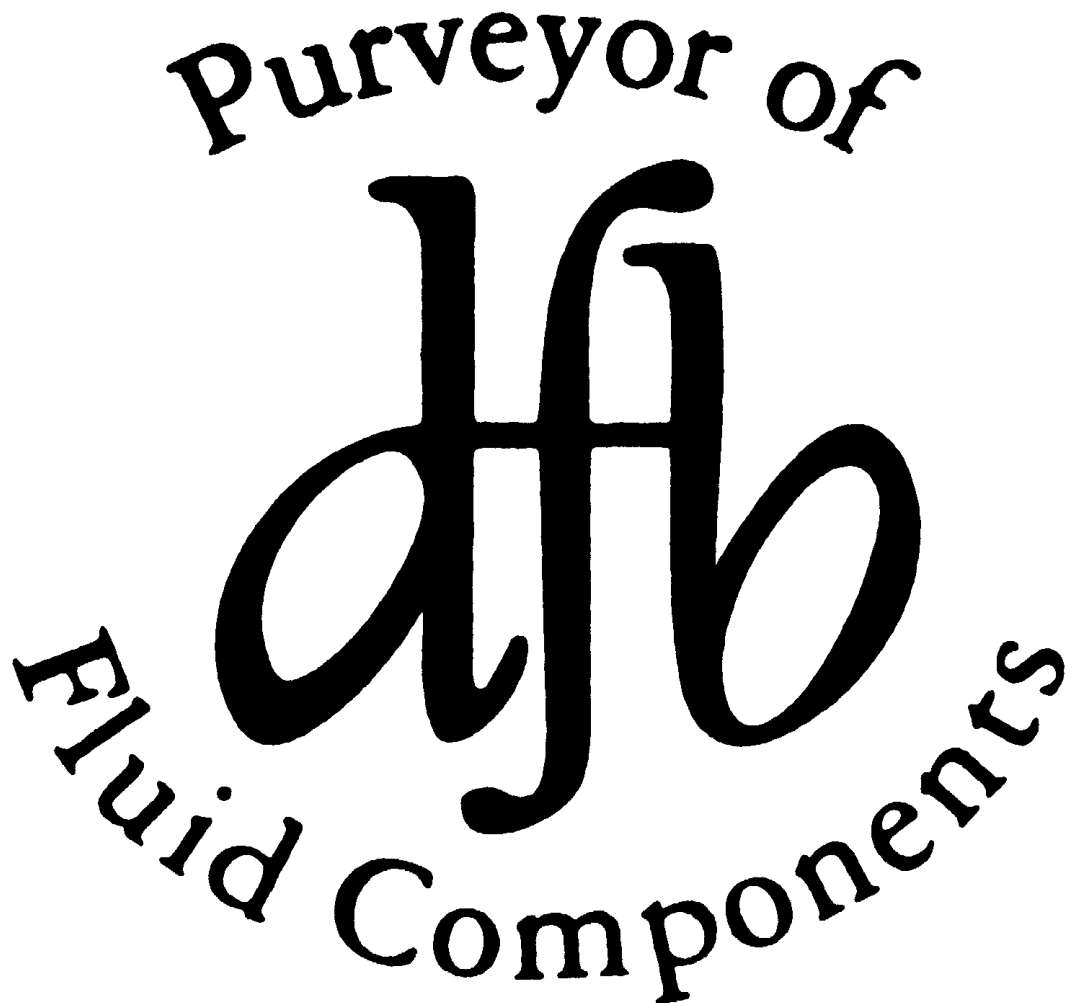


# **D.F. Burnham & Co.**

*Hydraulic and Pneumatic Components*

*“The Leader in Connections”*



*Toll Free 1-800-989-1770*

*Toll Free Fax 1-800-989-1774*

*e-mail: [sales@dfburnham.com](mailto:sales@dfburnham.com)*

*[www.dfburnham.com](http://www.dfburnham.com)*



# New Products

## *Hose Protectors*

Hose Looms  
Hose Protectors  
Hose Spacers  
Select-A-Loom



## *Power Transmission Products*

Banded U-Belts  
Eagle PD Belts & Sprockets  
Specialty Belting  
Synchronous  
U-Belts

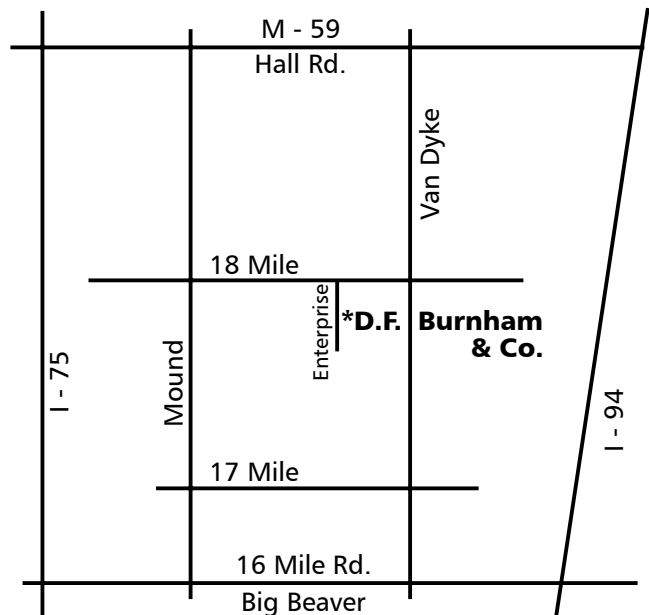




*“The Leader in Connections”*

**CERTIFIED  
ISO 9001:2000**

- Hose Assembly Fabrication  
While You Wait
- Made to Order Conversion Adapters
- Technical Support
- Will Call Showroom
- VISA / MasterCard & AMEX Accepted
- 24 HOUR Service
- Crib / Inventory Management



***40750 Enterprise Drive  
Sterling Heights, Michigan 48314  
e-mail: sales@dfburnham.com  
www.dfburnham.com***

Dear D.F. Burnham Customer,

It is with great pleasure that I present to you D.F. Burnham's first full line product catalog. D.F. Burnham and Company was formed in 1972 with the concept of making the Company a true stocking distributor of hydraulic & pneumatic components. Our goal is to represent quality and form a bond to supply the industry with such products. Thus, the logo Purveyor of Fluid Components was born.

We have been in business for over 32 years. In 1997 we moved into our new 23,000 square foot facility, in order to increase our stocking capabilities, and to continue to fulfill your needs as our customer. At the same time, we received our ISO-9002 Certification.

This catalog is filled with many products from our manufacturers. We have selected items found to be the most common and useful to our broad base of customers. It is designed to be comprehensive and user friendly and we hope you will make it your first choice for shopping. In the near future, you will be able to place your orders via the Web.

In the event you cannot find products that you are searching for, I encourage you to call one of our qualified sales representatives, as you can be certain that these products are available.

We appreciate you visiting us on our website and please, don't hesitate in contacting us for additional information or assistance.

To our current customers, we want to thank you for your support. To our future customers, we will endeavor to supply your needs on time with quality product.

Sincerely,

D.F. Burnham & Company

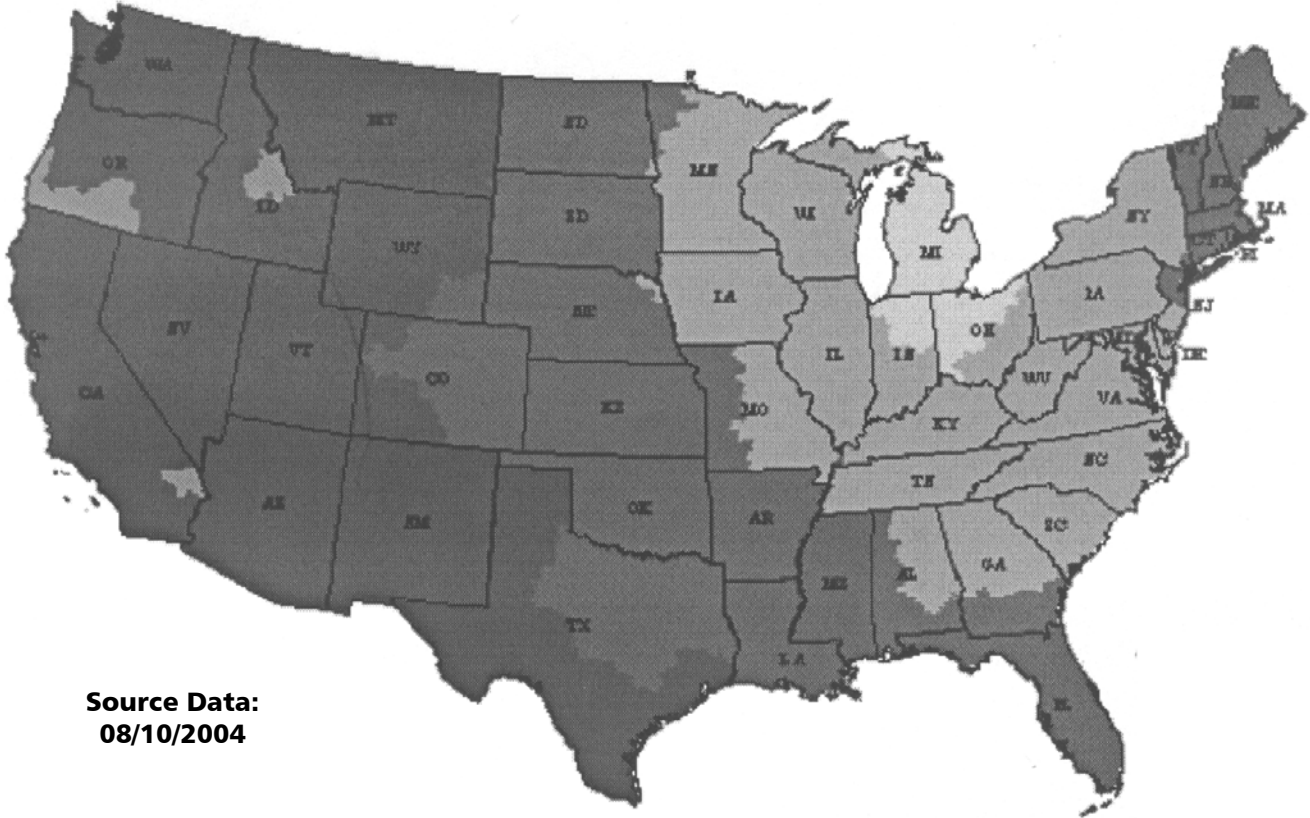
David A. Burnham  
President



# Services

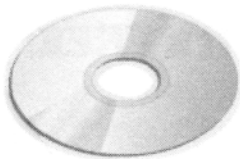
## UPS Ground Transit Map

**Business days in transit from: STERLING HEIGHTS, MI 48314**

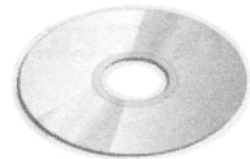


**Source Data:**  
08/10/2004

-  1 day
-  2 days
-  3 days
-  4 days
-  5 days



**Also Available  
on CD ROM**



**Please Call**



## Customer Info

### - Inventory -

We do our best to maintain full and complete inventories of all regular lines in our warehouse stock. Certain items shown in this catalog are included to indicate the breadth and depth of a product line and are not standard stock items. Closeout items may be depleted and will be replaced with other merchandise, all subject to prior sales.

#### Hard-To-Find Items

We are always willing to assist you in locating hard-to-find items. It is important to us that we help you find any item necessary for you to operate your business. If you purchase a hard-to-find item on a regular basis, we will gladly make that a stock item and put it in our inventory.

#### Damaged, Lost or Short Shipments

Inspect your order immediately upon receipt. Make a note regarding damaged goods or short shipment on the delivery receipt. Keep damaged goods for inspection by the carrier. Notify the carrier and file a claim with them. Notify us if we need to reship the damaged products. If your order arrives incomplete, check the shipper/invoice for backordered items. If there is a discrepancy, contact your D.F. Burnham & Co. representative.

#### Claims

All claims for shipment discrepancies must be made within seven calendar days of receipt. Please have your shipper/invoice number available when calling D.F. Burnham & Co. to make a claim. Claims for damage incurred during parcel shipment or by the freight carrier must be filed against the carrier.

#### Return Policy

Please call our office within 30 days of receipt, to obtain authorization prior to returning product. To receive a Return Authorization (RA) number before shipping product please call our Customer Service at 1-800-989-1770. NO returns of any type will be accepted without lot traceability and an RA number. Please have the following information on hand when calling for an RA number:

- Customer Name
- Original purchase order number
- Nature of problem
- Account number
- Invoice number

Credit will be issued within 30 days after returned product is received and if inspection and traceability requirements are met. Credit will be null and void after one year from credit date.

# Services

## Our Mission

D.F. Burnham & Co. is an innovative, full-line industrial distributor. We are committed to quality products, competitive prices, and on-time delivery. We strive to be proactive in creating cost-effective systems and solutions designed to meet and exceed the demands of our valued customers.

## Valued Added Services

### Customer Service

Knowledgeable Customer Service representatives are available from 8:00AM-5:00PM Eastern Standard Time, Monday through Friday, to assist with customer needs. And 8:00AM-12:00PM on Saturdays.

### Inventory Management

D.F. Burnham & Co. offers a wide range of inventory management programs and solutions. Programs include integrated supply, commodity management, replenishment systems, crib management, and bar coding. These programs can be customized for your specific needs.

### Bids, Contracts, Blankets

For large quantities and on-going purchases, customized pricing and terms can be established, including delivery, billing, and inventory management programs.

### Open Accounts

An open account can be set up through one of our account representatives. Approval of open accounts will be based on information feed back from credit application.

### Payment Options

Payment options include open account, MasterCard, Visa, American Express, pre-pay with check, C.O.D., and cash. If you require special billing and statements, contact a D.F. Burnham & Co. representative to discuss the available options.

### Delivery and Freight

Unless otherwise requested, orders are normally delivered by United Parcel Service (UPS) routed through regular ground as F.O.B. D. F. Burnham & Co. Due to the size and weight of an order, it may be shipped via freight carrier, F.O.B. shipping point. Orders may also be delivered by D.F. Burnham & Co. vehicles. If you require special terms for delivery, contact a D.F. Burnham & Co. representative to discuss the available options.

### Showroom

If you need an item the same day, you can stop at our showroom for pick-up. We advise that you call ahead to confirm that the desired products are in stock. Also, by calling ahead, your order will be ready for you when you arrive. Feel free to come and browse the many products on display in our showroom.

### Electronic Data Interchange (EDI)

D.F. Burnham & Co. has full EDI capabilities, allowing transactions such as ordering and invoicing to be integrated directly between computer systems. This process is efficient and reduces the possibility of entry errors. Contact our Information Systems Department for details and to set up an EDI account with D.F. Burnham & Co.



## Policies

**Quotation** – Quotations are valid for 30 days unless otherwise indicated.

**Terms** – 1% 10 days, net 30 days, unless otherwise agreed upon in writing.

**Minimum Order** – None

### Sales Tax

We are required to charge state and local taxes on items for which we do not have a sales tax exempt certification. When ordering, please indicate which products should be considered tax exempt.

### Guarantee

D.F. Burnham & Co. guarantees your satisfaction. If you are not completely satisfied with the quality of the product or if the product does not perform as described, return it within 30 days of delivery for an exchange or full refund on all products able to be re-sold. Restrictions may apply if the product has been altered. Custom order products are subject to the manufacturer's return policy. Products may also be returned against the manufacturer's warranty.

THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES WITH RESPECT TO THE PRODUCTS AND SERVICES, WHETHER ORAL, WRITTEN, EXPRESS, IMPLIED AND STATUTORY BY OPERATION OF THE LAW OR OTHERWISE. THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTIES ARISING BY USAGE OF TRADE, COURSE OF PERFORMANCE OR COURSE OF DEALING. SELLING SHALL NOT BE LIABLE TO BUYER OR ANY OTHER PERSON FOR SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY LOSSES, DAMAGES OR EXPENSES, DIRECTLY OR INDIRECTLY ARISING FROM THE SALE, HANDLING OR USE OF THE PRODUCTS OR SERVICES OR FROM ANY OTHER CAUSE RELATING THERETO. D.F. BURNHAM'S LIABILITY HEREUNDER WHETHER BASED ON THE CONTRACT, WARRANTY OR TORT (INCLUDING, BUT NOT LIMITED TO, NEGLIGENCE AND STRICT LIABILITY) OR OTHERWISE IS LIMITED TO, AT D.F. BURNHAM'S OPTION, THE CORRECTION OF DEFECTIVE SERVICES OR REFUNDING OR CREDITING BUYER WITH THE AMOUNT EQUAL TO THE PURCHASE PRICE THEREOF, THE REPLACEMENT OR REPAIR OF DEFECTIVE PRODUCTS OR THE REPAYMENT OF, OR CREDITING BUYER WITH AN AMOUNT EQUAL TO THE PURCHASE PRICE UPON RETURN OF THE PRODUCTS.

The parties expressly waive the Statute of Limitation and agree that any claim by buyer, with reference to the products or service sold hereunder for any cause, shall be deemed waived by the Buyer, unless filed within one (1) year from accrual of the cause of action therefore.

### Responsibility

The value of the defective product or material sent in error is our only liability. All technical data has been supplied by the manufacturer and is printed solely for your convenience. We assume no responsibility for the accuracy or reliability of this data or for the performance of any material or equipment selected with the use of this catalog. We do not warrant or represent that the merchandise complies with the provisions of any law, particularly the Walsh-Healy Public Contracts Act, and the Occupational Safety and Health Act of 1970, and regulations promulgated there under, unless the manufacturer so warrants.

### Catalog Errors

Every effort has been made to eliminate errors from this catalog; however, D.F. Burnham & Co. does not assume any liability and is not responsible for misprints, typographical errors, or errors of omission. Should an error be detected, it will be subject to correction.

Some items may not be exactly the same as pictured. The photos shown herein are general representations and may not include optional equipment.

### OSHA/MSDS

Per OSHA Requirements, material safety data sheets (MSDS) are available if applicable and will be provided upon request.



# Credit Application

## D.F. Burnham & Co. Hydraulic and Pneumatic Components

40750 ENTERPRISE DRIVE • STERLING HEIGHTS, MI 48314  
PH: (586) 268-5220 • FAX: (586) 268-8795

Sales Person \_\_\_\_\_

COMPANY NAME \_\_\_\_\_

DATE \_\_\_\_\_

BILLING ADDRESS \_\_\_\_\_  
\_\_\_\_\_

PHONE: ( ) \_\_\_\_\_

FAX: ( ) \_\_\_\_\_

SHIPPING ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

REQUESTED CREDIT LIMIT:

\_\_\_ \$500      \_\_\_ \$2000

\_\_\_ \$1000     \_\_\_ \$5000

\_\_\_ \$1500     \_\_\_ \$ Other

TAXABLE? \_\_\_\_\_ TAX ID # \_\_\_\_\_ (WE MUST HAVE A SIGNED TAX EXEMPT FORM ON FILE)

TYPE OF BUSINESS: \_\_\_\_\_ DATE OF ESTABLISHED: \_\_\_\_\_

HAS THE FIRM OR ANY OF ITS PRINCIPALS EVER FILED FOR BANKRUPTCY? \_\_\_\_\_

PERSONS AUTHORIZED FOR PURCHASING: \_\_\_\_\_

**PRINCIPALS** (PLEASE LIST NAME, TITLE, SOCIAL SECURITY NUMBER AND HOME ADDRESS):

A. \_\_\_\_\_

B. \_\_\_\_\_

**TRADE REFERENCES** (NAME, ADDRESS, PHONE AND FAX NUMBES OF MAJOR SUPPLIERS):

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

**BANK REFERENCES** (NAME, ADDRESS, PHONE NUMBER AND ACCOUNT NUMBERS):

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

APPLICANTS SIGNATURE ATTESTS FINANCIAL RESPONSIBILITY, ABILITY AND WILLINGNESS TO PAY OUR INVOICE(S) IN ACCORDANCE WITH THE FOLLOWING TERMS: NET 30 DAYS.

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

NAME \_\_\_\_\_ TITLE \_\_\_\_\_



## Brass Fittings

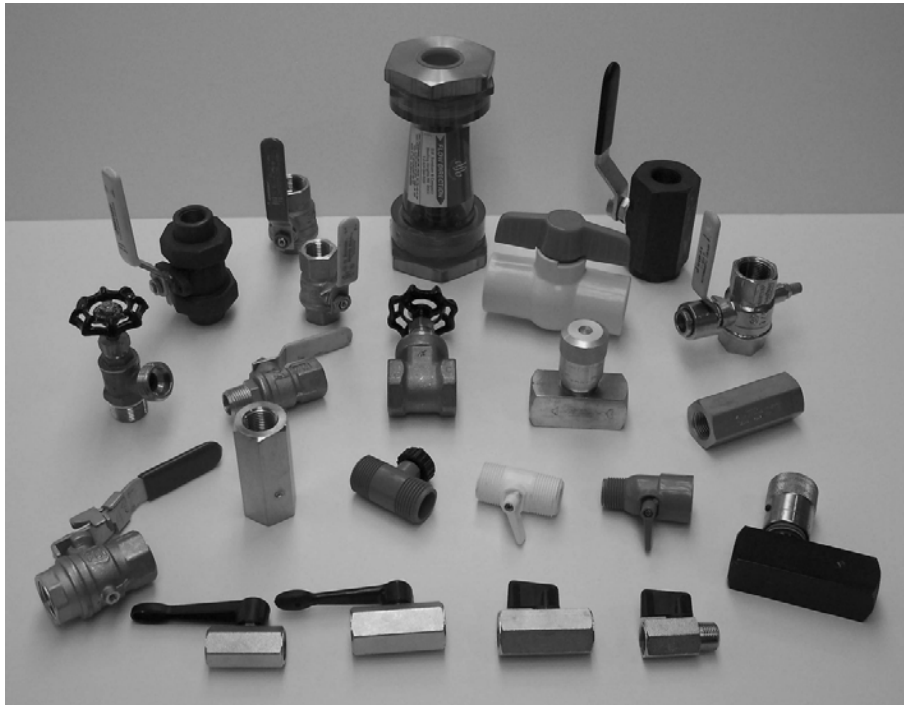


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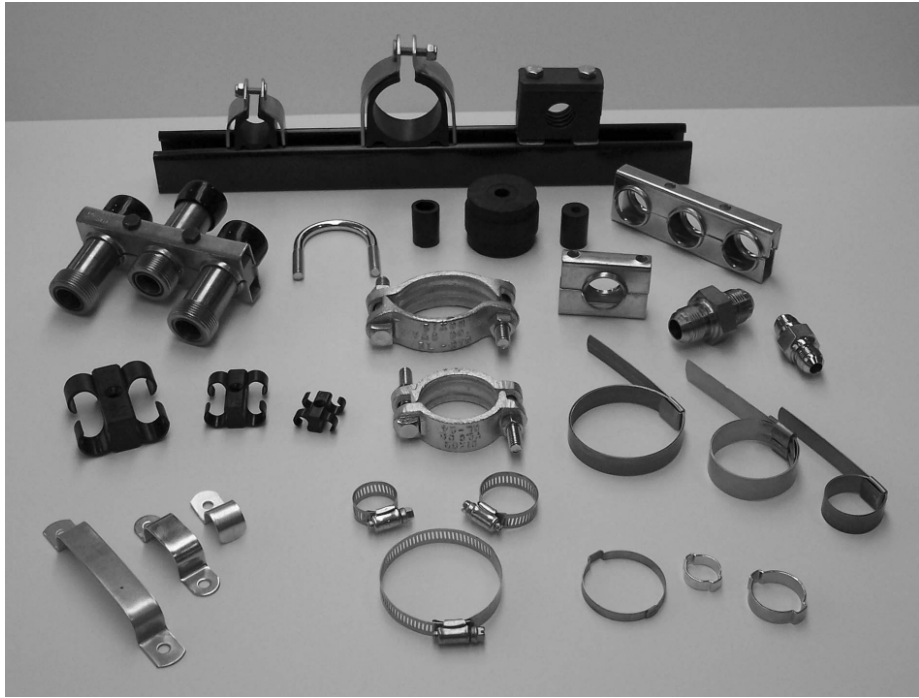
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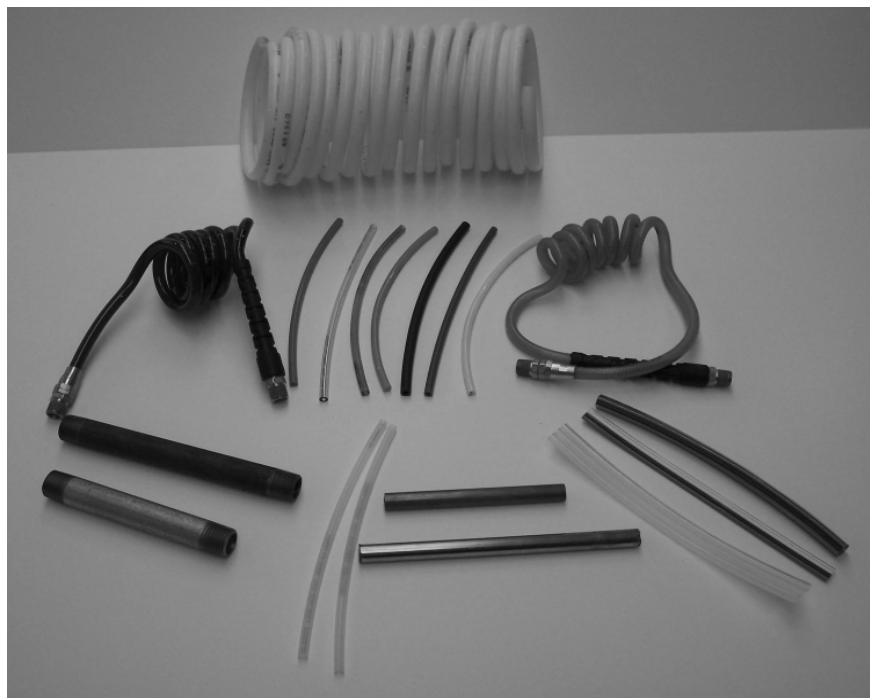


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**GOODYEAR**  
ENGINEERED PRODUCTS

**Kuri Tec**

**Nycoil**  
A RECTUS COMPANY



**NEWAGE INDUSTRIES**

**Accuflex Industrial Hose, Ltd.**

**CAMOZZI**

**Wheatland Tube Company**

**WOLYCHINE TUBE, INC.**  
A WOLYCHINE COMPANY

**POWER-STRUT**

**PLYMOUTH TUBE CO.**

**TI Automotive**



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**Industrial Hose**



**Kuri Tec®**

**Nycoril®**  
A RECTUS COMPANY



**NEWAGE INDUSTRIES**

**Accuflex Industrial Hose, Ltd.**

**CAMOZZI**

**FLEXAUST**

**FEDERAL HOSE®**  
THE HALLMARK OF FLEXIBLE HOSE AND DUCTING SINCE 1921

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Perfecting  
Coupling  
Company

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**RECTUS**  **TEMA**

**DIXON**  
BOSS

**Safeway**  
HYDRAULICS, INC.

**TOMCO**  
TOMCO  
TOMCO

Purveyor of  
**dfb**  
Fluid Components

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**GOODYEAR**  
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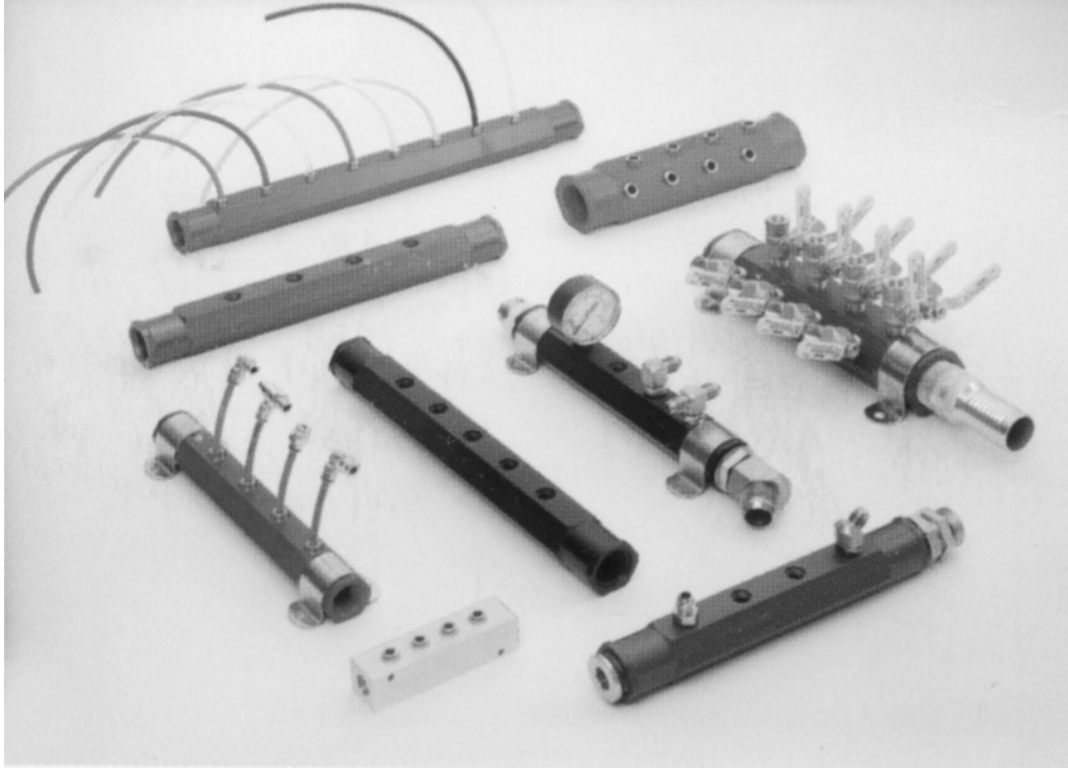


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**TYLOK** INTERNATIONAL, INC.

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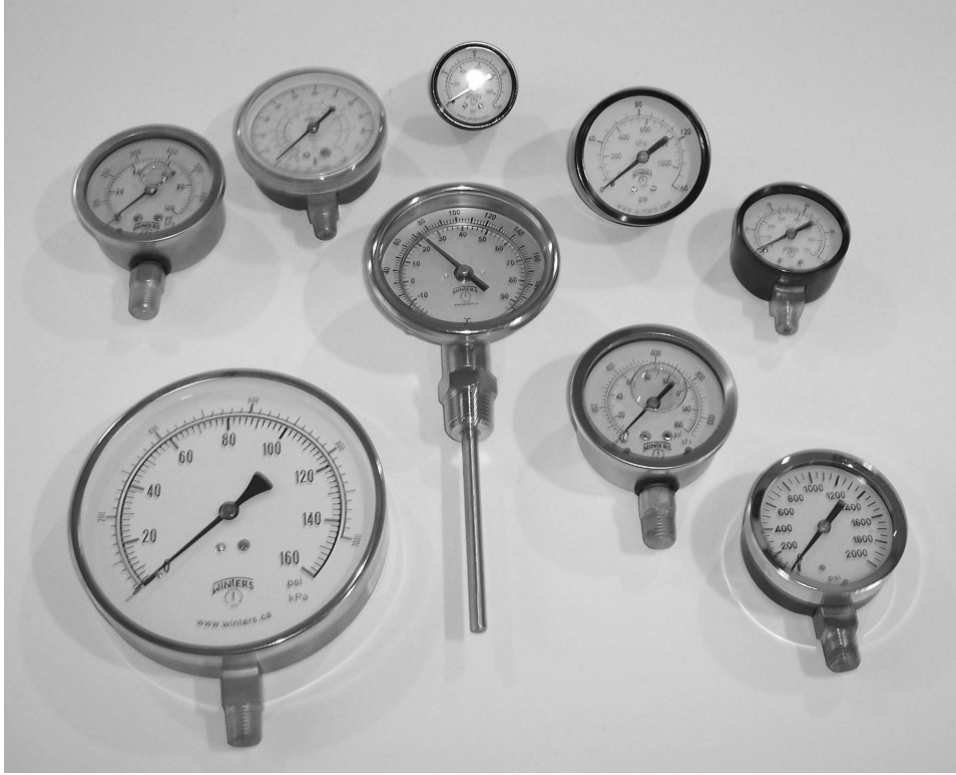
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AQ62DOT  
162 PL  
1862  
DQ62DOT

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815-06-06DOT-PI	3/8
815-08-08DOT-PI	1/2
815-10-10DOT-PI	5/8
815-12-12DOT-PI	3/4

### UNION TEE



AQ64DOT  
164 PL  
1864  
DQ64DOT

Part #	Tube O.D.
824-53DOT-PI	5/32
824-04DOT-PI	1/4
824-06DOT-PI	3/8
824-08DOT-PI	1/2
824-12DOT-PI	3/4

### UNION ELBOW

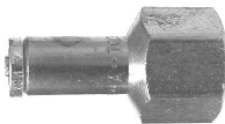


AQ65DOT  
165 PL  
1865  
DQ65DOT

Part #	Tube O.D.
821-53DOT-PI	5/32
821-04-04DOT-PI	1/4
821-06-06DOT-PI	3/8
821-08-08DOT-PI	1/2

Spec sheet is available upon request.

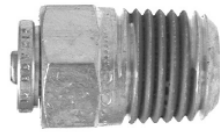
### FEMALE CONNECTOR



AQ66DOT  
166 PL  
1866  
DQ66DOT

Part #	Tube O.D.	Pipe Thread
854-53-02DOT-PI	5/32	1/8
854-04-02DOT-PI	1/4	1/8
854-04-04DOT-PI	1/4	1/4
854-05-02DOT-PI	5/16	1/8
854-06-02DOT-PI	3/8	1/8
854-06-04DOT-PI	3/8	1/4
854-06-06DOT-PI	3/8	3/8
854-08-04DOT-PI	1/2	1/4
854-08-06DOT-PI	1/2	3/8
854-08-08DOT-PI	1/2	1/2

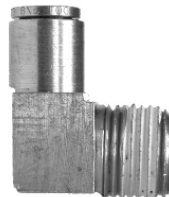
### MALE CONNECTOR



AQ68DOT  
168 PL  
1868  
DQ68DOT

Part #	Tube O.D.	Pipe Thread
816-53-32DOT-PI	5/32	10/32
816-53-01DOT-PI	5/32	1/16
816-53-02DOT-PI	5/32	1/8
816-03-02DOT-PI	3/16	1/8
816-04-32DOT-PI	1/4	10/32
816-04-02DOT-PI	1/4	1/8
816-04-04DOT-PI	1/4	1/4
816-04-06DOT-PI	1/4	3/8
816-06-02DOT-PI	3/8	1/8
816-06-04DOT-PI	3/8	1/4
816-06-06DOT-PI	3/8	3/8
816-06-08DOT-PI	3/8	1/2
816-08-04DOT-PI	1/2	1/4
816-08-06DOT-PI	1/2	3/8
816-08-08DOT-PI	1/2	1/2
816-10-06DOT-PI	5/8	3/8
816-10-08DOT-PI	5/8	1/2
816-12-08DOT-PI	3/4	1/2
816-12-12DOT-PI	3/4	3/4

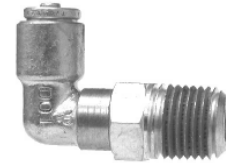
### MALE ELBOW



AQ69DOT  
169 PLNS  
1869  
DQ69DOT

Part #	Tube O.D.	Pipe Thread
822-53-01DOT-PI	5/32	1/16
822-53-02DOT-PI	5/32	1/8
822-03-02DOT-PI	3/16	1/8
822-04-02DOT-PI	1/4	1/8
822-04-04DOT-PI	1/4	1/4
822-04-06DOT-PI	1/4	3/8
822-06-02DOT-PI	3/8	1/8
822-06-04DOT-PI	3/8	1/4
822-06-06DOT-PI	3/8	3/8
822-06-08DOT-PI	3/8	1/2
822-08-04DOT-PI	1/2	1/4
822-08-06DOT-PI	1/2	3/8
822-08-08DOT-PI	1/2	1/2
822-10-06DOT-PI	5/8	3/8
822-10-08DOT-PI	5/8	1/2
822-12-08DOT-PI	3/4	1/2
822-12-12DOT-PI	3/4	3/4

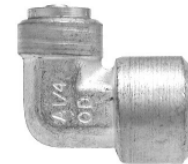
### MALE SWIVEL ELBOW



AQ69DOTS  
169 PL  
1869  
DQ69DOTS

Part #	Tube O.D.	Pipe Thread
822-53-32DOTPIR	5/32	10/32
822-04-32DOTPIR	1/4	10/32
822-04-02DOTPIR	1/4	1/8
822-02-02DOTPIR	1/4	1/4
822-04-06DOTPIR	1/4	3/8
822-06-02DOTPIR	3/8	1/8
822-06-04DOTPIR	3/8	1/4
822-06-06DOTPIR	3/8	3/8
822-06-08DOTPIR	3/8	1/2
822-08-04DOTPIR	1/2	1/4
822-08-06DOTPIR	1/2	3/8
822-08-08DOTPIR	1/2	1/2
822-10-06DOTPIR	5/8	3/8
822-10-08DOTPIR	5/8	1/2
822-12-08DOTPIR	3/4	1/2
822-12-12DOTPIR	3/4	3/4

### FEMALE ELBOW



AQ70DOTS  
1870  
DQ70DOTS

Part #	Tube O.D.	Pipe Thread
855-53-02DOT-PI	5/32	1/8
855-04-02DOT-PI	1/4	1/8
855-04-04DOT-PI	1/4	1/4
855-04-06DOT-PI	1/4	3/8
855-06-02DOT-PI	3/8	1/8
855-06-04DOT-PI	3/8	1/4
855-06-06DOT-PI	3/8	3/8
855-08-04DOT-PI	1/2	1/4
855-08-06DOT-PI	1/2	3/8
855-08-08DOT-PI	1/2	1/2

### FEMALE SWIVEL ELBOW



AQ70DOTS  
DQ70DOTS

Part #	Tube O.D.	Pipe Thread
855-53-02DOTPIR	5/32	1/8
855-04-02DOTPIR	1/4	1/8
855-04-04DOTPIR	1/4	1/4
855-06-04DOTPIR	3/8	1/4
855-06-06DOTPIR	3/8	3/8

Fitting Pictures are for reference only.  
Please contact us if specific style is needed.

Brass



**MALE RUN TEE**



AQ71DOTS  
171 PL  
1871  
DQ71DOTS

Part #	Tube O.D.	Pipe Thread
826-53-02DOT-PI	5/32	1/8
826-04-02DOT-PI	1/4	1/8
826-04-04DOT-PI	1/4	1/4
826-06-02DOT-PI	3/8	1/8
826-06-04DOT-PI	3/8	1/4
826-06-06DOT-PI	3/8	3/8
826-06-08DOT-PI	3/8	1/2
826-08-06DOT-PI	1/2	3/8

**MALE SWIVEL RUN TEE**



AQ71DOTS  
171 PL  
1871  
DQ71DOTS

Part #	Tube O.D.	Pipe Thread
826-53-02DOTPIR	5/32	1/8
826-04-02DOTPIR	1/4	1/8
826-04-04DOTPIR	1/4	1/4
826-06-04DOTPIR	3/8	1/4
826-06-06DOTPIR	3/8	3/8
826-08-04DOTPIR	1/2	1/4
826-08-06DOTPIR	1/2	3/8
826-08-08DOTPIR	1/2	1/2

**MALE BRANCH TEE**



AQ72DOT  
172 PL  
1872  
DQ72DOT

Part #	Tube O.D.	Pipe Thread
825-53-02DOT-PI	5/32	1/8
825-03-02DOT-PI	3/16	1/8
825-04-02DOT-PI	1/4	1/8
825-04-04DOT-PI	1/4	1/4
825-04-06DOT-PI	1/4	3/8
825-06-02DOT-PI	3/8	1/8
825-06-04DOT-PI	3/8	1/4
825-06-06DOT-PI	3/8	3/8
825-08-04DOT-PI	1/2	1/4
825-08-06DOT-PI	1/2	3/8
825-08-08DOT-PI	1/2	1/2

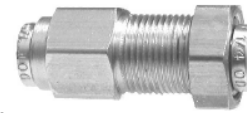
**MALE SWIVEL BRANCH TEE**



AQ72DOTS  
172 PL  
1872  
DQ72DOTS

Part #	Tube O.D.	Pipe Thread
825-53-32DOTPIR	5/32	10/32
825-53-02DOTPIR	5/32	1/8
825-04-32DOTPIR	1/4	10/32
825-04-02DOTPIR	1/4	1/8
825-04-04DOTPIR	1/4	1/4
825-04-06DOTPIR	1/4	3/8
825-06-02DOTPIR	3/8	1/8
825-06-04DOTPIR	3/8	1/4
825-06-06DOTPIR	3/8	3/8
825-08-04DOTPIR	1/2	1/4
825-08-06DOTPIR	1/2	3/8
825-08-08DOTPIR	1/2	1/2

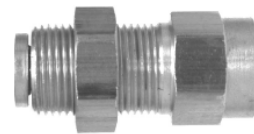
**BULKHEAD UNION**



AQ82DOT  
62PLBH  
1874  
DQ82DOT

Part #	Tube O.D.
832-04-04DOT-PI	1/4
832-06-06DOT-PI	3/8
832-08-08DOT-PI	1/2
832-10-10DOT-PI	5/8

**FEMALE BULKHEAD UNION**



AQ86DOT  
1873  
DQ86DOT

Part #	Tube O.D.	Pipe Thread
860402	1/4	1/8
860404	1/4	1/4
860604	3/8	1/4
860606	3/8	3/8
860808	1/2	1/2

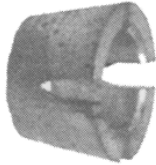
*Fitting Pictures are for reference only.  
Please contact us if specific style is needed.*

**Brass**



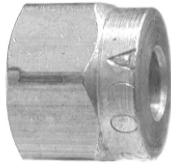
**BRASS SPLIT SLEEVE DOT  
FITTINGS (5/32 O.D.)**

**COLLET**



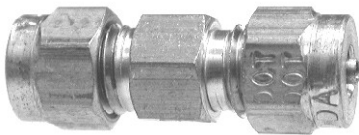
**Part #** ..... **Tube O.D.**  
38-711 ..... 5/32

**NUT**



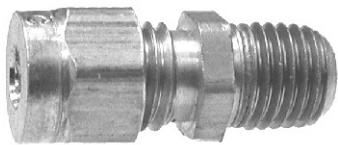
**Part #** ..... **Tube O.D.**  
38-732 ..... 5/32

**DOUBLE END UNION**



**Part #** ..... **Tube O.D.**  
38-761 ..... 5/32

**CONNECTOR**



**Part #** ..... **Tube O.D.** ..... **Pipe Thread**  
38-769 ..... 5/32 ..... 1/16  
38-770 ..... 5/32 ..... 1/8

**ELBOW**



**Part #** ..... **Tube** ..... **Pipe Thread**  
38-718 ..... 5/32 ..... 1/8

**AIR BRAKE TUBING**



- SAE J844, Type 3 A & B & DOT FMVSS 106
- Nylon inner tube with open ply nylon fiber reinforcement and nylon cover.
- -40° F to +200° F temperature range.
- 150 P.S.I. max. working pressure

Part #	Type A	Color	Length
38-950	1/8	Black	100'
38-950-3	1/8	Black	1000'
38-952	1/4	Black	100'
38-952G	1/4	Green	100'
38-952R	1/4	Red	100'
38-952U	1/4	Blue	100'
38-952-2	1/4	Black	500'
38-952-3	1/4	Black	1000'

**AIR BRAKE TUBING**

Part #	Type A	Color	Length
38-960	3/8	Black	100'
38-960R	3/8	Red	100'
38-960U	3/8	Blue	100'
38-960Y	3/8	Yellow	100'
38-960B5	3/8	Black	500'
38-965	1/2	Black	100'
38-965	1/2	Red	100'
38-965B5	1/2	Black	500'
38-970	5/8	Black	100'
38-975	3/4	Black	100'

NOTE: The Synflex, Parker and Eaton tubing must be torqued at 47 in. pounds.

Any other 5/32 DOT tubing used. tubing or fitting manufacturer should be contacted for proper torque requirements.

**Brass**



**AIR BRAKE HOSES**

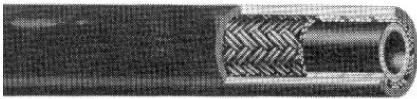
**AIR BRAKE HOSE**



- Spiral synthetic cord reinforcement with neoprene cover.
- -40° F to +200° F temperature range.
- Max. operating pressure 255 PSI
- Max. burst pressure 900 PSI

Part #	I.D.	O.D.	Length
38-910	3/8	3/4	50'
38-915	1/2	7/8	50'

**FUEL LINE AND VAPOR EMISSION**



- SAE 30R7
- Nitrile tube w/spiral synthetic cord, hypalon cover.
- 50 p.s.i. working pressure. 1/2-35 PSI
- -40° F to +257° F temperature range.
- Low pressure/high temperature fuel for cars, light trucks, and small engines.

Part #	I.D.	O.D.	Length
38-920	3/16	13/32	25'
38-926	5/16	9/16	25'
38-923	1/4	.50	25'
38-927	3/8	.63	50'

**COILED AIRBRAKE TUBE ASSEMBLIES**



**RED**



**BLUE**

- Conforms to SAE J844 Type B and SAE J1131.
- Conforms to DOT FMVSS 571. 106.
- Maximum Working Pressure 150 PSI.
- Minimum Burst 950 PSI.
- Temperature Range -40° F to +200° F.
- Brass end with spring guards and 1/2" male pipe connections.
- Spring guards zinc plated for maximum corrosion resistance.
- Color coding, red for emergency and blue for services, provides you with error free installation.
- Preassembled for immediate installation.
- 1/2 O.D. with 1/2" fitting.

Each Contains 1 Red, 1 Blue

Part #	Working Length	Pigtail Length
38-700	12'	6"
38-705	12'	12"
38-710	15'	12"

If opportunity doesn't knock  
build a door.



**STEEL BRAKE LINES FOR DOMESTIC VEHICLES**



**Brass**

Length	Catalog No. 3/16" O.D.	Catalog No. 1/4" O.D.	Catalog No. 5/16" O.D.	Catalog No. 3/8" O.D.
6"	38-930	—	—	—
8"	38-931	—	—	—
10"	38-932	—	—	—
12"	38-933	—	—	38-985
20"	38-934	—	—	38-986
30"	38-935	38-943	—	—
40"	38-936	38-944	—	38-988
51"	38-937	38-945	38-984	38-989
60"	38-938	38-946	—	38-990
72"	38-939	—	—	—

NOTE: 3/16" and 1/4" tube assemblies have one long and one short inverted nut.

**AIR BRAKE ACCESSORIES  
GLADHAND COUPLINGS**

- Die Cast Aluminum Body
- Conforms to SAE J318
- Connects to 1/2" pipe



SERVICE (Signal) Blue connects only to Service  
Part # 38-712

EMERGENCY (Supply Line) Red  
connects only to emergency  
Part # 38-714

UNIVERSAL - Gold connects to all three styles  
Part # 38-716

**GLADHAND SEAL**



Part # 38-740 ..... Full Face

Send DF Durnham & Company  
all your high volume quotes!

**DOUBLE END UNION**



Part # 46-600 ..... 1/4FPT Live air

**BALL FOOT CHUCK WITH  
1/4 I.D. HOSE BARB**



Part # 46-607 ..... 1/4 I.D. Live air

**DUAL FOOT CHUCKS**

6999	99941
693	50-065
108	6569
DFG-1	



Standard straight-on chuck with 30° reverse angle chuck,  
1/4" NPT female thread

Part # 320-000 .....

**ANGLE CHUCK**



690  
6172  
For inner dual wheels with tilted valves.  
Has 6" extension and 1/4" NPT female thread

Part # 320-005 .....

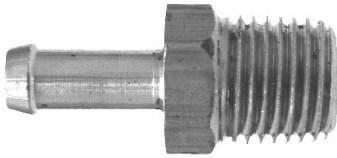


**BRASS FUEL HOSE FITTINGS**

**Typical Application:** Low pressure air, fuel and oil applications. Generally used for automotive, light truck, and small engine fuel lines. Use with fuel hose SAE 30R7 & SAE 30R9.

**Advantages:** Easy to assemble, just push the fitting into the hose clamp. Good selection of configurations at reasonable cost.

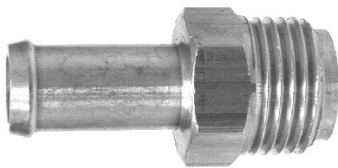
**MALE CONNECTOR**



**HOSE BARB X MALE PIPE**

Part #	I.D.	Size	
38-800	3/16	1/8	1541
38-802	1/4	1/8	1537
32-377	1/4	1/4	1581
38-806	5/16	1/8	1551
38-808	5/16	1/4	1555
38-810	3/8	1/8	1565
38-381	3/8	1/4	1564
32-382	3/8	3/8	1566
32-383	1/2	3/8	
32-384	1/2	1/2	
32-182	5/8	3/8	1411
32-385	5/8	1/2	1431
32-387	3/4	1/2	1430
32-388	3/4	3/4	
32-185	1	13/4	

**INVERTED FLARE MALE CONNECTOR**

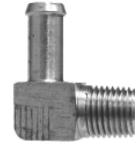


**HOSE BARB X INVERTED FLARE**

Part #	I.D.	Inv. Flare	
38-828	5/16	1/4	1598
38-830	5/16	5/16	1560
38-832	5/16	3/8	1561
38-834	3/8	5/16	1568
38-836	3/8	3/8	1570

See Hose Clamps Starting on Page 160

**90° MALE ELBOW**



**HOSE BARB X MALE PIPE**

Part #	I.D.	Size	
38-860	1/4	1/8	1582
38-862	5/16	1/8	1556
38-864	5/16	1/4	1557
38-886	3/8	1/8	1572
38-868	3/8	1/4	1571
32-186	3/8	3/8	
32-187	1/2	3/8	
32-191	1/2	1/2	
32-188	5/8	3/8	
32-189	5/8	1/2	
32-190	3/4	1/2	

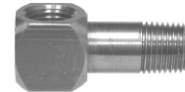
**INVERTED FLARE MALE SWIVEL  
90° ELBOW**



**HOSE BARB X TUBE O.D.**

Part #	I.D.	Tube	
38-873	15/16	15/16	1405
38-874	3/8	3/8	1407

**LONG STREET ELLS**



Part #	I.D.	Length
914-02-02D1B	1/8	1-3/16"
914-02-02D2B	1/8	1-7/16"
914-02-02D3B	1/8	1-11/16"
914-02-02D4B	1/8	1-7/8"
914-04-04D1B	1/4	1-3/16"
914-04-04D2B	1/4	1-7/16"
914-04-04D3B	1/4	1-11/16"
914-04-04D4B	1/4	1-7/8"
914-04-04D5B	1/4	2-1/4"
914-06-06D1B	3/8	1-3/4"
914-06-06D2B	3/8	2-1/4"

**EXTENSION ADAPTERS**



Part #	I.D.	Length
909-02-02D1B	1/8	1-1/4"
909-02-02D2B	1/8	1-3/4"
909-02-02D3B	1/8	3"
909-04-04D1B	1/4	1-9/16"
909-04-04D2B	1/4	1-13/16"
909-04-04D3B	1/4	2-1/16"
909-04-04D4B	1/4	2-1/2"





**BRASS FUEL HOSE FITTINGS**

- For use with low pressure air, water and fluids.
- Designed for a working pressure of 150 PSI.
- Hand-tightening provides a metal-to-metal seal.
- Not intended for natural gas, LPG, nuclear or aircraft applications.

**GASOLINE SHUT OFF w/SCREEN FILTER**



<b>Part #</b>	<b>Size</b>
46-046 .....	1/4x1/8

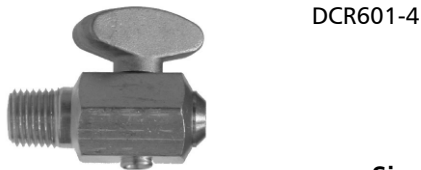
**AIR TANK DRAIN VALVE**



Self-sealing w/5ft. remote cable.

<b>Part #</b>	<b>Size</b>
46-065 .....	1/4

**DRAIN COCK 150 PSI**



<b>Part #</b>	<b>Size</b>
46-066 .....	1/4

**TRUCK DRAIN**



<b>Part #</b>	<b>Size</b>
46-067 .....	1/8 ..... 37D
46-068 .....	W15310 ..... 1/4 ..... 38D

**SHUT OFF**



150 PSI  
MAX

**MALE PIPE X FEMALE PIPE**

<b>Part #</b>	<b>Size</b>
15-04-04 .....	W20332 ..... 1/4

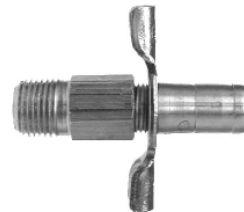
**LEVER HANDLE**



840  
41D  
DC601  
30 PSI G

<b>Part #</b>	<b>Size</b>
46-046 .....	M-41-P ..... 1/8
<b>Part #</b>	<b>M-42-P</b>
46-071 .....	1/4
<b>Part #</b>	<b>M-43-P</b>
46-072 .....	3/8
<b>Part #</b>	<b>M-44-P</b>
46-073 .....	1/2

**INTERNAL SEAT**



DC602  
808  
400A  
1800A

<b>Part #</b>	<b>Size</b>
46-079 .....	6783 ..... 1/8

**INTERNAL SEAT**

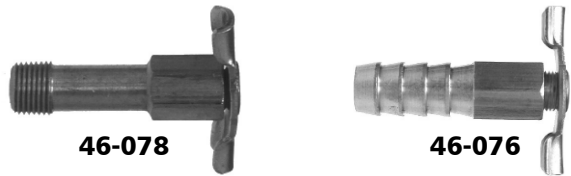


HB-5/16  
803  
305A

<b>Part #</b>	<b>Size</b>
28-02 .....	130 ..... 5/32 ..... 200PA
28-04 .....	140 ..... 1/4 ..... 201PA
38-06 .....	230 ..... 3/8 ..... 202PA



**LONG INTERNAL SEAT**



<b>Part #</b>	<b>Size</b>
46-078 ..... 185	1/8
46-076 ..... 3/8 Hose I.D.	

**TEE HANDLE**

INTERNAL SEAT



DC603  
802

<b>Part #</b>	<b>M-200-P</b>	<b>Size</b>
29-02		1/8
<b>Part #</b>	<b>M-201-P</b>	<b>Size</b>
29-04		1/4
<b>Part #</b>	<b>M-202-P</b>	<b>Size</b>
29-06		3/8

**EXTERNAL SEAT W/SPOUT**



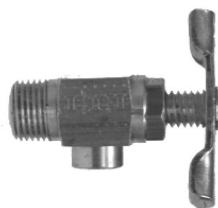
200A  
239  
DC606  
807

<b>Part #</b>	<b>Size</b>
31-04* ..... 6788	1/4

\*Replaces GM #511771 & Chrysler #836015

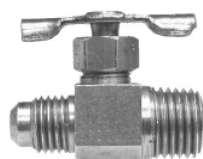
**BIBB NEEDLE VALVE**

.38 HOSE ID



804  
DC607  
2019  
201DH

<b>Part #</b>	<b>Size</b>
46-088 ..... 150 ..... 302P	1/8 MIP



<b>Part #</b>	<b>Size</b>
23-04-04 ..... 120 ..... 303P	1/4



<b>Part #</b>	<b>Size</b>
46-089A	6660 3/8HOSE x 1/4 MIP

**RADIATOR TYPE**

EXTERNAL SEAT



320D  
240  
DC604  
801

<b>Part #</b>	<b>M-320-P</b>	<b>Size</b>
46-085		1/8 ..... 300A

<b>Part #</b>	<b>M-321-P</b>	<b>Size</b>
46-086		1/4 ..... 100A

<b>Part #</b>	<b>M-322-P</b>	<b>Size</b>
46-087 <sup>4,5</sup>		3/8 ..... 200A
46-083 <sup>4</sup>		1/2

\*7/16" hex, for 9/16" hex order 46085A  
\*\*1-3/8" wide handle, 1" available 46086A

**REMOTE CONTROL DRAIN VALVES**

**REMOTE CONTROL DRAIN VALVES**



- Brass Body and stainless steel spring.
- Steel cable, nylon coated, certified to 200lbs pull test.
- Low profile to minimize accidental hits and damages.
- Pipe thread 1/4" NPTF.
- To order pre-coated pipe threads, add prefix "P" to the part number.

<b>Part #</b>	<b>Size</b>
46-492	Standard 48"
46-493	Standar 60"

**BRASS TRUCK VALVES**

**HOSE TO MALE PIPE**



404V

Part #	Size
46-450 .....	3/8x3/8
46-451 .....	5/8x3/8

**HOSE TO MALE PIPE**



404V

Part #	Size
46-455 .....	5/8x1/2
46-457 .....	3/4x3/8
46-456 .....	3/4x1/2

**FEMALE TO MALE PIPE**



405V

Part #	Size
46-465 .....	3/8x3/8
46-466 .....	3/8x1/2
46-467 .....	1/2x1/2

**FLARE TO MALE PIPE**



409V

Part #	Size
46-475 .....	1/2x1/2
46-476 .....	5/8x1/2

**FLARE TO MALE PIPE**



412V

Part #	Size
46-485 .....	5/8x1/2

To change and change  
for the better are two  
separate things.

No one ever says "It's  
only a game," when  
your team is winning.

**SOLID BOTTOM FUEL VALVES**

- Approved for use on Motorcraft fuel lines.
- Pointer lever.
- 90° turn stop mechanism to assure positive location of the on and off position.
- Corrosion proofed internal construction assures maximum salt atmosphere protection.
- Port hole is 1/4 (.250) diameter.
- UL listed for use in fuel oils no. 1 & no. 2, LP gas and utility gas.



8980

**PIPE  
FEMALE X MALE**

Part #	Size
46-400M .....	1/8x1/8
46-401M .....	1/4x1/4
46-402M .....	3/8x3/8

**SOLID BOTTOM VALVES**

- Designed for instantaneous on-off operation.
- 360° rotation standard.
- 30 PSI.
- Packed with grease.



1035D  
M-70-SBV

**O-RING SEALED  
FIP X MIP**

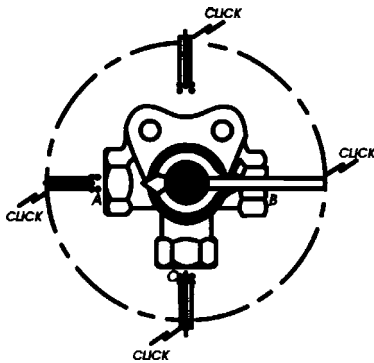
Part #	Size
46-400 .....	1/8
46-401 .....	1/4
46-402 .....	3/8



**THREE AND FOUR-WAY SELECTOR VALVES**

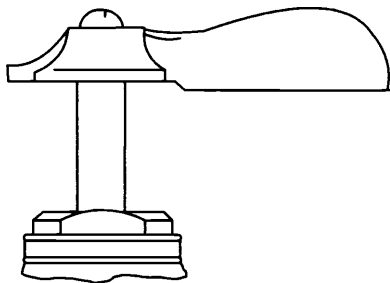
NON-LUBRICATED PLUG VALVES are designed to operate in systems where INSTANTANEOUS PORT SELECTION is desired. Since LUBRICANTS ARE NOT USED, relubrication is not required. There is no lubricant to freeze and lock the valve or to contaminate fine fluids. The O-RING SEALED CAP and STEM eliminate leakage to atmosphere. The mating BRASS BODY and CELCON PLUG produce a fine seal that WILL NOT SEIZE OR GALL.

Designed for PANEL or BRACKET MOUNTING. They are generally recommended for operation in GASOLINE, OIL, AIR, WATER and DETERGENT systems from minus 40° to 180°F, at a maximum operating pressure of 30 p.s.i.g. The fluid port size 9/32 (.281) diameter for 1/8 and 1/4 sizes, 5/16 (.312) diameter for the 3/8 size. (Consult factor for applications requiring a higher pressure).



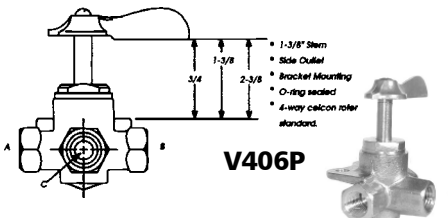
Type 1 (Standard)

A pronounced "click" may be felt at each position. Handle travel is not restricted.



PANEL MOUNTING AVAILABLE

**THREE-WAY VALVES (Side Outlet)**



**LESS CLICK**

Part #	A-B-C Female Pipe Thread	Length of Stem
46-247	1/4	1-3/8"
46-248	3/8	1-3/8"

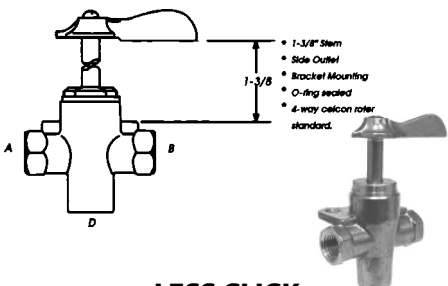
**M-108-MID WITH CLICK 360°**

Part #	A-B-C Female Pipe Thread	Length of Stem
46-250+	1/8	1-3/8"
46-251	1/4	1-3/8"
46-252	3/8	1-3/8"

Openings:

- Handle Pointer over A ..... Valve Open A-C
- Handle Pointer over C ..... Valve Open B-C
- Handle Pointer over B ..... Valve "OFF"
- Handle Pointer over Bracket ... Valve "OFF"

**THREE-WAY VALVES (Bottom Outlet)**



**LESS CLICK**

Part #	A-B-C Female Pipe Thread	Length of Stem
46-241	1/4	1-3/8"

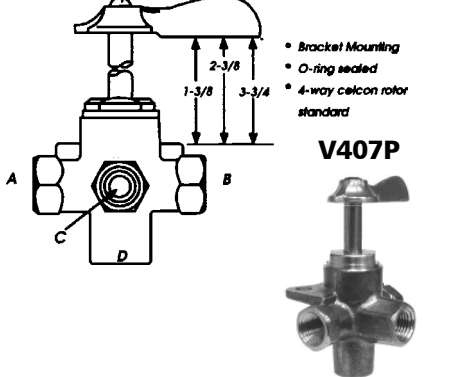
**WITH CLICK 360°**

Part #	A-B-C Female Pipe Thread	Length of Stem
46-243	1/8	1-3/8"
46-244	1/4	1-3/8"

Openings:

- Handle Pointer over A ..... Valve Open A-C
- Handle Pointer over C ..... Valve Open B-C
- Handle Pointer over B ..... Valve "OFF"

**FOUR-WAY VALVES**



**LESS CLICK**

Part #	A-B-C Female Pipe Thread	Length of Stem
46-257	1/4	1-3/8"

**M-114-MID WITH CLICK 360°**

Part #	A-B-C Female Pipe Thread	Length of Stem
46-255	1/4	1-3/8"
46-256	3/8	1-3/8"

**WITH 2-3/8" LONG STEM M-115-MID**

Part #	A-B-C Female Pipe Thread	Length of Stem
46-260	1/4	2-3/8"

Direction of Flow on four way valves pointer at:

- a) A, D open
- b) C, D open
- c) B, D open
- bracket open

Openings:

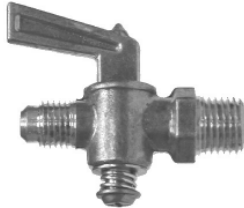
- Handle Pointer over A ..... Valve Open A-D
- Handle Pointer over C ..... Valve Open C-D
- Handle Pointer over B ..... Valve Open B-D
- Handle Pointer over Bracket ... Valve "OFF"



**SHUT-OFF COCKS**

- Designed for automotive or industrial use AGA approved shut-off cocks approved for LPG and natural gas applications. Lubricant may wash out at higher pressures or with some exotic fluids.
- Designed for working pressure of 15 PSI.
- Forged brass bodies and brass handles.
- Instantaneous off-on operation with 360° rotation.

**FLARE X MALE PIPE**

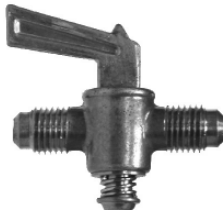


V402F  
848

Part #	Size	
13-04-02	1/4X1/8	27SAE
13-04-04	1/4X1/4	227SAE
13-05-02	5/16X1/8	29SAE
13-05-04	5/16X1/4	229SAE
13-06-04	3/8X1/4	57SAE
13-06-08	3/8X1/2	577SAE
13-08-06	1/2X3/8	67SAE

**FLARE X FLARE**

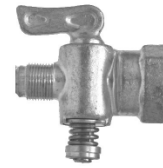
Please request  
AGA values



842  
V203F  
136C

Part #	Size	
12-04-04	1/4	28SAE
12-05-05	5/16	30SAE
12-06-06	3/8	58SAE
12-08-08	1/2	68SAE
12-10-10	5/8	1010SAE

**FEMALE X FEMALE PIPE**

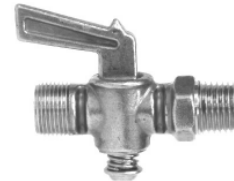


138C  
2046

Part #	Size	
46-127	3/8X3/8	163SAE
46-125	3/8X1/2	161SAE
46-126	3/8X1/2	161SAE
46-128	1/2X1/2	164SAE
46-123	5/8X1/2	164SAE

**COMP X MALE PIPE**

See page 45  
to order  
NUT and SLEEVE  
separately.



868  
V304C  
2068  
133C  
VC206

Part #	Size	
11-04-02	1/4x1/8	27-C
11-04-04	1/4x1/4	227-C
11-05-02	5/16x1/8	29-C
11-06-04	3/8x1/4	57-C
11-06-06	3/8x3/8	557-C

**COMP X COMP**

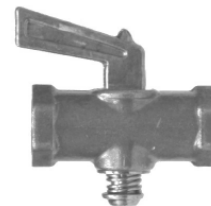
See Page 45  
to order  
NUT and SLEEVE  
separately.



V3030F  
2062  
134C

Part #	Size	
10-04-04	1/4	28-C
10-05-05	5/16	30-C
10-06-06	3/8	58-C
10-08-08	1/2	68-C

**FEMALE X FEMALE PIPE**

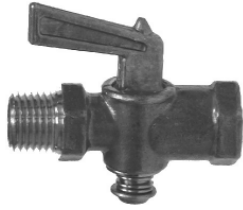


V403P  
132C  
875

Part #	Size
17-02-02	1/8
17-04-04	1/4
17-06-06	3/8
17-08-08	1/2



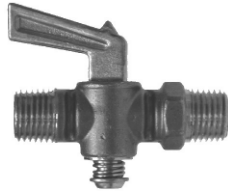
**MALE X FEMALE PIPE**



880  
V402P  
130C

Part #	Size	
15-02-02	1/8	48-P
15-04-04	1/4	49-P
15-06-06	3/8	50-P

**MALE PIPE X MALE PIPE**

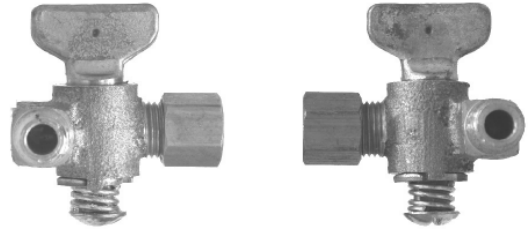


1V401P  
890

Part #	Size	
14-02-02	1/8	76-P
14-04-04	1/4	77-P
46-166T*	1/4	
14-06-06	3/8	78-P

\*125 PSI

**COMPRESSION X MALE PIPE  
LEFT TO RIGHT ANGLE**



Part #	Size	
46-168	LEFT 1/4X1/8	79C
46-169	RIGHT 1/4X1/8	89C

**Brass**



**BRASS AIR COCKS**

- For use on low pressure air systems.
- Designed for working pressure of 80 PSI at moderate temperatures.
- Spring-key type cocks of all brass construction with stainless steel springs.
- Machine finish is standard. Polished or plated finish available at extra cost.

**MIP X BIBB**



- Tee Handle
- No Hex

<b>Part #</b>	<b>#6</b>
46-300 .....	1/8
<b>Part #</b>	<b>#7</b>
46-301 .....	1/4

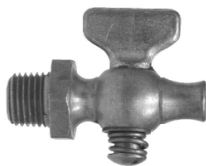
**MIP X BIBB**



- Lever Handle
- No Hex

<b>Part #</b>	<b>#12</b>
46-305 .....	1/8
<b>Part #</b>	<b>#13</b>
46-306 .....	1/4

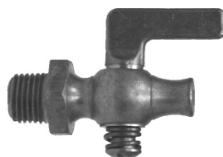
**MIP X BIBB**



- Tee Handle
- Hex

<b>Part #</b>	<b>#63</b>
46-310 .....	1/8
<b>Part #</b>	<b>#64</b>
46-311 .....	1/4
<b>Part #</b>	<b>#8</b>
46-312 .....	3/8

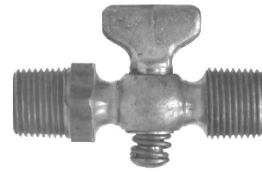
**MIP X BIBB**



- Lever Handle
- Hex

<b>Part #</b>	<b>#65</b>
46-315 .....	1/8
<b>Part #</b>	<b>#66</b>
46-316 .....	1/4
<b>Part #</b>	<b>#14</b>
46-317 .....	3/8
<b>Part #</b>	<b>#15</b>
46-318 .....	1/2

**MIP X MIP**



- Tee Handle
- Hex

<b>Part #</b>	<b>#18</b>
46-320 .....	1/8
<b>Part #</b>	<b>#19</b>
46-321 .....	1/4
<b>Part #</b>	<b>#20</b>
46-322 .....	3/8
<b>Part #</b>	<b>#21</b>
46-323 .....	1/2

**MIP X MIP**



- Lever Handle
- Hex

<b>Part #</b>	<b>#22</b>
46-324 .....	1/8
<b>Part #</b>	<b>#23</b>
46-325 .....	1/4
<b>Part #</b>	<b>#24</b>
46-326 .....	3/8
<b>Part #</b>	<b>#25</b>
46-327 .....	1/2

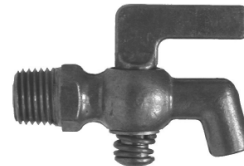
**MIP X BIBB NOSE**



- Tee Handle
- Hex

<b>Part #</b>	<b>#26</b>
46-330 .....	1/8
<b>Part #</b>	<b>#27</b>
46-331 .....	1/4
<b>Part #</b>	<b>#33</b>
46-333 .....	1/2

**MIP X BIBB NOSE**



- Lever Handle
- Hex

<b>Part #</b>	<b>#29</b>
46-335 .....	1/8
<b>Part #</b>	<b>#30</b>
46-336 .....	1/4
<b>Part #</b>	<b>#31</b>
46-337 .....	3/8
<b>Part #</b>	<b>#32</b>
46-338 .....	1/2



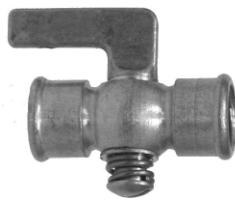
**FIP X FIP**



- Tee Handle
- No Hex

<b>Part #</b>	<b>#37</b>
46-340 .....	1/8
<b>Part #</b>	<b>#38</b>
46-341 .....	1/4
<b>Part #</b>	<b>#39</b>
46-342 .....	3/8

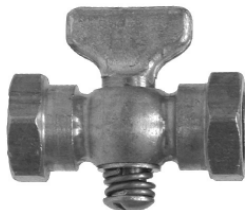
**FIP X FIP**



- Lever Handle
- No Hex

<b>Part #</b>	<b>#43</b>
46-345 .....	1/8
<b>Part #</b>	<b>#44</b>
46-346 .....	1/4
<b>Part #</b>	<b>#34</b>
46-347 .....	3/8

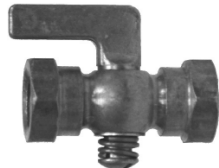
**FIP X FIP**



- Tee Handle
- Hex

<b>Part #</b>	<b>#55</b>
46-350 .....	1/8
<b>Part #</b>	<b>#56</b>
46-351 .....	1/4
<b>Part #</b>	<b>#57</b>
46-352 .....	3/8

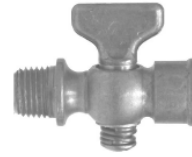
**FIP X FIP**



- Lever Handle
- Hex

<b>Part #</b>	<b>#58</b>
46-355 .....	1/8
<b>Part #</b>	<b>#59</b>
46-356 .....	1/4
<b>Part #</b>	<b>#60</b>
46-357 .....	3/8
<b>Part #</b>	<b>#60A</b>
46-358 .....	1/2

**MIP X FIP**



- Tee Handle
- No Hex

<b>Part #</b>	<b>#40</b>
46-360 .....	1/8
<b>Part #</b>	<b>#41</b>
46-361 .....	1/4
<b>Part #</b>	<b>#42</b>
46-362 .....	3/8

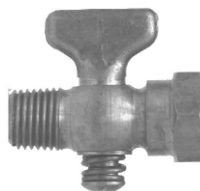
**MIP X FIP**



- Lever Handle
- No Hex

<b>Part #</b>	<b>#46</b>
46-365 .....	1/8
<b>Part #</b>	<b>#47</b>
46-366 .....	1/4
<b>Part #</b>	<b>#48</b>
46-367 .....	3/8
<b>Part #</b>	<b>#48A</b>
46-368 .....	1/2

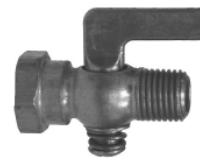
**MIP X FIP**



- Tee Handle
- Hex

<b>Part #</b>	<b>#49</b>
46-370 .....	1/8
<b>Part #</b>	<b>#50</b>
46-371 .....	1/4
<b>Part #</b>	<b>#51</b>
46-372 .....	3/8
<b>Part #</b>	<b>#51A</b>
46-373 .....	1/2

**FIP X MIP**



- Lever Handle
- Hex

<b>Part #</b>	<b>#52</b>
46-375 .....	1/8
<b>Part #</b>	<b>#53</b>
46-376 .....	1/4
<b>Part #</b>	<b>#54</b>
46-377 .....	3/8
<b>Part #</b>	<b>#54A</b>
46-378 .....	1/2



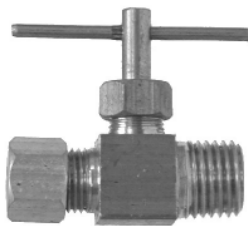


**NEEDLE VALVES**

Made with either pin handle or pressed on handle. Please specify if you have a preference.

- Used on instrumentation, hydraulic, and pneumatic systems.
- Designed for a maximum working pressure of 150 PSI.
- Provided with steel handles and metal-to-metal seats with fine-thread screwdown.
- Not designed for natural gas, LPG, nuclear or aircraft applications.
- Always install with pressure against the seat.

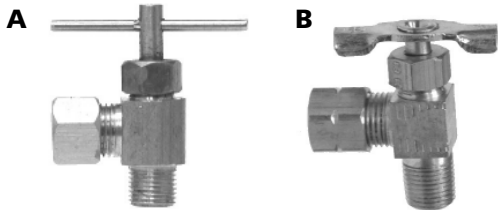
**COMP X MALE PIPE**



NV106C  
2205  
820  
3068

<b>Part #</b>	<b>#M-133-C</b>
20-03-02 .....	3/16X1/8
<b>Part #</b>	<b>#M-101-C</b>
20-04-02 .....	1/4X1/8
<b>Part #</b>	<b>#M-101-C</b>
20-04-04 .....	1/4X1/4
<b>Part #</b>	<b>#M-102-C</b>
20-05-02 .....	5/16X1/8
<b>Part #</b>	<b>#M-143-C</b>
20-06-04 .....	3/8X1/4

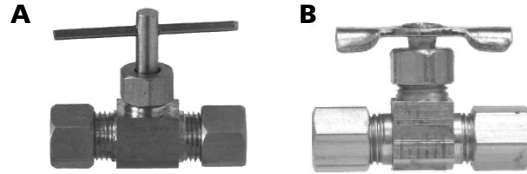
**COMP X MALE PIPE-ANGLE**



NV104C  
2203  
821  
3069

<b>Part #</b>	<b>Handle</b>	<b>#M-33-C</b>
21-03-02 .....	B .....	3/16X1/8
<b>Part #</b>	<b>Handle</b>	<b>#M-103-C</b>
21-04-02 .....	A .....	1/4X1/8
<b>Part #</b>	<b>Handle</b>	<b>#M-104-C</b>
21-04-04 .....	B .....	1/4X1/4
21-05-02 .....	B .....	5/16X1/8
21-05-04 .....	B .....	5/16X1/4
<b>Part #</b>	<b>Handle</b>	<b>#M-303-C</b>
21-06-04 .....	A .....	3/8X1/4

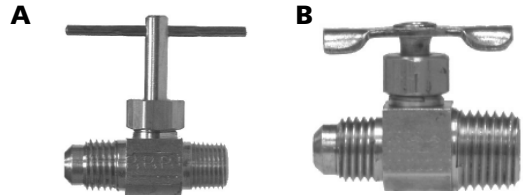
**COMP X COMP**



NV105C  
3062  
2201  
822

<b>Part #</b>	<b>Handle</b>	<b>#M-105-C</b>
19-03-03 .....	B .....	3/16
<b>Part#</b>	<b>Handle</b>	<b>#M-106-C</b>
19-04-04 .....	A .....	1/4
<b>Part#</b>	<b>Handle</b>	<b>#M-107-C</b>
19-05-05 .....	B .....	5/16
<b>Part#</b>	<b>Handle</b>	<b>#M-113-C</b>
19-06-06 .....	A .....	3/8

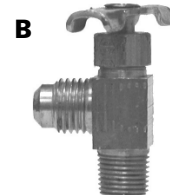
**FLARE X MALE PIPE**



NV103C  
2405  
823  
3048

<b>Part#</b>	<b>Handle</b>	<b>#M-204-SAE</b>
23-04-02 .....	A .....	1/4X1/8
<b>Part#</b>	<b>Handle</b>	<b>#M-1040-SAE</b>
23-04-04 .....	B .....	1/4X1/4
<b>Part#</b>	<b>Handle</b>	<b>#M-108-SAE</b>
23-06-04 .....	B .....	3/8X1/4

**FLARE X MALE PIPE**



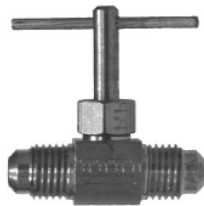
NV101F  
2403  
824  
3049

<b>Part#</b>	<b>Handle</b>	<b>#M-103-SAE</b>
27-04-02 .....	B .....	1/4X1/8
<b>Part#</b>	<b>Handle</b>	<b>#M-203-SAE</b>
27-05-02 .....	B .....	5/16X1/8
<b>Part#</b>	<b>Handle</b>	<b>#M-204-SAE</b>
27-05-04 .....	B .....	5/16X1/4
<b>Part#</b>	<b>Handle</b>	<b>#M-303-SAE</b>
27-06-04 .....	B .....	3/8X1/4

*Send DF Burnham & Company  
all your high volume quotes!*



**FLARE X FLARE**



NV102F  
3042  
825  
2401

<b>Part #</b>	<b>#M-110-SAE</b>
22-04-04 .....	1/4 M-11
<b>Part #</b>	<b>#M-115-SAE</b>
22-06-06 .....	3/4 M-11

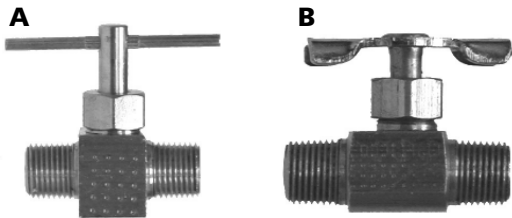
**MULTI-PURPOSE AIR VENT**



705

<b>Part #</b>	
46-048 .....	1/8

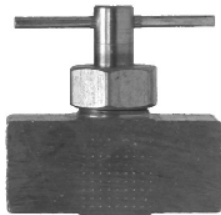
**MALE PIPE TO MALE PIPE**



NV107P  
2301  
826  
3122

<b>Part #</b>	<b>Handle</b>	<b>#M-08-P</b>
24-02-02 .....	A .....	1/8
<b>Part #</b>	<b>Handle</b>	<b>#M-110-P</b>
24-04-04 .....	A .....	1/4

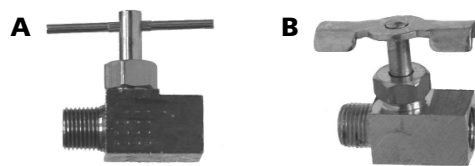
**FEMALE TO FE PIPE**



NV109P  
2304  
817  
3103

<b>Part #</b>	<b>#M-304-P</b>
26-02-02 .....	1/8
<b>Part #</b>	<b>#M-3044-P</b>
26-04-04 .....	1/4

**MALE X FEMALE PIPE**



NV108P  
2305  
818  
3120

<b>Part #</b>	<b>Handle</b>	<b>#M-305-P</b>
25-02-02 .....	A .....	1/8
<b>Part #</b>	<b>Handle</b>	<b>#M-3055-P</b>
25-04-04 .....	A .....	1/4

**FLOW CONTROL NEEDLE & CHECK VALVES**

- Precision calibrated, dial to determine and allow a return to required flow settings
- Safe positive stop for needle travel
- Positive no-leak stem seal
- 2-PSI he k cracking pressure
- 1000 PSI maximum operating pressure
- One piece forged housing
- Nickel plated available

**CHECK VALVE**



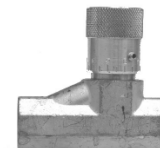
Brass	Size	Steel
C200B .....	1/8 .....	C200S
C400B .....	1/4 .....	C400S
C600B .....	3/8 .....	C600S
C800B .....	1/2 .....	C800S
C1200B .....	3/4 .....	C1200S
C1600B .....	1 .....	C1600S

**FLOW CONTROL**



Brass	Size	Steel
F200B .....	1/8 .....	F200S
F400B .....	1/4 .....	F400S
F600B .....	3/8 .....	F600S
F800B .....	1/2 .....	F800S
F1200B .....	3/4 .....	F1200S
F1600B .....	1 .....	F1600S

**NEEDLE VALVE**



Brass	Size	Steel
N200B .....	1/8 .....	N200S
N400B .....	1/4 .....	N400S
N600B .....	3/8 .....	N600S
N800B .....	1/2 .....	N800S
N1200B .....	3/4 .....	N1200S
N1600B .....	1 .....	N1600S



# Cross Referencing

BURNHAM	TRIDENT	BRENNAN	PARKER	PARKER	AEROQUIP	W HEAD
500	1213	6402	F650X	0506	X	9316
506	1255	6408	P50N	05 CP	900598	7237
506s	1256	6409	HP50N	05 HP	X	7238
507	1268	6405	F50G	0502	2216	C3269
508	1270	6410	F50G5	0510	FF1010	7033
509	1267	6404	FHG5	X	2246	C3239
516	1231	6400	F50X	0503	202702	C5315
522	1236	6801	C50X	2503	2062	C5515
523	1240	6802	V50X	3503	2061	C5365
525	1265	6803	S50X	253 T	203003	C5715
526	1266	6804	R50X	053 T	203005	C5716
527	1263	6806	X	X	X	TF3569
528	1269	6805	AEOG	2502	206801	C3459
601	1218	1501	X	2107	2047	9405
602	1216	1502	X	2207	2048	9455
603	1223	1603	X	X	X	9705
604	1210	1404	X	0107	2045	9205
605	1212	1405	X	0207	2046	9255
606	1214	1503	X	3107	2049	9355
607	1249	1504	X	X	2050	9385
608	1258	1601	X	X	2254	9406
609	1259	1602	X	X	2253	9456
610	1222	1406	X	X	X	X
612	1272	6902	X	3507	X	9365
617	1264	6401	F5F	X	X	C3249
618	1211	6505	F6X	0106	2018	9100
619	1235	6900	X	0507	2066	9315
620	1239	6809	X	X	X	X
620p	1271	6901	X	2507	X	9515
621	1215	6506	G6X	X	2242	C5256
622	1236	6500	C6X	3903	2071	C5506
623	1237	6502	V6X	3703	2070	C5356
625	1227	6600	S6X	393 T	203101	C5707
626	1248	6602	R6X	063 T	203102	C5706
627	1247	6501	X6EF	X	2250	TF5406
806	1254	2408	PNTX	03 CP	900599	C5229
815	1204	2403	HTX	0303	2027	C5305
816	1202	2404	FTX	0103	2021	C5205
818	1311	318	BTX	06 B	1290	C5105
819	1253	319	TX	06 S	900605	C5165
820	1329	304 C	FNTX	06 CP	210292	C5129



# Cross Referencing

821	1234	2500	ETX	2303	2039	C5505
822	1208	2501	CTX	2103	2024	C5405
823	1206	2503	VTX	3103	2023	C5355
824	1220	2603	JTX	033 T	2033	C5705
825	1221	2601	STX	0213 T	2030	C5605
826	1224	2605	RTX	013 T	2028	C5755
827	1229	2650	KTX	033 X	X	C5967
831	X	2705	WGTX	0253	X	5275
832	1260	2700	WTX	0353	2041	C5325
833	1262	2701	WETX	2353	2043	5525
834	1283	2703	WJTX	543 T	X	5737
835	1284	2704	WJJTX	533 T	X	5726
837	1261	2702	WNTX	3353	X	TF5375
854	1230	2405	GTX	0203	2022	C5255
855	1242	2502	DTX	2203	2025	5455
856	1228	2602	OTX	223 T	2031	C5655
857	1226	2606	MTX	023T	2029	X
860	1246	2406	TRTX	0603	2215	C5015
877	1208LO	2501 L	CCTX	5603	202411	C5425
878	1208 LL	2501 LL	CCCTX	5703	202413	X
909	1274	5405	FG	0201	2040	C3209
910	1273	5000	GG	0202	2096	C3309
911	1252	5404	FF	0101	2083	C3069
912	1250	5406	PTR	0102	2081	C3109
914	1243	5502	CD	2102	2089	C3409
914 DS	1243 C	3051	X	X	X	X
915	1244	5503	CD45	3102	X	C3359
916	1245	5504	DD	2202	2087	C3509
917	1225	5605	MMO	022T	2090	C3709
918	1279	5652	KMMOO	022X	2080	C3959
920	1275	5500	CR	2101	2085	C3529
921	1276	5602	MRO	012T	2092	C3759
922	1278	5604	MMS	212T	2091	C3609
923	1277	5603	X	X	2093	C3805
924	1332	306	WLN	53 N	210212	C5924
925	1241	5505	DD45	4202	X	C3559
926	X	5600	RRS	X	X	X
932	X	5406 HP	HHP	01HP	X	C3169
932p	1251	5406	HP	01 CP	2082	3159
F50-F50	1286	3474	F50-F50	0505	X	C5314
C50-C50	X	6807	C50-C50	X	X	X



# Fraction - Decimal Conversion Chart

	Inches	Millime-
1	$\frac{1}{32}$ .015625	.3969
1	$\frac{3}{64}$ .046875	.7938
1	$\frac{5}{128}$ .0625	1.1906
3	$\frac{7}{128}$ .078125	1.5875
1	$\frac{9}{128}$ .09375	1.9844
1	$\frac{11}{128}$ .109375	2.3813
5	$\frac{13}{128}$ .125	2.7781
5	$\frac{15}{128}$ .140625	3.1750
3	$\frac{17}{128}$ .15625	3.5719
3	$\frac{19}{128}$ .171875	3.9688
7	$\frac{21}{128}$ .1875	4.3656
7	$\frac{23}{128}$ .1875	4.7625
1	$\frac{25}{128}$ .203125	5.1594
1	$\frac{27}{128}$ .21875	5.5563
17	$\frac{29}{128}$ .234375	5.9531
9	$\frac{31}{128}$ .250	6.3500
9	$\frac{33}{128}$ .265625	6.7469
5	$\frac{35}{128}$ .28125	7.1438
5	$\frac{37}{128}$ .296875	7.5406
11	$\frac{39}{128}$ .3125	7.9375
11	$\frac{41}{128}$ .328125	8.3344
3	$\frac{43}{128}$ .34375	8.7313
3	$\frac{45}{128}$ .359375	9.1282
13	$\frac{47}{128}$ .375	9.5250
13	$\frac{49}{128}$ .390625	9.9219
7	$\frac{51}{128}$ .40625	10.3188
7	$\frac{53}{128}$ .421875	10.7157
15	$\frac{55}{128}$ .4375	11.1125

	Inches	Millime-
17	$\frac{33}{64}$ .515625	13.0969
17	$\frac{35}{64}$ .53125	13.4938
9	$\frac{37}{64}$ .546875	13.8907
9	$\frac{39}{64}$ .5625	14.2876
19	$\frac{41}{64}$ .578125	14.6844
19	$\frac{43}{64}$ .59375	15.0813
5	$\frac{45}{64}$ .609375	15.4782
5	$\frac{47}{64}$ .625	15.8751
21	$\frac{49}{64}$ .640625	16.2719
21	$\frac{51}{64}$ .65625	16.6688
11	$\frac{53}{64}$ .671875	17.0657
11	$\frac{55}{64}$ .6875	17.4626
23	$\frac{57}{64}$ .703125	17.8594
23	$\frac{59}{64}$ .71875	18.2563
3	$\frac{61}{64}$ .734375	18.6532
3	$\frac{63}{64}$ .750	19.0501
25	$\frac{65}{64}$ .765625	19.4470
13	$\frac{67}{64}$ .78125	19.8438
13	$\frac{69}{64}$ .796875	20.2407
27	$\frac{71}{64}$ .8125	20.6376
27	$\frac{73}{64}$ .828125	21.0345
7	$\frac{75}{64}$ .84375	21.4313
7	$\frac{77}{64}$ .859375	21.8282
29	$\frac{79}{64}$ .875	22.2251
15	$\frac{81}{64}$ .890625	22.6220
15	$\frac{83}{64}$ .90625	23.0188
31	$\frac{85}{64}$ .921875	23.4157
31	$\frac{87}{64}$ .9375	23.8126



# Thread Info.

**Thread Chart**

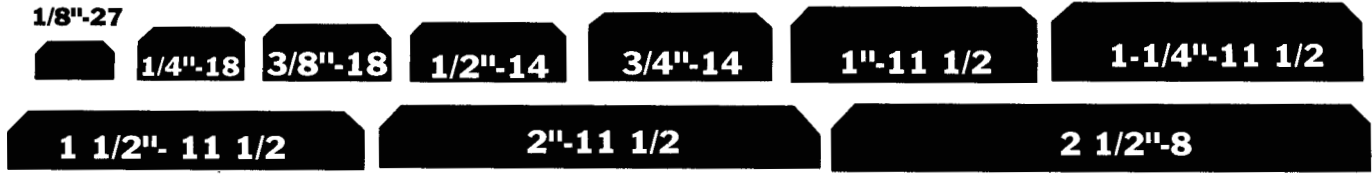
DASH SIZE	2	3	4	5	6	7	8	10	12	14	16	20	24	32	40	48	
O.D. TUBING	1/8	5/32	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	1-1/4	1-1/2	2	2-1/2	3
STANDARD PIPE																	
SIZE N.P.T.F. (DRYSEAL)*	1/8-27		1/4-18		3/8-18		1/2-14		3/4-14		1-11 1/2	1 1/4-11 1/2	1 1/2-11 1/2	2-11 1/2	2 1/2-8	3-8	
S.A.E. 45° FLARE	5/16-24	3/8-24	7/16-20	1/2-20	5/8-18	11/16-16	3/4-16	7/8-14	1 1/16-14	1 1/4-12	1 3/8-12						
INVERTED FLARE	5/16-24	3/8-24	7/16-24	1/2-20	5/8-18	11/16-18	3/4-18	7/8-18	1 1/16-16								
J.I.C. 37° FLARE	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18		3/4-16	7/8-14	1 1/16-12	1 3/16-12	1 5/16-12	1 5/8-12	1 7/8-12	2 1/2-12	3-12	3 1/2-12	
COMPRESSION FLARELESS	5/16-24	3/8-24	7/16-24	1/2-24	9/16-24	5/8-24	11/16-20	13/16-18	1-18	1 1/8-18							
COMPRESSION (PLASTIC TUBE)	5/16-24	3/8-24	3/8-24	7/16-24	1/2-24		11/16-20										
AIR BRAKE - PLASTIC TUBE			7/16-24		17/32-24		11/16-20	13/16-18	1-18								
AIR BRAKE - COPPER TUBE			7/16-24	1/2-24	17/32-24		11/16-20	13/16-18	1-18								
DOUBLE COMPRESSION	5/16-24	3/8-24	7/16-24	1/2-20	9/16-20		11/16-16										
STEEL COMPRESSION (HIGH PRESSURE)	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18		3/4-16	7/8-14	1 1/16-12	1 3/16-12	1 5/16-12	1 5/8-12	1 7/8-12	2 1/2-12			
S.A.E. O-RING	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18		3/4-16	7/8-14	1 1/16-12	1 3/16-12	1 5/16-12	1 5/8-12	1 7/8-12	2 1/2-12			
INTERNAL O-RING			1/2-20	9/16-18	5/8-18		7/8-14	1-14	1 1/8-12	1 1/2-12	1 3/4-12	2-12					
NPSM SWIVEL THREAD	1/8-27		1/4-18		3/8-18		1/2-14		3/4-14		1-11 1/2	1 1/4-11 1/2	1 1/2-11 1/2	2-11 1/2			
FLAT FACE THREAD			9/16-18		11/16-16		13/16-16	1-14	1 3/16-12		1 7/16-12	1 11/16-12	2-12				
BRITISH THREAD BSPP/BSPT	1/8-28		1/4-19		3/8-19		1/2-14		3/4-14		1-11	1 1/4-11	1 1/2-11	2-11			
METRIC THREAD	10	12	14	16	18	20	22	24	26	27	30	33	36	42	48		
M10X1.0		M12x1.5	M14x1.5	M16x1.5	M18x1.5	M20x1.5	M22x1.5	M24x1.5	M26x1.5	M27x2.0	M30x2.0	M33x2.0	M36x2.0	M42x2.0	M48x2.0		
CODE 61							1.19	1.335	1.50		1.75	2.00	2.38	2.81	3.31	4.00	
FLANGE HEAD O.D																	
CODE 62							1.25		1.62		1.88	2.12	2.50	3.12			
FLANGE HEAD O.D																	



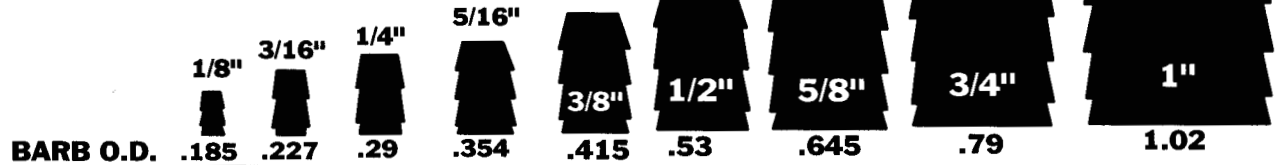
# Thread Profiles

## Pipe Threads

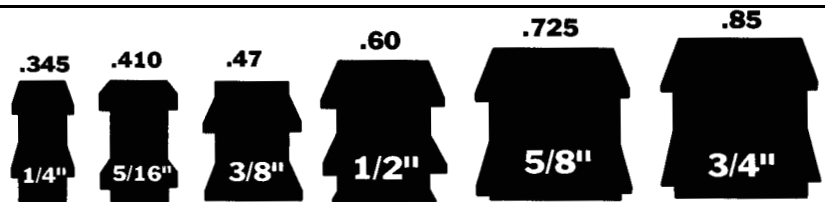
1/8"-27



## Hose Barb Fittings



## Push On Fittings

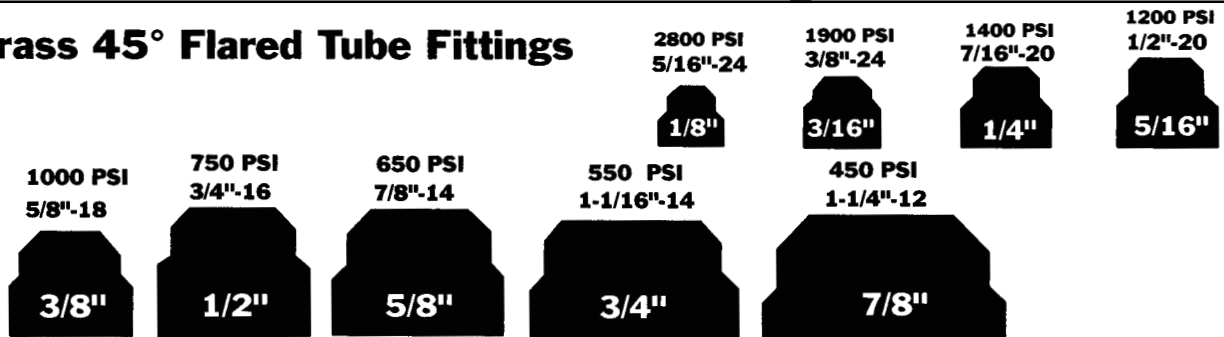


## Garden Hose Fittings

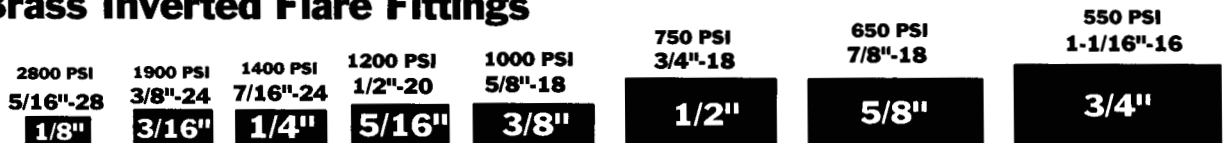
Male Garden Hose Threads are 3/4" with O.D. of 1.0625 and 11-1/2 threads per inch



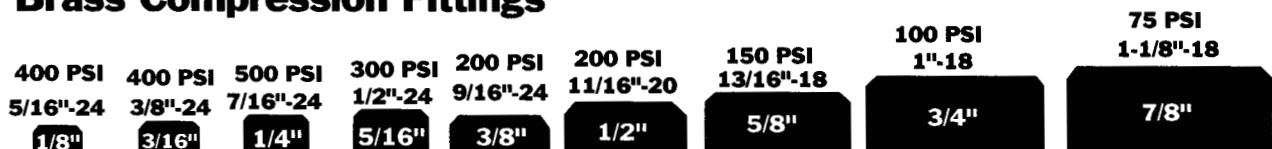
## Brass 45° Flared Tube Fittings



## Brass Inverted Flare Fittings



## Brass Compression Fittings



## Tubeing O.D. Size



# Tooling & Equipment



## PERMA-CRIMP™

### PC125M

**Description:** Carried to the job site, using a handle and support stand, the PC125M is ideal for portable crimping requirements. Whether carried on-site, or used in a vehicle, or even stationary at the shop, the PC125M is designed as a low volume crimper or for occasional use. Crimp diameter is set and controlled with an easy to read micrometer. This affordable crimper is packaged in component parts to fit the need of the user. The PC125M has three power options. No electrical power source required if using the hand or pneumatic pump option. A 1/2 HP, 110V electric pump is available as well. The PC125M includes die ring pusher, stand, compression ring, pressure plate and a metric micrometer. Pumps and dies are purchased separately



#### Dies:

Part Number	ID	Part Number	ID
PC125-8.5Black	8.5mm	PC125-27Brown	27mm
PC125-12Black	12mm	PC125-31Silver	31mm
PC125-14Red	14mm	PC125-16Blue	16mm
PC125-34Purple	34mm	PC125-41Orange	41mm
PC125-19Green	19mm	PC125-45Black	45mm
PC125-23Yellow	23mm	PC125-50Black	50mm

#### Options:

- PC125M-Skit includes the PC125M crimper and 5 die sets including 16mm, 19mm, 23mm, 31mm, 41mm dies for 1/4" to 1" 1-braid and 2-braid hose.
- PC125-Shelf-Black Die Storage Shelf 13" deep x 12.5" wide x 15" high, 12 lbs
- PC125-Hpump—Two Stage Hand Pump
- PC125-Ppump-Air/Hydraulic Pump
- PC125M-.5EPump-1/2 HP, 110V Electric Pump

#### Replacement Parts:

- PC125M-Pusher-Die Ring Pusher
- PC125-Cring-Compression Ring
- PC125-Plate-Pressure Plate
- PC125-Die Screw-Die Screw
- PC125-Die Spring—Die Spring
- PC125-Hpump—Optional Two Stage Hand Pump
- PC125-Ppump—Optional Air/Hydraulic Pump
- PC125M-.5EPump-Optional 1/2 HP, 110V Electric Pump
- PC900-Grease-3 oz.-High Pressure grease in a 3 oz. tube
- PC900-Grease-1 lb.-High Pressure grease in a 1 lb. can
- PC900-AerosolLube-High Pressure grease in an aerosol can

#### Features:

- Easy to read, fully adjustable metric micrometer allows precise setting of crimp diameters to an accuracy of +/- .1mm.
- Open design with vertical feed for good operator visibility.
- Removable pusher and spring loaded die set for easy loading.
- 35 ton cylinder
- Two piece, "slide in" die design for easy installation
- Lightweight for portable field use
- Color coded die sets to speed die selection and set-up
- Attach hand, air or electric pump

#### Capability:

- 1/4" through 1 1/4" ID, 2 wire braid hose and 1" ID 4-spiral hose with all coupling end styles including most bent tubes.

#### Power Source:

- Optional Two Stage Hand Pump, 10,000 psi (PC125-HPump)
- Optional Air/Hydraulic Pump, 10,000 psi using 80 psi air (PC125-PPump)
- Optional 1/2 HP 110VAC, single phase, 50-60 Hz Electric Pump (PC125M-.5EPump) with foot switch

**Oil Capacity:** 1 gallon

**Mounting:** Stand included

**Dimensions:** 14" deep x 11" wide x 23.5" high

**Weight:** 45 lbs



Electric Pump  
(PC125M-.5EPump)



Metric  
Micrometer



PC125 Die Set



Hand Pump  
(PC125 HPump)



PC125 Die  
Storage Shelf



Air/Hydraulic Pump  
(PC125-PPump)



Phone 1-800-989-1770

www.dfburnham.com

Fax 1-800-989-1774



# Tooling & Equipment



## PERMA-CRIMP™

### PC125

**Description:** The PC125 portable crimper with its open design, removable pusher and easy to use, spring loaded die set, is designed for higher production volume and repetitive use. Crimp diameter is set and controlled with an easy to read micrometer. The PC125 is packaged for shop service and includes the crimper and 1 HP, 110V electric pump on a common base, compression ring, pressure plate, magnetized die ring pusher, stop/start remote pendant switch, metric micrometer, adjustable coupling stop, metric micrometer, adjustable coupling stop and adjustable retraction stop.



#### Features:

- Easy to read, fully adjustable metric micrometer allows precise setting of crimp diameters to an accuracy of +/- .1mm
- Open design with vertical feed for good operator visibility.
- Removable pusher and spring loaded die set for easy loading
- Magnetized pusher to attach compression ring for repetitive use
- 35 ton cylinder
- Automatic shut off for precise crimps
- Adjustable Retraction Stop limits ram retractions for quick repetitive crimps
- Adjustable coupling stop for accurate, repetitive positioning of the assembly inside the dies
- Two piece, "slide in" die design for easy installation.
- Common base for bench mounting
- Color coded die sets to speed die selection and set-up
- 1 HP, HOV pump
- Pneumatic activation (no electric wires) of remote pendant switch

#### Capability:

- 1/4" through 1 1/4" ID, 2 wire braid hose and 1" ID 4-spiral hose with all coupling end styles including most bent tubes.

#### Power Source:

- 1 HP 110V AC, single phase 50-60 Hz, Electric Pump (PC125/150-E1PUMP) with pneumatic stop/start pendant switch

**Oil Capacity:** 1 gallon

**Mounting:** Crimper and pump installed on plate

**Dimensions:** 20" deep x 11" wide x 19" tall

**Weight:** 125 lbs

#### Dies:

Part Number	ID	Part Number	ID
PC125-8.5Black	8.5mm	PC125-27Brown	27mm
PC125-12Black	12mm	PC125-31Silver	31mm
PC125-14Red	14mm	PC125-16Blue	16mm
PC125-34Purple	34mm	PC125-41Orange	41mm
PC125-19Green	19mm	PC125-45Black	45mm
PC125-23Yellow	23mm	PC125-50Black	50mm

#### Options:

- PC 125-Skit includes the PC125 crimper and 5 die sets including 16mm, 19mm, 23mm, 31mm, 41mm dies for 1/4" to 1" 1-braid and 2-braid hose.
- PC125-Shelf-Black Die Storage Shelf 13" deep x 12.5" wide x 15" high, 12 lbs

#### Replacement Parts:

- PC125-Pusher-Die Ring Pusher with magnets
- PC125-Cring—Compression Ring
- PC125-Pplate-Pressure Plate
- PC125-Cstop-Adjustable Coupling Stop
- PC125-Die Screw-Die Screw
- PC125-Die Spring—Die Spring
- PC125-Switch-Pneumatic Start/Stop Pendant Switch for 1 HP Pump
- PC125/150-E1Pump-1 HP 110V Electric Pump
- PC900-Grease-3 oz.—High Pressure grease in a 3 oz. tube
- PC900-Grease-1 lb.—High Pressure grease in a 1 lb. can
- PC900-AerosolLube—High Pressure grease in an aerosol can



Metric Micrometer



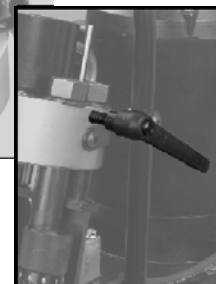
PC125 Die Storage Shelf



PC125 Die Set



PC125 Coupling Stop



PC125 Retraction Stop



PC125 Magnetic Pusher

Tooling & Equipment



# Tooling & Equipment

**GOODYEAR**

## PERMA-CRIMP™

### PC150 Series

Including PC150-1 and PC150-2

**Description:** The PC150 is a stationary crimper with more power to manufacture factory quality hose assemblies, quickly and easily. Its open design with removable pusher and "slide in" die configuration allows for good visibility and easy loading of dies and hose assemblies. Crimp diameter is set and controlled with an easy to read micrometer. Designed to handle higher volumes in a shop environment, the PCI 50-2 includes the crimper and 2 HP pump on a common base, pressure plate, compression ring, die ring pusher, stop/start remote pendant switch, metric micrometer, adjustable coupling stop, adjustable retraction stop and work light. The optional PC150-1 includes all the components of the PCI 50-2 and a 1 HP pump.



#### Dies:

Part Number	ID	Part Number	ID
PC150-8.5Black	8.5mm	PC150-27Brown	27mm
PC150-12Black	12mm	PC150-31Silver	31mm
PC150-14Red	14mm	PC150-34Purple	41mm
PC150-16Blue	16mm	PC150-41Orange	34mm
PC150-19Green	19mm	PC150-45Black	45mm
PC150-23Yellow	23mm	PC150-50Black	50mm
		PC150-56Black	56mm

#### Options:

- PC150-2Skit includes PCI 50-2 crimper and 7 die sets including 16mm, 19mm, 23mm, 31mm, 41mm, 50mm, 56mm dies for 1/4" to 1 1/2" 1-braid to 4-spiral hose.
- PC150-ISkit includes PC150-1 crimper and 7 die sets including 16mm, 19mm, 23mm, 31mm, 41mm, 50mm, 56mm dies for 1/4" to 1 1/2" 1-braid to 4-spiral hose.
- PC150-Shelf-Black Die Storage Shelf Unit 15" deep x 20.5" wide x 16" high, 25 lbs
- PC150-Spacer-Spacer Kit for Elbows
- PC150-1 with 1 HP Pump

#### Replacement Parts:

- PC150-Pusher-Die Ring Pusher
- PCI 50-Cring— Compression Ring
- PC150-Pplate-Pressure Plate
- PC150-Cstop-Adjustable Coupling Stop
- PC150-Die Screw-Die Screw
- PC150-Die Spring—Die Spring
- PC125/150-Switch-Pneumatic Start/Stop Pendant Switch for 1 HP or 2 HP Pump
- PC150-E2Pump-2 HP Electric Pump for PCI 50-2 Crimper
- PC125/150-E1Pump-1 HP Electric Pump for PC150-1 Crimper
- PC900-Grease-3 oz.-High Pressure grease in a 3 oz. tube
- PC900-Grease-1 lb.—High Pressure grease in a 1 lb. can
- PC900-AerosolLube-High Pressure grease in an aerosol can

#### Features:

- Easy to read, fully adjustable metric micrometer allows precise set-ring of crimp diameters to an accuracy of +/- .1mm
- Open design with vertical feed for good operator visibility
- Removable pusher and spring loaded die set for easy loading
- 80 ton cylinder
- Automatic shut off for precise crimps
- Adjustable Retraction Stop limits ram retractions for quick repetitive crimps
- Adjustable coupling stop for accurate, repetitive positioning of the assembly inside the dies
- Two piece, "slide in" die set for easy installation.
- Common base for bench mounting
- Color coded die sets to speed die selection and set-up
- 2 HP, 220V pump
- Pneumatic activation (no electric wires) of remote pendant switch

#### Capability:

- 1/4" through 1 1/2" ID, 2 wire braid hose and 4-spiral hose with all coupling styles and most bent tubes

#### Power Source:

- 2 HP 220V AC, single phase, 50-60 Hz Electric Pump (PC150-E2Pump) for PC150-2 crimper
- Optional 1 HP 110VAC, single phase, 50-60 Hz Electric Pump (PC125/150-E1Pump) for PC150-1 crimper

**Oil Capacity:** 1 gallon

**Mounting:** Crimper and pump installed on plate

**Dimensions:** 32" deep x 16.5" wide x 29" high

**Weight:** 275 lbs



Metric Micrometer



PC150 Die Set



PC150 Coupling Stop



PC150 Retraction Stop



Phone 1-800-989-1770

www.dfburnham.com

Fax 1-800-989-1774

# Tooling & Equipment



## PERMA-CRIMP™

### PC200 Series

Including PC200-1 and PC200-2

**Description:** The PC200 is a high volume, high capacity, stationary crimper, utilizing microprocessor control for the fastest, most accurate crimping system available. Crimp settings, dwell time, pre-set start positions and PC200-1 auto/manual operation are all easily set with electronic controls. This production crimper is a quick and easy way to make factory quality hose assemblies. The standard package is the PC200-1 crimper which includes a 7.5 HP, 230V/3 phase pump and foot pedal. The optional PC200-2 crimper includes a 7.5 HP, 480V/3 phase pump and foot pedal.



**Features:**

- Hose feed is horizontal from both front or rear.
- Accurate Electronic PLC Crimp Diameter Adjustment
- Manual or automatic mode
- Max Die Size +75 mm
- 340 ton cylinder
- Automatic shut off for precise crimps
- Power return stroke and return limit control
- Rapid retraction of die fingers through hydraulic system
- Die Sets easily changed using hand tool
- Accommodates bent tube/elbow couplings with the ability of installing 2", 90 degree fittings on both ends.

**Capability:**

- 1/4" through 2" ID, 2 wire braid hose and 2" 6 spiral hose with all coupling end styles including most bent tubes.

**Power Source:**

- 7.5 HP, 230V AC, 3 phase, 60 Hz (PC200-E7.5-1Pump)
- Optional 7.5 HP 480V AC, 3 phase, 60 Hz (PC200-E7.5-2Pump) for the PC200-2 crimper.

**Oil Capacity:** 8 gallon **Mounting:** Bench or cabinet

**Dimensions:** 18.5" deep x 27.5" wide x 31.5" high (without die cabinet)

**Weight:** 573 lbs (excluding cabinet)

**Dies:**

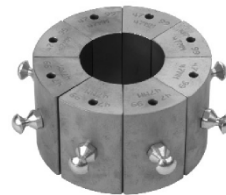
Part Number	ID	Part Number	ID
PC200-8.5	8.5mm	PC200-34	34mm
PC200-12	12mm	PC200-41	41mm
PC200-14	14mm	PC200-45	45mm
PC200-16	16mm	PC200-50	50mm
PC200-19	19mm	PC200-56	56mm
PC200-23	23mm	PC200-62	62mm
PC200-27	27mm	PC200-69	69mm
PC200-31	31mm	PC200-74	74mm
		PC200-78	78mm

**Options:**

- PC200-ISkit includes the PC200-1 crimper and 10 die sets including 16mm, 19mm, 23mm, 31mm, 41mm, 50mm, 56mm, 62mm, 69mm, 75mm dies for 1/4" to 2" 1-braid to 6-spiral hose.
- PC200-2Skit includes the PC200-2 crimper and 10 die sets including 16mm, 19mm, 23mm, 31mm, 41mm, 50mm, 56mm, 62mm, 69mm, 75mm dies for 1/4" to 2" 1-braid to 6-spiral hose.
- PC200-Rack-Black Die Cabinet 20" deep x 30" wide x 29" high
- PC200-MBS-Manual Back Stop
- PC200-EBS-Electric Back Stop

**Replacement Parts:**

- PC900-Grease-lib-High Pressure grease in a 1 lb. can
- PC900-AerosolLube-High Pressure grease in



PC200 Die Set



Foot Switch



Control Panel



Die Cabinet

Tooling & Equipment



# Tooling & Equipment

**GOODYEAR**

## SAWS

### SW101

**Description:** Designed to cut, 1-wire braid and 2-wire braid hydraulic hose up to 1 1/2" ID. **Features:**

- Radius hose feed into blade for reduced friction
- Reversible scallop edge blade design for extended life
- Includes 115 volt power cord and plug
- U.L. listed (Electrical)

**Blade Dimensions:**

- 8" scalloped blade (Replacement part number - SW200)

**Shaft Diameter:** 5/8"

**Power Source:**

- 1 1/2 HP (2.6 HP Peak), single phase, 115V 60 Hz, 15 amps
- This unit will operate on standard 20 amp service.

**Speed:** 3500 Max RPM

**Dimensions:** 13" wide x 24" long x 17" high

**Weight:** 65 lbs



### SW102

**Description:** Designed to cut, 1-wire braid, 2-wire braid and 6-spiral hydraulic hose up to 2" ID. **Features:**

- Radius hose feed into blade for reduced friction
- Reversible scallop edge blade design for extended life
- Designed for direct electrical hook-up. No power cord.
- U.L. Listed (Electrical)

**Blade Dimensions:**

- 10" scalloped blade (Replacement part number - SW201)

**Shaft Diameter:** 3/4"

**Power Source:**

- 3 HP (5.2 HP Peak), single phase, 230V, 60 Hz, 15 amps
- An electrician is recommended for direct line hook-up.

**Speed:** 3500 Max RPM

**Dimensions:** 22" wide x 42" long x 24" high

**Weight:** 130 lbs



### SW103

**Description:** Designed to cut, 1-wire braid, 2-wire braid, 4-spiral and 6-spiral hydraulic hose up to 2" ID. Includes skiver.

**Features:**

- Wire brush skiving attachment for up to 2" ID wire braid hose
- Radius hose feed into blade for reduced friction
- Reversible scallop edge blade design for extended life
- Designed for direct electrical hook-up. No power cord.
- U.L. Listed (Electrical)

**Blade Dimensions:**

- 10" scalloped blade (Replacement part number - SW201)

**Shaft Diameter:** 3/4"

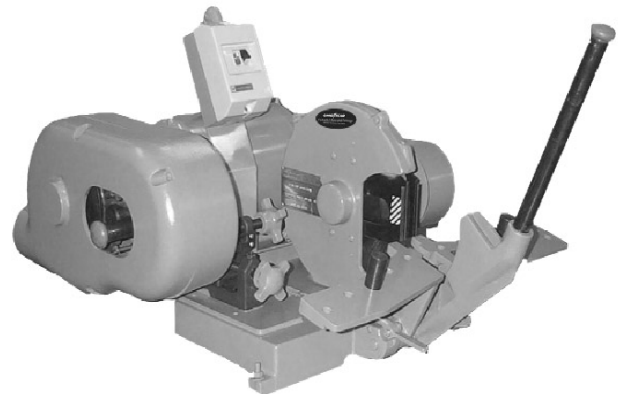
**Power Source:**

- 3 HP (5.2 HP Peak), single phase, 230V, 60 Hz, 14 amps
- An electrician is recommended for direct line hook-up.

**Speed:** 3500 Max RPM

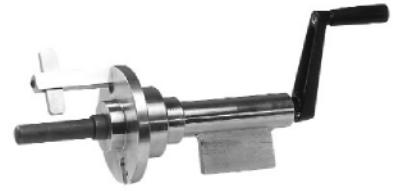
**Dimensions:** 24" wide x 42" long x 24" high

**Weight:** 183 lbs



# Tooling & Equipment

## MANUEL HOSE SKIVING TOOL



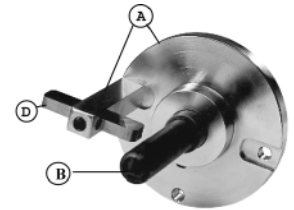
### Holder

- Manual skiving device designed for field service smaller workshops and service vans.
- Suitable for both internal and external skiving.
- Quickly and easily mounted to a vice
- Separate tooling available for 3/16"-1" ID (short arm) and 1-1/4"-2" ID (long arm)



### External Skiving Tool

This is a very robust and sturdy tool, suitable for skiving spiral and braided hoses from 3/16" to 2"ID. A complete tool consists of a holder with one arm (A), a mandrel (B), a double arm (C), which is optional, and two, external skiving knives (D). Each knife has 4, sharp edges.



**Material (Holder):** Stainless Steel 1914, zinc plated  
**Material (Mandrel):** Stainless Steel 1672, hardened  
**Weight:** 8.8 lbs

### Part Number

- SK01 = Holder only (A)
- SK02 = Holder with 3.9" short arm (A)
- SK05 = Holder with 4.9" long arm (A)

**Hose Capacity:** 3/16" to 2" ID

**Color:** Zinc Plating

**Length:** 19.6"

**Weight:** 8.8 lbs

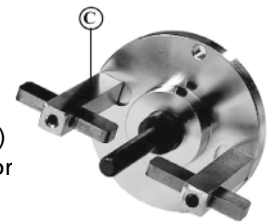
### Options:

- External skiving tools (see following specifications)
- Internal skiving tools (see following specifications)

### Short Arm

#### Part Number

- SK03 = Double, Short Arm, 3.9" (C)
- SK04 = External Skiving Knife for Short Arm (D)



#### Mandrels:

Part Number	Size	Skiving Length
SK04-03	3/16"	.9-1.5"
SK04-04	1/4"	.9-1.5"
SK04-05	5/16"	.9-1.6"
SK04-06	3/8"	.9-1.8"
SK04-08	1/2"	.9-1.8"
SK04-10	5/8"	.9-2.6"
SK04-12	3/4"	.9-2.6"
SK04-16	1"	.9-2.4"

### Long Arm

#### Part Number

- SK06 = Double, Long Arm, 4.9" (C)
- SK04 = External Skiving Knife for Lon Arm (D)

#### Mandrels:

Part Number	Size	Skiving Length
SK04-20	1-1/4"	1.8-3.3"
SK04-24	1-1/2"	1.8-3.3"
SK04-32	2"	1.8-3.3"

Tooling & Equipment



# Tooling & Equipment

## INTERNAL SKIVING TOOL

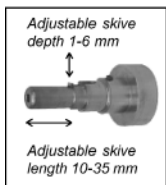


The internal skiving tool is used for the internal skiving of spiral hoses with 3—6 reinforcement layers. The tool is adjustable to suit varying needs of skiving lengths and depths.

**Material:** Stainless Steel 1672, hardened

**Adjustable Skive Length:** .4-1.4"

**Adjustable Skive Depth:** .04-.2"



**Length:** 5.9-7.9"

**Weight:** .7-1.1 lbs

Part Number	Description
SK10-06	3/8" Internal Skiving Tool
SKI 1-06	3/8" Knife
SK10-08	1/2" Internal Skiving Tool
SKI 1-08	1/2" Knife
SK10-10	5/8" Internal Skiving Tool
SKI 1-10	5/8" Knife (Also used for 3/4")
SK10-12	3/4" Internal Skiving Tool
SKI 1-10	3/4" Knife (Also used for 5/8")
SK10-16	1" Internal Skiving Tool
SKI 1-16	1" Knife (Also used for 1 1/4")
SK10-20	1 1/4" Internal Skiving Tool
SKI 1-16	1 1/4" Knife (Also used for 1")
SK10-24	1 1/2" Internal Skiving Tool
SKI 1-24	1 1/2" Knife (Also used for 2")
SK10-32	2" Internal Skiving Tool
SKI 1-24	2" Knife (Also used for 1

Tooling & Equipment



# Tooling & Equipment

## Model 624 Manual Bender

### Specifications

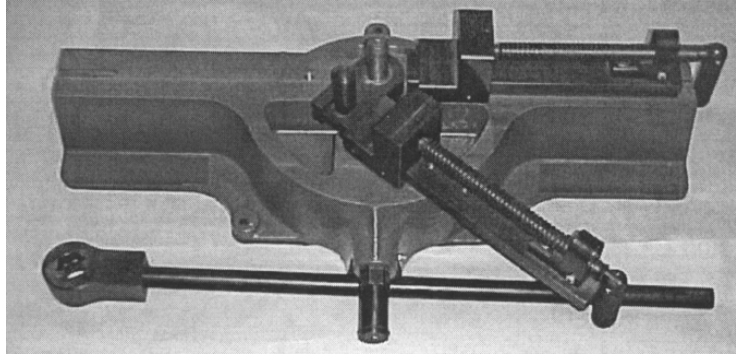
**Tube Size**

3/8" thru 1-1/2" O.D.  
 1/8" thru 1" Schedule 40 Pipe  
 6mm thru 32mm metric tubing

**Weight** - 125 lbs

**Gear Ratio** - 4:1 worm

**Size** - 30-1/2" L, 19" W, 7-3/4" H



Tooling & Equipment

### Tooling

## Modeling 624 Bender

Model 624 Bender ..... 3/8" to 1-1/2" Capacity ..... 6-624-1

### Tooling Clamp Blocks

3/8" Individual ..... 6-6-3  
 1/2"-3/4"-1"-1-1/2" ..... combo ..... 6-092-1  
 5/8"-7/8"-1"-1-1/4" ..... combo ..... 6-093-1  
 Any Individual Size ..... By Size

### Slide Blocks

3/8" Individual ..... 6-7-3  
 1/2"-3/4"-1"-1-1/2" ..... combo ..... 6-516-1  
 5/8"-7/8"-1"-1-1/4" ..... combo ..... 6-518-1  
 Any Individual Size ..... By Size

### Radius Blocks

**1" O.D. tube bent to 3" centerline radius**

O.D.	Centerline	
3/8"	1-1/8"	6-512-18
3/8"	1-1/4"	6-512-20
1/2"	1-1/4"	6-515-20
1/2"	1-1/2"	6-515-24
5/8"	1-1/2"	6-518-24
5/8"	1-7/8"	6-518-30
3/4"	1-3/4"	6-521-28
3/4"	2-1/4"	6-521-36
7/8"	2"	6-523-32
7/8"	2-5/8"	6-523-42
1"	3"	6-524-48
1-1/8"	3-3/8"	6-526-54
1-1/8"	3-1/2"	6-526-56
1-1/4"	3-3/4"	6-527-60
1-1/2"	4-1/2"	6-530-72
1-1/2"	5"	6-530-80



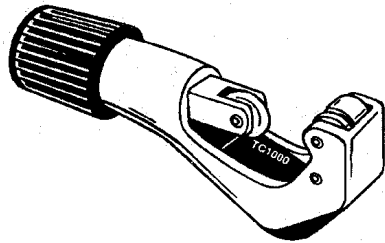




# Tooling & Equipment

## Tube Cutters

For hard or soft copper, aluminum, brass, thin wall steel, stainless steel, monel, titanium and other metal tubing.



**TC-1000**

Rollers have flare cut-off groove, fold away reamer and spare cutting wheel.

For 1/8" to 1 1/8" (4 to 28 mm) O.D. tubing, (1/8" to 1" nom.).  
Length: 4 15/16"  
Weight: 6 1/2 oz.

**312-FC**

For 1/4" to 1 5/8" (7 to 41 mm) O.D. tubing, (1/8" to 1 1/2" nom.).  
Length: 5 1/2"  
Weight: 7 oz.

**TC-1020**

Combination tube constictor and cutter for 1/8" to 1 1/8" (4 to 28 mm) O.D. tubing.  
Includes roller for making brazed connections.

**Replacement Parts:**

**S75015**

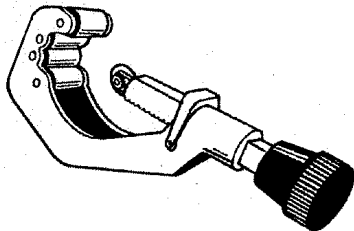
Standard cutting wheel

**S75046**

Cutting wheel for stainless steel and hard temper tubing

**S74762**

Screw for cutting wheel



**206-FB**

Ratchet feed mechanism speeds up cutting operation. Extra wide rollers stabilize tubing. Spare cutting wheel included.

For 3/8" to 2 5/8" (10 to 66 mm) O.D. tubing, (1/4" to 2 1/2" nom.).  
Length (closed): 7 3/4"  
Weight: 2 lbx.

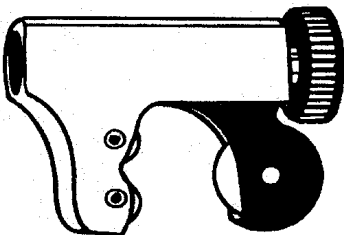
**406-FA**

2" to 4" cutter for 2" to 4 1/8" (51 to 104 mm) O.D. tubing, (2" to 4" nom.)  
Length (closed): 11 1/4"  
Weight: 3 1/2" lbs.

**Replacement Parts:**

**S74761**

Cutting wheel for 206-FB-BPD



**TC-1050**

For 1/8" to 5/8" (4 to 15 mm) O.D. tubing, (1/8" to 1/2" nom.)  
Requires only 1 1/4" swing radius. (Requires only 1 3/8" swing radius with 5/8" tube.)

Repositioned rollers to bottom of tool allows for easier cutter engagement on tubing. Enclosed feed-screw minimized contamination, assuring continued free operation. Redesigned feed mechanism improves overall cutting action.

Size: 1 3/4" x 1 1/4" x 1/2"  
Weight: 2 1/2 oz.

**TC-2050**

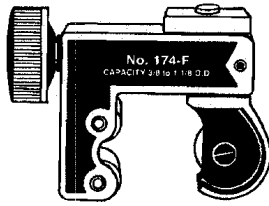
For 3/16" to 7/8" (5 to 22 mm) O.D. tubing. (Requires only 1 11/16" swing radius.)

**Replacement Parts:**

Screw for cutting wheel TC-1050-BPD

Cutting wheel for TC-1050-BPD

# Tooling & Equipment



174-F

For 3/8" to 1 1/8" (10 to 28 mm) O.D. tubing, (1/4" to 1" nom.).  
Requires only 1 15/16" swing radius.  
(Requires only 2 1/4" swing radius with 1 1/8" tube.)

Size: 2 11/16" x 2 1/32" x 1 1/8"  
Weight: 5 oz.

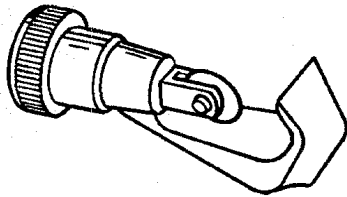
**Replacement Parts:**

S75015

Cutting wheel

S75046

Cutting wheel for stainless steel and hard temper tubing



227-FA

For 1/8" to 3/4" (4 to 19 mm) O.D. tubing, (1/8" to 5/8" nom.).  
Enclosed feed mechanism.

Length: 3 1/2"  
Weight: 5 oz.

**Replacement Parts:**

S32633

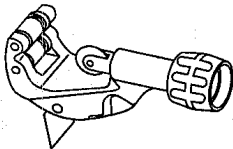
Cutting wheel

## Kloskut® Tube Cutters

Adjustable tube cutters to produce square cut ends with no external burr and minimum internal burring when used on fully annealed copper, brass, aluminum, and steel tubing. Features a hardened and burnished too-steel cutting wheel, flare cut-off grooves in rollers for removal of old flares, swith-away reamer for removing internal burrs.

Handle feeds and adjusts cutting wheel to uniformly cut tubing as the cutter is rotated.

NOTE: Tube cutters are not recommended for use with stainless steel tubing because of the work hardening effect. The use of a hacksaw with a "Tru-Kut" Sawing Vise or a rotary teeth saw is best recommended for stainless steel.



218B-BPD

218B-BPD

**Medium Kloskut**

For tubing sizes -2 (1/8" O.D.) to -18(1 1/8" O.D.)

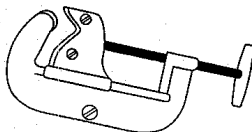
Weight: 11 oz.

1232-BPD

**Large Kloskut**

For tubing sizes -12 (3/4" O.D.) to -32 (2" O.D.) Die-cast aluminum frame.

**Replacement Parts**



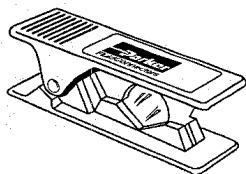
1232-BPD

218B Wheel-BPD

Cutter wheel for No. 218B Tube Cutter

1232 Wheel-BPD

Cutter Wheel for No. 1232 Tube Cutter



PTC-001

**Plastic Tube Cutter**

May be used with polyethylene, Polypropylene, nylon and other thermoplastic tubing. For tube O.D. sizes 1/8" to 1/2"

PTC-001RB

Replacement blades



# Tooling & Equipment

## Hand Tube Benders

Sturdy, easy-to-use hand tools for fast accurate bending without kinks or visible flattening. Individual sizes in three modest from size 2 (1/8" O.D.) to 16 (1" O.D.). See Table O3 for part numbers and technical data.

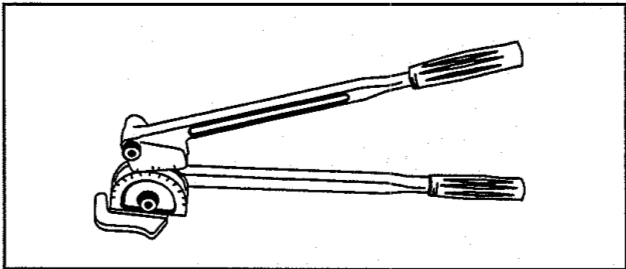
## Medium Duty Hand Tube Benders

Designed and built for fast accurate bends and long service life.

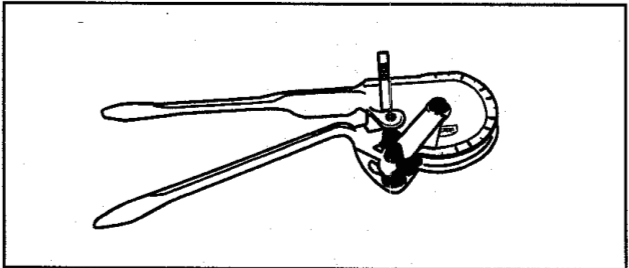
Individual benders for six tube sizes 1/8, 3/16, 1/4, 5/16, 3/8, and 1/2 inch. Will bend copper, aluminum, annealed steel and stainless steel. Can be used in hands or mounted in a bench vise for heavier wall thickness tube. Simply align marks on slide block and radius block then bend tube to desired angle (up to 180°) by pulling steadily on slide block handle. Angles are indicated on radius block both front and back. (Detailed instructions are included with each bender.) This style of bender is also available in metric sizes. See Table O4 for part numbers and technical data.

## 1" Hand Tube Bender

For tubing size 1" O.D. in soft copper or aluminum. Can be used in hands, but suggest mounting on bench vise - especially for heavier wall thickness tube. Align marks and bend tube to desired angle (up to 180°) by pulling steadily on operating handle. Handle may be repositioned for maximum leverage. Angles are indicated on radius block. (Detailed instructions are included with bender.)



Medium Hand Tube Bender



1" Hand Tube Bender

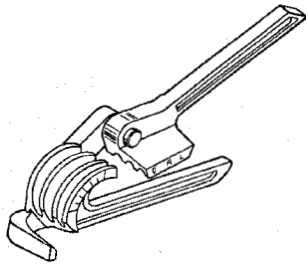
PART NUMBER	TYPE OF BENDER	SIZE	TUBE O.D. (IN.)	RADIUS TO TUBE CENTERLINE (INCHES)	MIN. WALL WITHOUT FLATTENING (INCHES)	RECOMMENDED MAX. WALL THICKNESS	
						COPPER ALUMINUM	STEEL STAINLESS STEEL (IN.)
364-FH-02	MED. DUTY	2	1/8	7/16	0.012	ANY	0.032
364-FH-03	MED. DUTY	3	3/16	9/16	0.020		0.032
364-FH-04	MED. DUTY	4	1/4	9/16	0.028		0.083
364-FH-05	MED. DUTY	5	5/16	15/16	0.032		0.083
364-FH-06	MED. DUTY	6	3/8	15/16	0.032		0.083
364-FH-08	MED. DUTY	8	1/2	1 1/2	0.042		0.083
364-FH-10	MED. DUTY	10	5/8	2 1/2	0.042		0.049
364-FH-12	MED. DUTY	12	3/4	3	0.049		0.065

Tooling & Equipment

# Tooling & Equipment

## Tube Benders, Lever Type

For soft copper, aluminum, brass, steel and other metal tubing



367-FH

368-FH

### Triple Header Benders

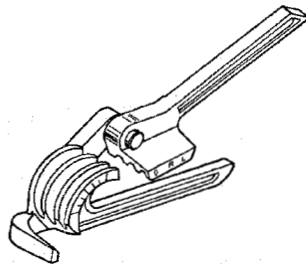
Calibrated markings for making accurate left-hand, right-hand and offset bends. Ninety degree start requires less effort - making bending fast and easy.

For 1/8", 3/16" and 1/4" (3, 4, and 6 mm) O.D. tubing, 9/16" radius to center of tube.

For 1/4", 5/16" and 3/8" (6 and 8 mm) O.D. tubing, 15/16" radius to center of tube.

Tooling & Equipment

## Metric Tube Benders



367-FH

368-FH

### Triple Header Benders

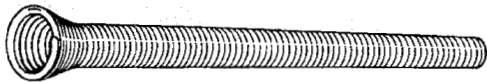
For annealed copper, aluminum, steel, stainless steel and hard copper tubing of bending temper.

Lever type, multiple size benders. Calibrated markings for making accurate left-hand, right-hand, and offset bends. Ninety degree start requires less effort; makes bending fast and easy.

BENDING RANGE				
Tube O.D.		Radius to Center of Tube		
(Inches)	(mm)	(Inches)	(mm)	
1/8, 3/16, 1/4	3, 4, 6	9/16	14.2	
1/4, 5/16, 3/8	6, 8	15/16	17.5	

## Tube Benders, Spring Type

For soft copper and aluminum tubing



102-F-04  
102-F-05  
102-F-06  
102-F-07  
102-F-08  
102-F-10  
102-F-12

201-F

112-F

163-F

### For 1/4" to 3/4" O.D. tubing.

Tools allow hand bending of soft tubing to any shape without collapsing walls. Special spring steel, nickel finished. End belled for quick tube removal.

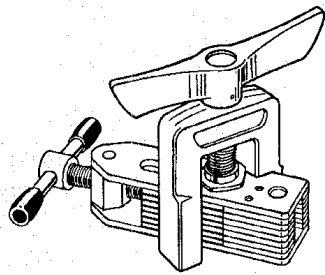
TUBE O.D. (INCHES)	BENDER		WEIGHT (OZ.)
	LENGTH (INCHES)		
1/4	10		3
5/16	10		3
3/8	10		4
7/16	12		6 1/4
1/2	12		6 1/2
5/8	12		8
3/4	12		10

Set of 8 benders for 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4" and 7/8" O.D. tubing.

Set of 3 benders for 1/4", 5/16" and 3/8" O.D. tubing.

Set of 4 benders for 1/4", 3/8", 1/2" and 5/8" O.D. tubing.

# Tooling & Equipment

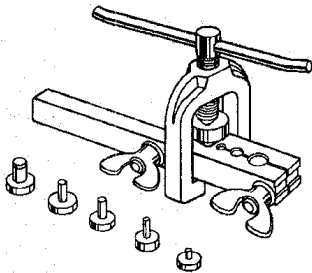


525-F

Flares and burnishes 3/16" to 5/8" (5 to 16 mm) O.D. tubing.

Unique, self-adjusting, tube holding mechanism permits use in tight quarters. Faceted, hard chrome finished cone rolls out and burnishes perfect 45° flare above the tube holding mechanism.

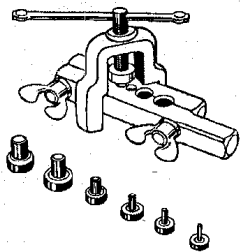
Weight: 1 3/4 lbs.



93-FB

For 3/16", 1/4", 5/16", 3/8" and 1/2" O.D. tubing. Recommended for Bundy, GM and other brazed or welded soft steel tubing (wall thickness to .035"). Also makes single or double flares in soft copper or aluminum tubing. Forged steel yoke; swivel-type hard chrome-finished flaring cone.

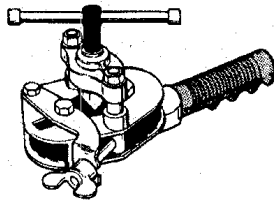
Weight: 3 lbs.



195-FB

For 1/4", 5/16", 3/8", 1/2", 5/8" and 3/4" O.D. tubing. Designed for automotive air conditioning service. Makes double flares in soft copper or aluminum tubing (wall thickness to .035"). Easy operating, ball bearing, swivel-type, hard chrome-finished, flaring cone. Makes flare with double-thick, double-strength walls. Also makes single and oversize flares.

Weight: 5 1/2 lbs.



945TH

**Rolo-flair® Manual Rotary Flaring Tool**

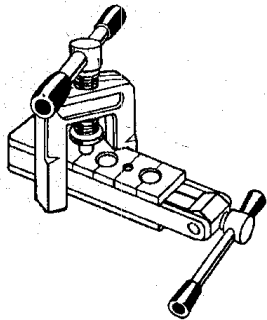
For soft metal tubing. Precision burnished 45° flares in tube sizes from 2 (1/8" O.D.) to 12 (3/4" O.D.) with an easy turn of the handle. For copper and aluminum alloy.

Weight: 2 1/2 lbs.

Tooling & Equipment

# Tooling & Equipment

## Metric Flaring Tools



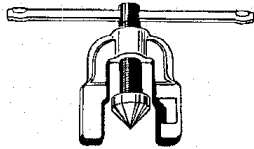
293-F

### Bubble Flaring Tool

For 4.75 (3/16"), 6, 8 and 10 mm O.D. tubing

Flares soft double wall steel tubing with a wall thickness to .028". For soft copper and aluminum tubing.

Also forms international Standard bubble flare in one fast operation. Flares metric hydraulic brake lines used on European, Japanese and domestic automobiles and light trucks. Can also be used for industrial applications where movement or vibration is a problem.



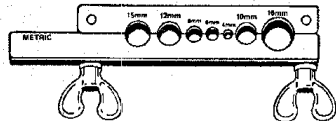
395-FAM

### 45° Flaring Tool

For 4, 6, 8, 10, 12, 15 and 16 mm O.D. tubing.

Flares soft copper, aluminum and brass.

Forged steel slip-on yoke and hardened flaring bar. Positive clamping action of bar prevents tube slippage. Self-centering yoke with swivel-type, hard chrome-finished flaring cone forms better flares with less effort. Design of yoke permits flaring where there is little space between nut and tube end.



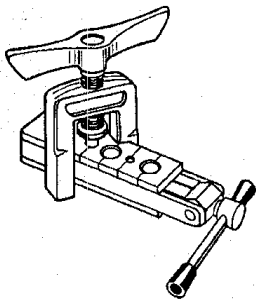
500-FCM

### 45° Flaring Tool

For flaring and burnishing 6, 8, 10, 12, 15 and 16 mm O.D. tubing.

For soft copper, aluminum and brass.

Flares rolled out above die bar by super-smooth faceted cone. Automatically burnishes flare face. Slip-on yoke permits use in tight quarters. Heat treated dies grip tubing without scoring.



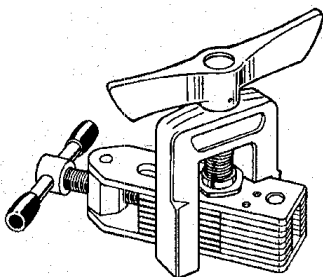
525-F

### 45° Flaring Tool

For flaring and burnishing 5 to 16 mm O.D. tubing.

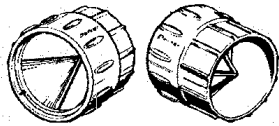
For soft copper, aluminum and brass.

Unique, self-adjusting tube holding mechanism permits flaring any size tubing within the range of 5 to 16 mm O.D. Single opening design is compact and easy to use. Faceted, hard chrome-finished cone rolls out and burnishes perfect flares above the tube holding mechanism. Slip-on self-centering yoke.



# Tooling & Equipment

## In-Ex® Tube Deburring Tool



208-F

A quick twist of the wrist will deburr either the O.D. or the I.D. of the tube end. Parker's In-Ex deburrer can be used on annealed steel, stainless steel, copper and aluminum, for tube sizes 1/8" to 1 5/8" O.D.

Insert tube into the convexed end of the In-Ex for inside deburring and the opposite end for outside deburring. Rotate in either direction. Replacement blades can be ordered. See bulletin 4391-B226 for details.

Weight: 10 oz.

208-FSS

Reamer for aircraft grade stainless steel tubing. Black finish



Tooling & Equipment

Meets SAE #J-534C.

Many other types available on special order.

**BALL CHECK  
5/8" LONG**

**PIPE THREAD**

**#610**



1610  
2800  
1720

**Part #** ..... **Size**  
1610BL ..... 1/8-27NPT

**BALL CHECK**

**PIPE THREAD**

**#607**



1607  
2800  
1669

**Part #** ..... **Size**  
1607 ..... 1/8-2NPT (1-1/4 Long)  
1669B ..... 1/8-27NPT (1-3/4 Long)

**30° ANGLE  
BALL CHECK**

**PIPE THREAD**

**#611**



1611  
2830

**Part #** ..... **Size**  
1611B ..... 1/8-27 NPT

**65° ANGLE  
BALL CHECK**

**PIPE THREAD**

**#688**



1688  
2845

**Part #** ..... **Size**  
1688B ..... 1/8-27NPT

**65° ANGLE  
BALL CHECK**

**PIPE THREAD**

**#612**



1612  
2865

**Part #** ..... **Size**  
1612B ..... 1/8-27NPT

**90° ANGLE  
BALL CHECK**

**PIPE THREAD**

**#613**



1613  
2890

**Part #** ..... **Size**  
1613B ..... 1/8-27NPT  
1606B ..... 1-3/16 Long

**BALL CHECK**

**PIPE THREAD**

**#627**



1627  
2900K

**Part #** ..... **Size**  
1627B ..... 1/4-18NPT

**PIPE THREAD**

**#629**

**65° ANGLE  
BALL CHECK**



1629  
2965

**Part #** ..... **Size**  
1629B ..... 1/4-18NPT

**1/4-28 TAPER THREAD**

**#641**

**SHORT  
BALL CHECK**



1641  
2400  
3038

**Part #** ..... **Size**  
16418 .....

**1/4-28 TAPER THREAD**

**#652**

**LONG  
BALL CHECK**



1652  
2400

**Part #** ..... **Size**  
1652B .....

**1/4-28 TAPER THREAD**

**#680**

**EXTRA LONG  
BALL CHECK**



1680  
2400

**Part #** ..... **Size**  
1680B .....

**1/4-28 TAPER THREAD**

**#637**

**SHORT 45°  
BALL CHECK**



1637  
2445  
1665  
2465  
3010

**Part #** ..... **Size**  
1637B .....  
1665B ..... 65°

**1/4-28 TAPER THREAD**

**#636**

**LONG 45°  
BALL CHECK**



1630  
2445

**Part #** ..... **Size**  
1630B .....

**1/4-28 TAPER THREAD**

**#911**

**90° ANGLE  
BALL CHECK**




1911  
2490  
3054

**Part #** ..... **Size**  
1911B .....





**DRIVE TYPE #608** **#608**  
**BALL CHECK**  1608  
**Part #** ..... **Size**  
 1608 ..... 5/16

**DRIVE TYPE #728** **#728**  
**BALL CHECK**  1728  
**Part #** ..... **Size**  
 1728B ..... 3/16

**DRIVE TYPE** **#743**  
**BALL CHECK**  1743  
**Part #** ..... **Size**  
 1743B ..... 1/4

**METRIC** **#711**  
 6000  
 2106  
 2M6  
**Part #** ..... **Size**  
 2106B ..... 6mmx1

**METRIC** **#712**  
**45° ANGLE**  6045  
 2107  
**Part #** ..... **Size**  
 2107B ..... 6mmx1


**METRIC** **#713**  
**90° ANGLE**  6090  
 2108  
 ZM906  
**Part #** ..... **Size**  
 2108B ..... 6mmx1


**METRIC** **#811**  
 8000  
 2103  
 ZM58  
**Part #** ..... **Size**  
 2103B ..... 8mmx1


**METRIC** **#812**  
**45° ANGLE**  8045  
 2104  
 ZM458  
**Part #** ..... **Size**  
 2104B ..... 8mmx1

**METRIC** **#813**  
**90° ANGLE**  8090  
 2105  
 ZM908  
**Part #** ..... **Size**  
 2105B ..... 8mmx1


**METRIC** **#911**  
 9000  
 2109  
 ZM510  
**Part #** ..... **Size**  
 2109B ..... 10mmx1

**METRIC** **#912**  
**45° ANGLE**  9045  
 2110  
 ZM4510  
**Part #** ..... **Size**  
 2110B ..... 10mmx1


**METRIC** **#913**  
**90° ANGLE**  9090  
 2111  
 ZM9010  
**Part #** ..... **Size**  
 2111B ..... 10mmx1

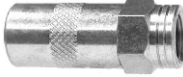
**#711-B**  
 1711  
 2500  
**Part #** ..... **Size**  
 1711B ..... 5/16x24

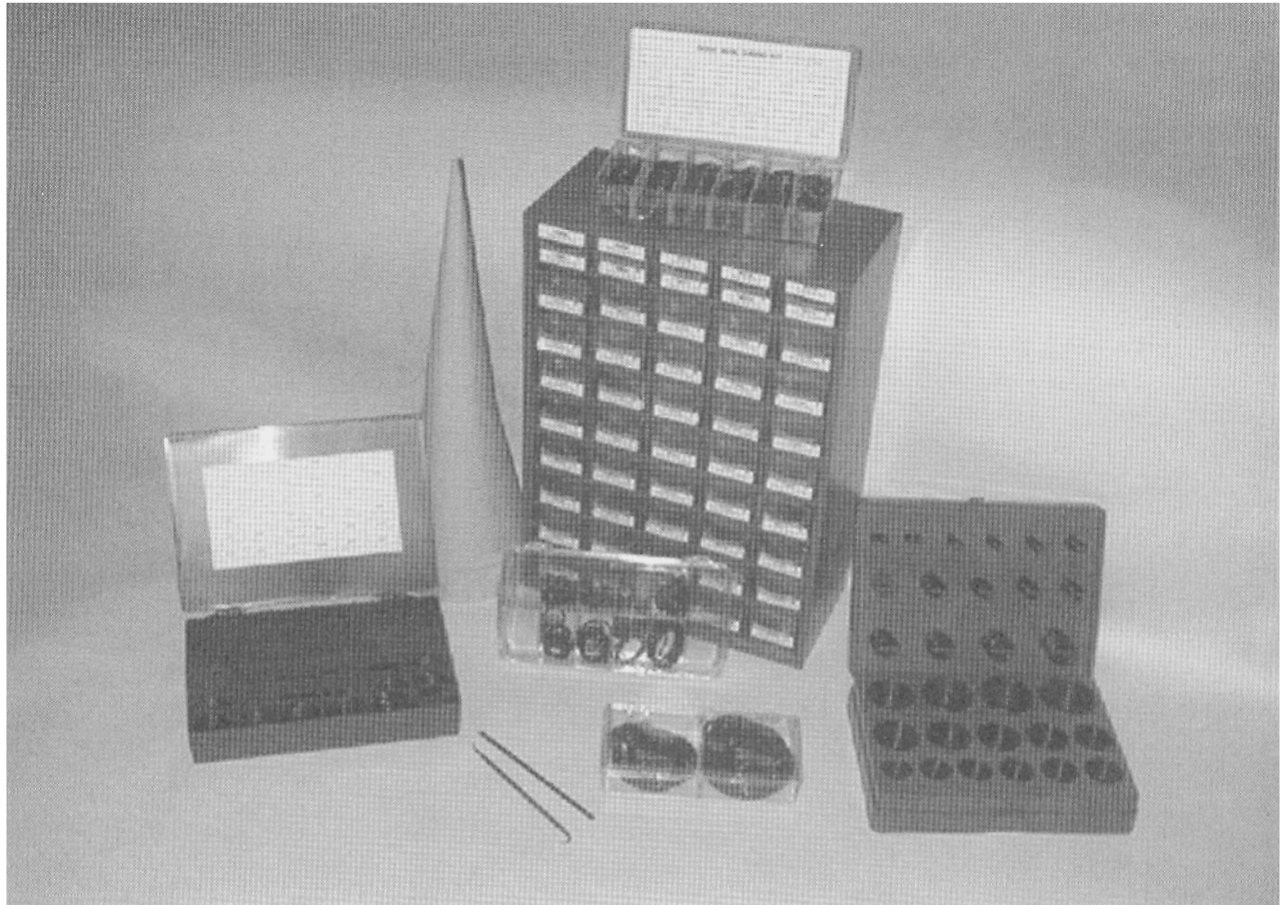
**#710-B**  
 1710  
 2600  
**Part #** ..... **Size**  
 1710B ..... 3/8-24

**BUTTON HEAD**  
 1184  
 1186  
**Part #** ..... **Size**  
 1184B ..... 1/8PTF  
 1186B ..... 1/4NPTF

**WHIP HOSE**  
*Fits any hand gun 1/8 MIP End • 10,000 LB Burst Pressure*

  
**Part #** ..... **Size**  
 36-210 ..... 12" Rubber  
 36-212 ..... 18" Rubber  
 36-214 ..... 24" Rubber  
 36-216 ..... 36" Rubber

**4 JAW GREASE GUN COUPLER**  
  
**Part #** .....  
 36-220 .....

**Part #**

DFB-01156-90  
 DFB-0115790  
 DFB-CONE  
 DFB-EXTOOL  
 DFB-OR2000BN70  
 DFB-OR250BN90  
 DFB-OR382BN70  
 DFB-OR500BN70

**Description**

O-RING FACE KIT  
 O-RING FLANGE KIT  
 O-RING SIZING CONE  
 O-RING EXTRACTION TOOL  
 BUNA N 70 O-RING KIT  
 BUNA N 90 BOSS O-RING KIT  
 BUNA N 70 O-RING KIT  
 BUNA N 70 O-RING KIT

# Misc Accessories

Misc Accessories

## TEFLON TAPE

**Chemical Properties:** Min. of 99% Poly-tetrafluoroethylene  
**Thickness:** .0035", +0.001 or 0.0005"  
**Elongation:** Min. of 50% (most of times it far exceeds)  
**Width:** Nominal width  $\pm 0.02$ , -0.02  
**Length:** Nominal length + 20", -0"  
**Density:** -0.35 to 0.40  
**Incompatibility:** Avoid using on Moten Alkali, certain Halogen products & Fluorine at high temperatures and pressures  
**Temperature:** When heated to over 260 degrees Centigrade, it will thermally degrade and decompose and produce toxic fumes.  
**Government Standard:** Meets military specification T-27730a  
**Usage:** To be used on all types of threaded fittings for passage of water, potable and non-potable, most chemicals, oxygen, gas, hydraulic and high pressure lines.

## TEFLON TAPE



## THREAD SEALANT

Part #	Size
08-X-260TT	1/2" x 260"
08-X-520TT	1/2" x 520"
12-X-260TT	3/4" x 520"
12-X-520TT	3/4" x 520"

POP OUT COVERED SPOOL

## PREMIUM GRADE DUCT TAPE

### 100 MPH Tape

- Waterproof
- Polyethylene coated cloth backed tape
- Provides high tack and quick grab
- Meets U.L. No. 723 specifications
- Each roll individually shrink wrapped

## PREMIUM GRADE DUCT TAPE



Part #	Size
990-128	Multi purpose 8 mil

## PRINTED CAUTION TAPE

### PRINTED CAUTION TAPE



Part #	Size
990-143	3" x 300 ft long

## ELECTRICAL TAPE

- 7 MIL VINYL
- UL APPROVED

### ELECTRICAL TAPE



Part #	Size
990-157	3/4" x 60 ft long

## SCRUBS IN A BUCKET



Truly portable Scrubs in a Bucket® provide, fast, easy and effective hand cleaning. Can be used anywhere, anyplace, anytime on the toughest soils, greases, tar, etc. Each dispensing canister contains 10-1/2" x 12-1/4" perforated absorbent cleaning towels. Containing a germ-fighting chemical known as Triclosan. No rinsing, no drying, no residue. Also can be used for cleaning tools and spills. On-the-spot hand cleaning when there is no sink around.

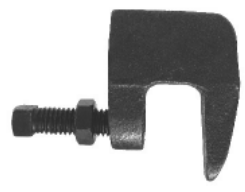
Part #	Description
980-100	36 Scrubs™/container
980-101	72 Scrubs™/container

Many more sizes & styles available. Just Ask!



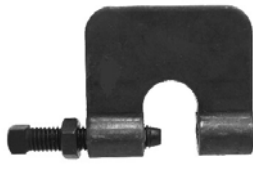
## PIPE HANGERS AND CLAMPS

### #350 MALLEABLE IRON BEAM CLAMP



Part #	Size
971-531	3/8" Short
971-532	3/8" Long
971-533	1/2"
971-534	5/8"
971-535	3/4"

### BC-26 STEEL BEAM "C" CLAMP 330 LBS.



Part #	Size
971-539	3/8"

### ZINC-PLATED HANGER



Part #	Size
971-494	1/2" IP, 3/4" CT
971-495	3/4" IP, 1" CT
971-496	1" IP, 1-1/4" CT

### COPPER FITTING BRUSHES

- Extra thick mass of steel wire insures perfect cleaning job with minimum effort. Twisted wire handle - for copper fittings. Carbon steel brush
- Sold in boxes of 12 only



Part #	Size
990-540	3/8"
990-541	1/2"
990-542	3/4"
990-543	1"

**LA-CO**

**Fiber-Tip Markers**

Misc Accessories



FINE TIP

**DURA-INK® #15 MARKER**

Part #	Color	Case Qty
96022	Red <sup>1</sup>	72
96023	Black <sup>1</sup>	72
96025	Blue <sup>1</sup>	72
96026	Green <sup>1</sup>	72
96030	Black <sup>2</sup>	72
96033	Black <sup>3</sup>	72

- Ideal for fine line marking.
- Extra tough tip, won't spread or mush.
- Smear-resistant, water-resistant, fast-drying.
- Marks on metal, wood, cardboard, paper, plastic, glass, etc.
- For identification of parts, layout work, and marking cartons and crates.
- Available on blister card for point-of-purchase display.
- Unit packaging: 12 of one color to a box.



MEDIUM TIP

**DURA-INK® #20 MARKER**

Part #	Color	Case Qty
96122	Red <sup>1</sup>	48
96123	Black <sup>1</sup>	48

- Large ink supply for more mileage.
- Water-resistant, fade-resistant, high intensity ink.
- Chisel tip makes fine lines or broad marks.
- Heavy-duty metal barrel.
- Use on cardboard, ceramics, wood, metal, rubber, and glass.
- For identification of equipment, marking shipping cartons, making signs, etc.
- Unit packaging: 12 of one color to a box.



KING TIP

**DURA-INK® #25 MARKER**

Part #	Color	Case Qty
96221	Yellow <sup>1</sup>	48
96222	Red <sup>1</sup>	48
96223	Black <sup>1</sup>	48
96224	Orange <sup>1</sup>	48
96225	Blue <sup>1</sup>	48
96226	Green <sup>1</sup>	48
96229	Brown <sup>1</sup>	48
96233	Black <sup>3</sup>	24

- Chisel tip makes fine lines or broad marks.
- Extra large ink supply for greater mileage.
- Heavy-duty metal barrel.
- Use on cardboard, wood, metal, paper, ceramics, glass and leather.
- For identification of equipment, marking shipping cartons, making signs, etc.
- Unit packaging: 12 of one color to a box.



**DURA-INK® #50 MARKER**

Part #	Color	Case Qty
96522	Red <sup>1</sup>	48
96523	Black <sup>1</sup>	48
96525	Blue <sup>1</sup>	48
96526	Green <sup>1</sup>	48

- High intensity colors.
- Long mileage.
- Smear-resistant, water-resistant, fast-drying.
- Marks on metal, wood, cardboard, paper, plastic, glass, etc.
- For identification of equipment, marking shipping cartons, making signs, etc.
- Unit packaging: 12 of one color to a box.



**DURA-INK® #70 MARKER**

Part #	Color	Case Qty
96072	Red <sup>1</sup>	48
96073	Black <sup>1</sup>	48
96075	Blue <sup>1</sup>	48

- Water-based ink.
- Non-toxic, no Xylol.
- Dries immediately.
- Marks on all surfaces.
- Beveled wedge tip.
- Will not bleed through paper.
- Unit packaging: 12 of one color to a box.





**DURA-INK® #80 MARKER**

Part #	Color	Case Qty
96922	Red <sup>1</sup>	48
96923	Black <sup>1</sup>	48
96925	Blue <sup>1</sup>	48

- Large ink supply for increased marking mileage.
- Smear-resistant, water-resistant, fast-drying.
- Tough, durable tip marks on all surfaces, including metal, wood, cardboard, glass, paper, etc.
- Metal barrel.
- Rounded tip.
- Valve tip actuated.
- Unit packaging: 12 of one color to a box.

**DURA-INK® #90 JUMBO MARKER**



Part #	Color	Case Qty
96093	Red <sup>2</sup>	48
96092	Black <sup>2</sup>	48
96095	Blue <sup>2</sup>	48

- Ink dries immediately when applied, but marker can be left with cap off for up to 2 weeks.
- Permanent ink. Non-Toxic. Contains no Xylol.
- Marks on all surfaces including paper, cardboard, wood, metal, plastics, glass and rubber.
- Durable chisel tip marks fine, medium or bold lines.
- Large ink supply for more marking mileage.
- Cap stores in base.

**DURA-INK® #100 MARKER**



Part #	Color	Case Qty
96913	Black	24

- 5/8" chisel tip for broad marks.
- Jumbo ink supply for greater mileage.
- Tough cap and barrel for heavy-duty use.
- Use on cardboard, wood, metal, paper, ceramics, glass and leather.
- For identification of equipment, marking shipping cartons, making signs, etc.
- Unit packaging: 12 of one color to a box.

**LIQUID PAINT MARKERS**

**VALVE ACTION® PAINT MARKER**



Marking range:  
-50°F to 150°F  
(-46°C to 66°C)

Part #	Color	Case Qty
96809	Brown	48
96817	Purple	48
96820	White	48
96821	Yellow	48
96822	Red	48
96823	Black	48
96824	Orange	48
96825	Blue	48
96826	Green	48
96827	Gold	48
96832	Aluminum	48
96835	Lt. Blue	48

**Carded - 1/Card**

96800	White	24
96801	Yellow	24
96802	Red	24
96803	Black	24
96804	Aluminum	24
96805	Blue	24
96806	Green	24
96807	Orange	24

**Display Packs**

Part #	Color	Case Qty
96810	White	24
96811	Yellow	24
96812	Red	24
96813	Black	24
96814	Orange	24
96815	Blue	24
96816	Green	24
96818	Aluminum	24
96819	Assorted	24
96867	Replacement Tips	144

- Marks with real paint, dries in 3 minutes.
- Nib releases paint as needed for continuous marking.
- Marks on all surfaces including: metal, wood, glass, plastic, rubber, cardboard, and paper.
- Lead-free, low halogens.
- The fiber nib is replaceable to assure complete use of each marker.
- Durable metal barrel.
- Meets California VOC Regulations.
- Unit packaging: 12 of one color to a box.
- Assorted box includes: 8 white, 8 yellow, 4 red, and 4 black.



**LA-CO**

**DURA-BALL® PAINT TUBE MARKER**



Marking range:  
-50°F to 150°F  
(-46°C to 66°C)

Part #	Ball Size		Color	Case Qty
	1/8"	3/16"		
96640	96652	96664	White	48
96641	96653	96665	Yellow	48
96642	96654	96666	Red	48
96643	96655	96667	Black	48
96644	96656	96668	Orange	48
96645	96657	96669	Blue	48
96646	96658	96670	Green	48
96647	96659	96671	Pink	48
96648	96660	96672	Violet	48
96649	96661	96673	Brown	48
96650	96662	96674	Grey	48
96651	96663	96675	Beige	48

- Durable steel ball tip comes in three sizes and marks on smooth or rough surfaces.
- Marks with real paint and dries in 5 minutes.
- All colors are low chloride making them safe for marking stainless steel and nuclear applications.
- Marks on all metals, wood, plastic, glass and any hard surface.
- Marks are weather- and fade-resistant.
- Marks on vertical or overhead surfaces without running or dripping.



Marking range:  
-50°F to 150°F  
(-46°C to 66°C)

**BALL PAINT MARKER®**

Part #	Color	Case Qty
84600	White <sup>1</sup>	24
84601	Yellow <sup>1</sup>	24
84620	White <sup>2</sup>	48
84621	Yellow <sup>3</sup>	48
84622	Red <sup>2</sup>	48
84623	Black <sup>2</sup>	48
84624	Orange <sup>2</sup>	48
84625	Blue <sup>2</sup>	48
84626	Green <sup>2</sup>	48

- Marks with real paint, dries in 5 minutes.
- Durable metal ball tip marks on smooth or rough surfaces.
- Marks on metal, wood, plastic, glass and any hard surfaces.
- Lead-free, non-toxic.
- Marks are weather- and fade-resistant.
- Unbreakable plastic bottle with 1/8" steel ball tip.
- Stores in pocket for easy access.
- Plastic cap keeps tip clean between jobs.
- Unit packaging: 12 of one color to a box.

**HOLDERS**



Length: 4"

**#100 HOLDER**

Part #	Description	Case Qty
85500	#100	12

- 4" wooden holder for hot surface Paintstik® markers: H, H-T, HT-34, HT-40, J, X-5



Length: 5"

**#101 HOLDER**

Part #	Description	Case Qty
85000	#101	12

- 5" metal holder for Paintstik® markers: B, B-E, BL-W, C, E, N, O-10, P, BL, M, M-10
- All metal construction for long worklife



Length: 6"

**#102 HOLDER**

Part #	Description	Case Qty
85100	#102	12

- 6" push-button metal holder for Paintstik® markers: B, B-E, BL-W, C, E, N, O-10, P, BL, M, M-10
- 2' and 3' extensions are available on special order.
- All metal construction for long worklife



Length: 7-1/4"

**#102K HOLDER**

Part #	Description	Case Qty
85200	#102K	12
85210	w/2' extension.. each	
85220	w/3' extension.. each	

- Metal holder for K, HT-75, HT King Size and HT-34 King Size Paintstik® markers.
- 2' and 3' extensions are available on special order.
- All metal construction for long worklife





Length: 5-1/2"

**RAILROAD CHALK HOLDER**

Part #	Description	Case Qty
85001	Railroad chalk holder	12

- Fits our standard size RR chalk.
- Prevents breakage.
- All-metal construction for long worklife.

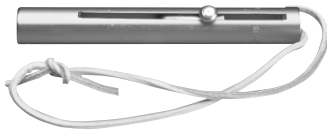


Length: 5"

**#106 HOLDER**

Part #	Description	Case Qty
85401	#106	12

- Unique dual design holds both the #200 or #500 Lumber Crayon and Markal® Carpenter's Pencil.
- Durable, lightweight construction.
- Handy on construction sites.



Length: 5-1/2"

**#107 HOLDER**

Part #	Description	Case Qty
85300	#107	12
85310	w/2' extension	each
85320	w/3' extension	each

- Push-button metal holder for B 3/8" and WS 3/8" Paintstik® markers.
- 2' and 3' extensions are available on special order.
- Comes with leather wrist thong.
- All-metal construction for long worklife.



Length: 6"

**#108 HOLDER**

Part #	Description	Case Qty
85400	#108	12

- For all 1/2" hexagonal markers.
- Durable aluminum construction.
- Push-button operation.
- Protects crayon from breakage.
- Comes with leather wrist thong.
- 2' and 3' extensions are available on special order.



Length: 5"

**#109 PETERSON HOLDER**

Part #	Description	Case Qty
85490	#109	12
85491	w/3' extension	each

- For Scan-It Plus® 1/2" hex crayons.
- For all 1/2" hexagonal markers.
- Made of durable hardwood.
- Protects crayon from breakage.
- Comes with leather wrist thong.
- 11' extensions are available on special order.

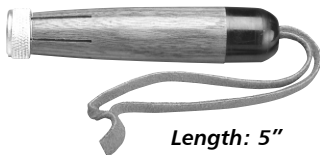


Length: 10"

**#111 HOLDER**

Part #	Description	Case Qty
85700	#111	12
85710	w/2' extension	each
85715	w/3' extension	each

- (Formally #301) 11" push-button metal holder for hot surface markers: H, H-T, HT-34, HT-40, J, X-5 Paintstik® markers.
- 2' and 3' extensions are available on special order.
- All metal construction for long worklife



Length: 5"

**#112 PETERSON HOLDER**

Part #	Description	Case Qty
85489	#112	12

- For Scan-It® and Scan-It Plus® 11/16" round crayons.
- Hardwood construction.
- Protects crayon from breakage.
- Comes with leather wrist thong.

**SOAPSTONE HOLDERS**



Flat: Length 5-3/4"



Flat: Round 5-1/4"

Part #	Description	Case Qty
80140	Flat for 5" x 1/2" x 3/16" Size	12
80141	Round for 5" x 1/4" size	12

- All-metal construction for long worklife.
- Prevents breakage.
- Allows full use of each soapstone marker.
- Handy pocket clip.





Length: 4"

**THE ULTIMATE HOLDER**

Part #	Description	Case Qty
68603	Black	24
68606	Black, carded	12

- Holds the All-Weather® Paintstik® and B-1" Paintstik®.
- Made of unbreakable plastic.
- Keeps paint off hands and clothing.
- Allows full use of each marker.

**FLUXES**

**REGULAR FLUX PASTE**



Part #	Size	Case Qty
21201	2 oz.	12
22101	2 oz.	48
21204	4 oz.	12
22104	4 oz.	48
22194	4 oz.	48
22107	1 lb.	24

- Super detergent action cleans as it solders.
- Non-acid, non-toxic, lead-free.
- Contains no zinc chloride.
- Use with all common soft solders including: tin-silver, 96/4, 94/6, 95/5, 50/50, 40/60, and 60/40.
- For use on copper, brass, galvanized iron, lead, zinc, tin, silver, nickel, mild, steel, terne plate, and malleable iron.
- Certified to ANSI/NSF std. 61 for use with potable water.
- Water soluble for faster flushing from pipe lines.
- Meets Mil. Spec. MIL-F-4995 Type II.



**ULTIMATE™ B813 FLUX**

Part #	Size	Case Qty
22126	2 oz.	48
22127	4 oz.	48
22128	1 lb.	24

- Self-cleaning formula instantly removes oxides and quickly cuts through oil, dirt and grime.
- Thick, no-drip formula stays put, will not run and drip during soldering like other B813 flux brands.
- High heat stability eliminates premature burn-off in standard soldering techniques.
- Added lubricants promote easy assembly of fittings.
- Non-drying formula, ideal for pre-assembly work.
- All the advantages of a standard flux, plus complete B813 compliance.



**SWEATIN' FLUX® SOLDERING PASTE**

Part #	Size	Case Qty
22120	2 oz.	48
22121	4 oz.	48
22122	1 lb.	24

- High heat resistance.
- Promotes fast and complete capillary action for better solder flow into the joint.
- Carefully cleans without damaging the metal surfaces.
- Orderless.
- Smooth creamy past, goes on easy.
- Won't discolor copper pipe.



**FLUX-RITE 90® FLUX**

Part #	Size	Case Qty
<i>Liquid</i>		
23148	8 fl. oz. <sup>1</sup>	24
<i>Paste</i>		
23153	2 oz. <sup>2</sup>	48
23154	4 oz.	24
23155	4 oz. <sup>2</sup>	24
23157	1 lb.	12

- Meets ASTM B-813.
- Completely water soluble for faster flushing from pipe lines.
- Super detergent action cleans as it solders.
- Non-acid, non-toxic, lead-free.
- Contains no zinc chloride.
- Use with all common soft solders including: tin-silver, 96/4, 94/6, 95/5, 50/50, 40/60, and 60/40.
- For use on copper, brass, galvanized iron, lead, zinc, tin, silver, nickel, mild, steel, terne plate, and malleable iron..





**LA-CO**

**F-A-S-T® 50/50 & 95/5 - FLUX & SOLDER COMBINATION**



<i>Part #</i>	<i>Size</i>	<i>Case Qty</i>
<b>50/50</b>		
32007 .....	1 lb. ....	24
<b>95/5</b>		
32707 .....	1 lb. ....	12

- Premium grad of flux and solder combination.
- Combines virgin 50/50 or 95/5 finely powdered solder with LA-CO® Regular Flux Paste.
- Non-acid, contains no zinc chloride.
- Clean, leaves no black residue to obscure the soldering operation.
- 95/5 lead-free, non-toxic, safe for potable water systems.
- 50/50 contains lead, do not use on potable water systems.



**SOLDER BRITE® 50/50 - ECONOMY FLUX & SOLDER COMBINATION**

<i>Part #</i>	<i>Size</i>	<i>Case Qty</i>
32806 .....	1/2 lb. ....	24

- Economical grade of flux and solder combination.
- Combines virgin 50/50 finely powdered solder with LA-CO® Regular Flux Paste.
- Non-acid, contains no zinc chloride.
- Clean, leaves no black residue to obscure the soldering operation.
- 50/50 contains lead, do not use on potable water systems.



**SILVER BRAZING FLUX PASTE**

<i>Part #</i>	<i>Size</i>	<i>Case Qty</i>
22302 .....	2 oz. <sup>1</sup> .....	48
22305 .....	6 oz. ....	24
22395 .....	6 oz. <sup>3</sup> .....	24
22307 .....	1 lb. ....	24

- Powerful cleaning action reduces waste of expensive silver solders.
- Packed in break-resistant plastic jars.
- Use with torch, furnace, resistance or induction heating.
- Production sites available.
- Meets Mil. Spec. MIL-F-4883.
- Certified by NSF to meet ANSI/NSF Std. 61 for use on potable water.
- Temperature range: 100°F to 1700°F (538°C to 927°C).
- Meets Fed. Spec. O-F 499D, Type B, AWS spec. A5.31-92 Classification FB3-A, AMS 3410F & 2665C, US Army #4-1121 and US Air Corps 1970.



**ACID BRUSHES**



**ACID BRUSHES**

<i>Part #</i>	<i>Size</i>	<i>Case Qty</i>
22000 .....	6-1/16" .....	288

- Heavy-duty 1/2" bristle #2.
- Long-lasting.
- Professional grade.

**THREAD SEALANTS**

**SLIC-TITE® PASTE WITH TEFLON\* - HEAVY DUTY THREAD SEALING COMPOUND**



Part #	Size	Case Qty
41209	1/4 pt. <sup>3</sup>	12
41219	1/2 pt. <sup>4</sup>	12
42002	1-1/2 oz. <sup>1,5</sup>	24
42009	1/4 pt. <sup>4</sup>	24
42019	1/2 pt. <sup>4</sup>	24
42012	1 pt.	24
42029	1 pt. <sup>4</sup>	24
42013	1 qt.	12
42049	1 qt. <sup>4</sup>	12
42014	1 gal.	4
42015	5 gal.	1
42069	55 gal.	1

- Contains more Teflon\* particles for greater sealing power.
- Use on metal, PVC, CPVC, and ABS plastic pipe threads.
- For sealing water, air, steam, natural gas, LP gas, refrigerants, ammonia, gasoline, and oil.
- Do not use on oxygen service; use Teflon\* Tape or Oxytite® Paste.
- Washes off hands and clothing easily.
- Non-toxic, non-drying.
- Sealing temperature range: -50°F to 500°F (-46°C to 260°C).
- Working pressures: 3,000 PSI (204 BAR) for gas, 10,000 PSI (680 BAR) for liquids.
- USDA approved for use federally inspected meat and poultry plants.

**SLIC-TITE® STIK WITH PTFE - THREAD SEALING COMPOUND**



Part #	Size	Case Qty
41600	1-1/4 oz. <sup>2</sup>	24

- High-performance thread compound in handy stick form.
- Contains PTFE particles for greater sealing power.
- Non-toxic, non-staining, non-drying.
- Designed for professional servicemen and mechanics.
- Clean-White-Washes off easily.
- Use on metal and PVC pipe thread connections for water, air, natural gas, steam, gasoline, oil refrigerants and ammonia.
- Do not use on oxygen service; use PTFE Tape or Oxytite® Paste.
- Sealing temperature range: -50°F to 350°F (-46°C to 177°C).
- Pressures: to 5,000 PSI (340 BAR) for liquids to 500 PSI (34 BAR) for gases.

**LEAK-TITE BLUE® - THREAD SEALING WITH PTFE**



Part #	Size	Case Qty
46029	1 pt. <sup>3</sup>	24
46049	1 qt. <sup>3</sup>	12
46013	1 qt.	12
46014	1 gal.	4
46015	5 gal.	1
46069	55 gal.	1

- Contains PTFE particles for greater sealing power.
- Will not harden or dry out over time. Remains flexible for easy disassembly.
- Non-toxic, contains no solvents
- Sticks to hot, oily threads.
- Ideal for use on production lines and fabrication shops.
- Easy clean-up, will not stain hands or clothing.
- For use on metal and PVC plastic pipe threads.
- Recommended services: water, air, natural gas, steam, gasoline, oil refrigerants and ammonia.
- Sealing temperature range: -50°F to 500°F (-45°C to 260°C).
- Working pressures: to 5,000 PSI (340 BAR) for liquids to 1,500 PSI (102 BAR) for gases.
- Do not use on oxygen service; use PTFE Tape or Oxytite® Paste.



**LA-CO**



**PIPE THREAD TAPE OF PTFE - STANDARD GRADE**

Part #	Size	Case Qty
44070	1/4" x 520"	144
44071	1/2" x 260"	144
44072	1/2" x 520"	144
44073	1/2" x 1296"	144
44074	3/4" x 260"	144
44075	3/4" x 520"	144
44076	3/4" x 1296"	144
44077	1" x 260"	144
44078	1" x 520"	144
44079	1" x 1296"	144
47272	1/2" x 520"	72

- Thickness 3 mils.
- Standard grade, low density.
- Provides a highly resistant seal on pipe threads for all types of service.
- Suitable for use with solvents, chemicals, oxygen, and on food lines
- Non-toxic.
- Permits easy disassembly, even after yeas of service.
- Meets Mil. Spec T-27730A.
- Sealing temperature range: -450°F to 550°F (-268°C to 288°C).
- Pressures: to 2000 PSI (136 BAR).
- Sold in case quantities only.

**SLIC-TITE® PTFE THREAD TAPE - HEAVY DUTY PREMIUM GRADE**



Part #	Size	Case Qty
44080	1/4" x 300" <sup>2</sup>	144
44081	1/4" x 600" <sup>2</sup>	144
44082	1/2" x 300" <sup>2</sup>	144
44083	1/2" x 600" <sup>2</sup>	144
44084	1/2" x 1200" <sup>2</sup>	144
44085	3/4" x 300" <sup>2</sup>	144
44086	3/4" x 600" <sup>2</sup>	144
44087	1" x 300" <sup>2</sup>	144
44088	1" x 600" <sup>2</sup>	144
44003	1/2" x 600" <sup>1</sup>	72

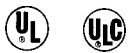
- Thickness 3 mils.
- High density.
- Provides a highly resistant seal on pipe threads for all types of service.
- Made in U.S.A.
- Suitable for use with solvents, chemicals, oxygen, and on food lines
- Non-toxic.
- Permits easy disassembly, even after yeas of service.
- Meets Mil. Spec T-27730A.
- Sealing temperature range: -450°F to 550°F (-268°C to 288°C).
- Pressures: to 2000 PSI (136 BAR).

**LA-CO® LOC® ANAEROBIC PIPE THREAD SEALANT**



Part #	Size	Case Qty
49050	50 ml. (1.69 fl. oz.)	12
49250	250 ml. (8.45 fl. oz.)	6

- Contains PTFE for a positive seal.
- Anaerobic adhesive provides locking power.
- Contains no solvents, won't shrink and weaken seal.
- Seals and locks in the absence of air.
- Ideal for threads in heavy vibration areas such as compressors and reciprocating equipment.
- Classified by Underwriters Laboratories in U.S.A. and Canada.
- Do not use on oxygen service; use PTFE Tape or Oxytite®.
- Sealing temperature range: -65°F to 400°F (-54°C to 204°C).
- Working pressures: to 10,000 PSI (680 BAR) for liquids to 3,000 PSI (204 BAR) for gases.



**PIPETITE® PASTE PIPE THREAD COMPOUND**



Part #	Size	Case Qty
12109	1/4 pt. <sup>2</sup>	24
12110	1/2 pt. <sup>2</sup>	24
12112	1 pt. <sup>2</sup>	24

- Soft set pipe thread compound.
- For refrigerators, butane, gasoline, oil, as well as water, steam, air, natural gas and LP gas.
- Use on metal threads.
- Classified by Underwriters Laboratories in U.S.A. and Canada.
- Do not use on oxygen service; use PTFE Tape or Oxytite®.
- Sealing temperature range: 400°F (204°C).
- Working pressures: to 5,000 PSI (340 BAR) for liquids to 2,600 PSI (177 BAR) for gases.





**OXYTITE® PIPE THREAD SEALANT FOR OXYGEN**

Part #	Size	Case Qty
42805	4 oz.	6

- Teflon\* thread sealant for oxygen services.
- Each batch tested to ASTM G-72.
- Pressure range: to 2,600 PSI (180 BAR).
- Sealing temperature range: -320°F to 450°F (196°C to 232).

**ANTI-SEIZE COMPOUNDS**

**E-Z BREAK® ANTI-SEIZE COMPOUND COPPER GRADE**



Part #	Size	Case Qty
01210	10 oz. <sup>1</sup>	12
08910	10 oz. <sup>1</sup>	24
08916	14 oz. <sup>2,5</sup>	12
08907	16 oz. <sup>1</sup>	24
08924	4 oz. <sup>1</sup>	24
08925	8 lbs.	4
08950	42 lbs. <sup>3</sup>	1
08969	425 lbs. <sup>4</sup>	1

- Copper-based anti-seize and lubricating compound.
- Resists rust and corrosion.
- Recommended for coating nuts, bolts, valves, flanges, splines for easy break out after years of service.
- Meets Mil. Spec. Mil-A-907E.
- Authorized by USDA for use in federally inspected meat and poultry plants.
- Sealing temperature range: 1800°F (982°C).

**E-Z BREAK® ANTI-SEIZE STICK COPPER GRADE**



Part #	Size	Case Qty
08930	2-1/4 oz.	24

- New stick technology!
- No mess. No drips. No spills.
- Easy to use; twist and apply.
- Copper-based anti-seize and lubricating compound.
- Protects against galling, seizing and corrosion.
- Non-setting, non-toxic, lead-free.
- Meets Mil. Spec. Mil-A-907E.
- Sealing temperature range: 1800°F (982°C).

**PREMIUM ALL-PURPOSE THREAD CUTTING OIL**



Part #	Size	Case Qty
73412	1 pt.	12
73413	1 qt.	12
73414	1 gal.	6
73415	5 gal. <sup>3</sup>	1
73469	55 gal. <sup>4</sup>	1

- 2 cutting oils in one.
- For hand tools and high-speed thread cutting machines.
- Combines the best properties of dark and light cutting oils with sulfur and other additives to provide superior heat protection for costly cutting dies.
- Use on steel, brass, copper, black iron, wrought iron and galvanized iron.

**PIERCE® - RUST REMOVER, PENETRANT AND LUBRICANT**



Part #	Size	Case Qty
71211	12 oz. <sup>2</sup>	12
79711	12 oz. <sup>2</sup>	24
79769	55 gal. <sup>4</sup>	1

- Drives under rust and penetrates into the tightest crevices to protect against rust and corrosion.
- Removes asphalt, tar, grease, dirt from metal surfaces.
- Colorless, moisture-repellent film guards against continuing rust and corrosion.
- Use on all equipment, tools, chainsaws, cables, ignition systems, threaded parts, and any rotating or sliding metal surfaces.
- Lubricates and eliminates squeaks.



**Air Tool Lubricants**

A specially formulated high grade lubricant that prolongs the service life of air tools, cylinders and accessories while permitting maximum performance. Prohibits rust and removes moisture as it lubricates. It is non-corrosive, non-reactive and does not decompose. This compound is superior in performance to ordinary lubricants. The easy pour spout helps prevent costly spills. #10 weight. Use with the in-line lubricators.



1 pint



1 gallon

Part #	Size
DATL016	1 pint
DATL128	1 gallon

**Anti-Freeze Lubricants**

Winter grade air tool lubricant that prevents air line, air tool and in-line lubricator freeze-up. Can be poured directly into tool or used with air line lubricators. Performance is good to -45°F.

Part #	Size
DATL016W	1 pint
DATL128W	1 gallon



1 pint



1

**Heavy Duty, High Capacity Safety Pop-Off Valves**

ASME Code, National Board Certified Safety Valves are designed to protect un-fired pressure vessels from over-pressure. Equipped with a pull ring for manual testing. Maximum temperature **400°F (204°C)**. All brass construction with chrome steel ball on a precision machined brass seat.

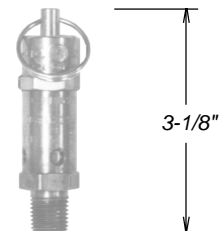
1/2" male NPT		
Part #	SCFM	Preset Pressure PSI
SV30HD	73	30
SV100HD	192	100
SV125HD	234	125
SV150HD	277	150
SV175HD	319	175
SV200HD	361	200



**Standard Safety Pop-Off Valves**

ASME Code, National Board Certified Safety Valves are designed to protect un-fired pressure vessels from over-pressure. Maximum operating temperature is **400°F (204°C)**. All brass construction with chrome steel ball on a precision machined brass seat. Higher flow/SCFM capacity at rated pressure.

1/4" male NPT		
Part #	SCFM	Preset Pressure PSI
SV30	24	30
SV100	64	100
SV125	78	125
SV150	92	150
SV175	106	175
SV200	120	200



**"Air Chief" Safety Blow Gun**

This basic Safety Blow Gun is designed to conform to OSHA Standard 1910.242 (B) permitting a maximum of 30 PSI outlet pressure when dead ended based on a maximum of 150 PSI inlet pressure as well as OSHA Standard 1910.95 regulating occupational noise level exposure. *Safety glasses or shield must be worn when using any blow gun.*



**Part #** D204-30

- Blow gun body is designed to comfortably fit the contour of the hand, minimizing user fatigue.
- Large lever with black vinyl grip further adds to the ergonomic design and allows for easy air flow activation.
- Chrome plated zinc die cast body, nickel plated steel lever, vinyl thumb grip, stainless steel spring, brass valve, Buna-N seals and nickel plated brass tip combine for superior corrosion resistance as well as a contemporary look.
- 1/4" female NPT inlet
- Recessed internal slotted screw allows easy access to valve assembly for repairs or replacement.

**SAFETY ALERT** Note: The "Air Chief" Safety Blow Gun has a safety tip which prevents buildup of tip pressure in the event the outlet is obstructed or "dead ended". It complies with the requirements for OSHA 1910.242(B) and 1910.95 when used on air lines of 150 PSI or less.

**Premium Safety Blow Gun**

This Premium Safety Blow Gun features a distinctive black powder coat finish to give it a rich appearances as well as long term protection from corrosion and rough handling. Designed to conform to OSHA Standard 1910.242 (B) permitting a maximum of 30 PSI outlet pressure when dead ended based on a maximum of 150 PSI inlet pressure as well as OSHA Standard 1910.95 regulating occupational noise level exposure. *Safety glasses or shield must be worn when using any blow gun.*



**Part #** D204-30P

- Blow gun body is designed to comfortably fit the contour of the hand, minimizing user fatigue.
- Large lever with black vinyl grip further adds to the ergonomic design and allows for easy air flow activation.
- Zinc die cast body with a black powder coat finish, nickel plated steel lever, vinyl thumb grip, stainless steel spring, brass valve, Buna-N seals and nickel plated brass tip.
- 1/4" female NPT inlet

**SAFETY ALERT** Note: The Premium Safety Blow Gun has a safety tip which prevents buildup of tip pressure in the event the outlet is obstructed or "dead ended". It complies with the requirements for OSHA 1910.242(B) and 1910.95 when used on air lines of 150 PSI or less.

**Safety Air Booster Blow Gun**

The multiple holes in the Safety Booster tip of the Safety Air Booster Gun create a venturi effect that increases air flow (working capacity) while still remaining compliant with OSHA Standard 1910.242 (B). *Safety glasses or shield must be worn when using any blow gun.*

- Blow gun body is designed to comfortably fit the contour of the hand, minimizing user fatigue.
- Large lever with black vinyl grip further adds to the ergonomic design and allows for easy air flow activation.
- Chrome plated zinc die cast body, nickel plated steel lever, vinyl thumb grip, stainless steel spring, brass valve, Buna-N seals and nickel plated brass Safety Booster tip.
- 1/4" female NPT inlet



Part # D204-30SB

Note: The Safety Air Booster Blow Gun has a safety tip which prevents buildup of tip pressure in the event the outlet is obstructed or "dead ended". It complies with the requirements for OSHA 1910.242(B) and 1910.95 when used on air lines of 150 PSI or less.



**Non-Safety Brass Tip Blow Gun**

The ventless, nickel-plated tip provides the most economical means of achieving as concentrated stream of air for many blow-off applications. All other components and design features are the same as our "Air Chief" Safety Blow Gun (D204-30). *Must be used on air lines having a maximum regulated pressure of 30 PSI in order to comply with OSHA Standard 1910.242 (B).*

- Blow gun body is designed to comfortably fit the contour of the hand, minimizing user fatigue.
- Large lever with black vinyl grip further adds to the ergonomic design and allows for easy air flow activation.
- Chrome plated zinc die cast body, nickel plated steel lever, vinyl thumb grip, stainless steel spring, brass valve, Buna-N seals and ventless, nickel plated brass tip provide superior corrosion resistance.
- 1/4" female NPT inlet



Part # D605



CAUTION: This blow gun does not have a safety by-pass to prevent buildup of tip pressure in the event of tip blockage. It may be used for cleaning purposes only if the air supply (inlet pressure) has been reduced to 30 PSI or less.

**Non-Safety Rubber Tipped Blow Gun**

The rubber tip will not scratch or mar delicate surfaces. The conical, rubber tip can also be used to create a seal between the Blow Gun and fluid lines (or any other opening). Base of the tip is nickel-plated brass for additional corrosion resistance. *Must be used on air lines having a maximum regulated pressure of 30 PSI in order to comply with OSHA Standard 1910.242 (B).*

- Blow gun body is designed to comfortably fit the contour of the hand, minimizing user fatigue.
- Large lever with black vinyl grip further adds to the ergonomic design and allows for easy air flow activation.
- Chrome plated zinc die cast body, nickel plated steel lever, vinyl thumb grip, stainless steel spring, brass valve, Buna-N seals and rubber tip with nickel plated brass provide superior corrosion resistance.
- 1/4" female NPT inlet



Part # D201



CAUTION: This blow gun does not have a safety by-pass to prevent buildup of tip pressure in the event of tip blockage. It may be used for cleaning purposes only if the air supply (inlet pressure) has been reduced to 30 PSI or less.



**Blow Gun Extensions**

These extension tips allow easier access to blow-off applications in high or hard to reach places. Made from a brass base with a rugged steel extension tube, all nickel plated. Supplied with 1/8" male NPT connections. Can be used with all Dixon "Air Chief" lever operated blow guns as well as most blow guns from other manufacturers.



Part #	Size Extension
BGE6	6"
BGE10	10"
BGE12	12"
BGE18	18"
BGE24	24"

**Blow Gun Extensions**



Nickel plated brass safety tip with 1/8" male NPT connection can be used with all Dixon "Air Chief" lever operated blow guns as well as most blow guns from other manufacturers.

Part #	SST10
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Rubber non-safety tip with 1/8" male NPT, nickel-plated brass connection can be used with all Dixon "Air Chief" lever operated blow guns as well as most blow guns from other manufacturers.

Part #	D201RT
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**NEW! Typhoon Blow Guns**

- Meets or exceeds OSHA regulations
- Maximum flow for easy clean-up and blow-off of even the heaviest shavings and chips.
- Lightweight and ergonomic
- Variable flow trigger for controlled blow-off
- Wide variety of tips and extensions are available. Contact the factory for pricing and availability.

**NEW! Typhoon Blow Gun with High Flow Tip**



- Comes standard with a high flow tip
- 34 CFM @ 125 PSI
- 2.1 lbs. of thrust

Part #	Description
TYP-2500CS	1/4" female NPT blowgun with high flow tip
EXT12CN-DPB	12" extension and high flow tip

**NEW! Typhoon Blow Gun with Multi-Jet Tip**



- Comes standard with a multi-jet tip
- 351 CFM @ 125 PSI
- 3.1 lbs. of thrust

Part #	Description
TYP-3800MJ	3/8" male NPT blowgun with multi-jet tip
EXT12MJ-DPB	12" extension and multi-jet tip

Pneumatic Accessories





**Safety Air Booster Blow Gun**

- Contoured pistol-grip for safe, comfortable handling, even with greasy hands.
- Convenient "hang-up" hook.
- Conforms to U.S. Dept. of Labor, OSHA Standard 1910.242 (B) allowing a maximum of 30 PSI outlet pressure at the nozzle when dead-ended.
- Conforms to U.S. Dept. of Labor, OSHA Standard 1910.95 regulating noise level exposure.
- Conforms to Title 41, Walsh-Healy Rules and Regulations P50-204.8, Safety and Health Standards.
- 1/4" female NPT inlet



Part #	PG700
--------	-------

**Extended Nozzle Pistol Grip Blow Gun**

- Conforms to U.S. Dept. of Labor, OSHA Standard 1910.242 (B) allowing a maximum of 30 PSI outlet pressure at the nozzle when dead-ended.
- Conforms to U.S. Dept. of Labor, OSHA Standard 1910.95 regulating noise level exposure.
- Conforms to Title 41, Walsh-Healy Rules and Regulations P50-204.8, Safety and Health Standards.
- Slender 4" extended nozzle allows access to hard to reach places and holes as small as .200".
- Pressure rating - **150 PSI**
- Variable output trigger enables user to control air flow.
- Hook design near trigger provides finger protection as well as easy storage.
- Lightweight to help minimize user fatigue.
- Side holes allow air to escape if nozzle tip is dead-ended, thus preventing back pressure buildup.
- 1/4" female NPT inlet



Part #	ENBG1
--------	-------

**Hydro-Blast Cleaning Tool and Siphon**

SHOULD NOT BE USED WITH MINERAL SPIRITS

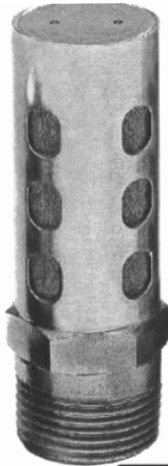
- Uses siphon to spray solvents or detergent solutions.
- Uses regular garden hose plus compressed air to blast off dirt and residue.
- Can be used with hot or cold water. Valve body stays cool even when used with hot water.
- Used in garages and factories to blast caked-on dirt from vehicles and equipment.
- Complete, ready to use. D230 includes: Valve body, 2" and 15" extensions, six foot siphon tubing and adapter for garden hose.
- 1/4" female NPT inlet



Part #	D230
--------	------

The tubing supplied is vinyl and the internal seals in the valve body are Buna-N. Consult chemical resistance charts for compatibility of solvents before putting gun into solvent service. Use safety equipment when using this tool. Eye and skin protection are necessary .





HFTO-Series FANTO® mufflers are our newest addition for combating exhaust ports noise from air-operated equipment.

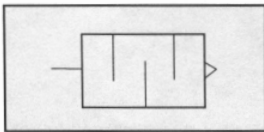
FANTO® mufflers utilize a 50 mesh, self-cleaning STAINLESS STEEL SCREEN in a strong, yet lightweight aluminum shell so they are completely corrosion-resistant. Large vent holes combined with precisely calculated layers of stainless steel screen to allow high airflow but effectively reduce the air exhaust noise level.

Their **ULTRA-SLIM** profile allows the FANTO® mufflers to be installed anywhere space is limited. Installation directly to the exhaust ports of pneumatic valves is possible without interference with other ports, since the overall body diameter is barely larger than the corresponding thread diameter.

Unit should be mounted in a protective position free from excessive vibration. Hand tighten to the device only.

Symbol

**PATENTED**



**HOW TO ORDER**

**HFTO**

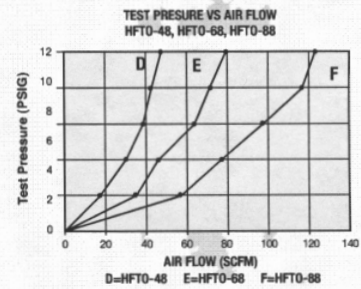
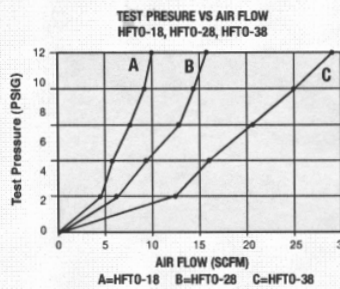
Fanto Muffler

Connection

18=1/8", 28=1/4"  
38=3/8", 48=1/2"  
68=3/4", 88=1"

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**FLOW CHARACTERISTICS - FANTO® MUFFLER**



\* All tests are performed by Consolidated Laboratories, Inc.

**SPECIFICATIONS**

ITEM	MODEL	HFTO-18	HFTO-28	HFTO-38	HFTO-48	HFTO-68	HFTO-88
CONNECTION	NPT	1/8"	1/4"	3/8"	1/2"	3/4"	1"
OVERALL LENGTH	IN.	1-7/16"	1-51/64"	2-19/64"	2-25/32"	3-3/16"	3-57/64"
HEX	IN.	7/16"	9/16"	11/16"	7/8"	1-1/16"	1-5/16"
MATERIAL	BODY	ALUMINUM					
	ELEMENT	50 MESH STAINLESS STEEL SCREEN					
MAX OPERATING PRESSURE		300 PSI (21.1 kg / cm <sup>2</sup> )					
OPERATING TEMPERATURE		35°F TO 160°F (1.6°C TO 70°C)					
WEIGHT (APPROX.)	Oz.	0.25	0.50	0.90	1.55	2.25	4.20
UNIT PACK	EA.	10	10	5	5	1	1

**SOUND CHARACTERISTICS - FANTO® MUFFLER**

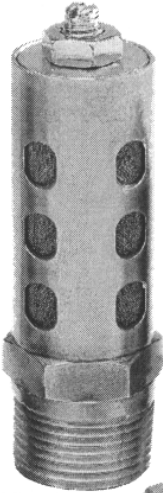
BACK PRESSURE (PSIG)	HFTO-18		HFTO-28		HFTO-38		HFTO-48		HFTO-68		HFTO-88	
	FLOW (SCFM)	db	FLOW (SCFM)	db	FLOW (SCFM)	db	FLOW (SCFM)	db	FLOW (SCFM)	db	FLOW (SCFM)	db
2	4.25	73.0	5.97	70.0	12.36	71.5	18.12	70.0	34.11	82.0	55.75	85.5
4	5.86	78.0	9.47	76.5	15.79	77.0	30.45	74.5	43.37	84.5	75.57	86.0
6	7.40	81.5	12.10	80.0	20.17	80.5	35.61	77.0	62.08	84.5	97.69	86.0
8	8.70	83.5	14.20	82.0	24.86	83.5	42.26	78.0	70.85	85.5	115.59	86.5
10	10.10	86.5	16.00	83.5	28.51	86.0	47.95	80.0	80.61	88.0	127.00	85.5

\* All tests are performed by Consolidated Laboratories, Inc.

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HFSPA-Series mufflers is our new FANTO® muffler fitted with an external flow adjustment screw.



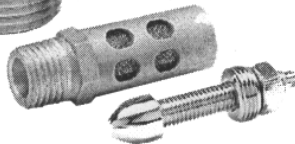
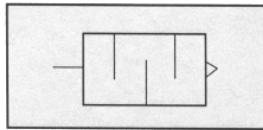
With all features of the FANTO® muffler retained, we added an adjustment screw with a **PATENTED** contour **BULLET** head; its aerodynamically shaped profile allows the smoothest airflow possible. It can accurately varies orifice opening form eh closed to full flow as required and the final position can be locked by the lock nut. It cannot be accidentally tampered with, removed or blown out. Complete adjustment assembly is nickel plated for corrosion resistance.

With its impressive high airflow design, corrosion-resistant constructin and lightweight aluminum body, the **ULTRA-SLIM** HFSPA-Series can withstand continuous heavy-duty use under the most demanding conditions.

Unit should be mounted in a protective position free from excessive vibration. Hand tighten to the device only.

**PATENTED**

Symbol



**HOW TO ORDER**

**HFSPA**

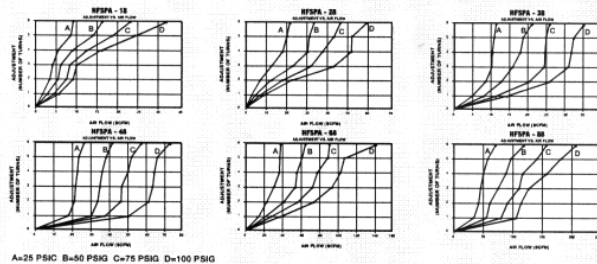
Speed Control Fanto® Muffler

Connection  
18=1/8", 28=1/4"  
38=3/8", 48=1/2"  
68=3/4", 88=1"

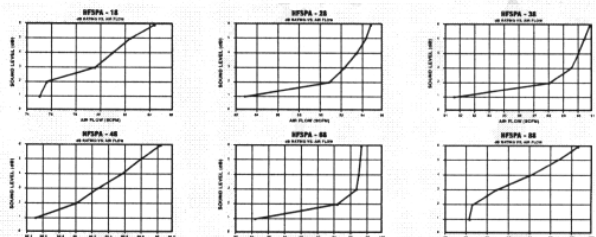
**SPECIFICATIONS**

ITEM	MODEL	HFSPA-18	HFSPA-28	HFSPA-38	HFSPA-48	HFSPA-68	HFSPA-88
CONNECTION	NPT	1/8"	1/4"	3/8"	1/2"	3/4"	1"
MAX ADJUSTMENT FLOW	SCFM	32	60	80	100	140	220
APPROX HEIGHT (FULL OPEN)	IN.	1-1/2"	2-61/64"	3-25/32"	4-53/64"	5-1/2"	6-21/32"
HEX	IN.	7/16"	9/16"	11/16"	7/8"	1-1/16"	1-5/16"
MATERIAL	BODY	ALUMINUM					
	ELEMENT	50 MESH STAINLESS STEEL SCREEN					
MAX OPERATING PRESSURE		300 PSI (21.1 kg / cm <sup>2</sup> )					
OPERATING TEMPERATURE		35°F TO 160°F (1.6°C to 70°C)					
WEIGHT (APPROX.)	Oz.	0.35	0.80	1.40	3.15	4.75	7.65
UNIT PACK	EA.	10	10	5	5	1	1

**FLOW CHARACTERISTICS  
SPEED CONTROL FANTO® MUFFLER**



**SOUND CHARACTERISTICS  
SPEED CONTROL FANTO® MUFFLER**

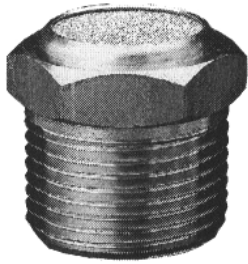


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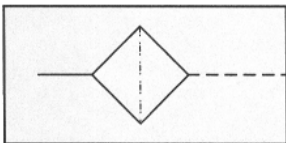
\* All tests are performed by Consolidated Laboratories, Inc.

- SPG3 & SPG5 = Shatterproof Glass Lens - 3" & 5"
- DUCT = Aluminum Duct Flange
- AP5 = 5" Acrylic lens
- BG3 & BG\$ & BG5 = Glycerin Filling - 3" & 4" & 5"





Symbol



Low profile breather vents have many applications. They are most often used on single acting cylinders or valves to prevent dirt and foreign particles from entering ports open to the atmosphere. Common uses can also be found on vacuum relief or pressure equalization for gear boxes, crank cases, storage tanks or other vessels whenever pressure equalization is required.

Supplied with standard male pipe threads, they can be installed, with little protrusion, as a flat integral part of the equipment. Unit should be mounted in a protective position free from excessive vibration. Use wrench on hex head to tighten unit to the device. Standard unit contains a 40 micron element, and 10 or 90 micron units are available on special order.

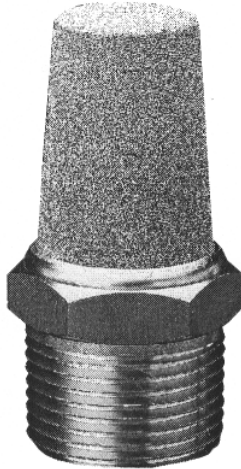
**SPECIFICATIONS**

ITEM	MODEL	BV-SAE#4	BV-SAE#6	BV-SAE#8
CONNECTION	SAE	7/16"-20	9/16"-18	3/4"-16
OVERALL LENGTH		3/4"	13/16"	15/16"
HEX		9/16"	11/16"	7/8"
MATERIAL	BODY	BRASS		
	MATERIAL	SINTERED BRONZE		
MAX OPERATING PRESSURE		150 PSI		
OPERATING TEMPERATURE		35°F TO 300°F (1.6°C to 149°C)		
WEIGHT (APPROX.)	Oz.	0.42	0.71	1.18
UNIT PACK	EA.	50	50	50

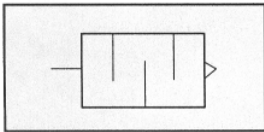
**SPECIFICATIONS**

ITEM	MODEL	ASP-1032BV	ASP-01BV	ASP-02BV	ASP-03BV	ASP-04BV	ASP-06BV	ASP-08BV	ASP-10BV	ASP-12BV
CONNECTION	NPT	10-32NF	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"
OVERALL LENGTH	IN.	23/64"	1/2"	11/16"	27/32"	61/64"	1-7/64"	1-11/32"	1-9/16"	1-5/8"
HEX	IN.	5/16"	7/16"	9/16"	11/16"	7/8"	1-9/64"	1-11/32"	1-3/4"	2"
MATERIAL	BODY	BRASS								
	ELEMENT	SINTERED BRONZE (40 micron Standard, 10 or 90 micron available)								
MAX OPERATING PRESSURE		300 PSI (21.1 kg / cm <sup>2</sup> )								
OPERATING TEMPERATURE		35°F TO 300°F (1.6°C to 149°C)								
WEIGHT (APPROX.)	Oz.	0.07	0.19	0.39	0.70	1.17	1.84	3.31	7.25	9.05
UNIT PACK	EA.	10	10	10	10	10	5	1	1	1

\* SUPPLY WITH GASKET.



Symbol



Mufflers utilize porous sintered bronze filter element secured to BRASS pipe fittings. These compact and inexpensive mufflers are furnished with standard male pipe thread connections, they are easy to install and maintain, particularly suitable where space is limited. They are used to diffuse air and muffle noise from the exhaust ports of air valves, air cylinders and air tools to an acceptable level within OSHA noise requirements.

Mufflers can also be used as filters for gasoline, oil and air exhaust and intake filtering; coalescing of oil mist or water vapor, etc.; cryogenic phase separation; pressure of vacuum equalization and many others.

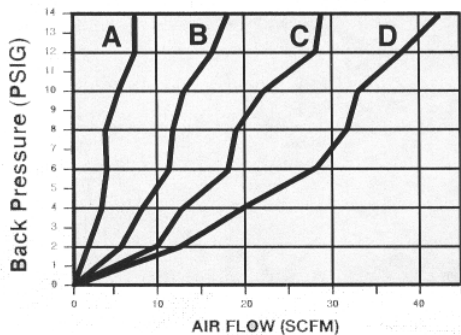
Unit should be mounted in a protective position free from excessive vibration. Use wrench on hex head to tighten unit to the device. Standard unit contains a 40 micron element, and 10 or 90 micron units are available on special order.

**SPECIFICATIONS**

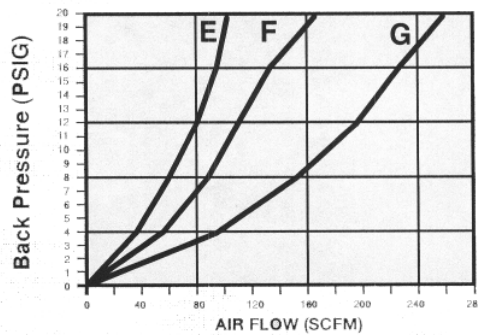
ITEM	MODEL	ASP-1032	ASP-01	ASP-02	ASP-03	ASP-04	ASP-06	ASP-08	ASP-10	ASP-12
CONNECTION	NPT	10-32NF	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"
OVERALL LENGTH	IN.	3/4"	29/32"	1-5/16"	1-9/16"	1-7/8"	2-9/32"	2-7/8"	3-7/16"	4"
HEX	IN.	5/16"	7/16"	9/16"	11/16"	7/8"	1-9/64"	1-11/32"	1-3/4"	2"
MATERIAL	BODY	BRASS								
	ELEMENT	SINTERED BRONZE (40 micron Standard, 10 or 90 micron available)								
MAX OPERATING PRESSURE		300 PSI (21.1 kg / cm <sup>2</sup> )								
OPERATING TEMPERATURE		35°F TO 300°F (1.6°C to 149°C)								
WEIGHT (APPROX.)	Oz.	0.16	0.26	0.56	0.93	1.47	2.96	4.16	9.50	13.75
UNIT PACK	EA.	10	10	10	10	5	1	1	1	1

\* SUPPLY WITH GASKET.

**FLOW CHARACTERISTICS - PNEUMATIC EXHAUST MUFFLER**



A: BM-08  
B: BM-18  
C: BM-28  
D: BM-38



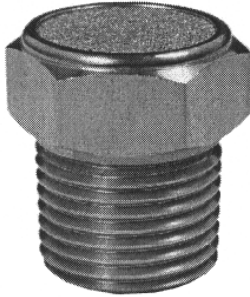
E: BM-48  
F: BM-68  
G: BM-88

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\* All tests are performed by Consolidated Laboratories, Inc.



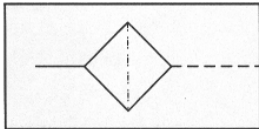
Series low profile breather vents are constructed with 300-Series stainless steel materials, they are resistant to atmospheric corrosion, foodstuffs, sterilizing solutions, many organic chemicals, dyestuffs and wide variety of inorganic chemicals.



Series compact breather vents are furnished with standard male pipe thread connections, they are often used on single acting stainless steel cylinders or valves to prevent dirt and foreign particles from entering port open to the atmosphere. Other common uses can also be found on vacuum relief or pressure equalization for gearboxes, crank cases, storage tanks or other vessels whenever pressure equalization is required.

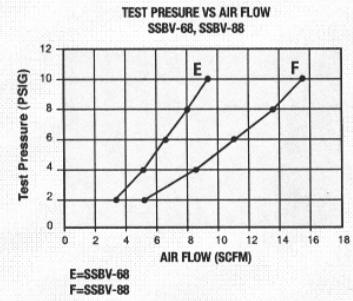
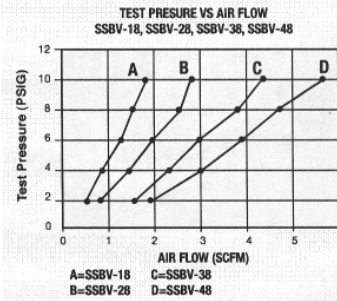
Unit should be mounted in a protective position free from excessive vibration. Use wrench on hex head to tighten unit to the device. All units contains 70-micron filter element.

Symbol



**FLOW CHARACTERISTICS - S.S. BREATHER VENT**

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\* All tests are performed by Consolidated Laboratories, Inc.

**SPECIFICATIONS**

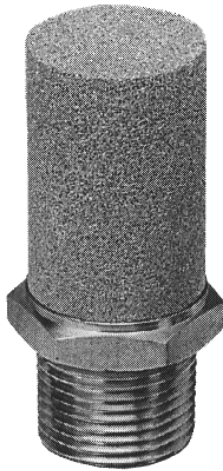
ITEM	MODEL	ASP-01BVSS	ASP-02BVSS	ASP-03BVSS	ASP-04BVSS	ASP-06BVSS	ASP-08BVSS
CONNECTION	NPT	1/8"	1/4"	3/8"	1/2"	3/4"	1"
OVERALL LENGTH	IN.	19/32"	49/64"	29/32"	1-1/32"	1-11/64"	1-1/4"
HEX	IN.	1/2"	5/8"	3/4"	15/16"	1-1/8"	1-1/2"
MATERIAL	BODY	303 GRADE STAINLESS STEEL					
	ELEMENT	316 GRADE STAINLESS STEEL (70um)					
MAX OPERATING PRESSURE		150 PSI (10.55 kg / cm <sup>2</sup> )					
OPERATING TEMPERATURE		35°F TO 392°F (1.6°C to 200°C)					
WEIGHT APPROX.	Oz.	0.27	0.54	0.81	1.36	2.11	3.31
UNIT PACK	EA.	5	5	2	2	1	1

**SOUND CHARACTERISTICS - STAINLESS STEEL EXHAUST MUFFLER**

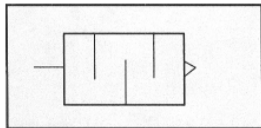
BACK PRESSURE (PSIG)	SSBV-18			SSBV-28			SSBV-38			SSBV-48			SSBV-68			SSBV-88		
	FLOW (SCFM)	db		FLOW (SCFM)	db		FLOW (SCFM)	db		FLOW (SCFM)	db		FLOW (SCFM)	db		FLOW (SCFM)	db	
2	0.6	60.0		0.9	60.0		1.5	60.0		1.9	62.0		3.3	60.0		5.0	60.0	
4	0.9	60.0		1.5	60.0		2.4	60.5		3.0	62.5		5.0	61.5		8.5	61.0	
6	1.2	60.0		2.0	60.0		3.0	61.0		3.9	64.0		6.6	62.0		11.0	61.5	
8	1.5	60.0		2.4	60.5		3.7	61.5		4.8	64.5		7.9	63.5		13.5	62.0	
10	1.8	60.0		2.7	60.5		4.4	62.5		5.7	65.0		9.3	65.0		15.5	62.0	

\* All tests are performed by Consolidated Laboratories, Inc.





Symbol



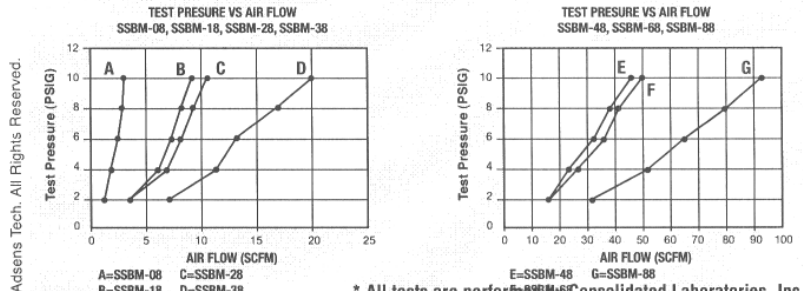
Mufflers are constructed with 300-Series stainless steel material, they are resistant to atmospheric corrosion, foodstuffs, sterilizing solutions, many organic chemicals, dyestuffs and wide variety of inorganic chemicals

These compact mufflers are furnished with standard male pipe thread connection, they are easy to install and maintain, particularly suitable for confined area. They are used to diffuse air and muffle noise from the exhaust ports of air valves, air cylinders and air tools to an acceptable level within OSHA noise requirement.

Mufflers can also be used as filters for gasoline, various chemical solutions, oil and air exhaust and intake filtering, coalescing of oil mist or water vapor, etc.; cryogenic phase separation; pressure of vacuum equalization and many others.

Unit should be mounted in a protective position free from excessive vibration. Use wrench on hex head to tighten unit to the device. All units contains 70-micron filter element.

**FLOW CHARACTERISTICS - S.S. EXHAUST MUFFLER**



**SPECIFICATIONS**

ITEM	MODEL	ASP-1032SS	ASP-01SS	ASP-02SS	ASP-03SS	ASP-04SS	ASP-06SS	ASP-08SS
CONNECTION	NPT	10-32 NF	1/8"	1/4"	3/8"	1/2"	3/4"	1"
OVERALL LENGTH	IN.	23/32"	1-3/32"	1-3/8"	1-7/8"	2-1/4"	2-51/64"	3-11/64"
HEX	IN.	5/16"	1/2"	5/8"	3/4"	15/16"	1-1/8"	1-1/2"
MATERIAL	BODY	303 GRADE STAINLESS STEEL						
	ELEMENT	316 GRADE STAINLESS STEEL (70 um)						
MAX OPERATING PRESSURE		300 PSI (21.1 kg / cm <sup>2</sup> )						
OPERATING TEMPERATURE		35°F TO 392°F (1.6°C to 200°C)						
WEIGHT (APPROX.)	Oz.	0.13	0.44	0.83	1.34	2.13	3.72	6.32
UNIT PACK	EA.	5	5	5	2	2	1	1

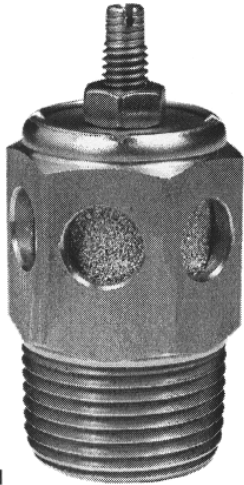
**SOUND CHARACTERISTICS - STAINLESS STEEL EXHAUST MUFFLER**

BACK PRESSURE (PSIG)	SSBM-08			SSBM-18		SSBM-28		SSBM-38		SSBM-48		SSBM-68		SSBM-88	
	FLOW (SCFM)	db		FLOW (SCFM)	db	FLOW (SCFM)	db	FLOW (SCFM)	db	FLOW (SCFM)	db	FLOW (SCFM)	db	FLOW (SCFM)	db
2	0.9	60.0		3.4	60.0	3.4	60.5	7.0	60.0	15.0	60.0	15.0	64.0	31.0	68.0
4	1.2	60.0		5.2	60.5	5.4	61.5	11.0	60.5	24.0	62.0	25.0	65.0	51.0	75.0
6	1.7	60.0		6.8	61.0	7.1	62.0	13.0	61.0	31.0	63.5	32.0	66.0	65.0	79.0
8	1.9	60.0		8.1	61.5	8.7	62.5	17.0	62.0	38.5	65.5	40.0	67.0	79.5	81.0
10	2.2	60.0		9.5	62.0	10.4	63.0	20.0	62.5	45.0	67.0	50.0	67.5	93.0	82.5

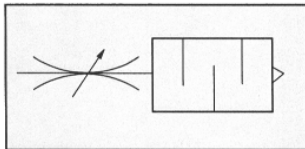
\* All tests are performed by Consolidated Laboratories, Inc.

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Symbol



SSSCM-Series stainless muffler with speed control provides infinite variation of control airflow at an acceptable sound level on the exhaust ports of air valves or single acting cylinder with complete safety. They are constructed with 300-Series stainless steel materials, therefore they are resistant to atmospheric corrosion, foodstuffs, sterilizing solutions, many organic chemicals, dyestuffs and wide variety of inorganic chemicals.

An external adjustment screw accurately varies orifice opening from closed to full flow as required. The final position can then be lock in place by the lock nut. The surrounding sleeve of stainless steel element reduces exhaust air noise. And it is protected by the integral stainless steel shroud/cage.

Unit should be mounted in a protective position free from excessive vibration. Use wrench on hex head to tighten unit to the device. All units contains 70-micron filter element.

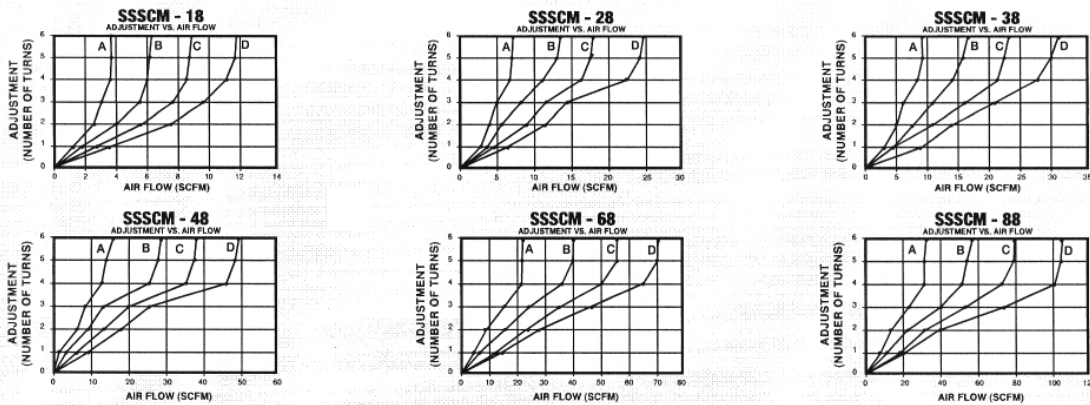
**HOW TO ORDER  
SSSCM**

Stainless Steel	Connection
Speed Control Muffler	18=1/8" 28=1/4" 38=3/8" 48=1/2" 68=3/4" 88=1"

**SPECIFICATIONS**

ITEM	MODEL	SSSCM-18	SSSCM-28	SSSCM-38	SSSCM-48	SSSCM-68	SSSCM-88
CONNECTION	NPT	1/8"	1/4"	3/8"	1/2"	3/4"	1"
OVERALL LENGTH	IN.	1-17/32"	1-59/64"	2-1/16"	2-25/64"	2-27/32"	3-1/16"
HEX	IN.	1/2"	9/16"	11/16"	7/8"	1-1/16"	1-3/8"
MATERIAL	BODY	303 GRADE STAINLESS STEEL					
	ELEMENT	316 GRADE STAINLESS STEEL (70um)					
MAX OPERATING PRESSURE		300 PSI (21.1 kg / cm <sup>2</sup> )					
OPERATING TEMPERATURE		35°F TO 392°F (1.6°C to 200°C)					
WEIGHT APPROX.	Oz.	0.63	1.03	1.63	2.91	4.85	7.81
UNIT PACK	EA.	5	5	2	2	1	1

**FLOW CHARACTERISTICS VS ADJUSTMENT - STAINLESS STEEL SPEED CONTROL MUFFLER**



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5

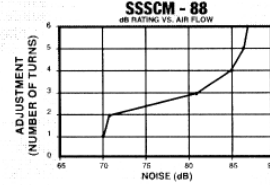
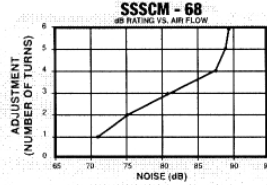
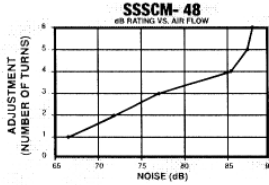
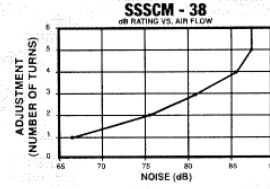
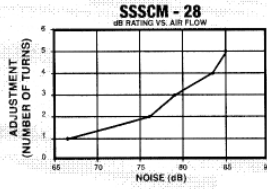
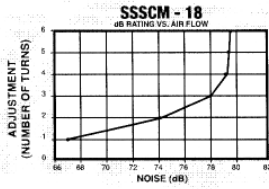
\* All tests are performed by Consolidated Laboratories, Inc.



# Pneumatic Accessories

## SOUND CHARACTERISTICS VS ADJUSTMENT - STAINLESS STEEL SPEED CONTROL MUFFLER

INLET PRESSURE=100 PSIG



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## SPBM MUFFLER WITH FLOW ADJUSTMENT

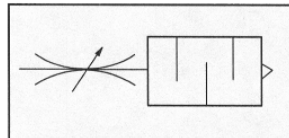


SPBM-Series muffer utilizes our very popular BM-Series muffer modified to fit with an external flow adjustment screw.

The external flow adjustment screw accurately varies orifice opening from closed to full flow as required. The final position is then lock in place by the lock nut.

Unit should be mounted in a protective position free from excessive vibration. Use wrench on hex head to tighten unit to the device. All units contains 40-micron filter element.

Symbol



### HOW TO ORDER

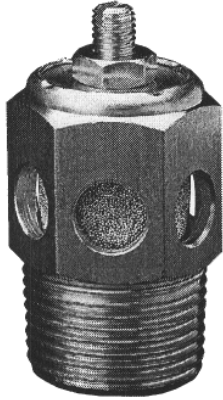
#### SPBM —

Speed Control BM Connection  
 18=1/8",  
 28=3/16",  
 38=3/8", 48=1/2"

### SPECIFICATIONS

ITEM	MODEL	SPBM-18	SPBM-28	SPBM-38	SPBM-48
CONNECTION	NPT	1/8"	1/4"	3/8"	1/2"
OVERALL LENGTH	IN.	1-37/64"	2-3/32"	2-33/64"	3-1/32"
HEX	IN.	7/16"	9/16"	11/16"	7/8"
MATERIAL	BODY	BRASS			
	ELEMENT	SINTERED BRONZE (40 micron)			
MAX OPERATING PRESSURE		300 PSI (21.1 kg / cm <sup>2</sup> )			
OPERATING TEMPERATURE		35°F TO 300°F (1.6°C to 149°C)			
WEIGHT APPROX.	Oz.	0.40	0.80	1.52	2.48
UNIT PACK	EA.	5	5	5	5





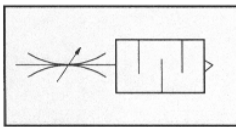
SCM-Series muffler with speed control provides infinite variation of control of air flow at an acceptable sound level on the exhaust ports of air valves with complete safety.

An external adjustment screw accurately varies orifice opening from closed to full flow as required. The final position is then locked in place by the lock nut. Objectionable exhaust air noise is eliminated by the surrounding sleeve of sintered bronze.

SCM-Series mufflers feature complete safety in operation. The sintered bronze sleeve is held security in position and protected by an integral shroud.

Standard pipe thread connections provide easy attachment to equipment. Unit should be mounted in a protective position free from excessive vibration. Use wrench on hex head to tighten unit to the device. Standard unit contains a 40 micron element.

Symbol



### HOW TO ORDER

#### SCM —

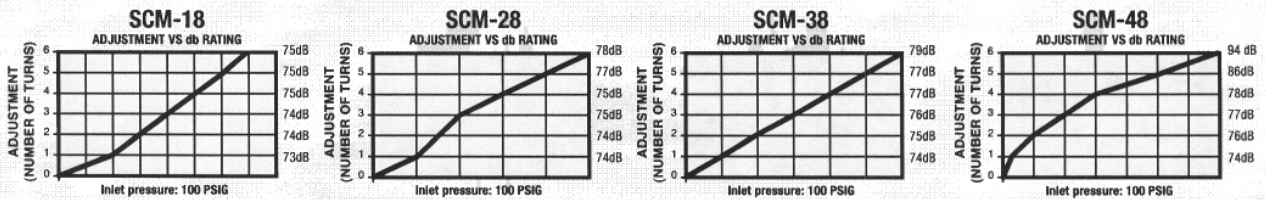
Speed Control Muffler	Connection	None=NPT (Inch) P = BSPT (Metric)
	18=1/8", 28=1/4"	
	38=3/8", 48=1/2"	
	68=3/4", 88=1"	

### SPECIFICATIONS

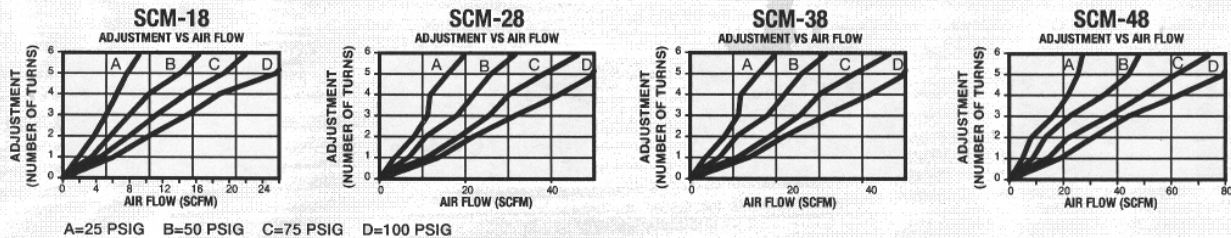
ITEM	MODEL	SCM-18	SCM-28	SCM-38	SCM-48	SCM-68	SCM-88
CONNECTION	NPT	1/8"	1/4"	3/8"	1/2"	3/4"	1"
MAX. ADJUSTMENT FLOW	SCFM	30	50	70	100	130	160
APPROX. HEIGHT (FULL OPEN)	IN.	1-1/2"	1-11/16"	1-11/16"	2"	2-3/4"	3"
HEX	IN.	1/2"	9/16"	11/16"	7/8"	1-7/64"	1-11/32"
MATERIAL	BODY	BRASS					
	ELEMENT	SINTERED BRONZE (40 micron)					
MAX OPERATING PRESSURE		300 PSI (21.1 kg / cm <sup>2</sup> )					
OPERATING TEMPERATURE		35°F TO 300°F (1.6°C to 149°C)					
WEIGHT APPROX.	Oz.	0.65	1.12	1.73	2.95	4.72	7.57
UNIT PACK	EA.	10	10	10	5	1	1

### SOUND CHARACTERISTICS VS. ADJUSTMENT - SPEED CONTROL MUFFLER

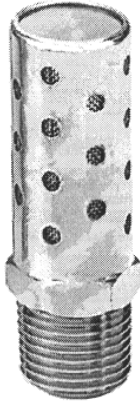
INLET PRESSURE=100 PSIG



### FLOW CHARACTERISTICS VS. ADJUSTMENT-SPEED CONTROL MUFFLERS



\* All tests are performed by Consolidated Laboratories, Inc.

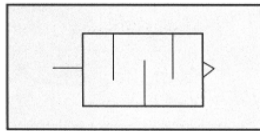


HFSM-Series steel mufflers utilize a 50 mesh, self-cleaning STAINLESS STEEL SCREEN in a tough steel shell to withstand shock and continuous heavy duty use in all applications.

Designed with evenly distributed small holes around the steel shell, exhaust air quietly disperses over a 360 degree pattern without restrict much air flow. Their SLIM profile allows them to be installed anywhere space is limited. Installation directly to the exhaust ports of pneumatic valves, or closely spaced manifold ports is possible without interference with other ports.

Unit should be mounted in a protective position free from excessive vibration. Use wrench on hex head to tighten unit to the device. Standard unit contains a 40 micron element, and 10 or 90 micron units are available on special order.

Symbol



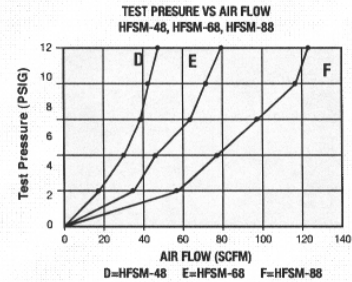
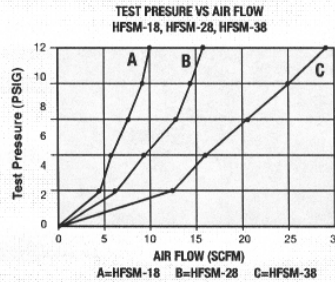
**HOW TO ORDER**

**HFSM**

High Flow Steel Muffler

Connection (NPT)  
18=1/8", 28=1/4"  
38=3/8", 48=1/2"  
68=3/4", 88=1"

**FLOW CHARACTERISTICS - HIGH FLOW STEEL MUFFLER**



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\* All tests are performed by Consolidated Laboratories, Inc.

**SPECIFICATIONS**

ITEM	MODEL	HFSM-18	HFSM-28	HFSM-38	HFSM-48	HFSM-68	HFSM-88
CONNECTION	NPT	1/8"	1/4"	3/8"	1/2"	3/4"	1"
OVERALL LENGTH	IN.	1-3/8"	1-3/4"	2-1/4"	2-3/4"	3-1/4"	3-7/8"
HEX	IN.	7/16"	9/16"	11/16"	7/8"	1-1/16"	1-5/16"
MATERIAL	BODY	STEEL					
	ELEMENT	50 MESH STAINLESS STEEL SCREEN					
MAX OPERATING PRESSURE		300 PSI (21.1 kg / cm <sup>2</sup> )					
OPERATING TEMPERATURE		35°F TO 160°F (1.6°C to 70°C)					
WEIGHT (APPROX.)	Oz.	0.25	0.50	0.90	1.55	2.25	4.20
UNIT PACK	EA.	10	10	5	5	1	1

**SOUND CHARACTERISTICS - STEEL MUFFLER**

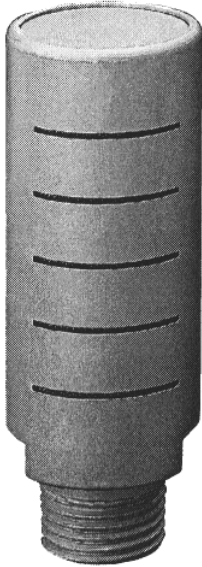
BACK PRESSURE (PSIG)	HFSM-18		HFSM-28		HFSM-38		HFSM-48		HFSM-68		HFSM-88	
	FLOW (SCFM)	db	FLOW (SCFM)	db	FLOW (SCFM)	db	FLOW (SCFM)	db	FLOW (SCFM)	db	FLOW (SCFM)	db
2	4.25	73.0	5.97	70.0	12.36	71.5	18.12	70.0	34.11	82.0	55.75	85.5
4	5.86	78.0	9.47	76.5	15.79	77.0	30.45	74.5	43.37	84.5	75.57	86.0
6	7.40	81.5	12.10	80.0	20.17	80.5	35.61	77.0	62.08	84.5	97.69	86.0
8	8.70	83.5	14.20	82.0	24.86	83.5	42.26	78.0	70.85	85.5	115.59	86.5
10	10.10	86.5	16.00	83.5	28.51	86.0	47.95	80.0	80.61	88.0	127.00	85.5

\* All tests are performed by Consolidated Laboratories, Inc.

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**ALUMINUM BODY**

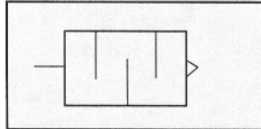


High flow muffler features a 50 mesh, self-cleaning STAINLESS STEEL SCREEN, and combined with corrosion-resistant aluminum shell to create a highly efficient, ultra-quiet muffler designed with minimal back pressure.

When installed on the exhaust ports pneumatic valves of manifolds, the aluminum body mufflers provides a quick and inexpensive way to reduce work area noise while preventing contamination from entering into the inside of the pneumatic valves.

Unit should be mounted in a protective position free from excessive vibration. Use wrench on hex head to tighten unit to the device.

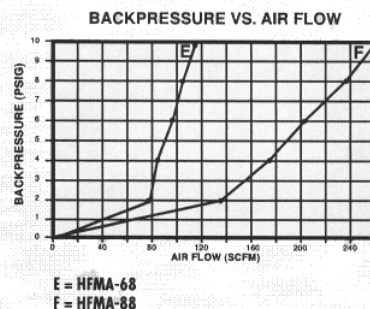
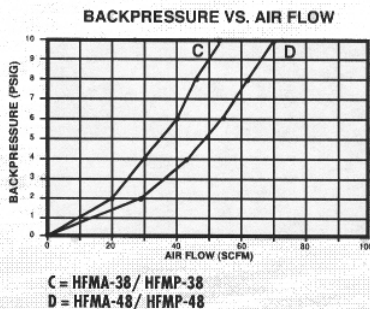
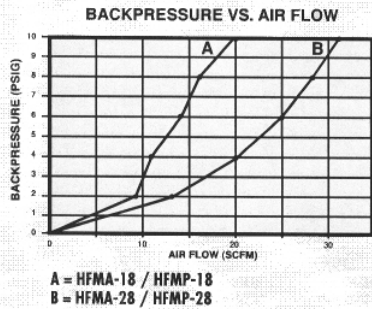
Symbol



**SPECIFICATIONS**

ITEM	MODEL	MHM-01	MHM-02	MHM-03	MHM-04	MHM-06	MHM-08
CONNECTION	NPT	1/8"	1/4"	3/8"	1/2"	3/4"	1"
OVERALL LENGTH	IN.	1 13/16"	1 13/16"	3 19/64"	3 19/64"	4 9/16"	4 5/8"
FLATS	IN.	5/8"	9/16"	1"	1"	1 1/8"	1 5/8"
MATERIAL	BODY	ALUMINUM					
	ELEMENT	50 MESH STAINLESS STEEL SCREEN					
MAX OPERATING PRESSURE		300 PSI (21.1 kg/cm <sup>2</sup> )					
OPERATING TEMPERATURE		35°F TO 160°F (1.6°C to 70°C)					
WEIGHT (APPROX.)	Oz.	0.52	0.52	1.81	1.83	5.2	5.52
UNIT PACK	EA.	5	5	5	5	1	1

**FLOW CHARACTERISTICS**



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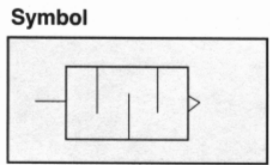
**PLASTIC BODY**



Built with the same concepts as our popular HFMA-Series but more affordable, our HFMP-Series utilize glass-filled nylon housing which is ultrasonically welded for maximum strength.

Both HFMA and HFMP Series offers greater flow with less pressure drop than the BM-Series, while lowering noise levels. Please refer to the sound and flow characteristics charts listed below for more information.

Unit should be mounted in a protective position free from excessive vibration. Hand tighten to the device only.



**HOW TO ORDER**

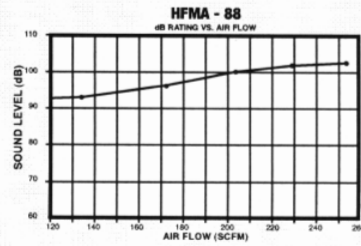
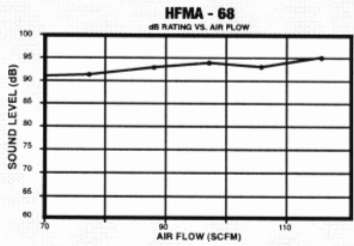
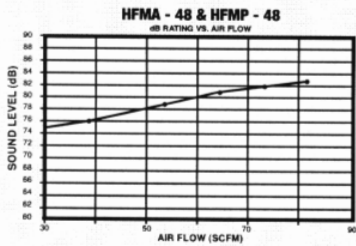
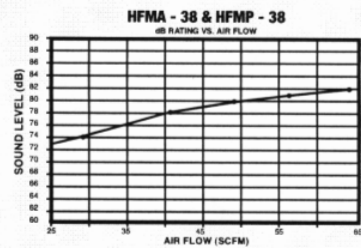
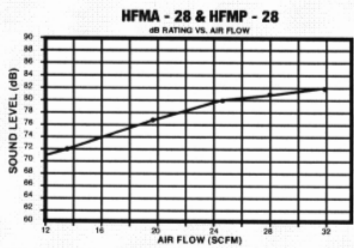
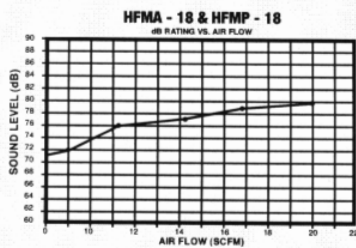
**HFMP** — —

High Flow Muffler      Connection      None=NPT (Inch)  
 Plastic Body      18=1/8", 28=1/4"      P=BSPT (Metric)  
 38=3/8", 48=1/2"

**SPECIFICATIONS**

ITEM	MODEL	HFMP-18	HFMP-28	HFMP-38	HFMP-48
CONNECTION	NPT	1/8"	1/4"	3/8"	1/2"
OVERALL LENGTH	IN.	2 9/16"	2 7/16"	3 7/16"	3 7/16"
FLATS	IN.	27/32"	27/32"	1 1/4"	1 1/4"
MATERIAL	BODY	NYLON			
	ELEMENT	50 MESH STAINLESS STEEL SCREEN			
MAX OPERATING PRESSURE		150 PSI (10.55 kg / cm <sup>2</sup> )			
OPERATING TEMPERATURE		35°F TO 120°F (1.6°C to 50°C)			
WEIGHT (APPROX.)	Oz.	0.40	0.48	1.60	1.60
UNIT PACK	EA.	10	10	5	5

**SOUND CHARACTERISTICS**

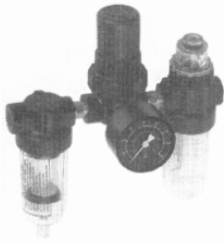


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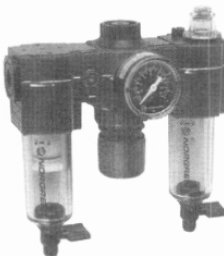
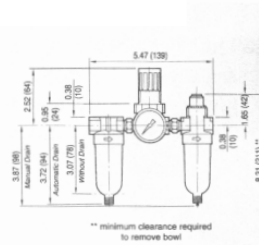
## Series 1 Combination Units



### Mini - Transparent Bowl

Automatic Drain			Manual Drain		
Size	Part #	SCFM	Size	Part #	SCFM
1/8"	P1A-100A	10	1/8"	P1A-100M	10
1/4"	P1A-200A	10	1/4"	P1A-200M	10

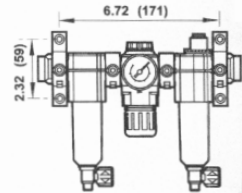
1 OZ. RESERVOIR



### 1/4" Basic - Transparent Bowl

Automatic Drain			Manual Drain		
Size	Part #	SCFM	Size	Part #	SCFM
1/4"	E72-2A	36	1/4"	E72-2M	36
3/8"	E72-3A	36	3/8"	E72-3M	36

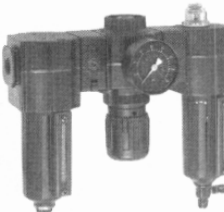
2 OZ. RESERVOIR



Transparent bowl pictured

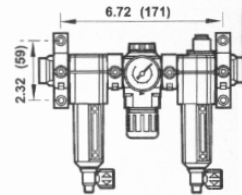
- Connected modularly
- Includes 2 clamp and wall mounting brackets #4214-52, 2 clamps #4214-51 and 2 NPT pipe adapters. See modular components on pages 133-135 for other options.

- 2 OZ. RESERVOIR
- Adjustable 5-150 PSI
- Inlet pressure for transparent bowl is 150 PSI
- Inlet pressure for metal bowl is 250 PSI maximum



### 1/4" Basic - Metal Bowl with Sight Glass

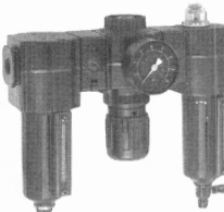
Automatic Drain			Manual Drain		
Size	Part #	SCFM	Size	Part #	SCFM
1/4"	E72-2A-MB	36	1/4"	E72-2M-MB	36
3/8"	E72-3A-MB	36	3/8"	E72-3M-MB	36



Metal bowl pictured

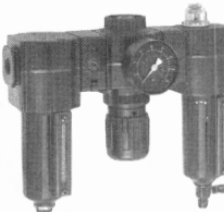
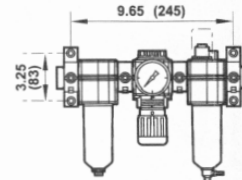
- Connected modularly
- Includes 2 clamp and wall mounting brackets #4314-52, 2 clamps #4314-51 and 2 NPT pipe adapters. See modular components on pages 133-135 for other options.

- 2 OZ. RESERVOIR
- Adjustable 5-150 PSI
- Inlet pressure for transparent bowl is 150 PSI
- Inlet pressure for metal bowl is 250 PSI maximum



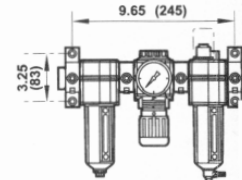
### 3/8" Basic - Transparent Bowl

Automatic Drain			Manual Drain		
Size	Part #	SCFM	Size	Part #	SCFM
1/4"	E73-2A	70	1/4"	E73-2M	70
3/8"	E73-3A	70	3/8"	E73-3M	70
1/2"	E73-4A	70	1/2"	E73-4M	70



### 3/8" Basic - Metal Bowl with Sight Glass

Automatic Drain			Manual Drain		
Size	Part #	SCFM	Size	Part #	SCFM
1/4"	E73-2A-MB	70	1/4"	E73-2M-MB	70
3/8"	E73-3A-MB	70	3/8"	E73-3M-MB	70
1/2"	E73-4A-MB	70	1/2"	E73-4M-MB	70



- 2 OZ. RESERVOIR
- Connected modularly
- Includes 2 clamp and wall mounting brackets #4314-52, 2 clamps #4314-51 and 2 NPT pipe adapters. See modular components on pages 133-135 for other options.
- Adjustable 5-150 PSI
- Inlet pressure for transparent bowl is 150 PSI
- Inlet pressure for metal bowl is 250 PSI maximum

These units are intended for use in industrial compressed air systems only. They must not be used where pressure or temperature may exceed maximum rated operating conditions. See specifications. The polycarbonated plastic bowls used on these units can be damaged and possibly burst if exposed to such substances as certain solvents, strong alkalis, compressor oils that contain ester-based additives or synthetic oils. Fumes of these substances in contact with the polycarbonate bowl, externally or internally, can also result in damage. Clean with warm water only. Use metal bowl in applications where a plastic bowl might be exposed to substances that are incompatible with polycarbonates. Not for use with fluids. Combination Units are supplied with micro-fog lubricators.

SCFM ratings at 100 PSI inlet pressure.

## Series 1 Drip Leg Automatic Drain

Used in compressed air systems to automatically expel liquids from piping systems. Installed at low points in piping and at end of pipe network, where water is likely to accumulate.

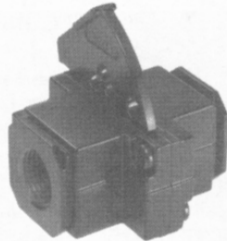


Size	Part #
1/2"	17-016-107

- Metal bowl
- Drain is ported to 1/8" NPT
- Inlet for metal bowl: 250 PSIG

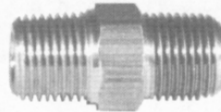
## Series 1 Three-Way Shut-Off Valves

These shut-off valves, typically attached to the inlet end of a combination unit, are manually operated, slide type valves that open and close with a short one-inch movement of the slide. The valve slide can be locked in the closed position with a customer supplied padlock. The standard valve is a 3-way valve that exhausts downstream air in the closed position. Recommended pressure is 250 PSI. For use with 73 and 74 Series filters, regulators and lubricators on pages 117-128.



Port Size	Part #
1/4"	T73E-2
3/8"	T73E-3
1/2"	T73E-4

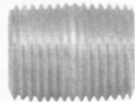
## Brass Hex Nipples



Male NPT x Male NPT	Part #	Pkg Qty
1/8" x 1/8"	BCN12	50
1/4" x 1/4"	BCN25	50
3/8" x 3/8"	BCN37	50
1/2" x 1/2"	BCN50	50
3/4" x 3/4"	BCN75	50

Optional Pkg./Box Quantity Shown

## Steel Close Nipples



Male NPT Size	Part #	Pkg Qty
1" x 1"	CN100	10
1-1/4" x 1-1/4"	CN125	10
1-1/2" x 1-1/2"	CN150	10
2" x 2"	CN200	10

- Stainless Steel close nipples are available on pages 164 and 312.
- Brass close nipples are available on page 175.

Optional Pkg./Box Quantity Shown



## Series 1 Accessories

### Mounting Brackets

Part #	Description
2962-89	Plastic Panel Nut for R07
5988-02	Panel Nut (Stainless Steel) for R22
5191-89	Plastic Panel Nut for B08, R08
5226-97	Metal Panel Nut for R12, R17, B12
5939-06	Mounting Bracket for F07
3783-52	Mounting Bracket for F08, L08
5532-04	Mounting Bracket Kit for F12, L12
6212-50	Mounting Bracket Kit for 3/4" & 1" F17, L17
6212-51	Mounting Bracket Kit for 1 1/4" & 1 1/2" F17, L17
18-025-003	Mounting Bracket for R07, B07
5203-06	Mounting Bracket Kit for R08, B08
5514-06	Mounting Bracket Kit w/Panel Nut for R12, B12
5570-04	Mounting Bracket for R17
18-001-962	Mounting Bracket Kit for R22
18-001-973	Mounting Bracket Kit w/Panel Nut for R22
5939-08	Mounting Bracket for L07

### O-Ring Kits

Part #	Description
3163-05	O-Ring Kit for F08
5324-02	O-Ring Kit for L08
3019-09	O-Ring Kit for F12
5771-01	O-Ring Kit for L12
5578-05	O-Ring Kit for F17
5771-02	O-Ring Kit for L17
4380-500	O-Ring Kit for F72
4380-600	O-Ring Kit for F73
4380-700	O-Ring Kit for F74
4382-500	O-Ring Kit for L72
4382-600	O-Ring Kit for L73
4382-700	O-Ring Kit for L74

### Service Life Indicator Conversion Kit for F74 Airline Filters and Oil Removal Filters

Allows addition of service life indicator in the field.



Series	Part #
74	5797-50

### Panel Nut

Use to panel mount Regulators and Filter/Regulators. Series 72 Nut is Plastic; Series 73 and 74 nuts are Zinc.



Series	Part #
72	4248-89
73	5191-88
74	4348-89

### Lubricator Accessories

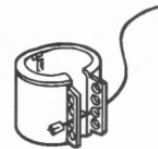
Part #	Description
18-011-024	Quick Fill Cap for L08
18-011-021	Quick Fill Cap L12, L17 & L74
5055-54	Sight Feed Dome
2325-10	Viton Seal for L72
720-01	Buna Seal for L72
4272-89	Acetal Fill Plug for L72
2325-13	Viton Seal for L74
5301-55	Alum. Fill Plug for L73 & L74
4055-50	Sight Feed Dome for L72 Micro-fogging Design
4055-51	Sight Feed Dome for L72 Oil-fogging Design
5055-54	Sight Feed Dome for L74
5605-58	Pyrex Sight Feed Dome for L72 & L74
4380-050	Liquid Level Indicator Repair Kit for L74

### Gauges

Part #	Description
GC620	0-160 PSI Gauge for R72 & B72
GC230	0-160 PSI Gauge for R73, R74, B73 & B74

### Tamper Resistant Cover & Seal Wire

Install on the adjusting knob of Regulators or Filter/Regulators to help prevent unauthorized adjustment to the pressure setting. Cover can be locked in place with up to four padlocks.



Series	Part #
72	4255-51
73	4455-51
74	4355-51

### Seal Wire

Install under sight feed dome on L73 and L74 lubricators to provide tamper resistant protection of the lubricator drip rate setting.



Series	Part #
73,74	2117-01

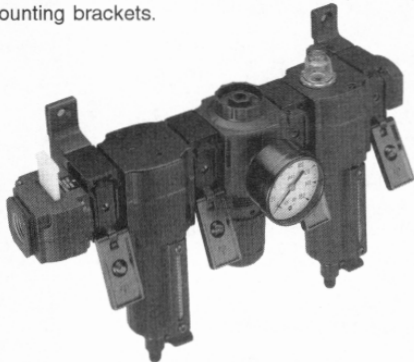




## Series 1 Accessories

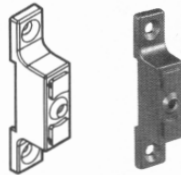
### Typical Setup

Combination unit shown with clamps, end pipe adapters and wall mounting brackets.



### Clamp Wall Mounting Bracket

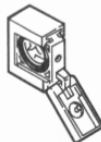
Use with the clamp to provide secure mounting to a wall, machine panel or other flat surface. 72 Series mounts with 3/16" screws; 74 Series mounts with 7/32" screws.



Series	Part #
72	4213-89
73, 74	4313-89

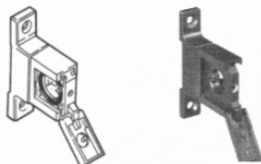
### Clamp

For use with all 72, 73 & 74 Series products to provide modular installation capability. Flanges on the products slide into V grooves in the clamp. Two face-sealing O-rings in the clamp provide a positive seal when the clamp is closed and the captive screw is tightened.



Series	Part #
72 Quickclamp	4214-51
73, 74 Quickclamp	4314-51
72 Service Kit (2 O-rings)	4384-570
73, 74 Service Kit (2 O-rings)	4384-770

### Clamp and Wall Mounting Bracket



Series	Part #
72	4214-52
73, 74	4314-52

### Wall Mounting Bracket

For use with 72, 73 & 74 Series products to secure to a wall, machine panel or other flat surface. For use instead of quickclamps and pipe adapters for wall attachment of combination unit or individual filter, regulator or lubricator. Use close nipples to connect combination unit and then place in bracket.

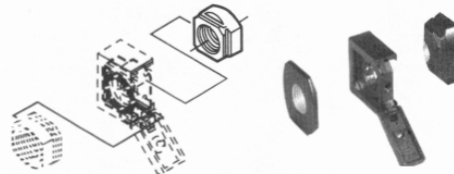


Series	Part #
72	4224-50
73	4424-50
74	4324-50
74	4324-51*

\*For L74 with 1 Quart Reservoir.

### Pipe Adapters

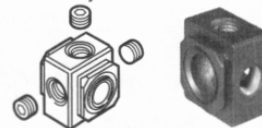
For use with clamps to provide PTF threaded connections to the system piping. Sold individually.



Series	Size	Part #
72	1/4"	4215-02
72	3/8"	4215-03
73, 74	1/4"	4315-01
73, 74	3/8"	4315-02
73, 74	1/2"	4315-03
73, 74	3/4"	4315-04

### Porting Block

Installs between two clamps to provide three additional 1/4" PTF outlets for auxiliary air.



Series	Part #
72	4216-01
73, 74	4316-02

### Manifold Block

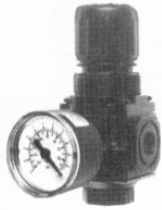
Installs with clamps. 72 Series ports are threaded 3/8" PTF; 73 & 74 Series ports are threaded 3/4" PTF to provide manifolding capability for up to three components.



Series	Part #
72	4228-01
73, 74	4328-50



## Series 1 Regulators 3/8" Basic



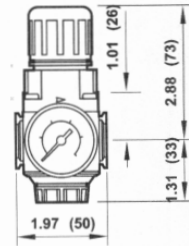
With Gauge		
Size	Part #	SCFM
1/4"	R72G-2RG	50
3/8"	R72G-3RG	50

- Adjustable 5-150 PSI
- Inlet pressure 300 PSI maximum

Without Gauge		
Size	Part #	SCFM
1/4"	R72G-2R	50
3/8"	R72G-3R	50

- In-line or modular installation
- Two 1/8" full-flow gauge ports
- Relieving type

Models supplied with a GC620 gauge.



## 3/8" Basic



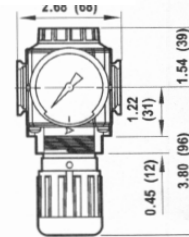
With Gauge		
Size	Part #	SCFM
1/4"	R73G-2RG	100
3/8"	R73G-3RG	100
1/2"	R73G-4RG	100

- Adjustable 5-150 PSI
- Inlet pressure 300 PSI maximum

Without Gauge		
Size	Part #	SCFM
1/4"	R73G-2R	100
3/8"	R73G-3R	100
1/2"	R73G-4R	100

- In-line or modular installation
- Two 1/4" full-flow gauge ports
- Relieving type.

Models supplied with a GC230 gauge.



## 1/2" Basic



With Gauge		
Size	Part #	SCFM
3/8"	R74G-3RG	200
1/2"	R74G-4RG	200
3/4"	R74G-6RG	200

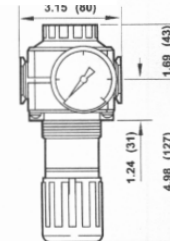
- Adjustable 5-150 PSI
- Inlet pressure 300 PSI maximum

Without Gauge		
Size	Part #	SCFM
3/8"	R74G-3R	200
1/2"	R74G-4R	200
3/4"	R74G-6R	200

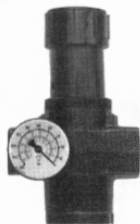
- In-line or modular installation
- Two 1/4" full-flow gauge ports
- Relieving type

Models supplied with a GC230 gauge.

For 0-60 PSI range R72, R73 or R74 unit, add a L to the end of the part number.



## 1" Basic



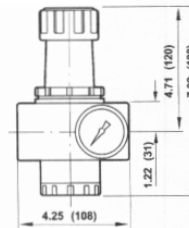
With Gauge		
Size	Part #	SCFM
3/4"	R17-600RG	240
1"	R17-800RG	400
1-1/4"	R17-A00RG	400
1-1/2"	R17-B00RG	400

- Adjustable 5-125 PSI
- Inlet pressure 300 PSI maximum

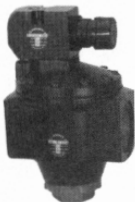
Without Gauge		
Size	Part #	SCFM
3/4"	R17-600R	240
1"	R17-800R	400
1-1/4"	R17-A00R	400
1-1/2"	R17-B00R	400

- Two 1/4" high flow capacity full-flow gauge ports
- Relieving type

Models supplied with a GC230 gauge.



## 2" Basic



With Gauge		
Size	Part #	SCFM
2"	R18-C05RG	2000

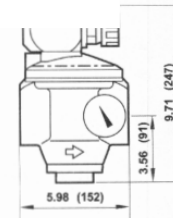
- Adjustable 5-125 PSI
- Inlet pressure 450 PSI maximum

Without Gauge		
Size	Part #	SCFM
2"	R18-C05R	2000

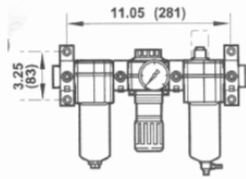
- Two 1/4" high flow capacity full-flow gauge ports
- Relieving type

Models supplied with a GC230 gauge.

SCFM ratings at 100 PSI inlet pressure.



## Series 1 Combination Units

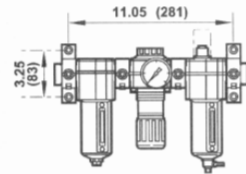


1/2" Basic - Transparent Bowl with Guard Automatic Drain			Manual Drain		
Size	Part #	SCFM	Size	Part #	SCFM
3/8"	<b>E74-3A</b>	140	3/8"	<b>E74-3M</b>	140
1/2"	<b>E74-4A</b>	140	1/2"	<b>E74-4M</b>	140
3/4"	<b>E74-6A</b>	140	3/4"	<b>E74-6M</b>	140

7 OZ. RESERVOIR

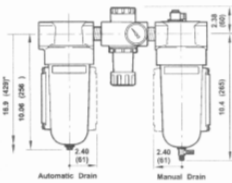


Metal bowl pictured.



1/2" Basic - Metal Bowl with Sight Glass Automatic Drain			Manual Drain		
Size	Part #	SCFM	Size	Part #	SCFM
3/8"	<b>E74-3A-MB</b>	140	3/8"	<b>E74-3M-MB</b>	140
1/2"	<b>E74-4A-MB</b>	140	1/2"	<b>E74-4M-MB</b>	140
3/4"	<b>E74-6A-MB</b>	140	3/4"	<b>E74-6M-MB</b>	140

- Connected modularly
- Includes 2 clamp and wall mounting brackets #4314-52, 2 clamps #4314-5 and 2 NPT pipe adapters. See modular components on pages 133-135 for other options.
- 7 OZ. RESERVOIR
- Adjustable 5-150 PSI
- Inlet pressure for transparent bowl is 150 PSI
- Inlet pressure for metal bowl is 250 PSI maximum



1" Basic - Metal Bowl with Sight Glass Automatic Drain			Manual Drain		
Size	Part #	SCFM	Size	Part #	SCFM
3/4"	<b>P8A-660A</b>	160	3/4"	<b>P8A-660M</b>	160
1"	<b>P8A-860A</b>	275	1"	<b>P8A-860M</b>	275

ONE QUART RESERVOIR



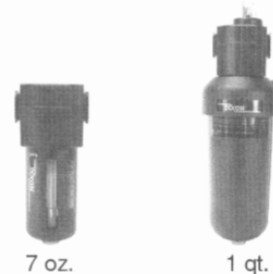
These units are intended for use in industrial compressed air systems only. They must not be used where pressure or temperature may exceed maximum rated operating conditions. See specifications. The polycarbonated plastic bowls used on these units can be damaged and possibly burst if exposed to such substances as certain solvents, strong alkalis, compressor oils that contain ester-based additives or synthetic oils. Fumes of these substances in contact with the polycarbonate bowl, externally or internally, can also result in damage. Clean with warm water only. Use metal bowl in applications where a plastic bowl might be exposed to substances that are incompatible with polycarbonates. Not for use with fluids. Combination units are supplied with micro-fog lubricators.

## Desiccant Compressed Air Dryers

Metal Bowl with Guard			
Size	Bowl	Part #	SCFM
1/4"	7 OZ.	<b>W74D-2A-MB7</b>	5
1/4"	1 QT.	<b>W74D-2A-MB32</b>	10

In-line or modular installation. **1.25 LB. CAPACITY BOWL.** Quick release bayonet bowl.

- 7 OZ.:** Nominal air drying capacity 750 cubic feet at 100 PSI and 77°F. Maximum inlet pressure: 150 PSI. Maximum temperature: 175°F.
- 1 QT.:** Moisture indicator on top of body. Nominal air drying capacity 6000 cubic feet at 100 PSI and 77°F. Maximum inlet pressure: 250 PSI. Maximum temperature: 175°F.



- Compressed air dryers help to eliminate condensation at the point of use. A replaceable element filters outlet air to help prevent desiccant dust migration downstream.
- Silica gel desiccant changes color from blue to pink when desiccant replacement is needed. Desiccant can be dried and reused by heating to 275°F, or replaced. 7 oz. bowl uses 1 gel packet; 1 qt. bowl uses 5 gel packets.
- An afterfilter should be placed downstream from the desiccant dryer to ensure solid contaminants such as desiccant dust do not migrate downstream.

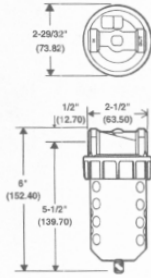
Cubic Foot ratings at 100 PSI inlet pressure.



## Watts Filters

### COMPACT

#### Polycarbonate Bowl with Plastic Bowl Guard



#### Automatic Drain

Size	Part #	SCFM
1/4"	<b>F602 - 02BJR</b>	55
3/8"	<b>F602 - 03BJR</b>	75

#### Manual Drain

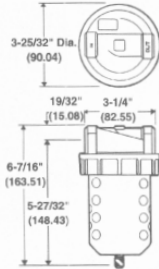
Size	Part #	SCFM
1/4"	<b>F602 - 02BJ</b>	55
3/8"	<b>F602 - 03BJ</b>	75

- 5 OZ. BOWL
- 40 micron Polypropylene element
- Zinc body

- Operating conditions:  
Temperature range: 40°F (4.4°C) and 120°F (48.9°C)  
Pressure range: 150 PSIG (10.2 bar) maximum

### STANDARD

#### Polycarbonate Bowl with Plastic Bowl Guard



#### Automatic Drain

Size	Part #	SCFM
1/2"	<b>F602 - 04BJR</b>	110

#### Manual Drain

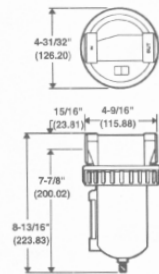
Size	Part #	SCFM
1/2"	<b>F602 - 04BJ</b>	110

- 8 OZ. BOWL
- 40 micron Polypropylene element
- Zinc body

- Operating conditions:  
Temperature range: 40°F (4.4°C) and 120°F (48.9°C)  
Pressure range: 150 PSIG (10.2 bar) maximum

### STANDARD

#### Zinc Bowl with Sight Glass



#### Automatic Drain

Size	Part #	SCFM
3/4"	<b>F602 - 06WJR</b>	250
1"	<b>F602 - 08WJR</b>	340

#### Manual Drain

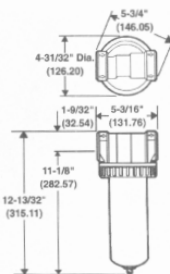
Size	Part #	SCFM
3/4"	<b>F602 - 06WJ</b>	250
1"	<b>F602 - 08WJ</b>	340

- 16 OZ. BOWL
- 40 micron Polypropylene element
- Zinc body

- Operating conditions:  
Temperature range: 40°F (4.4°C) and 150°F (65.6°C)  
Pressure range: 250 PSIG (17 bar) maximum

### STANDARD

#### Zinc Bowl with Sight Glass



#### Automatic Drain

Size	Part #	SCFM
1-1/2"	<b>F602 - 12WJR</b>	380

#### Manual Drain

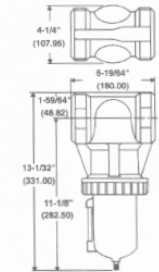
Size	Part #	SCFM
1-1/2"	<b>F602 - 12WJ</b>	380

- 16 OZ. BOWL
- 40 micron Polypropylene element
- Zinc body

- Operating conditions:  
Temperature range: 40°F (4.4°C) and 150°F (65.6°C)  
Pressure range: 250 PSIG (17 bar) maximum

### STANDARD

#### Zinc Bowl with Sight Glass



#### Automatic Drain

Size	Part #	SCFM
2"	<b>F602 - 16WJR</b>	1125

#### Manual Drain

Size	Part #	SCFM
2"	<b>F602 - 16WJ</b>	1125

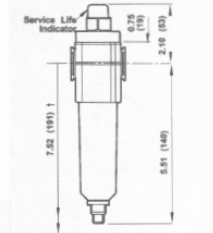
- 26 OZ. BOWL
- 40 micron Bronze element
- Aluminum body

- Operating conditions:  
Temperature range: 40°F (4.4°C) and 150°F (65.6°C)  
Pressure range: 250 PSIG (17 bar) maximum

SCFM ratings at 150 PSIG inlet pressure.

## Series 1 Oil Removal (Coalescing) Filters

**1/4" Basic - Standard Flow  
Transparent Bowl, Automatic Drain**



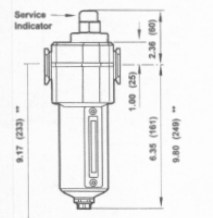
Size	Part #	SCFM Saturated Element	SCFM Dry Element
1/4"	<b>F72C-2A</b>	10.5	16
3/8"	<b>F72C-3A</b>	10.5	23

- In-line or modular installation
- Quick-release bayonet metal bowl
- Prismatic liquid level indicator lens
- Quarter turn manual drain
- Service life indicator turns from green to red when element needs to be replaced
- F72C provides *Air Quality Class 2 Hydrocarbon and Class 1 Particulate Removal* per ISO 8573-1

*For maximum service life install a general purpose filter upstream of the oil removal filter.*



**1/2" Basic - Standard Flow  
Metal Bowl, Automatic Drain**



Size	Part #	SCFM Saturated Element	SCFM Dry Element
3/8"	<b>F74C-3A-MB</b>	20	70
1/2"	<b>F74C-4A-MB</b>	35	75

**1/2" Basic - High Flow  
Metal Bowl, Automatic Drain**

Size	Part #	SCFM Saturated Element	SCFM Dry Element
1/2"	<b>F74H-4A-MB</b>	60	100
3/4"	<b>F74H-6A-MB</b>	60	120

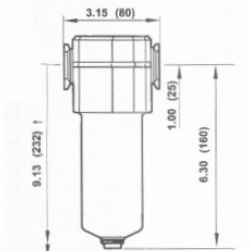
- In-line or modular installation
- Quick-release bayonet metal bowl
- Prismatic liquid level indicator
- F74C and F74H provide *Air Quality Class 2 Hydrocarbon and Class 1 Particulate Removal* per ISO 8573-1
- Element removes particles down to 0.01mm. Maximum remaining oil content of air leaving the filter is 0.01 ppm at 70°F (21°C) with an inlet concentration of 8 ppm.
- Service life indicator turns from green to red when element needs to be replaced.

*For maximum service life install a general purpose filter upstream of the oil removal filter.*



## Series 1 Oil Removal Filters

**1/2" Basic Metal Bowl**

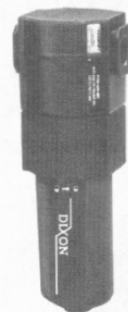


Size	Part #	SCFM
1/2"	<b>F74V-4A-MB</b>	21
3/4"	<b>F74V-6A-MB</b>	21

In-line or modular installation. Quick-release bayonet metal bowl. Activated carbon cartridge filter element absorbs oil vapors and removes most hydrocarbon odors. Filter and element designs optimizes air velocity and contact time to reduce oil content of air leaving the filter to 0.003 ppm at 70°F (21°C). Long service life of carbon cartridge element. Minimum service life of 400 hours can be expected if the vapor removal filter is protected upstream by an oil removal (coalescing) filter and if the filtration temperature is in the region of 70° to 80°F (21°C to 26°C). Above this range, oil vapor content of compressed air increases substantially and element service life is reduced. F74C and F74V combinations provide *Air Quality Class 1 Particulate Removal* per ISO 8573-1, Class 1.-1.

*For maximum service life, install a general purpose filter and an oil removal filter upstream of the oil vapor removal filter.*

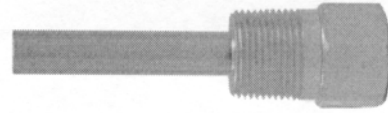
SCFM ratings at 100 PSI inlet pressure.



# Gauges

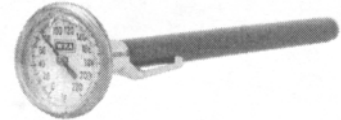
## 316 Stainless Steel Threaded Thermowells

Part #	Process Connection	"U" Dimensions
75TH2R015SS	3/4" NPT	1-5/8"
75TH2R025SS	3/4" NPT	2-1/2"
75TH2R045SS	3/4" NPT	4-1/2"
75TH2R075SS	3/4" NPT	7-1/2"



## Bi-Metal Pocket Thermometers

- Case: 304 stainless steel case, hermetically sealed
- Crystal: Extra heavy polycarbonate crystal
- Stem: 304 series stainless steel
- External reset: Hex nut on back case
- Bi-metal element: Responsive actuation by bi-metal helix
- Dampening: Bi-metal helix is coated with a viscous silicone to minimize pointer oscillation
- Scale length: Approximately 2-1/8" (54mm)
- Accuracy: 1%
- Carrying case: Polyethylene case with clip



Part #	Range
PT220	0-220°F
PT550	50-550°F

## DF Burnham Gauges

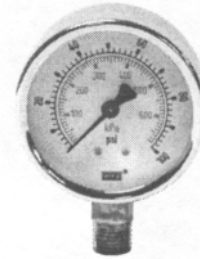
All of the gauges supplied by DF Burnham are design for long, reliable service under rugged conditions. Typical applications include those on pumps, hydraulic and pneumatic systems, compressors, machine tools and many other installations where it is necessary to have a gauge with a non-corrosive movement. The gauges available include standard dry and liquid-filled pressure gauges, compound pressure gauges, vacuum gauges and welding gauges. Material available include brass, stainless steel and plastic.

**Fig. Inter.:** Figure interval. Increments between PSI numbers on gauge face.

**Grad. Inter.:** Graduation Interval. Fractional increments between PSI numbers on gauge face.

## Brass Standard Dry Gauges

Part #	2-1/2" 1/4" Lower Mount	
	Fig. Inter.	Grad. Inter.
60P-0-15-BRASS	3	.2
60P-0-30-BRASS	5	.5
60P-0-60-BRASS	10	1
60P-0-100-BRASS	20	2
60P-0-160-BRASS	20	2
60P-0-200-BRASS	50	5
60P-0-300-BRASS	50	5
60P-0-400-BRASS	100	10
60P-0-600-BRASS	100	10
60P-0-1000-BRASS	200	20
60P-0-1500-BRASS	300	20
60P-0-2000-BRASS	500	50
60P-0-3000-BRASS	500	50
60P-0-5000-BRASS	1000	100



- 1.5% accuracy
- Polished brass case
- Polished brass ring
- Copper alloy bourdon tube
- Dual PSI / kPa scale dial
- Ambient temperature range of -10°F to 140°F

# Gauges

## Brass Liquid Filled Gauges

Designed for severe service in hydraulic systems and other demanding applications.



- 1.5% accuracy on 2-1/2"; 1% accuracy on 4"
- Acrylic window with membrane assembly
- Copper alloy bourdon tube
- Brass movement with highly polished bearing surfaces
- Glycerin filled
- Ambient temperature range of 0°F to 140°F

**2-1/2" Face**  
1/4" Lower Mount

PSI	Fig. Inter.	Grad. Inter.	Part #
0-15	3	.2	<i>GLBR15</i>
0-30	5	.5	<i>GLBR30</i>
0-60	10	1	<i>GLBR60</i>
0-100	20	2	<i>GLBR100</i>
0-160	20	2	<i>GLBR160</i>
0-200	50	5	<i>GLBR200</i>
0-300	50	5	<i>GLBR300</i>
0-400	100	10	<i>GLBR400</i>
0-600	100	10	<i>GLBR600</i>
0-1000	300	20	<i>GLBR1000</i>
0-1500	500	20	<i>GLBR1500</i>
0-2000	500	50	<i>GLBR2000</i>
0-3000	1000	50	<i>GLBR3000</i>
0-5000	1000	100	<i>GLBR5000</i>

**2-1/2" Face**  
1/4" Center Back Mount

PSI	Fig. Inter.	Grad. Inter.	Part #
0-15	3	.2	<i>GLBRC15</i>
0-30	5	.5	<i>GLBRC30</i>
0-60	10	1	<i>GLBRC60</i>
0-100	20	2	<i>GLBRC100</i>
0-160	20	2	<i>GLBRC160</i>
0-200	50	5	<i>GLBRC200</i>
0-300	50	5	<i>GLBRC300</i>
0-400	100	10	<i>GLBRC400</i>
0-600	100	10	<i>GLBRC600</i>
0-1000	300	20	<i>GLBRC1000</i>
0-1500	500	20	<i>GLBRC1500</i>
0-2000	500	50	<i>GLBRC2000</i>
0-3000	1000	50	<i>GLBRC3000</i>
0-5000	1000	100	<i>GLBRC5000</i>

2-1/2" has solid cast Brass case with polished Brass slip-fit ring

### 4" Face

1/2" Lower Mount

PSI	Fig. Inter.	Grad. Inter.	Part #
0-15	3	.2	<i>GLBR15-4</i>
0-30	5	.5	<i>GLBR30-4</i>
0-60	10	1	<i>GLBR60-4</i>
0-100	10	1	<i>GLBR100-4</i>
0-160	20	2	<i>GLBR160-4</i>
0-200	20	2	<i>GLBR200-4</i>
0-300	50	5	<i>GLBR300-4</i>
0-400	50	5	<i>GLBR400-4</i>
0-600	100	10	<i>GLBR600-4</i>
0-1000	100	10	<i>GLBR1000-4</i>
0-1500	300	20	<i>GLBR1500-4</i>
0-2000	200	20	<i>GLBR2000-4</i>
0-3000	500	50	<i>GLBR3000-4</i>
0-5000	500	50	<i>GLBR5000-4</i>
0-10000	1000	100	<i>GLBR10000-4</i>

4" has cast Brass, silver painted case with Chrome plated Brass ring

# Gauges

## Bi-Metal Thermometers

**Case:** Sturdy, corrosion resistant series 304 Stainless Steel case and bezel.

**Crystal:** Optically clear, strong glass, gasketed to maintain weather-tight integrity is standard.

**Stem:** 304 Series Stainless Steel, welded at tip and case connector to prevent leakage. 1/4" (6.35 mm) diameter is standard.

**Hermetic Seal:** Hermetically sealed per ASME B40.3

**External Reset:** A slotted-hex adjustment head offers screwdriver or wrench use to field calibrate the thermometer.

**Bi-Metal Element:** An extremely responsive temperature sensing helix which has been carefully sized and tested, heat treated and aged to relieve inherent stresses and insure continued accuracy.

**Dampening:** Bi-metal helix is coated with a viscous silicone to minimize pointer oscillation and to improve temperature transmission.

**Immersion:** For accurate temperature readings, immerse stem a minimum of 2" (50mm) in agitated liquids or 4" (100mm) in moving air or gas.

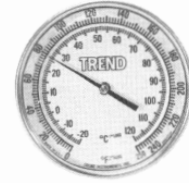
**Over Range:** Temporary over or under range of 50% of scale up to 260°C or 500°F will not affect the instrument accuracy.

**Accuracy:** Guaranteed to be accurate to within 1% of full scale (Grade A per ASME B40.3). (The American Society of Mechanical Engineers issued a new standard for Bi-Metal Thermometers in 1990 referred to as ASME B40.3.)

**Standard Connection is**  
1/2" Male NPT.

### Model 30 Back Connected 3" Thermometer

Stem Length	Range	Part #
2-1/2"	0-250°F/-20-120°C	30025064
2-1/2"	50-500°F/10-260°C	30025104
4"	0-250°F/-20-120°C	30040064
4"	50-500°F/10-260°C	30040104
6"	0-250°F/-20-120°C	30060064
6"	50-500°F/10-260°C	30060104
9"	0-250°F/-20-120°C	30090064
9"	50-500°F/10-260°C	30090104



### Model 31 Bottom Connected 90° Angle Thermometer

Stem Length	Range	Part #
2-1/2"	0-250°F/-20-120°C	31025064
4"	50-500°F/10-260°C	31040104



### Model 50 Back Connected 5" Thermometer

Stem Length	Range	Part #
2-1/2"	50-500°F/10-260°C	50025104
4"	0-250°F/-20-120°C	50040064



### Model 52 Adjustable Angle 5" Thermometer

Stem Length	Range	Part #
2-1/2"	0-250°F/-20-120°C	52025064
4"	0-250°F/-20-120°C	52040064
4"	50-500°F/10-260°C	52040104



## Magnetic Surface Mount Thermometers

### 2" Face

Range	Part #
0-250°F	MT250
0-500°F	MT500

**Case:** Steel, 2" x 1/2"

**Dial:** Polished Aluminum

**Bi-Metal Element:** Responsive actuation by bi-metal helix

**Accuracy:** +/- 2%





# Gauges

## Contractor Pressure Gauges

- Accuracy class: +/- % of span
- Material of wetted parts: copper alloy
- Window: acrylic, snap in
- Dial: aluminum, white
- Pointer: aluminum, black adjustable
- Mounting flange/bracket: rear flange, stainless steel

Part #	PSI
4277750-0001	0-15
4277768-0001	0-30
4277776-0001	0-60

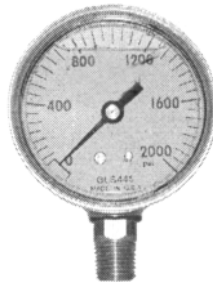


## Liquid Filled Stainless Case Gauges

- ASME B40.1, Grade B (+/- 3-2-3% accuracy)
- Helical wound bronze bourdon tube (**1000 PSI** and above)
- White aluminum dial with black numbers and black aluminum pointer
- PowerFlex™ movement with polyester segment designed to resist the effects of shock, vibration and pulsation.
- 1/4" NPT brass connection
- Glycerin liquid fill
- Ambient temperature range **20°F to 150°F**

2-1/2" Face  
1/4" Lower Mount

Part #	Fig. Inter.	Grad. Inter.	PSI
70G-0-15	1	.5	0-15
70G-0-30	5	.5	0-30
70G-0-60	5	1	0-60
70G-0-100	10	2	0-100
70G-0-160	20	5	0-160
70G-0-200	20	5	0-200
70G-0-300	30	5	0-300
70G-0-400	50	10	0-400
70G-0-600	50	10	0-600
70G-0-1000	200	20	0-1000
70G-0-1500	300	50	0-1500
70G-0-2000	400	50	0-2000
70G-0-3000	500	100	0-3000
70G-0-5000	1000	100	0-5000



2-1/2" Face  
1/4" Back Mount

Part #	Fig. Inter.	Grad. Inter.	PSI
71G-0-15	1	.5	0-15
71G-0-30	5	.5	0-30
71G-0-60	5	1	0-60
71G-0-100	10	2	0-100
71G-0-160	20	5	0-160
71G-0-200	20	5	0-200
71G-0-300	30	5	0-300
71G-0-400	50	10	0-400
71G-0-600	50	10	0-600
71G-0-1000	200	20	0-1000
71G-0-1500	300	50	0-1500
71G-0-2000	400	50	0-2000
71G-0-3000	500	100	0-3000
71G-0-5000	1000	100	0-5000

## 180° Steam Gauge Siphon

In order to prevent live steam from entering a pressure gauge bourdon tube, a siphon filled with water should be installed between the gauge and the process line. If freezing of the condensate in the loop of a siphon is a possibility, a diaphragm seal should be used to isolate the gauge from the process steam. Also use siphons whenever condensing hot vapors (not just steam) are present.

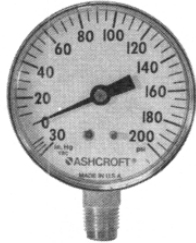
- 1/4" standard weight red brass pipe
- Complies with ASTM B-43
- Withstands combined pressure of 200 PSI and 406°F



Part #	Size
401-01	1/4"

# Gauges

## Compound Gauges



2-1/2" Face  
1/4" Lower Mount

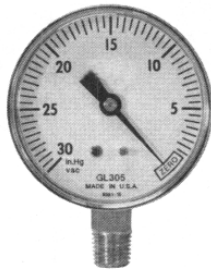
Mercury (Hg)	PSI	Fig. Inter. Hg / PSI	Minor Grad. Hg / PSI	Part #
30"	0-100	15 / 10	5 / 2	DFB310
30"	0-160	30 / 20	10 / 10	DFB110
30"	0-200	30 / 20	10 / 10	DFB315

2-1/2" Face  
1/4" Center Back Mount

Mercury (Hg)	PSI	Fig. Inter. Hg / PSI	Minor Grad. Hg / PSI	Part #
30"	0-160	30 / 20	5 / 5	DFB210

- ASME B40.1, Grade B accuracy (+/- 3-2-3 % accuracy)
- ABS Plastic case
- Bronze bourdon tube / Brass socket
- Polycarbonate crystal
- Black Aluminum pointer
- Brass movement with polyester segment, designed for extended wear.
- Ambient temperature range of -40°F to 150°F

## Vacuum Gauges



- ASME B40.1, Grade B accuracy (+/- 3-2-3 % accuracy)
- ABS Plastic case
- Bronze bourdon tube
- Polycarbonate crystal
- Black Aluminum pointer
- Brass movement with Polyester segment, designed for extended wear.
- Ambient temperature range of -40°F to 150°F

2" Face  
1/4" Lower Mount

Mercury (Hg)	Fig. Inter.	Minor Grad.	Part #
30"	5"	.5"	DFB105

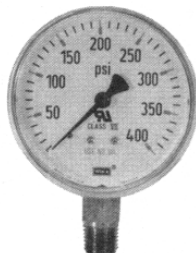
2" Face  
1/4" Center Back Mount

Mercury (Hg)	Fig. Inter.	Minor Grad.	Part #
30"	5"	.5"	DFB205

2-1/2" Face  
1/4" Lower Mount

Mercury (Hg)	Fig. Inter.	Minor Grad.	Part #
30"	5"	.5"	DFB305

## Brass Welding Gauges



- 3-2-3% accuracy according to ANSI B.40.1 Grade B
- Polished drawn Brass case
- Twist-lock Polycarbonate window
- Copper alloy bourdon tube
- "Use no oil" in red on face
- Temperature Range: -10°F to 140°F

2-1/2" Face  
1/4" Lower Mount

PSI	Fig. Inter.	Minor Grad.	Part #
0-30	5	.5	DFBW30
0-30	5	.5	DFBW30R*
0-60	10	1	DFBW60
0-100	20	2	DFBW100
0-200	50	5	DFBW200
0-400	100	10	DFBW400
0-600	100	50	DFBW600
0-4000	1000	100	DFBW4000

\* Red band between 15 to 30 PSI on GBRW30R

# Gauges

## Standard Dry Gauges

- ASME B40.1, Grade B (+/- 3-2-3% accuracy)
- ABS Plastic case
- C-shaped bronze safety bourdon tube (**600 PSI** and lower)
- Helical wound bronze safety bourdon tube (**1000 PSI** and higher)
- Polycarbonate crystal
- Black aluminum pointer
- PowerFlex™ movement with polyester segment, designed to resist the effects of shock, vibration and pulsation.
- Ambient temperature range of **-40°F to +150°F**

## Center Back Mount Standard Dry Gauges

2" Face  
1/4" Center Back Mount

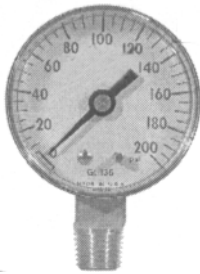
Part #	Fig. Inter.	Grad. Inter.	PSI
61P-0-15-2.0	1	.5	0-15
61P-0-30-2.0	5	.5	0-30
61P-0-60-2.0	5	1	0-60
61P-0-100-2.0	10	2	0-100
61P-0-160-2.0	20	5	0-160
61P-0-200-2.0	20	5	0-200
61P-0-300-2.0	30	5	0-300



1-1/2" Face  
1/8" Center Back Mount

Part #	Fig. Inter.	Grad. Inter.	PSI
SG-02-30	5	.5	0-30
SG-02-60	5	1	0-60
SG-02-100	10	2	0-100
SG-02-160	20	5	0-160
SG-02-200	20	5	0-200

## Brass Standard Dry Gauges



2-1/2" Face  
1/4" Lower Mount

Part #	Fig. Inter.	Grad. Inter.	PSI
60P-0-15	1	.5	0-15
60P-0-30	5	.5	0-30
60P-0-60	5	1	0-60
60P-0-100	10	2	0-100
60P-0-160	20	5	0-160
60P-0-200	20	5	0-200
60P-0-300	30	5	0-300
60P-0-400	50	10	0-400
60P-0-600	50	10	0-600
60P-0-1000	200	20	0-1000
60P-0-1500	300	50	0-1500
60P-0-2000	400	50	0-2000
60P-0-3000	500	100	0-3000
60P-0-5000	1000	100	0-5000

2" Face  
1/4" Lower Mount

Part #	Fig. Inter.	Grad. Inter.	PSI
60P-0-15-2.0	1	.5	0-15
60P-0-30-2.0	5	.5	0-30
60P-0-60-2.0	5	1	0-60
60P-0-100-2.0	10	2	0-100
60P-0-160-2.0	20	5	0-160
60P-0-200-2.0	20	5	0-200
60P-0-300-2.0	30	5	0-300

3-1/2" Face  
1/4" Lower Mount

Part #	Fig. Inter.	Grad. Inter.	PSI
60P-0-15-3.5	1	.5	0-15
60P-0-30-3.5	5	.5	0-30
60P-0-60-3.5	5	1	0-60
60P-0-100-3.5	10	2	0-100
60P-0-160-3.5	20	5	0-160
60P-0-200-3.5	20	5	0-200
60P-0-300-3.5	30	5	0-300
60P-0-400-3.5	50	10	0-400
60P-0-600-3.5	50	10	0-600
60P-0-1000-3.5	200	20	0-1000

# Gauges



2-1/2" Face  
1/4" Center Back Mount

Part #	Fig. Inter.	Grad. Inter.	PSI
61P-0-15	1	.5	0-15
61P-0-30	5	.5	0-30
61P-0-60	5	1	0-60
61P-0-100	10	2	0-100
61P-0-160	20	5	0-160
61P-0-200	20	5	0-200
61P-0-300	30	5	0-300
61P-0-400	50	10	0-400
61P-0-600	50	10	0-600
61P-0-1000	200	20	0-1000
61P-0-1500	300	50	0-1500
61P-0-2000	400	50	0-2000
61P-0-3000	500	100	0-3000
61P-0-5000	1000	100	0-5000



Gauges

**MOUNTING BRACKETS**



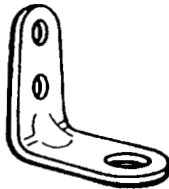
**BMB-01**

For Single Manifold (2 Brackets, 2 Bolts)



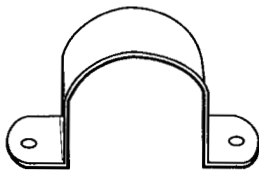
**BMB-02**

For Two Manifolds (2 Brackets, 4 Bolts)



**BMB-03**

For Single Manifold (2 Brackets, 2 Bolts)

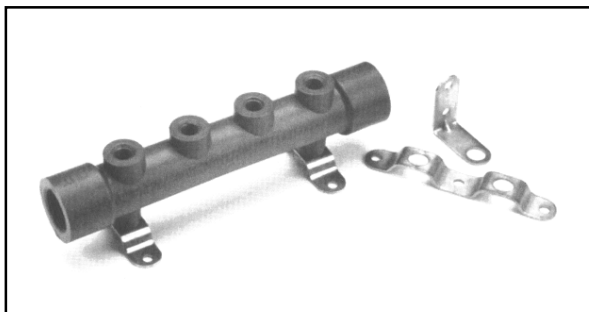


**BMB-OC1**

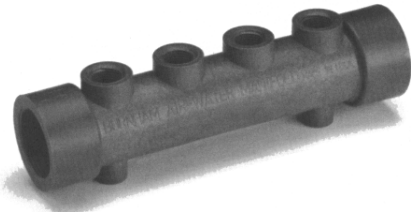
U-Bolt Bracket (for 1", 16 port manifolds)

**BMB-OC15**

U-Bolt Bracket (for 1 1/2", 16 port manifolds)



**NYLON MANIFOLDS**



**An Economical Replacement to Steel Manifolds**

(Burnham nylon manifolds) are molded from specialty-blended nylon material that's extremely durable and resistant to impact and corrosion. (The material is UL listed). They cost less than metal manifolds, yet can be applied nearly anywhere steel or copper units are used, such as on air, water lubricants or coolants.

With their nylon, 6% fiberglass fill construction and engineered thread design you can make leak-free NPT pipe connections without using Teflon or pipe dope. Their clean lines will enhance the appearance of the equipment on which they're mounted.

**Various Applications**

- Heating Induction
- Welders
- Injection Molding
- Machine Tool
- Car Wash Industries
- Chemical Plants
- Die Cast Machines
- Laundry Industries
- Robotics

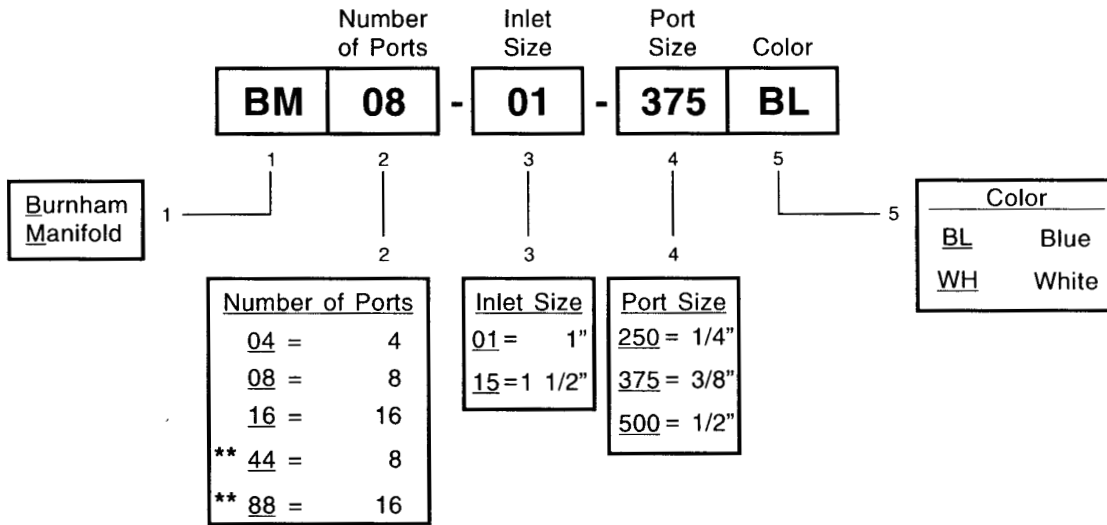
**Features**

- Ready to Use, no threading required.
- 70% Cost Savings over conventional pipe.
- One (1) pound approximate weight.
- No contaminant build-up
- Positive Seal.
- Use with brass or steel fittings.
- Color coded, eliminates painting.
- No scale or scrap residue.
- Both feed & return in one manifold.
- Excellent as a welding shielding gas manifold.
- Automotive tested approval.
- Marked In & Out for ease of installation.
- Numbered porting.

**Manifolds**



# Nylon Manifolds



\*\* These manifolds have a solid plug in the center

(See list below for available stock items)  
(Standard Colors: White & Blue)

BM04-01-250 color	BM16-15-375 color
BM04-01-375 color	BM16-15-500 color
BM04-15-375 color	BM44-01-250 color
BM04-15-500 color	BM44-01-375 color
BM08-01-250 color	BM44-15-375 color
BM08-01-375 color	BM44-15-500 color
BM08-15-375 color	BM88-01-250 color
BM08-15-500 color	BM88-01-375 color
BM16-01-250 color	BM88-15-375 color
BM16-01-375 color	BM88-15-500 color

\* All non-stock items will be 4-6 weeks delivery (100 piece minimum)

* <b>BLACK (BK)</b> 100 pc. min.	* <b>GREEN (GR)</b> 100 pc. min.	* <b>BROWN (BR)</b> 100 pc. min.	* <b>RED (RD)</b> 100 pc. min.	* <b>GRAY (GR)</b> 100 pc. min.
-------------------------------------	-------------------------------------	-------------------------------------	-----------------------------------	------------------------------------

\* These Colors Available Upon Request (non-stock item)

### Technical Data

#### How To Install

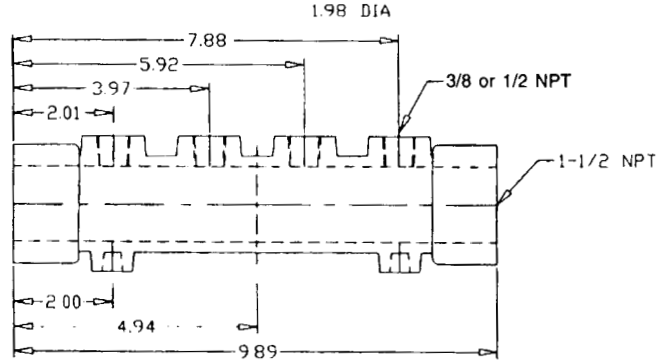
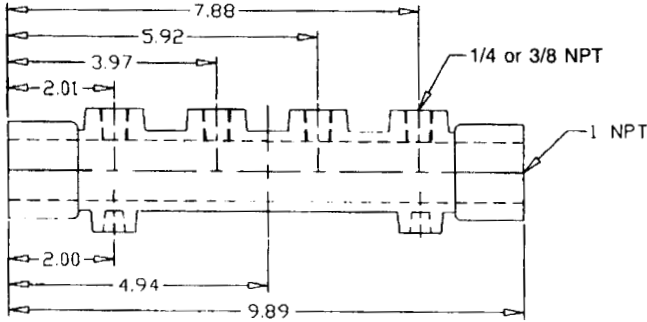
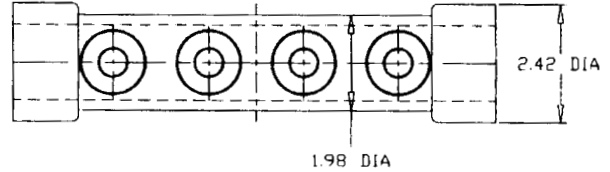
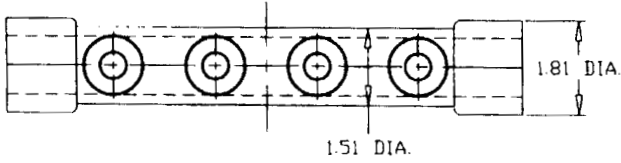
We recommend that you use PERMA TEX #2 when installing Manifold. This will help in sealing ports.  
DO NOT over tighten so as to bury the hex of the fitting in the BOSS. Hand tighten, then 1-2 turns with wrench.  
DO NOT use Teflon Tape or Teflon Paste.

#### Temperature

0° to 100°F - 300 psi max.  
100° to 120°F - 200 psi max.  
120° to 150°F - 120 psi max.



# Nylon Manifolds Engineering Specifications



**BM04-01-250  
BM04-01-375**

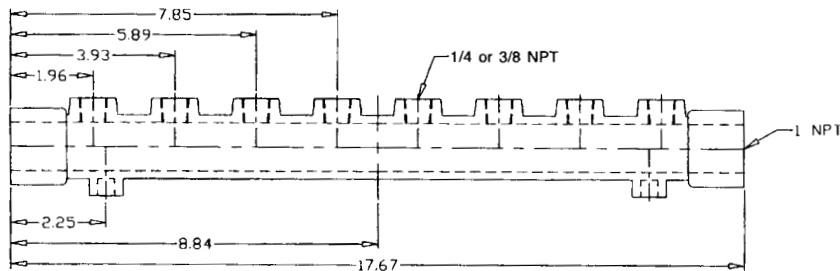
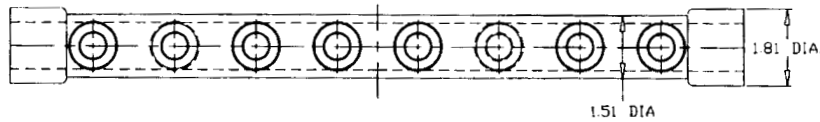
**BM04-15-375  
BM04-15-500**

1" main supply comes with 1/4" & 3/8" N.P.T. outlet ports.  
(1/4" ports available 100pc. min.)

1 1/2" main supply comes with 3/8" & 1/2" N.P.T.  
outlet ports. (1/4" ports available 100 pc. min.)

1" & 1 1/2" N.P.T.  
Female (main supply)  
(Actual I.D. 1" N.P.T.)  
(Actual I.D. 1 1/2" N.P.T.)

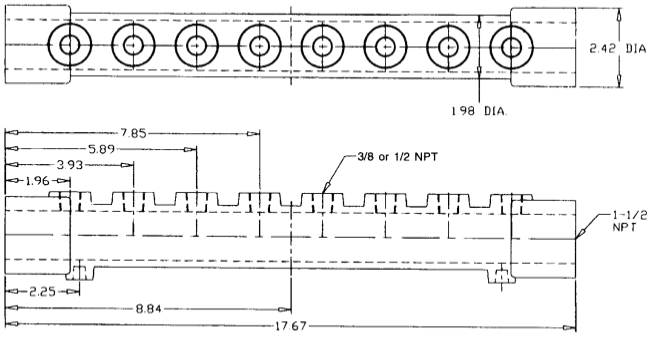
*NOTE: All 8 station & 16 station manifolds can be ordered with solid plug in center see page 3 (\*\*) for sizes & part #.*



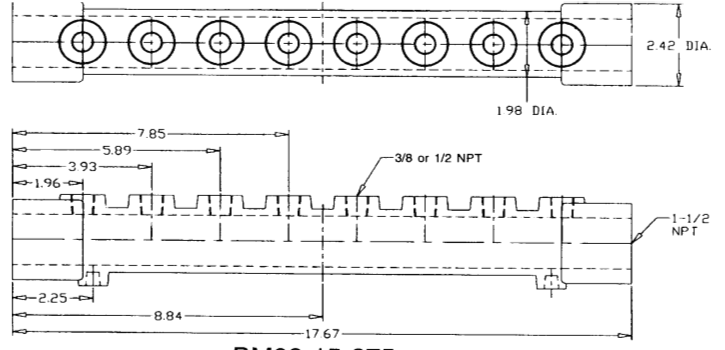
**BM08-01-250  
BM08-01-375**

**Manifolds**

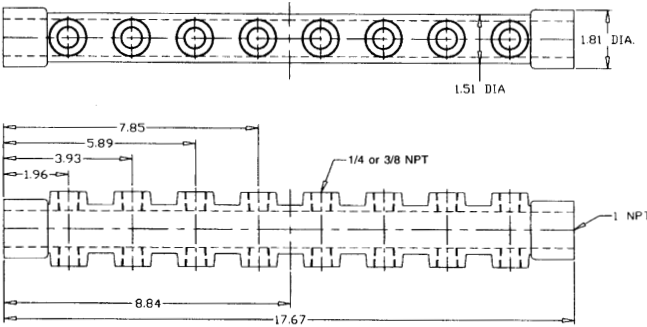




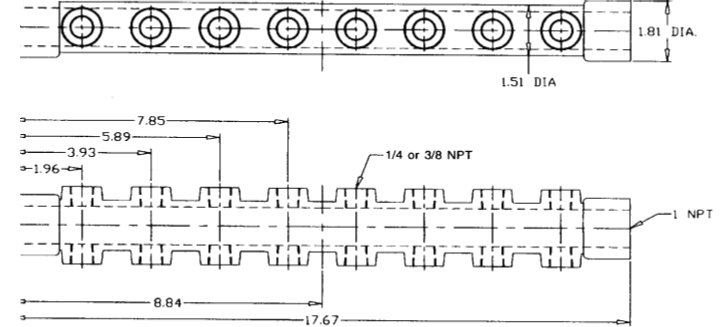
**BM08-15-375  
BM08-15-500**



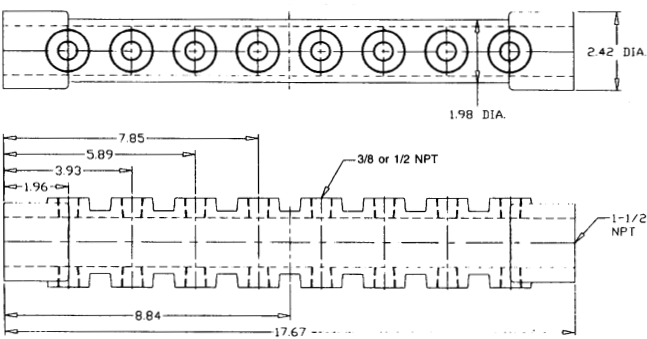
**BM44-15-375  
BM44-15-500**



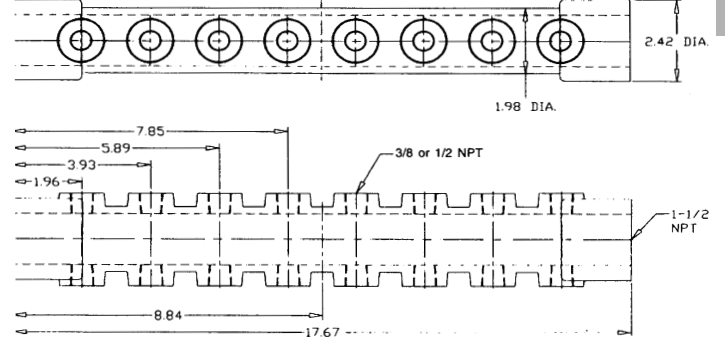
**BM16-01-250  
BM16-01-375**



**BM88-01-250  
BM88-01-375**



**BM16-15-375  
BM16-15-500**



**BM88-15-375  
BM88-15-500**

**Manifolds**



# Aluminum Manifolds

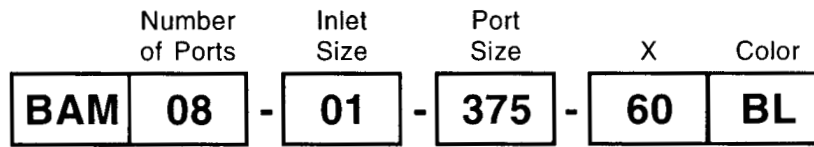


**Features:**

- Ready to use, no threading required
- No contaminant build-up
- Positive Seal
- Use with brass or steel fittings
- Hardcoat colored anodized finish
- No scale or scrap residue
- Automotive tested approval
- Tensile 38,000 psi yeild 35,000 psi
- Hardened to T6511
- Can withstand Ph 4.5
- Honed ID
- Dipped to remove blemishes and chips
- Manifolds can be manufactured to customers specifications
- Higher operating temperatures / pressure

**Applications:**

- Heating Induction
- Welding
- Injection Molding
- Machine Tool
- Chemical Plants
- Die Cast Machines
- Laundry Industries
- Robotics
- Car Wash



1 ——— 1  
Burnham  
Aluminum  
Manifold

Number of Ports	
04 =	4
06 =	6
08 =	8
16 =	16

Inlet Size	
07 =	3-4"
01 =	1"
12 =	1 1/4"
15 =	1 1/2"

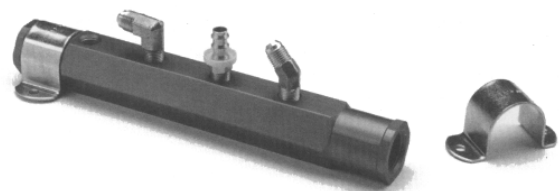
Port Size	
250 =	1/4"
375 =	3/8"
500 =	1/2"

Color	
AL	Aluminum
BK	Black
BL	Blue
BR	Brown *
CL	Clear
GL	Gold *
GR	Green
RD	Red *

\*See page 9 for ordering and min.

Clamp #	Inlet Size
BAM-OC-20 =	3/4" (07)
BAM-OC-24 =	1" (01)
BAM-OC-32 =	1 1/4" (12)
BAM-OC-34 =	1 1/2" (15)

Use if offset is necessary.  
 If the offset is not needed,  
 then skip and go to (#6).



**Manifolds**

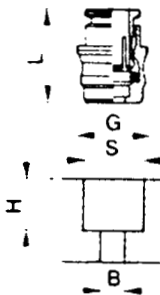
(See list below for available stock items)

BAM-04-01-250 color	BAM-08-01-250 color	BAM-08-15-375 color
BAM-04-01-375 color	BAM-08-01-250-60 color	BAM-08-15-375-60 color
BAM-04-07-250 color	BAM-08-01-375 color	BAM-08-15-500 color
BAM-04-07-375 color	BAM-08-01-375-60 color	BAM-08-15-500-60 color
BAM-04-12-375 color	BAM-08-07-250 color	BAM-16-01-250-60 color
BAM-04-12-500 color	BAM-08-07-250-60 color	BAM-16-01-375-60 color
BAM-04-15-375 color	BAM-08-07-375 color	BAM-16-07-250-60 color
BAM-04-15-500 color	BAM-08-07-375-60 color	BAM-16-07-375-60 color
BAM-06-07-250-60 color	BAM-08-12-375 color	BAM-16-12-375-60 color
BAM-06-07-375-60 color	BAM-08-12-375-60 color	BAM-16-12-500-60 color
BAM-06-12-375-60 color	BAM-08-12-500 color	BAM-16-15-375-60 color
BAM-06-12-500-60 color	BAM-08-12-500-60 color	BAM-16-15-500-60 color

\* All non-stock items will be 4-6 weeks delivery (100 piece minimum)

Brown, Gold, Red, Orange, Gray, Blue Gray are non-stock and available only on request. Minimum anodizing charge may apply. Other thread and port configurations also available upon request.

**CARTRIDGE-**



Dash No.	OD						
	A	F	G	L	S	H	B
-02	1/8	.338	.354	.610	.342	.413	.098
-53	5/32	.338	.354	.571	.342	.413	.118
-04	1/4	.464	.480	.669	.468	.453	.157
-05	5/16	.543	.559	.708	.547	.531	.236
-06	3/8	.622	.637	.807	.625	.590	.315
-08	1/2	.740	.755	.846	.744	.629	.393

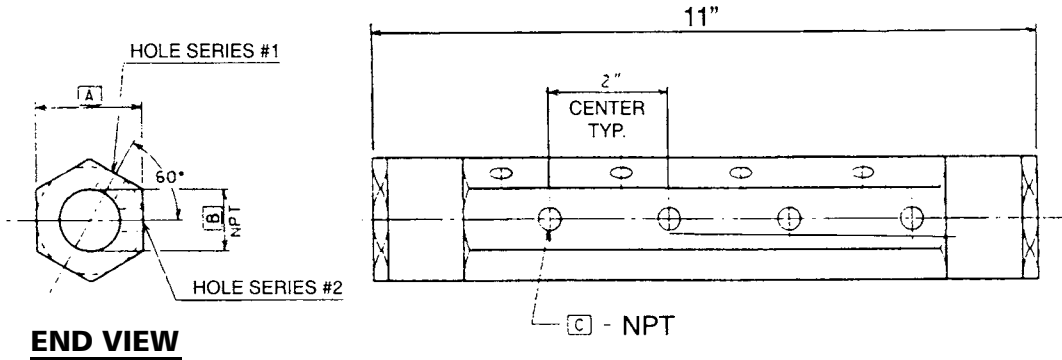
Cartridge fittings are useful for installations in various manifolds and/or distribution blocks when drilling and tapping are not desirable.

Hole tolerances: +/-0.001 (in.)

For plastic (non-metal) manifolds, reduce all hole dimensions "S" by 0.1 mm (0.004 in.)

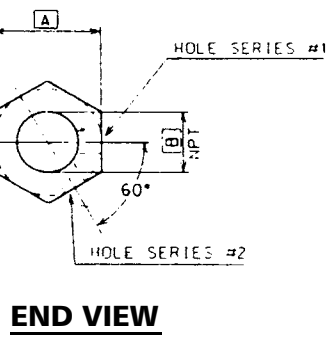
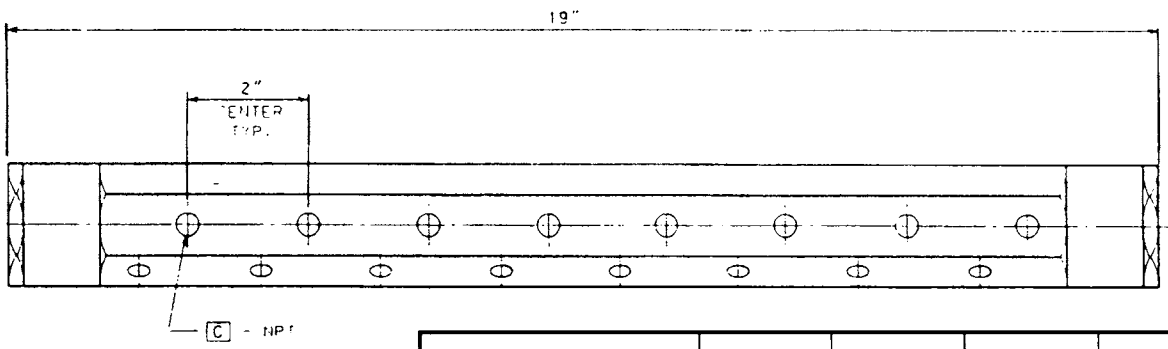
INSTALLATION: Drill or bore hole per specifications per size of cartridge. Simply press fit cartridge into hole with an evenly distributed force over the surface. Remove the collet ring is not necessary.

**Manifolds**



**END VIEW**

Part No.	A	B	C	PORT	HOLE SERIES
BAM-04-07-250	1.50"	.750"	.250"	4	1
BAM-04-07-375	1.50"	.750"	.375"	4	1
BAM-06-07-250-60°*	1.50"	.750"	.250"	6	1 & 2
BAM-06-07-375-60°*	1.50"	.750"	.375"	6	1 & 2
BAM-08-07-250-60°	1.50"	.750"	.250"	8	1 & 2
BAM-08-07-375-60°	1.50"	.750"	.375"	8	1 & 2
BAM-04-12-375	2.25"	1.250"	.375"	4	1
BAM-04-12-500	2.25"	1.250"	.500"	4	1
BAM-06-12-375-60°*	2.25"	1.250"	.375"	6	1 & 2
BAM-06-12-500-60°*	2.25"	1.250"	.500"	6	1 & 2
BAM-08-12-375-60°	2.25"	1.250"	.375"	8	1 & 2
BAM-08-12-500-60°	2.25"	1.250"	.500"	8	1 & 2

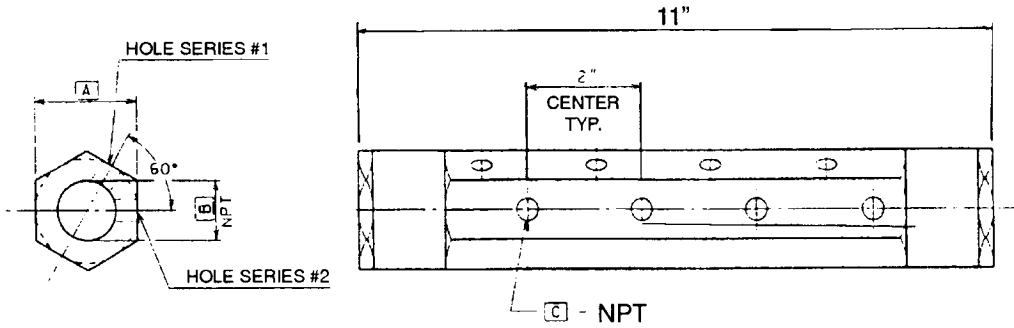


**END VIEW**

Part No.	A	B	C	PORT	HOLE SERIES
BAM-08-07-250	1.50"	.750"	.250"	8	1
BAM-08-07-375	1.50"	.750"	.375"	8	1
BAM-08-12-375	2.25"	1.250"	.375"	8	1
BAM-08-12-500	2.25"	1.250"	.500"	8	1
BAM-16-07-250-60°	1.50"	.750"	.250"	16	1 & 2
BAM-16-07-375-60°	1.50"	.750"	.375"	16	1 & 2
BAM-16-12-375-60°	2.25"	1.250"	.375"	16	1 & 2
BAM-16-12-500-60°	2.25"	1.250"	.500"	16	1 & 2

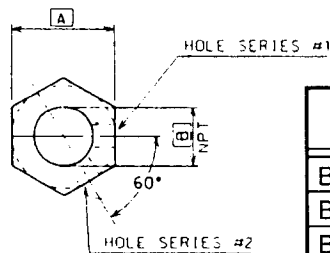
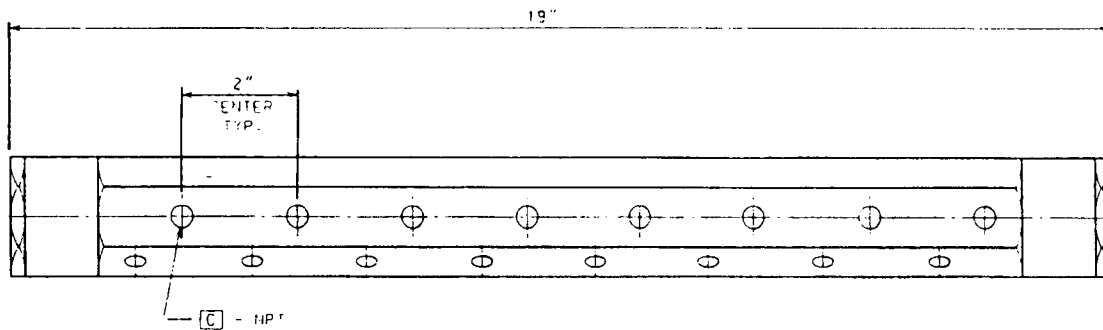
Manifolds





**END VIEW**

Part No.	A	B	C	PORT	HOLE SERIES
BAM-04-01-250	1.75"	1.0"	.250"	4	1
BAM-04-01-375	1.75"	1.0"	.375"	4	1
BAM-04-15-375	2.50"	1.5"	.375"	4	1
BAM-04-15-500	2.50"	1.5"	.500"	4	1
BAM-08-01-250-60°	1.75"	1.0"	.250"	8	1 & 2
BAM-08-01-375-60°	1.75"	1.0"	.375"	8	1 & 2
BAM-08-15-375-60°	2.50"	1.5"	.375"	8	1 & 2
BAM-08-15-500-60°	2.50"	1.5"	.500"	8	1 & 2



**END VIEW**

Part No.	A	B	C	PORT	HOLE SERIES
BAM-08-01-250	1.75"	1.0"	.250"	8	1
BAM-08-01-375	1.75"	1.0"	.375"	8	1
BAM-08-15-375	2.50"	1.5"	.375"	8	1
BAM-08-15-500	2.50"	1.5"	.500"	8	1
BAM-16-01-250-60°	1.75"	1.0"	.250"	16	1 & 2
BAM-16-01-375-60°	1.75"	1.0"	.375"	16	1 & 2
BAM-16-15-375-60°	2.50"	1.5"	.375"	16	1 & 2
BAM-16-15-500-60°	2.50"	1.5"	.500"	16	1 & 2

**Manifolds**

# Special Manifold & Block Request Form

*Type of Stock*      \_\_\_ Round      \_\_\_ Square      \_\_\_ Hex      \_\_\_ Other

*Type of Material*      \_\_\_ Alum.      \_\_\_ Steel      \_\_\_ S.S.      \_\_\_ Brass

*Size of Stock*      \_\_\_ Inches X \_\_\_ Inches

*Size of Feeds (if any)*      \_\_\_ NPT      \_\_\_ SAE      \_\_\_ BSPT      \_\_\_ BSPP

*Size of Ports*      \_\_\_ NPT      \_\_\_ SAE      \_\_\_ BSPT      \_\_\_ BSPP

*Number of Ports per side*      \_\_\_\_\_

*Configuration of Ports*      \_\_\_ One Side Only      \_\_\_ 60\*  
   \_\_\_ 90\*      \_\_\_ 180\*      \_\_\_ Tee      \_\_\_ Cross      \_\_\_ Other

*Begin First Ports*      \_\_\_ Inches Off Ends

*Centers Between Ports*      \_\_\_ Inches

*Overall Length*      \_\_\_ Inches

*Mounting Holes*      \_\_\_ Yes      \_\_\_ No

*Size of Mounting Holes*      \_\_\_ Inches

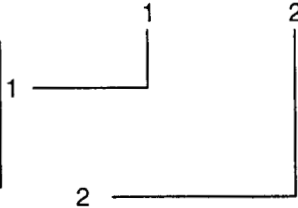
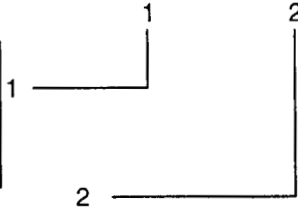



*Placement of Mounting Holes*

Above information has been determined to be correct and will meet the necessary requirements of \_\_\_\_\_  
*Company Name*

Per \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

**Manifolds**

## Aluminum Block Order Information

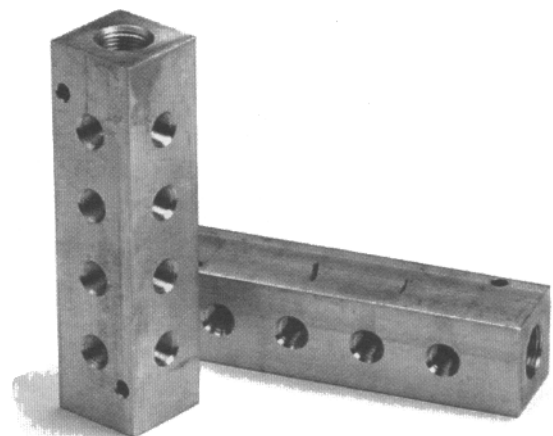
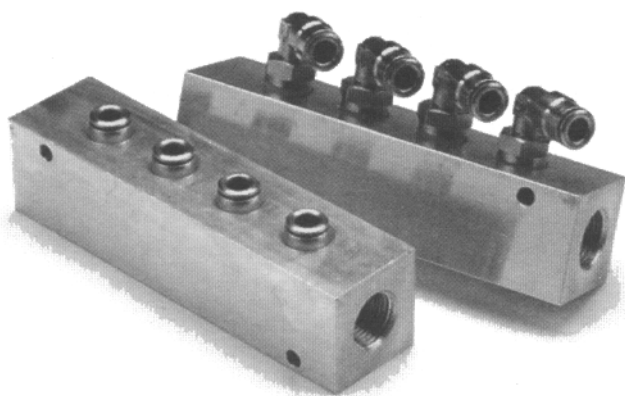
	Angle/Tee	Main Supply	Number of Ports	Port Size
<b>BAM</b>	<b>180</b>	<b>6</b>	<b>4</b>	<b>2</b>
<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">                     Burnham Aluminum Manifold                 </div> 				
		3	4	5
		3	4	5
		3/8	4	1/8
				1/4

Angle or Tee
90°
180°
Tee

\* The information above is our standard stock Special configurations "**Price On Request**".

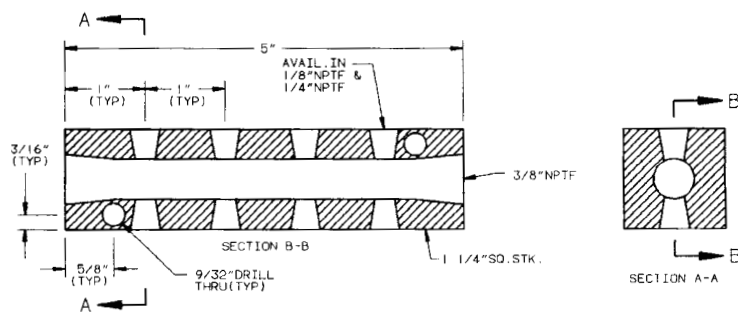
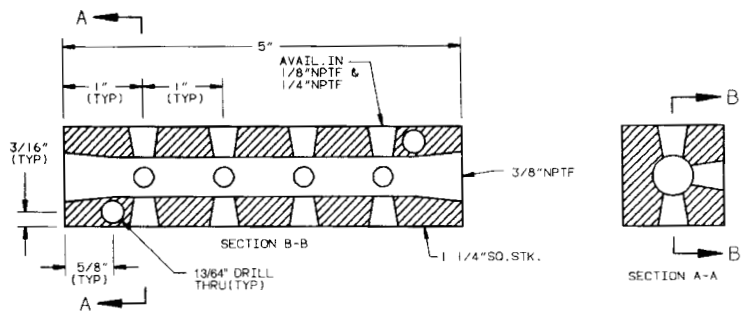
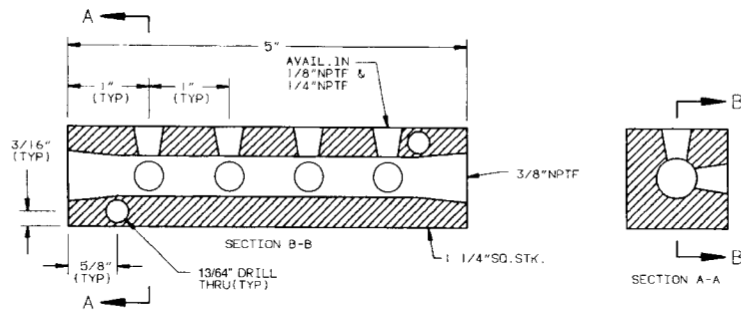
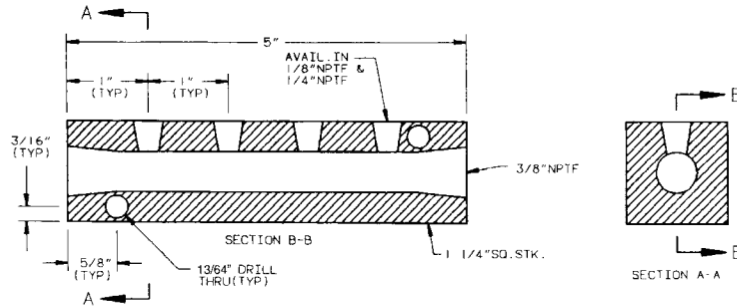
Use if any angle is needed.  
Skip to #3 if this is not used

\* Brass and Stainless available upon request.



**Manifolds**

# Aluminum Block Manifolds



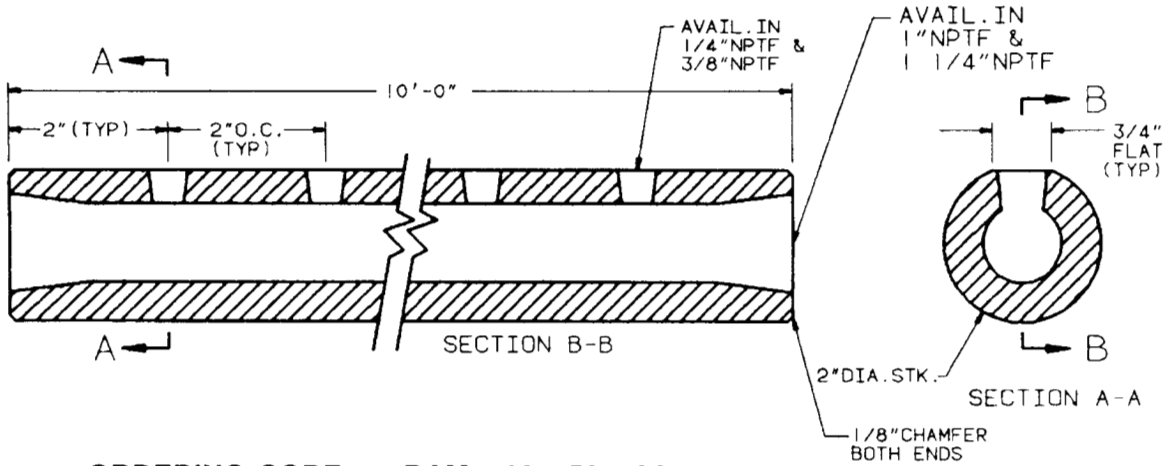
Delivery Ports	2	4	6*	8*	12*	16*	20*
Main Supply	1/8*	1/4*	3/8	1/2*	3/4*	1*	1 1/4*

\* P.O.R.



Manifolds

# Hydraulic Manifolds

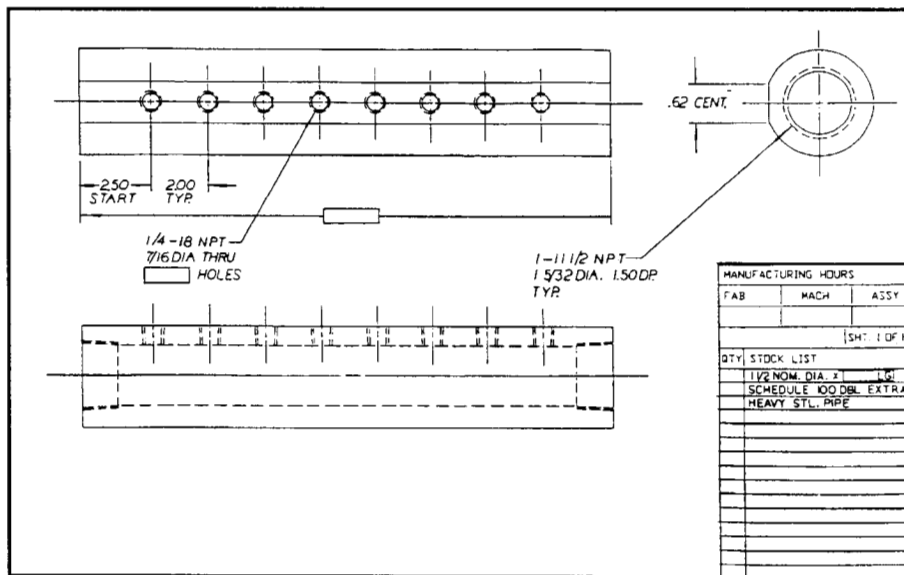


**ORDERING CODE** **BAM - 16 - 59 - 04**

MATERIAL —————  
 MANIFOLD —————  
 MAIN SUPPLY —————  
 NUMBER OF HOLES —————  
 SIZE OF DELIVERY PORTS —————

**MATERIAL**  
 S-STEEL PIPE XXH  
 A-ALUMINUM

**NPTF PIPE SIZES**  
 02 04 06 08 12 16 20  
 1/8 1/4 3/8 1/2 3/4 1 1 1/4



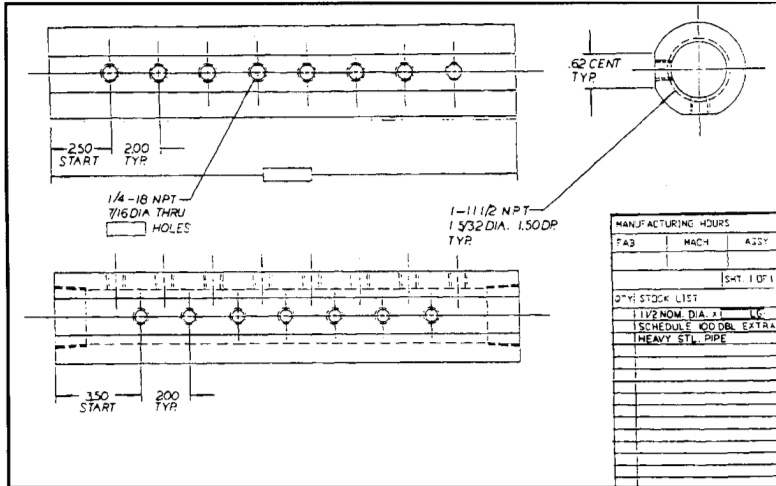
**BSM16-8-4 NPT**

*NOTE: Manifolds are made to order and therefore can be manufactured to customers specifications.*

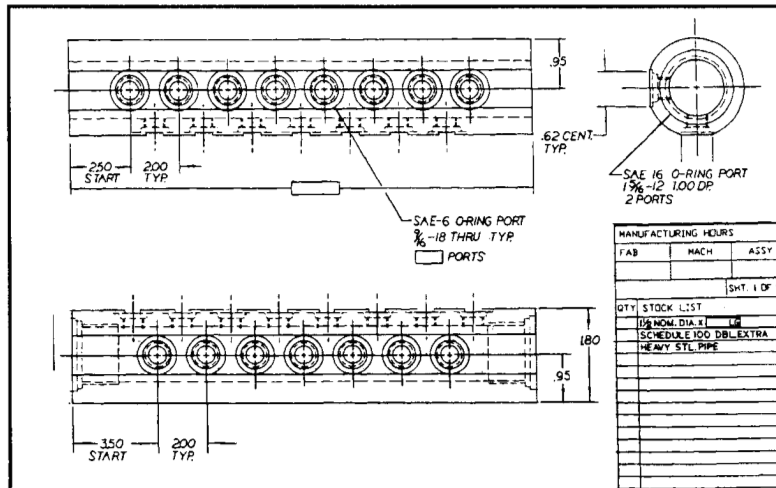
**Manifolds**



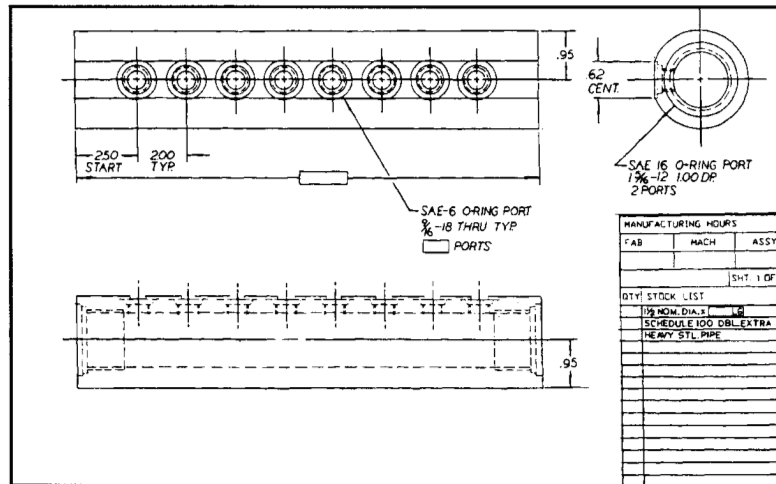




**BSM 16-8-4  
NPT 90° Offset**



**BSM 16-8-6  
STR Thread  
90° Offset**



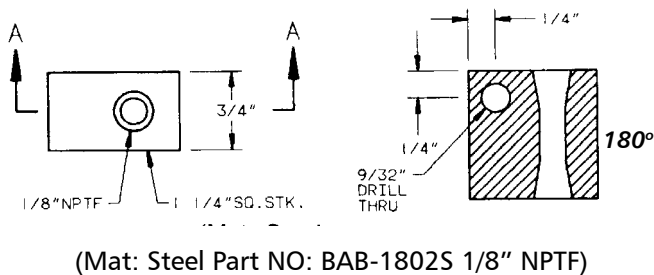
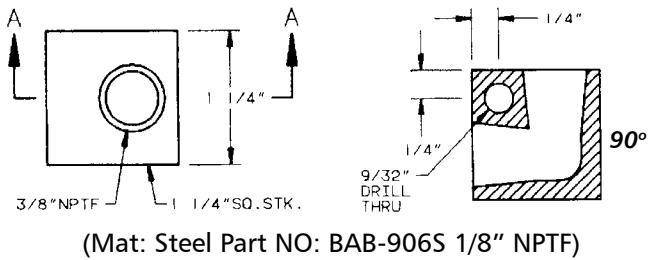
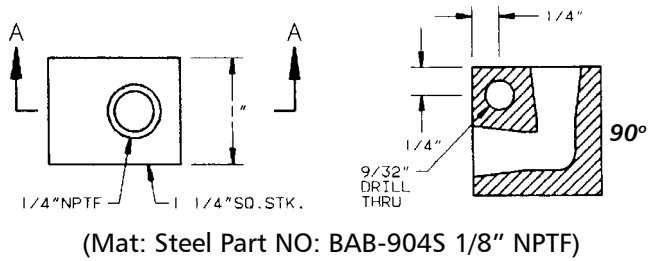
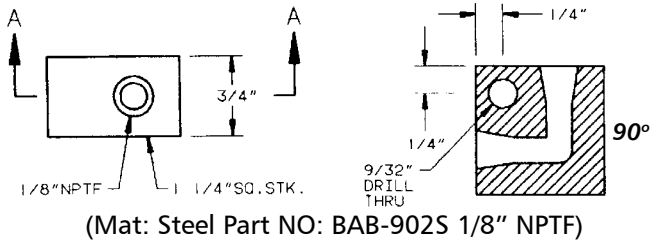
**BSM 16-8-6  
STR Thread**

*NOTE: Manifolds are made to order and therefore can be manufactured to customers specifications.*

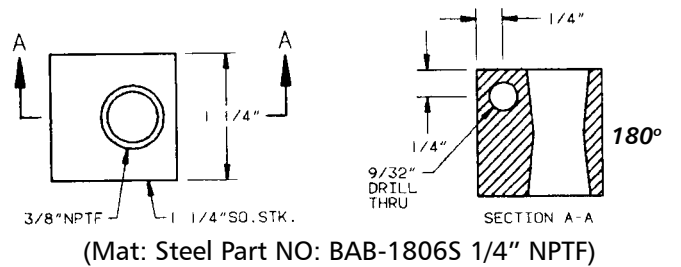
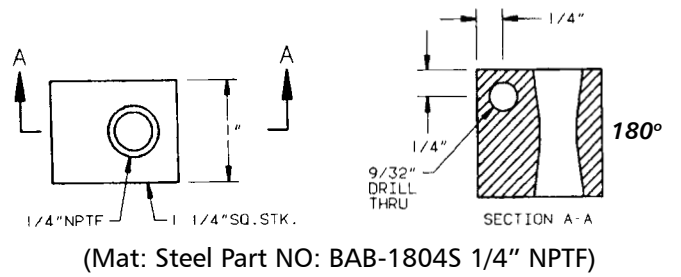
Manifolds



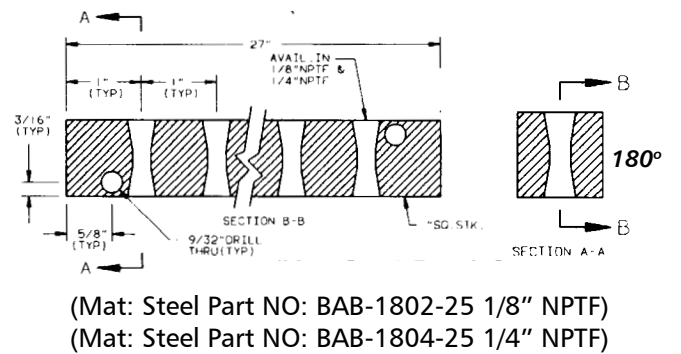
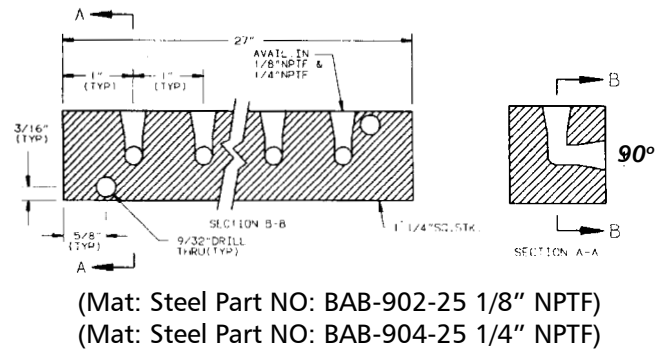
**ANCHOR BLOCKS**



\*Aluminum (Special Order)



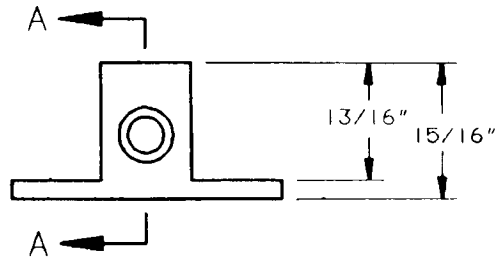
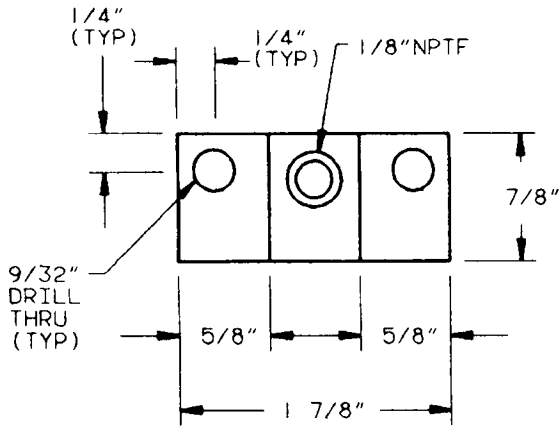
**25 HOLE ANCHOR BLOCKS**



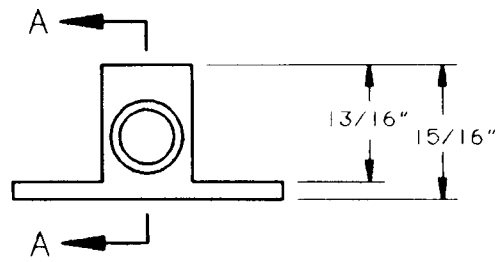
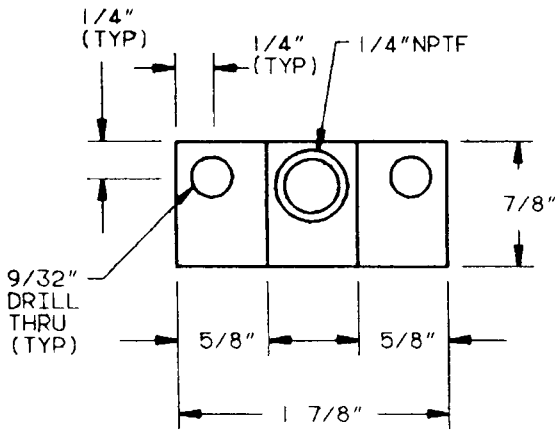
\*Aluminum (Special Order)

**Manifolds**

**Wing Ells**

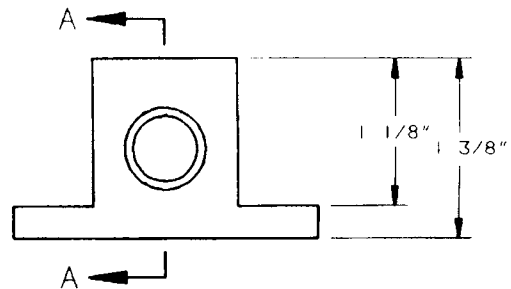
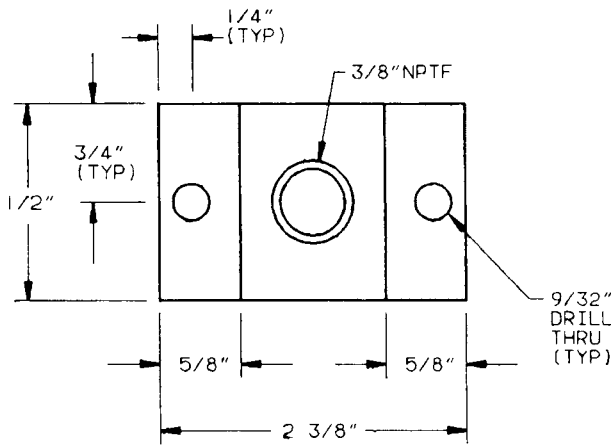


Brass = 02 BWE 1/8" NPTF 90°  
Steel = 02 SWE 1/8" NPTF 90°



Brass = 04 BWE 1/4" NPTF 90°  
Steel = 04 SWE 1/4" NPTF 90°

Size Chart	
1/8	= 02
1/4	= 04
3/8	= 06



Brass = 02 BWE 1/8" NPTF 90°  
Steel = 02 SWE 1/8" NPTF 90°

\*Aluminum (Special Order)



**Ty-Flo**

**TECHNICAL INFORMATION**

**USE/APPLICATIONS**

Ty-Flo ball valves are for use in any application where quick on-off service is required - for pressure systems and analysis in instrumentation - control panels - test stands - laboratories -shops - hydraulic systems - for OEM's - pilot plants - chemical plants - refineries - hydro carbon and nuclear power plants -food processing plants - paper mills and gas companies.

**DESIGN/FEATURES**

- Reliable, simple operation for on off service.
- Fast acting - one quarter turn fully opens or closes the valve.
- Corrosion resistant.
- Maximum performance - straight through flow for minimum turbulence and pressure drop.
- No valve over-tightening.
- Positive leak tight shut off - even with fluctuating pressures.
- Panel mounting capabilities.

**OPERATION**

The Ty-Flo ball valve features simple on-off operation. Fully open or fully closed, it offers sure positive service. The orifice through the valve is designed to be the same size as the orifice of the ball, allowing unrestricted flow. The handle of the valve points in the direction of the flow. When the handle is turned one quarter turn 90°, the ball rotates, blocking the flow and causing the normally open valve to close or shut off. The O-Rings seal against the ball, providing leak tight sealing, even at fluctuating pressures. Every valve is designed with panel mounting features and Ty-Flow interchangeable end connectors offer versatility and selection for any application requirement.

**TECHNICAL DATA**

**Construction**

Ty-Flo ball valves are made with a minimum of components. The one piece construction body with one piece stem and separate ball, assures long life and easy maintenance. Strict quality control procedures are adhered to throughout production. Every valve is hand inspected and tested to provide our customers with the best possible product.

**Materials**

Body:	316 stainless steel, steel, or brass	Handle:	nylon
Stem:	316 stainless steel	Seals:	standard o-rings: Viton
Ball:	316 stainless steel	Seats:	Kel-F standard, Teflon available upon request

**Specifications**

Specifications Operating pressure ranges: to 1500 PSI with TFE seats  
to 5000 PSI with Kel-F seats

Operating temperature ranges: Orifice size: -SOOT to +300T with  
Kel-F seats  
0 to 400°F with TFE seats,

Orifice size: .188, .250, .375

**HOW TO ORDER**

When ordering, please identify the part number in the following order:

- 1) specify material first: SS = Stainless steel S = Steel B = Brass
- 2) specify orifice series: series 4 (.188 orifice) Series 6 (.250 orifice) series 8 (.375 orifice)
- 3) specify outlet end and size before inlet end and size

**EXAMPLE:**

SS-6-1FT-6-4 stainless steel  
series 6 (.250 orifice)  
with 3/8" female NPT outflow  
to 1/4" Tylok inflow

**SPECIAL PRODUCTS**

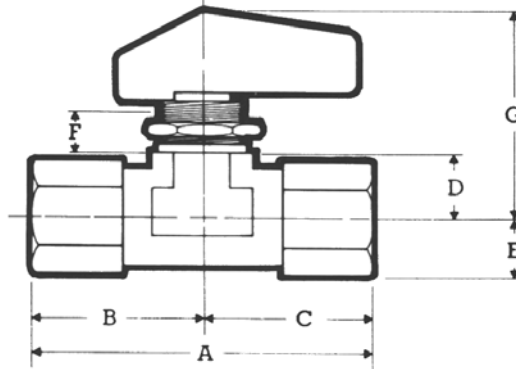
If you require special materials, shapes and/or applications that are not shown in this catalog, please submit inquiries. Special Ty-Flo Ball Valves can be made to order from any machinable material. Prices quoted upon receipt of print with quantity and material specified.



# TY-FLO BALL VALVE FEMALE TO FEMALE

This Ty-Flo ball valve offers a FEMALE NPT END Connector on both the inlet and the outlet of the valve.

Ty-Flo



Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
4-1FF-2-2	.188	2-25/64	1-3/16	1-3/16	19/32	25/64	3/8	1-1/2	3/4	1/8" Female NPT	1/8" Female NPT
4-1FF-2-4	.188	2-5/8	1-3/16	1-7/16	19/32	25/64	3/8	1-1/2	3/4	1/8" Female NPT	1/4" Female NPT
4-1FF-4-2	.188	2-5/8	1-7/16	1-3/16	19/32	25/64	3/8	1-1/2	3/4	1/4" Female NPT	1/8" Female NPT
4-1FF-4-4	.188	2-5/8	1-7/16	1-7/16	19/32	25/64	3/8	1-1/2	3/4	1/4" Female NPT	1/4" Female NPT

Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
6-1FF-4-4	.250	3	1-1/2	1-1/2	9/16	1/2	1/4	1-11/16	3/4	1/4" Female NPT	1/4" Female NPT
6-1FF-4-6	.250	3	1-1/2	1-1/2	9/16	1/2	1/4	1-11/16	3/4	1/4" Female NPT	3/8" Female NPT
6-1FF-4-8	.250	3-3/16	1-1/2	1-11/16	9/16	5/8	1/8	1-11/16	3/4	1/4" Female NPT	1/2" Female NPT
6-1FF-6-4	.250	3	1-1/2	1-1/2	9/16	1/2	1/4	1-11/16	3/4	3/8" Female NPT	1/4" Female NPT
6-1FF-6-6	.250	3	1-1/2	1-1/2	9/16	1/2	1/4	1-11/16	3/4	3/8" Female NPT	3/8" Female NPT
6-1FF-6-8	.250	3-3/16	1-1/2	1-11/16	9/16	5/8	1/8	1-11/16	3/4	3/8" Female NPT	1/2" Female NPT
6-1FF-8-4	.250	3-3/16	1-11/16	1-1/2	9/16	5/8	1/8	1-11/16	3/4	1/2" Female NPT	1/4" Female NPT
6-1FF-8-6	.250	3-3/16	1-11/16	1-1/2	9/16	5/8	1/8	1-11/16	3/4	1/2" Female NPT	3/8" Female NPT
6-1FF-8-8	.250	3-3/8	1-11/16	1-11/16	9/16	5/8	1/8	1-11/16	3/4	1/2" Female NPT	1/2" Female NPT

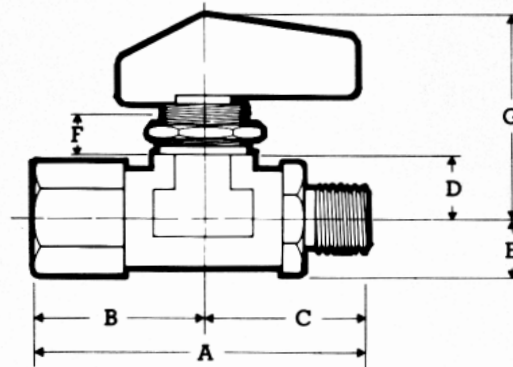
Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
8-1FF-4-4	.375	3-9/32	1-41/64	1-41/64	13/16	39/64	21/32	2	7/8	1/4" Female NPT	1/4" Female NPT
8-1FF-4-6	.375	3-1/4	1-41/64	1-39/64	13/16	39/64	21/32	2	7/8	1/4" Female NPT	3/8" Female NPT
8-1FF-4-8	.375	3-13/32	1-41/64	1-49/64	13/16	39/64	21/32	2	7/8	1/4" Female NPT	1/2" Female NPT
B-1FF-4-12	.375	3-17/32	1-41/64	1-57/64	13/16	23/32	21/32	2	7/8	1/4" Female NPT	3/4" Female NPT
8-1FF-6-4	.375	3-1/4	1-39/64	1-41/64	13/16	39/64	21/32	2	7/8	3/8" Female NPT	1/4" Female NPT
8-1FF-6-6	.375	3-7/32	1-39/64	1-39/64	13/16	39/64	21/32	2	7/8	3/8" Female NPT	3/8" Female NPT
8-1FF-6-8	.375	3-3/8	1-39/64	1-49/64	13/16	39/64	21/32	2	7/8	3/8" Female NPT	1/2" Female NPT
8-1FF-6-12	.375	3-1/2	1-39/64	1-57/64	13/16	23/32	21/32	2	7/8	3/8" Female NPT	3/4" Female NPT
8-1FF-8-4	.375	3-13/32	1-49/64	1-41/64	13/16	39/64	21/32	2	7/8	1/2" Female NPT	1/4" Female NPT
8-1FF-8-6	.375	3-3/8	1-49/64	1-39/64	13/16	39/64	21/32	2	7/8	1/2" Female NPT	3/8" Female NPT
8-1FF-8-8	.375	3-17/32	1-49/64	1-49/64	13/16	39/64	21/32	2	7/8	1/2" Female NPT	1/2" Female NPT
8-1FF-8-12	.375	3-21/32	1-49/64	1-57/64	13/16	23/32	21/32	2	7/8	1/2" Female NPT	3/4" Female NPT
8-1FF-12-4	.375	3-17/32	1-57/64	1-41/64	13/16	23/32	21/32	2	7/8	3/4" Female NPT	1/4" Female NPT
8-1FF-12-6	.375	3-1/2	1-57/64	1-39/64	13/16	23/32	21/32	2	7/8	3/4" Female NPT	3/8" Female NPT
8-1FF-12-8	.375	3-21/32	1-57/64	1-49/64	13/16	23/32	21/32	2	7/8	3/4" Female NPT	1/2" Female NPT
8-1FF-12-12	.375	3-25/32	1-57/64	1-57/64	13/16	23/32	21/32	2	7/8	3/4" Female NPT	3/4" Female NPT

Instrumentation

# TY-FLO BALL VALVE FEMALE TO MALE

This Ty-Flo ball valve offers a FEMALE NPT END Connector on both the outlet, and a MALE NPT END on the inlet END Connector.

Ty-Flo



Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
4-1FM-2-2	.188	2-27/64	1-3/16	1-7/32	19/32	25/64	3/8	1-1/2	3/4	1/8" Female NPT	1/8" Male NPT
4-1FM-2-4	.188	2-39/64	1-3/16	1-13/32	19/32	25/64	3/8	1-1/2	3/4	1/8" Female NPT	1/4" Male NPT
4-1FM-4-2	.188	2-43/64	1-7/16	1-7/32	19/32	25/64	3/8	1-1/2	3/4	1/4" Female NPT	1/8" Male NPT
4-1FM-4-4	.188	2-55/64	1-7/16	1-13/32	19/32	25/64	3/8	1-1/2	3/4	1/4" Female NPT	1/4" Male NPT

Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
6-1FM-4-4	.250	2-15/16	1-1/2	1-7/16	9/16	1/2	1/4	1-11/16	3/4	1/4" Female NPT	1/4" Male NPT
6-1FM-4-6	.250	2-15/16	1-1/2	1-7/16	9/16	1/2	1/4	1-11/16	3/4	1/4" Female NPT	3/8" Male NPT
6-1FM-4-8	.250	3-1/8	1-1/2	1-5/8	9/16	1/2	1/4	1-11/16	3/4	1/4" Female NPT	1/2" Male NPT
6-1FM-6-4	.250	2-15/16	1-1/2	1-7/16	9/16	1/2	1/4	1-11/16	3/4	3/8" Female NPT	1/4" Male NPT
6-1FM-6-6	.250	2-15/16	1-1/2	1-7/16	9/16	1/2	1/4	1-11/16	3/4	3/8" Female NPT	3/8" Male NPT
6-1FM-6-8	.250	3-1/8	1-1/2	1-5/8	9/16	1/2	1/4	1-11/16	3/4	3/8" Female NPT	1/2" Male NPT
6-1FM-8-4	.250	3-1/8	1-11/16	1-7/16	9/16	5/8	1/8	1-11/16	3/4	1/2" Female NPT	1/4" Male NPT
6-1FM-8-6	.250	3-1/8	1-11/16	1-7/16	9/16	5/8	1/8	1-11/16	3/4	1/2" Female NPT	3/8" Male NPT
6-1FM-8-8	.250	3-5/16	1-11/16	1-5/8	9/16	5/8	1/8	1-11/16	3/4	1/2" Female NPT	1/2" Male NPT

Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
8-1FM-4-4	.375	3-9/32	1-41/64	1-41/64	13/16	39/64	21/32	2	7/8	1/4" Female NPT	1/4" Male NPT
8-1FM-4-6	.375	3-9/32	1-41/64	1-41/64	13/16	39/64	21/32	2	7/8	1/4" Female NPT	3/8" Male NPT
8-1FM-4-8	.375	3-15/32	1-41/64	1-53/64	13/16	39/64	21/32	2	7/8	1/4" Female NPT	1/2" Male NPT
8-1FM-4-12	.375	3-15/32	1-41/64	1-53/64	13/16	23/32	21/32	2	7/8	1/4" Female NPT	3/4" Male NPT
8-1FM-6-4	.375	3-1/4	1-39/64	1-41/64	13/16	39/64	21/32	2	7/8	3/8" Female NPT	1/4" Male NPT
8-1FM-6-6	.375	3-1/4	1-39/64	1-41/64	13/16	39/64	21/32	2	7/8	3/8" Female NPT	3/8" Male NPT
8-1FM-6-8	.375	3-7/16	1-39/64	1-53/64	13/16	39/64	21/32	2	7/8	3/8" Female NPT	1/2" Male NPT
8-1FM-6-12	.375	3-7/16	1-39/64	1-53/64	13/16	23/32	21/32	2	7/8	3/8" Female NPT	3/4" Male NPT
8-1FM-8-4	.375	3-13/32	1-49/64	1-41/64	13/16	39/64	21/32	2	7/8	1/2" Female NPT	1/4" Male NPT
8-1FM-8-6	.375	3-13/32	1-49/64	1-41/64	13/16	39/64	21/32	2	7/8	1/2" Female NPT	3/8" Male NPT
8-1FM-8-8	.375	3-19/32	1-49/64	1-53/64	13/16	39/64	21/32	2	7/8	1/2" Female NPT	1/2" Male NPT
8-1FM-8-12	.375	3-19/32	1-49/64	1-53/64	13/16	39/64	21/32	2	7/8	1/2" Female NPT	3/4" Male NPT
8-1FM-12-4	.375	3-17/32	1-57/64	1-41/64	13/16	23/32	21/32	2	7/8	3/4" Female NPT	1/4" Male NPT
8-1FM-12-6	.375	3-17/32	1-57/64	1-41/64	13/16	23/32	21/32	2	7/8	3/4" Female NPT	3/8" Male NPT
8-1FM-12-8	.375	3-23/32	1-57/64	1-53/64	13/16	23/32	21/32	2	7/8	3/4" Female NPT	1/2" Male NPT
8-1FM-12-12	.375	3-23/32	1-57/64	1-53/64	13/16	23/32	21/32	2	7/8	3/4" Female NPT	3/4" Male NPT

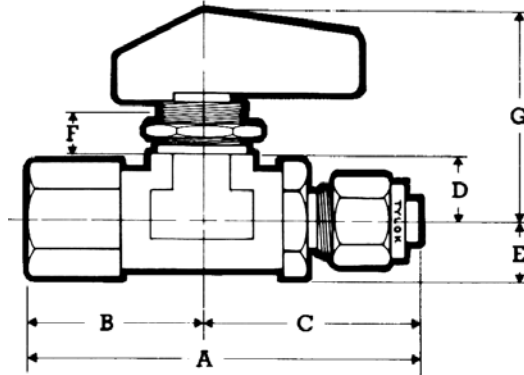
Instrumentation



# TY-FLO BALL VALVE FEMALE TO TYLOK

This Ty-Flo ball valve offers a FEMALE NPT END Connector on both the outlet,  
and a TYLOK® Tube Coupling on the inlet END Connector

Ty-Flo



Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
4-1FT-2-2	.188	2-51/64	1-3/16	1-39/64	19/32	25/64	3/8	1-1/2	3/4	1/8" Female NPT	1/8" Tylok
4-1FT-2-3	.188	2-53/64	1-3/16	1-41/64	19/32	25/64	3/8	1-1/2	3/4	1/8" Female NPT	3/16" Tylok
4-1FT-2-4	.188	2-15/16	1-3/16	1-3/4	19/32	25/64	3/8	1-1/2	3/4	1/8" Female NPT	1/4" Tylok
4-1FT-4-2	.188	3-3/64	1-7/16	1-39/64	19/32	25/64	3/8	1-1/2	3/4	1/4" Female NPT	1/8" Tylok
4-1FT-4-3	.188	3-5/64	1-7/16	1-41/64	19/32	25/64	3/8	1-1/2	3/4	1/4" Female NPT	3/16" Tylok
4-1FT-4-4	.188	3-3/16	1-7/16	1-3/4	19/32	25/64	3/8	1-1/2	3/4	1/4" Female NPT	1/4" Tylok

Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
6-1FT-4-4	.250	3-1 7/64	1-1/2	1-49/64	9/16	1/2	1/4	1-11/16	3/4	1/4" Female NPT	1/4" Tylok
6-1FT-4-6	.250	3-3/8	1-1/2	1-7/8	9/16	1/2	1/4	1-11/16	3/4	1/4" Female NPT	3/8" Tylok
6-1FT-4-8	.250	3-33/64	1-1/2	1-1/64	9/16	1/2	1/4	1-11/16	3/4	1/4" Female NPT	1/2" Tylok
6-1FT-6-4	.250	3-33/64	1-1/2	1-49/64	9/16	1/2	1/4	1-11/16	3/4	3/8" Female NPT	1/4" Tylok
6-1FT-6-6	.250	3-3/8	1-1/2	1-7/8	9/16	1/2	1/4	1-11/16	3/4	3/8" Female NPT	3/8" Tylok
6-1FT-6-8	.250	3-33/64	1-1/2	2-1/16	9/16	1/2	1/4	1-11/16	3/4	3/8" Female NPT	1/2" Tylok
6-1FT-8-4	.250	3-29/64	1-11/16	1-49/64	9/16	5/8	1/8	1-11/16	3/4	1/2" Female NPT	1/4" Tylok
6-1FT-8-6	.250	3-9/16	1-11/16	1-7/8	9/16	5/8	1/8	1-11/16	3/4	1/2" Female NPT	3/8" Tylok
6-1FT-8-8	.250	3-45/64	1-11/16	2-1/64	9/16	5/8	1/8	1-11/16	3/4	1/2" Female NPT	1/2" Tylok

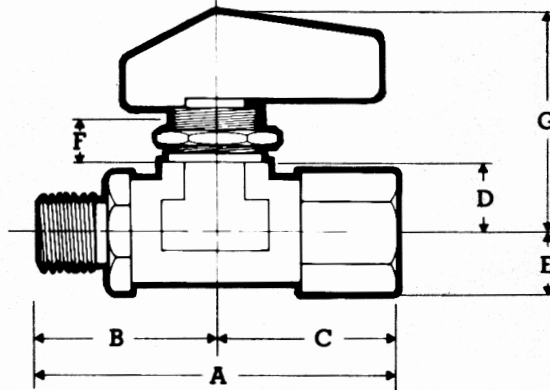
Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
8-1FT-4-4	.375	3-9/64	1-41/64	1-1/2	13/16	39/64	21/32	2	7/8	1/4" Female NPT	1/4" Tylok
8-1FT-4-6	.375	3-11/64	1-41/64	1-17/32	13/16	39/64	21/32	2	7/8	1/4" Female NPT	3/8" Tylok
8-1FT-4-8	.375	3-7/32	1-41/64	1-37/64	13/16	39/64	21/32	2	7/8	1/4" Female NPT	1/2" Tylok
8-1FT-4-10	.375	3-15/64	1-41/64	1-19/32	13/16	39/64	21/32	2	7/8	1/4" Female NPT	5/8" Tylok
8-1FT-4-12	.375	3-25/32	1-41/64	1-3/4	13/16	41/64	21/32	2	7/8	1/4" Female NPT	3/4" Tylok
8-1FT-6-4	.375	3-7/64	1-39/64	1-1/2	13/16	41/64	21/32	2	7/8	3/8" Female NPT	1/4" Tylok
8-1FT-6-6	.375	3-9/64	1-39/64	1-17/32	13/16	41/64	21/32	2	7/8	3/8" Female NPT	3/8" Tylok
8-1FT-6-8	.375	3-3/16	1-39/64	1-37/64	13/16	41/64	21/32	2	7/8	3/8" Female NPT	1/2" Tylok
8-1FT-6-10	.375	3-13/64	1-39/64	1-19/32	13/16	41/64	21/32	2	7/8	3/8" Female NPT	5/8" Tylok
8-1FT-6-12	.375	3-23/64	1-39/64	1-3/4	13/16	41/64	21/32	2	7/8	3/8" Female NPT	3/4" Tylok
8-1FT-8-4	.375	3-17/64	1-49/64	1-1/2	13/16	41/64	21/32	2	7/8	1/2" Female NPT	1/4" Tylok
8-1FT-8-6	.375	3-19/64	1-49/64	1-17/32	13/16	41/64	21/32	2	7/8	1/2" Female NPT	3/8" Tylok
8-1FT-8-8	.375	3 11/32	1-49/64	1-37/64	13/16	41/64	21/32	2	7/8	1/2" Female NPT	1/2" Tylok
8-1FT-8-10	.375	3-23/64	1-49/64	1-19/32	13/16	41/64	21/32	2	7/8	1/2" Female NPT	5/8" Tylok
8-1FT-8-12	.375	3-33/64	1-49/64	1-3/4	13/16	41/64	21/32	2	7/8	1/2" Female NPT	3/4" Tylok
8-1FT-12-4	.375	3-25/32	1-57/64	1-1/2	13/16	23/32	21/32	2	7/8	3/4" Female NPT	1/4" Tylok
8-1FT-12-6	.375	3-1 7/32	1-57/64	1-17/32	13/16	23/32	21/32	2	7/8	3/4" Female NPT	3/8" Tylok
8-1FT-12-8	.375	3-15/32	1-57/64	1-37/64	13/16	23/32	21/32	2	7/8	3/4" Female NPT	1/2" Tylok
8-1FT-12-10	.375	3-21/64	1-57/64	1-19/32	13/16	23/32	21/32	2	7/8	3/4" Female NPT	1/2" Tylok
8-1FT-12-12	.375	3-41/64	1-57/64	1-3/4	13/16	23/32	21/32	2	7/8	3/4" Female NPT	3/4" Tylok

Instrumentation

# TY-FLO BALL VALVE MALE TO FEMALE

This Ty-Flo ball valve offers a MALE NPT END Connector on both the outlet, and a FEMALE NPT END on the inlet END Connector.

**Ty-Flo**



Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
4-1MF-2-2	.188	2-27/64	1-7/32	1-3/16	19/32	25/64	3/8	1-1/2	3/4	1/8" Male NPT	1/8" Female NPT
4-1MF-2-4	.188	2-39/64	1-7/32	1-13/32	19/32	25/64	3/8	1-1/2	3/4	1/8" Male NPT	1/4" Female NPT
4-1MF-4-2	.188	2-43/64	1-13/32	1-7/32	19/32	25/64	3/8	1-1/2	3/4	1/4" Male NPT	1/8" Female NPT
4-1MF-4-4	.188	2-55/64	1-13/32	1-7/16	19/32	25/64	3/8	1-1/2	3/4	1/4" Male NPT	1/4" Female NPT

Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
6-1MF-4-4	.250	2-15/16	1-7/16	1-1/2	9/16	1/2	1/4	1-11/16	3/4	1/4" Male NPT	1/4" Female NPT
6-1MF-4-6	.250	2-15/16	1-7/16	1-1/2	9/16	1/2	1/4	1-11/16	3/4	1/4" Male NPT	3/8" Female NPT
6-1MF-4-8	.250	3-1/8	1-7/16	1-11/16	9/16	5/8	1/8	1-11/16	3/4	1/4" Male NPT	1/2" Female NPT
6-1MF-6-4	.250	2-15/16	1-7/16	1-1/2	9/16	1/2	1/4	1-11/16	3/4	3/8" Male NPT	1/4" Female NPT
6-1MF-6-6	.250	2-15/16	1-7/16	1-1/2	9/16	1/2	1/4	1-11/16	3/4	3/8" Male NPT	3/8" Female NPT
6-1MF-6-8	.250	3-1/8	1-7/16	1-11/16	9/16	5/8	1/8	1-11/16	3/4	3/8" Male NPT	1/2" Female NPT
6-1MF-8-4	.250	3-1/8	1-5/8	1-1/2	9/16	1/2	1/4	1-11/16	3/4	1/2" Male NPT	1/4" Female NPT
6-1MF-8-6	.250	3-1/8	1-5/8	1-1/2	9/16	1/2	1/4	1-11/16	3/4	1/2" Male NPT	3/8" Female NPT
6-1MF-8-8	.250	3-5/16	1-5/8	1-11/16	9/16	5/8	1/8	1-11/16	3/4	1/2" Male NPT	1/2" Female NPT

Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
8-1MF-4-4	.375	3-9/32	1-41/64	1-41/64	13/16	39/64	21/32	2	7/8	1/4" Male NPT	1/4" Female NPT
8-1MF-4-6	.375	3-1/4	1-41/64	1-39/64	13/16	39/64	21/32	2	7/8	1/4" Male NPT	3/8" Female NPT
8-1MF-4-8	.375	3-13/32	1-41/64	1-49/64	13/16	39/64	21/32	2	7/8	1/4" Male NPT	1/2" Female NPT
8-1MF-4-12	.375	3-17/32	1-41/64	1-57/64	13/16	23/32	21/32	2	7/8	1/4" Male NPT	3/4" Female NPT
8-1MF-6-4	.375	3-9/32	1-41/64	1-41/64	13/16	39/64	21/32	2	7/8	3/8" Male NPT	1/4" Female NPT
8-1MF-6-6	.375	3-1/4	1-41/64	1-39/64	13/16	39/64	21/32	2	7/8	3/8" Male NPT	3/8" Female NPT
8-1MF-6-8	.375	3-13/32	1-41/64	1-49/64	13/16	39/64	21/32	2	7/8	3/8" Male NPT	1/2" Female NPT
8-1MF-6-12	.375	3-17/32	1-41/64	1-57/64	13/16	23/32	21/32	2	7/8	3/8" Male NPT	3/4" Female NPT
8-1MF-8-4	.375	3-15/32	1-53/64	1-41/64	13/16	39/64	21/32	2	7/8	1/2" Male NPT	1/4" Female NPT
8-1MF-8-6	.375	3-7/16	1-53/64	1-39/64	13/16	39/64	21/32	2	7/8	1/2" Male NPT	3/8" Female NPT
8-1MF-8-8	.375	3-19/32	1-53/64	1-49/64	13/16	39/64	21/32	2	7/8	1/2" Male NPT	1/2" Female NPT
8-1MF-8-12	.375	3-23/32	1-53/64	1-57/64	13/16	23/32	21/32	2	7/8	1/2" Male NPT	3/4" Female NPT
8-1MF-12-4	.375	3-15/32	1-53/64	1-41/64	13/16	39/64	21/32	2	7/8	3/4" Male NPT	1/4" Female NPT
8-1MF-12-6	.375	3-7/16	1-53/64	1-39/64	13/16	39/64	21/32	2	7/8	3/4" Male NPT	3/8" Female NPT
8-1MF-12-8	.375	3-19/32	1-53/64	1-49/64	13/16	39/64	21/32	2	7/8	3/4" Male NPT	1/2" Female NPT
8-1MF-12-12	.375	3-23/32	1-53/64	1-57/64	13/16	23/32	21/32	2	7/8	3/4" Male NPT	3/4" Female NPT

Instrumentation

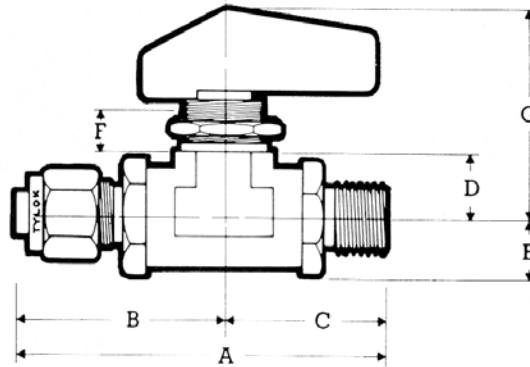




# TY-FLO BALL VALVE MALE TO MALE

This Ty-Flo ball valve offers a MALE NPT END Connector on both the inlet and the outlet of the valve.

Ty-Flo



Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
4-1MM-2-2	.188	2-7/16	1-7/32	1-7/32	19/32	25/64	3/8	1-1/2	3/4	1/8" Male NPT	1/8" Male NPT
4-1MM-2-4	.188	2-5/8	1-7/32	1-13/32	19/32	25/64	3/8	1-1/2	3/4	1/8" Male NPT	1/4" Male NPT
4-1MM-4-2	.188	2-5/8	1-13/32	1-7/32	19/32	25/64	3/8	1-1/2	3/4	1/4" Male NPT	1/8" Male NPT
4-1MM-4-4	.188	2-13/16	1-13/32	1-13/32	19/32	25/64	3/8	1-1/2	3/4	1/4" Male NPT	1/4" Male NPT

Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
6-1MM-4-4	.250	2-7/8	1-7/16	1-7/16	9/16	1/2	1/4	1-11/16	3/4	1/4" Male NPT	1/4" Male NPT
6-1MM-4-6	.250	2-7/8	1-7/16	1-7/16	9/16	1/2	1/4	1-11/16	3/4	1/4" Male NPT	3/8" Male NPT
6-1MM-4-8	.250	3-1/16	1-7/16	1-5/8	9/16	1/2	1/4	1-11/16	3/4	1/4" Male NPT	1/2" Male NPT
6-1MM-6-4	.250	2-7/8	1-7/16	1-7/16	9/16	1/2	1/4	1-11/16	3/4	3/8" Male NPT	1/4" Male NPT
6-1MM-6-6	.250	2-7/8	1-7/16	1-7/16	9/16	1/2	1/4	1-11/16	3/4	3/8" Male NPT	3/8" Male NPT
6-1MM-6-8	.250	3-1/16	1-7/16	1-5/8	9/16	1/2	1/4	1-11/16	3/4	3/8" Male NPT	1/2" Male NPT
6-1MM-8-4	.250	3-1/16	1-5/8	1-7/16	9/16	1/2	1/4	1-11/16	3/4	1/2" Male NPT	1/4" Male NPT
6-1MM-8-6	.250	3-1/16	1-5/8	1-7/16	9/16	1/2	1/4	1-11/16	3/4	1/2" Male NPT	3/8" Male NPT
6-1MM-8-8	.250	3-1/4	1-5/8	1-5/8	9/16	1/2	1/4	1-11/16	3/4	1/2" Male NPT	1/2" Male NPT

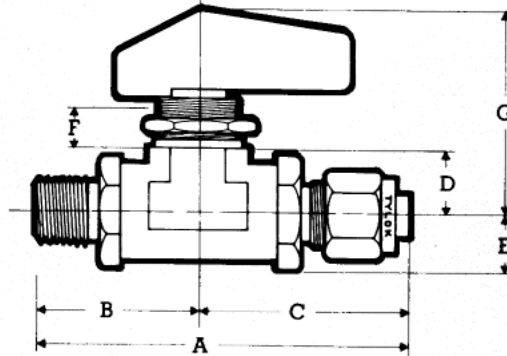
Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
8-1MM-4-4	.375	3-9/32	1-41/64	1-41/64	13/16	39/64	21/32	2	7/8	1/4" Male NPT	1/4" Male NPT
8-1MM-4-6	.375	3-9/32	1-41/64	1-41/64	13/16	39/64	21/32	2	7/8	1/4" Male NPT	3/8" Male NPT
8-1MM-4-8	.375	3-15/32	1-41/64	1-53/64	13/16	39/64	21/32	2	7/8	1/4" Male NPT	1/2" Male NPT
8-1MM-4-12	.375	3-15/32	1-41/64	1-53/64	13/16	39/64	21/32	2	7/8	1/4" Male NPT	3/4" Male NPT
8-1MM-6-4	.375	3-9/32	1-41/64	1-41/64	13/16	39/64	21/32	2	7/8	3/8" Male NPT	1/4" Male NPT
8-1MM-6-6	.375	3-9/32	1-41/64	1-41/64	13/16	39/64	21/32	2	7/8	3/8" Male NPT	3/8" Male NPT
8-1MM-6-8	.375	3-15/32	1-41/64	1-53/64	13/16	39/64	21/32	2	7/8	3/8" Male NPT	1/2" Male NPT
8-1MM-6-12	.375	3-15/32	1-41/64	1-53/64	13/16	39/64	21/32	2	7/8	3/8" Male NPT	3/4" Male NPT
8-1MM-8-4	.375	3-15/32	1-53/64	1-41/64	13/16	39/64	21/32	2	7/8	1/2" Male NPT	1/4" Male NPT
8-1MM-8-6	.375	3-15/32	1-53/64	1-41/64	13/16	39/64	21/32	2	7/8	1/2" Male NPT	3/8" Male NPT
8-1MM-8-8	.375	3-21/32	1-53/64	1-53/64	13/16	39/64	21/32	2	7/8	1/2" Male NPT	1/2" Male NPT
8-1MM-8-12	.375	3-21/32	1-53/64	1-53/64	13/16	39/64	21/32	2	7/8	1/2" Male NPT	3/4" Male NPT
8-1MM-12-4	.375	3-15/32	1-53/64	1-41/64	13/16	39/64	21/32	2	7/8	3/4" Male NPT	1/4" Male NPT
8-1MM-12-6	.375	3-15/32	1-53/64	1-41/64	13/16	39/64	21/32	2	7/8	3/4" Male NPT	3/8" Male NPT
8-1MM-12-8	.375	3-21/32	1-53/64	1-53/64	13/16	39/64	21/32	2	7/8	3/4" Male NPT	1/2" Male NPT
8-1MM-12-12	.375	3-21/32	1-53/64	1-53/64	13/16	39/64	21/32	2	7/8	3/4" Male NPT	3/4" Male NPT

Instrumentation

# TY-FLO BALL VALVE MALE TO TYLOK

This Ty-Flo ball valve offers a MALE NPT END Connector on the outlet,  
and a TYLOK® Tube Coupling on the inlet END Connector.

Ty-Flo



Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
4-1MT-2-2	.188	2-53/64	1-7/32	1-39/64	19/32	25/64	3/8	1-1/2	3/4	1/8" Male NPT	1/8" Tylok
4-1MT-2-3	.188	2-55/64	1-7/32	1-41/64	19/32	25/64	3/8	1-1/2	3/4	1/8" Male NPT	3/16" Tylok
4-1MT-2-4	.188	2-31/32	1-7/32	1-3/4	19/32	25/64	3/8	1-1/2	3/4	1/8" Male NPT	1/4" Tylok
4-1MT-4-2	.188	3-1/64	1-13/32	1-39/64	19/32	25/64	3/8	1-1/2	3/4	1/4" Male NPT	1/8" Tylok
4-1MT-4-3	.188	3-3/64	1-13/32	1-41/64	19/32	25/64	3/8	1-1/2	3/4	1/4" Male NPT	3/16" Tylok
4-1MT-4-4	.188	3-5/32	1-13/32	1-3/4	19/32	25/64	3/8	1-1/2	3/4	1/4" Male NPT	1/4" Tylok

Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
6-1MT-4-4	.250	3-13/64	1-7/16	1-49/64	9/16	1/2	1/4	1-11/16	3/4	1/4" Male NPT	1/4" Tylok
6-1MT-4-6	.250	3-5/16	1-7/16	1-7/8	9/16	1/2	1/4	1-11/16	3/4	1/4" Male NPT	3/8" Tylok
6-1MT-4-8	.250	3-29/64	1-7/16	2-1/64	9/16	1/2	1/4	1-11/16	3/4	1/4" Male NPT	1/2" Tylok
6-1MT-6-4	.250	3-13/64	1-7/16	1-49/64	9/16	1/2	1/4	1-11/16	3/4	3/8" Male NPT	1/4" Tylok
6-1MT-6-6	.250	3-5/16	1-7/16	1-7/8	9/16	1/2	1/4	1-11/16	3/4	3/8" Male NPT	3/8" Tylok
6-1MT-6-8	.250	3-29/64	1-7/16	2-1/64	9/16	1/2	1/4	1-11/16	3/4	3/8" Male NPT	1/2" Tylok
6-1MT-8-4	.250	3-25/64	1-5/8	1-49/64	9/16	1/2	1/4	1-11/16	3/4	1/2" Male NPT	1/4" Tylok
6-1MT-8-6	.250	3-1/2	1-5/8	1-7/8	9/16	1/2	1/4	1-11/16	3/4	1/2" Male NPT	3/8" Tylok
6-1MT-8-8	.250	3-41/64	1-5/8	2-1/64	9/16	1/2	1/4	1-11/16	3/4	1/2" Male NPT	1/2" Tylok

Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
4-1MT-4-4	.375	3-9/64	1-41/64	1-1/2	13/16	39/64	21/32	2	7/8	1/4" Male NPT	1/4" Tylok
8-1MT-4-6	.375	3-11/64	1-41/64	1-17/32	13/16	39/64	21/32	2	7/8	1/4" Male NPT	3/8" Tylok
8-1MT-4-8	.375	3-7/32	1-41/64	1-37/64	13/16	39/64	21/32	2	7/8	1/4" Male NPT	1/2" Tylok
8-1MT-4-10	.375	3-15/64	1-41/64	1-19/32	13/16	39/64	21/32	2	7/8	1/4" Male NPT	5/8" Tylok
8-1MT-4-12	.375	3-25/32	1-41/64	1-3/4	13/16	41/64	21/32	2	7/8	1/4" Male NPT	3/4" Tylok
8-1MT-6-4	.375	3-9/64	1-41/64	1-1/2	13/16	41/64	21/32	2	7/8	3/8" Male NPT	1/4" Tylok
8-1MT-6-6	.375	3-11/64	1-41/64	1-17/32	13/16	41/64	21/32	2	7/8	3/8" Male NPT	3/8" Tylok
8-1MT-6-8	.375	3 7/32	1-41/64	1-37/64	13/16	41/64	21/32	2	7/8	3/8" Male NPT	1/2" Tylok
8-1MT-6-10	.375	3-15/64	1-41/64	1-19/32	13/16	41/64	21/32	2	7/8	3/8" Male NPT	5/8" Tylok
8-1MT-6-12	.375	3-25/64	1-41/64	1-3/4	13/16	41/64	21/32	2	7/8	3/8" Male NPT	3/4" Tylok
8-1MT-8-4	.375	3-21/64	1-53/64	1-1/2	13/16	41/64	21/32	2	7/8	1/2" Male NPT	1/4" Tylok
8-1MT-8-6	.375	3-1/2	1-53/64	1-17/32	13/16	41/64	21/32	2	7/8	1/2" Male NPT	3/8" Tylok
8-1MT-8-8	.375	3-13/32	1-53/64	1-37/64	13/16	41/64	21/32	2	7/8	1/2" Male NPT	1/2" Tylok
8-1MT-8-10	.375	3-27/64	1-53/64	1-19/32	13/16	41/64	21/32	2	7/8	1/2" Male NPT	5/8" Tylok
8-1MT-8-12	.375	3-27/64	1-53/64	1-3/4	13/16	41/64	21/32	2	7/8	1/2" Male NPT	3/4" Tylok
8-1MT-2-4	.375	3-21/32	1-53/64	1-1/2	13/16	41/64	21/32	2	7/8	3/4" Male NPT	1/4" Tylok
8-1MT-2-6	.375	3-1/2	1-53/64	1-17/32	13/16	41/64	21/32	2	7/8	3/4" Male NPT	3/8" Tylok
8-1MT-12-8	.375	3-13/32	1-53/64	1-37/64	13/16	41/64	21/32	2	7/8	3/4" Male NPT	1/2" Tylok
8-1MT-2-10	.375	3-27/64	1-53/64	1-19/32	13/16	41/64	21/32	2	7/8	3/4" Male NPT	5/8" Tylok
8-1MT-2-12	.375	3-37/64	1-53/64	1-3/4	13/16	41/64	21/32	2	7/8	3/4" Male NPT	3/4" Tylok

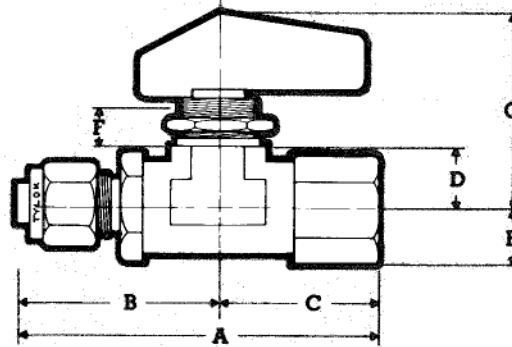
Instrumentation



# TY-FLO BALL VALVE TYLOK TO FEMALE

This Ty-Flo ball valve offers a TYLOK® Tube Coupling on the outlet END Connector,  
and a FEMALE NPT END on the inlet END Connector.

**Ty-Flo**



Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
4-1TF-2-2	.188	2-51/64	1-39/64	1-3/16	19/32	25/64	3/8	1-1/2	3/4	1/8" Tylok	1/8" Female NPT
4-1TF-2-4	.188	3-3/64	1-39/64	1-7/16	19/32	25/64	3/8	1-1/2	3/4	1/8" Tylok	1/4" Female NPT
4-1TF-3-2	.188	2-53/64	1-41/64	1-3/16	19/32	25/64	3/8	1-1/2	3/4	3/16" Tylok	1/8" Female NPT
4-1TF-3-4	.188	3-5/64	1-41/64	1-7/16	19/32	25/64	3/8	1-1/2	3/4	3/16" Tylok	1/4" Female NPT
4-1TF-4-2	.188	2-15/16	1-3/4	1-3/16	19/32	25/64	3/8	1-1/2	3/4	1/4" Tylok	1/8" Female NPT
4-1TF-4-4	.188	3-3/16	1-3/4	1-7/16	19/32	25/64	3/8	1-1/2	3/4	1/4" Tylok	1/4" Female NPT

Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
6-1TF-4-4	.250	3-17/64	1-49/64	1-1/2	9/16	1/2	1/4	1-11/16	3/4	1/4" Tylok	1/4" Female NPT
6-1TF-4-6	.250	3-17/64	1-49/64	1-1/2	9/16	1/2	1/4	1-11/16	3/4	1/4" Tylok	3/8" Female NPT
6-1TF-4-8	.250	3-29/64	1-49/64	1-11/16	9/16	5/8	1/8	1-11/16	3/4	1/4" Tylok	1/2" Female NPT
6-1TF-6-4	.250	3-3/8	1-7/8	1-1/2	9/16	1/2	1/4	1-11/16	3/4	3/8" Tylok	1/4" Female NPT
6-1TF-6-6	.250	3-3/8	1-7/8	1-1/2	9/16	1/2	1/4	1-11/16	3/4	3/8" Tylok	3/8" Female NPT
6-1TF-6-8	.250	3-9/16	1-7/8	1-11/16	9/16	5/8	1/8	1-11/16	3/4	3/8" Tylok	1/2" Female NPT
6-1TF-8-4	.250	3-33/64	2-1/64	1-1/2	9/16	1/2	1/4	1-11/16	3/4	1/2" Tylok	1/4" Female NPT
6-1TF-8-6	.250	3-33/64	2-1/64	1-1/2	9/16	1/2	1/4	1-11/16	3/4	1/2" Tylok	3/8" Female NPT
6-1TF-8-8	.250	3-45/64	2-1/64	1-11/16	9/16	5/8	1/8	1-11/16	3/4	1/2" Tylok	1/2" Female NPT

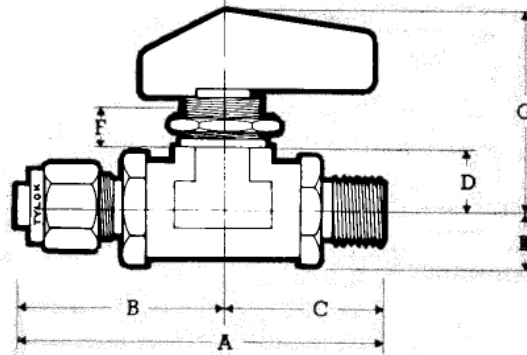
Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
8-1TF-4-4	.375	3-9/64	1-1/2	1-41/64	13/16	39/64	21/32	2	7/8	1/4" Tylok	1/4" Female NPT
8-1TF-4-6	.375	3-7/16	1-1/2	1-39/64	13/16	39/64	21/32	2	7/8	1/4" Tylok	3/8" Female NPT
8-1TF-4-8	.375	3-17/64	1-1/2	1-49/64	13/16	39/64	21/32	2	7/8	1/4" Tylok	1/2" Female NPT
8-1TF-4-12	.375	3-25/64	1-1/2	1-57/64	13/16	23/32	21/32	2	7/8	1/4" Tylok	3/4" Female NPT
8-1TF-6-4	.375	3-11/64	1-17/32	1-41/64	13/16	39/64	21/32	2	7/8	3/8" Tylok	1/4" Female NPT
8-1TF-6-6	.375	3-9/64	1-17/32	1-39/64	13/16	39/64	21/32	2	7/8	3/8" Tylok	3/8" Female NPT
8-1TF-6-8	.375	3-19/64	1-17/32	1-49/64	13/16	39/64	21/32	2	7/8	3/8" Tylok	1/2" Female NPT
8-1TF-6-12	.375	3-27/64	1-17/32	1-57/64	13/16	23/32	21/32	2	7/8	3/8" Tylok	3/4" Female NPT
8-1TF-8-4	.375	3-7/32	1-37/64	1-41/64	13/16	39/64	21/32	2	7/8	1/2" Tylok	1/4" Female NPT
8-1TF-8-6	.375	3-3/16	1-37/64	1-39/64	13/16	39/64	21/32	2	7/8	1/2" Tylok	3/8" Female NPT
8-1TF-8-8	.375	3-11/32	1-37/64	1-49/64	13/16	39/64	21/32	2	7/8	1/2" Tylok	1/2" Female NPT
8-1TF-8-12	.375	3-15/32	1-37/64	1-57/64	13/16	23/32	21/32	2	7/8	1/2" Tylok	3/4" Female NPT
8-1TF-10-4	.375	3-15/64	1-19/32	1-41/64	13/16	39/64	21/32	2	7/8	5/8" Tylok	1/4" Female NPT
8-1TF-10-6	.375	3-13/64	1-19/32	1-39/64	13/16	39/64	21/32	2	7/8	5/8" Tylok	3/8" Female NPT
8-1TF-10-8	.375	3-23/64	1-19/32	1-49/64	13/16	39/64	21/32	2	7/8	5/8" Tylok	1/2" Female NPT
8-1TF-10-12	.375	3-31/64	1-19/32	1-57/64	13/16	23/32	21/32	2	7/8	5/8" Tylok	3/4" Female NPT
8-1TF-12-4	.375	3-25/32	1-3/4	1-41/64	13/16	41/64	21/32	2	7/8	3/4" Tylok	1/4" Female NPT
8-1TF-12-6	.375	3-23/64	1-3/4	1-39/64	13/16	41/64	21/32	2	7/8	3/4" Tylok	3/8" Female NPT
8-1TF-12-8	.375	3-33/64	1-3/4	1-49/64	13/16	41/64	21/32	2	7/8	3/4" Tylok	1/2" Female NPT
8-1TF-12-12	.375	3-41/64	1-3/4	1-57/64	13/16	23/32	21/32	2	7/8	3/4" Tylok	3/4" Female NPT

**Instrumentation**

## TY-FLO BALL VALVE TYLOK TO MALE

This Ty-Flo ball valve offers a TYLOK® Tube Coupling on the outlet END Connector,  
and a MALE NPT END on the inlet END Connector.

Ty-Flo



Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
4-1TM-2-2	.188	2-53/64	1-39/64	1-7/32	19/32	25/64	3/8	1-1/2	3/4	1/8" Tylok	1/8" Male NPT
4-1TM-2-4	.188	3-1/64	1-39/64	1-13/32	19/32	25/64	3/8	1-1/2	3/4	1/8" Tylok	1/4" Male NPT
4-1TM-3-2	.188	2-55/64	1-41/64	1-7/32	19/32	25/64	3/8	1-1/2	3/4	3/16" Tylok	1/8" Male NPT
4-1TM-3-4	.188	3-3/64	1-41/64	1-13/32	19/32	25/64	3/8	1-1/2	3/4	3/16" Tylok	1/4" Male NPT
4-1TM-4-2	.188	2-31/32	1-3/4	1-7/32	19/32	25/64	3/8	1-1/2	3/4	1/4" Tylok	1/8" Male NPT
4-1TM-4-4	.188	3-5/32	1-3/4	1-13/32	19/32	25/64	3/8	1-1/2	3/4	1/4" Tylok	1/4" Male NPT

Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
6-1TM-4-4	.250	3-13/64	1-49/64	1-7/16	9/16	1/2	1/4	1-11/16	3/4	1/4" Tylok	1/4" Male NPT
6-1TM-4-6	.250	3-13/64	1-49/64	1-7/16	9/16	1/2	1/4	1-11/16	3/4	1/4" Tylok	3/8" Male NPT
6-1TM-4-8	.250	3-25/64	1-49/64	1-5/8	9/16	1/2	1/4	1-11/16	3/4	1/4" Tylok	1/2" Male NPT
6-1TM-6-4	.250	3-5/16	1-7/8	1-7/16	9/16	1/2	1/4	1-11/16	3/4	3/8" Tylok	1/4" Male NPT
6-1TM-6-6	.250	3-5/16	1-7/8	1-7/16	9/16	1/2	1/4	1-11/16	3/4	3/8" Tylok	3/8" Male NPT
6-1TM-6-8	.250	3-1/2	1-7/8	1-5/8	9/16	1/4	1/4	1-11/16	3/4	3/8" Tylok	1/2" Male NPT
6-1TM-8-4	.250	3-29/64	2-1/64	1-7/16	9/16	1/2	1/4	1-11/16	3/4	1/2" Tylok	1/4" Male NPT
6-1TM-8-6	.250	3-29/64	2-1/64	1-7/16	9/16	1/2	1/4	1-11/16	3/4	1/2" Tylok	3/8" Male NPT
6-1TM-8-8	.250	3-41/64	2-1/64	1-5/8	9/16	1/2	1/4	1-11/16	3/4	1/2" Tylok	1/2" Male NPT

Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
8-1TM-4-4	.375	3-9/64	1-1/2	1-41/64	13/16	39/64	21/32	2	7/8	1/4" Tylok	1/4" Male NPT
8-1TM-4-6	.375	3-9/64	1-1/2	1-41/64	13/16	39/64	21/32	2	7/8	1/4" Tylok	3/8" Male NPT
8-1TM-4-8	.375	3-21/64	1-1/2	1-53/64	13/16	39/64	21/32	2	7/8	1/4" Tylok	1/2" Male NPT
8-1TM-4-12	.375	3-21/64	1-1/2	1-53/64	13/16	39/64	21/32	2	7/8	1/4" Tylok	3/4" Male NPT
8-1TM-6-4	.375	3-11/64	1-17/32	1-41/64	13/16	39/64	21/32	2	7/8	3/8" Tylok	1/4" Male NPT
8-1TM-6-6	.375	3-11/64	1-17/32	1-41/64	13/16	39/64	21/32	2	7/8	3/8" Tylok	3/8" Male NPT
8-1TM-6-8	.375	3-23/64	1-17/32	1-53/64	13/16	39/64	21/32	2	7/8	3/8" Tylok	1/2" Male NPT
8-1TM-6-12	.375	3-23/64	1-17/32	1-53/64	13/16	39/64	21/32	2	7/8	3/8" Tylok	3/4" Male NPT
8-1TM-8-4	.375	3-7/32	1-37/64	1-41/64	13/16	39/64	21/32	2	7/8	1/2" Tylok	1/4" Male NPT
8-1TM-8-6	.375	3-7/32	1-37/64	1-41/64	13/16	39/64	21/32	2	7/8	1/2" Tylok	3/8" Male NPT
8-1TM-8-8	.375	3-13/32	1-37/64	1-53/64	13/16	39/64	21/32	2	7/8	1/2" Tylok	1/2" Male NPT
8-1TM-8-12	.375	3-13/32	1-37/64	1-53/64	13/16	39/64	21/32	2	7/8	1/2" Tylok	3/4" Male NPT
8-1TM-10-4	.375	3-15/64	1-19/32	1-41/64	13/16	39/64	21/32	2	7/8	5/8" Tylok	1/4" Male NPT
8-1TM-10-6	.375	3-15/64	1-19/32	1-41/64	13/16	39/64	21/32	2	7/8	5/8" Tylok	3/8" Male NPT
8-1TM-10-8	.375	3-27/64	1-19/32	1-53/64	13/16	39/64	21/32	2	7/8	5/8" Tylok	1/2" Male NPT
8-1TM-10-12	.375	3-27/64	1-19/32	1-53/64	13/16	39/64	21/32	2	7/8	5/8" Tylok	3/4" Male NPT
8-1TM-12-4	.375	3-25/32	1-3/4	1-41/64	13/16	41/64	21/32	2	7/8	3/4" Tylok	1/4" Male NPT
8-1TM-12-6	.375	3-25/64	1-3/4	1-41/64	13/16	41/64	21/32	2	7/8	3/4" Tylok	3/8" Male NPT
8-1TM-12-8	.375	3-37/64	1-3/4	1-53/64	13/16	41/64	21/32	2	7/8	3/4" Tylok	1/2" Male NPT
8-1TM-12-12	.375	3-37/64	1-3/4	1-53/64	13/16	41/64	21/32	2	7/8	3/4" Tylok	3/4" Male NPT

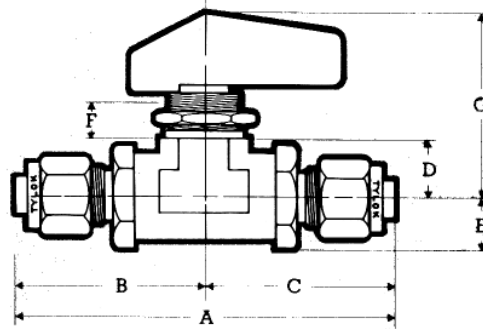
Instrumentation



# TY-FLO BALL VALVE TYLOK TO TYLOK

This Ty-Flo ball valve offers a TYLOK® Tube Coupling on both the outlet END Connector, and on the inlet END Connector.

Ty-Flo



Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
4-1TT-2-2	.188	3-7/32	1-39/64	1-39/64	19/32	25/64	3/8	1-1/2	3/4	1/8" Tylok	1/8" Tylok
4-1TT-2-3	.188	3-9/32	1-39/64	1-41/64	19/32	25/64	3/8	1-1/2	3/4	1/8" Tylok	3/16" Tylok
4-1TT-2-4	.188	3-23/64	1-39/64	1-3/4	19/32	25/64	3/8	1-1/2	3/4	1/8" Tylok	1/4" Tylok
4-1TT-3-2	.188	3-1/4	1-41/64	1-39/64	19/32	25/64	3/8	1-1/2	3/4	3/16" Tylok	1/8" Tylok
4-1TT-3-3	.188	3-9/32	1-41/64	1-41/64	19/32	25/64	3/8	1-1/2	3/4	3/16" Tylok	3/16" Tylok
4-1TT-3-4	.188	3-25/64	1-41/64	1-3/4	19/32	25/64	3/8	1-1/2	3/4	3/16" Tylok	1/4" Tylok
4-1TT-4-2	.188	3-23/64	1-3/4	1-39/64	19/32	25/64	3/8	1-1/2	3/4	1/4" Tylok	1/8" Tylok
4-1TT-4-3	.188	3-25/64	1-3/4	1-41/64	19/32	25/64	3/8	1-1/2	3/4	1/4" Tylok	3/16" Tylok
4-1TT-4-4	.188	3-1/2	1-3/4	1-3/4	19/32	25/64	3/8	1-1/2	3/4	1/4" Tylok	1/4" Tylok

Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
6-1TT-4-4	.250	3-17/64	1-49/64	1-49/64	9/16	1/2	1/4	1-11/16	3/4	1/4" Tylok	1/4" Tylok
6-1TT-4-6	.250	3-41/64	1-49/64	1-7/8	9/16	1/2	1/4	1-11/16	3/4	1/4" Tylok	3/8" Tylok
6-1TT-4-8	.250	3-25/32	1-49/64	2-1/64	9/16	1/2	1/4	1-11/16	3/4	1/4" Tylok	1/2" Tylok
6-1TT-6-4	.250	3-41/64	1-7/8	1-49/64	9/16	1/2	1/4	1-11/16	3/4	3/8" Tylok	1/4" Tylok
6-1TT-6-6	.250	3-3/4	1-7/8	1-7/8	9/16	1/2	1/4	1-11/16	3/4	3/8" Tylok	3/8" Tylok
6-1TT-6-8	.250	3-57/64	1-7/8	2-1/64	9/16	1/2	1/4	1-11/16	3/4	3/8" Tylok	1/2" Tylok
6-1TT-8-4	.250	3-25/32	2-1/64	1-49/64	9/16	1/2	1/4	1-11/16	3/4	1/2" Tylok	1/4" Tylok
6-1TT-8-6	.250	3-57/64	2-1/64	1-7/8	9/16	1/2	1/4	1-11/16	3/4	1/2" Tylok	3/8" Tylok
6-1TT-8-8	.250	4-1/32	2-1/64	2-1/64	9/16	1/2	1/4	1-11/16	3/4	1/2" Tylok	1/2" Tylok

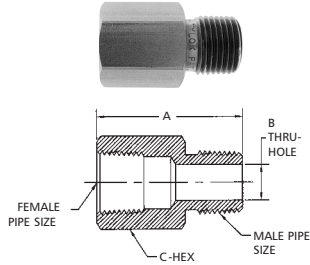
Part #	Orifice (in.)	A	B	C	D	E	F	G	Panel Hole	Outlet	Inlet
8-1TT-4-4	.375	3	1-1/2	1-1/2	13/16	39/64	21/32	2	7/8	1/4" Tylok	1/4" Tylok
8-1TT-4-6	.375	3-1/32	1-1/2	1-17/32	13/16	39/64	21/32	2	7/8	1/4" Tylok	3/8" Tylok
8-1TT-4-8	.375	3-5/64	1-1/2	1-37/64	13/16	39/64	21/32	2	7/8	1/4" Tylok	1/2" Tylok
8-1TT-4-10	.375	3-3/32	1-1/2	1-19/32	13/16	39/64	21/32	2	7/8	1/4" Tylok	5/8" Tylok
8-1TT-4-12	.375	3-1/4	1-1/2	1-3/4	13/16	41/64	21/32	2	7/8	1/4" Tylok	3/4" Tylok
8-1TT-6-4	.375	3-1/32	1-17/32	1-1/2	13/16	39/64	21/32	2	7/8	3/8" Tylok	1/4" Tylok
8-1TT-6-6	.375	3-1/16	1-17/32	1-17/32	13/16	39/64	21/32	2	7/8	3/8" Tylok	3/8" Tylok
8-1TT-6-8	.375	3-7/64	1-17/32	1-37/64	13/16	39/64	21/32	2	7/8	3/8" Tylok	1/2" Tylok
8-1TT-6-10	.375	3-1/4	1-17/32	1-19/32	13/16	39/64	21/32	2	7/8	3/8" Tylok	5/8" Tylok
8-1TT-6-12	.375	3-9/32	1-17/32	1-3/4	13/16	41/64	21/32	2	7/8	3/8" Tylok	3/4" Tylok
8-1TT-8-4	.375	3-5/64	1-37/64	1-1/2	13/16	39/64	21/32	2	7/8	1/2" Tylok	1/4" Tylok
8-1TT-8-6	.375	3-7/64	1-37/64	1-17/32	13/16	39/64	21/32	2	7/8	1/2" Tylok	3/8" Tylok
8-1TT-8-8	.375	3-5/32	1-37/64	1-37/64	13/16	39/64	21/32	2	7/8	1/2" Tylok	1/2" Tylok
8-1TT-8-10	.375	3-11/64	1-37/64	1-19/32	13/16	39/64	21/32	2	7/8	1/2" Tylok	5/8" Tylok
8-1TT-8-12	.375	3-21/64	1-37/64	1-3/4	13/16	41/64	21/32	2	7/8	1/2" Tylok	3/4" Tylok
8-1TT-10-4	.375	3-3/32	1-19/32	1-1/2	13/16	39/64	21/32	2	7/8	5/8" Tylok	1/4" Tylok
8-1TT-10-6	.375	3-1/4	1-19/32	1-17/32	13/16	39/64	21/32	2	7/8	5/8" Tylok	3/8" Tylok
8-1TT-10-8	.375	3-11/64	1-19/32	1-37/64	13/16	39/64	21/32	2	7/8	5/8" Tylok	1/2" Tylok
8-1TT-10-10	.375	3-3/16	1-19/32	1-19/32	13/16	39/64	21/32	2	7/8	5/8" Tylok	5/8" Tylok
8-1TT-10-12	.375	3-11/32	1-19/32	1-3/4	13/16	41/64	21/32	2	7/8	5/8" Tylok	3/4" Tylok
8-1TT-12-4	.375	3-1/4	1-3/4	1-1/2	13/16	41/64	21/32	2	7/8	3/4" Tylok	1/4" Tylok
8-1TT-12-6	.375	3-9/32	1-3/4	1-17/32	13/16	41/64	21/32	2	7/8	3/4" Tylok	3/8" Tylok
8-1TT-12-8	.375	3-21/64	1-3/4	1-37/64	13/16	41/64	21/32	2	7/8	3/4" Tylok	1/2" Tylok
8-1TT-12-10	.375	3-11/32	1-3/4	1-19/32	13/16	41/64	21/32	2	7/8	3/4" Tylok	5/8" Tylok
8-1TT-12-12	.375	3-1/2	1-3/4	1-3/4	13/16	41/64	21/32	2	7/8	3/4" Tylok	3/4" Tylok

Instrumentation

Tylok

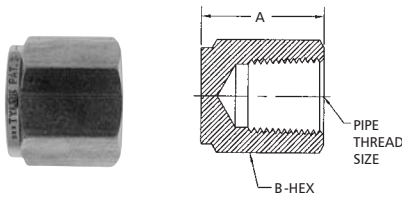
# Tylok Pipe Fittings

### FEMALE TO MALE ADAPTER



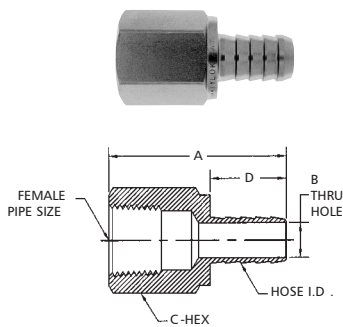
Part #	Female Pipe Size	Male Pipe Size	A	B Thru-Hole	C-Hex
1-1 FMA	1/16	1/16	1.000	.125	7/16
2-1 FMA	1/8	1/8	1.062	.187	9/16
4-1 FMA	1/4	1/4	1.375	.281	3/4
6-1 FMA	3/8	3/8	1.562	.375	7/8
8-1 FMA	1/2	1/2	1.906	.468	1-1/16
12-1 FMA	3/4	3/4	1.937	.625	1-1/4
16-1 FMA	1	1	2.281	.875	1-5/8

### FEMALE PIPE CAP



Part #	Pipe Thread Size	A	B-Hex
1-1 FPC	1/16	.500	7/16
2-1 FPC	1/8	.750	9/16
4-1 FPC	1/4	.906	3/4
6-1 FPC	3/8	1.031	7/8
8-1 FPC	1/2	1.343	1-1/16
12-1 FPC	3/4	1.437	1-1/4
16-1 FPC	1	1.625	1-5/8

### FEMALE PIPE HOSE CONNECTOR



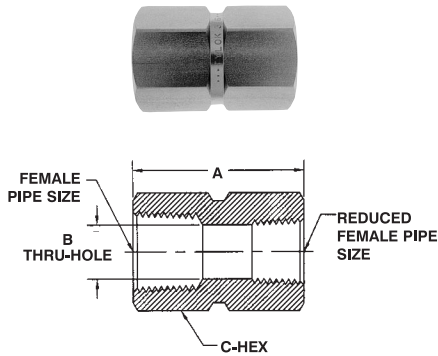
Part #	Female Pipe Size	Hose I.D.	A	B Thru-Hole	C-Hex	D
2-1FPHC-2	1/8	1/8	1.187	.093	9/16	.422
2-1FPHC-3	1/8	3/16	1.344	.125	9/16	.590
2-1FPHC-4	1/8	1/4	1.500	.187	9/16	.790
4-1FPHC-2	1/4	1/8	1.312	.093	3/4	.422
4-1FPHC-3	1/4	3/16	1.465	.125	3/4	.590
4-1FPHC-4	1/4	1/4	1.687	.187	3/4	.790
4-1FPHC-6	1/4	3/8	1.781	.281	3/4	.890
4-1FPHC-8	1/4	1/2	1.781	.406	3/4	.890
6-1FPHC-4	3/8	1/4	1.718	.187	7/8	.790
6-1FPHC-6	3/8	3/8	1.812	.281	7/8	.890
6-1FPHC-8	3/8	1/2	1.812	.406	7/8	.890
8-1FPHC-6	1/2	3/8	2.125	.281	1-1/16	.890
8-1FPHC-8	1/2	1/2	2.078	.406	1-1/16	.890
8-1FPHC-12	1/2	3/4	2.125	.656	1-1/16	.890
12-1FPHC-8	3/4	1/2	2.187	.406	1-1/4	.890
12-1FPHC-12	3/4	3/4	2.187	.656	1-1/4	.890
16-1FPHC-16	1	1	2.312	.906	1-5/8	.890

Instrumentation



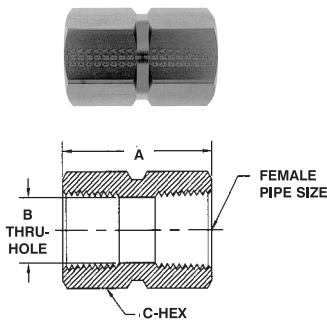
**Tylok**

**FEMALE PIPE REDUCER UNION**



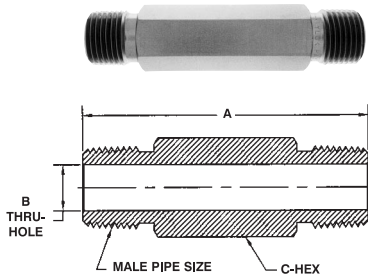
Part #	Female Pipe Size	Reduced Female Pipe Size	A	B Thru-Hole	C-Hex
2-1FPRU-1	1/8	1/16	1.062	.234	9/16
4-1FPRU-1	1/4	1/16	1.218	.234	3/4
4-1 FPRU-2	1/4	1/8	1.218	.328	3/4
6-1FPRU-1	3/8	1/16	1.312	.234	7/8
6-1 FPRU-2	3/8	1/8	1.312	.328	7/8
6-1 FPRU-4	3/8	1/4	1.375	.421	7/8
8-1 FPRU-2	1/2	1/8	1.562	.328	1-1/16
8-1 FPRU-4	1/2	1/4	1.750	.421	1-1/16
8-1FPRU-6	1/2	3/8	1.781	.562	1-1/16
12-1 FPRU-2	3/4	1/8	1.718	.328	1-1/4
12-1 FPRU-4	3/4	1/4	1.812	.421	1-1/4
12-1FPRU-6	3/4	3/8	1.843	.562	1-1/4
12-1FPRU-8	3/4	1/2	2.062	.687	1-1/4
16-1 FPRU-2	1	1/8	1.843	.328	1-5/8
16-1 FPRU-4	1	1/4	2.000	.421	1-5/8
16-1FPRU-6	1	3/8	2.062	.562	1-5/8
16-1FPRU-8	1	1/2	2.187	.687	1-5/8
16-1FPRU-12	1	3/4	2.250	.890	1-5/8

**FEMALE PIPE UNION**



Part #	Female Pipe Size	A	B Thru-Hole	C-Hex
1-1 FPU	1/16	.812	.234	7/16
2-1 FPU	1/8	.812	.328	9/16
4-1 FPU	1/4	1.187	.421	3/4
6-1 FPU	3/8	1.312	.562	7/8
8-1 FPU	1/2	1.625	.687	1-1/16
12-1 FPU	3/4	1.687	.890	1-1/4
16-1 FPU	1	2.000	1.125	1-5/8

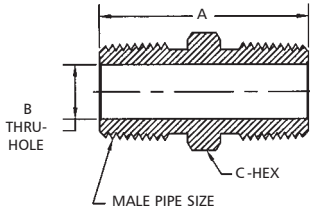
**HEX LONG NIPPLE**



Part #	Male Pipe Size	A	B Thru-Hole	C-Hex
1-1HLN-*	1/16	*Made To Order	.125	3/8
2-1HLN-*	1/8	To Order	.187	7/16
4-1HLN-*	1/4	Specify Size	.281	9/16
6-1HLN-*	3/8		.375	11/16
8-1HLN-*	1/2		.468	7/8
12-1HLN-*	3/4		.625	1-1/16
16-1HLN-*	1		.875	1-3/8

Instrumentation

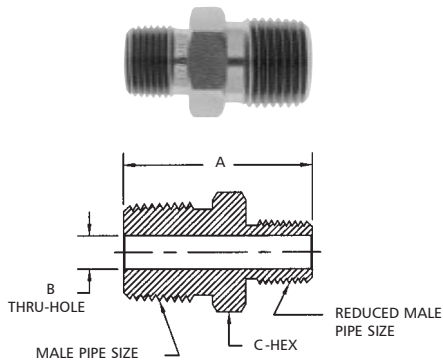
## Tylok



### HEX NIPPLE

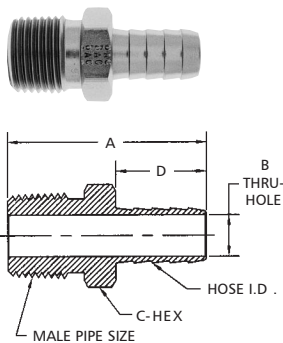
Part #	Male Pipe Size	A	B Thru-Hole	C-Hex
1-1HN	1/16	.937	.125	3/8
2-1 HN	1/8	1.000	.187	7/16
4-1 HN	1/4	1.375	.281	9/16
6-1 HN	3/8	1.406	.375	11/16
8-1 HN	1/2	1.781	.468	7/8
12-1HN	3/4	1.812	.625	1-1/16
16-1HN	1	2.281	.875	1-3/8

### HEX REDUCING NIPPLE



Part #	Male Pipe Size	Reduced Male Pipe Size	A	B Thru-Hole	C-Hex
2-1HRN-1	1/8	1/16	1.000	.125	7/16
4-1HRN-1	1/4	1/16	1.187	.125	9/16
4-1HRN-2	1/4	1/8	1.187	.187	9/16
6-1HRN-1	3/8	1/16	1.218	.125	11/16
6-1HRN-2	3/8	1/8	1.218	.187	11/16
6-1HRN-4	3/8	1/4	1.406	.281	11/16
8-1HRN-2	1/2	1/8	1.406	.187	7/8
8-1HRN-4	1/2	1/4	1.593	.281	7/8
8-1HRN-6	1/2	3/8	1.625	.375	7/8
12-1HRN-2	3/4	1/8	1.437	.187	1-1/16
12-1HRN-4	3/4	1/4	1.625	.281	1-1/16
12-1HRN-6	3/4	3/8	1.625	.375	1-1/16
12-1HRN-8	3/4	1/2	1.812	.468	1-1/16
16-1HRN-2	1	1/8	1.718	.187	1-3/8
16-1HRN-4	1	1/4	1.906	.281	1-3/8
16-1HRN-6	1	3/8	1.906	.375	1-3/8
16-1HRN-8	1	1/2	2.093	.468	1-3/8
16-1HRN-12	1	3/4	2.093	.625	1-3/8

### MALE PIPE HOSE CONNECTOR



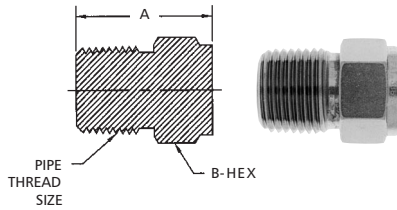
Part #	Female Pipe Size	Hose I.D.	A	B Thru-Hole	C-Hex	D
2-1MPHC-2	1/8	1/8	1.062	.093	7/16	.422
2-1MPHC-3	1/8	3/16	1.187	.125	7/16	.590
2-1MPHC-4	1/8	1/4	1.462	.187	7/16	.790
4-1MPHC-2	1/4	1/8	1.234	.093	9/16	.422
4-1MPHC-3	1/4	3/16	1.406	.125	9/16	.590
4-1MPHC-4	1/4	1/4	1.609	.187	9/16	.790
4-1MPHC-6	1/4	3/8	1.718	.281	9/16	.890
4-1MPHC-8	1/4	1/2	1.718	.281	9/16	.890
6-1MPHC-4	3/8	1/4	1.609	.187	11/16	.790
6-1MPHC-6	3/8	3/8	1.781	.281	11/16	.890
6-1MPHC-8	3/8	1/2	1.781	.375	11/16	.890
8-1MPHC-6	1/2	3/8	1.953	.281	7/8	.890
8-1MPHC-8	1/2	1/2	1.953	.406	7/8	.890
8-1MPHC-12	1/2	3/4	1.968	.468	7/8	.890
12-1MPHC-8	3/4	1/2	1.968	.406	1-1/16	.890
12-1MPHC-12	3/4	3/4	1.968	.625	1-1/16	.890
16-1MPHC-16	1	1	2.171	.875	1-3/8	.890

Instrumentation





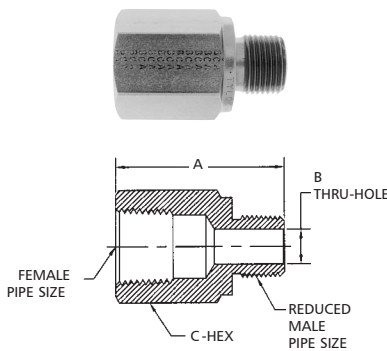
Tylok



**MALE PIPE PLUG**

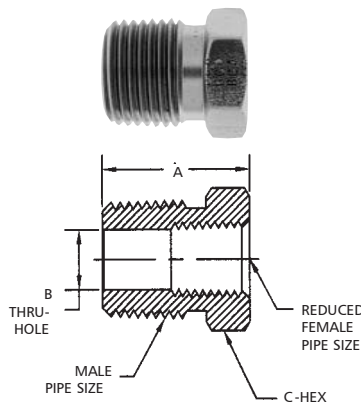
Part #	Pipe Thread Size	A	B-Hex
1-1MPP	1/16	.750	3/8
2-1MPP	1/8	.750	7/16
4-1 MPP	1/4	1.000	9/16
6-1 MPP	3/8	1.062	11/16
8-1MPP	1/2	1.312	7/8
12-1MPP	3/4	1.375	1-1/16
16-1 MPP	1	1.687	1-3/8

**REDUCER ADAPTER - FEMALE TO MALE**



Part #	Female Pipe Size	Male Pipe Size	A	B Thru-Hole	C-Hex
2-1 RAFM-1	1/8	1/16	1.093	.125	9/16
4-1 RAFM-1	1/4	1/16	1.250	.125	3/4
4-1 RAFM-2	1/4	1/8	1.250	.187	3/4
6-1 RAFM-1	3/8	1/16	1.437	.125	7/8
6-1 RAFM-2	3/8	1/8	1.437	.187	7/8
6-1 RAFM-4	3/8	1/4	1.562	.281	7/8
8-1 RAFM-2	1/2	1/8	1.687	.187	1-1/16
8-1 RAFM-4	1/2	1/4	1.812	.281	1-1/16
8-1 RAFM-6	1/2	3/8	1.812	.375	1-1/16
12-1 RAFM-2	3/4	1/8	1.812	.187	1-1/4
12-1 RAFM-4	3/4	1/4	1.968	.281	1-1/4
12-1 RAFM-6	3/4	3/8	1.968	.375	1-1/4
12-1RAFM-8	3/4	1/2	2.062	.468	1-1/4
16-1 RAFM-2	1	1/8	2.000	.187	1-5/8
16-1 RAFM-4	1	1/4	2.125	.281	1-5/8
16-1 RAFM-6	1	3/8	2.125	.375	1-5/8
16-1RAFM-8	1	1/2	2.250	.468	1-5/8
16-1 RAFM-12	1	3/4	2.250	.625	1-5/8

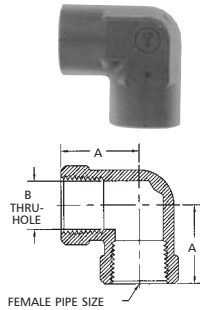
**REDUCER BUSHING - MALE TO FEMALE**



Part #	Female Pipe Size	Male Pipe Size	A	B Thru-Hole	C-Hex
2-1RBMF-1	1/8	1/16	1.000	.187	7/16
4-1RBMF-1	1/4	1/16	.812	.234	9/16
4-1RBMF-2	1/4	1/8	1.000	.281	9/16
6-1RBMF-1	3/8	1/16	.843	.234	11/16
6-1RBMF-2	3/8	1/8	.843	.328	11/16
6-1RBMF-4	3/8	1/4	1.125	.375	3/4
8-1RBMF-2	1/2	1/8	1.062	.328	7/8
8-1RBMF-4	1/2	1/4	1.062	.421	7/8
8-1RBMF-6	1/2	3/8	1.312	.468	7/8
12-1RBMF-2	3/4	1/8	1.062	.328	1-1/16
12-1RBMF-4	3/4	1/4	1.062	.421	1-1/16
12-1RBMF-6	3/4	3/8	1.062	.562	1-1/16
12-1RBMF-8	3/4	1/2	1.562	.625	1-1/16
16-1RBMF-2	1	1/8	1.343	.328	1-3/8
16-1RBMF-4	1	1/4	1.343	.421	1-3/8
16-1RBMF-6	1	3/8	1.343	.562	1-3/8
16-1RBMF-8	1	1/2	1.343	.687	1-3/8
16-1RBMF-12	1	3/4	1.750	.875	1-3/8

Instrumentation

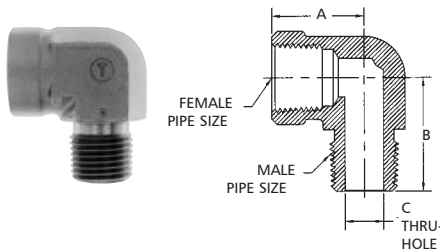
**Tylok**



**FEMALE PIPE ELBOW**

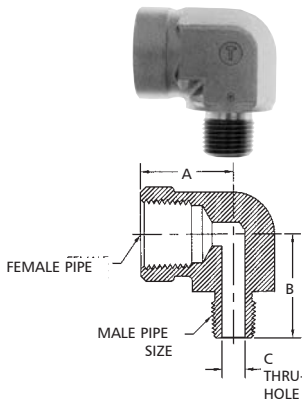
Part #	Pipe Thread Size	A	B-Hex
1-2FF-1	1/16	.750	.234
2-2FF-2	1/8	.843	.328
4-2FF-4	1/4	.968	.421
6-2FF-6	3/8	1.000	.562
8-2FF-8	1/2	1.125	.687
12-2FF-12	3/4	1.437	.890
16-2FF-16	1	1.625	1.125

**FEMALE - MALE PIPE ELBOW**



Part #	Female Pipe Size	A	B Thru-Hole	C-Hex
1-2FM-1	1/16	.750	.718	.125
2-2FM-2	1/8	.843	.843	.187
4-2FM-4	1/4	.843	1.093	.281
6-2FM-6	3/8	1.000	1.125	.375
8-2FM-8	1/2	1.125	1.375	.468
2-2FM-12	3/4	1.437	1.500	.625
16-2FM-16	1	1.625	1.937	.875

**FEMALE - MALE REDUCER PIPE ELBOW**



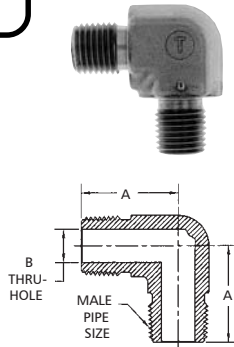
Part #	Female Pipe Size	Male Pipe Size	A	B Thru-Hole	C-Hex
2-2FMR-1	1/8	1/16	.750	.750	.125
4-2FMR-1	1/4	1/16	.843	.937	.125
4-2FMR-2	1/4	1/8	.843	.937	.187
6-2FMR-1	3/8	1/16	1.000	.937	.125
6-2FMR-2	3/8	1/8	1.000	.937	.187
6-2FMR-4	3/8	1/4	1.125	1.187	.281
8-2FMR-2	1/2	1/8	1.125	1.062	.187
8-2FMR-4	1/2	1/4	1.125	1.250	.281
8-2FMR-6	1/2	3/8	1.125	1.250	.375
12-2FMR-2	3/4	1/8	1.437	1.250	.187
12-2FMR-4	3/4	1/4	1.437	1.375	.281
12-2FMR-6	3/4	3/8	1.437	1.437	.375
12-2FMR-8	3/4	1/2	1.437	1.625	.468
16-2FMR-2	1	1/8	1.625	1.375	.187
16-2FMR-4	1	1/4	1.625	1.625	.281
16-2FMR-6	1	3/8	1.625	1.625	.375
16-2FMR-8	1	1/2	1.625	1.812	.468
16-2FMR-12	1	3/4	1.625	1.875	.625

Instrumentation



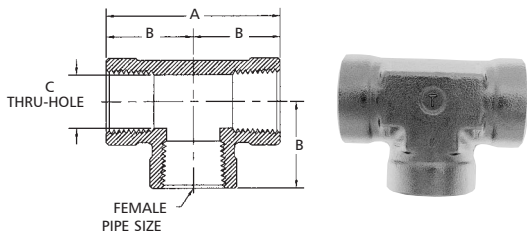
Tylok

**MALE PIPE ELBOW**



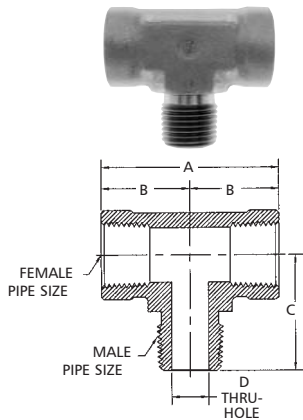
Part #	Pipe		A	B-Hex
	Thread Size			
1-2MM-1	1/16		.718	.125
2-2MM-2	1/8		.750	.187
4-2MM-4	1/4		1.000	.281
6-2MM-6	3/8		1.093	.375
8-2MM-8	1/2		1.375	.468
12-2MM-12	3/4		1.500	.625
16-2MM-16	1		1.875	.875

**ALL FEMALE PIPE TEE**



Part #	Female Pipe Size	A	B	
			Thru-Hole	C-Hex
1-3FFF-1	1/16	1.500	.750	.234
2-3FFF-2	1/8	1.687	.843	.328
4-3FFF-4	1/4	1.687	.843	.421
6-3FFF-6	3/8	2.000	1.000	.562
8-3FFF-8	1/2	2.250	1.125	.687
12-3FFF-12	3/4	2.625	1.312	.890
16-3FFF-16	1	3.250	1.625	1.125

**PIPE TEE - FEMALE - FEMALE - MALE**

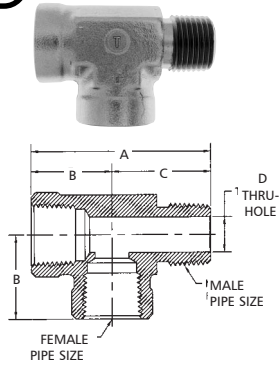


Part #	Female Pipe Size	Male Pipe Size	A	B	
				Thru-Hole	C-Hex
1-3FFM-1	1/16	1.500	.750	.718	.125
2-3FFM-2	1/8	1.687	.843	.843	.187
4-3FFM-4	1/4	1.875	.937	1.000	.281
6-3FFM-6	3/8	2.000	1.000	1.125	.375
8-3FFM-8	1/2	2.250	1.125	1.375	.468
12-3FFM-12	3/4	2.750	1.375	1.625	.625
16-3FFM-16	1	3.250	1.625	1.937	.875

Instrumentation

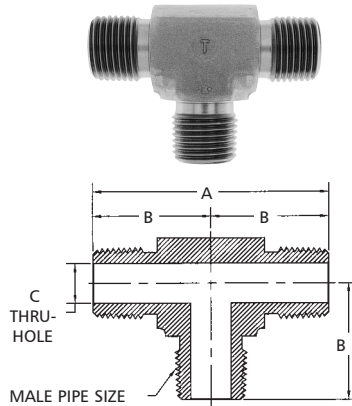
## Tylok

### PIPE TEE - FEMALE - MALE - FEMALE



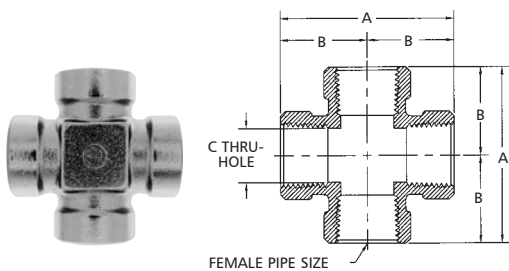
Part #	Female Pipe Size	Male Pipe Size	A	B Thru-Hole	C-Hex
1-3FMF-1	1/16	1.500	.750	.750	.125
2-3FMF-2	1/8	1.687	.843	.843	.187
4-3FMF-4	1/4	1.890	.843	1.046	.281
6-3FMF-6	3/8	2.125	1.000	1.125	.375
8-3FMF-8	1/2	2.500	1.125	1.375	.468
12-3FMF-12	3/4	2.937	1.437	1.500	.625
16-3FMF-16	1	3.562	1.625	1.937	.875

### ALL MALE PIPE TEE



Part #	Female Pipe Size	A	B Thru-Hole	C-Hex
1-3MMM-1	1/16	1.437	.718	.125
2-3MMM-2	1/8	1.437	.718	.187
4-3MMM-4	1/4	1.875	.937	.281
6-3MMM-6	3/8	2.000	1.000	.375
8-3MMM-8	1/2	2.750	1.375	.468
12-3MMM-12	3/4	2.750	1.375	.625
16-3MMM-16	1	3.750	1.875	.875

### FEMALE PIPE CROSS



Part #	Female Pipe Size	A	B Thru-Hole	C-Hex
1-4FPCR	1/16	1.250	.625	.246
2-4FPCR	1/8	1.687	.843	.328
4-4FPCR	1/4	1.687	.843	.421
6-4FPCR	3/8	2.125	1.062	.562
8-4FPCR	1/2	2.250	1.125	.687
12-4FPCR	3/4	2.875	1.437	.890
16-4FPCR	1	3.250	1.625	1.125

Instrumentation



**USE/APPLICATION**

Tylok Pipe Fittings are designed and manufactured for applications in power, processing and instrumentation. In designing a system incorporating pipe fittings, it is the designer's or user's obligation and responsibility to determine the appropriate fittings to be used for each application, and to insure proper installation and maintenance.

**DESIGN/FEATURES**

Tylok Pipe Fittings are manufactured to the same high quality standards as other Tylok Fittings. Each fitting is thoroughly cleaned to eliminate system contamination and features an attractive surface finish to enhance the appearance of modern scientific instrumentation and equipment.

**PIPE THREAD SPECIFICATIONS**

Tylok Pipe Fittings are manufactured from materials meeting applicable ASTM or ASME specifications, with pipe threads which meet or exceed ANSI B1.20.1 requirements. Strict quality control procedures are followed throughout production.

**Materials:** Brass • Steel • 316 Stainless Steel  
Aluminum • Other materials available as special order

**Suggest Allowable Working Pressures for Male Pipe Threads**

MNPT Size	316 Stainless Steel PSI Rating	Brass PSI Rating	Steel PSI Rating
1/16"	10,100	5,700	10,500
1/8"	9,200	5,300	9,800
1/4"	7,500	4,100	8,000
3/8"	7,250	4,000	7,700
1/2"	6,900	3,900	7,300
3/4"	6,600	3,700	7,000
1"	5,000	2,700	5,000



**Suggest Allowable Working Pressures for Female Pipe Threads**

FNPT Size	316 Stainless Steel PSI Rating	Brass PSI Rating	Steel PSI Rating
1/16"	6,200	3,500	6,800
1/8"	6,000	3,400	6,600
1/4"	6,100	3,300	6,500
3/8"	5,000	2,700	5,400
1/2"	4,700	2,500	4,800
3/4"	4,300	2,400	4,600
1"	4,100	2,300	4,500

**Instrumentation**

These charts are to be used as a guide only and are based on normal wall thicknesses, used for the various sizes. These ratings may vary widely from effects such as the proper use of sealants, size of stock, temperature, corrosion factors, etc. Therefore, Tylok International, Inc., assumes no responsibility for its accuracy in any individual design. When using a combination of fittings such as Male Pipe threads with Female Pipe threads, the minimum rating applies.

**HEAT TRACEABILITY**

Tylok Pipe Fittings can be traced back to the original mill heat from which it was made. Starting with the original billet, the mill creates a certificate which completely describes the chemical and physical makeup. This is useful for providing a method for complete material accountability for the manufacturer and end customer.

**TEMPERATURE RATINGS**

The standard Tylok Instrumentation Fittings are rated at the following temperatures:

316 Stainless -325°F to 1200°F    Brass -40°F to 400°F    Steel' -65°F to 400°F    Aluminum -40°F to 400°F  
(-198°C to 648°C)    (-40°C to 204°C)    (-54°C to 204°C)    (-40°C to 204°C)

Note: Consideration should be given to maximum temperature ratings if fittings are coated or plated.

*\*Special attention should be considered when selecting coated and/or plated materials such as Steel.*

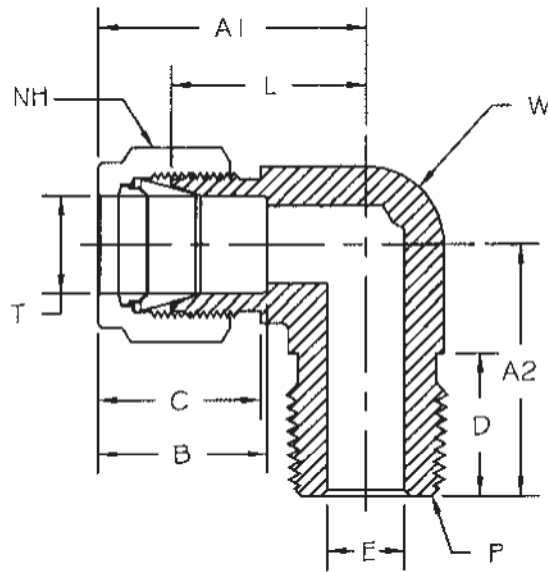
**INSTALLATION INSTRUCTIONS**

Pipe thread connections are very common in today's industry. They are relatively easy to work with because of the common sizes and dimensions throughout manufacturing. It is important to use a thread sealant. These products range from pipe "dopes" to teflon tape, all of which can be purchased through your local Tylok Distributor.



## MALE ELBOW

**Tylok**



Instrumentation

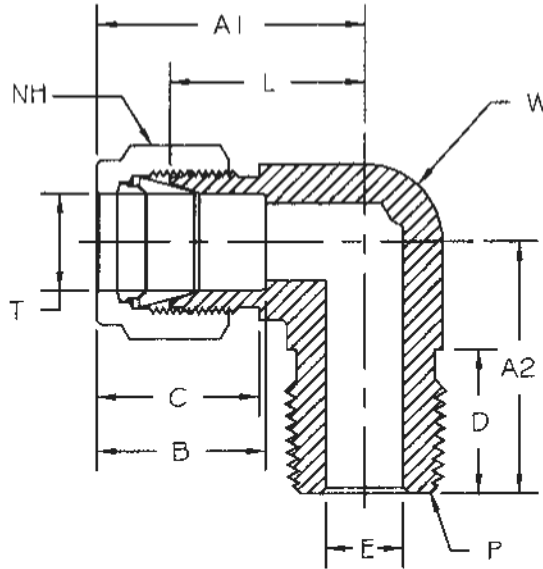
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A1	A2	B	C	D	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
1-DME-1	1/16	1/16	.703	.656	.344	.437	.375	.052	.547	5/16	3/8
1-DME-2	1/16	1/8	.750	.703	.344	.437	.375	.052	.609	5/16	7/16
2-DME-1	1/8	1/16	.937	.703	.500	.609	.375	.094	.672	7/16	7/16
2-DME-2	1/8	1/8	.937	.703	.500	.609	.375	.094	.672	7/16	7/16
2-DME-4	1/8	1/4	.969	.922	.500	.609	.562	.094	.719	7/16	1/2
2-DME-6	1/8	3/8	1.203	1.125	.500	.609	.562	.094	.812	7/16	13/16
3-DME-2	3/16	1/8	1.000	.734	.547	.625	.375	.125	.734	1/2	1/2
3-DME-4	3/16	1/4	1.000	.922	.547	.625	.562	.125	.734	1/2	1/2
4-DME-1	1/4	1/16	1.203	.703	.609	.703	.375	.156	.719	9/16	1/2
4-DME-2	1/4	1/8	1.062	.734	.609	.703	.375	.187	.766	9/16	1/2
4-DME-4	1/4	1/4	1.062	.922	.609	.703	.562	.187	.766	9/16	1/2
4-DME-6	1/4	3/8	1.172	1.031	.609	.703	.562	.187	.875	9/16	11/16
4-DME-8	1/4	1/2	1.250	1.297	.609	.703	.750	.187	.969	9/16	13/16
4-DME-12	1/4	3/4	1.546	1.500	.609	.703	.750	.187	1.093	9/16	1-1/16
5-DME-2	5/16	1/8	1.125	.781	.641	.734	.375	.187	.844	5/8	9/16
5-DME-4	5/16	1/4	1.125	.969	.641	.734	.562	.250	.844	5/8	9/16
5-DME-6	5/16	3/8	1.203	1.031	.641	.734	.562	.250	.906	5/8	11/16
6-DME-2	3/8	1/8	1.203	.812	.656	.766	.375	.187	.906	11/16	5/8
6-DME-4	3/8	1/4	1.203	1.000	.656	.766	.562	.281	.906	11/16	5/8
6-DME-6	3/8	3/8	1.234	1.031	.656	.766	.562	.281	.937	11/16	11/16

\*NOTE: All dimensions subject to change, to be used for reference only.



**MALE ELBOW**

**Tylok**



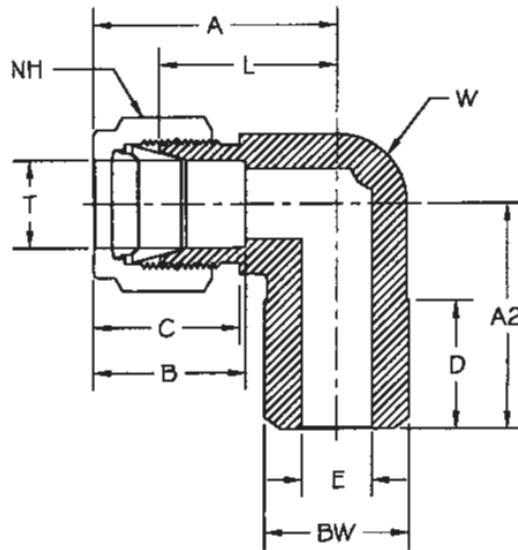
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A1	A2	B	C	D	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
6-DME-8	3/8	1/2	1.312	1.297	.656	.766	.750	.281	1.016	11/16	13/16
6-DME-12	3/8	3/4	1.469	1.453	.656	.766	.750	.281	1.172	11/16	1-1/16
8-DME-2	1/2	1/8	1.609	1.109	.906	.859	.375	.187	.969	7/8	13/16
8-DME-4	1/2	1/4	1.422	1.109	.906	.859	.562	.281	1.016	7/8	13/16
8-DME-6	1/2	3/8	1.422	1.109	.906	.859	.562	.375	1.016	7/8	13/16
8-DME-8	1/2	1/2	1.422	1.297	.906	.859	.750	.406	1.016	7/8	13/16
8-DME-12	1/2	3/4	1.578	1.453	.906	.859	.750	.406	1.172	7/8	1-1/16
10-DME-4	5/8	1/4	1.498	1.125	.969	.859	.562	.281	1.093	1	1
10-DME-6	5/8	3/8	1.500	1.187	.969	.859	.562	.375	1.109	1	15/16
10-DME-8	5/8	1/2	1.500	1.375	.969	.859	.750	.469	1.109	1	15/16
10-DME-12	5/8	3/4	1.578	1.453	.969	.859	.750	.500	1.172	1	1-1/16
10-DME-16	5/8	1	1.780	1.844	.969	.859	.937	.500	1.375	1	1-1/2
12-DME-4	3/4	1/4	1.576	1.250	.969	.859	.562	.281	1.375	1-1/4	1-1/16
12-DME-6	3/4	3/8	1.576	1.250	.969	.859	.562	.406	1.375	1-1/4	1-1/16
12-DME-8	3/4	1/2	1.561	1.453	.969	.859	.750	.469	1.172	1-1/8	1-1/16
12-DME-12	3/4	3/4	1.578	1.453	.969	.859	.750	.625	1.172	1-1/8	1-1/16
14-DME-12	7/8	3/4	1.766	1.641	1.016	.859	.750	.625	1.359	1-1/4	1-3/8
16-DME-4	1	1/4	1.935	1.375	1.234	1.047	.562	.281	1.531	1-1/2	1-1/2
16-DME-8	1	1/2	1.935	1.562	1.234	1.047	.750	.500	1.531	1-1/2	1-1/2
16-DME-12	1	3/4	1.937	1.641	1.234	1.047	.937	.625	1.453	1-1/2	1-3/8
16-DME-16	1	1	1.937	1.828	1.234	1.047	.937	.875	1.453	1-1/2	1-3/8

\*NOTE: All dimensions subject to change, to be used for reference only.



# TUBE TO BUTT WELD ELBOW

**Tylok**



PART NUMBER	T TUBE O.D.	BW	A1	A2	B	C	D	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DTBWE-2	1/8	.405	.922	.719	.516	.609	.344	.094	.656	7/16	1/2
3-DTBWE-2	3/16	.405	1.016	.734	.547	.641	.375	.125	.734	1/2	1/2
4-DTBWE-2	1/4	.405	1.062	.734	.609	.703	.375	.187	.766	9/16	1/2
4-DTBWE-4	1/4	.540	1.062	.937	.609	.703	.562	.187	.766	9/16	1/2
6-DTBWE-4	3/8	.540	1.203	1.000	.656	.766	.562	.281	.906	11/16	5/8
8-DTBWE-6	1/2	.675	1.375	1.125	.906	.859	.562	.406	.969	7/8	13/16
8-DTBWE-8	1/2	.840	1.422	1.297	.906	.859	.750	.406	1.016	7/8	13/16
10-DTBWE-8	5/8	.840	1.437	1.312	.969	.859	.750	.500	1.031	1	7/8
12-DTBWE-12	3/4	1.050	1.578	1.453	.969	.859	.750	.625	1.172	1-1/8	1-1/16
16-DTBWE-12	1	1.050	1.937	1.625	1.234	1.047	.750	.875	1.453	1-1/2	1-5/16
16-DTBWE-16	1	1.315	1.937	1.844	1.234	1.047	.937	.875	1.453	1-1/2	1-5/16

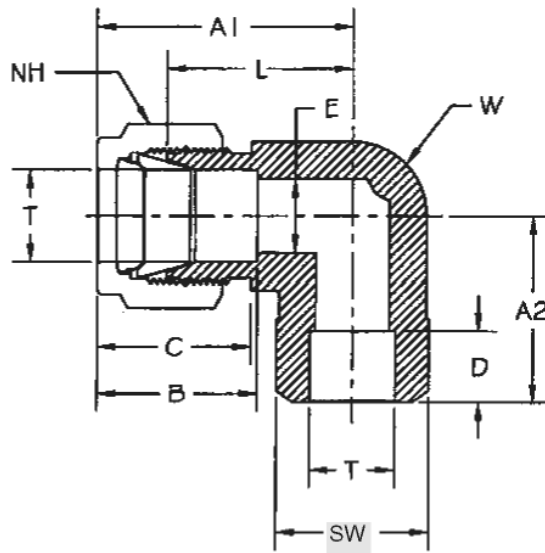
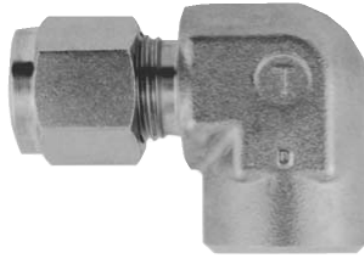
\*NOTE: All dimensions subject to change, to be used for reference only.





# TUBE TO SOCKET WELD ELBOW

**Tylok**



Instrumentation

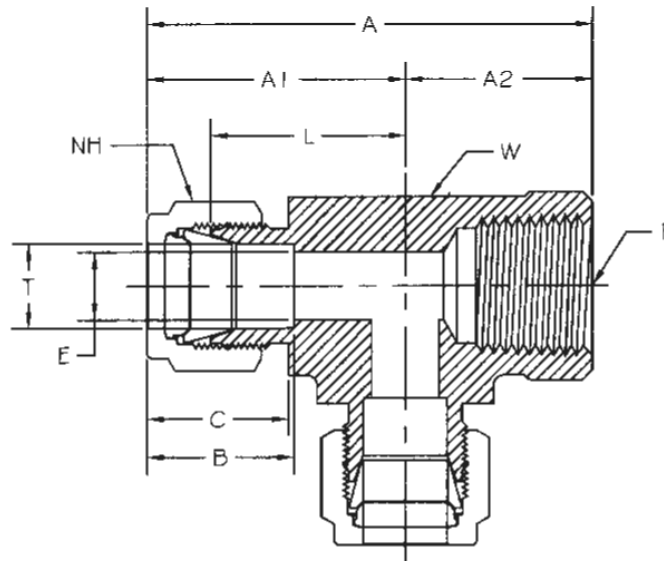
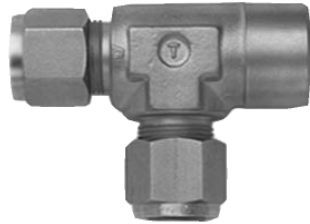
PART NUMBER	T TUBE O.D.	SW	A1	A2	B	C	D	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DTSWE-2	1/8	.375	.922	.625	.516	.609	.156	.094	.656	7/16	5/16
3-DTSWE-3	3/16	.437	.984	.687	.547	.641	.203	.125	.719	1/2	7/16
4-DTSWE-4	1/4	.500	1.062	.766	.609	.703	.312	.187	.766	9/16	1/2
6-DTSWE-6	3/8	.625	1.203	.906	.656	.766	.375	.281	.875	11/16	5/8
8-DTSWE-8	1/2	.812	1.422	1.016	.906	.859	.500	.406	1.016	7/8	13/16
10-DTSWE-10	5/8	.937	1.562	1.156	.969	.875	.500	.500	1.156	1	1-1/16
12-DTSWE-12	3/4	1.094	1.562	1.312	.969	.875	.500	.625	1.156	1-1/8	1-1/16
16-DTSWE-16	1	1.375	1.937	1.469	1.234	1.047	.562	.875	1.453	1-1/2	1-5/16

\*NOTE: All dimensions subject to change, to be used for reference only.



**FEMALE RUN TEE**

**Tylok**



PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	C	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DTFT-2	1/8	1/8	1.719	.969	.750	.500	.609	.094	.719	7/16	1/2
3-DTFT-2	3/16	1/8	1.766	1.016	.750	.547	.641	.125	.750	1/2	9/16
4-DTFT-2	1/4	1/8	1.812	1.078	.750	.609	.703	.187	.781	9/16	9/16
4-DTFT-4	1/4	1/4	2.047	1.172	.875	.609	.703	.187	.875	9/16	11/16
5-DTFT-2	5/16	1/8	1.922	1.172	.750	.641	.734	.250	.875	5/8	5/8
6-DTFT-4	3/8	1/4	2.109	1.234	.875	.656	.766	.281	.937	11/16	11/16
8-DTFT-4	1/2	1/4	2.562	1.437	1.125	.906	.875	.406	1.125	7/8	13/16
8-DTFT-6	1/2	3/8	2.297	1.422	.875	.906	.859	.406	1.016	7/8	13/16
8-DTFT-8	1/2	1/2	2.687	1.578	1.125	.906	.859	.406	1.172	7/8	1-1/16
10-DTFT-8	5/8	1/2	2.656	1.531	1.125	.969	.875	.500	1.125	1	1-1/16
12-DTFT-12	3/4	3/4	3.016	1.766	1.250	.969	.859	.625	1.359	1-1/8	1-3/8
14-DTFT-12	7/8	3/4	3.016	1.766	1.250	1.031	.875	.750	1.359	1-1/4	1-5/16
16-DTFT-12	1	3/4	3.187	1.937	1.250	1.234	1.047	.875	1.453	1-1/2	1-5/16
16-DTFT-16	1	1	3.516	2.016	1.500	1.234	1.047	.875	1.531	1-1/2	1-5/8

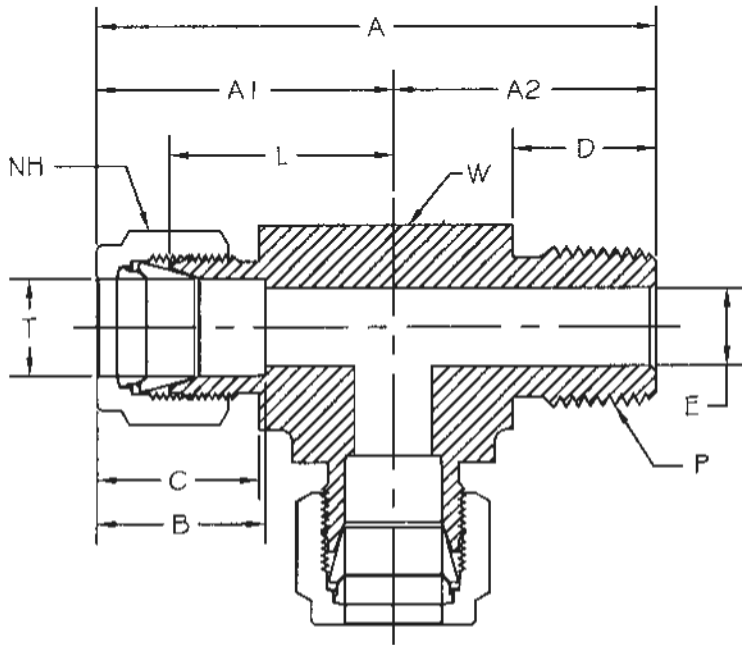
\*NOTE: All dimensions subject to change, to be used for reference only.  
\*Both tube ends are typical.

Instrumentation



**Tylok**

**MALE RUN TEE**



PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	C	D	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DTMT-2	1/8	1/8	1.625	.937	.703	.500	.609	.375	.094	.672	7/16	7/16
3-DTMT-2	3/16	1/8	1.656	.969	.703	.547	.625	.375	.125	.703	1/2	7/16
4-DTMT-2	1/4	1/8	1.797	1.062	.734	.609	.703	.375	.187	.766	9/16	1/2
4-DTMT-4	1/4	1/4	1.984	1.062	.922	.609	.703	.562	.187	.766	9/16	5/8
5-DTMT-2	5/16	1/8	1.984	1.172	.828	.641	.725	.375	.187	.875	5/8	5/8
6-DTMT-4	3/8	1/4	2.203	1.203	1.000	.656	.766	.562	.281	.906	11/16	5/8
6-DTMT-6	3/8	3/8	2.422	1.312	1.109	.656	.766	.562	.281	1.016	11/16	13/16
8-DTMT-6	1/2	3/8	2.531	1.422	1.109	.906	.859	.562	.406	1.016	7/8	13/16
8-DTMT-8	1/2	1/2	2.719	1.422	1.297	.906	.859	.750	.406	1.016	7/8	13/16
10-DTMT-8	5/8	1/2	2.875	1.500	1.375	.969	.859	.750	.469	1.109	1	15/16
12-DTMT-12	3/4	3/4	3.016	1.578	1.453	.969	.859	.750	.625	1.172	1-1/8	1-1/16
14-DTMT-12	7/8	3/4	3.266	1.766	1.500	1.031	.875	.750	.750	1.359	1-1/4	1-5/16
16-DTMT-12	1	3/4	3.609	1.937	1.656	1.234	1.047	.750	.875	1.453	1-1/2	1-5/16
16-DTMT-16	1	1	3.781	1.937	1.844	1.234	1.047	.937	.875	1.453	1-1/2	1-5/16

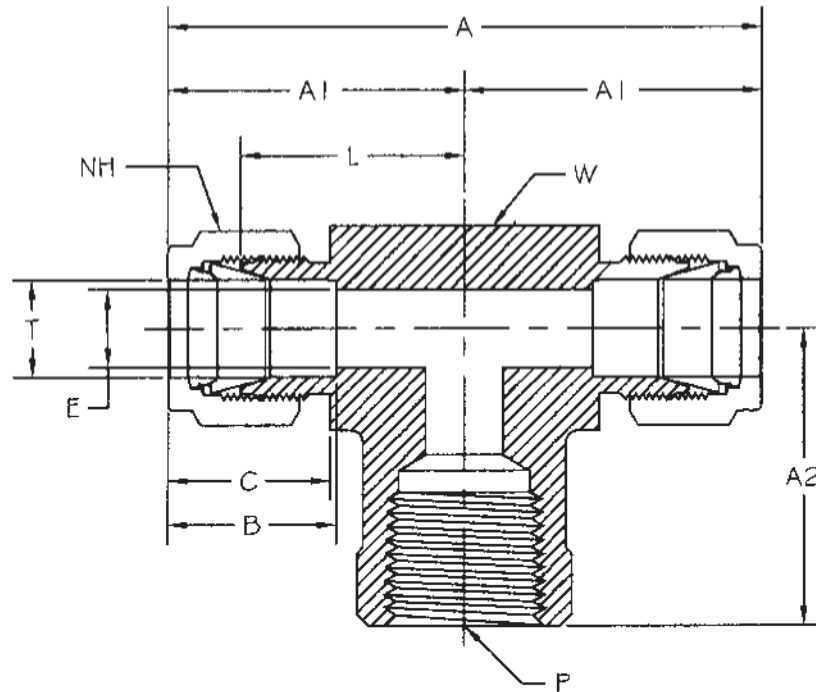
\*NOTE: All dimensions subject to change, to be used for reference only.

\*Both tube ends are typical.

Instrumentation

**Tylok**

**FEMALE BRANCH TEE**



Instrumentation

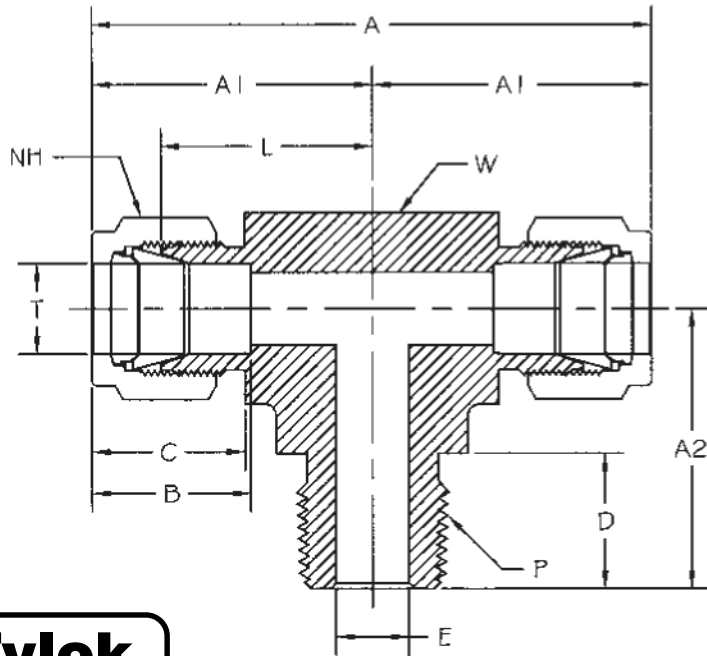
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	C	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DTTF-2	1/8	1/8	1.937	.969	.750	.500	.609	.094	.719	7/16	1/2
3-DTTF-2	3/16	1/8	2.016	1.016	.750	.547	.641	.125	.750	1/2	1/2
4-DTTF-2	1/4	1/8	2.125	1.062	.750	.609	.703	.187	.766	9/16	1/2
4-DTTF-4	1/4	1/4	2.344	1.172	.875	.609	.703	.187	.875	9/16	11/16
5-DTTF-2	5/16	1/8	2.344	1.172	.750	.641	.734	.250	.875	5/8	5/8
6-DTTF-4	3/8	1/4	2.469	1.234	.875	.656	.766	.281	.937	11/16	11/16
8-DTTF-4	1/2	1/4	2.844	1.422	.875	.906	.859	.406	1.016	7/8	13/16
8-DTTF-6	1/2	3/8	2.844	1.422	.875	.906	.859	.406	1.016	7/8	13/16
8-DTTF-8	1/2	1/2	3.062	1.531	1.125	.906	.859	.406	1.125	7/8	1
10-DTTF-8	5/8	1/2	3.062	1.531	1.125	.969	.859	.500	1.125	1	1
12-DTTF-12	3/4	3/4	3.516	1.766	1.250	.969	.859	.625	1.359	1-1/8	1-3/8
14-DTTF-12	7/8	3/4	3.016	1.766	1.250	1.031	.875	.750	1.359	1-1/4	1-5/16
16-DTTF-12	1	3/4	3.859	1.937	1.250	1.234	1.047	.875	1.453	1-1/2	1-3/8
16-DTTF-16	1	1	3.969	1.984	1.500	1.234	1.047	.875	1.500	1-1/2	1-11/16

\*NOTE: All dimensions subject to change, to be used for reference only.

\*Both tube ends are typical.



# MALE BRANCH TEE



**Tylok**

PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	A1	A2	B	C	D	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DTTM-2	1/8	1/8	1.859	.937	.703	.500	.609	.375	.094	.672	7/16	7/16
2-DTTM-4	1/8	1/4	1.937	.969	.922	.500	.609	.562	.094	.719	7/16	1/2
3-DTTM-2	3/16	1/8	1.922	.969	.703	.547	.625	.375	.125	.703	1/2	7/16
4-DTTM-2	1/4	1/8	2.125	1.062	.734	.609	.703	.375	.187	.765	9/16	1/2
4-DTTM-4	1/4	1/4	2.125	1.062	.922	.609	.703	.562	.187	.765	9/16	1/2
5-DTTM-2	5/16	1/8	2.344	1.172	.828	.641	.725	.375	.187	.875	5/8	5/8
6-DTTM-4	3/8	1/4	2.406	1.203	1.000	.656	.765	.562	.281	.906	11/16	5/8
6-DTTM-6	3/8	3/8	2.625	1.312	1.109	.656	.765	.562	.281	1.016	11/16	13/16
8-DTTM-6	1/2	3/8	2.844	1.422	1.109	.906	.859	.562	.375	1.016	7/8	13/16
8-DTTM-8	1/2	1/2	2.844	1.422	1.297	.906	.859	.750	.406	1.016	7/8	13/16
10-DTTM-8	5/8	1/2	3.062	1.531	1.406	.969	.859	.750	.469	1.125	1	1
12-DTTM-12	3/4	3/4	3.141	1.172	1.453	.969	.859	.750	.625	1.172	1-1/8	1-1/16
14-DTTM-12	7/8	3/4	3.516	1.766	1.500	1.031	.875	.750	.750	1.359	1-1/4	1-3/8
16-DTTM-12	1	3/4	3.875	1.937	1.656	1.234	1.047	.750	.875	1.453	1-1/2	1-1/2
16-DTTM-16	1	1	3.875	1.937	1.656	1.234	1.047	.937	.875	1.453	1-1/2	1-5/16

\*NOTE: All dimensions subject to change, to be used for reference only.

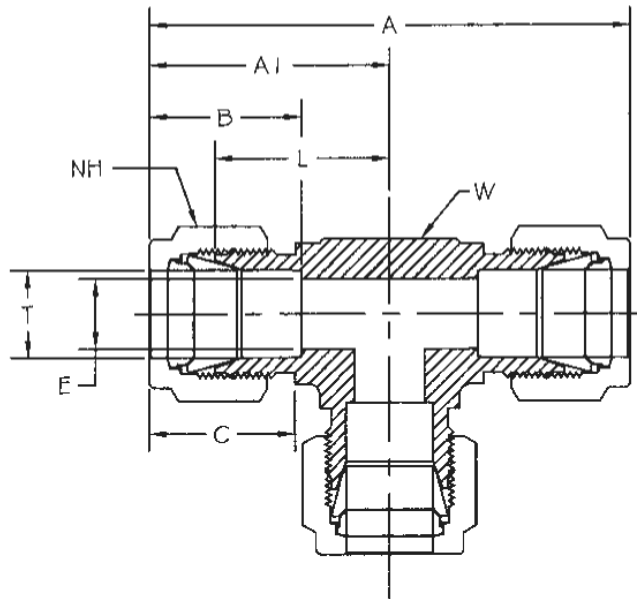
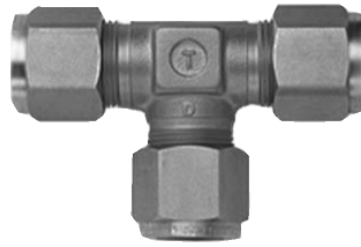
\*Both tube ends are typical.

Instrumentation



**UNION TEE**

**Tylok**



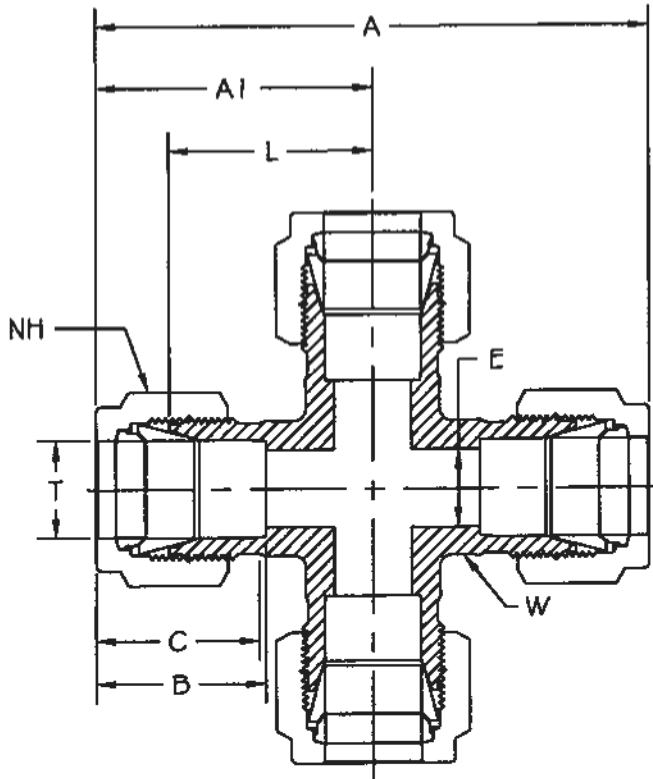
PART NUMBER	T TUBE O.D.	A	A1	B	C	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
1-DTTT-1	1/16	1.406	.703	.344	.437	.052	.547	5/16	3/8
2-DTTT-2	1/8	1.766	.875	.500	.609	.094	.625	7/16	3/8
3-DTTT-3	3/16	1.922	.969	.547	.625	.125	.703	1/2	7/16
4-DTTT-4	1/4	2.125	1.062	.609	.703	.187	.766	9/16	1/2
5-DTTT-5	5/16	2.344	1.172	.641	.734	.250	.875	5/8	5/8
6-DTTT-6	3/8	2.406	1.203	.656	.766	.281	.906	11/16	5/8
8-DTTT-8	1/2	2.844	1.422	.906	.859	.406	1.016	7/8	13/16
10-DTTT-10	5/8	3.062	1.531	.969	.859	.500	1.125	1	1
12-DTTT-12	3/4	3.141	1.578	.969	.859	.625	1.172	1-1/8	1-1/16
14-DTTT-14	7/8	3.516	1.766	1.016	.859	.718	1.359	1-1/4	1-3/8
16-DTTT-16	1	3.859	1.937	1.234	1.047	.875	1.453	1-1/2	1-3/8

\*NOTE: All dimensions subject to change, to be used for reference only.  
 \*All tube ends are typical.



Instrumentation

**UNION CROSS**



**Tylok**

Instrumentation

PART NUMBER	T TUBE O.D.	A	A1	B	C	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
2-DCR	1/8	1.766	.875	.500	.609	.094	.625	7/16	3/8
4-DCR	1/4	2.125	1.062	.609	.703	.187	.766	9/16	1/2
5-DCR	5/16	2.344	1.172	.641	.734	.250	.875	5/8	5/8
6-DCR	3/8	2.406	1.203	.656	.766	.281	.906	11/16	5/8
8-DCR	1/2	2.844	1.422	.906	.859	.406	1.016	7/8	13/16
12-DCR	3/4	3.016	1.516	.969	.859	.625	1.109	1-1/8	1-1/16
16-DCR	1	3.687	1.844	1.234	1.047	.875	1.359	1-1/2	1-3/8

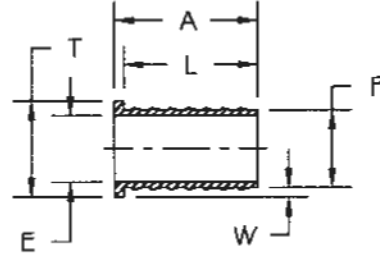
\*NOTE: All dimensions subject to change, to be used for reference only.

\*All tube ends are typical.



## BARBED INSERT

**Tylok**



PART NUMBER	T TUBE O.D.	W REF.	A	E THRU HOLE	F TUBE I.D.	L
3-DBI-031	3/16	.031	.566	.062	1/8	.518
4-DBI-022	1/4	.022	.566	.141	13/64	.518
4-DBI-031	1/4	.031	.566	.125	3/16	.518
4-DBI-040	1/4	.040	.566	.109	11/64	.518
4-DBI-062	1/4	.062	.566	.062	1/8	.518
5-DBI-031	5/16	.031	.566	.187	1/4	.518
5-DBI-062	5/16	.062	.566	.125	3/16	.518
5-DBI-094	5/16	.094	.566	.062	1/8	.518
5-DBI-103	5/16	.103	.566	.045	7/64	.518
6-DBI-049	3/8	.049	.566	.218	9/32	.518
6-DBI-062	3/8	.062	.566	.187	1/4	.518
6-DBI-094	3/8	.094	.566	.125	3/16	.518
6-DBI-159	3/8	.159	.566	.032	1/16	.518
8-DBI-035	1/2	.035	.750	.375	7/16	.702
8-DBI-049	1/2	.049	.750	.344	13/32	.702
8-DBI-062	1/2	.062	.750	.312	3/8	.702
8-DBI-125	1/2	.125	.750	.187	1/4	.702
10-DBI-049	5/8	.049	.750	.469	17/32	.702
10-DBI-062	5/8	.062	.750	.437	1/2	.702
10-DBI-125	5/8	.125	.750	.312	3/8	.702
10-DBI-187	5/8	.187	.750	.187	1/4	.702
12-DBI-049	3/4	.049	.750	.562	21/32	.702
12-DBI-062	3/4	.062	.750	.562	5/8	.702
12-DBI-125	3/4	.125	.750	.437	1/2	.702
14-DBI-049	7/8	.049	1.031	.687	25/32	.938
14-DBI-062	7/8	.062	1.031	.687	3/4	.938
14-DBI-125	7/8	.125	1.031	.562	5/8	.938
16-DBI-062	1	.062	1.031	.812	7/8	.938
16-DBI-125	1	.125	1.031	.687	3/4	.938

\*NOTE: All dimensions subject to change, to be used for reference only.

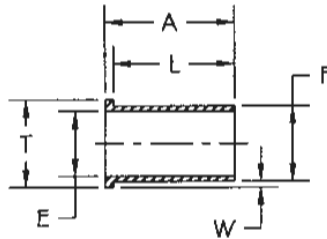
Instrumentation





# PLANE INSERT

**Tylok**



PART NUMBER	T TUBE O.D.	W REF.	A	E THRU HOLE	F TUBE I.D.	L
3-DPI-031	3/16	.031	.566	.062	1/8	.518
4-DPI-022	1/4	.022	.566	.140	13/64	.518
4-DPI-031	1/4	.031	.566	.125	3/16	.518
4-DPI-040	1/4	.040	.566	.109	11/64	.518
5-DPI-031	5/16	.031	.566	.187	1/4	.518
5-DPI-062	5/16	.062	.566	.125	3/16	.518
5-DPI-094	5/16	.094	.566	.062	1/8	.518
6-DPI-049	3/8	.049	.566	.218	9/32	.518
6-DPI-062	3/8	.062	.566	.187	1/4	.518
6-DPI-094	3/8	.094	.566	.125	3/16	.518
8-DPI-035	1/2	.035	.750	.375	7/16	.702
8-DPI-049	1/2	.049	.750	.344	13/32	.702
8-DPI-062	1/2	.062	.750	.312	3/8	.702
8-DPI-125	1/2	.125	.750	.187	1/4	.702
10-DPI-049	5/8	.049	.750	.469	17/32	.702
10-DPI-062	5/8	.062	.750	.437	1/2	.702
10-DPI-125	5/8	.125	.750	.312	3/8	.702
12-DPI-049	3/4	.049	.750	.562	21/32	.702
12-DPI-062	3/4	.062	.750	.562	5/8	.702
12-DPI-125	3/4	.125	.750	.437	1/2	.702
14-DPI-049	7/8	.049	1.000	.687	25/32	.952
14-DPI-062	7/8	.062	1.000	.687	3/4	.952
14-DPI-125	7/8	.125	1.000	.562	5/8	.952
16-DPI-050	1	.050	1.000	.843	57/64	.952
16-DPI-062	1	.062	1.000	.812	7/8	.952
16-DPI-125	1	.125	1.000	.687	3/4	.952

\*NOTE: All dimensions subject to change, to be used for reference only.

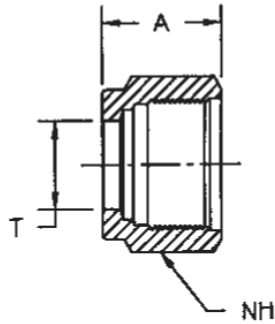
Instrumentation

**Tylok**

**NUT**



**NUT**



PART NUMBER	T TUBE O.D.	A	NH NUT HEX
DN-1	1/16	.312	5/16
DN-2	1/8	.469	7/16
DN-3	3/16	.469	1/2
DN-4	1/4	.500	9/16
DN-5	5/16	.531	5/8
DN-6	3/8	.562	11/16
DN-8	1/2	.687	7/8
DN-10	5/8	.687	1
DN-12	3/4	.687	1-1/8
DN-14	7/8	.687	1-1/4
DN-16	1	.812	1-1/2

\*NOTE: All dimensions subject to change, to be used for reference only.

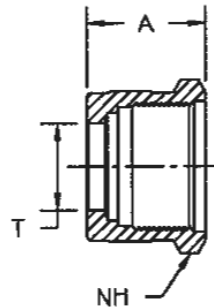
Instrumentation

**Tylok**

**KNURLED NUT**



**KNURLED NUT**

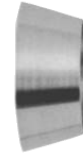
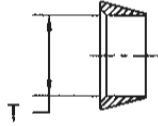


*Knurled nuts are available in the same sizes as shown for CBC-LOK™ nuts (DN). The knurled nut part descriptor is DKN. For example, the part number for a 1/2" knurled nut is SS-DKN-8.*



**Tylok**

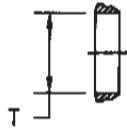
**FRONT COLLET**



PART NUMBER	T TUBE O.D.
DFC-1	1/16
DFC-2	1/8
DFC-3	3/16
DFC-4	1/4
DFC-5	5/16
DFC-6	3/8
DFC-8	1/2
DFC-10	5/8
DFC-12	3/4
DFC-14	7/8
DFC-16	1

**REAR COLLET**

**Tylok**



PART NUMBER	T TUBE O.D.
DRC-1	1/16
DRC-2	1/8
DRC-3	3/16
DRC-4	1/4
DRC-5	5/16
DRC-6	3/8
DRC-8	1/2
DRC-10	5/8
DRC-12	3/4
DRC-14	7/8
DRC-16	1

*\*NOTE: All dimensions subject to change, to be used for reference only.*

Instrumentation

**INSTRUMENT TEE**

The Instrument Tee may be ordered with any standard tube or pipe size. When ordering, specify sizes in the following order:

1. Tube Size O.D
2. Female Pipe Size
3. Male Pipe Size

Example: 1/2" tube, 3/8" female pipe, 1/4" male pipe.  
SS-8-DTFM-6-4



**HEAT EXCHANGER TEE**

The Heat Exchanger Tee may be ordered in any standard tube size. The process tube is bored through. When ordering, specify sizes in the following order:

1. Jacket Tube O.D
2. Process Tube O.D. followed by "BT" for bore through designation
3. Branch Tube O.D.

Example: 1/2" tube, 1/4" tube bored through, 1/2" tube.  
SS-8-DTTT-4BT-8



**THERMOCOUPLE  
BORE THROUGH**

A Thermocouple Connector can be furnished already bored through for an additional charge. When ordering:

1. Select required size male connector. See pages 14 and 15 for a listing of available Male Connectors.
2. Add the letters "BT" to designate bore through.  
Example: 4-DMC-2-BT



**TYLUBE™ THREAD LUBRICANT**

Tylube™ is an anti-gall compound to be used on stainless steel, steel and nickel based alloys. Temperature range to 500°F. Not recommended for plastic and aluminum products.

Tylube™ is made from distilled water with inert ingredients and contains no silicones, heavy metals, chlorine or sulfur. For a complete list of ingredients request an MSDS to be sure of its compatibility with your installation.

Available in handy 8 oz. plastic bottles.



Instrumentation

**CBC-LOK™ INSTALLATION INSTRUCTIONS**

CBC-Lok™ Tube Fittings come completely assembled and ready for use, no disassembly required. Although there are some general guide lines to follow no special preparation of the tubing is necessary, reference page 44. In overhead applications Tylok recommends using a Pre-Set Tool, see page 47.

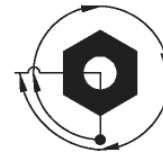
Size	Tighten # Turn(s)
1	1/16"
2	1/8"
3	3/16"
4	1/4"
5	5/16"
6	3/8"
8	1/2"
10	5/8"
12	3/4"
14	7/8"
16	1"

Size #1 Thru #3  
(1/16" – 3/16")

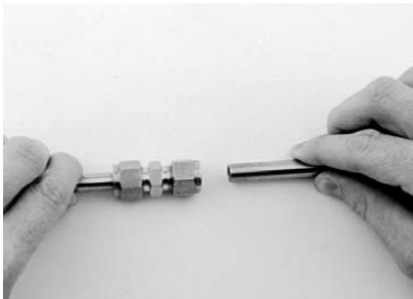


Finger Tight Plus  
3/4 Turn

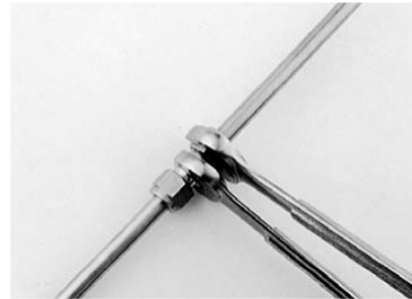
Size #4 Thru #16  
(1/4" – 1")



Finger Tight Plus  
1-1/4 Turns



Simply insert the tubing into the assembly making sure the tubing seats firmly against the shoulder of the body and the nut is finger tight.

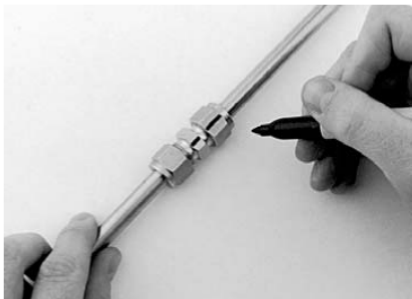


Tighten nut with wrench an additional number of turns indicated above, while holding the fitting body with a second wrench.

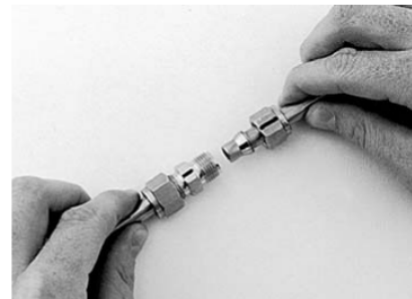


**TO REMOVE TUBE AND RE-CONNECT TUBE FITTING**

Mark the location of the nut with reference to the body before disassembly. For reassembly, re-insert the tubing into the body until it is seated. With proper size wrench, retighten nut to original location by realigning previous marks. A noticeable amount of torque will develop when the nut is turned to original position. Next, rotate the nut slightly past original position to fully re-set the seal.



Mark the location of the nut with reference to the body.



Back off the nut until it is clear of the body and remove the tubing from the fitting.

Instrumentation

**CBC-LOK™ TUBING SELECTION & PREPARATION**

Proper selection of tubing is key to the performance of the fitting. When selecting the proper wall thickness and material, all tubing should be compatible with the process fluid, temperature, application, flow and system pressure.

For proper sealing it is recommended that the tubing and fitting be of like material to allow for positive sealing (i.e., stainless on stainless, brass on copper, steel on steel). Galvanic corrosion could occur if the tubing and fitting are not of like material, with the exception of a brass fitting on copper tubing.

When using stainless steel tubing, Tylok recommends using Type 304 or 316 fully annealed, seamless or welded redrawn meeting ASTM-A-213, ASTM-A-269 or equivalent, with a suggested maximum hardness of 80 Rb.

For copper tubing, Tylok suggests using soft annealed, seamless tubing per ASTM-B75 or equivalent. Copper water tube type K or L, soft annealed (Temper O) per ASTM-B88 can also be used.

When using carbon steel, all tubing should be fully annealed and conform to ASTM-A-179, or equivalent, with a maximum hardness of 72 Rb.

In general, all tubing should be free of nicks, scratches, imperfections of any kind and be suitable for bending. Out of round tubing that does not easily go through fitting components should not be used. It is recommended that the charts be used for tube selection. Ideally, the tube end should be cut square so that when it bottoms out inside the fitting an extra seal is provided. Avoid installing contaminated tubing into your system. For elevated temperatures see page 46.

CBC-Lok™ Tube Fittings swage the tubing to achieve its seals. Thin wall tubing (wall thicknesses with working pressures highlighted in reverse text, in the charts) is not recommended for Gas Service. For Gas Service see page 45.

When using tubing of a thinner or thicker wall than shown, it is always recommended that you consult with your local Distributor or contact Tylok International directly if there is any doubt selecting tubing.

**Values in reverse text are not recommended for Gas Service.**

*Note: Tables calculated, to the right, are suggested pressure ratings, in accordance with ANSI 31.3, but should be used for reference only. Tylok International, Inc., is not responsible for its accuracy nor designs using these figures. All compatible Tylok fittings will withstand pressures above those listed for maximum tubing working pressures.*

It is the responsibility of the Engineer to refer to the technical pages in this catalog to ensure selection of the proper tubing material, tubing compatibility with the fitting, media and tubing wall thickness. Following the stated recommendations will ensure a safe application, free of leaks. The entire system must be considered when selecting the fitting.

**SUGGESTED ALLOWABLE WORKING PRESSURE TABLES (PSI)**

Stainless Steel								
Tube Size O.D.	Tube Wall Thickness (inches)							
	.028	.035	.049	.065	.083	.095	.109	.120
1/8"	8550	10900						
3/16"	5500	7000	10250					
1/4"	4000	5100	7500	10200				
5/16"		4050	5900	8050				
3/8"		3300	4800	6550				
1/2"		2500	3500	4700	6250			
5/8"			2900	4000	5200	6050		
3/4"			2400	3300	4250	4950	5800	
7/8"			2050	2800	3600	4200	4850	
1"				2400	3150	3650	4200	4700

75,000 PSI Tensile

Carbon Steel								
Tube Size O.D.	Tube Wall Thickness (inches)							
	.028	.035	.049	.065	.083	.095	.109	.120
1/8"	8100	10200						
3/16"	5150	6650	9700					
1/4"	3750	4850	7100	10000				
5/16"		3750	5500	7600				
3/8"		3100	4500	6200				
1/2"		2300	3250	4500	5950			
5/8"			2600	3500	4600	5350		
3/4"			2150	2900	3750	4350	5100	
7/8"			1800	2450	3200	3700	4300	
1"				2100	2750	3200	3700	4100

47,000 PSI Tensile

Copper								
Tube Size O.D.	Tube Wall Thickness (inches)							
	.028	.035	.049	.065	.083	.095	.109	.120
1/8"	2750	3700						
3/16"	1700	2300	3500					
1/4"	1300	1650	2550	3550				
5/16"		1300	1950	2750				
3/8"		1050	1600	2250				
1/2"		800	1150	1600	2100			
5/8"			900	1250	1650	1950		
3/4"			750	1000	1350	1550	1850	
7/8"			600	850	1100	1300	1550	
1"			550	750	950	1150	1350	1500

30,000 PSI Tensile



**GAS SERVICE**

Extra care must be taken when tubing is used in gas service applications. Small gas molecules easily escape through minute leak paths, therefore, the tubing must be free of nicks, scratches and imperfections of any kind. In particular, when using large diameter tubing the possibility of surface defects is increased due to greater surface area. It is strongly recommended that the heavier wall thicknesses be selected. Penetration of the collets on thin wall tubing or soft material may not offer enough radial resistance for sealing. In such cases, Tylok recommends using a Plane Insert (Part descriptor DPI, page 39). In the tables on page 44 note the suggested allowable working pressure for gas service. **Values in reverse text are not recommended for Gas Service.**

**PRECAUTIONS FOR WELD ENDS**

CBC-Lok™ Tube Fittings with weld ends offer the same positive sealing as all other Tylok fittings. Welding could deform the assembly, making pull ups or disassembly difficult. Some precautions should be taken...

- Remove the nut and collets from the fitting
- It is important that the fitting threads and sealing surfaces be protected from weld splatter
- A heat sink should be used to dissipate heat
- Ensure alignment by tack welding symmetrically
- Once welded, remove the weld splatter protection and reassemble nut and collets on fitting

**TYSKY LEAK DETECTOR**

Tylok offers a leak detector, Tyspy, for use in all sealing applications. Tyspy meets standard MIL-L-25567D, Sect. 4.4.9 for use on oxygen systems. Available in 1 pt. spray bottles. Specify number of bottles needed when ordering. Part Number: TYSPY

- All temperature formula: -55°F to 200°F
- Ultra-sensitive
- Long-lasting bubbles
- Available in handy spray bottle
- Fluorescent for improved visibility
- Safe for oxygen systems
- Non-corrosive, non-toxic



**GAP GAGES**

Gap Gages can be purchased to ensure the Installer and Inspector that the nut has been properly tightened. Available upon request.

Part Number	Tube Size	Part Number	Tube Size
#1-DGG	1/16"	#8-DGG	1/2"
#2-DGG	1/8"	#10-DGG	5/8"
#3-DGG	3/16"	#12-DGG	3/4"
#4-DGG	1/4"	#14-DGG	7/8"
#5-DGG	5/16"	#16-DGG	1"
#6-DGG	3/8"		



When fitting is properly tightened, **gap gage should not fit** between nut and shoulder of body.

**SAFETY GUIDELINES**

- Never connect, disconnect or remake a fitting with pressure in the system
- Make sure all fittings are properly installed, reference Installation Instructions - page 43, before pressurizing the system
- Tubing material should be softer than fitting material
- Tylok recommends using Tylok replacement parts
- Although the fittings will hold to the pressure rating of the tubing, it is not recommended to go beyond this rating. Elongation could occur in the tubing, shrinking the wall thickness and causing potential harm to anyone in the area
- Always use proper thread lubricants and sealants on tapered pipe threads
- If process fluids are toxic and/or hazardous, exercise extra caution
- Never bleed a system by loosening a fitting
- For proper sealing it is recommended that the tubing and fitting be of like material

**QUALITY CONTROL**

All components are manufactured and inspected to meet strict quality control standards in each phase of production. All employees are thoroughly trained to follow rigid procedures, in accordance with the ISO 9001:2000 Quality Standard, to ensure a quality product from the start of each job through completion. At Tylok our primary concern is quality, reliability and service to our customers.

**Instrumentation**

**PIPE THREAD SPECIFICATIONS**

Tylok Pipe Fittings are manufactured from materials meeting applicable ASTM or ASME specifications, with pipe threads which meet or exceed ANSI B1.20.1 requirements. Strict quality control procedures are followed throughout production. All parts are individually inspected to provide the finest possible product.

Materials: Brass ■ Steel ■ 316 Stainless Steel

**Suggested Maximum Operating Pressures for Male Pipe Threads**

MNPT Size	316 Stainless Steel PSI Rating	Brass PSI Rating	Steel PSI Rating
1/16"	10,100	5,700	10,500
1/8"	9,200	5,300	9,800
1/4"	7,500	4,100	8,000
3/8"	7,250	4,000	7,700
1/2"	6,900	3,900	7,300
3/4"	6,600	3,700	7,000
1"	5,000	2,700	5,000



**Suggested Maximum Operating Pressures for Female Pipe Threads**

FNPT Size	316 Stainless Steel PSI Rating	Brass PSI Rating	Steel PSI Rating
1/16"	6,200	3,500	6,800
1/8"	6,000	3,400	6,600
1/4"	6,100	3,300	6,500
3/8"	5,000	2,700	5,400
1/2"	4,700	2,500	4,800
3/4"	4,300	2,400	4,600
1"	4,100	2,300	4,500

These charts are to be used as a guide only and are based on normal wall thicknesses, used for the various sizes. These ratings may vary widely from effects such as the proper use of sealants, size of stock, temperature, corrosion factors, etc. Therefore, Tylok International, Inc., assumes no responsibility for its accuracy in any individual design.

**TEMPERATURE RATINGS**

Tylok Instrumentation Fittings are rated at the following temperatures:

316 Stainless -325°F to 1200°F      Brass -40°F to 400°F      Steel<sup>1</sup> -65°F to 400°F  
 (-198°C to 648°C)      (-40°C to 204°C)      (-54°C to 204°C)

Note: Consideration should be given to maximum temperature ratings if fittings and/or tubing are coated or plated.

<sup>1</sup>Special attention should be considered when selecting coated and/or plated materials such as Steel.

**TUBE PRESSURE DERATING FACTORS AT ELEVATED TEMPERATURES**

The following table lists derating factors that must be considered in applications above that of ambient temperatures.

Temperatures		Multiplier Factors			
°F	°C	304 SS	316 SS	Carbon Steel	Brass
200	93	1.00	1.00	.95	.80
400	204	.94	.97	.86	.50
600	315	.82	.85	.77	
800	427	.76	.80	.59	
1000	538	.69	.77		
1200	649	.30	.37		

**Example**

Type 316 Stainless Steel 1/4" O.D. x .049" wall at 800°F is...

7,500 PSI x .80 = 6,000 PSI

Therefore, the suggested allowable working pressure for 316 Stainless Steel - 1/4" O.D. with .049" tube wall - at 800°F is 6,000 PSI.

These charts are to be used as a guide only and are based on normal wall thicknesses, used for the various sizes. These ratings may vary widely from effects such as the proper use of sealants, size of stock, temperature, corrosion factors, etc. Therefore, Tylok International, Inc., assumes no responsibility for its accuracy in any individual design.

Instrumentation





**HEAT TRACEABILITY**

CBC-LOK™ Tube Fittings are completely heat code traceable back to the original mill heat from which it was made. Starting with the original billet, the mill creates a certificate which completely describes the chemical and physical makeup. For any one of the four components (body, front collet, rear collet, nut) the material certifications can be provided when calling Tylok and giving the heat code stamp marked on the part itself, along with the part number.



**RAW MATERIAL SPECIFICATIONS**

Fitting Material	Bar Stock	Forging	*Tubing Specification	Max Recommended Hardness (Tubing)
Brass	ASTM-B16 Alloy 360 ASTM-B453 Alloy 345	ASTM-B124 Alloy 377	ASTM-B75 Copper (Temper O)	60 Max. Rockwell 15T
Stainless Steel	ASTM-A276 ASME-SA-479 Type 316-SS	ASME-SA-182 Type 316-SS	ASTM-A213 ASTM-A269	90 Rb
Steel	ASTM-A108	—	ASTM-A179	72 Rb

\*Reference Tubing Selection & Preparation, page 44.

**TYLOK PRE-SETTING TOOL**

The CBC-Lok™ product line offers a Pre-Setting Tool when fittings need to be installed in hard to reach places. The Pre-Setting Tool is designed to be used in any tabletop vice. After tightening the nut the specified number of turns, as stated in Installation Instructions - page 43, loosen the nut from the Pre-Setting Tool. Once the collets have swaged into the tubing surface, the assembly is ready for installation (reference To Remove and Re-Connect Tube Fitting, page 43).



When ordering the CBC-Lok™ Pre-Set Tool, reference the part number in the chart. The Pre-Set Tool is made from carbon steel and is hardened for maximum durability. The Pre-Set Tool can be used repeatedly to set the collets onto the tubing for easy installation.

Part Number	Tube Size
#1-DPST	1/16"
#2-DPST	1/8"
#3-DPST	3/16"
#4-DPST	1/4"
#5-DPST	5/16"
#6-DPST	3/8"
#8-DPST	1/2"
#10-DPST	5/8"
#12-DPST	3/4"
#14-DPST	7/8"
#16-DPST	1"

**Instrumentation**



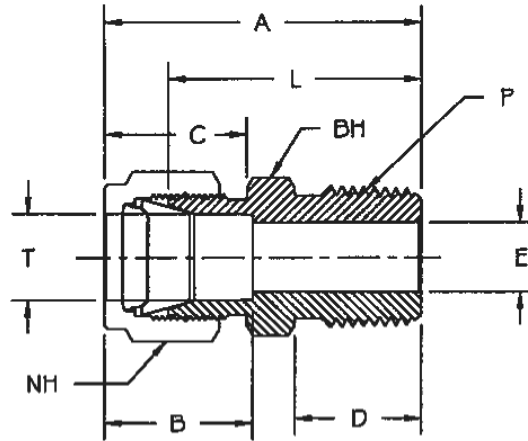
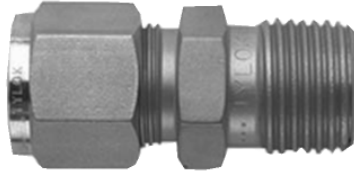
Place Pre-Setting Tool in a vice and tighten nut specified number of turns.



Back nut off of Pre-Setting Tool. Notice the collets have swaged into the tubing. Now take tubing to installation area.

**Tylok**

**MALE CONNECTOR**



Instrumentation

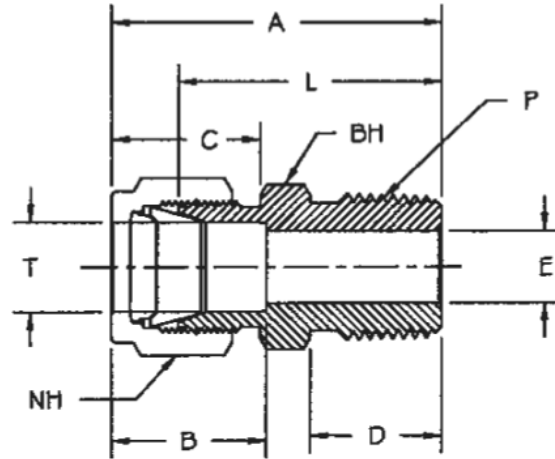
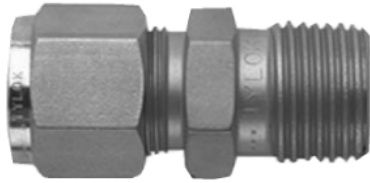
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
1-DMC-1	1/16	1/16	.937	.344	.437	.375	.052	.797	5/16	5/16
1-DMC-2	1/16	1/8	1.031	.344	.437	.375	.052	.875	5/16	7/16
2-DMC-1	1/8	1/16	1.172	.500	.609	.375	.094	.906	7/16	7/16
2-DMC-2	1/8	1/8	1.203	.500	.609	.375	.094	.937	7/16	7/16
2-DMC-4	1/8	1/4	1.406	.500	.609	.562	.094	1.140	7/16	9/16
2-DMC-6	1/8	3/8	1.406	.500	.609	.562	.094	1.156	7/16	11/16
2-DMC-8	1/8	1/2	1.656	.500	.609	.750	.094	1.406	7/16	7/8
3-DMC-2	3/16	1/8	1.234	.546	.625	.375	.125	.969	1/2	7/16
3-DMC-4	3/16	1/4	1.437	.546	.625	.562	.125	1.171	1/2	9/16
4-DMC-1	1/4	1/16	1.299	.609	.703	.375	.125	1.000	9/16	1/2
4-DMC-2	1/4	1/8	1.299	.609	.703	.375	.187	1.000	9/16	1/2
4-DMC-4	1/4	1/4	1.484	.609	.703	.562	.187	1.203	9/16	9/16
4-DMC-6	1/4	3/8	1.516	.609	.703	.562	.187	1.219	9/16	11/16
4-DMC-8	1/4	1/2	1.766	.609	.703	.750	.187	1.469	9/16	7/8
4-DMC-12	1/4	3/4	1.828	.609	.703	.750	.187	1.531	9/16	1-1/16
4-DMC-16	1/4	1	2.109	.609	.703	.937	.187	1.812	9/16	1-3/8
5-DMC-2	5/16	1/8	1.343	.641	.734	.375	.187	1.047	5/8	9/16
5-DMC-4	5/16	1/4	1.516	.641	.734	.562	.250	1.234	5/8	9/16
5-DMC-6	5/16	3/8	1.547	.641	.734	.562	.250	1.250	5/8	11/16
5-DMC-8	5/16	1/2	1.765	.641	.734	.750	.250	1.468	5/8	7/8
6-DMC-2	3/8	1/8	1.390	.656	.766	.375	.187	1.109	11/16	5/8
6-DMC-4	3/8	1/4	1.578	.656	.766	.562	.281	1.281	11/16	5/8
6-DMC-6	3/8	3/8	1.578	.656	.766	.562	.281	1.281	11/16	11/16
6-DMC-8	3/8	1/2	1.828	.656	.766	.750	.281	1.531	11/16	7/8
6-DMC-12	3/8	3/4	1.875	.656	.766	.750	.281	1.593	11/16	1-1/16
6-DMC-16	3/8	1	2.141	.656	.766	.937	.281	1.843	11/16	1-3/8

\*NOTE: All dimensions subject to change, to be used for reference only.



**Tylok**

# MALE CONNECTOR



PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
8-DMC-2	1/2	1/8	1.531	.906	.859	.375	.187	1.125	7/8	13/16
8-DMC-4	1/2	1/4	1.719	.906	.859	.562	.281	1.312	7/8	13/16
8-DMC-6	1/2	3/8	1.719	.906	.859	.562	.375	1.312	7/8	13/16
8-DMC-8	1/2	1/2	1.937	.906	.859	.750	.406	1.531	7/8	7/8
8-DMC-12	1/2	3/4	1.984	.906	.859	.750	.406	1.593	7/8	1-1/16
8-DMC-16	1/2	1	2.250	.906	.859	.937	.406	1.859	7/8	1-3/8
10-DMC-4	5/8	1/4	1.934	.969	.859	.562	.281	1.343	1	15/16
10-DMC-6	5/8	3/8	1.934	.969	.859	.562	.375	1.343	1	15/16
10-DMC-8	5/8	1/2	1.937	.969	.859	.750	.469	1.531	1	15/16
10-DMC-12	5/8	3/4	1.984	.969	.859	.750	.500	1.593	1	1-1/16
10-DMC-16	5/8	1	2.172	.969	.859	.937	.500	1.781	1	1-3/8
12-DMC-4	3/4	1/4	1.796	.969	.859	.562	.281	1.405	1-1/4	1-1/8
12-DMC-6	3/4	3/8	1.796	.969	.859	.562	.375	1.405	1-1/4	1-1/8
12-DMC-8	3/4	1/2	1.984	.969	.859	.750	.468	1.593	1-1/8	1-1/16
12-DMC-12	3/4	3/4	1.984	.969	.859	.750	.625	1.593	1-1/8	1-1/16
12-DMC-16	3/4	1	2.250	.969	.859	.937	.625	1.859	1-1/8	1-3/8
14-DMC-8	7/8	1/2	1.984	1.015	.859	.750	.468	1.593	1-3/8	1-1/4
14-DMC-12	7/8	3/4	1.984	1.015	.859	.750	.625	1.593	1-1/4	1-3/16
14-DMC-16	7/8	1	2.250	1.015	.859	.937	.718	1.859	1-1/4	1-3/8
16-DMC-4	1	1/4	2.055	1.234	1.046	.562	.281	1.562	1-1/2	1-3/8
16-DMC-6	1	3/8	2.055	1.234	1.046	.562	.375	1.562	1-1/2	1-3/8
16-DMC-8	1	1/2	2.265	1.234	1.046	.750	.468	1.781	1-1/2	1-3/8
16-DMC-12	1	3/4	2.265	1.234	1.046	.750	.625	1.781	1-1/2	1-3/8
16-DMC-16	1	1	2.453	1.234	1.046	.937	.875	1.969	1-1/2	1-3/8

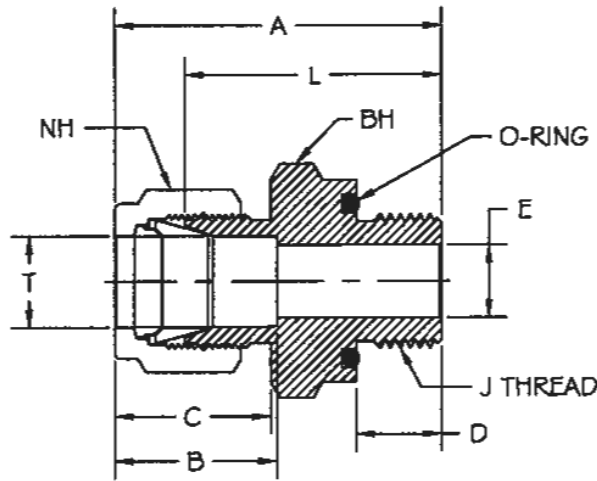
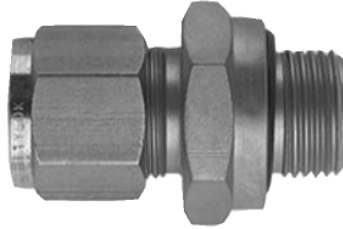
\*NOTE: All dimensions subject to change, to be used for reference only.



Instrumentation

# O-RING STRAIGHT THREAD MALE CONNECTOR

**Tylok**



Instrumentation

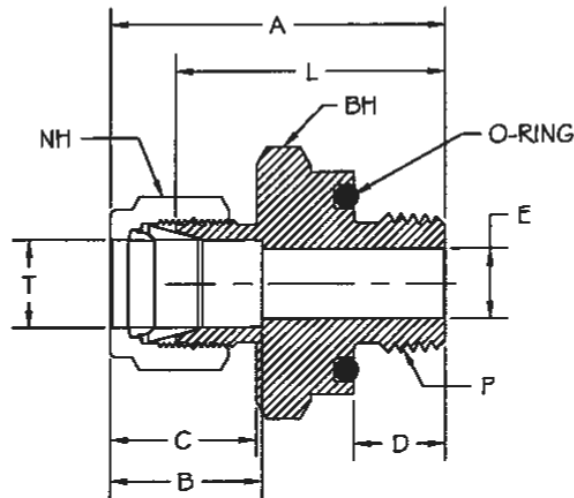
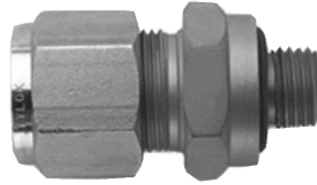
PART NUMBER	T TUBE O.D.	J THREAD	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX	O-RING
1-DMC-ORS	1/16	5/16-24	1.047	.344	.437	.343	.047	.906	5/16	9/16	AS-011
2-DMC-ORS	1/8	5/16-24	1.297	.500	.609	.343	.094	1.031	7/16	9/16	AS-011
3-DMC-ORS	3/16	3/8-24	1.359	.547	.625	.375	.125	1.094	1/2	5/8	AS-012
4-DMC-ORS	1/4	7/16-20	1.516	.609	.703	.406	.187	1.219	9/16	3/4	AS-111
5-DMC-ORS	5/16	1/2-20	1.609	.641	.734	.437	.250	1.312	5/8	7/8	AS-112
6-DMC-ORS	3/8	9/16-18	1.672	.656	.766	.468	.281	1.375	11/16	15/16	AS-113
8-DMC-ORS	1/2	3/4-16	1.812	.906	.859	.468	.406	1.406	7/8	1-1/8	AS-116
12-DMC-ORS	3/4	1-1/16-12	2.062	.969	.859	.562	.625	1.656	1-1/8	1-1/2	AS-215
16-DMC-ORS	1	1-5/16-12	2.297	1.234	1.047	.562	.875	1.812	1-1/2	1-3/4	AS-219

\*NOTE: All dimensions subject to change, to be used for reference only.



# O-RING PIPE THREAD MALE CONNECTOR

**Tylok**



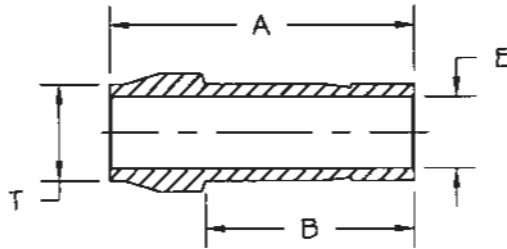
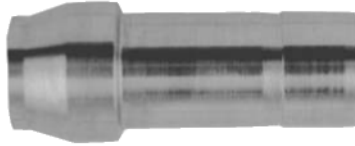
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX	O-RING
2-DMC-2-ORT	1/8	1/8	1.297	.500	.609	.280	.094	1.031	7/16	3/4	AS-111
2-DMC-4-ORT	1/8	1/4	1.437	.516	.609	.375	.094	1.172	7/16	15/16	AS-113
3-DMC-4-ORT	3/16	1/4	1.469	.547	.641	.375	.125	1.203	1/2	15/16	AS-113
4-DMC-2-ORT	1/4	1/8	1.375	.609	.703	.280	.187	1.094	9/16	3/4	AS-111
4-DMC-4-ORT	1/4	1/4	1.516	.609	.703	.375	.187	1.219	9/16	15/16	AS-113
6-DMC-6-ORT	3/8	3/8	1.625	.656	.766	.406	.281	1.344	11/16	1-1/8	AS-116
6-DMC-8-ORT	3/8	1/2	1.859	.656	.766	.531	.281	1.562	11/16	1-3/8	AS-212
8-DMC-4-ORT	1/2	1/4	1.687	.906	.875	.375	.281	1.281	7/8	15/16	AS-113
8-DMC-8-ORT	1/2	1/2	1.969	.906	.859	.531	.406	1.562	7/8	1-3/8	AS-212
10-DMC-12-ORT	5/8	3/4	2.062	.969	.875	.562	.500	1.656	1	1-1/2	AS-215
12-DMC-12-ORT	3/4	3/4	2.062	.969	.875	.562	.625	1.656	1-1/8	1-1/2	AS-215

\*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation

**PORT CONNECTOR UNION**

**Tylok**



Instrumentation

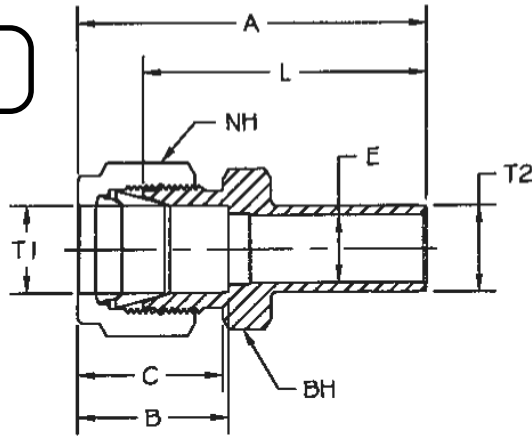
PART NUMBER	T TUBE O.D.	A	B	E THRU HOLE
1-DPCU-1	1/16	.547	.422	.031
2-DPCU-2	1/8	.875	.625	.094
4-DPCU-4	1/4	.969	.734	.187
5-DPCU-5	5/16	1.016	.797	.250
6-DPCU-6	3/8	1.031	.797	.297
8-DPCU-8	1/2	1.406	1.016	.391
12-DPCU-12	3/4	1.469	1.094	.594
16-DPCU-16	1	1.906	1.359	.812

\*NOTE: All dimensions subject to change, to be used for reference only.



# REDUCER ADAPTER TUBE TO TUBE

**Tylok**



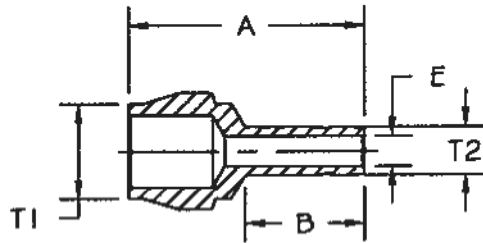
PART NUMBER	T1 TUBE O.D.	T2 TUBE O.D.	A	B	C	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
1-DRATT-2	1/16	1/8	1.156	.344	.437	.052	1.000	5/16	5/16
1-DRATT-4	1/16	1/4	1.234	.344	.437	.052	1.094	5/16	5/16
2-DRATT-1	1/8	1/16	1.141	.500	.609	.031	.875	7/16	7/16
2-DRATT-2	1/8	1/8	1.328	.500	.609	.078	1.062	7/16	7/16
2-DRATT-3	1/8	3/16	1.359	.500	.609	.094	1.094	7/16	7/16
2-DRATT-4	1/8	1/4	1.422	.500	.609	.094	1.156	7/16	7/16
2-DRATT-6	1/8	3/8	1.484	.500	.609	.094	1.219	7/16	7/16
2-DRATT-8	1/8	1/2	1.734	.500	.609	.094	1.484	7/16	9/16
3-DRATT-2	3/16	1/8	1.375	.547	.625	.078	1.109	1/2	7/16
3-DRATT-4	3/16	1/4	1.469	.547	.625	.125	1.203	1/2	7/16
4-DRATT-2	1/4	1/8	1.453	.609	.703	.078	1.156	9/16	1/2
4-DRATT-4	1/4	1/4	1.547	.609	.703	.187	1.250	9/16	1/2
4-DRATT-5	1/4	5/16	1.578	.609	.703	.187	1.281	9/16	1/2
4-DRATT-6	1/4	3/8	1.609	.609	.703	.187	1.312	9/16	1/2
4-DRATT-8	1/4	1/2	1.828	.609	.703	.187	1.531	9/16	9/16
4-DRATT-10	1/4	5/8	1.891	.609	.703	.187	1.609	9/16	11/16
5-DRATT-6	5/16	3/8	1.656	.641	.734	.250	1.359	5/8	9/16
5-DRATT-8	5/16	1/2	1.875	.641	.734	.250	1.578	5/8	9/16
6-DRATT-6	3/8	3/8	1.703	.656	.766	.281	1.406	11/16	5/8
6-DRATT-10	3/8	5/8	1.984	.656	.766	.281	1.687	11/16	11/16
6-DRATT-12	3/8	3/4	1.984	.656	.766	.281	1.687	11/16	13/16
8-DRATT-4	1/2	1/4	1.766	.906	.859	.187	1.375	7/8	13/16
8-DRATT-6	1/2	3/8	1.844	.906	.859	.281	1.437	7/8	13/16
8-DRATT-8	1/2	1/2	2.062	.906	.859	.406	1.656	7/8	13/16
8-DRATT-10	1/2	5/8	2.125	.906	.859	.406	1.719	7/8	13/16
8-DRATT-12	1/2	3/4	2.125	.906	.859	.406	1.719	7/8	13/16
8-DRATT-16	1/2	1	2.375	.906	.859	.406	1.969	7/8	1-1/16
10-DRATT-12	5/8	3/4	2.156	.969	.859	.500	1.750	1	15/16
10-DRATT-14	5/8	7/8	2.219	.969	.859	.500	1.812	1	15/16
10-DRATT-16	5/8	1	2.406	.969	.859	.500	2.000	1	1-1/16
12-DRATT-8	3/4	1/2	2.156	.969	.859	.391	1.750	1-1/8	1-1/16
12-DRATT-16	3/4	1	2.469	.969	.859	.625	2.062	1-1/8	1-1/16

\*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation

**REDUCING PORT CONNECTOR**

**Tylok**



Instrumentation

PART NUMBER	T1 TUBE O.D.	T2 TUBE O.D.	A	B	E THRU HOLE
2-DRPC-1	1/8	1/16	.687	.344	.031
4-DRPC-1	1/4	1/16	.719	.344	.031
4-DRPC-2	1/4	1/8	.891	.531	.094
6-DRPC-2	3/8	1/8	.906	.531	.094
6-DRPC-4	3/8	1/4	.984	.625	.187
8-DRPC-4	1/2	1/4	1.156	.625	.187
8-DRPC-6	1/2	3/8	1.203	.687	.281
12-DRPC-8	3/4	1/2	1.437	.906	.391

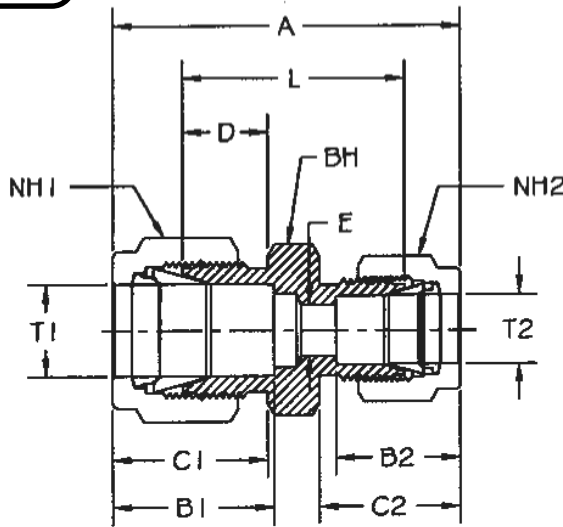
\*NOTE: All dimensions subject to change, to be used for reference only.





**Tylok**

**REDUCING UNION**



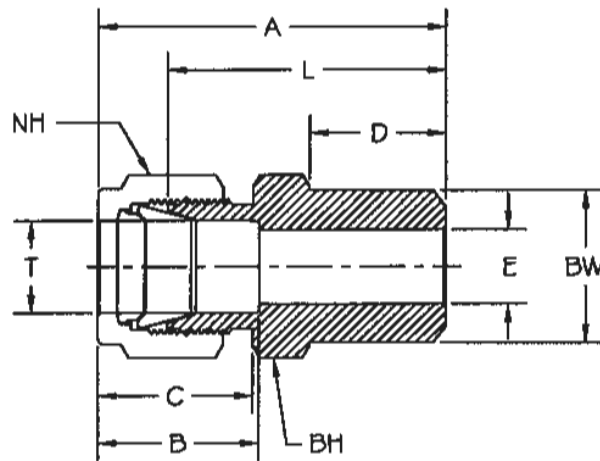
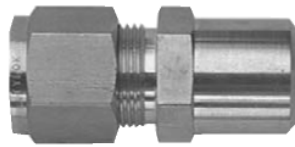
PART NUMBER	T1 TUBE O.D.	T2 TUBE O.D.	A	B1	B2	C1	C2	D	E THRU HOLE	L	NH1 NUT HEX	NH2 NUT HEX	BH BODY HEX
2-DRU-1	1/8	1/16	1.219	.500	.344	.609	.437	.343	.052	.812	7/16	5/16	7/16
3-DRU-1	3/16	1/16	1.266	.547	.344	.625	.437	.375	.052	.859	1/2	5/16	7/16
3-DRU-2	3/16	1/8	1.437	.547	.500	.625	.609	.375	.094	.922	1/2	7/16	7/16
4-DRU-2	1/4	1/8	1.516	.609	.500	.703	.609	.406	.094	.969	9/16	7/16	1/2
4-DRU-3	1/4	3/16	1.547	.609	.547	.703	.625	.406	.125	1.000	9/16	1/2	1/2
5-DRU-2	5/16	1/8	1.578	.641	.500	.734	.609	.437	.094	1.016	5/8	7/16	9/16
5-DRU-4	5/16	1/4	1.656	.641	.609	.734	.703	.437	.187	1.078	5/8	9/16	9/16
6-DRU-1	3/8	1/16	1.437	.656	.344	.765	.437	.468	.052	1.000	11/16	5/16	5/8
6-DRU-2	3/8	1/8	1.609	.656	.500	.765	.609	.468	.094	1.062	11/16	7/16	5/8
6-DRU-4	3/8	1/4	1.703	.656	.609	.765	.703	.468	.187	1.125	11/16	9/16	5/8
6-DRU-5	3/8	5/16	1.734	.656	.641	.765	.734	.468	.250	1.156	11/16	5/8	5/8
8-DRU-2	1/2	1/8	1.781	.906	.500	.859	.609	.468	.094	1.125	7/8	7/16	13/16
8-DRU-4	1/2	1/4	1.859	.906	.609	.859	.703	.468	.187	1.156	7/8	9/16	13/16
8-DRU-6	1/2	3/8	1.906	.906	.656	.859	.765	.468	.281	1.219	7/8	11/16	13/16
10-DRU-6	5/8	3/8	1.937	.969	.656	.859	.765	.468	.281	1.250	1	11/16	15/16
10-DRU-8	5/8	1/2	2.047	.969	.906	.859	.859	.468	.406	1.250	1	7/8	15/16
12-DRU-4	3/4	1/4	1.937	.969	.609	.859	.703	.468	.187	1.250	1-1/8	9/16	1-1/16
12-DRU-6	3/4	3/8	2.000	.969	.656	.859	.765	.468	.281	1.312	1-1/8	11/16	1-1/16
12-DRU-8	3/4	1/2	2.109	.969	.906	.859	.859	.468	.406	1.312	1-1/8	7/8	1-1/16
12-DRU-10	3/4	5/8	2.109	.969	.969	.859	.859	.468	.500	1.312	1-1/8	1	1-1/16
16-DRU-12	1	3/4	2.469	1.234	.969	1.047	.859	.562	.625	1.594	1-1/2	1-1/8	1-3/8

\*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation

**TUBE TO BUTT WELD CONNECTOR**

**Tylok**



Instrumentation

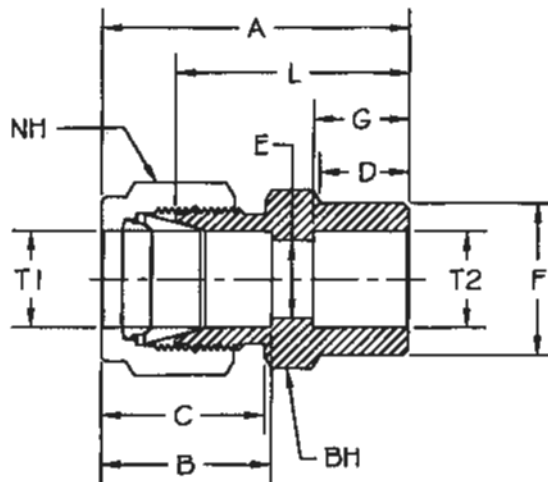
PART NUMBER	T TUBE O.D.	BW	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
2-DTBW-2	1/8	.405	1.203	.500	.609	.375	.094	.937	7/16	7/16
3-DTBW-2	3/16	.405	1.234	.547	.625	.375	.125	.969	1/2	7/16
4-DTBW-2	1/4	.405	1.297	.609	.703	.375	.187	1.000	9/16	1/2
4-DTBW-4	1/4	.540	1.484	.609	.703	.562	.187	1.203	9/16	9/16
5-DTBW-4	5/16	.540	1.516	.641	.734	.562	.250	1.234	5/8	9/16
6-DTBW-4	3/8	.540	1.578	.656	.766	.562	.281	1.281	11/16	5/8
6-DTBW-6	3/8	.675	1.578	.656	.766	.562	.281	1.281	11/16	3/4
6-DTBW-8	3/8	.840	1.828	.656	.766	.750	.281	1.531	11/16	7/8
8-DTBW-6	1/2	.675	1.719	.906	.859	.562	.406	1.312	7/8	13/16
8-DTBW-8	1/2	.840	1.937	.906	.859	.750	.406	1.531	7/8	7/8
8-DTBW-12	1/2	1.050	1.984	.906	.859	.750	.406	1.594	7/8	1-1/16
10-DTBW-8	5/8	.840	1.937	.969	.859	.750	.500	1.531	1	15/16
12-DTBW-12	3/4	1.050	1.984	.969	.859	.750	.625	1.594	1-1/8	1-1/16
16-DTBW-16	1	1.315	2.453	1.234	1.047	.937	.875	1.969	1-1/2	1-3/8

\*NOTE: All dimensions subject to change, to be used for reference only.



# TUBE TO SOCKET WELD CONNECTOR

**Tylok**



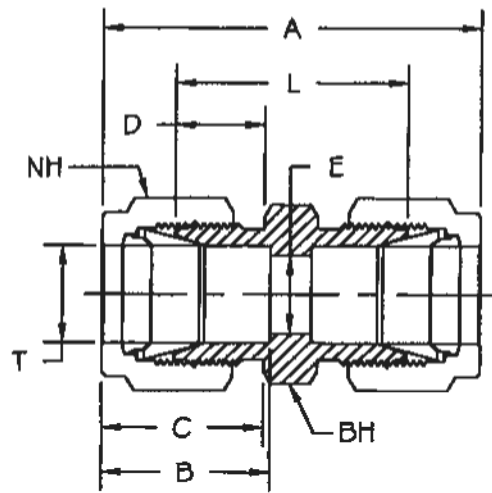
PART NUMBER	T1 TUBE O.D.	T2 TUBE O.D.	A	B	C	D	E THRU HOLE	F	G	L	NH NUT HEX	BH BODY HEX
2-DTSW-2	1/8	1/8	1.141	.500	.609	.344	.094	.312	.250	.875	7/16	7/16
3-DTSW-3	3/16	3/16	1.172	.547	.641	.375	.125	.422	.203	.906	1/2	7/16
4-DTSW-4	1/4	1/4	1.328	.609	.703	.406	.187	.437	.312	1.031	9/16	1/2
6-DTSW-6	3/8	3/8	1.484	.656	.766	.469	.281	.609	.375	1.187	11/16	5/8
8-DTSW-8	1/2	1/2	1.625	.906	.859	.469	.406	.750	.500	1.219	7/8	13/16
10-DTSW-10	5/8	5/8	1.656	.969	.859	.469	.500	.922	.500	1.250	1	15/16
12-DTSW-12	3/4	3/4	1.719	.969	.859	.469	.625	1.047	.562	1.312	1-1/8	1-1/16
16-DTSW-16	1	1	2.078	1.234	1.047	.562	.875	1.312	.750	1.594	1-1/2	1-3/8

\*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation

# UNION

**Tylok**



PART NUMBER	T TUBE O.D.	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
1-DU-1	1/16	.984	.344	.437	.281	.052	.687	5/16	5/16
2-DU-2	1/8	1.406	.500	.609	.343	.094	.875	7/16	7/16
3-DU-3	3/16	1.469	.547	.625	.375	.125	.953	1/2	7/16
4-DU-4	1/4	1.609	.609	.703	.406	.187	1.031	9/16	1/2
5-DU-5	5/16	1.687	.641	.734	.437	.250	1.109	5/8	9/16
6-DU-6	3/8	1.766	.656	.766	.468	.281	1.187	11/16	5/8
8-DU-8	1/2	2.016	.906	.859	.468	.406	1.219	7/8	13/16
10-DU-10	5/8	2.047	.969	.859	.468	.500	1.250	1	15/16
12-DU-12	3/4	2.109	.969	.859	.468	.625	1.312	1-1/8	1-1/16
14-DU-14	7/8	2.187	1.016	.859	.468	.718	1.375	1-1/4	1-3/16
16-DU-16	1	2.547	1.234	1.047	.562	.875	1.594	1-1/2	1-3/8

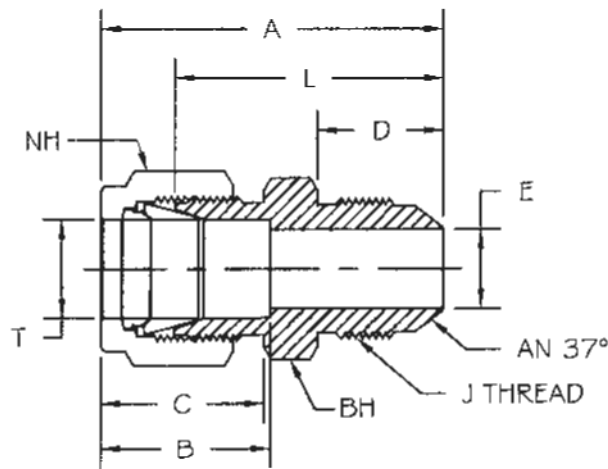
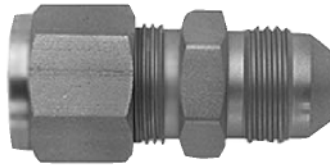
\*NOTE: All dimensions subject to change, to be used for reference only.



Instrumentation

**TUBE TO AN FLARE UNION**

**Tylok**



**Instrumentation**

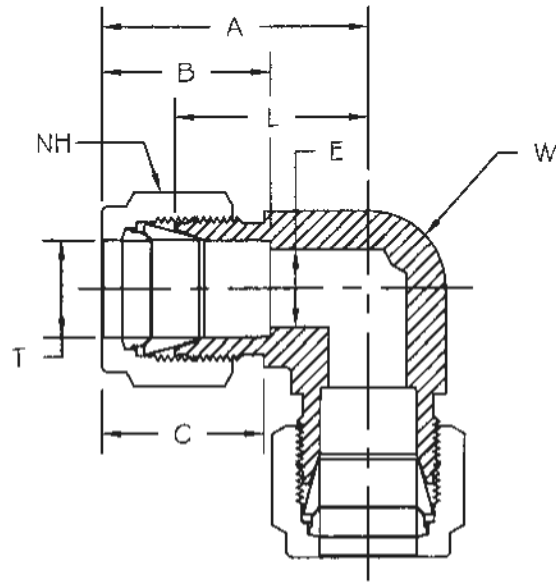
PART NUMBER	T TUBE O.D.	J THREAD	A	B	C	D	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
2-DUANF-2	1/8	5/16-24	1.234	.500	.609	.448	.062	.984	7/16	7/16
2-DUANF-4	1/8	7/16-20	1.375	.500	.609	.550	.094	1.125	7/16	1/2
3-DUANF-3	3/16	3/8-24	1.328	.547	.641	.479	.125	1.062	1/2	7/16
4-DUANF-4	1/4	7/16-20	1.484	.609	.703	.550	.172	1.187	9/16	1/2
5-DUANF-5	5/16	1/2-20	1.516	.641	.734	.550	.234	1.219	5/8	9/16
6-DUANF-4	3/8	7/16-20	1.562	.656	.766	.550	.172	1.266	11/16	5/8
6-DUANF-6	3/8	9/16-18	1.562	.656	.766	.556	.297	1.266	11/16	5/8
8-DUANF-8	1/2	3/4-16	1.812	.906	.859	.657	.391	1.406	7/8	13/16
10-DUANF-10	5/8	7/8-14	1.937	.969	.875	.758	.484	1.531	1	15/16
12-DUANF-12	3/4	1-1/16-12	2.109	.969	.859	.864	.609	1.703	1-1/8	1-1/8
16-DUANF-16	1	1-5/16-12	2.422	1.234	1.047	.911	.844	1.937	1-1/2	1-3/8

\*NOTE: All dimensions subject to change, to be used for reference only.



**Tylok**

**UNION ELBOW**



Instrumentation

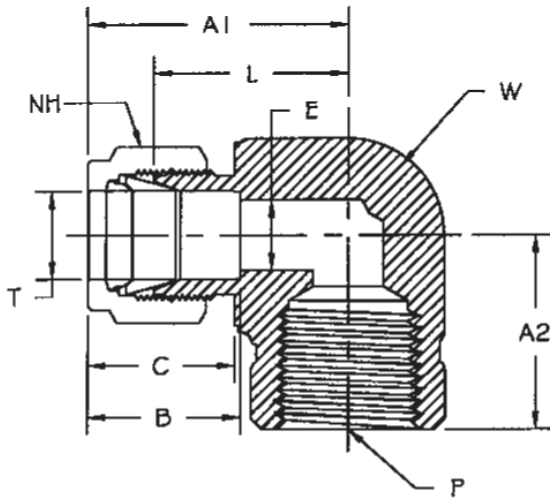
PART NUMBER	T TUBE O.D.	A	B	C	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
1-DELU-1	1/16	.750	.344	.437	.052	.609	5/16	7/16
2-DELU-2	1/8	.875	.500	.609	.094	.625	7/16	3/8
3-DELU-3	3/16	1.000	.547	.625	.125	.734	1/2	1/2
4-DELU-4	1/4	1.062	.609	.703	.187	.766	9/16	1/2
5-DELU-5	5/16	1.125	.640	.734	.250	.844	5/8	9/16
6-DELU-6	3/8	1.203	.656	.766	.281	.906	11/16	5/8
8-DELU-8	1/2	1.421	.906	.859	.406	1.016	7/8	13/16
10-DELU-10	5/8	1.500	.969	.859	.500	1.109	1	15/16
12-DELU-12	3/4	1.578	.969	.859	.625	1.171	1-1/8	1-1/16
14-DELU-14	7/8	1.766	1.016	.859	.718	1.406	1-1/4	1-3/8
16-DELU-16	1	1.937	1.234	1.047	.875	1.438	1-1/2	1-3/8

\*NOTE: All dimensions subject to change, to be used for reference only.



**Tylok**

**FEMALE ELBOW**



PART NUMBER	T TUBE O.D.	P PIPE END NPT	A1	A2	B	C	E THRU HOLE	L	NH NUT HEX	W WRENCH FLAT
1-DFE-2	1/16	1/8	.812	.750	.500	.609	.052	.687	5/16	1/2
2-DFE-2	1/8	1/8	.969	.750	.500	.609	.094	.719	7/16	1/2
2-DFE-4	1/8	1/4	1.078	.875	.500	.609	.094	.828	7/16	11/16
3-DFE-2	3/16	1/8	1.000	.750	.547	.625	.125	.734	1/2	1/2
4-DFE-2	1/4	1/8	1.062	.750	.609	.703	.187	.781	9/16	1/2
4-DFE-4	1/4	1/4	1.172	.875	.609	.703	.187	.875	9/16	11/16
4-DFE-6	1/4	3/8	1.250	.875	.609	.703	.187	.969	9/16	13/16
4-DFE-8	1/4	1/2	1.359	1.125	.609	.703	.187	1.078	9/16	1
5-DFE-2	5/16	1/8	1.125	.750	.640	.734	.250	.844	5/8	9/16
5-DFE-4	5/16	1/4	1.203	.875	.640	.734	.250	.906	5/8	11/16
6-DFE-2	3/8	1/8	1.203	.750	.656	.766	.281	.906	11/16	5/8
6-DFE-4	3/8	1/4	1.234	.875	.656	.766	.281	.937	11/16	11/16
6-DFE-6	3/8	3/8	1.312	.875	.656	.766	.281	1.016	11/16	13/16
6-DFE-8	3/8	1/2	1.429	1.125	.656	.766	.281	1.125	11/16	1
8-DFE-4	1/2	1/4	1.429	.875	.906	.859	.406	1.016	7/8	13/16
8-DFE-6	1/2	3/8	1.429	.875	.906	.859	.406	1.016	7/8	13/16
8-DFE-8	1/2	1/2	1.531	1.125	.906	.859	.406	1.125	7/8	1
10-DFE-6	5/8	3/8	1.500	.875	.969	.859	.500	1.109	1	15/16
10-DFE-8	5/8	1/2	1.578	1.125	.969	.859	.500	1.171	1	1-1/16
12-DFE-8	3/4	1/2	1.578	1.125	.969	.859	.625	1.171	1-1/8	1-1/16
12-DFE-12	3/4	3/4	1.766	1.250	.969	.859	.625	1.359	1-1/8	1-3/8
14-DFE-12	7/8	3/4	1.766	1.250	1.016	.859	.718	1.359	1-1/4	1-3/8
16-DFE-12	1	3/4	1.937	1.250	1.234	1.049	.875	1.453	1-1/2	1-3/8
16-DFE-16	1	1	1.984	1.500	1.234	1.049	.875	1.500	1-1/2	1-11/16

\*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation

**CREATION OF AN INDUSTRY**

In the mid 1940's, Cullen Crawford founded the Crawford Fitting company, which evolved into what is today Swagelok, Inc. Mr. Crawford developed and patented the original flareless fitting (nut and two ferrule system), for the Crawford Fitting Company. Thus, a new and innovative industry was born making it far easier to make tubing connections. This reduces installation time and errors. End Users from all four corners of the globe, since his invention, have made billions of connections. This system provides leak proof seals and thus Mr. Crawford has been named "The founder of the flareless fitting."



**INTRODUCTION**

Tylok International, Inc. offers a tube fitting line, CBC-Lok™, that is fully interchangeable with Swagelok® and Parker A-Lok®. Although it is always recommended to use all CBC-Lok™ components, intermixing CBC-Lok™ bodies and/or component parts with that of other manufacturers will not adversely affect sealing ability. CBC-Lok™ Tube Fittings are made to strict quality control standards and cannot guarantee that of other manufacturers. CBC-Lok Tube Fittings are proudly made in the U.S.A.

**OPERATION**

CBC-Lok™ Tube Fittings are comprised of four components: the Body, Front Collet, Rear Collet and Nut. A leak proof seal is obtained through proper collet action as the collets are tightened onto the tubing via axial thrust provided by the nut. The front collet provides the leak proof seal, when the nut and collets are properly drawn up the specified number of turns. The rear collet grips the tubing preventing pull-off. The stainless steel nuts are silver plated and a dry film lubricant is applied, reducing torque and ensuring proper sealing.

**TY-COR™ PROCESS**

Ty-Cor™ refers to the Kolsterising® treatment which diffuses carbon into the surface of the stainless steel, thereby increasing the surface hardness without affecting the quality of the metal treated. In fact, when AISI 316 stainless steel is treated, the corrosion resistance is equal to or better than non-treated 316 stainless steel. The increase in corrosion resistance to pitting and stress corrosion is very pronounced in media which contain chlorides (e.g. sea water, bleach, HCl, etc.). The Ty-Cor™ process applied to the rear collet also helps eliminate galling and ensures proper sealing on tube end make ups.

**ABS CERTIFICATION**



Tylok has received the Certificate of Type Approval from the American Bureau of Shipping (ABS). The following Part Families are ABS approved:

DFC – Female Connector, DMC – Male Connector, DU – Union, DELU – Union Elbow, DME – Male Elbow and DTTT – Union Tee. For further information visit [www.eagle.org](http://www.eagle.org).

**FEATURES**

- Double collet swaging action
- Total component interchangeability
- Heat Code traceable
- ASTM material construction
- Corrosion resistant 316 Stainless Steel rear collets

**QUALITY MANAGEMENT SYSTEM**

QMI has registered Tylok International's Quality Management System to ISO 9001:2000. The quality system complies with the international standard ISO 9001:2000 and its technical equivalent, ANSI/ISO/ASQ Q9001:2000. Tylok strives to continuously improve the effectiveness of the Quality Management System by each member within the organization.



Certificate No. 012106





**HOW TO ORDER CBC-LOK™ TUBE FITTINGS**

CBC-Lok™ Tube Fittings are ordered as listed in this catalog by inserting the material code before the part number. CBC-Lok™ Tube Fittings can be identified through the part number as to material, tube size, configuration and thread connection. The part number describes a complete fitting assembly. The size nomenclature to describe a tee fitting is from left (1) to right (2) and down (3). *Special Configurations available upon request.*

**Example:** A Stainless Steel Female Run Tee, 3/8" Tube Size to 1/4" Female Pipe to 3/8" Tube is designated as follows.



**CHART 1 - MATERIAL**

B	Brass
SS	Stainless Steel

**CHART 3 - STYLE**

D	CBC-Lok™
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**CHART 2 - TUBE O.D.**

Designator	Tube or Hose OD (inches)	Pipe Thread (NPT)	AN Tube Flare Size (inches)	Pipe Thread BSPP/BSPT
1	1/16	1/16-27		1/16-28
2	1/8	1/8-27	1/8	1/8-28
3	3/16		3/16	
4	1/4	1/4-18	1/4	1/4-19
5	5/16		5/16	
6	3/8	3/8-18	3/8	3/8-19
8	1/2	1/2-14	1/2	1/2-14
10	5/8		5/8	
12	3/4	3/4-14	3/4	3/4-14
14	7/8		7/8	
16	1	1.0-11 1/2	1	1.0-11

**CHART 4 - DESCRIPTION**

DATANF	Adapter Tube to AN Flare
DATPF	Adapter Tube to Female Pipe
DATPM	Adapter Tube to Male Pipe
DBHA	Bulkhead Adapter
DBHFP	Bulkhead Female Pipe Connector
DBHMP	Bulkhead Male Pipe Connector
DBHU	Bulkhead Union
DBUANF	Bulkhead to AN Flare Union
DCAP	Cap
DF PLUG	Fitting Plug
DFC	Female Connector
DMC	Male Connector
DMC-ORS	O Ring Straight Thread Male Connector
DMC-ORT	O Ring Pipe Thread Male Connector
DPCU	Port Connector Union
DRATT	Reducer Adapter Tube to Tube
DRPC	Reducing Port Connector
DRU	Reducing Union
DTBW	Tube to Butt Weld Connector
DTSW	Tube to Socket Weld Connector

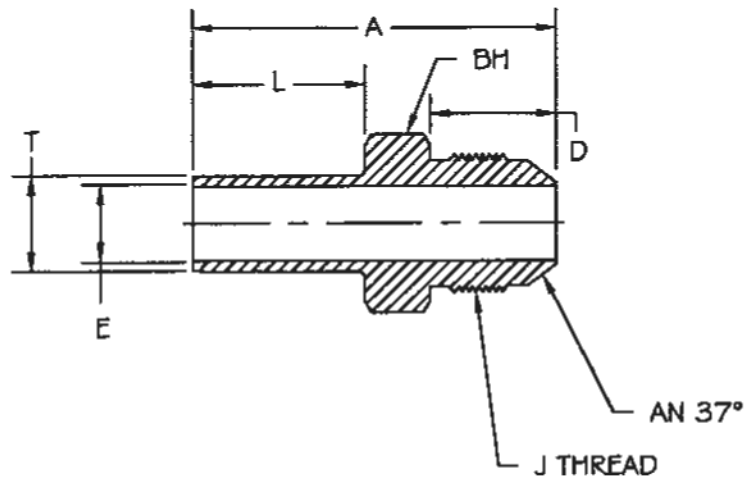
DU	Union
DUANF	Tube to AN Flare Union
DELU	Union Elbow
DFE	Female Elbow
DME	Male Elbow
DTBWE	Tube to Butt Weld Elbow
DTSWE	Tube to Socket Weld Elbow
DTFT	Female Run Tee
DTMT	Male Run Tee
DTTF	Female Branch Tee
DTTM	Male Branch Tee
DTTT	Union Tee
DCR	Union Cross
DBI	Barbed Insert
DPI	Plane Insert
DN	Nut
DKN	Knurled Nut
DFC	Front Collet
DRC	Rear Collet

Instrumentation



**ADAPTER TUBE TO AN FLARE**

**Tylok**



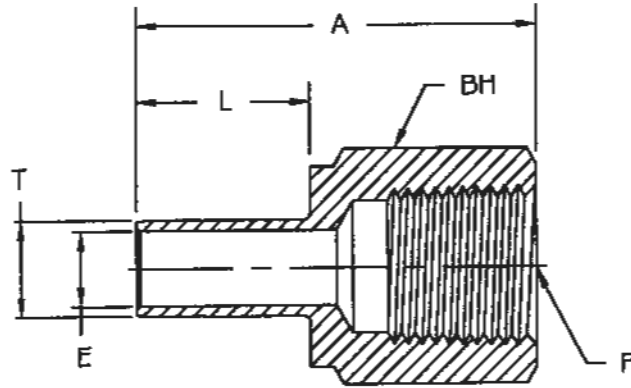
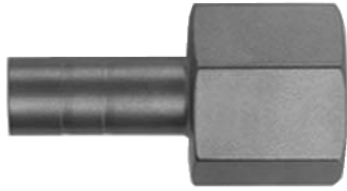
Instrumentation

PART NUMBER	T TUBE O.D.	J THREAD	A	D	E THRU HOLE	L	BH BODY HEX
2-DATANF-2	1/8	5/16-24	1.203	.448	.062	.531	3/8
2-DATANF-4	1/8	7/16-20	1.312	.550	.094	.531	1/2
3-DATANF-3	3/16	3/8-24	1.250	.479	.125	.562	7/16
4-DATANF-4	1/4	7/16-20	1.469	.550	.172	.625	1/2
5-DATANF-5	5/16	1/2-20	1.453	.550	.234	.656	9/16
6-DATANF-4	3/8	7/16-20	1.531	.550	.172	.687	1/2
6-DATANF-6	3/8	9/16-18	1.500	.556	.281	.687	5/8
8-DATANF-8	1/2	3/4-16	1.906	.657	.391	.906	13/16
10-DATANF-10	5/8	7/8-14	2.031	.758	.484	.969	15/16
12-DATANF-12	3/4	1-1/16-12	2.187	.864	.656	.969	1-1/8
16-DATANF-16	1	1-5/16-12	2.531	.911	.937	1.219	1-3/8

\*NOTE: All dimensions subject to change, to be used for reference only.



# ADAPTER TUBE TO FEMALE FLARE



**Tylok**

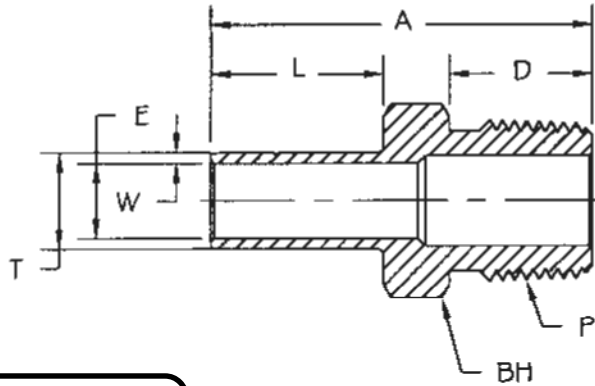
Instrumentation

PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	E THRU HOLE	L	BH BODY HEX
2-DATPF-2	1/8	1/8	1.234	.094	.531	9/16
2-DATPF-4	1/8	1/4	1.375	.094	.531	3/4
3-DATPF-2	3/16	1/8	1.266	.125	.562	9/16
3-DATPF-4	3/16	1/4	1.406	.125	.562	3/4
4-DATPF-2	1/4	1/8	1.312	.187	.625	9/16
4-DATPF-4	1/4	1/4	1.469	.187	.625	3/4
4-DATPF-6	1/4	3/8	1.562	.187	.625	7/8
4-DATPF-8	1/4	1/2	1.812	.187	.625	1-1/16
5-DATPF-2	5/16	1/8	1.359	.250	.656	9/16
5-DATPF-4	5/16	1/4	1.516	.250	.656	3/4
6-DATPF-2	3/8	1/8	1.391	.281	.687	9/16
6-DATPF-4	3/8	1/4	1.547	.281	.687	3/4
6-DATPF-6	3/8	3/8	1.625	.281	.687	7/8
6-DATPF-8	3/8	1/2	1.843	.281	.687	1-1/16
8-DATPF-4	1/2	1/4	1.719	.391	.906	3/4
8-DATPF-6	1/2	3/8	1.859	.391	.906	7/8
8-DATPF-8	1/2	1/2	2.093	.391	.906	1-1/16
10-DATPF-6	5/8	3/8	1.828	.500	.969	7/8
10-DATPF-8	5/8	1/2	2.093	.500	.969	1-1/16
12-DATPF-8	3/4	1/2	2.093	.594	.969	1-1/16
14-DATPF-12	7/8	3/4	2.203	.687	1.031	1-1/4
16-DATPF-12	1	3/4	2.406	.797	1.219	1-1/4
16-DATPF-16	1	1	2.547	.797	1.219	1-5/8

\*NOTE: All dimensions subject to change, to be used for reference only.



## ADAPTER TUBE TO MALE FLARE



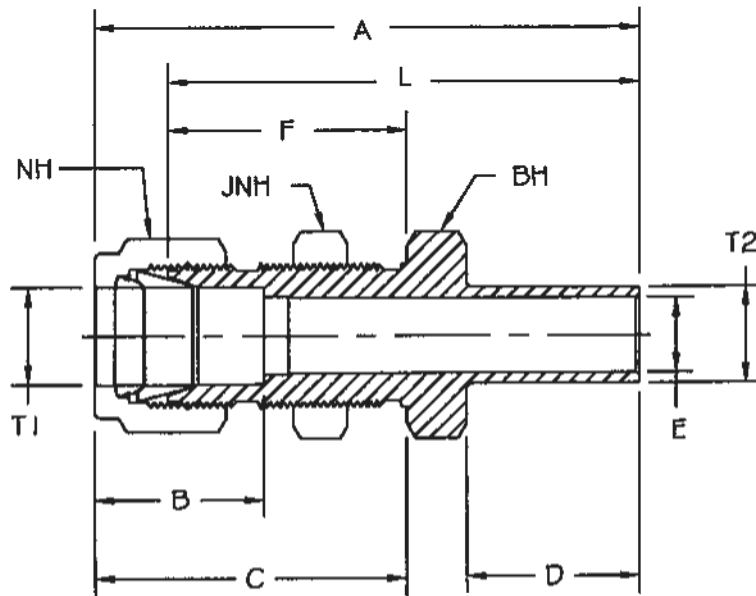
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	D	E THRU HOLE	L	W	BH BODY HEX
2-DATPM-2	1/8	1/8	1.156	.375	.093	.531	.022	7/16
2-DATPM-4	1/8	1/4	1.375	.562	.093	.531	.022	9/16
3-DATPM-2	3/16	1/8	1.187	.375	.187	.562	.022	7/16
3-DATPM-4	3/16	1/4	1.406	.562	.281	.562	.022	9/16
4-DATPM-2	1/4	1/8	1.250	.375	.171	.625	.032	7/16
4-DATPM-4	1/4	1/4	1.469	.562	.171	.625	.032	9/16
4-DATPM-6	1/4	3/8	1.500	.562	.171	.625	.032	11/16
4-DATPM-8	1/4	1/2	1.718	.750	.171	.625	.032	7/8
5-DATPM-2	5/16	1/8	1.297	.375	.187	.656	.032	7/16
5-DATPM-4	5/16	1/4	1.500	.562	.250	.656	.032	9/16
6-DATPM-2	3/8	1/8	1.343	.375	.187	.687	.032	7/16
6-DATPM-4	3/8	1/4	1.547	.562	.281	.687	.032	9/16
6-DATPM-6	3/8	3/8	1.562	.562	.281	.687	.032	11/16
6-DATPM-8	3/8	1/2	1.781	.750	.281	.687	.032	7/8
8-DATPM-4	1/2	1/4	1.750	.562	.281	.906	.047	9/16
8-DATPM-6	1/2	3/8	1.781	.562	.375	.906	.047	11/16
8-DATPM-8	1/2	1/2	2.000	.750	.391	.906	.047	7/8
10-DATPM-6	5/8	3/8	1.844	.562	.375	.969	.047	11/16
10-DATPM-8	5/8	1/2	2.062	.750	.468	.969	.047	7/8
10-DATPM-12	5/8	3/4	2.062	.750	.500	.969	.047	1-1/16
12-DATPM-8	3/4	1/2	2.062	.750	.468	.969	.047	7/8
12-DATPM-12	3/4	3/4	2.062	.750	.594	.969	.047	1-1/16
12-DATPM-16	3/4	1	2.359	.937	.594	.969	.047	1-3/8
14-DATPM-12	7/8	3/4	2.125	.750	.687	1.031	.047	1-3/8
16-DATPM-12	1	3/4	2.312	.750	.625	1.218	.047	1-1/16
16-DATPM-16	1	1	2.625	.937	.797	1.218	.047	1-3/8

\*NOTE: All dimensions subject to change, to be used for reference only.



**BULKHEAD ADAPTER**

**Tylok**



Instrumentation

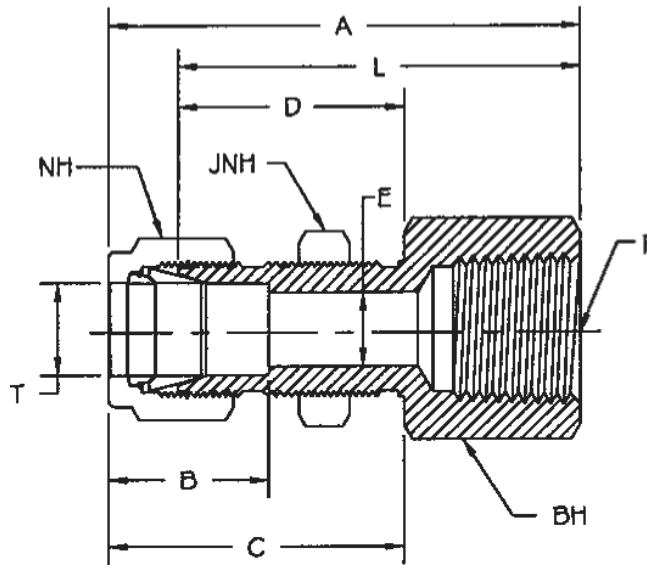
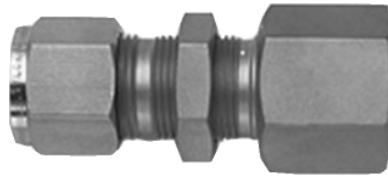
PART NUMBER	T1 TUBE O.D.	T2 TUBE O.D.	A	B	C	D	E THRU HOLE	F	L	NH NUT HEX	JNH JAM NUT HEX	BH BODY HEX	PANEL HOLE
2-DBHA-2	1/8	1/8	1.953	.500	1.234	.531	.078	.969	1.687	7/16	1/2	1/2	21/64
4-DBHA-4	1/4	1/4	2.203	.609	1.328	.625	.187	1.031	1.906	9/16	5/8	5/8	29/64
6-DBHA-6	3/8	3/8	2.406	.656	1.453	.687	.281	1.156	2.125	11/16	3/4	3/4	37/64
8-DBHA-8	1/2	1/2	2.875	.906	1.656	.906	.391	1.250	2.468	7/8	15/16	15/16	49/64

\*NOTE: All dimensions subject to change, to be used for reference only.



# BULKHEAD FEMALE PIPE CONNECTOR

**Tylok**



Instrumentation

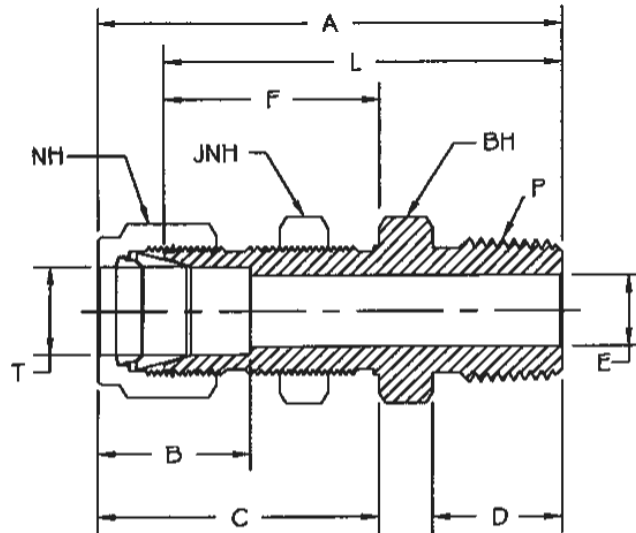
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	B	C	D	E THRU HOLE	L	NH NUT HEX	JNH JAM NUT HEX	BH BODY HEX	PANEL HOLE
2-DBHFP-2	1/8	1/8	1.766	.500	1.234	.969	.094	1.500	7/16	1/2	9/16	21/64
3-DBHFP-2	3/16	1/8	1.797	.547	1.266	1.000	.125	1.531	1/2	9/16	9/16	25/64
4-DBHFP-2	1/4	1/8	1.859	.609	1.328	1.031	.187	1.562	9/16	5/8	5/8	29/64
4-DBHFP-4	1/4	1/4	2.047	.609	1.328	1.031	.187	1.750	9/16	5/8	3/4	29/64
5-DBHFP-2	5/16	1/8	1.969	.641	1.422	1.125	.250	1.656	5/8	3/4	11/16	33/64
6-DBHFP-4	3/8	1/4	2.172	.656	1.453	1.156	.281	1.875	11/16	3/4	3/4	37/64
8-DBHFP-6	1/2	3/8	2.437	.906	1.656	1.250	.406	2.031	7/8	15/16	15/16	49/64
8-DBHFP-8	1/2	1/2	2.625	.906	1.656	1.250	.406	2.219	7/8	15/16	1-1/16	49/64
10-DBHFP-8	5/8	1/2	2.656	.969	1.687	1.281	.500	2.250	1	1-1/16	1-1/16	57/64
16-DBHFP-16	1	1	3.687	1.234	2.266	1.781	.875	3.187	1-1/2	1-1/2	1-5/8	1-21/64

\*NOTE: All dimensions subject to change, to be used for reference only.



# BULKHEAD MALE PIPE CONNECTOR

**Tylok**



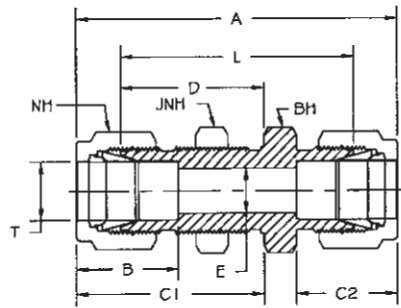
PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	B	C	D	E THRU HOLE	F	L	NH NUT HEX	JNH JAM NUT HEX	BH BODY HEX	PANEL HOLE
1-DBHMP-1	1/16	1/16	1.187	.437	.687	.375	.052	.531	1.031	5/16	7/16	5/16	13/64
1-DBHMP-2	1/16	1/8	1.234	.437	.687	.375	.052	.531	1.094	5/16	7/16	7/16	13/64
2-DBHMP-2	1/8	1/8	1.828	.500	1.234	.375	.094	.969	1.578	7/16	1/2	1/2	21/64
3-DBHMP-2	3/16	1/8	1.859	.547	1.266	.375	.125	1.000	1.594	1/2	9/16	9/16	25/64
4-DBHMP-2	1/4	1/8	1.953	.609	1.328	.375	.187	1.031	1.656	9/16	5/8	5/8	29/64
4-DBHMP-4	1/4	1/4	2.109	.609	1.328	.562	.187	1.031	1.843	9/16	5/8	5/8	29/64
4-DBHMP-6	1/4	3/8	2.187	.609	1.328	.562	.187	1.016	1.891	9/16	5/8	11/16	29/64
4-DBHMP-8	1/4	1/2	2.484	.609	1.328	.562	.187	1.016	2.187	9/16	5/8	7/8	29/64
6-DBHMP-4	3/8	1/4	2.266	.656	1.453	.562	.281	1.156	1.969	11/16	3/4	3/4	37/64
6-DBHMP-6	3/8	3/8	2.312	.656	1.437	.562	.281	1.156	1.969	11/16	3/4	3/4	37/64
6-DBHMP-8	3/8	1/2	2.609	.656	1.437	.750	.375	1.156	2.312	11/16	3/4	7/8	37/64
8-DBHMP-4	1/2	1/4	2.547	.906	1.656	.562	.375	1.250	2.141	7/8	15/16	15/16	49/64
8-DBHMP-6	1/2	3/8	2.484	.906	1.656	.562	.375	1.250	2.094	7/8	15/16	15/16	49/64
8-DBHMP-8	1/2	1/2	2.719	.906	1.656	.750	.406	1.250	2.312	7/8	15/16	15/16	49/64

\*NOTE: All dimensions subject to change, to be used for reference only.



**Tylok**

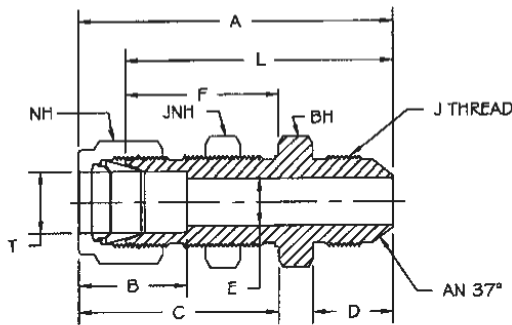
**BULKHEAD UNION**



PART NUMBER	T TUBE O.D.	A	B	C1	C2	D	E THRU HOLE	L	NH NUT HEX	JNH JAM NUT HEX	BH BODY HEX	PANEL HOLE
1-DBHU-1	1/16	1.234	.344	.687	.437	.531	.052	.937	5/16	5/16	5/16	13/64
2-DBHU-2	1/8	2.016	.500	1.234	.609	.969	.094	1.500	7/16	1/2	1/2	21/64
3-DBHU-3	3/16	2.109	.547	1.266	.625	1.000	.125	1.594	1/2	9/16	9/16	25/64
4-DBHU-4	1/4	2.266	.609	1.328	.703	1.031	.187	1.687	9/16	5/8	5/8	29/64
5-DBHU-5	5/16	2.391	.641	1.406	.734	1.125	.250	1.812	5/8	11/16	11/16	33/64
6-DBHU-6	3/8	2.453	.656	1.453	.766	1.156	.281	1.875	11/16	3/4	3/4	37/64
8-DBHU-8	1/2	2.797	.906	1.656	.859	1.250	.406	2.000	7/8	15/16	15/16	49/64
10-DBHU-10	5/8	2.859	.969	1.687	.859	1.281	.500	2.062	1	1-1/16	1-1/16	57/64
12-DBHU-12	3/4	3.109	.969	1.875	.859	1.469	.625	2.312	1-1/8	1-3/16	1-3/16	1-1/64
14-DBHU-14	7/8	3.328	1.031	2.094	.875	1.687	.718	2.531	1-1/4	1-3/8	1-3/8	1-9/64
16-DBHU-16	1	3.766	1.234	2.266	1.047	1.781	.875	2.812	1-1/2	1-5/8	1-5/8	1-21/64

**BULKHEAD TO AN FLARE UNION**

**Tylok**



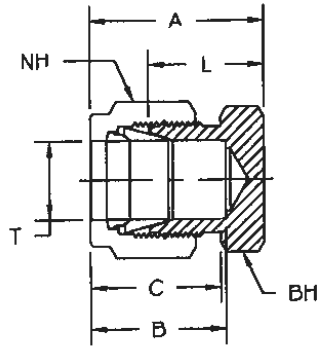
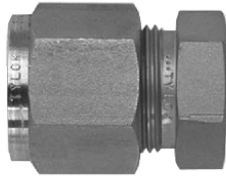
PART NUMBER	T TUBE O.D.	J THREAD	A	B	C	D	E THRU HOLE	F	L	NH NUT HEX	BH BODY HEX	JNH JAM NUT HEX	PANEL HOLE
2-DBUANF-2	1/8	5/16-24	1.906	.516	1.234	.453	.062	.969	1.656	7/16	1/2	1/2	21/64
3-DBUANF-3	3/16	3/8-24	1.984	.547	1.266	.484	.125	1.000	1.719	1/2	9/16	9/16	25/64
4-DBUANF-4	1/4	7/16-20	2.125	.609	1.328	.547	.172	1.031	1.828	9/16	5/8	5/8	29/64
5-DBUANF-5	5/16	1/2-20	2.219	.641	1.406	.547	.234	1.125	1.922	5/8	11/16	11/16	33/64
6-DBUANF-6	3/8	9/16-18	2.250	.656	1.453	.562	.281	1.156	1.969	11/16	11/16	3/4	37/64
8-DBUANF-8	1/2	3/4-16	2.594	.906	1.656	.656	.391	1.250	2.187	7/8	15/16	15/16	49/64
10-DBUANF-10	5/8	7/8-14	2.734	.969	1.687	.766	.484	1.281	2.234	1	1-1/16	1-1/16	57/64
12-DBUANF-12	3/4	1-1/16-12	3.109	.969	1.875	.859	.609	1.469	2.719	1-1/8	1-3/16	1-3/16	1-1/64
16-DBUANF-16	1	1-5/16-12	3.641	1.234	2.266	.906	.844	1.781	3.156	1-1/2	1-5/8	1-5/8	1-21/64

\*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation



**CAP**

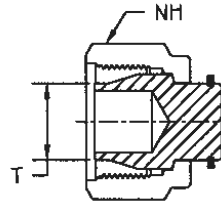


**Tylok**

PART NUMBER	T TUBE O.D.	A	B	C	L	BH BODY HEX	NH NUT HEX
1-DCAP	1/16	.594	.344	.437	.437	5/16	5/16
2-DCAP	1/8	.797	.500	.609	.531	7/16	7/16
3-DCAP	3/16	.844	.547	.625	.578	7/16	1/2
4-DCAP	1/4	.922	.609	.703	.625	1/2	9/16
5-DCAP	5/16	.969	.641	.734	.672	9/16	5/8
6-DCAP	3/8	1.016	.656	.766	.719	5/8	11/16
8-DCAP	1/2	1.156	.906	.859	.750	13/16	7/8
10-DCAP	5/8	1.188	.969	.859	.781	15/16	1
12-DCAP	3/4	1.234	.969	.859	.844	1-1/16	1-1/8
14-DCAP	7/8	1.344	1.016	.859	.937	1-3/16	1-1/4
16-DCAP	1	1.516	1.234	1.047	1.031	1-3/8	1-1/2

Instrumentation

**FITTING PLUG**



**Tylok**

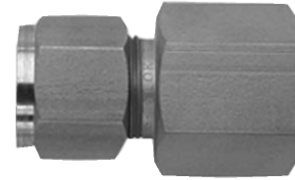
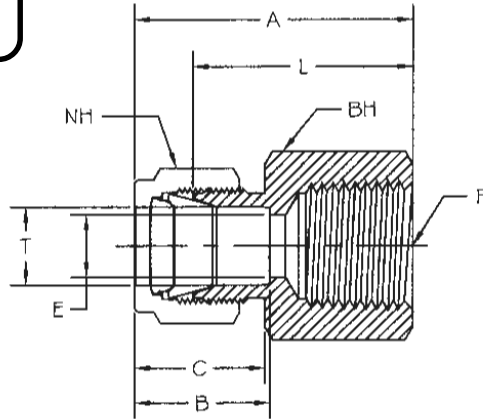
PART NUMBER	T TUBE O.D.	NH NUT HEX
1-DF PLUG	1/16	5/16
2-DF PLUG	1/8	7/16
3-DF PLUG	3/16	1/2
4-DF PLUG	1/4	9/16
5-DF PLUG	5/16	5/8
6-DF PLUG	3/8	11/16
8-DF PLUG	1/2	7/8
10-DF PLUG	5/8	1
12-DF PLUG	3/4	1-1/8
14-DF PLUG	7/8	1-1/4
16-DF PLUG	1	1-1/2

\*NOTE: All dimensions subject to change, to be used for reference only.



## FEMALE CONNECTOR

Tylok



PART NUMBER	T TUBE O.D.	P PIPE END NPT	A	B	C	E THRU HOLE	L	NH NUT HEX	BH BODY HEX
1-DFC-1	1/16	1/16	.937	.344	.437	.052	.782	5/16	7/16
1-DFC-2	1/16	1/8	.969	.344	.437	.052	.812	5/16	9/16
2-DFC-2	1/8	1/8	1.125	.500	.609	.094	.875	7/16	9/16
2-DFC-4	1/8	1/4	1.328	.500	.609	.094	1.062	7/16	3/4
2-DFC-6	1/8	3/8	1.390	.500	.609	.094	1.125	7/16	7/8
3-DFC-2	3/16	1/8	1.171	.547	.625	.125	.906	1/2	9/16
3-DFC-4	3/16	1/4	1.344	.547	.625	.125	1.094	1/2	3/4
3-DFC-8	3/16	1/2	1.594	.547	.625	.125	1.344	1/2	1-1/8
4-DFC-1	1/4	1/16	1.203	.609	.703	.187	.906	9/16	1/2
4-DFC-2	1/4	1/8	1.234	.609	.703	.187	.937	9/16	9/16
4-DFC-4	1/4	1/4	1.406	.609	.703	.187	1.125	9/16	3/4
4-DFC-6	1/4	3/8	1.484	.609	.703	.187	1.187	9/16	7/8
4-DFC-8	1/4	1/2	1.670	.609	.703	.187	1.375	9/16	1-1/16
5-DFC-2	5/16	1/8	1.266	.640	.734	.250	.969	5/8	9/16
5-DFC-4	5/16	1/4	1.453	.640	.734	.250	1.156	5/8	3/4
5-DFC-6	5/16	3/8	1.515	.640	.734	.250	1.218	5/8	7/8
5-DFC-8	5/16	1/2	1.703	.640	.734	.250	1.406	5/8	1-1/16
6-DFC-2	3/8	1/8	1.297	.656	.766	.281	1.000	11/16	5/8
6-DFC-4	3/8	1/4	1.484	.656	.766	.281	1.187	11/16	3/4
6-DFC-6	3/8	3/8	1.547	.656	.766	.281	1.250	11/16	7/8
6-DFC-8	3/8	1/2	1.734	.656	.766	.281	1.437	11/16	1-1/16
6-DFC-12	3/8	3/4	1.875	.656	.766	.281	1.593	11/16	1-1/4
8-DFC-4	1/2	1/4	1.593	.906	.859	.406	1.187	7/8	13/16
8-DFC-6	1/2	3/8	1.656	.906	.859	.406	1.250	7/8	7/8
8-DFC-8	1/2	1/2	1.843	.906	.859	.406	1.437	7/8	1-1/16
8-DFC-12	1/2	3/4	1.906	.906	.859	.406	1.500	7/8	1-1/4
8-DFC-16	1/2	1	2.265	.906	.859	.406	1.875	7/8	1-5/8
10-DFC-4	5/8	1/4	1.797	.969	.859	.281	1.406	1	15/16
10-DFC-6	5/8	3/8	1.656	.969	.859	.500	1.250	1	15/16
10-DFC-8	5/8	1/2	1.844	.969	.859	.500	1.437	1	1-1/16
10-DFC-12	5/8	3/4	1.953	.969	.859	.500	1.562	1	1-1/4
12-DFC-6	3/4	3/8	1.655	.969	.859	.500	1.265	1-1/8	1-1/16
12-DFC-8	3/4	1/2	1.844	.969	.859	.625	1.437	1-1/8	1-1/16
12-DFC-12	3/4	3/4	1.906	.969	.859	.625	1.500	1-1/8	1-1/4
12-DFC-16	3/4	1	2.265	.969	.859	.625	1.875	1-1/8	1-5/8
14-DFC-8	7/8	1/2	1.828	1.016	.859	.687	1.437	1-1/4	1-5/16
14-DFC-12	7/8	3/4	1.969	1.016	.859	.719	1.562	1-1/4	1-3/8
14-DFC-16	7/8	1	2.234	1.016	.859	.719	1.843	1-1/4	1-5/8
16-DFC-12	1	3/4	2.109	1.234	1.047	.875	1.625	1-1/2	1-3/8
16-DFC-16	1	1	2.453	1.234	1.047	.875	1.969	1-1/2	1-5/8

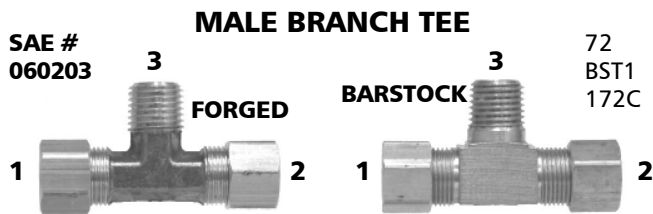
\*NOTE: All dimensions subject to change, to be used for reference only.

Instrumentation



**COMP X MALE PIPE  
(1 & 3) X 2**

Part #	Size
826C-02-02B	1/8x1/8
826C-03-02B	3/16x1/8
826C-04-02B	1/4x1/8
826C-04-04B	1/4x1/4
826C-05-02B	5/16x1/8
826C-05-04B	5/16x1/4
826C-06-02B	3/8x1/8
826C-06-04B	3/8x1/4
826C-06-06B	3/8x3/8
826C-08-06B	1/2x3/8
826C-08-08B	1/2x1/2
826C-10-08B	5/8x1/2
826C-12-08B	3/4x1/2



**COMP X MALE PIPE  
(1 & 2) X 3**

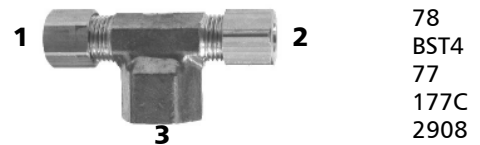
Part #	Size
BS825C-02-02B	BARSTOCK 1/8x1/8
825C-03-02B	3/16x1/8
BS825C-03-02B	BARSTOCK 3/16x1/8
825C-04-02B	1/4x1/8
BS825C-04-02B	BARSTOCK 1/4x1/8
825C-04-04B	1/4x1/4
825C-05-02B	5/16x1/8
825C-05-04B	5/16x1/4
825C-06-02B	3/8x1/8
825C-06-04B	3/8x1/4
BS825C-06-04B	BARSTOCK 3/8x1/4
825C-06-06B	3/8x3/8
825C-06-08B	3/8x1/2
825C-08-04B	1/2x1/4
BS825C-08-06B	BARSTOCK 1/2x3/8
825C-08-06B	1/2x3/8
825C-08-08B	1/2x1/2
825C-10-08B	5/8x1/2
825C-12-08B	3/4x1/2
825C-12-12B	3/4x3/4



**MALE PIPE X FEMALE PIPE X COMP**

Part #	Size
18-312	1/8x1/8
18-313	3/16x1/8
18-314	1/4x1/8
18-316	3/8x1/4

**FORGED TEE**



**COMP X FEMALE PIPE  
(1 & 2) X 3**

Part #	Size
856C-04-02B	1/4x1/8
856C-04-04B	1/4x1/4
856C-06-02B	3/8x1/8
856C-06-04B	3/8x1/4
856C-06-06B	3/8x3/8
856C-08-02B	1/2x1/8
856C-08-06B	1/2x3/8
856C-10-02B	5/8x1/8

**45° ELBOW**

SAE #	Size
060302	6945
	45BSE1
	74
	179C
	273
	77



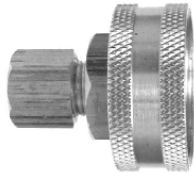
**COMP X MALE PIPE**

Part #	Size
823C-03-02B	3/16x1/8
823C-04-02B	1/4x1/8
823C-04-04B	1/4x1/4
823C-05-02B	5/16x1/8
823C-05-04B	5/16x1/4
823C-06-04B	3/8x1/4
823C-06-06B	3/8x3/8
823C-08-06B	1/2x3/8
823C-08-08B	1/2x1/2
823C-10-08B	5/8x1/2



**GARDEN HOSE SWIVEL**

• WASHER INCLUDED



**COMPRESSION X FEMALE**

<b>Part #</b>	<b>Size</b>
30-050 .....	1/4x3/4
30-051 .....	3/8x3/4

**DOUBLE COMPRESSION  
THREADED SLEEVE FITTINGS**

- Use with aluminum and copper tubing or plastic tubing with internal tube support. Not recommended for steel tubing.
- Easy to assemble, no flaring, two piece construction.
- For use on oil, air, water and grease lubrication systems.
- When design makes a dimension critical, contact us for information.

<b>Tube O.D.</b>	1/8	3/16	1/4	5/16	3/8
<b>Tread</b>	5/16-24	3/8-24	7/16-24	1/2-20	9/16-20
<b>Working Pressure</b>	500	500	500	250	250

**NUT**

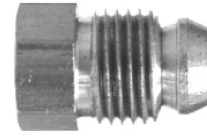


181  
6100  
11

<b>Part #</b>	<b>Size</b>
16-001 .....	1/8
16-002 .....	3/16
16-003 .....	1/4
16-004 .....	5/16
16-005 .....	3/8

“If you think you’re too small to make a difference, you haven’t been in bed with a mosquito.”  
- Anita Roddick

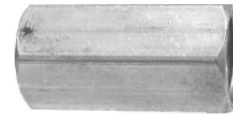
**BREAK-AWAY NUT**



181-BA  
21604  
99LB  
81LB

<b>Part #</b>	<b>Size</b>
16-010 .....	1/4
16-090 .....	3/16

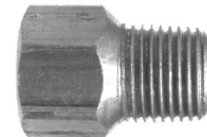
**THRD SLEEVE UNION**



182  
6300  
13

<b>Part #</b>	<b>Size</b>
16-013 .....	1/4

**MALE ADAPTER**



188  
6200  
12

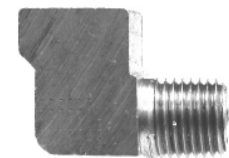
**THRD SLEEVE X MALE PIPE**

<b>Part #</b>	<b>Size</b>
16-117 .....	1/8x*
16-118 .....	1/8x1/8
16-119 .....	3/16x1/8
16-121 .....	1/4x1/8
16-122 .....	5/16x1/8
16-123 .....	3/4x1/4
*1/4-28 Male Thread Tapered	

**90° ELBOW**



**FORGED**



**BARSTOCK**

189  
6400  
15

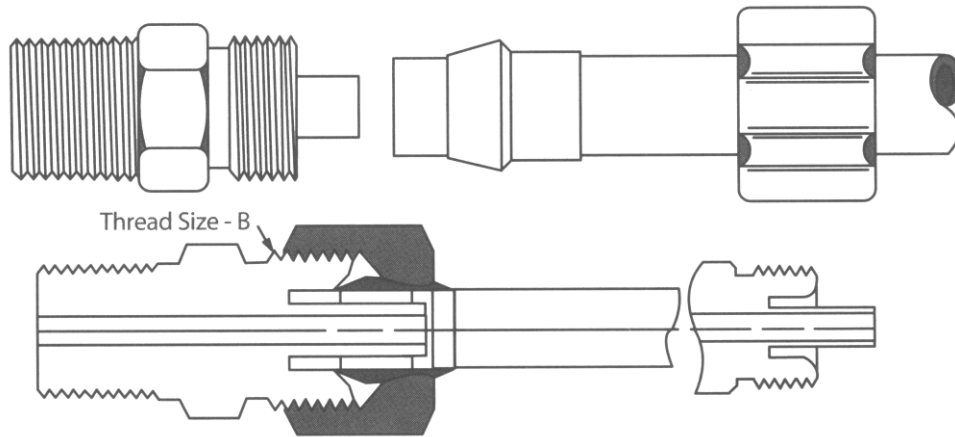
**THRD SLEEVE X MALE PIPE**

<b>Part #</b>	<b>Size</b>
16-127 .....	1/8x*
16-128 .....	1/8x1/8
16-129 .....	3/16x1/8
16-130 .....	1/4x1/8
16-130B .....	1/4x1/8
16-131 .....	5/16x1/8
16-132 .....	3/8x1/4
*1/4-28 Male Thread Tapered	



# FLARELESS

Flareless Brass Tube Fittings are interchangeable with Poly-Flo®, Poly-Tite® and Poly-Line®



Tube O.D.	1/8	3/16	1/4	5/16	3/8	7/16	1/2
Thread Size-B	5/16-24	3/8-24	3/8-24	3/8-24	7/16-24	1/2-24	11/16-20

#### •Typical Application

Pneumatic instrumentation circuits, lubricant and cooling lines.

#### •Working Pressure and Temperature Ranges

Up to 150 PSI from 0° to + 150°F with thermoplastic tubing. Up to 300 PSI from 0°.

#### •Maximum allowable metal tube wall thick-ness for use with Poly-Tite fittings:

1/8", 3/16" O.D. - no limitations, 1/4" O.D. - .035 5/16", 3/8", 1/2" O.D. - .049

#### •Temperature Range

Depends on tubing used. -65°F to +250°F (-53°C to +121°C) with brass sleeve, -40°F to +150°F (-40°C to +66°C) with plastic sleeve. (Refer to tubing temperature range.)

#### •Material

CA360 Brass body, plastic sleeve.

#### •Used With

Aluminum, copper, and hard plastic tubing to +175°F with soft metal tubing or steel requires brass sleeve. Not commended for steel tubing.

#### •Vibration

Excellent Resistance.

#### •Advantages

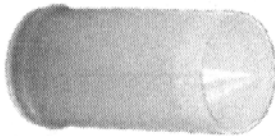
No flaring of tubing required. Easy installation, captive sleeve, pre-assembled for installation and can be reassembled.

#### •Assembly Instructions

- 1- Cut tubing to desired length.
- 2- Slide nut/sleeve assembly on tube. Threaded end "A" of nut must face toward fitting.
- 3- Bottom tubing into fitting.
- 4- Plastic sleeve - Tighten nut hand tight. Brass sleeve - Tighten nut hand tight, then additional 3/4 turn.



**PLASTIC CAP**



59P  
1229  
59P  
259P

Part #	Tube OD
20-201 .....	1/4
20-203 .....	3/8
20-204 .....	1/2

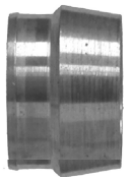
**PLASTIC SLEEVE**



60P  
260FF  
1260  
60P  
260P

Part #	Tube OD
20-205 .....	1/4
20-206 .....	5/16
20-207 .....	3/8
20-208 .....	1/2

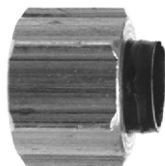
**BRASS SLEEVE**



260FB

Part #	Tube OD
20-380 .....	1/8
20-381 .....	3/16
20-382 .....	1/4
20-383 .....	5/16
20-384 .....	3/8
20-385 .....	1/2

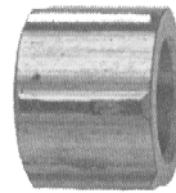
**NUT AND PLASTIC SLEEVE ASSEMBLY**



261PF  
1261  
61PN  
261U

Part #	Tube OD
818PF-04B .....	1/4
818PF-05B .....	5/16
818PF-06 .....	3/8
818PF-08B .....	1/2

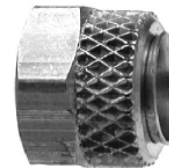
**NUT ONLY**



61PN  
1229  
59P  
259P  
261FPN

Part #	Tube OD	Thread
20-218 .....	1/8	5/16-24
20-219 .....	3/16	3/8-24
20-220 .....	1/4	3/8-24
20-221 .....	5/16	7/16-24
20-222 .....	3/8	1/2-24
20-223 .....	1/2	11/16-20

**UNIVERSAL NUT AND BRASS SLEEVE ASSEMBLY**



261PFB  
1261B  
61PB  
261UB

Part #	Tube OD
20-227 .....	1/8
20-228 .....	3/16
20-229 .....	1/4
20-230 .....	5/16
20-231 .....	3/8
20-232 .....	1/2

**UNION TUBE #M62C**



262S  
62PCA  
262PC

Part #	Tube OD
20-235 .....	1/4
20-237 .....	3/8



# Brass Fittings

**Poly Fit**

**Poly Fit**

**Brass**

**UNION**



262PF  
1262  
62P  
262P

Part #	Tube OD
815PF-02-02B	1/8
815PF-03-03B	3/16
815PF-04-04B	1/4
815PF-05-05B	5/16
815PF-06-06B	3/8
815PF-06-04B	3/8x1/4
815PF-08-08B	1/2

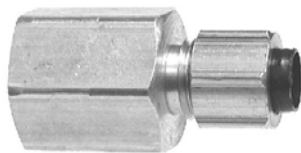
**UNION TEE**



1264  
164P  
264P

Part #	Tube OD
824PF-02B	1/8
824PF-03B	3/16
824PF-04B	1/4
824PF-05B	5/16
824PF-06B	3/8
824PF-06-04B	3/8x1/4
824PF-08B	1/2

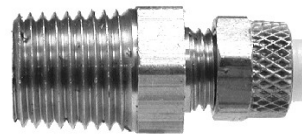
**FEMALE CONNECTOR**



1266  
66P  
266P

Part #	Tube OD	Female Pipe Thread
854PF-02-02B	1/8	1/8
854PF-03-02B	3/16	1/8
854PF-03-04B	3/16	1/4
854PF-04-02B	1/4	1/8
854PF-04-04B	1/4	1/4
854PF-05-02B	5/16	1/8
854PF-05-04B	5/16	1/4
854PF-06-02B	3/8	1/8
854PF-06-04B	3/8	1/4
854PF-08-06B	1/2	3/8

**MALE CONNECTOR**



1268  
68P  
268P

Part #	Tube OD	Male Pipe Thread
816PF-02-1/16B	1/8	1/16
816PF-02-02B	1/8	1/8
816PF-03-03B	3/16	1/8
816PF-04-1/16B	1/4	1/16
816PF-04-02B	1/4	1/8
816PF-04-04B	1/4	1/4
816PF-04-06B	1/4	3/8
816PF-05-02B	5/16	1/8
816PF-05-04B	5/16	1/4
816PF-06-02B	3/8	1/8
816PF-06-04B	3/8	1/4
816PF-06-06B	3/8	3/8
816PF-08-04B	1/2	1/4
816PF-08-06B	1/2	3/8
816PF-08-08B	1/2	1/2

**MALE ELBOW**



1269  
169P  
269P

Part #	Tube OD	Male Pipe Thread
822PF-02-1/16B	1/8	1/16
822PF-02-02B	1/8	1/8
822PF-03-02B	3/16	1/8
822PF-04-1/16B	1/4	1/16
822PF-04-02B	1/4	1/8
822PF-04-04B	1/4	1/4
822PF-04-06B	1/4	3/8
822PF-05-02B	5/16	1/8
822PF-06-02B	3/8	1/8
822PF-06-04B	3/8	1/4
822PF-06-06B	3/8	3/8
822PF-08-06B	1/2	3/8



# Brass Fittings

**Poly Fit**

**Poly Fit**

**Brass**

**UNION ELBOW**



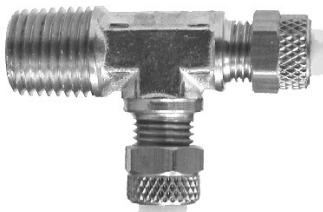
<b>Part #</b>	<b>Tube OD</b>
20-299 .....	1/4*
*For .062 wall tubing	

**FEMALE ELBOW**



	1270	
	170P	
	270P	
<b>Part #</b>	<b>Tube OD</b>	<b>Pipe Thread</b>
855PF-02-02B .....	1/8 .....	1/8
855PF-03-02B .....	3/16 .....	1/8
855PF-04-02B .....	1/4 .....	1/8
855PF-04-04B .....	1/4 .....	1/4
855PF-06-04B .....	3/8 .....	1/4
855PF-08-06B .....	1/2 .....	3/8

**MALE RUN TEE**

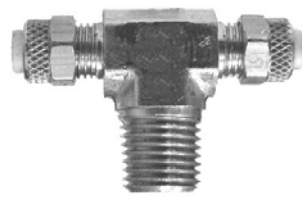


	1271	
	171P	
	271P	
<b>Part #</b>	<b>Tube OD</b>	<b>Male Pipe Thread</b>
826PF-02-02B .....	1/8 .....	1/8
826PF-03-02B .....	3/16 .....	1/8
826PF-04-02B .....	1/4 .....	1/8
826PF-04-04B .....	1/4 .....	1/4
826PF-05-02B .....	5/16 .....	1/8
826PF-06-04B .....	3/8 .....	1/4
826PF-08-06B .....	1/2 .....	3/8

People that values its privileges above its principles soon loses both.

Fitting Pictures are for reference only. Please contact us if specific style is needed.

**MALE BRANCH TEE**



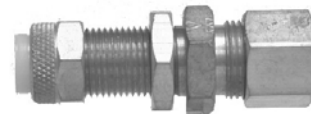
	1272	
	172P	
	272P	
<b>Part #</b>	<b>Tube OD</b>	<b>Male Pipe Thread</b>
825PF-02-02B .....	1/8 .....	1/8
825PF-03-02B .....	3/16 .....	1/8
825PF-04-02B .....	1/4 .....	1/8
825PF-04-04B .....	1/4 .....	1/4
825PF-05-02B .....	5/16 .....	1/8
825PF-06-02B .....	3/8 .....	1/8
825PF-06-04B .....	3/8 .....	1/4
825PF-08-06B .....	1/2 .....	3/8

**FEMALE BRANCH TEE**



	1277	
	177P	
	277P	
<b>Part #</b>	<b>Tube OD</b>	<b>Female Pipe Thread</b>
856PF-04-02B .....	1/4 .....	1/8
856PF-04-04B .....	1/4 .....	1/4

**BULKHEAD UNION**



	1274
<b>Part #</b>	<b>Tube OD</b>
20-333 .....	1/4
20-334 .....	3/8

**BULKHEAD NUT**

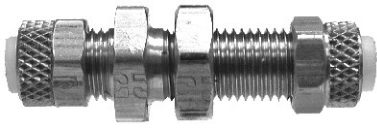


<b>Part #</b>	<b>Tube OD</b>
924PF-02B .....	1/8
924PF-04B .....	1/4
924PF-05B .....	5/16
924PF-06B .....	3/8
924PF-08B .....	1/2





**BULKHEAD UNION**



62PBH  
329P  
282P

Part #	Tube OD
832PF-04-04B	1/4
832PF-05-05B	5/16
832PF-06-06B	3/8

**QUICK DISCONNECT FITTING**



292P

when the tube is disconnected, flow shuts off automatically

Part #	Tube OD	Pipe Thread
20-344	1/4	1/8

**QUICK DISCONNECTOR COUPLERS**

**CHROME PLATED BRASS  
SINGLE END SHUT-OFF TYPE**

**TUBE X TUBE**



349P

Part #	Tube OD
20-401	1/4
20-403	3/8

**TUBE TO MALE THREAD**



398P

Part #	Tube OD	Pipe Thread
20-409	1/4	1/8
20-411	1/4	1/4
20-413	3/8	1/4

**INSERT ONLY**



393P

Part #	Tube OD
20-417	1/4
20-419	3/8

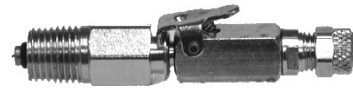
**DOUBLE END SHUT-OFF TYPE  
TUBE TO TUBE**



394P

Part #	Tube OD
20-425	1/4
20-427	3/8

**TUBE X MALE PIPE**



398PD

Part #	Tube OD	Pipe Thread
20-435	1/4	1/8
20-437	1/4	1/4
20-439	3/8	1/4

**INSERT ONLY**



Part #	Size
20-445	1/4

**CHROME PLATED NUT  
AND PLASTIC SLEEVE**



Part #	Tube OD
20-451	1/4
20-453	3/8

**TUBE CONNECTION  
SINGLE END OR DOUBLE END  
SHUT-OFF TYPE BODY ONLY**



392P

Part #	Tube OD
20-455	1/4
20-457	3/8

**MALE PIPE CONNECTION**

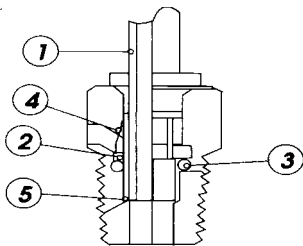


391P

Part #	Tube OD	Pipe Thread
20-461	1/4	1/8
20-463	1/4	1/4
20-465	3/8	1/4



- **QUICK CONNECT**, simply push tubing in, no tools. Saves up to 75% of assembly time of standard compression fittings.
- **QUICK DISCONNECT**, hold two fingers on insert and pull tubing out, no tools required.
- **REUSEABLE**, connect and disconnect numerous times.
- **FULL FLOW DESIGN**, provides up to 60% more flow area than conventional fittings with internal tube supports.
- **POSITIVE SEAL**, no leaks. After tubing is inserted, seal is made.
- **VERSATILE**. BunaN "O" rings standard. Other material of "O" rings available.
- **SECURE TUBE RETENTION**. Pulling on tubing only serves to tighten the connection.
- **SELF CONTAINED ASSEMBLY**, no loose parts, brass body and insert.
- **BRASS CONSTRUCTION**, Elbows and trees are forged brass.
- **CHOICE** of convenient swivel or economical stationary elbows and tees.
- **STRAIGHT CONNECTORS** have interior hex for Allen key tightening where space is limited...no need to use a wrench.
- **PRE-APPLIED TEFLON®** based pipe sealant on all male pipe threads, saving customer additional labor.
- **METRIC SIZES AVAILABLE**: Metric tube sizes from 2mm through 12mm in both standard NPT and metric pipe sizes are available on a special order basis.
- **WORKING PRESSURE**: The fitting is suitable for use up to the maximum working pressure of the plastic tubing used. For soft copper tube, a maximum pressure of 750 PSI is recommended.
- **WORKING TEMPERATURE**: -10°F to 200°F (other ranges available on request). Also suitable for vacuum service.
- **PIPE THREAD**: NPTF with Tefl on ® based sealant pre-applied.



When tubing (1) is inserted into the fitting, it first passes through the gripping teeth (2). Just beyond the gripping teeth is the o-ring (3) which provides the leak proof seal against the OD of the tube. The gripping teeth grab the tube, which expands the tube. Pulling back on the tube only tightens the grip as the insert moves onto the coning surface (4). Pressure thought the tube also serves to tighten the grip. The tube sure through the tube also serves to tighten the grip. The tube

bottoms against a positive tube stop (5) in a cavity providing bottoms against a positive tube stop (5) in a cavity providing tube support to prevent leakage.

## NICKEL PLATED BRASS GLOBAL THREAD

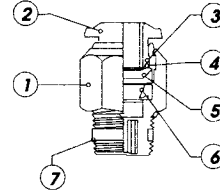
Works With Inch or Metric Threads



"Global Thread" fittings can be assembled assembled with female threads produced to the following standards.

Look for this  
Logo

Tapered NPTF  
Parallel (BSPP, BSP, ISO 7)  
Tapered (BSPT, PT, ISO 7, ISO 228)



1. BODY	BRASS - NICKEL PLATED
2. THRUST RING	PLASTIC
3. SLEEVE	BRASS - NICKEL PLATED
4. GRIPPER COLLET	STAINLESS STEEL
5. SAFETY RING	PA66
6. LIPSEAL (1/8 O-RING SEAL)	NBR 70
7. THREAD SEAL	NBR 70

### COMPONENT PARTS AND MATERIALS PRESSURES RATING

0-250 PSI Vacuum Compatible

### TUBING

Nylon, Polyethylene, Polyurethane 95  
Durometer or higher.

### TEMPERATURE RATING

0-160 F -18-70 C

### MEDIA

Compressed air, water.

### Global Thread Features:

- No need to stock both inch and metric fittings  
Reduce inventory by stocking Global Thread
- Stainless Steel gripper collet ensures superior gripping on all types of tubing.
- Global Thread fitting can endure applications of high impact and vibration.
- Lip seal has exceptional sealing capability in both pressure and vacuum.
- All Global Thread fittings have reusable thread seal for ease of installation.

**Reduce Inventory  
Stock GLOBAL THREAD**

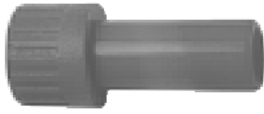
# Nickel Plated Push-In Fittings

# Brass Fittings

# Nickel Plated Push-In Fittings

Brass

## PLASTIC PLUG



284PP  
AQ59  
209-OF  
1129  
6900  
639PL  
12-004  
50-526

Part #	Size
806-53PI	5/32
806-04PI	1/4
806-05PI	5/16
806-06PI	3/8
806-08PI	1/2

## UNION CONNECTOR

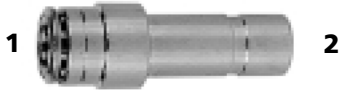


12-020	AQ62
50-562	6580
262-OF	3106
1162	63PL
262PP	KQH

## NICKEL PLATED

Part #	Size
815-02-02PI	1/8
815-53-53PI	5/32
815-04-04PI	1/4
815-06-04PI	3/8x1/4
815-06-06PI	3/8
815-08-08PI	1/2

## REDUCER



67PPL  
286PP

## NICKEL PLATED

Part #	Tube 1	Tube 2
20-510	1/4	1/8
20-511	1/4	5/31
20-512	3/8	1/4

## UNION TEE



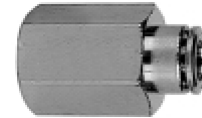
KQT  
12-060  
50-564  
2640F

264PP  
AQ64  
6540  
3140  
164PL

## NICKEL PLATED

Part #	Tube OD
824-02PI	1/8
824-53PI	5/32
824-03PI	3/16
824-04PI	1/4
824-05PI	5/16
824-06PI	3/8
824-08PI	1/2

## FEMALE CONNECTOR



266PP  
AQ66  
6463  
66PL  
12-426  
50-566  
266-OF  
1166

## NICKEL PLATED

Part #	Tube O.D.	Pipe Thread
854-02-02PI	1/8	1/8
854-02-04PI	1/8	1/4
854-04-02PI	1/4	1/8
854-04-04PI	1/4	1/4
854-06-04PI	3/8	1/4
854-06-06PI	3/8	3/8

## FIXED MALE ELBOW



269PP  
AQ69-P  
6500  
169PLNS

1169

## NICKEL PLATED

Part #	Tube O.D.	Pipe Thread
822-02-02PI	1/8	1/8
822-53-02PI	5/32	1/8
822-03-02PI	3/16	1/8
822-04-02PI	1/4	1/8
822-04-04PI	1/4	1/4
822-04-06PI	1/4	3/8
822-06-02PI	3/8	1/8
822-06-04PI	3/8	1/4
822-06-06PI	3/8	3/8
822-08-04PI	1/2	1/4
822-08-06PI	1/2	3/8
822-08-08PI	1/2	1/2



# Nickel Plated Push-In Fittings

# Brass Fittings

# Nickel Plated Push-In Fittings

**Brass**

## MALE CONNECTOR



268PP  
AQ68  
6510  
3115  
68PL



KQH  
12-425  
50-568  
268-0F  
1168

**NICKEL PLATED**

Part #	Tube O.D.	Pipe Thread
816-02-32PI	1/8	10-32*
816-02-02PI	1/8	1/8
816-02-04PI	1/8	1/4
816-53-32PI	5/32	10-32*
816-53-02PI	5/32	1/8
816-53-04PI	5/32	1/4
816-03-32PI	3/16	10-32*
816-03-02PI	3/16	1/8
816-04-32PI	1/4	10-32*
816-04-02PI	1/4	1/8
816-04-04PI	1/4	1/4
816-04-06PI	1/4	3/8
816-05-02PI	5/16	1/8
816-05-04PI	5/16	1/4
816-05-06PI	5/16	3/8
816-06-02PI	3/8	1/8
816-06-04PI	3/8	1/4
816-06-06PI	3/8	3/8
816-06-08PI	3/8	1/2
816-08-04PI	1/2	1/4
816-08-06PI	1/2	3/8
816-08-08PI	1/2	1/2

## SWIVEL MALE ELBOW



AQ69-PS  
56520  
3109  
169PL  
KQL



12-447  
50-579  
269-OFS  
11695

**NICKEL PLATED**

Part #	Tube O.D.	Pipe Thread
822-02-02PIR	1/8	1/8
822-03-04PIR	1/8	1/4
822-53-02PIR	5/32	1/8
822-53-32PIR	5/32	10-32
822-53-04PIR	5/32	1/4
822-04-02PIR	1/4	1/8
822-04-32PIR	1/4	10-32
822-04-04PIR	1/4	1/4
822-04-06PIR	1/4	3/8
822-05-04PIR	5/16	1/4
822-05-06PIR	5/16	3/8
822-06-02PIR	3/8	1/8
822-06-04PIR	3/8	1/4
822-06-06PIR	3/8	3/8
822-06-08PIR	3/8	1/2
822-08-06PIR	1/2	3/8
822-08-08PIR	1/2	1/2

## UNION ELBOW

AQ65  
6550  
3102  
165PL



KQL  
12-040  
50-565  
265-0F

**NICKEL PLATED**

Part #	Tube O.D.
821-02-02PI	1/8
821-53PI	5/32
821-04-04PI	1/4
821-05-05PI	5/16
821-06-06PI	3/8
821-08-08PI	1/2

## FEMALE ELBOW

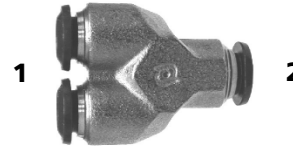


AQ70-P  
3009

**NICKEL PLATED**

Part #	Tube O.D.	Pipe Thread
855-53-02PI	5/32	1/8
855-04-02PI	1/4	1/8
855-04-04PI	1/4	1/4
855-06-04PI	3/8	1/4

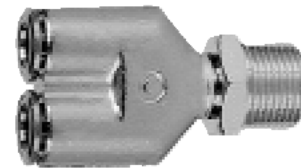
## UNION "Y"



**NICKEL PLATED**

Part #	Tube 1	Tube 2
6560-02-00	1/4	1/8
6560-04-00	1/4	1/4

## MALE "Y"



12-445  
50-569

**PLAIN BRASS**

Part #	Tube O.D.	Pipe Thread
6450-04-04	1/4	1/4

**SWIVEL MALE RUN TEE**

AQ70-PS  
56440  
3103  
171PL  
KQY



12-468  
50-571  
271-OFS  
11715

**NICKEL PLATED**

Part #	Tube O.D.	Pipe Thread
826-04-02PIR	1/4	1/8
826-04-04PIR	1/4	1/4
826-06-06PIR	3/8	3/8
826-08-04PIR	1/2	1/4
826-08-06PIR	1/2	3/8

**SWIVEL MALE BRANCH TEE**

KQT  
12-060  
50-564  
264OF



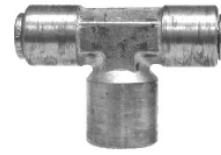
AQ64  
6540  
3140  
64PL

**NICKEL PLATED**

Part #	Tube O.D.	Pipe Thread
825-02-02PIR	1/8	1/8
825-53-03PIR	5/32	10/32
825-53-08PIR	5/32	1/8
825-04-02PIR	1/4	1/8
825-04-04PIR	1/4	1/4
825-06-04PIR	3/8	1/4
825-06-06PIR	3/8	3/8
825-08-06PIR	1/2	3/8
825-08-08PIR	1/2	1/2

*Send DF Burnham & Company  
all your high volume quotes!*

**FEMALE BRANCH TEE**



AQ77-P  
3008  
177PL

**PLAIN BRASS**

Part #	Tube O.D.	Pipe Thread
856-04-02PI	1/4	1/8
856-04-04PI	1/4	1/4
856-06-04PI	3/8	1/4

**BULKHEAD UNION**

AQ82-P  
6590  
62PLBH  
KQE

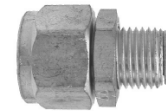


12-029  
50-582  
282-OF  
1174

**NICKEL PLATED**

Part #	Tube O.D.	Pipe Thread
832-03-03PI	3/16	1/2-20
832-04-04PI	1/4	1/2-20
832-05-05PI	5/16	
832-06-06PI	3/8	5/8-18
832-08-08PI	1/2	3/4-16

**FEMALE BULKHEAD UNION**



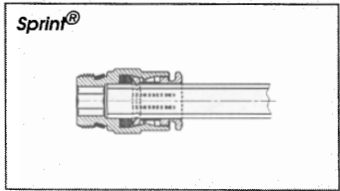
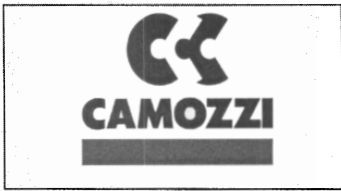
AQ86-P

**PLAIN BRASS**

Part #	Tube O.D.	Pipe Thread
20-170	1/4	1/8
20-171	1/4	1/4
20-172	3/8	1/4

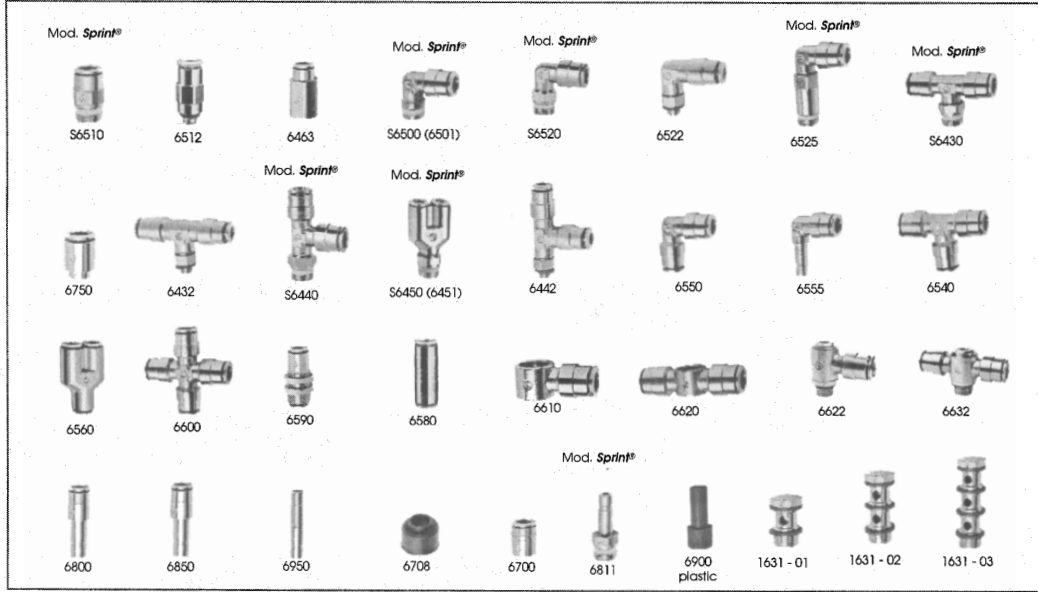


**Super-rapid fittings  
for plastic tubes Sprint®**  
Connections M5, G1/8, G1/4, G3/8, G1/2  
Tube od 4 - 5 - 6 - 8 - 10 - 12 - 14



Super-rapid fittings are available in 34 different models. Connection and disconnection of the tube, can be repeated several times and is performed with one hand only and without the use of tools. The sealing ring (O-ring) can be easily replaced if it is damaged or should the rubber compound from which it is made wear with time.

General data	
material	brass OT58, nickel-plated
threads	GAS, conical (BSPT) GAS, cylindrical (BSP) M5 - M6 NPT and metric (available on request)
pressure	min. 0 - max. 16 bar (see tubes)
tube to connect	riisan polyurethane 6 - 11 - 12
diameters	4, 5, 6, 8, 10, 12, 14
fluid	compressed air (for other types of fluid, contact our engineers)
temperature	-10°C to +60°C (see data for tubing used)



Mod.	A	D	C	E	F	H	M	SW	SW1	L
6525	- 6 -	1/8	6.5	33.8	12.7	5.5	22.5	10	12	
6525	- 6 -	1/4	6.5	34	12.7	7	22.5	10	14	
6525	- 8 -	1/8	7.5	34.8	15	5.5	25	12	12	
6525	- 8 -	1/4	7.5	35	15	7	25	12	14	

Mod.	A	G	C	L	F	T	M	SW
6555	- 4 -	4	6	24	10	16.5	20	9
6555	- 6 -	6	6.5	26	12.7	18	22.5	10
6555	- 8 -	8	7.5	30	15	20	25	12
6555	- 10 -	10	8.5	33.5	17.5	23	28.5	14

\* with Mod. 2661 assembled

Mod.	A	D	F	H	M	L
*6451	- 4 -	M5	18		10	27
*6451	- 6 -	M5	24.5		12.5	31
Mod.	A	D	F	H	M	L
S6450	- 4 -	1/8	21	5.5	10	38
S6450	- 6 -	1/8	24.5	5.5	12.5	41.5
S6450	- 8 -	1/8	29.5	5.5	14.5	48.5
S6450	- 8 -	1/4	29.5	7	14.5	50

The company reserves the right to vary models and dimensions without notice. These products are designed for industrial applications and are not suitable for sale to the general public.

Mod. Sprint®

Mod.	A	D	C	F	G	H	L	SW	SW1
S6510 - 4 - 1/8	3.8	8.8	13.2	5.5	18	12	2.5		
S6510 - 4 - 1/4	6	8.8	15.2	7	19.5	14	2.5		
S6510 - 5 - 1/8	3.8	9.8	13.2	5.5	19	12	3		
S6510 - 5 - 1/4	5.5	9.8	15.2	7	20	14	3		
S6510 - 6 - 1/8	5	11.7	13.2	5.5	22	12	4		
S6510 - 6 - 1/4	5.5	11.7	15.2	7	21	14	4		
S6510 - 8 - 1/8	7.5	13.7	15.2	5.5	25	14	5		
S6510 - 8 - 1/4	6.5	13.7	15.2	7	24	14	6		
S6510 - 8 - 3/8	6.5	13.7	20.5	8	23.5	19	6		
S6510 - 10 - 1/4	8.5	16.3	18.5	7	28.5	17	7		
S6510 - 10 - 3/8	5.25	16.3	20.5	8	25.5	19	8		
S6510 - 10 - 1/2	5	16.3	24.5	9	25	22	8		
S6510 - 12 - 1/4	10.5	18.3	20.5	7	31.5	19	7		
S6510 - 12 - 3/8	9.5	18.3	20.5	8	30.5	19	9		
S6510 - 12 - 1/2	6	18.3	24.5	9	27	22	10		
S6510 - 14 - 3/8	10.5	21	24.5	8	33.5	22	9		
S6510 - 14 - 1/2	6.5	21	24.5	9	29.5	22	12		

with O-Ring assembled

Mod.	A	D	C	F	G	H	L	SW	SW1
6512 - 4 - M5	5.5	7.8	8.8	3.5	19.5	8	2		
6512 - 5 - M5	5.5	8.8	9.9	3.5	20.5	9	2		
6512 - 6 - M5	5.5	11.7	13.2	3.5	21.5	12	2		

Mod.	A	D	C	F	G	H	L	SW
6463 - 4 - M5	6.5	8.8	9.9	5	20.5	9		
6463 - 4 - 1/8	9.5	9	15.2	7.5	23.5	14		
6463 - 5 - 1/8	10	9.8	15.2	7.5	25	14		
6463 - 6 - 1/8	9.5	11.7	15.2	7.5	25.5	14		
6463 - 6 - 1/4	13	11.7	18.5	11	29	17		
6463 - 8 - 1/8	10	13.7	15.2	7.5	27.5	14		
6463 - 8 - 1/4	13.5	13.7	18.5	11	31.5	17		
6463 - 10 - 1/4	13.5	16.3	18.5	11	33.5	17		

Mod. Sprint®

Mod.	A	D	C	E	F	H	L	SW	SW1
S6430 - 4 - 1/8	6	14.5	10	5.5	40	9	12		
S6430 - 5 - 1/8	6	14.5	11	5.5	42	9	12		
S6430 - 5 - 1/4	6	14.5	11	7	42	9	14		
S6430 - 6 - 1/8	6.5	15	12.7	5.5	45	10	12		
S6430 - 6 - 1/4	6.5	15	12.7	7	45	10	14		
S6430 - 8 - 1/8	7.5	16	15	5.5	50	12	12		
S6430 - 8 - 1/4	7.5	16	15	7	50	12	14		
S6430 - 8 - 3/8	7.5	16.5	15	8	50	12	19		
S6430 - 10 - 1/4	8.5	18.5	17.5	7	57	14	14		
S6430 - 10 - 3/8	8.5	19	17.5	8	57	14	19		
S6430 - 12 - 1/4	10	20	19.5	7	62	16	17		
S6430 - 12 - 3/8	10	20	19.5	8	62	16	19		
S6430 - 12 - 1/2	10	20.5	19.5	9	62	16	22		
S6430 - 14 - 1/2	12	21.5	22	9	70	18	22		

with O-Ring assembled

Mod.	A	D	C	E	F	H	L	SW	SW1
6432 - 4 - M5	6	12.5	10	3.5	40	9	8		
6432 - 5 - M5	6	12.5	11	3.5	42	9	8		

\* assembly required with Mod. 1635  
\* assembly possible only with Mod. SCU, SVU, SCO... M5

Mod.	A	V	C	F	M	O	V	W
6610 - 4 - M5	5	9	19	9	5.1	9		
6610 - 4 - M6	5	9	19	9	5.1	9		
6610 - 4 - 1/8	8.5	10	22.5	14.5	9.8	14		
6610 - 5 - M5	5	10	20	9	5.1	10		
6610 - 5 - M6	5	10	20	9	5.1	10		
6610 - 5 - 1/8	8.5	11	23.5	14.5	9.8	14		
6610 - 6 - M5	6.5	12.7	22.5	9	5.1	10		
6610 - 6 - M6	6.5	12.7	22.5	9	5.1	10		
6610 - 6 - 1/8	8.5	12.7	24.5	14.5	9.8	14		
6610 - 6 - 1/4	10.5	12.7	26.5	14.5	13.2	18		
6610 - 8 - 1/8	8.5	15	26	14.5	9.8	14		
6610 - 8 - 1/4	10.5	15	28	14.5	13.2	18		
6610 - 8 - 3/8	11.5	15	29	14.5	16.7	21		
6610 - 10 - 1/4	10	17.5	30	14.5	13.2	18		
6610 - 10 - 3/8	11.5	17.5	31.5	14.5	16.7	21		
6610 - 12 - 1/2	14	19.5	35	14.5	21	26		

The dimensions of the banjo bolts, Mod. 1631-01, Mod. 1631-02 and Mod. 1631-03 are given on page 7.05.013 and 7.05.023.

Mod.	A	C	F	L	O	V	W
6620 - 4 - M5	5	9	38	9	5.1	9	
6620 - 4 - 1/8	8.5	10	45	14.5	9.8	14	
6620 - 6 - 1/8	8.5	12.7	49	14.5	9.8	14	
6620 - 6 - 1/4	10.5	12.7	53	14.5	13.2	18	
6620 - 8 - 1/8	8.5	15	52	14.5	9.8	14	
6620 - 8 - 1/4	10.5	15	56	14.5	13.2	18	

Mod.	A	G	L
6750	4	8.8	15
6750	6	11.8	17
6750	8	13.8	18.5
6750	10	15.8	21
6750	12	17.8	22

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Mod.	A	F	G	L	N
6580 - 4	8.8	10	30	14	
6580 - 5	9.8	11	33	14.5	
6580 - 6	11.7	12	34	15.5	
6580 - 8	13.7	14	38	17.5	
6580 - 10	16.3	17	42.5	20	
6580 - 12	18.3	19	44.5	21	
6580 - 14	21	22	48	23	

Mod.	A	B	F	L	N	MAX	SW	SW1	T
6590 - 4	M10 x 1	8.6	30	14	10.5	14	14	20	
6590 - 5	M12 x 1	9.8	33	14.5	10.5	17	17	20	
6590 - 6	M14 x 1	12.5	34	15.5	10.5	17	17	20	
6590 - 8	M16 x 1	14.5	38	17.5	11.5	19	19	21	
6590 - 10	M18 x 1	16.3	42.5	20	13	22	22	23.5	
6590 - 12	M20 x 1	18.3	44.5	21	14.5	24	24	25	
6590 - 14	M22 x 1	20.5	48	23	17.5	27	27	30	

Mod.	A	C	F	M	SW
6550 - 4	6	10	20	9	
6550 - 5	6	11	21	9	
6550 - 6	6.5	12.7	22.5	10	
6550 - 8	7.5	15	25	12	
6550 - 10	8.5	17.5	28.5	14	
6550 - 12	10	19.5	31	17	
6550 - 14	12	22	35	19	

Mod.	A	C	F	L	M	SW
6540 - 4	6	10	40	20	9	
6540 - 5	6	11	42	21	9	
6540 - 6	6.5	12.7	45	22.5	10	
6540 - 8	7.5	15	50	25	12	
6540 - 10	8.5	17.5	57	28.5	14	
6540 - 12	10	19.5	62	31	17	
6540 - 14	12	22	70	35	19	

Mod.	A	F	L	M	SW
6600 - 4	10	40	20	9	
6600 - 5	11	42	21	9	
6600 - 6	12.7	45	22.5	10	
6600 - 8	15	50	25	12	
6600 - 10	17.5	57	28.5	14	
6600 - 12	19.5	62	31	16	

Mod.	A	C	F	L	M
6560 - 4	6	18	33	10	
6560 - 6	7	24.5	39	12.5	
6560 - 8	9	29.5	44	14.5	
6560 - 10	15.5	33.5	53.5	16	

Mod.	A	G	C	F	L	T
6800 - 4	5	20	10	34	18	
6800 - 4	6	20	10	34	18	
6800 - 4	8	19	10	33	20.5	
6800 - 5	6	20	11	35	18	
6800 - 5	8	19	11	34	20.5	
6800 - 6	8	22.5	13	38.5	20.5	
6800 - 6	10	21	13	36.5	23	
6800 - 6	12	22	13	37.5	24	
6800 - 8	10	25	14	42.5	23	
6800 - 8	12	22.5	14	40	24	
6800 - 10	12	25.5	17	45.5	24	
6800 - 10	14	25.5	17	45.5	28	
6800 - 12	14	30	18.8	51	28	

Mod.	A	G	C	F	L	T
6850 - 6	4	19	13	34.5	16.5	
6850 - 8	6	23.5	14	41	18	

Mod. Sprint®  
\* with O-Ring assembled

Mod.	G	D	H	T	LSW
6811 - 4	M5	3.5	16.5	24	8
6811 - 4	1/8	5.5	16.5	27.8	12
6811 - 5	1/8	5.5	18	29.3	12
6811 - 5	1/4	7	18	31	14
6811 - 6	1/8	5.5	18	29.3	12
6811 - 6	1/4	7	18	31	14
6811 - 8	1/8	5.5	20.5	31.8	12
6811 - 8	1/4	7	20.5	33.5	14
6811 - 10	1/4	7	23	36	14
6811 - 10	3/8	8	23	37.3	19
6811 - 12	3/8	8	24	38.3	19
6811 - 14	1/2	9	28	44	22

\* metallic seat +0.05  
0  
synthetic seat +0.03  
-0.02

Mod.	A	F	G	L	Misura	S	H	B
6700 - 4	8.6	9	14.5	4	8.75	11	3.5	
6700 - 5	9.6	10	15.5	5	9.75	11.5	3.5	
6700 - 6	11.8	12.2	16.5	6	11.95	12	4	
6700 - 8	13.8	14.2	18	8	13.95	14	6	
6700 - 10	15.8	16.2	20.5	10	15.95	15	8	

Mod.	G	L
6950 - 4		32.5
6950 - 6		35.5
6950 - 8		40.5
6950 - 10		46
6950 - 12		48
6950 - 14		52

plastic

Mod.	G	L	P	T
6900 - 4		25	8	16
6900 - 5		25.5	8	16.5
6900 - 6		26.5	8	17.5
6900 - 8		29.5	12	19.5
6900 - 10		32	12	22
6900 - 12		35.5	16	23.5
6900 - 14		37.5	16	25.5

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Mod. Sprint®

Mod.	A	D	C	E	F	H	M	SW
S6500 - 4 - 1/8	6	8.5	10	7.5	20	9		
S6500 - 4 - 1/4	6	10.5	10	11	20	9		
S6500 - 5 - 1/8	6	8.5	11	7.5	21	9		
S6500 - 5 - 1/4	6	10.5	11	11	21	9		
S6500 - 6 - 1/8	6.5	10	12.7	8.5	22.5	10		
S6500 - 6 - 1/4	6.5	11.5	12.7	11.5	22.5	10		
S6500 - 8 - 1/8	7.5	10.5	15	8.5	25	12		
S6500 - 8 - 1/4	7.5	12	15	11	25	12		
S6500 - 8 - 3/8	7.5	12	15	11.5	25	12		
S6500 - 10 - 1/4	7.5	14	17.5	11.5	28.5	14		
S6500 - 10 - 3/8	7.5	13.5	17.5	11.5	28.5	14		
S6500 - 12 - 1/4	10	15.5	19.5	11.5	31	16		
S6500 - 12 - 3/8	10	15	19.5	11.5	31	16		

Mod. Sprint®

Mod.	A	D	C	E	F	H	M	SW	SW1
S6520 - 4 - 1/8	6	14.5	10	5.5	20	9	12		
S6520 - 4 - 1/4	6	14.5	10	7	20	9	14		
S6520 - 5 - 1/8	6	14.5	11	5.5	21	9	12		
S6520 - 5 - 1/4	6	14.5	11	7	21	9	14		
S6520 - 6 - 1/8	6.5	15	12.7	5.5	22	10	12		
S6520 - 6 - 1/4	6.5	15	12.7	7	22.5	10	14		
S6520 - 8 - 1/8	7.5	16	15	5.5	25.5	12	12		
S6520 - 8 - 1/4	7.5	16	15	7	25	12	14		
S6520 - 8 - 3/8	7.5	16.5	15	8	25	12	19		
S6520 - 10 - 1/4	8.5	18.5	17.5	7	28.5	14	14		
S6520 - 10 - 3/8	8.5	19	17.5	8	28.5	14	19		
S6520 - 10 - 1/2	8.5	19.5	17.5	9	28.5	14	22		
S6520 - 12 - 1/4	10	20	19.5	7	31	16	17		
S6520 - 12 - 3/8	10	20	19.5	8	31	16	19		
S6520 - 12 - 1/2	10	20.5	19.5	9	31	16	22		
S6520 - 14 - 3/8	12	21	22	8	35	18	19		
S6520 - 14 - 1/2	12	21.5	22	9	35	18	22		

with O-Ring assembled

Mod.	A	D	C	E	F	H	M	SW	SW1
6522 - 4 - M5	6	13	10	3.5	20	9	8		
6522 - 5 - M5	6	13	11	3.5	21	9	8		
6522 - 6 - M5	6.5	13.5	12.7	3.5	22.5	10	10		

with O-Ring assembled

Mod.	A	D	C	E	F	H	M	SW
6501 - 4 - M5	6	10.5	10	4	20	9		

Mod. Sprint®

Mod.	A	D	C	E	F	H	L	M	SW	SW1
S6440 - 4 - 1/8	6	14.5	10	5.5	40	20	9	12		
S6440 - 5 - 1/8	6	14.5	11	5.5	41	21	9	12		
S6440 - 6 - 1/8	6.5	15	12.7	5.5	42.5	22.5	10	12		
S6440 - 6 - 1/4	6.5	15	12.7	7	44	22.5	10	14		
S6440 - 8 - 1/8	7.5	16	15	5.5	46.5	25	12	12		
S6440 - 8 - 1/4	7.5	16	15	7	48	25	12	14		
S6440 - 8 - 3/8	7.5	16.5	15	8	49.5	25	12	19		
S6440 - 10 - 1/4	8.5	18.5	17.5	7	54	28.5	14	14		
S6440 - 10 - 3/8	8.5	18.5	17.5	8	55.5	28.5	14	19		
S6440 - 12 - 3/8	10	19.5	19.5	8	59	31	16	19		
S6440 - 14 - 1/2	12	21.5	22	9	65.5	35	18	22		

with O-Ring assembled

Mod.	A	D	C	E	F	H	L	M	SW	SW1
6442 - 4 - M5	6	12.5	10	3.5	36	20	9	8		
6442 - 5 - M5	6	12.5	11	3.5	36.5	21	9	8		

Self-extinguishing material black colour

Mod.	A	F	L
6708	4	10.7	10
6708	5	11.7	10.5
6708	6	13.7	11
6708	8	15.7	12
6708	10	18.5	12.5
6708	12	20.7	14.5
6708	14	23.7	14.5

with O-Ring assembled

Mod.	A	B	C	F	M	W	H	L	SW
6622 - 4 - 1/8	8.5	10	22.5	14	6	26	4		
6622 - 6 - 1/8	8.5	12.7	24.5	14	6	26	4		
6622 - 6 - 1/4	10.5	12.7	26.5	18	7	27	5		
6622 - 8 - 1/8	8.5	15	26	14	6	26	4		
6622 - 8 - 1/4	10.5	15	28	18	7	27	5		
6622 - 10 - 1/4	10	17.5	30	18	7	27	5		

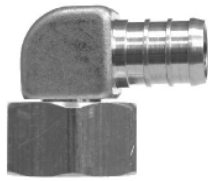
with O-Ring assembled

Mod.	A	B	C	F	M	W	H	L	SW
6632 - 4 - 1/8	8.5	10	45	14	6	26	4		
6632 - 6 - 1/8	8.5	12.7	49	14	6	26	4		
6632 - 6 - 1/4	10.5	12.7	53	18	7	27	5		
6632 - 8 - 1/8	8.5	15	52	14	6	26	4		
6632 - 8 - 1/4	10.5	15	56	18	7	27	5		
6632 - 10 - 1/4	10	17.5	60	18	7	27	5		

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**WATER HEATER CONNECTION**



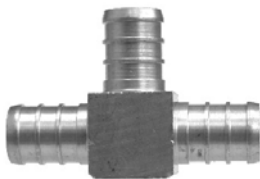
Part #	Size
37-440 .....	1/2 FIP Swivel x PEX Long Turn

**BRASS PEX INSERT ELBOW  
PEX X PEX**



Part #	Size
37-460 .....	1/2x1/2
37-461 .....	3/4x3/4

**PEX INSERT TEE**



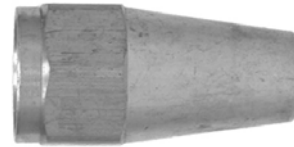
Part #	Size
37-451 .....	1/2
37-452 .....	1/2x1/2x3/4
37-453 .....	3/4x1/2x1/2
37-454 .....	3/4x1/2x3/4
37-455 .....	3/4x3/4x1/2
37-456 .....	3/4
37-457 .....	1x1x1/2
37-458 .....	1

**PEX INSERT COUPLING  
PEX X PEX**



Part #	Size
37-462 .....	1/2x1/2
27-463 .....	3/4x1/2
37-464 .....	3/4x3/4
37-465 .....	1x3/4
37-468 .....	1

**MALE INSERT COUPLING  
MALE SWEAT X PEX**



Part #	Size
37-472 .....	1/2x1/2
37-473 .....	3/4x3/4
37-477 .....	1

**FEMALE SWEAT X PEX**

37-474 .....	1/2x1/2
37-475 .....	3/4x3/4

**ADAPTER POLY X PEX**



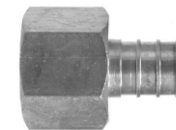
Part #	Size
37-442 .....	1/2
37-443 .....	3/4

**TEXT PLUGS**



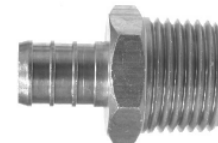
Part #	Size
37-444 .....	1/2
37-445 .....	3/4

**FEMALE ADAPTER**



Part #	Size
37-466 .....	1/2 Barb x 1/2 FPT
37-467 .....	3/4 Barb x 3/4 FPT

**INSERT MALE ADAPTER PEX X MPT**

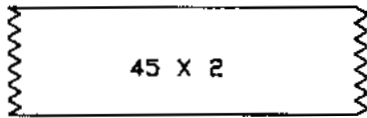
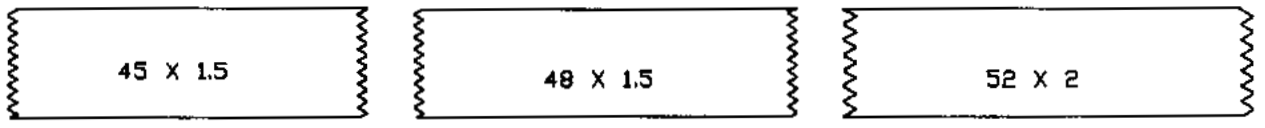
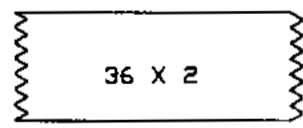
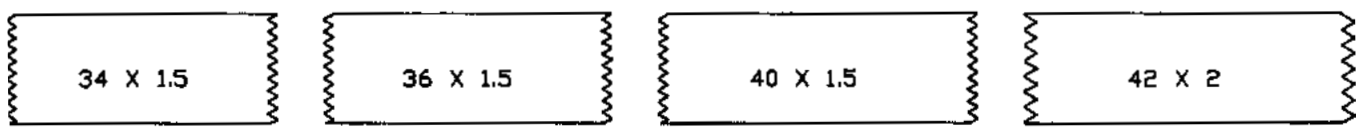
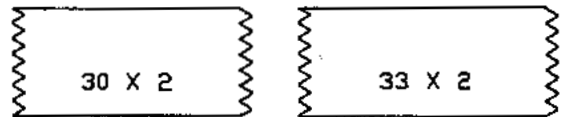
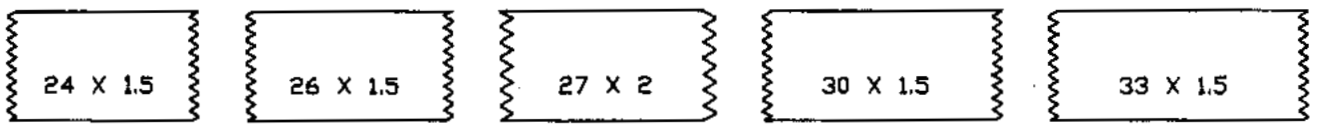
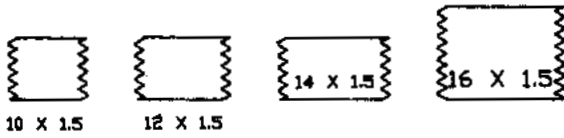
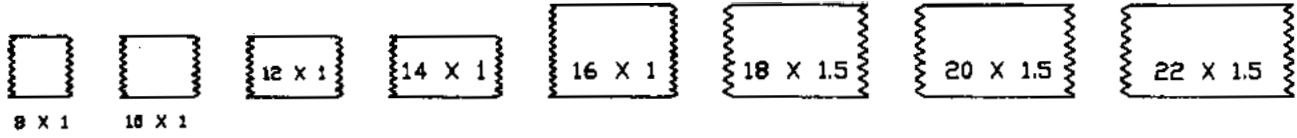


Part #	Size
37-470 .....	1/2x1/2
37-471 .....	3/4x3/4



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all your high volume quotes!*

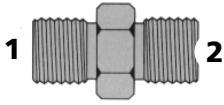
# Metric Parallel Threads



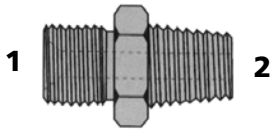
Brass



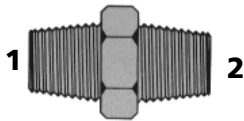
**BRASS STRAIGHT**



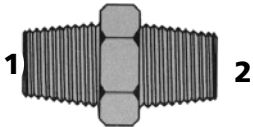
**BRASS MALE BSPP NIPPLE**  
8000



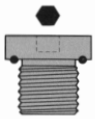
**BRASS MALE BSPP X  
MALE NPT NIPPLE**  
8007



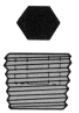
**BRASS MALE BSPT X  
MALE NPT NIPPLE**  
8008



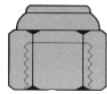
**BRASS BSPT NIPPLE**  
8010



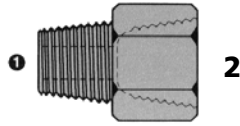
**BRASS BSPP COUNTERSUNK  
SEALED PLUG**  
8028



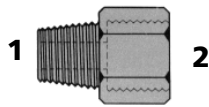
**BRASS BSPT HEX  
COUNTERSUNK PLUG**  
8030CSP



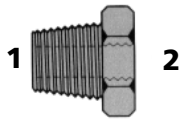
**BRASS FEMALE BSP CAP**  
8033



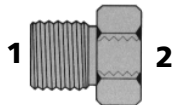
**BRASS BSPT MALE X  
FEMALE NPT**  
8036



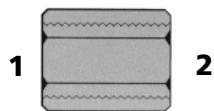
**BRASS NPT MALE X  
BSP FEMALE**  
9500



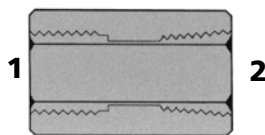
**BRASS BUSHING BSPT  
MALE X BSP FEMALE**  
8038



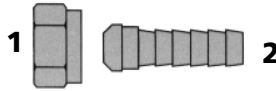
**BRASS MALE BSPP X  
FEMALE BSPP BUSHING**  
8039



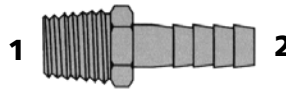
**BRASS FEMALE  
BSP COUPLING**  
8043



**BRASS FEMALE BSPP  
X FEMALE NPT**  
8044

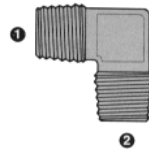


**BRASS FEMALE BSPP  
HOSE BARB**  
8900

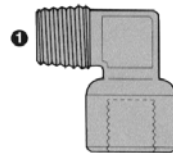


**BRASS MOBILE BSPT  
HOSE BARB**  
8920T

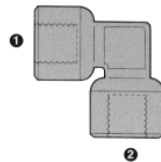
**BRASS 90° ELBOW**



**BRASS 90° BSPT  
MALE ELBOW**  
8055

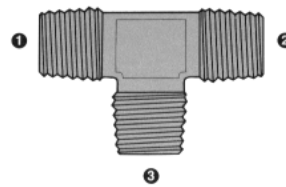


**BRASS 90° BSPT X  
BSP FEMALE**  
8060

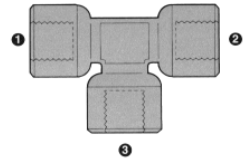


**BRASS 90° BSPT  
MALE ELBOW**  
8075

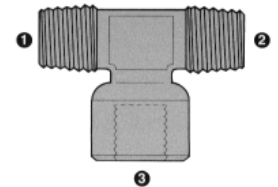
**BRASS TEE & CROSS**



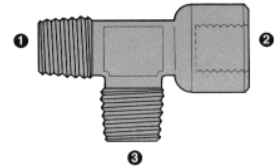
**BRASS MALE  
BSPT TEE**  
8080



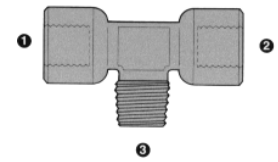
**BRASS BSP FEMALE TEE**  
8085



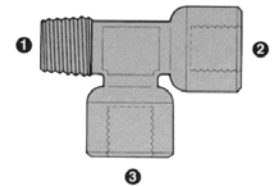
**BRASS FEMALE BRANCH  
BSP TEE**  
8087



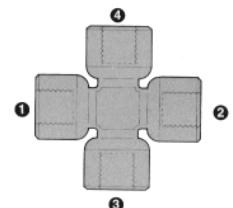
**BRASS FEMALE BSP  
RUN TEE**  
8090



**BRASS BRANCH TEE BSPT  
MALE X BSP FEMALE**  
8093



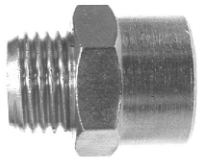
**BRASS MALE RUN BSP TEE**  
8095



**BRASS FEMALE BSP CROSS**  
8097

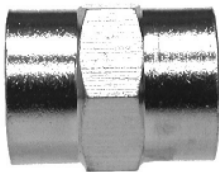


**MALE BSPP  
x FEMALE BSPP BUSHING**



Part #	Size
8039-02-02	1/8x1/8
8039-02-04	1/8x1/4
8039-04-02	1/4x1/8
8039-04-04	1/4x1/4
8039-04-06	1/4x3/8
8039-06-02	3/8x1/8
8039-06-04	3/8x1/4
8039-06-06	3/8x3/8
8039-06-08	3/8x1/2
8039-08-04	1/2x1/4
8039-08-06	1/2x3/8
8039-08-08	1/2x1/2
8039-12-08	3/4x1/2

**FEMALE BSP COUPLING**



Part #	Size
8043-02-02	1/8x1/8
8043-04-02	1/4x1/8
8043-04-04	1/4x1/4
8043-06-02	3/8x1/8
8043-06-04	3/8x1/4
8043-06-06	3/8x3/8
8043-08-04	1/2x1/4
8043-08-06	1/2x3/8
8043-08-08	1/2x1/2
8043-12-12	3/4x3/4

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**90° BSPT MALE ELBOW**



Part #	Size
8055-02-02	1/8x1/8
8055-04-04	1/4x1/4
8055-06-06	3/8x3/8
8055-08-08	1/2x1/2
8055-12-12	3/4x3/4

**90° BSPT x BSP FEMALE**



Part #	Size
8060-02-02	1/8x1/8
8060-04-04	1/4x1/4
8060-06-06	3/8x3/8
8060-08-08	1/2x1/2
8060-12-12	3/4x3/4

**90° BSP FEMALE ELBOW**



Part #	Size
8075-02-02	1/8x1/8
8075-04-04	1/4x1/4
8075-06-06	3/8x3/8
8075-08-08	1/2x1/2
8075-12-12	3/4x3/4

**MALE BSPT TEE**



Part #	Size
8080-02-02	1/8x1/8
8080-04-04	1/4x1/4
8080-06-06	3/8x3/8
8080-08-08	1/2x1/2
8080-12-12	3/4x3/4

**BSP FEMALE TEE**



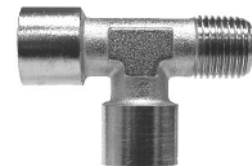
Part #	Size
8085-02-02	1/8x1/8
8085-04-04	1/4x1/4
8085-06-06	3/8x3/8
8085-08-08	1/2x1/2
8085-12-12	3/4x3/4

**BRANCH TEE BSP  
MALE x BSP FEMALE**



Part #	Size
8093-02-02	1/8x1/8
8093-04-04	1/4x1/4
8093-06-06	3/8x3/8
8093-08-08	1/2x1/2

**BRANCH MALE RUN  
BSPP TEE**



Part #	Size
8095-02-02	1/8x1/8
8095-04-04	1/4x1/4
8095-06-06	3/8x3/8
8095-08-08	1/2x1/2

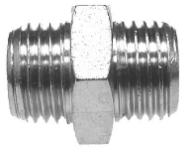
**FEMALE  
BSP CROSS**



Part #	Size
8097-02-02	1/8x1/8
8097-04-04	1/4x1/4
8097-06-06	3/8x3/8



**MALE BSPP NIPPLE**



Part #	Size
8000-02-02	1/8x1/8
8000-04-02	1/4x1/8
8000-04-04	1/4x1/4
8000-06-02	3/8x1/8
8000-06-04	3/8x1/4
8000-06-06	3/8x3/8
8000-08-04	1/2x1/4
8000-08-06	1/2x3/8
8000-08-08	1/2x1/2
8000-12-08	3/4x3/8
8000-12-12	3/4x1/2
8000-16-12	3/4x3/4
8000-16-16	1x1
8000-24-20	1-1/2x1-1/4

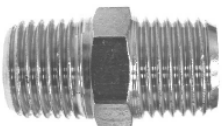
**MALE**



**BSPT X MALE NPT NIPPLE**

Part #	Size
8008-02-02	1/8x1/8
8008-04-04	1/4x1/4
8008-06-06	3/8x3/8
8008-08-08	1/2x1/2
8008-12-12	3/4x3/4

**BSPT NIPPLE**



Part #	Size
8010-02-02	1/8x1/8
8010-04-02	1/4x1/8
8010-04-04	1/4x1/4
8010-06-02	3/8x1/8
8010-06-04	3/8x1/4
8010-06-06	3/8x3/8
8010-08-04	1/2x1/8
8010-08-06	1/2x1/4
8010-08-08	1/2x3/8
8010-12-08	1/2x1/2
8010-12-12	3/4x1/4
8010-16-12	3/4x3/8
8010-16-16	3/4x1/2
8010-24-20	3/4x3/4

**BSPP COUNTERSUNK  
SEALED PLUG**



Part #	Size
8028-02	1/8
8028-04	1/4
8028-06	3/8
8028-08	1/2

**BSPT HEX  
COUNTERSUNK PLUG**



Part #	Size
8030CSP-02	1/8
8030CSP-04	1/4
8030CSP-06	3/8
8030CSP-08	1/2
	3/4
	1

**BSPT  
SQUARE HEAD PLUG**



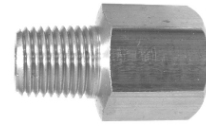
Part #	Size
28-848	1/8
28-849	1/4
28-850	3/8
28-851	1/2
28-852	3/4
28-853	1

**STEEL HOSE NIPPLES**



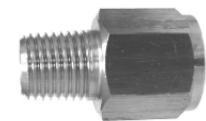
Part #	Size
28-855	1/8
28-856	1/4
28-857	3/8
28-858	1/2

**BSPT MALE x FEMALE NPT**



Part #	Size
8036-02-02	1/8x1/8
8036-04-04	1/4x1/4
8036-06-06	3/8x3/8
8036-08-08	1/2x1/2
8036-12-12	3/4x3/4

**NPT MALE x FEMALE BSP**



Part #	Size
8037-02-02	1/8x1/8
8037-04-04	1/4x1/4
8037-06-06	3/8x3/8
8037-08-08	1/2x1/2
8037-12-12	3/4x3/4

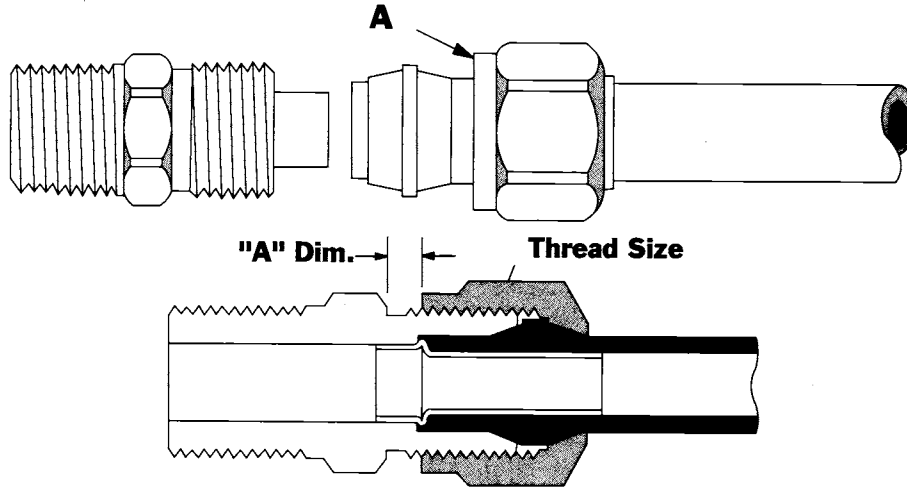
**BUSHING  
BSPT MALE x BSP FEMALE**



Part #	Size
8038-02-02	1/4x1/8
8038-04-02	3/8x1/8
8038-04-06	3/8x1/4
8038-06-02	1/2x1/4
8038-06-04	1/2x3/8
8038-06-06	3/4x1/2
8038-08-04	1/2x1/4
8038-08-06	1/2x3/8
8038-12-08	3/4x1/2
8038-16-12	1x3/4



**D.O.T. AIR BRAKE - NYLON TUBING**



<b>Tube O.D.</b>	<b>1/4</b>	<b>3/8</b>	<b>1/2</b>	<b>5/8</b>	<b>3/4</b>
<b>Thread Size-B</b>	<b>7/16-24</b>	<b>17/32-24</b>	<b>11/16-20</b>	<b>13/16-18</b>	<b>1-18</b>

**Brass**

**•Typical Application**

Air brake systems expect where temperatures exceed +200°F or where battery acid can drip on tubing.

**•Pressures**

Maximum operating pressure of 150 PSI.

**•Vibration**

Fair resistance.

**•Temperature Range**

-40°F to +200°F (-40°C to +93°C).

**•Material**

CA360 Brass

**•Used With**

NT Nylon Tubing - SAE J844 Type A and B.

**•Advantages**

Easy to assemble (no tube preparation or flaring required.) Built in tube support. May be used with copper tubing by replacing nut, sleeve and insert with long nut and spherical sleeve. Insert should be removed for copper tubing use.

**•Conformance**

Meets specifications and standards of SAE and DOT FMVSS 571,106.

**•Assembly Instructions**

- 1- Cut tubing to desired length.
- 2- Slide nut and then sleeve on tube. Threaded end "A" of nut must face toward fitting body.
- 3- Insert tubing into preassembled fitting. Be sure tubing is bottomed in fitting.
- 4- Tighten nut to required torque as indicated on chart.

<b>Tube Size</b>	<b>Additional Number of Turns from Hand-Tight</b>
<b>1/4</b>	<b>3</b>
<b>3/8, 1/2</b>	<b>4</b>
<b>5/8, 3/4</b>	<b>3-1/2</b>

**Disassembly:** Remove nut and pull tubing out of fitting body. Inset will remain in tubing.

**Reassembly:** Push tubing and insert into fitting body until it bottoms. Thread nut onto fitting body and torque as in step 4.



**SLEEVE**

**SAE #  
100115**



60NAB  
60NTA  
1460

Part #	Tube O.D.
819NAB-04B .....	1/4
819NAB-06B .....	3/8
819NAB-08B .....	1/2
819NAB-10B .....	5/8
819NAB-12B .....	3/4

**NUT**

**SAE #  
100110**



61NAB  
61NTA  
1461

Part #	Tube O.D.
818NAB-04B .....	1/4
818NAB-06B .....	3/8
818NAB-08B .....	1/2
818NAB-10B .....	5/8
818NAB-12B .....	3/4

**UNION**

**SAE #  
100101BA**



62NAB  
62NTA  
1462

Part #	Tube O.D.
815NAB-04-04B .....	1/4
815NAB-06-06B .....	3/8
815NAB-08-08B .....	1/2
815NAB-10-10B .....	5/8
815NAB-12-12B .....	3/4

**BULKHEAD UNION**

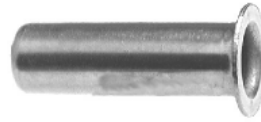


62NBH  
1474  
475

Part #	Tube O.D.
832NAB-04-04B .....	1/4
832NAB-06-06B .....	3/8
832NAB-08-08B .....	1/2

**STAINLESS STEEL INSERT**

• For SAE #  
J844 Tubing



59A  
63NTA

Part #	Tube O.D.
38-035 .....	1/4
38-036 .....	3/8
38-037 .....	1/2
38-038 .....	5/8
38-039 .....	3/4

**BRASS INSERT**

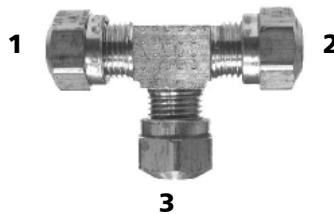


1484  
463

Part #	Tube O.D.
38-040 .....	1/4
38-041 .....	3/8
38-042 .....	1/2
38-043 .....	5/8
38-048 .....	3/4

**TEE**

**SAE #  
100401BA**



64NAB  
64NTA  
1464

Part #	Tube O.D.
824NAB-04B .....	1/4
824NAB-06B .....	3/8
824NAB-08B .....	1/2
824NAB-10B .....	5/8

**REDUCING TEE**

Part #	1	2	3
824NAB-06-04B .....	3/8	3/8	1/4
824NAB-06-08B .....	3/8	3/8	1/2
824NAB-08-06B .....	1/2	1/2	3/8





**ELBOW**

**SAE #  
100201BA**



64NAB  
265NTA  
1465

Part #	Size
821NAB-04-04B .....	1/4
821NAB-06-06B .....	3/8
821NAB-08-08B .....	1/2
821NAB-10-10B .....	5/8

**FEMALE ADAPTER**

**SAE #  
100103BA**



66NAB  
66NTA  
1466  
66NBH

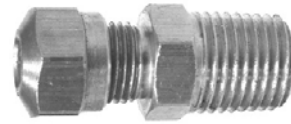
**TUBE O.D. X FEMALE PIPE**

Part #	Size
854NAB-04-02B .....	1/4x1/8
854NAB-04-04B .....	1/4x1/4
854NAB-06-02B .....	3/8x1/8
854NAB-06-04B .....	3/8x1/4
854NAB-06-06B .....	3/8x3/8
854NAB-08-06B .....	1/2x3/8
854NAB-08-08B .....	1/2x1/2
854NAB-10-06B .....	5/8x3/8
854NAB-10-08B .....	5/8x1/2

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**MALE ADAPTER**

**SAE #  
100102BA**



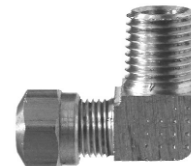
68NAB  
68NTA  
1468

**TUBE O.D. X MALE PIPE**

Part #	Size
816NAB-04-1/16B .....	1/4x1/16
816NAB-04-02B .....	1/4x1/8
815NAB-04-04B .....	1/4x1/4
816NAB-04-06B .....	1/4x3/8
816NAB-06-02B .....	3/8x1/8
816NAB-06-04B .....	3/8x1/4
816NAB-06-06B .....	3/8x3/8
816NAB-06-08B .....	3/8x1/2
816NAB-08-04B .....	1/2x1/4
816NAB-08-06B .....	1/2x3/8
816NAB-08-08B .....	1/2x1/2
816NAB-08-12B .....	1/2x3/4
816NAB-10-06B .....	5/8x3/8
816NAB-10-08B .....	5/8x1/2
816NAB-10-12B .....	5/8x3/4
816NAB-12-08B .....	3/4x1/2
816NAB-12-12B .....	3/4x3/4

**MALE ELBOW**

**SAE #  
100202BA**



1469

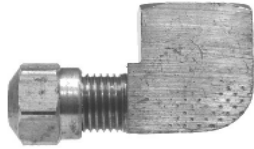
**TUBE O.D. X MALE PIPE**

Part #	Size
822NAB-04-02B .....	1/4x1/8
822NAB-04-04B .....	1/4x1/4
822NAB-04-06B .....	1/4x3/8
822NAB-06-02B .....	3/8x1/8
822NAB-06-04B .....	3/8x1/4
822NAB-06-06B .....	3/8x3/8
822NAB-06-08B .....	3/8x1/2
822NAB-08-04B .....	1/2x1/4
822NAB-08-06B .....	1/2x3/8
822NAB-08-08B .....	1/2x1/2
822NAB-10-06B .....	5/8x3/8
822NAB-10-08B .....	5/8x1/2
822NAB-10-12B .....	5/8x3/4
822NAB-12-06B .....	3/4x3/8
822NAB-12-08B .....	3/4x1/2



**FEMALE ELBOW**

SAE #  
100203BA



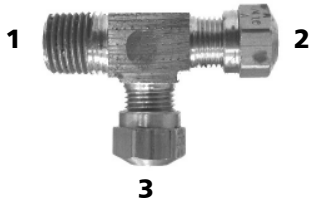
70NAB  
270NTA  
1470

**TUBE O.D. X FEMALE PIPE**

Part #	Size
855NAB-04-02B	1/4x1/8
855NAB-04-04B	1/4x1/4
855NAB-06-02B	3/8x1/8
855NAB-06-04B	3/8x1/4
855NAB-06-06B	3/8x3/8
855NAB-08-06B	1/2x3/8
855NAB-08-08B	1/2x1/2
855NAB-10-08B	5/8x1/2

**MALE RUN TEE**

SAE #  
100424BA

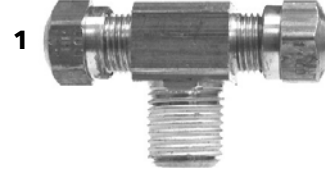


71NAB  
271NTA  
1471

Part #	1	2	3
826NAB-04-02B	1/4 x 1/8	x 1/4	x 1/4
826NAB-04-04B	1/4 x 1/4	x 1/4	x 1/4
826NAB-06-04B	3/8 x 1/4	x 1/4	x 1/4
826NAB-06-04-06B	3/8 x 1/4	x 3/8	x 3/8
826NAB-06-06B	3/8 x 3/8	x 3/8	x 3/8
826NAB-08-06-08B	1/2 x 3/8	x 3/8	x 1/2

**MALE BRANCH TEE**

SAE #  
100425BA



72NAB  
272NTA  
1472

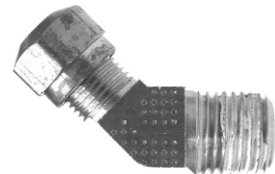
Part #	1	2	3
825NAB-04-02B	1/4 x 1/4	x 1/4	x 1/8
825NAB-04-04B	1/4 x 1/4	x 1/4	x 1/4
825NAB-06-02B	3/8 x 3/8	x 3/8	x 1/8
825NAB-06-04B	3/8 x 1/4	x 1/4	x 1/4
825NAB-06-06B	3/8 x 3/8	x 3/8	x 1/4
825NAB-08-04B	1/2 x 1/2	x 1/2	x 1/4
825NAB-06-06B	3/8 x 3/8	x 3/8	x 3/8
825NAB-08-06-08B	1/2 x 3/8	x 3/8	x 3/8
825NAB-08-06B	1/2 x 1/2	x 3/8	x 1/2
825NAB-08-08B	1/2 x 1/2	x 1/2	x 1/2
825NAB-10-04B	5/8 x 5/8	x 5/8	x 1/4
825NAB-10-08B	5/8 x 5/8	x 5/8	x 1/2

**SPECIAL TEES**

Part #	1	2	3
38-144	3/8 x 3/8	x 1/4FIP	x 1/4FIP
38-145	1/2 x 1/2	x 1/4FIP	x 1/4FIP
38-146	5/8 x 5/8	x 1/4FIP	x 1/4FIP

**45° ELBOW**

SAE #  
100302BA



945NAB  
279NTA  
1480

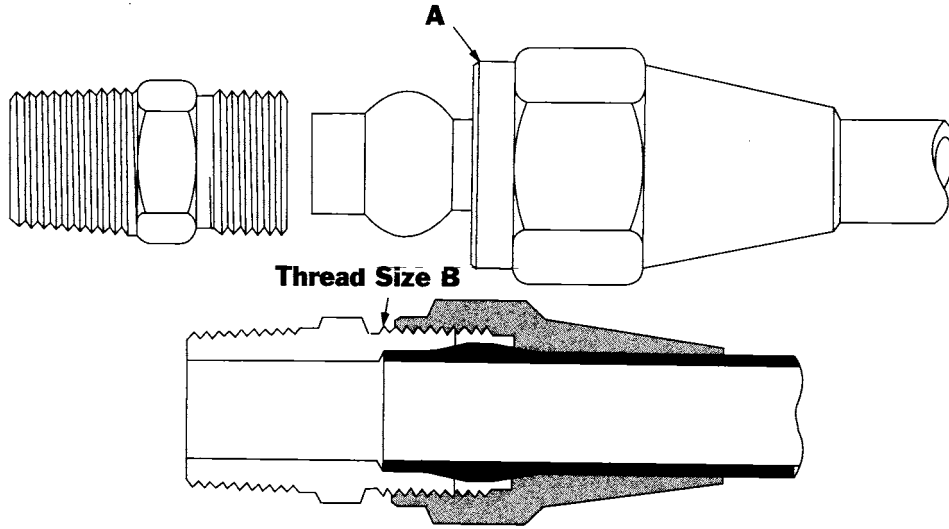
**TUBE O.D. X MALE PIPE**

Part #	Size
823NAB-04-02B	1/4x1/8
823NAB-04-04B	1/4x1/4
823NAB-06-02B	3/8x1/8
823NAB-06-04B	3/8x1/4
823NAB-06-06B	3/8x3/8
823NAB-06-08B	3/8x1/2
823NAB-08-04B	1/2x1/4
823NAB-08-06B	1/2x3/8
823NAB-08-08B	1/2x1/2
823NAB-10-08B	5/8x1/2
823NAB-12-08B	3/4x1/2



**D.O.T. AIR BRAKE - COPPER TUBING**

**Brass**



<b>Tube O.D.</b>	<b>1/4</b>	<b>3/8</b>	<b>1/2</b>	<b>5/8</b>	<b>3/4</b>
<b>Thread Size-B</b>	<b>7/16-24</b>	<b>17/32-24</b>	<b>11/16-20</b>	<b>13/16-18</b>	<b>1-18</b>

**•Typical Application**

Air brake systems.

**•Pressure**

Maximum operating pressure of 150 PSI.

**•Vibration**

Fair resistance.

**•Temperature Range**

-65°F to +250°F (-53°C to +121°C) with copper tubing.

**•Material**

CA360 Brass

**•Used With**

Copper tubing in air brake systems.

**•Advantages**

Easy to assemble (no flaring). May be used with nylon tubing by replacing long nut and spherical sleeve with insert, rigid sleeve and nut.

**•Conformance**

Meets specifications and standards of SAE and DOT.

**•Assembly Instructions**


- 1- Cut tubing to desired length. Make sure all burrs are removed and the ends are cut square.
- 2- Slide nut and then sleeve on tube. Threaded end "A" of nut must face toward fitting body.
- 3- Insert tubing into fitting. Be sure tubing is bottomed on fitting shoulder.
- 4- Thread nut onto fitting body until it is hand tight.
- 5- From that point, tighten with a wrench the number of turns indicated in the chart below:

<b>Tube Size</b>	<b>Additional Number of Turns from Hand-Tight</b>
<b>1/4, 3/8</b>	<b>1-3/4</b>
<b>1/2, 5/8, 3/4</b>	<b>3-1/4</b>

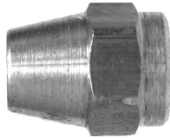


**Brass**


**SLEEVE**

<b>SAE #</b> 120115BA		60AB 1360
<b>Part #</b>		<b>Tube O.D.</b>
819AB-04B .....		1/4
819AB-06B .....		3/8
819AB-08B .....		1/2
819AB-10B .....		5/8
819AB-12B .....		3/4


**NUT**

<b>SAE #</b> 120111BA		61AB 20961 1361
<b>Part #</b>		<b>Tube O.D.</b>
818AB-04B .....		1/4
818AB-06B .....		3/8
818AB-08B .....		1/2
818AB-10B .....		5/8
818AB-12B .....		3/4


**UNION**

<b>SAE #</b> 120101BA		62AB 1362
<b>Part #</b>		<b>Tube O.D.</b>
815AB-04-04B .....		1/4
815AB-06-06B .....		3/8
815AB-08-08B .....		1/2
815AB-10-10B .....		5/8
815AB-12-12B .....		3/4

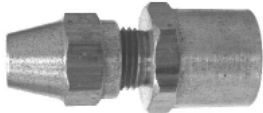
**TEE**

<b>SAE #</b> 120401BA		264AB 1364
<b>Part #</b>		<b>Tube O.D.</b>
824AB-04B .....		1/4
824AB-06B .....		3/8
824AB-08B .....		1/2
824AB-10B .....		5/8

**ELBOW**

<b>SAE #</b> 120201BA		265AB 1365
<b>Part #</b>		<b>Tube O.D.</b>
821AB-04-04B .....		1/4
821AB-06-06B .....		3/8
821AB-08-08B .....		1/2
821AB-10-10B .....		5/8


**FEMALE ADAPTER**

<b>SAE #</b> 120103BA		66AB 1366
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**TUBE O.D. X FEMALE PIPE**

<b>Part #</b>	<b>Size</b>
854AB-04-02B .....	1/4x1/8
854AB-04-04B .....	1/4x1/4
854AB-06-02B .....	3/8x1/8
854AB-06-04B .....	3/8x1/4
854AB-06-06B .....	3/8x3/8
854AB-08-06B .....	1/2x3/8
854AB-08-08B .....	1/2x1/2
854AB-10-06B .....	5/8x3/8
854AB-10-08B .....	5/8x1/2

**MALE ADAPTER**

<b>SAE #</b> 120102BA		68AB 1368
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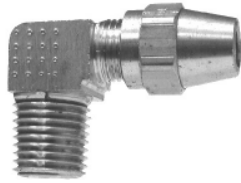
**TUBE O.D. X MALE PIPE**

<b>Part #</b>	<b>Size</b>
816AB-04-02B .....	1/4x1/8
816AB-04-04B .....	1/4x1/4
816AB-04-06B .....	1/4x3/8
816AB-06-02B .....	3/8x1/8
816AB-06-04B .....	3/8x1/4
816AB-06-06B .....	3/8x3/8
816AB-06-08B .....	3/8x1/2
816AB-08-04B .....	1/2x1/4
816AB-08-06B .....	1/2x3/8
816AB-08-08B .....	1/2x1/2
816AB-10-06B .....	5/8x3/8
816AB-10-08B .....	5/8x1/2
816AB-12-08B .....	3/4x1/2
816AB-12-12B .....	3/4x3/4



**90° MALE ELBOW**

**SAE #**  
**120202BA**

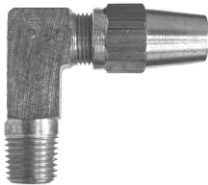


269AB  
1369

**TUBE O.D. X MALE PIPE**

Part #	Size
822AB-04-02B	1/4x1/8
822AB-04-04B	1/4x1/4
822AB-04-06B	1/4x3/8
822AB-06-02B	3/8x1/8
822AB-06-04B	3/8x1/4
822AB-06-06B	3/8x3/8
822AB-06-08B	3/8x1/2
822AB-08-04B	1/2x1/4
822AB-08-06B	1/2x3/8
822AB-08-08B	1/2x1/2
822AB-10-06B	5/8x3/8
822AB-10-08B	5/8x1/2
822AB-12-08B	3/4x1/2

**LONG PATTERN ELBOW**

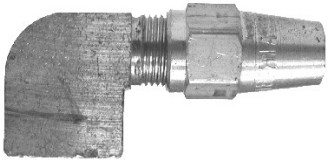


**TUBE O.D. X MALE PIPE**

Part #	Size
38-249	3/8x1/4

**90° FEMALE ELBOW**

**SAE #**  
**120203BA**



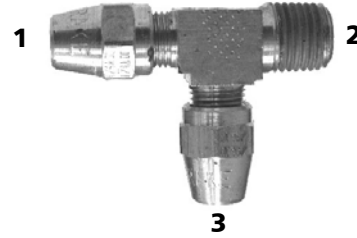
270AB  
1370

**TUBE O.D. X FEMALE PIPE**

Part #	Size
855AB-04-02B	1/4x1/8
855AB-04-04B	1/4x1/4
855AB-06-04B	3/8x1/4
855AB-06-06B	3/8x3/8
855AB-08-06B	1/2x3/8
855AB-08-08B	1/2x1/2
855AB-10-08B	5/8x1/2

**RUN TEE**

**SAE #**  
**120424BA**



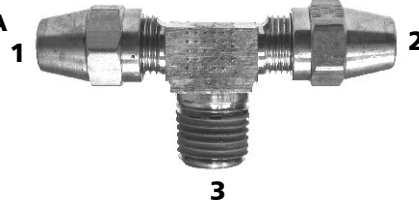
271AB  
1371

**TUBE O.D. X MALE PIPE  
(1 & 3) X 2**

Part #	Size
826AB-04-02B	1/4x1/8
826AB-04-04B	1/4x1/4
826AB-06-04B	3/8x1/4
826AB-06-06B	3/8x3/8
826AB-08-08B	1/2x1/2
826AB-10-08B	5/8x1/2

**BRANCH TEE**

**SAE #**  
**120425BA**



272AB  
1372

**TUBE O.D. X MALE PIPE  
(1 & 3) X 2**

Part #	Size
825AB-04-04B	1/4x1/4
825AB-06-04B	3/8x1/4
825AB-06-06B	3/8x3/8
825AB-08-06B	1/2x3/8
825AB-08-08B	1/2x1/2
825AB-10-08B	5/8x1/2

**45° MALE ELBOW**

**SAE #**  
**120302BA**



279AB  
1380

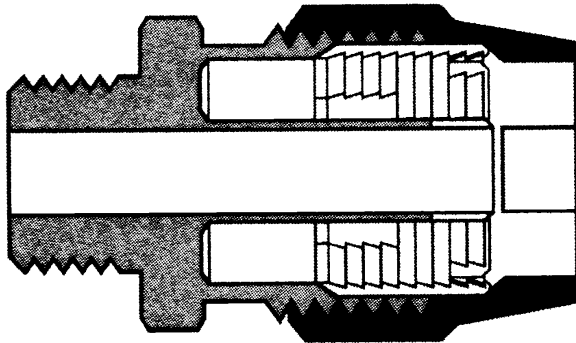
**TUBE O.D. X MALE PIPE**

Part #	Size
823AB-04-02B	1/4x1/8
823AB-04-04B	1/4x1/4
823AB-06-04B	3/8x1/4
823AB-06-06B	3/8x3/8
823AB-06-08B	3/8x1/2
823AB-08-06B	1/2x3/8

**Brass**



**D.O.T.  
AIR BRAKE HOSES/ENDS**



**•Typical Application**

Air Brake hose connections.  
Meets SAE & DOT specifications (FMVCS 10 GAL)

**•Pressure**

Determined by maximum working pressure for hose size.  
Up to 125 PSI.

**•Material**

CA360 Brass.  
Temperature: -40° to + 120°F

**•Advantages**

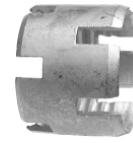
Can be used for nearly any brake line. Easy to assemble with a good selection of hose end configurations. Brass material offers excellent resistance against corrosion.

**•Assembly Instructions**

- 1- Slide nut and sleeve onto hose. Make sure bevel edge of sleeve faces out toward fitting.
- 2- Push hose into fitting until it bottoms.
- 3- Screw nut until contact is made with body hex.

**Note:** When reassembling fitting, body and nut should be inspected. Only reuse if in proper condition. Sleeves should never be reused.

**SLEEVE**

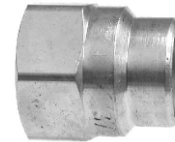


#60HC  
3380-A  
0903610  
367

**HOSE I.D.**

<b>Part #</b>	<b>Size</b>
38-300 .....	3/8
38-301 .....	1/2

**NUT**



#61HC  
3380-B  
0903624  
369

**HOSE I.D.**

<b>Part #</b>	<b>Size</b>
38-306 .....	3/8
38-307 .....	1/2

**NUT**



#61HCS  
3380-D  
0903613  
31RBSG

**HOSE I.D.**

<b>Part #</b>	<b>Size</b>	<b>Thread</b>
38-312 .....	3/8	31/31-20
38-313 .....	1/2	1-3/32-20

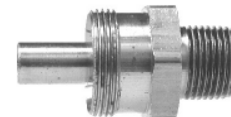
**NUT AND SPRING ASSEMBLY**



0999999  
67RBSG  
379

<b>Part #</b>	<b>Size</b>
38-015 .....	3/8 ID
38-016 .....	1/2 ID

**ADAPTER BODY**



#68B  
W1391Z

**HOSE I.D. X MIP**

<b>Part #</b>	<b>Size</b>
38-324 .....	3/8x1/4
38-325 .....	3/8x3/8
38-326 .....	3/8x1/2
38-327 .....	1/2x3/8
38-328 .....	1/2x1/2



**MALE ADAPTER**



#68HC  
368  
3380B-Y2  
68RB

**HOSE I.D. X MIP**

Part #	Size
38-333 .....	3/8x1/4
38-334 .....	3/8x3/8
38-335 .....	3/8x1/2
38-336 .....	1/2x3/8
38-337 .....	1/2x1/2

**MALE ADAPTER**

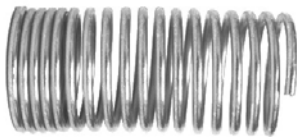


#68HCS  
3380B-Y3  
68RBGS  
378

**HOSE I.D. X MIP**

Part #	Size	Thread
38-342 .....	3/8x1/4	31/32
38-343 .....	3/8x3/8	31/32
38-344 .....	3/8x1/2	31/32
38-345 .....	1/2x3/8	1-1/8-20
38-346 .....	1/2x1/2	1-1/8-20

**SPRING**



#60SG  
0901045  
3380-C  
377

**HOSE I.D.**

Part #	Size
38-351 .....	3/8
38-352 .....	1/2

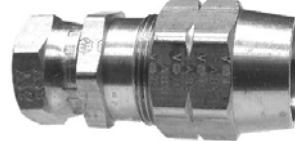
**UNION**



#62HC  
3380B-Y0  
362

Part #	Size	Thread
38-318 .....	3/8	31/32-30
38-319 .....	1/2	1-1/8-20

**FEMALE CONNECTOR HOSE**

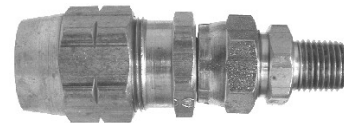


#66ABS  
66RBSV  
3380B-Y7  
386

**HOSE I.D. X FEMALE PIPE**

Part #	Size
38-357 .....	3/8x3/4-20
38-358 .....	1/2x7/8-20

**MALE CONNECTOR**

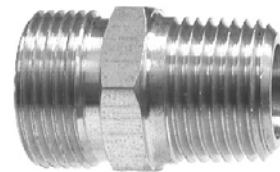


#68ABS  
09155  
3380B-Y8  
387

**ABS X PIPE**

Part #	Size
38-363 .....	3/8x1/4
38-364 .....	1/2x3/8

**ADAPTER**



#68ABS  
1390  
76RB  
388

**ABS X PIPE**

Part #	Size	Thread
38-369 .....	3/8x1/4	3/4-20
38-368 .....	3/8x3/8	3/4-20
38-372 .....	3/8x1/2	3/4-20
38-370 .....	1/2x3/8	7/8-20
38-371 .....	1/2x1/2	7/8-20



**D.O.T. PUSH-IN TUBE FITTINGS**

**Meets D.O.T. FMVSS 571.106  
SAE J1131 Air Brake System  
Requirements**

**Benefits for Cost Savings & Engineering Project**

- **Fast assembly:** No tools required. Simply push tubing in. Saves up to 75% of assembly time compared to standard air compression fittings. No loose parts to handle.
- **Fast disconnect:** Hold the collet collar with two fingers and pull out tube. No tools required.
- **Reusable:** Can be connected and disconnected several times.
- **Reliable sealing:** Using recommended tubing, full sealing is guaranteed.
- **Versatility:** Buna N O'ring standar. Viton and others available per request. Secure Tube Retention. Pulling on tubing only serves to tighten the connection.
- **Pre-Applied Teflon®** based pipe sealant on all male pipe threads, saving customer additional labor.
- **Full Flow Design,** provides more flow area than conventional fittings with internal tube supports even in the swivels.

DOT Fittings are constructed with an all brass captive eyelet which allows for maximum flow. The brass captive eyelet with extended length is floating and has a machined top end radius for easy installation of tubing. All male threads have a pre-applied Teflon\* based pipe sealant to provide for easy assembly and leak proof seal.

**•Materials:**

- CA360 Brass
- "O" Ring: Buna - Nitrile (90 Durometer)
- EP (Ethylene Propylene)

**•Working Pressures & Temperature Ranges:**

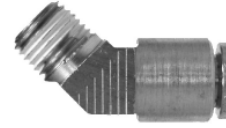
- Vacuum to 750 PSI
- 40° to 200° Fahrenheit

**•Ordering Options:**

The following options are available only by customer request and may be subject to minimum run quantities for ordering.

- \*Viton "O" Ring seals
- Electroless Nickel Plating
- Metric DQ Dot "One-Push" tube fittings with BSPT threads
- Manifolds with DQ DOT One Push Cartridges.

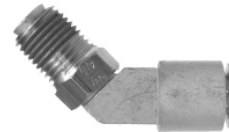
**MALE 45° ELBOW**



AQ54DOT  
279 PTMS  
1880  
DQ54DOT

Part #	Tube O.D.	Pipe Thread
823-04-02DOT-PI	1/4	1/8
823-04-04DOT-PI	1/4	1/4
823-06-02DOT-PI	3/8	1/8
823-06-04DOT-PI	3/8	1/4
823-06-06DOT-PI	3/8	3/8
823-06-08DOT-PI	3/8	1/2
823-08-04DOT-PI	1/2	1/4
823-08-06DOT-PI	1/2	3/8
823-08-08DOT-PI	1/2	1/2
823-10-08DOT-PI	5/8	1/2
823-10-06DOT-PI	5/8	3/8
823-12-08DOT-PI	3/4	1/2
823-12-12DOT-PI	3/4	3/4

**MALE 45° SWIVEL ELBOW**



AQ54DOTS  
279 PMT  
1880  
DQ54DOTS

Part #	Tube O.D.	Pipe Thread
823-04-02DOTPIR	1/4	1/8
823-04-04DOTPIR	1/4	1/4
823-06-02DOTPIR	3/8	1/8
823-06-04DOTPIR	3/8	1/4
823-06-06DOTPIR	3/8	3/8
823-08-04DOTPIR	1/2	1/4
823-08-06DOTPIR	1/2	3/8
823-08-08DOTPIR	1/2	1/2
823-10-08DOTPIR	5/8	1/2

**PLUG**



1829  
DQ59DOT

Part #	A Tube
806-53DOT-PI	5/32
806-04DOT-PI	1/4
806-06DOT-PI	3/8
806-08DOT-PI	1/2

*Fitting Pictures are for reference only.  
Please contact us if specific style is needed.*





**Split Flange Adapters**



**Anchor Flange Company now manufacturers a complete range of Split Flange Adapters for use with Anchor's SAE J518 Split Flanges.**

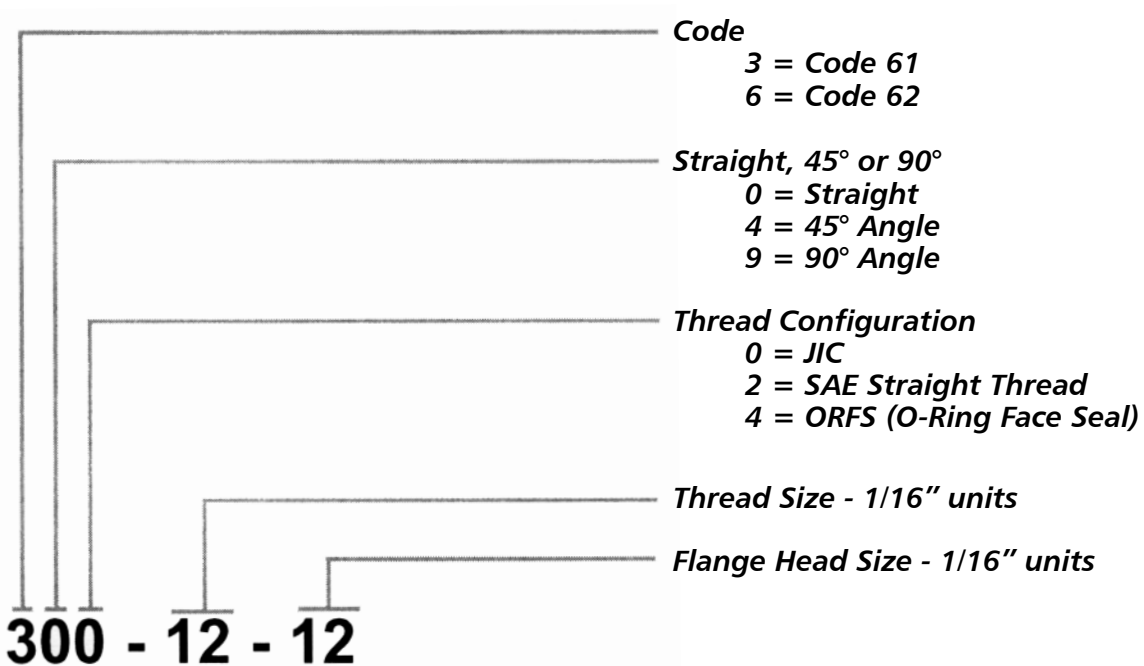
**These offer you many cost-saving features:**

- *One-piece carbon steel construction - simplifies installation, eliminates potential leak points*
- *Zinc dichromate finish - for high corrosion resistance*
- *Compact design - simplifies assembly*
- *Optional thread configurations - BSPP and NPTF - consult factor for availability*
- *Available off-the-shelf for immediate delivery*

**SAE  
Zinc dichromate  
finish**

**Hydraulic  
Adapters**

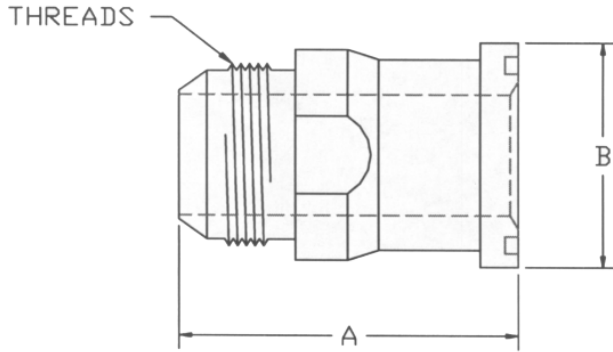
**Ordering System  
(available off-the-shelf)**



For additional jump sizes, please call us.



**JIC Thread**



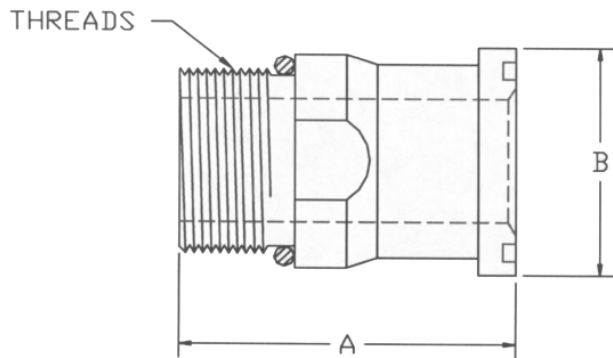
CODE 61

CODE 62

ANCHOR PART NO.	TUBE O.D.	FLANGE SIZE	A	B	THREAD
300-8-8	1/2	1/2	2.60	1.188	3/4-16
300-8-12	1/2	3/4	2.75	1.500	3/4-16
300-12-12	3/4	3/4	2.75	1.500	1 1/16-12
300-16-12	1	3/4	2.75	1.500	1 5/16-12
300-12-16	3/4	1	2.80	1.750	1 1/16-12
300-16-16	1	1	2.80	1.750	1 5/16-12
300-20-16	1 1/4	1	2.80	1.750	1 5/8-12
300-16-20	1	1 1/4	2.80	2.000	1 5/16-12
300-20-20	1 1/4	1 1/4	2.80	2.000	1 5/8-12
300-24-20	1 1/2	1 1/4	3.40	2.000	1 7/8-12
300-20-24	1 1/4	1 1/2	3.50	2.375	1 5/8-12
300-24-24	1 1/2	1 1/2	3.50	2.375	1 7/8-12
300-32-24	2	1 1/2	4.20	2.375	2 1/2-12
300-24-32	1 1/2	2	3.73	2.812	1 7/8-12
300-32-32	2	2	3.98	2.812	2 1/2-12
600-8-8	1/2	1/2	2.61	1.250	3/4-16
600-12-12	3/4	3/4	2.75	1.625	1 1/16-12
600-16-12	1	3/4	2.75	1.625	1 5/16-12
600-12-16	3/4	1	2.80	1.875	1 1/16-12
600-16-16	1	1	2.80	1.875	1 5/16-12
600-20-16	1 1/4	1	2.80	1.875	1 5/8-12
600-16-20	1	1 1/4	3.05	2.125	1 5/16-12
600-20-20	1 1/4	1 1/4	3.05	2.125	1 5/8-12
600-24-20	1 1/2	1 1/4	3.30	2.125	1 7/8-12
600-20-24	1 1/4	1 1/2	3.50	2.500	1 5/8-12
600-24-24	1 1/2	1 1/2	3.50	2.500	1 7/8-12
600-32-24	2	1 1/2	4.94	2.500	2 1/2-12
600-24-32	1 1/2	2	3.98	3.125	1 7/8-12
600-32-32	2	2	4.23	3.125	2 1/2-12

**Hydraulic Adapters**

**SAE Straight Thread**



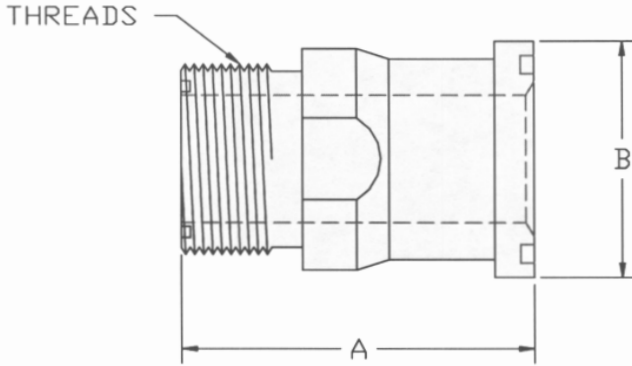
CODE 61

CODE 62

ANCHOR PART NO.	TUBE O.D.	FLANGE SIZE	A	B	THREAD
302-8-8	1/2	1/2	2.49	1.188	3/4-16
302-12-12	3/4	3/4	2.61	1.500	1 1/16-12
302-16-12	1	3/4	2.88	1.500	1 5/16-12
302-12-16	3/4	1	2.74	1.750	1 1/16-12
302-16-16	1	1	2.61	1.750	1 5/16-12
302-20-16	1 1/4	1	3.13	1.750	1 5/8-12
302-16-20	1	1 1/4	2.77	2.000	1 5/16-12
302-20-20	1 1/4	1 1/4	3.13	2.000	1 5/8-12
302-24-20	1 1/2	1 1/4	3.43	2.000	1 7/8-12
302-20-24	1 1/4	1 1/2	3.30	2.375	1 5/8-12
302-24-24	1 1/2	1 1/2	3.14	2.375	1 7/8-12
302-32-24	2	1 1/2	3.63	2.380	2 1/2-12
302-24-32	1 1/2	2	3.79	2.812	1 7/8-12
302-32-32	2	2	3.63	2.812	2 1/2-12
602-8-8	1/2	1/2	2.50	1.250	3/4-16
602-12-12	3/4	3/4	2.62	1.625	1 1/16-12
602-16-12	1	3/4	2.88	1.625	1 5/16-12
602-12-16	3/4	1	2.75	1.875	1 1/16-12
602-16-16	1	1	2.62	1.875	1 5/16-12
602-20-16	1 1/4	1	3.44	1.875	1 5/8-12
602-16-20	1	1 1/4	3.12	2.125	1 5/16-12
602-20-20	1 1/4	1 1/4	3.00	2.125	1 5/8-12
602-24-20	1 1/2	1 1/4	3.44	2.125	1 7/8-12
602-20-24	1 1/4	1 1/2	3.31	2.500	1 5/8-12
602-24-24	1 1/2	1 1/2	3.19	2.500	1 7/8-12
602-32-24	2	1 1/2	4.34	2.500	2 1/2-12
602-24-32	1 1/2	2	3.90	3.125	1 7/8-12
602-32-32	2	2	3.75	3.125	2 1/2-12



**ORFS Thread**



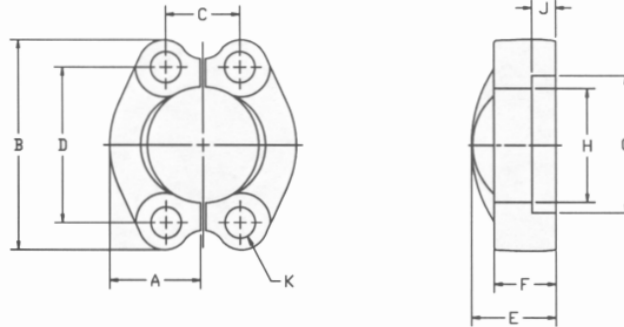
**CODE 61**

**CODE 62**

ANCHOR PART NO.	TUBE O.D.	FLANGE SIZE	A	B	THREAD
304-8-8	1/2	1/2	2.45	1.188	13/16-16
304-12-12	3/4	3/4	2.75	1.500	1 3/16-12
304-16-12	1	3/4	2.75	1.500	1 7/16-12
304-12-16	3/4	1	2.80	1.750	1 3/16-12
304-16-16	1	1	2.80	1.750	1 7/16-12
304-20-16	1 1/4	1	2.80	1.750	1 11/16-12
304-16-20	1	1 1/4	2.80	2.000	1 7/16-12
304-20-20	1 1/4	1 1/4	2.80	2.000	1 11/16-12
304-24-20	1 1/2	1 1/4	3.20	2.000	2-12
304-20-24	1 1/4	1 1/2	3.50	2.375	1 11/16-12
304-24-24	1 1/2	1 1/2	3.50	2.375	2-12
304-24-32	1 1/2	2	3.33	2.812	2-12
604-8-8	1/2	1/2	2.58	1.250	13/16-16
604-12-12	3/4	3/4	2.75	1.625	1 3/16-12
604-16-12	1	3/4	2.75	1.625	1 7/16-12
604-12-16	3/4	1	2.80	1.875	1 3/16-12
604-16-16	1	1	2.80	1.875	1 7/16-12
604-20-16	1 1/4	1	3.20	1.875	1 11/16-12
604-16-20	1	1 1/4	3.05	2.125	1 7/16-12
604-20-20	1 1/4	1 1/4	3.05	2.125	1 11/16-12
604-24-20	1 1/2	1 1/4	3.30	2.125	2-12
604-20-24	1 1/4	1 1/2	3.50	2.500	1 11/16-12
604-24-24	1 1/2	1 1/2	3.50	2.500	2-12
604-24-32	1 1/2	2	3.581	3.125	2-12

**Hydraulic  
Adapters**

**Split Flange Kits**



**CODE 61**

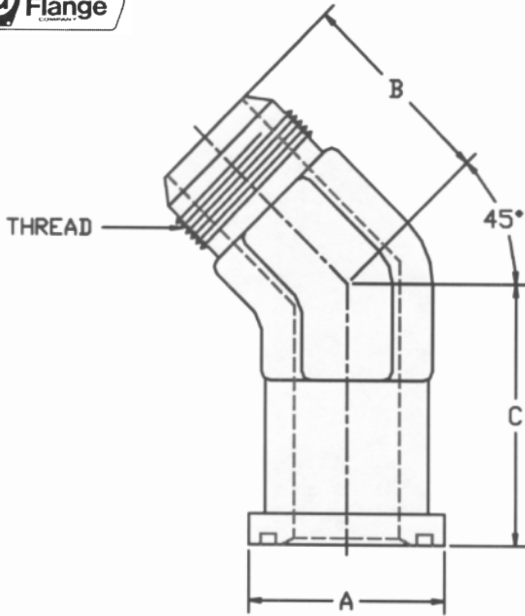
**CODE 62**

FLANGE HALF NO.	*KIT	FLANGE SIZE	A	B	D	E	F	G	H	J	K	O-RING	HHCS
8SF-2	8SFO	0.50	0.86	2.12	1.50	0.75	0.50	1.22	0.96	0.245	0.344	210	5/16-18 X 1.25
12SF-2	12SFO	0.75	0.98	2.56	1.88	0.88	0.56	1.53	1.27	0.245	0.406	214	3/8-16 X 1.25
16SF-2	16SFO	1.00	1.11	2.75	2.06	0.94	0.62	1.78	1.52	0.295	0.406	219	3/8-16 X 1.25
20SF-2	20SFO	1.25	1.39	3.12	2.31	0.88	0.56	2.03	1.72	0.295	0.469	222	7/16-14 X 1.50
24SF-2	24SFO	1.50	1.58	3.69	2.75	1.00	0.62	2.41	2.00	0.295	0.531	225	1/2-13 X 1.50
32SF-2	32SFO	2.00	1.86	4.00	3.06	1.03	0.62	2.84	2.47	0.355	0.531	228	1/2-13 X 1.50
40SF-2	40SFO	2.50	2.09	4.50	3.50	1.50	0.75	3.34	2.95	0.355	0.531	232	1/2-13 X 1.75
48SF-2	48SFO	3.00	2.53	5.31	4.19	1.62	0.88	4.03	3.58	0.355	0.656	237	5/8-11 X 1.75
56SF-2	56SFO	3.50	2.70	6.00	4.75	1.12	0.88	4.53	4.03	0.422	0.656	241	5/8-11 X 2.00
64SF-2	64SFO	4.00	2.95	6.38	5.13	1.38	1.00	5.03	4.53	0.422	0.656	245	5/8-11 X 2.00
8SFX-2	8SFXO	0.50	0.89	2.22	1.59	0.88	0.62	1.28	.970	0.285	0.344	210	5/16-18 X 1.25
12SFX-2	12SFXO	0.75	1.14	2.81	2.00	1.12	0.75	1.66	1.28	0.325	0.406	214	3/8-16 X 1.50
16SFX-2	16SFXO	1.00	1.33	3.19	2.25	1.31	0.94	1.91	1.53	0.355	0.469	219	7/16-14 X 1.75
20SFX-2	20SFXO	1.25	1.48	3.75	2.63	1.50	1.06	2.16	1.75	0.385	0.531	222	1/2-13 X 1.75
24SFX-2	24SFXO	1.50	1.83	4.44	3.13	1.69	1.19	2.53	2.03	0.475	0.656	225	5/8-11 X 2.25
32SFX-2	32SFXO	2.00	2.20	5.25	3.81	2.06	1.44	3.16	2.66	0.475	0.781	228	3/4-10 X 2.75

\*When ordering this part # you will receive: (2) split flange halves, (4) hex head bolts and lockwashers, and (1) Buna N O-Ring.



**45° JIC Thread**

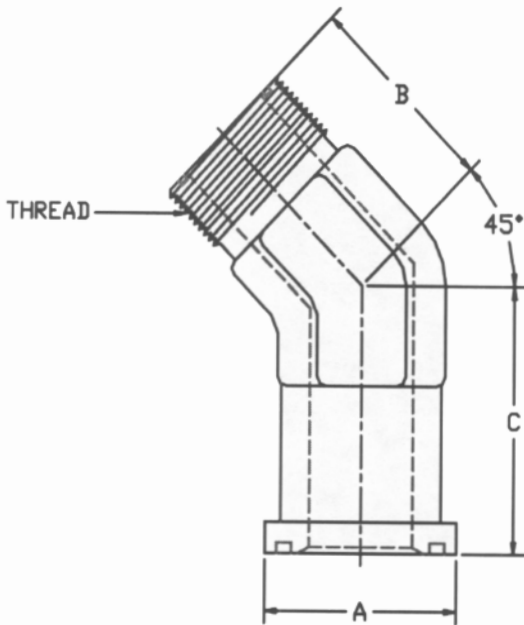


CODE 61  
CODE 62

ANCHOR PART NO.	TUBE O.D.	FLANGE SIZE	A	B	C	THREAD
340-12-12	3/4	3/4	1.500	1.28	1.58	1 1/16-12
340-16-16	1	1	1.750	1.47	1.85	1 5/16-12
340-20-20	1 1/4	1 1/4	2.000	1.59	2.04	1 5/8-12
340-24-24	1 1/2	1 1/2	2.375	1.78	2.38	1 7/8-12
340-32-32	2	2	2.812	2.22	3.00	2 1/2-12
640-12-12	3/4	3/4	1.625	1.28	1.58	1 1/16-12
640-16-16	1	1	1.875	1.47	1.85	1 5/16-12
640-20-20	1 1/4	1 1/4	2.125	1.59	2.04	1 5/8-12
640-24-24	1 1/2	1 1/2	2.500	1.78	2.38	1 7/8-12
640-32-32	2	2	3.125	2.22	3.00	2 1/2-12

**Hydraulic Adapters**

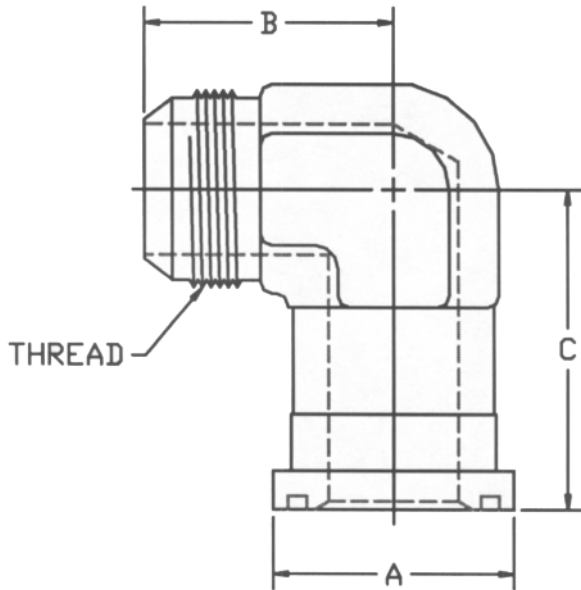
**45° ORFS Thread**



CODE 61  
CODE 62

ANCHOR PART NO.	TUBE O.D.	FLANGE SIZE	A	B	C	THREAD
344-12-12	3/4	3/4	1.500	1.28	1.58	1 3/16-12
344-16-16	1	1	1.750	1.47	1.85	1 7/16-12
344-20-20	1 1/4	1 1/4	2.000	1.59	2.04	1 11/16-12
344-24-24	1 1/2	1 1/2	2.375	1.78	2.38	2-12
644-12-12	3/4	3/4	1.625	1.28	1.58	1 3/16-12
644-16-16	1	1	1.875	1.47	1.85	1 7/16-12
644-20-20	1 1/4	1 1/4	2.125	1.59	2.04	1 11/16-12
644-24-24	1 1/2	1 1/2	2.500	1.78	2.38	2-12

**90° JIC Thread**



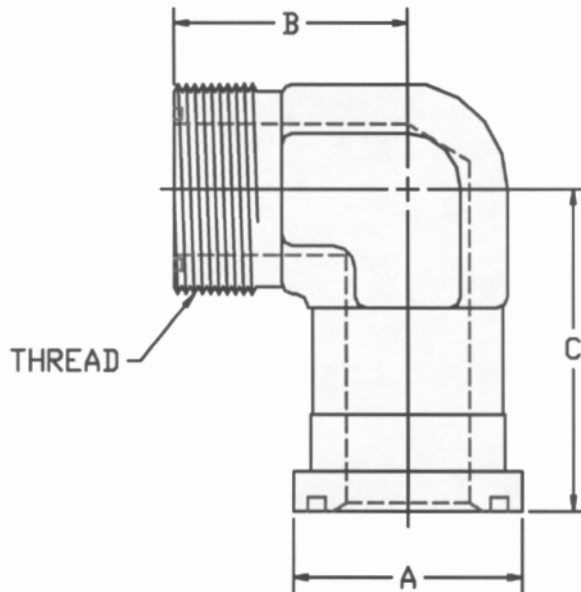
CODE 61

CODE 62

PART NUMBER	TUBE O.D.	FLANGE SIZE	A	B	C	THREAD
390-8-12	1/2	3/4	1.500	1.660	2.130	3/4-16
390-12-12	3/4	3/4	1.500	1.660	2.130	1 1/16-12
390-16-12	1	3/4	1.500	1.660	2.130	1 5/16-12
390-12-16	3/4	1	1.750	1.810	2.370	1 1/16-12
390-16-16	1	1	1.750	1.810	2.370	1 5/16-12
390-20-16	1 1/4	1	1.750	1.810	2.370	1 5/8-12
390-16-20	1	1 1/4	2.000	2.060	2.620	1 5/16-12
390-20-20	1 1/4	1 1/4	2.000	2.060	2.620	1 5/8-12
390-20-24	1 1/4	1 1/2	2.375	2.330	3.150	1 5/8-12
390-24-24	1 1/2	1 1/2	2.375	2.330	3.150	1 7/8-12
390-32-24	2	1 1/2	2.375	2.330	3.150	2 1/2-12
390-24-32	1 1/2	2	2.812	3.060	4.250	1 7/8-12
390-32-32	2	2	2.812	3.060	4.250	2 1/2-12
690-8-8	1/2	1/2	1.250	1.660	2.130	3/4-16
690-8-12	1/2	3/4	1.625	1.660	2.130	3/4-16
690-12-12	3/4	3/4	1.625	1.660	2.130	1 1/16-12
690-16-12	1	3/4	1.625	1.660	2.130	1 5/16-12
690-12-16	3/4	1	1.875	1.810	2.370	1 1/16-12
690-16-16	1	1	1.875	1.810	2.370	1 5/16-12
690-20-16	1 1/4	1	1.875	1.810	2.370	1 5/8-12
690-16-20	1	1 1/4	2.125	2.060	2.760	1 5/16-12
690-20-20	1 1/4	1 1/4	2.125	2.060	2.760	1 5/8-12
690-24-20	1 1/2	1 1/4	2.125	2.190	2.760	1 7/8-12
690-20-24	1 1/4	1 1/2	2.500	2.330	3.150	1 5/8-12
690-24-24	1 1/2	1 1/2	2.500	2.330	3.150	1 7/8-12
690-32-24	2	1 1/2	2.500	3.060	4.250	2 1/2-12
690-24-32	1 1/2	2	3.125	3.060	4.250	1 7/8-12
690-32-32	2	2	3.125	3.060	4.250	2 1/2-12

Hydraulic  
Adapters

**90° ORFS Thread**



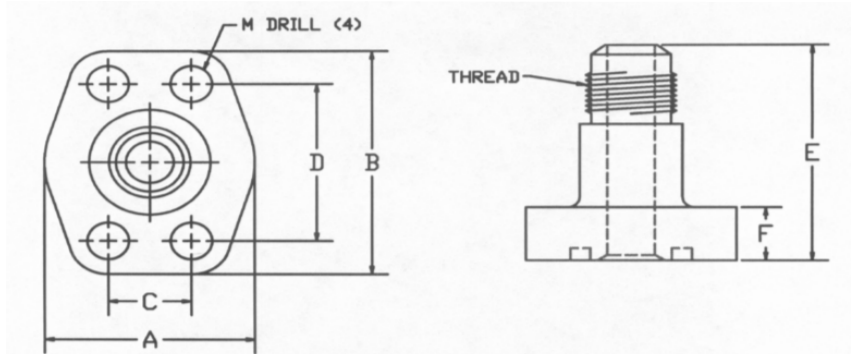
CODE 61

CODE 62

PART NUMBER	TUBE O.D.	FLANGE SIZE	A	B	C	THREAD
394-12-12	3/4	3/4	1.500	2.13	1.66	1 3/16-12
394-16-12	1	3/4	1.500	2.13	1.66	1 7/16-12
394-12-16	3/4	1	1.750	2.37	1.81	1 3/16-12
394-16-16	1	1	1.750	2.37	1.81	1 7/16-12
394-20-16	1 1/4	1	1.750	2.37	1.81	1 11/16-12
394-16-20	1	1 1/4	2.000	2.62	2.06	1 7/16-12
394-20-20	1 1/4	1 1/4	2.000	2.62	2.06	1 11/16-12
394-24-20	1 1/2	1 1/4	2.000	2.62	2.06	2-12
394-20-24	1 1/4	1 1/2	2.375	3.15	2.33	1 11/16-12
394-24-24	1 1/2	1 1/2	2.375	3.15	2.33	2-12
694-12-12	3/4	3/4	1.625	2.13	1.66	1 3/16-12
694-16-12	1	3/4	1.625	2.13	1.66	1 7/16-12
694-12-16	3/4	1	1.875	2.37	1.81	1 3/16-12
694-16-16	1	1	1.875	2.37	1.81	1 7/16-12
694-20-16	1 1/4	1	1.875	2.37	1.81	1 11/16-12
694-16-20	1	1 1/4	2.125	2.76	2.06	1 7/16-12
694-20-20	1 1/4	1 1/4	2.125	2.76	2.06	1 11/16-12
694-24-20	1 1/2	1 1/4	2.125	2.76	2.06	2-12
694-20-24	1 1/4	1 1/2	2.500	3.15	2.33	1 11/16-12
694-24-24	1 1/2	1 1/2	2.500	3.15	2.33	2-12



**JIC x 4 Bolt**

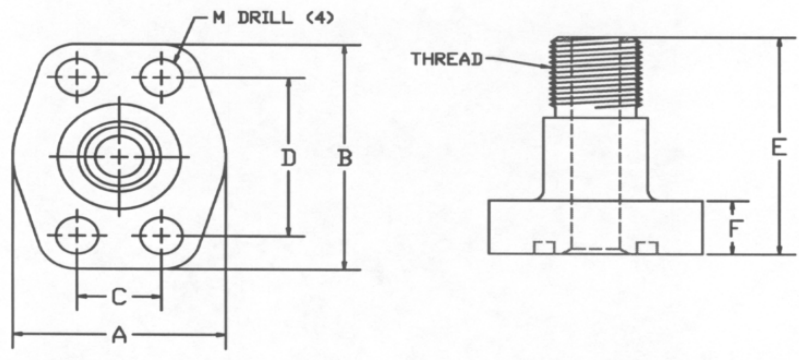


ANCHOR PART NO.	FLANGE SIZE	CODE 61								
		A	B	C	D	E	F	M	THREAD	
W300-8-8	.50	1.81	2.13	.688	1.500	1.75	.630	.344	3/4-16	
W300-12-12	.75	1.97	2.56	.875	1.875	2.12	.710	.413	1 1/16-12	
W300-16-16	1.00	2.17	2.75	1.031	2.062	2.18	.710	.413	1 5/16-12	
W300-20-20	1.25	2.68	3.12	1.188	2.312	2.44	.830	.469	1 5/8-12	
W300-24-24	1.50	3.07	3.66	1.406	2.750	2.81	.980	.531	1 7/8-12	
W600-8-8	.50	1.81	2.21	.719	1.594	1.75	.630	.344	3/4-16	
W600-12-12	.75	2.17	2.80	.937	2.000	2.31	.830	.413	1 1/16-12	
W600-16-16	1.00	2.56	3.19	1.093	2.250	2.62	.980	.492	1 5/16-12	
W600-20-20	1.25	3.07	3.75	1.250	2.625	2.81	1.060	.531	1 5/8-12	
W600-24-24	1.50	3.70	4.41	1.437	3.125	3.25	1.180	.656	1 7/8-12	

Hydraulic  
Adapters



**ORFS x 4 Bolt**



ANCHOR PART NO.	FLANGE SIZE	CODE 61								
		A	B	C	D	E	F	M	THREAD	
W304-8-8	.50	1.81	2.13	.688	1.500	1.75	.630	.344	13/16-16	
W304-12-12	.75	1.97	2.56	.875	1.875	2.00	.710	.413	1 3/16-12	
W304-16-16	1.00	2.17	2.75	1.031	2.062	2.00	.710	.413	1 7/16-12	
W304-20-20	1.25	2.68	3.12	1.188	2.312	2.25	.830	.469	1 11/16-12	
W304-24-24	1.50	3.07	3.66	1.406	2.750	2.50	.980	.531	2-12	
W604-8-8	.50	1.81	2.21	.719	1.594	1.75	.630	.344	13/16-16	
W604-12-12	.75	2.17	2.80	.937	2.000	2.25	.830	.413	1 3/16-12	
W604-16-16	1.00	2.56	3.19	1.093	2.250	2.50	.980	.492	1 7/16-12	
W604-20-20	1.25	3.07	3.75	1.250	2.625	2.62	1.060	.531	1 11/16-12	
W604-24-24	1.50	3.70	4.41	1.437	3.125	2.88	1.180	.656	2-12	





**Stainless Steel**

**ALPHA-NUMBERING LISTING**

SF-2/SFX-2 .....	38	W43 .....	39
SFW/SFTW .....	38	W44 .....	39
SFXW/SFXTW .....	38	W45 .....	39
W4 .....	41	W46 .....	40
W16 .....	46	W48 .....	40
W17 .....	46	W49 .....	40
W18 .....	46	W59 .....	41
W19 .....	46	W60 .....	41
W23 .....	43	W61 .....	41
W24 .....	43	W65 .....	47
W25 .....	43	W66 .....	47
W26 .....	44	W72 .....	41
W27 .....	43	W75 .....	47
W28 .....	44	W76 .....	47
W29 .....	44	W91 .....	41
W30 .....	44	W104 .....	39
W32 .....	44	W106 .....	40
W33 .....	44	W169 .....	45
W34 .....	43	W176 .....	45
W35 .....	43	W186 .....	45
W36 .....	42	W189 .....	45
W37 .....	42		
W38 .....	42		
W39 .....	42		

**SAE J518 SPLIT/CAPTIVE FLANGES**

*For SAE Flanged Head Connection*  
Code 61 - Code 62 .....

**SAE 4 BOLT FLANGES**

*For Pipe*  
500 PSI - Code 61 - Code 62 Flat Socket ..... 41  
Code 61 - Code 62 NPTF ..... 39  
Code 61 - Code 62 SAE Thread ..... 40  
Code 61 Butt Weld-Sched 40/Sched  
80/Sched 160 ..... 43  
Code 62 Butt Weld-Sched 80/Sched  
160/Sched XXS ..... 44  
Code 61 - Code 62 Blanking ..... 42  
Code 61 - Code 62 Elbow Socket Weld ..... 45

**SQUARE 4 BOLT FLANGES**

*For Pipe*  
3000 Series Flat Socket Weld ..... 47  
3000 Series NPTF Thread ..... 47

**MISCELLANEOUS COMPONENTS**

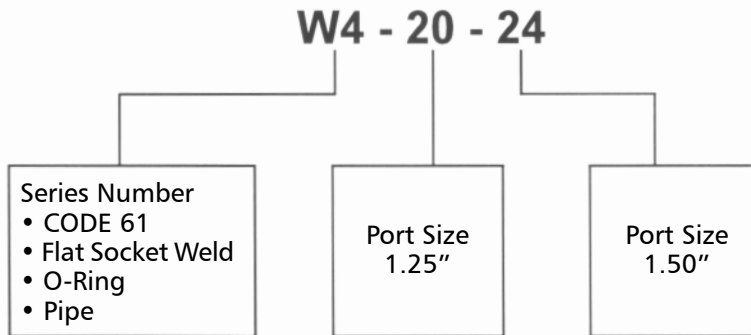
*For Pipe & Tube*  
Code 61 - Code 62 Tee Junction Block ..... 46

*\* The use of stainless steel bolts may reduce the pressure rating of the assembly.*

**Hydraulic  
Adapters**

**Ordering System**

Our basic part numbering system is simple to use. The explanation of our part numbering system is detailed below. The series number provides the greatest amount of information pertaining to the flange product. The port size and pad size simply refer to size only, with all sizes based on 1/16 of an inch.



- NOTE #1 - All items available with mounting kit by simply adding suffix letter "U".
- NOTE #2 - All items available in stainless steel material by simply adding the suffix letters "SS".
- NOTE #3 - All items available with metric mounting holes simply by adding the appropriate suffix (IE: M10, M12, etc).



**Pressure Ratings of SAE Flanges**

**STANDARD PRESSURE: J518 CODE 61**

**HIGH PRESSURE: J518 CODE 62**

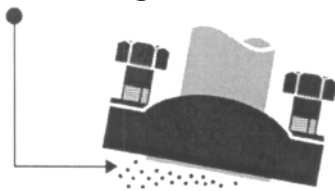
Size	PSI	BAR	Bolt Torque lb-in
1/2"	5000	350	175-225
3/4"	5000	350	250-350
1"	5000	350	325-425
1-1/4"	4000	280	425-550
1-1/2"	3000	210	550-700
2"	3000	210	650-800
2-1/2"	2500	170	950-1100
3"	2000	140	1650-1800
3-1/2"	500	35	1400-1600
4"	500	35	1400-1600
5"	500	35	1400-1600

Size	PSI	BAR	Bolt Torque lb-in
3/4"	6000	420	300-400
1"	6000	420	500-600
1-1/4"	6000	420	750-900
1-1/2"	6000	420	1400-1600
2"	6000	420	2400-2600



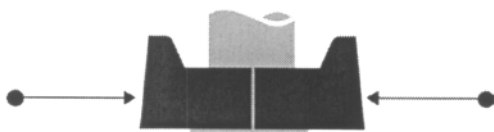
**Split Flange Clamp**

**1. Clean the sealing surface.**



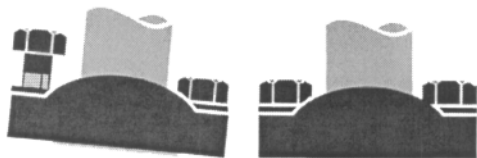
Clean the sealing surface and make certain the O-Ring groove is free of chips, dirt, nicks, etc. Foreign material prevents a proper seal.

**2. Make sure of full flange-to-head contact.**



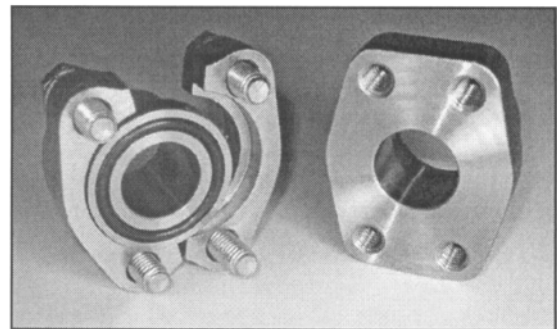
Check O-Ring to see that it is properly seated to prevent cutting during installation. Push clamp halves inward as far as they will go so as to give greatest possible bearing area necessary to long service life.

**3. Tighten bolts evenly and torque to specs.**



This ensures even distribution of the necessary sealing forces on the clamps and O-Ring head.

Anchor's Split-Flange Clamp design gives you a tilt proof clamp. By locating the plane of the Split-Flange Clamp half bolt centelines so that it passes through the center of force of the flanged head on the Split-Flange Clamp half, unbalanced moments are eliminated. This design principle prevents tilting of the clamp half and extrusion of the O-Ring. It conforms to SAE Standard J518.



Hose assembly removal is facilitated by the rounded end design of the clamp halves. Loosening of the four bolts and removal of one bolt permits the end of one clamp half to be pivoted to the side about the other bolt. This opens the clamp fully and allows the flanged head assembly to be removed. It also allows the easy assembly of the hose in close quarters.

Use of the highly efficient and widely used static O-Ring seal eliminates the use of gaskets, tapered threads and sealing compounds. There are no spiral leakage paths. The connector may be assembled with small automotive wrenches in tight quarters with low torque requirements. Large wrenches and high assembly forces are not required.

**Hydraulic  
Adapters**

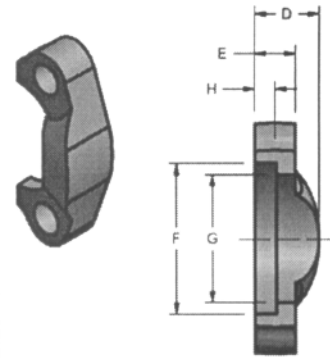




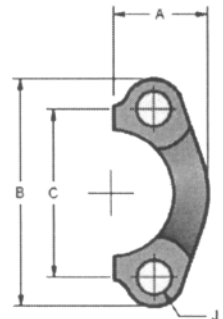


**SAE J518 Split**

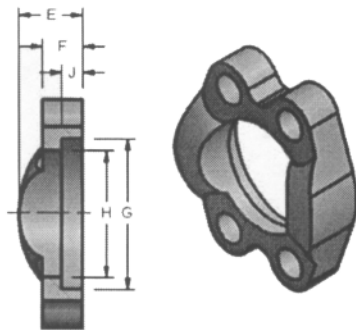
CODE 61 SPLIT FLANGE													
PART NO.	**KIT PART NO.	FLANGE SIZE	A	B	C	D	E	F	G	H	J	MOUNTING HARDWARE	
												O-RING	HHCS
8SF-2	8SFO	.50	.86	2.12	1.500	.75	.50	1.219	.955	.245	.344	210	5/16-18X1.25
12SF-2	12SFO	.75	.98	2.56	1.875	.88	.56	1.531	1.265	.245	.406	214	3/8-16X1.25
16SF-2	16SFO	1.00	1.11	2.75	2.062	.94	.62	1.781	1.515	.295	.406	219	3/8-16X1.25
20SF-2	20SFO	1.25	1.39	3.12	2.312	.88	.56	2.031	1.720	.295	.469	222	7/16-14X1.50
24SF-2	24SFO	1.50	1.58	3.69	2.750	1.00	.62	2.406	2.000	.295	.531	225	1/2-13X1.50
32SF-2	32SFO	2.00	1.86	4.00	3.062	1.03	.62	2.844	2.470	.355	.531	228	1/2-13X1.50
40SF-2	40SFO	2.50	2.09	4.50	3.500	1.50	.75	3.344	2.950	.355	.531	232	1/2-13X1.75
48SF-2	48SFO	3.00	2.53	5.31	4.188	1.62	.88	4.031	3.580	.355	.656	237	5/8-11X1.75
56SF-2	56SFO	3.50	2.70	6.00	4.750	1.12	.88	4.531	4.030	.422	.656	241	5/8-11X2.00
64SF-2	64SFO	4.00	2.95	6.38	5.125	1.38	1.00	5.031	4.530	.422	.656	245	5/8-11X2.00



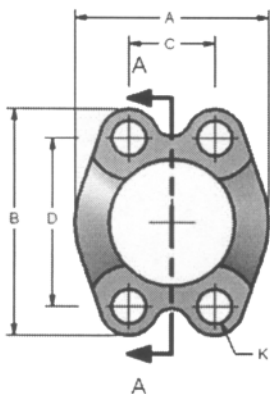
CODE 62 SPLIT FLANGE													
PART NO.	**KIT PART NO.	FLANGE SIZE	A	B	C	D	E	F	G	H	J	MOUNTING HARDWARE	
												O-RING	HHCS
8SFX-2	8SFXO	.50	.89	2.22	1.594	.88	.62	1.281	.970	.285	.344	210	5/16-18X1.25
12SFX-2	12SFXO	.75	1.14	2.81	2.000	1.12	.75	1.656	1.280	.325	.406	214	3/8-16X1.50
16SFX-2	16SFXO	1.00	1.33	3.19	2.250	1.31	.94	1.906	1.530	.355	.469	219	7/16-14X1.75
20SFX-2	20SFXO	1.25	1.48	3.75	2.625	1.50	1.06	2.156	1.750	.385	.531	222	1/2-13X1.75
24SFX-2	24SFXO	1.50	1.83	4.44	3.125	1.69	1.19	2.531	2.030	.475	.656	225	5/8-11X2.25
32SFX-2	32SFXO	2.00	2.20	5.25	3.812	2.06	1.44	3.156	2.660	.475	.781	228	3/4-10X2.75



\*\*When ordering this part # you will receive: (2) split flange halves, (4) hex head bolts and lockwashers, and (1) Buna N O-Ring.



CODE 61 CAPTIVE FLANGE													
DRILLED PART NO.	TAPPED PART NO.	FLANGE SIZE	A	B	C	D	E	F	G	H	J	K	K UNC-2B
8SFW	8SFTW	.50	1.81	2.12	.688	1.500	.75	.50	1.219	.955	.245	.344	5/16-18
12SFW	12SFTW	.75	2.06	2.56	.875	1.875	.88	.56	1.531	1.265	.245	.406	3/8-16
16SFW	16SFTW	1.00	2.31	2.75	1.031	2.062	.94	.62	1.781	1.515	.295	.406	3/8-16
20SFW	20SFTW	1.25	2.88	3.12	1.188	2.312	.88	.56	2.031	1.720	.295	.469	7/16-14
24SFW	24SFTW	1.50	3.25	3.69	1.406	2.750	1.00	.62	2.406	2.000	.295	.531	1/2-13
32SFW	32SFTW	2.00	3.81	4.00	1.688	3.062	1.03	.62	2.844	2.470	.355	.531	1/2-13
40SFW	40SFTW	2.50	4.28	4.50	2.000	3.500	1.50	.75	3.344	2.950	.355	.531	1/2-13
48SFW	48SFTW	3.00	5.16	5.31	2.438	4.188	1.62	.88	4.031	3.580	.355	.656	5/8-11
56SFW	56SFTW	3.50	5.50	6.00	2.750	4.750	1.12	.88	4.531	4.030	.422	.656	5/8-11
64SFW	64SFTW	4.00	6.00	6.38	3.062	5.125	1.38	1.00	5.031	4.530	.422	.656	5/8-11

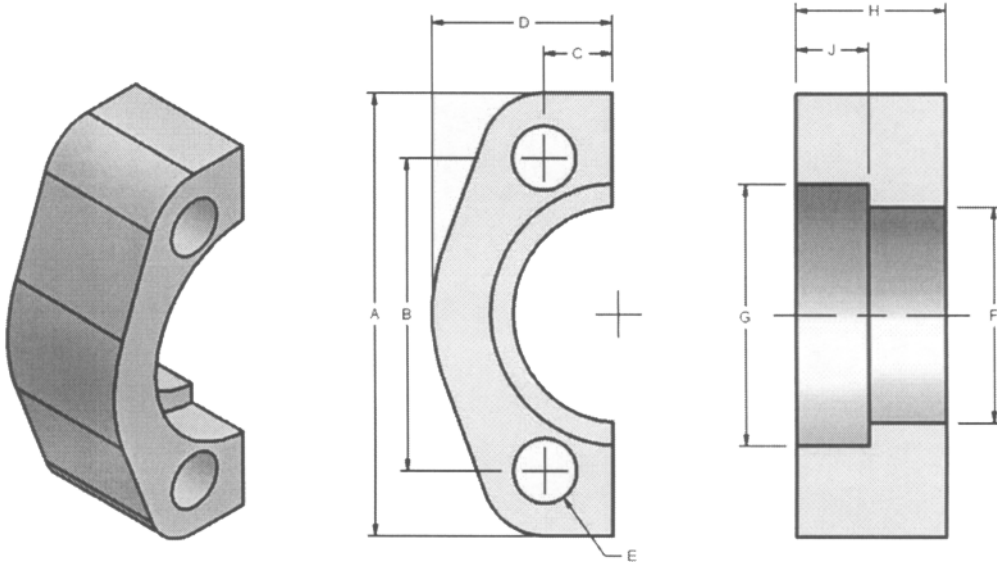


CODE 62 CAPTIVE FLANGE													
DRILLED PART NO.	TAPPED PART NO.	FLANGE SIZE	A	B	C	D	E	F	G	H	J	K	K UNC-2B
8SFXW	8SFXTW	.50	1.86	2.22	.718	1.594	.88	.62	1.281	.970	.285	.344	5/16-18
12SFXW	12SFXTW	.75	2.38	2.81	.938	2.000	1.12	.75	1.656	1.280	.325	.406	3/8-16
16SFXW	16SFXTW	1.00	2.75	3.19	1.094	2.250	1.31	.94	1.906	1.530	.355	.469	7/16-14
20SFXW	20SFXTW	1.25	3.06	3.75	1.250	2.625	1.50	1.06	2.156	1.750	.385	.531	1/2-13
24SFXW	24SFXTW	1.50	3.75	4.44	1.438	3.125	1.69	1.19	2.531	2.030	.475	.656	5/8-11
32SFXW	32SFXTW	2.00	4.50	5.25	1.750	3.812	2.06	1.44	3.156	2.660	.475	.781	3/4-10



**Split Flange**

Fits Caterpillar Flange Head hose ends



**Hydraulic  
Adapters**

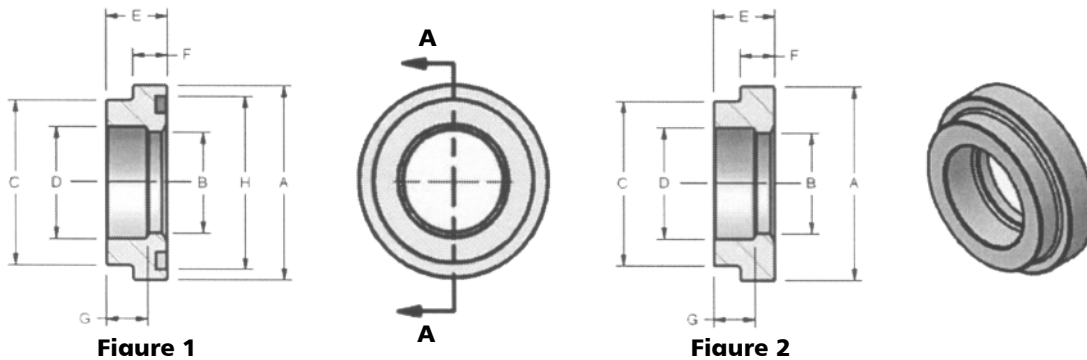
PTX SERIES SPLIT FLANGES													
PART NO.	**KIT PART NO.	FLANGE SIZE	A	B	C	D	E	F	G	H	J	MOUNTING HARDWARE	
												O-RING	HHCS
12PTX-2	12PTXO	.75	2.950	2.000	.446	1.210	.406	1.270	1.632	1.102	.530	214	3/8-16X1.75
16PTX-2	16PTXO	1.00	3.190	2.250	.507	1.335	.469	1.550	1.884	1.102	.530	219	7/16-14X1.75
20PTX-2	20PTXO	1.25	3.750	2.625	.585	1.490	.531	1.705	2.134	1.102	.530	222	1/2-13X2.00
24PTX-2	24PTXO	1.50	4.440	3.125	.679	1.335	.656	2.080	2.509	1.258	.530	225	5/8-11X2.50
32PTX-2	32PTXO	2.00	5.240	3.812	.834	2.205	.827	2.640	3.130	1.457	.530	228	3/4-10X2.75

\*\*When ordering this part # you will receive: (2) split flange halves, (4) hex head bolts and lockwashers. **NO O-RING INCLUDED.**





**Tube Flange Head Fitting**



CODE 61 TUBE FLANGE HEAD FITTING											
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	TUBE SIZE	FLANGE SIZE	A	B	C	D	E	F	G	H
8T-8SF	8T-8SFN	.50	.50	1.188	.406	.924	.502	.50	.265	.312	1.000
10T-8SF	10T-8SFN	.63	.50	1.188	.500	.924	.627	.50	.265	.312	1.000
12T-12SF	12T-12SFN	.75	.75	1.500	.656	1.234	.752	.56	.265	.375	1.250
16T-12SF	16T-12SFN	1.00	.75	1.500	.750	1.234	1.002	.56	.265	.375	1.250
16T-16SF	16T-16SFN	1.00	1.00	1.750	.906	1.484	1.002	.56	.315	.375	1.560
20T-16SF	20T-16SFN	1.25	1.00	1.750	1.000	1.484	1.252	.56	.315	.375	1.560
20T-20SF	20T-20SFN	1.25	1.25	2.000	1.125	1.684	1.252	.56	.315	.375	1.750
24T-20SF	24T-20SFN	1.50	1.25	2.000	1.250	1.684	1.502	.56	.315	.375	1.750
24T-24SF	24T-24SFN	1.50	1.50	2.375	1.375	1.964	1.502	.62	.315	.438	2.115
28T-24SF	28T-24SFN	1.75	1.50	2.375	1.500	1.964	1.752	.62	.315	.438	2.115
32T-32SF	32T-32SFN	2.00	2.00	2.812	1.875	2.434	2.002	.62	.375	.500	2.490
36T-32SF	36T-32SFN	2.25	2.00	2.812	2.000	2.434	2.252	.62	.375	.500	2.490
40T-40SF	40T-40SFN	2.50	2.50	3.312	2.375	2.904	2.502	.68	.375	.562	2.995
44T-40SF	44T-40SFN	2.75	2.50	3.312	2.500	2.904	2.752	.68	.375	.500	2.995
48T-48SF	48T-48SFN	3.00	3.00	4.000	2.875	3.534	3.002	.75	.375	.562	3.615

CODE 62 TUBE FLANGE HEAD FITTING											
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	TUBE SIZE	FLANGE SIZE	A	B	C	D	E	F	G	H
12T-12SFX	12T-12SFXN	.75	.75	1.625	.656	1.234	.752	.69	.345	.500	1.250
16T-12SFX	16T-12SFXN	1.00	.75	1.625	.750	1.234	1.002	.69	.345	.500	1.250
16T-16SFX	16T-16SFXN	1.00	1.00	1.875	.810	1.484	1.002	.81	.375	.625	1.560
20T-16SFX	20T-16SFXN	1.25	1.00	1.875	1.000	1.484	1.252	.81	.375	.625	1.560
20T-20SFX	20T-20SFXN	1.25	1.25	2.125	1.010	1.704	1.252	1.00	.405	.812	1.750
24T-20SFX	24T-20SFXN	1.50	1.25	2.125	1.250	1.704	1.502	1.00	.405	.812	1.750
24T-24SFX	24T-24SFXN	1.50	1.50	2.500	1.250	1.984	1.502	1.19	.495	1.000	2.115
28T-24SFX	28T-24SFXN	1.75	1.50	2.500	1.500	1.984	1.757	1.19	.495	1.000	2.115
32T-32SFX	32T-32SFXN	2.00	2.00	3.125	1.750	2.604	2.002	1.50	.495	1.375	2.490
36T-32SFX	36T-32SFXN	2.25	2.00	3.125	2.000	2.604	2.252	1.50	.495	1.312	2.490

Hydraulic  
Adapters





**Flange Plug**

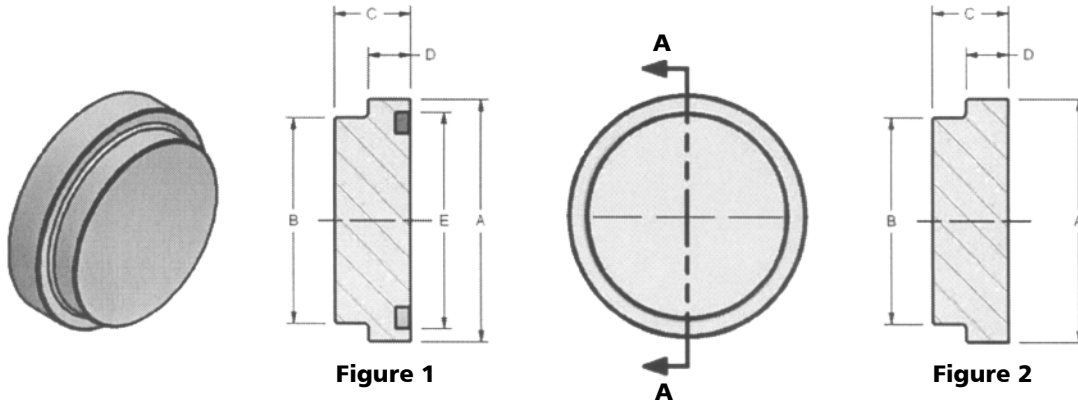


Figure 1

Figure 2

CODE 61 FLANGE PLUG							
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	FLANGE SIZE	A	B	C	D	E
8-FOP	8-FP	.50	1.188	.924	.50	.265	1.000
12-FOP	12-FP	.75	1.500	1.234	.56	.265	1.250
16-FOP	16-FP	1.00	1.750	1.484	.56	.315	1.560
20-FOP	20-FP	1.25	2.000	1.684	.56	.315	1.750
24-FOP	24-FP	1.50	2.375	1.964	.62	.315	2.115
32-FOP	32-FP	2.00	2.810	2.434	.62	.375	2.490
40-FOP	40-FP	2.50	3.312	2.904	.68	.375	2.995
48-FOP	48-FP	3.00	4.000	3.534	.75	.375	3.615

CODE 62 FLANGE PLUG							
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	FLANGE SIZE	A	B	C	D	E
12-FOPX	12-FPX	.75	1.625	1.234	.690	.345	1.250
16-FOPX	16-FPX	1.00	1.875	1.484	.810	.375	1.560
20-FOPX	20-FPX	1.25	2.125	1.704	1.000	.405	1.750
24-FOPX	24-FPX	1.50	2.500	1.984	1.190	.495	2.115
32-FOPX	32-FPX	2.00	3.125	2.604	1.500	.495	2.490

Hydraulic  
Adapters

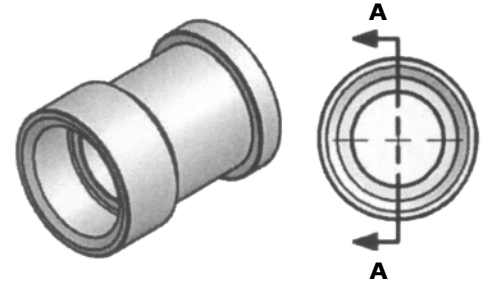


**Female Flange Head Adapter**



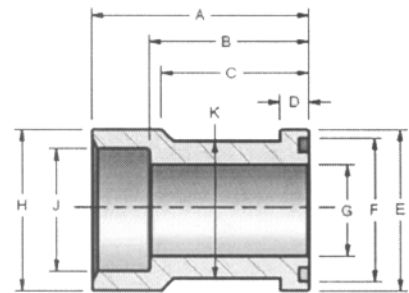
**CODE 61 SOCKET WELD TO FLANGE HEAD FOR PIPE**

PART NO.	PIPE SIZE	CLAMP SIZE	A	B	C	D	E	F	G	H	J	K
8P-8WSF	.50	.50	2.34	1.78	1.62	.265	1.187	1.000	.500	1.25	.855	.924
12P-12WSF	.75	.75	2.34	1.78	1.62	.265	1.500	1.250	.750	1.50	1.062	1.234
16P-16WSF	1.00	1.00	2.38	1.75	1.62	.315	1.750	1.560	1.000	1.75	1.328	1.484
20P-20WSF	1.25	1.25	2.62	1.94	1.81	.315	2.000	1.750	1.250	2.00	1.672	1.684
24P-24WSF	1.50	1.50	2.88	2.12	2.00	.315	2.375	2.115	1.500	2.38	1.922	1.964
32P-32WSF	2.00	2.00	3.00	2.12	2.00	.375	2.812	2.490	2.000	2.81	2.406	2.434
40P-40WSF	2.50	2.50	3.06	2.06	1.91	.375	3.312	2.995	2.500	3.31	2.906	2.920
48P-48WSF	3.00	3.00	3.88	2.63	2.47	.375	4.000	3.615	2.875	4.00	3.547	3.534

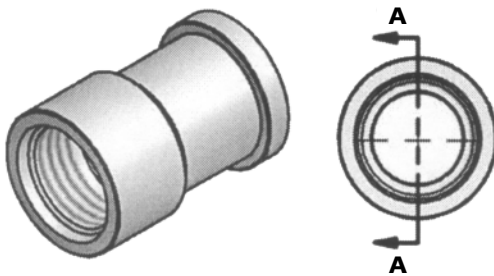


**CODE 62 SOCKET WELD TO FLANGE HEAD FOR PIPE**

PART NO.	PIPE SIZE	CLAMP SIZE	A	B	C	D	E	F	G	H	J	K
W53-12-12	.75	.75	2.75	2.12	1.95	.345	1.625	1.250	.750	1.750	1.062	1.234
W53-16-16	1.00	1.00	3.06	2.43	2.34	.375	1.875	1.560	1.000	2.000	1.328	1.484
W53-20-20	1.25	1.25	3.31	2.62	2.50	.405	2.125	1.750	1.125	3.312	1.672	1.704
W53-24-24	1.50	1.50	3.93	3.18	3.06	.495	2.500	2.115	1.375	2.750	1.922	1.984
W53-32-32	2.00	2.00	4.06	3.18	3.18	.495	3.125	2.490	1.875	3.125	2.406	2.604

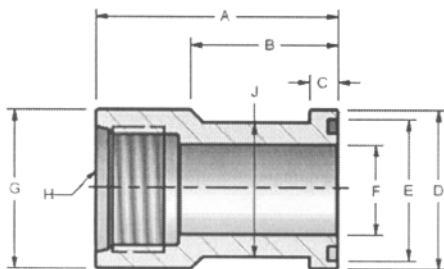


Hydraulic Adapters



**CODE 61 NPTF THREAD TO FLANGE HEAD**

PART NO.	PIPE SIZE	CLAMP SIZE	A	B	C	D	E	F	G	H NPTF	J
12F-12FO	.75	.75	2.47	1.62	.265	1.500	1.250	.75	1.50	.75	1.234
16F-16FO	1.00	1.00	2.66	1.62	.315	1.750	1.560	1.00	1.75	1.00	1.484
20F-20FO	1.25	1.25	2.84	1.81	.315	2.000	1.750	1.25	2.00	1.25	1.684
24F-24FO	1.50	1.50	3.00	2.00	.315	2.375	2.115	1.50	2.38	1.50	1.964
32F-32FO	2.00	2.00	3.00	2.00	.375	2.812	2.490	2.00	2.81	2.00	2.434



**CODE 61 SAE THREAD TO FLANGE HEAD**

PART NO.	TUBE SIZE	CLAMP SIZE	A	B	C	D	E	F	G	H UN-2B	J
12S-12FO	.75	.75	2.47	1.62	.265	1.500	1.250	.75	1.50	1 1/16-12	1.234
16S-16FO	1.00	1.00	2.66	1.62	.315	1.750	1.560	1.00	1.75	1 5/16-12	1.484
20S-20FO	1.25	1.25	2.84	1.81	.315	2.000	1.750	1.25	2.00	1 5/8-12	1.684
24S-24FO	1.50	1.50	3.00	2.00	.315	2.375	2.115	1.50	2.38	1 7/8-12	1.964
32S-32FO	2.00	2.00	3.00	2.00	.375	2.812	2.490	2.00	2.81	2 1/2-12	2.434



**Butt Weld Pipe**

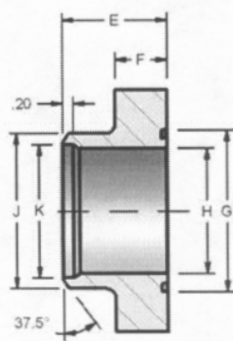
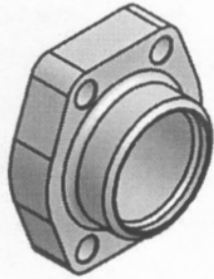


Figure 1

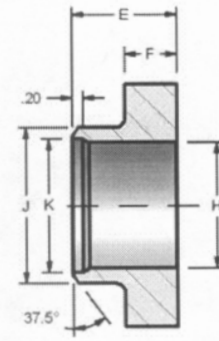
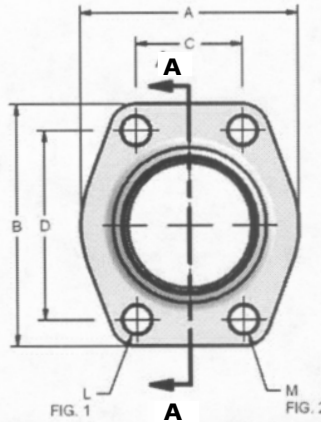


Figure 2

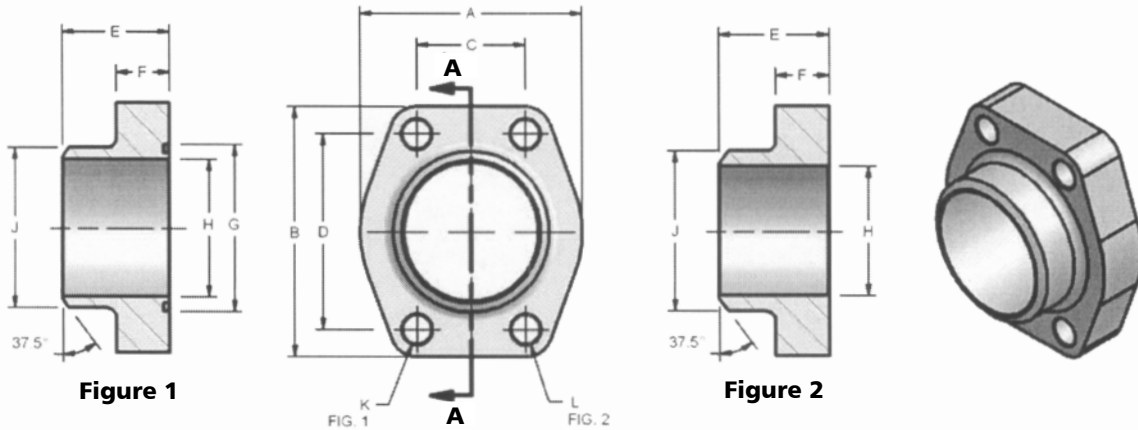
CODE 61 BUTT WELD - SCHEDULE 40 PIPE																	
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K	L	M UNC-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W35-8	W34-8	.50	.50	1.81	2.13	.688	1.500	1.42	.63	1.000	.548	.840	.624	.344	5/16-18	210	5/16-18X1.25
W35-12	W34-12	.75	.75	1.97	2.56	.875	1.875	1.42	.71	1.250	.744	1.050	.846	.406	3/8-16	214	3/8-16X1.50
W35-16	W34-16	1.00	1.00	2.17	2.75	1.031	2.062	1.50	.71	1.560	.959	1.315	1.051	.406	3/8-16	219	3/8-16X1.50
W35-20	W34-20	1.25	1.25	2.68	3.12	1.188	2.312	1.61	.83	1.750	1.280	1.660	1.382	.469	7/16-14	222	7/16-14X1.75
W35-24	W34-24	1.50	1.50	3.07	3.66	1.406	2.750	1.73	.98	2.115	1.502	1.900	1.612	.531	1/2-13	225	1/2-13X1.75
W35-32	W34-32	2.00	2.00	3.54	4.00	1.688	3.062	1.77	.98	2.490	1.941	2.375	2.069	.531	1/2-13	228	1/2-13X1.75
W35-40	W34-40	2.50	2.50	4.09	4.49	2.000	3.500	1.97	.98	2.995	2.325	2.875	2.471	.531	1/2-13	232	1/2-13X1.75
W35-48	W34-48	3.00	3.00	4.88	5.28	2.438	4.188	1.97	1.06	3.615	2.902	3.500	3.070	.656	5/8-11	237	5/8-11X2.00

CODE 61 BUTT WELD - SCHEDULE 80 PIPE																	
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K	L	M UNC-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W24-8	W23-8	.50	.50	1.81	2.13	.688	1.500	1.42	.63	1.000	.548	.840	SCHEDULE 40 ONLY	.344	5/16-18	210	5/16-18X1.25
W24-12	W23-12	.75	.75	1.97	2.56	.875	1.875	1.42	.71	1.250	.744	1.050		.406	3/8-16	214	3/8-16X1.50
W24-16	W23-16	1.00	1.00	2.17	2.75	1.031	2.062	1.50	.71	1.560	.959	1.315		.406	3/8-16	219	3/8-16X1.50
W24-20	W23-20	1.25	1.25	2.68	3.12	1.188	2.312	1.61	.83	1.750	1.280	1.660		.469	7/16-14	222	7/16-14X1.75
W24-24	W23-24	1.50	1.50	3.07	3.66	1.406	2.750	1.73	.98	2.115	1.502	1.900		.531	1/2-13	225	1/2-13X1.75
W24-32	W23-32	2.00	2.00	3.54	4.00	1.688	3.062	1.77	.98	2.490	1.941	2.375		.531	1/2-13	228	1/2-13X1.75
W24-40	W23-40	2.50	2.50	4.09	4.49	2.000	3.500	1.97	.98	2.995	2.325	2.875		.531	1/2-13	232	1/2-13X1.75
W24-48	W23-48	3.00	3.00	4.88	5.28	2.438	4.188	1.97	1.06	3.615	2.902	3.500		.656	5/8-11	237	5/8-11X2.00

CODE 61 BUTT WELD - SCHEDULE 160 PIPE																	
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K	L	M UNC-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W27-8	W25-8	.50	.50	1.81	2.13	.688	1.500	1.42	.63	1.000	.466	.840	SCHEDULE 40 ONLY	.344	5/16-18	210	5/16-18X1.25
W27-12	W25-12	.75	.75	1.97	2.56	.875	1.875	1.42	.71	1.250	.614	1.050		.406	3/8-16	214	3/8-16X1.50
W27-16	W25-16	1.00	1.00	2.17	2.75	1.031	2.062	1.50	.71	1.560	.817	1.315		.406	3/8-16	219	3/8-16X1.50
W27-20	W25-20	1.25	1.25	2.68	3.12	1.188	2.132	1.61	.83	1.750	1.162	1.660		.469	7/16-14	222	7/16-14X1.75
W27-24	W25-24	1.50	1.50	3.07	3.66	1.406	2.750	1.73	.98	2.115	1.340	1.900		.531	1/2-13	225	1/2-13X1.75
W27-32	W25-32	2.00	2.00	3.54	4.00	1.688	3.062	1.77	.98	2.490	1.689	2.375		.531	1/2-13	228	1/2-13X1.75
W27-40	W25-40	2.50	2.50	4.09	4.49	2.000	3.500	1.97	.98	2.995	2.127	2.875		.531	1/2-13	232	1/2-13X1.75
W27-48	W25-48	3.00	3.00	4.88	5.28	2.438	4.188	1.97	1.06	3.615	2.626	3.500		.656	5/8-11	237	5/8-11X2.00



**Butt Weld Pipe**



Hydraulic  
Adapters

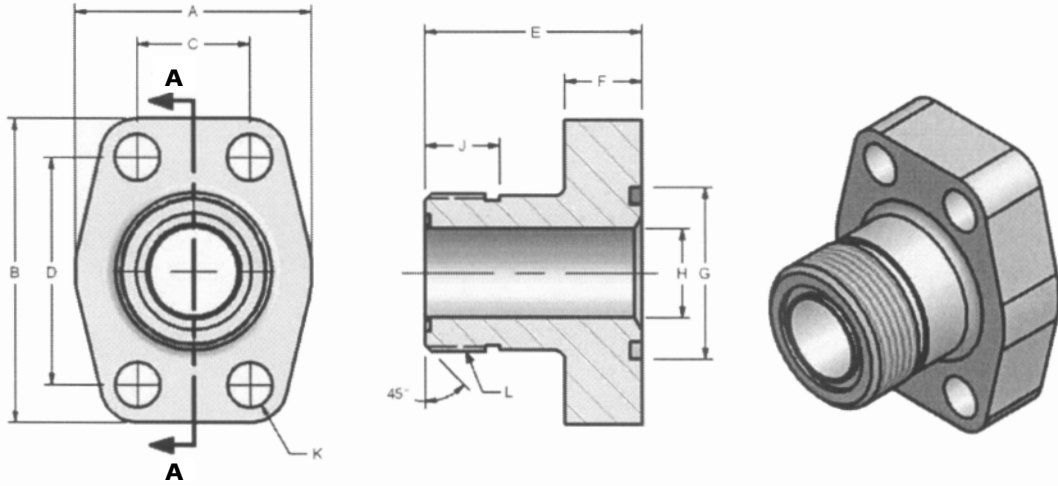
CODE 62 BUTT WELD - SCHEDULE 80 PIPE																
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W28-8	W26-8	.50	.50	1.81	2.21	.718	1.594	1.42	.63	1.000	.548	.840	.344	5/16-18	210	5/16-18X1.25
W28-12	W26-12	.75	.75	2.17	2.80	.937	2.000	1.38	.83	1.250	.744	1.050	.406	3/8-16	214	3/8-16X1.50
W28-16	W26-16	1.00	1.00	2.56	3.19	1.093	2.250	1.61	.83	1.560	.959	1.315	.492	7/16-14	219	7/16-14X1.75
W28-20	W26-20	1.25	1.25	3.07	3.75	1.250	2.625	1.73	.98	1.750	1.280	1.660	.531	1/2-13	222	1/2-13X1.75
W28-24	W26-24	1.50	1.50	3.70	4.41	1.437	3.125	2.17	1.18	2.115	1.502	1.900	.656	5/8-11	225	5/8-11X2.25
W28-32	W26-32	2.00	2.00	4.50	5.28	1.750	3.812	2.56	1.46	2.490	1.941	2.375	.781	3/4-10	228	3/4-10X2.75

CODE 62 BUTT WELD - SCHEDULE 160 PIPE																
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W30-8	W29-8	.50	.50	1.81	2.21	.718	1.594	1.42	.63	1.000	.466	.840	.344	5/16-18	210	5/16-18X1.25
W30-12	W29-12	.75	.75	2.17	2.80	.937	2.000	1.38	.83	1.250	.614	1.050	.406	3/8-16	214	3/8-16X1.50
W30-16	W29-16	1.00	1.00	2.56	3.19	1.093	2.250	1.61	.83	1.560	.817	1.315	.492	7/16-14	219	7/16-14X1.75
W30-20	W29-20	1.25	1.25	3.07	3.75	1.250	2.625	1.73	.98	1.750	1.162	1.660	.531	1/2-13	222	1/2-13X1.75
W30-24	W29-24	1.50	1.50	3.70	4.41	1.437	3.125	2.17	1.18	2.115	1.340	1.900	.656	5/8-11	225	5/8-11X2.25
W30-32	W29-32	2.00	2.00	4.50	5.28	1.750	3.812	2.56	1.46	2.490	.1689	2.375	.781	3/4-10	228	3/4-10X2.75

CODE 62 BUTT WELD - SCHEDULE XXS PIPE																
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W33-8	W32-8	.50	.50	1.81	2.21	.718	1.594	1.42	.63	1.000	.254	.840	.344	5/16-18	210	5/16-18X1.25
W33-12	W32-12	.75	.75	2.17	2.80	.937	2.000	1.38	.83	1.250	.436	1.050	.406	3/8-16	214	3/8-16X1.50
W33-16	W32-16	1.00	1.00	2.56	3.19	1.093	2.250	1.61	.83	1.560	.601	1.315	.492	7/16-14	219	7/16-14X1.75
W33-20	W32-20	1.25	1.25	3.07	3.75	1.250	2.625	1.73	.98	1.750	.898	1.660	.531	1/2-13	222	1/2-13X1.75
W33-24	W32-24	1.50	1.50	3.70	4.41	1.437	3.125	2.17	1.18	2.115	1.102	1.900	.656	5/8-11	225	5/8-11X2.25
W33-32	W32-32	2.00	2.00	4.50	5.28	1.750	3.812	2.56	1.46	2.490	1.505	2.375	.781	3/4-10	228	3/4-10X2.75



**Male Thread**



**Hydraulic Adapters**

CODE 61 MALE ORFS														
PART NO.	PAD SIZE	A	B	C	D	E	F	G	H	J	K	L UN-2A	MOUNTING HARDWARE	
													O-RING	SHCS
W304-8-8	.50	1.81	2.13	.688	1.500	1.75	.630	1.000	.394	.504	.344	13/16-16	210	5/16-18X1.25
W304-12-12	.75	1.97	2.56	.875	1.875	2.00	.710	1.250	.611	.670	.413	1 3/16-12	214	3/8-16X1.50
W304-16-16	1.00	2.17	2.75	1.031	2.062	2.00	.710	1.560	.811	.689	.413	1 7/16-12	219	3/8-16X1.50
W304-20-20	1.25	2.68	3.12	1.188	2.312	2.25	.830	1.750	1.024	.689	.469	1 11/16-12	222	7/16-14X1.75
W304-24-24	1.50	3.07	3.66	1.406	2.750	2.50	.980	2.115	1.260	.689	.531	2-12	225	1/2-13X2.00

CODE 62 MALE ORFS														
PART NO.	PAD SIZE	A	B	C	D	E	F	G	H	J	K	L UN-2A	MOUNTING HARDWARE	
													O-RING	SHCS
W604-8-8	.50	1.81	2.21	.719	1.594	1.75	.630	1.000	.394	.504	.344	13/16-16	210	5/16-18X1.25
W604-12-12	.75	2.17	2.80	.937	2.000	2.25	.830	1.250	.611	.670	.413	1 3/16-12	214	3/8-16X1.50
W604-16-16	1.00	2.56	3.19	1.093	2.250	2.50	.980	1.560	.811	.689	.492	1 7/16-12	219	7/16-14X1.75
W604-20-20	1.25	3.07	3.75	1.250	2.625	2.62	1.060	1.750	1.024	.689	.531	1 11/16-12	222	1/2-13X1.75
W604-24-24	1.50	3.70	4.41	1.437	3.125	2.88	1.180	2.115	1.260	.689	.656	2-12	225	5/8-11X2.25





## Flat Socket Weld Pipe

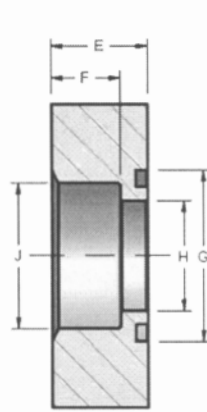
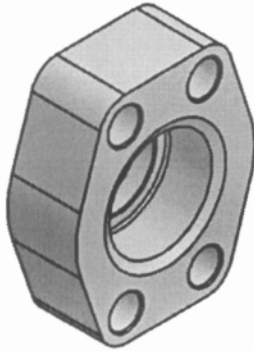


Figure 1

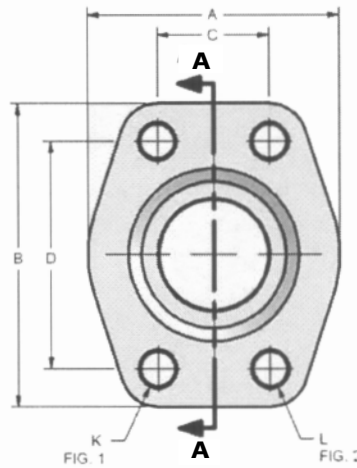


FIG. 1 A FIG. 2

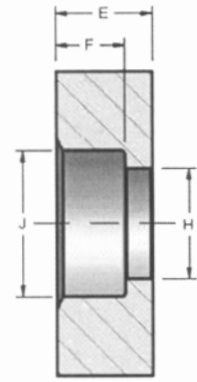


Figure 2

Hydraulic Adapters

CODE 61 FLAT SOCKET WELD - PIPE																
PART NO. O-RING FIG. 1.	PART NO. FLAT FACE FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W4-8-8	W61-8-8	.50	.50	1.813	2.125	.688	1.500	.750	.560	1.000	.502	.855	.344	5/16-18	210	5/16-18X1.50
W4-12-12	W61-12-12	.75	.75	2.063	2.563	.875	1.875	.750	.560	1.250	.752	1.062	.406	3/8-16	214	3/8-16X1.50
W4-16-16	W61-16-16	1.00	1.00	2.313	2.75	1.031	2.063	.880	.630	1.560	1.002	1.328	.406	3/8-16	219	3/8-16X1.75
W4-20-20	W61-20-20	1.25	1.25	2.875	3.125	1.188	2.313	.940	.690	1.750	1.252	1.672	.469	7/16-14	222	7/16-14X1.75
W4-24-24	W61-24-24	1.50	1.50	3.25	3.688	1.406	2.75	1.190	.750	2.115	1.502	1.922	.531	1/2-13	225	1/2-13X2.25
W4-32-32	W61-32-32	2.00	2.00	3.813	4.00	1.688	3.063	1.380	.875	2.490	2.002	2.406	.531	1/2-13	228	1/2-13X2.50
W4-40-40	W61-40-40	2.50	2.50	4.281	4.50	2.000	3.500	1.750	1.00	2.995	2.502	2.906	.531	1/2-13	232	1/2-13X2.75
W4-48-48	W61-48-48	3.00	3.00	5.156	5.313	2.438	4.188	2.120	1.250	3.615	3.002	3.547	.656	5/8-11	237	5/8-11X3.50

CODE 62 FLAT SOCKET WELD - PIPE																
PART NO. O-RING FIG. 1.	PART NO. FLAT FACE FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W59-8-8	W60-8-8	.50	.50	1.94	2.30	.718	1.594	1.25	.560	1.000	.502	.855	.344	5/16-18	210	5/16-18X2.00
W59-12-12	W60-12-12	.75	.75	2.50	2.95	.937	2.000	1.250	.560	1.250	.752	1.062	.406	3/8-16	214	3/8-16X2.00
W59-16-16	W60-16-16	1.00	1.00	2.75	3.19	1.093	2.250	1.500	.630	1.560	1.002	1.328	.492	7/16-14	219	7/16-14X2.50
W59-20-20	W60-20-20	1.25	1.25	3.06	3.75	1.250	2.625	1.500	.690	1.750	1.252	1.672	.531	1/2-13	222	1/2-13X2.50
W59-24-24	W60-24-24	1.50	1.50	3.75	4.44	1.437	3.125	1.750	.750	2.115	1.502	1.922	.656	5/8-11	225	5/8-11X3.00
W59-32-32	W60-32-32	2.00	2.00	4.50	5.25	1.750	3.812	1.750	.875	2.490	2.002	2.406	.781	3/4-10	228	3/4-10X3.00
W59-40-40	W60-40-40	2.50	2.50	5.87	6.87	2.312	4.875	2.060	1.000	2.995	2.502	2.906	.906	7/8-9	232	7/8-9X3.50
W59-48-48	W60-48-48	3.00	3.00	7.00	8.50	2.812	6.000	2.620	1.250	3.615	3.002	3.547	1.190	1-1/8-7	237	1 1/8-7X4.50

CODE 61 FLAT SOCKET WELD - PIPE																
PART NO. O-RING FIG. 1.	PART NO. FLAT FACE FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
*W72-48-48	*W91-48-48	3.00	3.00	5.12	5.31	2.438	4.188	1.380	1.120	3.615	3.002	3.547	.656	5/8-11	237	5/8-11X2.50
W72-56-56	W91-56-56	3.50	3.50	5.50	6.00	2.750	4.750	1.440	1.190	4.095	3.502	4.047	.656	5/8-11	241	5/8-11X2.75
W72-64-64	W91-64-64	4.00	4.00	6.00	6.38	3.062	5.125	1.500	1.250	4.595	4.002	4.578	.656	5/8-11	245	5/8-11X2.75
W72-80-80	W91-80-80	5.00	5.00	7.12	7.25	3.625	6.000	1.750	1.380	5.595	5.002	5.641	.656	5/8-11	253	5/8-11X3.00

\*NOTE: 500 PSI max for W72-48-48 & W91-48-48.





**Flat Socket Weld Tube**

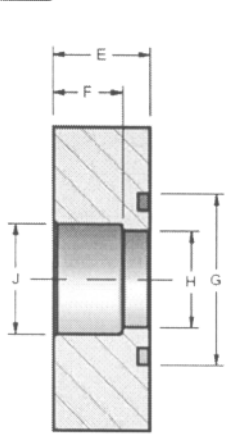


Figure 1

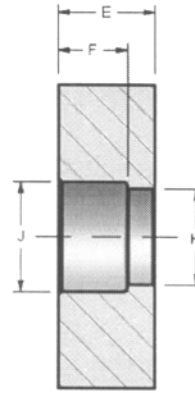
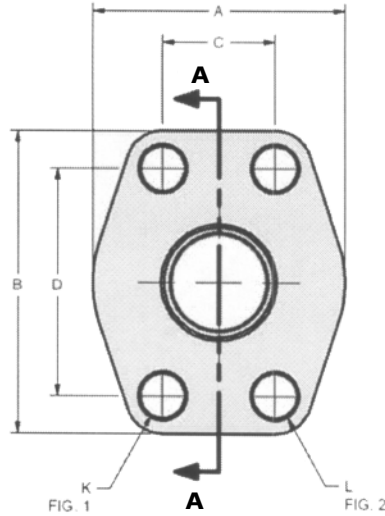
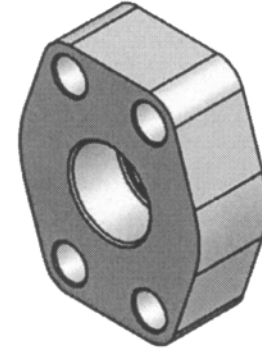


Figure 2



CODE 61 FLAT SOCKET WELD - TUBE																
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	TUBE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W6-12-12	W62-12-12	.75	.75	2.060	2.560	.875	1.875	.750	.560	1.250	.625	.752	.406	3/8-16	214	3/8-16X1.50
W6-16-12	W62-16-12	1.00	.75	2.060	2.560	.875	1.875	.750	.560	1.250	.750	1.002	.406	3/8-16	214	3/8-16X1.50
W6-16-16	W62-16-16	1.00	1.00	2.310	2.750	1.031	2.062	.880	.630	1.560	.875	1.002	.406	3/8-16	219	3/8-16X1.75
W6-20-16	W62-20-16	1.25	1.00	2.310	2.750	1.031	2.062	.880	.630	1.560	1.000	1.252	.406	3/8-16	219	3/8-16X1.75
W6-20-20	W62-20-20	1.25	1.25	2.880	3.120	1.188	2.312	.940	.690	1.750	1.125	1.252	.469	7/16-14	222	7/16-14X1.75
W6-24-20	W62-24-20	1.50	1.25	2.880	3.120	1.188	2.312	.940	.690	1.750	1.250	1.502	.469	7/16-14	222	7/16-14X1.75
W6-24-24	W62-24-24	1.50	1.50	3.250	3.690	1.406	2.750	1.190	.750	2.115	1.375	1.502	.531	1/2-13	225	1/2-13X2.25
W6-28-24	W62-28-24	1.75	1.50	3.250	3.690	1.406	2.750	1.190	.750	2.115	1.500	1.752	.531	1/2-13	225	1/2-13X2.25
W6-32-32	W62-32-32	2.00	2.00	3.810	4.000	1.688	3.062	1.380	.875	2.490	1.875	2.002	.531	1/2-13	228	1/2-13X2.50
W6-36-32	W62-36-32	2.25	2.00	3.810	4.000	1.688	3.062	1.380	.875	2.490	2.000	2.252	.531	1/2-13	228	1/2-13X2.50

CODE 62 FLAT SOCKET WELD - TUBE																
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	TUBE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W58-12-12	W63-12-12	.75	.75	2.50	2.95	.937	2.000	1.250	.560	1.250	.625	.752	.406	3/8-16	214	3/8-16X2.00
W58-16-12	W63-16-12	1.00	.75	2.50	2.95	.937	2.000	1.250	.560	1.250	.750	1.002	.406	3/8-16	214	3/8-16X2.00
W58-16-16	W63-16-16	1.00	1.00	2.75	3.19	1.093	2.250	1.500	.630	1.560	.875	1.002	.492	7/16-14	219	7/16-14X2.50
W58-20-16	W63-20-16	1.25	1.00	2.75	3.19	1.093	2.250	1.500	.630	1.560	1.000	1.252	.492	7/16-14	219	7/16-14X2.50
W58-20-20	W63-20-20	1.25	1.25	3.06	3.75	1.250	2.625	1.500	.690	1.750	1.125	1.252	.531	1/2-13	222	1/2-13X2.50
W58-24-20	W63-24-20	1.50	1.25	3.06	3.75	1.250	2.625	1.500	.690	1.750	1.250	1.502	.531	1/2-13	222	1/2-13X2.50
W58-24-24	W63-24-24	1.50	1.50	3.75	4.44	1.437	3.125	1.750	.750	2.115	1.375	1.502	.656	5/8-11	225	5/8-11X3.00
W58-28-24	W63-28-24	1.75	1.50	3.75	4.44	1.437	3.125	1.750	.750	2.115	1.500	1.752	.656	5/8-11	225	5/8-11X3.00
W58-32-32	W63-32-32	2.00	2.00	4.50	5.25	1.750	3.812	1.750	.875	2.490	1.875	2.002	.781	3/4-10	228	3/4-10X3.00
W58-36-32	W63-36-32	2.25	2.00	4.50	5.25	1.750	3.812	1.750	.875	2.490	2.000	2.252	.781	3/4-10	228	3/4-10X3.00

Hydraulic  
Adapters





## NPTF Thread

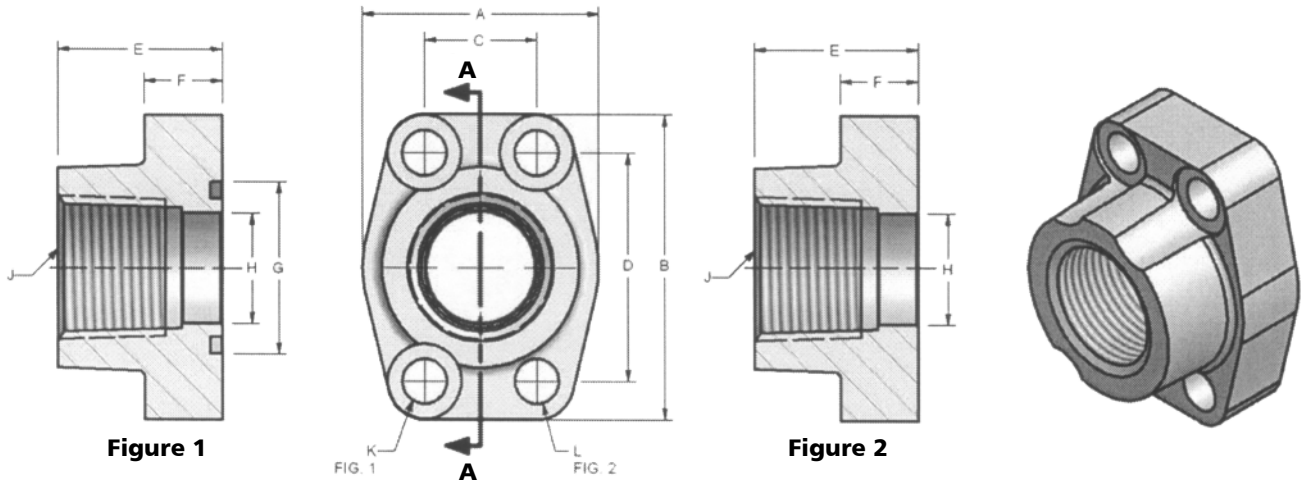


Figure 1

Figure 2

Hydraulic Adapters

CODE 61 NPTF THREAD																
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	PORT SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J NPTF	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W43-8-8	W104-8-8	.50	.50	1.81	2.13	.688	1.500	1.42	.63	1.000	.502	1/2-14	.344	5/16-18	210	5/16-18X1.25
W43-12-12	W104-12-12	.75	.75	1.97	2.56	.875	1.875	1.42	.71	1.250	.752	3/4-14	.406	3/8-16	214	3/8-16X1.50
W43-16-16	W104-16-16	1.00	1.00	2.17	2.75	1.031	2.062	1.50	.71	1.560	1.002	1-11.5	.406	3/8-16	219	3/8-16X1.50
W43-20-20	W104-20-20	1.25	1.25	2.68	3.12	1.188	2.312	1.61	.83	1.750	1.252	1 1/4-11.5	.469	7/16-14	222	7/16-14X1.75
W43-24-24	W104-24-24	1.50	1.50	3.07	3.66	1.406	2.750	1.77	.98	2.115	1.502	1 1/2-11.5	.531	1/2-13	225	1/2-13X1.75
W43-32-32	W104-32-32	2.00	2.00	3.54	4.00	1.688	3.062	1.77	.98	2.490	2.002	2-11.5	.531	1/2-13	228	1/2-13X1.75
W43-40-40	W104-40-40	2.50	2.50	4.09	4.49	2.000	3.500	1.97	.98	2.995	2.502	2 1/2-8	.531	1/2-13	232	1/2-13X1.75
W43-48-48	W104-48-48	3.00	3.00	4.88	5.28	2.438	4.188	1.97	1.06	3.615	3.002	3-8	.656	5/8-11	237	5/8-11X2.00

CODE 62 NPTF THREAD																
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	PORT SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J NPTF	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W44-8-8	W45-8-8	.50	.50	1.81	2.21	.718	1.594	1.42	.63	1.000	.502	1/2-14	.344	5/16-18	210	5/16-18X1.25
W44-12-12	W45-12-12	.75	.75	2.17	2.80	.937	2.000	1.38	.83	1.250	.752	3/4-14	.406	3/8-16	214	3/8-16X1.50
W44-16-16	W45-16-16	1.00	1.00	2.56	3.19	1.093	2.250	1.65	.98	1.560	1.002	1-11.5	.492	7/16-14	219	7/16-14X1.75
W44-20-20	W45-20-20	1.25	1.25	3.07	3.75	1.250	2.625	1.77	1.06	1.750	1.252	1 1/4-11.5	.531	1/2-13	222	1/2-13X1.75
W44-24-24	W45-24-24	1.50	1.50	3.70	4.41	1.437	3.125	1.97	1.18	2.115	1.502	1 1/2-11.5	.656	5/8-11	225	5/8-11X2.25
W44-32-32	W45-32-32	2.00	2.00	4.50	5.28	1.750	3.812	2.56	1.46	2.490	2.002	2-11.5	.781	3/4-10	228	3/4-10X2.75



**SAE Thread**

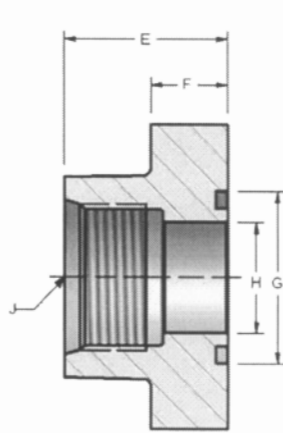
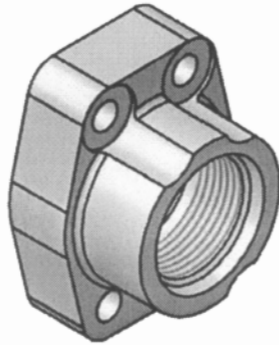


Figure 1

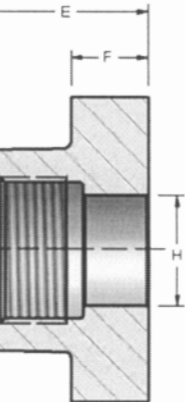
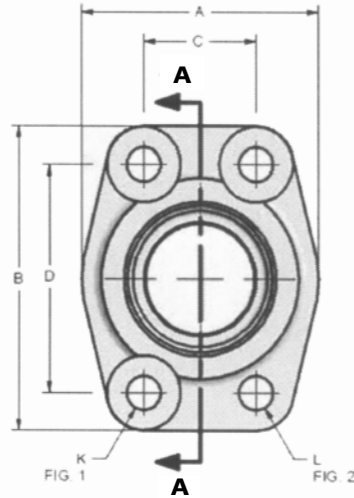


Figure 2

CODE 61 SAE STRAIGHT THREAD																
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	PORT SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J UN/ UNF-2B	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W46-8-8	W106-8-8	.50	.50	1.81	2.13	.688	1.500	1.42	.63	1.000	.502	3/4-16	.344	5/16-18	210	5/16-18X1.25
W46-12-12	W106-12-12	.75	.75	1.97	2.56	.875	1.875	1.42	.71	1.250	.752	1 1/16-12	.406	3/8-16	214	3/8-16X1.50
W46-16-16	W106-16-16	1.00	1.00	2.17	2.75	1.031	2.062	1.50	.71	1.560	1.002	1 5/16-12	.406	3/8-16	219	3/8-16X1.50
W46-20-20	W106-20-20	1.25	1.25	2.68	3.12	1.188	2.312	1.61	.83	1.750	1.252	1 5/8-12	.469	7/16-14	222	7/16-14X1.75
W46-24-24	W106-24-24	1.50	1.50	3.07	3.66	1.406	2.750	1.77	.98	2.115	1.502	1 7/8-12	.531	1/2-13	225	1/2-13X1.75
*W46-32-32	W106-32-32	2.00	2.00	3.54	4.00	1.688	3.062	1.77	.98	2.490	2.002	2 1/2-12	.531	1/2-13	228	1/2-13X1.75

\*NOTE: 500 PSI max for W46-32-32

CODE 62 SAE STRAIGHT THREAD																
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	PORT SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J UN/ UNF-2B	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W48-8-8	W49-8-8	.50	.50	1.81	2.21	.718	1.594	1.42	.63	1.000	.502	3/4-16	.344	5/16-18	210	5/16-18X1.25
W48-12-12	W49-12-12	.75	.75	2.17	2.80	.937	2.000	1.38	.83	1.250	.752	1 1/8-12	.406	3/8-16	214	3/8-16X1.50
W48-16-16	W49-16-16	1.00	1.00	2.56	3.19	1.093	2.250	1.65	.98	1.560	1.002	1 5/16-12	.492	7/16-14	219	7/16-14X1.75
W48-20-20	W49-20-20	1.25	1.25	3.07	3.75	1.250	2.625	1.77	1.06	1.750	1.252	1 5/8-12	.531	1/2-13	222	1/2-13X1.75
W48-24-24	W49-24-24	1.50	1.50	3.70	4.41	1.437	3.125	1.97	1.18	2.115	1.502	1 7/8-12	.656	5/8-11	225	5/8-11X2.25
W48-32-32	W49-32-32	2.00	2.00	4.50	5.28	1.750	3.812	2.56	1.46	2.490	2.002	2 1/2-12	.781	3/4-10	228	3/4-10X2.75

Hydraulic  
Adapters





**BSPP Thread**

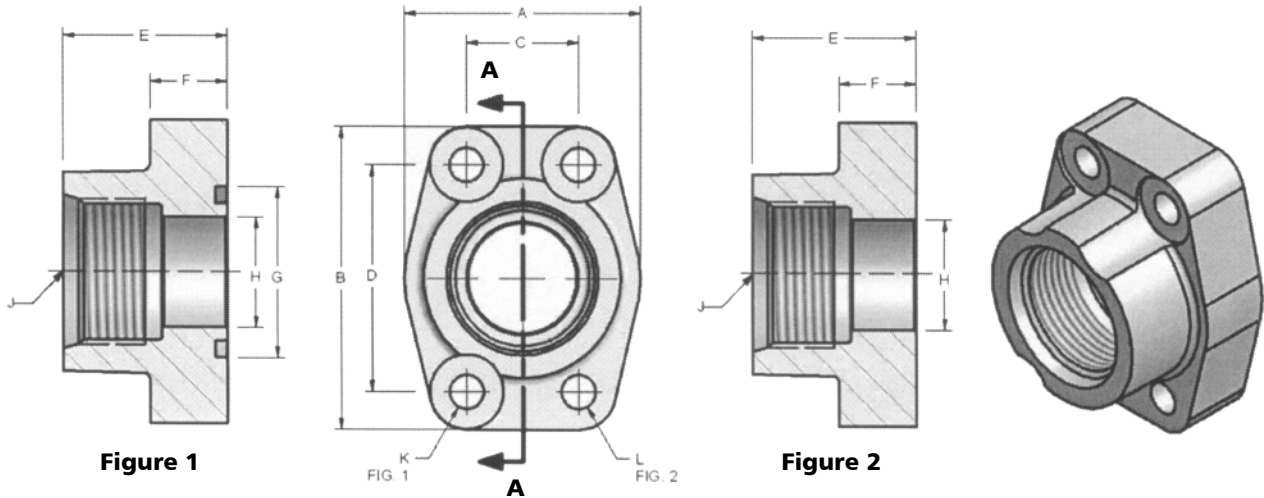


Figure 1

FIG. 1 K L FIG. 2

Figure 2

Hydraulic  
Adapters

CODE 61 BSPP THREAD																
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	PORT SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J BSPP	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W192-8-8	W193-8-8	.50	.50	1.81	2.13	.688	1.500	1.42	.63	1.000	.502	.50-14	.344	5/16-18	210	5/16-18X1.25
W192-12-12	W193-12-12	.75	.75	1.97	2.56	.875	1.875	1.42	.71	1.250	.752	.75-14	.406	3/8-16	214	3/8-16X1.50
W192-16-16	W193-16-16	1.00	1.00	2.17	2.75	1.031	2.062	1.50	.71	1.560	1.002	1.00-11	.406	3/8-16	219	3/8-16X1.50
W192-20-20	W193-20-20	1.25	1.25	2.68	3.12	1.188	2.312	1.61	.83	1.750	1.252	1.25-11	.469	7/16-14	222	7/16-14X1.75
W192-24-24	W193-24-24	1.50	1.50	3.07	3.66	1.406	2.750	1.77	.98	2.115	1.502	1.50-11	.531	1/2-13	225	1/2-13X1.75
W192-32-32	W193-32-32	2.00	2.00	3.54	4.00	1.688	3.062	1.77	.98	2.490	2.002	2.00-11	.531	1/2-13	228	1/2-13X1.75

CODE 62 BSPP THREAD																
PART NO. O-RING FIG. 1	PART NO. FLAT FACE FIG. 2	PORT SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J BSPP	K	L UNC-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W194-8-8	W195-8-8	.50	.50	1.81	2.21	.718	1.594	1.42	.63	1.000	.502	.50-14	.344	5/16-18	210	5/16-18X1.25
W194-12-12	W195-12-12	.75	.75	2.17	2.80	.937	2.000	1.38	.83	1.250	.752	.75-14	.406	3/8-16	214	3/8-16X1.50
W194-16-16	W195-16-16	1.00	1.00	2.56	3.19	1.093	2.250	1.65	.98	1.560	1.002	1.00-11	.492	7/16-14	219	7/16-14X1.75
W194-20-20	W195-20-20	1.25	1.25	3.07	3.75	1.250	2.625	1.77	1.06	1.750	1.252	1.25-11	.531	1/2-13	222	1/2-13X1.50
W194-24-24	W195-24-24	1.50	1.50	3.70	4.41	1.437	3.125	1.97	1.18	2.115	1.502	1.50-11	.656	5/8-11	225	5/8-11X2.00
W194-32-32	W195-32-32	2.00	2.00	4.50	5.28	1.750	3.812	2.56	1.46	2.490	2.002	2.00-11	.781	3/4-10	228	3/4-10X2.75



**STEEL METRIC ADAPTERS**

**JIC MALE CONNECTOR BSPT**



Part #	JIC Thread Size 1	Male BSPT 2
9011-04-02	7/16-20	1/8-28
9011-04-04	7/16-20	1/4-19
9011-06-04	9/16-18	1/4-19
9011-06-06	9/16-18	3/8-19
9011-06-08	9/16-18	1/2-14
9011-08-06	3/4-16	3/8-19
9011-08-08	3/4-16	1/2-14
9011-08-12	3/4-16	3/4-14
9011-10-08	7/8-14	1/2-14
9011-10-12	7/8-14	3/4-14
9011-12-08	1-1/16-12	1/2-14
9011-12-12	1-1/16-12	3/4-14
9011-16-16	1-5/16-12	1-11
9011-20-20	1-5/8-12	1-1/4-11

More sizes available

**JIC MALE ELBOW BSPT**



Part #	JIC Thread Size 1	Male BSPT 2
9063-04-02	7/16-20	1/8-28
9063-04-04	7/16-20	1/4-19
9063-06-04	9/16-18	1/4-19
9063-06-06	9/16-18	3/8-19
9063-06-08	9/16-18	1/2-14
9063-08-06	3/4-16	3/8-19
9063-08-08	3/4-16	1/2-14
9063-10-08	7/8-14	1/2-14
9063-12-12	1-1/16-12	3/4-14
9063-16-16	1-5/16-12	1-11
9063-20-20	1-5/8-12	1-1/4-11

More sizes available

Send DFBurnham all your high volume quotes!

**MALE CONNECTOR BSPP**



Part #	JIC Thread Size 1	Male BSPP 2
9002-04-02	7/16-20	1/8
9002-04-04	7/16-20	1/4
9002-04-06	7/16-20	3/8
9002-04-08	7/16-20	1/2
9002-06-04	9/16-18	1/4
9002-06-06	9/16-18	3/8
9002-06-08	9/16-18	1/2
9002-08-06	3/4-16	3/8
9002-08-08	3/4-16	1/2
9002-08-12	3/4-16	3/4
9002-10-08	7/8-14	1/2
9002-12-12	1-1/16-12	3/4
9002-12-16	1-1/16-12	1
9002-16-16	1-5/16-12	1
9002-20-20	1-5/8-12	1-1/4
9002-24-24	1-7/8-12	1-1/2

More sizes available

**MALE ELBOW BSPP**

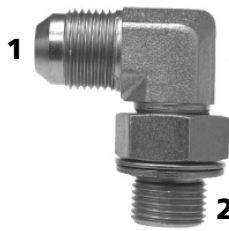


Part #	JIC Thread Size 1	Male BSPP 2
9059-04-02	7/16-20	1/8
9059-04-04	7/16-20	1/4
9059-06-04	9/16-18	1/4
9059-06-06	9/16-18	3/8
9059-06-08	9/16-18	1/2
9059-08-06	3/4-16	3/8
9059-08-08	3/4-16	1/2
9059-08-12	3/4-16	3/4
9059-10-08	7/8-14	1/2
9059-12-12	1-1/16-12	3/4
9059-12-16	1-1/16-12	1
9059-16-16	1-5/16-12	1
9059-20-20	1-5/8-12	1-1/4
9059-24-24	1-7/8-12	1-1/2

**Hydraulic  
Adapters**



**MALE ELBOW**



Port-seal  
crush washer  
and O-ring  
included

Part #	JIC Thread Size 1	Metric Thread 2
9069-04-10	7/16-20	10x1.0
9069-04-12	7/16-20	12x1.5
9069-04-14	7/16-20	14x1.5
9069-05-10	1/2-20	10x1.0
9069-05-12	1/2-20	12x1.5
9069-05-14	1/2-20	14x1.5
9069-06-14	9/16-18	14x1.5
9069-06-16	9/16-18	16x1.5
9069-08-16	3/4-16	16x1.5
9069-08-18	3/4-16	18x1.5
9069-08-22	3/4-16	22x1.5
9069-10-18	7/8-14	18x1.5
9069-10-20	7/8-14	20x1.5
9069-10-22	7/8-14	22x1.5
9069-12-22	1-1/16-12	22x1.5
9069-12-27	1-1/16-12	27x2.0
9069-14-26	1-3/16-12	26x1.5
9069-16-27	1-5/16-12	27x2.0
9069-16-33	1-5/16-12	33x2.0
9069-20-42	1-5/8-12	42x2.0

**STRAIGHT SWIVEL**



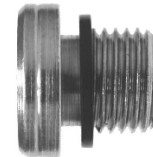
Part #	JIC Thread Size 1	Metric Thread 2
9024-10-04	7/16-20	10x1.0
9024-12-04	7/16-20	12x1.5
9024-12-05	1/2-20	12x1.5
9024-14-06	9/16-18	14x1.5
9024-16-06	9/16-18	16x1.5
9024-16-08	3/4-16	16x1.5
9024-18-08	3/4-16	18x1.5
9024-22-10	7/8-14	22x1.5
9024-27-12	1-1/16-12	27x2.0
9024-33-16	1-5/16-12	33x2.0

**HEX HEAD PLUG METRIC  
PARALLEL**



Part #	Metric Thread
9030M-10X1.0	10x1.0
9030M-12X1.5	12x1.5
9030M-14X1.5	14x1.5
9030M-16X1.5	16x1.5
9030M-18X1.5	18x1.5
9030M-20X1.5	20x1.5
9030M-22X1.5	22x1.5
9030M-26X1.5	26x1.5
9030M-30X1.5	30x1.5

**HOLLOW HEX HEAD PLUG  
METRIC PARALLEL**



Part #	Metric Thread
8555-H-10	10x1.0
8555-H-12	12x1.5
8555-H-14	14x1.5
8555-H-16	16x1.5
8555-H-18	18x1.5
8555-H-20	20x1.5
8555-H-22	22x1.5
8555-H-26	26x1.5
8555-H-30	30x1.5

More sizes available

**FEMALE ADAPTER**



Part #	Female Pipe 1	Metric Thread 2
9235-10-02	1/8	10x1.0
9235-12-04	1/4	12x1.5
9235-14-04	1/4	14x1.5
9235-16-06	3/8	16x1.5
9235-18-06	3/8	18x1.5
9235-16-08	1/2	16x1.5
9235-18-08	1/2	18x1.5
9235-22-08	1/2	22x1.5
9235-27-12	3/4	27x2.0
9235-33-16	1	33x2.0
9235-42-20	1-1/4	42x2.0

More sizes available

Send DFBurnham all your high volume quotes!



Hydraulic Adapters

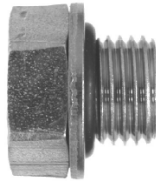
**JIC STRAIGHT SWIVEL BSPP**



<i>Part #</i>	<i>JIC Thread Size 1</i>	<i>Male BSPP 2</i>
9021-04-02	7/16-20	1/8-28
9021-04-04	7/16-20	1/4-19
9021-06-04	9/16-18	1/4-19
9021-06-06	9/16-18	3/8-19
9021-08-06	3/4-16	3/8-19
9021-08-08	3/4-16	1/2-14
9021-10-08	7/8-14	1/2-14
9021-12-12	1-1/16-12	3/4-14
9021-16-16	1-5/16-12	1-11

More sizes available

**HEX HEAD PLUG BSPP**



<i>Part #</i>	<i>Male BSPP</i>
9030-02	1/8-28
9030-04	1/4-19
9030-06	3/8-19
9030-08	1/2-14
9030-12	3/4-14
9030-16	1-11
9030-20	1-1/4-11

**HOLLOW HEX PLUG BSPP**



<i>Part #</i>	<i>Male BSPP</i>
9522-H-2	1/8-28
9522-H-4	1/4-19
9522-H-6	3/8-1
9522-H-8	1/2-14
9522-H-12	3/4-14
9522-H-16	1-11
9522-H-20	1-1/4-11

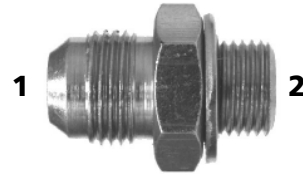
**FEMALE ADAPTER BSPP**



<i>Part #</i>	<i>Female Pipe 1</i>	<i>Male BSPP 2</i>
9035-02-02	1/8-27	1/8-28
9035-04-02	1/4-18	1/8-19
9035-04-04	1/4-18	1/4-19
9035-06-06	3/8-18	3/8-18
9035-08-08	1/2-14	1/2-14
9035-12-12	3/4-14	3/4-14
9035-16-16	1-11 1/2	1-11
9035-20-20	1-1/4-11 1/2	1-1/4-11
9035-24-24	1-1/2-11 1/2	1-1/2-11

More sizes available

**MALE CONNECTOR**

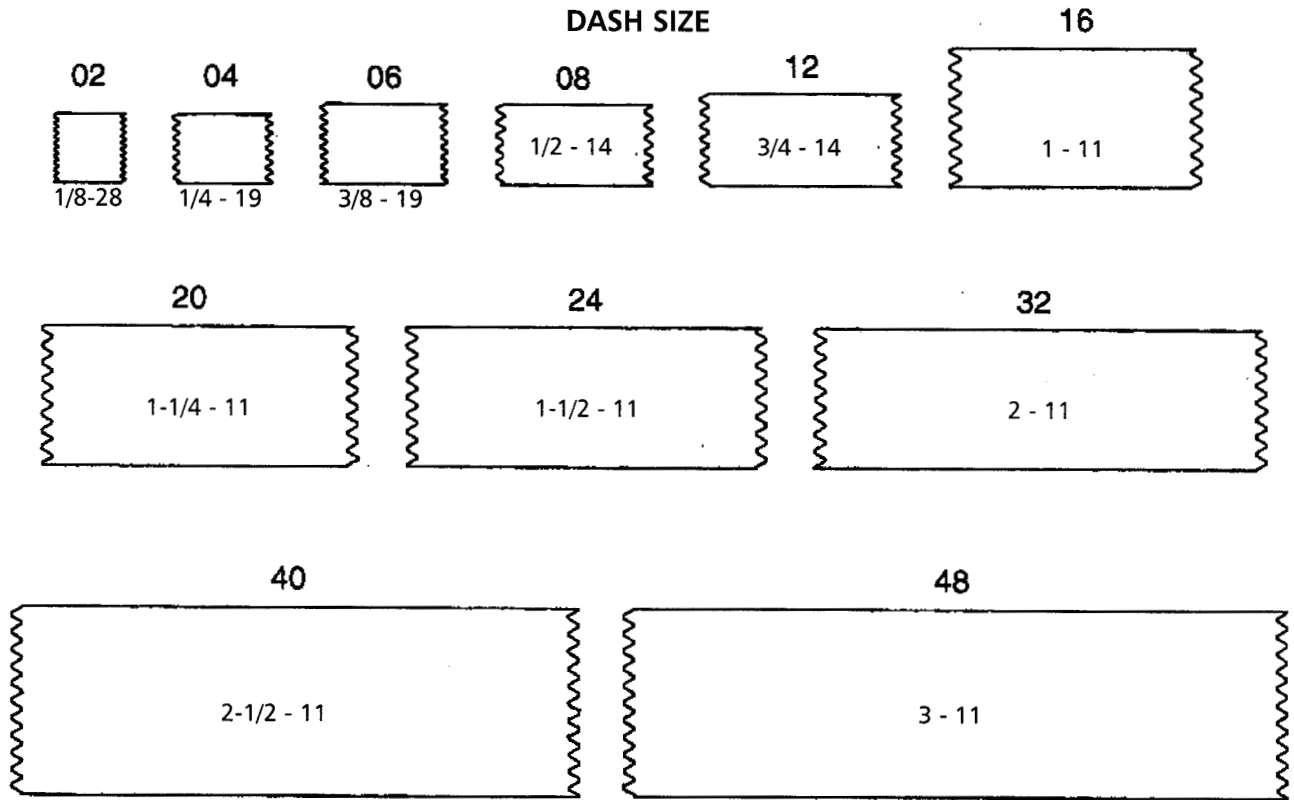


<i>Part #</i>	<i>Thread Size 1</i>	<i>Metric Thread 2</i>
9068-04-10	7/16-20	10x1.0
9068-04-12	7/16-20	12x1.5
9068-04-14	7/16-20	14x1.5
9068-04-18	7/16-20	18x1.5
9068-05-10	1/2-20	10x1.0
9068-05-12	1/2-20	12x1.5
9068-05-14	1/2-20	14x1.5
9068-06-14	9/16-18	14x1.5
9068-06-16	9/16-18	16x1.5
9068-06-18	9/16-18	18x1.5
9068-08-16	3/4-16	16x1.5
9068-08-18	3/4-16	18x1.5
9068-08-22	3/4-16	22x1.5
9068-10-18	7/8-14	18x1.5
9068-10-20	7/8-14	20x1.5
9068-10-22	7/8-14	22x1.5
9068-12-22	1-1/16-12	22x1.5
9068-12-27	1-1/16-12	27x2.0
9068-14-26	1-3/16-12	26x1.5
9068-16-27	1-5/16-12	27x2.0
9068-16-33	1-5/16-12	33x2.0
9068-20-42	1-5/8-12	42x2.0
9068-24-48	1-7/8-12	48x2.0

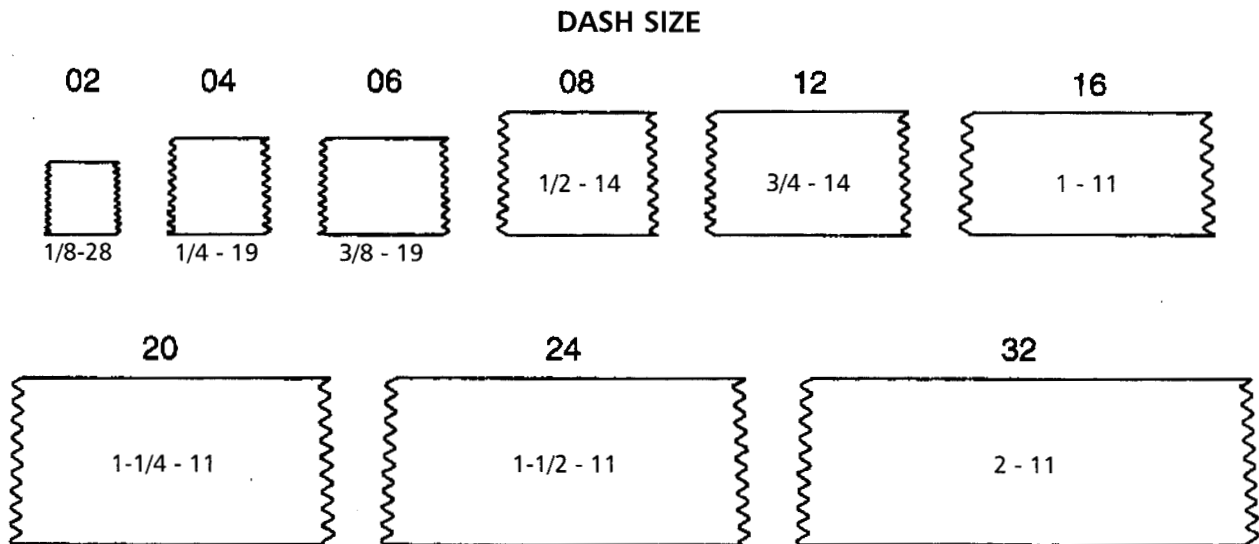
**Hydraulic  
Adapters**



## British Parallel Threads



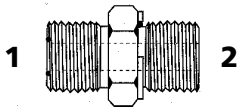
## British Taper Threads



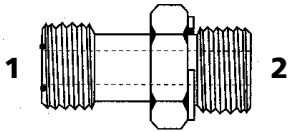
Note: Japanese Taper Thread (PT) is same as British Taper



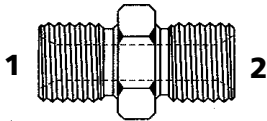
**BSPP Straight**



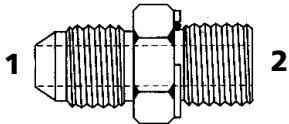
**MALE ORFS X MALE BSPP  
(C/W WASHER & O-RING)**  
6002



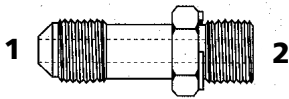
**MALE ORFS X MALE BSPP LONG  
(C/W WASHER & O-RING)**  
6002L



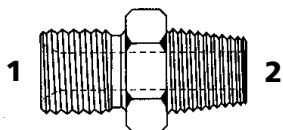
**BSPP NIPPLE**  
9000



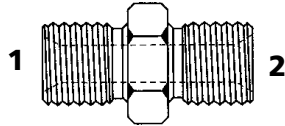
**MALE JIC X MALE BSPP  
(C/W WASHER & O-RING)**  
9002



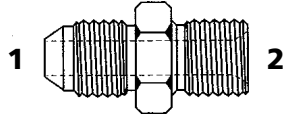
**MALE JIC X MALE BSPP LONG  
(C/W WASHER & O-RING)**  
9002L



**BSPP MALE X BSPP MALE NIPPLE**  
9003



**MALE BSPP X MALE METRIC**  
9004



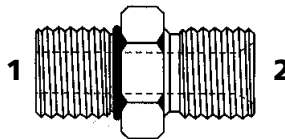
**MALE JIC X MALE BSPP**  
9005



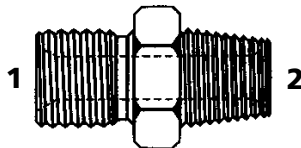
**MALE JIC X MALE BSPP (LONG)**  
9005L



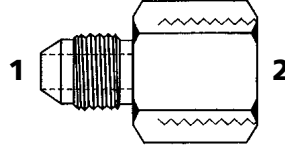
**MALE JIC X MALE BSPP (EXTRA LONG)**  
9005EL



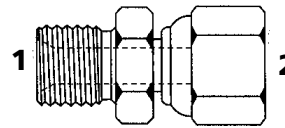
**MALE SAE O-RING BOSS X MALE BSPP**  
9006



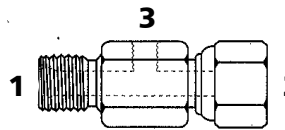
**MALE BSPP X MALE NPT NIPPLE**  
9007



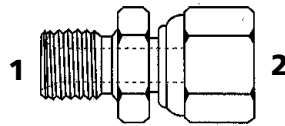
**MALE JIC X FEMALE BSPP SOLID**  
9009



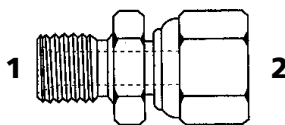
**MALE BSPP X FEMALE BSPP SWIVEL**  
9015



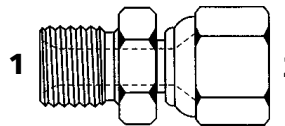
**MALE BSPP X FEMALE BSPP SWIVEL (TEST PORT)**  
9015TP



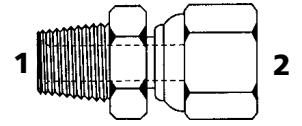
**MALE METRIC X FEMALE BSPP SWIVEL**  
9018



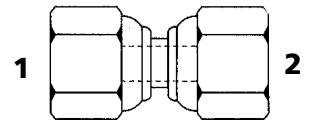
**MALE BSPP X FEMALE METRIC SWIVEL**  
9019



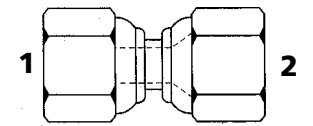
**MALE BSPP X FEMALE JIC SWIVEL**  
9021



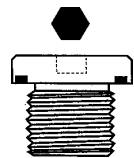
**MALE NPT X FEMALE BSPP SWIVEL**  
9023



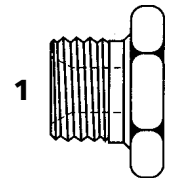
**FEMALE BSPP SWIVEL UNION**  
9025



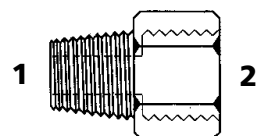
**FEMALE BSPP X FEMALE JIC SWIVEL**  
9027



**BSPP COUNTERSUNK SEALED PLUG**  
9028

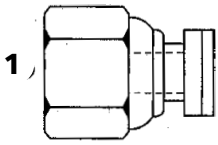


**BSPP HEX PLUG**  
9030

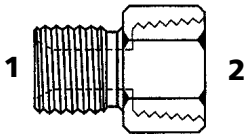


**MALE BSPT X FEMALE BSPP**  
9032

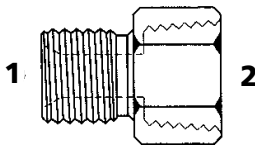
**Hydraulic  
Adapters**



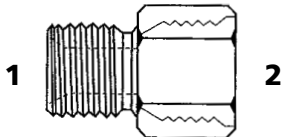
**SWIVEL BSPP CAP**  
9033



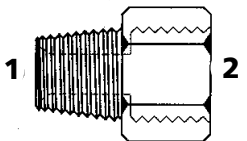
**MALE BSPP X  
FEMALE BSPT**  
9034



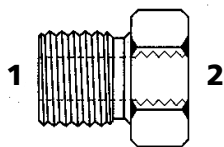
**MALE BSPP X  
FEMALE NPT**  
9035



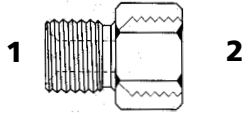
**MALE BSPP X FEMALE  
O-RING BOSS**  
9036



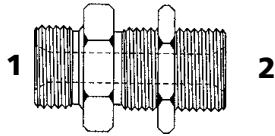
**MALE NPT X FEMALE  
BSPP**  
9037



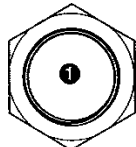
**MALE BSPP X FEMALE  
BSPP BUSHING**  
9038



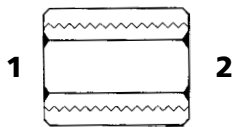
**MALE BSPP X FEMALE  
BSPP EXTENDED BUSHING**  
9039



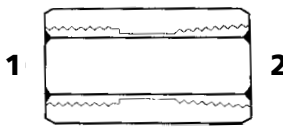
**MALE BSPP X MALE  
BSPP BULKHEAD**  
9040



**BSPP BULKHEAD  
LOCKNUT**  
9041

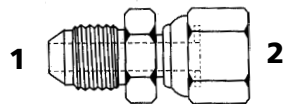


**FEMALE BSPP COUPLING**  
9043



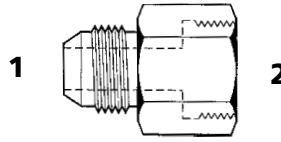
**FEMALE BSPP X  
FEMALE NPT**  
9044

PATTERN 1

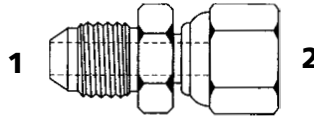


**MALE JIC X FEMALE  
FLAT-FACE BSPP  
SWIVEL (HIAB)**  
9210

PATTERN 2

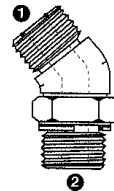


**MALE JIC X FEMALE  
FLAT-FACE BSPP SOLID  
(HIAB)**  
9210

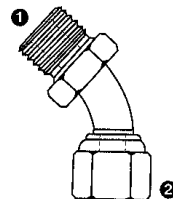


**MALE JIC X FEMALE  
BSPP SWIVEL**  
9240

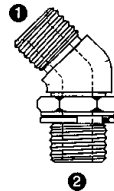
**BSPP 45° ELBOW**



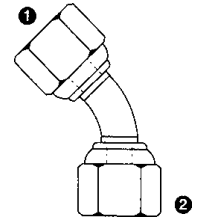
**45° MALE ORFS X  
MALE BSPP ADJ. ELBOW  
(FORGED STEEL)**  
6058



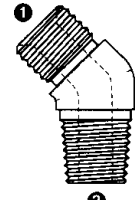
**45° TUBE ELBOW  
M. BSPP X F. BSPP**  
9047



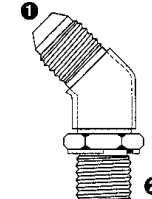
**45° MALE BSPP X  
MALE BSPP ADJ. ELBOW  
(FORGED STEEL)**  
9051



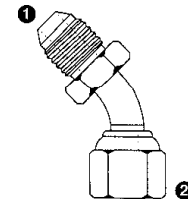
**45° TUBE ELBOW FEMALE  
BSPP X FEMALE BSPP**  
9053



**45° MALE BSPP X  
MALE BSPT ELBOW  
(FORGED STEEL)**  
9054

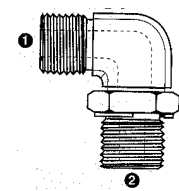


**45° MALE JIC X  
MALE BSPP ADJ. ELBOW  
(FORGED STEEL)**  
9058



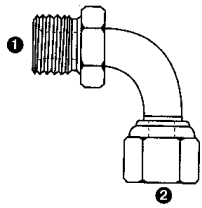
**45° TUBE ELBOW  
MALE JIC X FEMALE  
BSPP SWIVEL**  
9260

**BSPP 90° ELBOW**

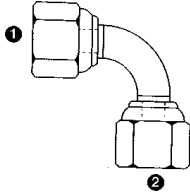


**90° MALE ORFS X  
MALE BSPP ADJ. ELBOW  
(FORGED STEEL)**  
6059

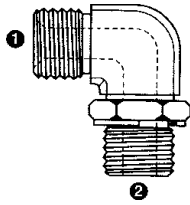
**Hydraulic  
Adapters**



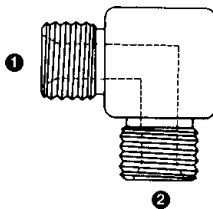
**90° TUBE ELBOW  
M. BSPP X F. BSPT  
9045**



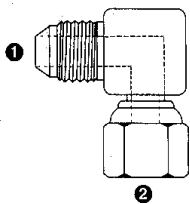
**90° TUBE ELBOW FEMALE  
BSPP X FEMALE BSPP  
9050**



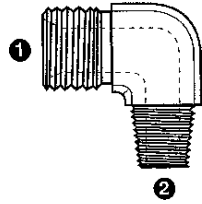
**90° MALE BSPP X  
MALE BSPP ADJ. ELBOW  
(FORGED STEEL)  
9052**



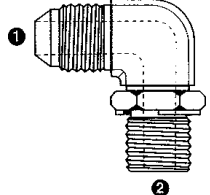
**90° MALE BSPP ELBOW  
9055**



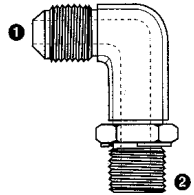
**90° MALE JIC X FEMALE  
BSPP SWIVEL  
9056**



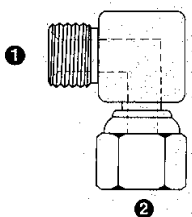
**90° MALE BSPP X  
MALE BSPT  
(FORGED STEEL)  
9057**



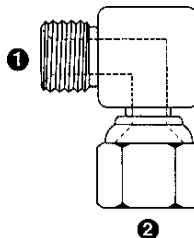
**90° MALE JIC X MALE  
BSPP ADJ. ELBOW  
(FORGED STEEL)  
9059**



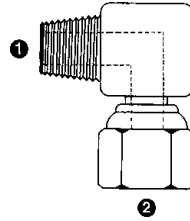
**90° MALE JIC X MALE  
BSPP ADJ. LONG ELBOW  
(FORGED STEEL)  
9059L**



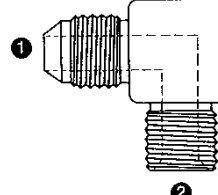
**90° MALE BSPP X FEMALE  
BSPP SWIVEL  
9060**



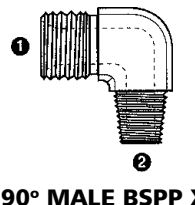
**90° MALE BSPP X FEMALE  
JIC SWIVEL  
9061**



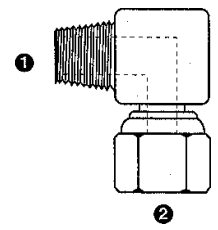
**90° MALE BSPT X FEMALE  
BSPP SWIVEL  
9062**



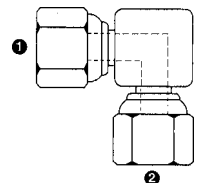
**90° MALE JIC X  
MALE BSPP  
9065**



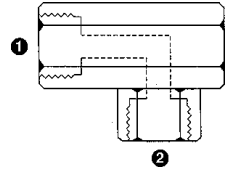
**90° MALE BSPP X  
MALE NPT  
(FORGED STEEL)  
9070**



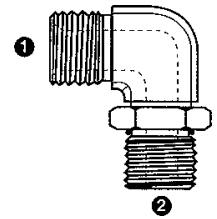
**90° MALE NPT X FEMALE  
BSPP SWIVEL  
9072**



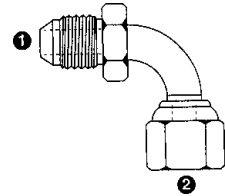
**90° FEMALE BSPP  
SWIVEL ELBOW  
9075**



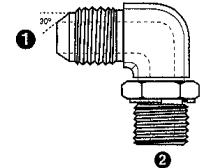
**90° FEMALE BSPP  
ELBOW (FIXED)  
9076**



**90° MBSPP X MALE  
O-RING BOSS ADJ.  
(FORGED STEEL)  
9077**

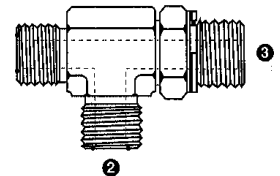


**90° TUBE ELBOW  
MALE JIC X FEMALE  
BSPP SWIVEL  
9250**



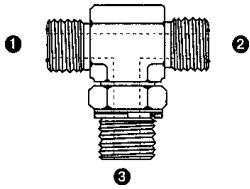
**90° MALE JIS X MALE  
BSPP ADJ. ELBOW  
(FORGED STEEL)  
9259**

**BSPP TEE**

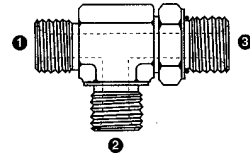


**MALE ORFS X MALE  
BSPP ADJ. RUN TEE  
(FORGED STEEL)  
6158**

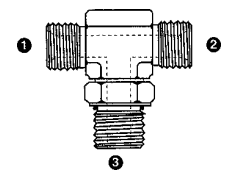
**Hydraulic  
Adapters**



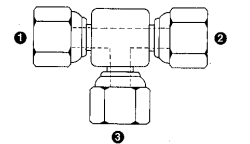
**MALE ORFS X MALE BSPP  
ADJ. BRANCH TEE  
(FORGED STEEL)**  
6159



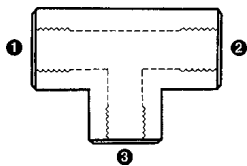
**MBSPP X MALE  
O-RING BOSS RUN TEE  
(FORGED STEEL)**  
9078



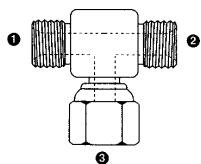
**MBSPP X MALE  
O-RING BOSS BRANCH TEE  
(FORGED STEEL)**  
9079



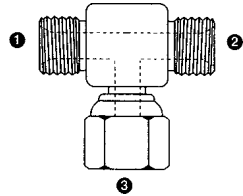
**MALE BSPP TEE**  
9080



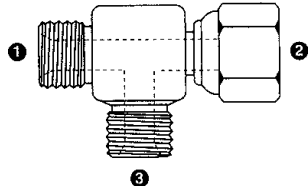
**FEMALE BSPP  
SWIVEL TEE**  
9085



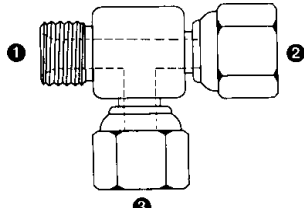
**BSPP FEMALE TEE  
(FIXED)**  
9086



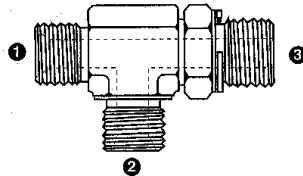
**FEMALE BSPP  
BRANCH TEE**  
9087



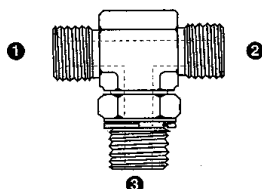
**FEMALE BSPP RUN TEE**  
9090



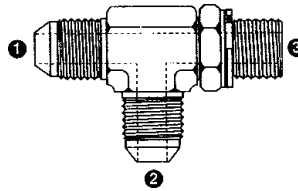
**MALE BSPP RUN  
SWIVEL TEE**  
9095



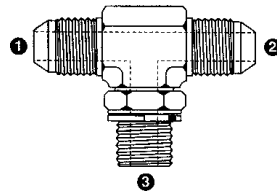
**MALE BSPP ADJ. RUN TEE  
(FORGED STEEL)**  
9151



**MALE BSPP ADJ.  
BRANCH TEE  
(FORGED STEEL)**  
9152

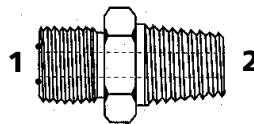


**MALE JIC X MALE BSPP  
ADJ. RUN TEE  
(FORGED STEEL)**  
9158

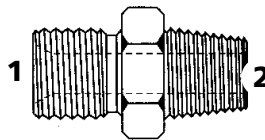


**MALE JIC X MALE BSPP  
ADJ. BRANCH TEE  
(FORGED STEEL)**  
9159

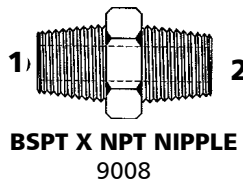
**BSPT STRAIGHT**



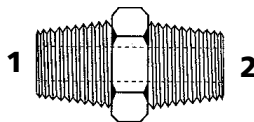
**MALE ORFS X MALE BSPP**  
6011



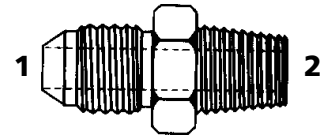
**BSPP MALE X BSPT  
MALE NIPPLE**  
9003



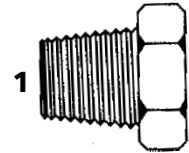
**BSPT X NPT NIPPLE**  
9008



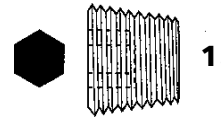
**BSPT X BSPT NIPPLE**  
9010



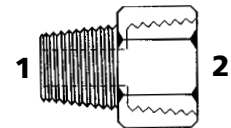
**MALE JIC X MALE BSPT**  
9011



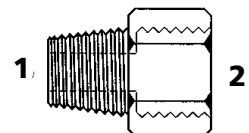
**MALE BSPT PLUG**  
9030T



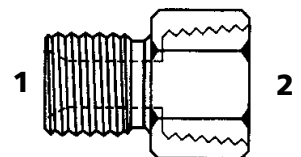
**BSPT HEX  
COUNTERSUNK PLUG**  
9030TCSP



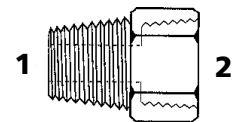
**MALE BSPT X FEMALE  
BSPT BUSHING**  
9031



**MALE BSPT X FEMALE BSPP**  
9010



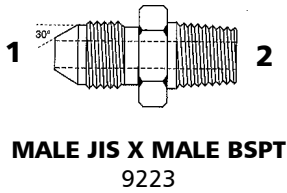
**MALE BSPP X FEMALE BSPT**  
9034



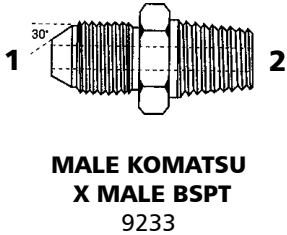
**MALE BSPT X FEMALE NPT**  
9042

**Hydraulic  
Adapters**

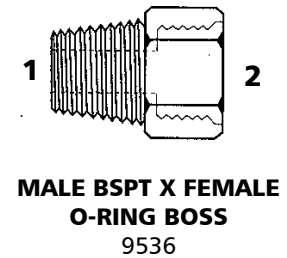




**MALE JIS X MALE BSPT**  
9223

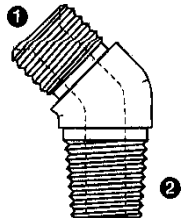


**MALE KOMATSU  
X MALE BSPT**  
9233

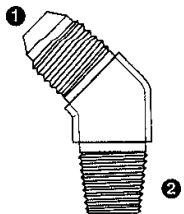


**MALE BSPT X FEMALE  
O-RING BOSS**  
9536

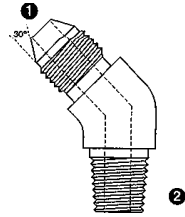
**BSPT 45° ELBOW**



**45° MALE BSPP  
X MALE BSPP ELBOW  
(FORGED STEEL)**  
9054

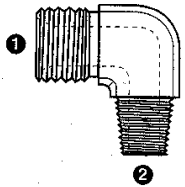


**45° ELBOW MALE  
JIC X MALE BSPT  
(FORGED STEEL)**  
9064

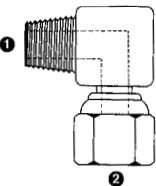


**45° MALE JIS X  
MALE BSPT  
(FORGED STEEL)**  
9225

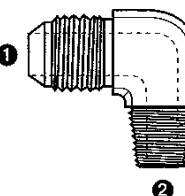
**BSPT 90° ELBOW**



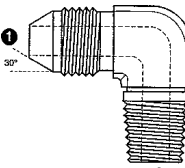
**90° MALE BSPP  
X MALE BSPT  
(FORGED STEEL)**  
9057



**90° MALE BSPT X FEMALE  
BSPP SWIVEL**  
9062

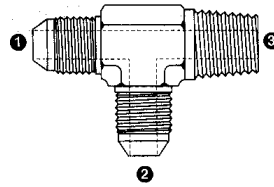


**90° MALE JIC X  
MALE BSPT  
(FORGED STEEL)**  
9063

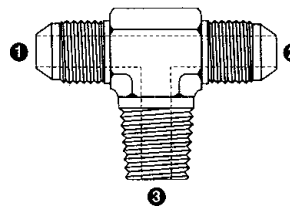


**90° MALE JIS X  
MALE BSPT  
(FORGED STEEL)**  
9057

**BSPT TEE**

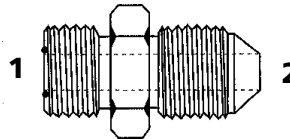


**MALE JIC X MALE  
BSPT RUN TEE  
(FORGED STEEL)**  
9163

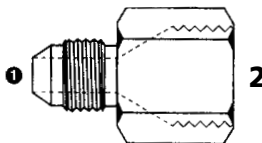


**MALE JIC X MALE BSPT  
BRANCH TEE  
(FORGED STEEL)**  
9164

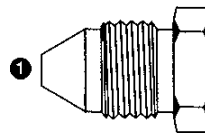
**JIC STRAIGHT**



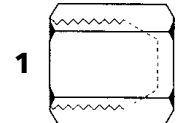
**MALE ORFS X MALE JIS  
UNION -30° SEAT BSPP  
THREAD**  
6337



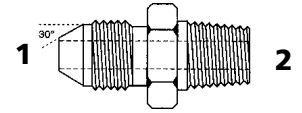
**MALE JIC X FEMALE JIS  
SOLID -30° SEAT BSPP  
THREAD**  
9220



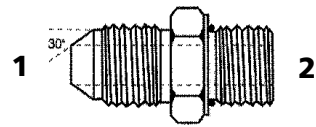
**MALE JIS PLUG -30°  
SEAT BSPP THREAD**  
9221



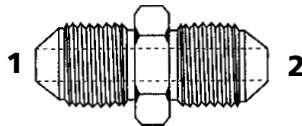
**FEMALE JIS CAP -30° SEAT  
BSPP THREAD**  
9222



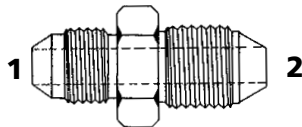
**MALE JIS X MALE BSPT**  
9223



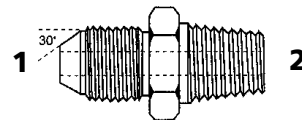
**MALE JIS X MALE  
O-RING BOSS**  
9277



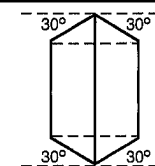
**MALE JIS UNION -30°  
SEAT BSPP THREAD**  
9336



**MALE JIS UNION -30° SEAT  
BSPP THREAD**  
9337



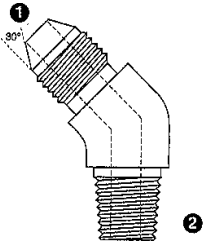
**MALE JIS X MALE NPT**  
9338



**JIS SEALING SEAT**  
9999

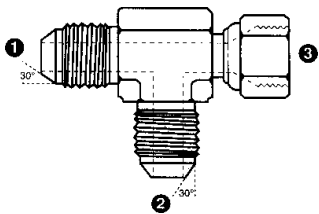
**Hydraulic  
Adapters**

**JIS 45° ELBOW**



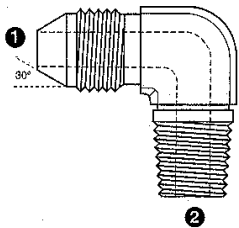
**45° MALE JIS X MALE BSPT  
(FORGED STEEL)**  
9225

**JIS TEE**

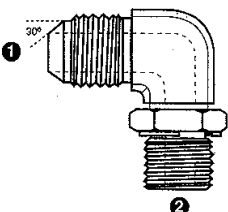


**FEMALE JIS RUN TEE  
(FORGED STEEL)**  
9291

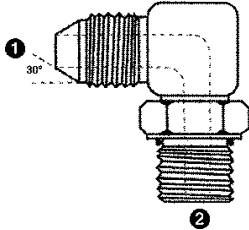
**JIS 90° ELBOW**



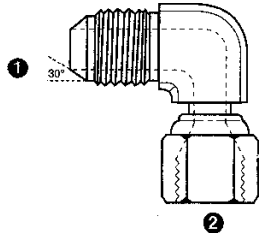
**90° MALE JIS X MALE BSPT  
(FORGED STEEL)**  
9224



**90° MALE JIS X MALE  
BSPP ADJ. ELBOW  
(FORGED STEEL)**  
9259

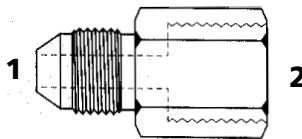


**MALE JIS X MALE  
O-RING BOSS ADJ.**  
9278

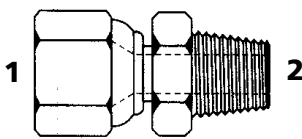


**90° MALE X FEMALE  
JIS ELBOW  
(FORGED STEEL)**  
9292

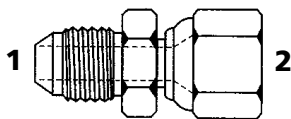
**NORTH AMERICAN  
STRAIGHT**



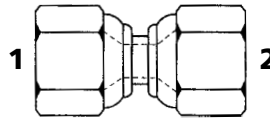
**MALE JIS X  
FEMALE ORFS**  
6620



**FEMALE JIC SWIVEL  
X MALE NPT**  
9017

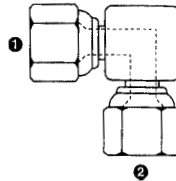


**MALE JIC X FEMALE  
JIC SWIVEL**  
9020



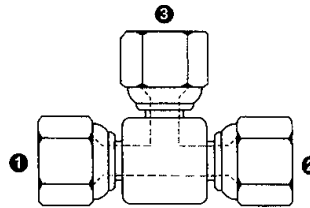
**FEMALE JIC SWIVEL UNION**  
9026

**NORTH AMERICAN  
90° ELBOW**



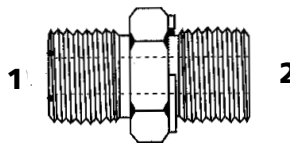
**90° FEMALE JIC  
SWIVEL ELBOW**  
9355

**NORTH AMERICAN  
TEE**



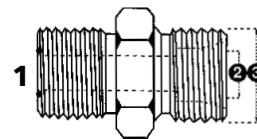
**FEMALE JIC SWIVEL TEE**  
9220

**METRIC STRAIGHT**



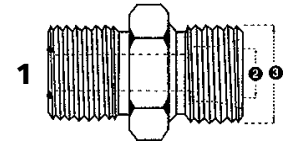
**MALE ORFS X MALE METRIC  
(C/W WASHER & O-RING)**  
6068

DIN 2353 L

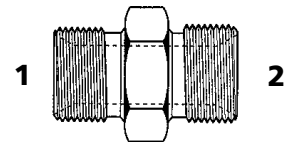


**MALE ORFS X MALE  
METRIC DUAL PURPOSE  
(PORT OR TUBE)**  
6605

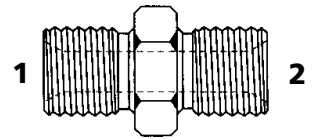
DIN 2353 L



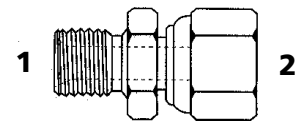
**MALE ORFS X MALE  
METRIC DUAL PURPOSE  
(PORT OR TUBE)**  
6606



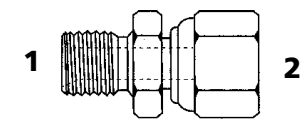
**MALE METRIC NIPPLE**  
9001



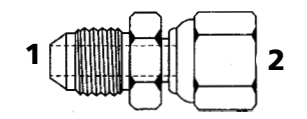
**MALE BSPP X  
MALE METRIC**  
9004



**MALE METRIC X FEMALE  
BSPP SWIVEL**  
9018



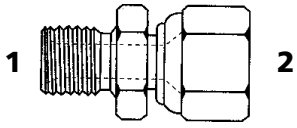
**MALE BSPP X FEMALE  
METRIC SWIVEL**  
9019



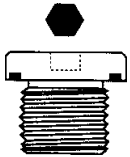
**MALE JIC X FEMALE  
METRIC SWIVEL**  
9022

Hydraulic  
Adapters

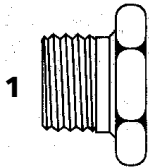




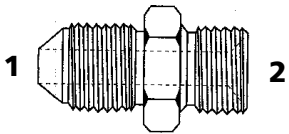
**MALE METRIC X FEMALE  
JIC SWIVEL**  
9024



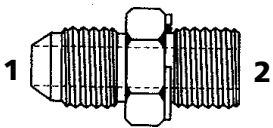
**METRIC COUNTERSUNK  
SEALED PLUG**  
9029



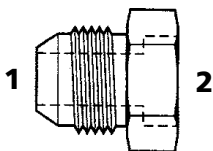
**METRIC HEX PLUG SOLID**  
9030M



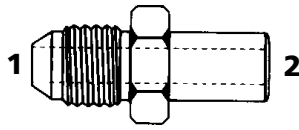
**MALE JIC X MALE METRIC**  
9067



**MALE JIC X MALE METRIC  
(C/W WASHER & O-RING)**  
9068



**BRAZE MALE JIC X  
METRIC BORE**  
9197



**MALE JIC X  
METRIC STANDPIPE**  
9200



**METRIC LIGHT SERIES  
TUBE NUT**  
9201L



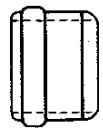
**METRIC EXTRA LIGHT  
SERIES TUBE NUT**  
9201LL



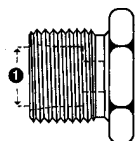
**METRIC HEAVY SERIES  
TUBE NUT**  
9201S



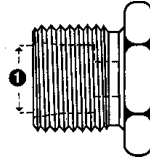
**METRIC TUBE  
CUTTING RING**  
9202



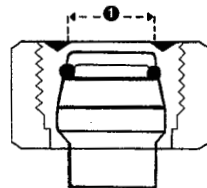
**METRIC EXTRA LIGHT TUBE  
CUTTING RING**  
9202LL



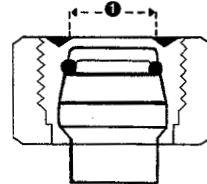
**METRIC LIGHT SERIES  
TUBE PLUG**  
9203L



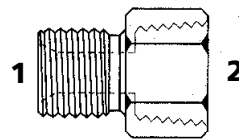
**METRIC HEAVY SERIES  
TUBE PLUG**  
9203S



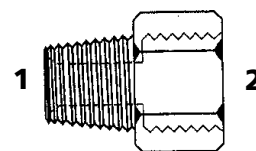
**METRIC LIGHT SERIES  
TUBE CAP**  
9204L



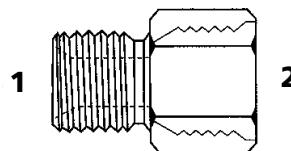
**METRIC HEAVY SERIES  
TUBE CAP**  
9204S



**METRIC MALE X  
FEMALE NPT**  
9235

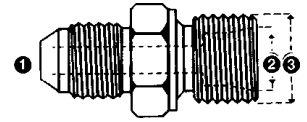


**MALE NPT X  
FEMALE METRIC**  
9325



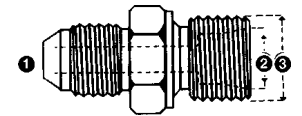
**MALE METRIC X FEMALE  
O-RING BOSS**  
9395

DIN 2353 L

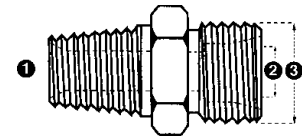


**MALE JIC X MALE  
METRIC DUAL PURPOSE  
(PORT OR TUBE)**  
9605

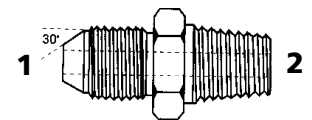
DIN 2353 S



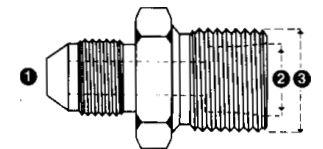
**MALE JIC X MALE  
METRIC DUAL PURPOSE  
(PORT OR TUBE)**  
9606



**MALE NPT X MALE  
METRIC DUAL PURPOSE  
(PORT OR TUBE)**  
9607



**MALE METRIC X  
FEMALE NPT  
(DUAL PURPOSE PORT OR  
TUBE DIN 2353 S OR L)**  
9635

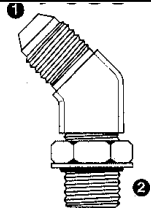


**METRIC BUSHING**  
9638

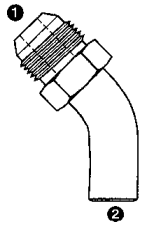
**Hydraulic  
Adapters**



**METRIC 45° ELBOW**

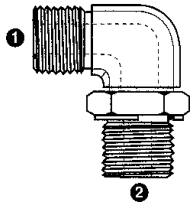


**45° MALE JIC X MALE  
METRIC ADJ. ELBOW  
(FORGED STEEL)**  
9066

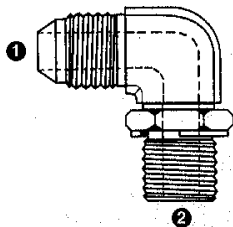


**45° MALE JIC X  
METRIC STANDPIPE**  
9198

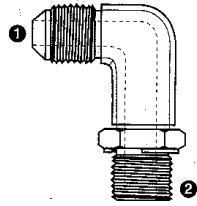
**METRIC 90° ELBOW**



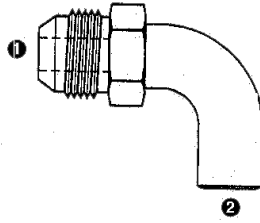
**90° MALE ORFS X MALE  
METRIC ADJ. ELBOW  
(FORGED STEEL)**  
6069



**90° MALE JIC X MALE  
METRIC ADJ. ELBOW  
(FORGED STEEL)**  
6069

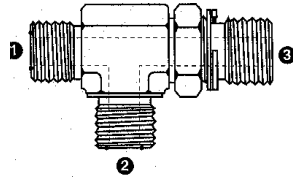


**90° MALE JIC X MALE  
METRIC ADJ.  
LONG ELBOW  
(FORGED STEEL)**  
6069L

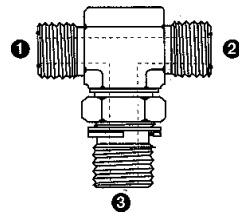


**METRIC STANDPIPE**  
9199

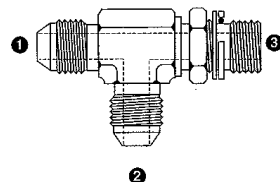
**METRIC TEE**



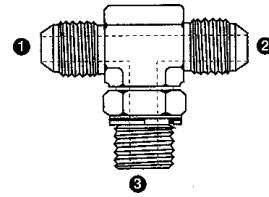
**MALE ORFS X MALE  
METRIC ADJ. RUN TEE**  
6168



**MALE ORFS X MALE  
METRIC ADJ. BRANCH TEE  
(FORGED STEEL)**  
6169

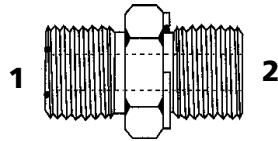


**MALE JIC X MALE  
METRIC ADJ. RUN TEE  
(FORGED STEEL)**  
9168

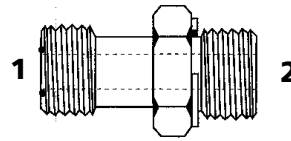


**MALE JIC X MALE  
METRIC ADJ. BRANCH TEE  
(FORGED STEEL)**  
9169

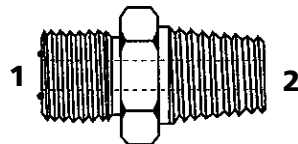
**O-RING FACE SEAL  
STRAIGHT**



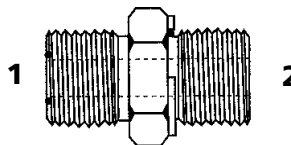
**MALE ORFS X MALE BSPP  
(C/W WASHER & O-RING)**  
6002



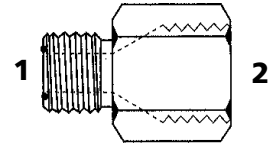
**MALE ORFS X MALE  
BSPP LONG  
(C/W WASHER & O-RING)**  
6002L



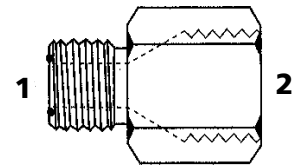
**MALE ORFS X MALE BSPT**  
6011



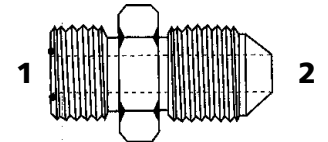
**MALE ORFS X  
MALE METRIC  
(C/W WASHER & O-RING)**  
6068



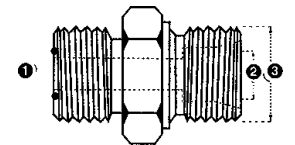
**MALE ORFS X FEMALE JIS  
SOLID -30° SEAT BSPP  
THREAD**  
6220



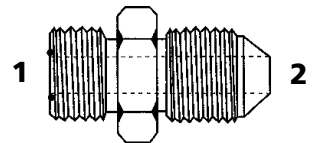
**MALE ORFS X FEMALE  
KOMATSU -30° SEAT  
METRIC THREAD**  
6230



**MALE ORFS X MALE  
KOMATSU -30° SEAT  
METRIC THREAD**  
6237

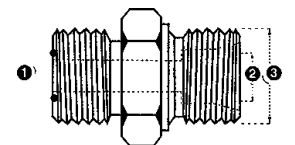


**MALE ORFS X  
MALE KOBELCO**  
6247

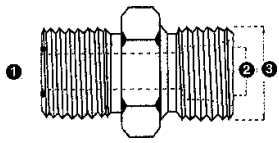


**MALE ORFS X MALE JIS  
-30° SEAT BSPP THREAD**  
6337

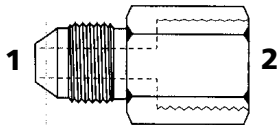
DIN 2353 L



**MALE ORFS X MALE  
METRIC DUAL PURPOSE  
(PORT OR TUBE)**  
6605

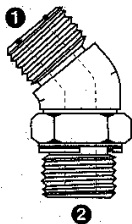


**MALE ORFS X MALE  
METRIC DUAL PURPOSE  
(PORT OR TUBE)**  
6606



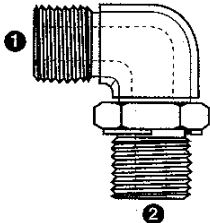
**MALE JIC X FEMALE ORFS**  
6620

**O-RING FACE SEAL  
45° ELBOW**

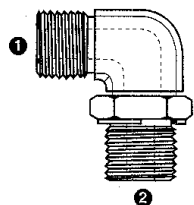


**45° MALE ORFS X MALE  
BSPP ADJ. ELBOW  
(FORGED STEEL)**  
6058

**O-RING FACE SEAL  
90° ELBOW**

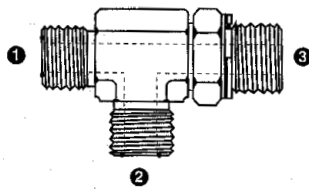


**90° MALE ORFS X MALE  
BSPP ADJ. ELBOW  
(FORGED STEEL)**  
6059

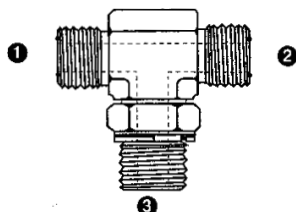


**90° MALE ORFS X MALE  
METRIC ADJ. ELBOW  
(FORGED STEEL)**  
6069

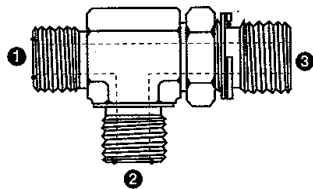
**O-RING FACE SEAL  
TEE**



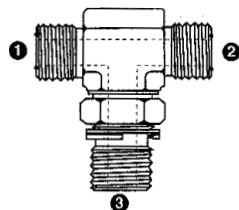
**MALE ORFS X MALE  
BSPP ADJ. RUN TEE  
(FORGED STEEL)**  
6158



**MALE ORFS X MALE  
BSPP ADJ. BRANCH TEE  
(FORGED STEEL)**  
6159

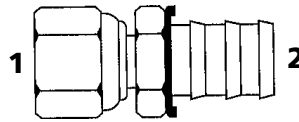


**MALE ORFS X MALE  
METRIC ADJ. RUN TEE  
(FORGED STEEL)**  
6168

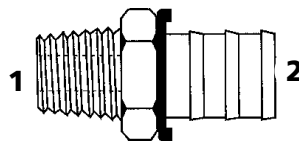


**MALE ORFS X MALE  
METRIC ADJ. BRANCH TEE  
(FORGED STEEL)**  
6169

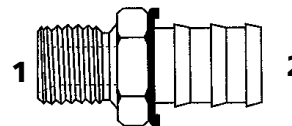
**PUSH-ON HOSE  
FITTINGS STRAIGHT**



**FEMALE BSPP SWIVEL  
X PUSH-ON**  
9900

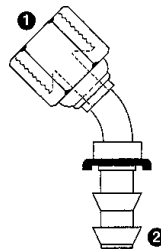


**MALE BSPT PUSH-ON  
HOSE BARB**  
9915



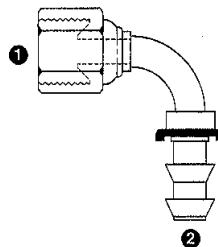
**MALE BSPP X PUSH-ON**  
9920

**PUSH-ON HOSE  
FITTINGS 45° ELBOW**



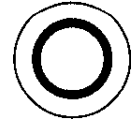
**45° FEMALE BSPP  
SWIVEL X PUSH-ON**  
9905

**PUSH-ON HOSE  
FITTINGS 90° ELBOW**

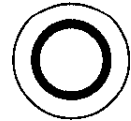


**90° FEMALE BSPP  
SWIVEL X PUSH-ON**  
9910

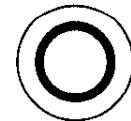
**SEALS, SEALING  
SEATS, ETC.**



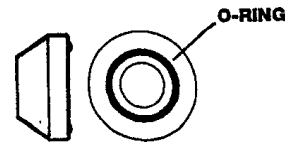
**BOUNDED SEAL FOR  
BRITISH THREAD**  
9500



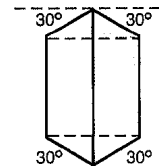
**BOUNDED SEAL FOR  
METRIC THREAD**  
9500MM



**BONDED VITON SEAL**  
9500V

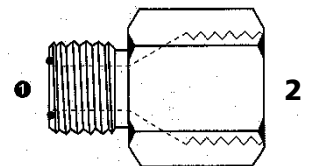


**BSPP FLAT-FACE  
SEALING SEAT 30° (HIAB)**  
9777



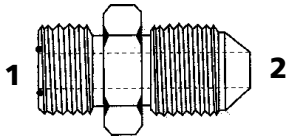
**JIS SEALING SEAT**  
9999

**SPECIALTY MOBILE  
EQUIPMENT STRAIGHT**

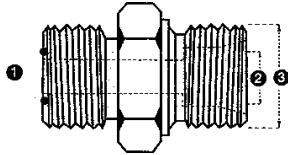


**MALE ORFS X FEMALE  
KOMATSU -30° SEAT  
METRIC THREAD**  
6230

**Hydraulic  
Adapters**

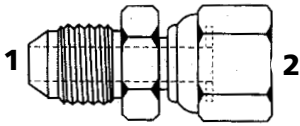


**MALE ORFS X MALE  
KOMATSU -30° SEAT  
METRIC THREAD**  
9237



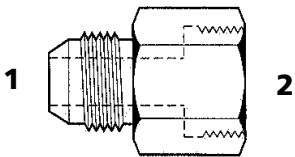
**METRIC ORFS X  
MALE KOBELCO**  
9247

PATTERN 1

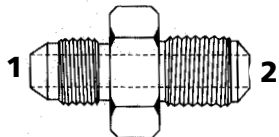


**MALE JIC X FEMALE  
FLAT-FACE BSPP  
SWIVEL (HIAB)**  
9210

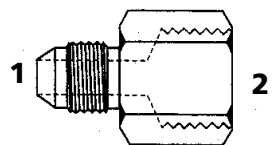
PATTERN 2



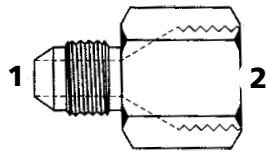
**MALE JIC X FEMALE  
FLAT-FACE BSPP  
SOLID (HIAB)**  
9210



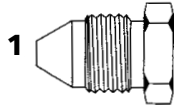
**MALE JIC X MALE NISSAN  
UNION -50° SEAT  
METRIC THREAD**  
9228



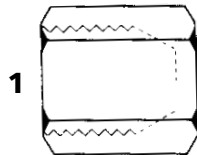
**MALE JIC X FEMALE  
NISSAN -50° SEAT  
METRIC THREAD**  
9229



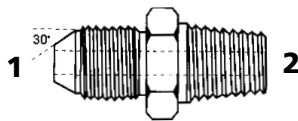
**MALE JIC X FEMALE  
KOMATSU -30° SEAT  
METRIC THREAD**  
9230



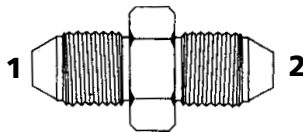
**MALE KOMATSU PLUG -30°  
SEAT METRIC THREAD**  
9231



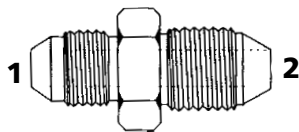
**FEMALE KOMATSU  
CAP -30° SEAT  
METRIC THREAD**  
9232



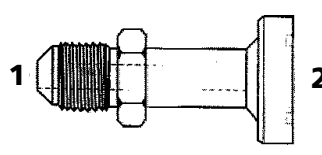
**MALE KOMATSU  
X MALE BSPT**  
9233



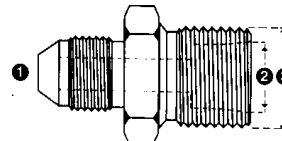
**MALE KOMATSU UNION  
-30° SEAT METRIC THREAD**  
9236



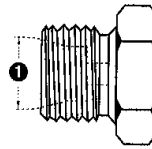
**MALE JIC X MALE  
KOMATSU UNION  
-30° SEAT METRIC  
THREAD**  
9237



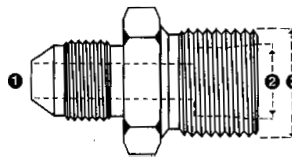
**MALE JIC X  
KOMATSU FLANGE**  
9238



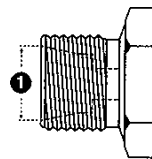
**MALE JIC X MALE JSW  
(JAPAN STEEL WORKS)**  
9245



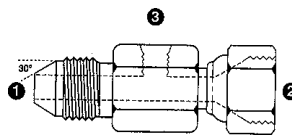
**JSW TUBE PLUG  
(JAPAN STEEL WORKS)**  
9246



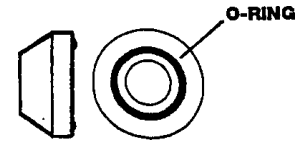
**MALE JIC X  
MALE KOBELCO**  
9247



**KOBELCO TUBE PLUG**  
9248

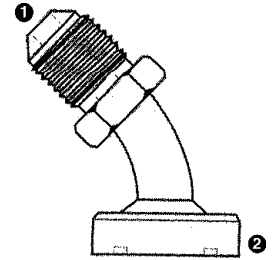


**TEST PORT ADAPTER  
KOMATSU - SWIVEL**  
9634TP



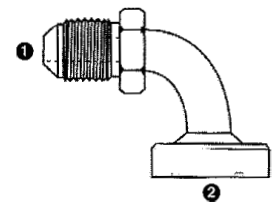
**BSPP FLAT-FACE SEALING  
-30° SEAT (HIAB)**  
9777

**SPECIALTY MOBILE  
EQUIPMENT  
45° ELBOW**

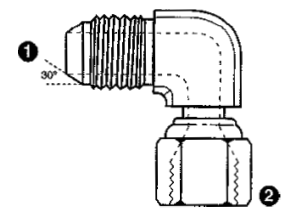


**90° TUBE ELBOW MALE  
JIC X KOMATSU FLANGE**  
9241

**SPECIALTY MOBILE  
EQUIPMENT  
90° ELBOW**



**90° TUBE ELBOW MALE  
JIC X KOMATSU FLANGE**  
9239



**90° MALE X FEMALE  
KOMATSU ELBOW  
(FORGED STEEL)**  
9392

**SPECIALTY MOBILE  
EQUIPMENT TEE**

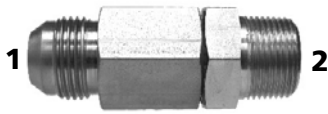
**FEMALE KOMATSU RUN TEE**  
9391

**Hydraulic  
Adapters**



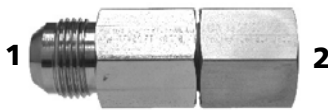
**HIGH PRESSURE SWIVELS**

**MALE CONNECTOR**



Part #	JIC Thread Size 1	Metric Pipe Thread 2
SS4MP25XMJ6	9/16-18	1/4
SS8MP38XMJ8	3/4-16	3/8
SS8MP50XMJ10	7/8-14	1/2
SS12MP75XMJ12	1-1/16-12	3/4
SS16MP100XMJ16	1-5/16-12	1
SS20MP125XMJ20	1-5/8-12	1-1/4
HP2404-24-24	1-7/8-12	1-1/2
HP2404-32-32	2-1/2-12	2

**FEMALE CONNECTOR**



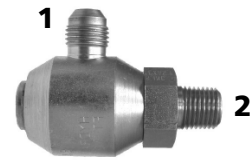
Part #	JIC Thread Size 1	Metric Pipe Thread 2
SS4MJ6XFP25	9/16-18	1/4
SS8MJ8XFP38	3/4-16	3/8
SS8MJ10XFP50	7/8-14	1/2
SS12MJ12XFP75	1-1/16-12	3/4
SS16MJ16XFP100	1-5/16-12	1
SS20MJ20XFP125	1-5/8-12	1-1/4
SS24MJ24XFP150	1-7/8-12	1-1/2
HP2405-32-32	2-1/2-12	2

**TUBE ADAPTER**



Part #	JIC Thread Size 1	JIC Thread Size 2
SS4MJ6XFJ6	9/16-18	9/16-18
SS8MJ8XFJ8	3/4-16	3/4-16
SS8MJ10XFJ10	7/8-14	7/8-14
SS12MJ12XFJ12	1-1/16-12	1-1/16-12
HP2406-14-14	1-3/16-12	1-3/16-12
SS16MJ16XFJ16	1-5/16-12	1-5/16-12
SS20MJ20XFJ20	1-5/8-12	1-5/8-12
SS24MJ24XFJ24	1-7/8-12	1-7/8-12
HP2406-32-32	2-1/2-12	2-1/2-12

**MALE ELBOW**



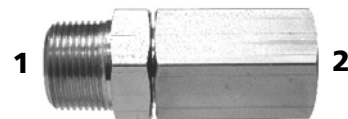
Part #	Male Size 1	Thread Pipe 2
HP2501-5-4	1/2-20	1/4
HP2501-5-6	1/2-20	3/8
9SS4MP25XMJ6	9/16-18	1/4
9SS4MP38XMJ6	9/16-18	3/8
9SS8MP38XMJ8	3/4-16	3/8
9SS8MP50XMJ10	7/8-14	1/2
9SS12MP75XMJ12	1-1/6-12	3/4
9SS16MP100XMJ16	1-5/16-12	1
9SS20MP125XMJ20	1-5/8-12	1-1/4
9SS24MP150XMJ24	1-7/8-12	1-1/2
HP2501-32-32	2-1/2-12	2

**FEMALE ELBOW**



Part #	JIC Thread Size 1	Female Thread Pipe 2
HP2502-5-4	1/2-20	1/4
HP2502-5-6	1/2-20	3/8
9SS4MJ6XFP25	9/16-18	1/4
HP2502-6-6	9/16-18	3/8
9SS8MJ8XFP38	3/4-16	3/8
9SS8MJ10XFP50	7/8-14	1/2
9SS12MJ12XFP75	1-1/6-12	3/4
9SS16MJ16XFP100	1-5/16-12	1
9SS20MJ20XFP125	1-5/8-12	1-1/4
9SS24MJ24XFP150	1-7/8-12	1-1/2
HP2502-32-32	2-1/2-12	2

**PIPE ADAPTER**

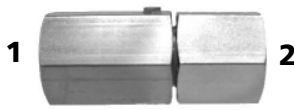


Part #	Male Pipe 1	Female Pipe 2
SS4MP25XFP25	1/4	1/4
SS8MP38XFP38	3/8	3/8
SS8MP50XFP50	1/2	1/2
SS12MP75XFP75	3/4	3/4
SS16MP100XFP100	1	1
SS20MP125XFP125	1-1/4	1-1/4
SS24MP150XFP150	1-1/2	1-1/2
SS32MP200XFP200	2	2

Also available in Stainless Steel

**Hydraulic Adapters**

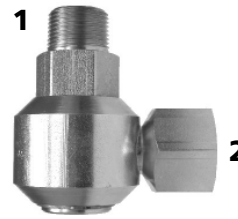
**PIPE COUPLING**



Part #	Female Pipe 1	Female Pipe 2
SS4FP25XFP25	1/4	1/4
SS8FP38XFP38	3/8	3/8
SS8FP50XFP50	1/2	1/2
SS12FP75XFP75	3/4	3/4
SS16FP100XFP100	1	1
SS20FP125XFP125	1-1/4	1-1/4
SS24FP150XFP150	1-1/2	1-1/2
SS32FP200XFP200	2	2

*Also available in Stainless Steel*

**STREET ELBOW**



Part #	Male Pipe 1	Female Pipe 2
9SS4MP25XFP25	1/4	1/4
HP5502-4-6	1/4	3/8
9SS4MP38XFP25	3/8	1/4
9SS8MP38XFP38	3/8	3/8
9SS8MP50XFP50	1/2	1/2
9SS12MP75XFP75	3/4	3/4
9SS16MP100FP100	1	1
9SS20MP125FP125	1-1/4	1-1/4
9SS24MP150FP125	1-1/2	1-1/2
9SS32MP200FP200	2	2

*Also available in Stainless Steel*

**MALE SWIVEL ELBOW**



Part #	Male Pipe 1	Female NPSM 2
9SS4MP25XPS25	1/4	1/4
9SS4MP25XPS38	1/4	3/8
9SS4MP38XPS25	3/8	1/4
9SS4MP38XPS38	3/8	3/8
9SS8MP50XPS50	1/2	1/2
9SS12MP75XPS75	3/4	3/4
0SS16MP100FP100	1	1
9SS20MP125FP125	1-1/4	1-1/4
9SS24MP150FP150	1-1/2	1-1/2
HP1501-32-32	2	2

*Also available in Stainless Steel*

**JIC TO O-RING ELBOW CONNECTOR**



Part #	JIC Thread Size 1	O-Ring Thread 2
9SS4MO6XMJ6	9/16-18	9/16-18
HP68016-8	9/16-18	3/4-16
9SS8MO8XMJ8	3/4-16	3/4-16
9SS8MO10XMJ10	7/8-14	7/8-14
9SS12MO12XMJ12	1-1/16-12	1-1/16-12
9SS16MO16XMJ16	1-5/16-12	1-5/16-12
9SS20MO20XMJ20	1-5/8-12	1-5/8-12
9SS24MO24XMJ24	1-7/8-12	1-7/8-12
HP6801-32-32	2-1/2-12	2-1/2-12

**FEMALE SWIVEL ELBOW**



Part #	Female Pipe 1	Female NPSM 2
9SS4FP25XPF25	1/4	1/4
9SS4FP25XPS38	1/4	3/8
HP1502-6-4	3/8	1/4
9SS8FP38XPS38	3/8	3/8
9SS8FP50XPS50	1/2	1/2
9SS12FP75XPS75	3/4	3/4
9SS16FP100PS100	1	1
9SS20FP125PS125	1-1/4	1-1/4
9SS24FP150PS150	1-1/2	1-1/2
HP1502-32-32	2	2

*Also available in Stainless Steel*

**Hydraulic Adapters**



# Hydraulic Adapters

## STEEL PIPE ADAPTERS

### CONFORMANCE

- SAE J518

### MATERIALS

- Steel -per SAE J518 with either black phosphate finish or plated zinc with yellow dichromate or iridite dip. Stainless available upon request.

### WORKING PRESSURES

The following table lists the recommended working pressures for steel Four-bolt Solid and Split Flange Fittings and Hose Ends manufactured in accordance with SAE standards J518 and J517. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using Flanged Fittings that have a threaded connection on one end, use the lower pressure rating of the two.

**CAUTION:** *Although many Four-bolt Flange Fittings have sufficient structural integrity to support the weight of many components, we recommend consulting with our technical support department*

for guidance in selection of parts for this purpose.

### SAE J518 FOUR-BOLT CODE 61

FLANGE PRESSURE RATINGS		
Dash Size	Flange Head OD Inches	4 TO 1 Minimum Burst PSI
-8	1-3/16 - 1.188	5000
-12	1-1/2 - 1.500	5000
-16	1-3/4 - 1.750	5000
-20	2 - 2.000	4000
-24	2-3/8 - 2.375	3000
-32	2-13/16 - 2.812	3000
-40	3-5/16 - 3.312	2500
-48	4 - 4.000	2000
-56	4-1/2 - 4.500	500

### SAE J518 FOUR-BOLT CODE 62

FLANGE PRESSURE RATINGS		
Dash Size	Flange Head OD Inches	4 TO 1 Minimum Burst PSI
-8	1-1/4 - 1.250	6000
-12	1-5/8 - 1.625	6000
-16	1-7/8 - 1.875	6000
-20	2-1/8 - 2.125	6000
-24	2-1/2 - 2.500	6000
-32	3-1/8 - 3.125	6000

Hydraulic Adapters

## STEEL FLANGE ADAPTERS ASSEMBLY INSTRUCTIONS

### RECOMMENDED SOLID FOUR-BOLT

- Step 1.** Inspect port area to be smooth and free of nicks, burrs, scratches, or contaminants.
- Step 2.** Lubricate the O-ring and place in flange head groove.
- Step 3.** Lubricate screw threads, slip lock washers onto screws, and insert screws into flange.
- Step 4.** Position flange on port and finger tighten all screws.
- Step 5.** Torque the screws in a figure eight sequence, incrementally until the appropriate torque value in the following table is achieved.

### RECOMMENDED SOLID FOUR-BOLT

- Step 1.** Follow steps 1 through 3 above, then proceed to the following steps.
- Step 2.** Position both flanges on port and turn one screw in each flange about three turns.
- Step 3.** Rotate each flange away from the port for sufficient clearance to position hose or fitting flange head on port.
- Step 4.** Close each flange until it properly captures flange head. Insert remaining screws and finger tighten.
- Step 5.** Torque the screws in a figure eight sequence, incrementally until the appropriate torque value in the proceeding table is achieved.

### J518 CODE 61 AND CODE 62 FLANGE MINIMUM TORQUE VALUES

Dash Size	Port Size	Code 61 Foot/lbs.	Code 62 Foot/lbs.
-8	1/2	15 - 19	15 - 19
-12	3/4	20 - 29	25 - 33
-16	1	27 - 35	41 - 50
-20	1-1/4	35 - 46	62 - 75
-24	1-1/2	46 - 58	116 - 133
-32	2	53 - 67	200 - 217
-40	2-1/2	79	NA
-48	3	137	NA
-56	3-1/2	116	NA
-64	4	116	NA
-80	5	116	NA

### WHY WET TORQUE?

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Over tightening causes threads to yield, deform and lose their ability to maintain an adequate load of clamping force on the sealing area. Extended operation and severe conditions cause further yielding which results in leaks. Over tightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.



**Flareless Bite Type Fittings**

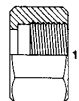
Steel and stainless steel bite type fittings meet all design and performance requirements for hydraulic flareless tube fittings in Standard J514 published by the Society of Automotive Engineers (SAE).

(080112/MS# 51590)



**CAP NUT**  
F820

(080110/MS# 51823)

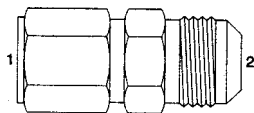


**NUT**  
F818

(080115A/MS# 51825A)

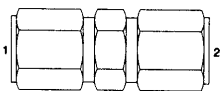


**FERRULE**  
F819



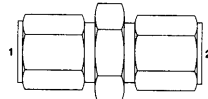
**BT - MJ**  
F814

(080101/MS# 51814)



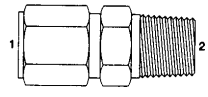
**BT - BT TUBE UNION  
STRAIGHT**  
F815

(080119/MS# 51856)



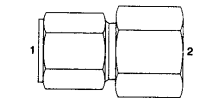
**BT - BT TUBE UNION  
LARGE HEX STRAIGHT**  
F815LH

(080102/MS# 51819)

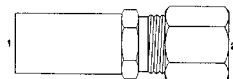


**BT - MP ADAPTER  
STRAIGHT**  
F816

(080103)



**BT - FP ADAPTER  
STRAIGHT**  
F854



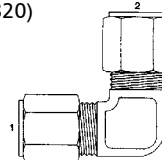
**TUBE - BT REDUCER**  
F860

(080109)



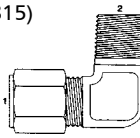
**PLUG**  
F806

(080201/  
MS# 51820)



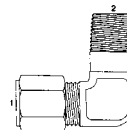
**BT - BT ELBOW 90°**  
F821

(080202/  
MS# 51815)



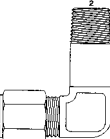
**BT - MP ELBOW 90°**  
F822

(071502)



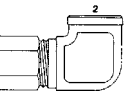
**BT - MP ELBOW  
90° LONG**  
F877

(081602)



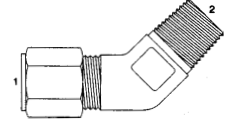
**BT - MP ELBOW  
90° X-LONG**  
F878

(080203/MS# 51813)

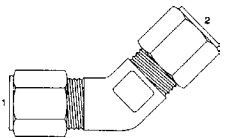


**BT - FP ELBOW 90°**  
F855

(080302/MS# 51817)

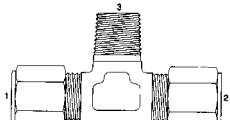


**BT - MP ELBOW 45°**  
F823



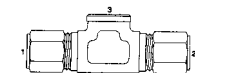
**BT - BT ELBOW 45°**  
F817

(080425/MS# 51818)



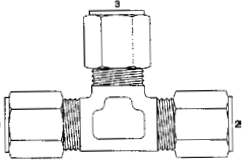
**BT - BT - MP TEE**  
F825

(080427/MS# 51821)



**BT - BT - FP TEE**  
F856

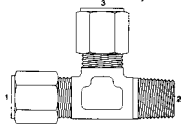
(080401/  
MS# 51811)



**BT - BT - BT TEE**  
F824

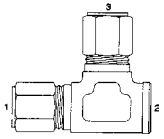
**Hydraulic  
Adapters**

(080424/MS# 51824)



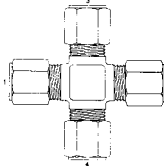
**BT - MP - BT TEE**  
F826

(080426/MS# 51822)

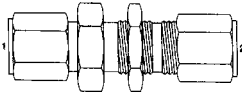


**BT - FP - BT TEE**  
F857

(080501/MS# 51894)

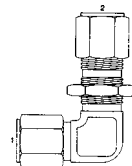


**BT - BT - BT - BT CROSS**  
F827



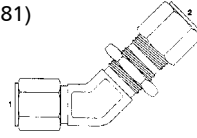
**BT - BT BULKHEAD UNION**  
F832

(080701/MS# 51855)



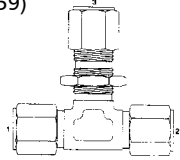
**BT - BT BULKHEAD  
UNION 90°**  
F833

(08081)



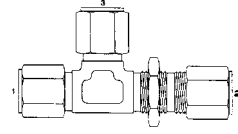
**BT - BT BULKHEAD  
UNION 45°**  
F837

(080959)

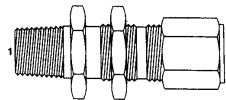


**BT - BT - BT BULKHEAD  
BRANCH TEE**  
F834

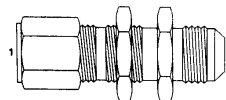
(080958)



**BT - BT - BT BULKHEAD TEE**  
F835

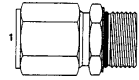


**BT - MP BULKHEAD**  
F840



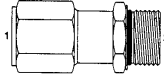
**BT - MJ BULKHEAD**  
F847

(08120/MS# 51843)



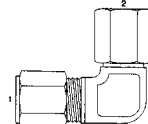
**BT - MORB**  
F516

(080122)



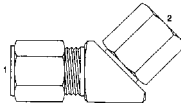
**BT - MORB LONG**  
F516L

(080221/MS# 51852)



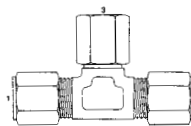
**BT - BTS 90°**  
F622

(080321)



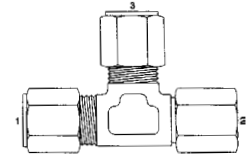
**BT - BTS 45°**  
F623

(080433/MS# 51853)



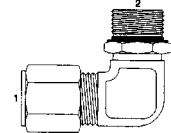
**BT - BT - BTS TEE**  
F625

(080432/MS# 51854)



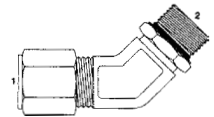
**BT - BTS - BT TEE**  
F626

(080220/MS# 51839)



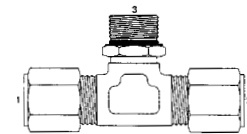
**BT - MAORB 90°**  
F522

(080320/MS# 51842)



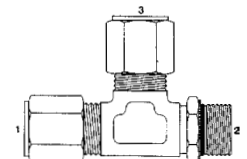
**BT - MAORD 45°**  
F523

(080320/MS# 51842)



**BT - BT - MAORB TEE**  
F525

(080428/MS# 51892)



**BT - MAORB - BT TEE**  
F526

**Hydraulic  
Adapters**





# Flareless Bite Type Fittings

## Assembly Instructions

The assembly of Brennan Steel and Stainless Steel Bite-Type Fittings involves four steps:

- 1) cutting, deburring and cleaning
- 2) presetting the ferrule to the tubing
- 3) ferrule bite inspection
- 4) installation.

### **Cutting, Deburring & Cleaning**

1. Square-cut the seamless or welded-and-drawn tubing using a hacksaw with a fine-tooth blade, or a circular-toothed cut-off saw. Use only tubing that is fully annealed for bending and flaring.
2. Remove all burrs and sharp edges on the tube by lightly deburring the I.D. and O.D. Emery paper may be used to perform this task.
3. Wipe the tube end completely with a clean cloth. Be sure to remove all metal chips from the tube end.

### **Pre-Setting Ferrule to the Tubing**

This procedure must be followed to ensure the proper location of the ferrule to the tubing.

1. Lubricate the fitting body thread and the thread of the nut.
2. Slip the nut and ferrule over the deburred end of the tube. The long, straight end of the ferrule must point toward the deburred tube end.
3. Lubricate the ferrule.
4. Position the deburred tube end squarely on the shoulder of the fitting body.
5. Manually screw the nut onto the fitting body until it is finger-tight.
6. Put a reference mark on the nut and the tube.
7. Hold the tube firmly on the fitting body and tighten the nut an additional 1% turns. Proper assembly of bite-type fittings is dependent upon the ferrule traveling a prescribed distance into the fitting throat. This allows it to "bite" into the tube, creating a strong grip and seal.

8. The use of a Ferulset tool is recommended for sizes -08 through -32".

### **Ferrule Bite Inspection**

The following inspection procedures must be completed prior to final assembly.

1. Disassemble the fitting.
2. The tube surface must have a raised ridge of metal that is at least 50% of the thickness of the leading edge of the ferrule.
3. There must be a slight bow to the pilot section of the ferrule.
4. The tail of the ferrule should be snug against the tube.
5. A slight indentation around the deburred end of the tube indicates that the tube was bottomed in the fitting. If this indentation is not visible, the ferrule may not be properly seated.
6. Do not rotate the ferrule.

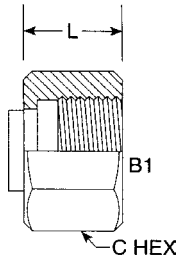
### **Installation**

1. Finger-tighten the nut.
2. Wrench\*tighten the nut another 1/3 to 1/2 turn.

# Cap Nut

## F820 Series

SAE # 080112 / MS # 51590

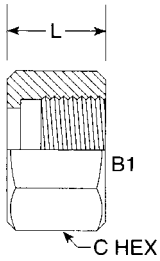


PART NO. SIZE	TUBE O.D.	B1 THREAD	L LGTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
								S	FG	SS	B
F820-02	1/8	5/16-24	0.500	12.70	3/8	0.375	9.52	•		•	
F820-04	1/4	7/16-20	0.590	14.99	9/16	0.562	15.87	•		•	
F820-05	5/16	1/2-20	0.610	15.49	5/8	0.625	15.87	•		•	
F820-06	3/8	9/16-18	0.630	16.00	11/16	0.688	17.47	•		•	
F820-08	1/2	3/4-16	0.750	19.05	7/8	0.875	22.22	•		•	
F820-10	5/8	7/8-14	0.840	21.34	1	1.000	25.40	•		•	
F820-12	3/4	1 1/16-12	0.910	23.11	1 1/4	1.250	31.75	•		•	
F820-16	1	1 5/16-12	1.020	25.91	1 1/2	1.500	38.10	•		•	
F820-20	1 1/4	1 5/8-12	1.060	26.92	2	2.000	50.80	•		•	

# Nut

## F818 Series

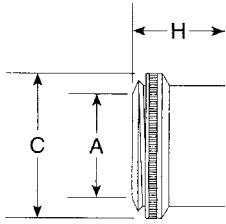
SAE # 080110 / MS # 51823



PART NO. SIZE	TUBE O.D.	B1 THREAD	L LGTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
								S	FG	SS	B
F818-02	1/8	5/16-24	0.540	13.72	3/8	0.375	9.52	•		•	
F818-03	3/16	3/8-24	0.600	15.24	7/16	0.438	11.12	•		•	
F818-04	1/4	7/16-20	0.610	15.49	9/16	0.562	14.27	•		•	•
F818-05	5/16	1/2-20	0.670	17.02	5/8	0.625	15.87	•		•	
F818-06	3/8	9/16-18	0.720	18.29	11/16	0.688	17.47	•		•	•
F818-08	1/2	3/4-16	0.840	21.34	7/8	0.875	22.22	•		•	
F818-10	5/8	7/8-14	0.970	24.64	1	1.000	25.40	•		•	
F818-12	3/4	1 1/16-12	1.020	25.91	1 1/4	1.250	31.75	•		•	
F818-14	7/8	1 3/16-12	1.080	27.43	1 3/8	1.375	34.92	•		•	
F818-16	1	1 5/16-12	1.120	28.45	1 1/2	1.500	38.10	•		•	
F818-20	1 1/4	1 5/8-12	1.220	30.99	2	2.000	50.80	•		•	
F818-24	1 1/2	1 7/8-12	1.410	35.81	2 1/4	2.250	57.15	•		•	
F818-32	2	2 1/2-12	1.740	44.20	2 7/8	2.875	73.02	•		•	

Hydraulic Adapters



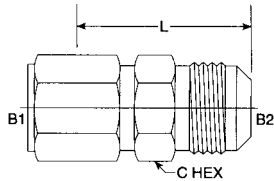


**Ferrule**

**F819 Series**

SAE # 080115A / MS # 51825

PART NO. SIZE	TUBE O.D.	A	C	H	Standard Material From Stock			
					S	FG	SS	B
F819-02	1/8	0.130	0.240	0.290	•		•	
F819-03	3/16	0.190	0.310	0.330	•		•	
F819-04	1/4	0.260	0.370	0.360	•		•	•
F819-05	5/16	0.320	0.430	0.370	•		•	
F819-06	3/8	0.380	0.500	0.390	•		•	•
F819-08	1/2	0.510	0.660	0.430	•		•	
F819-10	5/8	0.630	0.780	0.440	•		•	
F819-12	3/4	0.760	0.930	0.480	•		•	
F819-14	7/8	0.880	1.060	0.480	•		•	
F819-16	1	1.010	1.190	0.480	•		•	
F819-20	1 1/4	1.260	1.450	0.480	•		•	
F819-24	1 1/2	1.510	1.690	0.480	•		•	
F819-32	2	2.010	2.210	0.051	•		•	



**BT - MJ**

**F814 Series**

PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	L LGTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
									S	FG	SS	B
F814-04-04	1/4	7/16-20	1/4-18	1.1875	30.00	1/2	0.50	12.70	•		•	
F814-06-06	3/8	9/16-18	9/16-18	1.280	32.51	5/8	0.625	15.87	•		•	
F814-08-08	1/2	3/4-16	3/4-16	1.470	37.34	13/16	0.812	20.62	•		•	
F814-08-12											•	
F814-12-12	3/4	1 1/16-12	1 1/16-12	1.940	49.28	1 1/8	1.125	28.57	•		•	
F814-16-16	1	1 5/16-12	1-11 1/2	1.970	50.00	1 5/8	1.625	41.28	•		•	
F814-20-20	1 1/4	1 5/8-12	1 1/2-11 1/2	2.000	51.00	1 3/4	1.75	44.45	•		•	

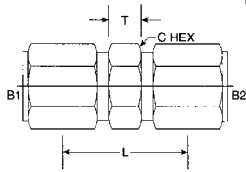
**Hydraulic Adapters**



# BT - BT Tube Union Straight

## F815 Series

SAE # 080101 / MS # 51814



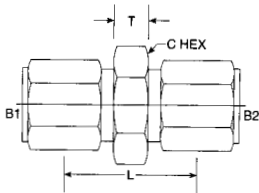
PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	L LGTH	M.M.	T WIDTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
											S	FG	SS	B
F815-02-02	1/8	5/16-24	5/16-24	1.020	25.91	0.220	5.59	7/16	0.438	11.12	•		•	
F815-03-03	3/16	3/8-24	3/8-24	1.110	28.19	0.220	5.59	7/16	0.438	11.12	•		•	
F815-04-04	1/4	7/16-20	7/16-20	1.190	30.23	0.220	5.59	1/2	0.500	12.70	•		•	
F815-05-05	5/16	1/2-20	1/2-20	1.190	30.23	0.220	5.59	9/16	0.562	14.27	•		•	
F815-06-04	3/8 1/4	9/16-18	7/16-20	1.240	31.50	0.250	6.35	5/8	0.625	15.87	•		•	
F815-06-06	3/8	9/16-18	9/16-18	1.220	30.99	0.250	6.35	5/8	0.625	15.87	•		•	
F815-08-08	1/2	3/4-16	3/4-16	1.420	36.07	0.250	6.35	13/16	0.812	20.62	•		•	
F815-10-10	5/8	7/8-14	7/8-14	1.610	40.89	0.310	7.87	15/16	0.038	23.82	•		•	
F815-12-08	3/4	1 1/16-12	1/2-14	1.690	42.93	0.380	9.65	1 1/4	1.125	28.58	•		•	
F815-12-12	3/4	1 1/16-12	1 1/16-12	1.810	45.97	0.380	9.65	1 1/8	1.125	28.57	•		•	
F815-14-14	7/8	1 3/16-12	1 3/16-12	1.810	45.97	0.380	9.65	1 1/8	1.125	28.57	•		•	
F815-16-16	1	1 5/16-12	1 5/16-12	1.810	45.97	0.380	9.65	1 3/8	1.375	34.92	•		•	
F815-20-20	1 1/4	1 5/8-12	1 5/8-12	1.890	48.01	0.460	11.68	1 11/16	1.688	42.87	•		•	
F815-24-24	1 1/2	1 7/8-12	1 7/8-12	1.960	49.78	0.530	13.46	2	2.000	50.80	•		•	
F815-32-32	2	2 1/2-12	2 1/2-12	2.110	53.59	0.680	17.27	2 5/8	2.625	66.67	•		•	

Hydraulic Adapters

# BT - BT Tube Union Large Hex Straight

## F815LH Series

SAE # 080119 / MS # 51856



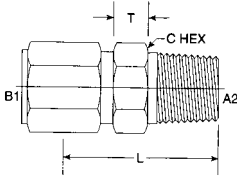
PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	L LGTH	M.M.	T WIDTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
											S	FG	SS	B
F815LH-04-04	1/4	7/16-20	7/16-20	1.190	30.23	0.220	5.588	11/16	0.688	17.47	•		•	
F815LH-06-06	3/8	9/16-18	9/16-18	1.230	31.24	0.250	6.350	13/16	0.812	20.62	•		•	
F815LH-08-06	1/2 3/8	3/4-16	9/16-18	1.220	30.99	0.250	6.350	1	1.000	25.40	•		•	
F815LH-08-08	1/2	3/4-16	3/4-16	1.420	36.07	0.250	6.350	1	1.000	25.40	•		•	
F815LH-10-10	5/8	7/8-14	7/8-14	1.330	33.78	0.310	7.874	1 1/8	1.125	28.57	•		•	
F815LH-12-12	3/4	1 1/16-12	1 1/16-12	1.610	40.89	0.380	9.652	1 3/8	1.375	34.92	•		•	
F815LH-16-16	1	1 5/16-12	1 5/16-12	1.810	45.97	0.380	9.652	1 5/8	1.625	41.27	•		•	



# BT - MP Adapter Straight

## F816 Series

SAE # 080102 / MS # 51819



PART NO. SIZE	TUBE O.D.	B1 THREAD	A2 NPTF	L LGTH	M.M.	T WIDTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
											S	FG	SS	B
NEW F816-02-02	1/8	5/16-24	1/8-27	1.040	26.42	0.220	5.59	7/16	0.438	11.12	•		•	
F816-02-04	1/8	5/16-24	1/4-18	1.250	31.75	0.250	6.35	9/16	0.562	14.27	•		•	
F816-03-02											•		•	
F816-04-02	1/4	7/16-20	1/8-27	1.120	28.45	0.250	6.35	1/2	0.500	12.70	•		•	•
F816-04-04	1/4	7/16-20	1/4-18	1.330	33.78	0.250	6.35	9/16	0.562	14.27	•		•	•
F816-04-06	1/4	7/16-20	3/8-18	1.330	33.78	0.250	6.35	3/4	0.750	19.05	•		•	
F816-04-08	1/4	7/16-20	1/2-14	1.580	40.13	0.250	6.35	7/8	0.875	22.22	•		•	
F816-05-02	5/16	1/2-20	1/8-27	1.120	28.45	0.250	6.35	9/16	0.562	14.27	•		•	
F816-05-04	5/16	1/2-20	1/4-18	1.330	33.78	0.250	6.35	9/16	0.562	14.27	•		•	
F816-05-06	5/16	1/2-20	3/8-18	1.420	36.09	0.250	6.35	3/4	0.750	19.05	•		•	
F816-06-02	3/8	9/16-18	1/8-27	1.160	29.46	0.250	6.35	5/8	0.625	15.87	•		•	
F816-06-04	3/8	9/16-18	1/4-18	1.340	34.04	0.250	6.35	5/8	0.625	15.87	•		•	
F816-06-06	3/8	9/16-18	3/8-18	1.340	34.04	0.250	6.35	13/16	0.812	20.62	•		•	•
F816-06-08	3/8	9/16-18	1/2-14	1.600	40.65	0.250	6.35	15/16	0.938	23.82	•		•	
F816-08-04	1/2	3/4-16	1/4-18	1.440	36.58	0.250	6.35	13/16	0.812	20.62	•		•	
F816-08-06	1/2	3/4-16	3/8-18	1.440	36.58	0.250	6.35	13/16	0.812	20.62	•		•	
F816-08-08	1/2	3/4-16	1/2-14	1.690	42.93	0.310	7.87	15/16	0.938	23.82	•		•	
F816-08-12	1/2	3/4-16	3/4-14	1.750	44.45	0.380	9.65	1-1/8	1.125	28.57	•		•	
F816-10-06	5/8	7/8-14	3/8-16	1.560	39.62	0.380	9.65	15/16	0.938	23.82	•		•	
F816-10-08	5/8	7/8-14	1/2-14	1.750	44.45	0.310	7.87	15/16	0.938	23.82	•		•	
F816-10-12	5/8	7/8-14	3/4-14	1.830	46.48	0.380	9.65	1 1/8	1.125	28.57	•		•	
F816-12-08	3/4	1 1/16-12	1/2-14	1.880	47.75	0.380	9.65	1 1/8	1.125	28.57	•		•	
F816-12-12	3/4	1 1/16-12	3/4-14	1.880	47.75	0.380	9.65	1 1/8	1.125	28.57	•		•	
F816-12-16	3/4	1 1/16-12	1-11 1/2	2.080	52.83	0.380	9.65	1 3/8	1.375	34.92	•		•	
NEW F816-14-12											•		•	
F816-16-12	1	1 5/16-12	3/4-14	1.880	47.75	0.380	9.65	1 3/8	1.375	34.92	•		•	
F816-16-16	1	1 5/16-12	1-11 1/2	2.070	52.58	0.380	9.65	1 3/8	1.375	34.92	•		•	
F816-20-20	1 1/4	1 5/8-12	1 1/4-11 1/2	2.180	55.37	0.460	11.68	1 11/16	1.688	42.93	•		•	
F816-24-20	1 1/2	1 7/8-12	1 1/4-11 1/2	2.280	57.91	0.562	14.22	2	2.000	50.80	•		•	
F816-24-24	1 1/2	1 7/8-12	1 1/2-11 1/2	2.280	57.91	0.530	13.46	2	2.000	50.80	•		•	
F816-32-32	2	2 1/2-12	2-11 1/2	2.460	62.48	0.680	17.27	2 5/8	2.625	66.80	•		•	

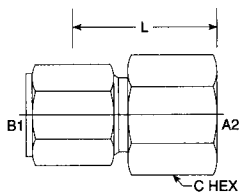
Hydraulic Adapters



# BT - FP Adapter Straight

## F854 Series

SAE # 080103

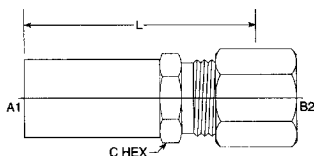


PART NO. SIZE	TUBE O.D.	B1 THREAD	A2 NPTF	L LGTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
									S	FG	SS	B
F854-02-02	1/8	5/16-24	1/8-27	1.050	26.67	9/16	0.562	14.27	•		•	
F854-04-02	1/4	7/16-20	1/8-27	1.090	27.70	9/16	0.562	14.27	•		•	
F854-04-04	1/4	7/16-20	1/4-18	1.290	32.77	3/4	0.750	19.05	•		•	
F854-05-02	5/16	1/2-20	1/8-27	1.080	27.45	9/16	0.562	14.27	•		•	
<b>NEW</b> F854-05-04											•	
F854-06-04	3/8	9/16-18	1/4-28	1.310	33.27	3/4	0.750	19.05	•		•	
F854-06-06	3/8	9/16-18	3/8-18	1.340	34.04	7/8	0.875	22.22	•		•	
F854-06-08	3/8	9/16-18	1/2-14	1.590	40.39	1 1/8	1.125	28.57	•		•	
F854-08-04	1/2	3/4-16	1/4-18	1.460	37.08	13/16	0.812	20.62	•		•	
F854-08-06	1/2	3/4-16	3/8-18	1.470	37.34	7/8	0.875	22.22	•		•	
F854-08-08	1/2	3/4-16	1/2-14	1.690	42.93	1 1/8	1.125	28.57	•		•	
<b>NEW</b> F854-10-06											•	
F854-10-08	5/8	7/8-14	1/2-14	1.770	44.96	1 1/8	1.125	28.57	•		•	
F854-12-12	3/4	1 1/16-12	3/4-14	1.890	48.01	1 3/8	1.375	34.92	•		•	
<b>NEW</b> F854-14-12											•	
F854-16-16	1	1 15/16-12	1-11 1/2	2.130	54.10	1 5/8	1.625	41.27	•		•	
F854-20-20	1 1/4	1 5/8-12	1 1/4-11 1/2	2.220	56.39	2	2.000	50.80	•		•	
F854-24-24	1 1/2	1 7/8-12	1 1/2-11 1/2	2.230	56.64	2 3/8	2.375	60.32	•		•	

Hydraulic Adapters

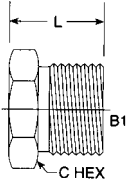
# Tube - BT Reducer

## F860 Series



PART NO. SIZE	TUBE O.D.	A1 TUBE	B2 THREAD	L LGTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
									S	FG	SS	B
F860-06-04	3/8	0.375	7/16-20	1.610	40.89	1/2	0.500	12.70	•		•	
F860-08-04	1/2	0.500	7/16-20	1.730	43.94	9/16	0.562	14.27	•		•	
F860-08-06	1/2	0.500	9/16-18	1.770	44.96	9/16	0.562	14.27	•		•	
F860-10-08	5/8	0.625	7/8-14	1.950	49.53	13/16	0.812	20.62	•		•	
F860-12-06	3/4	0.750	1 1/16-12	1.940	49.28	13/16	0.812	20.62	•		•	
F860-12-08	3/4	0.750	1 1/16-12	2.030	51.56	13/16	0.812	20.62	•		•	
F860-16-08	1	1.000	1 5/16-12	2.050	52.07	1 1/16	1.062	26.97	•		•	
F860-16-12	1	1.000	1 5/16-12	2.250	57.15	1 1/8	1.125	28.57	•		•	
F860-20-16	1 1/4	1.250	1 5/8-12	2.280	57.91	1 3/8	1.375	34.92	•		•	





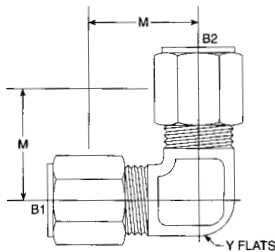
**Plug**  
**F806 Series**  
SAE # 080109

PART NO. SIZE	TUBE O.D.	B1 THREAD	L LGTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
								S	FG	SS	B
F806-02	1/8	5/16-24	0.630	16.00	7/16	0.438	11.12	•			
F806-04	1/4	7/16-20	0.710	18.03	1/2	0.500	12.70	•		•	
F806-06	3/8	9/16-18	0.750	19.05	5/8	0.625	15.87	•		•	
F806-08	1/2	3/4-16	0.850	21.59	13/16	0.812	20.62	•		•	
F806-10	5/8	7/8-14	0.970	24.64	15/16	0.938	23.82	•		•	
F806-12	3/4	1 1/16-12	1.100	27.94	1 1/8	1.125	28.57	•		•	
F806-16	1	1 5/16-12	1.100	27.94	1 3/8	1.375	34.92	•		•	
F806-20	1 1/4	1 5/8-12	1.180	29.97	1 11/16	1.688	42.87			•	

**BT - BT Elbow 90°**

**F821 Series**

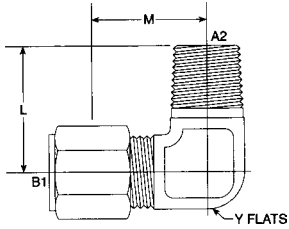
SAE # 080201 / MS # 51820



PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
									S	FG	SS	B
F821-02-02	1/8	5/16-24	5/16-24	0.770	19.56	7/16	0.438	11.12			•	
F821-04-04	1/4	7/16-20	7/16-20	0.890	22.61	7/16	0.438	11.12		•	•	
F821-05-05	5/16	1/2-20	1/2-20	0.950	24.13	9/16	0.562	14.27		•	•	
F821-06-06	3/8	9/16-18	9/16-18	1.050	26.67	9/16	0.562	14.27		•	•	
F821-08-08	1/2	3/4-16	3/4-16	1.250	31.75	3/4	0.750	19.05		•	•	
F821-10-10	5/8	7/8-14	7/8-14	1.420	36.07	7/8	0.875	22.22		•	•	
F821-12-12	3/4	1 1/16-12	1 1/16-12	1.580	40.13	1 1/16	1.062	26.97		•	•	
F821-16-16	1	1 5/16-12	1 5/16-12	1.730	43.94	1 5/16	1.312	33.32		•	•	
F821-20-20	1 1/4	1 5/8-12	1 5/8-12	1.890	48.01	1 5/8	1.625	41.27		•	•	
F821-24-24	1 1/2	1 7/8-12	1 7/8-12	2.020	51.31	1 7/8	1.875	47.62			•	

**Hydraulic  
Adapters**





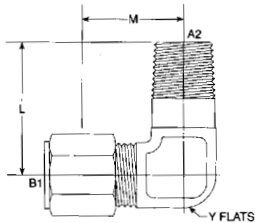
**BT - MP Elbow 90°**

**F822 Series**

SAE # 080202 / MS # 51815

PART NO. SIZE	TUBE O.D.	B1 THREAD	A2 NPTF	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
F822-02-02	1/8	5/16-24	1/8-27	0.720	18.29	0.780	19.81	7/16	0.438	11.12		•	•	
F822-03-02	3/16	3/8-24	1/8-27	0.720	18.29	0.840	21.34	7/16	0.438	11.12		•	•	
F822-04-02	1/4	7/16-20	1/8-27	0.780	19.81	0.890	22.61	7/16	0.438	11.12		•	•	
F822-04-04	1/4	7/16-20	1/4-18	1.090	27.69	1.030	26.16	9/16	0.562	14.27		•	•	
F822-04-06	1/4	7/16-20	3/8-18	1.220	30.99	1.130	28.70	13/16	0.812	20.62		•	•	
F822-04-08	1/4	7/16-20	3/4-16	1.470	37.34	1.220	30.99	7/8	0.875	22.22		•	•	
F822-05-02	5/16	1/2-20	1/8-27	0.810	20.57	0.950	24.13	9/16	0.562	14.27		•	•	
F822-05-04	5/16	1/2-20	1/4-18	1.090	27.69	1.030	26.16	9/16	0.562	14.27		•	•	
F822-06-02	3/8	9/16-18	1/8-27	0.880	22.35	1.050	26.67	9/16	0.562	14.27		•	•	
F822-06-04	3/8	9/16-18	1/4-18	1.090	27.69	1.050	26.67	9/16	0.562	14.27		•	•	
F822-06-06	3/8	9/16-18	3/8-18	1.220	30.99	1.140	28.96	3/4	0.750	19.05		•	•	
F822-06-08	3/8	9/16-18	1/2-14	1.470	37.34	1.230	31.24	7/8	0.875	22.22		•	•	
F822-08-04	1/2	3/4-16	1/4-18	1.160	29.46	1.250	31.75	3/4	0.750	19.05		•	•	
F822-08-06	1/2	3/4-16	3/8-18	1.220	30.99	1.250	31.75	3/4	0.750	19.05		•	•	
F822-08-08	1/2	3/4-16	1/2-14	1.470	37.34	1.340	34.04	7/8	0.875	22.22		•	•	
F822-08-12	1/2	3/4-16	3/4-14	1.590	40.39	1.420	36.07	1 1/16	1.062	26.97		•	•	
F822-10-06	5/8	7/8-14	3/8-18	1.300	33.02	1.420	36.07	7/8	0.875	22.22		•	•	
F822-10-08	5/8	7/8-14	1/2-14	1.470	37.34	1.420	36.07	7/8	0.875	22.22		•	•	
F822-10-12	5/8	7/8-14	3/4-14	1.590	40.39	1.430	36.32	1 1/16	1.062	26.97		•	•	
F822-12-08	3/4	1 1/16-12	1/2-14	1.590	40.39	1.580	40.13	1 1/16	1.062	26.97		•	•	
F822-12-12	3/4	1 1/16-12	3/4-14	1.590	40.39	1.580	40.13	1 1/16	1.062	26.97		•	•	
F822-16-12	1	1 5/16-12	3/4-14	1.780	45.21	1.730	43.95	1 3/8	1.375	34.92		•	•	
F822-16-16	1	1 5/16-12	1-11 1/2	1.970	50.04	1.730	43.94	1 5/16	1.312	33.32		•	•	
F822-20-20	1 1/4	1 5/8-12	1 1/4-11 1/2	2.380	60.45	1.890	48.01	1 5/8	1.625	41.27		•	•	
F822-24-24	1 1/2	1 7/8-12	1 1/2-11 1/2	2.640	67.06	2.020	51.31	1 7/8	1.875	47.62		•	•	
F822-32-32	2	2 1/2-12	2-11 1/2	3.000	76.20	2.450	62.23	2 9/16	2.562	65.07		•	•	

**Hydraulic  
Adapters**



**BT - MP Elbow 90° Long**

**F877 Series**

SAE # 071502

PART NO. SIZE	TUBE O.D.	B1 THREAD	A2 NPTF	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
F877-04-02	1/4	7/16-20	1/8-27	1.170	29.72	0.890	22.61	7/16	0.438	11.12			•	
F877-04-04	1/4	7/16-20	1/4-18	1.580	40.13	1.030	26.16	9/16	0.562	14.27			•	
F877-05-04	5/16	1/2-20	1/4-18	1.440	36.58	1.030	26.16	9/16	0.562	14.27			•	
F877-06-06	3/8	9/16-18	3/8-18	1.830	46.48	1.140	28.96	3/4	0.750	19.05			•	
F877-12-12	3/4	1 1/16-12	3/4-14	2.440	61.98	1.580	40.13	1 1/16	1.062	26.97			•	
F877-16-16	1	1 5/16-12	1-11 1/2	3.010	76.45	1.730	43.94	1 5/16	1.312	33.32			•	
F877-20-20	1 1/4	1 5/8-12	1 1/4-11 1/2	3.690	93.73	1.890	48.01	1 5/8	1.625	41.27			•	
F877-24-24	1 1/2	1 7/8-12	1 1/2-11 1/2	4.100	104.14	2.020	51.31	1 7/8	1.875	47.62			•	
F877-32-32	2	2 1/2-12	2-11 1/2	4.810	122.17	2.450	62.23	2 1/2	2.500	63.50			•	

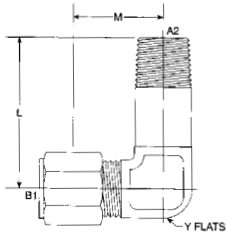




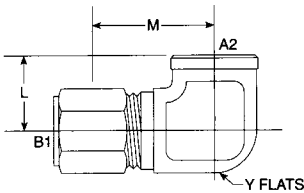
# BT - MP Elbow 90° X-Long

## F878 Series

SAE # 081602



NO. SIZE	O.D.	THREAD	NPTF	LGTH	M.M.	LGTH	M.M.	FLATS	FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
F878-04-02	1/4	7/16-20	1/8-27	1.560	39.62	0.890	22.61	7/16	0.438	11.12			•	
F878-04-04	1/4	7/16-20	1/4-18	2.030	51.56	1.030	26.16	9/16	0.562	14.27			•	
F878-05-02	5/16	1/2-20	1/8-27	1.630	41.40	0.950	24.13	9/16	0.562	14.27			•	
F878-06-04	3/8	9/16-18	1/4-18	2.070	52.58	1.050	26.67	9/16	0.562	14.27			•	
F878-08-06	1/2	3/4-16	3/8-18	2.420	61.47	1.250	31.75	3/4	0.750	19.05			•	
F878-10-08	5/8	7/8-14	1/2-14	2.870	72.90	1.420	36.07	7/8	0.875	22.22			•	
F878-12-12	3/4	1 1/16-12	3/4-14	3.280	83.31	1.580	40.13	1 1/16	1.062	26.97			•	
F878-16-16	1	1 5/16-12	1-11 1/2	4.050	102.82	1.730	43.94	1 5/16	1.312	33.32			•	
F878-20-20	1 1/4	1 5/8-12	1 1/4-11 1/2	5.000	127.00	1.890	48.01	1 5/8	1.625	41.27			•	
F878-24-24	1 1/2	1 7/8-12	1 1/2-11 1/2	5.550	140.97	2.020	51.32	1 7/8	1.875	47.62			•	
F878-32-32	2	2 1/2-12	2-11 1/2	6.630	168.40	2.450	62.23	2 1/2	2.500	63.50			•	



# BT - FP Elbow 90°

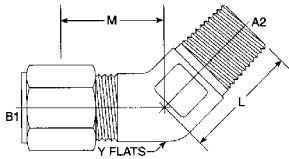
## F855 Series

SAE # 080203 / MS# 51813

PART NO. SIZE	TUBE O.D.	B1 THREAD	A2 NPTF	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
F855-04-02	1/4	7/16-20	1/8-27	0.660	16.76	0.890	22.61	9/16	0.562	14.27		•	•	
F855-04-04	1/4	7/16-20	1/4-18	0.880	22.35	1.030	26.16	3/4	0.750	19.05		•	•	
F855-05-02	5/16	1/2-20	1/8-27	0.660	16.76	0.950	24.13	9/16	0.562	14.27		•	•	
F855-06-04	3/8	9/16-18	1/4-18	0.880	22.35	1.050	26.67	3/4	0.750	19.05		•	•	
F855-06-06	3/8	9/16-18	3/8-18	1.020	25.91	1.130	28.70	7/8	0.875	22.22		•	•	
F855-08-04	3/8	3/4-16	1/4-18	0.880	22.35	1.230	31.24	3/4	0.750	19.05		•	•	
F855-08-06	3/8	3/4-16	3/8-18	1.020	25.91	1.230	31.24	7/8	0.875	22.22		•	•	
F855-08-08	1/2	3/4-16	1/2-14	1.230	31.24	1.340	34.04	1 1/16	1.062	26.97		•	•	
F855-10-08	5/8	7/8-14	1/2-14	1.230	31.24	1.420	36.07	1 1/16	1.062	26.97		•	•	
F855-12-12	3/4	1 1/16-12	3/4-14	1.360	34.54	1.580	40.13	1 5/16	1.312	33.32		•	•	
F855-16-16	1	1 5/16-12	1-11 1/2	1.620	41.15	1.730	43.94	1 5/8	1.625	41.27		•	•	
F855-20-20	1 1/4	1 5/8-12	1 1/4-11 1/2	1.700	43.18	2.080	52.83	1 7/8	1.875	47.62		•	•	
F855-24-24	1 1/2	1 7/8-12	1 1/2-11 1/2	2.080	52.83	2.580	65.53	1 1/2	2.500	63.50		•	•	

Hydraulic Adapters





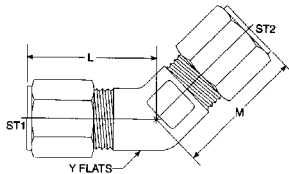
**BT - MP Elbow 45°**

**F823 Series**

SAE # 080302 / MS# 51817

PART NO. SIZE	TUBE O.D.	B1 THREAD	A2 NPTF	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	STANDARD MATERIAL FROM STOCK			
											S	FG	SS	B
F823-04-02	1/4	7/16-20	1/8-27	0.640	16.26	0.700	17.78	7/16	0.438	11.12		•	•	
F823-04-04	1/4	7/16-20	1/4-18	0.860	21.84	0.810	20.57	9/16	0.562	14.27		•	•	
F823-06-04	3/8	9/16-18	1/4-18	0.860	21.84	0.830	21.08	9/16	0.562	14.27		•	•	
F823-06-06	3/8	9/16-18	3/8-18	0.950	24.13	0.830	21.08	3/4	0.750	19.05		•	•	
F823-06-08	3/8	9/16-18	1/2-14	1.170	29.72	0.900	22.86	7/8	0.875	22.22		•	•	
F823-08-06	1/2	3/4-16	3/8-18	0.950	24.13	0.980	24.89	3/4	0.750	19.05		•	•	
F823-08-08	1/2	3/4-16	1/2-14	1.170	29.72	0.980	24.89	7/8	0.875	22.22		•	•	
F823-08-12	1/2	3/4-16	3/4-14	1.200	30.48	1.120	28.45	1 1/16	1.062	26.97		•	•	
F823-10-06	5/8	7/8-14	3/8-18	0.980	24.89	1.080	27.43	7/8	0.875	22.22		•	•	
F823-10-08	5/8	7/8-14	1/2-14	1.170	29.72	1.080	27.43	7/8	0.875	22.22		•	•	
F823-12-08	3/4	1 1/16-12	1/2-4	1.200	30.48	1.270	32.26	1 1/16	1.062	26.97		•	•	
F823-12-12	3/4	1 1/16-12	3/4-14	1.200	30.48	1.270	32.26	1 1/16	1.062	26.97		•	•	
F823-16-16	1	1 5/16-12	1-11 1/2	1.480	37.59	1.360	34.54	1 5/16	1.312	33.32		•	•	
F823-20-20	1 1/4	1 5/8-12	1 1/4-11 1/2	1.670	42.42	1.450	36.83	1 5/8	1.625	41.27		•	•	

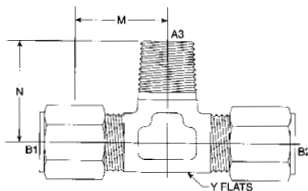
Hydraulic Adapters



**BT - BT Elbow 45°**

**F817 Series**

PART NO. SIZE	TUBE O.D.	ST1 THREAD	ST2 NPTF	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
F817-12-12														
F817-16-16														
F817-20-20														



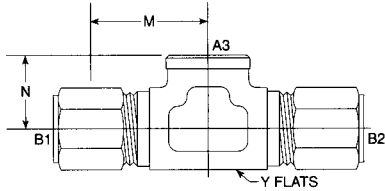
**BT - BT - MP Tee**

**F825 Series**

SAE # 080425 / MS# 51818

PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	A3 NPTF	M LGTH	M.M.	N LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
												S	FG	SS	B
F825-02-02-02	1/8	5/16-24	5/16-25	1/8-27	0.780	19.81	0.720	18.29	7/16	0.438	11.12			•	
F825-04-04-02	1/4	7/16-20	7/16-20	1/8-27	0.890	22.61	0.780	19.81	7/16	0.438	11.12		•	•	
F825-04-04-04	1/4	7/16-20	6/16-20	1/4-18	1.030	26.16	1.090	27.69	9/16	0.562	14.27		•	•	
F825-05-05-02	5/16	1/2-20	1/2-20	1/8-27	0.950	24.13	0.810	20.57	9/16	0.562	14.27		•	•	
F825-06-06-04	3/8	9/16-18	9/16-18	1/4-18	1.050	26.67	1.090	27.69	9/16	0.562	14.27		•	•	
F825-06-06-06	3/8	9/16-18	9/16-18	3/8-18	1.140	28.96	1.220	30.99	3/4	0.750	19.05		•	•	
F825-08-08-06	1/2	3/4-16	3/4-16	3/8-18	1.250	31.75	1.220	30.99	3/4	0.750	19.05		•	•	
F825-08-08-08	1/2	3/4-16	3/4-16	1/2-14	1.340	34.04	1.470	37.34	3/4	0.750	19.05		•	•	
F825-10-10-08	5/8	7/8-14	7/8-14	1/2-14	1.420	36.07	1.470	37.34	7/8	0.875	22.22		•	•	
F825-12-12-12	3/4	1 1/16-12	1 1/16-12	3/4-14	1.580	40.13	1.590	40.39	1 1/16	1.062	26.97		•	•	
F825-16-16-16	1	1 5/16-12	1 5/16-12	1-11 1/2	1.730	43.94	1.970	50.04	1 5/16	1.312	33.32		•	•	



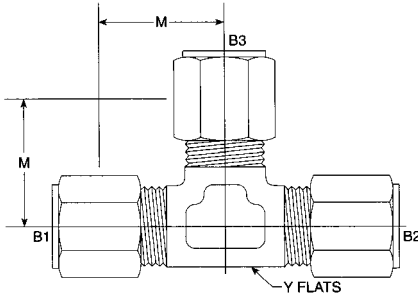


**BT - BT - FP Tee**

**F856 Series**

SAE # 080427 / MS# 51821

PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	A3 NPTF	M LGTH M.M.	N LGTH M.M.	Y FLATS M.M.	Y FLATS M.M.	Y FLATS M.M.	Standard Material From Stock					
										S	FG	SS	B		
F856-04-02	1/4	7/16-20	7/16-20	1/8-27	0.890	22.61	0.660	16.76	9/16	0.562	14.27		•	•	
F856-04-04	1/4	7/16-20	7/16-20	1/4-18	1.030	26.16	0.880	22.35	3/4	0.750	19.05		•	•	
F856-06-04	3/8	9/16-18	9/16-18	1/4-18	1.050	26.67	0.880	22.35	3/4	0.750	19.05		•	•	
F856-08-06	1/2	3/4-16	3/4-16	3/8-18	1.230	31.24	1.020	25.91	7/8	0.875	22.22		•	•	
F856-08-08	1/2	3/4-16	3/4-16	3/4-16	1.350	34.29	1.230	31.24	1 1/16	1.062	26.97		•	•	
F856-10-08	5/8	7/8-14	7/8-14	1/2-14	1.420	36.07	1.230	31.24	1 1/16	1.062	26.97		•	•	
F856-12-12	3/4	1 1/16-12	1 1/16-12	3/4-14	1.580	40.13	1.360	34.54	1 5/16	1.312	33.32		•	•	
F856-16-16	1	1 5/16-12	1 5/16-12	1-11 1/2	1.730	43.94	1.620	41.15	1 5/8	1.625	41.27		•	•	
F856-20-20	1 1/4	1 5/8-12	1 5/8-12	1 1/4-11 1/2	2.080	52.83	1.700	43.18	1 7/8	1.875	47.62		•	•	



**BT - BT - BT Tee**

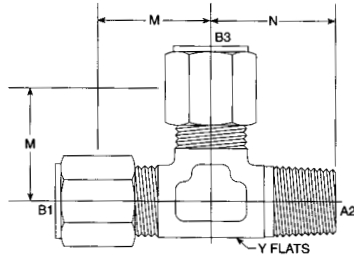
**F824 Series**

SAE # 080401 / MS# 51811

PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	B3 THREAD	M LGTH M.M.	Y FLATS M.M.	Y FLATS M.M.	Y FLATS M.M.	Standard Material From Stock				
									S	FG	SS	B	
F824-02-02	1/8	5/16-24	5/16-24	5/16-24	0.770	19.56	5/16	0.312	7.92		•	•	
F824-03-03	3/16	3/8-24	3/8-24	3/8-24	0.840	21.34	7/16	0.438	11.12		•	•	
F824-04-04	1/4	7/16-20	7/16-20	7/16-20	0.890	22.61	7/16	0.438	11.12		•	•	
F824-05-05	5/16	1/2-20	1/2-20	1/2-20	0.950	24.13	9/16	0.562	14.27		•	•	
F824-06-06	3/8	9/16-18	9/16-18	9/16-18	1.050	26.67	9/16	0.562	14.27		•	•	
F824-08-08	1/2	3/4-16	3/4-16	3/4-16	1.250	31.75	3/4	0.750	19.05		•	•	
F824-10-10	5/8	7/8-14	7/8-14	7/8-14	1.420	36.07	7/8	0.875	22.22		•	•	
F824-12-12	3/4	1 1/16-12	1 1/16-12	1 1/16-12	1.580	40.13	1 1/16	1.062	26.97		•	•	
<b>NEW</b> F824-14-14											•	•	
<b>NEW</b> F824-16-16	1	1 5/16-12	1 5/16-12	1 5/16-12	1.730	43.94	1 5/16	1.312	33.32		•	•	
F824-20-16											•	•	
F824-20-20	1 1/4	1 5/8-12	1 5/8-12	1 5/8-12	1.890	48.01	1 5/8	1.625	41.27		•	•	
F824-24-24	1 1/2	1 7/8-12	1 7/8-12	1 7/8-12	2.020	51.31	1 7/8	1.875	47.62		•	•	
F824-32-32	2	2 1/2-12	2 1/2-12	2 1/2-12	2.450	62.23	2 1/2	2.500	63.50		•	•	

**Hydraulic Adapters**





**BT - MP - BT Tee**

**F826 Series**

SAE # 080424 / MS# 51824

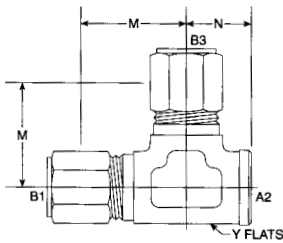
PART NO. SIZE	TUBE O.D.	B1 THREAD	A2 NPTF	B3 THREAD	M LGTH	M.M.	N LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
												S	FG	SS	B
F826-04-02	1/4	7/16-20	1/8-27	7/16-20	0.890	22.62	0.780	19.81	7/16	0.438	11.12		•	•	
F826-04-04	1/4	7/16-20	1/4-18	7/16-20	1.030	26.16	1.090	28.69	9/16	0.562	14.27		•	•	
F826-05-02	5/16	1/2-20	1/8-27	1/2-20	0.950	24.13	0.810	20.57	1/2	0.500	12.70		•	•	
F826-06-04	3/8	9/16-18	1/4-18	9/16-18	1.050	26.67	1.090	27.69	9/16	0.562	14.27		•	•	
F826-06-06	3/8	9/16-18	3/8-18	9/16-18	1.250	31.75	1.270	32.26	3/4	0.750	19.05		•	•	
F826-08-06	1/2	3/4-16	3/8-18	3/4-16	1.250	31.75	1.220	30.99	3/4	0.750	19.05		•	•	
F826-08-08	1/2	3/4-16	1/2-14	3/4-16	1.340	34.04	1.470	37.34	7/8	0.875	22.22		•	•	
F826-10-08	5/8	7/8-14	1/2-14	7/8-14	1.420	36.07	1.470	37.34	7/8	0.875	22.22		•	•	
F826-12-12	3/4	1 1/16-12	3/4-14	1 1/16-12	1.580	40.13	1.590	40.39	1 1/16	1.062	26.97		•	•	
F826-16-16	1	1 5/16-12	1-11 1/2	1 5/16-12	1.730	43.94	1.970	50.04	1 5/16	1.312	33.32		•	•	

Hydraulic Adapters

**BT - FP - BT Tee**

**F857 Series**

SAE # 080426 / MS# 51822



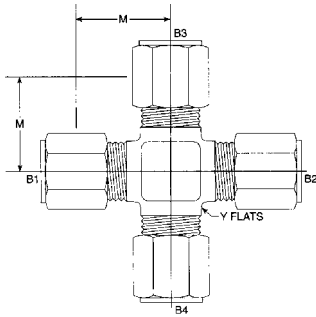
PART NO. SIZE	TUBE O.D.	B1 THREAD	A2 NPTF	B3 THREAD	M LGTH	M.M.	N LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
												S	FG	SS	B
F857-04-02	1/4	7/16-20	1/8-27	7/16-20	0.890	22.61	0.660	16.76	9/16	0.562	14.27		•	•	
F857-06-04	3/8	9/16-18	1/4-18	9/16-18	1.050	26.67	0.880	22.35	3/4	0.750	19.05		•	•	
F857-08-06	1/2	3/4-16	3/8-18	3/4-16	1.230	31.24	1.020	25.91	7/8	0.875	22.22		•	•	
F857-10-08	5/8	7/8-14	1/2-14	7/8-14	1.420	36.07	1.230	31.24	1 1/16	1.062	26.97		•	•	
F857-12-12	3/4	1 1/16-12	3/4-14	1 1/16-12	1.580	40.13	1.360	34.54	1 5/16	1.312	33.32		•	•	
F857-16-16	1	1 5/16-12	1-11 1/2	1 5/16-12	1.730	43.94	1.620	41.15	1 5/8	1.625	41.27		•	•	



**BT - BT - BT - BT Cross**

**F827 Series**

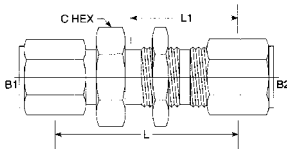
SAE # 080501 / MS# 51894



PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	B3 THREAD	B4 THREAD	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
F827-04-04	1/4	7/16-20	7/16-20	7/16-20	7/16-20	0.890	22.62	7/16	0.438	11.12		•	•	
F827-06-06	3/8	9/16-18	9/16-18	9/16-18	9/16-18	1.050	26.67	9/16	0.562	14.27		•	•	
F827-08-08	1/2	3/4-16	3/4-16	3/4-16	3/4-16	1.250	31.75	3/4	0.750	19.05		•	•	
F827-10-10	5/8	7/8-14	7/8-14	7/8-14	7/8-14	1.420	36.07	7/8	0.875	22.22		•	•	
F827-16-16	1	1 5/16-12	1 5/16-12	1 5/16-12	1 5/16-12	1.730	43.94	1 5/16	1.312	33.32			•	
F827-20-20	1 1/4	1 5/8-12	1 5/8-12	1 5/8-12	1 5/8-12	1.890	48.01	1 5/8	1.625	41.27			•	
F827-24-24	1 1/2	1 7/8-12	1 7/8-12	1 7/8-12	1 7/8-12	2.020	51.31	1 7/8	1.875	47.62			•	
F827-32-32	2	2 1/2-12	2 1/2-12	2 1/2-12	2 1/2-12	2.450	62.23	2 1/2	2.500	63.50			•	

**BT - BT Bulkhead Union**

**F832 Series**



PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	L LGTH	M.M.	L1 LGTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
											S	FG	SS	B
F832-04-04	1/4	7/16-20	7/16-20	1.130	28.70	1.890	48.01	11/16	0.688	17.47	•		•	
F832-06-06	3/8	9/16-18	9/16-18	1.170	29.72	1.980	50.29	13/16	0.812	20.62	•		•	
F832-08-08	1/2	3/4-16	3/4-16	1.310	33.27	2.220	56.39	1	1.000	25.40	•		•	
F832-10-10	5/8	7/8-14	7/8-14	1.450	36.83	2.480	62.99	1 1/8	1.125	28.57	•		•	
F832-12-12	3/4	1 1/16-12	1 1/16-12	1.560	39.62	2.720	69.09	1 3/8	1.375	34.92	•		•	
F832-16-16	1	1 5/16-12	1 5/16-12	1.560	39.62	2.720	69.09	1 5/8	1.625	41.27			•	

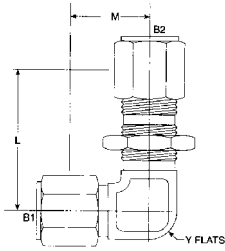
**Hydraulic Adapters**



**BT - BT Bulkhead Union 90°**

*F833 Series*

SAE # 080701 / MS# 51855

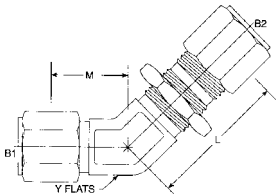


PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
F833-03-03	3/16	3/8-24	3/8-24	1.410	35.81	0.920	23.37	7/16	0.438	11.12			•	
F833-04-04	1/4	7/16-20	7/16-20	1.520	38.61	0.950	24.13	7/16	0.438	11.12			•	
F833-06-06	3/8	9/16-18	9/16-18	1.700	43.18	1.080	27.43	9/16	0.562	14.27			•	
F833-08-08	1/2	3/4-16	3/4-16	1.970	50.04	1.330	33.78	3/4	0.750	19.05			•	
F833-10-10	5/8	7/8-14	7/8-14	2.270	57.66	1.520	38.61	7/8	0.875	22.22			•	
F833-12-12	3/4	1 1/16-12	1 1/16-12	2.480	62.99	1.640	41.66	1 1/16	1.062	26.97			•	
F833-16-16	1	1 5/16-12	1 5/16-12	2.610	66.29	1.730	43.94	1 5/16	1.312	33.32			•	
F833-20-20	1 1/4	1 5/8-12	1 5/8-12	2.890	73.41	2.020	51.31	1 5/8	1.625	41.27			•	

**BT - BT Bulkhead Union 45°**

*F837 Series*

SAE # 080801

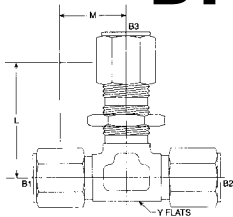


PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
F837-04-04	1/4	7/16-20	7/16-20	1.450	36.83	0.700	17.78	7/16	0.438	11.12			•	
F837-06-06	3/8	9/16-18	9/16-18	1.560	39.62	0.830	21.08	9/16	0.562	14.27			•	
F837-08-08	1/2	3/4-16	3/4-16	1.810	45.97	0.980	24.89	3/4	0.750	19.05			•	
F837-12-12	3/4	1 1/16-12	1 1/16-12	2.250	57.15	1.270	32.26	1 1/16	1.062	26.97			•	

**BT - BT - BT Bulkhead Branch Tee**

*F845 Series*

SAE # 080959



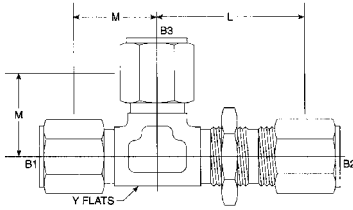
PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	B3 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
												S	FG	SS	B
F845-04-04	1/4	7/16-20	7/16-20	7/16-20	1.520	38.61	0.950	24.13	7/16	0.438	11.12			•	
F845-05-05	5/16	1/2-20	1/2-20	1/2-20	1.550	39.37	1.050	26.67	9/16	0.562	14.27			•	
F845-06-06	3/8	9/16-18	9/16-18	9/16-18	1.700	43.18	1.080	27.43	9/16	0.562	14.27			•	
F845-10-10	1/2	3/4-16	3/4-16	3/4-16	1.970	50.04	1.330	33.78	3/4	0.750	19.05			•	
F845-12-12	3/4	1 1/16-12	1 1/16-12	1 1/16-12	2.480	62.99	1.640	41.66	1 1/16	1.062	26.97			•	



**BT - BT - BT Bulkhead Tee**

*F846 Series*

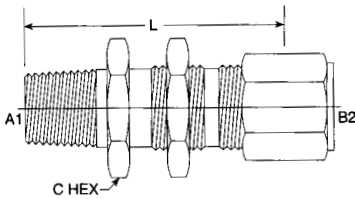
SAE # 080958



PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	B3 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
												S	FG	SS	B
F846-04-04	1/4	7/16-20	7/16-20	7/16-20	1.520	38.61	0.950	24.13	7/16	0.438	11.12			•	
F846-06-06	3/8	9/16-18	9/16-18	9/16-18	1.700	43.18	1.080	27.43	9/16	0.562	14.27			•	
F846-08-08	1/2	3/4-16	3/4-16	3/4-16	1.970	50.04	1.330	33.78	3/4	0.750	19.05			•	
F846-12-12	3/4	1 1/16-12	1 1/16-12	1 1/16-12	2.480	62.99	1.640	41.66	1 1/16	1.062	26.97			•	

**BT - MP Bulkhead**

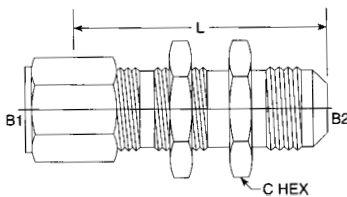
*F840 Series*



PART NO. SIZE	TUBE O.D.	A1 THREAD	B2 THREAD	L LGTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
									S	FG	SS	B
F840-02-04	1/4	1/8-27	7/16-20	1.820	46.23	11/16	0.688	17.45			•	
F840-04-04	1/4	1/4-18	7/16-20	2.080	52.83	3/4	0.750	19.05			•	
F840-04-06	3/8	1/4-18	9/16-18	2.100	53.34	13/16	0.812	20.62			•	
F840-06-06	3/8	3/8-18	9/16-18	2.140	54.36	13/16	0.812	20.62			•	
F840-08-06	1/2	3/8-18	3/4-16	2.300	58.42	1	1.000	25.40			•	
F840-08-08	1/2	1/2-14	3/4-16	2.560	65.02	1	1.000	25.40			•	
F840-12-12	3/4	3/4-14	1 1/16-12	2.760	70.10	1 3/8	1.375	34.92			•	
F840-16-16	1	1-11 1/2	1 5/16-12	3.100	78.74	1 5/8	1.625	41.27			•	

**BT - MJ Bulkhead**

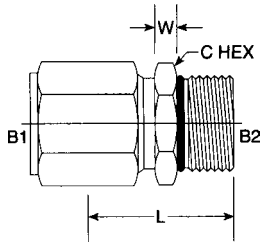
*F847 Series*



PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	L LGTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
									S	FG	SS	B
F847-04-04	1/4	7/16-20	7/16-20	1.940	49.28	11/16	0.688	17.45			•	
F847-06-06	3/8	9/16-18	9/16-18	2.080	52.83	13/16	0.812	20.62			•	
F847-08-08	1/2	3/4-16	3/4-16	2.310	58.67	1	1.000	25.40			•	
F847-12-12	3/4	1 1/16-12	1 1/16-12	2.940	74.68	1 3/8	1.375	34.92			•	
F847-16-16	1	1 5/16-12	1 5/16-12	2.950	74.93	1 5/8	1.625	41.27			•	

Hydraulic Adapters





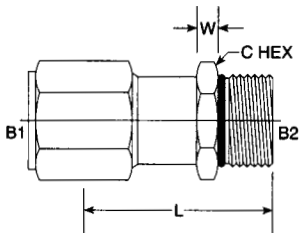
**BT - MORB**

**F516 Series**

SAE # 080120 / MS# 51843

PART NO. SIZE	TUBE/PORT	B1 THREAD	B2 THREAD	L LGTH	M.M.	W WIDTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
											S	FG	SS	B
F516-02-02	1/8	5/16-12	5/16-12	0.990	25.15	0.280	7.11	7/16	0.438	11.12			•	
F516-03-03	3/8	3/8-24	3/8-24	1.040	26.42	0.280	7.11	1/2	0.500	12.70	•		•	
F516-04-04	1/4	7/16-20	7/16-20	1.130	28.70	0.280	7.11	9/16	0.562	14.27	•		•	
F516-04-05	1/4 5/16	7/16-20	1/2-20	1.130	28.70	0.280	7.11	5/8	0.625	15.87	•		•	
F516-04-06	1/4 3/8	7/16-20	9/16-18	1.200	30.48	0.280	7.11	11/16	0.688	17.47	•		•	
F516-05-05	5/16	1/2-20	1/2-20	1.130	28.70	0.280	7.11	5/8	0.625	15.87	•		•	
F516-06-04	3/8 1/4	9/16-18	7/16-20	1.180	29.97	0.340	8.64	5/8	0.625	15.87	•		•	
F516-06-05	3/8 5/16	9/16-18	1/2-20	1.180	29.97	0.340	8.64	11/16	0.688	17.47	•		•	
F516-06-06	3/8	9/16-18	9/16-18	1.210	30.73	0.340	8.64	11/16	0.688	17.47	•		•	
F516-06-08	3/8 1/2	9/16-18	3/4-16	1.290	32.77	0.340	8.64	7/8	0.875	22.22	•		•	
F516-08-06	1/2 3/8	3/4-16	9/16-18	1.340	34.04	0.340	8.64	13/16	0.812	20.62	•		•	
F516-08-08	1/2	3/4-16	3/4-16	1.380	35.05	0.340	8.64	7/8	0.875	22.22	•		•	
F516-08-10	1/2 5/8	3/4-16	7/8-14	1.510	38.35	0.400	10.16	1	1.000	25.40	•		•	
F816-10-10	1/2 3/4	3/4-16	1 1/16-12	1.670	42.42	0.470	11.94	1 1/4	1.250	31.75	•		•	
F816-10-10	5/8	7/8-14	7/8-14	1.570	39.88	0.400	10.16	1	1.000	25.40	•		•	
F816-12-08	3/4 1/2	1 1/16-12	3/4-16	1.750	44.45	0.470	11.94	1 1/8	1.125	28.57	•		•	
F516-12-12	3/4	1 1/16-12	1 1/16-12	1.790	45.47	0.470	11.94	1 1/4	1.250	31.75	•		•	
F816-12-16	3/4 1	1 1/16-12	1 5/16-12	1.820	46.23	0.500	12.70	1 1/2	1.500	38.10	•		•	
F816-16-12	1 3/4	1 5/16-12	1 5/16-12	1.820	46.23	0.500	12.70	1 1/2	1.500	38.10	•		•	
F816-16-16	1	1 5/16-12	1 5/16-12	1.820	46.23	0.500	12.70	1 1/2	1.500	38.10	•		•	
F816-20-20	1 1/4	1 5/8-12	1 5/8-12	1.900	48.26	0.580	14.73	1 7/8	1.875	47.62	•		•	
F816-24-24	1 1/2	1 1/2-12	1 1/2-12	1.970	50.04	0.580	14.73	2 1/8	2.125	53.97	•		•	
F816-32-32	2	1 1/2-12	1 1/2-12	2.130	54.10	0.650	16.50	2 3/4	2.750	69.85	•		•	

Hydraulic Adapters



**BT - MORB Long**

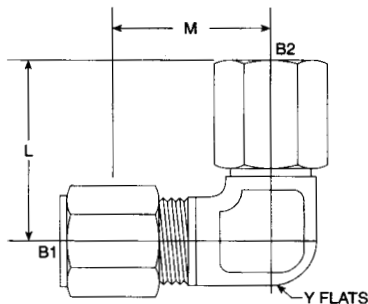
**F516L Series**

SAE # 080122

PART NO. SIZE	TUBE/PORT	B1 THREAD	B2 THREAD	L LGTH	M.M.	W WIDTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
											S	FG	SS	B
F516L-04-04	1/4	7/16-20	7/16-20	2.020	51.31	0.280	7.11	9/16	0.562	14.27	•			
F516L-06-06	3/8	9/16-18	9/16-18	2.230	56.64	0.340	8.64	11/16	0.688	17.47	•		•	
F516L-08-08	1/2	3/4-16	3/4-16	2.620	66.55	0.340	8.64	7/8	0.875	22.22	•		•	
F516L-10-10	5/8	7/8-14	7/8-14	2.980	75.69	0.400	10.16	1	1.000	25.40	•		•	
F816L-12-12	3/4	1 1/16-12	1 1/16-12	3.530	89.66	0.470	11.94	1 1/4	1.250	31.75	•		•	
F516L-16-16	1	1 5/16-12	1 5/16-12	3.910	99.31	0.500	12.70	1 1/2	1.500	38.10	•		•	





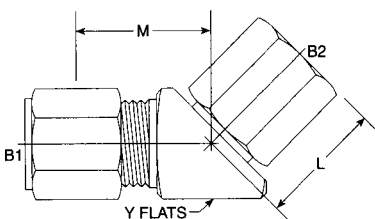


**BT - BTS 90°**

**F622 Series**

SAE # 080221 / MS# 51852

PART NO. SIZE	TUBE O.D.	B1 THREAD	B2	L		M		Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
				LGTH	M.M.	LGTH	M.M.				S	FG	SS	B
F622-04-04	1/4	7/16-20	7/16-20	0.890	22.61	0.890	22.61	7/16	0.438	11.12			•	
F622-06-06	3/8	9/16-18	9/16-18	1.050	26.67	1.050	26.67	9/16	0.562	14.27			•	
F622-08-08	1/2	3/4-16	3/4-16	1.230	31.24	1.250	31.75	3/4	0.750	19.05			•	
F622-10-10	5/8	7/8-14	7/8-14	1.420	36.07	1.420	36.07	7/8	0.875	22.22			•	
F622-12-12	3/4	1 1/16-12	1 1/16-12	1.580	40.13	1.580	40.13	1 1/16	1.062	26.97		•	•	
F822-16-16	1	1 5/16-12	1 5/16-12	1.730	43.94	1.730	43.94	1 5/16	1.312	33.32			•	
F822-20-20	1 1/4	1 5/8-12	1 5/8-12	1.890	48.01	1.890	48.01	1 5/8	1.625	41.27			•	



**BT - BTS 45°**

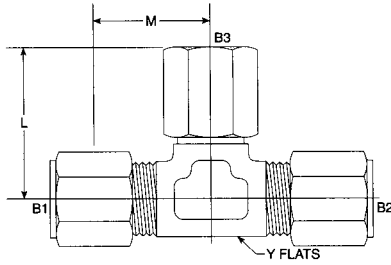
**F623 Series**

SAE # 080321

PART NO. SIZE	TUBE O.D.	B1 THREAD	B2	L		M		Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
				LGTH	M.M.	LGTH	M.M.				S	FG	SS	B
F623-04-04	1/4	7/16-20	7/16-20	0.980	24.89	0.700	17.78	7/16	0.438	11.12			•	
F623-06-06	3/8	9/16-18	9/16-18	1.200	30.48	0.830	21.08	9/16	0.562	14.27			•	
F623-08-08	1/2	3/4-16	3/4-16	1.330	33.78	0.980	24.89	3/4	0.750	19.05			•	
F623-12-12	3/4	1 1/16-12	1 1/16-12	1.610	40.89	1.270	32.26	1 1/16	1.062	26.97			•	
F623-16-16	1	1 5/16-12	1 5/16-12	1.700	43.18	1.360	34.54	1 5/16	1.312	33.32			•	
F823-20-20	1 1/4	1 5/8-12	1 5/8-12	1.800	45.72	1.450	36.83	1 5/8	1.625	41.27			•	
F823-24-24	1 1/2	1 7/8-12	1 7/8-12	1.920	48.77	1.520	38.61	1 7/8	1.875	47.62			•	

**Hydraulic Adapters**





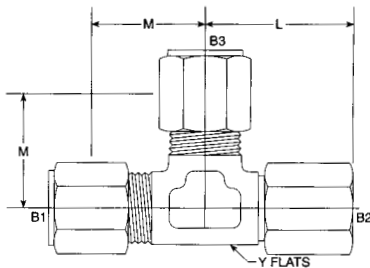
**BT - BT - BTS Tee**

**F625 Series**

SAE # 080433 / MS# 51853

PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	B3	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
												S	FG	SS	B
F625-04-04	1/4	7/16-20	7/16-20	7/16-20	1.050	26.67	0.890	22.61	7/16	0.438	11.12			•	
F625-06-06	3/8	9/16-18	9/16-18	9/16-18	1.280	32.50	1.050	26.67	9/16	0.562	14.27			•	
F625-08-08	1/2	3/4-16	3/4-16	3/4-16	1.470	37.34	1.250	31.75	3/4	0.750	19.05			•	
F625-12-12	3/4	1 1/16-12	1 1/16-12	1 1/16-12	1.770	45.96	1.580	40.13	1 1/16	1.062	26.97			•	

Hydraulic Adapters



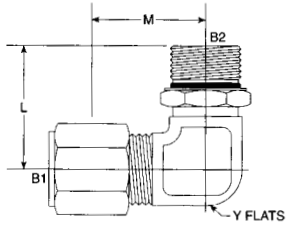
**BT - BTS - BT Tee**

**F626 Series**

SAE # 080432 / MS# 51854

PART NO. SIZE	TUBE O.D.	B1 THREAD	B2	B3 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
												S	FG	SS	B
F626-04-04	1/4	7/16-20	7/16-20	7/16-20	1.050	26.67	0.890	22.61	7/16	0.438	11.12			•	
F626-06-06	3/8	9/16-18	9/16-18	9/16-18	1.280	32.52	1.050	26.67	9/16	0.562	14.27			•	
F626-08-08	1/2	3/4-16	3/4-16	3/4-16	1.470	37.34	1.250	31.75	3/4	0.750	19.05			•	
F626-12-12	3/4	1 1/16-12	1 1/16-12	1 1/16-12	1.770	44.96	1.580	40.13	1 1/16	1.062	26.97			•	
F626-16-16	1	1 5/16-12	1 5/16-12	1 5/16-12	1.860	47.24	1.730	43.94	1 5/16	1.312	33.32			•	





**BT - MAORB 90°**

**F522 Series**

SAE # 080220 / MS# 51839

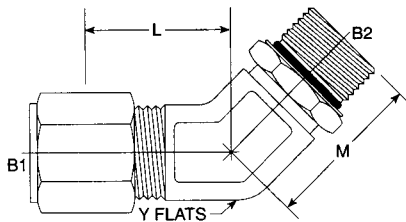
PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 ORB	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
F522-03-03	3/16	3/8-24	3/16-24	0.940	23.88	0.830	21.08	7/16	0.438	11.12			•	
F522-04-04	1/4	7/16-20	7/16-20	1.030	26.16	0.890	22.61	7/16	0.438	11.12			•	•
F522-05-05	5/16	1/2-20	1/2-20	1.130	28.70	0.950	24.13	1/2	0.500	12.70			•	•
<b>NEW</b> F522-06-04													•	•
F522-06-06	3/8	9/16-18	9/16-18	1.250	31.75	1.060	26.92	9/16	0.562	14.27			•	•
F522-06-08	3/8	9/16-18	3/4-16	1.450	36.83	1.150	29.21	3/4	0.750	19.05			•	•
F522-08-06	1/2	3/4-16	9/16-18	1.330	33.78	1.250	31.75	3/4	0.750	19.05			•	•
F522-08-08	1/2	3/4-16	3/4-16	1.450	36.83	1.250	31.75	3/4	0.750	19.05			•	•
F522-08-10	1/2	3/4-16	7/8-14	1.700	43.18	1.340	34.04	7/8	0.875	22.22			•	•
F522-08-12	1/2	3/4-16	1 1/16-12	1.940	49.27	1.410	35.81	1 1/16	1.062	26.97			•	•
F522-10-10	5/8	7/8-14	7/8-14	1.700	43.18	1.420	36.07	7/8	0.875	22.22			•	•
F522-12-08	3/4	1 1/16-12	3/4-16	1.640	41.66	1.580	40.13	1 1/16	1.062	26.97			•	•
F522-12-10	3/4	1 1/16-12	7/8-14	1.780	45.21	1.580	40.13	1 1/16	1.062	26.97			•	•
F522-12-12	3/4	1 1/16-12	1 1/16-12	1.940	49.28	1.580	40.13	1 1/16	1.062	26.97			•	•
F522-12-16	3/4	1 1/16-12	1 5/16-12	2.050	52.07	1.730	43.94	1 5/16	1.312	33.32			•	•
F522-16-12	1	1 5/16-12	1 5/16-12	2.050	52.07	1.730	43.94	1 5/16	1.312	33.32			•	•
F522-16-16	1	1 5/16-12	1 5/16-12	2.050	52.07	1.730	43.94	1 5/16	1.312	33.32			•	•
<b>NEW</b> F522-20-20													•	•
<b>NEW</b> F522-24-24													•	•

**Hydraulic Adapters**

**BT - MAORB 45°**

**F523 Series**

SAE # 080320 / MS# 51842



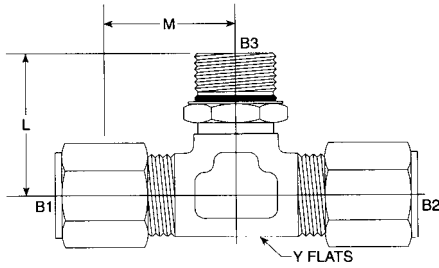
PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 ORB	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
F523-04-04	1/4	7/16-20	7/16-20	1.050	26.67	0.700	17.78	7/16	0.438	11.12			•	•
F523-06-06	3/8	9/16-18	9/16-18	1.140	28.96	0.830	21.08	9/16	0.562	14.27			•	•
F523-08-08	1/2	3/4-16	3/4-16	1.300	33.02	0.980	24.89	3/4	0.750	19.05			•	•
F523-10-10													•	•
F523-12-12	3/4	1 1/16-12	1 1/16-12	1.730	43.94	1.270	32.26	1 1/16	1.062	26.97			•	•
F523-16-16	1	1 5/16-12	1 5/16-12	1.860	47.24	1.360	35.54	1 5/16	1.312	33.32			•	•



**BT - BT - MAORB Tee**

*F525 Series*

SAE # 080429 / MS# 51841



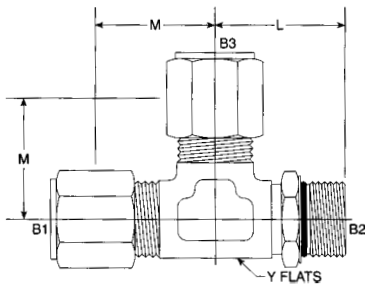
PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 THREAD	B3 ORB	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
												S	FG	SS	B
F525-04-04	1/4	7/16-20	7/16-20	7/16-20	1.030	26.16	0.890	22.61	7/16	0.438	11.12		•	•	
F525-06-06	3/8	9/16-18	9/16-18	9/16-18	1.250	31.75	1.050	26.67	9/16	0.562	14.27		•	•	
F525-08-08	1/2	3/4-16	3/4-16	3/4-16	1.450	36.83	1.250	31.75	3/4	0.750	19.05		•	•	
F525-12-12	3/4	1 1/16-12	1 1/16-12	1 1/16-12	1.940	49.28	1.580	40.13	1 1/16	1.062	26.97			•	
F525-16-16	1	1 5/16-12	1 5/16-12	1 5/16-12	2.050	52.07	1.730	43.94	1 5/16	1.312	33.32			•	

Hydraulic Adapters

**BT - MAORB - BT Tee**

*F526 Series*

SAE # 080428 / MS# 51892



PART NO. SIZE	TUBE O.D.	B1 THREAD	B2 ORB	B3 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
												S	FG	SS	B
F526-04-04	1/4	7/16-20	7/16-20	7/16-20	1.030	26.16	0.890	22.61	7/16	0.438	11.12		•	•	
F526-06-06	3/8	9/16-18	9/16-18	9/16-18	1.250	31.75	1.050	26.67	9/16	0.562	14.27		•	•	
F526-08-08	1/2	3/4-16	3/4-16	3/4-16	1.450	36.83	1.250	31.75	3/4	0.750	19.05		•	•	
F526-10-10	5/8	7/8-14	7/8-14	7/8-14	1.700	43.18	1.430	36.32	7/8	0.875	22.22			•	
F526-12-12	3/4	1 1/16-12	1 1/16-12	1 1/16-12	1.940	49.28	1.580	40.13	1 1/16	1.062	26.97			•	
F526-16-16	1	1 5/16-12	1 5/16-12	1 5/16-12	2.050	52.07	1.730	43.94	1 5/16	1.312	33.32			•	



**O-Ring Face Seal Fittings**

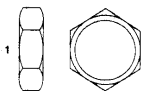
Brennan Industries, Inc.'s steel and stainless steel o-ring face seal fittings meet all design and performance requirements for o-ring face seal fittings in Standard J1453 published by the Society of Automotive Engineers (SAE).

(520112)



**CAP ASSEMBLY INSERT**  
FF820

(520118)



**BULKHEAD LOCK NUT**  
FF924

(520112)



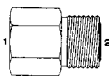
**NUT**  
FF818

(520115)

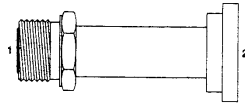


**SLEEVE**  
FF819

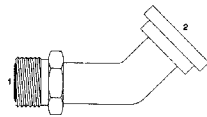
(520104)



**BORE - MFS STRAIGHT**  
FF853



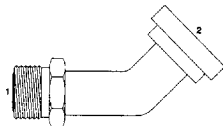
**MFS - FLANGE STRAIGHT**  
CODE 61  
FF360



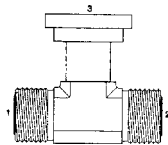
**MFS - FLANGE 45° CODE 61**  
FF361



**MFS - FLANGE STRAIGHT**  
CODE 62  
FF363

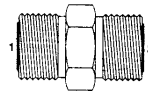


**MFS - FLANGE 45° CODE 62**  
FF364

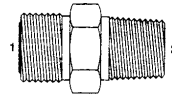


**MFS - MFS - FLANGE**  
CODE 62  
FF366

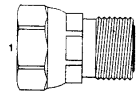
(520101)



**MFS - MFS STRAIGHT**  
FF815



**MFS - MP STRAIGHT**  
FF816



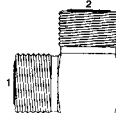
**FFS - MFS TUBE END REDUCER**  
FF860

(520109)

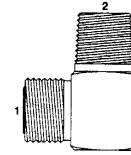


**MFS PLUG**  
FF806

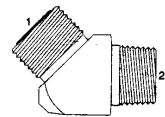
(520201)



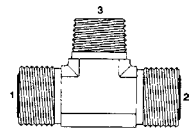
**MFS - MFS 90°**  
FF821



**MFS - MP 90°**  
FF822

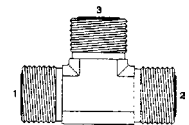


**MFS - MP 45°**  
FF823



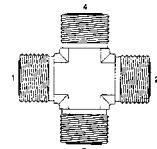
**MFS - MFS - MP TEE**  
FF825

(520401)



**MFS - MFS - MFS TEE**  
FF824

(520501)

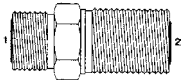


**MFS - MFS - MFS - MFS CROSS**  
FF827

**Hydraulic Adapters**

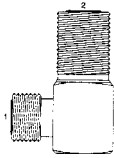


(520601)



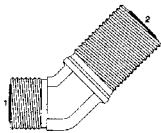
**MFS - MFS BULKHEAD  
UNION  
FF832**

(520701)

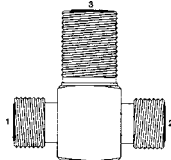


**MFS - MFS BULKHEAD 90°  
FF833**

(520801)

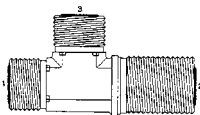


**MFS - MFS BULKHEAD 90°  
FF837**



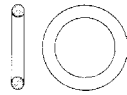
**MFS - MFS BULKHEAD TEE  
FF815**

(520201)

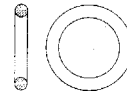


**MFS - MFS - MFS TEE  
FF846**

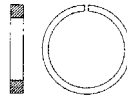
(J515 Type CH)



**BUNA O-RING  
FF**

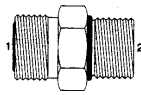


**VITON O-RING  
FF**



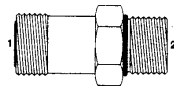
**SILVER BRAZE RING  
FF813**

(520120)

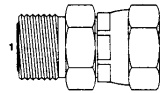


**MFS - MORB STRAIGHT  
FF516**

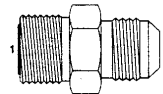
(520122)



**MFS - MORB STRAIGHT  
LONG  
FF516L**

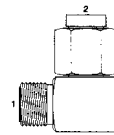


**MFS - FJS STRAIGHT  
FF501**

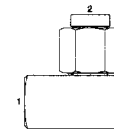


**MFS - MJ STRAIGHT  
FF816**

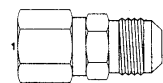
(520221)



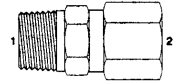
**MFS - FFSS 90°  
FF601**



**FP - FFSS 90°  
FF602**

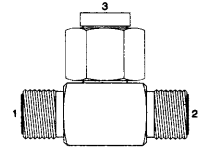


**FFSS - MJ STRAIGHT  
FF811**



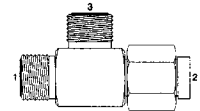
**MP - FFSS STRAIGHT  
FF618**

(520433)



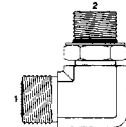
**MFS - MFS - FFSS  
BRANCH TEE  
FF625**

(520428)



**MFS - MAORB - MFS TEE  
FF526**

(520281)



**MFS - MAORD 90°  
FF620**

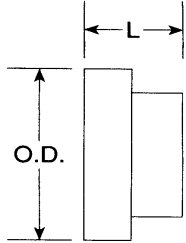
**Hydraulic  
Adapters**



# Cap Assembly Insert

*FF820 Series (Used with FS0318)*

SAE # 520112

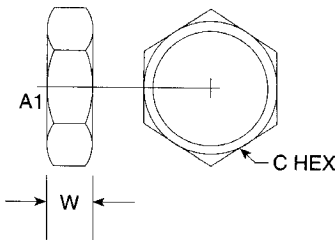


PART NO. SIZE	TUBE O.D.	O.D.	M.M.	L LGTH	M.M.	Standard Material From Stock			
						S	FG	SS	B
FF820-04S	1/4	0.502	12.75	0.340	8.64	•			
FF820-06S	3/8	0.620	15.75	0.370	9.40	•			
FF820-08S	1/2	0.745	18.92	0.470	11.94	•			
FF820-10S	5/8	0.923	23.44	0.470	11.94	•			
FF820-12S	3/4	1.097	27.86	0.530	13.46	•			
FF820-16S	1	1.347	34.21	0.590	14.99	•			
FF820-20S	1 1/4	1.597	40.56	0.590	14.99	•			
FF820-24S	1 1/2	1.910	48.51	0.590	14.99	•			

# Bulkhead Lock Nut

*FF924 Series*

SAE # 520118

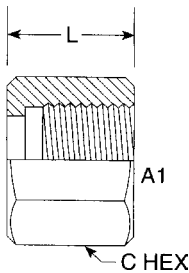


PART NO. SIZE	TUBE O.D.	A1 THREAD	C HEX	M.M.	W WIDTH	M.M.	Standard Material From Stock			
							S	FG	SS	B
FF924-04S	1/4	9/16-18	13/16	20.64	0.270	6.86	•			
FF924-06S	3/8	11/16-16	1	25.40	0.310	8.13	•			
FF924-08S	1/2	13/16-16	1 1/8	28.58	0.350	8.89	•			
FF924-10S	5/8	1-14	1 5/16	33.34	0.410	10.41	•			
FF924-12S	3/4	1 3/16-12	1 1/2	38.10	0.410	10.41	•			
FF924-16S	1	1 7/16-12	1 3/4	44.45	0.410	10.41	•			
FF924-20S	1 1/4	1 11/16-12	2	50.80	0.410	10.41	•			
FF924-24S	1 1/2	2-12	2 3/8	60.33	0.410	10.41	•			

# Nut

*FF818 Series*

SAE # 520110



PART NO. SIZE	TUBE O.D.	A1 THREAD	C HEX	M.M.	L LGTH	M.M.	Standard Material From Stock			
							S	FG	SS	B
FF818-04S	1/4	9/16-18	11/16	17.46	0.580	14.73	•			
FF818-06S	3/8	11/16-16	13/16	20.63	0.670	17.02	•			
FF818-08S	1/2	13/16-16	15/16	23.81	0.830	21.08	•			
FF818-10S	5/8	1-14	1-1/8	28.58	0.930	23.62	•			
FF818-12S	3/4	1 4/16-12	1-3/8	34.93	1.024	26.01	•			
FF818-16S	1	1 7/16-12	1-5/8	41.28	1.100	27.94	•			
FF818-20S	1 1/4	1 11/16-12	1-7/8	47.64	1.100	27.94	•			
FF818-24S	1 1/2	2-12	2-1/4	57.15	1.100	27.94	•			



**Sleeve**  
**FF819 Series**  
SAE # 520115

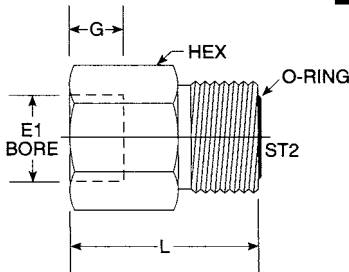


PART NO. SIZE	TUBE O.D.	LGTH L	M.M.	Standard Material From Stock			
				S	FG	SS	B
FF819-04TPLS	1/4	0.374	9.50	•			
FF819-06TPLS	3/8	0.374	9.50	•			
FF819-08TPLS	1/2	0.374	9.50	•			
FF819-10TPLS	5/8	0.413	10.49	•			
FF819-12TPLS	3/4	0.551	13.99	•			
FF819-16TPLS	1	0.610	15.49	•			
FF819-20TPLS	1 1/4	0.610	15.49	•			
FF819-24TPLS	1 1/2	0.610	15.49	•			

Note: Braze Style

**Bore - MFS Straight**

**FF853 Series**  
SAE # 520104



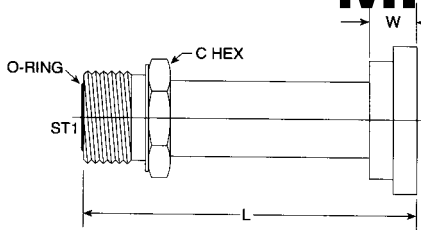
PART NO. SIZE	E1* BORE	ST2 THREAD	G*	M.M.	L LGTH	M.M.	HEX	HEX	M.M.	Standard Material From Stock	
										S	SS
FF853-04-04S	0.256	9/16-18	0.330	8.38	0.860	21.84	5/8	0.625	15.87	•	
FF853-04-06S	0.256	11/16-16	0.330	8.38	0.900	22.86	3/4	0.750	19.05	•	
FF853-06-04S	0.381	9/16-18	0.330	8.38	0.860	21.84	5/8	0.625	15.87	•	
FF853-06-06S	0.381	11/16-16	0.330	8.38	0.900	22.86	3/4	0.750	19.05	•	
FF853-06-08S	0.381	13/16-16	0.330	8.38	0.970	24.64	7/8	0.875	22.22	•	
FF853-08-06S	0.506	11/16-16	0.330	8.38	0.900	22.86	3/4	0.750	19.05	•	
FF853-08-08S	0.506	13/16-16	0.330	8.38	0.970	24.64	7/8	0.875	22.22	•	
FF853-08-10S	0.506	1-14	0.330	8.38	1.070	27.18	1 1/16	1.062	26.97	•	
FF853-08-12S	0.506	1 3/16-12	0.330	8.38	1.160	29.46	1 1/4	1.250	31.75	•	
FF853-10-08S	0.631	13/16-16	0.330	8.38	0.970	24.64	7/8	0.875	22.22	•	
FF853-10-10S	0.631	1-14	0.330	8.38	1.070	27.18	1 1/16	1.062	26.97	•	
FF853-10-12S	0.631	1 3/16-12	0.330	8.38	1.160	29.46	1 1/4	1.250	31.75	•	
FF853-12-08S	0.757	13/16-16	0.490	12.45	1.160	29.46	1 1/16	1.062	26.97	•	
FF853-12-10S	0.757	1-14	0.490	12.45	1.230	31.24	1 1/4	1.250	31.75	•	
FF853-12-12S	0.757	1 3/16-12	0.490	12.45	1.320	33.53	1 1/4	1.250	31.75	•	
FF853-12-16S	0.757	1 7/16-12	0.490	12.45	1.460	37.08	1 1/2	1.500	38.10	•	
FF853-16-12S	1.007	1 3/16-12	0.550	13.97	1.380	35.05	1 1/2	1.500	38.10	•	
FF853-16-16S	1.007	1 7/16-12	0.550	13.97	1.520	38.61	1 1/2	1.500	38.10	•	
FF853-16-20S	1.007	1 11/16-12	0.550	13.97	1.520	38.61	1 3/4	1.750	44.45	•	
FF853-20-20S	1.258	1 11/16-12	0.550	13.97	1.520	38.61	1 3/4	1.750	44.45	•	
FF853-20-24S	1.258	2-12	0.550	13.97	1.520	38.61	2 1/8	2.125	53.97	•	
FF853-24-20S	1.508	1 11/16-12	0.550	13.97	1.520	38.61	2 1/8	2.125	53.97	•	
FF853-24-24S	1.508	2-12	0.550	13.97	1.520	38.61	2 1/8	2.125	53.97	•	

Hydraulic Adapters





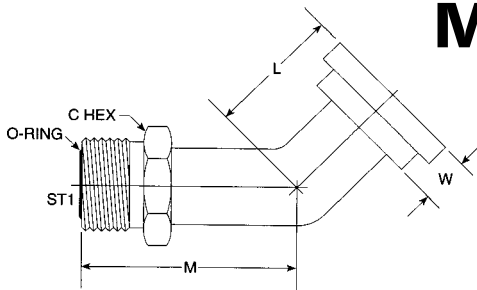
**MFS - Flange Straight**  
**Code 61**  
*FF360 Series*



PART NO. SIZE	TUBE O.D.	ST1	FLANGE	L		W		C HEX	C HEX	M.M.	Standard Material From Stock						
				LGTH	M.M.	WIDTH	M.M.				S	FG	SS	B			
FF360-12-12																	
FF360-16-16																	
FF360-20-20																	
FF360-24-24																	

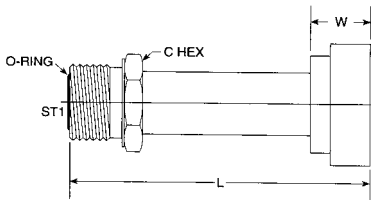
Hydraulic Adapters

**MFS - Flange 45°**  
**Code 61**  
*FF361 Series*



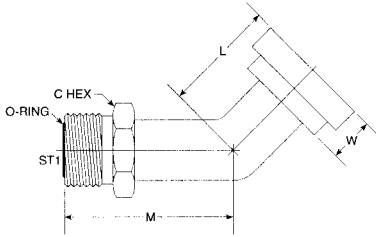
PART NO. SIZE	TUBE O.D.	ST1	FLANGE	L		M		W		C HEX	C HEX	M.M.	Standard Material From Stock				
				LGTH	M.M.	LGTH	M.M.	WIDTH	M.M.				S	FG	SS	B	
FF361-12-12																	
FF361-12-16																	
FF361-16-16																	
FF361-20-20																	
FF361-24-24																	

**MFS - Flange Straight**  
**Code 62**  
*FF363 Series*



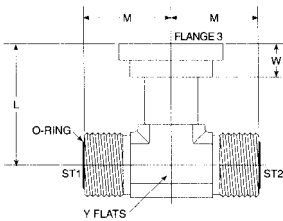
PART NO. SIZE	TUBE O.D.	ST1	FLANGE	L		W		C HEX	C HEX	M.M.	Standard Material From Stock						
				LGTH	M.M.	WIDTH	M.M.				S	FG	SS	B			
FF363-12-12																	
FF363-16-12																	
FF363-16-16																	
FF363-20-20																	
FF363-24-24																	





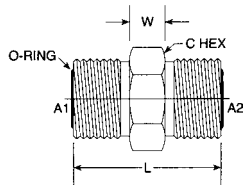
**MFS - Flange 45°  
Code 62  
FF364 Series**

PART NO. SIZE	TUBE O.D.	ST1	FLANGE	L LGTH	M M.M.	M LGTH	M.M.	W WIDTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock				
													S	FG	SS	B	
FF364-12-12																	
FF364-16-16																	
FF364-20-20																	
FF364-24-24																	



**MFS - MFS - Flange  
Code 62  
FF366 Series**

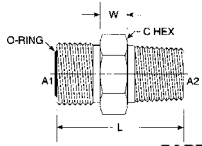
PART NO. SIZE	TUBE O.D.	ST1	ST2	L LGTH	M M.M.	M LGTH	M.M.	W WIDTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock				
													S	FG	SS	B	
FF366-12-12																	
FF366-16-16																	



**MFS - MFS Straight  
FF815 Series  
SAE # 520101**

PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	L LGTH	M.M.	W WIDTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
											S	FG	SS	B
FF815-04-04S	1/4	9/16-18	9/16-18	1.080	27.43	0.310	7.87	5/8	0.625	15.87	•			
FF815-06-04S	3/8 1/4	11/16-16	9/16-18	1.170	29.72	0.340	8.64	3/4	0.750	19.05	•			
FF815-06-06S	3/8	11/16-16	11/16-16	1.220	30.99	0.340	8.64	3/4	0.750	19.05	•			
FF815-08-06S	1/2 3/8	13/16-16	11/16-16	1.330	33.78	0.390	9.91	7/8	0.875	22.22	•			
FF815-08-08S	1/2	13/16-16	13/16-16	1.390	35.31	0.390	9.91	7/8	0.875	22.22	•			
FF815-10-08S	5/8 1/2	1-14	13/16-16	1.570	39.88	0.460	11.68	1 1/16	1.062	26.97	•			
FF815-10-10S	5/8	1-14	1-14	1.680	42.67	0.460	11.68	1 1/16	1.062	26.97	•			
<b>NEW</b> FF815-12-08S											•			
FF815-12-10S	3/4 5/8	1 3/16-12	1-14	1.800	45.72	0.520	13.20	1 1/4	1.250	31.75	•			
FF815-12-12S	3/4	1 3/16-12	1 3/16-12	1.850	46.99	0.520	13.20	1 1/4	1.250	31.75	•			
FF815-16-12S	1 3/4	1 7/16-12	1 3/16-12	1.920	48.77	0.560	14.22	1 1/2	1.500	38.10	•			
FF815-16-16S	1	1 7/16-12	1 7/16-12	1.940	49.28	0.560	14.22	1 1/2	1.500	38.10	•			
FF815-20-20S	1 1/4	1 11/16-12	1 11/16-12	2.020	51.31	0.640	16.26	1 3/4	1.750	44.45	•			
<b>NEW</b> FF815-24-20S											•			
FF815-24-24S	1 1/2	2-12	2-12	2.090	53.09	0.710	18.03	2 1/8	2.125	53.97	•			

**Hydraulic Adapters**

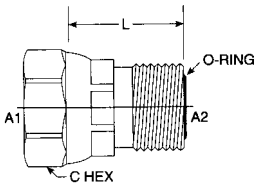


**MFS - MP Straight  
FF816 Series**

PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	L LGTH	M.M.	W WIDTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
											S	FG	SS	B
FF816-04-02S	1/4	9/16-18	1/8-27	1.070	27.18	0.270	6.86	5/8	0.625	15.87	•			
FF816-04-04S	1/4	9/16-18	1/4-18	1.260	32.00	0.270	6.86	5/8	0.625	15.87	•			
FF816-04-06S	1/4	9/16-18	3/8-18	1.320	33.53	0.270	6.86	3/4	0.750	19.05	•			
FF816-04-08S	1/4	9/16-18	1/2-14	1.500	38.10	0.270	6.86	7/8	0.875	22.22	•			
<b>NEW</b> FF816-06-02S											•			
FF816-06-04S	3/8	11/16-16	1/4-18	1.250	31.75	0.310	7.87	3/4	0.750	19.05	•			
FF816-06-06S	3/8	11/16-16	3/8-18	1.340	34.04	0.310	7.87	3/4	0.750	19.05	•			
FF816-06-08S	3/8	11/16-16	1/2-14	1.550	39.37	0.310	7.87	7/8	0.875	22.22	•			
FF816-08-04S	1/2	13/16-16	1/4-18	1.480	37.59	0.350	8.89	7/8	0.875	22.22	•			
FF816-08-06S	1/2	13/16-16	3/8-18	1.480	37.59	0.350	8.89	7/8	0.875	22.22	•			
FF816-08-08S	1/2	13/16-16	1/2-14	1.640	41.66	0.350	8.89	7/8	0.875	22.22	•			
FF816-08-12S	1/2	13/16-16	3/4-14	1.690	42.93	0.410	10.41	1 1/8	1.125	28.57	•			
FF816-10-08S	5/8	1-14	1/2-14	1.820	46.23	0.410	10.41	1 1/16	1.062	26.97	•			
FF816-10-12S	5/8	1-14	3/4-14	1.820	46.23	0.410	10.41	1 1/8	1.125	28.57	•			
FF816-10-16S	5/8	1-14	1-11 1/2	1.950	49.53	0.380	9.65	1 3/8	1.375	34.93	•			
FF816-12-08S	3/4	1 3/16-12	1/2-14	1.930	49.02	0.410	10.41	1 1/4	1.250	31.75	•			
FF816-12-12S	3/4	1 3/16-12	3/4-14	1.930	49.02	0.410	10.41	1 1/4	1.250	31.75	•			
FF816-12-16S	3/4	1 3/16-12	1 11-1/2	2.130	54.10	0.410	10.41	1 3/8	1.375	34.92	•			
FF816-16-12S	1	1 7/16-12	3/4-14	2.000	50.80	0.410	10.41	1 1/2	1.500	38.10	•			
FF816-16-16S	1	1 7/16-12	1 11-1/2	2.190	55.63	0.410	10.41	1 1/2	1.500	38.10	•			
FF816-16-20S	1	1 7/16-12	1 1/4-11 1/2	2.30	58.42	0.620	15.75	1 11/16	1.6875	42.86	•			
FF816-16-24S	1	1 7/16-12	1 1/2-11 1/2	2.15	54.61	0.445	11.30	2	2.000	50.80	•			
FF816-20-16S	1 1/4	1 11/16-12	1-11 1/2	2.300	58.42	.645	16.38	1 3/4	1.750	44.45	•			
FF816-20-20S	1 1/4	1 11/16-12	1 1/4-11 1/2	2.300	58.42	0.410	10.41	1 7/8	1.875	47.62	•			
FF816-24-24S	1 1/2	2-12	1 1/2-11 1/2	2.400	60.96	0.410	10.41	2 1/8	2.125	53.97	•			

**Hydraulic Adapters**

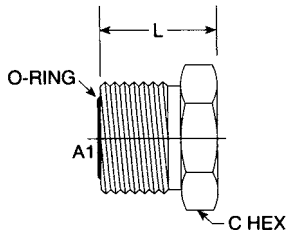
**FFS - MFS Tube End Reducer  
FF502 Series**



PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	L LGTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
									S	FG	SS	B
FF502-06-04S	3/8 1/4	11/16-16	9/16-18	0.770	19.56	13/16	0.812	20.62	•			
FF502-08-04S	1/2 1/4	13/16-16	9/16-18	0.860	21.84	15/16	0.937	23.80	•			
FF502-08-06S	1/2 3/8	13/16-16	9/16-18	0.880	22.35	15/16	0.937	23.80	•			
FF502-10-04S	5/8 1/4	1-14	9/16-18	0.900	22.86	1 1/8	1.125	28.57	•			
FF502-10-06S	5/8 3/8	1-14	11/16-16	0.950	24.13	1 1/8	1.125	28.57	•			
FF502-10-08S	5/8 1/2	1-14	13/16-16	1.020	25.91	1 1/8	1.125	28.57	•			
FF502-12-04S	3/4 1/4	1 3/16-12	9/16-18	0.980	24.89	1 3/8	1.375	34.92	•			
FF502-12-06S									•			
FF502-12-08S	3/4 1/2	1 3/16-12	13/16-16	1.090	27.69	1 3/8	1.375	34.92	•			
FF502-12-10S	3/4 5/8	1 3/16-12	1-14	1.160	29.46	1 3/8	1.375	34.92	•			
FF502-12-16S									•			
FF502-16-08S	1 1/2	1 7/16-12	13/16-16	1.150	29.21	1 5/8	1.625	41.27	•			
FF502-16-10S	1 5/8	1 7/16-12	1-14	1.260	32.00	1 5/8	1.625	41.27	•			
FF502-16-12S	1 3/4	1 7/16-12	1 3/16-12	1.300	33.02	1 5/8	1.625	41.27	•			
FF502-16-20S									•			
FF502-20-12S	1 1/4 3/4	1 11/16-12	1 3/16-12	1.320	33.53	1 7/8	1.875	47.62	•			
FF502-20-16S	1 1/4 1	1 11/16-12	1 7/16-12	1.510	38.35	1 7/8	1.875	47.62	•			
FF502-20-24S	1 1/4 1 1/2	1 11/16-12	2-12	1.300	33.02	2 1/4	2.250	57.15	•			
FF502-24-16S	1 1/2 1	1 7/16-12	2-12	1.230	31.24	2 1/4	2.250	57.15	•			
FF502-24-20S	1 1/2 1 1/4	1 11/16-12	2-12	1.350	34.29	2 1/4	2.250	57.15	•			

\*Note: Two-Piece Assembly



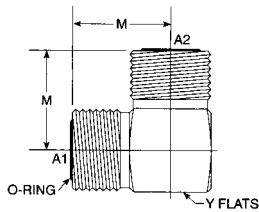


**MFS Plug**

**FF806 Series**

SAE # 520109

PART NO. SIZE	A1 THREAD	L LGTH M.M.	C HEX	C HEX	M.M.	Standard Material From Stock				
						S	FG	SS	B	
FF806-04S	9/16-18	0.660	16.76	5/8	0.625	15.87	•			
FF806-06S	11/16-16	0.750	19.05	3/4	0.750	19.05	•			
FF806-08S	13/16-16	0.850	21.59	7/8	0.875	22.22	•			
FF806-10S	1-14	1.020	25.91	1 1/16	1.062	26.97	•			
FF806-12S	1 3/16-12	1.080	27.43	1 1/4	1.250	31.75	•			
FF806-16S	1 7/16-12	1.090	27.69	1 1/2	1.500	38.10	•			
FF806-20S	1 11/16-12	1.090	27.69	1 3/4	1.750	44.45	•			
FF806-24S	2-12	1.090	27.69	2 1/8	2.125	53.97	•			



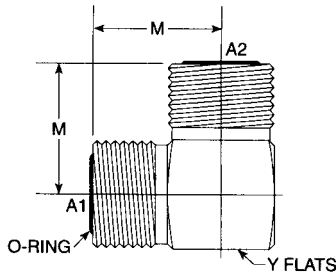
**MFS - MFS 90°**

**FF821 Series**

SAE # 520201

PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	M LGTH M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock				
								S	FG	SS	B	
FF821-04-04S	1/4	9/16-18	9/16-18	0.850	21.59	9/16	0.562	14.27	•	•		
FF821-06-06S	3/8	11/16-16	11/16-16	0.980	24.89	3/4	0.750	19.05	•	•		
FF821-08-08S	1/2	13/16-16	13/16-16	1.100	27.94	3/4	0.750	19.05	•	•		
FF821-10-10S	5/8	1-14	1-14	1.310	33.27	1 1/16	1.062	26.97	•	•		
FF821-12-12S	3/4	1 3/16-12	1 3/16-12	1.470	37.34	1 3/16	1.188	30.17	•	•		
FF821-16-16S	1	1 7/16-12	1 7/16-12	1.640	41.66	1 7/16	1.438	36.52	•	•		
FF821-20-20S	1 1/4	1 11/16-12	1 11/16-12	1.760	44.70	1 5/8	1.625	41.27	•	•		
FF821-24-24S	1 1/2	2-12	2-12	1.920	48.77	1 7/8	1.875	47.62	•	•		

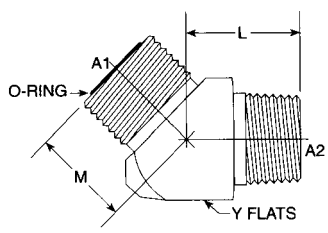
**Hydraulic Adapters**



**MFS - MP 90°  
FF822 Series**

PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
FF822-04-02S	1/4	9/16-18	1/8-27	0.800	20.32	0.850	21.59	9/16	0.562	14.27	•	•		
FF822-04-04S	1/4	9/16-18	1/4-18	1.120	28.45	0.850	21.59	9/16	0.562	14.27	•	•		
FF822-04-06S	1/4	9/16-18	3/8-18	1.220	30.99	0.970	24.64	3/4	0.750	19.05	•	•		
FF822-06-04S	3/8	11/16-16	1/4-18	1.090	27.69	0.980	24.89	3/4	0.750	19.05	•	•		
FF822-06-06S	3/8	11/16-16	3/8-18	1.220	30.99	0.980	24.89	3/4	0.750	19.05	•	•		
FF822-06-08S	3/8	11/16-16	3/8-18	1.470	37.34	1.150	29.21	7/8	0.875	22.22	•	•		
FF822-08-04S	1/2	13/16-16	1/4-18	1.220	30.99	1.100	27.94	3/4	0.750	19.05	•	•		
FF822-08-06S	1/2	13/16-16	3/8-18	1.220	30.99	1.100	27.94	3/4	0.750	19.05	•	•		
FF822-08-08S	1/2	13/16-16	1/2-14	1.470	37.34	1.100	27.94	1 7/8	1.875	47.62	•	•		
FF822-08-12S	1/2	13/16-16	3/4-14	1.470	37.34	1.320	33.53	1 1/16	1.062	26.97	•	•		
FF822-10-08S	5/8	1-14	1/2-14	1.470	37.34	1.310	33.27	1 1/16	1.062	26.97	•	•		
FF822-10-12S	5/8	1-14	3/4-14	1.590	40.39	1.410	35.81	1 3/16	1.188	30.17	•	•		
FF822-12-08S	3/4	1 3/16-12	1/2-14	1.590	40.39	1.470	37.34	1 3/16	1.188	30.17	•	•		
FF822-12-12S	3/4	1 3/16-12	3/4-14	1.590	40.39	1.470	37.34	1 3/16	1.188	30.17	•	•		
FF822-12-16S	3/4	1 3/16-12	1-11 1/2	1.970	50.04	1.620	41.15	1 5/16	1.312	33.32	•	•		
FF822-16-12S	1	1 7/16-12	3/4-14	1.780	45.21	1.64	41.66	1 7/16	1.438	36.53	•	•		
FF822-16-16S	1	1 7/16-12	1-11 1/2	1.970	50.04	1.640	41.66	1 7/16	1.438	36.52	•	•		
FF822-16-20S	1	1 7/16-12	1 1/4-11 1/2	2.380	60.45	1.760	44.70	1 5/8	1.625	41.27	•	•		
FF822-20-16S	1 1/4	1 11/16-12	1-11 1/2	2.350	59.69	1.76	44.70	1 5/8	1.625	41.28	•	•		
FF822-20-20S	1 1/4	1 11/16-12	1 1/4-11 1/2	2.380	60.45	1.760	44.70	1 5/8	1.625	41.27	•	•		
FF822-24-24S	1 1/2	2-12	1 1/2-11 1/2	2.640	67.06	1.920	48.77	1 7/8	1.875	47.62	•	•		

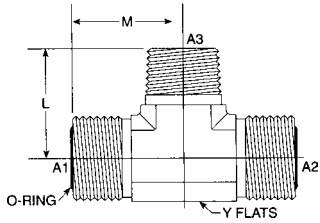
**Hydraulic  
Adapters**



**MFS - MP 45°  
FF823 Series**

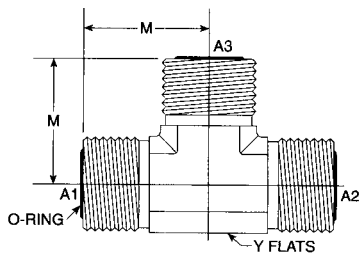
PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
FF823-04-04S	1/4	9/16-18	1/4-18	1.020	25.91	0.630	16.00	9/16	0.562	14.27	•	•		
FF823-06-04S	3/8	11/16-16	1/4-18	0.870	22.10	0.740	18.80	3/4	0.750	19.05	•	•		
FF823-06-06S	3/8	11/16-16	3/8-18	0.930	23.62	0.850	21.59	3/4	0.750	19.05	•	•		
FF823-08-06S	1/2	13/16-16	3/8-18	0.930	23.62	0.910	23.11	3/4	0.750	19.05	•	•		
FF823-08-08S	1/2	13/16-16	1/2-14	1.170	29.72	0.890	22.61	3/4	0.750	19.05	•	•		
FF823-10-08S	5/8	1-14	1/2-14	1.175	29.84	0.920	23.37	1 1/16	1.062	26.97	•	•		
FF823-12-08S	3/4	1 3/16-12	1/2-14	1.300	33.02	1.020	25.91	1 3/16	1.188	30.17	•	•		
FF823-12-12S	3/4	1 3/16-12	3/4-14	1.200	30.48	1.110	28.19	1 3/16	1.188	30.17	•	•		
FF823-16-16S	1	1 7/16-12	1-11 1/2	1.560	39.62	1.180	29.97	1 7/16	1.438	36.52	•	•		
FF823-20-20S	1 1/4	1 11/16-12	1 1/4-11 1/2	1.670	42.42	1.260	32.00	1 5/8	1.625	41.28	•	•		





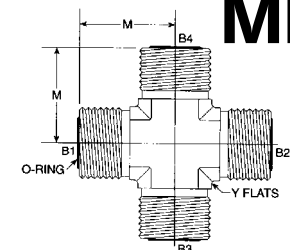
**MFS - MFS - MP Tee**  
*FF825 Series*

PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	A3 THREAD	L LGTH	M M.M.	M LGTH	Y M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
												S	FG	SS	B
FF825-06-06S	3/8	11/16-16	11/16-16	1/4-18	1.090	27.64	0.980	24.89	3/4	0.750	19.05	•			
FF825-06-06S	3/8	9/16-18	9/16-18	3/8-18	1.195	30.35	1.013	25.73	3/4	0.750	19.05	•			
FF825-08-08S	1/2	13/16-16	13/16-16	1/2-14	1.470	37.34	1.100	27.94	7/8	0.875	22.22	•			
FF825-12-12S	3/4	1 3/16-12	1 3/16-12	3/4-14	1.59	40.39	1.47	37.34	1 3/16	1.188	30.18	•	•		



**MFS - MFS - MFS Tee**  
*FF824 Series*  
SAE # 520401

PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	A3 THREAD	M LGTH	M M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
										S	FG	SS	B
FF824-04-04S	1/4	9/16-18	9/16-18	9/16-18	0.850	21.59	9/16	0.562	14.27	•	•		
FF824-06-06S	3/8	11/16-16	11/16-16	11/16-16	0.980	24.89	3/4	0.750	19.05	•	•		
FF824-08-08S	1/2	13/16-16	13/16-16	13/16-16	1.100	27.94	3/4	0.750	19.05	•	•		
FF824-10-10S	5/8	1-14	1-14	1-14	1.310	33.27	1 1/16	1.062	26.97	•	•		
FF824-12-12S	3/4	1 3/16-12	1 3/16-12	1 3/16-12	1.470	37.34	1 3/16	1.188	30.17	•	•		
FF824-16-16S	1	1 7/16-12	1 7/16-12	1 7/16-12	1.640	41.66	1 7/16	1.438	36.52	•	•		
FF824-20-20S	1 1/4	1 11/16-12	1 11/16-12	1 11/16-12	1.760	44.70	1 5/8	1.625	41.27	•	•		
FF824-24-24S	1 1/2	2-14	2-14	2-14	1.920	48.77	1 7/8	1.875	47.62	•	•		



**MFS - MFS - MFS - MFS CROSS**  
*FF827 Series*  
SAE # 520501

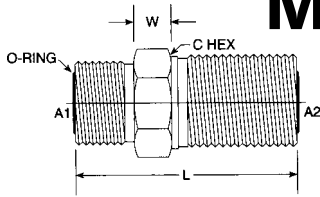
PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	A3 THREAD	A4 THREAD	M LGTH	M M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
FF827-04S	1/4	9/16-12	9/16-12	9/16-12	9/16-12	0.850	21.59	9/16	0.562	14.27	•	•		
FF827-06S	3/8	11/16-16	11/16-16	11/16-16	11/16-16	0.980	24.89	3/4	0.750	19.05	•	•		
FF827-08S	1/2	13/16-16	13/16-16	13/16-16	13/16-16	1.100	27.94	3/4	0.750	19.05	•	•		
FF827-10S	5/8	1-14	1-14	1-14	1-14	1.310	33.27	1 1/16	1.062	26.97	•	•		
FF827-12S	3/4	1 3/16-12	1 3/16-12	1 3/16-12	1 3/16-12	1.470	37.34	1 3/16	1.188	30.17	•	•		
FF827-16S	1	1 7/16-12	1 7/16-12	1 7/16-12	1 7/16-12	1.640	41.66	1 7/16	1.438	36.52	•	•		
FF827-20S	1 1/4	1 11/16-12	1 11/16-12	1 11/16-12	1 11/16-12	1.760	44.71	1 5/8	1.625	41.27	•	•		
FF827-24S	1 1/2	2-12	2-12	2-12	2-12	1.920	48.77	1 7/8	1.875	47.62	•	•		

**Hydraulic Adapters**

**MFS - MFS Bulkhead Union**

**FF832 Series**

SAE # 520601



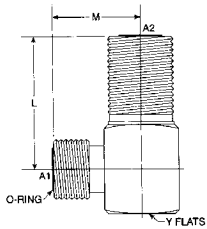
PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	L LGTH	M.M.	W WIDTH	M.M.	C HEX	C HEX	M.M.	PLATE MAX	Standard Material From Stock			
												S	FG	SS	B
FF832-04-04S	1/4	9/16-18	9/16-18	1.090	27.69	0.270	6.86	13/16	0.812	20.63	1/2	•			
FF832-06-06S	3/8	11/16-16	11/16-16	2.090	53.09	0.310	7.87	1	1.000	25.40	35/64	•			
FF832-08-08S	1/2	13/16-16	13/16-16	2.300	58.42	0.350	8.89	1 1/4	1.250	31.75	35/64	•			
FF832-10-10S	5/8	1-14	1-14	2.620	66.55	0.410	10.41	1 5/16	1.312	33.32	35/64	•			
FF832-12-12S	3/4	1 3/16-12	1 3/16-12	2.720	69.09	0.410	10.41	1 1/2	1.500	38.10	35/64	•			
FF832-16-16S	1	1 7/16-12	1 7/16-12	2.760	70.10	0.410	10.41	1 3/4	1.750	44.45	35/64	•			
FF832-20-20S	1 1/4	1 11/16-12	1 11/16-12	2.760	70.10	0.410	10.41	2	2.000	50.80	35/64	•			
FF832-24-24S	1 1/2	2-14	2-14	2.760	70.10	0.410	10.41	2 3/8	2.375	60.32	35/64	•			

**Hydraulic Adapters**

**MFS - MFS Bulkhead 90°**

**FF833 Series**

SAE # 520701

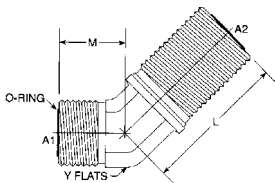


PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	PLATE MAX	Standard Material From Stock			
												S	FG	SS	B
FF833-04-04S	1/4	9/16-12	9/16-12	1.850	46.99	0.890	22.61	9/16	0.562	14.27	1/2	•	•		
FF833-06-06S	3/8	11/16-16	11/16-16	2.050	52.07	1.020	25.91	3/4	0.750	19.05	35/64	•	•		
FF833-06-08S	3/8	11/16-12	13/16-12	2.180	55.37	1.08	27.43	3/4	0.750	19.05	35/64	•	•		
FF833-08-08S	1/2	13/16-16	13/16-16	2.180	55.37	1.140	28.96	3/4	0.750	19.05	35/64	•	•		
<b>NEW</b> FF833-08-10S												•	•		
FF833-10-10S	5/8	1-14	1-14	2.480	62.99	1.360	34.54	1 1/16	1.062	26.97	35/64	•	•		
FF833-12-12S	3/4	1 3/16-12	1 3/16-12	2.650	67.31	1.520	38.61	1 3/16	1.188	30.17	35/64	•	•		
FF833-16-16S	1	1 7/16-12	1 7/16-12	2.800	71.12	1.670	42.42	1 7/16	1.438	36.52	35/64	•	•		
FF833-20-20S	1 1/4	1 11/16-12	1 11/16-12	2.970	75.44	1.790	45.47	1 5/8	1.625	41.27	35/64	•	•		
FF833-24-24S	1 1/2	2-12	2-12	3.130	79.50	1.950	49.53	1 7/8	1.875	47.62	35/64	•	•		

**MFS - MFS Bulkhead 45°**

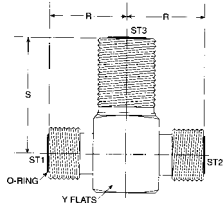
**FF837 Series**

SAE # 520801



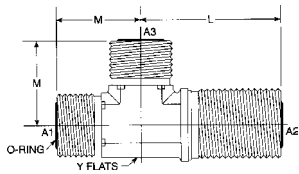
PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	PLATE MAX	Standard Material From Stock			
												S	FG	SS	B
FF837-04-04S	1/4	9/16-18	9/16-18	1.730	43.94	0.630	16.00	9/16	0.562	14.27	1/2	•	•		
FF837-06-06S	3/8	11/16-16	11/16-16	1.910	48.51	0.740	18.80	3/4	0.750	19.05	35/64	•	•		
FF837-08-08S	1/2	13/16-16	13/16-16	2.010	51.05	0.800	20.32	3/4	0.750	19.05	35/64	•	•		
<b>NEW</b> FF837-10-08S												•	•		
FF837-10-10S	5/8	1-14	1-14	2.230	56.64	0.920	23.37	1 1/16	1.062	26.97	35/64	•	•		
FF837-12-12S	3/4	1 3/16-12	1 3/16-12	2.390	60.71	1.020	25.91	1 3/16	1.188	30.17	35/64	•	•		
FF837-16-16S	1	1 7/16-12	1 7/16-12	2.570	65.28	1.180	29.97	1 7/16	1.438	36.52	35/64	•	•		
FF837-20-20S	1 1/4	1 11/16-12	1 11/16-12	2.640	67.06	1.260	32.00	1 5/8	1.625	41.27	35/64	•	•		
FF837-24-24S	1 1/2	2-14	2-14	2.640	67.06	1.450	36.83	1 7/8	1.875	47.62	35/64	•	•		





**MFS - MFS Bulkhead Tee**  
*FF845 Series*

PART NO. SIZE	TUBE O.D.	ST1 THREAD	ST2 THREAD	ST3 THREAD	S LGTH M.M.	R LGTH M.M.	Y FLATS M.M.	Y FLATS M.M.	PLATE MAX	Standard Material From Stock					
										S	FG	SS	B		
FF845-04-04S	1/4	9/16-18	9/16-18	9/16-18	1.850	46.99	0.89	22.61	9/16	0.562	14.27	•			
FF845-06-06S	3/8	11/16-16	11/16-16	11/16-16	2.050	52.07	1.02	25.91	3/4	0.750	19.05	•			
FF845-08-08S	1/2	13/16-12	13/16-12	13/16-12	2.180	55.37	1.14	28.96	3/4	0.750	19.05	•			
FF845-12-12S	3/4	1 3/16-12	1 3/16-12	1 3/16-12	2.650	67.31	1.52	38.61	1 3/16	1.188	30.18	•			

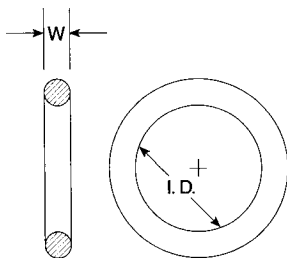


**MFS - MFS - MFS Tee**  
*FF846 Series*

PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	A3 THREAD	L LGTH M.M.	M LGTH M.M.	Y FLATS M.M.	Y FLATS M.M.	PLATE MAX	Standard Material From Stock						
										S	FG	SS	B			
FF846-04-04S	1/4	9/16-12	9/16-12	9/16-12	1.850	46.99	0.890	22.61	9/16	0.562	14.27	1/2	•	•		
FF846-06-06S	3/8	11/16-16	11/16-16	11/16-16	2.050	52.07	1.020	25.91	3/4	0.750	19.05	35/64	•	•		
FF846-08-08S	1/2	13/16-16	13/16-16	13/16-16	2.180	55.37	1.140	28.96	3/4	0.750	19.05	35/64	•	•		
FF846-10-10S	5/8	1-14	1-14	1-14	2.480	62.99	1.360	34.55	1 1/16	1.062	26.97	35/64	•	•		
FF846-12-12S	3/4	1 3/16-12	1 3/16-12	1 3/16-12	2.650	67.31	1.520	38.61	1 3/16	1.188	30.17	35/64	•	•		
FF846-16-16S	1	1 7/16-12	1 7/16-12	1 7/16-12	2.800	71.12	1.670	42.42	1 7/16	1.438	36.52	35/64	•	•		
FF846-20-20S	1 1/4	1 11/16-12	1 11/16-12	1 11/16-12	2.970	75.44	1.790	45.47	1 5/8	1.625	41.27	35/64	•			

**Hydraulic Adapters**

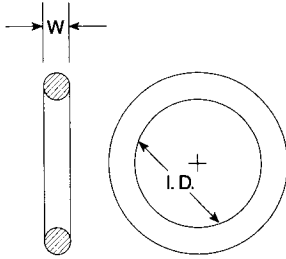
**Buna O-Ring**  
*FF-B Series*  
SAE # J515 Type CH



PART NO. SIZE	TUBE O.D.	W WIDTH	I.D.	M.M.
FF-04-ORING-B	1/4	0.070	0.301	7.64
FF-06-ORING-B	3/8	0.070	0.364	9.25
FF-08-ORING-B	1/2	0.070	0.489	12.42
FF-10-ORING-B	5/8	0.070	0.614	15.60
FF-12-ORING-B	3/4	0.070	0.739	18.77
FF-16-ORING-B	1	0.070	0.926	23.52
FF-20-ORING-B	1 1/4	0.070	1.176	29.87
FF-24-ORING-B	1 1/2	0.070	1.489	37.82



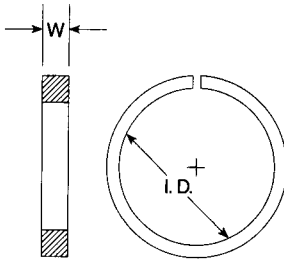
## Viton O-Ring FF-V Series



PART NO. SIZE	TUBE O.D.	W WIDTH	I.D.	M.M.
FF-04-ORING-V				
FF-06-ORING-V				
FF-08-ORING-V				
FF-10-ORING-V				
FF-12-ORING-V				
FF-16-ORING-V				
FF-20-ORING-V				
FF-24-ORING-V				

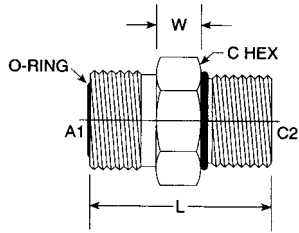
Hydraulic Adapters

## Silver Braze Ring FF813 Series



PART NO. SIZE	TUBE O.D.	W WIDTH	I.D.	M.M.
FF813-04	1/4	0.047	0.260	6.60
FF813-06	3/8	0.071	0.389	9.88
FF813-08	1/2	0.071	0.515	13.08
FF813-10	5/8	0.071	0.642	16.31
FF813-12	3/4	0.079	0.764	19.41
FF813-16	1	0.079	1.020	25.91
FF813-20	1-1/4	0.079	1.264	32.11





**MFS - MORB Straight**

**FF516 Series**

SAE # 520120

PART NO.	SIZE	TUBE O.D.	A1 THREAD	C2 THREAD	L LGTH	M.M.	W WIDTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
												S	FG	SS	B
	FF516-04-04S	1/4	9/16-18	7/16-20	1.130	28.70	0.310	7.87	5/8	0.625	15.87	•			
	FF516-04-05S	1/4	9/16-18	1/2-20	1.133	28.78	0.310	7.87	5/8	0.625	15.88	•			
	FF516-04-06S	1/4	9/16-18	9/16-18	1.200	30.48	0.340	8.64	3/4	0.750	19.05	•			
	FF516-04-08S	1/4	9/16-18	3/4-16	1.321	33.55	0.390	9.91	7/8	0.875	22.23	•			
<b>NEW</b>	FF516-04-10S											•			
	FF516-04-12S	1/4	9/16-18	1 1/16-12	1.638	41.61	0.520	13.21	1 1/4	1.250	31.75	•			
<b>NEW</b>	FF516-06-04S	3/8	11/16-16	7/16-20	1.370	34.80	0.340	8.64	3/4	0.750	19.05	•			
<b>NEW</b>	FF516-06-05S											•			
	FF516-06-06S	3/8	11/16-16	9/16-18	1.260	32.00	0.340	8.64	3/4	0.750	19.05	•			
	FF516-06-08S	3/8	11/16-18	3/4-16	1.380	35.05	0.390	9.91	7/8	0.875	22.22	•			
<b>NEW</b>	FF516-06-10S											•			
<b>NEW</b>	FF516-06-16S											•			
<b>NEW</b>	FF516-08-06S											•			
	FF516-08-08S	1/2	13/16-16	3/4-16	1.440	36.58	0.390	9.91	7/8	0.875	22.22	•			
	FF516-08-10S	1/2	13/16-16	7/8-14	1.590	40.39	0.460	11.68	1	1.000	25.40	•			
	FF516-08-12S	1/2	13/16-16	1 1/16-12	1.750	44.45	0.520	13.21	1 1/4	1.250	31.75	•			
<b>NEW</b>	FF516-08-16S											•			
	FF516-10-08S	5/8	1-14	3/4-16	1.780	45.21	0.460	11.68	1 1/16	1.062	26.97	•			
	FF516-10-10S	5/8	1-14	7/8-14	1.700	43.18	0.460	11.68	1 1/16	1.062	26.97	•			
	FF516-10-12S	5/8	1-14	1 1/16-12	1.120	28.45	0.520	13.21	1 1/4	1.250	31.75	•			
	FF516-12-08S	3/4	1 3/16-12	3/4-16	1.910	48.51	0.520	13.21	1 1/4	1.250	31.75	•			
	FF516-12-10S	3/4	1 3/16-12	7/8-14	1.990	50.55	0.520	13.21	1 1/4	1.250	31.75	•			
	FF516-12-12S	3/4	1 3/16-12	1 1/16-12	1.910	48.51	0.520	13.21	1 1/4	1.250	31.75	•			
	FF516-12-16S	3/4	1 3/16-12	1 5/16-12	1.960	49.78	0.520	13.21	1 1/2	1.125	28.57	•			
<b>NEW</b>	FF516-16-10S											•			
	FF516-16-12S	1	1 7/16-12	1 1/16-12	2.200	55.88	0.560	14.22	1 1/2	1.125	28.57	•			
	FF516-16-16S	1	1 7/16-12	1 5/16-12	1.980	50.29	0.560	14.22	1 1/2	1.125	28.57	•			
	FF516-16-20S	1	1 7/16-12	1 5/8-12	2.060	52.32	0.640	16.26	1 7/8	1.875	47.62	•			
	FF516-20-16S	1 1/4	1 11/16-16	1 5/16-12	2.280	57.91	0.640	16.26	1 7/8	1.875	47.62	•			
	FF516-20-20S	1 1/4	1 11/16-16	1 5/8-12	2.060	52.32	0.640	16.26	1 7/8	1.875	47.62	•			
	FF516-20-24S	1 1/4	1 11/16-12	1 7/8-12	2.128	54.05	0.710	18.03	2 1/8	2.125	53.98	•			
<b>NEW</b>	FF516-24-20S											•			
	FF516-24-24S	1 1/2	2-12	1 7/8-12	2.130	54.10	0.710	18.03	2 1/8	2.125	53.97	•			

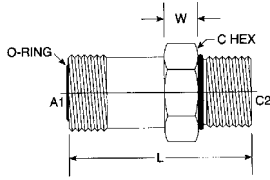
**Hydraulic Adapters**



**MFS - MORB Straight Long**

**FF516L Series**

SAE # 520122

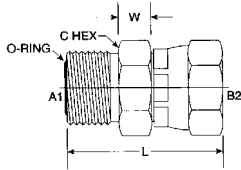


PART NO. SIZE	TUBE O.D.	A1 THREAD	C2 THREAD	L LGTH	M.M.	W WIDTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
											S	FG	SS	B
FF516-L-04-04S	1/4	9/16-18	7/16-20	2.060	52.32	0.310	7.87	5/8	0.625	15.87	•			
FF516-L-06-06S	3/8	11/16-16	9/16-18	2.270	57.66	0.340	8.64	3/4	0.750	19.05	•			
FF516-L-08-08S	1/2	13/16-16	3/4-16	2.680	68.07	0.390	9.91	7/8	0.875	22.22	•			
FF516-L-10-10S	5/8	1-14	7/8-14	3.130	79.50	0.460	11.69	1 1/16	1.062	26.97	•			
FF516-L-12-12S	3/4	1 3/16-12	1 1/16-12	3.760	95.50	0.520	13.21	1 1/4	1.250	31.75	•			
FF516-L-16-16S	1	1 7/8-12	1 5/16-12	4.140	105.16	0.560	14.23	1 1/2	1.125	28.57	•			
FF516-L-20-20S	1 1/4	1 11/16-16	1 5/8-12	4.760	120.90	0.640	16.26	1 7/8	1.875	47.62	•			
FF516-L-24-24S	1 1/2	2-12	1 7/8-12	5.260	133.60	0.710	18.03	2 1/8	2.125	53.97	•			

**Hydraulic Adapters**

**MFS - FJS Straight**

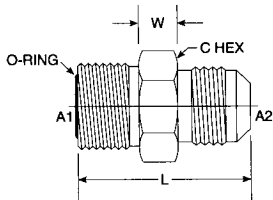
**FF501 Series**



PART NO. SIZE	TUBE O.D.	A1 THREAD	B2 THREAD	L LGTH	M.M.	W WIDTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
											S	FG	SS	B
FF501-04-04S	1/4	9/16-18	7/16-20	1.350	34.29	0.310	7.87	5/8	0.625	15.87	•			
FF501-06-06S	3/8	11/16-16	9/16-18	1.540	39.12	0.340	8.64	3/4	0.750	19.05	•			
FF501-08-08S	1/2	13/16-16	3/4-16	1.720	43.69	0.390	9.91	7/8	0.875	22.22	•			
FF501-10-10S	5/8	1-14	7/8-14	2.000	50.80	0.460	11.68	1 1/16	1.062	26.97	•			
FF501-12-12S	3/4	1 3/16-12	1 1/16-12	2.250	57.15	0.520	13.21	1 1/4	1.250	31.75	•			
FF501-16-16S	1	1 7/8-12	1 5/16-12	2.375	60.33	0.550	13.97	1 1/2	1.500	38.10	•			
<b>NEW</b> FF501-20-20S											•			

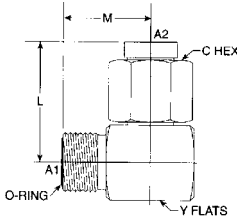
**MFS - MJ Straight**

**FF814 Series**



PART NO. SIZE	TUBE O.D.	A1 THREAD	B2 THREAD	L LGTH	M.M.	W WIDTH	M.M.	C HEX	C HEX	M.M.	Standard Material From Stock			
											S	FG	SS	B
FF814-04-04S	1/4	9/16-18	7/16-20	1.250	31.75	0.310	7.87	5/8	0.625	15.87	•			
FF814-06-06S	3/8	11/16-16	9/16-18	1.300	33.02	0.310	7.87	3/4	0.750	19.05	•			
FF814-08-08S	1/2	13/16-16	3/4-16	1.550	39.37	0.390	9.90	7/8	0.875	22.22	•			
FF814-10-10S	5/8	1-14	7/8-14	1.750	44.45	0.390	9.90	1 1/16	1.062	26.97	•			
FF814-12-12S	3/4	1 3/16-12	1 1/16-12	1.950	49.53	0.390	9.90	1 1/4	1.250	31.75	•			
<b>NEW</b> FF814-16-16S											•			



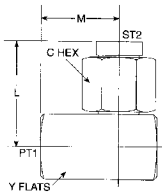


**MFS - FFSS 90°**

**FF601 Series**

SAE # 520121

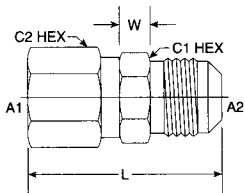
PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	L LGTH	M M.M.	M LGTH	C HEX	C HEX	Y M.M.	Y FLATS	Y FLATS	Y M.M.	Standard Material From Stock				
													S	FG	SS	B	
FF601-04-04S	1/4	9/16-18	9/16-18	1.040	26.42	0.850	21.59	11/16	0.688	17.47	9/16	0.562	14.27	•	•		
FF601-06-06S	3/8	11/16-16	11/16-16	1.150	29.21	0.980	24.89	13/16	0.812	20.62	3/4	0.750	19.05	•	•		
FF601-08-08S	1/2	13/16-16	13/16-16	1.490	37.85	0.850	21.59	15/16	0.938	23.82	3/4	0.750	19.05	•	•		
FF601-10-10S	5/8	1-14	1-14	1.620	41.15	0.980	24.89	1 1/8	1.125	28.57	1 1/16	1.062	26.97	•	•		
FF601-12-12S	3/4	1 3/16-12	1 3/16-12	2.290	58.17	0.850	21.59	1 3/8	1.375	34.92	1 3/16	1.188	30.17	•	•		
FF601-16-16S	1	1 7/16-12	1 7/16-12	2.410	61.21	0.980	24.89	1 5/8	1.625	41.27	1 7/16	1.438	36.52	•	•		
FF601-20-20S	1 1/4	1 11/16-12	1 11/16-12	2.290	58.17	0.850	21.59	1 7/8	1.875	47.62	1 5/8	1.625	41.27	•	•		
FF601-24-24S	1 1/2	2-12	2-12	2.410	61.21	0.980	24.89	2 1/2	2.250	57.15	1 7/8	1.875	47.62	•	•		



**FP - FFSS 90°**

**FF602 Series**

PART NO. SIZE	TUBE O.D.	PT1 THREAD	ST2 THREAD	L LGTH	W M.M.	W WIDTH	C M.M.	C HEX	C HEX	Y M.M.	Y FLATS	Y FLATS	Y M.M.	Standard Material From Stock				
														S	FG	SS	B	
NEW FF602-04-04S																		
NEW FF602-06-06S																		



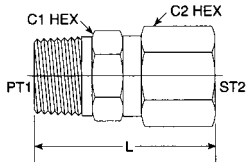
**MP - FFSS Straight**

**FF811 Series**

PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	L LGTH	W M.M.	W WIDTH	C1 M.M.	C1 HEX	C1 HEX	C2 M.M.	C2 HEX	C2 HEX	C2 M.M.	Standard Material From Stock			
														S	FG	SS	B
FF811-04-04S	1/4	9/16-18	7/16-20	1.500	38.10	0.270	6.86	1/2	0.500	12.70	11/16	0.688	17.47	•			
FF811-06-06S	3/8	11/16-16	9/16-18	1.760	44.70	0.270	6.86	5/8	0.625	15.87	13/16	0.812	20.62	•			
FF811-08-04S	1/2	13/16-16	7/16-20	2.524	64.11	0.350	8.89	3/4	0.750	19.05	15/16	0.937	23.81	•			
FF811-08-08S	1/2	13/16-16	3/4-16	1.900	48.26	0.350	8.89	13/16	0.812	20.62	15/16	0.937	23.80	•			
FF811-10-04S	5/8	1-14	7/16-20	2.670	67.82	0.370	9.40	7/8	0.880	22.22	1 1/8	1.125	28.58	•			
FF811-10-10S	5/8	1-14	7/8-14	2.300	58.42	0.350	8.89	15/16	0.937	23.80	1 1/4	1.125	28.57	•			
FF811-12-04S	3/4	1 3/16-12	7/16-20	2.916	74.07	0.406	10.31	1 1/8	1.130	28.575	1 3/8	1.375	34.93	•			
NEW FF811-12-12S														•			
FF811-16-04S	1	1 3/16-12	7/16-20	3.115	79.12	0.400	10.21	1 3/8	1.375	34.93	1 5/8	1.625	41.28	•			
FF811-16-16S	3/4	1 7/16-12	1 5/16-12	2.700	68.58	0.410	10.41	1 3/8	1.375	34.92	1 5/8	1.625	41.27	•			
FF811-20-20S	1 1/4	1 11/16-12	1 11/16-12	3.350	85.09	0.410	10.41	1 11/16	1.688	42.87	1 7/8	1.875	47.62	•			



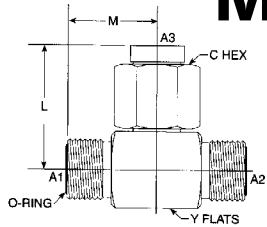
**MP - FFSS Straight**  
*FF618 Series*



PART NO. SIZE	TUBE O.D.	PT1 THREAD	ST2 THREAD	L LGTH M.M.	W M.M. WIDTH M.M.	C1 HEX M.M.	C1 HEX M.M.	C2 HEX M.M.	C2 HEX M.M.	Standard Material From Stock					
										S	FG	SS	B		
NEW FF618-04-06S															

**MFS - MFS - FFSS Branch Tee**  
*FF625 Series*

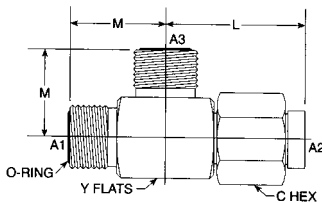
SAE # 520433



PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	A3 THREAD	L LGTH M.M.	M LGTH M.M.	C HEX M.M.	C HEX M.M.	Y FLATS M.M.	Y FLATS M.M.	Standard Material From Stock							
											S	FG	SS	B				
FF625-04-04S	1/4	9/16-18	9/16-18	9/16-18	1.040	26.42	0.850	21.59	11/16	0.688	17.47	9/16	0.562	14.27	•	•		
FF625-06-06S	3/8	11/16-16	11/16-16	11/16-16	1.150	29.21	0.980	24.89	13/16	0.812	20.62	3/4	0.750	19.05	•	•		
FF625-08-08S	1/2	13/16-16	13/16-16	13/16-16	1.490	37.85	0.850	21.59	15/16	0.937	23.80	3/4	0.750	19.05	•	•		
FF625-10-10S	5/8	1-14	1-14	1-14	1.620	41.15	0.850	21.59	1 1/8	1.125	28.57	1 1/16	1.062	26.97	•	•		
FF625-12-12S	3/4	1 3/16-12	1 3/16-12	1 3/16-12	2.290	58.17	0.850	21.59	1 3/8	1.375	34.92	1 3/16	1.188	30.17	•	•		
FF625-16-16S	1	1 7/16-12	1 7/16-12	1 7/16-12	2.410	61.21	0.980	24.89	1 5/8	1.625	41.27	1 7/16	1.438	36.52	•	•		
FF625-20-20S	1 1/4	1 11/16-12	1 11/16-12	1 11/16-12	2.290	58.17	0.850	21.59	1 7/8	1.875	47.62	1 5/8	1.625	41.27	•	•		
FF625-24-24S	1 1/2	2-12	2-12	2-12	2.410	61.21	0.980	24.89	2 1/4	2.250	57.15	1 7/8	1.875	47.62	•	•		

**MFS - FFSS - MFS Tee**  
*FF626 Series*

SAE # 520433



PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	A3 THREAD	L LGTH M.M.	M LGTH M.M.	C HEX M.M.	C HEX M.M.	Y FLATS M.M.	Y FLATS M.M.	Standard Material From Stock							
											S	FG	SS	B				
FF626-04-04S	1/4	9/16-18	9/16-18	9/16-18	1.040	26.42	0.850	21.59	11/16	0.688	17.47	9/16	0.562	14.27	•	•		
FF626-06-06S	3/8	11/16-16	11/16-16	11/16-16	1.150	29.21	0.980	24.89	13/16	0.812	20.62	3/4	0.750	19.05	•	•		
FF626-08-08S	1/2	13/16-16	13/16-16	13/16-16	1.490	37.85	1.100	27.94	15/16	0.937	23.80	3/4	0.750	19.05	•	•		
FF626-10-10S	5/8	1-14	1-14	1-14	1.620	41.15	1.310	33.27	1 1/4	1.250	31.75	1 1/16	1.062	26.97	•	•		
FF626-12-12S	3/4	1 3/16-12	1 3/16-12	1 3/16-12	1.820	46.23	1.470	37.34	1 3/8	1.375	34.92	1 3/16	1.188	30.17	•	•		
FF626-16-16S	1	1 7/16-12	1 7/16-12	1 7/16-12	2.100	53.34	1.640	41.66	1 5/8	1.625	41.27	1 7/16	1.438	36.52	•	•		
FF626-20-20S	1 1/4	1 11/16-12	1 11/16-12	1 11/16-12	2.290	58.17	1.760	44.70	1 7/8	1.875	47.62	1 5/8	1.625	41.27	•	•		
FF626-24-24S	1 1/2	2-12	2-12	2-12	2.410	61.21	1.920	48.77	2 1/4	2.250	57.15	1 7/8	1.875	47.62	•	•		

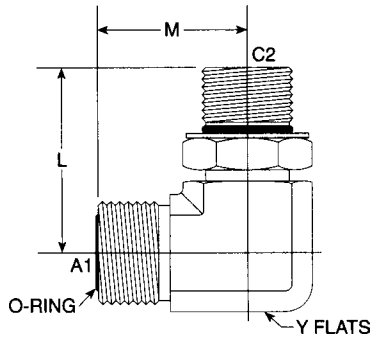


Hydraulic Adapters

# MFS - MAORB 90°

## FF522 Series

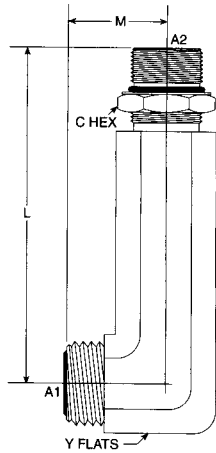
SAE # 520220



PART NO. SIZE	TUBE O.D.	A1 THREAD	C2 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
FF522-04-04S	1/4	9/16-18	7/16-20	1.290	32.77	0.850	21.59	9/16	0.562	14.27	•	•		
FF522-04-06S	1/4	9/16-18	9/16-18	1.450	36.83	0.920	23.37	3/4	0.750	19.05	•	•		
FF522-04-08S	1/4	9/16-18	3/4-16	1.600	40.64	0.970	24.64	3/4	0.750	19.05	•	•		
NEW FF522-06-04S	3/8	11/16-16	7/16-20	1.370	34.80	0.980	24.89	3/4	0.750	19.05	•	•		
FF522-06-05S														
FF522-06-06S	3/8	11/16-16	9/16-18	1.450	36.83	0.980	24.89	3/4	0.750	19.05	•	•		
FF522-06-08S	3/8	11/16-16	3/4-16	1.600	40.64	1.040	26.42	3/4	0.750	19.05	•	•		
FF522-06-10S	3/8	11/16-16	5/8-14	1.970	50.03	1.150	29.21	1 1/16	1.062	26.97	•	•	•	
FF522-06-12S	3/8	11/16-12	1 1/16-12	2.170	55.12	1.250	31.75	1 3/16	1.188	30.17	•	•		
FF522-08-06S	1/2	13/16-16	9/16-18	1.440	36.58	1.100	27.94	3/4	0.750	19.05	•	•		
FF522-08-08S	1/2	13/16-16	3/4-16	1.600	40.64	1.100	27.94	3/4	0.750	19.05	•	•		
FF522-08-10S	1/2	13/16-16	5/8-14	1.970	50.04	1.210	30.73	1 1/16	1.062	26.97	•	•		
NEW FF522-08-12S	1/2	13/16-16	1 1/16-12	2.170	55.12	1.320	33.53	1 3/16	1.188	30.17	•	•		
FF522-10-08S														
FF522-10-10S	5/8	1-14	7/8-14	1.970	50.04	1.310	33.27	1 1/16	1.062	26.97	•	•		
FF522-10-12S	5/8	1-14	1 1/16-12	2.170	55.12	1.410	35.81	1 3/16	1.188	30.17	•	•		
FF522-12-08S	3/4	1 3/16-12	3/4-16	1.840	46.74	1.470	37.34	1 3/16	1.188	30.17	•	•		
FF522-12-10S	3/4	1 3/16-12	7/8-14	2.170	55.12	1.470	37.34	1 3/16	1.188	30.17	•	•		
FF522-12-12S	3/4	1 3/16-12	1 1/16-12	2.170	55.12	1.470	37.34	1 3/16	1.188	30.17	•	•		
NEW FF522-12-16S	3/4	1 3/16-12	1 5/16-12	2.350	59.69	1.620	41.15	1 7/16	1.438	36.52	•	•		
FF522-12-20S														
FF522-16-12S	1	1 7/16-12	1 1/16-12	2.320	58.93	1.640	41.66	1 7/16	1.438	36.52	•	•		
FF522-16-16S	1	1 7/16-12	1 5/16-12	2.350	59.69	1.640	41.66	1 7/16	1.438	36.52	•	•		
FF522-16-20S	1	1 7/16-12	1 5/8-12	2.450	62.23	1.760	44.70	1 5/8	1.625	41.27	•	•		
FF522-20-16S	1 1/4	1 11/16-12	1 5/16-12	2.450	62.23	1.760	44.70	1 5/8	1.625	41.27	•	•		
FF522-20-20S	1 1/4	1 11/16-12	1 5/8-12	2.450	62.23	1.760	44.70	1 5/8	1.625	41.27	•	•		
FF522-20-24S	1 1/4	1 11/16-12	1 7/8-12	2.590	65.79	1.920	48.77	1 7/8	1.875	47.62	•	•		
FF522-24-20S	1 1/2	2-12	1 5/8-12	2.590	65.79	1.920	48.77	1 7/8	1.875	47.62	•	•		
FF522-24-24S	1 1/2	2-12	1 7/8-12	2.590	65.79	1.920	48.77	1 7/8	1.875	47.62	•	•		

**Hydraulic Adapters**



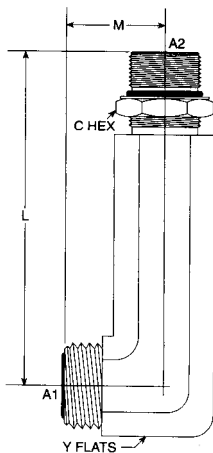


**MFS - MORB 90° Long**  
*FF522-L Series*

PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
FF522-L-04-04S	1/4	9/16-18	7/16-20	2.23	56.64	.85	21.59	9/16	.562	14.27		•		
FF522-L-06-06S	3/8	11/16-16	9/16-18	2.61	66.29	.98	24.89	3/4	.750	19.05		•		
FF522-L-08-08S	1/2	13/16-16	3/4-16	2.95	74.93	1.10	27.94	3/4	.750	19.05		•		
FF522-L-16-16S	1	1 7/16-12	1 5/16-12	4.51	114.55	1.64	41.66	1 7/16	1.438	36.53		•		

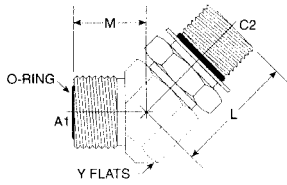
Hydraulic Adapters

**MF - MAORB X-Long**  
*FF522-LL Series*



PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
FF522-LL-08-08S	1/2	13/16-16	3/4-16	3.50	88.90	1.10	27.94	3/4	.750	19.05		•		
FF522-LL-16-16S	1	1 7/16-12	1 5/16-12	5.00	127.00	1.64	41.66	1 7/16	1.438	36.53		•		





**MFS - MAORB 45°**

**FF523 Series**

SAE # 520320

**NEW**

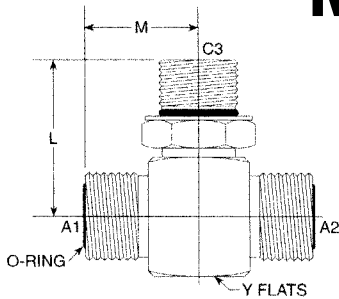
PART NO. SIZE	TUBE O.D.	A1 THREAD	C2 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
											S	FG	SS	B
FF523-04-04S	1/4	9/16-18	7/16-20	1.180	29.97	0.630	16.00	9/16	0.562	14.27	•	•		
FF523-04-06S	1/4	9/16-18	9/16-18	1.300	33.02	0.690	17.53	3/4	0.750	19.05	•	•		
FF523-06-04S	3/8	11/16-16	7/16-20	1.220	30.99	0.740	18.80	3/4	0.750	19.05	•	•		
FF523-06-06S	3/8	11/16-16	9/16-18	1.300	33.02	0.740	18.80	3/4	0.750	19.05	•	•		
FF523-06-08S	3/8	11/16-16	3/4-16	1.450	36.83	0.740	18.80	3/4	0.750	19.05	•	•		
FF523-06-10S											•	•		
FF523-08-06S	1/2	13/16-16	9/16-18	1.270	32.26	0.800	20.32	3/4	0.750	19.05	•	•		
FF523-08-08S	1/2	13/16-16	3/4-16	1.430	36.32	0.800	20.32	3/4	0.750	19.05	•	•		
FF523-08-10S	1/2	13/16-16	7/8-14	1.760	44.70	0.840	21.34	3/4	0.750	19.05	•	•		
FF523-10-08S	5/8	1-14	3/4-16	1.590	40.39	0.920	23.27	1 1/16	1.062	26.97	•	•		
FF523-10-10S	5/8	1-14	7/8-14	1.760	44.70	0.920	23.37	1 1/16	1.062	26.97	•	•		
FF523-10-12S	5/8	1-14	1 1/16-12	1.970	50.04	0.980	24.89	1 3/16	1.188	30.17	•	•		
FF523-12-10S	3/4	1 3/16-12	7/8-14	1.810	45.98	1.020	25.91	1 3/16	1.188	30.17	•	•		
FF523-12-12S	3/4	1 3/16-12	1 1/16-12	1.970	50.04	1.020	25.91	1 3/16	1.188	30.17	•	•		
FF523-12-16S	3/4	1 3/16-12	1 5/16-12	2.060	52.33	1.020	25.91	1 7/16	1.438	36.52	•	•		
FF523-16-12S	1	1 7/16-12	1 1/16-12	2.030	51.57	1.180	29.97	1 7/16	1.438	36.52	•	•		
FF523-16-16S	1	1 7/16-12	1 5/16-12	2.060	52.33	1.180	29.97	1 7/16	1.438	36.52	•	•		
FF523-16-20S	1	1 7/16-12	1 5/8-12	2.250	57.15	1.260	32.00	1 5/8	1.625	41.27	•	•		
FF523-20-20S	1 1/4	1 11/16-12	1 5/8-12	2.110	53.59	1.260	32.00	1 5/8	1.625	41.27	•	•		
FF523-24-24S	1 1/2	2-12	1 7/8-12	2.110	53.59	1.450	36.83	1 7/8	1.875	47.62	•	•		

**Hydraulic  
Adapters**

**MFS - MFS - MAORB Tee**

**FF525 Series**

SAE # 520429



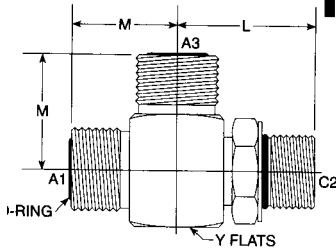
PART NO. SIZE	TUBE O.D.	A1 THREAD	A2 THREAD	C3 THREAD	L LGTH	M.M.	M LGTH	M.M.	Y FLATS	Y FLATS	M.M.	Standard Material From Stock			
												S	FG	SS	B
FF525-04-04S	1/4	9/16-18	9/16-18	7/16-20	1.290	32.77	0.850	21.59	9/16	0.562	14.27	•	•		
FF525-06-06S	3/8	11/16-16	11/16-16	9/16-18	1.450	36.83	0.980	24.89	3/4	0.750	19.05	•	•		
FF525-08-08S	1/2	13/16-16	13/16-16	3/4-16	1.600	40.64	1.100	27.94	3/4	0.750	19.05	•	•		
FF525-10-10S	5/8	1-14	1-14	7/8-14	1.970	50.04	1.310	33.27	1 1/16	1.062	26.97	•	•		
FF525-12-12S	3/4	1 3/16-12	1 3/16-12	1 1/16-12	2.170	55.12	1.470	37.34	1 3/16	1.188	30.17	•	•		
FF525-16-16S	1	1 7/16-12	1 7/16-12	1 5/16-12	2.350	59.69	1.640	41.66	1 7/16	1.438	36.52	•	•		
FF525-20-20S	1 1/4	1 11/16-12	1 11/16-12	1 5/8-12	2.450	62.23	1.760	44.70	1 5/8	1.625	41.27	•	•		



**MFS - MAORB - MFS Tee**

*FF526 Series*

SAE # 520428



NEW

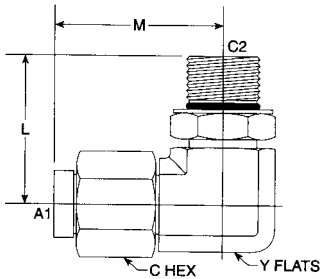
PART NO. SIZE	TUBE O.D.	A1 THREAD	C2 THREAD	A3 THREAD	L LGTH M.M.	M LGTH M.M.	Y FLATS M.M.	Y FLATS M.M.	Y FLATS M.M.	Standard Material From Stock					
										S	FG	SS	B		
FF526-04-04S	1/4	9/16-18	7/16-20	9/16-18	1.290	32.77	0.850	21.59	9/16	0.562	14.27	•	•		
FF526-04-06S	1/4	9/16-18	9/16-18	9/16-18	1.450	36.83	0.920	23.37	3/4	0.750	19.05	•	•		
FF526-06-04S	3/8	11/16-16	11/16-16	7/16-20	1.370	34.80	0.980	24.89	3/4	0.750	19.05	•	•		
FF526-06-06S	3/8	11/16-16	9/16-18	11/16-16	1.450	36.83	0.980	24.89	3/4	0.750	19.05	•	•		
FF526-08-06S	1/2	13/16-16	13/16-16	9/16-18	1.440	36.58	1.100	27.94	3/4	0.750	19.05	•	•		
FF526-08-08S	1/2	13/16-16	3/4-16	13/16-16	1.600	40.64	1.100	27.94	3/4	0.750	19.05	•	•		
FF526-08-12S	1/2	13/16-16	13/16-12	1 1/16-12	2.170	55.12	1.320	33.53	1 3/16	1.188	30.18	•	•		
FF526-10-10S	5/8	1-14	7/8-14	1-14	1.970	50.04	1.310	33.27	1 1/16	1.062	26.97	•	•		
FF526-10-12S	3/4	1 3/16-12	1 1/16-12	1 3/16-12	2.170	55.12	1.470	37.34	1 3/16	1.188	30.17	•	•		
FF526-12-12S	1	1 7/16-12	1 5/16-12	1 7/16-12	2.350	59.69	1.640	41.66	1 7/16	1.437	36.50	•	•		
FF523-16-16S	1 1/4	1 11/16-12	1 5/8-12	1 11/16-12	2.450	62.23	1.760	44.70	1 5/8	1.625	41.27	•	•		
FF523-20-20S	1 1/2	2-12	1 7/8-12	2-12	2.590	65.79	1.920	48.77	1 7/8	1.875	47.62	•	•		

Hydraulic Adapters

**FFSS - MAORB 90°**

*FF620 Series*

SAE # 520281



PART NO. SIZE	TUBE O.D.	A1 THREAD	C2 THREAD	L LGTH M.M.	M LGTH M.M.	C HEX M.M.	C HEX M.M.	Y FLATS M.M.	Y FLATS M.M.	Y FLATS M.M.	Standard Material From Stock						
											S	FG	SS	B			
FF620-04-04S	1/4	9/16-18	7/16-20	1.290	32.77	1.040	26.42	11/16	0.688	17.47	9/16	0.562	14.27	•	•		
FF620-06-06S	3/8	11/16-16	9/16-18	1.450	36.83	1.150	29.21	13/16	0.812	20.62	3/4	0.750	19.05	•	•		
FF620-08-08S	1/2	13/16-16	3/4-16	1.600	40.64	1.490	37.85	15/16	0.937	23.80	3/4	0.750	19.05	•	•		
FF620-10-10S	5/8	1-14	7/8-14	1.970	50.04	1.620	41.25	1 1/8	1.125	28.57	1 1/16	1.062	26.97	•	•		
FF620-12-12S	3/4	1 3/16-12	1 1/16-12	2.170	55.12	1.820	46.23	1 3/8	1.387	34.23	1 3/16	1.188	30.17	•	•		
FF620-16-16S	1	1 3/16-12	1 5/16-12	2.350	59.69	2.100	53.34	1 5/8	1.625	41.27	1 7/16	1.437	36.50	•	•		



**O-RING PORT  
REDUCER/EXPANDER**



Part #	O-Ring Thread 1	O-Ring Thread 2
508-02-04S	5/16-24	7/16-20
508-04-05S	7/16-20	1/2-20
508-04-06S	7/16-20	9/16-18
508-06-04S	9/16-18	7/16-20
508-06-08S	9/16-18	3/4-16
508-08-04S	3/4-16	7/16-20
508-08-06S	3/4-16	9/16-18
508-08-10S	3/4-16	7/8-14
508-08-12S	3/4-16	1-1/16-12
508-10-04S	7/8-14	7/16-20
508-10-06S	7/8-14	9/16-18
508-10-08S	7/8-14	3/4-16
508-10-12S	7/8-14	1-1/16-12
508-12-04S	1-1/16-12	7/16-20
508-12-06S	1-1/16-12	9/16-18
508-12-08S	1-1/16-12	3/4-16
508-12-10S	1-1/16-12	7/8-14
508-12-14S	1-1/16-12	1-3/16-12
508-12-16S	1-1/16-12	1-5/16-12
508-12-20S	1-1/16-12	1-5/8-12
508-14-08S	1-3/16-12	3/4-16
508-14-10S	1-3/16-12	7/8-14
508-14-12S	1-3/16-12	1-1/16-12
508-16-06S	1-5/16-12	9/16-18
508-16-08S	1-5/16-12	3/4-16
508-16-10S	1-5/16-12	7/8-14
508-16-12S	1-5/16-12	1-1/16-12
508-16-14S	1-5/16-12	1-3/16-12
508-16-20S	1-5/16-12	1-5/8-12
508-20-10S	1-5/8-12	7/8-14
508-20-12S	1-5/8-12	1-1/16-12
508-20-16S	1-5/8-12	1-5/16-12
508-20-24S	1-5/8-12	1-7/8-12
508-24-12S	1-7/8-12	1-1/16-12
508-24-16S	1-7/8-12	1-5/16-12
508-32-16S	2-1/2-12	1-5/16-12
508-32-20S	2-1/2-12	1-5/8-12
508-32-24S	2-1/2-12	1-7/8-12

*Some sizes available in Stainless Steel  
More sizes available  
Available in an extender*

A ship in a safe harbor is safe, but that is not what a ship is built for.

— William Shedd

**FEMALE SWIVELS STEEL FLARE**

**JIC SWIVEL NUT ELBOW**

SAE 070221  
MS 51531



Part #	JIC Thread Size 1	JIC Thread Size 2
622-04-04S	7/16-20	7/16-20
622-05-05S	1/2-20	1/2-20
622-06-06S	9/16-18	9/16-18
622-08-08S	3/4-16	3/4-16
622-08-06S	3/4-16	9/16-18
622-10-10S	7/8-14	7/8-14
622-10-08S	7/8-14	3/4-16
622-12-12S	1-1/16-12	1-1/16-12
622-12-10S	1-1/16-12	7/8-14
622-14-14S	1-3/16-12	1-3/16-12
622-16-16S	1-5/16-12	1-5/16-12
622-20-20S	1-5/8-12	1-5/8-12
622-24-24S	1-7/8-12	1-7/8-12
622-32-32S	2-1/2-12	2-1/2-12

*Some Sizes available in Stainless Steel  
More sizes available*

**JIC SWIVEL TO MALE PIPE ELBOW**



Part #	JIC Thread Size 1	Male Pipe Thread 2
627-02-04S	7/16-20	1/8
627-04-04S	7/16-20	1/4
627-06-04S	9/16-18	1/4
627-06-06S	9/16-18	3/8
627-08-06S	3/4-16	3/8
627-08-08S	3/4-16	1/2
627-10-08S	7/8-14	1/2
627-12-12S	1-1/16-12	3/4
627-14-12S	1-3/16-12	3/4
627-16-16S	1-5/16-12	1
627-20-20S	1-5/8-12	1-1/4
627-24-24S	1-7/8-12	1-1/2
627-32-32S	2-1/2-12	2

*Also available in Stainless Steel  
More sizes available*

**Hydraulic  
Adapters**

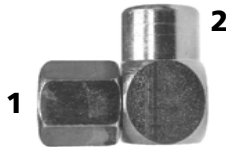
**JIC SWIVEL 45° ELBOW**



Part #	JIC Thread	
	Size 1	Size 2
623-04-04S	7/16-20	7/16-20
623-05-05S	1/2-20	1/2-20
623-06-06S	9/16-18	9/16-18
623-08-08S	3/4-16	3/4-16
623-10-10S	7/8-14	7/8-14
623-12-12S	1-1/16-12	1-1/16-12
623-14-14S	1-3/16-12	1-3/16-12
623-16-16S	1-5/16-12	1-5/16-12
623-20-20S	1-5/8-12	1-5/8-12
623-24-24S	1-7/8-12	1-7/8-12
623-32-32S	2-1/2-12	2-1/2-12

*Some Sizes available in Stainless Steel*

**JIC SWIVEL TO FEMALE  
PIPE ELBOW**



Part #	JIC Thread		Female Pipe Thread 2
	Size 1	Size 2	
6503-6-4	9/16-18	1/4	
6503-6-6	9/16-18	3/8	
6503-8-6	3/4-16	3/8	
6503-8-8	3/4-16	1/2	
6503-10-8	7/8-14	1/2	
6503-12-12	1-1/16-12	3/4	

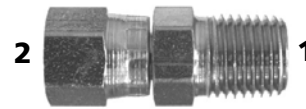
*Also available in Stainless Steel  
More sizes available*

**JIC SWIVEL CONNECTOR**



Part #	JIC Thread	
	Size 1	Size 2
6504-4-4	7/16-20	7/16-20
6504-5-5	1/2-20	1/2-20
6504-6-6	9/16-18	9/16-18
6504-8-8	3/4-16	3/4-16
6504-8-10	3/4-16	7/8-14
6504-10-10	7/8-14	7/8-14
6504-12-12	1-1/16-12	1-1/16-12
6504-16-16	1-5/16-12	1-5/16-12
6504-20-20	1-5/8-12	1-5/8-12
6504-24-24	1-7/8-12	1-7/8-12
6504-32-32	2-1/2-12	2-1/2-12

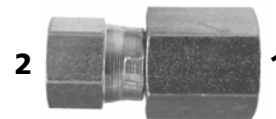
**JIC SWIVEL TO MALE  
PIPE ADAPTER**



Part #	JIC Thread		Male Pipe Thread 2
	Size 1	Size 2	
618-04-02S	7/16-20	1/8	
618-04-04S	7/16-20	1/4	
618-05-04S	1/2-20	1/4	
618-06-04S	9/16-18	1/4	
618-06-06S	9/16-18	3/8	
618-08-06S	3/4-16	3/8	
618-08-08S	3/4-16	1/2	
618-10-08S	7/8-14	1/2	
618-10-12S	7/8-14	3/4	
618-12-08S	1-1/16-12	1/2	
618-12-12S	1-1/16-12	3/4	
618-16-12S	1-5/16-12	3/4	
618-16-16S	1-5/16-12	1	
618-20-20S	1-5/8-12	1-1/4	
618-24-24S	1-7/8-12	1-1/2	
618-32-32S	2-1/2-12	2	

*Also available in Stainless Steel  
More sizes available*

**JIC SWIVEL TO FEMALE  
PIPE ADAPTER**



Part #	JIC Thread		Female Pipe Thread 2
	Size 1	Size 2	
621-04-02S	7/16-20	1/8	
621-04-04S	7/16-20	1/4	
621-06-04S	9/16-18	1/4	
621-06-06S	9/16-18	3/8	
621-06-08S	9/16-18	1/2	
621-08-06S	3/4-16	3/8	
621-08-08S	3/4-16	1/2	
621-08-12S	3/4-16	3/4	
621-10-06S	7/8-14	3/8	
621-10-08S	7/8-14	1/2	
621-10-12S	7/8-14	3/4	
621-12-08S	1-1/16-12	1/2	
621-12-12S	1-1/16-12	3/4	
621-14-12S	1-3/16-12	3/4	
621-16-16S	1-5/16-12	1	
621-20-20S	1-5/8-12	1-1/4	
621-24-24S	1-7/8-12	1-1/2	
621-32-32S	2-1/2-12	2	

*Also available in Stainless Steel  
More sizes available*



**Hydraulic  
Adapters**

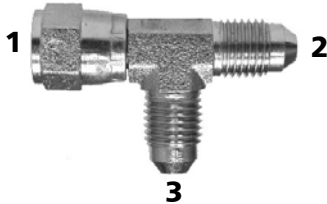
**JIC SWIVEL BRANCH TEE**



<b>PART #</b>	<b>JIC Thread Size</b>	<b>JIC Female Thread</b>
625-04-04S	7/16-20	7/16-20
625-05-05S	1/2-20	1/2-20
625-06-06S	9/16-18	9/16-18
625-08-08S	3/4-16	3/4-16
625-10-10S	7/8-14	7/8-14
625-12-12S	1-1/16-12	1-1/16-12
625-14-14S	1-3/16-12	1-3/16-12
625-16-16S	1-5/16-12	1-5/16-12
625-20-20S	1-5/8-12	1-5/8-12
625-24-24S	1-7/8-12	1-7/8-12
625-32-32S	2-1/2-12	2-1/2-12

*Also available in Stainless Steel*

**JIC SWIVEL RUN TEE**



<b>PART #</b>	<b>JIC Thread Size</b>	<b>JIC Female Thread</b>
626-04-04S	7/16-20	7/16-20
626-05-05S	1/2-20	1/2-20
626-06-06S	9/16-18	9/16-18
626-08-08S	3/4-16	3/4-16
626-10-10S	7/8-14	7/8-14
626-12-12S	1-1/16-12	1-1/16-12
626-14-14S	1-3/16-12	1-3/16-12
626-16-16S	1-5/16-12	1-5/16-12
626-20-20S	1-5/8-12	1-5/8-12
626-24-24S	1-7/8-12	1-7/8-12
626-32-32S	2-1/2-12	2-1/2-12

*More sizes available  
Also available in Stainless Steel*

**JIC BENT TUBE SWIVEL NUT ELBOW**



<b>Part #</b>	<b>JIC Thread Size 1</b>	<b>JIC Thread Size 2</b>
6701-4	7/16-20	7/16-20
6701-6	9/16-18	9/16-18
6701-8	3/4-16	3/4-16
6701-10	7/8-14	7/8-14
6701-12	1-1/16-12	1-1/16-12
6701-16	1-5/16-12	1-5/16-12
6701-20	1-5/8-12	1-5/8-12
6704-24	1-7/8-12	1-7/8-12

**JIC LONG BENT TUBE SWIVEL NUT ELBOW**



<b>Part #</b>	<b>JIC Thread Size 1</b>	<b>JIC Thread Size 2</b>
6701-L-4	7/16-20	7/16-20
6701-L-6	9/16-18	9/16-18
6701-L-8	3/4-16	3/4-16
6701-L-10	7/8-14	7/8-14
6701-L-12	1-1/16-12	1-1/16-12
6701-L-16	1-5/16-12	1-5/16-12
6701-L-20	1-5/8-12	1-5/8-12

**JIC EXTRA HEAVY BENT  
TUBE SWIVEL NUT ELBOW**



<b>Part #</b>	<b>JIC Thread Size 1</b>	<b>JIC Thread Size 2</b>
6701-XH-8	3/4-16	3/4-16
6701-XH-10	7/8-14	7/8-14
6701-XH-12	1-1/16-12	1-1/16-12
6701-XH-16	1-5/16-12	1-5/16-12
6701-XH-20	1-5/8-12	1-5/8-12
6704-XH-24	1-7/8-12	1-7/8-12

Maine is the only state (in USA)  
who name is just one syllable.

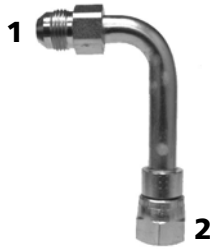
**Hydraulic  
Adapters**

"If I had to live my life again I'd make all the same mistakes - only sooner."

— Tallulah Bankhead

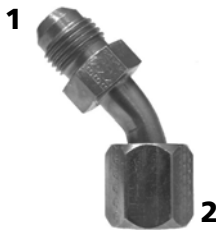


**JIX EXTRA HEAVY LONG BENT TUBE  
SWIVEL NUT ELBOW**



Part #	JIC Thread	JIC Thread
	Size 1	Size 2
6701-LXH-8	3/4-16	3/4-16
6701-LXH-12	1-1/16-12	1-1/16-12
6701-LXH-16	1-5/16-12	1-5/16-12
6701-LXH-20	1-5/8-12	1-5/8-12

**JIC 45° BENT TUBE  
SWIVEL NUT ELBOW**

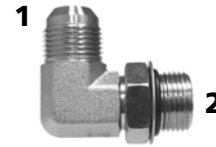


Part #	JIC Thread	JIC Thread
	Size 1	Size 2
6702-6	9/16-18	9/16-18
6702-8	3/4-16	3/4-16
6702-10	7/8-14	7/8-14
6702-12	1-1/16-12	1-1/16-12
6702-16	1-5/16-12	1-5/16-12

Send DFBurnham all you high volume quotes!

**STEEL SAE O-RING FITTINGS**

**JIC TO O-RING ELBOW CONNECTOR**



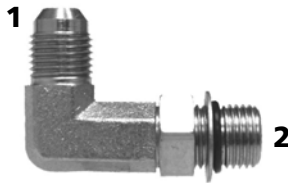
Part #	Thread	O-Ring
	Size 1	Thread 2
522-02-02S	5/16-24	5/16-24
522-03-03S	3/8-24	3/8-24
522-04-04S	7/16-20	7/16-20
522-04-03S	7/16-20	3/8-24
522-04-05S	7/16-20	1/2-20
522-04-06S	7/16-20	9/16-18
522-04-08S	7/16-20	3/4-16
522-05-05S	1/2-20	1/2-20
522-05-04S	1/2-20	7/16-20
522-05-06S	1/2-20	9/16-18
522-06-06S	9/16-18	9/16-18
522-06-04S	9/16-18	7/16-20
522-06-05S	9/16-18	1/2-20
522-06-08S	9/16-18	3/4-16
522-06-10S	9/16-18	7/8-14
522-06-12S	9/16-18	1-1/16-12
522-08-08S	3/4-16	3/4-16
522-08-06S	3/4-16	9/16-18
522-08-10S	3/4-16	7/8-14
522-08-12S	3/4-16	1-1/16-12
522-08-16S	3/4-16	1-5/16-12
522-10-10S	7/8-14	7/8-14
522-10-06S	7/8-14	9/16-18
522-10-08S	7/8-14	3/4-16
522-10-12S	7/8-14	1-1/16-12
522-10-16S	7/8-14	1-5/16-12
522-12-12S	1-1/16-12	1-1/16-12
522-12-08S	1-1/16-12	3/4-16
522-12-10S	1-1/16-12	7/8-14
522-12-14S	1-1/16-12	1-3/16-12
522-12-16S	1-1/16-12	1-5/16-12
522-12-20S	1-1/16-12	1-5/8-12
522-14-14S	1-3/16-12	1-3/16-12
522-14-12S	1-3/16-12	1-1/16-12
522-14-16S	1-3/16-12	1-5/16-12
522-16-16S	1-5/16-12	1-5/16-12
522-16-12S	1-5/16-12	1-1/16-12
522-16-14S	1-5/16-12	1-3/16-12
522-16-20S	1-5/16-12	1-5/8-12
522-20-20S	1-5/8-12	1-5/8-12
522-20-12S	1-5/8-12	1-1/16-12
522-20-16S	1-5/8-12	1-5/16-12
522-20-24S	1-5/8-12	1-7/8-12
522-24-24S	1-7/8-12	1-7/8-12
522-24-20S	1-7/8-12	1-5/8-12
522-32-32S	2-1/2-12	2-1/2-12

Some sizes available in Stainless Steel  
More sizes available



**Hydraulic  
Adapters**

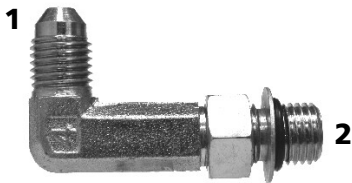
**LONG JIC TO O-RING ELBOW**



Part #	Thread Size 1	O-Ring Thread 2
522L-04-04S	7/16-20	7/16-20
522L-06-06S	9/16-18	9/16-18
522L-06-08S	9/16-18	3/4-16
522L-08-08S	3/4-16	3/4-16
522L-08-10S	3/4-16	7/8-16
522L-10-10S	7/8-14	7/8-14
522L-12-12S	1-1/16-12	1-1/16-12
522L-16-16S	1-5/16-12	1-5/16-12

More sizes available

**EXTRA LONG JIC TO O-RING ELBOW**



Part #	Thread Size 1	O-Ring Thread 2
522LL-04-04S	7/16-20	7/16-20
522LL-06-06S	9/16-18	9/16-18
522LL-06-08S	9/16-18	3/4-16
522LL-08-08S	3/4-16	3/4-16
522LL-08-10S	3/4-16	7/8-16
522LL-10-10S	7/8-14	7/8-14
522LL-12-12S	1-1/16-12	1-1/16-12
522LL-16-16S	1-5/16-12	1-5/16-12

More sizes available

**EXTRA-EXTRA LONG STRAIGHT THREAD ELBOW**



PART #	Thread Size 1	O-Ring Thread 2
6801-LLL-NWO-6*	9/16-18	9/16-18
6801-LLL-NWO-8	3/4-16	3/4-16
6801-LLL-NWO-10*	3/4-16	7/8-16

\* Braze-on Style

**JIC TO O-RING SWIVEL ELBOW**



Part #	Thread Size 1	O-Ring Thread 2
522MS-06-06S	9/16-18	9/16-18
522MS-08-08S	3/4-16	3/4-16
522MS-10-10S	7/8-14	7/8-14

**STRAIGHT THREAD 45° ELBOW**

SAE 070320  
MS 51528



Part #	Thread Size 1	O-Ring Thread 2
523-04-04S	7/16-20	7/16-20
523-04-06S	7/16-20	9/16-18
523-04-08S	7/16-20	3/4-16
523-05-05S	1/2-20	1/2-20
523-05-08S	1/2-20	3/4-16
523-06-06S	9/16-18	9/16-18
523-06-08S	9/16-18	3/4-16
523-06-10S	9/16-18	7/8-14
523-08-08S	3/4-16	3/4-16
523-08-06S	3/4-16	9/16-18
523-08-10S	3/4-16	7/8-14
523-08-12S	3/4-16	1-1/16-12
523-10-10S	7/8-14	7/8-14
523-10-08S	7/8-14	3/4-16
523-10-12S	7/8-14	1-1/16-12
523-12-12S	1-1/16-12	1-1/16-12
523-12-14S	1-1/16-12	1-3/16-12
523-12-16S	1-1/16-12	1-5/16-12
523-14-14S	1-3/16-12	1-3/16-12
523-16-16S	1-5/16-12	1-5/16-12
523-16-12S	1-5/16-12	1-1/16-12
523-16-20S	1-5/16-12	1-5/8-12
523-20-20S	1-5/8-12	1-5/8-12
523-20-16S	1-5/8-12	1-5/16-12
523-24-24S	1-7/8-12	1-7/8-12
522-32-32S	2-1/2-12	2-1/2-12

Some sizes available in Stainless Steel

More sizes available

**Hydraulic Adapters**

**IC TO O-RING  
BRANCH TEE**

SAE 070429  
MS 51529

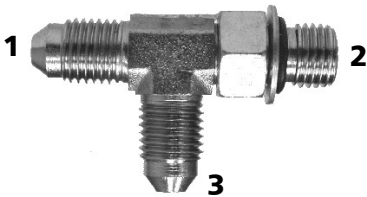


Part #	Thread Size 1 & 2	O-Ring Thread 3
525-04-04S	7/16-20	7/16-20
525-05-05S	1/2-20	1/2-20
525-06-06S	9/16-18	9/16-18
525-06-08S	9/16-18	3/4-16
525-08-08S	3/4-16	3/4-16
525-08-10S	3/4-16	7/8-14
525-10-10S	7/8-14	7/8-14
525-12-12S	1-1/16-12	1-1/16-12
525-14-14S	1-3/16-12	1-3/16-12
525-16-16S	1-5/16-12	1-5/16-12
525-16-12S	1-5/16-12	1-1/16-12
525-20-20S	1-5/8-12	1-5/8-12
525-24-24S	1-7/8-12	1-7/8-12
525-32-32S	2-1/2-12	2-1/2-12

*Some Sizes available in Stainless Steel  
More sizes available*

**JIC TO O-RING RUN TEE**

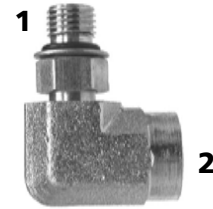
SAE 070428  
MS 51530



Part #	Thread Size 1 & 3	O-Ring Thread 2
526-04-04S	7/16-20	7/16-20
526-05-05S	1/2-20	1/2-20
526-06-06S	9/16-18	9/16-18
526-06-08S	9/16-18	3/4-16
526-08-08S	3/4-16	3/4-16
526-08-10S	3/4-16	7/8-14
526-10-10S	7/8-14	7/8-14
526-12-12S	1-1/16-12	1-1/16-12
526-14-14S	1-3/16-12	1-3/16-12
526-16-16S	1-5/16-12	1-5/16-12
526-16-12S	1-5/16-12	1-1/16-12
526-20-20S	1-5/8-12	1-5/8-12
526-24-24S	1-7/8-12	1-7/8-12
526-32-32S	2-1/2-12	2-1/2-12

*Some Sizes available in Stainless Steel  
More sizes available*

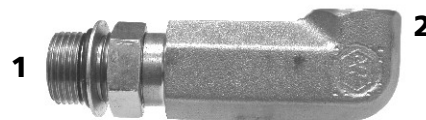
**O-RING TO FEMALE PIPE ELBOW**



Part #	O-Ring Thread 1	Pipe Thread 2
528-04-02S	7/16-20	1/8
528-04-04S	7/16-20	1/4
528-05-02S	1/2-20	1/8
528-06-04S	9/16-18	1/4
528-06-06S	9/16-18	3/8
528-08-06S	3/4-16	3/8
528-08-08S	3/4-16	1/2
528-10-08S	7/8-14	1/2
528-12-12S	1-1/16-12	3/4
528-14-12S	1-3/16-12	3/4
528-16-16S	1-5/16-12	1
528-20-20S	1-5/8-12	1-1/4
528-24-24S	1-7/8-12	1-1/2
528-32-32S	2-1/2-12	2

*More sizes available*

**EXTRA LONG O-RING TO FEMALE PIPE EL-  
BOW**



Part #	O-Ring Thread 1	O-Ring Thread 2
6805-LL-8-6	3/4-16	3/8
6805-LL-10-8	7/8-14	1/2
6805-LL-12-12	1-1/16-12	3/4
6805-LL-16-16	1-5/16-12	1

**Hydraulic  
Adapters**



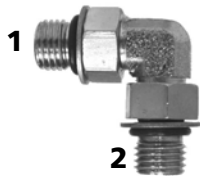
**O-RING TO MALE PIPE ELBOW**



Part #	O-Ring Thread 1	Pipe Thread 2
6806-NWO-4-2	7/16-20	1/8
6806-NWO-4-4	7/16-20	1/4
6806-NWO-6-4	9/16-18	1/4
6806-NWO-6-6	9/16-18	3/8
6806-NWO-8-6	3/4-16	3/8
6806-NWO-8-8	3/4-16	1/2
6806-NWO-10-8	7/8-14	1/2
6806-NWO-12-12	1-1/16-12	3/4
6806-NWO-16-16	1-5/16-12	1
6806-NWO-20-20	1-5/8-12	1-1/4
6806-NWO-24-24	1-7/8-12	1-1/2
6806-NWO-32-32	2-1/2-12	2

More sizes available

**STRAIGHT THREAD TO STRAIGHT THREAD**



Part #	O-Ring Thread 1 & 2
04C50-C50S-NWO-4-4	7/16-20
06C50-C50S-NWO-6-6	9/16-18
08C50-C50S-NWO-8-8	3/4-16
10C50-C50S-NWO-10-10	7/8-14
12C50-C50S-NWO-12-12	1-1/16-12
16C50-C50S-NWO-16-16	1-5/16-12
20C50-C50S-NWO-20-20	1-5/8-12
24C50-C50S-NWO-24-24	1-7/8-12

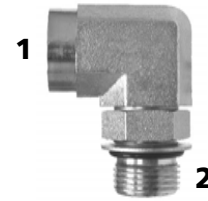
More sizes available

**37° JIC SWIVEL NUT  
TO O-RING ELBOW**



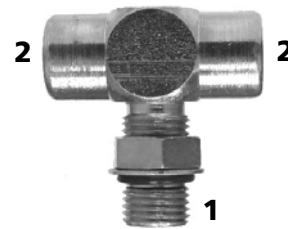
Part #	O-Ring Thread 1	JIC Thread 2
620-04-04S	7/16-20	7/16-20
620-06-06S	9/16-18	9/16-18
620-08-08S	3/4-16	3/4-16
620-08-10S	3/4-16	7/8-14
620-10-10S	7/8-14	7/8-14
620-12-12S	1-1/16-12	1-1/16-12
620-16-16S	1-5/16-12	1-5/16-12
620-20-20S	1-5/8-12	1-5/8-12

**FEMALE O-RING TO MALE  
O-RING ELBOW**



Part #	O-Ring Thread 1	O-Ring Thread 2
6815-NWO-6-6	9/16-18	9/16-18
6815-NWO-8-8	3/4-16	3/4-16
6815-NWO-10-10	7/8-14	7/8-14
6815-NWO-12-12	1-1/16-12	1-1/16-12

**O-RING TO FEMALE PIPE BRANCH TEE**



Part #	O-Ring Thread 1	Pipe Thread 2
6855-NWO-6-4	9/16-18	1/4
6855-NWO-6-6	9/16-18	3/8

**After a While**

After a while you learn to subtle difference between holding a hand and chaining a soul, and you learn that love doesn't mean leaning and company doesn't mean security, and you begin to learn that kisses aren't contracts and presents aren't promises, and you begin to accept your defeats with your head up and your eyes open, with the grace of an adult, not the grief of a child, and you learn to build all your roads on today, because tomorrow's ground is too uncertain for plans.

After a while you learn that even sunshine burns if you get too much. So plant your own garden and decorate your own soul, instead of waiting for someone to bring you flowers.

— Author Unknown





**O-RING SWIVEL ADAPTER**

SAE 140157



Part #	O-Ring Thread 1	Female NPSM 2
619-04-02S	7/16-20	1/8
619-04-04S	7/16-20	1/4
619-04-06S	7/16-20	3/8
619-04-08S	7/16-20	1/2
619-06-04S	9/16-18	1/4
619-06-06S	9/16-18	3/8
619-06-08S	9/16-18	1/2
619-08-04S	3/4-16	1/4
619-08-06S	3/4-16	3/8
619-08-08S	3/4-16	1/2
619-08-12S	3/4-16	3/4
619-10-04S	7/8-14	1/4
619-10-06S	7/8-14	3/8
619-10-08S	7/8-14	1/2
619-10-12S	7/8-14	3/4
619-10-16S	7/8-14	1
619-12-06S	1-1/16-12	3/8
619-12-08S	1-1/16-12	1/2
619-12-12S	1-1/16-12	3/4
619-12-16S	1-1/16-12	1
619-14-08S	1-3/16-12	1/2
619-14-12S	1-3/16-12	3/4
619-14-16S	1-3/16-12	1
619-16-08S	1-5/16-12	1/2
619-16-12S	1-5/16-12	3/4
619-16-16S	1-5/16-12	1
619-16-20S	1-5/16-12	1-1/4
619-20-12S	1-5/8-12	3/4
619-20-16S	1-5/8-12	1
619-20-20S	1-5/8-12	1-1/4
619-24-24S	1-7/8-12	1-1/2
619-32-32S	2-1/2-12	2

More sizes available

**90° O-RING SWIVEL ADAPTER**



Part #	O-Ring Thread 1	Female Pipe NPSM 2
620P-04-02S*	7/16-20	1/8
620P-04-04S	7/16-20	1/4
620P-04-06S	7/16-20	3/8
620P-06-04S	9/16-18	1/4
620P-06-06S	9/16-18	3/8
620P-06-08S	9/16-18	1/2
620P-08-04S*	3/4-16	1/4
620P-08-06S	3/4-16	3/8
620P-08-08S	3/4-16	1/2
620P-08-12S	3/4-16	3/4
620P-10-04S*	7/8-14	1/4
620P-10-06S	7/8-14	3/8
620P-10-08S	7/8-14	1/2
620P-10-12S	7/8-14	3/4
620P-12-06S*	1-1/16-12	3/8
620P-12-08S	1-1/16-12	1/2
620P-12-12S	1-1/16-12	3/4
620P-12-16S*	1-1/16-12	1
620P-14-12S*	1-3/16-12	3/4
620P-16-12S*	1-5/16-12	3/4
620P-16-16S	1-5/16-12	1
620P-16-20S*	1-5/16-12	1-1/4
620P-20-12S*	1-5/8-12	3/4
620P-20-16S	1-5/8-12	1
620P-20-20S	1-5/8-12	1-1/4
620P-24-24S*	1-7/8-12	1-1/2
620P-32-32S*	2-1/2-12	2

\* Braze-on Style Available

**O-RING SWIVEL TEE**



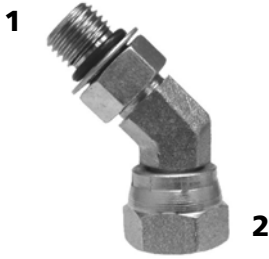
Part # & 3	O-Ring Thread 1	Female NPSM 2
6911-NWO-4-4	7/16-20	1/4
6911-NWO-6-6	9/16-18	3/8
6911-NWO-8-8	3/4-16	1/2
6911-NWO-10-8	7/8-14	1/2
6911-NWO-12-12	1-1/16-12	3/4

More sizes Available



**Hydraulic Adapters**

**45° O-RING SWIVEL ADAPTER**



<i>Part #</i>	<i>O-Ring Thread 1</i>	<i>Female Pipe NPSM 2</i>
612-04-02S	7/16-20	1/8
612-04-04S	7/16-20	1/4
612-04-06S	4-16-20	3/8
612-06-04S	9/16-18	1/4
612-06-06S	9/16-18	3/8
612-06-08S	9/16-18	1/2
612-08-04S	3/4-16	1/4
612-08-06S	3/4-16	3/8
612-08-08S	3/4-16	1/2
612-08-12S	3/4-16	3/4
612-10-06S	7/8-14	3/8
612-10-08S	7/8-14	1/2
612-10-12S	7/8-14	3/4
612-12-08S	1-1/16-12	1/2
612-12-12S	1-1/16-12	3/4
612-12-16S	1-1/16-12	1
612-16-12S	1-5/16-12	3/4
612-16-16S	1-5/16-12	1
612-20-20S	1-5/8-12	1-1/4
612-24-24S	1-7/8-12	1-1/2

**O-RINGS**

**SAE BOSS VITON O-RING**

Fluorocarbon



<i>Part #</i>	<i>Boss Straight Thread</i>	<i>O-Ring I.D.</i>
02-VITON-O-RING	5/16-24	.239
03-VITON-O-RING	3/8-24	.301
04-VITON-O-RING	7/16-20	.351
05-VITON-O-RING	1/2-20	.414
06-VITON-O-RING	9/16-18	.468
08-VITON-O-RING	3/4-16	.644
10-VITON-O-RING	7/8-14	.755
12-VITON-O-RING	1-1/16-12	.924
14-VITON-O-RING	1-3/16-12	1.048
16-VITON-O-RING	1-5/16-12	1.171
20-VITON-O-RING	1-5/8-12	1.475
24-VITON-O-RING	1-7/8-12	1.720
32-VITON-O-RING	2-1/2-12	2.337

**SAE BOSS BUNA O-RING**



<i>Part #</i>	<i>Boss Straight Thread</i>	<i>O-Ring I.D.</i>
02-BUTON-O-RING	5/16-24	.239
03-BUTON-O-RING	3/8-24	.301
04-BUTON-O-RING	7/16-20	.351
05-BUTON-O-RING	1/2-20	.414
06-BUTON-O-RING	9/16-18	.468
08-BUTON-O-RING	3/4-16	.644
10-BUTON-O-RING	7/8-14	.755
12-BUTON-O-RING	1-1/16-12	.924
14-BUTON-O-RING	1-3/16-12	1.048
16-BUTON-O-RING	1-5/16-12	1.171
20-BUTON-O-RING	1-5/8-12	1.475
24-BUTON-O-RING	1-7/8-12	1.720
32-BUTON-O-RING	2-1/2-12	2.337

**Hydraulic  
Adapters**



**STEEL BEARDED HOSE INSERTS**

**MALE PIPE HOSE INSERT**

SAE 430160

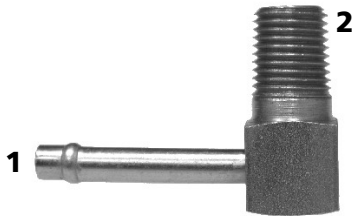


Part #	Hose I.D.		Pipe Thread	
	1	2	1	2
4404-4-2	1/4	1/8	1/8	1/8
4404-4-4	1/4	1/8	1/8	1/8
4404-5-2	5/16	1/8	1/8	1/8
4404-6-4	3/8	1/4	1/4	1/4
4404-6-6	3/8	3/8	3/8	3/8
4404-8-6	1/2	3/8	3/8	3/8
4404-8-8	1/2	1/2	1/2	1/2
4404-10-8	5/8	1/2	1/2	1/2
4404-12-12	3/4	3/4	3/4	3/4
4404-16-12	1	3/4	3/4	3/4
4404-16-16	1	1	1	1
4404-20-20	1-1/4	1-1/4	1-1/4	1-1/4
4404-24-20	1-1/2	1-1/4	1-1/4	1-1/4
4404-24-24	1-1/2	1-1/2	1-1/2	1-1/2
4404-32-32	2	2	2	2

More sizes available

**90° PIPE HOSE INSERT**

SAE 430260



Part #	Hose I.D.		Pipe Thread	
	1	2	1	2
4501-4-2	1/4	1/8	1/8	1/8
4501-4-4	1/4	1/8	1/8	1/8
4501-5-2	5/16	1/8	1/8	1/8
4501-6-4	3/8	1/4	1/4	1/4
4501-6-6	3/8	3/8	3/8	3/8
4501-8-6	1/2	3/8	3/8	3/8
4501-8-8	1/2	1/2	1/2	1/2
4501-10-8	5/8	1/2	1/2	1/2
4501-12-12	3/4	3/4	3/4	3/4
4501-16-12	1	3/4	3/4	3/4
4501-16-16	1	1	1	1
4501-20-16	1-1/4	1	1	1
4501-20-20	1-1/4	1-1/4	1-1/4	1-1/4
4501-24-24	1-1/2	1-1/2	1-1/2	1-1/2
4501-32-32	2	2	2	2

More sizes available

**45° PIPE HOSE INSERT**

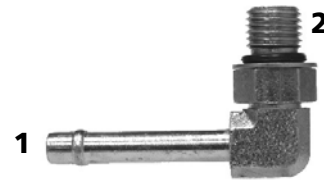
SAE 430360



Part #	Hose I.D.		Pipe Thread	
	1	2	1	2
4503-4-2	1/4	1/8	1/8	1/8
4503-6-4	3/8	1/4	1/4	1/4
4503-8-6	1/2	3/8	3/8	3/8
4503-10-8	5/8	1/2	1/2	1/2
4503-12-12	3/4	3/4	3/4	3/4
4503-16-16	1	1	1	1
4503-20-20	1-1/4	1-1/4	1-1/4	1-1/4

More sizes available

**90° O-RING HOSE INSERT**



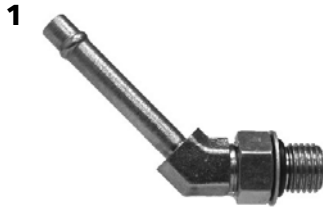
Part #	Hose I.D.		O-Ring	
	1	2	1	2
4601-NWO-4	1/4	7/16-20	7/16-20	7/16-20
4601-NWO-5	5/16	1/2-20	1/2-20	1/2-20
4601-NWO-6	3/8	9/16-1	9/16-1	9/16-1
4601-NWO-8	1/2	3/4-16	3/4-16	3/4-16
4601-NWO-10	5/8	7/8-14	7/8-14	7/8-14
4601-NWO-10-8	5/8	3/4-16	3/4-16	3/4-16
4601-NWO-12	3/4	1-1/16-12	1-1/16-12	1-1/16-12
4601-NWO-16	1	1-5/16-12	1-5/16-12	1-5/16-12
4601-NWO-16-12	1	1-1/16-12	1-1/16-12	1-1/16-12
4601-NWO-20	1-1/4	1-5/8-12	1-5/8-12	1-5/8-12
4601-NWO-24	1-1/2	1-7/8-12	1-7/8-12	1-7/8-12
4601-NWO-24-20	1-1/2	1-5/8-12	1-5/8-12	1-5/8-12
4601-NWO-32	2	2-1/2-12	2-1/2-12	2-1/2-12

More sizes available



Hydraulic Adapters

**45° O-RING HOSE INSERT**



<i>Part #</i>	<i>Hose I.D.</i>	<i>O-Ring</i>
4603-NWO-4	1/4	7/16-20
4603-NWO-6	3/8	9/16-18
4603-NWO-8	1/2	3/4-16
4603-NWO-12	3/4	1-1/12-12
4603-NWO-16	1	1-5/16-12
4603-NWO-20	1-1/4	1-5/8-12
4603-NWO-20-16	1-1/4	1-5/16-12
4603-NWO-20-24	1-1/4	1-7/8-12
4603-NWO-24	1-1/2	1-7/8-12
4603-NWO-24-20	1-1/2	1-5/8-12
4603-NWO-32	2	2-1/2-12

More sizes available

**O-RING HOSE INSERT**



<i>Part #</i>	<i>Hose I.D.</i>	<i>O-Ring</i>
4604-O-4	1/4	7/16-20
4604-O-5	5/16	1/2-20
4604-O-6	3/8	9/16-18
4604-O-8	1/2	3/4-16
4604-O-10	5/8	7/8-14
4604-O-10-8	5/8	3/4-16
4604-O-12	3/4	1-1/16-12
4604-O-16	1	1-5/16-12
4604-O-16-12	1	1-1/16-12
4604-O-20	1-1/4	1-5/8-12
4604-O-20-16	1-1/4	1-5/16-20
4604-O-24	1-1/2	1-7/8-12
4604-O-24-20	1-1/2	1-5/8-12

More sizes available

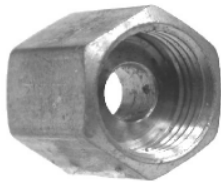


**Hydraulic  
Adapters**



**STEEL 37° JIC FLARE  
TUBE FITTINGS**

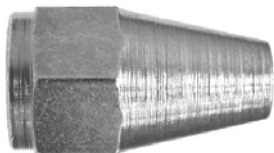
**JIC SHORT TUBE NUT**



Part #	Tube O.D.	JIC Thread Size
0302-4	1/4	7/16-20
0302-6	3/8	9/16-18
0302-8	1/2	3/4-16
0302-10	5/8	7/8-14
0302-12	3/4	1-1/16-12
0302-16	1	1-5/16-12

**LONG JIC TUBE NUT**

SAE 070111

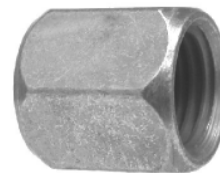


Part #	Tube O.D.	JIC Thread Size
818L-4	1/4	7/16-20
818L-5	5/16	1/2-20
818L-6	3/8	9/16-18
818L-8	1/2	3/4-16
818L-10	5/8	7/8-14
818L-12	3/4	1-1/16-12
818L-14	7/8	1-3/16-12
818L-16	1	1-5/16-12
818L-20	1-1/4	1-5/8-12
818L-24	1-1/2	1-7/8-12
818L-32	2	2-1/2-12

*Also available in Stainless Steel*

**JIC CAP**

SAE 070112  
MS 51532



Part #	Tube O.D.	JIC Thread Size
820-02S	1/8	5/16-24
820-03S	3/16	3/8-24
820-04S	1/4	7/16-20
820-05S	5/16	1/2-20
820-06S	3/8	9/16-18
820-08S	1/2	3/4-16
820-10S	5/8	7/8-14
820-12S	3/4	1-1/6-12
820-14S	7/8	1-3/16-12
820-16S	1	1-5/16-12
820-20S	1-1/4	1-5/8-12
820-24S	1-1/2	1-7/8-12
820-32S	2	2-1/2-12

*Also available in Stainless Steel*

“The future’s always looked bleak till people with brains and faith and courage who dreamed and dared to takes risks found away to make it better. If we’re free to dare - and we are - then we’re free to give - and we are - then we’re free to shape the future and have within our grasp all that we dream that future will be.”

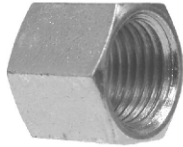
— President Ronald Reagan, 1981

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**JIC TUBE NUT  
(SLEEVE REQUIRED)**

SAE 070110  
MS 51531

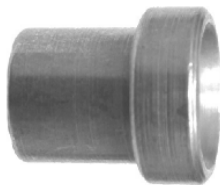


Part #	Tube O.D.	JIC Thread Size
818-02S	1/8	5/16-24
818-03S	3/16	3/8-24
818-04S	1/4	7/16-20
818-05S	5/16	1/2-20
818-06S	3/8	9/16-18
818-08S	1/2	3/4-16
818-10S	5/8	7/8-14
818-12S	3/4	1-1/6-12
818-14S	7/8	1-3/16-12
818-16S	1	1-5/16-12
818-20S	1-1/4	1-5/8-12
818-24S	1-1/2	1-7/8-12
818-32S	2	2-1/2-12

*Also available in Stainless Steel*

**JIC TUBE SLEEVE**

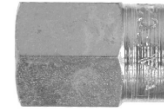
SAE 070115  
MS 51533



Part #	Tube O.D.
819-02S	1/8
819-03S	3/16
819-04S	1/4
819-05S	5/16
819-06S	3/8
819-08S	1/2
819-10S	5/8
819-12S	3/4
819-14S	7/8
819-16S	1
819-20S	1-1/4
819-24S	1-1/2
819-32S	2

*Also available in Stainless Steel*

**JIC FLARELESS TUBE NUT**



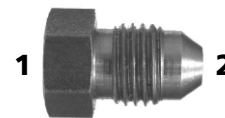
Part #	Tube O.D.	JIC Thread Size
V0318-3	3/16	3/8-24
V0318-4	1/4	7/16-20
V0318-5	5/16	1/2-20
V0318-6	3/8	9/16-18
V0318-8	1/2	3/4-16
V0318-10	5/8	7/8-14
V0318-12	3/4	1-1/6-12
V0318-16	1	1-5/16-12
V0318-20	1-1/4	1-5/8-12
V0318-24	1-1/2	1-7/8-12
V0318-32	2	2-1/2-12

**JIC FLARELESS TUBE-SLEEVE**



Part #	Tube O.D.
V0319-3	3/16
V0319-4	1/4
V0319-5	5/16
V0319-6	3/8
V0319-8	1/2
V0319-10	5/8
V0319-12	3/4
V0319-16	1
V0319-20	1-1/4
V0319-24	1-1/2
V0319-32	2

**JIC BRAZE TUBE UNION**



Part #	Braze Port 1	JIC Thread Size 2
0403-4	1/4	7/16-20
0403-6	3/8	9/16-18
0403-8	1/2	3/4-16
0403-10	5/8	7/8-14
0403-12	3/4	1-1/6-12
0403-14	7/8	1-3/16-12
0403-16	1	1-5/16-12
0403-20	1-1/4	1-5/8-12
0403-24	1-1/2	1-7/8-12
0403-32	2	2-1/2-12

**Hydraulic Adapters**

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**JIC TUBE UNION**

SAE 070101  
MS 51501



Part #	Thread Size 1	Thread Size 2
815-02-02S	5/16-24	5/16-24
815-03-03S	3/8-24	3/8-24
815-04-04S	7/16-20	7/16-20
815-05-05S	1/2-20	1/2-20
815-06-06S	9/16-18	9/16-18
815-06-04S	9/16-18	7/16-20
815-06-05S	9/16-18	1/2-20
815-08-08S	3/4-16	3/4-16
815-08-04S	3/4-16	7/16-20
815-08-06S	3/4-16	9/16-18
815-10-10S	7/8-14	7/8-14
815-10-04S	7/8-14	7/16-20
815-10-06S	7/8-14	9/16-18
815-10-08S	7/8-14	3/4-16
815-12-12S	1-1/16-12	1-1/16-12
815-12-06S	1-1/16-12	9/16-18
815-12-08S	1-1/16-12	3/4-16
815-12-10S	1-1/16-12	7/8-14
815-14-14S	1-3/16-12	1-3/16-12
815-16-16S	1-5/16-12	1-5/16-12
815-16-10S	1-5/16-12	7/8-14
815-16-12S	1-5/16-12	1-1/16-12
815-20-20S	1-5/8-12	1-5/8-12
815-20-12S	1-5/8-12	1-1/16-12
815-20-16S	1-5/8-12	1-5/16-12
815-24-24S	1-7/8-12	1-7/8-12
815-24-20S	1-7/8-12	1-5/8-12
815-32-32S	2-1/2-12	2-1/2-12

Also available in Stainless Steel

**JIC LARGE HEX TUBE UNION**



Part #	Thread Size 1	Thread Size 2
815LH-04-04S	7/16-20	7/16-20
815LH-06-06S	9/16-18	9/16-18
815LH-08-08S	3/4-16	3/4-16
815LH-10-10S	7/8-14	7/8-14
815LH-12-12S	1-1/16-12	1-1/16-12
815LH-16-16S	1-5/16-12	1-5/16-12
815LH-20-20S	1-5/8-12	1-5/8-12

Also available in Stainless Steel

**JIC MALE CONNECTOR**

SAE 070102  
MS 51500



Part #	JIC Thread Size 1	Male Pipe Thread
816-02-02S	5/16-24	1/8
816-02-04S	5/16-24	1/4
816-03-02S	3/8-24	1/8
816-03-04S	3/8-24	1/4
816-04-02S	7/16-20	1/8
816-04-04S	7/16-20	1/4
816-04-06S	7/16-20	3/8
816-04-08S	7/16-20	1/2
816-05-02S	1/2-20	1/8
816-05-04S	1/2-20	1/4
816-05-06S	1/2-20	3/8
816-06-02S	9/16-18	1/8
816-06-04S	9/16-18	1/4
816-06-06S	9/16-18	3/8
816-06-08S	9/16-18	1/2
816-06-12S	9/16-18	3/4
816-08-04S	3/4-16	1/4
816-08-06S	3/4-16	3/8
816-08-08S	3/4-16	1/2
816-08-12S	3/4-16	3/4
816-08-16S	3/4-16	1
816-10-04S	7/8-14	1/4
816-10-06S	7/8-14	3/8
816-10-08S	7/8-14	1/2
816-10-12S	7/8-14	3/4
816-10-16S	7/8-14	1
816-12-06S	1-1/16-12	3/8
816-12-08S	1-1/16-12	1/2
816-12-12S	1-1/16-12	3/4
816-12-16S	1-1/16-12	1
816-12-20S	1-1/16-12	1-1/4
816-14-12S	1-3/16-12	3/4
816-14-16S	1-3/16-12	1
816-16-12S	1-5/16-12	3/4
816-16-16S	1-5/16-12	1
816-16-20S	1-5/16-12	1-1/4
816-16-24S	1-5/16-12	1-1/2
816-20-12S	1-5/8-12	3/4
816-20-12S	1-5/8-12	1
816-20-20S	1-5/8-12	1-1/4
816-20-24S	1-5/8-12	1-1/2
816-24-16S	1-7/8-12	1
816-24-20S	1-7/8-12	1-1/4
816-24-24S	1-7/8-12	1-1/2
816-24-32S	1-7/8-12	2
816-32-16S	2-1/2-12	1
816-32-20S	2-1/2-12	1-1/4
816-32-24S	2-1/2-12	1-1/2
816-32-32S	2-1/2-12	2
816-40-40S	3-12	2-1/2

Also available in Stainless Steel



**JIC LONG MALE CONNECTOR**

SAE 070102  
MS 51500

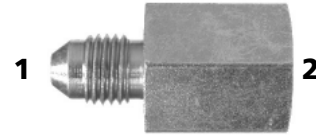


Part #	JIC Thread Size 1	Male Pipe Size 2	Length
816L-04-02S	7/17-20	1/8	1.81
816L-04-04S	7/16-20	1/4	2.35
816L-06-04S	9/16-18	1/4	2.35
816L-06-06S	9/16-18	3/8	2.50
816L-08-06S	3/4-16	3/8	2.75
816L-08-08S	3/4-16	1/2	3.13
816L-10-08S	7/8-14	1/2	3.13
816L-12-12S	1-1/16-12	3/4	3.50
816L-16-16S	1-5/16-12	1	4

*Also available in Stainless Steel*

**JIC FEMALE CONNECTOR**

SAE 070103  
MS 51503



Part #	JIC Thread Size 1	Male Pipe Thread
854-02-02S	5/16-24	1/8
854-03-02S	3/8-24	1/8
854-03-04S	3/8-24	1/4
854-04-02S	7/16-20	1/8
854-04-04S	7/16-20	1/4
854-04-06S	7/16-20	3/8
854-05-02S	1/2-20	1/8
854-05-04S	1/2-20	1/4
854-06-02S	9/16-18	1/8
854-06-04S	9/16-18	1/4
854-06-06S	9/16-18	3/8
854-06-08S	9/16-18	1/2
854-08-04S	3/4-16	1/4
854-08-06S	3/4-16	3/8
854-08-08S	3/4-16	1/2
854-08-12S	3/4-16	3/4
854-10-06S	7/8-14	3/8
854-10-08S	7/8-14	1/2
854-10-12S	7/8-14	3/4
854-12-08S	1-1/16-12	1/2
854-12-12S	1-1/16-12	3/4
854-12-16S	1-1/16-12	1
854-14-12S	1-3/16-12	3/4
854-16-12S	1-5/16-12	3/4
854-16-16S	1-5/16-12	1
854-16-20S	1-5/16-12	1-1/4
854-20-20S	1-5/8-12	1-1/4
854-24-24S	1-7/8-12	1-1/2
854-32-32S	2-1/2-12	2

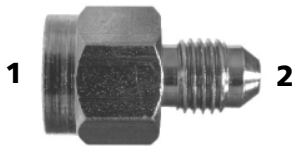
*Also available in Stainless Steel*

**Hydraulic  
Adapters**





**TUBE REDUCER/EXPANDER**



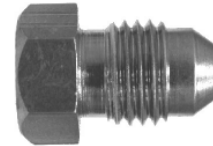
<i>Part #</i>	<i>Thread Size 1</i>	<i>Thread Size 2</i>
860-06-04S	9/16-18	7/16-20
860-06-05S	9/16-18	1/2-20
860-08-04S	3/4-16	7/16-20
860-08-06S	3/4-16	9/16-18
860-08-12S*	3/4-16	1-1/16-12
860-10-04S	7/8-14	7/16-20
860-10-06S	7/8-14	9/16-18
860-10-08S	7/8-14	3/4-16
860-12-04S	1-1/16-12	7/16-20
860-12-06S	1-1/16-12	9/16-18
860-12-08S	1-1/16-12	3/4-16
860-12-10S	1-1/16-12	7/8-14
860-12-16S*	1-1/16-12	1-5/16-12
860-14-06S	1-3/16-12	9/16-18
860-14-08S	1-3/16-12	3/4-16
860-14-10S	1-3/16-12	7/8-14
860-14-12S	1-3/16-12	1-1/16-12
860-16-04S	1-5/16-12	7/16-20
860-16-06S	1-5/16-12	9/16-18
860-16-08S	1-5/16-12	3/4-16
860-16-10S	1-5/16-12	7/8-14
860-16-12S	1-5/16-12	1-1/16-12
860-16-14S	1-5/16-12	1-3/16-12
860-16-20S*	1-5/16-12	1-5/8-12
860-20-08S	1-5/8-12	3/4-16
860-20-12S	1-5/8-12	1-1/16-12
860-20-16S	1-5/8-12	1-5/16-12
860-24-16S	1-7/8-12	1-5/8-12
860-32-24S	2-1/2-12	1-7/8-12

\**Tube Expander*  
*Special Jump sizes also available*

Send DFBurnham all your high volume quotes!

**PLUG**

SAE 070109  
MS 51518



<i>Part #</i>	<i>Tube O.D.</i>	<i>JIC Thread Size</i>
806-02S	1/8	5/16-24
806-03S	3/16	3/8-24
806-04S	1/4	7/16-20
806-05S	5/16	1/2-20
806-06S	3/8	9/16-18
806-08S	1/2	3/4-16
806-10S	5/8	7/8-14
806-12S	3/4	1-1/6-12
806-14S	7/8	1-3/16-12
806-16S	1	1-5/16-12
806-20S	1-1/4	1-5/8-12
806-24S	1-1/2	1-7/8-12
806-32S	2	2-1/2-12

**JIC UNION ELBOW**



<i>Part #</i>	<i>Thread Size 1</i>	<i>Thread Size 2</i>
821-02-02S	5/16-24	5/16-24
821-03-03S	3/8-24	3/8-24
821-04-04S	7/16-20	7/16-20
821-05-05S	1/2-20	1/2-20
821-06-06S	9/16-18	9/16-18
821-06-04S	9/16-18	7/16-20
821-08-08S	3/4-16	3/4-16
821-08-04S	3/4-16	7/16-20
821-08-06S	3/4-16	9/16-18
821-10-10S	7/8-14	7/8-14
821-10-08S	7/8-14	3/4-16
821-12-12S	1-1/16-12	1-1/16-12
821-12-08S	1-1/16-12	3/4-16
821-14-14S	1-3/16-12	1-3/16-12
821-16-16S	1-5/16-12	1-5/16-12
821-16-12S	1-5/16-12	1-1/16-12
821-20-20S	1-5/8-12	1-5/8-12
821-24-24S	1-7/8-12	1-7/8-12
821-32-32S	2-1/2-12	2-1/2-12

*Also available in Stainless Steel*  
*More sizes available*



**Hydraulic  
Adapters**

**SHAPES STEEL 37° JIC FLARE**

**JIC MALE ELBOW**

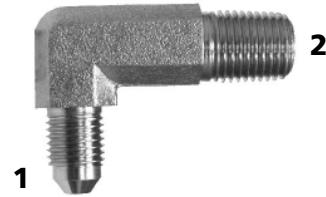


Part #	JIC Thread Size 1	Male Pipe Size 2
822-02-02S	5/16-24	1/8
822-02-04S	5/16-24	1/4
822-03-02S	3/8-24	1/8
822-03-04S	3/8-24	1/4
822-04-02S	7/16-20	1/8
822-04-04S	7/16-20	1/4
822-04-06S	7/16-20	3/8
822-04-08S	7/16-20	1/2
822-05-02S	1/2-20	1/8
822-05-04S	1/2-20	1/4
822-05-06S	1/2-20	3/8
822-06-02S	9/16-18	1/8
822-06-04S	9/16-18	1/4
822-06-06S	9/16-18	3/8
822-06-08S	9/16-18	1/2
822-06-12S	9/16-18	3/4
822-08-04S	3/4-16	1/4
822-08-06S	3/4-16	3/8
822-08-08S	3/4-16	1/2
822-08-12S	3/4-16	3/4
822-08-16S	3/4-16	1
822-10-06S	7/8-14	3/8
822-10-08S	7/8-14	1/2
822-10-12S	7/8-14	3/4
822-10-16S	7/8-14	1
822-12-06S	1-1/16-12	3/8
822-12-08S	1-1/16-12	1/2
822-12-12S	1-1/16-12	3/4
822-12-16S	1-1/16-12	1
822-12-20S	1-1/16-12	1-1/4
822-14-12S	1-3/16-12	3/4
822-14-16S	1-3/16-12	1
822-16-12S	1-5/16-12	3/4
822-16-16S	1-5/16-12	1
822-16-20S	1-5/16-12	1-1/4
822-20-16S	1-5/8-12	1
822-20-20S	1-5/8-12	1-1/4
822-20-24S	1-5/8-12	1-1/2
822-24-20S	1-7/8-12	1-1/4
822-24-24S	1-7/8-12	1-1/2
822-24-32S	1-7/8-12	2
822-32-24S	2-1/2-12	1-1/2
822-32-32S	2-1/2-12	2
822-40-40S	3-12	2-1/2

*Also available in Stainless Steel*

**LONG MALE ELBOW**

SAE071502



Part #	Thread Size 1	Thread Size 2	Length
877-04-02S	7/16-20	1/8	1.17"
877-04-04S	7/16-20	1/4	1.58"
877-05-02S	1/2-20	1/8	1.22"
877-05-04S	1/2-20	1/4	1.55"
877-06-02S	9/16-18	1/8	1.58"
877-06-04S	9/16-18	1/4	1.58"
877-06-06S	9/16-18	3/8	1.83"
877-08-04S	3/4-16	1/4	1.83"
877-08-06S	3/4-16	3/8	1.83"
877-08-08S	3/4-16	1/2	2.17"
877-10-08S	7/8-14	1/2	2.17"
877-12-08S	1-1/16-12	1/2	2.24"
877-12-12S	1-1/16-12	3/4	2.44"
877-14-12S	1-3/16-12	3/4	2.66"
877-16-16S	1-5/16-12	1	3.02"
877-20-20S	1-5/8-12	1-1/4	3.69"
877-24-24S	1-7/8-12	1-1/2	4.11"

*Also available in Stain Steel*

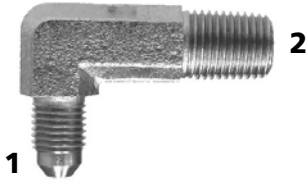
*Send DFBurnham and Company  
all your high volume quotes!*

**Remember, half the people you  
know are below average.**

**Hydraulic  
Adapters**

**JIC EXTRA-LONG MALE ELBOW**

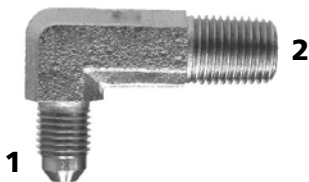
SAE140130



Part #	Thread Size 1	Thread Size 2	Length
878-04-02S	7/16-20	1/8	1.56"
878-04-04S	7/16-20	1/4	2.11"
878-05-02S	1/2-20	1/8	1.63"
878-05-04S	1/2-20	1/4	2.04"
878-06-02S	9/16-18	1/8	2.04"
878-06-04S	9/16-18	1/4	2.08"
878-06-06S	9/16-18	3/8	2.44"
878-08-04S	3/4-16	1/4	2.42"
878-08-06S	3/4-16	3/8	2.42"
878-08-08S	3/4-16	1/2	2.88"
878-10-08S	7/8-14	1/2	2.88"
878-12-08S	1-1/16-12	1/2	3.25"
878-12-12S	1-1/16-12	3/4	3.28"
878-14-12S	1-3/16-12	3/4	3.63"
878-16-16S	1-5/16-12	1	4.05"
878-20-20S	1-5/8-12	1-1/4	5.00"
878-24-24S	1-7/8-12	1-1/2	5.50"

**JIC EXTRA EXTRA LONG  
MALE ELBOW**

SAE071502



Part #	Thread Size 1	Thread Size 2	Length
2501-LLL-4-2	7/16-20	1/8	2.31"
2501-LLL-4-4	7/16-20	1/4	3.00"
2501-LLL-6-4	9/16-18	1/4	3.06"
2501-LLL-6-6	9/16-18	3/8	3.06"
2501-LLL-8-6	3/4-16	3/8	3.75"
2501-LLL-8-8	3/4-16	1/2	3.75"
2501-LLL-10-8	7/8-14	1/2	4.50"
2501-LLL-12-12	1-1/16-12	3/4	5.03"
2501-LLL-01-16	1-5/16-12	1	6.34"

Hard Work pays off in the future.  
Laziness pays off now.

**JIC MALE ELBOW SWIVEL**

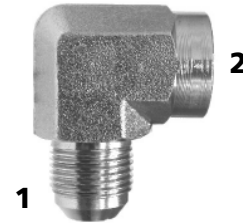
• Swivel for  
Installation  
Only



Part #	JIC Thread Size 1	Male Pipe Size 2
624-S-4-4	7/16-20	1/4
624-S-6-4	9/16-18	1/4
624-S-6-6	9/16-18	3/8
624-S-8-6	3/4-16	3/8
624-S-8-8	3/4-16	1/2
624-S-10-8	7/8-14	1/2
624-S-12-12	1-1/16-12	3/4

**JIC FEMALE ELBOW**

SAE 070203  
MS 51506



Part #	JIC Thread Size 1	Female Pipe Thread
855-04-02S	7/16-20	1/8
855-04-04S	7/16-20	1/4
855-04-06S	7/16-20	3/8
855-05-02S	1/2-20	1/8
855-05-04S	1/2-20	1/4
855-06-02S	9/16-18	1/8
855-06-04S	9/16-18	1/4
855-06-06S	9/16-18	3/8
855-06-08S	9/16-18	1/2
855-08-04S	3/4-16	1/4
855-08-06S	3/4-16	3/8
855-08-08S	3/4-16	1/2
855-08-12S	3/4-16	3/4
855-10-06S	7/8-14	3/8
855-10-08S	7/8-14	1/2
855-12-08S	1-1/16-12	1/2
855-12-12S	1-1/16-12	3/4
855-14-12S	1-3/16-12	3/4
855-16-12S	1-5/16-12	3/4
855-16-16S	1-5/16-12	1
855-20-20S	1-5/8-12	1-1/4
855-24-24S	1-7/8-12	1-1/2
855-32-32S	2-1/2-12	2

Also available in Stainless Steel



**JIC MALE 45° ELBOW**



Part #	JIC Thread	Male Pipe
	Size 1	Size 2
823-02-02S	5/16-24	1/8
823-03-02S	3/8-24	1/8
823-04-02S	7/16-20	1/8
823-04-04S	7/16-20	1/4
823-04-06S	7/16-20	3/8
823-05-02S	1/2-20	1/8
823-05-04S	1/2-20	1/4
823-06-02S	9/16-18	1/8
823-06-04S	9/16-18	1/4
823-06-06S	9/16-18	3/8
823-06-08S	9/16-18	1/2
823-06-12S	9/16-18	3/4
823-08-04S	3/4-16	1/4
823-08-06S	3/4-16	3/8
823-08-08S	3/4-16	1/2
823-08-12S	3/4-16	3/4
823-10-06S	7/8-14	3/8
823-10-08S	7/8-14	1/2
823-10-12S	7/8-14	3/4
823-12-06S	1-1/16-12	3/8
823-12-08S	1-1/16-12	1/2
823-12-12S	1-1/16-12	3/4
823-12-16S	1-1/16-12	1
823-14-12S	1-3/16-12	3/4
823-16-12S	1-5/16-12	3/4
823-16-16S	1-5/16-12	1
823-16-20S	1-5/16-12	1-1/4
823-20-16S	1-5/8-12	1
823-20-20S	1-5/8-12	1-1/4
823-24-24S	1-7/8-12	1-1/2
823-32-32S	2-1/2-12	2
823-40-40S	3-12	2-1/2

**JIC 45° UNION ELBOW**



Part #	JIC Thread	JIC Thread
	Size 1	Size 2
2504-6	9/16-18	9/16-18
2504-8	3/4-16	3/4-16
2504-10	7/8-14	7/8-14
2504-12	1-1/16-12	1-1/16-12
2504-16	1-5/16-12	1-5/16-12
2504-20	1-5/8-12	1-5/8-12

**JIC 45° UNION ELBOW**



Part #	JIC Thread	Female Pipe
	Size 1	Size 2
2504-6-4	9/16-18	1/4
2504-8-6	3/4-16	3/8
2504-10-8	7/8-14	1/2
2504-12-12	1-1/16-12	3/4

More sizes available

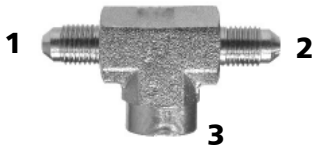
**JIC MALE BRANCH TEE**



Part #	JIC Thread	Pipe Thread
	Size 1 & 2	Size 3
825-02-02S	5/16-24	1/8
825-03-02S	3/8-24	1/8
825-04-02S	7/16-20	1/8
825-04-04S	7/16-20	1/4
825-05-02S	1/2-20	1/8
825-05-04S	1/2-20	1/4
825-06-04S	9/16-18	1/4
825-06-06S	9/16-18	3/8
825-08-04S	3/4-16	1/4
825-08-06S	3/4-16	3/8
825-08-08S	3/4-16	1/2
825-10-06S	7/8-14	3/8
825-10-08S	7/8-14	1/2
825-12-08S	1-1/16-12	1/2
825-12-12S	1-1/16-12	3/4
825-14-12S	1-3/16-12	3/4
825-16-12S	1-5/16-12	3/4
825-16-16S	1-5/16-12	1
825-20-20S	1-5/8-12	1-1/4
825-24-24S	1-7/8-12	1-1/2
825-32-32S	2-1/2-12	2

Also available in Stainless Steel

**JIC FEMALE BRANCH TEE**

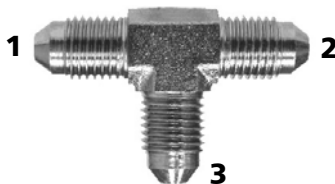


Part #	JIC Thread Size 1 & 2	Pipe Thread Size 3
856-02-02S	5/16-24	1/8
856-03-02S	3/8-24	1/8
856-04-02S	7/16-20	1/8
856-04-04S	7/16-20	1/4
856-05-02S	1/2-20	1/8
856-06-04S	9/16-18	1/4
856-06-06S	9/16-18	3/8
856-08-06S	3/4-16	3/8
856-08-08S	3/4-16	1/2
856-10-08S	7/8-14	1/2
856-12-08S	1-1/16-12	1/2
856-12-12S	1-1/16-12	3/4
856-14-12S	1-3/16-12	3/4
856-16-16S	1-5/16-12	1
856-20-20S	1-5/8-12	1-1/4
856-24-24S	1-7/8-12	1-1/2
856-32-32S	2-1/2-12	2

Also available in Stainless Steel

**JIC UNION TEE**

SAE 070401  
MS 51510

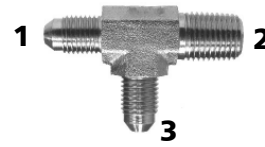


Part #	Thread Size 1 & 2	Thread Size 3
824-02S	5/16-24	5/16-24
824-03S	3/8-24	3/8-24
824-04S	7/16-20	7/16-20
824-05S	1/2-20	1/2-20
824-06S	9/16-18	9/16-18
824-08S	3/4-16	3/4-16
824-10S	7/8-14	7/8-14
824-12S	1-1/16-12	1-1/16-12
824-14S	1-3/16-12	1-3/16-12
824-16S	1-5/16-12	1-5/16-12
824-20S	1-5/8-12	1-5/8-12
824-24S	1-7/8-12	1-7/8-12
824-32S	2-1/2-12	2-1/2-12

More reducing sizes available  
Also available in Stainless Steel

**JIC MALE RUN TEE**

SAE 070424  
MS 51511

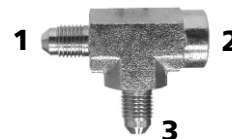


Part #	JIC Thread Size 1 & 3	Male Pipe Size 2
826-02-02S	5/16-24	1/8
826-03-02S	3/8-24	1/8
826-04-02S	7/16-20	1/8
826-04-04S	7/16-20	1/4
826-05-02S	1/2-20	1/8
826-05-04S*	1/2-20	1/4
826-06-04S	9/16-18	1/4
826-06-06S	9/16-18	3/8
826-08-04S	3/4-16	1/4
826-08-06S	3/4-16	3/8
826-08-08S	3/4-16	1/2
826-10-06S*	7/8-14	3/8
826-10-08S	7/8-14	1/2
826-12-08S	1-1/16-12	1/2
826-12-12S	1-1/16-12	3/4
826-14-12S	1-3/16-12	3/4
826-16-12S*	1-5/16-12	3/4
826-16-16S	1-5/16-12	1
826-20-20S	1-5/8-12	1-1/4
826-24-24S	1-7/8-12	1-1/2
826-32-32S	2-1/2-12	2

\*Braze-on Style

Also available in Stainless Steel.  
More sizes available

**JIC FEMALE RUN TEE**



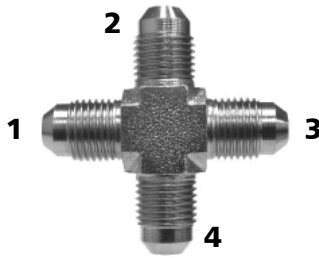
Part #	JIC Thread Size 1 & 2	Pipe Thread Size 3
857-03-02S	3/8-24	1/8
857-04-02S	7/16-20	1/8
857-04-04S	7/16-20	1/4
857-05-02S	1/2-20	1/8
857-05-04S	1/2-20	1/4
857-06-04S	9/16-18	1/4
857-06-06S	9/16-18	3/8
857-08-06S	3/4-16	3/8
857-08-08S	3/4-16	1/2
857-10-08S	7/8-14	1/2
857-12-08S	1-1/16-12	1/2
857-12-12S	1-1/16-12	3/4
857-14-12S	1-3/16-12	3/4
857-16-16S	1-5/16-12	1
857-20-20S	1-5/8-12	1-1/4
857-24-24S	1-7/8-12	1-1/2
857-32-32S	2-1/2-12	2

Send DFBurnham all your high volume quotes!



Hydraulic Adapters

**JIC UNION CROSS**



Part #	Thread Size 1 & 2	Thread Size 3 & 4
827-04S	7/16-20	7/16-20
827-05S	1/2-20	1/2-20
827-06S	9/16-18	9/16-18
827-08S	3/4-16	3/4-16
827-10S	7/8-14	7/8-14
827-12S	1-1/16-12	1-1/16-12
827-14S	1-3/16-12	1-3/16-12
827-16S	1-5/16-12	1-5/16-12
827-20S	1-5/8-12	1-5/8-12
827-24S	1-7/8-12	1-7/8-12

More sizes available

**BULKHEAD LOCK NUT**

SAE 070118  
MS 51860

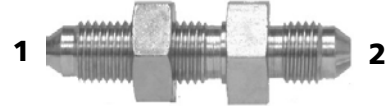


Part #	Tube O.D.	Thread Size
924-04S	1/4	7/16-20
924-05S	5/16	1/2-20
924-06S	3/8	9/16-18
924-08S	1/2	3/4-16
924-10S	5/8	7/8-14
924-12S	3/4	1-1/16-12
924-14S	7/8	1-3/16-12
924-16S	1	1-5/16-12
924-20S	1-1/4	1-5/8-12
924-24S	1-1/2	1-7/8-12
924-32S	2	2-1/2-12

**STEEL BULKHEAD FITTINGS**

**JIC BULKHEAD UNION**

SAE 070601  
MS 51520

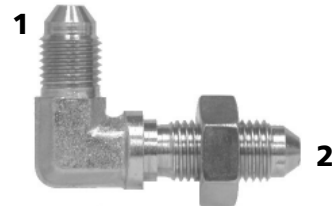


Part #	Thread Size 1	Bulkhead Size 2
832-04-04S	7/16-20	7/16-20
832-05-05S	1/2-20	1/2-20
832-06-06S	9/16-18	9/16-18
832-08-08S	3/4-16	3/4-16
832-10-10S	7/8-14	7/8-14
832-12-12S	1-1/16-12	1-1/16-12
832-14-14S	1-3/16-12	1-3/16-12
832-16-16S	1-5/16-12	1-5/16-12
832-20-20S	1-5/8-12	1-5/8-12
832-24-24S	1-7/8-12	1-7/8-12
832-32-32S	2-1/2-12	2-1/2-12

Also available in Stainless Steel

**JIC BULKHEAD UNION ELBOW**

SAE 070701  
MS 51507



Part #	Thread Size 1	Bulkhead Thread 2
833-04-04S	7/16-20	7/16-20
833-05-05S	1/2-20	1/2-20
833-06-06S	9/16-18	9/16-18
833-08-08S	3/4-16	3/4-16
833-10-10S	7/8-14	7/8-14
833-12-12S	1-1/16-12	1-1/16-12
833-14-14S	1-3/16-12	1-3/16-12
833-16-16S	1-5/16-12	1-5/16-12
833-20-20S	1-5/8-12	1-5/8-12
833-24-24S	1-7/8-12	1-7/8-12

Also available in Stainless Steel

Lock Nut not included on above parts

**Hydraulic  
Adapters**

**JIC BULKHEAD UNION 45° ELBOW**

SAE 070801  
MS 51509



Part #	Thread		Bulkhead Thread 2
	Size 1	Size 2	
837-04-04S	7/16-20	7/16-20	7/16-20
837-05-05S	1/2-20	1/2-20	1/2-20
837-06-06S	9/16-18	9/16-18	9/16-18
837-08-08S	3/4-16	3/4-16	3/4-16
837-10-10S	7/8-14	7/8-14	7/8-14
837-12-12S	1-1/16-12	1-1/16-12	1-1/16-12
837-14-14S	1-3/16-12	1-3/16-12	1-3/16-12
837-16-16S	1-5/16-12	1-5/16-12	1-5/16-12
837-20-20S	1-5/8-12	1-5/8-12	1-5/8-12
837-24-24S	1-7/8-12	1-7/8-12	1-7/8-12

*Also available in Stainless Steel*

**JIC BULKHEAD BRANCH TEE**

SAE 070959  
MS 51515

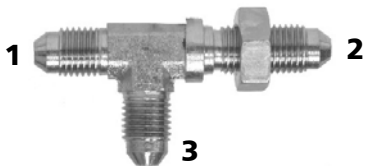


Part #	Thread		Bulkhead Thread 3
	Size 1 & 2	Size 3	
834-04-04S	7/16-20	7/16-20	7/16-20
834-05-05S	1/2-20	1/2-20	1/2-20
834-06-06S	9/16-18	9/16-18	9/16-18
834-08-08S	3/4-16	3/4-16	3/4-16
834-10-10S	7/8-14	7/8-14	7/8-14
834-12-12S	1-1/16-12	1-1/16-12	1-1/16-12
834-16-16S	1-5/16-12	1-5/16-12	1-5/16-12
834-20-20S	1-5/8-12	1-5/8-12	1-5/8-12
834-24-24S	1-7/8-12	1-7/8-12	1-7/8-12
834-32-32S	2-1/2-12	2-1/2-12	2-1/2-12

*Also available in Stainless Steel*

**JIC BULKHEAD RUN TEE**

SAE 070958  
MS 51516

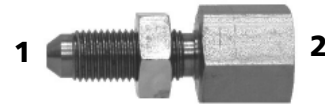


Part #	Thread		Bulkhead Thread 2
	Size 1 & 3	Size 2	
835-04-04S	7/16-20	7/16-20	7/16-20
835-06-06S	9/16-18	9/16-18	9/16-18
835-08-08S	3/4-16	3/4-16	3/4-16
835-10-10S	7/8-14	7/8-14	7/8-14
835-12-12S	1-1/16-12	1-1/16-12	1-1/16-12
835-16-16S	1-5/16-12	1-5/16-12	1-5/16-12

*More Sizes available*

*Also available in Stainless Steel*

**JIC TO FEMALE PIPE BULKHEAD**



Part #	Thread		Female Pipe Size 2
	Size 1	Size 2	
831-04-02S	7/16-20	7/16-20	1/8
831-04-04S	7/16-20	7/16-20	1/4
831-05-02S	1/2-20	1/2-20	1/8
831-06-04S	9/16-18	9/16-18	1/4
831-06-06S	9/16-18	9/16-18	3/8
831-08-06S	3/4-16	3/4-16	3/8
831-08-08S	3/4-16	3/4-16	1/2
831-10-08S	7/8-14	7/8-14	1/2
831-12-12S	1-1/16-12	1-1/16-12	3/4
831-14-12S	1-3/16-12	1-3/16-12	3/4
831-16-16S	1-5/16-12	1-5/16-12	1
831-20-20S	1-5/8-12	1-5/8-12	1-1/4
831-24-24S	1-7/8-12	1-7/8-12	1-1/2
831-32-32S	2-1/2-12	2-1/2-12	2

*Also available in Stainless Steel*

**JIC TO MALE PIPE BULKHEAD**



Part #	Bulkhead		Pipe Thread 2
	Thread 1	Thread 2	
840-04-02S	7/16-20	7/16-20	1/8
840-04-04S	7/16-20	7/16-20	1/4
840-06-04S	9/16-18	9/16-18	1/4
840-06-06S	9/16-18	9/16-18	3/8
840-08-06S	3/4-16	3/4-16	3/8
840-08-08S	3/4-16	3/4-16	1/2
840-10-08S	7/8-14	7/8-14	1/2
840-12-12S	1-1/16-12	1-1/16-12	3/4
840-16-16S	1-5/16-12	1-5/16-12	1
840-20-20S	1-5/8-12	1-5/8-12	1-1/4
840-24-24S	1-7/8-12	1-7/8-12	1-1/2
840-32-32S	2-1/2-12	2-1/2-12	2

**MALE PIPE BULKHEAD**



Part #	JIC Thread		Pipe Thread Size 3
	Size 1 & 2	Size 3	
2708-4-4	7/16-20	7/16-20	1/4
2708-6-6	9/16-18	9/16-18	3/8
2708-8-8	3/4-16	3/4-16	1/2
2708-12-12	1-1/16-12	1-1/16-12	3/4

*Lock Nuts not included for any of the above parts.*

**Hydraulic  
Adapters**

**STEEL PIPE ADAPTERS**

**CONFORMANCE**

- SAE J514 for hex nipples, expanders, elbows, tees and crosses
- SAE J514, J530 and J531 for bushing and plugs.
- Temperature Range" -65° F to +400° F

**MATERIALS**

- Steel - SAE 12L14 carbon steel plated zinc with yellow dichromate or bright iridite finish.

**STYLES**

- Barstock
- Forged
- Chamfered-male ends have an internal 30-degree chamfer to mate with NPSM female swivel union connections. Many pipe fittings do not have this chamfer, as it is not required per SAE J514 standard.

**CAUTION:** Although most pipe fittings have sufficient structural integrity to support the weight of many components, consult our technical support department for guidance in selection of parts for this purpose.

**WORKING PRESSURES**

The following table lists the recommended working pressures for steel NPTF hydraulic pipe fittings manufactured in accordance with SAE standard J514. Many factors such as number of threads engaged, impulsing, vibration, mechanical shock removal and reassembly, thermal expansion and contractions may affect the integrity of the fitting or fitting connection. For these reasons, the recommended working pressures are actually lower than the capacity of the fittings. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions.

**SAE J514 NPTF PIPE WORKING PRESSURES**

Dash Size	NPTF Thread Size	4 TO 1 Minimum Burst PSI
-1	1/16-27	5000
-2	1/8-27	5000
-4	1/4-18	5000
-6	3/8-18	4000
-8	1/2-14	3000
-12	3/4-14	2500
-16	1-11 1/2	2000
-20	1-1/4-11 1/2	1150
-24	1-1/2-11 1/2	1000
-32	2-11 1/2	750

**Hydraulic Adapters**

**NPTF DRY SEAL PIPE ASSEMBLY INSTRUCTIONS**

**Step 1.** Inspect port and fitting to ensure that both are free of contaminants and excessive burrs and nicks..

**Step 2.** Apply a stripe of an anaerobic liquid pipe sealant around the male threads leaving the first two threads uncovered. If no liquid sealant is available, wrap Teflon tape 1-1/2 to 2 turns in a clockwise direction, viewed from the pipe end, leaving the first two threads uncovered. **Caution: Teflon tape and some pipe sealants are destructive to hydraulic components. Always use extreme caution and follow manufactures recommendations for proper application of any sealant in order to prevent contamination.**

**Step 3.** Screw finger tight into the port.

**Step 4.** Wrench tighten the fitting to the correct Turns Past Finger Tight position. (See following table). When installing elbows or tees, consider final orientation position as to not exceed the recommended TPFT.

**Caution: Never back off an installed pipe fitting to achieve proper alignment. Loosening installed pipe fittings will corrupt the seal and contribute to leakage and failure.**

Torque installation of pipe fittings is not a recommended practice. Thread taper and quality, different port and fitting materials, plating thickness and types, varying threads sealants, orientation, and other factors reduce the reliability of a torqued connection. If torque installation is required, refer to the following table for suggested torque values. consistency and quality for convenience.

Dash Size	NPTF Thread Size	Torque Foot/LBS
-2	1/8-27	12
-4	1/4-18	25
-6	3/8-18	40
-8	1/2-14	54
-12	3/4-14	78
-16	1-11 1/2	112
-20	1-1/4-11 1/2	154
-24	1-1/2-11 1/2	211
-32	2-11 1/2	300

Dash Size	NPTF Thread Size	Turns Past Finger Tight
-1	1/16-27	2.0 - 3.0
-2	1/8-27	2.0 - 3.0
-4	1/4-18	2.0 - 3.0
-6	3/8-18	2.0 - 3.0
-8	1/2-14	2.0 - 3.0
-12	3/4-14	2.0 - 3.0
-16	1-11 1/2	1.5 - 2.5
-20	1-1/4-11 1/2	1.5 - 2.5
-24	1-1/2-11 1/2	1.5 - 2.5
-32	2-11 1/2	1.5 - 2.5

See STRAIGHT THREAD O-RING FITTING SECTION for assembly instructions and torque values for pipe fittings with o-rings straight threads.





**PIPE COUPLING**

SAE 140138



Part #	Female Pipe 1	Female Pipe 2
910-02-02S	1/8	1/8
910-04-02S	1/4	1/8
910-04-04S	1/4	1/4
910-06-02S	3/8	1/8
910-06-04S	3/8	1/4
910-06-06S	3/8	3/8
910-08-04S	1/2	1/4
910-08-06S	1/2	3/8
910-08-08S	1/2	1/2
910-12-06S	3/4	3/8
910-12-08S	3/4	1/2
910-12-12S	3/4	3/4
910-16-08S	1	1/2
910-16-12S	1	3/4
910-16-16S	1	1
910-20-12S	1-1/4	3/4
910-20-16S	1-1/4	1
910-20-20S	1-1/4	1-1/4
910-24-24S	1-1/2	1-1/2
910-32-32S	2	2

*Also available in Stainless Steel*

**CLOSE NIPPLE**



Part #	Male Pipe 1 & 2	Length (Inches)
02-X-CLOSEXH	1/8	3/4
04-X-CLOSEXH	1/4	7/8
06-X-CLOSEXH	3/8	1
08-X-CLOSEXH	1/2	1-1/8
12-X-CLOSEXH	3/4	1-3/8
16-X-CLOSEXH	1	1-1/2
20-X-CLOSEXH	1-1/4	1-5/8
24-X-CLOSEXH	1-1/2	1-3/4

*Also available in Stainless Steel*

**LONG PIPE NIPPLE**



Part #	Male Pipe 1 & 2	Length (Inches)
02-X-1.5XH	1/8	1-1/2
02-X-2XH	1/8	2
02-X-3XH	1/8	3
04-X-2XH	1/4	2
04-X-2.5XH	1/4	2-1/2
04-X-3XH	1/4	3
04-X-4XH	1/4	4
04-X-6XH	1/4	6
06-X-2XH	3/8	2
06-X-2.5XH	3/8	2-1/2
06-X-3XH	3/8	3
06-X-4XH	3/8	4
06-X-6XH	3/8	6
06-X-7XH	3/8	7
08-X-2.5XH	1/2	2-1/2
08-X-3XH	1/2	3
08-X-4XH	1/2	4
08-X-6XH	1/2	6
12-X-3XH	3/4	3
12-X-4XH	3/4	4

*Other lengths available*

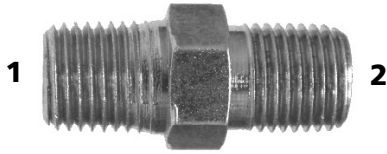
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**Hydraulic  
Adapters**

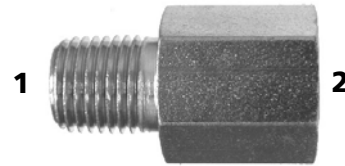
**HEX PIPE NIPPLE**

SAE 140137



**EXPANDING PIPE ADAPTER**

SAE 140139



<b>Part #</b>	<b>Male Pipe 1</b>	<b>Male Pipe 2</b>
911-02-1/16S	1/8	1/16
911-02-02S	1/8	1/8
911-02-04S	1/8	1/4
911-04-02S	1/4	1/8
911-04-04S	1/4	1/4
911-06-02S	3/8	1/8
911-06-04S	3/8	1/4
911-06-06S	3/8	3/8
911-08-04S	1/2	1/4
911-08-06S	1/2	3/8
911-08-08S	1/2	1/2
911-12-06S	3/4	3/8
911-12-08S	3/4	1/2
911-12-12S	3/4	3/4
911-16-06S	1	3/8
911-16-08S	1	1/2
911-16-12S	1	3/4
911-16-16S	1	1
911-20-08S	1-1/4	1/2
911-20-12S	1-1/4	3/4
911-20-16S	1-1/4	1
911-20-20S	1-1/4	1-1/4
911-24-12S	1-1/2	3/4
911-24-16S	1-1/2	1
911-24-20S	1-1/2	1-1/4
911-24-24S	1-1/2	1-1/2
911-32-20S	2	1-1/4
911-32-24S	2	1-1/2
911-32-32S	2	2

*Also available in Stainless Steel  
More sizes and lengths available*

<b>Part #</b>	<b>Male Pipe 1</b>	<b>Female Pipe 2</b>
909-1/16-02S	1/16	1/8
909-02-02S	1/8	1/8
909-02-04S	1/8	1/4
909-02-06S	1/8	3/8
909-02-08S	1/8	1/2
909-04-04S	1/4	1/4
909-04-06S	1/4	3/8
909-04-08S	1/4	1/2
909-04-12S	1/4	3/4
909-06-06S	3/8	3/8
909-06-08S	3/8	1/2
909-06-12S	3/8	3/4
909-08-08S	1/2	1/2
909-08-12S	1/2	3/4
909-08-16S	1/2	1
909-12-12S	3/4	3/4
909-12-16S	3/4	1
909-12-20S	3/4	1-1/4
909-16-16S	1	1
909-16-20S	1	1-1/4
909-16-24S	1	1-1/2
909-20-20S	1-1/4	1-1/4
909-20-24S	1-1/4	1-1/2
909-24-24S	1-1/2	1-1/2
909-24-32S	1-1/2	2

*Also available in Stainless Steel  
More sizes and lengths available*

**Hydraulic  
Adapters**

**HEX REDUCER BUSHING**



<i>Part #</i>	<i>Male Pipe</i>	<i>Female Pipe</i>
912-02-1/16S	1/8	1/16
912-04-02S	1/4	1/8
912-06-02S	3/8	1/8
912-06-04S	3/8	1/4
912-08-02S	1/2	1/8
912-08-04S	1/2	1/4
912-08-06S	1/2	3/8
912-12-02S	3/4	1/8
912-12-04S	3/4	1/4
912-12-06S	3/4	3/8
912-12-08S	3/4	1/2
912-16-04S	1	1/4
912-16-06S	1	3/8
912-16-08S	1	1/2
912-16-12S	1	3/4
912-20-04S	1-1/4	1/4
912-20-06S	1-1/4	3/8
912-20-16S	1-1/4	1/2
912-20-12S	1-1/4	3/4
912-20-16S	1-1/4	1
912-24-06S	1-1/2	3/8
912-24-08S	1-1/2	1/2
912-24-12S	1-1/2	3/4
912-24-16S	1-1/2	1
912-24-20S	1-1/2	1-1/4
912-32-08S	2	1/2
912-32-12S	2	3/4
912-32-16S	2	1
912-32-20S	2	1-1/4
912-32-24S	2	1-1/2
912-40-32S	2-1/2	2

*Also available in Stainless Steel  
Also available in short pattern*

**HEX HEAD PLUG**



<i>Part #</i>	<i>Male Pipe</i>
932-1/16P	1/16
932-02P	1/8
932-04P	1/4
932-06P	3/8
932-08P	1/2
932-12P	3/4
932-16P	1
932-20P	1-1/4
932-24P	1-1/2
932-32P	2

*Also available in Stainless Steel*

**HOLLOW HEX PLUG**

SAE 130109



<i>Part #</i>	<i>Male Pipe</i>
932-1/16S	1/16
932-02S	1/8
932-04S	1/4
932-06S	3/8
932-08S	1/2
932-12S	3/4
932-16S	1
932-20S	1-1/4
932-24S	1-1/2
932-32S	2

*Also available in Stainless Steel*

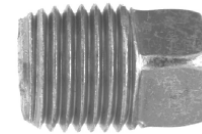
**FLUSH HOLLOW HEX PLUG  
W/ 7/8 TAPER**



<i>Part #</i>	<i>Male Pipe</i>
932-1/16F	1/16
932-02F	1/8
932-04F	1/4
932-06F	3/8
932-08F	1/2
932-12F	3/4
932-16F	1
932-20F	1-1/4
932-24F	1-1/2
932-32F	2

**SQUARE HEAD PLUG**

SAE 130109A

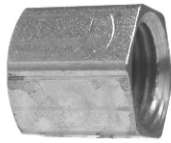


<i>Part #</i>	<i>Male Pipe</i>
932-02SH	1/8
932-04SH	1/4
932-06SH	3/8
932-08SH	1/2
932-12SH	3/4
932-16SH	1
932-20SH	1-1/4
932-24SH	1-1/2
932-32SH	2



**Hydraulic  
Adapters**

**PIPE CAP**



<b>Part #</b>	<b>Female Pipe</b>
5406-C-2 .....	1/8
5406-C-4 .....	1/4
5406-C-6 .....	3/8
5406-C-8 .....	1/2
5406-C-12 .....	3/4
5406-C-16 .....	1

*Also available in Stainless Steel*

**MALE ELBOW**

SAE 140237



<b>Part #</b>	<b>Male Pipe 1</b>	<b>Male Pipe 2</b>
920-02-02S .....	1/8	1/8
920-04-02S .....	1/4	1/8
920-04-04S .....	1/4	1/4
920-06-04S .....	3/8	1/4
920-06-06S .....	3/8	3/8
920-08-04S .....	1/2	1/4
920-08-06S .....	1/2	3/8
920-08-08S .....	1/2	1/2
920-12-06S* .....	3/4	3/8
920-12-08S .....	3/4	1/2
920-12-12S .....	3/4	3/4
920-16-12S .....	1	3/4
920-16-16S .....	1	1
920-20-16S* .....	1-1/4	1
920-20-20S .....	1-1/4	1-1/4
920-24-24S .....	1-1/2	1-1/2
920-32-32S .....	2	2

*\*Braze-on Style*

*Also available in Stainless Steel  
More sizes available*

**MALE ELBOW SWIVEL**



Swivel for  
installation  
purpose only

<b>Part #</b>	<b>Male Pipe 1</b>	<b>Male Pipe 2</b>
5700-S-4-4 .....	1/4	1/4
5700-S-6-6 .....	3/8	3/8
5700-S-8-8 .....	1/2	1/2
5700-S-12-12 .....	3/4	3/4

**45° MALE ELBOW**



<b>Part #</b>	<b>Male Pipe 1</b>	<b>Male Pipe 2</b>
5501-2-2 .....	184	1/8
5501-4-4 .....	1/4	1/4
5501-6-6 .....	3/8	3/8
5501-8 .....	1/2	1/2
5501-12-12 .....	3/4	3/4
5501-16-16 .....	1	1
5501-20-20 .....	1-1/4	1-1/4

**90° STREET ELBOW**

SAE 140239

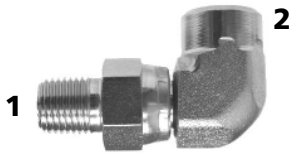


<b>Part #</b>	<b>Male Pipe 1</b>	<b>Male Pipe 2</b>
914-02-02S .....	1/8	1/8
914-02-04S .....	1/8	1/4
914-02-06S* .....	1/8	3/8
914-04-02S .....	1/4	1/8
914-04-04S .....	1/4	1/4
914-04-06S .....	1/4	3/8
914-04-08S* .....	1/4	1/2
914-06-02S .....	3/8	1/8
914-06-04S .....	3/8	1/4
914-06-06S .....	3/8	3/8
914-06-08S .....	3/8	1/2
914-08-04S .....	1/2	1/4
914-08-06S .....	1/2	3/8
914-08-08S .....	1/2	1/2
914-08-12S .....	1/2	3/4
914-12-08S .....	3/4	1/2
914-12-12S .....	3/4	3/4
914-12-16S* .....	3/4	1
914-16-12S .....	1	3/4
914-16-16S .....	1	1
914-16-20S* .....	1	1-1/4
914-20-16S .....	1-1/4	1
914-20-20S .....	1-1/4	1-1/4
914-24-24S .....	1-1/2	1-1/2
914-32-32S .....	2	2

*\*Braze-on Style*

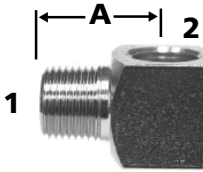
*Also available in Stainless Steel  
More sizes and lengths available*

**STREET ELBOW SWIVEL**



Part #	Male Pipe 1	Female Pipe 2
914MS-04-04S	1/4	1/4
914MS-06-06S	3/8	3/8
914MS-08-08S	1/2	1/2
914MS-12-12S	3/4	3/4

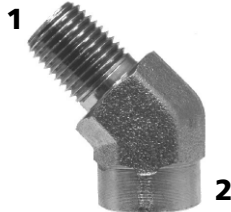
**SHORT BODY STREET ELBOW**



Part #	Male Pipe	Female Pipe	A
914-02-02DSS	1/8	1/8	7/8"
914-02-02DS	1/8	1/8	1"
914-02-02DL	1/8	1/8	1-1/8"
914-04-02DS	1/4	1/8	
914-04-04DS	1/4	1/4	
914-06-06DS	3/8	3/8	
914-08-08DS	1/2	1/2	
914-1-16-2DS	1/16	1/8	
914-4-28-2DS	1/4 28	1/8	

**45° STREET ELBOW**

SAE 140339

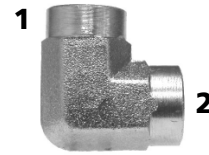


Part #	Male Pipe 1	Female Pipe 2
915-02-02S	1/8	1/8
915-04-04S	1/4	1/4
915-06-06S	3/8	3/8
915-08-08S	1/2	1/2
915-12-12S	3/4	3/4
915-16-16S	1	1
915-20-20S	1-1/4	1-1/4
915-24-24S	1-1/2	1-1/2
915-32-32S	2	2

More sizes available  
Also available in Stainless Steel

**FEMALE ELBOW**

SAE 140238

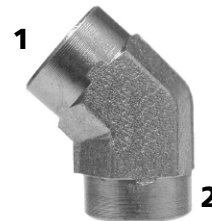


Part #	Male Pipe 1	Female Pipe 2
916-02-02S	1/8	1/8
916-04-02S	1/4	1/8
916-04-04S	1/4	1/4
916-06-04S	3/8	1/4
916-06-06S	3/8	3/8
916-08-04S	1/2	1/4
916-08-06S	1/2	3/8
916-08-08S	1/2	1/2
916-12-06S	3/4	3/8
916-12-08S	3/4	1/2
916-12-12S	3/4	3/4
916-16-12S	1	3/4
916-16-16S	1	1
916-20-16S	1-1/4	1
916-20-20S	1-1/4	1-1/4
916-24-24S	1-1/2	1-1/2
916-32-32S	2	2

Also available in Stainless Steel  
More sizes and lengths available

**45° FEMALE ELBOW**

SAE 140338



Part #	Male Pipe 1	Female Pipe 2
925-02-02S	1/8	1/8
925-04-04S	1/4	1/4
925-06-06S	3/8	3/8
925-08-08S	1/2	1/2
925-12-12S	3/4	3/4
925-16-16S	1	1
925-20-20S	1-1/4	1-1/4

More sizes available

More than 50% of the people in the world have never made or received a telephone call.



**MALE PIPE TEE**



Part #	Male Pipe 1 & 2	Female Pipe 3
926-02-02S	1/8	1/8
926-04-04S	1/4	1/4
926-06-06S	3/8	3/8
926-08-08S	1/2	1/2
926-12-12S	3/4	3/4
926-16-16S	1	1
926-20-20S	1-1/4	1-1/4

*Also available in Stainless Steel*

**FEMALE BRANCH PIPE TEE**

SAE 140427

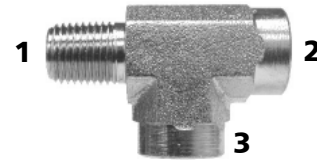


Part #	Male Pipe 1 & 2	Female Pipe 3
5601-2-2	1/8	1/8
5601-4-4	1/4	1/4
5601-6-6	3/8	3/8
5601-8	1/2	1/2
5601-12	3/4	3/4
5601-16	1	1
5601-20	1-1/4	1-1/4
5601-24	1-1/2	1-1/2

*Also available in Stainless Steel*

**STREET TEE**

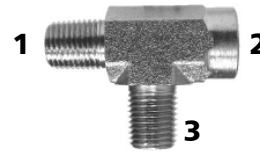
SAE 140424



Part #	Male Pipe 1	Female Pipe 2 & 3
921-02-02S	1/8	1/8
921-04-04S	1/4	1/4
921-06-06S	3/8	3/8
921-08-08S	1/2	1/2
921-12-12S	3/4	3/4
921-16-16S	1	1
921-20-20S	1-1/4	1-1/4
921-24-24S	1-1/2	1-1/2
921-32-32S	2	2

*Also available in Stainless Steel*

**FEMALE RUN PIPE TEE**

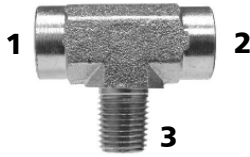


Part #	Male Pipe 1 & 3	Female Pipe 2
923-02-02S	1/8	1/8
923-04-04S	1/4	1/4
923-06-06S	3/8	3/8
923-08-08S	1/2	1/2
923-12-12S	3/4	3/4
923-16-16S	1	1
923-20-20S	1-1/4	1-1/4
923-24-24S	1-1/2	1-1/2
923-32-32S	2	2

*Also available in Stainless Steel*



**MALE BRANCH TEE**



<b>Part #</b>	<b>Male Pipe 1 &amp; 3</b>	<b>Female Pipe 2</b>
922-02-02S .....	1/8 .....	1/8
922-04-04S .....	1/4 .....	1/4
922-06-06S .....	3/8 .....	3/8
922-08-08S .....	1/2 .....	1/2
922-12-12S .....	3/4 .....	3/4
922-16-16S .....	1 .....	1
922-20-20S .....	1-1/4 .....	1-1/4
922-24-24S .....	1-1/2 .....	1-1/2
922-32-32S .....	2 .....	2

*Also available in Stainless Steel*

**FEMALE PIPE TEE**

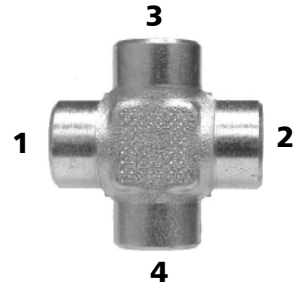
SAE 140438



<b>Part #</b>	<b>Female Pipe</b>
917-02S .....	1/8
917-04S .....	1/4
917-06S .....	3/8
917-08S .....	1/2
917-12S .....	3/4
917-16S .....	1
917-20S .....	1-1/4
917-24S .....	1-1/2
917-32S .....	2

*More Sizes available  
Also available in Stainless Steel*

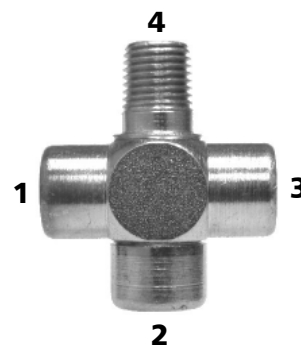
**FEMALE CROSS**



<b>Part #</b>	<b>Female Pipe 1 &amp; 3</b>	<b>Female Pipe 2</b>
918-02S .....	1/8 .....	1/8
918-04S .....	1/4 .....	1/4
918-06S .....	3/8 .....	3/8
918-08S .....	1/2 .....	1/2
918-12S .....	3/4 .....	3/4
918-16S .....	1 .....	1
918-20S .....	1-1/4 .....	1-1/4
918-24S .....	1-1/2 .....	1-1/2
918-32S .....	2 .....	2

*Also available in Stainless Steel*

**CROSS**



<b>Part #</b>	<b>Thread Size 1,2,3, &amp; 4</b>
5655-4-4-4-4 .....	1/4-18
5655-6-6-6-6 .....	3/8-18
5655-8-8-8-8 .....	1/2-14
5655-12-12-12-12 .....	3/4-14



**STEEL PIPE ADAPTERS**

Straights Pg. 200-205  
Shapes Pg. 206-210  
Bulkheads Pg. 210-211  
Female Swivels Pg. 224-227  
O-Ring Fittings Pg. 227-230

**CONFORMANCE**

- SAE J514
- SAE J1926/1, SAE J1926/3.
- ISO 11926-1, ISO 11926-3

**MATERIALS**

- Steel - SAE 12L14 carbon steel plated zinc with yellow dichromate or bright iridite finish.

**WORKING PRESSURES**

The following table lists the recommended working pressures for steel O-ring Straight Thread Fittings made in accordance with SAE standard J514. Many factors such as surging, vibration, mechanical shock and over tightening may affect the integrity of the fitting or fitting connection.. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using the fittings with different size or thread type, use the lower pressure rating of the two threads.

**SAE J514 O-RING STRAIGHT THREAD  
FITTINGS PRESSURE RATINGS FOR STRAIGHT  
AND ADJUSTABLE THREAD PORT STUDS**

Dash Size	Straight Thread	4 TO 1 Minimum Burst PSI Straight O-ring	4 to 1 Minimum Burst PSI Adjustable O-ring
-2	5/16-34	5000	5000
-3	3/8-24	5000	5000
-4	7/16-20	5000	4500
-5	1/2-20	5000	4000
-6	9/16-16	5000	4000
-8	3/4-16	1800	4000
-10	7/8-14	3500	3000
-12	1-5/16-12	3000	2500
-20	1-5/8-12	2500	2000
-24	1-7/8-12	2000	1500
-32	2-1/2-12	1500	1125

**CAUTION:** Although most O-ring Straight Thread Fittings have sufficient structural integrity to support the weight of many components, consult our technical support department for guidance in selection of parts for this purpose.

**STEEL STRAIGHT THREAD O-RING  
RECOMMENDED ASSEMBLY INSTRUCTIONS**

- Step 1.** Inspect port areas to be free of any contaminant.
- Step 2.** Lubricate o-ring and threads on fitting.
- Step 3.** Turn fitting into port finger tight, then torque to the value shown in the following tables.

- Step 2.** Looking at fitting from end with nut/washer/o-ring assembly, turn nut clockwise as far as possible.
- Step 3.** Using wrench pad, turn fitting into port until the washer touches thread nearest wrench pad.
- Step 4.** Back off fitting counterclockwise not exceeding one revolution until it is orientated in the correct position.
- Step 5.** Place wrench on the wrench pad of fitting to prevent fitting from turning, and torque nut to the value shown in the following table.

**J514 & J1926/3 TORQUE VALUES**

Dash Size	Straight Thread	Straight Stud Torque	Adjustable Stud Torque
-2	5/16-24	6	6
-3	3/8-24	6	6
-4	7/16-20	9	8
-5	1/2-20	14	9
-6	9/16-18	18	12
-8	3/4-16	27	20
-10	7/8-14	36	30
-12	1-1/16-12	65	44
-14	1-3/16-12	75	53
-16	1-5/16-12	85	59
-20	1-5/8-12	115	75
-24	1-7/8-12	125	105
-32	2-1/2-12	290	225

**J514 & J1926/2 TORQUE VALUES**

Dash Size	Straight Thread	Straight Stud Torque	Adjustable Stud Torque
-2	5/16-24	NA	NA
-3	3/8-24	NA	NA
-4	7/16-20	14	11
-5	1/2-20	18	14
-6	9/16-18	24	18
-8	3/4-16	40	28
-10	7/8-14	55	44
-12	1-1/16-12	95	65
-14	1-3/16-12	105	75
-16	1-5/16-12	120	85
-20	1-5/8-12	160	115
-24	1-7/8-12	175	125

**ADJUSTABLE STUD**

- Step 1.** Follow steps 1 and 2 from the forgoing instructions, then proceed to the following steps below.

**WHY WET TOQUE?**

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Over tightening causes threads to yield, deform and lose their ability to maintain an adequate load of clamping force on the sealing area. Extended operation and severe conditions cause further yielding which results in leaks. Over tightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.





**JIC TO O-RING CONNECTOR**



PART #	Thread Size 1	O-Ring Thread 2
516-02-02S	5/16-24	5/16-24
516-03-03S	3/8-24	3/8-24
516-04-04S	7/16-20	7/16-20
516-04-03S	7/16-20	3/8-24
516-04-05S	7/16-20	1/2-20
516-04-06S	7/16-20	9/16-18
516-04-08S	7/16-20	3/4-16
516-04-10S	7/16-20	7/8-14
516-05-05S	1/2-20	1/2-20
516-05-04S	1/2-20	7/16-20
516-05-06S	1/2-20	9/16-18
516-06-06S	9/16-18	9/16-18
516-06-04S	9/16-18	7/16-20
516-06-05S	9/16-18	1/2-20
516-06-08S	9/16-18	3/4-16
516-06-10S	9/16-18	7/8-14
516-06-12S	9/16-18	1-1/16-12
516-06-16S	9/16-18	1-5/16-12
516-08-08S	3/4-16	3/4-16
516-08-04S	3/4-16	7/16-20
516-08-06S	3/4-16	9/16-18
516-08-10S	3/4-16	7/8-14
516-08-12S	3/4-16	1-1/16-12
516-08-16S	3/4-16	1-5/16-12
516-10-10S	7/8-14	7/8-14
516-10-06S	7/8-14	9/16-18
516-10-08S	7/8-14	3/4-16
516-10-12S	7/8-14	1-1/16-12
516-10-16S	7/8-14	1-5/16-12
516-10-20S	7/8-14	1-5/8-12
516-12-12S	1-1/16-12	1-1/16-12
516-12-08S	1-1/16-12	3/4-16
516-12-10S	1-1/16-12	7/8-14
516-12-14S	1-1/16-12	1-3/16-12
516-12-16S	1-1/16-12	1-5/16-12
516-12-20S	1-1/16-12	1-5/8-12
516-14-14S	1-3/16-12	1-3/16-12
516-14-12S	1-3/16-12	1-1/16-12
516-14-16S	1-3/16-12	1-5/16-12
516-16-16S	1-5/16-12	1-5/16-12
516-16-10S	1-5/16-12	7/8-14
516-16-12S	1-5/16-12	1-1/16-12
516-16-14S	1-5/16-12	1-3/16-12
516-16-20S	1-5/16-12	1-5/8-12
516-16-24S	1-5/16-12	1-7/8-12
516-20-20S	1-5/8-12	1-5/8-12
516-20-12S	1-5/8-12	1-1/16-12
516-20-16S	1-5/8-12	1-5/16-12
516-20-24S	1-5/8-12	1-7/8-12
516-24-24S	1-7/8-12	1-7/8-12
516-24-20S	1-7/8-12	1-5/8-12
516-24-32S	1-7/8-12	2-1/2-12
516-32-32S	2-1/2-12	2-1/2-12
516-32-24S	2-1/2-12	1-7/8-12

*Also available in Stainless Steel  
Also Available in restrictor*

**LONG JIC TO O-RING CONNECTER**



Part #	Thread Size 1	O-Ring Thread 2	Length
516L-04-04S	7/16-20	7/16-20	2.12"
516L-06-06S	9/16-18	9/16-18	2.31"
516L-08-08S	3/4-16	3/4-16	2.68"
516L-10-10S	7/8-14-12	7/8-14-12	3.00"
516L-12-12S	1-1/16-12	1-1/16-12	3.56"
516L-16-16S	1-5/16-12	1-5/16-12	4.00"
516L-20-20S	1-5/8-12	1-5/8-12	4.62"

*Also available in Stainless Steel*

**O-RING TO PIPE ADAPTER**



Part #	O-Ring Thread 1	Male Pipe Thread 2
617-04-02S	7/16-20	1/8
617-04-04S	7/16-20	1/4
617-05-02S	1/2-20	1/8
617-06-04S	9/16-18	1/4
617-06-06S	9/16-18	3/8
617-06-08S	9/16-18	1/2
617-08-06S	3/4-16	3/8
617-08-08S	3/4-16	1/2
617-08-12S	3/4-16	3/4
617-10-08S	7/8-14	1/2
617-12-08S	1-1/16-12	1/2
617-12-12S	1-1/16-12	3/4
617-16-16S	1-5/16-12	1
617-20-20S	1-1/8-12	1-1/4
617-24-24S	1-1/8-12	1-1/2
617-32-32S	2-1/2-12	2

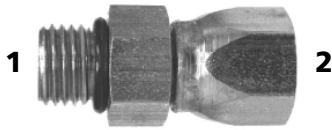
*More sizes available*

*Some sizes available in Stainless Steel*

No word in the English language rhymes with month, orange, silver, or purple.



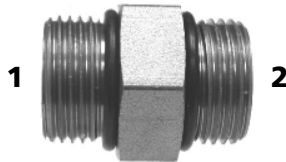
**O-RING TO 37° JIC  
SWIVEL ADAPTER**



Part #	O-Ring Thread 1	Thread Size 2
500-04-04S	7/16-20	7/16-20
500-05-05S	1/2-20	1/2-20
500-06-06S	9/16-18	9/16-18
500-06-08S	9/16-18	3/4-16
500-08-08S	3/4-16	3/4-16
500-08-06S	3/4-16	9/16-18
500-10-10S	7/8-14	7/8-14
500-12-12S	1-1/16-12	1-1/16-12
500-14-14S	1-3/16-12	1-3/16-12
500-16-16S	1-5/16-12	1-5/16-12
500-16-12S	1-5/16-12	1-1/16-12
500-20-20S	1-5/8-12	1-5/8-12
500-24-24S	1-7/8-12	1-7/8-12

*More sizes available  
Some sizes available in Stainless Steel*

**O-RING HEX NIPPLE UNION**



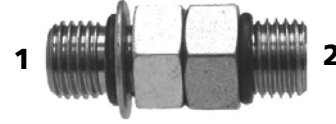
Part #	O-Ring Thread 1	Thread Size 2
6403-O-4	7/16-20	7/16-20
6403-O-6	9/16-18	9/16-18
6403-O-6-4	9/16-18	7/16-20
6403-O-8	3/4-16	3/4-16
6403-O-10	7/8-14	7/8-14
6403-O-10-8	7/8-14	3/4-16
6403-O-12	1-1/16-12	1-1/16-12
6403-O-12-8	1-1/16-12	3/4-16
6403-O-12-10	1-1/16-12	7/8-14
6403-O-16	1-5/16-12	1-5/16-12

*More sizes available*

George Bush:  
When you rearrange the letters:  
He buys Gore

**ADJUSTABLE O-RING HEX NIPPLE**

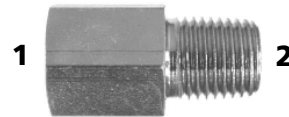
SAE 09009A



Part #	O-Ring Thread 1	O-Ring Thread 2
04F50-F50S	7/16-20	7/16-20
06F50-F50S	9/16-18	9/16-18
08F50-F50S	3/4-16	3/4-16
08-06F50-50S	3/4-16	9/16-18
10F50-F50S	7/8-14	7/8-14
10-08F50-F50S	7/8-14	3/4-16
12F50-F50S	1-1/16-12	1-1/16-12
12-08F50-F50S	1-1/16-12	3/4-16
12-10F50-F50S	1-1/16-12	7/8-14
16F50-F50S	1-5/16-12	1-5/16-12
16-125F50-F50S	1-5/16-12	1-1/16-12
20-F50-F50S	1-5/8-12	1-5/8-12
24-F50-F50S	1-7/8-12	1-7/8-12
32F50-F50S	2-1/2-12	2-1/2-12

*Also available in Stainless Steel*

**FEMALE O-RING TO MALE PIPE ADAPTER**



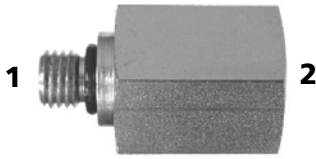
Part #	O-Ring Thread 1	Male Pipe Thread 2
509-04-02S	7/16-20	1/8
509-04-04S	7/16-20	1/4
509-06-04S	9/16-18	1/4
509-06-06S	9/16-18	3/8
509-06-08S	9/16-18	1/2
509-08-04S	3/4-16	1/4
509-08-06S	3/4-16	3/8
509-08-08S	3/4-16	1/2
509-10-08S	7/8-14	1/2
509-10-12S	7/8-14	3/4
509-10-16S	7/8-14	1
509-12-12S	1-1/16-12	3/4
509-16-16S	1-5/16-12	1
509-20-20S	1-1/8-12	1-1/4

*More sizes available*

The Morse Code:  
When you rearrange the letters:  
Here come dots  
-----

Slot Machines:  
When you rearrange the letters:  
Cash lost in em

**O-RING TO FEMALE PIPE ADAPTER**

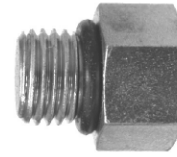


Part #	O-Ring Thread 1	Female Pipe Thread 2
507-02-02S	5/16-24	1/8
507-02-04S	5/16-24	1/4
507-03-02S	3/8-24	1/8
507-03-04S	3/8-24	1/4
507-04-02S	7/16-20	1/8
507-04-04S	7/16-20	1/4
507-05-02S	1/2-20	1/8
507-05-04S	1/2-20	1/4
507-06-02S	9/16-18	1/8
507-06-04S	9/16-18	1/4
507-06-06S	9/16-18	3/8
507-06-08S	9/16-18	1/2
507-06-12S	9/16-18	3/4
507-08-04S	3/4-16	1/4
507-08-06S	3/4-16	3/8
507-08-08S	3/4-16	1/2
507-08-12S	3/4-16	3/4
507-10-04S	7/8-14	1/4
507-10-06S	7/8-14	3/8
507-10-08S	7/8-14	1/2
507-10-12S	7/8-14	3/4
507-12-06S	1-1/16-12	3/8
507-12-08S	1-1/16-12	1/2
507-12-12S	1-1/16-12	3/4
507-12-16S	1-1/16-12	1
507-14-08S	1-3/16-12	1/2
507-14-12S	1-3/16-12	3/4
507-14-16S	1-3/16-12	1
507-16-06S	1-5/16-12	3/8
507-16-08S	1-5/16-12	1/2
507-16-12s	1-5/16-12	3/4
507-16-16S	1-5/16-12	1
507-16-20S	1-5/16-12	1-1/4
507-20-12S	1-5/8-12	3/4
507-20-20S	1-5/8-12	1-1/4
507-20-24S	1-5/8-12	1-1/2
507-24-16S	1-7/8-12	1
507-24-20S	1-7/8-12	1-1/4
507-24-24S	1-7/8-12	1-1/2
507-32-20S	2-1/2-20	1-1/4
507-32-24S	2-1/2-12	1-1/2
507-32-32S	2-1/2-12	2

*Some sizes available in Stainless Steel  
More sizes available*

**O-RING HEX HEAD PLUG**

SAE 090109A

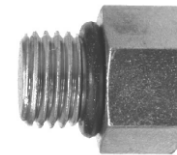


Part #	O-Ring Thread
506-02S	5/16-24
506-03S	3/8-24
506-04S	7/16-20
506-05S	1/2-20
506-06S	9/16-18
506-08S	3/4-16
506-10S	7/8-14
506-12S	1-1/16-12
506-14S	1-3/16-20
506-16S	1-5/16-12
506-20S	1-5/8-12
506-24S	1-7/8-12
506-32S	2-1/2-12

*Also available in Stainless Steel*

**O-RING HOLLOW  
HEX HEAD PLUG**

SAE 090109A



Part #	O-Ring Thread
506S-02S	5/16-24
506S-03S	3/8-24
506S-04S	7/16-20
506S-05S	1/2-20
506S-06S	9/16-18
506S-08S	3/4-16
506S-10S	7/8-14
506S-12S	1-1/16-12
506S-14S	1-3/16-20
506S-16S	1-5/16-12
506S-20S	1-5/8-12
506S-24S	1-7/8-12
506S-32S	2-1/2-12

*Also available in Stainless Steel*

God gave us two ears but only one mouth. Some people say it's because He wanted us to spend twice as much time listening as talking. Others claim it's because He knew that listening was twice as hard.

Send DFBurnham all your high volume quotes!



**CONFORMANCE**

- SAE J514
- 30-Degree Chamfers - Most NPSM pipe swivel union fittings have 30-degree chamfer on NPTF male end of fittings. This chamfer is optional per SAE J514. If chamfer is mandatory, consult with our customer service department to verify chamfer exists on items you are requesting.
- Temperature Range" -65° F to +400° F

**MATERIALS**

- Steel - Carbon steel plated Zinc with yellow Dichromate per ASTM B633-98 (Type II SC-2).

**Torque Values:** The torque values provide benchmarks that we believe give optimum results for leak free connections. Actual torque values should be based on individual applications.

**WORKING PRESSURES**

The following table lists the recommended working pressures for steel 37° flare hydraulic tube fittings manufactured in accordance with SAE standard J514. Many factors such as impulsing, vibration, mechanical shock and over tightening may affect the integrity of the fitting and swivel union connection. For these reasons, the recommended working pressures are actually lower than the capacity of the fittings. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using fittings with different size or thread type, use the lower pressure rating of the two threads.

**SAE J514 NPSM PRESSURE RATINGS**

Dash Size	NPSM Thread Size	4 TO 1 Minimum Burst PSI
-2	1/8-27	5000
-4	1/4-18	5000
-6	3/8-18	4000
-8	1/2-14	3500
-12	3/4-14	2250
-16	1-11 1/2	2000
-20	1-1/4-11 1/2	1625
-24	1-1/2-11 1/2	1250
-32	2-11 1/2	1125

**Caution: NPSM pipe swivel unions are not designed to provide structural support for other components.**

**Hydraulic**

**STEEL PIPE SWIVEL  
ASSEMBLY INSTRUCTIONS**

**RECOMMENDED**

- Step 1.** Inspect male pipe fitting connecting to swivel and confirm that it has an internal 30-degree chamfer. Do not install into union if chamfer is missing.
- Step 2.** Lubricate the threads and the entire chamfered area of male fitting with hydraulic fluid or other light weight lubricant.
- Step 3.** Install lubricated pipe fitting into swivel nut and turn nut until finger tight.
- Step 4.** Place wrench on hex of male fitting to prevent male fitting from turning, and torque swivel nut to the values in the following table.

**Caution: Never back off an installed pipe fitting to achieve proper alignment. Loosening installed pipe fittings will corrupt the seal and contribute to leakage and failure.**

Dash Size	NPSM Thread Size	Torque Foot/Lbs.
-2	1/8-27	13
-4	1/4-18	20
-6	3/8-18	25
-8	1/2-14	47
-12	3/4-14	84
-16	1-11 1/2	129
-20	1-1/4-11 1/2	152
-24	1-1/2-11 1/2	152
-32	2-11 1/2	300

**ALTERNATE ASSEMBLY METHOD**

- Step 1.** If torque method not possible, follow steps 1-3 above, then proceed to the steps below.
- Step 2.** Place wrench on hex of male pipe fitting and consider this wrench in the 12 o'clock position.
- Step 3.** Lightly wrench tighten the swivel union nut so that the wrench is as near the 3 o'clock position as possible.
- Step 4.** Rotate wrench in 3 o'clock position counterclockwise to no less than the 1 o'clock position, but no more than the 12 o'clock position.

**WHY WET TORQUE?**

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Over tightening causes threads to yield, deform and lose their ability to maintain an adequate load of clamping force on the sealing area. Extended operation and severe conditions cause further yielding which results in leaks. Over tightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.



**STEEL PIPE SWIVEL ADAPTERS**

**MALE PIPE SWIVEL ADAPTER**

SAE 140130

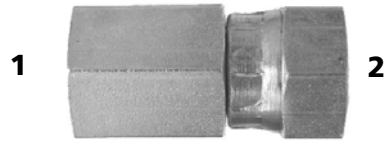


Part #	Male Pipe 1	Female NPSM 2
604-02-02S	1/8	1/8
604-02-04S	1/8	1/4
604-04-02S	1/4	1/8
604-04-04S	1/4	1/4
604-04-06S	1/4	3/8
604-04-08S	1/4	1/2
604-06-04S	3/8	1/4
604-06-06S	3/8	3/8
604-06-08S	3/8	1/2
604-06-12S	3/8	3/4
604-08-04S	1/2	1/4
604-08-06S	1/2	3/8
604-08-08S	1/2	1/2
604-08-12S	1/2	3/4
604-12-06S	3/4	3/8
604-12-08S	3/4	1/2
604-12-12S	3/4	3/4
604-12-16S	3/4	1
604-16-08S	1	1/2
604-16-12S	1	3/4
604-16-16S	1	1
604-16-20S	1	1-1/4
604-20-16S	1-1/4	1
604-20-20S	1-1/4	1-1/4
604-20-24S	1-1/4	1-1/2
604-24-20S	1-1/2	1-1/4
604-24-24S	1-1/2	1-1/2
604-32-32S	2	2

*Also available in Stainless Steel  
More sizes available  
- Available in a Restrictor -*

**FEMALE PIPE SWIVEL ADAPTER**

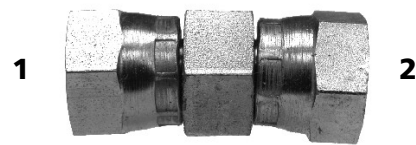
SAE 140131



Part #	Female Pipe 1	Female NPSM 2
605-02-02S	1/8	1/8
605-02-04S	1/8	1/4
605-04-02S	1/4	1/8
605-04-04S	1/4	1/4
605-04-06S	1/4	3/8
605-06-04S	3/8	1/4
605-06-06S	3/8	3/8
605-06-08S	3/8	1/2
605-08-04S	1/2	1/4
605-08-06S	1/2	3/8
605-08-08S	1/2	1/2
605-08-12S	1/2	3/4
605-12-08S	3/4	1/2
605-12-12S	3/4	3/4
605-12-16S	3/4	1
605-16-16S	1	1
605-20-20S	1-1/4	1-1/4
605-24-24S	1-1/2	1-1/2
605-32-32S	2	2

*Available in Stainless Steel*

**FEMALE SWIVEL UNION**



Part #	Female NPSM 1	Female NPSM 2
610-04-04S	1/4	1/4
610-06-06S	3/8	3/8
610-08-08S	1/2	1/2
610-12-12S	3/4	3/4
610-16-16S	1	1



**Hydraulic Adapters**

**MALE PIPE ELBOW SWIVEL ADAPTER**

SAE 140230



Part #	Male Pipe 1	Female NPSM 2
601-02-02S	1/8	1/8
601-02-04S	1/8	1/4
601-04-02S	1/4	1/8
601-04-04S	1/4	1/4
601-04-06S	1/4	3/8
601-04-08S	1/4	1/2
601-06-04S	3/8	1/4
601-06-06S	3/8	3/8
601-06-08S	3/8	1/2
601-06-12S	3/8	3/4
601-08-04S	1/2	1/4
601-08-06S	1/2	3/8
601-08-08S	1/2	1/2
601-08-12S	1/2	3/4
601-12-06S	3/4	3/8
601-12-08S	3/4	1/2
601-12-12S	3/4	3/4
601-12-16S	3/4	1
601-16-08S	1	1/2
601-16-12S	1	3/4
601-16-16S	1	1
601-16-20S	1	1-1/4
601-20-16S	1-1/4	1
601-20-20S	1-1/4	1-1/4
601-20-24S	1-1/4	1-1/2
601-24-20S	1-1/2	1-1/4
601-24-24S	1-1/2	1-1/2
601-32-32S	2	2

*Also available in Stainless Steel  
More sizes available*

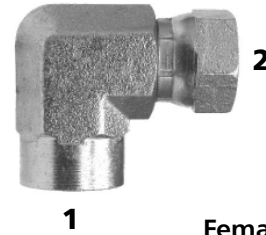
**- Available in a Restrictor -**

**EXTRA LONG MALE PIPE ELBOW**



Part #	Male Pipe 1	Female NPSM 2
601LL-04-04S	1/4	1/4
601LL-06-06S	3/8	3/8
601LL-08-08S	1/2	1/2
601LL-12-12S	3/4	3/4
601LL-16-16S	1	1

**FEMALE UNION ELBOW SWIVEL ADAPTER**



Part #	Female Pipe 1	Female NPSM 2
602-02-02S	1/8	1/8
602-02-04S	1/8	1/4
602-04-02S	1/4	1/8
602-04-04S	1/4	1/4
602-04-06S	1/4	3/8
602-06-04S	3/8	1/4
602-06-06S	3/8	3/8
602-06-08S	3/8	1/2
602-08-04S	1/2	1/4
602-08-06S	1/2	3/8
602-08-08S	1/2	1/2
602-08-12S	1/2	3/4
602-12-08S	3/4	1/2
602-12-12S	3/4	3/4
602-12-16S	3/4	1
602-16-16S	1	1
602-20-20S	1-1/4	1-1/4
602-24-24S	1-1/2	1-1/2
602-32-32S	2	2

*Available in Stainless Steel*

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**Hydraulic**

**MALE 45° PIPE ELBOW SWIVEL ADAPTER**



Part #	Male Pipe 1	Female NPSM 2
606-02-02S	1/8	1/8
606-02-04S	1/8	1/4
606-04-02S	1/4	1/8
606-04-04S	1/4	1/4
606-04-06S	1/4	3/8
606-06-04S	3/8	1/4
606-06-06S	3/8	3/8
606-06-08S	3/8	1/2
606-08-04S	1/2	1/4
606-08-06S	1/2	3/8
606-08-08S	1/2	1/2
606-08-12S	1/2	3/4
606-12-06S	3/4	3/8
606-12-08S	3/4	1/2
606-12-12S	3/4	3/4
606-12-16S	3/4	1
606-16-12S	1	3/4
606-16-16S	1	1
606-16-20S	1	1-1/4
606-20-16S	1-1/4	1
606-20-20S	1-1/4	1-1/4
606-24-24S	1-1/2	1-1/2
606-32-32S	2	2

*Also available in Stainless Steel  
More sizes available*

**FEMALE 45° UNION ELBOW SWIVEL ADAPTER**



Part #	Female Pipe 1	Female NPSM 2
607-02-02S	1/8	1/8
607-04-04S	1/4	1/4
607-06-04S	3/8	1/4
607-06-06S	3/8	3/8
607-08-06S	1/2	3/8
607-08-08S	1/2	1/2
607-12-12S	3/4	3/4
607-16-16S	1	1
607-20-20S	1-1/4	1-1/4
607-24-24S	1-1/2	1-1/2

*Also available in Stainless Steel  
More sizes available*

**MALE SWIVEL BRANCH TEE**



Part #	Male Pipe 1	Female NPSM 2 & 3
608-02-02S	1/8	1/8
608-04-04S	1/4	1/4
608-06-04S	3/8	1/4
608-06-06S	3/8	3/8
608-06-08S	3/8	1/2
608-08-04S	1/2	1/4
608-08-06S	1/2	3/8
608-08-08S	1/2	1/2
608-12-08S	3/4	1/2
608-12-12S	3/4	3/4
608-16-12S	1	3/4
608-16-16S	1	1
608-20-20S	1-1/4	1-1/4
608-24-24S	1-1/2	1-1/2

**FEMALE SWIVEL BRANCH TEE**



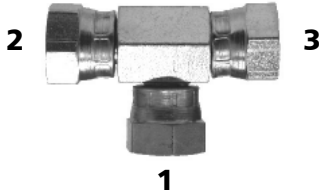
Part #	Female Pipe 1	Female NPSM 2 & 3
609-02-02S	1/8	1/8
609-04-04S	1/4	1/4
609-06-04S	3/8	1/4
609-06-06S	3/8	3/8
609-08-06S	1/2	3/8
609-08-08S	1/2	1/2
609-12-08S	3/4	1/2
609-12-12S	3/4	3/4
609-16-12S	1	3/4
609-16-16S	1	1
609-20-20S	1-1/4	1-1/4
609-24-24S	1-1/2	1-1/2

*Send DFBurnham all your high volume quotes!*



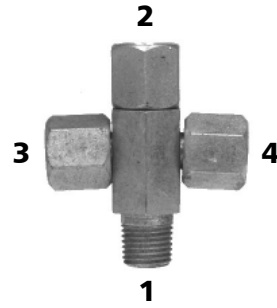
**Hydraulic Adapters**

**FEMALE SWIVEL UNION TEE**



Part #	Female NPSM 1	Female NPSM 2 & 3
603-02-02S .....	1/8 .....	1/8
603-04-04S .....	1/4 .....	1/4
603-06-06S .....	3/8 .....	3/8
603-08-08S .....	1/2 .....	1/2
603-12-12S .....	3/4 .....	3/4
603-16-16S .....	1 .....	1
603-20-20S .....	1-1/4 .....	1-1/4

**SWIVEL CROSS**



Part #	Male Pipe 1	Female NPSM 2, 3 & 4
1604-4-4 .....	1/4 .....	1/4
1604-6-6 .....	3/8 .....	3/8
1604-8-88S .....	1/2 .....	1/2



**Hydraulic**



Straights Pg. 200-205  
 Shapes Pg. 206-210  
 Bulkheads Pg. 210-211  
 Female Swivels Pg. 224-227  
 O-Rint Fittings Pg. 227-230

Caution: 37° Degree flared fittings are not designed to provide structural support for either components.

**CONFORMANCE**

- SAE J514
- MS51500-MS51534
- Temperature Range" -65° F to +400° F

**MATERIALS**

- Steel - Carbon steel plated Zinc with yellow Dichromate per ASTM B633-98 (Type II SC-2).

**WORKING PRESSURES**

The following table lists the recommended working pressures for steel 37° flare hydraulic tube fittings manufactured in accordance with SAE standard J514. Many factors such as impulsing, vibration, mechanical shock and over tightening may affect the integrity of the fitting and swivel union connection. For these reasons, the recommended working pressures are actually lower than the capacity of the fittings. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using fittings with different size or thread type, use the lower pressure rating of the two threads.

**SAE J514 37 DEGREE FLARED FITTINGS  
PRESURE RATING**

Dash Size	NPTF Thread Size	4 TO 1 Minimum Burst PSI
-2	5/16-24	5000
-3	3/8-24	5000
-4	7/16-20	5000
-5	1/2-20	5000
-6	9/16-18	5000
-8	3/4-16	4500
-10	7/8-14	3500
-12	1-1/16-12	3500
-14	1-3/16-12	3000
-16	1-5/16-12	3000
-20	1-5/8-12	2500
-24	1-7/8-12	2000
-32	2-1/2-12	1500

Hydraulic Adapters

**37° FLARED FITTING  
ASSEMBLY INSTRUCTIONS**

**RECOMMENDED**

- Step 1.** Inspect for possible contamination or damage from shipping or handling. Sealing surface should be smooth. Annular tool marks of (100uin) concentric with thread permissible.
- Step 2.** Lubricate the thread and the entire surface of cone with hydraulic fluid or other light weight lubricant.
- Step 3.** Align mating components for hand connection and turn flare nut until scaling surfaces make full contact.
- Step 4.** Torque nut to the values shown on the following table. If a wrench pad is provided next to nut, place a second wrench on pad to prevent flare from rotating while being torqued.
- Step 5.** When torquing nut onto a straight flared fitting, it may be necessary to also place a wrench on the flared fitting wrench pad to prevent it from turning during assembly.

**ALTERNATE ASSEMBLY METHOD**

- Step 1.** If torque method not possible, follow steps 1-3 above, then proceed to the steps below.
- Step 2.** Lightly wrench tighten the nut until there is firm resistance.
- Step 3.** Place a wrench on wrench pad next to nut as near the 6 o'clock position as possible.
- Step 4.** Place second wrench on nut as near the 3 o'clock position as possible.
- Step 5.** Turn nut clockwise to no less than the 4 o'clock position and no more than the 6 o'clock position. Require rotation generally decreases as size increases.

Dash Size	Flared Thread Size	Torque Foot/Lbs.
-2	5/16-24	6-7
-3	3/8-24	6-9
-4	7/16-20	9-12
-5	1/2-20	14-15
-6	9/16-18	18-20
-8	3/4-16	27-39
-10	7/8-14	36-63
-12	1-1/16-12	65-88
-14	1-3/16-12	75-103
-16	1-5/16-12	85-113
-20	1-5/8-12	115-133
-24	1-7/8-12	125-167
-32	2-1/2-12	190-258

**WHY WET TOQUE?**

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Over tightening causes threads to yield, deform and lose their ability to maintain an adequate load of clamping force on the sealing area. Extended operation and severe conditions cause further yielding which results in leaks. Over tightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.



Straights Pg. 200-205  
 Shapes Pg. 206-210  
 Bulkheads Pg. 210-211  
 Female Swivels Pg. 224-227  
 O-Rint Fittings Pg. 227-230

Caution: 37° Degree flared fittings are not designed to provide structural support for either components.

**CONFORMANCE**

- SAE J514
- MS51500-MS51534
- Temperature Range" -65° F to +400° F

**MATERIALS**

- Steel - Carbon steel plated Zinc with yellow Dichromate per ASTM B633-98 (Type II SC-2).

**WORKING PRESSURES**

The following table lists the recommended working pressures for steel 37° flare hydraulic tube fittings manufactured in accordance with SAE standard J514. Many factors such as impulsing, vibration, mechanical shock and over tightening may affect the integrity of the fitting and swivel union connection. For these reasons, the recommended working pressures are actually lower than the capacity of the fittings. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using fittings with different size or thread type, use the lower pressure rating of the two threads.

**SAE J514 37 DEGREE FLARED FITTINGS  
PRESSURE RATING**

Dash Size	NPTF Thread Size	4 TO 1 Minimum Burst PSI
-2	5/16-24	5000
-3	3/8-24	5000
-4	7/16-20	5000
-5	1/2-20	5000
-6	9/16-18	5000
-8	3/4-16	4500
-10	7/8-14	3500
-12	1-1/16-12	3500
-14	1-3/16-12	3000
-16	1-5/16-12	3000
-20	1-5/8-12	2500
-24	1-7/8-12	2000
-32	2-1/2-12	1500

**Hydraulic**

**37° FLARED FITTING  
ASSEMBLY INSTRUCTIONS**

**RECOMMENDED**

- Step 1.** Inspect for possible contamination or damage from shipping or handling. Sealing surface should be smooth. Annular tool marks of (100uin) concentric with thread permissible.
- Step 2.** Lubricate the thread and the entire surface of cone with hydraulic fluid or other light weight lubricant.
- Step 3.** Align mating components for hand connection and turn flare nut until scaling surfaces make full contact.
- Step 4.** Torque nut to the values shown on the following table. If a wrench pad is provided next to nut, place a second wrench on pad to prevent flare from rotating while being torqued.
- Step 5.** When torquing nut onto a straight flared fitting, it may be necessary to also place a wrench on the flared fitting wrench pad to prevent it from turning during assembly.

**ALTERNATE ASSEMBLY METHOD**

- Step 1.** If torque method not possible, follow steps 1-3 above, then proceed to the steps below.
- Step 2.** Lightly wrench tighten the nut until there is firm resistance.
- Step 3.** Place a wrench on wrench pad next to nut as near the 6 o'clock position as possible.
- Step 4.** Place second wrench on nut as near the 3 o'clock position as possible.
- Step 5.** Turn nut clockwise to no less than the 4 o'clock position and no more than the 6 o'clock position. Require rotation generally decreases as size increases.

Dash Size	Flared Thread Size	Torque Foot/Lbs.
-2	5/16-24	6-7
-3	3/8-24	6-9
-4	7/16-20	9-12
-5	1/2-20	14-15
-6	9/16-18	18-20
-8	3/4-16	27-39
-10	7/8-14	36-63
-12	1-1/16-12	65-88
-14	1-3/16-12	75-103
-16	1-5/16-12	85-113
-20	1-5/8-12	115-133
-24	1-7/8-12	125-167
-32	2-1/2-12	190-258

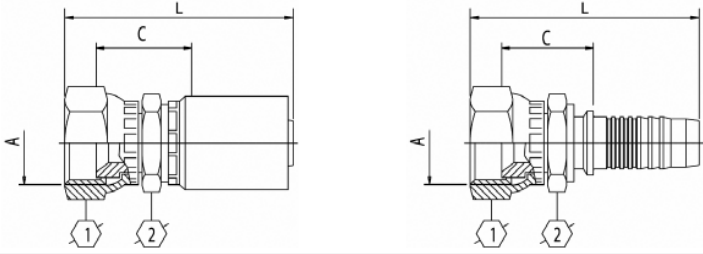
**WHY WET TOQUE?**

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Over tightening causes threads to yield, deform and lose their ability to maintain an adequate load of clamping force on the sealing area. Extended operation and severe conditions cause further yielding which results in leaks. Over tightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.



# JIC 37° FLARE (SAE J514)

**Hydraulic  
Hose**



**Hose**

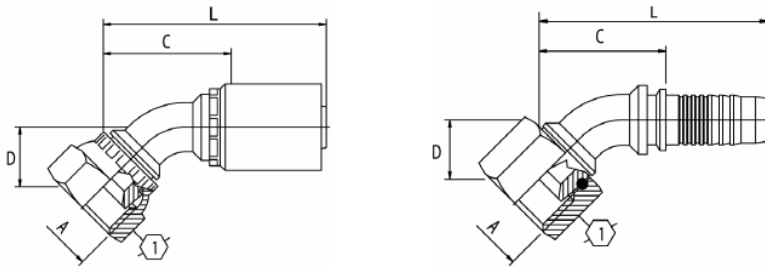
S = Skive, NS = Non-Skive, DG = Dual-Grip	GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
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Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size		Hex-2 Size		Cut-off (C)		Length (L)		Skive Type			
	INCH	MM		Wrench Size	MM	Wrench Size	MM	INCH	MM	INCH	MM				
UC-JCFX-0304	3/16	4.80	7/16-20	1/2	12	5/8	16	0.79	20.10	2.01	51.00	S	UCF1-03	UCF2-03	
B2-JCFX-0404	1/4	6.40	7/16-20	9/16	14	5/8	16	0.81	20.60	2.13	54.10	NS	Y	Y	Y
B2-JCFX-0405	1/4	6.40	1/2-20	9/16	14	11/16	17	0.84	21.30	2.19	55.60	NS	Y	Y	Y
B2-JCFX-0406	1/4	6.40	9/16-18	9/16	14	13/16	19	0.84	21.30	2.21	56.10	NS	Y	Y	Y
B2-JCFX-0505	5/16	7.90	1/2-20	9/16	14	11/16	17	0.84	21.30	2.19	55.60	NS	Y	Y	Y
B2-JCFX-0506	5/16	7.90	9/16-18	9/16	14	13/16	19	0.84	21.30	2.21	56.10	NS	Y	Y	Y
B2-JCFX-0606	3/8	9.50	9/16-18	11/16	17	13/16	19	0.84	21.30	2.28	58.00	NS	Y	Y	Y
B2-JCFX-0608	3/8	9.50	3/4-16	13/16	19	1	25	0.94	23.80	2.42	61.50	NS	Y	Y	Y
B2-JCFX-0610	3/8	9.50	7/8-14	7/8	22	1 1/16	27	1.06	26.80	2.62	66.50	NS	Y	Y	Y
B2-JCFX-0806	1/2	12.70	9/16-18	13/16	19	13/16	19	0.91	23.10	2.54	64.60	NS	Y	Y	Y
B2-JCFX-0808	1/2	12.70	3/4-16	13/16	19	1	25	1.01	25.60	2.68	68.10	NS	Y	Y	Y
B2-JCFX-0810	1/2	12.70	7/8-14	7/8	22	1 1/16	27	1.09	27.60	2.84	72.10	NS	Y	Y	Y
B2-JCFX-0812	1/2	12.70	1 1/16-12	1	25	1 1/4	32	1.11	28.10	2.90	73.60	NS	Y	Y	Y
B2-JCFX-1008	5/8	15.90	3/4-16	1	25	15/16	24	1.09	27.60	2.87	72.90	NS	Y	Y	Y
B2-JCFX-1010	5/8	15.90	7/8-14	1	25	1 1/16	27	1.20	30.60	3.07	77.90	NS	Y	Y	Y
B2-JCFX-1012	5/8	15.90	1 1/16-12	1	25	1 1/4	32	1.11	28.10	3.01	76.40	NS	Y	Y	Y
B2-JCFX-1210	3/4	19.00	7/8-14	1 1/16	27	1 1/4	30	1.15	29.10	3.21	81.60	NS	Y	Y	Y
B2-JCFX-1212	3/4	19.00	1 1/16-12	1 1/16	27	1 1/4	32	1.17	29.60	3.27	83.10	NS	Y	Y	Y
B2-JCFX-1214	3/4	19.00	1 3/16-12	1 1/4	32	1 7/16	36	1.22	31.00	3.35	85.20	NS	Y	Y	Y
B2-JCFX-1216	3/4	19.00	1 5/16-12	1 1/4	32	1 1/2	38	1.30	33.10	3.47	88.10	NS	Y	Y	Y
B2-JCFX-1612	1	25.40	1 1/16-12	1 1/4	32	1 1/4	32	1.31	33.40	3.07	78.00	NS	Y	Y	Y
B2-JCFX-1616	1	25.40	1 5/16-12	1 1/4	32	1 1/2	38	1.37	34.90	3.74	95.00	NS	Y	Y	Y
B2-JCFX-1620 <sup>T</sup>	1	25.40	1 5/8-12	1 5/8	41	2	50	1.59	40.50	3.98	101.00	NS	Y	Y	Y
S4-JCFX-2020 <sup>T</sup>	1 1/4	31.80	1 5/8-12	1 5/8	41	2	50	1.66	42.10	4.33	110.00	NS	Y	Y	
UC-JCFX-2020 <sup>T</sup>	1 1/4	31.80	1 5/8-12	1 5/8	41	2	50	1.66	42.10	4.33	110.00	NS			UCF4-20
S4-JCFX-2424 <sup>T</sup>	1 1/2	38.10	1 7/8-12	2	50	2 1/4	55	1.75	44.40	4.80	122.00	NS	Y	Y	
S4-JCFX-3232 <sup>T</sup>	2	50.80	2 1/2-12	2 5/8	65	70 mm	70	1.93	49.00	5.71	145.00	NS	Y	Y	

T: Thrust-Wire Nut (see 'Fitting Identification' in Appendix for details)



## JIC 37° FLARE (SAE J514)



**Hose**

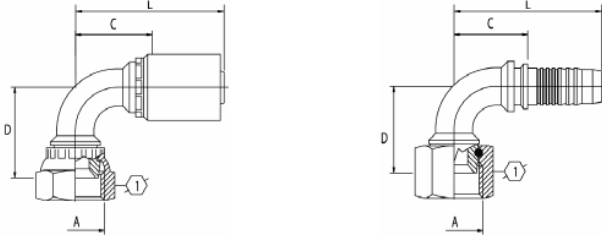
GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
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Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size		Drop (D)		Cut-off (C)		Length (L)		Skive Type	Hose		
	INCH	MM		Wrench Size	MM	INCH	MM	INCH	MM	INCH	MM		GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
B2-JCFX45-0404	1/4	6.40	7/16-20	5/8	16	0.43	11.00	1.44	36.50	2.41	61.30		Y	Y	Y
B2-JCFX45-0405	1/4	6.40	1/2-20	11/16	17	0.43	11.00	1.69	43.00	2.67	67.80		Y	Y	Y
B2-JCFX45-0406	1/4	6.40	9/16-18	13/16	19	0.43	11.00	1.52	38.50	2.49	63.30		Y	Y	Y
B2-JCFX45-0606	3/8	9.50	9/16-18	13/16	19	0.45	11.50	1.65	42.00	2.70	68.70		Y	Y	Y
B2-JCFX45-0608	3/8	9.50	3/4-16	1	25	0.59	15.00	1.73	44.00	2.78	70.70		Y	Y	Y
B2-JCFX45-0808	1/2	12.70	3/4-16	1	25	0.59	15.00	2.01	51.00	3.25	82.50		Y	Y	Y
B2-JCFX45-0810	1/2	12.70	7/8-14	1 1/16	27	0.67	17.00	2.05	52.00	3.29	83.50		Y	Y	Y
B2-JCFX45-1010	5/8	15.90	7/8-14	1 1/16	27	0.67	17.00	2.44	62.00	3.79	96.30		Y	Y	Y
B2-JCFX45-1012	5/8	15.90	1 1/16-12	1 1/4	32	0.87	22.00	2.38	60.50	3.73	94.80		Y	Y	Y
B2-JCFX45-1212	3/4	19.00	1 1/16-12	1 1/4	32	0.87	22.00	2.64	67.00	4.19	106.50		Y	Y	Y
B2-JCFX45-1216	3/4	19.00	1 5/16-12	1 1/2	38	1.02	26.00	2.76	70.00	4.31	109.50		Y	Y	Y
B2-JCFX45-1616	1	25.40	1 5/16-12	1 1/2	38	0.98	25.00	3.07	78.00	4.83	122.60		Y	Y	Y
S4-JCFX45-2020 <sup>T</sup>	1 1/4	31.80	1 5/8-12	2	50	1.46	37.00	3.84	97.50	5.89	149.50		Y	Y	
UC-JCFX45-2020	1 1/4	31.80	1 5/8-12	2	50	1.46	37.00	3.84	97.50	5.89	149.50				UCF4-20
S4-JCFX45-2424 <sup>T</sup>	1 1/2	38.10	1 7/8-12	2 1/4	55	1.69	43.00	4.25	108.00	6.57	167.00		Y	Y	

T: Thrust-Wire Nut (see 'Fitting Identification' in Appendix for details)

**Hydraulic  
Hose**

## JIC 37° FLARE (SAE J514)



**Hose**

GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
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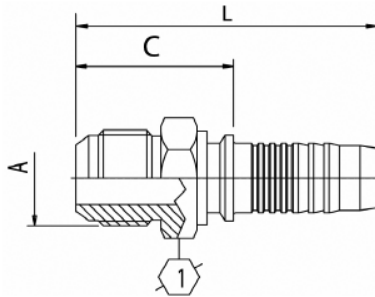
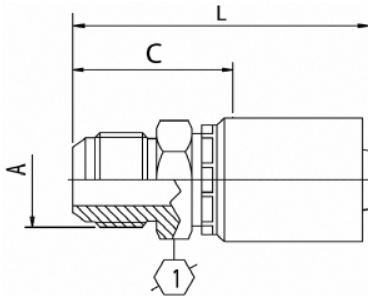
**Hydraulic  
Hose**

Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size Wrench Size		Elbow Type	Drop (D)		Cut-off (C)		Length (L)		Skive Type	Hose		
	INCH	MM		INCH	MM		INCH	MM	INCH	MM	INCH	MM		GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
B2-JCFX90-0404	1/4	6.40	7/16-20	5/8	16		1.26	32.00	1.32	33.50	2.30	58.30		Y	Y	Y
B2-JCFX90L-0404	1/4	6.40	7/16-20	5/8	16	Long Tube	1.81	46.00	1.25	31.80	2.23	56.60		Y	Y	Y
B2-JCFX90S-0404	1/4	6.40	7/16-20	5/8	16	Short Tube	0.83	21.00	1.02	26.00	2.00	50.80		Y	Y	Y
B2-JCFX90-0405	1/4	6.40	1/2-20	11/16	17		1.18	30.00	1.02	26.00	2.00	50.80		Y	Y	Y
B2-JCFX90L-0405	1/4	6.40	1/2-20	11/16	17	Long Tube	1.77	45.00	1.02	26.00	2.00	50.80		Y	Y	Y
B2-JCFX90S-0405	1/4	6.40	1/2-20	11/16	17	Short Tube	0.83	21.00	1.02	26.00	2.00	50.80		Y	Y	Y
B2-JCFX90-0406	1/4	6.40	9/16-18	13/16	19		1.50	38.00	1.22	31.00	2.20	55.80		Y	Y	Y
B2-JCFX90L-0406	1/4	6.40	9/16-18	11/16	17	Long Tube	2.13	54.00	1.52	38.50	2.49	63.30		Y	Y	Y
B2-JCFX90S-0406	1/4	6.40	9/16-18	11/16	17	Short Tube	0.91	23.00	1.22	31.00	2.20	55.80		Y	Y	Y
B2-JCFX90-0606	3/8	9.50	9/16-18	13/16	19		1.38	35.00	1.28	32.50	2.33	59.20		Y	Y	Y
B2-JCFX90L-0606	3/8	9.50	9/16-18	13/16	19	Long Tube	2.13	54.00	1.63	41.50	2.69	68.20		Y	Y	Y
B2-JCFX90S-0606	3/8	9.50	9/16-18	13/16	19	Short Tube	0.91	23.00	1.67	42.50	2.72	69.20		Y	Y	Y
B2-JCFX90-0608	3/8	9.50	3/4-16	1	25		1.61	41.00	1.50	38.00	2.55	64.70		Y	Y	Y
B2-JCFX90L-0608	3/8	9.50	3/4-16	1	25	Long Tube	2.52	64.00	1.83	46.50	2.88	73.20		Y	Y	Y
B2-JCFX90S-0608	3/8	9.50	3/4-16	1	25	Short Tube	1.14	29.00	1.91	48.50	2.96	75.20		Y	Y	Y
B2-JCFX90-0808	1/2	12.70	3/4-16	1	25		1.57	40.00	1.46	37.00	2.70	68.50		Y	Y	Y
B2-JCFX90L-0808	1/2	12.70	3/4-16	1	25	Long Tube	2.52	64.00	1.97	50.00	3.21	81.50	↕	Y	Y	Y
B2-JCFX90S-0808	1/2	12.70	3/4-16	1	25	Short Tube	1.14	29.00	1.81	46.00	3.05	77.50	↕	Y	Y	Y
B2-JCFX90-0810	1/2	12.70	7/8-14	1 1/16	27		1.85	47.00	1.50	38.00	2.74	69.50		Y	Y	Y
B2-JCFX90L-0810	1/2	12.70	7/8-14	1 1/16	27	Long Tube	2.56	65.00	1.50	38.00	2.74	69.50		Y	Y	Y
B2-JCFX90S-0810	1/2	12.70	7/8-14	1 1/16	27	Short Tube	1.26	32.00	1.81	46.00	3.05	77.50		Y	Y	Y
B2-JCFX90-0812	1/2	12.70	1 1/16-12	1 1/4	32		1.81	46.00	1.52	38.50	2.76	70.00	↕	Y	Y	Y
B2-JCFX90-1010	5/8	15.90	7/8-14	1 1/16	27		1.85	47.00	1.97	50.00	3.32	84.30		Y	Y	Y
B2-JCFX90L-1010	5/8	15.90	7/8-14	1 1/16	27	Long Tube	2.56	65.00	1.97	50.00	3.32	84.30		Y	Y	Y
B2-JCFX90S-1010	5/8	15.90	7/8-14	1 1/16	27	Short Tube	1.26	32.00	1.44	36.50	2.79	70.80		Y	Y	Y
B2-JCFX90-1012	5/8	15.90	1 1/16-12	1 1/4	32		2.28	58.00	1.89	48.00	3.24	82.30		Y	Y	Y
B2-JCFX90S-1012	5/8	15.90	1 1/16-12	1 1/4	32	Short Tube	1.89	48.00	1.89	48.00	3.24	82.30		Y	Y	Y
B2-JCFX90-1212	3/4	19.00	1 1/16-12	1 1/4	32		2.13	54.00	2.11	53.50	3.66	93.00		Y	Y	Y
B2-JCFX90L-1212	3/4	19.00	1 1/16-12	1 1/4	32	Long Tube	3.74	95.00	2.05	52.00	3.60	91.50		Y	Y	Y
B2-JCFX90S-1212	3/4	19.00	1 1/16-12	1 1/4	32	Short Tube	1.89	48.00	2.34	59.50	3.90	99.00		Y	Y	Y
B2-JCFX90S-1214	3/4	19.00	1 3/16-12	1 7/16	36	Short Tube	2.07	52.50	2.11	53.50	3.66	93.00		Y	Y	Y
B2-JCFX90-1216	3/4	19.00	1 5/16-12	1 1/2	38		2.80	71.00	2.11	53.50	3.66	93.00		Y	Y	Y
B2-JCFX90-1616	1	25.40	1 5/16-12	1 1/2	38		2.81	71.50	2.89	73.50	4.65	118.10		Y	Y	Y
B2-JCFX90L-1616	1	25.40	1 5/16-12	1 1/2	38	Long Tube	4.49	114.00	3.09	78.50	4.85	123.10		Y	Y	Y
B2-JCFX90S-1616	1	25.40	1 5/16-12	1 1/2	38	Short Tube	2.20	56.00	3.05	77.50	4.81	122.10		Y	Y	Y
S4-JCFX90-2020 <sup>T</sup>	1 1/4	31.80	1 5/8-12	2	50		3.07	78.00	3.27	83.00	5.31	135.00		Y	Y	
UC-JCFX90-2020	1 1/4	31.80	1 5/8-12	2	50		3.07	78.00	3.27	83.00	5.31	135.00				UCF4-20
S4-JCFX90-2424 <sup>T</sup>	1 1/2	38.10	1 7/8-12	2 1/4	55		3.39	86.00	4.06	103.00	6.38	162.00		Y	Y	

T: Thrust-Wire Nut (see 'Fitting Identification' in Appendix for details)



# JIC 37° FLARE (SAE J514)



**Hose**

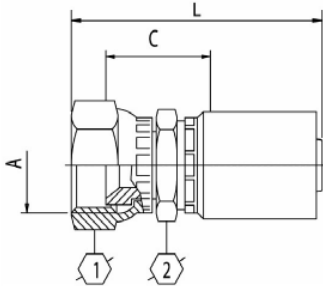
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Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
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Y	Y	Y
Y	Y	Y
Y	Y	UCF4-20
Y	Y	UCF4-20
Y	Y	UCF4-20
Y	Y	UCF4-20
Y	Y	UCF4-20

**Hydraulic  
Hose**

Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size		Cut-off (C)		Length (L)		Skive Type
	INCH	MM		Wrench Size	MM	INCH	MM	INCH	MM	
B2-JCM-0404	1/4	6.40	7/16-20	1/2	12	1.00	25.30	1.97	50.10	
B2-JCM-0405	1/4	6.40	1/2-20	9/16	14	1.04	26.30	2.01	51.10	
B2-JCM-0406	1/4	6.40	9/16-18	11/16	17	1.04	26.30	2.01	51.10	
B2-JCM-0506	5/16	7.90	9/16-18	11/16	17	1.04	26.30	2.01	51.10	
B2-JCM-0606	3/8	9.50	9/16-18	11/16	17	1.04	26.30	2.09	53.00	
B2-JCM-0608	3/8	9.50	3/4-16	13/16	19	1.14	29.00	2.19	55.70	
B2-JCM-0610	3/8	9.50	7/8-14	15/16	24	1.32	33.60	2.37	60.30	
B2-JCM-0808	1/2	12.70	3/4-16	13/16	19	1.17	29.80	2.41	61.30	
B2-JCM-0810	1/2	12.70	7/8-14	15/16	24	1.35	34.40	2.59	65.90	
B2-JCM-0812	1/2	12.70	1 1/16-12	1 1/16	27	1.46	37.00	2.70	68.50	
B2-JCM-1010	5/8	15.90	7/8-14	15/16	24	1.35	34.40	2.70	68.70	
B2-JCM-1012	5/8	15.90	1 1/16-12	1 1/16	27	1.46	37.00	2.81	71.30	
B2-JCM-1212	3/4	19.00	1 1/16-12	1 1/16	27	1.48	37.50	3.03	77.00	
B2-JCM-1214	3/4	19.00	1 3/16-12	1 1/4	32	1.50	38.00	3.05	77.50	
B2-JCM-1216	3/4	19.00	1 5/16-12	1 7/16	36	1.64	41.70	3.20	81.20	
B2-JCM-1616	1	25.40	1 5/16-12	1 7/16	36	1.67	42.50	3.43	87.10	
B2-JCM-1620	1	25.40	1 5/8-12	1 7/8	46	1.84	46.70	3.59	91.30	
S4-JCM-2020	1 1/4	31.80	1 5/8-12	1 7/8	46	1.90	48.30	3.95	100.30	
UC-JCM-2020	1 1/4	31.80	1 5/8-12	1 7/8	46	1.90	48.30	3.95	100.30	
S4-JCM-2024	1 1/4	31.80	1 7/8-12	2	50	2.09	53.00	4.13	105.00	
UC-JCM-2024	1 1/4	31.80	1 7/8-12	2	50	2.09	53.00	4.13	105.00	
S4-JCM-2424	1 1/2	38.10	1 7/8-12	2	50	2.09	53.00	4.41	112.00	
S4-JCM-3232	2	50.80	2 1/2-12	2 5/8	65	2.36	60.00	5.20	132.00	

**SAE 45° J512 FLARE**

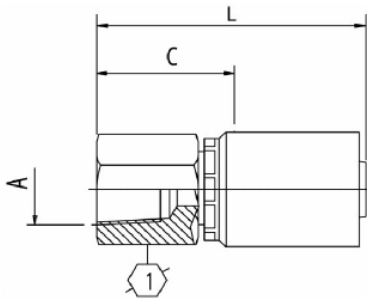
**Hydraulic  
Hose**



**Hose**

Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size		Hex-2 Size		Cut-off (C)		Length (L)		Skive Type	Hose		
	INCH	MM		Wrench Size	MM	Wrench Size	MM	INCH	MM	INCH	MM		GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
B2-SFFX-0606	3/8	9.50	5/8-18	13/16	19	7/8	22	0.88	22.30	2.32	59.00	NS	Y	Y	Y
B2-SFFX-1212	3/4	19.00	1 1/16-14	1 1/16	27	1 1/4	32	1.17	29.60	3.27	83.10	NS	Y	Y	Y

**NPTF**

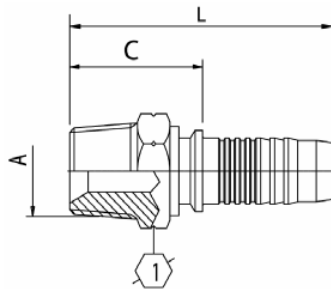
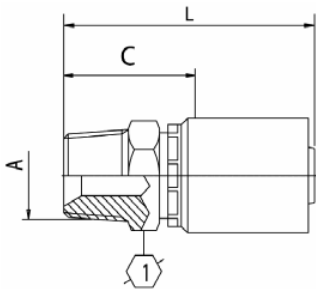


**Hose**

Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size		Cut-off (C)		Length (L)		Skive Type	Hose		
	INCH	MM		Wrench Size	MM	INCH	MM	INCH	MM		GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
B2-NPF-0404	1/4	6.40	1/4-18	13/16	19	1.09	27.80	2.07	52.60	NS	Y	Y	Y
B2-NPF-0606	3/8	9.50	3/8-18	7/8	22	1.13	28.80	2.19	55.50	NS	Y	Y	Y
B2-NPF-0808	1/2	12.70	1/2-14	1	25	1.40	35.60	2.64	67.10	NS	Y	Y	Y
B2-NPF-1212	3/4	19.00	3/4-14	1 1/4	32	1.50	38.10	3.06	77.60	NS	Y	Y	Y



**NPTF**



**Hose**

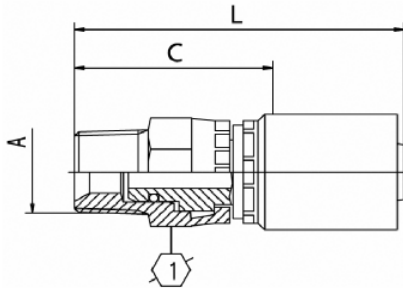
S = Skive, NS = Non-Skive, DG = Dual-Grip	GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC

Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size		Cut-off (C)		Length (L)		Skive Type	UCF1-03	UCF2-03	UCF4-20
	INCH	MM		Wrench Size	MM	INCH	MM	INCH	MM				
UC-NPM-0302	3/16	4.80	1/8-27	1/2	12	0.82	20.80	1.69	43.00	S			
B2-NPM-0402	1/4	6.40	1/8-27	9/16	14	0.88	22.30	1.85	47.10	NS	Y	Y	Y
B2-NPM-0404	1/4	6.40	1/4-18	11/16	17	1.04	26.30	2.01	51.10	NS	Y	Y	Y
B2-NPM-0406	1/4	6.40	3/8-18	13/16	19	1.04	26.30	2.01	51.10	NS	Y	Y	Y
B2-NPM-0408	1/4	6.40	1/2-14	7/8	22	1.31	33.30	2.29	58.10	NS	Y	Y	Y
B2-NPM-0604	3/8	9.50	1/4-18	11/16	17	1.04	26.30	2.09	53.00	NS	Y	Y	Y
B2-NPM-0606	3/8	9.50	3/8-18	13/16	19	1.04	26.30	2.09	53.00	NS	Y	Y	Y
B2-NPM-0608	3/8	9.50	1/2-14	7/8	22	1.27	32.30	2.32	59.00	NS	Y	Y	Y
B2-NPM-0806	1/2	12.70	3/8-18	13/16	19	1.11	28.10	2.35	59.60	NS	Y	Y	Y
B2-NPM-0808	1/2	12.70	1/2-14	7/8	22	1.34	34.00	2.58	65.50	NS	Y	Y	Y
B2-NPM-0812	1/2	12.70	3/4-14	1 1/16	27	1.34	34.00	2.58	65.50	NS	Y	Y	Y
B2-NPM-1008	5/8	15.90	1/2-14	15/16	24	1.34	34.10	2.69	68.40	NS	Y	Y	Y
B2-NPM-1012	5/8	15.90	3/4-14	1 1/16	27	1.34	34.00	2.69	68.30	NS	Y	Y	Y
B2-NPM-1208	3/4	19.00	1/2-14	1 1/16	27	1.36	34.60	2.92	74.10	NS	Y	Y	Y
B2-NPM-1212	3/4	19.00	3/4-14	1 1/16	27	1.36	34.60	2.92	74.10	NS	Y	Y	Y
B2-NPM-1216	3/4	19.00	1-11 1/2	1 7/16	36	1.68	42.60	3.23	82.10	NS	Y	Y	Y
B2-NPM-1612	1	25.40	3/4-14	1 7/16	36	1.51	38.40	3.27	83.00	NS	Y	Y	Y
B2-NPM-1616	1	25.40	1-11 1/2	1 7/16	36	1.71	43.40	3.46	88.00	NS	Y	Y	Y
B2-NPM-1620	1	25.40	1 1/4-11 1/2	1 7/8	46	1.87	47.40	3.62	92.00	NS	Y	Y	Y
S4-NPM-2020	1 1/4	31.80	1 1/4-11 1/2	1 7/8	46	1.93	49.00	3.98	101.00	NS	Y	Y	
UC-NPM-2020	1 1/4	31.80	1 1/4-11 1/2	1 7/8	46	1.93	49.00	3.98	101.00	NS			UCF4-20
S4-NPM-2024	1 1/4	31.80	1 1/2-11 1/2	2	50	1.97	50.00	4.02	102.00	NS	Y	Y	
S4-NPM-2424	1 1/2	38.10	1 1/2-11 1/2	2	50	1.97	50.00	4.29	109.00	NS	Y	Y	
S4-NPM-3232	2	50.80	2-11 1/2	2 5/8	65	2.05	52.00	4.88	124.00	NS	Y	Y	

**Hydraulic  
Hose**



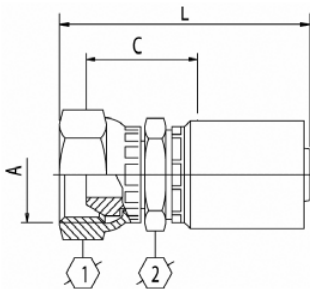
## NPTF



Hose		
GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	Y

Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size		Cut-off (C)		Length (L)		Skive Type
	INCH	MM		Wrench Size	MM	INCH	MM	INCH	MM	
B2-NPMX-0404	1/4	6.40	1/4-18	11/16	17	1.47	37.30	2.44	62.10	← Non-Skive →
B2-NPMX-0406	1/4	6.40	3/8-18	7/8	22	1.48	37.70	2.46	62.50	
B2-NPMX-0604	3/8	9.50	1/4-18	11/16	17	1.54	39.10	2.59	65.80	
B2-NPMX-0606	3/8	9.50	3/8-18	7/8	22	1.48	37.50	2.53	64.20	
B2-NPMX-0608	3/8	9.50	1/2-14	1	25	1.66	42.10	2.71	68.80	
B2-NPMX-0806	1/2	12.70	3/8-18	7/8	22	1.51	38.30	2.75	69.80	
B2-NPMX-0808	1/2	12.70	1/2-14	1	25	1.69	42.80	2.93	74.30	
B2-NPMX-1212	3/4	19.00	3/4-14	1 1/4	32	2.01	51.10	3.57	90.60	
B2-NPMX-1616	1	25.40	1-11 1/2	1 5/8	41	2.32	58.90	4.07	103.50	

## NPSM

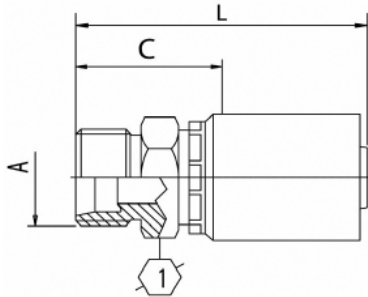


Hose		
GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
Y	Y	Y
Y	Y	Y
Y	Y	Y

Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size		Hex-2 Size		Cut-off (C)		Length (L)		Skive Type
	INCH	MM		Wrench Size	MM	Wrench Size	MM	INCH	MM	INCH	MM	
B2-NSFX-0404	1/4	6.40	1/4-18	11/16	17	13/16	19	0.96	24.30	2.07	52.60	NS
B2-NSFX-0606	3/8	9.50	3/8-18	13/16	19	7/8	22	1.02	25.80	2.31	58.70	NS
B2-NSFX-0808	1/2	12.70	1/2-14	7/8	22	1 1/16	27	1.09	27.60	2.58	65.60	NS



## SAE J514 FLARELESS TUBE FITTINGS

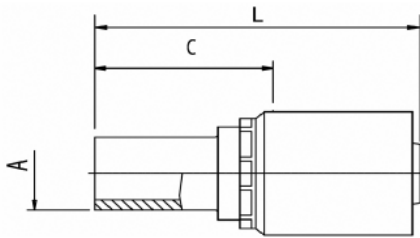


**Hose**

Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size		Cut-off (C)		Length (L)		Skive Type	Hose		
	INCH	MM		Wrench Size	MM	INCH	MM	INCH	MM		GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
B2-FTM-0404	1/4	6.40	7/16-20	9/16	14	0.98	24.80	1.95	49.60	NS	Y	Y	Y
B2-FTM-0606	3/8	9.50	9/16-18	11/16	17	1.03	26.20	2.08	52.90	NS	Y	Y	Y

**Hydraulic  
Hose**

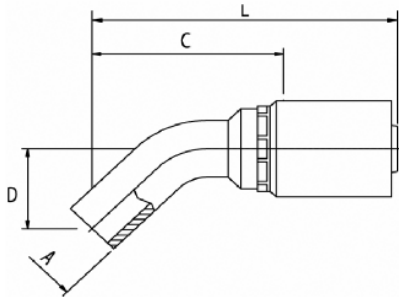
## STANDPIPE



**Hose**

Part Number	Hose I.D.		Tube O.D. (A) MM	Cut-off (C)		Length (L)		Skive Type	Hose		
	INCH	MM		INCH	MM	INCH	MM		GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
B2-SP-0408	1/4	6.40	8	1.19	30.20	2.17	55.00		Y	Y	Y
B2-SP-0410	1/4	6.40	10	1.27	32.20	2.24	57.00		Y	Y	Y
B2-SP-0610	3/8	9.50	10	1.19	30.30	2.24	57.00	↕	Y	Y	Y
B2-SP-0612	3/8	9.50	12	1.15	29.30	2.20	56.00	↕	Y	Y	Y
B2-SP-0815	1/2	12.70	15	1.26	32.00	2.50	63.50	↕	Y	Y	Y
B2-SP-0816	1/2	12.70	16	1.46	37.00	2.70	68.50	↕	Y	Y	Y
B2-SP-1018	5/8	15.90	18	1.35	34.20	2.70	68.50	↕	Y	Y	Y
B2-SP-1020	5/8	15.90	20	1.74	44.20	3.09	78.50	↕	Y	Y	Y
B2-SP-1222	3/4	19.00	22	1.44	36.50	2.99	76.00	↕	Y	Y	Y
B2-SP-1628	1	25.40	28	1.59	40.40	3.35	85.00		Y	Y	Y

**STANDPIPE**



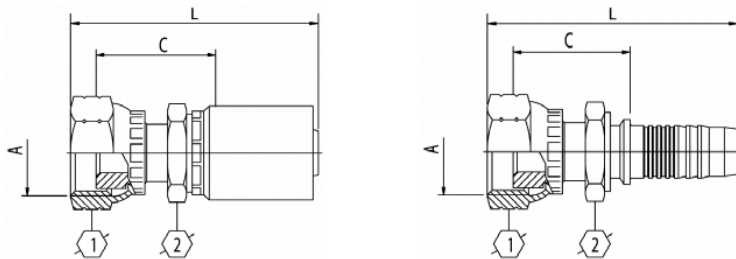
**Hose**

S = Skive, NS = Non-Skive, DG = Dual-Grip	GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
	GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
	GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
	GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC

Part Number	Hose I.D.		Tube O.D.	Drop (D)		Cut-off (C)		Length (L)		Skive Type	GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
	INCH	MM	(A) MM	INCH	MM	INCH	MM	INCH	MM				
B2-SP45-0408	1/4	6.40	8	0.87	22.00	1.73	44.00	2.71	68.80	NS	Y	Y	Y

**Hydraulic  
Hose**

**O-RING FACE SEAL (SAE J1453 ORS/ORFS)**



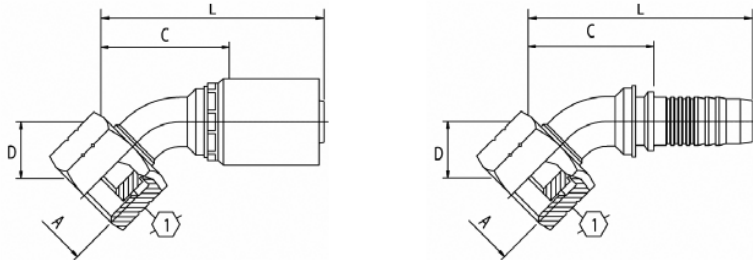
**Hose**

GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC

Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size		Hex-2 Size		Cut-off (C)		Length (L)		Skive Type	GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
	INCH	MM		Wrench Size	MM	Wrench Size	MM	INCH	MM	INCH	MM				
B2-OFFX-0404	1/4	6.40	9/16-18	9/16	14	11/16	17	1.11	28.30	2.41	61.30		Y	Y	Y
B2-OFFX-0406	1/4	6.40	11/16-16	11/16	17	7/8	22	1.19	30.20	2.54	64.50		Y	Y	Y
B2-OFFX-0408	1/4	6.40	13/16-16	15/16	24	7/8	22	1.39	35.30	2.80	71.10		Y	Y	Y
B2-OFFX-0606	3/8	9.50	11/16-16	11/16	17	7/8	22	1.31	33.30	2.74	69.50		Y	Y	Y
B2-OFFX-0608	3/8	9.50	13/16-16	7/8	22	15/16	24	1.39	35.30	2.87	73.00		Y	Y	Y
B2-OFFX-0806	1/2	12.70	11/16-16	13/16	19	7/8	22	1.22	31.10	2.84	72.10		Y	Y	Y
B2-OFFX-0808	1/2	12.70	13/16-16	7/8	22	15/16	24	1.42	36.10	3.09	78.60		Y	Y	Y
B2-OFFX-0810	1/2	12.70	1-14	15/16	24	1 1/4	30	1.56	39.60	3.31	84.10	↕	Y	Y	Y
B2-OFFX-0812	1/2	12.70	1 3/16-12	1 1/4	32	1 7/16	36	1.66	42.10	3.47	88.10	↕	Y	Y	Y
B2-OFFX-1010	5/8	15.90	1-14	15/16	24	1 1/4	30	1.56	39.60	3.42	86.90	↕	Y	Y	Y
B2-OFFX-1012	5/8	15.90	1 3/16-12	1 1/4	30	1 7/16	36	1.66	42.10	3.58	90.90	↕	Y	Y	Y
B2-OFFX-1210	3/4	19.00	1-14	1 1/16	27	1 1/4	30	1.58	40.10	3.65	92.60	↕	Y	Y	Y
B2-OFFX-1212	3/4	19.00	1 3/16-12	1 1/4	32	1 7/16	36	1.68	42.60	3.80	96.60	↕	Y	Y	Y
B2-OFFX-1216	3/4	19.00	1 7/16-12	1 1/2	38	1 5/8	41	1.80	45.60	3.93	99.90	↕	Y	Y	Y
B2-OFFX-1612	1	25.40	1 3/16-12	1 1/4	32	1 7/16	36	1.75	44.40	4.07	103.50		Y	Y	Y
B2-OFFX-1616	1	25.40	1 7/16-12	1 1/2	38	1 5/8	41	1.83	46.40	4.17	105.80		Y	Y	Y
B2-OFFX-1620	1	25.40	1 11/16-12	1 5/8	41	2	50	1.91	48.40	4.24	107.80		Y	Y	Y
S4-OFFX-2020	1 1/4	31.80	1 11/16-12	1 5/8	41	2	50	1.97	50.00	4.02	102.00		Y	Y	
UC-OFFX-2020	1 1/4	31.80	1 11/16-12	1 5/8	41	2	50	1.97	50.00	4.60	116.80				UCF4-20
S4-OFFX-2424	1 1/2	38.10	2-12	2	50	2 1/2	60	2.15	54.50	5.14	130.50		Y	Y	



**O-RING FACE SEAL (SAE J1453 ORS/ORFS)**



**Hose**

GR1SN, HR1SN	GR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
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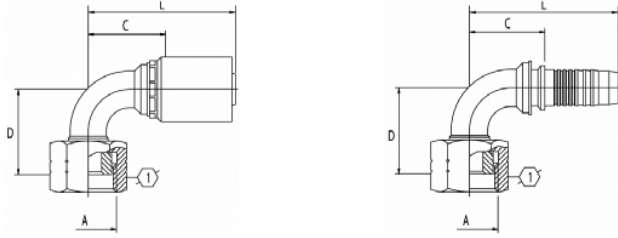
Hydraulic  
Hose

Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size		Drop (D)		Cut-off (C)		Length (L)		Skive Type	Hose		
	INCH	MM		Wrench Size	MM	INCH	MM	INCH	MM	INCH	MM		GR1SN, HR1SN	GR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
B2-OFFX45-0404	1/4	6.40	9/16-18	11/16	17	0.43	11.00	1.36	34.50	2.33	59.30		Y	Y	Y
B2-OFFX45-0406	1/4	6.40	11/16-16	7/8	22	0.43	11.00	1.42	36.00	2.39	60.80		Y	Y	Y
B2-OFFX45-0606	3/8	9.50	11/16-16	7/8	22	0.47	12.00	1.63	41.50	2.69	68.20		Y	Y	Y
B2-OFFX45-0608	3/8	9.50	13/16-16	15/16	24	0.59	15.00	1.81	46.00	2.86	72.70		Y	Y	Y
B2-OFFX45-0808 <sup>C</sup>	1/2	12.70	13/16-16	7/8	22	0.63	16.00	1.85	47.00	3.09	78.50		Y	Y	Y
B2-OFFX45-0810	1/2	12.70	1-14	1 1/4	30	0.65	16.50	1.97	50.00	3.21	81.50	Non-Skive	Y	Y	Y
B2-OFFX45-1010	5/8	15.90	1-14	1 1/4	30	0.67	17.00	2.19	55.50	3.54	89.80		Y	Y	Y
B2-OFFX45-1012	5/8	15.90	1 3/16-12	1 7/16	36	0.83	21.00	2.40	61.00	3.75	95.30		Y	Y	Y
B2-OFFX45-1212	3/4	19.00	1 3/16-12	1 7/16	36	0.83	21.00	2.48	63.00	4.04	102.50		Y	Y	Y
B2-OFFX45-1216	3/4	19.00	1 7/16-12	1 5/8	41	0.94	24.00	2.76	70.00	4.31	109.50		Y	Y	Y
B2-OFFX45-1616	1	25.40	1 7/16-12	1 5/8	41	1.02	26.00	3.15	80.00	4.91	124.60		Y	Y	Y
S4-OFFX45-2020	1 1/4	31.80	1 11/16-12	2	50	1.02	26.00	3.54	90.00	5.59	142.00		Y	Y	
UC-OFFX45-2020	1 1/4	31.80	1 11/16-12	2	50	1.02	26.00	3.54	90.00	5.59	142.00				UCF4-20
S4-OFFX45-2024	1 1/4	31.80	2-12	2 1/2	60	1.06	27.00	3.54	90.00	5.59	142.00		Y	Y	
UC-OFFX45-2024	1 1/4	31.80	2-12	2 1/2	60	1.06	27.00	3.54	90.00	5.59	142.00				UCF4-20
S4-OFFX45-2424	1 1/2	38.10	2-12	2 1/2	60	1.10	28.00	4.13	105.00	6.46	164.00		Y	Y	

C: Crimp Nut (see 'Fitting Identification' in Appendix for details)

# O-RING FACE SEAL (SAE J1453 ORS/ORFS)

**Hose**



GR15N, HR15N	GR25N, HR25N, LR25N, CR25N	GR16, GR16SC, AR16SC

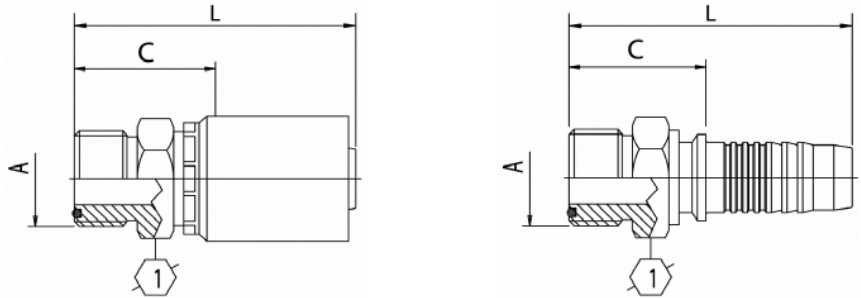
**Hydraulic  
Hose**

Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size Wrench Size		Elbow Type	Drop (D)		Cut-off (C)		Length (L)		Skive Type			
	INCH	MM		MM	MM		INCH	MM	INCH	MM	INCH	MM				
B2-OFFX90-0404	1/4	6.40	9/16-18	11/16	17		1.26	32.00	1.30	33.00	2.28	57.80		Y	Y	Y
B2-OFFX90L-0404	1/4	6.40	9/16-18	11/16	17	Long Tube	1.81	46.00	1.30	33.00	2.28	57.80		Y	Y	Y
B2-OFFX90S-0404	1/4	6.40	9/16-18	11/16	17	Short Tube	0.83	21.00	1.14	29.00	2.12	53.80		Y	Y	Y
B2-OFFX90-0406	1/4	6.40	11/16-16	7/8	22		1.50	38.00	1.46	37.00	2.43	61.80		Y	Y	Y
B2-OFFX90L-0406	1/4	6.40	11/16-16	7/8	22	Long Tube	2.13	54.00	1.46	37.00	2.43	61.80		Y	Y	Y
B2-OFFX90S-0406	1/4	6.40	11/16-16	7/8	22	Short Tube	0.91	23.00	1.26	32.00	2.24	56.80		Y	Y	Y
B2-OFFX90-0606	3/8	9.50	11/16-16	7/8	22		1.50	38.00	1.63	41.50	2.69	68.20		Y	Y	Y
B2-OFFX90L-0606	3/8	9.50	11/16-16	7/8	22	Long Tube	2.13	54.00	1.69	43.00	2.74	69.70		Y	Y	Y
B2-OFFX90S-0606	3/8	9.50	11/16-16	7/8	22	Short Tube	0.98	25.00	1.63	41.50	2.69	68.20		Y	Y	Y
B2-OFFX90-0608	3/8	9.50	13/16-16	15/16	24		1.61	41.00	1.75	44.50	2.80	71.20		Y	Y	Y
B2-OFFX90L-0608	3/8	9.50	13/16-16	15/16	24	Long Tube	2.52	64.00	1.65	42.00	2.70	68.70		Y	Y	Y
B2-OFFX90S-0608	3/8	9.50	13/16-16	15/16	24	Short Tube	1.14	29.00	1.63	41.50	2.69	68.20		Y	Y	Y
B2-OFFX90-0808 <sup>C</sup>	1/2	12.70	13/16-16	1 1/16	27		1.71	43.50	1.50	38.00	2.74	69.50		Y	Y	Y
B2-OFFX90L-0808 <sup>C</sup>	1/2	12.70	13/16-16	15/16	24	Long Tube	2.52	64.00	1.50	38.00	2.74	69.50		Y	Y	Y
B2-OFFX90S-0808 <sup>C</sup>	1/2	12.70	13/16-16	15/16	24	Short Tube	1.14	29.00	1.26	32.00	2.50	63.50		Y	Y	Y
B2-OFFX90-0810	1/2	12.70	1-14	1 1/4	30		1.85	47.00	1.93	49.00	3.17	80.50		Y	Y	Y
B2-OFFX90L-0810	1/2	12.70	1-14	1 1/4	30	Long Tube	2.76	70.00	1.93	49.00	3.17	80.50		Y	Y	Y
B2-OFFX90S-0810	1/2	12.70	1-14	1 1/4	30	Short Tube	1.28	32.50	1.93	49.00	3.17	80.50		Y	Y	Y
B2-OFFX90-1010	5/8	15.90	1-14	15/16	24		1.73	44.00	2.17	55.00	3.52	89.30	← Non-Skive →	Y	Y	Y
B2-OFFX90L-1010	5/8	15.90	1-14	15/16	24	Long Tube	2.76	70.00	2.17	55.00	3.52	89.30		Y	Y	Y
B2-OFFX90S-1010	5/8	15.90	1-14	15/16	24	Short Tube	1.28	32.50	2.24	57.00	3.59	91.30		Y	Y	Y
B2-OFFX90S-1012	5/8	15.90	1 3/16-12	1 7/16	36	Short Tube	1.93	49.00	2.17	55.00	3.52	89.30		Y	Y	Y
B2-OFFX90S-1210 <sup>C</sup>	3/4	19.00	1-14	1 1/4	30	Short Tube	1.26	32.00	2.09	53.00	3.64	92.50		Y	Y	Y
B2-OFFX90-1212	3/4	19.00	1 3/16-12	1 7/16	36		2.28	58.00	2.42	61.50	3.98	101.00		Y	Y	Y
B2-OFFX90L-1212	3/4	19.00	1 3/16-12	1 7/16	36	Long Tube	3.78	96.00	2.42	61.50	3.98	101.00		Y	Y	Y
B2-OFFX90S-1212	3/4	19.00	1 3/16-12	1 7/16	36	Short Tube	1.97	50.00	2.42	61.50	3.98	101.00		Y	Y	Y
B2-OFFX90S-1216	3/4	19.00	1 7/16-12	1 5/8	41	Short Tube	2.80	71.00	2.42	61.50	3.98	101.00		Y	Y	Y
B2-OFFX90-1616	1	25.40	1 7/16-12	1 5/8	41		2.60	66.00	3.23	82.00	4.98	126.60		Y	Y	Y
B2-OFFX90L-1616	1	25.40	1 7/16-12	1 5/8	41	Long Tube	4.49	114.00	3.23	82.00	4.98	126.60		Y	Y	Y
B2-OFFX90S-1616	1	25.40	1 7/16-12	1 5/8	41	Short Tube	2.28	58.00	3.23	82.00	4.98	126.60		Y	Y	Y
B2-OFFX90-1620	1	25.40	1 11/16-12	2	50		3.07	78.00	3.23	82.00	4.98	126.60		Y	Y	Y
B2-OFFX90S-1620	1	25.40	1 11/16-12	2	50	Short Tube	2.60	66.00	3.23	82.00	4.98	126.60		Y	Y	Y
S4-OFFX90-2020	1 1/4	31.80	1 11/16-12	2	50		3.07	78.00	3.82	97.00	5.87	149.00		Y	Y	
S4-OFFX90L-2020	1 1/4	31.80	1 11/16-12	2	50	Long Tube	5.08	129.00	3.82	97.00	5.87	149.00		Y	Y	
S4-OFFX90S-2020	1 1/4	31.80	1 11/16-12	2	50	Short Tube	2.60	66.00	3.82	97.00	5.87	149.00		Y	Y	
UC-OFFX90S-2020	1 1/4	31.80	1 11/16-12	2	50	Short Tube	2.60	66.00	3.82	97.00	5.87	149.00				UCF4-20
S4-OFFX90L-2024	1 1/4	31.80	2-12	2 1/2	60	Long Tube	5.55	141.00	3.82	97.00	5.87	149.00		Y	Y	
UC-OFFX90L-2024	1 1/4	31.80	2-12	2 1/2	60	Long Tube	5.55	141.00	3.82	97.00	5.87	149.00				UCF4-20
S4-OFFX90S-2024	1 1/4	31.80	2-12	2 1/2	60	Short Tube	2.72	69.00	3.82	97.00	5.87	149.00		Y	Y	
UC-OFFX90S-2024	1 1/4	31.80	2-12	2 1/2	60	Short Tube	2.72	69.00	3.82	97.00	5.87	149.00				UCF4-20
S4-OFFX90-2424	1 1/2	38.10	2-12	2 1/2	60		3.31	84.00	4.33	110.00	6.65	169.00		Y	Y	
S4-OFFX90S-2424	1 1/2	38.10	2-12	2 1/2	60	Short Tube	2.72	69.00	4.33	110.00	6.65	169.00		Y	Y	

C: Crimp Nut (see 'Fitting Identification' in Appendix for details)



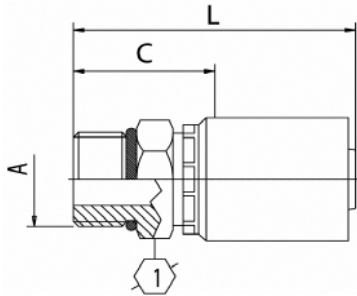
**O-RING FACE SEAL (SAE J1453 ORS/ORFS)**



Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size		Cut-off (C)		Length (L)		Skive Type	Hose		
	INCH	MM		Wrench Size	MM	INCH	MM	INCH	MM		GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
B2-OFM-0404	1/4	6.40	9/16-18	11/16	17	1.00	25.30	1.97	50.10		Y	Y	Y
B2-OFM-0606	3/8	9.50	11/16-16	13/16	19	1.04	26.50	2.09	53.20		Y	Y	Y
B2-OFM-0608	3/8	9.50	13/16-16	7/8	22	1.04	26.30	2.09	53.00		Y	Y	Y
B2-OFM-0808	1/2	12.70	13/16-16	7/8	22	1.18	29.90	2.42	61.40	v-- Non-Skive -->	Y	Y	Y
B2-OFM-0810	1/2	12.70	1-14	1 1/16	27	1.20	30.60	2.44	62.10		Y	Y	Y
B2-OFM-0812	1/2	12.70	1 3/16-12	1 1/4	32	1.46	37.10	2.70	68.60		Y	Y	Y
B2-OFM-1010	5/8	15.90	1-14	1 1/16	27	1.20	30.60	2.56	64.90		Y	Y	Y
B2-OFM-1012	5/8	15.90	1 3/16-12	1 1/4	32	1.26	32.10	2.61	66.40		Y	Y	Y
B2-OFM-1212	3/4	19.00	1 3/16-12	1 1/4	32	1.48	37.60	3.04	77.10		Y	Y	Y
B2-OFM-1216	3/4	19.00	1 7/16-12	1 5/8	41	1.54	39.10	3.09	78.60		Y	Y	Y
B2-OFM-1616	1	25.40	1 7/16-12	1 1/2	38	1.57	39.90	3.33	84.50		Y	Y	Y
S4-OFM-2020	1 1/4	31.80	1 11/16-12	1 7/8	46	1.63	41.50	3.68	93.50		Y	Y	
UC-OFM-2020	1 1/4	31.80	1 11/16-12	1 7/8	46	1.63	41.50	3.68	93.50				UCF4-20

**Hydraulic  
Hose**

# O-RING BOSS STRAIGHT THREAD (SAE J514)



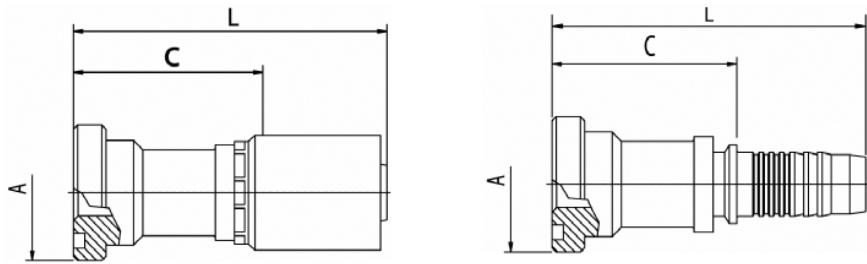
**Hydraulic  
Hose**

**Hose**

GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
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Part Number	Hose I.D.		Thread Size (A)	Hex-1 Size		Cut-off (C)		Length (L)		Skive Type	Hose		
	INCH	MM		Wrench Size	MM	INCH	MM	INCH	MM		GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
B2-OBM-0404	1/4	6.40	7/16-20	9/16	14	0.88	22.40	1.86	47.20		Y	Y	Y
B2-OBM-0405	1/4	6.40	1/2-20	5/8	16	0.88	22.40	1.86	47.20		Y	Y	Y
B2-OBM-0406	1/4	6.40	9/16-18	11/16	17	0.95	24.20	1.93	49.00		Y	Y	Y
B2-OBM-0606	3/8	9.50	9/16-18	13/16	19	0.95	24.20	2.00	50.90		Y	Y	Y
B2-OBM-0608	3/8	9.50	3/4-16	7/8	22	1.04	26.40	2.09	53.10	↕ Non-Skive ↕	Y	Y	Y
B2-OBM-0610	3/8	9.50	7/8-14	1 1/16	27	1.14	28.90	2.19	55.60		Y	Y	Y
B2-OBM-0808	1/2	12.70	3/4-16	7/8	22	1.07	27.20	2.31	58.70		Y	Y	Y
B2-OBM-0810	1/2	12.70	7/8-14	1 1/16	27	1.09	27.80	2.33	59.30		Y	Y	Y
B2-OBM-0812	1/2	12.70	1 1/16-12	1 1/4	32	1.27	32.20	2.51	63.70		Y	Y	Y
B2-OBM-1012	5/8	15.90	1 1/16-12	1 1/4	32	1.27	32.20	2.62	66.50		Y	Y	Y
B2-OBM-1210	3/4	19.00	7/8-14	1 1/16	27	1.19	30.30	2.75	69.80		Y	Y	Y
B2-OBM-1212	3/4	19.00	1 1/16-12	1 1/4	32	1.29	32.70	2.84	72.20		Y	Y	Y
B2-OBM-1216	3/4	19.00	1 5/16-12	1 1/2	38	1.41	35.70	2.96	75.20		Y	Y	Y
B2-OBM-1616	1	25.40	1 5/16-12	1 1/2	38	1.44	36.50	3.19	81.10		Y	Y	Y

## CODE 61 FLANGE (SAE J518)

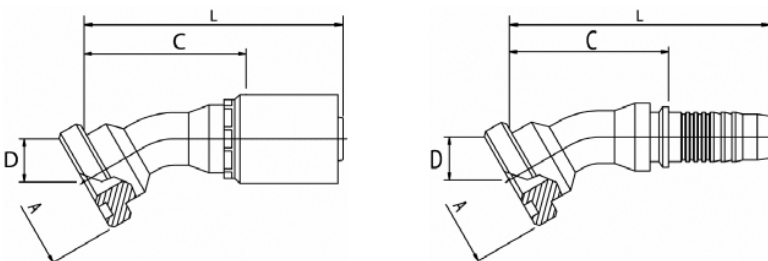


**Hose**

Part Number	Hose I.D.		Flange Size INCH	Flange Dia (A)		Cut-off (C)		Length (L)		Skive Type	GR15N, HR15N	GR25N, HR25N, LR25N, CR25N	GR16, GR16SC, AR16SC
	INCH	MM		INCH	MM	INCH	MM	INCH	MM				
B2-FL-0808	1/2	12.70	1/2	1.19	30.20	1.61	41.00	2.85	72.50		Y	Y	Y
B2-FL-0812	1/2	12.70	3/4	1.50	38.10	1.65	42.00	2.89	73.50		Y	Y	Y
B2-FL-1012	5/8	15.90	3/4	1.50	38.10	1.66	42.10	3.01	76.40		Y	Y	Y
B2-FL-1212	3/4	19.00	3/4	1.50	38.10	1.67	42.50	3.23	82.00		Y	Y	Y
B2-FL-1216	3/4	19.00	1	1.75	44.50	1.99	50.50	3.54	90.00	↕	Y	Y	Y
B2-FL-1616	1	25.40	1	1.75	44.50	2.03	51.50	3.78	96.10	Non-Skive	Y	Y	Y
B2-FL-1620	1	25.40	1 1/4	2.00	50.80	2.13	54.00	3.88	98.60		Y	Y	Y
S4-FL-2020	1 1/4	31.80	1 1/4	2.00	50.80	2.19	55.50	4.23	107.50		Y	Y	
UC-FL-2020	1 1/4	31.80	1 1/4	2.00	50.80	2.19	55.50	4.23	107.50				UCF4-20
S4-FL-2024	1 1/4	31.80	1 1/2	2.37	60.30	2.30	58.50	4.35	110.50	↕	Y	Y	
UC-FL-2024	1 1/4	31.80	1 1/2	2.37	60.30	2.30	58.50	4.35	110.50				UCF4-20
S4-FL-2424	1 1/2	38.10	1 1/2	2.37	60.30	2.30	58.50	4.63	117.50		Y	Y	
S4-FL-2432	1 1/2	38.10	2	2.81	71.40	2.76	70.00	5.08	129.00		Y	Y	
S4-FL-3232	2	50.80	2	2.81	71.40	2.76	70.00	5.59	142.00		Y	Y	

**Hydraulic  
Hose**

## CODE 61 FLANGE (SAE J518)



**Hose**

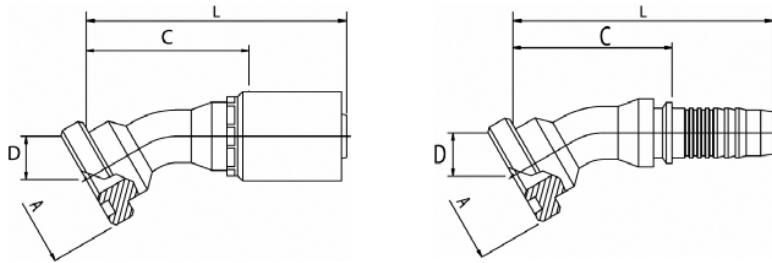
Part Number	Hose I.D.		Flange Size INCH	Flange Dia (A)		Drop (D)		Cut-off (C)		Length (L)		Skive Type	GR15N, HR15N	GR25N, HR25N, LR25N, CR25N	GR16, GR16SC, AR16SC
	INCH	MM		INCH	MM	INCH	MM	INCH	MM	INCH	MM				
B2-FL22-1616	1	25.40	1	1.75	44.50	0.47	12.00	3.41	86.50	5.16	131.10	NS	Y	Y	Y
S4-FL22-2020	1 1/4	31.80	1 1/4	2.00	50.80	0.51	13.00	4.49	114.00	6.54	166.00	NS	Y	Y	
UC-FL22-2020	1 1/4	31.80	1 1/4	2.00	50.80	0.51	13.00	4.49	114.00	6.54	166.00	NS			UCF4-20
S4-FL22-2424	1 1/2	38.10	1 1/2	2.37	60.30	0.65	16.50	5.26	133.50	7.58	192.50	NS	Y	Y	

S = Skive, NS = Non-Skive, DG = Dual-Grip





## CODE 61 FLANGE (SAE J518)

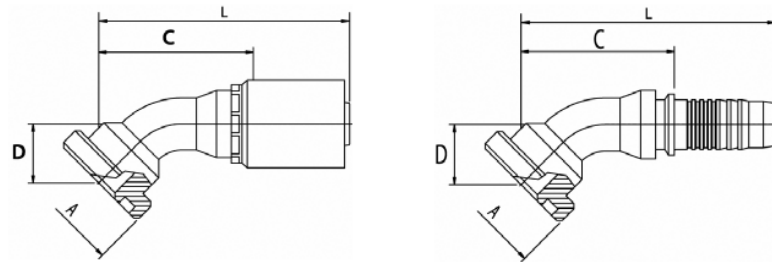


**Hose**

GR15N, HR15N	GR25N, HR25N, CR25N	GR16, GR16SC, AR16SC
	GR15N, HR15N	GR16, GR16SC, AR16SC

Part Number	Hose I.D.		Flange Size INCH	Flange Dia (A)		Drop (D)		Cut-off (C)		Length (L)		Skive Type	Hose		
	INCH	MM		INCH	MM	INCH	MM	INCH	MM	INCH	MM		GR15N, HR15N	GR25N, HR25N, CR25N	GR16, GR16SC, AR16SC
B2-FL30-1616	1	25.40	1	1.75	44.50	0.83	21.00	4.61	117.00	6.36	161.60	↕	Y	Y	Y
S4-FL30-2020	1 1/4	31.80	1 1/4	2.00	50.80	0.98	25.00	4.13	105.00	6.18	157.00	↔	Y	Y	
UC-FL30-2020	1 1/4	31.80	1 1/4	2.00	50.80	0.98	25.00	4.13	105.00	6.18	157.00	↕			UCF4-20
S4-FL30-2024	1 1/4	31.80	1 1/2	2.37	60.30	1.06	27.00	4.49	114.00	6.54	166.00	↕	Y	Y	
UC-FL30-2024	1 1/4	31.80	1 1/2	2.37	60.30	1.06	27.00	4.49	114.00	6.54	166.00	↕			UCF4-20
S4-FL30-2424	1 1/2	38.10	1 1/2	2.37	60.30	0.75	19.00	5.12	130.00	7.44	189.00	↔	Y	Y	

## CODE 61 FLANGE (SAE J518)



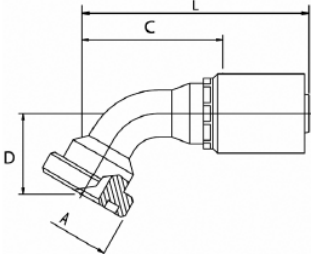
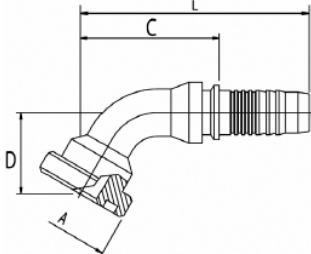
**Hose**

GR15N, HR15N	GR25N, HR25N, CR25N	GR16, GR16SC, AR16SC
	GR15N, HR15N	GR16, GR16SC, AR16SC

Part Number	Hose I.D.		Flange Size INCH	Flange Dia (A)		Drop (D)		Cut-off (C)		Length (L)		Skive Type	Hose		
	INCH	MM		INCH	MM	INCH	MM	INCH	MM	INCH	MM		GR15N, HR15N	GR25N, HR25N, CR25N	GR16, GR16SC, AR16SC
B2-FL45-0808	1/2	12.70	1/2	1.19	30.20	0.87	22.00	2.09	53.00	3.33	84.50		Y	Y	Y
B2-FL45-0812	1/2	12.70	3/4	1.50	38.10	1.02	26.00	2.24	57.00	3.48	88.50		Y	Y	Y
B2-FL45-1212	3/4	19.00	3/4	1.50	38.10	1.26	32.00	2.97	75.50	4.53	115.00		Y	Y	Y
B2-FL45-1216	3/4	19.00	1	1.75	44.50	1.14	29.00	3.11	79.00	4.67	118.50	↕	Y	Y	Y
B2-FL45-1616	1	25.40	1	1.75	44.50	1.32	33.50	3.33	84.50	5.08	129.10	↕	Y	Y	Y
B2-FL45-1620	1	25.40	1 1/4	2.00	50.80	1.42	36.00	3.27	83.00	5.02	127.60	↕	Y	Y	Y
S4-FL45-2020	1 1/4	31.80	1 1/4	2.00	50.80	1.26	32.00	4.15	105.50	6.20	157.50	↕	Y	Y	
UC-FL45-2020	1 1/4	31.80	1 1/4	2.00	50.80	1.26	32.00	4.15	105.50	6.20	157.50	↕			UCF4-20
S4-FL45-2024	1 1/4	31.80	1 1/2	2.37	60.30	1.50	38.00	4.17	106.00	6.22	158.00	↕	Y	Y	
UC-FL45-2024	1 1/4	31.80	1 1/2	2.37	60.30	1.50	38.00	4.17	106.00	6.22	158.00	↕			UCF4-20
S4-FL45-2424	1 1/2	38.10	1 1/2	2.37	60.30	2.01	51.00	4.43	112.50	6.75	171.50	↕	Y	Y	
S4-FL45-2432	1 1/2	38.10	2	2.81	71.40	2.22	56.50	5.30	134.50	7.62	193.50	↕	Y	Y	
S4-FL45-3232	2	50.80	2	2.81	71.40	2.46	62.50	6.24	158.50	9.07	230.50	↕	Y	Y	



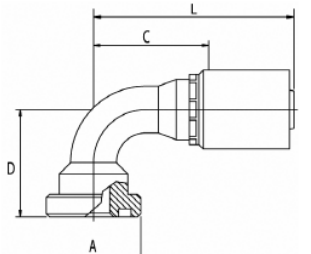
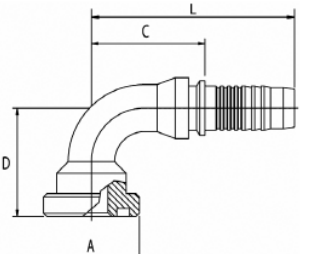
## CODE 61 FLANGE (SAE J518)

Part Number	Hose I.D.		Flange Size INCH	Flange Dia (A)		Drop (D)		Cut-off (C)		Length (L)		Skive Type	Hose		
	INCH	MM		INCH	MM	INCH	MM	INCH	MM	INCH	MM		GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
B2-FL60-1212	3/4	19.00	3/4	1.50	38.10	1.46	37.00	3.39	86.00	4.94	125.50	NS	Y	Y	Y
B2-FL60-1216	3/4	19.00	1	1.75	44.50	1.73	44.00	4.06	103.00	5.61	142.50	NS	Y	Y	Y
S4-FL60-2020	1 1/4	31.80	1 1/4	2.00	50.80	2.22	56.50	5.10	129.50	7.15	181.50	NS	Y	Y	
UC-FL60-2020	1 1/4	31.80	1 1/4	2.00	50.80	2.22	56.50	5.10	129.50	7.15	181.50	NS			UCF4-20

**Hydraulic  
Hose**

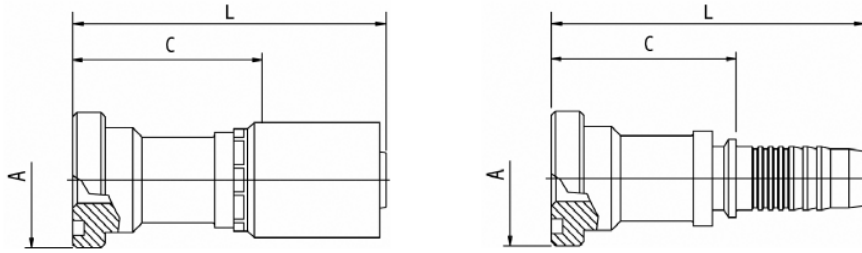
## CODE 61 FLANGE (SAE J518)

Part Number	Hose I.D.		Flange Size INCH	Flange Dia (A)		Drop (D)		Cut-off (C)		Length (L)		Skive Type	Hose		
	INCH	MM		INCH	MM	INCH	MM	INCH	MM	INCH	MM		GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
B2-FL90-0808	1/2	12.70	1/2	1.19	30.20	1.65	42.00	1.77	45.00	3.01	76.50		Y	Y	Y
B2-FL90-0812	1/2	12.70	3/4	1.50	38.10	2.01	51.00	1.79	45.50	3.03	77.00		Y	Y	Y
B2-FL90-1212	3/4	19.00	3/4	1.50	38.10	2.22	56.50	2.40	61.00	3.96	100.50		Y	Y	Y
B2-FL90-1216	3/4	19.00	1	1.75	44.50	2.54	64.50	2.40	61.00	3.96	100.50		Y	Y	Y
B2-FL90-1616	1	25.40	1	1.75	44.50	2.83	72.00	2.89	73.50	4.65	118.10		Y	Y	Y
B2-FL90-1620	1	25.40	1 1/4	2.00	50.80	3.11	79.00	3.01	76.50	4.77	121.10		Y	Y	Y
S4-FL90-2016	1 1/4	31.80	1	1.75	44.50	2.56	65.00	3.64	92.50	5.69	144.50		Y	Y	
UC-FL90-2016	1 1/4	31.80	1	1.75	44.50	2.56	65.00	3.64	92.50	5.69	144.50				UCF4-20
S4-FL90-2020	1 1/4	31.80	1 1/4	2.00	50.80	3.11	79.00	3.86	98.00	5.91	150.00		Y	Y	
UC-FL90-2020	1 1/4	31.80	1 1/4	2.00	50.80	3.11	79.00	3.86	98.00	5.91	150.00				UCF4-20
S4-FL90-2024	1 1/4	31.80	1 1/2	2.37	60.30	3.44	87.50	3.92	99.50	5.96	151.50		Y	Y	
UC-FL90-2024	1 1/4	31.80	1 1/2	2.37	60.30	3.46	88.00	3.92	99.50	5.96	151.50				UCF4-20
S4-FL90-2424	1 1/2	38.10	1 1/2	2.37	60.30	4.02	102.00	3.90	99.00	6.22	158.00		Y	Y	
S4-FL90-2432	1 1/2	38.10	2	2.81	71.40	4.53	115.00	4.45	113.00	6.77	172.00		Y	Y	
S4-FL90-3232	2	50.80	2	2.81	71.40	5.31	135.00	5.63	143.00	8.46	215.00		Y	Y	



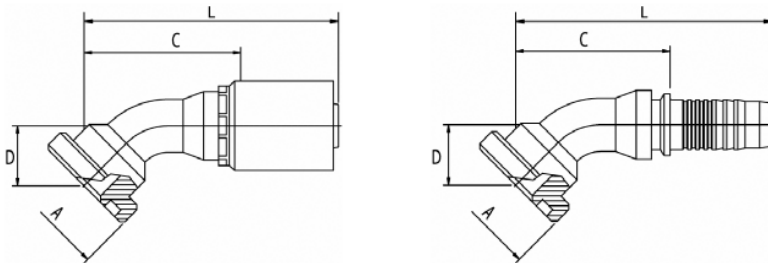
## CODE 62 FLANGE (SAE J518)



Hose		
GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	UCF4-20
Y	Y	UCF4-20
Y	Y	UCF4-20
Y	Y	UCF4-20
Y	Y	UCF4-20
Y	Y	UCF4-20

Part Number	Hose I.D.		Flange Size INCH	Flange Dia (A)		Cut-off (C)		Length (L)		Skive Type
	INCH	MM		INCH	MM	INCH	MM	INCH	MM	
B2-FH-1212	3/4	19.00	3/4	1.63	41.30	2.07	52.50	3.62	92.00	Skive
B2-FH-1616	1	25.40	1	1.87	47.60	2.22	56.50	3.98	101.10	Skive
B2-FH-1620	1	25.40	1 1/4	2.13	54.00	2.50	63.50	4.26	108.10	Non-Skive
S4-FH-2020	1 1/4	31.80	1 1/4	2.13	54.00	2.56	65.00	4.61	117.00	Non-Skive
UC-FH-2020	1 1/4	31.80	1 1/4	2.13	54.00	2.56	65.00	4.61	117.00	Non-Skive
S4-FH-2024	1 1/4	31.80	1 1/2	2.50	63.50	2.80	71.00	4.84	123.00	Non-Skive
UC-FH-2024	1 1/4	31.80	1 1/2	2.50	63.50	2.80	71.00	4.84	123.00	Non-Skive
S4-FH-2424	1 1/2	38.10	1 1/2	2.50	63.50	2.80	71.00	5.12	130.00	Non-Skive
S4-FH-2432	1 1/2	38.10	2	3.13	79.40	2.99	76.00	5.31	135.00	Non-Skive
S4-FH-3232	2	50.80	2	3.13	79.40	2.99	76.00	5.83	148.00	Non-Skive

## CODE 62 FLANGE (SAE J518)

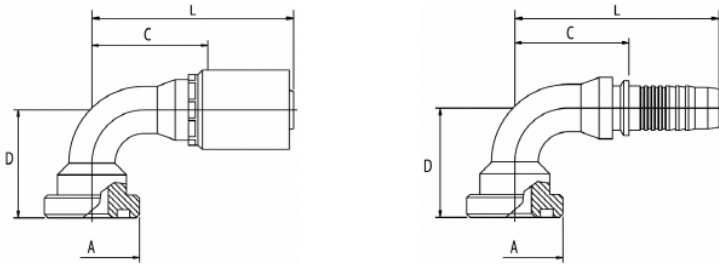


Hose		
GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
Y	Y	Y
Y	Y	Y
Y	Y	Y
Y	Y	UCF4-20
Y	Y	UCF4-20
Y	Y	UCF4-20
Y	Y	UCF4-20
Y	Y	UCF4-20

Part Number	Hose I.D.		Flange Size INCH	Flange Dia (A)		Drop (D)		Cut-off (C)		Length (L)		Skive Type
	INCH	MM		INCH	MM	INCH	MM	INCH	MM	INCH	MM	
B2-FH45-1212	3/4	19.00	3/4	1.63	41.30	1.10	28.00	2.95	75.00	4.51	114.50	Skive
B2-FH45-1616	1	25.40	1	1.87	47.60	1.42	36.00	3.78	96.00	5.54	140.60	Skive
B2-FH45-1620	1	25.40	1 1/4	2.13	54.00	1.54	39.00	3.78	96.00	5.54	140.60	Non-Skive
S4-FH45-2020	1 1/4	31.80	1 1/4	2.13	54.00	1.57	40.00	4.47	113.50	6.52	165.50	Non-Skive
UC-FH45-2020	1 1/4	31.80	1 1/4	2.13	54.00	1.57	40.00	4.49	114.00	6.54	166.00	Non-Skive
S4-FH45-2024	1 1/4	31.80	1 1/2	2.50	63.50	1.83	46.50	4.51	114.50	6.56	166.50	Non-Skive
S4-FH45-2424	1 1/2	38.10	1 1/2	2.50	63.50	1.81	46.00	4.55	115.50	6.87	174.50	Non-Skive
S4-FH45-2432	1 1/2	38.10	2	3.13	79.40	2.26	57.50	5.22	132.50	7.54	191.50	Non-Skive
S4-FH45-3232	2	50.80	2	3.13	79.40	2.36	60.00	6.14	156.00	8.98	228.00	Non-Skive



## CODE 62 FLANGE (SAE J518)

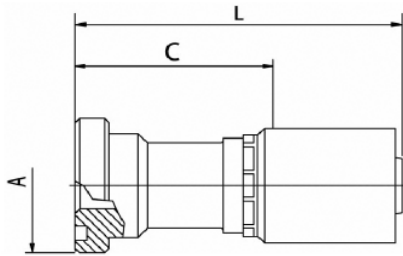


**Hose**

Part Number	Hose I.D.		Flange Size INCH	Flange Dia (A)		Drop (D)		Cut-off (C)		Length (L)		Skive Type	GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
	INCH	MM		INCH	MM	INCH	MM	INCH	MM	INCH	MM				
B2-FH90-0808	1/2	12.70	1/2	1.25	31.80	1.81	46.00	1.89	48.00	3.13	79.50		Y	Y	Y
B2-FH90-1212	3/4	19.00	3/4	1.63	41.30	2.40	61.00	2.40	61.00	3.96	100.50		Y	Y	Y
B2-FH90-1616	1	25.40	1	1.87	47.60	2.97	75.50	3.01	76.50	4.77	121.10		Y	Y	Y
B2-FH90-1620	1	25.40	1 1/4	2.13	54.00	3.07	78.00	3.01	76.50	4.77	121.10		Y	Y	Y
S4-FH90-2020	1 1/4	31.80	1 1/4	2.13	54.00	3.50	89.00	3.82	97.00	5.87	149.00	Non-Skive	Y	Y	
UC-FH90-2020	1 1/4	31.80	1 1/4	2.13	54.00	3.50	89.00	3.82	97.00	5.87	149.00				UCF4-20
S4-FH90-2024	1 1/4	31.80	1 1/2	2.50	63.50	3.70	94.00	3.86	98.00	5.91	150.00		Y	Y	
UC-FH90-2024	1 1/4	31.80	1 1/2	2.50	63.50	3.70	94.00	3.86	98.00	5.91	150.00				UCF4-20
S4-FH90-2424	1 1/2	38.10	1 1/2	2.50	63.50	3.94	100.00	4.45	113.00	6.77	172.00		Y	Y	
S4-FH90-2432	1 1/2	38.10	2	3.13	79.40	4.84	123.00	4.45	113.00	6.77	172.00		Y	Y	
S4-FH90-3232	2	50.80	2	3.13	79.40	5.20	132.00	5.63	143.00	8.46	215.00		Y	Y	

**Hydraulic  
Hose**

## KOMATSU® FLANGE



**Hose**

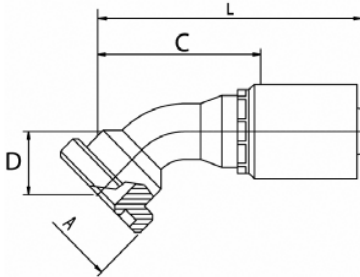
Part Number	Hose I.D.		Flange Size INCH	Flange Dia (A)		Cut-off (C)		Length (L)		Skive Type	GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
	INCH	MM		INCH	MM	INCH	MM	INCH	MM				
B2-KF-1010	5/8	15.90	5/8	1.34	34.00	1.83	46.60	3.19	80.90	NS	Y	Y	Y

S = Skive, NS = Non-Skive, DG = Dual-Grip



**KOMATSU® FLANGE**

**Hose**

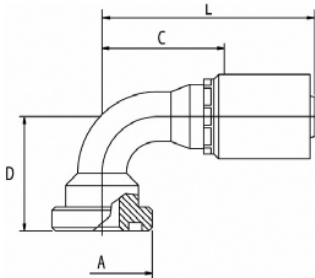


S = Skive, NS = Non-Skive, DG = Dual-Grip	GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
	Y	Y	Y
	Y	Y	Y
	Y	Y	Y

Part Number	Hose I.D.		Flange Size INCH	Flange Dia (A)		Drop (D)		Cut-off (C)		Length (L)		Skive Type
	INCH	MM		INCH	MM	INCH	MM	INCH	MM	INCH	MM	
B2-KF45-1010	5/8	15.90	5/8	1.34	34.00	0.91	23.00	2.32	59.00	3.67	93.30	NS

**KOMATSU® FLANGE**

**Hose**



S = Skive, NS = Non-Skive, DG = Dual-Grip	GR1SN, HR1SN	GR2SN, HR2SN, LR2SN, CR2SN	GR16, GR16SC, AR16SC
	Y	Y	Y
	Y	Y	Y
	Y	Y	Y

Part Number	Hose I.D.		Flange Size INCH	Flange Dia (A)		Drop (D)		Cut-off (C)		Length (L)		Skive Type
	INCH	MM		INCH	MM	INCH	MM	INCH	MM	INCH	MM	
B2-KF90-1010	5/8	15.90	5/8	1.34	34.00	2.01	51.00	2.01	51.00	3.36	85.30	NS



**GR1SN**

Meets or exceeds the performance requirements of: SAE 100R1AT; EN 853 1SN; DIN 20022 1SN  
Meets Flame Resistance USMSHA Designation • Meets Higher EN/DIN Pressures

**GOOD YEAR****Application**

Medium pressure hydraulic applications including mobile, machine tool and agricultural applications using petroleum or water based hydraulic fluids

**Construction**

**Inner Tube:** Nitrile

**Cover:** Black Neoprene

**Reinforcement:** One Braid of high-tensile steel wire

**Temperature**

-40°F to 212°F (-40°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>GR1SN-03</b>	3/16	05	0.47	11.9	3630	25.0	3.5	89	14520	100.1	0.12
<b>GR1SN-04</b>	1/4	06	0.53	13.6	3270	22.5	4.0	102	13080	90.2	0.15
<b>GR1SN-05</b>	5/16	08	0.60	15.1	3120	21.5	4.5	114	12480	86.0	0.17
<b>GR1SN-06</b>	3/8	10	0.69	17.5	2615	18.0	5.0	127	10460	72.1	0.22
<b>GR1SN-08</b>	1/2	12	0.81	20.7	2320	16.0	7.0	178	9280	64.0	0.28
<b>GR1SN-10</b>	5/8	16	0.94	23.8	1890	13.0	8.0	203	7560	52.1	0.33
<b>GR1SN-12</b>	3/4	19	1.10	27.8	1530	10.5	9.5	241	6120	42.2	0.41
<b>GR1SN-16</b>	1	25	1.41	35.8	1280	8.8	12.0	305	5120	35.3	0.62
<b>GR1SN-20</b>	1 1/4	31	1.70	43.1	920	6.3	16.5	419	3680	25.4	0.84
<b>GR1SN-24</b>	1 1/2	38	1.97	50.1	730	5.0	20.0	508	2920	20.1	1.09
<b>GR1SN-32</b>	2	51	2.50	63.6	580	4.0	25.0	635	2320	16.0	1.34

**DESERT™ HR1SN**

Meets or exceeds the performance requirements of: SAE 100R1AT; EN 853 1SN; DIN 20022 1SN  
Meets Higher EN/DIN Pressures • High Temperature



**Application**

Medium pressure hydraulic oil lines used in mobile, machine tool and agricultural applications, where higher temperature petroleum or water based hydraulic fluids are a factor.

**Construction**

**Inner Tube:** Nitrile

**Cover:** Black Neoprene

**Reinforcement:** One Braid of high-tensile steel wire

**Temperature**

-40°F to 275°F (-40°C to 135°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>HR1SN-04</b>	1/4	06	0.52	13.1	3270	22.5	4.0	102	13080	90.2	0.15
<b>HR1SN-06</b>	3/8	10	0.67	17.1	2615	18.0	5.0	127	10460	72.1	0.22
<b>HR1SN-08</b>	1/2	12	0.80	20.3	2320	16.0	7.0	178	9280	64.0	0.28
<b>HR1SN-10</b>	5/8	16	0.92	23.4	1890	13.0	8.0	203	7560	52.1	0.33
<b>HR1SN-12</b>	3/4	19	1.08	27.4	1530	10.5	9.5	241	6120	42.2	0.41
<b>HR1SN-16</b>	1	25	1.39	35.3	1280	8.8	12.0	305	5120	35.3	0.62
<b>HR1SN-20</b>	1 1/4	31	1.70	43.1	920	6.3	16.5	419	3680	25.4	0.84
<b>HR1SN-24</b>	1 1/2	38	1.97	50.1	730	5.0	20.0	508	2920	20.1	1.09
<b>HR1SN-32</b>	2	51	2.50	63.6	580	4.0	25.0	635	2320	16.0	1.34



**Hydraulic Hose**

**NSFX - SAFLEX®**

Non-Conductive



**Application**

Medium pressure hydraulic applications where shock hazards exist and non-conductivity is required. Meets maximum leakage of 100 microamps/ft at 75 KV for 3 minutes.

**Construction**

**Inner Tube:** Neoprene

**Cover:** Orange Nitrile

**Reinforcement:** Two textile brands

**Temperature**

-40°F to 212°F (-40°C to 100°C)

**Hydraulic Hose**

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	MM	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>NSFX-04</b>	1/4	6.4	0.56	14.2	2750	19.0	NA	NA	11000	75.8	0.11
<b>NSFX-06</b>	3/8	9.5	0.75	19.0	2250	15.5	NA	NA	9000	62.1	0.19
<b>NSFX-08</b>	1/2	12.7	0.94	23.7	2000	13.8	NA	NA	8000	55.2	0.27





**GR7**

Meets or exceeds the performance requirements of: SAE 100R7; EN 855 R7

**GOOD YEAR****Application**

Medium pressure thermoplastic hose with a perforated cover. Compatible with petroleum, water and synthetic based fluids for mobile equipment, lube lines, blowout preventers, hydraulic lifts and construction machinery.

**Construction**

**Inner Tube:** Nylon

**Cover:** Black Urethane

**Reinforcement:** Synthetic Fiber

**Temperature**

-40°F to 212°F (-40°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>GR7-02</b>	1/8	03	0.34	8.5	2500	17.2	0.5	13	10000	68.9	0.03
<b>GR7-03</b>	3/16	05	0.43	10.8	3000	20.7	0.8	20	12000	82.7	0.05
<b>GR7-04</b>	1/4	06	0.51	13.0	3000	20.7	1.3	33	12000	82.7	0.06
<b>GR7-05</b>	5/16	08	0.59	15.1	2500	17.2	1.8	46	10000	68.9	0.07
<b>GR7-06</b>	3/8	10	0.67	17.0	2250	15.5	2.0	51	9000	62.1	0.10
<b>GR7-08</b>	1/2	12	0.82	20.7	2000	13.8	3.0	76	8000	55.2	0.14
<b>GR7-12</b>	3/4	19	1.07	27.1	1250	8.6	5.0	127	5000	34.5	0.19
<b>GR7-16</b>	1	25	1.34	34.0	1000	6.9	8.0	203	4000	27.6	0.26

*Note: Max. temperature for water based and fire resistant fluids is 150°F (66°C)*



# TR7

Meets or exceeds the performance requirements of: SAE 100R7



**Hydraulic  
Hose**

### Application

Medium pressure, twin line, thermoplastic hose with a perforated cover. Compatible with petroleum, water and synthetic based fluids for mobile equipment, lube lines, blowout preventers, hydraulic lifts and construction machinery.

### Construction

**Inner Tube:** Nylon

**Cover:** Black Urethane

**Reinforcement:** Synthetic Fiber

### Temperature

-40°F to 212°F (-40°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	MM	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>TR7-03</b>	3/16	4.8	0.43	10.8	3000	20.7	0.8	20	12000	82.7	0.09
<b>TR7-04</b>	1/4	6.4	0.51	13.0	3000	20.7	1.3	33	12000	82.7	0.11
<b>TR7-05</b>	5/16	7.9	0.59	15.1	2500	17.2	1.8	46	10000	68.9	0.14
<b>TR7-06</b>	3/8	9.5	0.67	17.0	2250	15.5	2.0	51	9000	62.1	0.19
<b>TR7-08</b>	1/2	12.7	0.82	20.7	2000	13.8	3.0	76	8000	55.2	0.28

*Note: Max. temperature for water based and fire resistant fluids is 150°F (66°C)*

# NR7

Meets or exceeds the performance requirements of: SAE 100R7  
Non-Conductive



**Hydraulic  
Hose**

### Application

Medium pressure thermoplastic hose with a non-perforated cover. Compatible with petroleum, water and synthetic based fluids for mobile equipment, lube lines, blowout preventers, hydraulic lifts and construction machinery, requiring SAE 100R7 non-conductivity standards.

### Construction

**Inner Tube:** Nylon (sizes 1/8", 3/4" and 1") and Polyester (sizes 3/16", 1/4", 5/16", 3/8" and 1/2")

**Cover:** Orange Urethane

**Reinforcement:** Synthetic Fiber

### Temperature

-65°F to 212°F (-54°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	MM	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>NR7-02</b>	1/8	3.3	0.34	8.5	2500	17.2	0.5	13	10000	68.9	0.03
<b>NR7-03</b>	3/16	4.8	0.43	10.8	3000	20.7	0.8	20	12000	82.7	0.05
<b>NR7-04</b>	1/4	6.4	0.49	12.3	2750	19.0	1.3	33	11000	75.8	0.06
<b>NR7-05</b>	5/16	7.9	0.58	14.7	2500	17.2	1.8	46	10000	68.9	0.08
<b>NR7-06</b>	3/8	9.5	0.64	16.1	2250	15.5	2.0	51	9000	62.1	0.10
<b>NR7-08</b>	1/2	12.7	0.82	20.7	2250	15.5	3.0	76	9000	62.1	0.14
<b>NR7-12</b>	3/4	19.0	1.07	27.1	1250	8.6	5.0	127	5000	34.5	0.19
<b>NR7-16</b>	1	25.4	1.34	34.0	1000	6.9	8.0	203	4000	27.6	0.26

*Note: Temperature range is -40°F to 212°F (-40°C to 100°C) for sizes 1/8", 3/4" and 1".  
Temperature range is -65°F to 212°F (-54°C to 100°C) for sizes 3/16", 1/4", 5/16", 3/8" and 1/2".  
Max. temperature for water based and fire resistant fluids is 140°F (60°C)*



## BR7

Meets or exceeds the performance requirements of: SAE 100R7  
Twin-Line • Non-Conductive



### Application

Medium pressure, twin line, thermoplastic hose with a non-perforated cover. Compatible with petroleum, water and synthetic based fluids for mobile equipment, lube lines, blowout preventers, hydraulic lifts and construction machinery, requiring SAE 100R7 non-conductivity standards.

### Construction

**Inner Tube:** Nylon

**Cover:** Orange Urethane

**Reinforcement:** Synthetic Fiber

### Temperature

-65°F to 212°F (-54°C to 100°C)

**Hydraulic  
Hose**

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	MM	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>BR7-04</b>	1/4	6.4	0.49	12.3	2750	19.0	1.3	33	11000	75.8	0.12
<b>BR7-05</b>	5/16	7.9	0.58	14.7	2500	17.2	1.8	46	10000	68.9	0.15
<b>BR7-06</b>	3/8	9.5	0.64	16.1	2250	15.5	2.0	51	9000	62.1	0.19
<b>BR7-08</b>	1/2	12.7	0.82	20.7	2250	15.5	3.0	76	9000	62.1	0.29

*Note: Max. temperature for water based and fire resistant fluids is 150°F (66°C)*



**GR2SN**

Meets or exceeds the performance requirements of: SAE 100R2AT; EN 853 2SN; DIN 20022 2SN  
 Meets Flame Resistance USMSHA Designation • Meets Higher EN/DIN Pressures

**GOOD YEAR****Application**

High pressure hydraulic oil lines used in construction, machine tool and agricultural application using petroleum or water based hydraulic fluids.

**Construction**

**Inner Tube:** Nitrile

**Cover:** Black Neoprene

**Reinforcement:** Two braids of high-tensile steel wire

**Temperature**

-40°F to 212°F (-40°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>GR2SN-03</b>	3/16	05	0.48	12.3	6000	41.4	3.5	89	24000	165.5	0.20
<b>GR2SN-04</b>	1/4	06	0.59	15.1	5800	40.0	4.0	102	23200	160.0	0.24
<b>GR2SN-06</b>	3/8	10	0.75	19.1	4800	33.1	5.0	127	19200	132.4	0.34
<b>GR2SN-08</b>	1/2	12	0.88	22.2	4000	27.6	7.0	178	16000	110.3	0.43
<b>GR2SN-10</b>	5/8	16	1.00	25.4	3630	25.0	8.0	203	14520	100.1	0.50
<b>GR2SN-12</b>	3/4	19	1.16	29.4	3120	21.5	9.5	241	12480	86.0	0.61
<b>GR2SN-16</b>	1	25	1.50	38.1	2400	16.5	12.0	305	9600	66.2	0.88
<b>GR2SN-20</b>	1 1/4	31	1.88	47.7	1820	12.5	16.5	419	7280	50.2	1.29
<b>GR2SN-24</b>	1 1/2	38	2.13	54.1	1310	9.0	20.0	508	5240	36.1	1.61
<b>GR2SN-32</b>	2	51	2.63	66.7	1160	8.0	25.0	635	4640	32.0	1.98



**DESERT™ HR2SN**

Meets or exceeds the performance requirements of: SAE 100R2AT; EN 853 2SN; DIN 20022 2SN.  
Meets Higher EN/DIN Pressures • High Temperature



**Application**

High pressure hydraulic oil lines used in construction, machine tool and agricultural applications, where higher temperature petroleum or water based hydraulic fluids are a factor.

**Construction**

**Inner Tube:** Nitrile

**Cover:** Black Neoprene

**Reinforcement:** Two braids of high-tensile steel wire

**Temperature**

-40°F to 275°F (-40°C to 135°C)

**Hydraulic  
Hose**

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>HR2SN-04</b>	1/4	06	0.58	14.7	5800	40.0	4.0	102	23200	160.0	0.24
<b>HR2SN-06</b>	3/8	10	0.74	18.7	4800	33.1	5.0	127	19200	132.4	0.34
<b>HR2SN-08</b>	1/2	12	0.86	21.8	4000	27.6	7.0	178	16000	110.3	0.43
<b>HR2SN-10</b>	5/8	16	0.99	25.0	3630	25.0	8.0	203	14520	100.1	0.50
<b>HR2SN-12</b>	3/4	19	1.14	29.0	3120	21.5	9.5	241	12480	86.0	0.61
<b>HR2SN-16</b>	1	25	1.48	37.6	2400	16.5	12.0	305	9600	66.2	0.88
<b>HR2SN-20</b>	1 1/4	31	1.88	47.7	1820	12.5	16.5	419	7280	50.2	1.29
<b>HR2SN-24</b>	1 1/2	38	2.13	54.1	1310	9.0	20.0	508	5240	36.1	1.61
<b>HR2SN-32</b>	2	51	2.63	66.7	1160	8.0	25.0	635	4640	32.0	1.98

**ARCTIC™ LR2SN**

Meets or exceeds the performance requirements of: SAE 100R2AT; EN 853 2SN; DIN 20022 2SN  
Meets Flame Resistance USMSHA Designation • Meets Higher EN/DIN Pressures • Low Temperature



**Hydraulic  
Hose**

**Application**

High pressure hydraulic oil lines used in construction, machine tool and agricultural applications, where lower temperature petroleum or water based hydraulic fluids are a factor.

**Construction**

**Inner Tube:** Nitrile

**Cover:** Black Neoprene

**Reinforcement:** Two braids of high-tensile steel wire

**Temperature**

-58°F to 212°F (-50°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>LR2SN-04</b>	1/4	06	0.58	14.7	5800	40.0	4.0	102	23200	160.0	0.24
<b>LR2SN-06</b>	3/8	10	0.74	18.7	4800	33.1	5.0	127	19200	132.4	0.34
<b>LR2SN-08</b>	1/2	12	0.86	21.8	4000	27.6	7.0	178	16000	110.3	0.43
<b>LR2SN-10</b>	5/8	16	0.99	25.0	3630	25.0	8.0	203	14520	100.1	0.50
<b>LR2SN-12</b>	3/4	19	1.14	29.0	3120	21.5	9.5	241	12480	86.0	0.61
<b>LR2SN-16</b>	1	25	1.48	37.6	2400	16.5	12.0	305	9600	66.2	0.88
<b>LR2SN-20</b>	1 1/4	31	1.88	47.7	1820	12.5	16.5	419	7280	50.2	1.29



**ARMORCOAT™ CR2SN**

Meets or exceeds the performance requirements of: SAE 100R2AT; EN 853 2SN; DIN 20022 2SN  
Meets Flame Resistance USMSHA Designation • Meets Higher EN/DIN Pressures • Low Temperature • Abrasion Cover



**Application**

High pressure and high temperature, SAE 100R2AT applications in an abrasive or severe outdoor environment such as offshore, forestry, construction and mining.

**Construction**

**Inner Tube:** Nitrile

**Cover:** Black Neoprene with Armorcoat

**Reinforcement:** Two braids of high-tensile steel wire

**Temperature**

-40°F to 2750°F (-40°C to 121°C)

**Hydraulic  
Hose**

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>CR2SN-04</b>	1/4	06	0.58	14.7	5800	40.0	4.0	102	23200	160.0	0.24
<b>CR2SN-06</b>	3/8	10	0.74	18.7	4800	33.1	5.0	127	19200	132.4	0.34
<b>CR2SN-08</b>	1/2	12	0.86	21.8	4000	27.6	7.0	178	16000	110.3	0.42
<b>CR2SN-12</b>	3/4	19	1.14	29.0	3120	21.5	9.5	241	12480	86.0	0.60
<b>CR2SN-16</b>	1	25	1.48	37.6	2400	16.5	12.0	305	9600	66.2	0.89
<b>CR2SN-20</b>	1 1/4	31	1.88	47.7	1820	12.5	16.5	419	7280	50.2	1.29
<b>CR2SN-24</b>	1 1/2	38	2.13	54.1	1310	9.0	20.0	508	5240	36.1	1.61
<b>CR2SN-32</b>	2	51	2.63	66.7	1160	8.0	25.0	635	4640	32.0	1.98



**GR8**

Meets or exceeds the performance requirements of: SAE 100R8; EN 858 R8

**GOOD YEAR****Application**

High pressure thermoplastic hose with a perforated cover for petroleum, water and synthetic based fluids for mobile equipment, lube lines, blowout preventers, hydraulic lifts and construction machinery.

**Construction**

**Inner Tube:** Nylon

**Cover:** Black Urethane

**Reinforcement:** Synthetic Fiber

**Temperature**

-40°F to 212°F (-40°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>GR8-03</b>	3/16	05	0.52	13.1	5000	34.5	1.5	38	20000	137.9	0.08
<b>GR8-04</b>	1/4	06	0.63	15.9	5000	34.5	2.0	51	20000	137.9	0.12
<b>GR8-06</b>	3/8	10	0.77	19.4	4000	27.6	2.5	64	16000	110.3	0.15
<b>GR8-08</b>	1/2	12	0.89	22.7	3500	24.1	4.0	102	14000	96.5	0.19

*Note: Max. temperature for water based and fire resistant fluids is 150°F (66°C)*



**GR16**

Meets or exceeds the performance requirements of: SAE 100R16  
Meets Flame Resistance USMSHA Designation

**GOOD YEAR****Application**

High pressure hydraulic applications designed to replace SAE 100R2 where higher pressures and a more flexible hose is required.

**Construction**

**Inner Tube:** Nitrile

**Cover:** Black Neoprene

**Reinforcement:** Two braids of high-tensile steel wire

**Temperature**

-40°F to 212°F (-40°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	MM	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>GR16-04</b>	1/4	6.4	0.57	14.5	5000	34.5	2.0	51	20000	137.9	0.18
<b>GR16-06</b>	3/8	9.5	0.74	18.8	4000	27.6	2.5	64	16000	110.3	0.24
<b>GR16-08</b>	1/2	12.7	0.87	22.0	3500	24.1	3.5	89	14000	96.5	0.31
<b>GR16-10</b>	5/8	15.9	1.00	25.4	2750	19.0	4.0	102	11000	75.8	0.36
<b>GR16-12</b>	3/4	19.0	1.14	29.0	2250	15.5	4.8	121	9000	62.1	0.49
<b>GR16-16</b>	1	25.4	1.44	36.6	2000	13.8	6.0	152	8000	55.2	0.67
<b>GR16-20</b>	1 1/4	31.8	1.75	44.3	1625	11.2	8.3	210	6500	44.8	0.95

# GR16SC

Meets or exceeds the performance requirements of: SAE 100R16; EN 857 2SC  
Meets Flame Resistance USMSHA Designation • Meets Higher EN/DIN Pressures



**Hydraulic  
Hose**

### Application

High pressure service with tight bends for petroleum and water based hydraulic fluids. Excellent impulse performance and flexibility, exceeding SAE 100R2 and SAE 100R16 standards.

### Construction

**Inner Tube:** Nitrile

**Cover:** Black Neoprene

**Reinforcement:** Two braids of high-tensile steel wire

### Temperature

-40°F to 212°F (-40°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>GR16SC-04</b>	1/4	06	0.56	14.2	5800	40.0	3.0	76	23200	160.0	0.18
<b>GR16SC-06</b>	3/8	10	0.72	18.3	5000	34.5	3.5	89	20000	137.9	0.27
<b>GR16SC-08</b>	1/2	12	0.85	21.5	4500	31.0	5.0	127	18000	124.1	0.36
<b>GR16SC-10</b>	5/8	16	0.97	24.7	4000	27.6	6.3	159	16000	110.3	0.41
<b>GR16SC-12</b>	3/4	19	1.13	28.6	3500	24.1	8.0	203	14000	96.5	0.55
<b>GR16SC-16</b>	1	25	1.44	36.6	2700	18.6	10.0	254	10800	74.5	0.83



**ARMORCOAT™ AR16SC**

Meets or exceeds the performance requirements of: SAE 100R16; EN 857 2SC;  
Meets Flame Resistance USMSHA Designation • Meets Higher EN/DIN Pressures • Abrasion Cover



**Application**

High pressure service with tight bends for petroleum and water based hydraulic fluids where maximum abrasion resistance is required. Excellent impulse performance and flexibility, exceeding SAE 100R2 and SAE 100R16 standards.

**Construction**

**Inner Tube:** Nitrile

**Cover:** Black Neoprene with Armorcoat

**Reinforcement:** Two braids of high-tensile steel wire

**Temperature**

-40°F to 212°F (-40°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>AR16SC-04</b>	1/4	06	0.56	14.2	5800	40.0	3.0	76	23200	160.0	0.17
<b>AR16SC-06</b>	3/8	10	0.72	18.3	5000	34.5	3.5	89	20000	137.9	0.26
<b>AR16SC-08</b>	1/2	12	0.85	21.5	4500	31.0	5.0	127	18000	124.1	0.35
<b>AR16SC-10</b>	5/8	16	0.97	24.7	4000	27.6	6.3	159	16000	110.3	0.40
<b>AR16SC-12</b>	3/4	19	1.13	28.6	3500	24.1	8.0	203	14000	96.5	0.54
<b>AR16SC-16</b>	1	25	1.44	36.6	2700	18.6	10.0	254	10800	74.5	0.83

**Hydraulic  
Hose**

**GR17**

Meets or exceeds the performance requirements of: SAE 100R17  
Meets Flame Resistance USMSHA Designation

**GOOD YEAR****Application**

High pressure hydraulic applications designed to replace 100R1 where higher pressures and a more flexible hose is required.

**Construction**

**Inner Tube:** Nitrile

**Cover:** Black Neoprene

**Reinforcement:** One braid of high-tensile steel wire (sizes 1/4", 3/8" & 1/2")  
and two braids of high-tensile steel wire (sizes 5/8", 3/4" & 1")

**Temperature**

-40°F to 212°F (-40°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	MM	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>GR17-04</b>	1/4	6.4	0.52	13.2	3000	20.7	2.0	51	12000	82.7	0.11
<b>GR17-06</b>	3/8	9.5	0.67	17.0	3000	20.7	2.5	64	12000	82.7	0.17
<b>GR17-08</b>	1/2	12.7	0.83	21.1	3000	20.7	3.5	89	12000	82.7	0.28
<b>GR17-10</b>	5/8	15.9	1.02	25.9	3000	20.7	4.0	102	12000	82.7	0.41
<b>GR17-12</b>	3/4	19.0	1.19	30.3	3000	20.7	5.0	127	12000	82.7	0.55
<b>GR17-16</b>	1	25.4	1.52	38.6	3000	20.7	6.0	152	12000	82.7	0.82



**ARMORCOAT™ AR17**

Meets or exceeds the performance requirements of: SAE 100R17  
Meets Flame Resistance USMSHA Designation • Abrasion Cover



**Application**

High pressure hydraulic applications designed to replace 100R1 where higher pressures, increased flexibility and maximum abrasion resistance is required.

**Construction**

**Inner Tube:** Nitrile

**Cover:** Black Neoprene with Armorcoat

**Reinforcement:** Two braids of high-tensile steel wire

**Temperature**

-40°F to 212°F (-40°C to 100°C)

**Hydraulic  
Hose**

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	MM	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>AR17-04</b>	1/4	6.4	0.52	13.2	3000	20.7	2.0	51	12000	82.7	0.11
<b>AR17-06</b>	3/8	9.5	0.67	17.0	3000	20.7	2.5	64	12000	82.7	0.17
<b>AR17-08</b>	1/2	12.7	0.83	21.1	3000	20.7	3.5	89	12000	82.7	0.28

**GR18**

Meets or exceeds the performance requirements of: SAE 100R18

**GOOD YEAR****Application**

Thermoplastic hose, highly flexible even in cold temperatures. Compact size with a small O.D. and lightweight, yet rugged construction. Applications for this hose include: forklifts, construction equipment, general hydraulic applications, chemical and gas transfer, agricultural equipment, material handling, freezer applications, machine tools & robotics, lubrication equipment, and, portable hydraulic tools.

**Construction**

**Inner Tube:** Thermoplastic polymer  
**Cover:** Black Perforated thermoplastic polymer  
**Reinforcement:** Two textile braids

**Temperature**

-65°F to 199°F (-54°C to 93°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	MM	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>GR18-04</b>	1/4	6.4	0.49	12.3	3000	20.7	1.3	32	12000	82.7	0.06
<b>GR18-05</b>	5/16	7.9	0.61	15.5	3000	20.7	1.5	38	12000	82.7	0.08
<b>GR18-06</b>	3/8	9.5	0.66	16.8	3000	20.7	2.0	51	12000	82.7	0.12
<b>GR18-08</b>	1/2	12.7	0.85	21.6	3000	20.7	3.5	89	12000	82.7	0.15



**GR12**

Meets or exceeds the performance requirements of: SAE 100R12; EN 856 R12  
Meets Flame Resistance USMSHA Designation

**GOODYEAR****Application**

Very high pressure applications subject to surges or flexing such as construction equipment, mining and the high performance industrial market

**Construction**

**Inner Tube:** Neoprene

**Cover:** Grey Hypalon

**Reinforcement:** Four alternating layers of spiraled high-tensile steel wire

**Temperature**

-40°F to 250°F (-40°C to 121°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>GR12-06</b>	3/8	10	0.80	20.2	4000	27.6	5.0	127	16000	110.3	0.44
<b>GR12-08</b>	1/2	12	0.94	23.8	4000	27.6	7.0	178	16000	110.3	0.54
<b>GR12-10</b>	5/8	16	1.09	27.7	4000	27.6	8.0	203	16000	110.3	0.72
<b>GR12-12</b>	3/4	19	1.21	30.7	4000	27.6	9.5	241	16000	110.3	0.85
<b>GR12-16</b>	1	25	1.50	38.0	4000	27.6	12.0	305	16000	110.3	1.20
<b>GR12-20</b>	1 1/4	31	1.85	47.0	3000	20.7	16.5	419	12000	82.7	1.84
<b>GR12-24</b>	1 1/2	38	2.10	53.4	2500	17.2	20.0	508	10000	68.9	2.10
<b>GR12-32</b>	2	51	2.63	66.7	2500	17.2	25.0	635	10000	68.9	2.71



**ARMORCOAT™ AR12**

Meets or exceeds the performance requirements of: SAE 100R12; EN 856 R12  
Meets Flame Resistance USMSHA Designation • Abrasion Cover



**Hydraulic  
Hose**

**Application**

Very high pressure applications subject to surges or flexing such as construction equipment, mining and the high performance industrial market, where maximum abrasion resistance is required.

**Construction**

**Inner Tube:** Neoprene

**Cover:** Black Perforated with Armorcoat

**Reinforcement:** Four alternating layers of spiralled high-tensile steel wire

**Temperature**

-40°F to 250°F (-40°C to 121°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>AR12-06</b>	3/8	10	0.80	20.2	4000	27.6	5.0	127	16000	110.3	0.44
<b>AR12-08</b>	1/2	12	0.94	23.8	4000	27.6	7.0	178	16000	110.3	0.55
<b>AR12-12</b>	3/4	19	1.21	30.7	4000	27.6	9.5	241	16000	110.3	0.82
<b>AR12-16</b>	1	25	1.50	38.0	4000	27.6	12.0	305	16000	110.3	1.21
<b>AR12-20</b>	1 1/4	31	1.85	47.0	3000	20.7	16.5	419	12000	82.7	1.65
<b>AR12-24</b>	1 1/2	38	2.10	53.4	2500	17.2	20.0	508	10000	68.9	2.19
<b>AR12-32</b>	2	51	2.63	66.7	2500	17.2	25.0	635	10000	68.9	3.13



## GR13

Meets or exceeds the performance requirements of: SAE 100R13; EN 856 R13  
Meets Flame Resistance USMSHA Designation




### Application

Very high pressure applications subject to surges or flexing such as construction equipment, mining and the high performance industrial market

### Construction

**Inner Tube:** Neoprene

**Cover:** Black Neoprene

**Reinforcement:** Four alternating layers of spiralled high-tensile steel wire (sizes 3/4" & 1") and six alternating layers of spiralled high-tensile steel wire (sizes 1 1/4", 1 1/2" & 2")

### Temperature

-40°F to 250°F (-40°C to 121°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>GR13-12</b>	3/4	19	1.26	32.1	5000	34.5	9.5	241	20000	137.9	1.04
<b>GR13-16</b>	1	25	1.52	38.7	5000	34.5	12.0	305	20000	137.9	1.34
<b>GR13-20</b>	1 1/4	31	1.96	49.8	5000	34.5	16.5	419	20000	137.9	2.40
<b>GR13-24</b>	1 1/2	38	2.26	57.3	5000	34.5	20.0	508	20000	137.9	3.35
<b>GR13-32</b>	2	51	2.80	71.1	5000	34.5	25.0	635	20000	137.9	4.38

# ARMORCOAT™ AR13

Meets or exceeds the performance requirements of: SAE 100R13 (except size 5/8"); EN 856 R13  
Meets Flame Resistance USMSHA Designation • Abrasion Cover



**Hydraulic  
Hose**

### Application

Very high pressure applications subject to surges or flexing such as construction equipment, mining and the high performance industrial market, where maximum abrasion resistance is required.

### Construction

**Inner Tube:** Neoprene

**Cover:** Black Perforated with Armorcoat

**Reinforcement:** Four alternating layers of spiralled high-tensile steel wire (sizes 5/8", 3/4" & 1") and six alternating layers of spiralled high-tensile steel wire (sizes 1 1/4", 1 1/2" & 2")

### Temperature

-40°F to 250°F (-40°C to 121°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	DIN Dash Size	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>AR13-10</b>	5/8	16	1.11	28.2	5000	34.5	8.0	203	20000	137.9	0.71
<b>AR13-12</b>	3/4	19	1.26	32.1	5000	34.5	9.5	241	20000	137.9	0.97
<b>AR13-16</b>	1	25	1.52	38.7	5000	34.5	12.0	305	20000	137.9	1.30
<b>AR13-20</b>	1 1/4	31	1.96	49.8	5000	34.5	16.5	419	20000	137.9	1.73
<b>AR13-24</b>	1 1/2	38	2.26	57.3	5000	34.5	20.0	508	20000	137.9	3.27
<b>AR13-32</b>	2	51	2.80	71.1	5000	34.5	25.0	635	20000	137.9	4.43



**GR5**

Meets or exceeds the performance requirements of: SAE 100R5  
DOT FMVSS 106 All and SAE J1402 (sizes 3/16", 1/4", 5/16", 13/32", 1/2" and 5/8")

**GOODYEAR****Application**

General purpose, medium pressure applications including petroleum based hydraulic oil, air and water for use in air brakes, power steering, turbo oil lines, tilt cab cylinders, transmission coolant and filtration lines.

**Construction**

**Inner Tube:** Nitrile

**Cover:** Black Impregnated textile braid

**Reinforcement:** One braid of high-tensile steel wire

**Temperature**

-40°F to 212°F (-40°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	MM	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>GR5-04</b>	3/16	4.8	0.52	13.2	3000	20.7	3.0	76	12000	82.7	0.15
<b>GR5-05</b>	1/4	6.4	0.58	14.8	3000	20.7	3.4	86	12000	82.7	0.18
<b>GR5-06</b>	5/16	7.9	0.68	17.1	2250	15.5	4.0	102	9000	62.1	0.22
<b>GR5-08</b>	13/32	10.3	0.77	19.5	2000	13.8	4.6	117	8000	55.2	0.30
<b>GR5-10</b>	1/2	12.7	0.92	23.4	1750	12.1	5.5	140	7000	48.3	0.37
<b>GR5-12</b>	5/8	15.9	1.08	27.4	1500	10.3	6.5	165	6000	41.4	0.45
<b>GR5-16</b>	7/8	22.2	1.24	31.4	800	5.5	7.4	187	3200	22.1	0.47
<b>GR5-20</b>	1 1/8	28.6	1.50	38.1	625	4.3	9.0	229	2500	17.2	0.58
<b>GR5-24</b>	1 3/8	35.0	1.75	44.4	500	3.4	10.5	267	2000	13.8	0.73
<b>GR5-32</b>	1 13/16	46.0	2.22	56.4	350	2.4	13.3	337	1400	9.7	0.90

\*\*\* NOTE: ASSEMBLIES MADE WITH GOODYEAR'S GR5 HOSE AND GOODYEAR'S "FIELD-GRIP" FITTINGS MEET SAE J1402 AND DOT FMVSS 571.106 SPECIFICATIONS.

IF YOU NEED FITTINGS FOR GR5 HOSE TO MEET SAE J517 100R5 ASSEMBLY REQUIREMENTS, PLEASE CONTACT GOODYEAR.



# GGUN - Grease Gun Hose

Meets Flame Resistance USMSHA Designation

**GOOD YEAR**

### Application

Used as a grease whip hose or general purpose lubrication line. To be used with hand grease guns only. Not for powered units.

### Construction

**Inner Tube:** Nitrile**Cover:** Black Neoprene**Reinforcement:** One braid of high-tensile steel wire

### Temperature

-40°F to 212°F (-40°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	MM	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>GGUN-03</b>	3/16	4.8	0.41	10.4	3000	20.7	NA	NA	12000	82.7	0.09



## GHJ - Jack Hose



**Hydraulic  
Hose**

***Application***

Extreme high pressure hydraulic lines for jacking systems.

***Construction***

***Inner Tube:*** Nitrile

***Cover:*** Black Neoprene

***Reinforcement:*** Two braids of high-tensile steel wire

***Temperature***

-40°F to 212°F (-40°C to 100°C)

Part Number	Hose Size I.D.		Hose O.D.		Max. Working Pressure		Min. Bend Radius		Min. Burst Pressure		Weight (lbs/foot)
	INCH	MM	INCH	MM	PSI	MPA	INCH	MM	PSI	MPA	
<b>GHJ-04</b>	1/4	6.4	0.58	14.7	10000	68.9	4.0	102	20000	137.9	0.24
<b>GHJ-06</b>	3/8	9.5	0.74	18.7	10000	68.9	5.0	127	20000	137.9	0.30

# GOODYEAR HYDRAULIC HOSE PART NUMBER DESIGNATIONS

GR1SN	SAE100R1AT/1SN
HR1SN	DESERT SAE 100R1AT/1SN (High Temp)
GR2SN	SAE 100R2AT/2SN
LR2SN	ARCTIC SAE 100R2AT/2SN (Low Temp)
HR2SN	DESERT SAE 100R2AT/2SN (High Temp)
CR2SN	ARMORCOAT SAE 100R2AT/2SN (High Temp, Abrasion Cover)
GR3	SAE 100R3/EN 854 R3
GR4	SAE 100R4
GR5	SAE 100R5
GR6	SAE 100R6/EN 854 R6
HR6	DESERT SAE 100R6/EN 854 R6 (High Temp)
GR7	SAE 100R7/EN 855 R7
NR7	SAE 100R7 (Non Conductive)
NSFX	SAFLEX® (Non Conductive)
TR7	SAE 100R7 (Twin-Line)
BR7	SAE 100R7 (Twin-Line, Non Conductive)
GR8	SAE 100R8/EN855 R8
NR8	SAE 100R8 (Non Conductive)
TR8	SAE 100R8 (Twin-Line)
G4SH	EN 856 4SH
G4SP	EN 856 4SP
GR12	SAE 100R12/EN 856 R12
AR12	ARMORCOAT SAE 100R12/EN856 R12 (Abrasion Cover)
GR13	SAE 100R13/EN 856 R13
AR13	ARMORCOAT SAE 100R13/EN856 R13 (Abrasion Cover)
GR15	SAE 100R15
AR15	ARMORCOAT SAE 100R15 (Abrasion Cover)
GR16	SAE 100R16
GR16SC	SAE 100R16/EN 857 2SC
AR16SC	ARMORCOAT SAE 100R16/EN857 2SC (Abrasion Cover)
GR17	SAE 100R17
AR17	ARMORCOAT SAE 100R17 (Abrasion Cover)
GR18	SAE 100R18
GGUN	Grease Gun Hose
GHJ	Jack Hose

# Hydraulic Hose

## EXAMPLE: B2-JCFX45-0608

**XX**

**XXXXXX**

**-- XXXX**

### Fitting FAMILY

First character of Part Number

- H = High Temp (DESERT™)**
- L = Low Temp (ARCTIC™)
- A = Abrasion Cover (ARMORCOAT™)
- C = Combination of Abrasion Cover and High Temp
- N = Non-Conductive
- T = Twin-Line
- B = Both Non-Conductive and Twin-Line
- G = General Specification Hose

### Thread Description

Next 2-5 characters of Part Number before hyphen

- R1SN = SAE 100R1AT/1SN
- R2SN = SAE 100R2AT/2SN**
- R3 = SAE 100R3/EN 854 R3
- R4 = SAE 100R4
- R5 = SAE 100R5
- R6 = SAE 100R6/854 R6
- R7 = SAE 100R7/855 R7
- SFX = SAFLEX®
- R8 = SAE 100R8/855 R8
- 4SH = EN 856 4SH/DIN 20023 4SH
- 4SP = EN 856 4SP/DIN 20023 4SP
- R12 = SAE 100R12/856R12
- R13 = SAE 100R13/856R13
- R15 = SAE 100R15
- R16 = SAE 100R16
- R16SC = SAE 100R16/857 2SC
- R17 = SAE 100R17
- R18 = SAE 100R18
- GUN = Grease Gun Hose
- HJ = Jack Hose

### Hose DASH SIZE

(Hose Inside Diameter)  
Last 2 characters of Part Number after hyphen

#### All hoses except R5

- 02 = 1/8" (3.3 mm)
- 3 = 3/16" (4.8 mm)
- 4 = 1/4" (6.4 mm)
- 5 = 5/16" (7.9 mm)
- 6 = 3/8" (9.5 mm)
- 08 = 1/2" (12.7mm)
- 10 = 5/8" (15.9 mm)
- 12 = 3/4" (**19 mm**)
- 16 = 1" (25.4mm)
- 20 = 1 1/4" (31.8mm)
- 24 = 1 1/2" (38.1 mm)
- 32 = 2" (50.8 mm)
- 40 = 2 1/2" (63.5 mm)
- 48 = 3" (76.2 mm)
- 56 = 3 1/2" (89 mm)
- 64 = 4" (101.6mm)

#### SAE 100R5 Hose

- 4 = 3/16" (4.8 mm)
- 5 = 1/4" (6.4 mm)
- 6 = 5/16" (7.9 mm)
- 08 = 13/32" (10.3 mm)
- 10 = 1/2" (12.7mm)
- 12 = 5/8" (15.9 mm)
- 16 = 7/8" (22.2 mm)
- 20 = 1 1/8" (28.6 mm)
- 24 = 1 3/8" (35 mm)
- 32 = 1 13/16" (46mm)

### Warning - Selection of Hose

Selection of the proper Goodyear hose for the application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to selection of the hose for your application can result in hose leakage, bursting, or other failure, which can cause serious bodily injury or property damage from spraying fluids or flying projectiles. Some of the factors involved in the selection of the proper hose are:

- Hose Size
- Fluid Conveyed
- Hose Pressure
- Hose Length
- Bends
- Static Head Pressure
- Hose Ends
- Temperature
- Installation Design

The above factors and information provided in this catalog should be considered in selecting the proper hose for your application.



# Hydraulic Hose

## EXAMPLE: HR2SN-12

**X**

**XXXXX**

--

**XX**

### Hose ATTRIBUTE

First character of Part Number

- H = High Temp (DESERT™)**
- L = Low Temp (ARCTIC™)**
- A = Abrasion Cover (ARMORCOAT™)**
- C = Combination of Abrasion Cover and High Temp**
- N = Non-Conductive**
- T = Twin-Line**
- B = Both Non-Conductive and Twin-Line**
- G = General Specification Hose**

### Hose STANDARD

Next 2-5 characters of Part Number before hyphen

- R1SN = SAE 100R1AT/1SN
- R2SN = SAE 100R2AT/2SN**
- R3 = SAE 100R3/EN 854 R3
- R4 = SAE 100R4
- R5 = SAE 100R5
- R6 = SAE 100R6/854 R6
- R7 = SAE 100R7/855 R7
- SFX = SAFLEX®
- R8 = SAE 100R8/855 R8
- 4SH = EN 856 4SH/DIN 20023 4SH
- 4SP = EN 856 4SP/DIN 20023 4SP
- R12 = SAE 100R12/856R12
- R13 = SAE 100R13/856R13
- R15 = SAE 100R15
- R16 = SAE 100R16
- R16SC = SAE 100R16/857 2SC
- R17 = SAE 100R17
- R18 = SAE 100R18
- GUN = Grease Gun Hose
- HJ = Jack Hose

### Hose DASH SIZE

(Hose Inside Diameter) Last 2 characters of Part Number after hyphen

#### All hoses except R5

- 02 = 1/8" (3.3 mm)
- 3 = 3/16" (4.8 mm)
- 4 = 1/4" (6.4 mm)
- 5 = 5/16" (7.9 mm)
- 6 = 3/8" (9.5 mm)
- 08 = 1/2" (12.7mm)
- 10 = 5/8" (15.9 mm)
- 12 = 3/4" (19 mm)**
- 16 = 1" (25.4mm)
- 20 = 1 1/4" (31.8mm)
- 24 = 1 1/2" (38.1 mm)
- 32 = 2" (50.8 mm)
- 40 = 2 1/2" (63.5 mm)
- 48 = 3" (76.2 mm)
- 56 = 3 1/2" (89 mm)
- 64 = 4" (101.6mm)

#### SAE 100R5 Hose

- 4 = 3/16" (4.8 mm)
- 5 = 1/4" (6.4 mm)
- 6 = 5/16" (7.9 mm)
- 08 = 13/32" (10.3 mm)
- 10 = 1/2" (12.7mm)
- 12 = 5/8" (15.9 mm)
- 16 = 7/8" (22.2 mm)
- 20 = 1 1/8" (28.6 mm)
- 24 = 1 3/8" (35 mm)
- 32 = 1 13/16" (46mm)

### Warning - Selection of Hose

Selection of the proper Goodyear hose for the application is essential to the proper operation and safe use of the hose and related equipment. Inadequate attention to selection of the hose for your application can result in hose leakage, bursting, or other failure, which can cause serious bodily injury or property damage from spraying fluids or flying projectiles. Some of the factors involved in the selection of the proper hose are:

- Hose Size
- Fluid Conveyed
- Hose Pressure
- Hose Length
- Bends
- Static Head Pressure
- Hose Ends
- Temperature
- Installation Design

The above factors and information provided in this catalog should be considered in selecting the proper hose for your application.



# Hydraulic Hose

Pressure Range	Family Part Number	Hose Description	Temperature Range	DASH SIZE							
				02	03	04	05	06	08	10	12
				HOSE ID							
				1/8" (3.3 mm)	3/16" (4.8 mm)	1/4" (6.4 mm) R5: 3/16" (4.8 mm)	5/16" (7.9 mm) R5: 1/4" (6.4 mm)	3/8" (9.5 mm) R5: 5/16" (7.9 mm)	1/2" (12.7 mm) R5: 13/32" (10.3 mm)	5/8" (15.9 mm) R5: 1/2" (12.7 mm)	3/4" (19 mm) R5: 5/8" (15.9 mm)
LOW PRESSURE	GR6	SAE 100R6/EN 854 R6	-40°F to 199°F (-40°C to 93°C)		500	400	400	400	400	350	300
	HR6	DESERT SAE 100R6/EN 854 R6 (High Temp)	-40°F to 275°F (-40°C to 135°C)			400	400	400	400	350	300
	GR4	SAE 100R4	-40°F to 212°F (-40°C to 100°C)								300
	GR3	SAE 100R3/EN 854 R3	-40°F to 212°F (-40°C to 100°C)			1250	1200	1125	1000		750
MEDIUM PRESSURE	GR1SN	SAE 100R1AT/1SN	-40°F to 212°F (-40°C to 100°C)		3630	3270	3120	2615	2320	1890	1530
	HR1SN	DESERT SAE 100R1AT/1SN (High Temp)	-40°F to 275°F (-40°C to 135°C)			3270		2615	2320	1890	1530
	NSFX	SAFLEX (Non-conductive)	-40°F to 212°F (-40°C to 100°C)			2750		2250	2000		
	GR7	SAE 100R7/EN 855 R7	-40°F to 212°F (-40°C to 100°C)	2500	3000	3000	2500	2250	2000		1250
	TR7	SAE 100R7 (Twin-Line)	-40°F to 212°F (-40°C to 100°C)		3000	3000	2500	2250	2000		
	NR7	SAE 100R7 (Non-Conductive)	-65°F to 212°F (-54°C to 100°C)	2500	3000	2750	2500	2250	2250		1250
	BR7	SAE 100R7 (Twin-Line, Non-Conductive)	-65°F to 212°F (-54°C to 100°C)			2750	2500	2250	2250		
HIGH PRESSURE	GR2SN	SAE 100R2AT/2SN	-40°F to 212°F (-40°C to 100°C)		6000	5800		4800	4000	3630	3120
	HR2SN	DESERT SAE 100R2AT/2SN (High Temp)	-40°F to 275°F (-40°C to 135°C)			5800		4800	4000	3630	3120
	LR2SN	ARCTIC SAE 100R2AT/2SN (Low Temp)	-58°F to 212°F (-50°C to 100°C)			5800		4800	4000	3630	3120
	CR2SN	ARMORCOAT SAE 100R2AT/2SN (High Temp, Abrasion Cover)	-40°F to 250°F (-40°C to 121°C)			5800		4800	4000		3120
	GR8	SAE 100R8/EN 855 R8	-40°F to 212°F (-40°C to 100°C)		5000	5000		4000	3500		
	TR8	SAE 100R8 (Twin-Line)	-40°F to 212°F (-40°C to 100°C)					4000			
	NR8	SAE 100R8 (Non-Conductive)	-40°F to 212°F (-40°C to 100°C)			5000		4000	3500		
	GR16	SAE 100R16	-40°F to 212°F (-40°C to 100°C)			5000		4000	3500	2750	2250
	GR16SC	SAE 100R16/EN 857 2SC	-40°F to 212°F (-40°C to 100°C)			5800		5000	4500	4000	3500
	AR16SC	ARMORCOAT SAE 100R16/EN 857 2SC (Abrasion Cover)	-40°F to 212°F (-40°C to 100°C)			5800		5000	4500	4000	3500
	GR17	SAE 100R17	-40°F to 212°F (-40°C to 100°C)			3000		3000	3000	3000	3000
	AR17	ARMORCOAT SAE 100R17 (Abrasion Cover)	-40°F to 212°F (-40°C to 100°C)			3000		3000	3000		
	GR18	SAE 100R18	-65°F to 199°F (-54°C to 93°C)			3000	3000	3000	3000		
VERY HIGH PRESSURE	GR12	SAE 100R12/EN 856 R12	-40°F to 250°F (-40°C to 121°C)					4000	4000	4000	4000
	AR12	ARMORCOAT SAE 100R12/EN 856 R12 (Abrasion Cover)	-40°F to 250°F (-40°C to 121°C)					4000	4000		4000
	GR13	SAE 100R13/EN 856 R13	-40°F to 250°F (-40°C to 121°C)								5000
	AR13	ARMORCOAT SAE 100R13/EN 856 R13 (Abrasion Cover)	-40°F to 250°F (-40°C to 121°C)							5000	5000
	GR15	SAE 100R15	-40°F to 250°F (-40°C to 121°C)						6000	6000	6000
	AR15	ARMORCOAT SAE 100R15 (Abrasion Cover)	-40°F to 250°F (-40°C to 121°C)						6000		6000
	G4SP	EN 856 4SP	-40°F to 212°F (-40°C to 100°C)			6550		6450	6000	5000	5000
G4SH	EN 856 4SH	-40°F to 212°F (-40°C to 100°C)								6000	
SPECIAL APPLICATION	GR5	SAE 100R5	-40°F to 212°F (-40°C to 100°C)			3000	3000	2250	2000	1750	1500
	GGUN	Grease Gun Hose	-40°F to 212°F (-40°C to 100°C)		3000						
	GHJ	Jack Hose	-40°F to 212°F (-40°C to 100°C)			10000		10000			

Hydraulic Hose



# Hydraulic Hose

Hydraulic Hose

Pressure Range	Family Part Number	Hose Description	Temperature Range	DASH SIZE								
				16	20	24	32		40	48	56	64
				HOSE ID								
				1" (25.4 mm) R5-7/8" (22.2 mm)	1 1/4" (31.8 mm) R5-1" (28.6 mm)	1 1/2" (38.1 mm) R5-1 1/4" (35 mm)	2" (50.8 mm) R5-1 3/4" (46 mm)	2 1/2" (63.5 mm)	3" (76.2 mm)	3 1/2" (89 mm)	4" (101.6 mm)	
LOW PRESSURE	GR6	SAE 100R6/EN 854 R6	-40°F to 199°F (-40°C to 93°C)									
	HR6	DESERT SAE 100R6/EN 854 R6 (High Temp)	-40°F to 275°F (-40°C to 135°C)									
	GR4	SAE 100R4	-40°F to 212°F (-40°C to 100°C)	250	200	150	100	62	56	45	35	
	GR3	SAE 100R3/EN 854 R3	-40°F to 212°F (-40°C to 100°C)	565	377							
MEDIUM PRESSURE	GR1SN	SAE 100R1AT/1SN	-40°F to 212°F (-40°C to 100°C)	1280	920	730	580					
	HR1SN	DESERT SAE 100R1AT/1SN (High Temp)	-40°F to 275°F (-40°C to 135°C)	1280	920	730	580					
	NSFX	SAFLEX (Non-conductive)	-40°F to 212°F (-40°C to 100°C)									
	GR7	SAE 100R7/EN 855 R7	-40°F to 212°F (-40°C to 100°C)	1000								
	TR7	SAE 100R7 (Twin-Line)	-40°F to 212°F (-40°C to 100°C)									
	NR7	SAE 100R7 (Non-Conductive)	-65°F to 212°F (-54°C to 100°C)	1000								
	BR7	SAE 100R7 (Twin-Line, Non-Conductive)	-65°F to 212°F (-54°C to 100°C)									
HIGH PRESSURE	GR2SN	SAE 100R2AT/2SN	-40°F to 212°F (-40°C to 100°C)	2400	1820	1310	1160					
	HR2SN	DESERT SAE 100R2AT/2SN (High Temp)	-40°F to 275°F (-40°C to 135°C)	2400	1820	1310	1160					
	LR2SN	ARCTIC SAE 100R2AT/2SN (Low Temp)	-58°F to 212°F (-50°C to 100°C)	2400	1820							
	CR2SN	ARMORCOAT SAE 100R2AT/2SN (High Temp, Abrasion Cover)	-40°F to 250°F (-40°C to 121°C)	2400	1820	1310	1160					
	GR8	SAE 100R8/EN 855 R8	-40°F to 212°F (-40°C to 100°C)									
	TR8	SAE 100R8 (Twin-Line)	-40°F to 212°F (-40°C to 100°C)									
	NR8	SAE 100R8 (Non-Conductive)	-40°F to 212°F (-40°C to 100°C)									
	GR16	SAE 100R16	-40°F to 212°F (-40°C to 100°C)	2000	1625							
	GR16SC	SAE 100R16/EN 857 2SC	-40°F to 212°F (-40°C to 100°C)	2700								
	AR16SC	ARMORCOAT SAE 100R16/EN 857 2SC (Abrasion Cover)	-40°F to 212°F (-40°C to 100°C)	2700								
	GR17	SAE 100R17	-40°F to 212°F (-40°C to 100°C)	3000								
	AR17	ARMORCOAT SAE 100R17 (Abrasion Cover)	-40°F to 212°F (-40°C to 100°C)									
	GR18	SAE 100R18	-65°F to 199°F (-54°C to 93°C)									
VERY HIGH PRESSURE	GR12	SAE 100R12/EN 856 R12	-40°F to 250°F (-40°C to 121°C)	4000	3000	2500	2500					
	AR12	ARMORCOAT SAE 100R12/EN 856 R12 (Abrasion Cover)	-40°F to 250°F (-40°C to 121°C)	4000	3000	2500	2500					
	GR13	SAE 100R13/EN 856 R13	-40°F to 250°F (-40°C to 121°C)	5000	5000	5000	5000					
	AR13	ARMORCOAT SAE 100R13/EN 856 R13 (Abrasion Cover)	-40°F to 250°F (-40°C to 121°C)	5000	5000	5000	5000					
	GR15	SAE 100R15	-40°F to 250°F (-40°C to 121°C)	6000	6000	6000	6000					
	AR15	ARMORCOAT SAE 100R15 (Abrasion Cover)	-40°F to 250°F (-40°C to 121°C)	6000								
	G4SP	EN 856 4SP	-40°F to 212°F (-40°C to 100°C)	4000								
	G4SH	EN 856 4SH	-40°F to 212°F (-40°C to 100°C)	5500	4700	4200	3650					
	SPECIAL APPLICATION	GR5	SAE 100R5	-40°F to 212°F (-40°C to 100°C)	800	625	500	350				
GGUN		Grease Gun Hose	-40°F to 212°F (-40°C to 100°C)									
GHJ		Jack Hose	-40°F to 212°F (-40°C to 100°C)									



# Hydraulic Hose

Family Part Number	Hose Description	Meets Flame Resistance US MSHA Designation	Meets Higher DIN/EN Pressures	DESERT (High Temp Hose)	ARCTIC (Low Temp Hose)	ARMOR-COAT (Abrasion Cover Hose)	Twin Line Hose	Non-Conductive Hose
GR1SN	SAE 100R1AT/1SN							
DESERT HR1SN	SAE 100R1AT/1SN							
GR2SN	SAE 100R2AT/2SN							
ARCTIC LR2SN	SAE 100R2AT/2SN							
DESERT HR2SN	SAE 100R2AT/2SN							
ARMORCOAT CR2SN	SAE 100R2AT/2SN							
GR3	SAE 100R3/EN 854 R3							
GR4	SAE 100R4							
DESERT HR6	SAE 100R6/854 R6							
NR7	SAE 100R7 (Non-Conductive)							
NSFX	SAFLEX							
TR7	SAE 100R7 (Twin-Line)							
BR7	SAE 100R7 (Twin-Line, Non-Conductive)							
NR8	SAE 100R8 (Non-Conductive)							
TR8	SAE 100R8 (Twin-Line)							
G4SH	EN 856 4SH/ DIN 20023 4SH							
G4SP	EN 856 4SP/ DIN 20023 4SP							
GR12	SAE 100R12/856 R12							
ARMORCOAT AR12	SAE 100R12/856 R12							
GR13	SAE 100R13/856 R13							
ARMORCOAT AR13	SAE 100R13/856 R13							
GR15	SAE 100R15							
ARMORCOAT AR15	SAE 100R15							
GR16	SAE 100R16							
GR16SC	SAE 100R16/857 2SC							
ARMORCOAT AR16SC	SAE 100R16/857 2SC							
GR17	SAE 100R17							
ARMORCOAT AR17	SAE 100R17							
GGUN	Grease Gun Hose							

Hydraulic Hose



# Hydraulic Hose

Hydraulic Hose

HR1SN (Desert SAE 100R1A T/1SN)  
 HR2SN (Desert SAE 100R2A T/2SN)  
 HR6 (Desert SAE 100R6/EN 854 R6)

A

CR2SN (Armorcoat SAE 100R2A T/2SN)  
 GR12 (SAE 100R12/EN 856 R12)  
 AR12 (Armorcoat SAE 100R12/EN 856 R12)  
 GR13 (SAE 100R13/EN 856 R13)  
 AR13 (Armorcoat SAE 100R13/EN 856 R13)  
 GR15 (SAE 100R15)  
 AR15 (Armorcoat SAE 100R15)

B

GR1SN (SAE 100R1AT/1SN)  
 GR2SN (SAE 100R2AT/2SN)  
 GR3 (SAE 100R3/EN 854 R3)  
 GR4 (SAE 100R4)  
 GR5 (SAE 100R5 DOT FMVSS 106 All)  
 GR7 (SAE 100R7/EN855 R7)  
 NSFX (Saflex Non-Conductive)  
 TR7 (SAE 100R7 Twin Line)  
 GR8 (SAE 100R8/EN 855 R8)  
 NR8 (SAE 100R8 Non-Conductive)  
 TR8 (SAE 100R8 Twin Line)  
 G4SH (EN 856 4SH)  
 G4SP (EN 856 4SP)  
 GR16 (SAE 100R16)  
 GR16SC (SAE 100R16/EN 857 2SC)  
 AR16SC (Armorcoat SAE 100R16/EN 857 2SC)  
 GR17 (SAE 100R17)  
 AR17 (Armorcoat SAE100R17)  
 GGUN (Grease Gun Hose)  
 GHJ (Jack Hose)

C

GR6 (SAE 100R6/EN 854 R6)

D

GR18 (SAE 100R18)

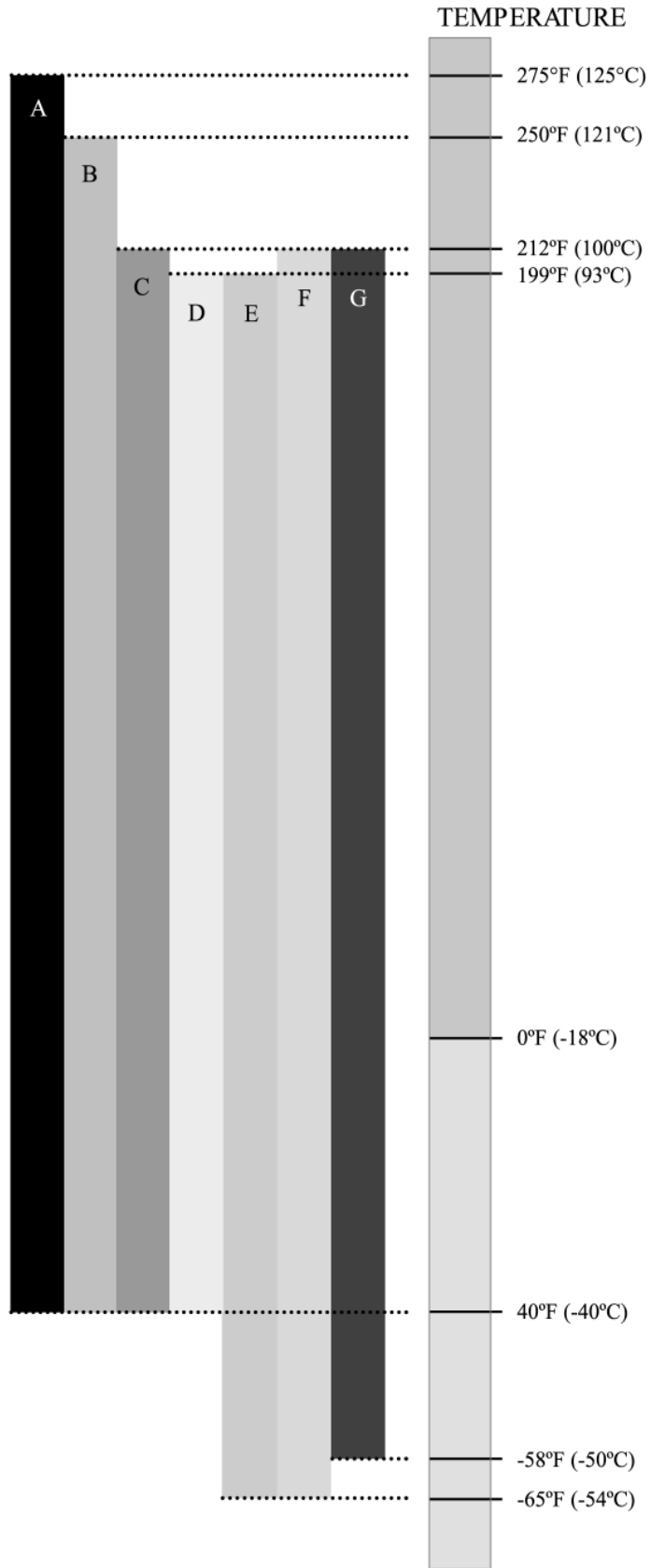
E

NR7 (SAE 100R7 Non-Conductive)  
 BR7 (SAE 100R7 Twin Line, Non-Conductive)

F

LR2SN (Arctic 100R2A T/2SN)

G

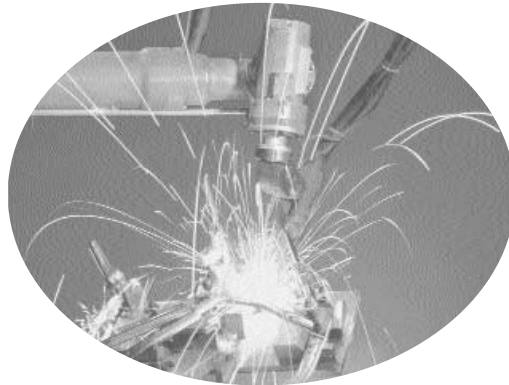


# Hydraulic Hose

THREAD	THREAD DESCRIPTION	GENDER	SWIVEL	ELBOW
JC FX	JIC 37° Flare (SAE J514)	Female	Swivel	
JC FX45		Female	Swivel	45° Elbow
JC FX45S		Female	Swivel	45° Elbow (Short Drop-Tube)
JC FX90		Female	Swivel	90° Elbow
JC FX90L		Female	Swivel	90° Elbow (Long Drop-Tube)
JC FX90S		Female	Swivel	90° Elbow (Short Drop-Tube)
JC M		Male		
SF FX	SAE 45° J512 Flare	Female	Swivel	
SF FX90		Female	Swivel	90° Elbow
SF M		Male		
SI MX	SAE 45° Inverted Flare	Male	Swivel	
SI MX45		Male	Swivel	45° Elbow
SI MX90		Male	Swivel	90° Elbow
NP F	NPTF	Female		
NP M		Male		
NP MX		Male	Swivel	
NS FX	NPSM	Female	Swivel	
FT M	SAE J514 Flareless Tube Fittings	Male		
SP	Standpipe			
SP 45				45° Elbow
OF FX	O-Ring Face Seal (SAE J1453 ORS/ORFS)	Female	Swivel	
OF FX45		Female	Swivel	45° Elbow
OF FX90		Female	Swivel	90° Elbow
OF FX90L		Female	Swivel	90° Elbow (Long Drop-Tube)
OF FX90S		Female	Swivel	90° Elbow (Short Drop-Tube)
OF M		Male		
OB M	O-Ring Boss Straight Thread (SAE J514)	Male		
OB MX		Male	Swivel	
OB MX90B		Male	Swivel	90° Elbow (Block)
FL	Code 61 Flange (SAE J518)			
FL 22				22.5° Elbow
FL 30				30° Elbow
FL 45				45° Elbow
FL 60				60° Elbow
FL 90				90° Elbow
FH	Code 62 Flange (SAE J518)			
FH 45				45° Elbow
FH 90				90° Elbow
CF	Caterpillar Flange			
CF 45				45° Elbow
CF 90				90° Elbow
KF	Komatsu Flange			
KF 45				45° Elbow
KF 90				90° Elbow
BP FX	BSPP (British Standard Pipe Parallel)	Female	Swivel	
BP FX45		Female	Swivel	45° Elbow
BP FX90		Female	Swivel	90° Elbow
BP M		Male		
BT M	BSPT (British Standard Pipe Tapered)	Male		
BF FX	BSP Flat Seat (British Standard Pipe)	Female	Swivel	
DL FX	DIN 24° Light	Female	Swivel	
DL FX45		Female	Swivel	45° Elbow
DL FX90		Female	Swivel	90° Elbow
DL M		Male		
DH FX	DIN 24° Heavy	Female	Swivel	
DH FX45		Female	Swivel	45° Elbow
DH FX90		Female	Swivel	90° Elbow
DH M		Male		
DN FX45	DIN 60°	Female	Swivel	45° Elbow
DN FX90		Female	Swivel	90° Elbow
KM FX	Japanese Komatsu 30° Flare with Metric Threads	Female	Swivel	
JS FX	JIS 30° (Parallel Pipe Threads)	Female	Swivel	



**Push-On**



Hydraulic Hose

	Page	Superior Abrasion Cover	MSHA	Non-conductive	Oil Resistance Tube*	Oil Resistance Cover*	Braided	Robotic Service	General Industrial
Autogrip®		Yes	Yes	Yes	B	A	Yes	Yes	Yes
Insta-Grip 250™				Yes	A	A			Yes
Insta-Grip 300™				Yes	A	B	Yes		Yes
Insta-Grip TC™					A	B	Yes		Yes
Ultra-Grip™		Yes	Yes	Yes	A	A	Yes	Yes	Yes

\* Based on RMA Oil Classification.

Couplings - Contact D.F. Burnham for proper fitting recommendation.



**Insta-Grip 300™**



**Application**

For use with push-on fittings at working pressure of 300 psi. For low-pressure hydraulic and pneumatic systems such as shop air systems, general industrial, maintenance, and automotive applications. Nonconductive, minimum electrical resistance, greater than one (1) megohm per inch of hose length at 1000 Volts DC.

**Construction**

- Tube:** Chemivic® oil- and heat-resistant synthetic rubber, RMA Class A (high oil resistance)
- Cover:** Black, Green, Blue, Red, and Gray (others: contact marketing); weather-, abrasion-, and oil-resistant synthetic rubber, RMA Class B (medium/high oil resistance)
- Reinforcement:** Braided (1) high-strength yarn laid at the most effective angle for maximum strength and coupling holding ability

**Temperature**

-40°F to 190°F (-40°C to 88°C)

**Colors Available**

Black, Green, Gray, Red, and Blue

**Hydraulic Hose**

Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	in.	mm.	lb./ft.	kg./m.
300-535-280-04	1/4	6.35	0.54	13.72	300	2.07	2.5	64	0.09	0.13
300-535-280-05	5/16	7.90	0.62	15.70	300	2.07	3.0	76	0.14	0.21
300-535-280-06	3/8	9.53	0.69	17.53	300	2.07	3.0	76	0.14	0.21
300-535-280-08	1/2	12.70	0.81	20.57	300	2.07	5.0	127	0.16	0.24
300-535-280-10	5/8	15.88	0.93	23.62	300	2.07	6.0	152	0.20	0.30
300-535-280-12	3/4	19.05	1.07	27.18	300	2.07	7.0	178	0.25	0.37
300-535-280-16	1	25.40	1.34	34.04	300	2.07	8.0	203	0.34	0.51

Couplings - Contact D.F. Burnham for proper fitting recommendation.





# Hydraulic Hose

## Ultra-Grip™



### Application

For use with push-on fittings at maximum working pressure of 300 psi. For low-pressure hydraulic pneumatic systems such as robotics, shop air systems, general industrial, maintenance, and automotive applications. Nonconductive, minimum electrical resistance, greater than one (1) megohm per inch of hose length at 1000 Volts DC.

### Construction

**Tube:** Chemivic® oil- and heat-resistant synthetic rubber, RMA Class A (high oil resistance)  
**Cover:** Black, Blue, Gray, Green, Red, White, Brown, and Yellow (others: contact marketing); weather-, abrasion-, and oil-resistant Carbryn® rubber, RMA Class A (high oil resistance)

**Reinforcement:** Braided (1) high-strength yarn laid at an angle for strength and coupling holding ability

### Temperature

-40°F to 200°F (-40°C to 93°C)

### Colors Available

Black, Blue, Gray, Green, Red, White, Brown, and Yellow

Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	in.	mm.	lb./ft.	kg./m.
300-03IG	3/16	4.80	0.36	9.10	300	2.07	2.5	64	0.04	0.06
300-04IG	1/4	6.35	0.51	12.95	300	2.07	2.5	64	0.08	0.12
300-06IG	3/8	9.53	0.67	17.02	300	2.07	3	76	0.13	0.19
300-08IG	1/2	12.70	0.76	19.30	300	2.07	5	127	0.14	0.21
300-10IG	5/8	15.88	0.93	23.62	300	2.07	6	152	0.19	0.28
300-12IG	3/4	19.05	1.06	26.92	300	2.07	7	178	0.24	0.36
300-16IG	1	25.40	1.34	34.04	300	2.07	8	203	0.34	0.51

Couplings - Contact D.F. Burnham for proper fitting recommendation.



# Hydraulic Hose

## Autogrip®



### Application

A premium-quality push-on hose specifically designed for the rigors of robotic and automated applications where flexibility, high abuse resistance, and strength are desired. It is ideally suited for use in the demanding applications of the automotive assembly, pharmaceutical, material handling, and welding industries. Nonconductive, minimum electrical resistance greater than one (1) megohm per inch of hose length at 1000 Volts DC.

### Construction

**Tube:** Neoprene, seamless, heat- and oil-resistant, RMA Class B (medium/high oil resistance)

**Cover:** Weather-, abrasion-, and oil-resistant Carbryn® synthetic rubber, RMA Class C (medium oil resistance), MSHA approved

**Reinforcement:** Braided (1) high-strength yarn laid at the most effective angle for maximum coupling holding ability

### Temperature

-40°F to 200°F (-40°C to 93°C)

Hydraulic Hose

Colors Available:

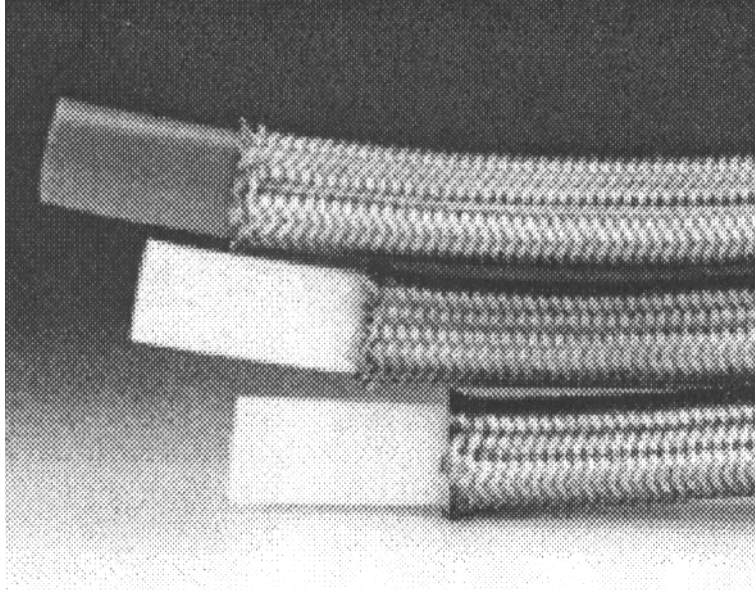
- Black
- Blue
- Gray
- Green
- Red
- White
- Brown
- Yellow

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
300-04AG	1/4	6.35	0.50	12.70	300	2.07	0.09	0.13
300-06AG	3/8	9.53	0.66	16.76	300	2.07	0.12	0.18
300-08AG	1/2	12.70	0.76	19.30	300	2.07	0.14	0.21
300-10AG	5/8	15.88	0.92	23.37	300	2.07	0.17	0.25
300-12AG	3/4	19.05	1.06	26.92	300	2.07	0.22	0.33
300-16AG	1	25.40	1.34	34.04	300	2.07	0.30	0.45

Couplings - Contact D.F. Burnham for proper fitting recommendation.



# Smooth Bore Teflon<sup>®</sup> Hose-



Hydraulic  
Hose

Part #	Nominal ID
900-04 .....	1/4
900-05 .....	5/16
900-06 .....	3/8
900-10 .....	5/8
900-14 .....	7/8
900-16 .....	1
900-20 .....	1-1/4
900-24 .....	1-1/2

Bronze braid unavailable

**DF-Series Industrial Interchange**



D-Series couplers provide convenient automatic one-handed connection and safe disconnection, as explained on page 82. All couplers have a high concentration of locking balls to reduce incidents of brinelling during operation. D-Series couplers have a reverse-acting sleeve to prevent accidental disconnection and prevent whip during disconnection. F-Series couplers have a sleeve-guard 'Lip' to reduce the risk of accidental disconnection while in service. F-Series couplers, D-Series couplers and DF-Series nipples are available in a variety of material configurations

Performance Specifications	Operating Bar (PSI)	Min. Burst Bar (PSI)	Flow p=0.4Bar (6.9Bar Inlet)	Locking Mechanism
1/4"	69 (1,000)	310 (4,500)	37 CF M	6 Balls
3/8"	69 (1,000)	276 (4,000)	70 CF M	6 Balls
1/2"	69 (1,000)	414 (6,000)	150 CF M	6 Balls
3/4"	21 (300)	138 (2,000)	200 CF M	9 Balls

Interchange Standards	US Military	US Government	International Standards	ANSI/NFPA
1/4"	MIL-C-4109F	A-A-59439	ISO 6150B	T3.20.14-1990
3/8"			ISO 6150B	T3.20.14-1990
1/2"	MIL-C-4109F	A-A-59439	ISO 6150B	T3.20.14-1990
3/4"				T3.20.14-1990

These particular sizes are not outlined within the documented standard category.

'D' Coupler Interchange	Parker	Hansen	Rectus	CEJN
1/4"	30-Series	3000	23KA/24KA	Series 310
3/8"	30-Series	4000	30KA	Series 430
1/2"	30-Series	5000	37KA	Series 550
3/4"	30-Series	6000	-	-

'F' Coupler Interchange	Parker	Hansen	Tomco	Rectus
1/4"	20-Series	1000	A180	24KM
3/8"	20-Series	400	PT400	30KM
1/2"	20-Series	500	T500	37K

**D-Series Industrial Interchange (Automatic Safety Coupler)**



Part Number	Body Size	Barb Configuration	Body Material
2DE2-B	1/4"	1/4" ID X 1/2" OD	Brass
2DH2-B	1/4"	1/4" ID X 5/8" OD	Brass
2DH2-S	1/4"	1/4" ID X 5/8" OD	303SS
2DK3-B	1/4"	3/8" ID X 11/16" OD	Brass
2DL3-B	1/4"	3/8" ID X 3/4" OD	Brass

**F-Series Industrial Interchange (Manual Coupler)**



Part Number	Body Size	Barb Configuration	Body Material
2FE2-B	1/4"	1/4" ID X 1/2" OD	Brass
2FH2-B	1/4"	1/4" ID X 5/8" OD	Brass
2FH2-S	1/4"	1/4" ID X 5/8" OD	303SS
2FK3-B	1/4"	3/8" ID X 11/16" OD	Brass
2FL3-B	1/4"	3/8" ID X 3/4" OD	Brass

**DF-Series Industrial Interchange (Nipple)**



Part Number	Body Size	Barb Configuration	Body Material
D2E 2	1/4"	1/4" ID X 1/2" OD	Steel
D2H2	1/4"	1/4" ID X 5/8" OD	Steel
D2H2-S	1/4"	1/4" ID X 5/8" OD	303SS
D2K3	1/4"	3/8" ID X 11/16" OD	Steel
D2L3	1/4"	3/8" ID X 3/4" OD	Steel



**Quick Disconnect**

**D-Series Industrial Interchange (Automatic Safety Coupler)**

Part Number	Body Size	Thread Size	Body Material
2DF1-B	1/4"	1/8"-27 NPTF	Brass
2DF2-B	1/4"	1/4"-18 NPTF	Brass
2DF2-S	1/4"	1/4"-18 NPTF	303SS
2DBF2- B	1/4"	G1/4" BSPP	Brass
2DF3-B	1/4"	3/8"-18 NPTF	Brass
2DBF3- B	1/4"	G3/8" BSPP	Brass
3DF2-B	3/8"	1/4"-18 NPTF	Brass
3DF3-B	3/8"	3/8"-18 NPTF	Brass
3DF3-S	3/8"	3/8"-18 NPTF	303SS
3DBF3- B	3/8"	G3/8" BSPP	Brass
3DF4-B	3/8"	1/2"-14 NPTF	Brass
4DF3-B	1/2"	3/8"-18 NPTF	Brass
4DF4-B	1/2"	1/2"-14 NPTF	Brass
4DF4-S	1/2"	1/2"-14 NPTF	303SS
4DBF4- B	1/2"	G1/2" BSPP	Brass
4DF6-B	1/2"	3/4"-14 NPTF	Brass
6DF4-B-PCC	3/4"	1/2"-14 NPTF	Brass
6DF6-B-PCC	3/4"	3/4"-14 NPTF	Brass
6DF8-B-PCC	3/4"	1"-11 1/2 NPTF	Brass



(Female Thread)

**F-Series Industrial Interchange (Manual Coupler)**

Part Number	Body Size	Thread Size	Body Material
2FF1-B	1/4"	1/8"-27 NPTF	Brass
2FBF1- B	1/4"	G1/8" BSPP	Brass
2FF2-B	1/4"	1/4"-18 NPTF	Brass
2FF2	1/4"	1/4"-18 NPTF	Steel
2FF2-S	1/4"	1/4"-18 NPTF	303SS
2FBF2- B	1/4"	G1/4" BSPP	Brass
2FF3-B	1/4"	3/8"-18 NPTF	Brass
2FBF3- B	1/4"	G3/8" BSPP	Brass
3FF2	3/8"	1/4"-18 NPTF	Steel
3FF3	3/8"	3/8"-18 NPTF	Steel
3FF3-S	3/8"	3/8"-18 NPTF	303SS
3FBF 3	3/8"	G3/8" BSPP	Steel
3FF4	3/8"	1/2"-14 NPTF	Steel
4FF3	1/2"	3/8"-18 NPTF	Steel
4FF4	1/2"	1/2"-14 NPTF	Steel
4FF4-S	1/2"	1/2"-14 NPTF	303SS
4FBF 4	1/2"	G1/2" BSPP	Steel
4FF6	1/2"	3/4"-14 NPTF	Steel



(Female Thread)

**DF-Series Industrial Interchange (Nipple)**

Part Number	Body Size	Thread Size	Body Material
D2F 1	1/4"	1/8"-27 NPTF	Steel
D2F 2	1/4"	1/4"-18 NPTF	Steel
D2F2-B	1/4"	1/4"-18 NPTF	Brass
D2F2-S	1/4"	1/4"-18 NPTF	303SS
D2BF 2	1/4"	G1/4" BSPP	Steel
D2F 3	1/4"	3/8"-18 NPTF	Steel
D2F3- B	1/4"	3/8"-18 NPTF	Brass
D2BF 3	1/4"	G3/8" BSPP	Steel
D3F 2	3/8"	1/4"-18 NPTF	Steel
D3F 3	3/8"	3/8"-18 NPTF	Steel
D3F3- B	3/8"	3/8"-18 NPTF	Brass
D3F3-S	3/8"	3/8"-18 NPTF	303SS
D3BF 3	3/8"	G3/8" BSPP	Steel
D3F 4	3/8"	1/2"-14 NPTF	Steel
D4F 3	1/2"	3/8"-18 NPTF	Steel
D4F 4	1/2"	1/2"-14 NPTF	Steel
D4F4- B	1/2"	1/2"-14 NPTF	Brass
D4F4-S	1/2"	1/2"-14 NPTF	303SS
D4BF 4	1/2"	G1/2" BSPP	Steel
D4F 6	1/2"	3/4"-14 NPTF	Steel
D6F4-PC C	3/4"	1/2"-14 NPTF	Steel
D6F6-PC C	3/4"	3/4"-14 NPTF	Steel
D6F8-PC C	3/4"	1"-11 1/2 NPTF	Steel



(Female Thread)



**D-Series Industrial Interchange (Automatic Safety Coupler)**



(Male Thread)

Part Number	Body Size	Thread Size	Body Material
2DM1-B	1/4"	1/8"-27 NPTF	Brass
2DM2-B	1/4"	1/4"-18 NPTF	Brass
2DM2-S	1/4"	1/4"-18 NPTF	303SS
2DBM2-B	1/4"	R1/4" BSPT	Brass
2DM3-B	1/4"	3/8"-18 NPTF	Brass
2DBM3-B	1/4"	R3/8" BSPT	Brass
3DM2-B	3/8"	1/4"-18 NPTF	Brass
3DM3-B	3/8"	3/8"-18 NPTF	Brass
3DM3-S	3/8"	3/8"-18 NPTF	303SS
3DBM3-B	3/8"	R3/8" BSPT	Brass
3DM4-B	3/8"	1/2"-14 NPTF	Brass
4DM3-B	1/2"	3/8"-18 NPTF	Brass
4DM4-B	1/2"	1/2"-14 NPTF	Brass
4DM4-S	1/2"	1/2"-14 NPTF	303SS
4DBM4-B	1/2"	R1/2" BSPT	Brass
4DM6-B	1/2"	3/4"-14 NPTF	Brass
6DM4-B-PC C	3/4"	1/2"-14 NPTF	Brass
6DM6-B-PC C	3/4"	3/4"-14 NPTF	Brass
6DM8-B-PC C	3/4"	1"-11 1/2 NPTF	Brass

**F-Series Industrial Interchange (Manual Coupler)**



(Male Thread)

Part Number	Body Size	Thread Size	Body Material
2FM1-B	1/4"	1/8"-27 NPTF	Brass
2FM1-S	1/4"	1/8"-27 NPTF	303SS
2FM2-B	1/4"	1/4"-18 NPTF	Brass
2FM2	1/4"	1/4"-18 NPTF	Steel
2FM2-S	1/4"	1/4"-18 NPTF	303SS
2FBM2-B	1/4"	R1/4" BSPT	Brass
2FM3-B	1/4"	3/8"-18 NPTF	Brass
2FBM3-B	1/4"	R3/8" BSPT	Brass
3FM2	3/8"	1/4"-18 NPTF	Steel
3FM3	3/8"	3/8"-18 NPTF	Steel
3FM3-S	3/8"	3/8"-18 NPTF	303SS
3FBM3	3/8"	R3/8" BSPT	Steel
3FM4	3/8"	1/2"-14 NPTF	Steel
4FM3	1/2"	3/8"-18 NPTF	Steel
4FM4	1/2"	1/2"-14 NPTF	Steel
4FM4-S	1/2"	1/2"-14 NPTF	303SS
4FBM4	1/2"	R1/2" BSPT	Steel
4FM6	1/2"	3/4"-14 NPTF	Steel

**DF-Series Industrial Interchange (Nipple)**



(Male Thread)

Part Number	Body Size	Thread Size	Body Material
D2M1	1/4"	1/8"-27 NPTF	Steel
D2M1-B	1/4"	1/8"-27 NPTF	Brass
D2M1-S	1/4"	1/8"-27 NPTF	303SS
D2M2	1/4"	1/4"-18 NPTF	Steel
D2M2-B	1/4"	1/4"-18 NPTF	Brass
D2M2-S	1/4"	1/4"-18 NPTF	303SS
D2BM2	1/4"	R1/4" BSPT	Steel
D2M3	1/4"	3/8"-18 NPTF	Steel
D2M3-B	1/4"	3/8"-18 NPTF	Brass
D2BM3	1/4"	R3/8" BSPT	Steel
D3M2	3/8"	1/4"-18 NPTF	Steel
D3M3	3/8"	3/8"-18 NPTF	Steel
D3M3-B	3/8"	3/8"-18 NPTF	Brass
D3M3-S	3/8"	3/8"-18 NPTF	303SS
D3BM3	3/8"	R3/8" BSPT	Steel
D3M4	3/8"	1/2"-14 NPTF	Steel
D4M2	1/2"	1/4"-18 NPTF	Steel
D4M3	1/2"	3/8"-18 NPTF	Steel
D4M4	1/2"	1/2"-14 NPTF	Steel
D4M4-B	1/2"	1/2"-14 NPTF	Brass
D4M4-S	1/2"	1/2"-14 NPTF	303SS
D4BM4	1/2"	R1/2" BSPT	Steel
D4M6	1/2"	3/4"-14 NPTF	Steel
D6M4-PCC	3/4"	1/2"-14 NPTF	Steel
D6M6-PCC	3/4"	3/4"-14 NPTF	Steel
D6M8-PCC	3/4"	1"-11 1/2 NPTF	Steel



**D-Series Industrial Interchange (Automatic Safety Coupler)**

Part Number	Body Size	Barb Configuration	Body Material
2DS2-B	1/4"	1/4" Hose Barb	Brass
2DS2-S	1/4"	1/4" Hose Barb	303SS
2DB2-B	1/4"	1/4" Push-Loc	Brass
2DS2.5-B	1/4"	5/16" Hose Barb	Brass
2DS3-B	1/4"	3/8" Hose Barb	Brass
2DB3-B	1/4"	3/8" Push-Loc	Brass
3DS2-B	3/8"	1/4" Hose Barb	Brass
3DS3-B	3/8"	3/8" Hose Barb	Brass
3DS3-S	3/8"	3/8" Hose Barb	303SS
3DB3-B	3/8"	3/8" Push-Loc	Brass
3DS4-B	3/8"	1/2" Hose Barb	Brass
4DS3-B	1/2"	3/8" Hose Barb	Brass
4DS4-B	1/2"	1/2" Hose Barb	Brass
4DS4-S	1/2"	1/2" Hose Barb	303SS
4DB4-B	1/2"	1/2" Push-Loc	Brass
4DS6-B	1/2"	3/4" Hose Barb	Brass
6DS4-B-PC C	3/4"	1/2" Hose Barb	Brass
6DS6-B-PC C	3/4"	3/4" Hose Barb	Brass
6DS8-B-PC C	3/4"	1" Hose Barb	Brass



(Standard & Push-Loc Hose Barb)

**F-Series Industrial Interchange (Manual Coupler)**

Part Number	Body Size	Barb Configuration	Body Material
2FS2-B	1/4"	1/4" Hose Barb	Brass
2FS2-S	1/4"	1/4" Hose Barb	Brass
2FB2-B	1/4"	1/4" Push-Loc	Brass
2FS2.5-B	1/4"	5/16" Hose Barb	Brass
2FS3-B	1/4"	3/8" Hose Barb	Brass
2FB3-B	1/4"	3/8" Push-Loc	Brass
3FS2	3/8"	1/4" Hose Barb	Steel
3FS3	3/8"	3/8" Hose Barb	Steel
3FS3-S	3/8"	3/8" Hose Barb	303SS
3FB3	3/8"	3/8" Push-Loc	Steel
3FS4	3/8"	1/2" Hose Barb	Steel
4FS3	1/2"	3/8" Hose Barb	Steel
4FS4	1/2"	1/2" Hose Barb	Steel
4FS4-S	1/2"	1/2" Hose Barb	303SS
4FB4	1/2"	1/2" Push-Loc	Steel
4FS6	1/2"	3/4" Hose Barb	Steel



(Standard & Push-Loc Hose Barb)

**DF-Series Industrial Interchange (Nipple)**

Part Number	Body Size	Barb Configuration	Body Material
D2S 2	1/4"	1/4" Hose Barb	Steel
D2S2-B	1/4"	1/4" Hose Barb	Brass
D2S2-S	1/4"	1/4" Hose Barb	303SS
D2B2	1/4"	1/4" Push-Loc	Steel
D2S2.5	1/4"	5/16" Hose Barb	Steel
D2S 3	1/4"	3/8" Hose Barb	Steel
D2S3-B	1/4"	3/8" Hose Barb	Brass
D2B3	1/4"	3/8" Push-Loc	Steel
D3S 2	3/8"	1/4" Hose Barb	Steel
D3S 3	3/8"	3/8" Hose Barb	Steel
D3S3-B	3/8"	3/8" Hose Barb	Brass
D3S3-S	3/8"	3/8" Hose Barb	303SS
D3B3	3/8"	3/8" Push-Loc	Steel
D3S 4	3/8"	1/2" Hose Barb	Steel
D4S 3	1/2"	3/8" Hose Barb	Steel
D4S 4	1/2"	1/2" Hose Barb	Steel
D4S4-B	1/2"	1/2" Hose Barb	Brass
D4S4-S	1/2"	1/2" Hose Barb	303SS
D4B4	1/2"	1/2" Push-Loc	Steel
D4S 6	1/2"	3/4" Hose Barb	Steel
D6S4-PC C	3/4"	1/2" Hose Barb	Steel
D6S6-PC C	3/4"	3/4" Hose Barb	Steel
D6S8-PC C	3/4"	1" Hose Barb	Steel



(Standard & Push-Loc Hose Barb)



**H-Series ISO7241 Series 'B' Interchange**

H-Series couplers and nipples are fully compliant with the parameters outlined in ISO7241 Series 'B'.  
 Couplers have a high concentration of locking balls to reduce incidents of brinelling under impulse conditions.  
 A wide variety of body and seal materials are available to maximize compatibility in a variety of applications.  
 Large diameter heavy duty knurled sleeves are designed to resist brinelling and maximize performance under impulse conditions.  
 Wide selection of thread configurations to ensure compatibility in a variety of installations.



**Quick Disconnect**

Performance Specifications	Operating Bar (PSI)	Burst Bar (PSI)	Flow Rate p=2Bar	Locking Mechanism
1/8" Steel	379 (5,500)	1,448 (21,000)	12 LPM (3.2 GPM)	8 Balls
1/4" Steel	345 (5,000)	1,344 (19,500)	26 LPM (7 GPM)	8 Balls
3/8" Steel	345 (5,000)	1,241 (18,000)	45 LPM (12 GPM)	9 Balls
1/2" Steel	354 (5,000)	1,103 (16,000)	76 LPM (20 GPM)	9 Balls
3/4" Steel	310 (4,500)	1,103 (16,000)	151 LPM (40 GPM)	12 Balls
1" Steel	310 (4,500)	1,103 (16,000)	246 LPM (65 GPM)	12 Balls
1-1/4" Steel	103 (1,500)	413 (6,000)	404 LPM (107 GPM)	12 Balls
1-1/2" Steel	124 (1,800)	489 (7,100)	473 LPM (125 GPM)	12 Balls

Please Note: For 316SS and 303SS operating pressure, multiply the operating pressures above by 0.60.

1/8" Brass	207 (3,000)	827 (12,000)	12 LPM (3.2 GPM)	8 Balls
1/4" Brass	259 (3,750)	1,034 (15,000)	26 LPM (7 GPM)	12 Balls
3/8" Brass	241 (3,500)	965 (14,000)	45 LPM (12 GPM)	12 Balls
1/2" Brass	207 (3,000)	827 (12,000)	76 LPM (20 GPM)	12 Balls
3/4" Brass	155 (2,250)	621 (9,000)	151 LPM (40 GPM)	12 Balls
1" Brass	103 (1,500)	414 (6,000)	246 LPM (65 GPM)	12 Balls
1-1/4" Brass	69 (1,000)	220 (3,200)	404 LPM (107 GPM)	18 Balls
1-1/2" Brass	69 (1,000)	248 (3,600)	473 LPM (125 GPM)	20 Balls

Interchange Standard	US Military	Industry Standard	International Standard	ANSI/NFPA
1/8"	-	-	-	-
1/4"	-	-	ISO7241-B	B93.113M-B
3/8"	-	-	ISO7241-B	B93.113M-B
1/2"	-	-	ISO7241-B	B93.113M-B
3/4"	-	-	ISO7241-B	B93.113M-B
1"	-	-	ISO7241-B	B93.113M-B
1-1/4"	-	-	-	-
1-1/2"	-	-	-	-

These particular sizes are not outlined within the documented standard category.

'H' Series Interchange	Parker	Snap-Tite	Faster	Holmbug
1/8"	60-Series	72-Series	Series 'HNV'	ISO.B
1/4"	60-Series	72-Series	Series 'HNV'	ISO.B
3/8"	60-Series	72-Series	Series 'HNV'	ISO.B
1/2"	60-Series	72-Series	Series 'HNV'	ISO.B
3/4"	60-Series	72-Series	Series 'HNV'	ISO.B
1"	60-Series	72-Series	Series 'HNV'	ISO.B
1-1/4"	-	-	-	-
1-1/2"	60-Series	-	Series 'HNV'	-

**H-Series ISO-B Steel Mill 'Slide-Gate' Interchange (Coupler)**

Part Number	Body Size	Thread Size	Body Material
4HF4-HV	1/2"	1/2"-14NPTF	Steel



(Female Thread)

**H-Series ISO-B Steel Mill 'Slide-Gate' Interchange (Nipple)**

Part Number	Body Size	Thread Size	Body Material
H4F4-HV	1/2"	1/2"-14NPTF	Steel



(Female Thread)





**H-Series ISO-B Interchange (Coupler)**



(Female Thread)

**Quick  
Disconnect**

Part Number	Body Size	Thread Size	Body Material
1HF1	1/8"	1/8"-27NPTF	Steel
1HF1-B	1/8"	1/8"-27NPTF	Brass
1HF1-S	1/8"	1/8"-27NPTF	303SS
1HOF2	1/8"	7/16"-20OR B	Steel
1HOF2-S	1/8"	7/16"-20OR B	303SS
2HF2	1/4"	1/4"-18NPTF	Steel
2HF2-B	1/4"	1/4"-18NPTF	Brass
2HF2-S	1/4"	1/4"-18NPTF	303SS
2HF2-SS	1/4"	1/4"-18NPTF	316SS
2HOF3	1/4"	9/16"-18OR B	Steel
2HOF3-S	1/4"	9/16"-18OR B	303SS
2HOF3-SS	1/4"	9/16"-18OR B	316SS
2HBF 2	1/4"	G1/4" BSPP	Steel
2HBF2- B	1/4"	G1/4" BSPP	Brass
2HBF2- S	1/4"	G1/4" BSPP	303SS
2HBF2-SS	1/4"	G1/4" BSPP	316SS
3HF3	3/8"	3/8"-18NPTF	Steel
3HF3-B	3/8"	3/8"-18NPTF	Brass
3HF3-S	3/8"	3/8"-18NPTF	303SS
3HF3-SS	3/8"	3/8"-18NPTF	316SS
3HOF4	3/8"	3/4"-16OR B	Steel
3HOF4-S	3/8"	3/4"-16OR B	303SS
3HOF4-SS	3/8"	3/4"-16OR B	316SS
3HBF 3	3/8"	G3/8" BSPP	Steel
3HBF3- B	3/8"	G3/8" BSPP	Brass
3HBF3- S	3/8"	G3/8" BSPP	303SS
3HBF3-SS	3/8"	G3/8" BSPP	316SS
4HF4	1/2"	1/2"-14NPTF	Steel
4HF4-B	1/2"	1/2"-14NPTF	Brass
4HF4-S	1/2"	1/2"-14NPTF	303SS
4HF4-SS	1/2"	1/2"-14NPTF	316SS
4HOF5	1/2"	7/8"-14OR B	Steel
4HOF5-S	1/2"	7/8"-14OR B	303SS
4HOF5-SS	1/2"	7/8"-14OR B	316SS
4HBF 4	1/2"	G1/2" BSPP	Steel
4HBF4- B	1/2"	G1/2" BSPP	Brass
4HBF4- S	1/2"	G1/2" BSPP	303SS
4HBF4-SS	1/2"	G1/2" BSPP	316SS
6HF6	3/4"	3/4"-14NPTF	Steel
6HF6-B	3/4"	3/4"-14NPTF	Brass
6HF6-S	3/4"	3/4"-14NPTF	303SS
6HF6-SS	3/4"	3/4"-14NPTF	316SS
6HOF6	3/4"	1-1/16"-12 ORB	Steel
6HOF6-S	3/4"	1-1/16"-12 ORB	303SS
6HOF6-SS	3/4"	1-1/16"-12 ORB	316SS
6HBF 6	3/4"	G3/4" BSPP	Steel
6HBF6- B	3/4"	G3/4" BSPP	Brass
6HBF6- S	3/4"	G3/4" BSPP	303SS
6HBF6-SS	3/4"	G3/4" BSPP	316SS
8HF8	1"	1"-11 1/2 NPTF	Steel
8HF8-B	1"	1"-11 1/2 NPTF	Brass
8HF8-S	1"	1"-11 1/2 NPTF	303SS
8HF8-SS	1"	1"-11 1/2 NPTF	316SS
8HOF8	1"	1-5/16"-12 ORB	Steel
8HOF8-S	1"	1-5/16"-12 ORB	303SS
8HOF8-SS	1"	1-5/16"-12 ORB	316SS
8HBF 8	1"	G1" BSPP	Steel
8HBF8- B	1"	G1" BSPP	Brass
8HBF8- S	1"	G1" BSPP	303SS
8HBF8-SS	1"	G1" BSPP	316SS
10HF10	1-1/4"	1-1/4"-11 1/2 NPTF	Steel
10HF10-B	1-1/4"	1-1/4"-11 1/2 NPTF	Brass
10HF10-S	1-1/4"	1-1/4"-11 1/2 NPTF	303SS
10HF10-SS	1-1/4"	1-1/4"-11 1/2 NPTF	316SS
10HBF1 0	1-1/4"	G1-1/4" BSPP	Steel
10HBF10- B	1-1/4"	G1-1/4" BSPP	Brass
10HBF10- S	1-1/4"	G1-1/4" BSPP	303SS
10HBF10-SS	1-1/4"	G1-1/4" BSPP	316SS
12HF10	1-1/2"	1-1/4"-11 1/2 NPTF	Steel
12HOF1 0	1-1/2"	1-5/8"-12OR B	Steel
12HF12	1-1/2"	1-1/2"-11 1/2 NPTF	Steel
12HF12-B	1-1/2"	1-1/2"-11 1/2 NPTF	Brass
12HF12-S	1-1/2"	1-1/2"-11 1/2 NPTF	303SS
12HF12-SS	1-1/2"	1-1/2"-11 1/2 NPTF	316SS
12HOF1 2	1-1/2"	1-7/8"-12OR B	Steel
12HBF1 2	1-1/2"	G1-1/2" BSPP	Steel
12HBF12- B	1-1/2"	G1-1/2" BSPP	Brass
12HBF12- S	1-1/2"	G1-1/2" BSPP	303SS
12HBF12-SS	1-1/2"	G1-1/2" BSPP	316SS



**H-Series ISO-B Interchange (Nipple)**



(Female Thread)

Part Number	Body Size	Thread Size	Body Material
H1F1	1/8"	1/8"-27NPTF	Steel
H1F1-B	1/8"	1/8"-27NPTF	Brass
H1F1-S	1/8"	1/8"-27NPTF	303SS
H1OF2	1/8"	7/16"-20OR B	Steel
H1OF2-S	1/8"	7/16"-20OR B	303SS
H2F2	1/4"	1/4"-18NPTF	Steel
H2F2-B	1/4"	1/4"-18NPTF	Brass
H2F2-S	1/4"	1/4"-18NPTF	303SS
H2F2-SS	1/4"	1/4"-18NPTF	316SS
H2OF3	1/4"	9/16"-18OR B	Steel
H2OF3-S	1/4"	9/16"-18OR B	303SS
H2OF3-SS	1/4"	9/16"-18OR B	316SS
H2BF 2	1/4"	G1/4" BSPP	Steel
H2BF2- B	1/4"	G1/4" BSPP	Brass
H2BF2- S	1/4"	G1/4" BSPP	303SS
H2BF2-SS	1/4"	G1/4" BSPP	316SS
H3F3	3/8"	3/8"-18NPTF	Steel
H3F3- B	3/8"	3/8"-18NPTF	Brass
H3F3- S	3/8"	3/8"-18NPTF	303SS
H3F3-SS	3/8"	3/8"-18NPTF	316SS
H3OF4	3/8"	3/4"-16OR B	Steel
H3OF4-S	3/8"	3/4"-16OR B	303SS
H3OF4-SS	3/8"	3/4"-16OR B	316SS
H3BF 3	3/8"	G3/8" BSPP	Steel
H3BF3- B	3/8"	G3/8" BSPP	Brass
H3BF3- S	3/8"	G3/8" BSPP	303SS
H3BF3-SS	3/8"	G3/8" BSPP	316SS
H4F4	1/2"	1/2"-14NPTF	Steel
H4F4- B	1/2"	1/2"-14NPTF	Brass
H4F4- S	1/2"	1/2"-14NPTF	303SS
H4F4-SS	1/2"	1/2"-14NPTF	316SS
H4OF 5	1/2"	7/8"-14OR B	Steel
H4OF5-S	1/2"	7/8"-14OR B	303SS
H4OF5-SS	1/2"	7/8"-14OR B	316SS
H4BF 4	1/2"	G1/2" BSPP	Steel
H4BF4- B	1/2"	G1/2" BSPP	Brass
H4BF4- S	1/2"	G1/2" BSPP	303SS
H4BF4-SS	1/2"	G1/2" BSPP	316SS
H6F6	3/4"	3/4"-14NPTF	Steel
H6F6-B	3/4"	3/4"-14NPTF	Brass
H6F6-S	3/4"	3/4"-14NPTF	303SS
H6F6-SS	3/4"	3/4"-14NPTF	316SS
H6OF6	3/4"	1-1/16"-12 ORB	Steel
H6OF6-S	3/4"	1-1/16"-12 ORB	303SS
H6OF6-SS	3/4"	1-1/16"-12 ORB	316SS
H6BF 6	3/4"	G3/4" BSPP	Steel
H6BF6- B	3/4"	G3/4" BSPP	Brass
H6BF6- S	3/4"	G3/4" BSPP	303SS
H6BF6-SS	3/4"	G3/4" BSPP	316SS
H8F8	1"	1"-11 1/2 NPTF	Steel
H8F8-B	1"	1"-11 1/2 NPTF	Brass
H8F8-S	1"	1"-11 1/2 NPTF	303SS
H8F8-SS	1"	1"-11 1/2 NPTF	316SS
H8OF8	1"	1-5/16"-12 ORB	Steel
H8OF8-S	1"	1-5/16"-12 ORB	303SS
H8OF8-SS	1"	1-5/16"-12 ORB	316SS
H8BF 8	1"	G1" BSPP	Steel
H8BF8- B	1"	G1" BSPP	Brass
H8BF8- S	1"	G1" BSPP	303SS
H8BF8-SS	1"	G1" BSPP	316SS
H10F10	1-1/4"	1-1/4"-11 1/2 NPTF	Steel
H10F10-B	1-1/4"	1-1/4"-11 1/2 NPTF	Brass
H10F10-S	1-1/4"	1-1/4"-11 1/2 NPTF	303SS
H10F10-SS	1-1/4"	1-1/4"-11 1/2 NPTF	316SS
H10BF10	1-1/4"	G1-1/4" BSPP	Steel
H10BF10- B	1-1/4"	G1-1/4" BSPP	Brass
H10BF10- S	1-1/4"	G1-1/4" BSPP	303SS
H10BF10-SS	1-1/4"	G1-1/4" BSPP	316SS
H12F10	1-1/2"	1-1/4"-11 1/2 NPTF	Steel
H12OF1 0	1-1/2"	1-5/8"-12OR B	Steel
H12F12	1-1/2"	1-1/2"-11 1/2 NPTF	Steel
H12F12- B	1-1/2"	1-1/2"-11 1/2 NPTF	Brass
H12F12- S	1-1/2"	1-1/2"-11 1/2 NPTF	303SS
H12F12-SS	1-1/2"	1-1/2"-11 1/2 NPTF	316SS
H12OF12	1-1/2"	1-7/8"-12OR B	Steel
H12BF12	1-1/2"	G1-1/2" BSPP	Steel
H12BF12- B	1-1/2"	G1-1/2" BSPP	Brass
H12BF12- S	1-1/2"	G1-1/2" BSPP	303SS
H12BF12-SS	1-1/2"	G1-1/2" BSPP	316SS

**Quick  
Disconnect**



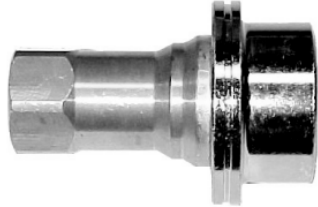
**H-Series ISO-B Interchange (Nipple)**



(Male Thread)

Part Number	Body Size	Thread Size	Body Material
H1M2	1/8"	1/4"-18NPTF	Steel
H1OM3	1/8"	9/16"-18OR B	Steel
H2M3	1/4"	3/8"-18NPTF	Steel

**HS-Series ISO-B Steam Interchange (Coupler)**



(Female Thread)

Part Number	Body Size	Thread Size	Body Material
2HSF2- B	1/4"	1/4"-18NPTF	Brass
2HSF2- S	1/4"	1/4"-18NPTF	303SS
2HSBF2- B	1/4"	G1/4" BSPP	Brass
2HSBF2- S	1/4"	G1/4" BSPP	303SS
3HSF3- B	3/8"	3/8"-18NPTF	Brass
3HSF3- S	3/8"	3/8"-18NPTF	303SS
3HSBF3- B	3/8"	G3/8" BSPP	Brass
3HSBF3- S	3/8"	G3/8" BSPP	303SS
4HSF4- B	1/2"	1/2"-14NPTF	Brass
4HSF4- S	1/2"	1/2"-14NPTF	303SS
4HSBF4- B	1/2"	G1/2" BSPP	Brass
4HSBF4- S	1/2"	G1/2" BSPP	303SS
6HSF6- B	3/4"	3/4"-14NPTF	Brass
6HSF6- S	3/4"	3/4"-14NPTF	303SS
6HSBF6- B	3/4"	G3/4" BSPP	Brass
6HSBF6- S	3/4"	G3/4" BSPP	303SS
8HSF8- B	1"	1"-11 1/2 NPTF	Brass
8HSF8- S	1"	1"-11 1/2 NPTF	303SS
8HSBF8- B	1"	G1" BSPP	Brass
8HSBF8- S	1"	G1" BSPP	303SS

**HS-Series ISO-B Steam Interchange (Nipple)**



(Female Thread)

Part Number	Body Size	Thread Size	Body Material
HS2F 2	1/4"	1/4"-18NPTF	Steel
HS2F2- B	1/4"	1/4"-18NPTF	Brass
HS2F2- S	1/4"	1/4"-18NPTF	303SS
HS2BF2	1/4"	G1/4" BSPP	Steel
HS2BF2-B	1/4"	G1/4" BSPP	Brass
HS2BF2-S	1/4"	G1/4" BSPP	303SS
HS3F 3	3/8"	3/8"-18NPTF	Steel
HS3F3- B	3/8"	3/8"-18NPTF	Brass
HS3F3- S	3/8"	3/8"-18NPTF	303SS
HS3BF3	3/8"	G3/8" BSPP	Steel
HS3BF3-B	3/8"	G3/8" BSPP	Brass
HS3BF3-S	3/8"	G3/8" BSPP	303SS
HS4F 4	1/2"	1/2"-14NPTF	Steel
HS4F4- B	1/2"	1/2"-14NPTF	Brass
HS4F4- S	1/2"	1/2"-14NPTF	303SS
HS4BF4	1/2"	G1/2" BSPP	Steel
HS4BF4-B	1/2"	G1/2" BSPP	Brass
HS4BF4-S	1/2"	G1/2" BSPP	303SS
HS6F 6	3/4"	3/4"-14NPTF	Steel
HS6F6- B	3/4"	3/4"-14NPTF	Brass
HS6F6- S	3/4"	3/4"-14NPTF	303SS
HS6BF6	3/4"	G3/4" BSPP	Steel
HS6BF6-B	3/4"	G3/4" BSPP	Brass
HS6BF6-S	3/4"	G3/4" BSPP	303SS
HS8F 8	1"	1"-11 1/2 NPTF	Steel
HS8F8- B	1"	1"-11 1/2 NPTF	Brass
HS8F8- S	1"	1"-11 1/2 NPTF	303SS
HS8BF8	1"	G1" BSPP	Steel
HS8BF8-B	1"	G1" BSPP	Brass
HS8BF8-S	1"	G1" BSPP	303SS



Attention Required!

**Do Not Disconnect Steam Couplings While Under Pressure!**

Maximum operating temperature for steam service couplings 204°C (400°F). Be sure to use safety chains, or equivalent means, to prevent the line from thrashing around in case the coupling becomes disconnected.



**H-Series ISO-B Interchange (Coupler Dust Plug)**

Part Number	Body Size	Cap Lanyard	Body Material
1HDP	1/8"	Elastomer	Elastomer
2HDP	1/4"	Elastomer	Elastomer
3HDP	3/8"	Elastomer	Elastomer
4HDP	1/2"	Elastomer	Elastomer
6HDP	3/4"	Elastomer	Elastomer
8HDP	1"	Elastomer	Elastomer



**H-Series ISO-B Interchange (Nipple Dust Cap)**

Part Number	Body Size	Cap Lanyard	Body Material
H1DC	1/8"	Elastomer	Elastomer
H2DC	1/4"	Elastomer	Elastomer
H3DC	3/8"	Elastomer	Elastomer
H4DC	1/2"	Elastomer	Elastomer
H6DC	3/4"	Elastomer	Elastomer
H8DC	1"	Elastomer	Elastomer



**H-Series ISO-B Interchange (Coupler Rigid Dust Plug)**

Part Number	Body Size	Cap Lanyard	Body Material
2HDP-A	1/4"	Steel Ring	Aluminum
3HDP-A	3/8"	Steel Ring	Aluminum
4HDP-A	1/2"	Steel Ring	Aluminum
6HDP-A	3/4"	Steel Ring	Aluminum
8HDP-A	1"	Steel Ring	Aluminum
12HDP-A	1-1/2"	Steel Ring	Aluminum



**H-Series ISO-B Interchange (Nipple Rigid Dust Cap)**

Part Number	Body Size	Cap Lanyard	Body Material
H2DC-A	1/4"	Steel Ring	Aluminum
H3DC-A	3/8"	Steel Ring	Aluminum
H4DC-A	1/2"	Steel Ring	Aluminum
H6DC-A	3/4"	Steel Ring	Aluminum
H8DC-A	1"	Steel Ring	Aluminum
H12DC-A	1-1/2"	Steel Ring	Aluminum



**H-Series ISO-B Interchange (Nipple Protective Pressure Cap)**

Part Number	Body Size	Cap Lanyard	Body Material
H2PC	1/4"	Steel Chain	Steel
H3PC	3/8"	Steel Chain	Steel
H4PC	1/2"	Steel Chain	Steel
H6PC	3/4"	Steel Chain	Steel
H8PC	1"	Steel Chain	Steel



One such option is the "Valve Actuator", also known as a bleeder-style valve. This valve design is ideal for applications requiring a single shut-off function. Features this valve style include: Reduce the exhaust velocity of air from a disconnected line to prevent hose whip upon disconnection or prevent static pressure from building up in disconnected lines.



Attention Required!



**K-Series ISO7241 Series 'A' Interchange**

**Quick  
Disconnect**



- K-Series couplers and nipples are compliant with the parameters outlined in ISO7241 Series 'A'.
- Couplers have a high concentration of locking balls to reduce incidents of brinneling during operation.
- Heavy duty knurled sleeves are designed to resist brinneling and maximize performance under impulse conditions.
- Wide selection of thread configurations and body sizes ensure compatibility in a variety of installations.

Performance Specifications	Operating Bar (PSI)	Burst Bar (PSI)	Flow Rate Δp=2 Bar	Locking Mechanism
1/4" Steel	350 (5,075)	1300 (18,850)	12 LPM (3.2 GPM)	6 Balls
3/8" Steel	300 (4,350)	1200 (17,400)	26 LPM (7 GPM)	10 Balls
1/2" Steel	300 (4,350)	1160 (16,820)	45 LPM (12 GPM)	12 Balls
3/4" Steel	250 (3,625)	1040 (15,080)	76 LPM (20 GPM)	12 Balls
1" Steel	230 (3,335)	1000 (14,500)	151 LPM (40 GPM)	16 Balls
1-1/4" Steel	230 (3,335)	1000 (14,500)	246 LPM (65 GPM)	16 Balls
1-1/2" Steel	200 (2,900)	800 (11,600)	404 LPM (107 GPM)	16 Balls
2" Steel	190 (2,755)	850 (12,325)	473 LPM (125 GPM)	15 Balls

Interchange Standards	US Military	Industry Standards	International Standards	ANSI/NFPA
1/4"	-	-	ISO7241-A	B93.113M-A
3/8"	-	-	ISO7241-A	B93.113M-A
1/2"	-	-	ISO7241-A	B93.113M-A
3/4"	-	-	ISO7241-A	B93.113M-A
1"	-	-	ISO7241-A	B93.113M-A
1-1/4"	-	-	ISO7241-A	B93.113M-A
1-1/2"	-	-	ISO7241-A	B93.113M-A
2"	-	-	ISO7241-A	B93.113M-A

\* These particular sizes are not outlined within the documented standard category.

'K' Series Interchange	Parker	Aeroquip	Faster	Holmbury
1/4"	Series 6600	FD56 (5600)	ANV	ISO.A
3/8"	Series 6600	FD56 (5600)	ANV	ISO.A
1/2"	Series 6600	FD56 (5600)	ANV	ISO.A
3/4"	Series 6600	FD56 (5600)	ANV	ISO.A
1"	Series 6600	FD56 (5600)	ANV	ISO.A
1-1/4"	-	-	ANV	ISO.A
1-1/2"	-	-	ANV	ISO.A
2"	-	-	ANV	ISO.A

**K-Series ISO-A Interchange (Coupler Dust Plug)**



**Now**

Part Number	Body Size	Cap Lanyard	Body Material
2KDP	1/4"	Elastomer	Elastomer
3KDP	3/8"	Elastomer	Elastomer
4KDP	1/2"	Elastomer	Elastomer
6KDP	3/4"	Elastomer	Elastomer
8KDP	1"	Elastomer	Elastomer

**K-Series ISO-A Interchange (Nipple Dust Cap)**



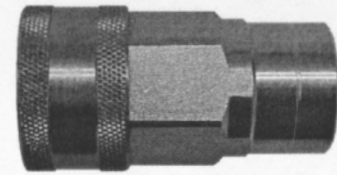
**Now**

Part Number	Body Size	Cap Lanyard	Body Material
K2DC	1/4"	Elastomer	Elastomer
K3DC	3/8"	Elastomer	Elastomer
K4DC	1/2"	Elastomer	Elastomer
K6DC	3/4"	Elastomer	Elastomer
K8DC	1"	Elastomer	Elastomer



**K-Series ISO-A Interchange (Coupler)**

Part Number	Body Size	Thread Size	Body Material
2KF2	1/4"	1/4"-18 NPT	Steel
2KBF2	1/4"	G1/4" BSPP	Steel
3KF3	3/8"	3/8"-18 NPT	Steel
3KOF3	3/8"	9/16"-18 ORB	Steel
3KBF3	3/8"	G3/8" BSPP	Steel
4KF4	1/2"	1/2"-14 NPT	Steel
4KOF4	1/2"	3/4"-16 ORB	Steel
4KBF4	1/2"	G1/2" BSPP	Steel
4KOF5	1/2"	7/8"-14 ORB	Steel
4KF6	1/2"	3/4"-14 NPT	Steel
6KF6	3/4"	3/4"-14 NPT	Steel
6KOF6	3/4"	1-1/6"-12 ORB	Steel
6KBF6	3/4"	G3/4" BSPP	Steel
8KF8	1"	1"-11 1/2 NPT	Steel
8KOF8	1"	1-5/16"-12 ORB	Steel
8KBF8	1"	G1" BSPP	Steel
10KF10	1-1/4"	1-1/4"-11 1/2 NPT	Steel
10KBF10	1-1/4"	G1-1/4" BSPP	Steel
12KF12	1-1/2"	1-1/2"-11 1/2 NPT	Steel
12KBF12	1-1/2"	G1-1/2" BSPP	Steel
16KF16	2"	2"-11 1/2 NPT	Steel
16KBF16	2"	G2" BSPP	Steel



(Female Thread)

**K-Series ISO-A Interchange (Nipple)**

Part Number	Body Size	Thread Size	Body Material
K2F2	1/4"	1/4"-18 NPT	Steel
K2BF2	1/4"	G1/4" BSPP	Steel
K3F3	3/8"	3/8"-18 NPT	Steel
K3OF3	3/8"	9/16"-18 ORB	Steel
K3BF3	3/8"	G3/8" BSPP	Steel
K4F4	1/2"	1/2"-14 NPT	Steel
K4OF4	1/2"	3/4"-16 ORB	Steel
K4BF4	1/2"	G1/2" BSPP	Steel
K4OF5	1/2"	7/8"-14 ORB	Steel
K4F6	1/2"	3/4"-14 NPT	Steel
K6F6	3/4"	3/4"-14 NPT	Steel
K6OF6	3/4"	1-1/6"-12 ORB	Steel
K6BF6	3/4"	G3/4" BSPP	Steel
K8F8	1"	1"-11 1/2 NPT	Steel
K8OF8	1"	1-5/16"-12 ORB	Steel
K8BF8	1"	G1" BSPP	Steel
K10F10	1-1/4"	1-1/4"-11 1/2 NPT	Steel
K10BF10	1-1/4"	G1-1/4" BSPP	Steel
K12F12	1-1/2"	1-1/2"-11 1/2 NPT	Steel
K12BF12	1-1/2"	G1-1/2" BSPP	Steel
K16F16	2"	2"-11 1/2 NPT	Steel
K16BF16	2"	G2" BSPP	Steel



(Female Thread)



**E-Series Straight-Through Interchange**



Smooth bore full-flow design ensures maximum flow with minimal pressure drop.  
1-1/4" and 2" sleeves are yellow zinc plated to minimize incidents of brinelling during impulse service.

Performane Specifications	Brass* Bar (PSI)	Steel** Bar (PSI)	303SS*** Bar (PSI)	Locking Mechanism
1/8"	193 (2,800)	234 (3,400)	290 (4,200)	8 Balls
1/4"	359 (5,200)	379 (5,500)	517 (7,500)	8 Balls
3/8"	193 (2,800)	290 (4,200)	434 (6,300)	8 Balls
1/2"	152 (2,200)	241 (3,500)	248 (3,600)	8 Balls
3/4"	117 (1,700)	145 (2,100)	207 (3,000)	8 Balls
1"	117 (1,700)	138 (2,000)	138 (2,000)	8 Balls
1-1/4"	117 (1,700)	186 (2,700)	152 (2,200)	8 Balls
1-1/2"	97 (1,400)	152 (2,200)	172 (2,500)	8 Balls
2"	97 (1,400)	152 (2,200)	103 (1,500)	8 Balls

\* Brass working pressure is as a result of using a brass plug with a brass coupler.  
\*\* Steel working pressure is as a result of using a steel plug with a brass coupler.  
\*\*\* 303SS working pressure is as a result of using a 303SS plug with a 303SS coupler.

Please Note: Operating pressures for the E-Series couplings utilizing hose barb end connections may be dramatically reduced to that of the hose rating and/or hose and end connection combination. Consult hose manufacturer's catalog for hose end connection ratings. If in doubt, test under controlled conditions for suitability to application. Perfecting Coupling Company cannot assume liability for misapplication of products resulting in equipment down-time, lost production, property damage and/or personal injury including death.

**E-Series Straight-Through Interchange (Coupler)**



(Standard Hose Barb)

Part Number	Body Size	Barb Configuratoion	Body Material
2ES2-B	1/4"	1/4" Hose Barb	Brass
3ES3-B	3/8"	3/8" Hose Barb	Brass
4ES4-B	1/2"	1/2" Hose Barb	Brass
6ES6-B	3/4"	3/4" Hose Barb	Brass
8ES8-B	1"	1" Hose Barb	Brass

**E-Series Straight-Through Interchange (Nipple)**



(Standard Hose Barb)

Part Number	Body Size	Barb Configuration	Body Material
E2S2	1/4"	1/4" Hose Barb	Steel
E2S2-B	1/4"	1/4" Hose Barb	Brass
E3S3	3/8"	3/8" Hose Barb	Steel
E3S3-B	3/8"	3/8" Hose Barb	Brass
E4S4	1/2"	1/2" Hose Barb	Steel
E4S4-B	1/2"	1/2" Hose Barb	Brass
E6S6	3/4"	3/4" Hose Barb	Steel
E6S6-B	3/4"	3/4" Hose Barb	Brass
E8S8	1"	1" Hose Barb	Steel
E8S8-B	1"	1" Hose Barb	Brass

**E-Series Straight-Through Interchange (Coupler)**



(Female Thread)

Part Number	Body Size	Thread Size	Body Material
1EF1-B	1/8"	1/8"-27 NPTF	Brass
1EF1-S	1/8"	1/8"-27 NPTF	303SS
2EF2-B	1/4"	1/4"-18 NPTF	Brass
2EF2-S	1/4"	1/4"-18 NPTF	303SS
3EF3-B	3/8"	3/8"-18 NPTF	Brass
3EF3-S	3/8"	3/8"-18 NPTF	303SS
4EF4-B	1/2"	1/2"-14 NPTF	Brass
4EF4-S	1/2"	1/2"-14 NPTF	303SS
6EF6-B	3/4"	3/4"-14 NPTF	Brass
6EF6-S	3/4"	3/4"-14 NPTF	303SS
8EF8-B	1"	1"-11 1/2 NPTF	Brass
8EF8-S	1"	1"-11 1/2 NPTF	303SS
10EF10-B	1-1/4"	1-1/4"-11 1/2 NPTF	Brass
10EF10-S	1-1/4"	1-1/4"-11 1/2 NPTF	303SS
12EF12-B	1-1/2"	1-1/2"-11 1/2 NPTF	Brass
12EF12-S	1-1/2"	1-1/2"-11 1/2 NPTF	303SS
16EF16-B	2"	2"-11 1/2 NPTF	Brass
16EF16-S	2"	2"-11 1/2 NPTF	303SS



**E-Series Straight-Through Interchange (Nipple)**

Part Number	Body Size	Thread Size	Body Material
E1F1	1/8"	1/8"-27NPTF	Steel
E1F1-B	1/8"	1/8"-27NPTF	Brass
E1F1-S	1/8"	1/8"-27NPTF	303SS
E2F2	1/4"	1/4"-18NPTF	Steel
E2F2-B	1/4"	1/4"-18NPTF	Brass
E2F2-S	1/4"	1/4"-18NPTF	316SS
E3F3	3/8"	3/8"-18NPTF	Steel
E3F3-B	3/8"	3/8"-18NPTF	Brass
E3F3-S	3/8"	3/8"-18NPTF	316SS
E4F4	1/2"	1/2"-14NPTF	Steel
E4F4-B	1/2"	1/2"-14NPTF	Brass
E4F4-S	1/2"	1/2"-14NPTF	316SS
E6F6	3/4"	3/4"-14NPTF	Steel
E6F6-B	3/4"	3/4"-14NPTF	Brass
E6F6-S	3/4"	3/4"-14NPTF	316SS
E8F8	1"	1"-11 1/2 NPTF	Steel
E8F8-B	1"	1"-11 1/2 NPTF	Brass
E8F8-S	1"	1"-11 1/2 NPTF	316SS
E10F10	1-1/4"	1-1/4"-11 1/2 NPTF	Steel
E10F10-B	1-1/4"	1-1/4"-11 1/2 NPTF	Brass
E10F10-S	1-1/4"	1-1/4"-11 1/2 NPTF	303SS
E12F12	1-1/2"	1-1/2"-11 1/2 NPTF	Steel
E12F12-B	1-1/2"	1-1/2"-11 1/2 NPTF	Brass
E12F12-S	1-1/2"	1-1/2"-11 1/2 NPTF	303SS
E16F16	2"	2"-11 1/2 NPTF	Steel
E16F16-B	2"	2"-11 1/2 NPTF	Brass
E16F16-S	2"	2"-11 1/2 NPTF	303SS



(Female Thread)

**Quick Disconnect**

**E-Series Straight-Through Interchange (Coupler)**

Part Number	Body Size	Thread Size	Body Material
1EM1-B	1/8"	1/8"-27NPTF	Brass
1EM1-S	1/8"	1/8"-27NPTF	303SS
2EM2-B	1/4"	1/4"-18NPTF	Brass
2EM2-S	1/4"	1/4"-18NPTF	303SS
3EM3-B	3/8"	3/8"-18NPTF	Brass
3EM3-S	3/8"	3/8"-18NPTF	303SS
4EM4-B	1/2"	1/2"-14NPTF	Brass
4EM4-S	1/2"	1/2"-14NPTF	303SS
6EM6-B	3/4"	3/4"-14NPTF	Brass
6EM6-S	3/4"	3/4"-14NPTF	303SS
8EM8-B	1"	1"-11 1/2 NPTF	Brass
8EM8-S	1"	1"-11 1/2 NPTF	303SS



(Male Thread)

**E-Series Straight-Through Interchange (Nipple)**

Part Number	Body Size	Thread Size	Body Material
E1M1	1/8"	1/8"-27NPTF	Steel
E1M1-B	1/8"	1/8"-27NPTF	Brass
E1M1-S	1/8"	1/8"-27NPTF	303SS
E2M2	1/4"	1/4"-18NPTF	Steel
E2M2-B	1/4"	1/4"-18NPTF	Brass
E2M2-S	1/4"	1/4"-18NPTF	316SS
E3M3	3/8"	3/8"-18NPTF	Steel
E3M3-B	3/8"	3/8"-18NPTF	Brass
E3M3-S	3/8"	3/8"-18NPTF	316SS
E4M4	1/2"	1/2"-14NPTF	Steel
E4M4-B	1/2"	1/2"-14NPTF	Brass
E4M4-S	1/2"	1/2"-14NPTF	316SS
E6M6	3/4"	3/4"-14NPTF	Steel
E6M6-B	3/4"	3/4"-14NPTF	Brass
E6M6-S	3/4"	3/4"-14NPTF	316SS
E8M8	1"	1"-11 1/2 NPTF	Steel
E8M8-B	1"	1"-11 1/2 NPTF	Brass
E8M8-S	1"	1"-11 1/2 NPTF	316SS
E10M10	1-1/4"	1-1/4"-11 1/2 NPTF	Steel
E10M10-B	1-1/4"	1-1/4"-11 1/2 NPTF	Brass
E12M12	1-1/2"	1-1/2"-11 1/2 NPTF	Steel
E12M12B	1-1/2"	1-1/2"-11 1/2 NPTF	Brass



(Male Thread)





## Spray Guns



**ST 601**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
200601610	4000 PSI	300° F	12 GPM	3/8" FNPT	1/4" FNPT	23 oz

**WEEP**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
200601615	4000 PSI	300° F	12 GPM	3/8" FNPT	1/4" FNPT	23 oz

(Repair Kits: ST 601 #202000044; WEEP #202000046)



**ST 810**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
200810510	3000 PSI	320° F	8 GPM	3/8" FNPT	1/4" FNPT	15 oz

**WEEP**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
200810515	3000 PSI	320° F	8 GPM	3/8" FNPT	1/4" FNPT	15 oz

(Repair Kits: ST 810 #200810491; WEEP #200810401)



**ST 1100**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
201100510	3000 PSI	300° F	7 GPM	3/8" FNPT	1/4" FNPT	15 oz

**WEEP**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
201100525	3000 PSI	300° F	7 GPM	3/8" FNPT	1/4" FNPT	15 oz

(Repair Kits: ST 1100 #999000020; WEEP #99900020W)



**ST 1500**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
201500510	4000 PSI	300° F	12 GPM	3/8" FNPT	1/4" FNPT	20.5 oz

**WEEP**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
201500515	4000 PSI	300° F	12 GPM	3/8" FNPT	1/4" FNPT	20.5 oz

(Repair Kits: ST 1500 #202000044; WEEP #202000046)



**ST 2000**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
202000520	4000 PSI	300° F	12 GPM	3/8" FNPT	1/4" FNPT	26 oz

(Repair Kits: ST 2000 #202000044)



**ST 3002**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
203002600	7250 PSI	300° F	26 GPM	1/2" FNPT	1/2" FNPT	42.5 oz

(Repair Kits: ST 3002#203002495 without plunger, #999000024 with plunger)

**Hose  
Accessories**

**ST 3002 L**

Lance ST 3002 with lateral handle and 1/4" x 1/2" bushing.



Part #	Length (in.)	Inlet	Outlet
999000026	18.5	1/2" MNPT	1/4" FNPT
999000027	38	1/2" MNPT	1/4" FNPT
203002300	Side handle only		



**ST 3100**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
203100550	900 PSI	176° F	26 GPM	1/2" FNPT	1/2" FNPT	42.5 oz

(Repair Kits: ST 3100 #999000025)

**SPRAY GUNS - COMFORT TECHNOLOGY DESIGNED**



**ST 2305**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
202305600	5000 PSI	300° F	12 GPM	3/8" FNPT	1/4" FNPT	21 oz

**WEEP**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
202300615	5000 PSI	300° F	12 GPM	3/8" FNPT	1/4" FNPT	21 oz

(Repair Kits: ST 2305 #202300490; WEEP #202300491)



**ST 2605**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
202605600	5000 PSI	300° F	12 GPM	3/8" FNPT	1/4" FNPT	21 oz

**WEEP**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
202300615	5000 PSI	300° F	12 GPM	3/8" FNPT	1/4" FNPT	21 oz

(Repair Kits: ST 2605 #202300490; WEEP #202300491)



**ST 2700 SS**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
202700600	4500 PSI	300° F	12 GPM	3/8" FNPT	1/4" FNPT	21 oz

(Repair Kits: ST 2700 SS #202700490)



**ST 2705**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
202705600	7300 PSI	300° F	8 GPM	3/8" FNPT	1/4" FNPT	22 oz

(Repair Kits: ST 2705 #202700490)





**SHOULDER SUPPORT**

Part #  
202705590 ..... Use on ST-2305, ST-2605, ST-2700, and ST-2705



**ADAPTER FOR SHOULDER SUPPORT**

Part #  
020000146 .....

**SPECIAL APPLICATION GUNS**



**ST 1500 H**

Part #	Pressure	Temperature	Inlet	Outlet	Weight
201500751	..... Low Only	..... 300° F	..... 3/8" FNPT	..... 1/4" FNPT	..... 13 oz



**ST 1200**

Part #	Pressure	Temperature	Flow Rate	Inlet	Weight
201200500	..... 350 PSI	..... 100° F	..... 14 GPM	..... 1/2" F	..... 28 oz

**SAFETY RELIEF VALVE**



**ST 230**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
200230500	..... 3600 PSI	..... 200° F	..... 8 GPM	..... 1/4" FNPT	..... 1/4" FNPT	..... 14 oz

(Repair Kits: ST 230 #200230495)

**UNLOADER VALVES**



**ST 261**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
200261500	..... 3600 PSI	..... 3176° F	..... 8 GPM	..... 3/8" FNPT	..... 3/8" FNPT	..... 22.5 oz

(Repair Kits: ST 261 #200261526)



**ST 261 I**

ST 261 with chemical injector

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
200261560	..... 3600 PSI	..... 176° F	..... 8 GPM	..... 3/8" FNPT	..... 3/8" FNPT	..... 30 oz
(1.50 - 2.25 gpm)						
200261570	..... 3600 PSI	..... 176° F	..... 8 GPM	..... 3/8" FNPT	..... 3/8" FNPT	..... 30 oz
(2.25 - 3.35 gpm)						
200261580	..... 3600 PSI	..... 176° F	..... 8 GPM	..... 3/8" FNPT	..... 3/8" FNPT	..... 30 oz
(3.35 - 5.00 gpm)						

(Repair Kits: ST 261 I #200261526, Injector 200060720)

**Hose  
Accessories**



**ST 261 S**  
With Micro-Switch

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
200261550 .....	3600 PSI .....	176° F .....	8 GPM .....	3/8" FNPT .....	3/8" FNPT .....	30 oz

**Amps:** 125 VAC 5A, 250 VAC 3A  
(Repair Kits: ST 261 S #200261526)



**ST 280**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
200280510 .....	4060 PSI .....	176° F .....	8 GPM .....	3/8" FNPT .....	3/8" FNPT .....	27.5 oz

(Repair Kits: ST 280 #200280646)

**ADJUSTABLE NOZZLE**



**ST 51 N**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
200051530 .....	3600 PSI .....	300° F .....	8 GPM .....	1/4" FNPT .....	1/4" FNPT .....	6 oz

**ROLL-OVER NOZZLE**



**ST 56**

Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet	Weight
200056500 .....	3600 PSI .....	300° F .....	8 GPM .....	3/14" FNPT .....	1/4" FNPT .....	8.3 oz

**MULTI-REG NOZZLES**



**ST 59 H**

Hi - Low

Part #	Orifice Size	Pressure	Temperature	Flow Rate	Inlet	Weight
200059030 .....	3.0 .....	2000 PSI .....	140° F .....	4 GPM .....	1/4" FPT .....	5.3 oz
200059035 .....	3.5 .....	2000 PSI .....	140° F .....	4 GPM .....	1/4" FPT .....	5.3 oz
200059040 .....	4.0 .....	2000 PSI .....	140° F .....	4 GPM .....	1/4" FPT .....	5.3 oz
200059045 .....	4.5 .....	2000 PSI .....	140° F .....	4 GPM .....	1/4" FPT .....	5.3 oz
200059050 .....	5.0 .....	2000 PSI .....	140° F .....	4 GPM .....	1/4" FPT .....	5.3 oz
200059055 .....	5.5 .....	2000 PSI .....	140° F .....	4 GPM .....	1/4" FPT .....	5.3 oz
200059060 .....	6.0 .....	2000 PSI .....	140° F .....	4 GPM .....	1/4" FPT .....	5.3 oz
200059070 .....	7.0 .....	2000 PSI .....	140° F .....	4 GPM .....	1/4" FPT .....	5.3 oz
200059080 .....	8.0 .....	2000 PSI .....	140° F .....	4 GPM .....	1/4" FPT .....	5.3 oz

**Hose  
Accessories**





**ST 59 1**

Hi - Low

Part #	Orifice Size	Pressure	Temperature	Flow Rate	Inlet	Weight
200059835	3.5	3000 PSI	176° F	8 GPM	1/4" FPT	6.7 oz
200059840	4.0	3000 PSI	176° F	8 GPM	1/4" FPT	6.7 oz
200059845	4.5	3000 PSI	176° F	8 GPM	1/4" FPT	6.7 oz
200059850	5.0	3000 PSI	176° F	8 GPM	1/4" FPT	6.7 oz
200059855	5.5	3000 PSI	176° F	8 GPM	1/4" FPT	6.7 oz
200059860	6.0	3000 PSI	176° F	8 GPM	1/4" FPT	6.7 oz
200059870	7.0	3000 PSI	176° F	8 GPM	1/4" FPT	6.7 oz

**TURBO NOZZLES**



**ST 357**

Part #	Orifice Size	Pressure	Temperature	Inlet	Repair Kit #
200357530	3.0	3000 PSI	190° F	1/4" FNPT	200357130
200357535	3.5	3000 PSI	190° F	1/4" FNPT	200357135
200357540	4.0	3000 PSI	190° F	1/4" FNPT	200357140
200357545	4.5	3000 PSI	190° F	1/4" FNPT	200357145
200357550	5.0	3000 PSI	190° F	1/4" FNPT	200357150
200357555	5.5	3000 PSI	190° F	1/4" FNPT	200357155
200357560	6.0	3000 PSI	190° F	1/4" FNPT	200357160



**ST 457**

Part #	Orifice Size	Pressure	Temperature	Inlet	Repair Kit #
200457520	2.0	5000 PSI	212° F	1/4" FNPT	200457120
200457530	3.0	5000 PSI	212° F	1/4" FNPT	200457130
200457535	3.5	5000 PSI	212° F	1/4" FNPT	200457135
200457540	4.0	5000 PSI	212° F	1/4" FNPT	200457140
200457545	4.5	5000 PSI	212° F	1/4" FNPT	200457145
200457550	5.0	5000 PSI	212° F	1/4" FNPT	200457150
200457555	5.5	5000 PSI	212° F	1/4" FNPT	200457155
200457560	6.0	5000 PSI	212° F	1/4" FNPT	200457160
200457570	7.0	5000 PSI	212° F	1/4" FNPT	200457170
200457580	8.0	5000 PSI	212° F	1/4" FNPT	200457180
200457510	10.0	5000 PSI	212° F	1/4" FNPT	200457110
080653512	12.0	5000 PSI	212° F	1/4" FNPT	865351211
080653515	15.0	5000 PSI	212° F	1/4" FNPT	865351511

**TURBO NOZZLE STRAINERS**



Part #	Pressure	Temperature	Flow Rate	Inlet	Outlet
900000009	5000 PSI	190° F Max	8 GPM	1/4" QC Plug	1/4" MNPT
900000019	5000 PSI	190° F Max	8 GPM	1/4" FNPT	1/4" MNPT

**Hose  
Accessories**

**QUICK NOZZLES**



**With Guide Vane**

Orifice Size	0°	15°	25°	40°
2.5			900002525	
3.0	900000D30	900001530	900002530	900004030
3.5	900000D35	900001535	900002535	900004035
4.0	900000D40	900001540	900002540	900004040
4.5	900000D45	900001545	900002545	900004045
5.0	900000D50	900001550	900002550	900004050
5.5	900000D55	900001555	900002555	900004055
6.5	900000D65	900001565	900002565	900004065
7.0	900000D70	900001570	900002570	900004070
7.5	S/O	900001575	900002575	S/O
8.0	900000D80	900001580	900002580	900004080
10.0	900000D10	900001510	900002510	S/O
12.0	S/O	900001512	S/O	S/O
15.0	900000D15	900001515	S/O	S/O
20.0	N/A	90001 5D20	S/O	S/O

3.0 - 8.0 in stock  
8.0+ Check for availability  
S/O = Special Order  
N/A = Not Available

**With No Guide Vane**

Orifice Size	0°	15°	25°	40°
9.0	900000D90	900001590	900002590	
9.5	900000D95	900001595	900002595	

**Soap Nozzles**

Orifice Size	0°	15°	25°	40°
4.0			90000S2540	

also available in 0°: 65° 90000S6540

**IMEGS**



Orifice Size	15°	25°	40°
3.5	SAQCIMEG-15035	SAQCIMEG-25035	SAQCIMEG-40035
4.0	SAQCIMEG-1504	SAQCIMEG-2504	SAQCIMEG-4004
4.5	SAQCIMEG-15045	SAQCIMEG-25045	SAQCIMEG-40045
5.0	SAQCIMEG-1505	SAQCIMEG-2505	SAQCIMEG-4005
5.5	SAQCIMEG-15055	SAQCIMEG-25055	SAQCIMEG-40055
6.0	SAQCIMEG-1506	SAQCIMEG-2506	SAQCIMEG-4006
6.5	SAQCIMEG-15065	SAQCIMEG-25065	SAQCIMEG-40065
7.0	SAQCIMEG-1507	SAQCIMEG-2507	SAQCIMEG-4007
8.0	SAQCIMEG-1508	SAQCIMEG-2508	SAQCIMEG-4008

Additional size in stock: 10° x 4.0 SAQCIMEG-1004

Hose  
Accessories



**THREADED NOZZLES**

**With Guide Vane**



Orifice Size	0°	15°	25°	40°
3.0	810200003	810201530	810202530	810204030
3.5	810200035	810201535	810202535	810204032
4.0	810300004	810301540	810302540	810304040
4.5	810400045	810401545	810402545	810404045
5.0	810500005	810501550	810502550	810504050
5.5	810600055	810601555	810602555	810604055
6.0	810700006	810701560	810702560	810704060
6.5	810700065	810701565	810702565	810704065
7.0	810800007	810801570	810802570	810804070
8.0	810900008	810901580	810902580	810904080
10.0	811000010	811001510	811002510	811004010
15.0	811000015	811001515		
20.0	811000020	811001520		
30.0	811000030	811001530		
35.0	811000035	811001535		

3.0 - 8.0 in stock,  
8.0+ Check for availability

**With No Guide Vane**



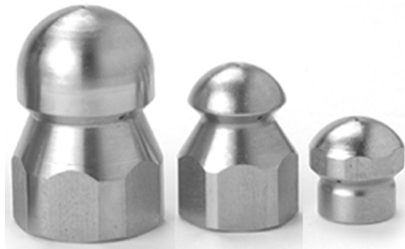
Orifice Size	0°	15°	25°	40°
3.0	820200003	820201530	820202530	820204030
3.5	820200035	820201535	820202535	820204035
4.0	820300004	820301540	820302540	820304040
4.5	820400045	820401545	820402545	820404045
5.0	820500005	820501550	820502550	820504050
5.5	820600055	820601555	820602555	820604055
6.0	820700006	820701560	820702560	820704060
6.5	820700065	820701565	820702565	820704065
7.0	820800007	820801570	820802570	820804070
7.5		820801575		
8.0	820900008	820901580	820902580	820904080
9.0		820901509		820904090
10.0	821000010	821001510	821002510	821004010
15.0		821001515		821504015
25.0			821502525	

Additional sizes: 65° x 4.0 820306540  
65° x 9.0 820906509  
65° x 10.0 821006510

3.0 - 8.0 in stock  
8.0+ Check for availability

**Hose  
Accessories**

**SEWER NOZZLES**



**3/8"      1/4"      1/8"**



**1/8" rotating      1/4" rotating**

**With Guide Vane**

Part #	Style	Orifice Size	Pressure
122375000	1/8"	4.5	290 bar / 4200 PSI
12370170	1/8"	5.5	290 bar / 4200 PSI
121370170	1/4"	4.5	290 bar / 4200 PSI
121375175	1/4"	5.5	290 bar / 4200 PSI
121470170	1/4"	6.0	290 bar / 4200 PSI
121480180	1/4"	7.5	290 bar / 4200 PSI
121395195	1/4"	8.0	290 bar / 4200 PSI
121312112	1/4"	12.0	290 bar / 4200 PSI
123065188	3/8"	4.0	290 bar / 4200 PSI
123065187	3/8"	5.5	290 bar / 4200 PSI
123065189	3/8"	8.5	290 bar / 4200 PSI
123065186	3/8"	12.0	290 bar / 4200 PSI
123065185	3/8"	14.0	290 bar / 4200 PSI
200049650	1/8" (rotating)	5.5	200 bar / 3000 PSI
200049600	1/4" (rotating)	5.5	200 bar / 3000 PSI
200049610	1/4" (rotating)	8.0	200 bar / 3000 PSI
200049700	1/4" rot. Duct	5.5	200 bar / 3000 PSI

**NOZZLE PROTECTION**



**With Bushing**

Part #	Inlet	Outlet
20000003	1/4" FNPT	1/4" FNPT
20000004	1/4" FNPT	1/8" FNPT



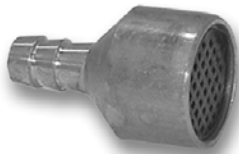
**ST 005**

Part #  
20000003 ..... Heavy duty rubber protector  
for 1/8" meg nozzles

Hose  
Accessories



**CHEMICAL STRAINERS**



	<b>ST 32</b>	
<b>Part #</b>	<b>Weight</b>	<b>Hose Barb</b>
2000032800 .....	1.0 oz .....	1/4"

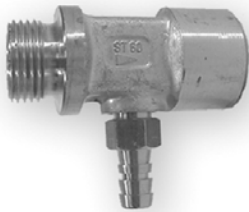


	<b>ST 31</b>	
<b>Part #</b>	<b>Weight</b>	<b>Hose Barb</b>
2000031600 .....	0.8 oz .....	1/4" - 3/8"

	<b>ST 31 R</b>	
	with check valve	
<b>Part #</b>	<b>Weight</b>	<b>Hose Barb</b>
2000031610 .....	0.8 oz .....	1/4" - 3/8"

**CHEMICAL INJECTOR**

**With Guide Vane**



Part #	Orifice Size	Pressure	Flow Rate	Hose Barb	Inlet	Outlet
200060600 .....	1.8 mm .....	3600 PSI .....	1.5- 2.25 GPM .....	1/4" .....	3/8" MNPT .....	3/8" FNPT
200060610 .....	2.1 mm .....	3600 PSI .....	2.25 -3.35 GPM .....	1/4" .....	3/8" MNPT .....	3/8" FNPT
200060620 .....	2.4 mm .....	3600 PSI .....	3.35-5.00 GPM .....	1/4" .....	3/8" MNPT .....	3/8" FNPT

(Repair Kit: ST 60 200060720)

**METERING VALVE FOR ST 60/62/64/261**



	<b>ST 61</b>
<b>Part #</b>	
999061500 .....	Attaches to the hose barb of the ST 60, ST 62, ST 64, or unloader injector.

Hose  
Accessories

**ADJUSTABLE INJECTOR**



**ST 62**

Part #	Pressure	Hose Barb	Inlet	Outlet
200062500	3600 PSI	1/4"	3/8" FNPT	3/8" FNPT

**UPSTREAM CHEMICAL INJECTOR**



**ST 64**

Part #	Pressure	Temperature	Flow Rate	Weight	Inlet	Outlet
999000019	140 PSI	160° F	1.5- 4.0 GPM	1/4"	3/4" F Garden	3/4" F Garden
999000021	140 PSI	160° F	4.0-7.0 GPM	1/4"	3/4" F Garden	3/4" F Garden
999000022	140 PSI	160° F	1.5-4.0 GPM	1/4"	1/2" FNPT	1/2" MNPT
999000023	140 PSI	160° F	4.0-7.0 GPM	1/4"	1/2" FNPT	1/2" MNPT

(Repair Kit: ST 60 200060720)

**INLET PRESSURE REGULATOR**



**REDUCES PRESURE TO  
20-30 PSI**

Part #	Pressure	Temperature	Flow Rate	Weight	Inlet	Outlet
90000056	200 PSI	160° F	10 GPM	8 oz	3/4" FGHT	3/4" FGHT

**DUAL METERING VALVE**



**ST 66**

Part #	Description
200066500	Allows metering from two different sources with one injector.

**FLOAT TANK**



**ST 10 TANK**

Part #	Holding Capacity	Tank Dimensions
020000780	1.8 gallons	13-3/4 x 5-1/2 x 6-3/4

**ST 11 LID**

Part #	Holding Capacity	Tank Dimensions
020000800	1.8 gallons	13-3/4 x 5-1/2 x 6-3/4



**FLOAT VALVE**

**ST 8**



Part #	Pressure	Temperature	Flow Rate	Weight	Inlet
200008520	140 PSI	176° F	5 GPM	7.4 oz	1/2" FNPT**
200060610	140 PSI	176° F	5 GPM	7.4 oz	1/2" FNPT**
200060620	140 PSI	176° F	5 GPM	7.4 oz	1/2" FNPT**

(Repair Kit: ST 8 #200008495)  
\*\*1/2 in MNPT Adapter #200008526

**INLET WATER STRAINER**



**ST 33**

Part #	Pressure	Temperature	Screen	Weight	Inlet	Outlet
200033535	145 PSI	140° F	80 mesh SS	2.4 oz	1/2" FNPT	1/2" MNPT

(#200033540 Strainer without 1/4" FNPT, Bypass ports)

**SUCTION FILTER**



**ST 35**

Part #	Weight	Hose Barb
200035500	14.2 oz	1/2" - 3/4."
200035530	14.2 oz	3/4" - 1"

**ST 35 R**

Part #	Weight	Hose Barb
200035510	14.2 oz	1/2" - 3/4."
200035520	14.2 oz	3/4" - 1"

(ST 35 R is with Check Valve)

**THREADED LANCES**



**ST 001 STAINLESS STEEL**

Part #	Length	Material	Pressure	Inlet / Outlet
070005007	18 in.	S.S.	5000 PSI	1/4" M x 1/8" F
070006008	24 in.	S.S.	5000 PSI	1/4" M x 1/4" M
070009008	36 in.	S.S.	5000 PSI	1/4" M x 1/4" M

Hose  
Accessories



**ST 003 ZINC PLATED STEEL**

Part #	Length	Material	Pressure	Inlet / Outlet
070000025	12 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
070000026	18 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
070000040	24 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
070000055	36 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
070000070	48 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
070000080	60 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
070000090	79 in.	Plated steel	4000 PSI	1/4" M x 1/4" M

**LANCES WITH MOLDED GRIP**



**ST 007 ZINC PLATED STEEL WITH MOLDED GRIP**

Part #	Length	Material	Pressure	Inlet / Outlet
070000330	12 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
070000240	18 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
070000180	24 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
070000260	18 in.	Plated steel	4000 PSI	1/4" M x 1/8" F
070000470	36 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
070000210	48 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
070000220	60 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
070000230	79 in.	Plated steel	4000 PSI	1/4" M x 1/4" M

**LANCES WITH VENTED GRIP**



**ST 009 ZINC PLATED STEEL**

Part #	Length	Material	Pressure	Inlet / Outlet
200009506	24 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
200009509	36 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
200009512	48 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
200009515	60 in.	Plated steel	4000 PSI	1/4" M x 1/4" M
200009519	79 in.	Plated steel	4000 PSI	1/4" M x 1/4" M

**LANCE HANDLES**



**ST 009**

Part #	Description
200009600	Used on any 1/4" lance
200009700	Molded Grip Lance Handle

**LANCE INSULATOR**



**ST 2**

Part #	Length	Temperature
200002510	12 in.	300° F

Hose  
Accessories



**VENTED LANCE GRIPS**



**ST 9**  
Part #  
200009510 .....

**ST 9 H**  
Part #  
200009520 ..... With side handle

**DUAL LANCES**



**ST 53**  
Part #      Length      Material      Pressure  
200053500 ..... 38 in. .... Plated Steel ..... 4000 PS

**ST 54**  
Part #      Length      Material      Pressure  
200054500 ..... 38 in. .... Plated Steel ..... 4000 PSI  
200051530 ..... 48 in. .... Plated Steel ..... 4000 PSI

**TWIN TURBO NOZZLE LANCES**



Part #      Length      Orifice Size      Pressure  
99357530 ..... 42 in. .... 2 x 3.0 ..... 3000 PSI  
999457530 ..... 42 in. .... 2 x 3.0 ..... 5000 PSI  
070009011\* ... 38 in. .... ..... 5000 PSI  
\*Lance only

**FOAM LANCE**



**ST 72 FOAM LANCE WITH AIR INJECTION**

Part #	Length	Pressure	Temperature	Flow Rate
200072500	25 in.	900 PSI	300° F	1.0 - 2.9 GPM
200072510	25 in.	900 PSI	300° F	3.0 - 3.9 GPM
200072520	25 in.	900 PSI	300° F	4.0 - 5.0 GPM
200072600	48 in.	900 PSI	300° F	1.0 - 2.9 GPM
200072610	48 in.	900 PSI	300° F	3.0 - 3.9 GPM
200072620	48 in.	900 PSI	300° F	4.0 - 5.0 GPM

**BREAK AWAY FITTINGS**



Part #      Thread Size  
900000077 ..... 1/4" M x F  
900000078 ..... 3/8" M x F

**QUICK CONNECT SOCKETS AND PLUGS**



**ST 45 QUICK COUPLERS BRASS SOCKETS**

Part #	Description
200045700 .....	Quick Coupler 1/4" M Socket
200045700 .....	Quick Coupler 1/4" M Socket
200045710 .....	Quick Coupler 1/4" F Socket
200045720 .....	Quick Coupler 3/8" M Socket
200045730 .....	Quick Coupler 3/8" F Socket
200045740 .....	3/4" GHF Socket

**QUICK COUPLERS STAINLESS STEEL SOCKETS**

Part #	Description
20SS45710 .....	1/4" F Socket
20SS45730 .....	3/8" F Socket
20SS45760 .....	1/2" F Socket



**ST 46 QUICK COUPLERS PLATED STEEL PLUGS**

Part #	Description
100000140 .....	Quick Connect, 1/4" M Plug
100000150 .....	Quick Connect, 1/4" F Plug
100000160 .....	Quick Connect, 3/8" M Plug
100000170 .....	Quick Connect, 3/8" F Plug
100000180 .....	Quick Connect, 1/2" M Plug
100000190 .....	Quick Connect, 1/2" F Plug



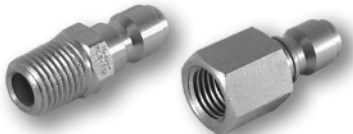
**QUICK COUPLERS BRASS PLUGS**

Part #	Description
1000BR140 .....	1/4" M Plug
1000BR150 .....	1/4" F Plug
1000BR160 .....	3/8" M Plug
1000BR170 .....	3/8" F Plug
100000200 .....	3/4" GHF Plug



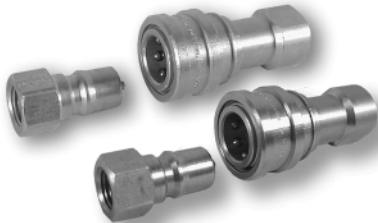
**QUICK COUPLERS 303 STAINLESS STEEL PLUGS**

Part #	Description
1000SS140 .....	1/4" M Plug
1000SS150 .....	1/4" F Plug
1000SS160 .....	3/8" M Plug
1000SS170 .....	3/8" F Plug
1000SS180 .....	1/2" M Plug
1000SS190 .....	1/2" F Plug



**QUICK COUPLERS 416 STAINLESS STEEL PLUGS**

Part #	Description
1000SSS140 .....	1/4" M Plug
1000SSS150 .....	1/4" F Plug
1000SSS160 .....	3/8" M Plug
1000SSS170 .....	3/8" F Plug



**TWO-WAY CHECK VALVES**

Part #	Description
10TWBR150 .....	1/4" F Plug, Brass Check Valve
10TWBR170 .....	3/8" F Plug, Brass Check Valve
10TWSS170 .....	3/8" F Plug, SS Check Valve
20TWBR710 .....	1/4" F Socket, Brass Check Valve
20TWBR730 .....	3/8" F Socket, Brass Check Valve
20TWSS730 .....	3/8" F Socket, SS Check Valve

(10 piece Minimum order per Part #)

**Hose  
Accessories**



**SCREW COUPLINGS**



**ST 40**

Part #	Pressure	Temperature	Inlet	Outlet
200040800	3500 PSI	300° F	1/4" FNPT	M22 x 1.5
200040810	3500 PSI	300° F	1/4" MNPT	M22 x 1.5
200040820	3500 PSI	300° F	3/8" FNPT	M22 x 1.5
200040830	3500 PSI	300° F	3/8" MNPT	M22 x 1.5
200040840	3500 PSI	300° F	1/2" FNPT	M22 x 1.5
200040850	3500 PSI	300° F	1/2" MNPT	M22 x 1.5

**SCREW NIPPLES**



**ST 41**

Part #	Pressure	Temperature	Inlet	Outlet
010000561	3500 PSI	300° F	1/4" MNPT	M22 x 1.5
010000562	3500 PSI	300° F	1/4" FNPT	M22 x 1.5
010000563	3500 PSI	300° F	3/8" MNPT	M22 x 1.5
010000564	3500 PSI	300° F	3/8" FNPT	M22 x 1.5
010000565	3500 PSI	300° F	1/2" MNPT	M22 x 1.5
010000566	3500 PSI	300° F	1/2" FNPT	M22 x 1.5
010000567	3500 PSI	300° F	1/4" QC Plug	M22 x 1.5

**SWIVEL COUPLINGS**



**ST 44**

Part #	Pressure	Temperature	Flow Rate	Weight	Inlet	Outlet
200044500	7250 PSI	300° F	5.2 GPM	5.1 oz	1/4" MNPT	M22 x 1.5
200044520	7250 PSI	300° F	5.2 GPM	5.1 oz	3/8" FNPT	M22 x 1.5

**SWIVELS**



**ST 300**

Part #	Pressure	Temperature	Flow Rate	Weight	Inlet	Outlet
300300025	3000 PSI	300° F	5.2 GPM	5.1 oz	3/8" MNPT	3/8" FNPT
300300030	3000 PSI	300° F	5.2 GPM	5.1 oz	3/8" FNPT	3/8" FNPT

**FLOWSWITCH**



**ST 5**

Gravity actuated

Part #	Pressure	Temperature	Flow Rate	Weight	Inlet	Outlet
200005500	3600 PSI	176° F	8 GPM	16 oz	3/8" MNPT	3/8" MNPT

Volts: 400  
Amps: 3.0 (100 Watts max.)



**ST 6**

Spring Activated

Part #	Pressure	Temperature	Flow Rate	Weight	Inlet	Outlet
200006540	3600 PSI	176° F	8 GPM	14 oz	3/8" MNPT	3/8" MNPT
Volts: 400						
Amps: 3.0 (100 Watts max.)						

**SEWER HOSE**



Part #	Style	Pressure	Temperature
200053500	1/8" x 25' ..... #4.5 nozzle M22 nipple	4000 PS	140° F
900041015	1/8" x 50'	3000 PSI	140° F
080041030	1/8" x 100'	3000 PSI	140° F
080420015	1/4" x 50'	2500 PSI	150° F
080042030	1/4" x 100'	2500 PSI	150° F
080042060	1/4" x 200'	2500 PSI	150° F
084200015	1/4" x 50'	4200 PSI	300° F
084200030	1/4" x 100'	4200 PSI	300° F
084200045	1/4" x 150'	4200 PSI	300° F

**FOOT ACTUATED VALVE**



Part #	Pressure	Temperature	Flow Rate	Weight	Inlet	Outlet
999000012	3000 PSI	320° F	8 GPM	7.0 oz	3/8" FNPT	1/4" FNPT

**CLEANING EQUIPMENT HOSE**



**HOSE**

Part #	I.D. (in.)	Max. Operating Pressure	Length	Fittings
B3V55200	3/8" ..... 9.5 mm	4000 PSI ..... 27.6 MPA	50 ft	3/8" MNPT & 1 end swivel

**HOSE BEND PROTECTOR**



**ST 61**

Part #  
080030871 ..... Fits 3/8" Hose  
For assembly during manufacturing only

**Hose  
Accessories**



**ROTATING BRUSH**



**ST 20**

Part #	Bristles	Pressure	Flow Rate	Weight	Inlet
200020020	Natural	700 PSI	8 GPM	27 oz	1/4" MNPT
200020050	Nylon	700 PSI	8 GPM	27 oz	1/4" MNPT



**ST 21**

Part #	Bristles	Pressure	Flow Rate	Weight	Inlet
200021021	Natural	700 PSI	8 GPM	27 oz	1/4" FNPT
200021121	Nylon	700 PSI	8 GPM	27 oz	1/4" FNPT
200021020	Natural	700 PSI	8 GPM	27 oz	M22 x 1.5

**FLOOR CLEANER**



**ST 95**

Part #	Length	Pressure	Flow Rate	Inlet	Weight
200095500	36 in.	2250 PSI	4.5 GPM	1/4" FNPT	6.3 oz

#80015 Orifice

**SANDBLASTING KIT**



**ST 55**

Part #	Orifice	Sand Nozzle	Pressure	Flow Rate
200055509	4.0	Steel	3600 PSI	8.0 GPM (max)
200055504	5.0	Steel	3600 PSI	8.0 GPM (max)
200055500	6.0	Steel	3600 PSI	8.0 GPM (max)
200055507	7.0	Steel	3600 PSI	8.0 GPM (max)
200055508	8.0	Steel	3600 PSf	8.0 GPM (max)
200055509C	4.0	Carbide	3600 PSI	8.0 GPM (max)
200055504C	5.0	Carbide	3600 PSI	8.0 GPM (max)
200055500C	6.0	Carbide	3600 PSI	8.0 GPM (max)
200055507C	7.0	Carbide	3600 PSI	8.0 GPM (max)
200055508C	8.0	Carbide	3600 PSI	8.0 GPM (max)

Features: Adjustable sand volume (up to 750 lbs/hour)  
18 inch sand probe, 20 inch lance, 13 feet of hose.

**Hose  
Accessories**

**SLUDGE PUMP**

**ST 36**



Part #	Orifice	Pressure	Temp.	Flow Ratio	Weight	Hose Length	Inlet
999QC2540	4.0 (0 degree)	4000 PSI	104° F	11:1	8-10 lbs	25 feet	1/4" male Q.C.
999QC2545	4.5 (0 degree)	4000 PSI	104° F	11:1	8-10 lbs	25 feet	1/4" male Q.C.
999QC2550	5.0 (0 degree)	4000 PSI	104° F	11:1	8-10 lbs	25 feet	1/4" male Q.C.
999QC2555	5.5 (0 degree)	4000 PSI	104° F	11:1	8-10 lbs	25 feet	1/4" male Q.C.
999QC2560	6.0 (0 degree)	4000 PSI	104° F	11:1	8-10 lbs	25 feet	1/4" male Q.C.

Casting Assembly: #200036500

**FOAM NOZZLE**



**ST 70**

Part #	Pressure	Temperature	Flow Rate	Weight	Inlet
200095500	4000 PSI	176° F	4 GPM	9.5 oz	M22 x 1.5
999070600	4000 PSI	176° F	4 GPM	9.5 oz	1/4" Q.C. Plug

0.8 mm Orifice



Hose  
Accessories

# Hose Protection, Spring Guards and Firesleeves

## Spiral Guard™ Hose & Cable Protection



Heavy duty hose, cable or wire protection, used to guard against rubbing, crushing and environmental hazards that decrease hose life. Used in Mining, Quarrying, Forestry, Offshore industries and most Hydraulic hose applications.

- Crush resistant
- High abrasion resistance
- Chemical resistant
- UV ray resistant
- Self-lubricating to reduce hose wear
- Easy to install on-site
- Can be used on single or multiple hose bundles
- Smooth radius on all edges

Part # Flame Retardant	Part # Standard	Spiral Guard I.D.	Coil Length
FRSGX16 .....	NFSGX16 .....	1/2" .....	66'
FRSGX20 .....	NFSGX20 .....	5/8" .....	66'
FRSGX25 .....	NFSGX25 .....	3/4" .....	66'
FRSGX32 .....	NFSGX32 .....	15/16" .....	66'
FRSGX40 .....	NFSGX40 .....	1-1/4" .....	66'
FRSGX50 .....	NFSGX50 .....	1-1/2" .....	66'
FRSGX63 .....	NFSGX63 .....	1-15/16" .....	66'
FRSGX75 .....	NFSGX75 .....	2-3/8" .....	66'
FRSGX90 .....	NFSGX90 .....	2-5/8" .....	66'
FRSGX110 .....	NFSGX110 .....	3-3/16" .....	33'

**Flame Retardant:**

Temperature range: -148°F to 212°F

**Standard:**

Temperature range: -58°F to 194°F

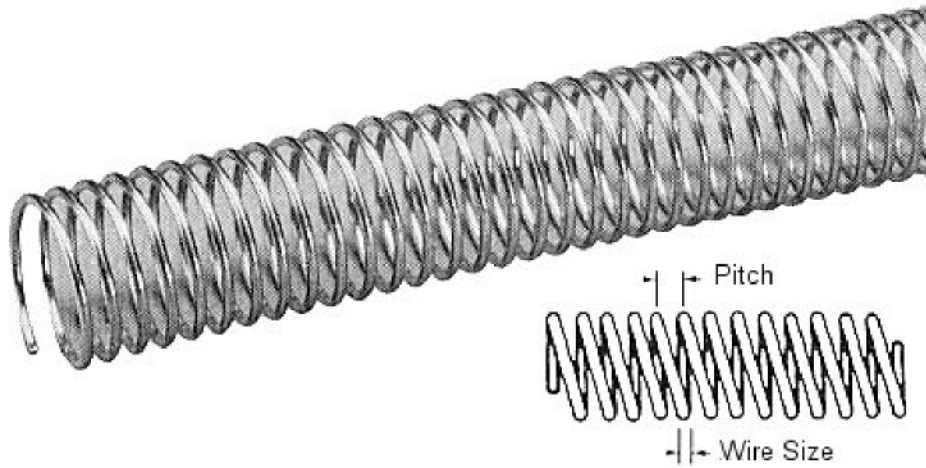
**Flame Retardant:**

Approved by MSHA 1C-231/1 and is self extinguishing.

**Hose  
Accessories**



# Round Wire Spring Guard



Spring guards should be considered for those applications which call for tough, steel armor protection. They offer heavy-duty hose defense against cuts and abrasion, with the added benefit of kink resistance and the ability to mold hose assembly routing for applications which require tight bends.

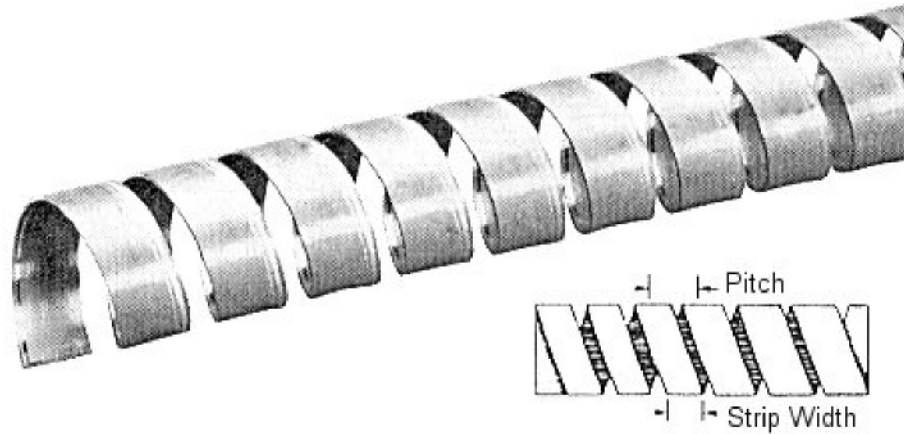
**Material:**

Galvanized C1035 / C1040 steel

Part #	Coil I. D.	Wire Size	Pitch Length	Package Length
TI900	.515"	.063"	.188"	100'
TI901	.550"	.063"	.188"	100'
TI902	.610"	.063"	.188"	100'
TI903	.650"	.080"	.188"	100'
TI904	.750"	.080"	.188"	100'
TI905	.835"	.080"	.188"	100'
TI906	.900"	.080"	.188"	100'
TI907	.990"	.080"	.188"	100'
TI908	1.055"	.080"	.188"	100'
TI909	1.110"	.080"	.250"	100'
TI910	1.240"	.080"	.250"	100'
TI911	1.300"	.120"	.375"	60'
TI912	1.380"	.120"	.375"	60'
TI913	1.630"	.120"	.375"	60'
TI915	1.810"	.120"	.375"	60'
TI916	2.000"	.120"	.375"	40'
TI917	2.125"	.120"	.375"	40'
TI919	2.300"	.120"	.375"	40'

**Hose  
Accessories**

# Flat Wire Spring Guard



Spring guards should be considered for those applications which call for tough, steel armor protection. They offer heavy-duty hose defense against cuts and abrasion, with the added benefit of kink resistance and the ability to mold hose assembly routing for applications which require tight bends.

**Material:**

Galvanized C1035 / C1040 steel

Part #	Coil I. D.	Strip Width	Strip Thickness	Pitch Length	Package Length
TF900	.515"	.375"	.028"	.500"	100'
TF901	.550"	.375"	.028"	.500"	100'
TF902	.610"	.375"	.028"	.500"	100'
TF903	.650"	.375"	.028"	.500"	100'
TF904	.750"	.375"	.028"	.500"	100'
TF905	.835"	.500"	.028"	.688"	100'
TF906	.900"	.500"	.028"	.688"	100'
TF907	.990"	.500"	.028"	.688"	100'
TF908	1.055"	.500"	.028"	.688"	100'
TF909	1.110"	.500"	.028"	.688"	100'
TF910	1.240"	.500"	.028"	.688"	100'
TF911	1.300"	.500"	.028"	.688"	60'
TF912	1.380"	.500"	.042"	.812"	60'
TF913	1.630"	.500"	.042"	.812"	60'
TF917	2.125"	.500"	.042"	.812"	40'
TF919	1.055"	.500"	.042"	.812"	40'

**Hose  
Accessories**



**Fire Sleeve for Hose**



Used to protect hose and hose assemblies, tubing, piping, wiring and cables from high temperatures or molten splash. Will also help maintain line temperature and reduce environmental overheating and overcooling. Sleeving slides easily over hose and expands to go over fittings. Compounded silicone rubber coating over fiberglass. Completely non-asbestos. Resistant to hydraulic fluids and lubricating oil.

**Color**

Iron oxide red

**Temperature range**

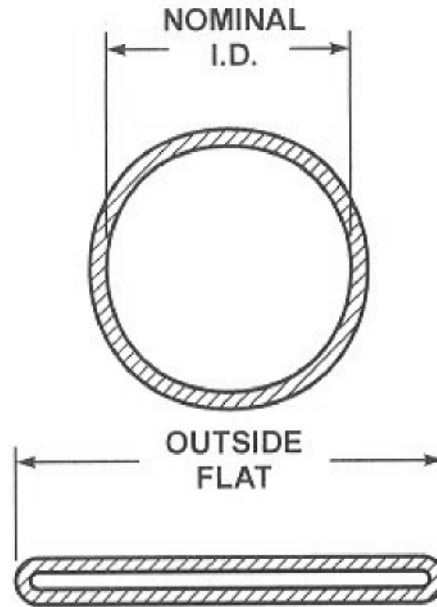
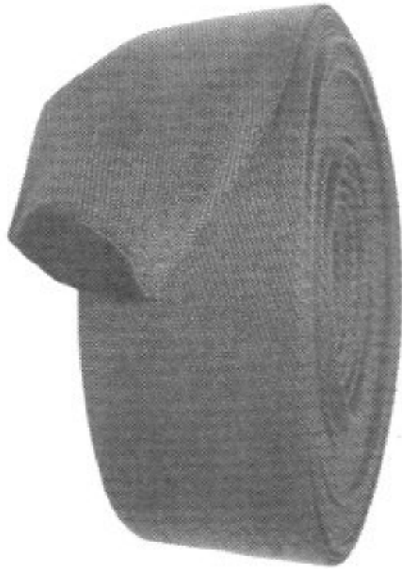
-65°F to 500°F

**Length**

Supplied in 50' lengths

<b>Part #</b>	<b>Nominal I.D.</b>
0610-4 .....	1/4"
1010-6 .....	3/8"
1310-8 .....	1/2"
1610-10 .....	5/8"
1910-12 .....	3/4"
2210-14 .....	7/8"
2510-16 .....	1"
3210-20 .....	1-1/4"
3810-24 .....	1-1/2"
4510-28 .....	1-3/4"
5110-32 .....	2"

## Nylon Protective Sleeves - MSHA Accepted



This woven nylon tubular sleeving is ideal for use as a protective covering on hydraulic and industrial hose. The tight weave of the seamless tubular sleeving helps dispense the flow of fluid in a ruptured hose. This sleeving is **MSHA accepted**. It withstands temperatures up to **375°F**, and fully passes flammability tests

Part #		Nominal Outside	
100' Rolls	300' Rolls	I.D.	Flat
DHS90-100	DHS90-300	0.90"	1.50"
DHS100-100	DHS100-300	1.00"	1.66"
DHS106-100	DHS106-300	1.06"	1.88"
DHS122-100	DHS122-300	1.22"	2.13"
DHS138-100	DHS138-300	1.38"	2.25"
DHS138-100	DHS138-300	1.38"	2.25"
DHS142-100	DHS142-300	1.42"	2.50"
DHS159-100	DHS159-300	1.59"	2.62"
DHS159-1-100	DHS159-1-300	1.59"	2.75"
DHS175-100	DHS175-300	1.75"	2.88"
DHS181-100	DHS181-300	1.81"	3.00"
DHS219-100	DHS219-300	2.19"	3.63"
DHS238-100	DHS238-300	2.38"	3.88"
DHS263-100	DHS263-300	2.63"	4.25"
DHS288-100	DHS288-300	2.88"	4.75"
DHS366-100	DHS366-300	3.66"	5.88"

**Hose  
Accessories**

## Fire Tape for Hose



Silicone rubber tape used to seal the ends of fire sleeves to prevent fraying. Completely non-asbestos.

**Part #**

FTH100 .....

**Nominal I.D.**

1"wide x 12 yards

**Color**

Iron oxide red

**Temperature range**

-45°F to 380°F



# Abrasion Sleeve



A hose protection product used to help safeguard hose covers from abrasions and cuts. Typical areas of use include agricultural, logging, construction and mining applications. The abrasion sleeve is also useful for bundling two or more hose assemblies together, in addition to the protective qualities the sleeving provides. Available in .090" thin wall and .180" thick wall sleeving.

Thin Wall Part #	Thick Wall Part #	Sleeve I.D.	Package Length
TR900 .....	RG900 .....	.90" .....	100'
TR901 .....	RG901 .....	1.06" .....	100'
TR902 .....	RG902 .....	1.22" .....	100'
TR903 .....	RG903 .....	1.35" .....	100'
TR904 .....	RG904 .....	1.66" .....	100'
TR905 .....	RG905 .....	1.81" .....	100'
TR906 .....	RG906 .....	2.19" .....	100'
TR907 .....	RG907 .....	2.62" .....	100'
TR908 .....	RG908 .....	2.80" .....	100'

**Hose  
Accessories**

**Soft Seat Safety Pop-Off Valves**

ASME Code Safety Valve, National Board Certified for compressed air service applications. Designed for Original Equipment Manufacturers, utilizing ASME Code un-fired pressure vessels in their finished product. Constructed of precision machined brass bar stock, with a silicone disc seating on brass. Maximum operating temperature is **400°F (204°C)**.

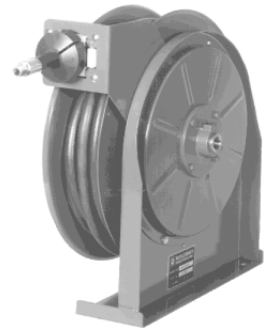
1/4" male NPT		
Part #	SCFM	Preset Pressure PSI
<b>KSV10-100</b>	33	<b>100</b>
<b>KSV10-125</b>	40	<b>125</b>
<b>KSV10-150</b>	47	<b>150</b>
<b>KSV10-175</b>	54	<b>175</b>



**Reelcraft® 5000 Series Spring Driven Hose Reels**

With Hose					
Part #	Hose I.D.	Hose Length	Service	PSI	Weight
<b>5450LP</b>	1/4"	50'	Air / Water	<b>300</b>	26
<b>5635LP</b>	3/8"	35'	Air / Water	<b>300</b>	25
<b>5650LP</b>	3/8"	50'	Air / Water	<b>300</b>	37

Without Hose				
Part #	Hose Capacity	Service	PSI	Weight
<b>5600LP</b>	50' of 1/4" or 35' of 3/8"	Air / Water	<b>500</b>	21
<b>5605LP</b>	50' of 3/8"	Air / Water	<b>500</b>	31

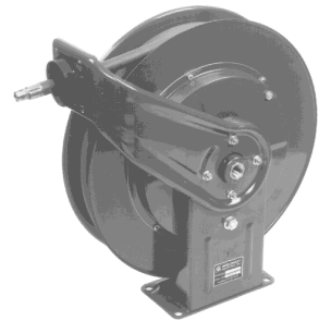


- Maximum temperature is **150°F**
- Reel inlet 3/8" NPTF
- All steel construction
- Full full shaft and swivel
- Furnished standard with PVC hose
- Compressed air hose should not be converted to oxygen service. Compressed air hoses are often contaminated with an oil coating, which can react explosively when oxygen is introduced.

**Reelcraft® 7000 Series Spring Driven Hose Reels**

With Hose					
Part #	Hose I.D.	Hose Length	Service	PSI	Weight
<b>7670LP</b>	3/8"	70'	Air / Water	<b>300</b>	50
<b>7850LP</b>	1/2"	50'	Air / Water	<b>300</b>	51

Without Hose				
Part #	Hose Capacity	Service	PSI	Weight
<b>7800LP</b>	70' of 3/8", 50' of 1/2"	Air / Water	<b>500</b>	43
<b>7800MP</b>	50' of 3/8" or 50' of 1/2"	Oil	<b>3000</b>	44
<b>7600HP~</b>	50' of 1/4" or 50' of 3/8"	Grease	<b>5000</b>	46



- All steel construction
- "LP" Low Pressure reels:  
Maximum temperature **150°F**  
Reel inlet 1/2" NPTF  
PVC hose is standard
- "MP" Medium Pressure reels:  
Maximum temperature **210°F**  
Reel inlet 1/2" NPTF  
SAE 100 R1T 1-wire braid hose standard
- "HP" Low Pressure reels:  
Maximum temperature **210°F**  
Reel inlet 1/4" NPTF  
SAE 100 R2T 2-wire braid hose standard

**Hose  
Accessories**

**Reelcraft® 80000 Series Spring Driven Hose Reels**

With Hose					
Part #	Hose I.D.	Hose Length	Service	PSI	Weight
82075LP~	1/2"	75'	Air / Water	300	90
82100LP	1/2"	100'	Air / Water	300	99
83050LP	3/4"	50'	Air / Water	250	89

Without Hose				
Part #	Hose Capacity	Service	PSI	Weight
83000LP~	50' of 3/4" or 100' of 1/2"	Air / Water	500	74

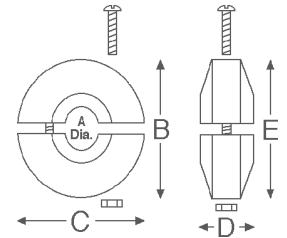
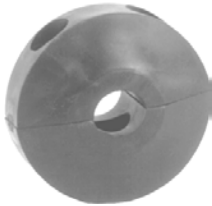


- Maximum temperature is **150°F** *with hose*
- Maximum temperature is **210°F** *without hose*
- Furnished standard with PVC hose
- Reel inlet 3/4" NPTF
- Five-in-one heat treated aluminum casting incorporates main shaft, ratchet, spring arbor and inlet/outlet plumbing in one piece casting. High pressure cast steel.
- Most compact 3/4" x 50' hose reel of its capacity available.

*See next page for bumper stops. Consult factory for uses other than stated services.*

**Adjustable Hose Bumper Stops**

Part #	Hose Diameter		Hose I.D.	Dimensions		Reel Series
	From:	To:		B,C,E	D	
1-HR1004A	.438"	.625"	1/4"	2-1/2"	1-1/4"	5000
1-HR1004	.625"	.749"	3/8"	2-1/2"	1-1/4"	5000
1-HR1004-3	.625"	.749"	3/8"	3"	1-1/4"	7000
2-HR1004-3	.750"	1.050"	1/2" or 3/8" 2-wire	3"	1-1/4"	7000
3-HR1004-3	1.060"	1.300"	3/4"	3"	1-1/4"	7000
2-HR1005	.750"	1.050"	1/2"	3-1/2"	2-7/8"	9000
3-HR1005	1.060"	1.380"	3/4"	3-1/2"	2-7/8"	9000
4-HR1005	1.390"	1.550"	1"	3-1/2"	2-7/8"	9000



*Adjustable Hose Bumper Stops are not included on hose reels ordered without hose. Order separately.*

**Reelcraft® 30,000 Manual Driven Hose Reels**



Without Hose					
Part #	Hose I.D.	Spool Width	Hose Capacity	PSI	Weight
C33112L	3/4"	12"	100'	1000	46
C32112M	1/2"	12"	200'	3000	46

- Unitized construction: Reel frame, spool and drum are fabricated from heavy gauge steel.
- All bolted construction - no welds
- Manual driven standard
- Motor drive available

**Hose  
Accessories**



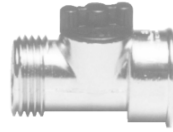
**Garden Hose Accessories**



**Garden Hose Gooseneck**

**Part # GHGN**

- Powder-coated zinc gooseneck connector angles hose away from hose bib
- **125 PSI**



**Straight GHT Valve**

**Part # GHV**

- Powder-coated zinc shut-off valve
- Hot water up to **160°F**
- **150 PSI**



**Straight GHT Valve with Handle**

**Part # GHVEZK**

- Powder-coated zinc shut-off valve with easy on/off handle
- Hot water up to **160°F**
- **150 PSI**



**GHT Twin Valve**

**Part # GHYV**

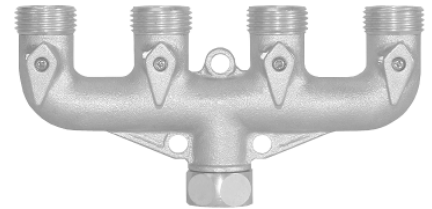
- Powder-coated zinc with twin shut-off valves
- Hot water up to **160°F**
- **150 PSI**



**GHT "Y"**

**Part # GHY**

- Plated zinc with twin outlet
- Hot water up to **160°F**
- Includes one end cap
- **150 PSI**



**GHT 4-Valve Manifold**

**Part # 500-GH4V**

- Stainless balls
- Teflon® seats
- Swivel inlet

**Pressure Spray Gun**

- 3/8" female inlet
- 1/4" female outlet
- **8 GPM**
- Operating pressure: **4500 PSI**
- Temperatures to **300°F**
- Anti-fatigue pressure compensating design



**Part # HPSG**

**Braided Rubber Hose**



Part #	Pressure	Length	Inside Diameter	Male Inlet	Male Swivel Outlet
AR503830SSP	3,000 PSI	50'	3/8"	3/8"	3/8"

**Brass Industrial Grade Front Lever Spray Nozzle**

The brass industrial grade spray nozzle provides effortless one hand operation: by actuating the operating lever the valve is opened/closed and the jet power is regulated from spray to concentrated jet.

- Durable nozzle constructed of a high quality brass and steel combination.
- Maximum operating pressure: **350 PSI**
- Suitable for hot water up to **122°F**
- The adjusting screw on the back of the gun allows you to fix the desired form of jet. The fixing clamp for the operating lever allows permanent service.
- **6.6 GPM** flow capacity at **72 PSI**
- 1/2" female NPT inlet



<b>Part #</b>	<b>Body</b>
<b>DWG050</b>	Brass

**Garden Hoses  
Coiled Garden Hose**

- Automatically recoils to a fraction of its working length when not in use
- Resists kinking and marring
- Extremely durable in both hot and cold environments
- Constructed of polyurethane
- Working pressure **100 PSI**

Part #	Size	Color
<b>CGH38</b>	3/8" x 25'	Red
<b>CGH50</b>	1/2" x 25'	Blue



**Rubber Vinyl Garden Hose**

- Extra tough, five-ply construction
- Exclusive, soft textured, abrasion-resistant cover
- Dual reinforced, heavy-duty, flexibility, kink resistance
- Combines durability of rubber, easy handling of vinyl
- SEAL-TITE® leakproof coupling
- Green cover
- Working pressure **150 PSI**

Part #	Size
<b>SGH25</b>	5/8" x 25'
<b>SGH50</b>	5/8" x 50'
<b>SGH75</b>	5/8" x 75'
<b>SGH100</b>	5/8" x 100'
<b>SGH50-75</b>	3/4" x 50'
<b>SGH75-75</b>	3/4" x 75'

Temperature Range: **0°F to 140°F**



**Contractors Rubber Water Hose**

- EPDM tube
- Spiral synthetic cord reinforcement
- Black EPDM cover
- Heavy duty, crush proof solid brass couplings with wrench grips
- Working pressure **150 PSI**

Part #	Size
<b>CWH50</b>	3/4" x 50'

Temperature Range: **-20°F to 180°F**



**Hose  
Accessories**





**Layflat Garden Hose**

Part #	Size
LFGH50	5/8" x 50'

- USFDA-approved tube materials for food contact use
- Coils flat for compact, easy storage
- For pools, patios, cabins, campers, boats
- Drains automatically
- Non-marring nylon couplings
- Working pressure **300 PSI**



**Premium Rubber Hose**

Part #	Size
PGH50	5/8" x 50'
PGH75	5/8" x 75'

Temperature Range: -20°F to 160°F

- Professional grade reinforcement provides maximum strength
- Heavy-duty flexibility
- Ultimate kink resistance
- SEAL-TITE® leakproof coupling
- Black cover
- Working pressure **150 PSI**



**Hot Water Rubber Reinforced Hose**

Part #	Size
HWH50	5/8" x 50'
HWH50-75	3/4" x 50'

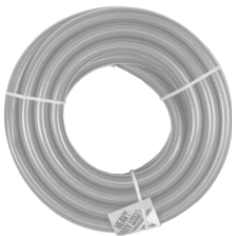
- Withstands extensive hot water (**200°F**) use.
- Maximum wear, abrasion-resistant cover
- Industrial style reinforcing for flexibility, high burst strength
- Extra heavy-duty, crush-proof, machined brass couplings
- Red cover
- Working pressure **130 PSI**



**Marine, Camper, Patio & Pool Hose**

Part #	Size
MCH50	5/8" x 50'

- Lightweight to handle, easy to store
- USFDA-approved tube materials for food contact use
- Non-marring nylon couplings
- White cover
- Working pressure **80 PSI**



**Country Club® RT Hose**

Part #	Size
CCH50	1" x 50'

- For golf courses, parks, nurseries
- Premium PVC for high strength, flexibility
- Lightweight, easy handling
- Industrial knit reinforcing for kink resistance
- **450 PSI** burst
- Heavy duty 1" NPSH brass couplings
- Green cover
- Working pressure **150 PSI**



**Insulated Water Nozzles**

<b>GHT Part #</b>	<b>NPT Part #</b>
<b>SN75</b>	<b>SN75NPT</b>

- Heavy duty brass valve and adjusting nut
- Hold open clip locks any spray pattern
- Chrome plated all zinc body
- Industrial strength nylon handle
- Rubber head guard on threaded GHT front version
- Hot water up to **180°F**



**Pistol-Grip Water Nozzles**

<b>Part #</b>	<b>CSN75</b>
---------------	--------------

- Heavy duty all zinc metallized body
- Clip locks any spray pattern
- Easy squeeze on/off lever
- All brass valve stem and adjusting nut
- Stainless steel spring with lifetime packing
- Handle GHT threads



**Solid Brass Twist Nozzles**

Part #	Description
<b>BTN75</b>	4" nozzle
<b>500-AN4 *</b>	4" nozzle
<b>500-AN7 *</b>	7" nozzle

\* Imported nozzles



**Brass Sweeper Nozzle**

Part #	Thread Size	Description	Discharge
<b>PSN76</b>	3/4"	GHT x 2" long	3/16"



**Adjust-a-Power Nozzle**

Part #	Description
<b>AAPN75GHT</b>	Solid brass, 3 SS bearings



**Red polycarbonate - Fire Hose Nozzle**  
with bumper and brass stem

Part #	Size	Thread	45° Spray GPM @ 100 PSI
<b>FNB75GHT</b>	3/4"	GHT	25.1



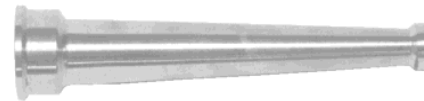
**Green ABS - Constant Flow Hose Nozzle**  
with bumper and black plastic and steel stem

Part #	Size	Thread	45° Spray GPM @ 100 PSI
<b>GNB75GHT</b>	3/4"	GHT	8



**Hydrant Adapter**

Part #	Description
<b>HA2576</b>	2½" female NST x ¾" male GHT



**Solid Brass Hose Nozzle - 100 PSI**

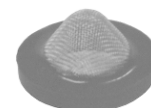
Part #	Thread Size	Description	Discharge
<b>BN6</b>	¾"	GHT x 6" long	¼"



**GHT Washers**

Part #	Material
<b>TVW7</b>	red vinyl
<b>TRW7</b>	white rubber

Optional package/box quantity shown



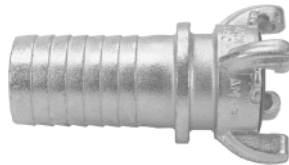
**Garden Hose Screen Gasket**

Part #	Material	Mesh Size
<b>TVS7-30</b>	FDA approved black vinyl	6050 mesh, 304 SS



## "Air King" 4 - Lug Quick-Acting Couplings

Malleable Iron		Brass
Size	Part #	Part #
1 1/4"	AM16	AB16~
1 1/2"	AM21	AB21~
2"	AM26	AB26
1 1/4"	AM18	AB18~
1 1/2"	AM23	AB23
2"	AM28	AB28



Hose End



Female N.P.T. End

Rubber Washers for 4-Lug	
Part #	
AWR14	
Fits all sizes	



"Boss" clamps recommended  
See page 55

Rated to 150 PSI

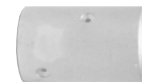
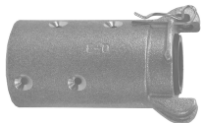
**WARNING: MUST USE SAFETY CLIPS.  
NOT TO BE USED FOR STEAM SERVICE.**



NOTE: Safety clips are same size for both 2-lug & 4-lug Universal Couplings. See page 59.  
Use safety clips on all Universal Coupling applications.

## Sand Blast Couplings

These fittings are designed for use on sand blast hose. Supplied with screws. Nozzle holders have 1 1/4" NPSM thread. Installation: 1) Ends of hose must be cut square to fit snug against metal end. 2) Holding hose tight to end of fitting, insert screws and turn in full, putting screw 180° from first to insure best centering. 3) After all screws have been placed, check tube opposite screws to be sure screws have not penetrated completely through. 4) On quick couplings, insert safety clips.



Quick Couplings			
Hose Size	Hose O.D.	Brass Part #	Alum. Part #
3/4"	1-1/2"	BSB75	ASB75
1"	1-7/8"	BSB100	ASB100
1-1/4"	2-5/32"	BSB125	ASB125
1-1/2"	2-3/8"	BSB150	ASB150

Nozzle Holders			
Hose Size	Hose O.D.	Brass Part #	Alum. Part #
3/4"	1-1/2"	BNH75	ANH75
1"	1-7/8"	BNH100	ANH100
1-1/4"	2-5/32"	BNH125	ANH125
1-1/2"	2-3/8"	BNH150	ANH150

Replacement Screws	
Part #	
SBGS	



Replacement Gaskets	
Black Nitrile (Standard) Part #	Urethane Part #
SBG	USBG

Threaded Couplings		
NPT Size	Brass Part #	Aluminum Part #
1 1/4"	BSC125	ASC125
1 1/2"	BSC150	ASC150

Note: Abrasive blasting equipment must have hose safety cables (page 68) or hose coupling safety locks.



**Hose Accessories**

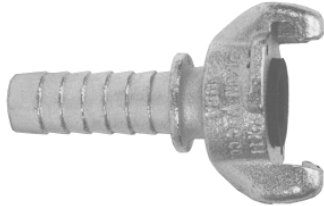


## "Air King" Universal Couplings

"Air King" is for Air and Water Service Only

**SAFETY**  
**ALERT**

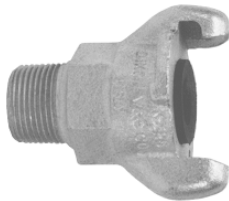
### Hose Ends



Malleable Iron		Brass	316 Stain. Steel
Size	Part #	Part #	Part #
3/8"	AMH	ABH	RAMH
1/2"	AM1	AB1	RAM1
5/8"	AM5	AB5	----
3/4"	AM6	AB6	RAM6
1"	AM11	AB11	RAM11

\* Prices for Universal Couplings listed above include safety clip.

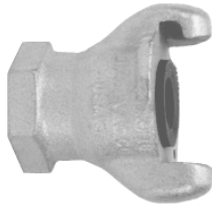
### Male NPT Ends



Malleable Iron		Brass	316 Stain. Steel
Size	Part #	Part #	Part #
1/4"	AMB1	ABB1	----
3/8"	AMB	ABB	RAMB
1/2"	AM2	AB2	RAM2
3/4"	AM7	AB7	RAM7
1"	AM12	AB12	RAM12

\* Prices for Universal Couplings listed above include safety clip.

### Female NPT Ends



Malleable Iron		Brass	316 Stain. Steel
Size	Part #	Part #	Part #
1/4"	AMC1	ABC1	----
3/8"	AMC	ABC	RAMC
1/2"	AM3	AB3	RAM3
3/4"	AM8	AB8	RAM8
1"	AM13	AB13	RAM13

\* Prices for Universal Couplings listed above include safety clip.

### Blank Ends



Malleable Iron	Brass	316 Stain. Steel
Part #	Part #	Part #
AM0	AB0	RAM0

\* Prices for Universal Couplings listed above include safety clip.

### Triple Connections



Malleable Iron	Brass
Part #	Part #
AM10	AB10

\* Prices for Universal Couplings listed above include safety clip.

**SAFETY**  
**ALERT**

### The Importance of "Whip Hose"

Constant vibration created by air drills, pavement breakers etc. is destructive to air hose couplings, especially the quick-acting type. To provide protection connect one end of a 3' to 10' length of air hose to the tool using the heat-treated No. 3500 Steel Nipple which withstands vibration for a longer period. Connect the other end of the whip hose to the air supply with the quick-acting coupling. Whip hose should remain permanently connected to the tool and should be the same diameter as the supply line hose.

**WARNING: NEVER USE ANY "AIR KING" COUPLING FOR STEAM SERVICE!** None of Dixon's catalog information is to be interpreted to mean that this type of coupling is suitable for use on steam hose.

**SAFETY**  
**ALERT**

- The use of an "Air King" safety clip or wire type retainer is necessary to assure "Air King" universal couplings will not become accidentally disconnected. This guarantees the fittings are properly connected as pin will not go through holes in mating flanges until couplings are locked in place. Only one "Air King" safety clip or wire type retainer is required for each "Air King" universal coupling.
- Made in the USA.
- "Air King" is rated to **150 PSI** at ambient temperature (**70°F**).
- Standard "Air King" fittings come with AWR4 washers.
- "Air King" available to meet MIL Spec. WWC - 633D - consult factory.

**SAFETY**  
**ALERT**

Purveyor of  
**dfb**  
Fluid Components

## "Air King" Accessories

*"Air King" is for Air and Water Service Only*



The use of an "Air King" safety clip or wire type retainer is necessary to assure "Air King" universal couplings will not become accidentally disconnected. This guarantees the fittings are properly connected as pin will not go through holes in mating flanges until couplings are locked in place. Only one "Air King" safety clip or wire type retainer is required for each "Air King" universal coupling.

Part #	AC1
--------	-----

### Standard Safety Clip

- Same size for all coupling sizes.



### "Air King" Safety Pins

Part #	Wire Diameter
AKSP1	.058
AKSP25	.091

- Heavy duty
- Oversized



### Stainless Steel Clip

Part #	AC7
--------	-----

- Same size for all coupling sizes.



### Lanyards

Part #	ACL8
--------	------

- Same size for all coupling sizes.
- Synthetic cord



Part #	LR7
--------	-----

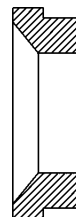
- Stainless steel cable



Part #	Description
AWR4	Black natural rubber
AWS6	Neoprene

### Washers

- Same size for all coupling sizes.
- Rubber temperature range: **-20°F to 160°F**
- Neoprene temperature range: **-20°F to 190°F**
- Neoprene is oil resistant

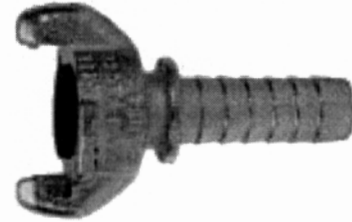


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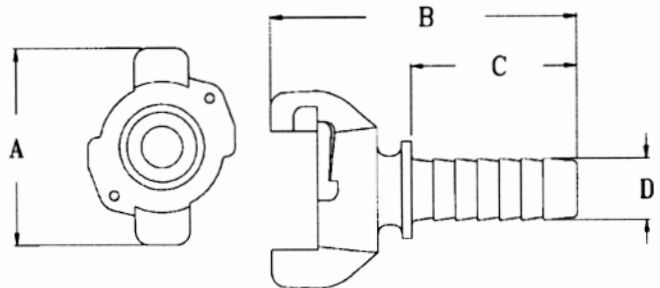
### Hose Ends

Malleable Iron			Brass			316 Stainless Steel		
Part #	Size	Pkg Qty	Part #	Size	Pkg Qty	Part #	Size	Pkg Qty
AMH	3/8"	25	ABH	3/8"	25	RAMH	3/8"	25
AM1	1/2"	50	AB1	1/2"	50	RAM1	1/2"	50
AM5	5/8"	50	AB5	5/8"	50		5/8"	50
AM6	3/4"	50	AB6	3/4"	50	RAM6	3/4"	50
AM11	1"	50	AB11	1"	50	RAM11	1"	50



#### Dimensions

Size	A	B	C	D
3/8"	2-1/2"	3-1/2"	1-11/16"	7/16"
1/2"	2-1/2"	3-7/16"	1-5/8"	1-7/32"
5/8"	2-1/2"	4-1/4"	2-7/16"	1-1/16"
3/4"	2-1/2"	3-15/16"	2-1/8"	2-5/32"
1"	2-1/2"	4-25/32"	2-13/16"	1-1/16"

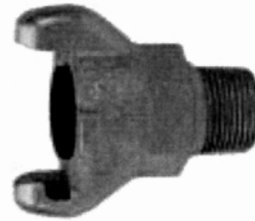


- Shanks are long and deeply corrugated.
- Available in Malleable Iron, Brass or 316 Stainless Steel (5/8" not available in Stainless Steel).
- Available in sizes 3/8" through 1".

All dimensions are nominal.

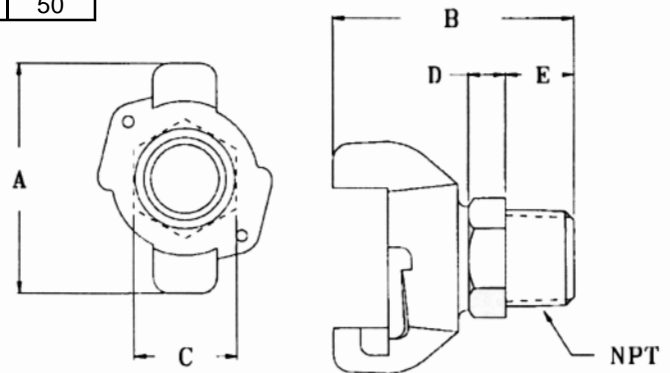
### Male N.P.T. Ends

Malleable Iron			Brass			316 Stainless Steel		
Part #	Size	Pkg Qty	Part #	Size	Pkg Qty	Part #	Size	Pkg Qty
AMB1	1/4"	25	ABB1	1/4"	25		1/4"	25
AMB	3/8"	25	ABB	3/8"	25	RAMB	3/8"	25
AM2	1/2"	50	AB2	1/2"	50	RAM2	1/2"	50
AM7	3/4"	50	AB7	3/4"	50	RAM7	3/4"	50
AM12	1"	50	AB12	1"	50	RAM12	1"	50



#### Dimensions

Size	A	B	C	D	E	NPT
1/4"	2-1/2"	2-9/16"	1"	7/16"	5/8"	1/4"
3/8"	2-1/2"	2-9/16"	1"	7/16"	5/8"	3/8"
1/2"	2-1/2"	2-11/16"	1-1/8"	3/8"	13/16"	1/2"
3/4"	2-1/2"	2-13/16"	1-3/8"	3/8"	7/8"	3/4"
1"	2-1/2"	2-7/8"	1-1/2"	3/8"	7/8"	1"



- Male NPT thread with hex for a wrench.
- Available in Malleable Iron, Brass or 316 Stainless Steel (1/4" not available in Stainless Steel).
- Available in sizes 3/4" through 1".

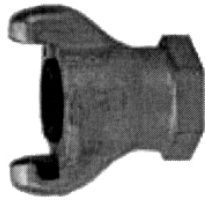
All dimensions are nominal.

#### The Importance of "Whip Hose"

Constant vibration created by air drills, pavement breakers etc. is destructive to air hose couplings, especially the quick-acting type. To provide protection connect one end of a 3' to 10' length of air hose to the tool using the heat-treated "No.3500" Steel Nipple which withstands vibration for a longer period. Connect the other end of the "Whip Hose" to the air supply with the quick-acting coupling. "Whip Hose" should remain permanently connected to the tool and should be the same diameter as the supply line hose.



### Female N.P.T. Ends



**Malleable Iron**

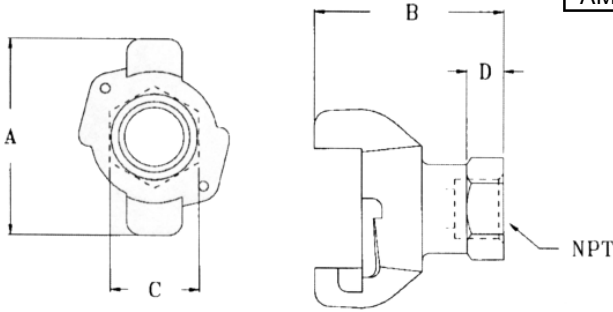
Part #	Size	Pkg Qty
AMC1	1/4"	25
AMC	3/8"	25
AM3	1/2"	50
AM8	3/4"	50
AM13	1"	50

**Brass**

Part #	Size	Pkg Qty
ABC1	1/4"	25
ABC	3/8"	25
AB3	1/2"	50
AB8	3/4"	50
AB13	1"	50

**316 Stainless Steel**

Part #	Size	Pkg Qty
RAMC	1/4"	25
RAM3	3/8"	25
RAM8	3/4"	50
RAM13	1"	50



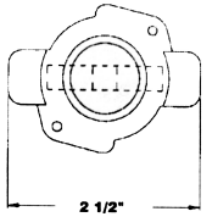
All dimensions are nominal.

**Dimensions**

Size	A	B	C	D	NPT
1/4"	2-1/2"	2-7/16"	1-1/8"	3/8"	1/4"
3/8"	2-1/2"	2-7/16"	1-1/8"	3/8"	3/8"
1/2"	2-1/2"	2-17/16"	1-1/8"	3/8"	1/2"
3/4"	2-1/2"	2-1/2"	1-7/16"	3/8"	3/4"
1"	2-1/2"	2-1/16"	1-5/8"	3/8"	1"

- Female NPT thread with hex for a wrench.
- Available in Malleable Iron, Brass or 316 Stainless Steel (1/4" not available in Stainless Steel).
- Available in sizes 1/4" through 1".

### Blank Ends



**Malleable Iron**

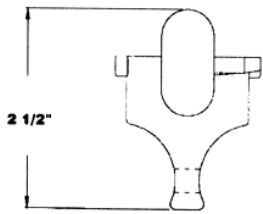
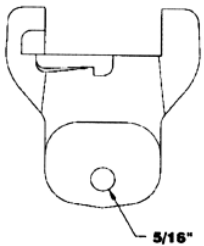
Part #	Pkg Qty
AM0	25

**Brass**

Part #	Pkg Qty
AB0	25

**316 Stainless Steel**

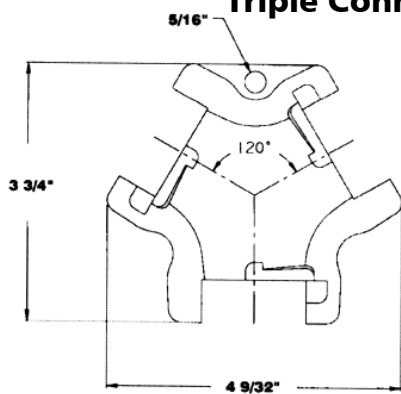
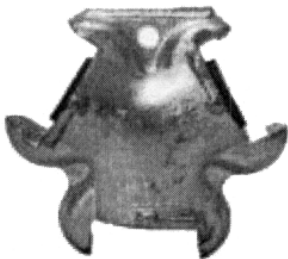
Part #	Pkg Qty
RAM0	25



All dimensions are nominal.

- Blank end fittings have no outlet and are used to block the line at any coupling point.
- The end opposite the coupling head is flat, with an eye for a chain to secure the fitting when not in use.
- Available in Malleable Iron, Brass or 316 Stainless Steel.

### Triple Connections



**Malleable Iron**

Part #	Pkg Qty
AM10	25

**Brass**

Part #	Pkg Qty
AB10	25

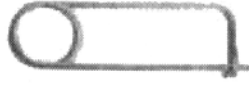
- Triple connection consists of three universal coupling heads in a "Y" form that provides an extra outlet when connected to the line.
- Available in Malleable Iron or Brass.

## "Air King" Safety Pins, Clips, Lanyards and Washers

The use of an "Air King" Safety Clip or wire type retainer is necessary to assure "Air King" Universal Couplings will not become accidentally disconnected. This guarantees the fittings are properly connected as the pin will not go through holes in mating flanges until the couplings are locked in place. Only one "Air King" Safety Clip or wire type retainer is required for each "Air King" Universal Coupling.

### Air King" Safety Pins

Part #	Wire Diameter
AKSP1	.058
AKSP25	.091



- Heavy duty.
- Oversized.
- Sold only in bag of 25.

### Standard Safety Pins

Part #	AC1



- Same size for all coupling sizes.
- Sold only in bag of 25.

### Stainless Steel Clips

Part #	AC7



- Same size for all coupling sizes.

### Lanyards

Part #	ACL8



- Same size for all coupling sizes.
- Synthetic cord.
- Sold only in bag of 25.

### Washers

Part #	Description
AWR4	Rubber
AWS6	Neoprene



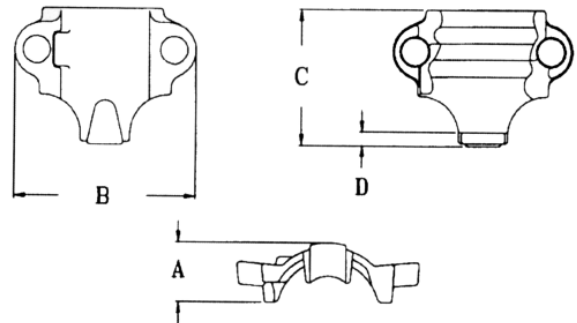
- Rubber temp. range: -20°F to 160°F.
- Neoprene temp. range: -20°F to 160°F.
- Neoprene is oil resistant.
- Same size for all coupling sizes.
- Sold only in bag of 25.

## "Air King" Clamps

Part #	Size	Hose O.D.'s		Torque	Pkg Qty
		From	To		
CD	3/8"	11/16"	7/8"	6	100
A4	1/2"	1"	1-3/16"	6	50
A9	5/8"	1-1/8"	1-5/16"	12	50
A10**	3/4"	1-5/16"	1-1/2"	12	50
A14	1"	1-1/2"	1-13/16"	21	50

\*Recommend Torque rating in FT. LBS.

\*\*Can be used with AM6 & AM11.



All dimensions are nominal.

### Dimensions

Size	A	B	C	D
3/8"	15/32"	1-3/8"	1-7/16"	1/8"
1/2"	11/16"	2-1/16"	1-17/32"	5/32"
5/8"	7/8"	2-1/2"	1-21/32"	1/8"
3/4"	7/8"	2-19/32"	1-15/16"	9/32"
1"	1"	3-1/32"	2-1/4"	5/32"

- Air King clamps should be used on all Air King shank fittings. Clamp fingers engage behind the universal head to anchor the coupling to the hose. The ridges on the underside provide additional retention.
- Available in Zinc plated Malleable Iron in sizes 3/8" to 1"



Plated  
Malleable Iron

## "Boss" Clamps

Hose O.D.			Hose I.D.	Stainless Steel		Brass	
Part #	From:	To:	Size	Part #	Torque <sup>3</sup>	Part #	Torque
BD	36/64"	42/64"	1/4"	----	6	---	--
CD	44/64"	56/64"	3/8"	----	6	---	--
DD	52/64"	60/64"	1/2"	----	6	---	--
B4	60/64"	1-4/64"	1/2"	RB4	12	BB4	10
B5	1-4/64"	1-12/64"	1/2"	----	12	---	--
BU9S	1-10/64"	1-18/64"	3/4"	----	21	---	--
BU9	1-12/64"	1-20/64"	3/4"	RBU9	21	BBU9	18
B9	1-20/64"	1-32/64"	3/4"	RB9	21	BB9	18
B10	1-32/64"	1-44/64"	3/4"	----	21	BB10~	--
968	58/64"	1-2/64"	1/2"	----	6	---	--
156 <sup>1</sup>	1-26/64"	1-36/64"	1"	----	21	---	--
BU14	1-34/64"	1-46/64"	1"	RBU14	21	BBU14	18
B14	1-44/64"	1-60/64"	1"	RB14~	21	BB14	18
B15	1-60/64"	2-8/64"	1"	----	21	---	--
BU18	1-32/64"	1-50/64"	1-1/4"	----	40	---	--
187 <sup>1</sup>	1-44/64"	1-56/64"	1-1/4"	----	21	---	--
BU19	1-50/64"	2-6/64"	1-1/4"	----	40	---	--
206 <sup>1</sup>	1-56/64"	2-4/64"	1-1/4"	----	21	---	--
B19	2-8/64"	2-24/64"	1-1/4"	RB19~	40	BB19 <sup>2~</sup>	28
BU22	1-52/64"	2"	1-1/2"	----	40	---	--
B22	2"	2-14/64"	1-1/2"	----	40	---	--
212 <sup>1</sup>	2"	2-8/64"	1-1/2"	----	21	---	--
225 <sup>1</sup>	2-4/64"	2-16/64"	1-1/2"	----	40	---	--
BU24	2-12/64"	2-24/64"	1-1/2"	RBU24	40	BBU24 <sup>2~</sup>	28
B24	2-24/64"	2-36/64"	1-1/2"	RB24	40	---	--
B25	2-36/64"	2-48/64"	1-1/2"	----	40	---	--
250 <sup>1</sup> †	2-16/64"	2-32/64"	2"	----	40	---	--
BU28	2-22/64"	2-34/64"	2"	----	60	---	--
275 <sup>1</sup> †	2-32/64"	2-48/64"	2"	----	40	---	--
BU29	2-32/64"	2-50/64"	2"	RBU29	60	BBU29 <sup>2~</sup>	40
B29	2-48/64"	3-4/64"	2"	RB29	60	BB29 <sup>2~</sup>	40
306 <sup>1</sup> †	2-48/64"	3-4/64"	2"	----	60	---	--
B30	3-6/64"	3-28/64"	2"	----	60	---	--
350 <sup>1</sup>	3-4/64"	3-32/64"	2-1/2"	----	60	---	--
BU34	3-6/64"	3-28/64"	2-1/2"	----	60	---	--
B34	3-32/64"	3-60/64"	2-1/2"	----	150	---	--
375 <sup>1</sup>	3-32/64"	3-48/64"	3"	----	60	---	--
BU35	3-32/64"	3-60/64"	3"	RBU35	150	---	--
401 <sup>1</sup>	3-48/64"	4"	3"	----	150	---	--
B35	3-52/64"	4-4/64"	3"	----	150	---	--
418 <sup>1</sup>	4"	4-12/64"	3"	----	200	---	--
B39	4-4/64"	4-28/64"	3"	----	200	---	--
450 <sup>1</sup>	4-12/64"	4-32/64"	3"	----	200	---	--



2-Bolt Type



4-Bolt Type  
2 Gripping Fingers



4-Bolt Type  
4 Gripping Fingers<sup>1</sup>

- <sup>1</sup> 4 gripping fingers
- <sup>2</sup> Will become obsolete as inventory is depleted.
- <sup>3</sup> Torque applies to plated malleable iron and stainless steel clamps
- † Not to be used with GF81, GB26, WF81, B26, RGF81, RGB26, BGF81, BGB26, RWF81, RB26

- The bolts used in the "Boss" interlocking clamps are not standard bolts. They vary from standard bolts in their length, diameter, overall thread length and material hardness. These bolts can be retorqued, but it is not recommended that they be reused, as they are designed for a single bend only. Dixon recommends using only factory supplied replacement bolts.
- Torque values for clamps are based on "dry bolts". The use of lubricant on bolts will adversely effect clamp performance.
- See page 385 for Fraction to Decimal conversion chart.
- Do not lubricate nuts and bolts.
- Recommended torque rating in FT. LBS.

SAFETY  
ALERT



## "Boss" Clamps



**Three Piece  
6-Bolt Type**

Hose I.D.	Hose O.D.		Plated Malleable Iron		
	Size	From:	To:	Part #	Qty
3"	4-16/64"	4-52/64"	<b>BS39</b>	2	150
4"	4-40/64"	5"	<b>B45</b>	2	150
4"	4-56/64"	5-16/64"	<b>BS49</b>	2	200
4"	5-16/64"	5-38/64"	<b>BU49</b>	2	200
4"	5-34/64"	5-60/64"	<b>B49</b>	2	200
6"	6-56/64"	7-24/64"	<b>750</b>	1	200
6"	7-32/64"	8"	<b>850~</b>	1	200

- The bolts used in the "Boss" interlocking clamps are not standard bolts. They vary from standard bolts in their length, diameter, overall thread length and material hardness. These bolts can be retorqued, but it is not recommended that they be reused, as they are designed for a single bend only. Dixon recommends using only factory supplied replacement bolts.
- Torque values for clamps are based on "dry bolts". The use of lubricant on bolts will adversely effect clamp performance.
- See page 385 for Fraction to Decimal conversion chart.
- Do not lubricate nuts and bolts.
- Recommended torque rating in FT. LBS.



## Ground Joint Air Hammer Couplings

Ground Joint Type - rounded steel head of stem fits concave inserts in spuds for superior sealing. Use with "Boss" clamp.



Hose I.D. & NPT Sizes	Coarse Spud Nut Thread
1/2" Compact	1-31/64" O.D. x 8 T.P.I.
3/4" Compact	8 T.P.I.
3/4" Heavy	1-47/64" O.D. x 8 T.P.I.
1" Heavy	8 T.P.I.

Complete Female
Part #
<b>GDF6</b>
<b>GDF8</b>
<b>GDF10</b>
<b>GDF12</b>

Plated Steel Stem
Part #
<b>GBA45</b>
<b>GBA46</b>
<b>GBB18</b>
<b>GBB11</b>

Malleable Wing Nut
Part #
<b>J47</b>
<b>J47</b>
<b>DLB12</b>
<b>DLB12</b>



Hose I.D. & NPT Sizes
1/2" Compact
3/4" Compact
3/4" Heavy
1" Heavy


Female Spud Plated Steel w/ Copper Seat
Part #
<b>GJ65</b>
<b>GJ55</b>
<b>GDL8</b>
<b>GDL13</b>


Male Spud Plated Steel w/ Copper Seat
Part #
<b>GJ60</b>
<b>GJ50</b>
<b>GDL7</b>
<b>GDL10</b>

Double Spud Plated Steel w/ Copper Seat
Part #
<b>GJ75</b>
<b>GJ75</b>
<b>GDL25</b>
<b>GDL25</b>



**Hose Assembly Sleeving**  
Styles USY and HMG

<b>Style USY</b> Polyurethane Sleeving  	PART NUMBER	A I.D. (INCHES)	NOMINAL WALL THICKNESS (INCHES)	USUAL SERVICE AND TEMPERATURE RANGE
	USY-568 USY-603 USY-668  USY-723 USY-768  USY-838 USY-856 USY-943 USY-1094  USY-1168 USY-1223 USY-1328  USY-1523 USY-1672 USY-2125	.568 .603 .668  .723 .768  .838 .856 .943 1.094  1.168 1.123 1.328  1.523 1.672 2.125	.045 .045 .045  .045 .045  .045 .045 .045  .045 .045 .045  .045 .045 .060	<p><b>Application:</b> Used over hose for protection of cover where high abrasion may exist.</p> <p><b>Temperature Range:</b> -40°F to +250°F Ultraviolet resistant</p> <p><b>Material:</b> Polyurethane</p> <p><b>Color:</b> Industrial yellow</p> <p><b>Lengths:</b> Available in 10 ft. lengths</p>

<b>Style HMG</b> Flame Retardant Polyurethane Sleeving MSHA Approved  	PART NUMBER	A I.D. (INCHES)	NOMINAL WALL THICKNESS (INCHES)	USUAL SERVICE AND TEMPERATURE RANGE
	HMG-668 HMG-723 HMG-858  HMG-933 HMG-1133 HMG-1243  HMG-1303 HMG-1523  HMG-1604  HMG-1975	.668 .723 .858  .933 1.133 1.243  1.303 1.523  1.604  1.975	.045 .045 .045  .045 .045 .045  .045 .045  .045  .060	<p><b>Application:</b> Used over hose in mining applications for protection of cover where high abrasion may exist.</p> <p><b>Temperature range:</b> -40°F to + 250°F Ultraviolet resistant</p> <p><b>Material:</b> Flame retardant polyurethane</p> <p><b>Color:</b> Black</p> <p><b>Lengths:</b> Available in 10 ft. lengths</p>

Hose  
Accessories





**"King" Combination Nipples**

Hose nipples, made from tubular stock, to fit straight end hose. Threaded end, in all styles, has male NPT thread. Combination nipples are recommended for low-pressure discharge and suction service for compatible liquids. **Not for compressible products such as air or nitrogen on sizes 1¼" and above.** The working pressure of combination nipples will vary with the size and construction of the hose, the type and number of clamps used, clamp placement, proper installation of clamps, temperature and product being conveyed. In accordance with the RMA bulletin for oil suction and discharge hose, a coupled length of hose, in any size should be tested to 1½ times the working pressure and held for fifteen minutes without leaking or coupling movement.



**Unplated Steel  
NPT Ends**

Part #	Size
08-CNM	½"
12-CNM	¾"
16-CNM	1"
20-CNM	1¼"
24-CNM	1½"
32-CNM	2"
40-CNM	2½"
48-CNM	3"
64-CNM	4"
80-CNM	5"
96-CNM	6"
128-CNM	8"
160-CNM	10"
192-CNM	12"

**Plated Steel  
NPT Ends**

Part #	Size
08-CN	½"
12-CN	¾"
16-CN	1"
20-CN	1¼"
24-CN	1½"
32-CN	2"
40-CN	2½"
48-CN	3"
64-CN	4"
80-CN	5"
96-CN	6"
128-CN	8"
160-CN	10"
192-CN	12"

**316 Stainless Steel  
NPT Ends**

Part #	Size
08-CNSS	½"
12-CNSS	¾"
16-CNSS	1"
20-CNSS	1¼"
24-CNSS	1½"
32-CNSS	2"
40-CNSS	2½"
48-CNSS	3"
64-CNSS	4"
80-CNSS	5"
96-CNSS	6"
128-CNSS	8"
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Unplated steel and plated steel in sizes ½" - 2" are knurled.  
316 stainless steel in sizes ½" - 2" are not knurled.

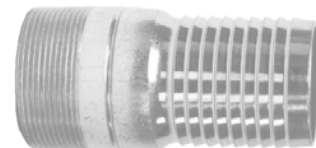


**Brass  
NPT Ends**

Part #	Size
08-CNB	½"
12-CNB	¾"
16-CNB	1"
20-CNB	1¼"
24-CNB	1½"
32-CNB	2"
40-CNB	2½"
48-CNB	3"
64-CNB	4"
--	5"
--	6"

**Aluminum  
NPT Ends**

Part #	Size
08-CNAL	½"
12-CNAL	¾"
16-CNAL	1"
20-CNAL	1¼"
24-CNAL	1½"
32-CNAL	2"
40-CNAL	2½"
48-CNAL	3"
64-CNAL	4"
80-CNAL	5"
96-CNAL	6"



**Plated Steel for Plastic Pipe  
NPT Ends \***

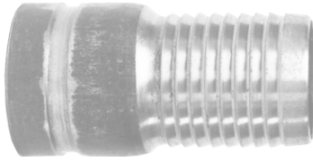
Part #	Size
SAP1	½"
SAP6	¾"
SAP11	1"
SAP16	1¼"
SAP21	1½"
SAP26	2"
SAP31~	2½"
SAP36	3"
SAP46	4"
--	5"
SAP66	6"

For additional information and detailed instruction on testing procedures, see Rubber Manufacturers Association's handbook.

\* Groove in part is for identification purposes.

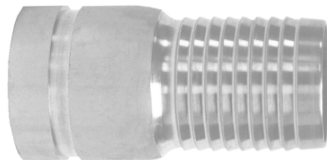
**"King" Combination Nipples**

Hose nipples, made from tubular stock, to fit straight end hose. Threaded end, in all styles, has male NPT thread. Combination nipples are recommended for low-pressure discharge and suction service for compatible liquids. **Not for compressible products such as air or nitrogen on sizes 1¼" and above.** The working pressure of combination nipples will vary with the size and construction of the hose, the type and number of clamps used, clamp placement, proper installation of clamps, temperature and product being conveyed. In accordance with the RMA bulletin for oil suction and discharge hose, a coupled length of hose, in any size should be tested to 1½ times the working pressure and held for fifteen minutes without leaking or coupling movement.



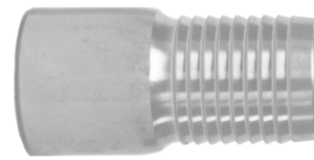
**Unplated Steel  
Grooved Ends \***

Part #	Size
--	--
--	--
STV10	1"
STV15	1¼"
STV20	1½"
STV25	2"
STV30	2½"
STV35	3"
STV40	4"
STV50	5"
STV60	6"
STV80	8"
STV100	10"
STV120	12"



**316 Stainless Steel  
Grooved Ends\***

Part #	Size
--	--
--	--
--	1"
--	1¼"
RSTV20	1½"
RSTV25	2"
--	2½"
RSTV35	3"
RSTV40	4"
--	5"
--	6"
--	8"
--	10"
--	12"



**Unplated Steel  
Beveled Ends**

Part #	Size
STB1	½"
STB5	¾"
STB10	1"
STB15	1¼"
STB20	1½"
STB25	2"
STB30	2½"
STB35	3"
STB40	4"
STB50	5"
STB60	6"
STB80	8"
STB100	10"
STB120	12"

**316 Stainless Steel  
Beveled Ends**

Part #	Size
--	½"
RSTB5	¾"
RSTB10	1"
RSTB15	1¼"
RSTB20	1½"
RSTB25	2"
RSTB30	2½"
RSTB35	3"
RSTB40	4"
--	5"
RSTB60	6"
RSTB80	8"
--	10"
--	12"

\* See pages 355 - 361 for our complete line of victaulic groove style fittings.

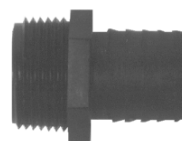
Optional Pkg./Box Quantity Shown

Grooved and beveled ends (in brass and aluminum) available in selected sizes. Consult Dixon for prices and availability.



**"Tuff-Lite" Nylon  
NPT Ends**

Part #	Size
--	½"
--	¾"
--	1"
THN15	1¼"
THN20	1½"
THN25	2"
--	--
THN35	3"



**PPN**



**HB**

**"Tuff-Lite" Polypropylene  
NPT Ends**

Part #	Size
PPN44 *	½"
PPN66 *	¾"
PPN88 *	1"
--	1¼"
HB150	1½"
HB200	2"
--	2½"
HB300	3"
HB400	4"

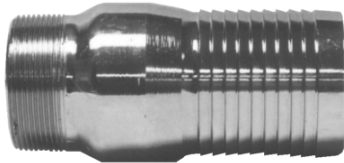
Sizes 1" and below have hex.

\* Sold in package quantities only.

**SAFETY  
ALERT**

**Jump Size "King" Combination Nipples**

Hose nipples, made from tubular stock, to fit straight end hose. Threaded end, in all styles, has male NPT thread. Combination nipples are recommended for low-pressure discharge and suction service for compatible liquids. **Not for compressible products such as air or nitrogen on sizes 1¼" and above.** The working pressure of combination nipples will vary with the size and construction of the hose, the type and number of clamps used, clamp placement, proper installation of clamps, temperature and product being conveyed. In accordance with the RMA bulletin for oil suction and discharge hose, a coupled length of hose, in any size should be tested to 1½ times the working pressure and held for fifteen minutes without leaking or coupling movement.



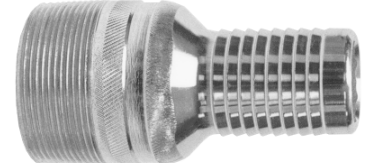
**Reducer  
Plated Steel  
Hose Shank x Male NPT**

Part #	Hose Shank	Male NPT
STC0510	¾"	1"
STC1005	1"	¾"
STC1015	1"	1¼"
STC1510	1¼"	1"
STC1520	1¼"	1½"
STC2015	1½"	1¼"
STC2025	1½"	2"
STC2520	2"	1½"
STC2530	2"	2½"
STC2535	2"	3"
STC3025	2½"	2"
STC3035	2½"	3"
STC3525	3"	2"
STC3530	3"	2½"
STC3540	3"	4"
STC4035	4"	3"



**Increaser  
Plated Steel  
Hose Shank x Male NPT**

Part #	Hose Shank	Male NPT
STC175200	1¾"	2"



**Increaser  
316 Stainless Steel  
Hose Shank x Male NPT**

Part #	Hose Shank	Male NPT
RST0501	¾"	½"
RST0510	¾"	1"
RST1005	1"	¾"
RST1015	1"	1¼"
RST1510	1¼"	1"
RST1520	1¼"	1½"
RST2015	1½"	1¼"
RST2025	1½"	2"
RST2520	2"	1½"
RST2535	2"	3"
RST3525	3"	2"
--	--	--
--	--	--
--	--	--

**Flanged "King" Combination Nipples**

Hose nipples, made from tubular stock, to fit straight end hose. Threaded end, in all styles, has male NPT thread. Combination nipples are recommended for low-pressure discharge and suction service for compatible liquids. **Not for compressible products such as air or nitrogen on sizes 1¼" and above.** The working pressure of combination nipples will vary with the size and construction of the hose, the type and number of clamps used, clamp placement, proper installation of clamps, temperature and product being conveyed. In accordance with the RMA bulletin for oil suction and discharge hose, a coupled length of hose, in any size should be tested to 1½ times the working pressure and held for fifteen minutes without leaking or coupling movement.

**Steel**

Part #	Size
FST20	1½"
FST25	2"
FST35	3"
FST40	4"
FST60	6"
FST80	8"
FST100	10"
FST120	12"



All parts are 150# ASA flange drilling

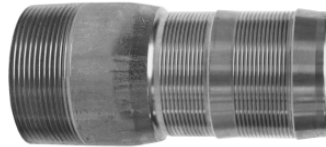


**Stainless Steel**

Part #	Size
RFST20	1½"
RFST25	2"
RFST35	3"
RFST40	4"
RFST60	6"
RFST80	8"
RFST100~	10"
RFST120	12"

**PF Shank "King" Combination Nipples**

PF shank "King" Combination nipples have the same shank pattern as found on the PF style cam and groove Fittings sold on page 29. This shank design was developed specifically for chemical transport hoses having Crosslinked Polyethylene (XLPE) or Ultra High Molecular Weight Polyethylene (UHMW) tubes, where shank retention can be a problem when using conventional band clamps. They are made from tubular stock to fit straight end hose. The male NPT thread is the same size as the hose; i.e. 2" nipple has 2" thread and fits 2" I.D. hose. Recommended for discharge and suction service. *NOT INTENDED FOR COMPRESSED AIR.*



Plated Steel		
Part #	Size	70°F Maximum PF Working Pressure
ST25PF	2"	250
ST35PF	3"	125
ST40PF	4"	100
ST60PF	6"	75
ST80PF	8"	45
ST100PF *	10"	25

Stainless Steel		
Part #	Size	70°F Maximum PF Working Pressure
RST25PF	2"	250
RST35PF	3"	125
RST40PF	4"	100
RST60PF *	6"	75

\* ST100PF and RST60PF will be discontinued as inventory is depleted.

*Note: Beveled ends for welding are also available. Contact the factory for further information. The working pressure may vary with the construction of the hose and the type of clamping system used; consult the factory for recommendations.*

**PF Shank Victaulic "King" Combination Nipples**

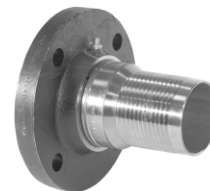
Part #	Size
RSTV25PF	2"
RSTV35PF	3"



**End Seal Swivels**

Developed for pressure service in applications where material entrapment, common to most swivel designs, makes it difficult to turn the swivel and causes contamination from load to load. These End Seal Swivels are limited to the same working pressure as the "King" Combination Nipple shank design.

- Low torque
- No gap between swivel housings
- Short overall length
- Replaceable bearings and wear surfaces
- Chemically resistant Teflon® Encapsulated seal is standard



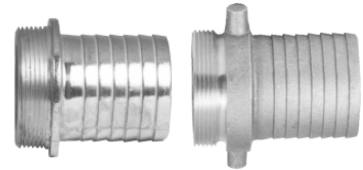
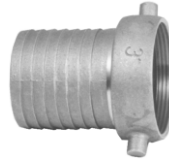
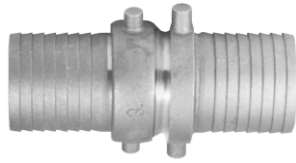
Carbon Steel Part #	Stainless Steel Part #	Size	Number of Preformed Clamps	Maximum Working Pressure		
				Water Hose	Petroleum Hose	Chemical Hose (Rubber, XLPE, or UHMWPE Lined)
FWSST25	FSWRST25	2"	2	75	75	75
FWSST35	FSWRST35	3"	3	50	50	50
FWSST40	FSWRST40	4"	3	50	50	50
FWSST60	FSWRST60	6"	4	25	25	*

\* Consult Dixon for recommendations. Pressure ratings at ambient temperature (70°F).

End Seal Swivels with other shank designs can be produced capable of up to a 250 PSI working pressure, limited by the lowest pressure rated component in the hose assembly which is often the shank design. Consult the factory for cost and availability.



**"King" Short Shank Suction Couplings, NPSM Thread**



**Complete Coupling**

Part #	Size
CAB150	1½"
CAB200	2"
CAB250	2½"
CAB300	3"
CAB400	4"
CAB600	6"

**Female  
Aluminum with Brass Swivel Nut**

Part #	Size
FAB150	1½"
FAB200	2"
FAB250	2½"
FAB300	3"
FAB400	4"
FAB600	6"

**Male  
All 2½" to 6" males have pin lugs**

Part #	Size
MA150	1½"
MA200	2"
MA250	2½"
MA300	3"
MA400	4"
MA600	6"

**All Brass including Swivel Nut**

Part #	Size
CBB125	1¼"
CBB150	1½"
CBB200	2"
CBB250	2½"
CBB300	3"
CBB400	4"

Part #	Size
FBF125	1¼"
FBF150	1½"
FBF200	2"
FBF250	2½"
FBF300	3"
FBF400	4"

Part #	Size
MB125	1¼"
MB150	1½"
MB200	2"
MB250	2½"
MB300	3"
MB400	4"

**Plated Malleable Iron including Swivel Nut**

Part #	Size
S33	1"
S48	1¼"
S63	1½"
S78	2"
S93	2½"
S111	3"
S123	4"
S168	5"
S183	6"
S243	8"

Part #	Size
S12	1"
S17	1¼"
S22	1½"
S27	2"
S32	2½"
S38	3"
S42	4"
S57	5"
S62	6"
S82	8"

Part #	Size
S10	1"
S15	1¼"
S20	1½"
S25	2"
S30	2½"
S36	3"
S40	4"
S55	5"
S60	6"
STC80	8"

Note: 1" has a hex nut  
1-1/4" - 8" have a pin lug

**Plated Malleable Iron with Brass Swivel Nut**

Part #	Size
SB33	1"
SB48	1¼"
SB63	1½"
SB78	2"
SB93	2½"
SB111	3"
SB123	4"
SB168	5"
SB183	6"
SB243	8"

Part #	Size
SB12	1"
SB17	1¼"
SB22	1½"
SB27	2"
SB32	2½"
SB38	3"
SB42	4"
SB57	5"
SB62	6"
SB82	8"

Note: 1" has a hex nut  
1¼" - 8" have a pin lug

Part #	Size
S10	1"
S15	1¼"
S20	1½"
S25	2"
S30	2½"
S36	3"
S40	4"
S55	5"
S60	6"
STC80	8"

**Hose  
Accessories**





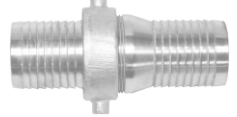
1 1/4" Hose x 2" Thread

**Suction Hose Fittings**

Complete Coupling		Female		Male	
Part #	Size	Part #	Size	Part #	Size
CSM175	1 1/4"	FCSM175	1 1/4"	STC175200	1 1/4"

**"King" Steel Short Shank Suction Couplings, NPSM Thread**

Complete Coupling



Part #	Size
CSM125	1 1/4"
CSM150	1 1/2"
CSM200	2"
CSM250	2 1/2"
CSM300	3"
CSM400	4"
CSM600	6"

Female



Steel with Malleable Swivel Nut

Part #	Size
FCSM125	1 1/4"
FCSM150	1 1/2"
FCSM200	2"
FCSM250	2 1/2"
FCSM300	3"
FCSM400	4"
FCSM600	6"

Male



Part #	Size
MCS125	1 1/4"
MCS150	1 1/2"
MCS200	2"
MCS250	2 1/2"
MCS300	3"
MCS400	4"
MCS600	6"

Part #	Size
CSB125	1 1/4"
CSB150	1 1/2"
CSB200	2"
CSB250	2 1/2"
CSB300	3"
CSB400	4"
CSB600	6"

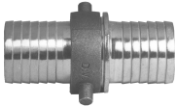
Steel with Brass Swivel Nut

Part #	Size
FCSB125	1 1/4"
FCSB150	1 1/2"
FCSB200	2"
FCSB250	2 1/2"
FCSB300	3"
FCSB400	4"
FCSB600	6"

Part #	Size
MCS125	1 1/4"
MCS150	1 1/2"
MCS200	2"
MCS250	2 1/2"
MCS300	3"
MCS400	4"
MCS600	6"

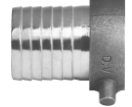
**"King" Short Shank Suction Couplings, NST (NH) Thread**

Complete Coupling



Part #	Size
S63N	1 1/2"
S93N	2 1/2"

Female



Plated Malleable Iron including Swivel Nut

Part #	Size
S22N	1 1/2"
S32N	2 1/2"

Male



Part #	Size
S201	1 1/2"
S301	2 1/2"

Part #	Size
SB63N	1 1/2"
SB93N	2 1/2"

Plated Malleable Iron with Brass Swivel Nut

Part #	Size
SB22N	1 1/2"
SB32N	2 1/2"

Part #	Size
	1 1/2"
	2 1/2"

All Brass

Part #	Size
BS63N	1 1/2"
BS93N	2 1/2"

Part #	Size
BS22N	1 1/2"
BS32N	2 1/2"

Part #	Size
BS201	1 1/2"
BS301	2 1/2"

Aluminum with Brass Swivel Nut

Part #	Size
CAB150N	1 1/2"
CAB250N	2 1/2"

Part #	Size
FAB150N	1 1/2"
FAB250N	2 1/2"

Part #	Size
MA150N	1 1/2"
MA250N	2 1/2"



**Nylon Short Shank Suction Couplings (NPSM Thread)**

ALL REINFORCED NYLON including SWIVEL NUT



**Complete Coupling**

Part #	Size
TCS48	1¼" *
TCS63~	1½"
TCS78	2"
TCS111	3"



**Female**

Part #	Size
TCM17	1¼" *
TCM22	1½"
TCM27	2"
TCM38	3"



**Male**

Part #	Size
TCF15	1¼" *
TCF20	1½"
TCF25	2"
TCF36	3"

\* 1¼" fittings have a 1½" NPSM thread

**Brass Long Shank Couplings (NST Thread)**



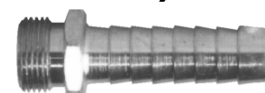
**Complete Coupling**

Part #	Size
BLS63NST	1½"
BLS93NST	2½"



**Female**

Part #	Size
BLS150NST	1½"
BLS250NST	2½"



**Male**

Part #	Size
BLS20NST	1½"
BLS30NST	2½"

NST (Common Fire Hose Thread) is also known as NH.

**Pin Lug Spanner Wrenches**



**Plated Malleable Iron Single End Wrench**

Part #	Size	Part #	Size
SW15	1½"	SW40	4"
SW20	2"	SW60	6"
SW25	2½"	SW80~	8"
SW30	3"		



**Plated Malleable Iron Double End Wrench**

Part #	Size
SW153	1½", 2" x 2½" & 3"

**Washers for Suction, Long and Short Shank Couplings**



**RUBBER**

Part #	Size
KRW1	½"
KRW5	¾"
KRW10	1"
KRW15	1¼"
KRW20	1½"
KRW25	2"
KRW30	2½"
KRW35	3"
KRW40	4"
KRW50	5"
KRW60	6"
KRW80	8"



**NEOPRENE**

Part #	Size
KNW5	¾"
KNW10	1"
KNW15	1¼"
KNW20	1½"
KNW25	2"
KNW30	2½"
KNW35	3"
KNW40	4"
KNW50~	5"
KNW60	6"
KNW80~	8"



**VITON®**

Part #	Size
KVW10	1"
KVW20	1¼"
KVW25	1½"
KVW35	2½"
--	3"
--	4"
--	5"
--	6"
--	8"



**LEATHER**

Part #	Size
KLW1~	½"
KLW5	¾"
KLW10	1"
KLW15	1¼"
KLW20	1½"
KLW25	2"
KLW30	2½"
KLW35	3"
KLW40	4"
--	5"
--	6"
--	8"



**NST WASHERS**

Part #	Size
KRW2075	1½"
KRW3075	2½"
--	3"
--	4"
--	5"
--	6"
--	8"

Hose Accessories



**Dixon Steel Hose Menders**

*Not for compressible products such as air, nitrogen or steam.* The working pressure of menders will vary with the size and construction of the hose, the type and number of clamps used, clamp placement, proper installation of clamps, temperature and product being conveyed. In accordance with the RMA bulletin for Oil Suction and Discharge Hose, a coupled length of hose, in any size should be tested to 1½ times the working pressure and held for fifteen minutes without leaking or coupling movement. Consult the factory for recommendations specific to the application.



**Zinc Plated Steel**

**316 Stainless Steel**

Part #	Size	Part #	Size
115-04-04	1/4"	115-32-32	2"
115-06-06	3/8"	115-32-32XL	2"
115-08-08	1/2"	115-40-40	2-1/2"
115-10-10	5/8"	115-48-48	3"
115-12-12	3/4"	115-64-64	4"
115-16-16	1"	115-80-80	5"
115-20-20	1-1/4"	115-96-96	6"
115-24-24	1-1/2"	115-128-128	8"
115-24-24XL	1-1/2"	115-160-160	10"
		115-192-192	12"

Part #	Size	Part #	Size
115-04-04SS	1/4"	115-32-32SS	2"
115-06-06SS	3/8"	--	2"
115-08-08SS	1/2"	--	2-1/2"
115-10-10SS	5/8"	115-48-48SS	3"
115-12-12SS	3/4"	115-64-64SS	4"
115-16-16SS	1"	--	5"
115-20-20SS	1-1/4"	--	6"
115-24-24SS	1-1/2"	--	8"
--	1-1/2"	--	10"
		--	12"

\* XL series is extra long

**"King" Steel Hose Menders**

*Not for compressible products such as air, nitrogen or steam.* The working pressure of menders will vary with the size and construction of the hose, the type and number of clamps used, clamp placement, proper installation of clamps, temperature and product being conveyed. In accordance with the RMA bulletin for Oil Suction and Discharge Hose, a coupled length of hose, in any size should be tested to 1½ times the working pressure and held for fifteen minutes without leaking or coupling movement. Consult the factory for recommendations specific to the application.

**For 1 Clamp Each End**

**For 2 Clamps Each End**



Part #	Size
KM21	1/4"
KM251	5/16"
KM41	1/2"
KM51	5/8"
KM61	3/4"
KM81	1"
KM101	1-1/4"
KM121	1-1/2"
--	2"

Part #	Size
--	1/4"
--	5/16"
KM42	1/2"
KM52	5/8"
KM62	3/4"
KM82	1"
KM102	1-1/4"
KM122	1-1/2"
KM162	2"



**Spring Loaded Check Valves with Strainer**






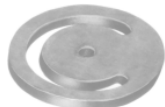
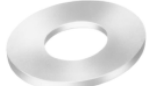
Part #	Size
BVFS20	1½"
BVFS25	2"
BVFS35	3"
BVFS40	4"

- Brass with NBR seat, stainless steel strainer
- Soft seat for bubble tight shutoff, spring loaded for fast seating action.
- Flow profile designed to minimize head loss.
- Temperature range: 10°F to 210°F (-10°C to 100°C)
- Pressure rating: 1-1/2" - 2" 400 WOG; 3" - 4" 200 WOG
- Cracking pressure: 0.29 PSI





**Cast Iron Threaded Foot Valves**

									
<b>Complete Threaded Assembly (painted)</b>		<b>Strainer Only (painted)</b>		<b>Flapper Valve Assembly</b>		<b>Valve Leather</b>		<b>Seat Plate</b>	
Part #	NPT Size	Part #	NPT Size	Part #	NPT Size	Part #	NPT Size	Part #	NPT Size
DFVS20	1½"	FVS20~	1½"	FVFA20	1½"	FVL20	1½"	FVSP20	1½"
DFVS25	2"	FVS25	2"	FVFA25	2"	FVL25	2"	FVSP25	2"
DFVS30	2½"	FVS30~	2½"	FVFA30	2½"	FVL30	2½"	FVSP30~	2½"
DFVS35	3"	FVS35	3"	FVFA35	3"	FVL35	3"	FVSP35	3"
DFVS40	4"	FVS40	4"	FVFA40	4"	FVL40	4"	FVSP40	4"
DFVS60	6"	FVS60	6"	FVFA60	6"	FVL60	6"	FVSP60	6"
DFVS80	8"	FVS80~	8"	FVFA80	8"	FVL80	8"	FVSP80	8"



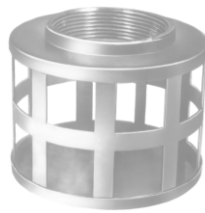



**Cast Iron Flanged Foot Valves**

Note: Replacement parts are available, please contact the factory for further information.



Part #	NPT Size
DFVS060	6"
DFVS080	8"
DFVS100	10"
DFVS120	12"

**Strainers and Skimmers**

											
<b>Standard Threaded Round Hole Type *</b>		<b>304 Stain. Steel Round Hole Type</b>		<b>Standard Threaded Square Hole Type *</b>		<b>Long Thin Round Hole Type *</b>		<b>Skimmer Bottom Round Hole Type *</b>		<b>Skimmer Top Round Hole Type *</b>	
Part #	Size	Part #	Size	Part #	Size	Part #	Size	Part #	Size	Part #	Size
RHS20	1½"	RRHS20	1½"	SHS20~	1½"	RSS20	1½"	DSB20	1½"	DST20	1½"
RHS25	2"	RRHS25	2"	SHS25	2"	RSS25	2"	DSB25	2"	DST25	2"
RHS30	2½"	--	2½"	SHS30	2½"	RSS30	2½"	--	2½"	--	2½"
RHS35	3"	RRHS35	3"	SHS35	3"	RSS35	3"	DSB35	3"	DST35	3"
RHS40	4"	RRHS40	4"	SHS40	4"	RSS40	4"	--	4"	--	4"
RHS50	5"	--	5"	--	5"	--	5"	--	5"	--	5"
RHS60	6"	RRHS60	6"	SHS60	6"	--	6"	--	6"	--	6"
RHS80	8"	--	8"	--	8"	--	8"	--	8"	--	8"
RHS100	10"	--	10"	--	10"	--	10"	--	10"	--	10"
RHS120	12"	--	12"	--	12"	--	12"	--	12"	--	12"

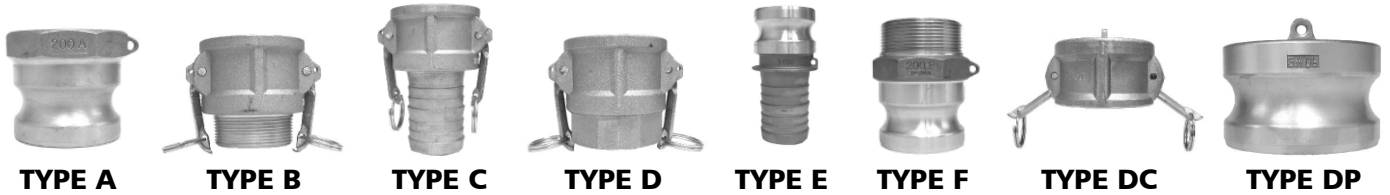
**Black Polyethylene Strainers**

Part #	Size
TSS20	1½"
TSS25	2"
TSS35	3"



\* Zinc plated steel





**Aluminum**

Type	A	B	C	D	E	F	DC	DP	Type
Size	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Size
3/4"	75-A-AL	75-B-AL	75-C-AL	75-D-AL	75-E-AL	75-F-AL	75-DC-AL	75-DP-AL	3/4"
1"	100-A-AL	100-B-AL	100-C-AL	100-D-AL	100-E-AL	100-F-AL	100-DC-AL	100-DP-AL	1"
1 1/4"	125-A-AL	AB125	AC125	AD125	125-E-AL	125-F-AL	61-973	125-DP-AL	1 1/4"
1 1/2"	150-A-AL	150-B-AL	150-C-AL	150-D-AL	150-E-AL	150-F-AL	150-DC-AL	150-DP-AL	1 1/2"
2"	200-A-AL	200-B-AL	200-C-AL	200-D-AL	200-E-AL	200-F-AL	200-DC-AL	200-DP-AL	2"
2 1/2"	250-A-AL	AB250	AC250	AD250	250-E-AL	250-F-AL	61-976	250-DP-AL	2 1/2"
3"	300-A-AL	300-B-AL	300-C-AL	300-D-AL	300-E-AL	300-F-AL	300-DC-AL	300-DP-AL	3"
4"	400-A-AL	400-B-AL	400-C-AL	400-D-AL	400-E-AL	400-F-AL	400-DC-AL	400-DP-AL	4"

**316 Stainless Steel**

Type	A	B	C	D	E	F	DC	DP	Type
Size	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Size
3/4"	75-A-SS	75-B-SS	75-C-SS	75-D-SS	75-E-SS	75-F-SS	75-DC-SS	75-DP-SS	3/4"
1"	100-A-SS	100-B-SS	100-C-SS	100-D-SS	100-E-SS	100-F-SS	100-DC-SS	100-DP-SS	1"
1 1/4"	125-A-SS	RB125BL	125-C-SS	125-D-SS	125-E-SS	125-F-SS	63-973	125-DP-SS	1 1/4"
1 1/2"	150-A-SS	150-B-SS	150-C-SS	150-D-SS	150-E-SS	150-F-SS	150-DC-SS	150-DP-SS	1 1/2"
2"	200-A-SS	200-B-SS	200-C-SS	200-D-SS	200-E-SS	200-F-SS	200-DC-SS	200-DP-SS	2"
2 1/2"	250-A-SS	250-B-SS	250-C-SS	250-D-SS	250-E-SS	250-F-SS	250-DC-SS	250-DP-SS	2 1/2"
3"	300-A-SS	300-B-SS	300-C-SS	300-D-SS	300-E-SS	300-F-SS	300-DC-SS	300-DP-SS	3"
4"	400-A-SS	400-B-SS	400-C-SS	400-D-SS	400-E-SS	400-F-SS	400-DC-SS	400-DP-SS	4"

**Brass**

Type	A	B	C	D	E	F	DC	DP	Type
Size	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Size
3/4"	75-A-BR	75-B-BR	75-C-BR	75-D-BR	75-E-BR	75-F-BR	75-DC-BR	75-DP-BR	3/4"
1"	100-A-BR	100-B-BR	100-C-BR	100-D-BR	100-E-BR	100-F-BR	100-DC-BR	100-DP-BR	1"
1 1/4"	125-A-BR	BB125	BC125	BD125	125-E-BR	125-F-BR	44-973	125-DP-BR	1 1/4"
1 1/2"	150-A-BR	150-B-BR	150-C-BR	150-D-BR	150-E-BR	150-F-BR	150-DC-BR	150-DP-BR	1 1/2"
2"	200-A-BR	200-B-BR	200-C-BR	200-D-BR	200-E-BR	200-F-BR	200-DC-BR	200-DP-BR	2"
2 1/2"	250-A-BR	BB250	BC250	BD250	250-E-BR	250-F-BR	44-976	250-DP-BR	2 1/2"
3"	300-A-BR	300-B-BR	300-C-BR	300-D-BR	300-E-BR	300-F-BR	300-DC-BR	300-DP-BR	3"
4"	400-A-BR	400-B-BR	400-C-BR	400-D-BR	400-E-BR	400-F-BR	400-DC-BR	400-DP-BR	4"



# "Andrews" Standard Handle Assemblies

Brass (-BR)

Sintered Stainless Steel (-SP)

Investment Stainless Steel (-SI)



Part #	Size	Description	Brass	Sintered SS	Investment SS
			- BR	- SP	- SI
50-HP	1/2"	Handle and Pin			
75-HP	3/4"	Handle and Pin			
100-HP	1"	Handle and Pin			
200-HRP	1 1/4" thru 2 1/2"	Handle, Ring and Pin			
200-HSCR-P-SI		Handle, Ring and Pin			
300-HSCR-P-SI	3"	Handle, Ring and Pin			
300-HRP	3" thru 5"	Handle, Ring and Pin			
300-HR325P	3" thru 5"	Handle, Ring and Short (1-1/2") Pin			
600-HRP	6"	Handle, Ring and Pin			
800-HP *	8" *	Handle and Pin			
800-HNP	8"	Handle and Pin for new 8" couplers			

\* Consult the factory for specifications when ordering replacement arms for 8" couplings. Stainless steel pins are standard with all assemblies. Pull rings are standard on 1 1/4" thru 6", optional on other sizes.

## Locking Handle for "Andrews" Dust Caps

Part #	Coupler Size	Hole Diameter	Description
200-LH-BR	2"	9/32"	Locking handle, brass
300-LH-BR	3"	5/16"	Locking handle, brass
400-LH-BR	4"	3/8"	Locking handle, brass

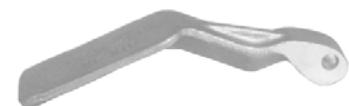
Note: Not supplied with pins



## Paddle Handle for "Andrews" Couplings

Part #	Coupler Size	Description
300H-PADBR	3" & 4"	Paddle handle, brass

Note: Not supplied with pins.



## "Boss-Lock" Standard Handle Assemblies

Part #	Coupler Size	Investment Cast	Plated
		Stainless Steel	Malleable Iron
		Part #	Part #
Assembly includes cam arm, pin and pull ring safety clip			
BHSC175	3/4" - 1"	RHSC175	-----
BHSC152	1 1/4" - 2 1/2"	RHSC152	IHSC152
BHSC34	3" & 4"	RHSC34	IHSC34
Assembly includes cam arm, pin and pull ring			
BH6	6" & 8"	NA	IH6



Cam Arm with Pin and Pull Ring Safety Clip



Cam Arm with Pin and Pull Ring

Hose Accessories



## "EZ Boss-Lock" Handles

**UNDER NO CIRCUMSTANCES** should the "EZ Boss-Lock" cam arms be used on any fitting not specifically produced for their use. The aluminum, brass and malleable iron are made from sand castings. To insure proper functioning of the "EZ Boss-Lock" cam arm assemblies, we sort the castings to insure there is sufficient length and orientation on the lugs on the main casting to engage the lever. We also buff or grind the rougher sand cast surface to insure that the lever will move freely. The "EZ Boss-Lock" cam arms **CANNOT** be retrofitted onto existing aluminum, brass or plated malleable iron Boss-Lock already in service.



Stainless Steel Part #	Size
RHEZ175	3/4" - 1"
RHEZ152	1 1/4" - 2 1/2"
RHEZ34	3" & 4"

Investment cast stainless steel cam arm & lever; 316 stainless steel spring, stainless steel pin, washer; plated carbon steel pull ring

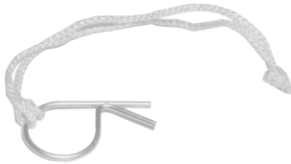
## Pull Ring Safety Clips for "Boss-Lock" Couplings

Carbon Steel Part #	Stainless Steel Part #	Coupler Size
-----	<b>100PRSCSS</b>	3/4" x 1"
200PRSCCS	<b>200PRSCSS</b>	1 1/4" to 2 1/2"
300PRSCCS	<b>300PRSCSS</b>	3" and 4"

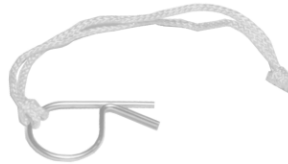


## Clips and Lanyard for "Boss-Lock" Couplings

Carbon steel clips with nylon lanyard



Part #	Size
ACL4	3/4" & 1"



Part #	Size
ACL2	1 1/4" to 4"



Part #	Size
ACL3	6"

## Stainless Steel Clip and Lanyard for "Boss-Lock" Couplings



Part #	Description
AC7	Clip



Part #	Description
LR7	Lanyard

Hose Accessories

**Carbon Steel Clip Assembly | Stainless Steel Pull Rings**

For "Boss-Lock" couplings

Part #	Description
BLCA152CS	Pull ring, chain and AC3 clip



Part #	Description
R200SS	2", 304 stainless steel



**Jack Chains with S-Hooks**



Jack chain with S-hooks

Part #	Description	Pkg Qty
CH-B-6	6" Brass	10
CH-B-12	12" Brass	10
CH-B-24	24" Brass	--
CH-C-12	12" Carbon Steel	10
CH-SS-6	6" Stainless Steel	10
CH-SS-12	12" Stainless Steel	10
CH-SS-24	24" Stainless Steel	10

Optional Pkg./Box quantity shown

**Sash Chains with Pull**



Sash chain with pull rings

Part #	Description
J125	4-1/2" brass
J150	6-1/2" brass
J300	8-1/2" brass
J500	12-3/4" brass

Pull rings are plated steel

**PVC Coated Lanyards**



Part #	Description
CAL15	15" long PVC coated carbon steel with aluminum crimp sleeves. One end factory crimped, one end uncrimped for field installation.
CAL25	25" long PVC coated carbon steel with aluminum crimp sleeves. One end factory crimped, one end uncrimped for field installation.

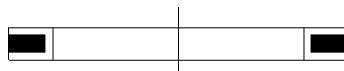
**Cam and Groove Gaskets**



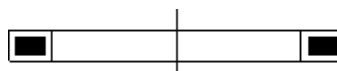
NOTE: White neoprene and white Buna N gaskets contain all FDA approved materials.

		Buna-N	Viton®-A	Extra Thick Buna N	Ethylene Propylene	Neoprene	White Neoprene	White Buna N	Silicone
Part #	Size	- BU	- VI	THK	- EPR	- NE	- WNE	- WB	- SIL
50-G	1/2								
75-G	3/4								
100-G	1								
125-G	1-1/4								
150-G	1-1/2								
200-G	2								
250-G	2-1/2								
300-G	3								
400-G	4								
500-G	5								
600-G	6								
800-G	8								

**Cam and Groove Gaskets**



ENVELOPE GASKET



ENCAPSULATED GASKET



ACCORDION GASKET

		ENVELOPE GASKETS				ENCAPSULATED GASKETS		ACCORDION GASKETS
		Teflon® Buna filler	Teflon® Viton® filler	Teflon® White Buna filler	Teflon® Ethylene Propylene filler	Teflon® Encapsulated Silicone	Teflon® Encapsulated Viton®	Teflon® Accordion
Part #	Size	- TF	- TFVI	TFWB	TFEP	- TES	- TEV	TFACC
50-G	1/2							
75-G	3/4							
100-G	1							
125-G	1-1/4							
150-G	1-1/2							
200-G	2							
250-G	2-1/2							
300-G	3							
400-G	4							
500-G	5							
600-G	6							

- Teflon® White Buna Filler (TFWB) and Teflon® Encapsulated silicone (TES) contain all FDA approved materials.
- Teflon® Accordion gaskets (TFACC) are recommended for use with VISCOUS (thick) FLUIDS ONLY.
- Encapsulated gasket pressure ratings are reduced to 125 PSI for 1/2" - 2 1/2" at ambient temperature (70°F) when these gaskets are used.
- Teflon® Encapsulated Viton® (TEV) gaskets - maximum operating temperature 200°F
- Teflon® Encapsulated silicone gaskets (TES) gaskets - maximum operating temperature 225°F
- Maximum operating temperatures for specific chemicals may be lower. Contact the Dixon Factory for specific recommendations.

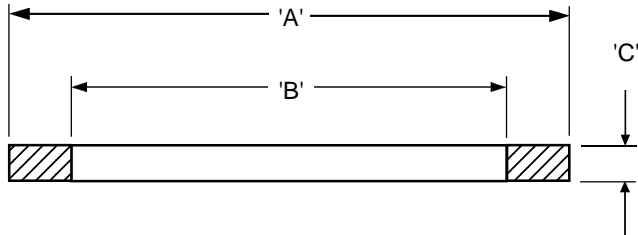


The torque (force) required to close the handles on a pair of cam & groove fittings will vary according to the gasket chosen. Due to the nature of the Teflon® material, the various Teflon® gasket designs will require the most torque, increasing as you go from envelope to encapsulated and finally, accordion.



# Dixon / "Andrews" Cam and Groove Gasket Dimensions

The following are the nominal dimensions for Dixon's elastomeric cam and groove gaskets.



Part #	Size	A OD	B ID	C Thickness *
50-G	1/2" *	1-1/32"	11/16"	.156"
75-G	3/4"	1-3/8"	7/8"	.218"
100-G	1"	1-9/16"	1-1/16"	.250"
125-G	1 1/4"	1-15/16"	1-23/64"	.250"
150-G	1 1/2"	2-3/16"	1-5/8"	.250"
200-G	2"	2-5/8"	2"	.250"
250-G	2 1/2"	3-1/8"	2-3/8"	.250"
300-G	3"	3-23/32"	3"	.250"
400-G	4"	4-7/8"	4"	.250"
500-G	5"	5-15/16"	4-7/8"	.250"
600-G	6"	7-1/16"	6"	.250"
800-G	8" *	9-5/16"		.343"

The ID's of the Teflon® Envelope gaskets and the Teflon® Accordion gaskets are 1/16" **smaller** than the ID's for the Elastomeric gaskets shown above.

\* Thicknesses of Teflon® Accordion gaskets may vary from chart above.

\* No interchange standard exists for the 1/2" and 8" fittings. Generally, these sizes do not interchange with other manufacturer's products. As such, the gaskets in these sizes are not suitable for use in other manufacturers' couplings.

**SAFETY**  
**ALERT**

# Dixon / "Andrews" Cam and Groove Gasket Color Codes

Gasket Code	Gasket Material	Material Color	Color code stripes (appear on the O.D. of the gasket or filler)
-BU	Buna N (standard in all metal fittings)	Black	1 Blue
-VI	Viton®	Black	1 Yellow
-THK	Extra Thick Buna	Black	2 Blue
-EPR	Ethylene Propylene	Black	1 White
-NE	Neoprene	Black	1 Red
-WNE	White Neoprene - FDA approved material	White	None
-WB	White Buna N - FDA approved material	White	Blue
-SIL	Silicone	Red	None
-TF	Teflon® (TFE) Envelope with Buna N Filler	White / Black	1 Blue
TFVI	Teflon® (TFE) Envelope with Viton® Filler	White / Black	1 Yellow
TFWB	Teflon® (TFE) Envelope with White Buna N Filler. FDA approved materials	White / White	Blue
TFEP	Teflon® (TFE) Envelope with Ethylene Propylene Filler	White / Black	1 White Stripe
-TES	Teflon® (FEP) Encapsulated Silicone Core. FDA approved materials	Translucent / Red	None
-TEV	Teflon® (FEP) Encapsulated Viton® Core	Translucent / Black	None
TFACC	Teflon® (TFE) Accordion. FDA approved materials	White	None


Since other manufacturers coding systems vary, **this chart should not be used as a reference in identifying gaskets of unknown origin.**


**SAFETY**  
**ALERT**

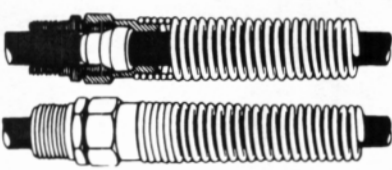
Hose Accessories



**Spring Guards - Strain Relievers**

<b>PVC Strain Reliever</b>    Temperature Range: -40°F to +225°F Material: PVC Color: Black	PART NUMBER	LENGTH (INCHES)	HOSE O.D. (INCHES)
	1804-95	7	.53
1805-95	5	.61	
1806-95	7	.69	
1808-95	7	.84	
1810-95	6	1.03	
1812-95	6	1.13	
1906-95	6	0.81	
1908-95	6	0.92	

<b>Polygard® Strain Reliever</b>    Temperature Range: -40°F to +225°F Material: Flexible PVC Color: Black (Check for availability of other colors).	PART NUMBER	LENGTH (INCHES)	HOSE O.D. (INCHES)
	4PG	7	.53
6PG	7	.63	
7PG	7	.69	
8PG	7	.84	

<b>Strain Reliever with Spring Guard</b> Brass couplings with steel springs zinc plated clear chromate For electrical cords	PART NUMBER	THREAD I.P.T.	MINIMUM CORD O.D.	MAXIMUM CORD O.D.	WEIGHT PER 100 PCS. (LBS.)
		33-STR	1/4 - 18	.300	.340
36-STR		3/8 - 18	.390	.440	15
37-STR*		3/8 - 18	.350	.370	15
38-STR*		1/2 - 14	.350	.370	20
39-STR		1/2 - 14	.390	.440	20
40-STR		3/8 - 18	.450	.500	21
41-STR		1/2 - 14	.450	.500	26
42-STR		1/2 - 14	.510	.562	27
44-STR		3/4 - 14	.572	.615	34
45-STR		1 - 11 1/2	.725	.812	65

\*Furnished with heavy wall compression sleeve





**Strain Relievers**

Open Wound/Close Wound Strain Relievers		MINIMUM I.D.	LENGTH (INCHES)
Material: Steel, Zinc Plated			
PART NUMBER			
EC04-95		.72	8
EC06-95		.89	12
EC08-95		1.02	12
EC10-95		1.16	12
EC12-95		1.36	9
EC16-95		1.63	12
1870-95		.50	4
1880-95		.54	5
1881-95		.72	6
HJK04-95		.60	5 1/2
HJK06-95		.79	6
GOC7-4		.53	4 1/8
GOC8-4		.60	4 1/8
GOC8-6		.60	6
GOC10-4		.64	4 1/8
GOC10-9		.64	9
GOC11-4		.69	4 1/8
GOC11-9		.69	9
GOC11-12		.69	12
GOC12-9		.75	9
GOC12-12		.75	12
GOC13-6		.79	6
GOC13-12		.79	12
GOC14-6		.85	6
GOC14-12		.85	12
GOC15-6		.91	6
GOC16-9		.91	9
GOC16-12		.91	12
GOC18-12		1.13	12
GOC19-9		1.13	9
GOC20-9		1.30	9
GOC20-13		1.30	13 1/2
GOC25-9		1.59	9
GOC25-12		1.59	12
GOC25-18		1.59	18
GOC32-12		2.01	12

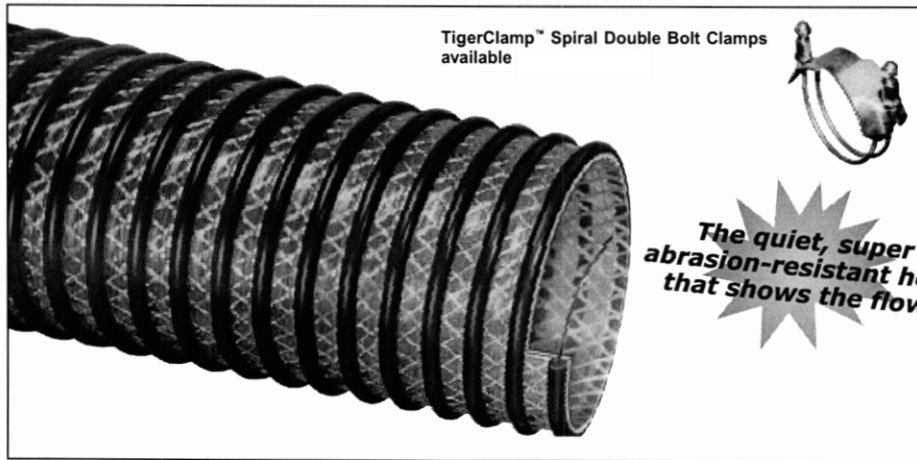


Hose  
Accessories



## Series 2020

**Reinforced Polyurethane-lined material handling hose with embedded static wire. For outdoor dry applications.**



**Features and Benefits:**

- **Clear Polyurethane construction with blue PVC helix** - allows visual confirmation that material is flowing...provides high abrasion-resistance.
- **Food grade Polyurethane liner** - complies with all applicable FDA\* and USDA\*\* requirements.
- **Embedded static wire** - prevents the build-up of static electricity...helps keep material flowing smoothly.
- **Polyester fabric reinforcement** - provides increased ability to with stand positive pressures.
- **"See-through" construction** - translucent construction with blue helix allows visual confirmation that material is flowing.

- **Smooth bore construction** - reduces material build-up...provides high abrasion resistance and quiet operation (polymer pellet transfer through Series 2020 can be 60 - 70% quieter than with stainless steel hoses).
- **Exposed blue rigid PVC helix** - abrasion-resistant...allows hose to slide easily...easier to handle.

**General Applications:**

- Pneumatic conveying systems for powder, pellets or other dry granular materials.
- Dry food transfer systems, such as flour, rice, grains, etc.

Note: Service life may vary depending on operating conditions and type of material being conveyed.

**Service Temperature Range**  
-40°F to 150°F

Actual service temperature range is application-dependent.

Series	Nominal				Approx. Liner Thickness (mm)	Working Pressure (PSI)		Vacuum Rating (Inches Hg)		Minimum Bending Radius @ 68° F	Standard Length (Ft)	Approx. Wt. (lbs/ft.)
	ID (In.)	ID (mm)	OD (In.)	OD (mm)		68° F	104° F	68° F	104° F			
2020-300	3	76.2	3.78	96.0	1.8	70	35	Full	28	10"	100/50/20	1.20
2020-400	4	101.6	4.84	123.0	2.0	65	30	Full	28	12"	100/50/20	1.60
2020-500	5	127.0	5.79	147.0	2.0	45	22	28	25	14"	50/20	2.45
2020-600	6	152.4	6.93	176.0	2.0	40	22	28	25	16"	50/20	2.86

\* FDA - CFR Title 21 Parts 177.1680, and 177.2600 requirements.

\*\* USDA - For use in federally-inspected meat and poultry plants

**Caution:** This product is designed to dissipate static electricity when the metal wire is properly connected to ground, through the fitting or other means.

BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS OR DISCONTINUE PRODUCTS WITHOUT PRIOR NOTICE.

**Industrial  
Hose**



## Series 2001

Polyurethane-lined PVC food grade material handling hose with embedded static wire. For dry applications.



**Features and Benefits:**

- **Food grade Polyurethane liner** - complies with all applicable FDA\* and USDA\*\* requirements.
- **Food grade PVC convoluted cover** - complies with all applicable FDA\*\*\* and USDA\*\* requirements...provides increased flexibility.
- **Embedded static wire** - prevents the build-up of static electricity...helps keep material flowing smoothly.
- **"See-through" construction** - clear cover and translucent liner allows visual confirmation that material is flowing.

- **Smooth bore construction** - reduces material build-up...provides high abrasion resistance and quiet operation (polymer pellet transfer through Series 2020 can be 60 - 70% quieter than with stainless steel hoses).

**General Applications:**

- Pneumatic conveying systems for powder, pellets or other dry granular materials.
- Dry food transfer systems, such as flour, rice, grains, etc.

Note: Service life may vary depending on operating conditions and type of material being conveyed.

**Service Temperature Range**

-4°F to 150°F

Actual service temperature range is application-dependent.

Series	Nominal				Approx. Liner Thickness (mm)	Working Pressure (PSI)		Vacuum Rating (Inches Hg)		Minimum Bending Radius @ 68° F	Standard Length (Ft)	Approx. Wt. (lbs/ft.)
	ID (In.)	ID (mm)	OD (In.)	OD (mm)		68° F	104° F	68° F	104° F			
2001-150	1½	38.1	1.88	47.8	0.8	50	25	Full	28	6"	60	.48
2001-200	2	50.8	2.44	62.0	0.9	40	20	Full	28	7"	60	.67
2001-250	2½	63.5	3.12	79.2	0.9	40	20	Full	28	8"	60	.92
2001-300	3	76.2	3.70	94.1	1.8	40	20	Full	28	9"	60	1.35
2001-400	4	101.6	4.80	122.0	2.0	35	18	Full	28	15"	60/20	2.17
2001-500	5	127.0	5.81	147.6	2.0	35	18	28	25	23"	60/20	2.77
2001-600	6	152.4	6.93	176.0	2.3	30	15	28	25	26"	60/20	3.90
2001-700	7	178.8	8.08	205.2	2.3	30	15	28	25	30"	60/20	5.20
2001-800	8	203.2	9.28	235.8	2.7	30	15	28	25	36"	60/20	6.65

\* FDA - CFR Title 21 Parts 170 and 199 requirements.

\*\* USDA - For use in federally-inspected meat and poultry plants

\*\*\* FDA - CFR Title 21 Parts 177.1680 and 177.2600 requirements.

**Caution:** This product is designed to dissipate static electricity when the metal wire is properly connected to ground, through the fitting or other means.

BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS OR DISCONTINUE PRODUCTS WITHOUT PRIOR NOTICE.

**Industrial  
Hose**



**Series WT**

**Heavy duty PVC food grade material handling hose. For dry applications**

**Features and Benefits:**

- **Clear PVC construction** - complies with all applicable FDA\* and USDA\*\* requirements and 3-A Sanitary Standards†...allows visula confirmation that material is flowing.
- **Smooth bore construction** - eliminates material build-up.
- **Convuloted cover design** - provides increased flexibility.

**General Applications:**

- Pneumatic conveying systems for powder, pellets or granular materials.
- Food transfer systems
- Poutry cleaning operations

\* FDA - DFR Tittle 21 Parts 170 to 199.

\*\* USDA - For use in Federally-inspected meat and poultry plants

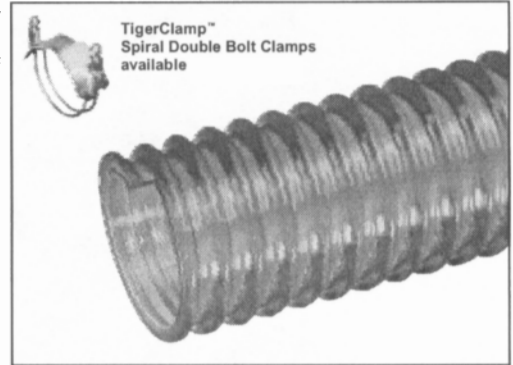
† 3-A Sanitary Standard - No.20-20, Multi-use plastic materials as product contact surfaces in equipment for production, processing and handling of milk and milk products.

Note: Service life may vary depending on operating conditions and type of material being conveyed.

**Service Temperature Range:**

-4°F to 150°F

Actual service temperature range is application-dependent.



Series	Nominal				Working Pressure (PSI)		Vacuum Rating (In. Hg)		Min. Bending Radius @ 68°F	Standard Length (Ft)	Approx. Wt. (lbs/ft.)
	ID (In.)	ID (mm)	OD (In.)	OD (mm)	68°F	104°F	68°F	104°F			
WT100	1	25.4	1.30	33.0	55	30	28	28	2"	100/50	.21
WT125	1 1/4	31.7	1.60	40.6	50	25	28	28	2"	100/50	.28
WT150	1 1/2	38.1	1.92	48.8	50	25	28	28	3"	100/50	.35
WT200	2	50.8	2.40	61.0	40	20	28	24	4"	100/50	.56
WT225	2 1/4	57.2	2.74	69.6	40	20	28	24	4.5"	100/50	.65
WT250	2 1/2	63.5	2.99	75.9	40	20	28	24	5"	100/50	.77
WT300	3	76.2	3.64	92.5	40	20	28	24	6"	100/50	1.10
WT350	3 1/2	88.9	4.21	107.0	35	18	28	24	8"	100/50	1.48
WT400	4	101.6	4.72	120.0	35	18	24	22	10"	100/50	1.80
WT500	5	127.0	5.74	145.8	30	15	24	22	16"	100/20	2.34
WT600	6	152.4	6.91	175.5	30	15	24	22	18"	100/50/20	3.70
WT800	8	203.2	8.97	227.8	20	10	20	18	36"	20	5.53
WT45M	1.77	45.0	2.09	53.0	45	25	28	24	4"	50	.44
WT57M	2.24	57.0	2.68	68.0	40	20	28	24	4.5"	50	.64

**Series WE**

**Heavy duty PVC food grade material handling hose with embedded static wire. For dry applications**

**Features and Benefits:**

- **Clear PVC construction** - complies with all applicable FDA\* and USDA\*\* requirements...allows visula confirmation that material is flowing.
- **Embedded static wire** - prevents the build-up of static electricity...helps to keep material flowing smoothly.
- **Smooth bore construction** - eliminates material build-up.
- **Convuloted cover design** - provides increased flexibility.

**General Applications:**

- Pneumatic conveying systems for powder, pellets or granular materials.
- Paper mill vacuum lines

\* FDA - DFR Tittle 21 Parts 170 to 199.

\*\* USDA - For use in Federally-inspected meat and poultry plants

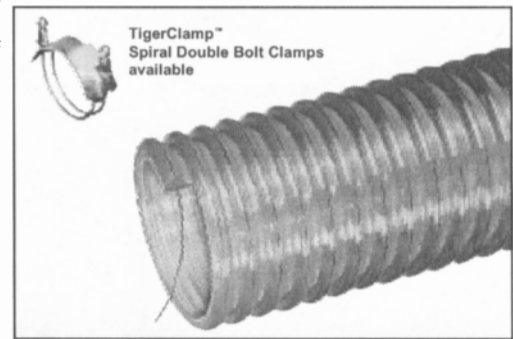
Caution: This product is designed to dissipate static electricity when the metal wire is properly connected to ground, through the fitting or other means.

Note: Service life may vary depending on operating conditions and type of material being conveyed.

**Service Temperature Range:**

-4°F to 150°F

Actual service temperature range is application-dependent.

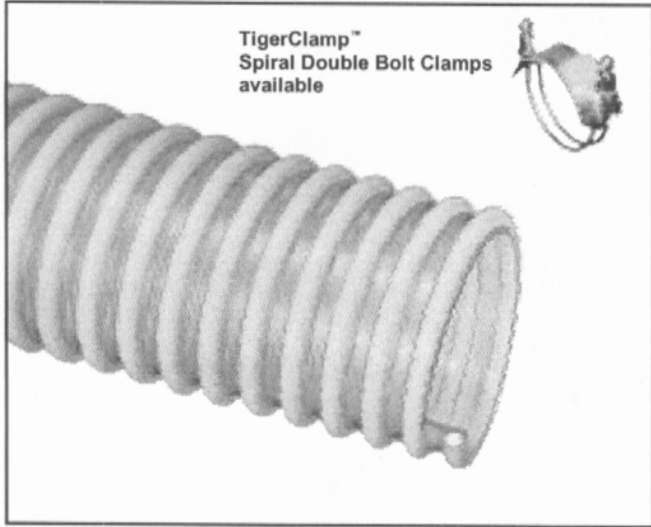


Series	Nominal				Working Pressure (PSI)		Vacuum Rating (In. Hg)		Min. Bending Radius @ 68°F	Standard Length (Ft)	Approx. Wt. (lbs/ft.)
	ID (In.)	ID (mm)	OD (In.)	OD (mm)	68°F	104°F	68°F	104°F			
WE125	1 1/4	32.0	1.65	42.0	50	25	28	28	2"	100/50	.33
WE150	1 1/2	38.1	1.93	49.0	50	25	28	28	3"	100/50	.43
WE200	2	50.8	2.48	63.0	40	20	28	24	4"	100/50	.58
WE225	2 1/4	57.2	2.80	71.0	40	20	28	24	4.5"	100/50	.65
WE250	2 1/2	63.5	3.07	78.0	40	20	28	24	5"	100/50	.89
WE300	3	76.2	3.64	92.5	40	20	28	24	6"	100/50	1.25
WE350	3 1/2	88.9	4.27	108.5	35	18	28	24	8"	100/50	1.55
WE400	4	101.6	4.72	120.0	35	18	24	20	10"	100/50	1.93
WE500	5	127.0	5.74	146.0	30	15	24	20	16"	60/50/20	2.40
WE600	6	152.4	6.81	175.5	30	15	24	20	18"	60/50/20	3.70
WE45M	1.77	45.0	2.20	55.8	45	25	28	24	4"	60	.46
WE57M	2.24	57.0	2.76	70.0	40	20	28	24	4.5"	60	.64

**Industrial Hose**



BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS OR DISCONTINUE PRODUCTS WITHOUT PRIOR NOTICE.



## Series WBS

**Anti-Static PVC food grade material handling hose.**

### Features and Benefits:

- **Clear PVC construction** - complies with all applicable FDA\* and USDA\*\* requirements...allows visula confirmation that material is flowing.
- **Static-dissipative thermoplastic compound** - prevents the build-up of static electricity...helps to keep material flowing smoothly.
- **Wireless static-dissipative design** - allows for ease of coupling and installation.
- **Smooth bore construction** - eliminates material build-up.
- **Convoluted cover design** - provides increased flexibility.

### General Applications:

- Pneumatic conveying systems for powder, pellets or granular materials.
- Pharmaceutical product transfer.
- Hopper loader systems.

**Note:** The effectiveness of static dissipation is application-dependent, based upon humidity, material conveyed, and length of hose.

Series	Nominal				Working Pressure (PSI)		Vacuum Rating (In. Hg)		Min. Bending Radius @ 68°F	Standard Length (Ft)	Approx. Wt. (lbs/ft.)
	ID (In.)	ID (mm)	OD (In.)	OD (mm)	68°F	104°F	68°F	104°F			
WBS150	1½	38.1	1.92	48.8	50	25	28	28	3"	100	.35
WBS200	2	50.8	2.40	61.0	40	20	28	24	4"	100	.56
WBS250	2½	63.5	2.99	75.9	40	20	28	24	5"	100	.77
WBS300	3	76.2	3.64	92.5	40	20	28	24	6"	100	1.10
WBS400	4	101.6	4.76	121.0	35	20	24	20	10"	100/50	1.92
WBS45M	1.77	45.0	2.09	53.0	45	25	28	24	4"	50	.52
WBS57M	2.24	57.0	2.68	68.0	40	20	28	24	5"	50	.62

**Note:** Service life may vary depending on operating conditions and type of material being conveyed.

### Service Temperature Range:

-4°F to 150°F

Actual service temperature range is application-dependent.

\* FDA - DFR Title 21 Parts 170 to 199.

\*\* USDA - For use in Federally-inspected meat and poultry plants

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# Industrial Ducting

## HBD Thermoid



### Ultraflex™

I.D. (in)  
2 - 18

#### FEATURES

Four types of PVC/Thermoplastic hose/ducting are available in a spectrum of different compound combinations for a wide range of job-specific applications. Its flexibility, compressibility, toughness, weather ability, and resistance to chemicals and abrasion extends its usefulness for dozens of difficult, awkward applications.

#### APPLICATIONS

Industrial vacuum systems, transfer of plastic pellets, dry bulk material handling system, agricultural products, lawn and garden, including chip handling, leaf and grass loading; Venting systems for chemical fumes, dust collection, exhausting gases, air movement; Ventilation, light material handling, internal cooling and venting of computers.



### FlexKing®

I.D. (in)  
1 - 24

#### FEATURES

Good flexibility, lightweight and crush resistance are characteristic of the nine types available. All are impregnated with neoprene and due to the method of construction, the fabric completely encloses the wire helix

#### APPLICATIONS

For hot air handling, fume control, dust collection, and light materials handling in the chemical, electrical, food, mining, paper, textile, utility and lumber industries.



### Tufttex®

I.D. (in)  
1 - 16

#### FEATURES

This series of four products is the only one of its kind in the ducting industry that borders on a general purpose hose. It features an integrally vulcanized rubber liner and cover with external corrugation to give maximum flexibility, yet maintaining a smooth bore.

#### APPLICATIONS

One series for handling of wet or dry materials and may be used for gravity, positive or negative flow. Another series for transmission or liquids, grindings, and contaminated air, as well as an air intake hose on over or off-road equipment, buses, farm machinery, and trucks. Another type designed for gravity, positive and negative applications in abrasive bulk material handling usage and temp ranges of -40F to 250F. The other type handles leaf suction applications

**Cyclone®**I.D. (in)  
5 - 30**FEATURES**

This eight product series is designed for all types of large air volume and fume control applications. It's exceptionally flexible, lightweight, and compresses neatly for easy storage. Will not rot or mildew. Has all sewn construction.

**APPLICATIONS**

Excellent for portable blower applications, temporary ship construction ventilation, welding fume removal, utility manhole ventilation, and portable heaters.

**Neoflex®**I.D. (in)  
1 - 16**FEATURES**

Lightweight and flexible, this two product series is designed for moving hot (up to 300F) or cold (-65F) air handling and fume control.

**APPLICATIONS**

Suited for conveying fumes and air.

**Siflex**I.D. (in)  
1 - 16**FEATURES**

Lightweight and flexible. Designed for high and low temp air handling applications (-80F to +600F).

**APPLICATIONS**

Product is excellent for close quarter applications where duct can snake around obstacles. Typical applications include aluminum and glass manufacturing fume removal, engine compartment air handling, turbine engine bleed air duct and paper processing equipment.

**Tufttex® GVR**I.D. (in)  
2 - 6**FEATURES**

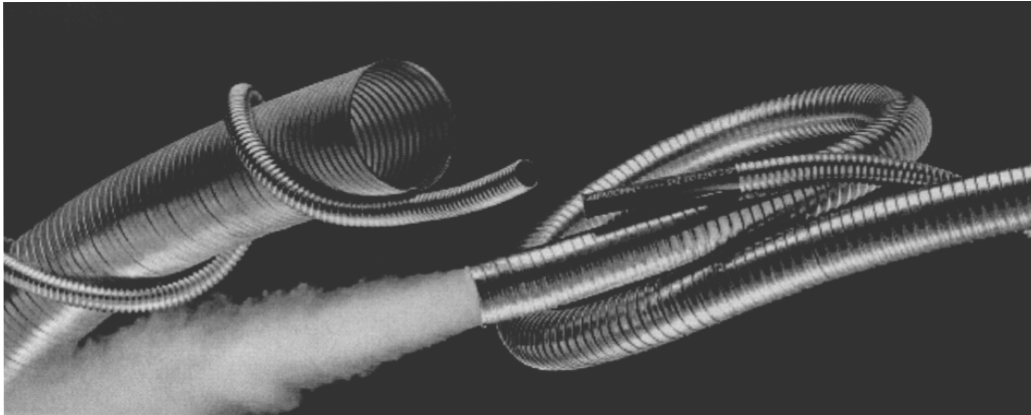
Lightweight and flexible for easy handling and hook-up. Neoprene cover resists abrasion, weather, oil, gasoline and gasoline vapors. Helical wound reinforcing wire provides negative and positive pressure strength. Remains flexible to -40F.

**APPLICATIONS**

Designed for petroleum-refinery terminals, tank trucks and service

**HBD  
Thermoid**

**HT4000 Series Unlined Rough Bore  
"Multi-Flex" Interlocked Metal Hose**



Interlocked construction provides a flexible metal hose that offers flexibility, strength and economy.

**Construction:**

- A single metal strip is formed to create a flexible interlocked metal hose that offers maximum flexibility and strength, as well as superior service life.
- Available in galvanized steel and stainless steel construction, with strip thickness from .010" to .030"¥
- Choice of packing materials to suit most applications.

**Applications:**

- Non-rigid connections for conveying gases and semi-solid materials.
- Dust and fume collection.
- Ventilation of heaters and general hot air ducting applications.
- Engine exhaust and flexible tail pipe applications.
- Garage fume exhaust collection.
- Hot air blower and suction hose applications.
- Protection armor and shielding.
- Fly ash removal
- Blow out protection for hydraulic and other high pressure hoses.
- Liner for corrugated hose and braid assemblies.
- Steam hose protection.



Unpacked



Packed

**Features:**

- High strength construction.
- Temperature and corrosion-resistant.
- Flexible...does not restrict movement when installed with other hoses.
- Can be formed and holds its shape, yet is easily moved.
- Available in standard 25' and 50' lengths *extended*.

**Maximum Service Temperature:**

Stainless Steel: Up to 1800°F      Galvanized Steel: Up to 750°F  
Note: Service temperature may vary due to choice of packing material.

**Catalog Series Numbers:**

**HT4000 Series Galvanized Unlined Interlocked Metal Hose (Unpacked):**

- HT4100G - Light Weight (.010" - .012" strip thickness)
- HT4150G - Light-Medium Weight (.014" - .016" strip thickness)
- HT4200G - Medium Weight (.018" - .020" strip thickness)
- HT4250G - Heavy Weight (.024" - .026" strip thickness)
- HT4300G - Extra-Heavy Weight (.029" - .031" strip thickness)

**HT4000 Series Stainless Steel Unlined Interlocked Metal Hose (Unpacked):**

- HT4100S - Light Weight (.010" - .012" strip thickness)
- HT4150S - Light-Medium Weight (.014" - .016" strip thickness)
- HT4200S - Medium Weight (.018" - .020" strip thickness)
- HT4250S - Heavy Weight (.024" - .026" strip thickness)
- HT4300S - Extra-Heavy Weight (.029" - .031" strip thickness)

¥ Note: Consult factor for other metal alternatives and special length requirements.

BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS OR DISCONTINUE PRODUCTS WITHOUT PRIOR NOTICE.





## HT4000 Series Unlined Rough Bore "Multi-Flex" Interlocked Metal Hose

### SPECIFICATIONS (Weights and bend diameters are based on extended hose and are approximate)

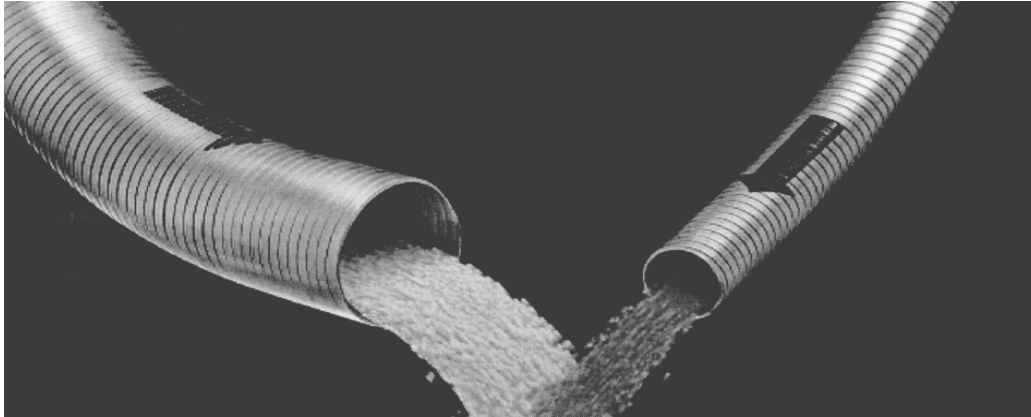
Hose Size I. D. (Inches)	Series & Strip Thickness									
	HT4100G/S .010" - .012"		HT4150G/S .014" - .016"		HT4200G/S .018" - .020"		HT4250G/S .024" - .026"		HT4300G/S .029" - .031"	
	Min. Inside Bend Dia. (In.)	Wt. per foot (lbs.)	Min. Inside Bend Dia. (In.)	Wt. per foot (lbs.)	Min. Inside Bend Dia. (In.)	Wt. per foot (lbs.)	Min. Inside Bend Dia. (In.)	Wt. per foot (lbs.)	Min. Inside Bend Dia. (In.)	Wt. per foot (lbs.)
5/16	2.5	0.10	2.5	0.15	—	—	—	—	—	—
3/8	3.0	0.12	3.0	0.20	—	—	—	—	—	—
1/2	3.5	0.15	4.0	0.25	—	—	—	—	—	—
5/8	4.0	0.20	4.5	0.30	—	—	—	—	—	—
3/4	5.25	0.25	5.625	0.36	—	—	—	—	—	—
7/8	6.0	0.29	6.0	0.40	—	—	—	—	—	—
1	7.0	0.33	7.5	0.45	—	—	—	—	—	—
1 1/8	7.5	0.37	8.0	0.50	—	—	—	—	—	—
1 1/4	8.0	0.41	9.0	0.55	—	—	—	—	—	—
1 3/8	8.5	0.45	10.0	0.60	—	—	—	—	—	—
1 1/2	9.5	0.50	11.0	0.70	12.0	1.00	—	—	—	—
1 5/8	10.0	0.54	11.5	0.75	13.0	1.05	—	—	—	—
1 3/4	10.5	0.58	12.0	0.80	14.0	1.10	—	—	—	—
1 7/8	11.0	0.62	12.5	0.85	15.0	1.20	—	—	—	—
2	12.0	0.70	13.0	0.90	16.0	1.30	18.0	1.60	19.0	2.10
2 1/4	13.5	0.75	14.5	1.10	17.0	1.45	19.0	1.80	20.0	2.20
2 1/2	15.0	0.80	16.0	1.20	18.0	1.60	20.0	2.00	21.0	2.30
2 3/4	17.5	0.90	16.5	1.30	20.0	1.80	22.0	2.15	23.0	2.50
3	20.0	1.00	21.0	1.40	22.0	2.00	24.0	2.30	26.0	2.70
3 1/4	21.0	1.10	22.5	1.50	24.0	2.10	26.0	2.50	27.0	2.95
3 1/2	22.0	1.20	24.0	1.60	25.0	2.30	27.0	2.70	28.0	3.20
4	25.0	1.40	27.0	1.80	29.0	2.60	30.0	3.10	31.0	3.60
4 1/2	28.0	1.50	30.0	2.00	32.0	2.90	34.0	3.50	36.0	4.10
5	30.0	1.70	32.0	2.30	34.0	3.00	36.0	3.90	38.0	4.50
5 1/4	32.0	1.80	34.5	2.40	36.0	3.15	39.0	4.10	41.0	4.75
5 1/2	35.0	1.90	37.0	2.50	39.0	3.30	42.0	4.30	44.0	5.00
6	40.0	2.00	42.0	2.70	44.0	3.60	47.0	4.70	50.0	5.40
6 1/4	41.0	2.10	43.0	2.80	46.0	3.75	49.0	4.90	52.0	5.60
6 1/2	42.0	2.20	44.0	2.95	47.0	3.90	50.0	5.10	53.0	5.80
7	44.0	2.40	46.0	3.20	50.0	4.20	53.0	5.50	56.0	6.30
7 1/4	46.0	2.50	47.5	3.30	52.0	4.30	55.0	5.70	58.0	6.50
7 1/2	48.0	2.60	49.0	3.40	53.0	4.40	56.0	5.85	59.0	6.75
8	50.0	2.70	52.0	3.60	56.0	4.70	59.0	6.20	62.0	7.20
9	52.0	3.0	56.5	4.05	61.0	5.30	64.0	6.60	68.0	7.60
9 1/2	54.0	3.2	59.0	4.25	63.0	5.60	67.0	6.80	71.0	7.80
10	59.0	3.4	61.0	4.50	65.0	5.90	69.0	7.00	74.0	9.00
11	—	—	66.0	5.00	71.0	6.50	75.0	7.40	79.0	9.90
11 1/4	—	—	67.5	5.10	72.0	6.60	76.0	7.50	81.0	10.20
11 1/2	—	—	69.0	5.20	74.0	6.75	77.0	7.60	83.0	10.40
12	—	—	72.0	5.40	76.0	7.00	80.0	7.80	84.0	10.80
14	—	—	100.0	6.30	106.0	8.10	110.0	9.40	115.0	12.60
16	—	—	—	—	121.0	9.20	125.0	11.00	150.0	14.40

Note: Standard Lengths are 25 ft. and 50 ft. coils extended; all other lengths available on request. Aluminum hose available on request.

BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS OR DISCONTINUE PRODUCTS WITHOUT PRIOR NOTICE.



**HT5000 Series Lined Smooth Bore  
"Smooth Flow" Interlocked Metal Hose**



HT5000's Interlocked Metal Hose combines Hose Tec's single strip interlocked construction with a smooth liner, providing a flexible metal hose that resists material build-up and internal abrasion. Materials flow smoothly in direction shown by arrows.

**Construction:**

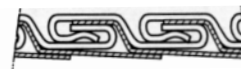
- An armor strip is combined with a strip of liner material and formed to create a lined flexible interlocked metal hose that offers superior strength and abrasion-resistance.
- Available with galvanized steel and stainless steel armor construction, with either galvanized or stainless steel liner, in a variety of weights.¥
- Standard is Type 304. Types 304L, 316, 316L, 321 and 410 stainless steel and aluminum also available.¥

**Applications:**

- Pneumatic dry bulk unloading of grains, pellets, powders and dry chemicals.
- Ideal hose for general bulk unloading applications.
- Transfer of hot materials (not for hot tar or asphalt).
- Bulk unloading of highly abrasive materials.
- Plastic pellet transfer.

**Features:**

- Flow indication arrows are provided on each length.
- Galvanized or stainless steel liner provides additional strength and greater resistance to abrasion.
- Smooth liner reduces material degradation and improved unloading time.
- Provides maximum flow rates for pneumatic conveying applications.
- Choice of packing materials to suit most applications.
- Available in standard 25' lengths extended, cut to length, or with attached end fittings.



Unpacked



Packed

**Maximum Service Temperature:**

Stainless Steel: Up to 1800°F      Galvanized Steel: Up to 750°F      Aluminum: 400°F

Note: Service temperature may vary due to choice of packing material.

**Catalog Series Numbers:**

**HT5000 Series Galvanized Lined Interlocked  
Hose with Galvanized or SS Liner (Unpacked):**

- HT5150LGG - Lt. Wt. with Galvanized Liner (.015" Armor/.015" Liner)
- HT5150LGS - Lt. Wt. with Stainless Steel Liner (.015" Armor/.015" Liner)
- HT5180LGG - Med. Wt. with Galvanized Liner (.018" Armor/.015" Liner)
- HT5180LGS - Med. Wt. with Stainless Steel Liner (.018" Armor/.015" Liner)

**HT4000 Series Stainless Steel Lined Interlocked  
Hose with Galvanized or SS Liner (Unpacked):**

- HT5150LSS - Lt. Wt. with Galvanized Liner (.015" Armor/.015" Liner)
- HT5150LSS - Lt. Wt. with Stainless Steel Liner (.018" Armor/.015" Liner)
- HT5180LSS - Med. Wt. with Galvanized Liner (.025" Armor/.018" Liner)

¥ Note: Consult factor for other metal alternatives and special length requirements.

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**Now available . . .**

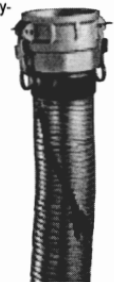
The only full-time swivel coupling in the industry that's available with both female couplers and male adapters.

**Full-time swivel female couplers and male adapters for use with flexible metal hoses!**

**HT5000 SPECIFICATIONS**  
(Weights & bend diameters are based on extended hose and are approximate)

Hose Size I.D. (Inches)	Series & Strip Thickness					
	HT5150LGG/LGS/LSS .015" Armor/.015" Liner		HT5180LGG/LGS/LSS .018" Armor/.015" Liner		HT5250LSS .025" Armor/.018" Liner	
	Minimum Inside Bend Dia. (Inches)	Weight per foot (lbs.)	Minimum Inside Bend Dia. (Inches)	Weight per foot (lbs.)	Minimum Inside Bend Dia. (Inches)	Weight per foot (lbs.)
1 1/2	11.25	1.10	12.0	1.50	—	—
1 3/4	13.0	1.35	14.0	1.70	—	—
2	15.0	1.60	16.0	1.90	—	—
2 1/4	17.0	1.90	19.0	2.10	—	—
2 1/2	19.0	2.10	21.0	2.30	—	—
2 3/4	21.0	2.30	25.0	2.50	—	—
3	23.0	2.50	28.0	2.80	35.0	3.75
3 1/2	27.0	2.90	30.0	3.20	37.0	4.35
4	30.0	3.40	32.0	3.60	39.0	5.10
4 1/2	34.0	3.75	37.0	4.00	44.0	5.40
5	37.0	4.10	41.0	4.70	48.0	5.60
6	44.0	4.90	49.0	5.60	60.0	6.25
7	53.0	5.80	58.0	6.60	68.0	7.80
8	61.0	6.60	63.0	7.70	74.0	8.80
10	—	—	79.0	9.70	86.0	11.00
12	—	—	94.0	11.70	104.0	13.00
14	—	—	110.0	13.50	120.0	15.50
16	—	—	126.0	15.00	138.0	18.00

- No more twisted, leaking flexible metal hoses.
- Specially-designed Type 316 stainless steel swivel insert is continuously-welded to hose both inside and out . . . provides maximum leak protection and freedom from material build-up.
- Swivel female coupler features aluminum construction and our exclusive investment cast stainless steel LTV™ (Lifetime Warranted) handles . . . 3" & 4" sizes have patented Z-Loc™ locking handles.
- Swivel male adapter available in aluminum or Type 316 stainless steel.
- Available with male adapters or female couplers on both ends . . . or one of each.
- Couplers and adapters available factory-installed or separately, for installation by a local welding shop.



The arrow tells all! Curved or distorted arrows like this one show that the hose has been deformed!

NOTE: Standard coil length is 25 ft. **extended** other lengths available on request.

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**Industrial  
Hose**

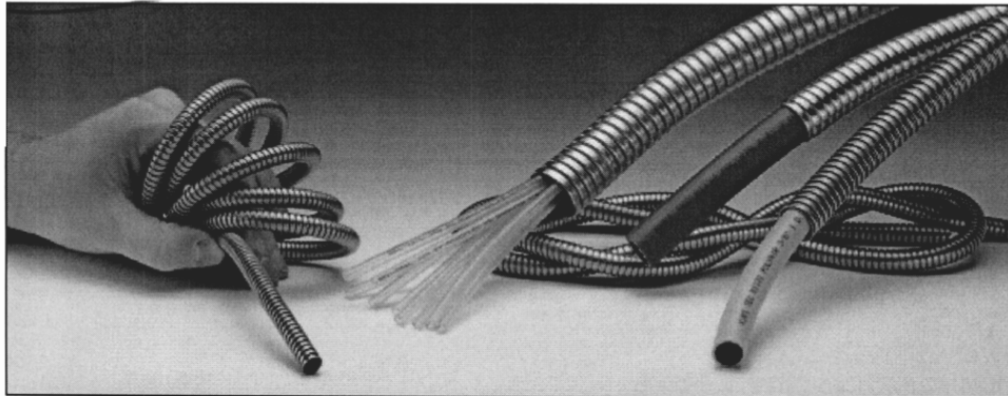


Phone 1-800-989-1770

Fax 1-800-989-1774

www.dfburnham.com

**HT1000 Series Flexible  
"Floppy Guard" Interlocked Metal Hose**



For interlocked metal hose applications requiring a more flexible hose, HT1000's unique floppy-type construction allows maximum flexibility.

**Construction:**

- A single metal strip is loosely interlock-wound to create an extremely flexible interlocked metal hose.
- Available in galvanized steel and stainless steel.

**Features:**

- Extremely flexible and light weight.
- Wide range of operating temperatures.
- Available in mill run and special cut lengths.

**Applications:**

- Shielding for wiring where flexibility is important.
- Protective armor for corrugated hose and braid.
- Protective armor for plastic and rubber hoses.
- Beverage dispenser hose armor.

**Maximum Service Temperature:**

Galvanized Steel: Up to 750°F  
304 Stainless Steel: 850°F

**Catalog Series Numbers:**

HT1100GF — Galvanized — .010" - .012" strip thickness

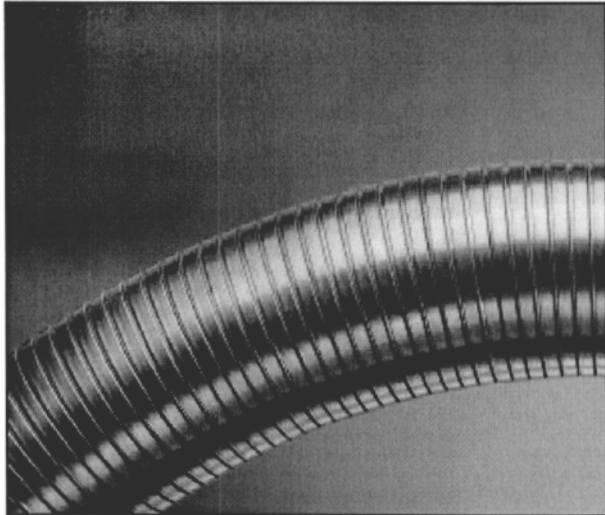
HT1100SF — Stainless Steel — .010" - .012" strip thickness

<b>SPECIFICATIONS</b> (Weights and bend diameters are based on extended hose and are approximate)					
Hose Size I. D. (In.)	HT1100GF/SF		Hose Size I. D. (In.)	HT1100GF/SF	
	Min. Inside Bend Dia. (In.)	Wt. per foot (lbs.)		Min. Inside Bend Dia. (In.)	Wt. per foot (lbs.)
$\frac{3}{16}$	1.5	.08	$1\frac{1}{2}$	12.0	.48
$\frac{1}{4}$	2.0	.10	$1\frac{5}{8}$	13.0	.52
$\frac{5}{16}$	2.5	.12	$1\frac{3}{4}$	14.0	.58
$\frac{3}{8}$	3.0	.14	$1\frac{7}{8}$	15.0	.62
$\frac{1}{2}$	4.5	.16	2	16.0	.66
$\frac{5}{8}$	5.5	.18	$2\frac{1}{4}$	19.0	.76
$\frac{3}{4}$	6.0	.20	$2\frac{1}{2}$	☞	☞
$\frac{7}{8}$	7.0	.23	$2\frac{3}{4}$	☞	☞
1	7.5	.28	3	☞	☞
$1\frac{1}{8}$	9.0	.32	$3\frac{1}{4}$	☞	☞
$1\frac{1}{4}$	10.0	.36	$3\frac{1}{2}$	☞	☞
$1\frac{3}{8}$	11.0	.42	4	☞	☞

BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS OR DISCONTINUE PRODUCTS WITHOUT PRIOR NOTICE.



# HT2000/HT3000 Series Heavy Duty Interlocked & Convulted "Flue-Saver" Chimney Liners



**HT2000 Series Heavy Duty Stripwound Interlocked Chimney Liner**

Stripwound interlocked construction provides a heavy duty flexible metal hose that offers flexibility, strength and long service life.

**HT2000 Construction:**

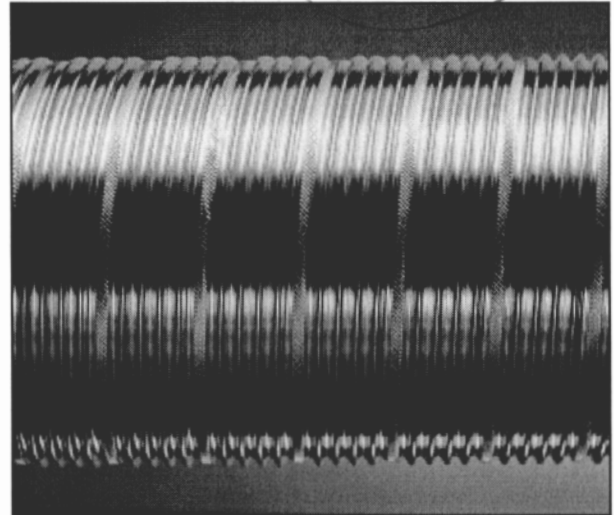
- A single metal strip is formed to create a flexible leak-proof interlocked metal hose that offers maximum flexibility, strength and resistance to corrosion, as well as superior service life.
- Standard is Type 304. Also available in Types 304L, 316, 316L and AL29-4-C stainless steel.

**Features:**

- Non-combustible...will not ignite or support combustion.
- Temperature, weather and Corrosion-resistant.
- Can be bent, straightened and re-bent.
- High crush-resistance.

**Applications:**

- Chimney relining.
- Fume hood exhaust.
- Industrial and commercial dryer vents.

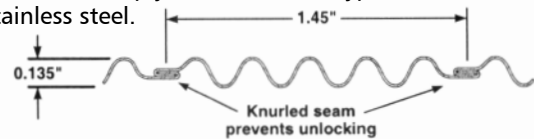


**HT3000 Series Convulted Chimney Liner**

- A single metal strip is corrugated and helically-wound to form a flexible gas-tight metal hose that offers flexibility, light weight and resistance to corrosion.

**HT3000 Construction:**

- Available in 2-ply aluminum and Types 316L and AL29-4-C stainless steel.



- Good air-handling characteristics...low friction loss and minimal air leakage.
- Available in standard 25' lengths (extended). Cut lengths also available.
- Available ovalized, square or rectangular as an option...specify major and minor dimensions.

- Oven, kiln and calciner exhaust.
- Garage fume exhaust collection.
- Fresh air supply for air intake.
- Temporary spot air conditioning ducts.

**Maximum Service Temperature:**

Stainless Steel: Up to 1800°F      Aluminum: 400°F

**Catalog Series Numbers:**

**HT2000 Series heavy duty stripwound chimney liner:**

- HT2150S - Light-Medium Weight (.014" - .016" strip thickness) 304 SS
- HT2200S - Medium Weight (.018" - .020" strip thickness) 304 SS

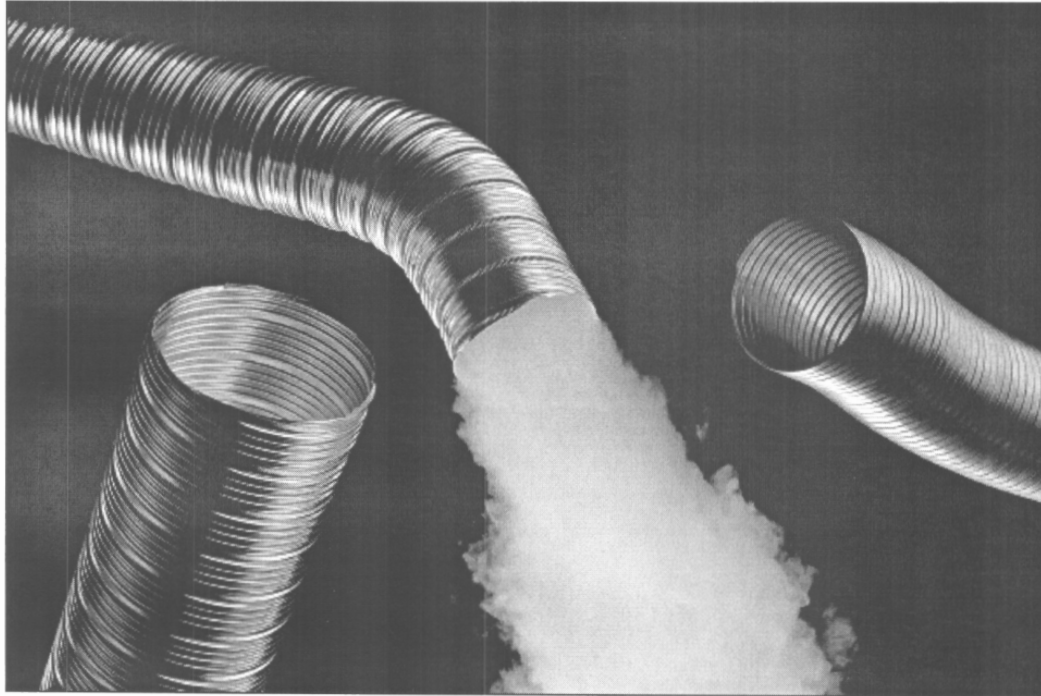
**HT3000 Series convulted chimney liner:**

- HT3007S - Light-weight (.006" - .007" strip thickness) 316L SS
- HT3008S - Light-weight (.007" - .008" strip thickness) aluminum
- HT3006S - Light-weight (.005" - .006" strip thickness) AL29-4-C SS

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# HT2000/HT3000 Series Heavy Duty Interlocked & Convuluted "Flue-Saver" Chimney Liners



**SPECIFICATIONS** (Weights and bend diameters are based on extended hose and are approximate)

Hose Size I. D. (Inches)	Series and Strip Thickness									
	HT3008A .007" - .008" Aluminum		HT3006S .005" - .006" AL29-4-C SS		HT3007S .006" - .007" SS		HT2150S .014" - .016"		HT2200S .018" - .020" SS	
	Minimum Inside Bend Dia. (Inches)	Weight per foot (lbs.)	Minimum Inside Bend Dia. (Inches)	Weight per foot (lbs.)	Minimum Inside Bend Dia. (Inches)	Weight per foot (lbs.)	Minimum Inside Bend Dia. (Inches)	Weight per foot (lbs.)	Minimum Inside Bend Dia. (Inches)	Weight per foot (lbs.)
3	4.5	.15	6.0	.35	6.0	.40	21.0	1.40	22.0	2.00
3 1/2	5.2	.17	7.0	.40	7.0	.45	24.0	1.60	25.0	2.30
4	6.0	.20	8.0	.45	8.0	.50	27.0	1.80	29.0	2.60
4 1/2	6.8	.22	9.0	.50	9.0	.58	30.0	2.00	32.0	2.80
5	7.5	.25	10.0	.55	10.0	.63	32.0	2.30	34.0	3.00
5 1/2	8.2	.27	11.0	.60	11.0	.70	37.0	2.50	39.0	3.30
6	9.0	.28	12.0	.65	12.0	.75	42.0	2.70	44.0	3.60
7	10.5	.33	14.0	.75	14.0	.86	46.0	3.20	50.0	4.20
8	12.0	.38	16.0	.85	16.0	1.00	52.0	3.60	56.0	4.70
9	13.5	.40	18.0	1.00	18.0	1.15	56.5	4.05	61.0	5.30
10	15.0	.45	20.0	1.10	20.0	1.27	61.0	4.50	65.0	5.90
12	18.0	.54	24.0	1.30	24.0	1.50	72.0	5.40	76.0	7.00
14	21.0	.63	28.0	1.50	28.0	1.73	100.0	6.30	106.0	8.10
16	24.0	.72	32.0	1.75	32.0	2.00	—	—	121.0	9.20
18	27.0	.81	36.0	2.00	36.0	2.30	—	—	☎	☎
20	30.0	.90	40.0	2.20	40.0	2.50	—	—	☎	☎
22	33.0	1.00	44.0	2.42	44.0	2.75	—	—	☎	☎
24	36.0	1.10	48.0	2.64	48.0	3.00	—	—	☎	☎

NOTE: Standard lengths are 25 ft. **extended**. Cut lengths available on request.  
☎ Telephone factory for availability.

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**PLASTIC GARDEN HOSE VALVE**



**CYCOLAC BODY & BALL  
MGH X FGH**

Part # Size  
30-163 ..... 3/4x3/4 Yellow

**PLASTIC, NON-CORROSIVE, 2-WAY  
HOSE SHUT-OFF "Y"**



30-160 ..... 3/4



30-624 ..... Y shape Zinc Alloy connector



30-626 .... Y shape Zinc Alloy connector with two levers



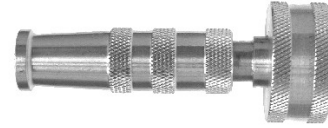
30-629 ..... Zinc Alloy swivel hose connector



30-631 ..... Zinc Alloy hose shut-off with one lever



30-637 ..... 2.5" Striped pattern brass nozzle



30-640 ..... 3" Crossed pattern brass nozzle



30-638 ..... 4" Crosse pattern brass nozzle



Lead Free

30-600 ..... 5-1/2" Zinc Alloy spray nozzle with insulated handle soft grip and front thread protector.



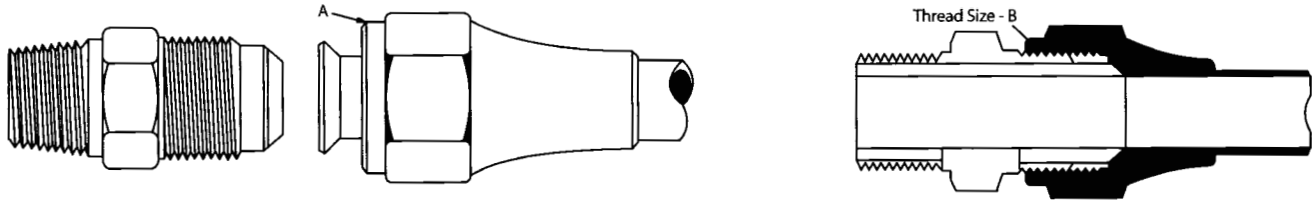
30-609 ..... Zinc Alloy spray nozzle with easy adjustable brass head and plastic grip.



30-630 ..... 4-1/2" Plastic spray nozzle

**Brass**

**SAE 45° FLARE**



<b>Tube O.D.</b>	<b>1/8</b>	<b>3/16</b>	<b>1/4</b>	<b>5/16</b>	<b>3/8</b>	<b>7/16</b>	<b>1/2</b>	<b>5/8</b>	<b>3/4</b>
<b>Thread Size-B</b>	<b>5/16-24</b>	<b>3/8-24</b>	<b>7/16-20</b>	<b>1/2-20</b>	<b>5/8-18</b>	<b>11/16-16</b>	<b>3/4-16</b>	<b>7/8-14</b>	<b>1-1/16-14</b>

**•Typical Application**

LP and natural gas, flammable liquids, instrumentation, refrigeration, power steering, hydraulic and pneumatic systems.

**•Working Pressure Ranges**

Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection.

<b>PSI</b>	<b>Tube O.D. (in.)</b>	<b>Tube Wall (in.)</b>
<b>2800</b>	<b>1/8</b>	<b>.030</b>
<b>1900</b>	<b>3/16</b>	<b>.030</b>
<b>1400</b>	<b>1/4</b>	<b>.030</b>
<b>1200</b>	<b>5/16</b>	<b>.032</b>
<b>1000</b>	<b>3/8</b>	<b>.032</b>
<b>750</b>	<b>1/2</b>	<b>.032</b>
<b>650</b>	<b>5/8</b>	<b>.035</b>
<b>550</b>	<b>3/4</b>	<b>.035</b>
<b>450</b>	<b>7/8</b>	<b>.035</b>

Temperature 73°F with copper tubing:

**•Vibration**

Good resistance - use long nut when greater vibration resistance is required.

**•Temperature Range**

-650F to +2500F (-530C to +1210C) range at maximum operating pressures.

**•Material**

CA360 Brass for Barstock fittings  
CA377 Brass for forged fittings

**•Used With**

Copper, brass, aluminum and steel hydraulic tubing that can be flared

**•Conformance**

Meets specifications and standards of ASA, ASME, SAE, and MS (Military standards).

**•Assembly Instructions**

- 1- Cut tubing to desired length. Make sure all burrs are removed and ends are cut square.
- 2- Slide nut on tube. Threaded and "A" of nut must face out.
- 3- Flare end of tube with a 450 flaring tool.
  - a-Measure flare diameter
  - b-Examine flare for excessive thin out.
- 4- Lubricate threads and assemble to fitting body. Nut should be turned hand out.
- 5- Tighten assembly with wrench until a solid feeling is encountered. From that point, apply a one-sixth turn.

Note: Do not over-torque as it may damage the fitting or split the tubing at the flare.

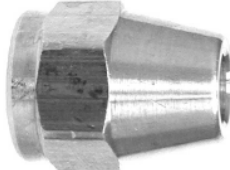
**Actual O.D. of Flare Fittings**





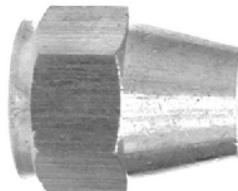
**SHORT ROD NUT**

<b>SAE #</b>	
010110	20910 41FS 1110 N1 41FX 441S 'L'



<b>Part #</b>	<b>Size</b>
818F-02B .....	1/8
818F-03B .....	3/16
818F-04B .....	1/4
818F-05B .....	5/16
818F-06B .....	3/8
818F-07B .....	7/16
818F-08B .....	1/2
818F-10B .....	5/8
818F-12B .....	3/4
818F-14B .....	7/8
818F-16B .....	1

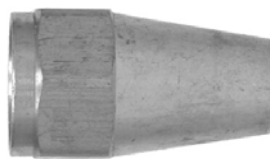
**REDUCING SHORT ROD NUT**



<b>Part #</b>	<b>Size</b>
818RF-06-04B .....	3/8x1/4
818RF-08-06B .....	1/2x3/8
818RF-10-08B .....	5/8x1/2

**LONG ROD NUT**

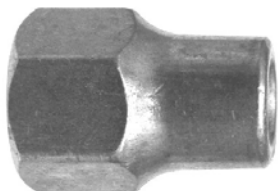
<b>SAE #</b>	
010111	14FL N2 241 441 41



<b>Part #</b>	<b>Size</b>
818FL-02B .....	1/8
818FL-03B .....	3/16
818FL-04B .....	1/4
818FL-05B .....	5/16
818FL-06B .....	3/8
818FL-08B .....	1/2
818FL-10B .....	5/8
818FL-12B .....	3/4

**LONG FORGED NUT**


<b>SAE #</b>	
010167	N4 14FL 641 41FF 39



<b>Part #</b>	<b>Size</b>
10-028 .....	1/4
10-030 .....	3/8
10-031 .....	1/2
10-032 .....	5/8
10-033 .....	3/4

**SHORT FORGED NUT**


<b>SAE #</b>	
010166	14FS 41FFS 40 641-S 1116 NS4



<b>Part #</b>	<b>Size</b>
818FS-03B .....	3/16
818FS-04B .....	1/4
818FS-05B .....	5/16
818FS-06B .....	3/8
818FS-08B .....	1/2
818FS-10B .....	5/8
818FS-12B .....	3/4
818FS-14B .....	7/8

**EXTRA HEAVY SHORT FORGED NUT**

<b>SAE #</b>	
	NSA



<b>Part #</b>	<b>Size</b>
10-046 .....	1/4
10-047 .....	3/8
10-048 .....	1/2
10-049 .....	5/8

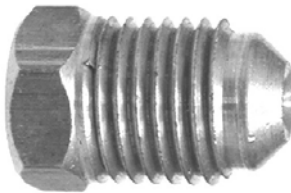
**FORGED REDUCING NUT**



NSR4  
14FS  
41FRS  
40R  
662-S

Part #	Size
818RF-05-04B	5/16x1/4
818RF-06-04B	3/8x1/4
818RF-06-05B	3/8x5/16
818RF-08-06B	1/2x3/8
818RF-10-08B	5/8x3/8
818RF-10-08B	5/8x1/2
818RF-12-10B	3/4x5/8

**FLARED PLUG**



58  
639F  
PF  
57  
57  
P2  
2229  
439

Part #	Size
806F-03	3/16
806F-04	1/4
806F-05	5/16
806F-06	3/8
806F-08	1/2
806F-10	5/8
806F-12	

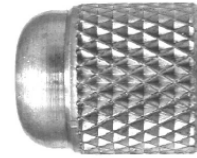
**FLARED CAP**



640F  
41FC  
56  
N5  
2129  
54  
440

Part #	Size
820F-03B	3/16
820F-04B	1/4
820F-05B	5/16
820F-06B	3/8
820F-08B	1/2
820F-10B	5/8
820F-12B	3/4

**FIGHTER TIGHTENING CAP**



NFT5

Part #	Size
10-081	1/4

**COPPER GASKET**



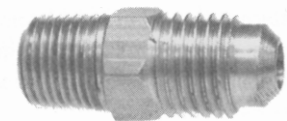
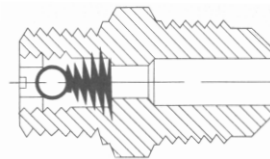
SAE #	Part #	Size
010113	10-084	3/16
	10-085	1/4
	10-086	5/16
	10-087	3/8
	10-088	1/2
	10-089	5/8
	10-90	3/4

**COPPER BONNET**



SAE #	Part #	Size
010113	10-094	3/16
	10-095	1/4
	10-097	3/8
	10-098	1/2
	10-099	5/8
	10-100	3/4

**MALE BALL CHECK CONNECTOR**



Part #	Size
10-131	1/4x1/8
10-132	5/16x1/8
10-133	3/8x1/4

Note: Ball & Spring position may be reversed to change flow/check position. Maximum pressure 3 PSI



**UNION**

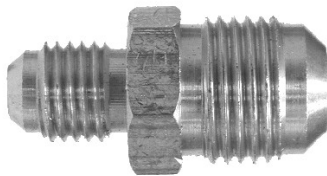
**SAE #**  
**010101**



42F  
U2

<b>Part #</b>	<b>Size</b>
815F-02-02B .....	1/8
815F-03-03B .....	3/16
815F-04-04B .....	1/4
815F-05-05B .....	5/16
815F-06-06B .....	3/8
815F-07-07B .....	7/16
815F-08-08B .....	1/2
815F-10-10B .....	5/8
815F-12-12B .....	3/4
815F-14-14B .....	7/8

**REDUCING UNION**



656F  
UR2  
42-R

<b>Part #</b>	<b>Size</b>
815F-05-04B .....	5/16x1/4
815F-06-04B .....	2/8x1/4
815F-06-05B .....	3/8x5/16
815F-08-04B .....	1/2x1/4
815F-08-06B .....	1/2x3/8
815F-10-06B .....	5/8x3/8
815F-10-08B .....	5/8x1/2
815F-12-10B .....	3/4x5/8

**UNION TEE**

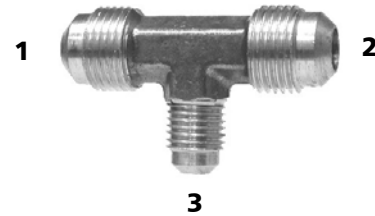
**SAE #**  
**010401**



244F  
T2  
144F

<b>Part #</b>	<b>Size</b>
824F-02B .....	1/8
824F-03B .....	3/16
824F-04B .....	1/4
824F-05B .....	5/16
824F-06B .....	3/8
824F-08B .....	1/2
824F-10B .....	5/8
824F-12B .....	3/4
824F-14B .....	7/8

**REDUCING TEE**



144F  
TR2  
659F  
684F  
44R

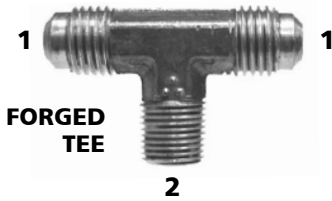
**1 X 2 X 3**

<b>Part #</b>	<b>Size</b>
824F-04-06B .....	1/4x1/4x3/8
824F-05-04B .....	5/16x5/16x1/4
824F-06-04-04B .....	3/8x1/4x1/4
824F-06-04-06B .....	3/8x1/4x3/8
824F-06-04B .....	3/8x3/8x1/4
824F-06-08B .....	3/8x3/8x1/2
824F-06-10B .....	3/8x3/8x5/8
824F-08-06-06B .....	1/2x3/8x3/8
824F-08-06-08B .....	1/2x3/8x1/2
824F-08-04B .....	1/2x1/2x1/4
824F-08-06B .....	1/2x1/2x3/8
824F-10-08-10B .....	5/8x1/2x5/8
824F-10-06B .....	5/8x5/8x3/8
824F-10-08B .....	5/8x5/8x1/2
824F-12-10B .....	3/4x3/4x5/8



**MALE BRANCH TEE**

SAE #  
010425



T1  
145F  
45

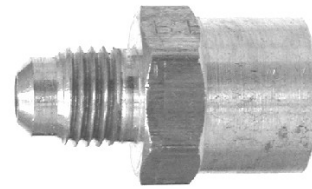
**FORGED  
TEE**

**FLARE X MALE PIPE  
1 X 2**

Part #	Size
825F-02-02B	1/8x1/8
825F-04-02B	1/4x1/8
825F-04-04B	1/4x1/4
825F-04-06B	1/4x3/8
825F-05-02B	5/16x1/8
825F-05-04B	5/16x1/4
825F-06-02B	3/8x1/8
825F-06-06B	3/8x3/8
825F-06-08B	3/8x1/2
825F-08-04B	1/2x1/4
825F-08-06B	1/2x3/8
825F-08-08B	1/2x1/2
825F-10-06B	5/8x3/8
825F-10-08B	5/8x1/2
825F-10-12B	5/8x3/4
825F-12-08B	3/4x1/2
825F-12-12B	3/4x3/4

**FEMALE ADAPTER**

SAE #  
010103



46  
U3

**FLARE X FEMALE PIPE**

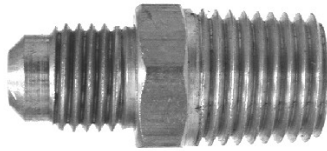
Part #	Size
854F-02-02B	1/8x1/8
854F-03-02B	3/16x1/8
854F-04-02B	1/4x1/8
854F-04-04B	1/4x1/4
854F-04-06B	1/4x3/8
854F-04-08B	1/4x1/2
854F-05-02B	5/16x1/8
854F-05-04B	5/16x1/4
854F-05-06B	5/16x3/8
854F-06-02B	3/8x1/8
854F-06-04B	3/8x1/4
854F-06-06B	3/8x3/8
854F-06-08B	3/8x1/2
854F-06-12B	3/8x3/4
854F-08-04B	1/2x1/4
854F-08-06B	1/2x3/8
854F-08-08B	1/2x1/2
854F-08-12B	1/2x3/4
854F-10-06B	5/8x3/4
854F-10-08B	5/8x1/2
854F-10-12B	5/8x3/4
854F-12-08B	3/4x1/2
854F-12-12B	3/4x3/4
854F-14-12B	7/8x3/4

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**MALE ADAPTER**

**SAE #**  
**010102**



U1  
48

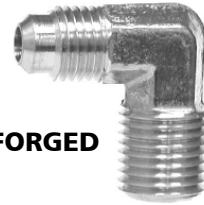
**FLARE X MALE PIPE**

Part #	Size
816F-02-02B	1/8x1/8
816F-03-02B	3/16x1/8
816F-04-02B	1/4x1/8
816F-04-04B	1/4x1/4
816F-04-06B	1/4x3/8
816F-04-08B	1/4x1/2
816F-05-02B	5/16x1/8
816F-05-04B	5/16x1/4
816F-05-06B	5/16x3/8
816F-06-02B	3/8x1/8
816F-06-04B	3/8x1/4
816F-06-06B	3/8x3/8
816F-06-08B	3/8x1/2
816F-06-12B	3/8x3/4
816F-08-04B	1/2x1/4
816F-08-06B	1/2x3/8
816F-08-08B	1/2x1/2
816F-08-12B	1/2x3/4
816F-10-04B	5/8x1/4
816F-10-06B	5/8x3/4
816F-10-08B	5/8x1/2
816F-10-12B	5/8x3/4
816F-12-08B	3/4x1/2
816F-12-12B	3/4x3/4
816F-14-08B	7/8x1/2
816F-14-12B	7/8x3/4
816F-16-12B	1x3/4
816F-16-16B	1x1

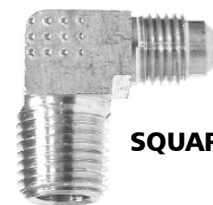
The will to win is not nearly as important as the will to prepare to win.  
- Bobby Knight

**90° MALE ELBOW**

**SAE #**  
**010202**



**FORGED**



**SQUARE**

249F  
49  
E1  
149F

**FLARE X MALE PIPE**

Part #	Size
822F-02-02B	1/8x1/8
BS822F-02-02B	BARSTOCK 1/8x1/8
822F-03-02B	3/16x1/8
BS822F-03-02B	BARSTOCK 3/16x1/8
822F-03-04B	3/16x1/4
822F-04-02B	1/4x1/8
BS822-04-02B	BARSTOCK 1/4x1/8
822F-04-04B	1/4x1/4
BS822F-04-04B	BARSTOCK 1/4x1/4
822F-04-06B	1/4x3/8
822F-04-08B	1/4x1/2
822F-05-02B	5/16x1/8
BS822F-05-02B	BARSTOCK 5/16x1/8
822F-05-04B	5/16x1/4
BS822F-05-04	BARSTOCK 5/16x1/4
822F-05-06B	5/16x3/8
822F-06-02B	3/8x1/8
BS822F-06-02B	BARSTOCK 3/8x1/8
822F-06-04B	3/8x1/4
BS822F-06-04B	BARSTOCK 3/8x1/4
822F-06-06B	3/8x3/8
BS822F-06-06B	BARSTOCK 3/8x3/8
822F-06-08B	3/8x1/2
822F-06-12B	3/8x3/4
822F-08-04B	1/2x1/4
BS822F-08-04B	BARSTOCK 1/2x1/4
822F-08-06B	1/2x3/8
BS822F-08-06B	BARSTOCK 1/2x3/8
822F-08-08B	1/2x1/2
BS822F-08-08B	BARSTOCK 1/2x1/2
822F-08-12B	1/2x3/4
822F-10-04B	5/8x1/4
822F-10-06B	5/8x3/8
BS822-10-06B	BARSTOCK 5/8x3/8
822F-10-08B	5/8x1/2
BS822F-10-08B	BARSTOCK 5/8x1/2
822F-12-12B	5/8x3/4
822F-12-08B	3/4x1/2
822F-12-12B	3/4x3/4
BS822F-12-12B	BARSTOCK 3/4x3/4
822F-12-12B	7/8x3/4
822F-16-12B	1x3/4
822F-16-16B	1x1

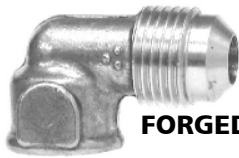
**Brass**



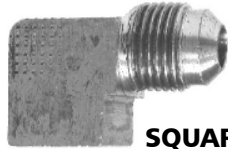
90° FEMALE ELBOW

SAE #  
010203

E3  
50  
150F



FORGED ELBOW



SQUARE BARSTOCK

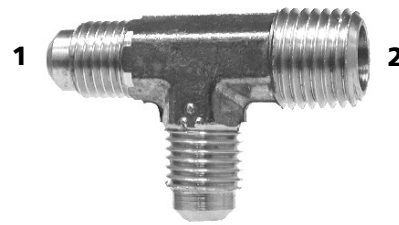
FLARE X FEMALE PIPE

Part #	Size
855F-03-02B	3/16x1/8
855F-04-02B	1/4x1/8
BS855F-04-02B	BARSTOCK 1/4x1/8
855F-04-04B	1/4x1/4
855F-04-06B	1/4x3/8
855F-04-08B	1/4x1/2
855F-05-02B	5/16x1/8
BS855F-05-02B	BARSTOCK 5/15x1/8
855F-05-04B	5/16x1/4
855F-06-02B	3/8x1/8
855F-06-04B	3/8x1/4
BS855F-06-04B	BARSTOCK 3/8x1/4
855F-06-06B	3/8x3/8
855F-06-08B	3/8x1/2
855F-06-12B	3/8x3/4
855F-08-04B	1/2x1/4
855F-08-06B	1/2x3/8
BS855F-08-06B	BARSTOCK 1/2x3/8
855F-08-08B	1/2x1/2
855F-08-12B	1/2x3/4
855F-10-06B	5/8x3/8
855F-10-08B	5/8x1/2
855F-10-12B	5/8x3/4
855F-12-08B	3/4x1/2
855F-12-12B	3/4x3/4

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FORGED MALE RUN TEE

T3  
151F  
51



1

FLARE X MALE PIPE  
1 X 2

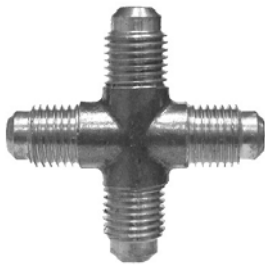
Part #	Size
826F-03-02B	3/16x1/8
826F-04-02B	1/4x1/8
826F-04-04B	1/4x1/4
826F-05-02B	5/16x1/8
826F-05-04B	5/16x1/4
826F-06-04B	3/8x1/4
826F-06-06B	3/8x3/8
826F-06-08-06B	3/8x1/2x3/8
826F-06-08B	3/8x1/2
826F-08-06-08B	1/2x3/8x1/2
826F-08-06B	1/2x3/8
826F-08-08B	1/2x1/2
826F-10-08B	5/8x1/2
826F-12-08B	3/4x1/2
826F-12-12B	3/4x3/4
826F-03-02-05B	3/16x1/8x5/16

More sizes available



**FORGED CROSS FLARE**

**SAE #**  
**010501**



455  
C1  
147F  
52

Part #	Size
827F-04B .....	1/4
827F-05B .....	5/16
827F-06B .....	3/8
827F-08B .....	1/2

**FORGED REDUCING ELBOW**



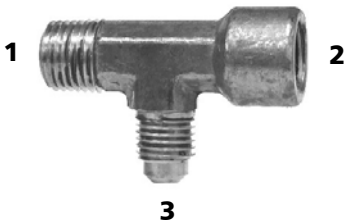
ER2  
657F  
55R

**FLARE X FLARE**

Part #	Size
821F-06-04B .....	3/8x1/4
821F-06-05B .....	3/8x5/16
821F-08-06B .....	1/2x3/8
821F-10-08B .....	5/8x1/2

**FORGED ADAPTER TEE**

SERVICE TEE

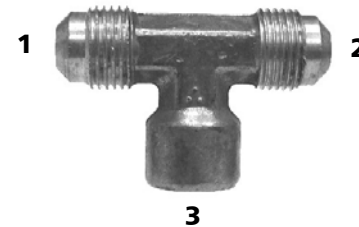


T17  
53

**MALE PIPE X FEMALE PIPE X FLARE**

Part #	Size
10-382 .....	1/8x1/8x1/4
10-383 .....	1/4x1/4x1/4

**FORGED FEMALE BRANCH TEE**



TF1  
136  
T4  
36  
58FP

**FLARE X FEMALE PIPE  
1 & 2 X 3**

Part #	Size
856F-04-04B .....	1/4x1/4
856F-06-04B .....	3/8x1/4
856F-06-06B .....	3/8x3/8
856F-06-08B .....	3/8x1/2
856F-08-08B .....	1/2x1/2
856F-10-08B .....	5/8x1/2

**FORGED 90° FLARE ELBOW**



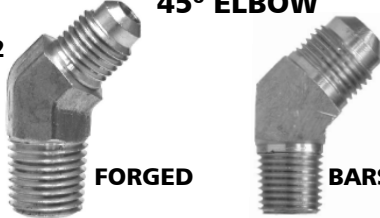
E2  
155F

Part #	Size
821F-02-02B .....	1/8
821F-03-03B .....	3/16
821F-04-04B .....	1/4
821F-05-05B .....	5/16
821F-06-06B .....	3/8
821F-08-08B .....	1/2
821F-10-10B .....	5/8
821F-12-12B .....	3/4
821F-14-14B .....	7/8

**More sizes available**

**45° ELBOW**

SAE # 010302



**FORGED**      **BARSTOCK**

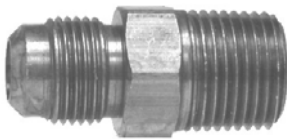
**FLARE X MALE PIPE**

E145
54
159F
654F
59FF
254
47
4945

Part #	Size
823F-04-02B .....	1/4x1/8
BS823F-04-02B .....	1/4x1/8
823F-04-04B .....	1/4x1/4
823F-05-02B .....	5/16x1/8
823F-05-04B .....	5/16x1/4
823F-06-04B .....	3/8x1/4
BS823F-06-04B .....	3/8x1/4
823F-06-06B .....	3/8x3/8
823F-06-08B .....	3/8x1/2
823F-08-06B .....	1/2x3/8
BS823F-08-06B .....	1/2x3/8
823F-08-08B .....	1/2x1/2
823F-10-06B .....	5/8x3/8
823F-10-08B .....	5/8x1/2
823F-12-08B .....	3/4x1/2
823F-12-12B .....	3/4x3/4

**BRASS GAS RANGE FITTINGS**

**BRASS MALE ADAPTERS**




**FLARE X MALE PIPE**

Part #	Size
35-132 .....	1/2x1/2(3/8FIPTAP)
35-134 .....	516x12

**DRUM ADAPTERS**

SAE # 010165



RD  
IF  
K1

• STRAIGHT  
THREAD

**FLARE X FIP**

Part #	Size
50-011 .....	1/4x1/2
50-001 .....	1/4x3/4

**FEMALE 45° FLARE FITTINGS**

• Use with Copper Gasket  
**UNION**

SAE # 010107



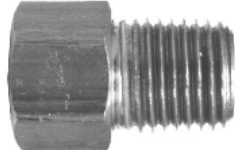
2310  
U4  
660HD  
32

**FEMALE FLARE X FEMALE FLARE**

Part #	Size
10-135 .....	1/4
10-136 .....	3/8
10-137 .....	1/2

**FEMALE FLARE ADAPTER**

SAE # 010106



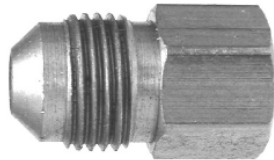
U5  
664FHD  
33  
48-FF

**FEMALE FLARE X MALE PIPE**

Part #	Size
10-440 .....	1/4x1/8
10-441 .....	1/4x1/4
10-442 .....	3/8x1/4
10-443 .....	1/2x3/8
10-444 .....	1/2x1/2

**FLARE REDUCER**

SAE # 010105



UR3  
661FHD  
227  
46-FF

**MALE FLARE X FEMALE FLARE**

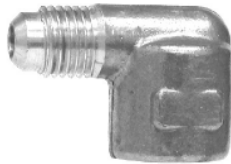
Part #	Size
10-462 .....	1/4x3/8
10-461 .....	1/4x1/2
10-463 .....	3/8x1/4
10-464 .....	3/8x1/2
10-473 .....	3/8x5/8
10-467 .....	1/2x3/8
10-468 .....	1/2x5/8
10-469 .....	5/8x1/2
10-470 .....	5/8x3/4
10-471 .....	3/4x5/8





**FEMALE 45° FLARE FITTINGS**

•Use with Copper Gasket  
**90° ELBOW**



E4  
669F

**MALE FLARE X FEMALE FLARE**

Part #	Size
10-500 .....	1/4x1/4
10-495 .....	1/2x1/2

**BRASS FLARE SWIVEL FITTINGS**

**FORGED SWIVEL**

SAE #	Size
<b>010108</b>	1350 US4 14FSV 34



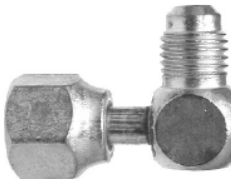
Part #	Size
10-481 .....	1/4
10-482 .....	5/16
10-483 .....	3/8
10-484 .....	1/2
10-485 .....	5/8
10-486 .....	3/4

**REDUCING SWIVELS**



Part #	Size
10-487 .....	3/8x1/4
10-488 .....	1/2x3/8
10-489 .....	5/8x1/2

**FORGED SWIVEL ELBOWS**



**MALE FLARE X FEMALE FLARE SWIVEL**

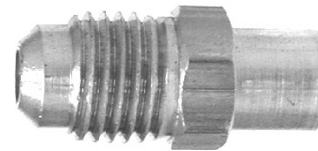
Part #	Size
10-493 .....	1/4
10-494 .....	3/8
10-495* .....	1/2

\*No Swivel

**BRASS SOLDER FITTINGS**

**FEMALE TO SWT UNION**

SAE #  
**010104**

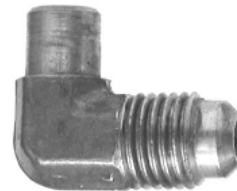


4085  
US3  
672FS  
46FS  
277

**FLARE X SWT**

Part #	Size
10-600 .....	1/4x1/4
10-602 .....	1/4x3/8
10-610 .....	1/2x1/2
10-611 .....	1/2x5/8
10-615 .....	3/4x3/4

**FORGED 90° SOLDER ELBOWS**



ES2  
SOLE1

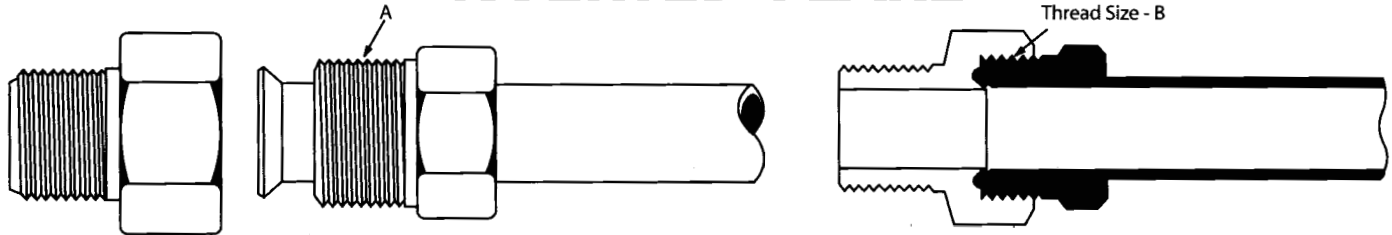
**FLARE X SOLDER**

Part #	Size
10-620 .....	1/4x1/4

Many, Many More Sizes Available! Just Ask!  
See 37° flare brass fittings.

Brass

**INVERTED FLARE**



<b>Tube O.D.</b>	<b>1/8</b>	<b>3/16</b>	<b>1/4</b>	<b>5/16</b>	<b>3/8</b>	<b>7/16</b>	<b>1/2</b>	<b>5/8</b>	<b>3/4</b>
<b>Thread Size-B</b>	<b>5/16-24</b>	<b>3/8-24</b>	<b>7/16-20</b>	<b>1/2-20</b>	<b>5/8-18</b>	<b>11/16-16</b>	<b>3/4-16</b>	<b>7/8-14</b>	<b>1-1/16-14</b>

**•Typical Application**

Hydraulic brake, power steering, fuel lines and transmission cooler lines, LP and natural gas.

**•Working Pressure Ranges**

Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection. Temperature 73°F with copper tubing:

<b>PSI</b>	<b>Tube O.D. (in.)</b>	<b>Tube Wall (in.)</b>
<b>2800</b>	<b>1/8</b>	<b>.030</b>
<b>1900</b>	<b>3/16</b>	<b>.030</b>
<b>1400</b>	<b>1/4</b>	<b>.030</b>
<b>1200</b>	<b>5/16</b>	<b>.032</b>
<b>1000</b>	<b>3/8</b>	<b>.032</b>
<b>750</b>	<b>1/2</b>	<b>.032</b>
<b>650</b>	<b>5/8</b>	<b>.035</b>
<b>550</b>	<b>3/4</b>	<b>.035</b>

**•Vibration**

Excellent resistance.

**•Temperature Range**

-650F to +2500F (-530C to +1210C) range at maximum operating pressures.

**•Material**

CA360 Brass.

**Actual O.D. of male inverted flare threads**

**•Used With**

Copper, brass, aluminum and steel hydraulic tubing that can be flared

**•Advantages**

Very low cost and reusable. Seats and threads are internal and protected. Compact, excellent vibration life. Short nut affords very close tube bends. Steel or brass tube nut.

**•Conformance**

Meets specifications and standards of ASA, ASME, SAE, and MS (Military standards).

**•Assembly Instructions**

- 1- Cut tubing to desired length. Make sure all burrs are removed and ends are cut square.
- 2- Slide nut on tube. Threaded end "A" of nut must face out.
- 3- Flare end of tube with a 45° flaring tool.
  - a-Measure flare diameter
  - b-Examine flare for excessive thin out.
  - c-On thin wall, welded or brazed tubing, use double flare to prevent pinch-off and cracked flares.
- 4- Lubricate threads and assemble to fitting body. Nut should be turned hand tight.
- 5- Tighten assembly with wrench until a solid feeling is encountered. From that point, apply a one-sixth turn.

**Note:** Do not over-torque as it may damage the fitting or split the tubing at the flare.

**Actual O.D. of Male Inverted Flare Fittings**

<b>5/16"-28 2800 PSI</b>	<b>3/8"-24 1900 PSI</b>	<b>7/16"-24 1400 PSI</b>	<b>1/2"-20 1200 PSI</b>	<b>5/8"-18 1000 PSI</b>	<b>3/4"-18 750 PSI</b>	<b>7/8"-18 650 PSI</b>	<b>1-1/16"-16 550 PSI</b>
<b>1/8"</b>	<b>3/16"</b>	<b>1/4"</b>	<b>5/16"</b>	<b>3/8"</b>	<b>1/2"</b>	<b>5/8"</b>	<b>3/4"</b>



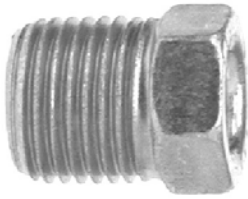
# Brass Fittings

## Inverted Flare

## Inverted Flare

### LONG STEEL NUT

**SAE #**  
040110



210S  
411FS  
105  
41W

Part #	Size
12-009 .....	3/16
12-010 .....	1/4

### BRASS NUT

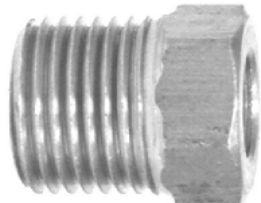


7896

Part #	Size
818IF-02B .....	1/8
818IF-03B .....	3/16
818IF-04B .....	1/4
818IF-05B .....	5/16
818IF-06B .....	3/8
818IF-08B .....	1/2

### SPECIAL FORD NUT

**SAE #**  
040110



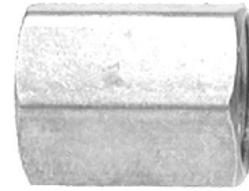
2100  
411F  
100  
411B

Part #	Size
12-020 .....	1/4

**“Character is what you do on the third and fourth tries.”**  
- James A. Michener

### UNION INTERNAL

**SAE #**  
040101



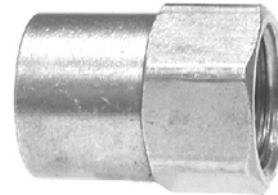
2300  
42IFHD

### INVERTED FLARE X INVERTED FLARE

Part #	Size
910IF-02-02B .....	1/8
910IF-03-03B .....	3/16
910IF-04-04B .....	1/4
910IF-05-05B .....	5/16
910IF-06-06B .....	3/8
910IF-08-08B .....	1/2
910IF-10-10B .....	5/8

### FEMALE ADAPTER

**SAE #**  
040103



461FHD  
252  
46W

### INVERTED FLARE X FEMALE PIPE

Part #	Size
12-032 .....	3/16x1/8
12-033 .....	1/4x1/8
12-034 .....	5/16x1/8
12-035 .....	3/8x1/4
12-036 .....	1/2x3/8
12-030 .....	5/8x1/2
12-031 .....	3/4x3/4

**“Maybe, just once, someone will call me ‘sir’ without adding, ‘you’re making a scene’.**  
- Homer Simpson

**Brass**

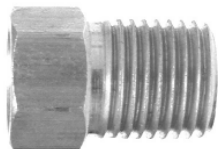
# Brass Fittings

## Inverted Flare

## Inverted Flare

### MALE ADAPTER

**SAE #**  
**040102**



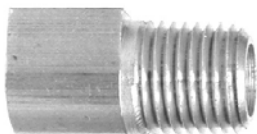
2200  
48IFHD  
202  
48W

### INVERTED FLARE X NPTF

Part #	Size
909IF-02-02B	1/8x1/8
909IF-03-02B	3/16x1/8
909IF-04-02B	1/4x1/8
909IF-04-04B	1/4x1/4
909IF-05-02B	5/16x1/8
909IF-05-04B	5/16x1/4
909IF-06-02B	3/8x1/8
909IF-06-04B	3/8x1/4
909IF-06-06B	3/8x3/8
909IF-08-04B	1/2x1/4
909IF-08-06B	1/2x3/8
909IF-08-08B	1/2x1/2
909IF-10-08B	5/8x1/2
909IF-12-08B	3/4x1/2
909IF-12-12B	3/4x3/4
909IF-16-16B	1x1

### ELBOW

**SAE #**  
**040202**



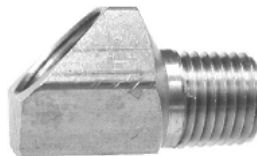
400  
2400  
249IFHD  
402  
249IF  
49W

### INVERTED FLARE X NPTF

Part #	Size
914IF-02-02B	1/8x1/8
914IF-03-02B	3/16x1/8
914IF-04-02B	1/4x1/8
914IF-04-04B	1/4x1/4
914IF-05-02B	5/16x1/8
914IF-05-04B	5/16x1/4
914IF-06-02B	3/8x1/8
914IF-06-04B	3/8x1/4
914IF-06-06B	3/8x3/8
914IF-08-06B	1/2x3/8
914IF-08-08B	1/2x1/2
914IF-10-06B	5/8x3/8
914IF-10-08B	5/8x1/2
914IF-12-08B	3/4x1/2
914IF-14-12B	7/8x3/4
914IF-16-16B	1x1

### 45° ELBOW

**SAE #**  
**040302**



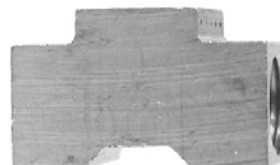
154  
2352  
259IFHD  
532  
94W

### INVERTED FLARE X MALE PIPE

Part #	Size
915IF-02-02B	1/8x1/8
915IF-03-02B	3/16x1/8
915IF-04-02B	1/4x1/8
915IF-05-02B	5/16x1/8
915IF-05-04B	5/16x1/4
915IF-06-02B	3/8x1/8
915IF-06-04B	3/8x1/4
915IF-08-06B	1/2x3/8
915IF-10-08B	5/8x1/2

### UNION TEE

**SAE #**  
**040401**

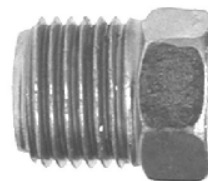


244IFHD  
702  
441

Part #	Size
917IF-02B	1/8
917IF-03B	3/16
917IF-04B	1/4
917IF-05B	5/16
917IF-06B	3/8
917IF-08B	1/2

### STEEL PLUG

**SAE #**  
**040109**



•CORED  
106  
411P  
131  
2131

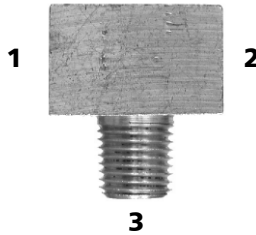
Part #	Size
932IF-03B	3/16
932IF-04B	1/4
932IF-05B	5/16
932IF-06B	3/8

*Send DF Burnham & Company  
all your high volume quotes!*



**MALE BRANCH TEE**

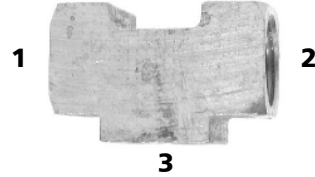
SAE #  
040427



145  
245IFHD  
602  
2600  
600

**FEMALE BRANCH TEE**

SAE #  
040427



252IFHD  
652  
136

**IN FL X IN FL X MALE PIPE  
(1 & 2) X 3**

Part #	Size
922IF-03-02B	3/16x1/8
922IF-04-02B	1/4x1/8
922IF-05-02B	5/16x1/8
922IF-06-04B	3/8x1/4

**INVERTED FLARE X INVERTED FLARE X  
FEMALE PIPE  
(1 & 2) X 3**

Part #	Size
917IF-03-02B	3/16x1/8
917IF-04-02B	1/4x1/8
917IF-05-02B	5/16x1/8
917IF-06-04B	3/8x1/4
917IF-08-06B	1/2x3/8

**FEMALE ELBOW**

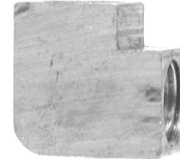
SAE #  
040203



450

**90° UNION ELBOW**

SAE #  
040201



255IFHD  
652  
136

**INVERTED FLARE X FEMALE PIPE**

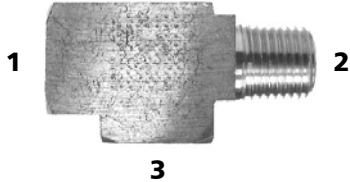
Part #	Size
916IF-03-02B	3/16x1/8
916IF-04-02B	1/4x1/8
916IF-05-02B	5/16x1/8
916IF-06-04B	3/8x1/4
916IF-08-06B	1/2x3/8

**INVERTED FLARE X INVERTED FLARE**

Part #	Size
916IF-04-04B	1/4
916IF-05-05B	5/16
916IF-06-06B	3/8

**MALE RUN TEE**

SAE #  
040424



251IFHD  
752  
550  
151

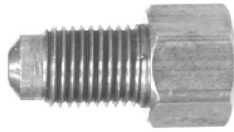
**IN FL X MIP X IN FL  
(1 & 3) X 2**

Part #	Size
921IF-03-02B	3/16x1/8
921IF-04-02B	1/4x1/8
921IF-05-02B	5/16x1/8
921IF-06-03	3/8x1/4
921IF-08-06B	1/2x3/8

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**INVERTED FLARE AUTO FITTINGS**

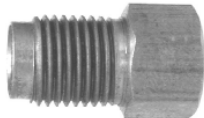
**DUAL MASTER CYLINDER ADAPTER**



**MALE FLARE X FEMALE  
(INVERTED FLARE THREADS)**

Part #	Male	Female
12-200	3/16	3/16
12-202	5/16	3/16

**DUAL MASTER CYLINDER ADAPTER**



47W

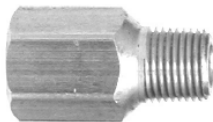
**MALE INVERTED FLARE X  
FEMALE INVERTED FLARE  
(INVERTED FLARE THREADS)\***

Part #	Male	Female
12-210	3/16	1/4
12-212	1/4	3/16
12-214*	7/16-20	1/4
12-216	5/16	3/16
12-218*	5/16	1/8
12-220	5/16	1/4
12-222*	5/16	5/16
12-224	3/8 MPT	5/16

\*Seals on hex face

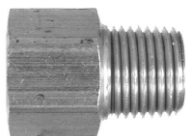
**CARBURETOR TO FUEL LINE  
ADAPTER - FORD**

1513



Part #	Size	Size
12-230	1/4(1/2-20	1/8 MPT

**RESTRICTION PIPE ADAPTER**



1510

**(.625 ORIFICE)**

Part #	Size
12-310	1/8

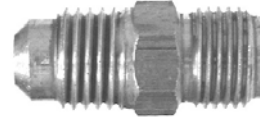
**CARBURETOR TO FUEL LINE  
ADAPTER - PLYMOUTH**

1514

Part #	Size
12-236	1/2-20x1/8 MPT

**SAE FLARE X INVERTED FLARE**

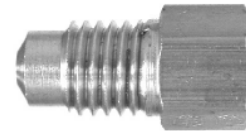
4205



Part #	Size	Size
12-250	1/4	3/16
12-252	1/4	1/4
12-254	3/8	5/16
12-256	3/8	3/8
12-257	3/8	7/16

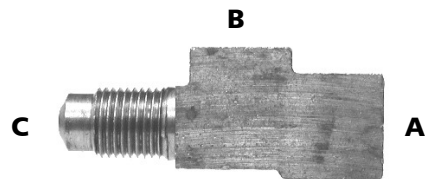
**INVERTED FLARE AUTO FITTINGS**

**METRIC ADAPTER**



Part #	Size	Size
12-335	M10x1.0	3/16"(3/8-24)
12-326	M11x1.5	3/16"(M10x1.0)
12-327	M12x1.0	3/16"(M10x1.0)
12-328	M13x1.5	3/16"(M10x1.0)

**METRIC TOWED TRAILER BRAKE TEE**

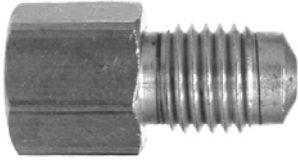


Part #	A	B	C
12-330	3/16 (M10x1.0)	3/16 (3/8-24)	3/16 (M10x1.0)
12-331	3/16 (M10x1.0)ISO	3/16 (3/8-24)	3/16 (M10x1.0)ISO
12-332	3/16 (M11x1.5)	3/16 (3/8-24)	3/16 (M11x1.5)
12-333	3/16 (M12x1.0)	3/16 (3/8-24)	3/16 (M12x1.0)
12-334*	3/16 (M13x1.5)	1/4 (3/8-24)	3/16 (M13x1.5)

\*Bubble flare type

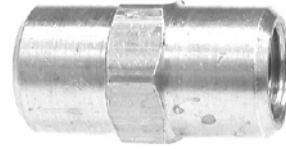


**ADAPTER STANDARD TO METRIC BUBBLE**



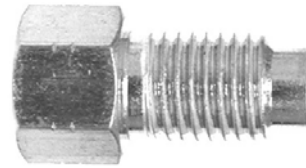
Part #	Size	Size
12-337	3/16 (3/8-24)	4.762 (3/16) (10x1.25)
12-338	3/16 (3/8-24)	1/4 (3/16x20)
12-339	3/16 (3/8-24)	13x1.5
12-340	3/16 (3/8-24)	11x1.5
12-341	3/16 (3/8-24)	12x1.0

**METRIC UNION**



Part #	Size
12-343	3/16 ..... 10.0MM

**ADAPTER STANDARD TO METRIC STANDARD**



Part #	Size
12-343	3/16 ..... 4.762 (3/16) (3/8-24) ..... (10x1.25)

**Brass**



**POL BRASS FITTINGS (BOTTLE GAS)**

POL Thread 880 - 14LH  
 Note: All bottle fittings are UL listed.

**TEE CHECK**



POL-T1  
 2000  
 1000

Part # ..... Size  
 34-001 ..... M2000

**TAILPIECE WITH FLATS**

1001AUL  
 21605



POL-LTPH  
 POL-LPT

Part # ..... Size  
 34-011 ..... M-2000-A  
 34-012 ..... HEX HEAD

**STANDARD NUT**



1001BUL  
 POL-N  
 21601

Part # ..... Size  
 34-016 ..... M-2001-B

**LARGE HEX NUT**



1001ABUL  
 POL-LN

Part # ..... Size  
 34-021 ..... M-2001-BL

**TAILPIECE & NUT ASSEMBLY**



2002AB

Part # ..... Size  
 34-022 ..... 1/4

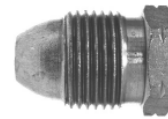
**POL CAP**



POL-N5  
 2004  
 1004A

Part # ..... Size  
 34-031 ..... M-2004

**POL PLUG**



1014A  
 POL-P2  
 2014

Part # ..... Size  
 34-036 ..... M-2014

**ADAPTERS**



21607  
 POL-U2  
 1015

Part # ..... Size  
 34-041 ..... 3/8FLARExPOL 2005  
 34-046 ..... 1/2FLARExPOL 2006  
 34-051 ..... 5/8FLARExPOL 2007

**POL X 1/4 FIP**



2008  
 POL-U3B

Part # ..... Size  
 34-056 ..... POLx1/4FIP

**TAILPIECE & NUT ASSEMBLY**



Part # ..... Size  
 34-025 ..... POLx1/4BARB

**CAP ORIFICE**



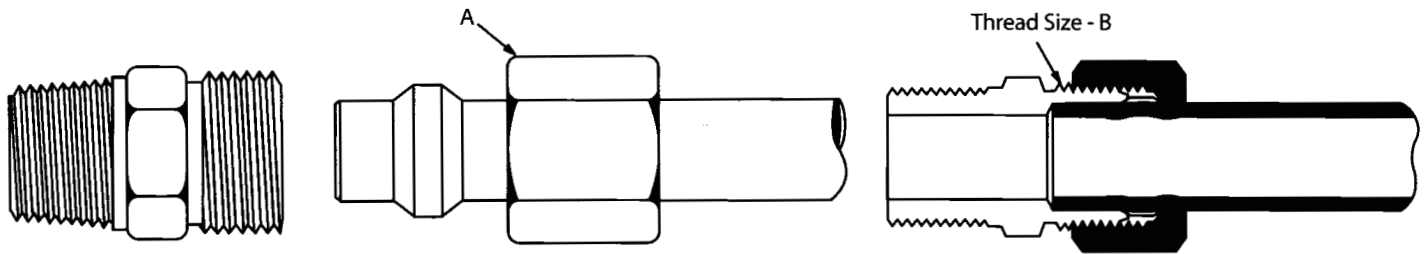
GF6  
 OH

Part # ..... Size  
 34-032 ..... 72  
 34-033 ..... 80





**COMPRESSION FITTINGS**



**Brass**

<b>Tube O.D.</b>	<b>1/8</b>	<b>3/16</b>	<b>1/4</b>	<b>5/16</b>	<b>3/8</b>	<b>7/16</b>	<b>1/2</b>	<b>5/8</b>	<b>3/4</b>	<b>1</b>
<b>Thread Size-B</b>	<b>5/16-24</b>	<b>3/8-24</b>	<b>7/16-24</b>	<b>1/2-24</b>	<b>9/16-24</b>	<b>5/8-24</b>	<b>11/16-20</b>	<b>13/16-18</b>	<b>1-18</b>	<b>1-1/4-18</b>

**•Typical Application**

Instrumentation, hydraulic and pneumatic systems.

**•Pressures**

Working pressure up to 2000 PSI with a 4:1 safety factor depending on tube sizes. When using plastic tubing, use the working pressure for type used.

**•Vibration**

Fair resistance - use long nut when greater vibration resistance is needed.

**•Temperature Range**

-65°F to +250°F (-53°C to +121°C) range at maximum operating pressures. (Refer to tubing temperature range.)

**•Material**

CA360 Brass for barstock fitting.  
CA377 Brass for forged fittings.

**•Used With**

Aluminum, copper, brass and plastic tubing. Plastic tubing requires insert. Not commended for steel tubing.

**•Conformance**

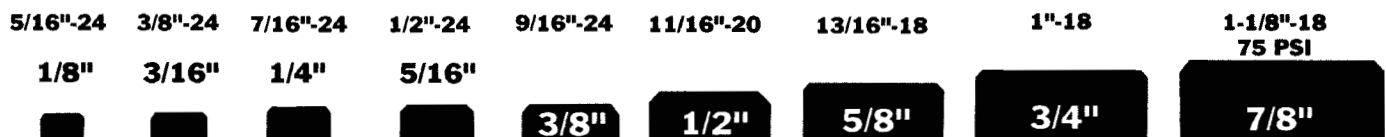
Meets specifications and standards of ASA, ASME, SAE.

**•Assembly Instructions**

- 1- Cut tubing to desired length.
- 2- Slide nut and then sleeve on tube. Threaded end "A" of nut must face out.
- 3- Insert tubing into fitting body. Be sure tubing is bottomed on fitting shoulder.
- 4- Lubricate threads and assemble to fitting body.
- 5- Tighten nut hand tight. From that point, tighten with a wrench the number of turns indicated in the chart below.

<b>Tube Size</b>	<b>Additional Turns From Hand Tight</b>
1/8" thru 1/4"	1-1/4
5/16"	1-3/4
3/8" thru 1"	2-1/4

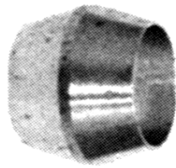
**Actual O.D. of Compression Threads**



**Brass**

**BRASS SLEEVE**

SAE #  
060115



60  
260

Part #	Size
819C-02B	1/8
819C-03B	3/16
819C-04B	1/4
819C-05B	5/16
819C-06B	3/8
819C-07B	7/16
819C-08B	1/2
819C-10B	5/8
819C-12B	3/4
819C-14B	7/8

**DERLIN SLEEVE**



60-P

Part #	Size
18-015	1/4
18-016	5/16
18-017	3/8
18-018	1/2
18-019	5/8
18-020	3/4

**SELF ALIGN SLEEVE**

Note: To buy comp. fittings with self-align sleeve, simply add 'A' on the same size compression fitting. Pricing available upon request.



601

Part #	Size
819CA-02B	1/8
819CA-03B	3/16
819CA-04B	1/4
819CA-06B	3/8
819CA-08B	1/2

**BRASS INSERT**

•SLEEVE

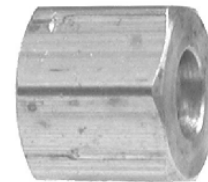


63-BI  
60AE  
2030  
63PT

Part #	Tube O.D.	Insert O.D.	Length
CTI-02B	1/8	080	0.46
CTI-03B	3/16	135	0.46
CTI-04B	1/4	0.163	0.50
CTI-05B	5/16	0.187	0.53
CTI-06B	3/8	0.250	0.56
CTI-08B	1/2	0.372	0.72
CTI-10B	5/8	0.483	0.72
CTI-12B	3/4	0.563	1.03

**BRASS NUT**

SAE #  
060110



61  
261

Part #	Size
818C-02B	1/8
818C-03B	3/16
818C-04B	1/4
818C-05B	5/16
818C-06B	3/8
818C-07B	7/16
818C-08B	1/2
818C-10B	5/8
818C-12B	3/4
818C-14B	7/8

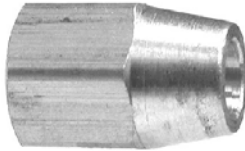


**LONG NUT COMPRESSION**

Note: To buy comp. fittings with captive sleeve, simply add 'CL' on the same size compression fitting. Pricing available upon request.

**LONG NUT**

161



Part #	Size
818CL-04B .....	1/4
818CL-05B .....	5/16
818CL-06B .....	3/8
818CL-08B .....	1/2

**CAPTIVE SLEEVE NUT**

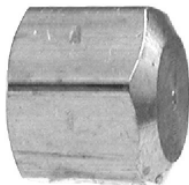
Note: To buy comp. fittings with captive sleeve, simply add 'C' on the same size compression fitting. Pricing available upon request.



Part #	Size
820C-02B .....	1/8
820C-03B .....	3/16
820C-04B .....	1/4
820C-05B .....	5/16
820C-06B .....	3/8
820C-08B .....	1/2
820C-10B .....	5/8

**CAP**

61-CC  
N5CT

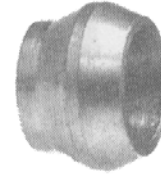


Part #	Size
18-047 .....	1/4
18-048 .....	3/8
18-049 .....	1/2
18-050 .....	5/8

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all your high volume quotes!

**COMPRESSION PLUG**

CSP



Part #	Size
806C-06B .....	3/8
806C-08B .....	1/2

**UNION**

M-62

SAE #  
060101BA



Part #	Size
815C-02-02B .....	1/8
815C-03-03B .....	3/16
815C-04-04B .....	1/4
815C-05-05B .....	5/16
815C-06-06B .....	3/8
815C-07-07B .....	7/16
815C-08-08B .....	1/2
815C-10-10B .....	5/8
815C-12-12B .....	3/4
814C-14-14B .....	7/8

**REDUCING UNION**

62-R

Part #	Size
815C-04-02B .....	1/4x1/8
815C-04-03B .....	1/4x3/16
815C-05-04B .....	5/16x1/4
815C-06-04B .....	3/8x1/4
815C-06-05B .....	3/8x5/16
815C-08-06B .....	1/2x3/8
815C-10-06B .....	5/8x3/8
815C-10-08B .....	5/8x1/2
815C-14-10B .....	7/8x5/8

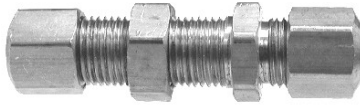
**DRILLED THRU COMP. UNION**

Part #	Size
18-066D .....	3/8
18-069D .....	5/8
18-071D .....	7/8



**BULKHEAD UNIONS**

<b>SAE #</b>	62BH
<b>060101</b>	75
	274



<b>Part #</b>	<b>Size</b>
832C-04-04B .....	1/4
832C-06-06B .....	3/8
832C-08-08B .....	1/2

**BULKHEAD NUTS**

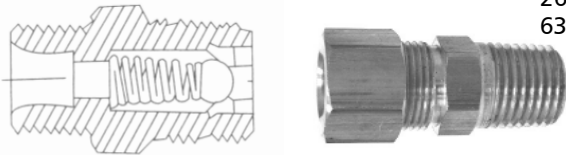
20102



<b>Part #</b>	<b>Size</b>
924-04B .....	1/4
924-06B .....	3/8
924-08B .....	1/2

**BALL CHECK VALVE**

63  
263  
63A



**TUBE O.D. X MALE PIPE**

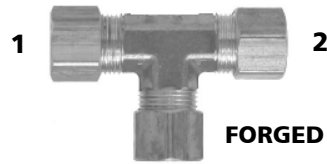
<b>Part #</b>	<b>Size</b>
816BCV-02-02B .....	1/8x1/8
816BCV-04-02B .....	1/4x1/8
816BCV-05-02B .....	5/16x1/8
816BCV-06-04B .....	3/8x1/4

“Laughter is to life what shock absorbers are to automobiles. It won’t take the potholes out of the road, but it sure makes the ride smoother.”

- Barbara Johnson

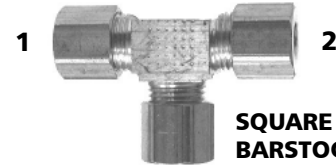
**TEE**

<b>SAE #</b>	64
<b>060401</b>	264C



**FORGED**

3



**SQUARE BARSTOCK**

3

<b>Part #</b>	<b>Size</b>
824C-02B .....	1/8
BS824C-02B .....	BARSTOCK 1/8
824C-03B .....	3/16
BS824C-03B .....	BARSTOCK 3/16
824C-04B .....	1/4
BS824C-04B .....	BARSTOCK 1/4
824C-05B .....	5/16
BS824C-05B .....	BARSTOCK 5/16
824C-06B .....	3/8
BS824C-06B .....	BARSTOCK 3/8
824C-08B .....	1/2
BS824C-08B .....	BARSTOCK 1/2
824C-10B .....	5/8
824C-12B .....	3/4
824C-14B .....	7/8

**FORGED REDUCING TEE**

64-R

**1 X 2 X 3**

<b>Part #</b>	<b>Size</b>
824C-04-02B .....	1/4x1/4x1/8
824C-04-06B .....	1/4x1/4x3/8
824C-06-04-04B .....	3/8x1/4x1/4
824C-06-04B .....	3/8x3/8x1/4
824C-08-04B .....	1/2x1/2x1/4
824C-08-06B .....	1/2x1/2x3/8
824C-10-06B .....	5/8x5/8x3/8
824C-10-08B .....	5/8x5/8x1/2

A truly happy person is one who can enjoy the scenery on a detour.



**UNION ELBOW**

**SAE #**  
**060201**



**FORGED**

65  
BSE2  
165C  
265C



**"B"**

**BARSTOCK**

<b>Part #</b>	<b>Size</b>
821C-02-02B .....	1/8
BS821C-02-02B .....	1/8
821C-03-03B .....	3/16
BS821C-03-03B .....	3/16
821C-04-04B .....	1/4
BS821C-04-04B .....	1/4
821C-05-05B .....	5/16
BS821C-05-05B .....	5/16
821C-06-06B .....	3/8
821C-08-08B .....	1/2
BS821C-08-08B .....	1/2
821C-10-10B .....	5/8
821C-12-12B .....	3/4
821C-14-14B .....	7/8

**REDUCING ELBOW**

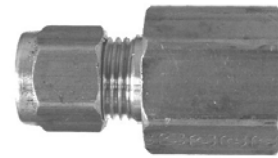
65-R

<b>Part #</b>	<b>Size</b>
821C-06-04B .....	3/8x1/4
821C-08-06B .....	1/2x3/8
821C-10-06BQ .....	5/8x3/8

*Send DF Burnham & Company  
all your high volume quotes!*

**FEMALE ADAPTER**

**SAE #**  
**060103**



66

**COMP X FEMALE PIPE**

<b>Part #</b>	<b>Size</b>
854C-02-02B .....	1/8x1/8
854C-03-02B .....	3/16x1/8
854C-03-04B .....	3/16x1/4
854C-04-02B .....	1/4x1/8
854C-04-04B .....	1/4x3/8
854C-04-06B .....	1/4x1/2
854C-04-08B .....	1/4x1/2
854C-05-02B .....	5/16x1/8
854C-05-04B .....	5/16x1/4
854C-05-06B .....	5/16x3/8
854C-06-02B .....	3/8x1/8
854C-06-04B .....	3/8x1/4
854C-06-06B .....	3/8x3/8
854C-06-08B .....	3/8x1/2
854C-06-12B .....	3/8x3/4
854C-08-04B .....	1/2x1/4
854C-08-06B .....	1/2x3/8
854C-08-08B .....	1/2x1/2
854C-08-12B .....	1/2x3/4
854C-10-06B .....	5/8x3/4
854C-10-08B .....	5/8x1/2
854C-10-12B .....	5/8x3/4
854C-12-08B .....	3/4x1/2
854C-12-12B .....	3/4x3/4
854C-14-08B .....	7/8x1/2
854C-14-12B .....	7/8x3/4



**MALE ADAPTER**

SAE #  
060102

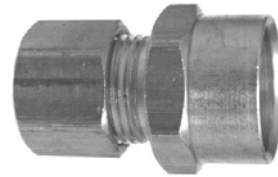


68

**COMP X MALE PIPE**

Part #	Size
816C-02-1/16B	1/8x1/16
816C-02-02B	1/8x1/8
816C-03-02B	3/16x1/8
816C-03-04B	3/16x1/4
816C-04-02B	1/4x1/8
816C-04-04B	1/4x1/4
816C-04-06B	1/4x3/8
816C-04-08B	1/4x1/2
816C-05-02B	5/16x1/8
816C-05-04B	5/16x1/4
816C-05-06B	5/16x3/8
816C-05-08B	5/16x1/2
816C-06-02B	3/8x1/8
816C-06-04B	3/8x1/4
816C-06-06B	3/8x3/8
816C-06-08B	3/8x1/2
816C-06-12B	3/8x3/4
816C-07-04B	7/16x1/4
816C-07-06B	7/16x3/8
816C-08-04B	1/2x1/4
816C-08-06B	1/2x3/8
816C-08-08B	1/2x1/2
816C-08-12B	1/2x3/4
816C-10-06B	5/8x3/8
816C-10-08B	5/8x1/2
816C-10-12B	5/8x3/4
816C-12-08B	3/4x1/2
816C-12-12B	3/4x3/4
816C-14-08B	7/8x1/2
816C-14-12B	7/8x3/4
816C-14-16B	7/8x1

**COMP X SWEAT ADAPTER**



66-5

Part #	Size
18-171	3/8x1/2NOM.SWT.

*More sizes available*

**Values**

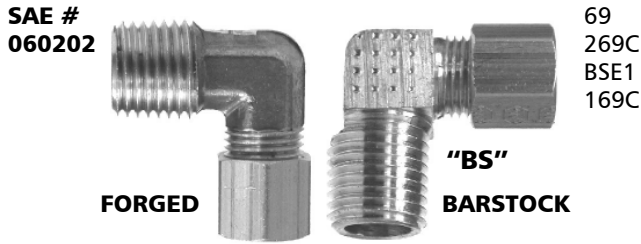
Success does not necessarily mean that we must earn a great deal of money and live in the biggest house in town. It means only that we are daily engaged in striving toward a goal that we have independently chosen and feel is worthy of us as persons.

A goal, whatever it might be, is what gives us meaning to our existence. it is the carrot on the end of the stick that keeps us striving - that keeps us interested - that gives us a reason for getting out of bed in the morning.

- Earl Nightingale

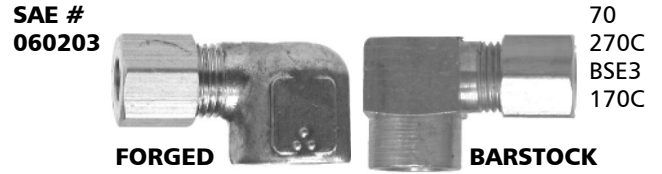


**MALE ELBOW**



Part #	Size
822C-02-02B	1/8x1/8
BS822C-02-02B	BARSTOCK 1/8x1/8
822C-03-02B	3/16x1/8
BS822C-03-02B	BARSTOCK 3/16x1/8
822C-03-04B	3/16x1/4
822C-04-02B	1/4x1/8
BS822C-04-02B	BARSTOCK 1/4x1/8
822C-04-04B	1/4x1/4
BS822C-04-04B	BARSTOCK 1/4x1/4
822C-04-06B	1/4x3/8
822C-04-08B	1/4x1/2
822C-05-02B	5/16x1/8
BS822C-05-02B	BARSTOCK 5/16x1/8
822C-05-04B	5/16x1/4
BS822C-05-04B	BARSTOCK 5/16x1/4
822C-05-06B	5/16x3/8
822C-05-08B	5/16x1/2
822C-06-02B	3/8x1/8
BS822C-06-02B	BARSTOCK 3/8x1/8
822C-06-04B	3/8x1/4
BS822C-06-04B	BARSTOCK 3/8x1/4
822C-06-06B	3/8x3/8
BS822C-06-06B	BARSTOCK 3/8x3/8
822C-06-08B	3/8x1/2
BS822C-06-08B	BARSTOCK 3/8x1/2
822C-06-12B	3/8x3/4
822C-07-04B	7/16x1/4
822C-08-04B	1/2x1/4
822C-08-06B	1/2x3/8
BS822C-08-06B	BARSTOCK 1/2x3/8
822C-08-08B	1/2x1/2
BS822C-08-08B	BARSTOCK 1/2x1/2
822C-08-12B	1/2x3/4
822C-10-06B	5/8x3/8
822C-10-08B	5/8x1/2
BS822C-10-08B	BARSTOCK 5/8x1/2
822C-10-12B	5/8x3/4
822C-12-08B	3/4x1/2
822C-12-12B	3/4x3/4
822C-14-12B	7/8x3/4

**FEMALE ELBOW**



**COMP X FEMALE PIPE**

Part #	Size
855C-02-02B	1/8x1/8
855C-03-02B	3/16x1/8
855C-04-02B	1/4x1/8
BS855C-04-02B	BARSTOCK 1/4x1/8
855C-04-04B	1/4x1/4
BS855C-04-04B	BARSTOCK 1/4x1/4
855C-04-06B	1/4x3/8
855C-04-08B	1/4x1/2
855C-05-02B	5/16x1/8
855C-05-04B	5/16x1/4
855C-06-02B	3/8x1/8
855C-06-04B	3/8x1/4
855C-06-06B	3/8x3/8
855C-06-08B	3/8x1/2
855C-06-12B	3/8x3/4
855C-08-04B	1/2x1/4
855C-08-06B	1/2x3/8
855C-08-08B	1/2x1/2
855C-08-12B	1/2x3/4
855C-10-06B	5/8x3/8
855C-10-08B	5/8x1/2
855C-10-12B	5/8x3/4
855C-12-08B	3/4x1/3

**FORGED DROP-EAR ELBOW**



Part #	Size
18-271	5/8x1/2

**FORGED TEE**



**COMP X FEMALE PIPE X MALE PIPE  
1 X (2 & 3)**

Part #	Size
18-307	1/4x1/8

# Tan Flexwing®



### Application

Tan Flexwing® is for acids, alcohol bases, and salt solutions.

### Construction

**Tube:** Tan Pureten™ gum rubber (nonoil-resistant) (FDA/USDA compliant)

**Cover:** Tan Plioflex® synthetic rubber (nonoil-resistant) with blue spiral stripe (wrapped impression)

**Reinforcement:** Sprial-plyed synthetic fabric with wire helix

### Temperature

-40°F to 180°F (-40°C to 82°C)

### Packaging

100' exact length, coiled, ploywrapped

Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		VACUUM HG		WEIGHT	
	in.	mm.	in.	mm.	psi	Mpa	in.	mm.	in.	mm.	lb./ft.	kg./m.
16-FIEXWING-TAN	1	25.40	1.61	40.89	150	1.03	3.5	89	29	736.6	0.75	1.12
20-FIEXWING-TAN	1-1/4	31.75	1.91	48.51	150	1.03	4.0	102	29	736.6	0.95	1.41
24-FIEXWING-TAN	1-1/2	38.10	2.14	54.36	150	1.03	4.0	102	29	736.6	1.08	1.61
32-FIEXWING-TAN	2	50.80	2.68	68.07	150	1.03	5.0	127	29	736.6	1.44	2.14
40-FIEXWING-TAN	2-1/2	63.50	3.24	82.30	150	1.03	6.0	152	29	736.6	1.93	2.87
48-FIEXWING-TAN	3	76.20	3.75	95.25	150	1.03	7.0	178	29	736.6	2.32	3.45
64-FIEXWING-TAN	4	101.60	4.83	122.68	150	1.03	10.0	254	29	736.6	3.39	5.04
96-FIEXWING-TAN	6	152.40	6.96	176.78	150	1.03	30.0	762	29	736.6	6.04	8.99

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**





## Purple Flexwing®



### Application

A versatile hose developed to handle a wide range of chemicals, acids, and alcohols in both suction and discharge service.

### Construction

**Tube:** Black Versigard® synthetic rubber  
**Cover:** Purple Versigard® with yellow spiral brand (wrapped impression)  
**Reinforcement:** Sprial-plied synthetic fabric with double wire helix

### Temperature

-40°F to 220°F (-40°C to 104°C)

### Packaging

100' exact length, coiled, polywrapped

Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		VACUUM HG		WEIGHT	
	in.	mm.	in.	mm.	psi	Mpa	in.	mm.	in.	mm.	lb./ft.	kg./m
24-FIEXWING-PR	1-1/2	38.10	2.02	51.31	150	1.03	4	102	29	736.6	0.95	1.41
32-FIEXWING-PR	2	50.80	2.53	64.26	150	1.03	5	127	29	736.6	1.16	1.73
48-FIEXWING-PR	3	76.20	3.58	90.93	150	1.03	7	178	29	736.6	2.00	2.98
64-FIEXWING-PR	4	101.60	4.69	119.13	150	1.03	10	254	29	736.6	3.03	4.51

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**



**Fabchem™  
Pliosyn™ (UHMWPE) Tube**



**Application**

A significant improvement to Goodyear's chemical hose line. It handles the majority of common industrial chemicals in pressure, gravity flow, and suction service.

**Construction**

- Tube:** Pliosyn Ultra-High Molecular Weight Polyethylene (UHMWPE)
- Cover:** Green Versigard® synthetic rubber with bright orange longitudinal stripe, corrugated (wrapped impression)
- Reinforcement:** Sprial-plied synthetic fabric with double wire helix

**Temperature**

-40°F to 150°F (-40°C to 66°C)

**Packaging**

100' exact length, coiled, ploywrapped

Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		VACUUM HG		WEIGHT	
	in.	mm.	in.	mm.	psi	Mpa	in.	mm.	in.	mm.	lb./ft.	kg./m
08-FABCHEM	1/2	12.70	0.95	24.13	200	1.38	3.0	76	29	736.6	0.33	0.49
12-FABCHEM	3/4	19.05	1.22	30.99	200	1.38	3.5	89	29	736.6	0.46	0.68
16-FABCHEM	1	25.40	1.47	37.34	200	1.38	4.0	102	29	736.6	0.60	0.89
20-FABCHEM	1-1/4	31.75	1.73	43.94	200	1.38	4.0	102	29	736.6	0.73	1.09
24-FABCHEM	1-1/2	38.10	1.97	50.04	200	1.38	5.0	127	29	736.6	0.84	1.25
32-FABCHEM	2	50.80	2.55	64.77	200	1.38	6.0	152	29	736.6	1.22	1.82
40-FABCHEM	2-1/2	63.50	3.14	79.76	200	1.38	8.0	203	29	736.6	1.78	2.65
48-FABCHEM	3	76.20	3.63	92.20	200	1.38	9.0	229	29	736.6	2.11	3.14
64-FABCHEM	4	101.60	4.67	118.62	200	1.38	10.0	254	29	736.6	2.81	4.18

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**



## Hi-per®



### Application

A premium hose which is Teflon® lined to handle a broad spectrum of fluids and materials in a wide variety of applications.

### Construction

- Tube:** Teflon® Fluoroethylenepropylene (FEP) has FDA/USDA compliant materials
- Cover:** Green Versigard® synthetic rubber with spiral white stripe (wrapped impression)
- Reinforcement:** Sprial-plyed synthetic fabric with double wire helix

### Temperature

-40°F to 300°F (-40°C to 149°C)

### Packaging

Custom lengths available (minimum 5')

Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		VACUUM HG		WEIGHT	
	in.	mm.	in.	mm.	psi	Mpa	in.	mm.	in.	mm.	lb./ft.	kg/m
08-HI-PER	1/2	12.70	0.97	24.64	200	1.38	3.0	76	29	736.6	0.37	0.55
12-HI-PER	3/4	19.05	1.11	28.19	200	1.38	5.0	127	29	736.6	0.56	0.83
16-HI-PER	1	25.40	1.52	38.61	200	1.38	7.5	191	29	736.6	0.71	1.06
20-HI-PER	1-1/4	31.75	1.73	43.94	200	1.38	11.0	279	29	736.6	0.84	1.25
24-HI-PER	1-1/2	38.10	2.13	54.10	200	1.38	14.0	356	29	736.6	1.24	1.85
32-HI-PER	2	50.80	2.69	68.33	200	1.38	18.0	457	29	736.6	1.71	2.54
40-HI-PER	2-1/2	63.50	3.14	79.76	200	1.38	22.0	559	29	736.6	2.01	2.99
48-HI-PER	3	76.20	3.67	93.22	200	1.38	35.0	889	29	736.6	2.52	3.75

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**



## Green XLPE Cross Link Polyethylene



### Application

Handles the majority of today's industrial chemicals in pressure, gravity flow, or suction service.

### Construction

**Tube:** Clear Speclar™ synthetic rubber Cross-Linked Polyethylene (XLPE)

**Cover:** Green Versigard® synthetic rubber with spiral white stripe (wrapped impression)

**Reinforcement:** Spiral-plyed synthetic fabric with double wire helix

### Temperature

-25°F to 150°F (-32°C to 66°C)

### Packaging

100' exact length, coiled, ploywrapped

Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		VACUUM HG		WEIGHT	
	in.	mm.	in.	mm.	psi	Mpa	in.	mm.	in.	mm.	lb./ft.	kg./m.
08-XLPE-GN	1/2	12.70	0.97	24.64	150	1.03	6	152	29	736.6	0.31	0.46
12-XLPE-GN	3/4	19.05	1.23	31.24	150	1.03	7	178	29	736.6	0.44	0.65
16-XLPE-GN	1	25.40	1.47	37.34	150	1.03	8	203	29	736.6	0.54	0.80
20-XLPE-GN	1-1/4	31.75	1.73	43.94	150	1.03	9	229	29	736.6	0.66	0.98
24-XLPE-GN	1-1/2	38.10	2.03	51.56	150	1.03	10	254	29	736.6	0.92	1.37
32-XLPE-GN	2	50.80	2.61	66.29	150	1.03	12	305	29	736.6	1.32	1.96
40-XLPE-GN	2-1/2	63.50	3.11	78.99	150	1.03	15	381	29	736.6	1.65	2.46
48-XLPE-GN	3	76.20	3.61	91.69	150	1.03	18	457	29	736.6	2.02	3.01
64-XLPE-GN	4	101.60	4.69	119.13	150	1.03	24	610	29	736.6	2.95	4.39

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**



# Spiraflex® Polyurethane Vapor Recovery



### Application

For the transfer of gasoline and other petroleum-based products under pressure, gravity flow or full-suction where maximum flexibility is needed.

### Construction

**Tube:** Nitrile synthetic rubber (oil resistant)

**Cover:** Red Wingprene® corrugated synthetic rubber (oil resistant) with white spiral stripe.

**Reinforcement:** Sprial-plyed synthetic fabric with double wire helix

### Temperature

-30°F to 150°F (-34°C to 66°C)

### Packaging

100' lengths, coiled and polywrapped

### Order Codes

586-465 (without static wire)

586-468 (static wire)

NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		WEIGHT	
in.	mm.	in.	mm.	psi.	Mpa.	in.	mm.	lb./ft.	kg./m.
2	50.8	2.47	62.74	30	0.21	3	76	0.57	0.85
3	76.2	3.41	86.61	20	0.14	4	102	0.68	1.01
4	101.6	4.51	114.55	15	0.10	7	178	0.98	1.46

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**



## Red Flextra®



### Application

For the transfer of gasoline and other petroleum-based products under pressure, gravity flow or full-suction where maximum flexibility is needed.

### Construction

**Tube:** Nitrile synthetic rubber (oil resistant)

**Cover:** Red Wingprene® corrugated synthetic rubber (oil resistant) with white spiral stripe.

**Reinforcement:** Sprial-plyed synthetic fabric with double wire helix

### Temperature

-30°F to 180°F (-34°C to 82°C)

### Packaging

100' lengths, coiled and polywrapped

## Red Flextra® 100

Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		VACUUM HG		WEIGHT	
	in.	mm.	in.	mm.	psi	Mpa	in.	mm.	in.	mm.	lb./ft.	kg./m.
543-123	2	50.8	2.38	60.33	100	0.69	4	102	29	736.6	0.87	1.29
543-123	2-1/2	63.5	2.88	73.15	100	0.69	5	127	29	736.6	1.13	1.68
543-123	3	76.2	3.41	86.61	100	0.69	6	152	29	736.6	1.47	2.19
543-123	4	101.6	4.53	115.06	100	0.69	9	229	29	736.6	2.30	3.42

## Red Flextra® 150

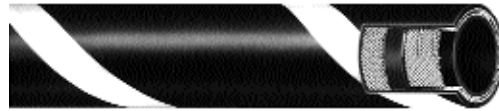
Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		VACUUM HG		WEIGHT	
	in.	mm.	in.	mm.	psi	Mpa	in.	mm.	in.	mm.	lb./ft.	kg./m.
543-120	2	50.8	2.52	64.01	150	1.03	4	102	29	736.6	1.18	1.76
543-120	3	76.2	3.59	91.19	150	1.03	6	152	29	736.6	1.99	2.96
543-120	4	101.6	4.61	117.09	150	1.03	9	229	29	736.6	2.66	3.96

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**



# Plicord® Flexwing® Petroleum



### Application

For use in tank truck and in-plant operations to transfer gasoline, oil, and other petroleum base products up to 50% aromatic content. It is designed for pressure, gravity flow, or full-suction service.

### Construction

**Tube:** Nitrile synthetic rubber (oil resistant)

**Cover:** Black (red spiral stripe) or Red Chemivic (white spiral stripe) synthetic rubber (oil resistant); smooth cover; wrapped finish

**Reinforcement:** Sprial-plied synthetic fabric

### Temperature

-35°F to 200°F (-37°C to 93°C)

### Packaging

100' lengths, coiled and polywrapped

### Colors Available

543-109 (Black)      543-110 (Red)

NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		VACUUM HG		WEIGHT	
in.	mm.	in.	mm.	psi	Mpa	in.	mm.	in.	mm.	lb./ft.	kg./m.
3/4	19.05	1.22	30.99	150	1.03	2.00	51	29	736.6	0.47	0.70
1	25.40	1.50	38.10	150	1.03	2.00	51	29	736.6	0.63	0.94
1-1/4	31.75	1.76	44.70	150	1.03	3.00	76	29	736.6	0.79	1.18
1-1/2	38.10	2.03	51.56	150	1.03	4.00	102	29	736.6	0.99	1.47
1-3/4	44.45	2.28	57.91	150	1.03	4.00	102	29	736.6	1.07	1.59
2	50.80	2.55	64.77	150	1.03	4.50	114	29	736.6	1.30	1.93
2-1/2	63.50	3.07	77.98	150	1.03	5.75	146	29	736.6	1.66	2.47
3	76.20	3.57	90.68	150	1.03	7.00	178	29	736.6	2.03	3.02
3-1/2	88.90	4.13	104.90	150	1.03	8.00	203	29	736.6	2.39	3.56
4	101.60	4.60	116.84	150	1.03	10.00	254	29	736.6	2.68	3.99
6	152.66	6.78	171.94	150	1.03	30.00	762	29	736.6	5.61	8.36

Couplings - Contact D.F. Burnham for proper fitting recommendation.



# Wingcraft™



### Application

For fueling or defueling commercial and private aircraft. It handles jet fuel and the higher aromatic aviation gasolines. Its high working pressure permits use in fuel cart hydrant service. Hose meets API Bulletin 1529-5th edition, 1998 and N.F.P.A. Bulletin #407 (1990 revision).

### Construction

- Tube:** Black Nitrile synthetic rubber
- Cover:** Black Wingprene® (ORS) static dissipating/static conductive synthetic rubber
- Reinforcement:** Sprial-plyed synthetic fabric

### Temperature

-35°F to 200°F (-37°C to 93°C)

### Packaging

Cut lengths, coiled and polywrapped

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
16-WINGCRAFT	1	25.40	1.58	40.13	300	2.07	0.63	0.94
20-WINGCRAFT	1-1/4	31.75	1.89	48.01	300	2.07	0.84	1.25
24-WINGCRAFT	1-1/2	38.10	2.13	54.10	300	2.07	0.96	1.43
32-WINGCRAFT	2	50.80	2.72	69.09	300	2.07	1.43	2.13
40-WINGCRAFT	2-1/2	63.50	3.22	81.79	300	2.07	1.72	2.56
48-WINGCRAFT	3	76.20	3.70	93.98	300	2.07	2.02	3.01
64-WINGCRAFT	4	101.60	4.80	121.92	300	2.07	2.89	4.30

Note: Each length is factory coupled, hydrostatic tested to 600 psi and certified

Couplings - Contact D.F. Burnham for proper fitting recommendation.

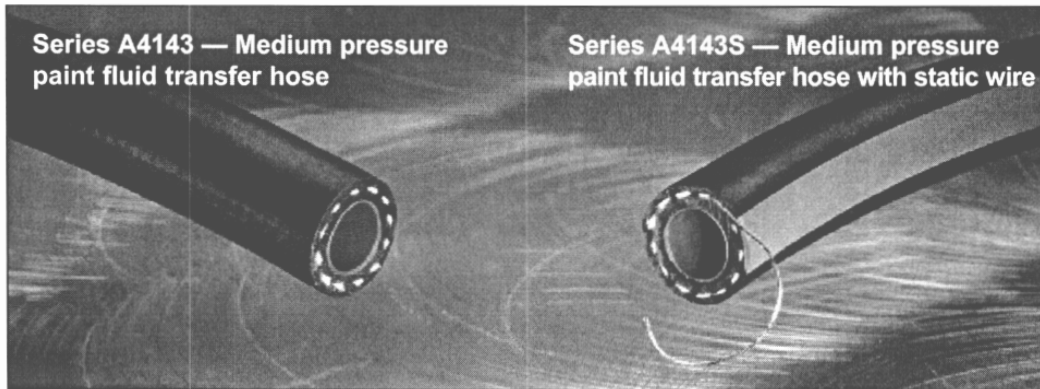
**Industrial  
Hose**





**Series A4143**  
Medium pressure paint fluid  
transfer hose

**Series A4143S**  
Medium pressure paint fluid transfer  
hose with static wire



Lightweight polyethylene-lined rubber blend hoses that are the ideal choice for handling paint and paint-related products in a variety of applications.

**Construction:**

**Series A4143**

- Tube - Co-extruded blue LLDPE/rubber blend
- Reinforcement - High tensile strength yarn
- Cover - Black rubber blend compound;  
Branded "Paint Fluid"

**Features:**

- Excellent resistance to paint fluids, lacquers and solvents... see chemical resistance chart, referring to both core and cover materials.
- Excellent Flexibility
- Silicone-free
- Compatible with popular spray fittings, such as Binks and DeVilbiss
- Excellent cold weather properties
- Static conductivity (Series A4143S only)
- Lightweight
- One-piece lengths

**Series A4143S**

- Tube - Co-extruded blue LLDPE/rubber blend
- Static wire - Embedded copper wire for static conductivity (see note below)\*
- Reinforcement - High tensile strength yarn
- Cover - Black rubber blend compound with green identification stripe; Branded "Conductive Paint Fluid"

**Applications:**

- Lower pressure transfer of enamels, lacquers and other finishes
- Robotic paint spraying equipment
- Manual paint spraying
- Spraying of automobile "rustproofing" fluids
- Low temperature transfer of chemicals

**Service Temperature Range:** +-40 °F (-40°C) to +125°F (+52°C)

**CAUTION:** NOT FOR USE WITH HOT PAINT. DO NOT EXCEED TEMPERATURE OF 125°F (+52°C).

**WARNING:** IMMERSION OF THE HOSE IN SOLVENTS FOR AN EXTENDED PERIOD OF TIME IS NOT RECOMMENDED DUE TO POTENTIAL SWELLING OF THE HOSE JACKET

**Series A4143 / A4143S - Paint fluid transfer hose**

Series No.		Size Code	Nominal ID		Nominal OD		Max. Working* Pressure (PSI)		Standard Lengths		Standard Lengths	
			(in)	(mm)	(in)	(mm)	@70°F (20°C)	@122°F (250°C)	Reel	Coil	Reel	Coil
A4143	A4143S	04	1/4	6.5	.500	12.7	175	85	500 ft.	100 ft.	36 lbs.	7 lbs.
A4143	A4143S	06	3/8	9.5	.690	17.3	175	85	500 ft.	100 ft.	60 lbs.	112 lbs.
A4143	A4143S	08	1/2	12.7	.875	22.2	175	85	500 ft.	100 ft.	93 lbs.	18 lbs.
A4143	A4143S	12	3/4	19.0	1.188	30.2	150	75	--	300/100ft.	--	85/28 lbs.
A4143	A4143S	16	1	25.4	1.500	38.1	125	60	--	200/100 ft.	--	86/43 lbs.

\* Note: Working Pressure decreases as temperature increases. Pressure ratings can only be obtained with proper coupling procedures. Compatible with popular spray fittings, such as Binks and DeVilbiss.

\*\*Caution: This product is designed to dissipate static electricity when the metal wire is properly grounded through the fitting or by other means. BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS OR DISCONTINUE PRODUCTS WITHOUT PRIOR NOTICE.



# Series A1628/A1661/A1687

## 300/600/ PSI PVC/Polyurethane Blend Reinforced Spray Hoses



Unique PVC/polyurethane blended core provides excellent resistance to hydrocarbon-based lawn care and pest control chemicals. Reinforced with high tensile strength yarn. PVC ribbed cover provides abrasion resistance.

**Construction:**

- Tube - Black PVC/polyurethane blend
- Reinforcement - High tensile strength yarn
- Cover - Ribbed PVC

**Features:**

- Extremely tough and kink resistant
- PVC/polyurethane blended core - provides better chemical resistance than comparable all-PVC hoses
- Ribbed cover provides excellent abrasion-resistance

- Choice of 300, 600, or 800 PSI working pressures
- Pin-pricked cover vents vapor...helps prevent ballooning
- Silicone-free
- One-piece lengths

**Applications:**

- Agricultural spraying
- Commercial weed spraying
- Pest control spraying (Series A1628 & A1661)
- Tree spraying (Series A1687 only)

**Service Temperature Range:** +15°F (-10°C) to 160°F (+70°C)

### Series A1628 - 300 PSI PVC/Polyurethane blend spray hose - 1-pass spiral construction

Series No.	Size Code	Nominal ID		Nominal OD		Max. Working* Pressure (PSI)		Standard Coil Lengths	Aprox. Wt. per pkg.	
		(in)	(mm)	(in)	(mm)	@70°F (20°C)	@122°F (250°C)		300 ft. Coil	400 ft. Coil
A1628	06	3/8	9.5	.5625	15.9	300	150	300 or 400 ft.	36 lbs.	47 lbs.
A1628	08	1/2	12.7	.6770	19.6	300	150	300 or 400 ft.	49 lbs.	65 lbs.
A1628	12	3/4	19.1	1.060	26.9	200	100	300 ft.	80 lbs	---
A1628	16	1	25.4	1.306	33.2	200	100	300 ft.	67 lbs	

### Series A1661 - 600 PSI PVC/Polyurethane blend spray hose - 2-pass spiral construction

Series No.	Size Code	Nominal ID		Nominal OD		Max. Working* Pressure (PSI)		Standard Coil Lengths	Aprox. Wt. per pkg.	
		(in)	(mm)	(in)	(mm)	@70°F (20°C)	@122°F (250°C)		300 ft. Coil	400 ft. Coil
A1661	06	3/8	9.5	.650	16.5	600	350	300 or 400 ft.	41 lbs.	54 lbs.
A1661	08	1/2	12.7	.790	20.1	600	350	300 or 400 ft.	57 lbs.	76 lbs.
A1661	16	5/8	25.4	1.030	26.2	600	300	300 ft.	96 lbs.	--
A1661	12	3/4	19.1	1.170	29.7	600	300	300 ft.	126 lbs.	--

### Series A1687 - 800 PSI PVC/Polyurethane blend spray hose - 2-pass spiral construction

Series No.	Size Code	Nominal ID		Nominal OD		Max. Working* Pressure (PSI)		Standard Coil Lengths	Aprox. Wt. per pkg.	
		(in)	(mm)	(in)	(mm)	@70°F (20°C)	@122°F (250°C)		300 ft. Coil	400 ft. Coil
A1687	06	3/8	9.5	.650	16.5	800	450	300 or 400 ft.	41 lbs.	54 lbs.
A1687	08	1/2	12.7	.850	21.6	800	450	300 or 400 ft.	68 lbs.	90 lbs.
A1687	10	5/8	15.9	1.030	26.2	800	400	300 ft.	96 lbs.	--
A1687	12	3/4	19.1	1.170	29.7	800	400	300 ft.	126 lbs.	--

\* Note: Working Pressure decreases as temperature increases. Pressure ratings can only be obtained with proper coupling procedures.  
 Note: Use of hydraulic or reusable-type fittings are not recommended for coupling Kuri Tec® hose products. Hose claims involving use of these fittings will be disallowed. BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS OR DISCONTINUE PRODUCTS WITHOUT PRIOR NOTICE.

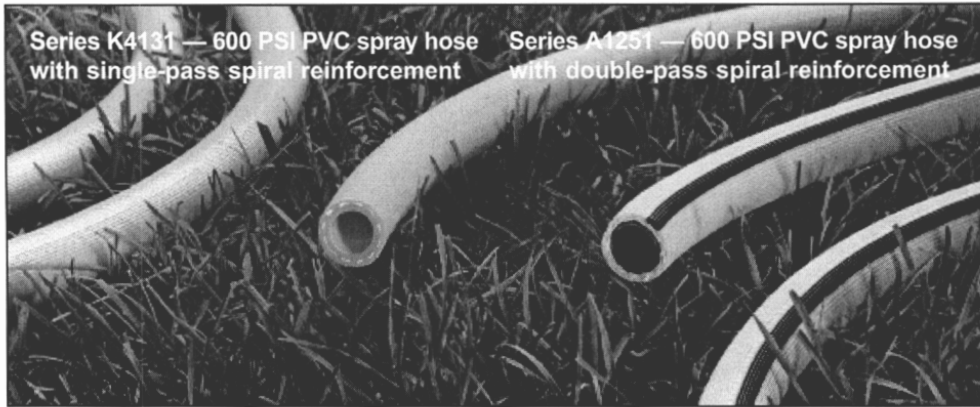


**Series K4131**

**600 PSI PVC spray hose with single-pass spiral reinforcement**

**Series A1251**

**600 PSI PVC spray hose with double-pass spiral reinforcement**



Excellent quality spray hoses made with premium quality PVC compounds, ideally-suited for lawn and ornamental spray applications using wettable powder chemicals. (Not recommended for high pressure tree spray applications.)

**Construction:**

**Series K4131**

- Tube - Yellow PVC
- Reinforcement - High tensile strength yarn; one-pass spiral construction
- Cover - Yellow ribbed PVC

**Features:**

- Economical priced
- Ribbed cover for reduced drag and increased flexibility
- Pin-pricked cover vents vapor...helps prevent ballooning
- Lightweight - easily coiled after use
- Longitudinal reinforcing yarns enhance coupling retention and reduce elongation under pressure
- Chemical resistance of quality PVC for the transfer or spraying of "wetable powder" type chemicals. Not recommended for use with emulsifiable chemicals based on hydrocarbon carriers.
- Silicone-free
- One-piece lengths

**Service Temperature Range:** +25°F (-5°C) to 150°F

**Applications:** Agricultural spraying, Vineyard spraying, Nursery spraying and Building washdown

**Construction:**

**Series A1251**

- Tube - Black PVC
- Reinforcement - High tensile strength yarn; two-pass spiral construction
- Cover - Yellow ribbed PVC with black strip

**Features:**

- Ribbed cover for reduced drag and increased flexibility
- Unique heavy duty design offers optimum performance
- Highly abrasion-resistant cover
- Cover is pin-pricked to vent vapor pressure and prevent ballooning
- Chemical resistance of quality PVC for the transfer or spraying of "wetable powder" type chemicals. Not recommended for use with emulsifiable chemicals based on hydrocarbon carriers.
- Silicone-free
- One-piece lengths

**Service Temperature Range:** +0°F (-18°C) to 150°F (+65°C)

**Series A1251 - 600 PSI all - PVC spray hose with 2-pass spiral construction**

Series No.	Size Code	Nominal ID		Nominal OD		Max. Working* Pressure (PSI)		Standard Coil Lengths	Aprox. Wt. per pkg.	
		(in)	(mm)	(in)	(mm)	@70°F (20°C)	@122°F (250°C)		300 ft. Coil	400 ft. Coil
K4131	06	3/8	9.5	.625	15.9	600	250	300 or 400 ft.	35 lbs.	46 lbs.
K4131	08	1/2	12.7	.790	20.0	600	250	300 or 400 ft.	54 lbs.	72 lbs.

**Series A1251 - 600 PSI all - PVC spray hose with 2-pass spiral construction**

Series No.	Size Code	Nominal ID		Nominal OD		Max. Working* Pressure (PSI)		Standard Coil Lengths	Aprox. Wt. per pkg.	
		(in)	(mm)	(in)	(mm)	@70°F (20°C)	@122°F (250°C)		300 ft. Coil	400 ft. Coil
A1251	06	3/8	9.5	.650	16.5	600	300	300 or 400 ft.	45 lbs.	60 lbs.
A1251	08	1/2	12.7	.790	20.0	600	300	300 or 400 ft.	59 lbs.	78 lbs.

\* Note: Working Pressure decreases as temperature increases. Pressure ratings can only be obtained with proper coupling procedures. Compatible with popular spray fittings, such as Binks and DeVibiss.

\*\*Caution: This product is designed to dissipate static electricity when the metal wire is properly grounded through the fitting or by other means. BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS OR DISCONTINUE PRODUCTS WITHOUT PRIOR NOTICE.



**Series K4350/A9350  
EVA yarn-reinforced hose**

**Series K4350/A9350  
Polyethylene yarn-reinforced  
dual line spray hose**



**Construction:**

**Series K4350**

- Tube - Translucent EVA copolymer
- Reinforcement - High tensile strength yarn
- Cover - Translucent EVA copolymer

**Features:**

- Highly flexible
- Higher working pressures than non-reinforced EVA tubing
- Excellent low temperature flexibility
- Excellent chemical-resistance
- Silicone-free
- One-piece lengths

**Applications:**

- Agricultural spray applications, including anhydrous ammonia fertilizer.
- Low pressure lawn spray
- Low pressure transfer of liquids and gases, including chemicals

**Construction:**

**Series A9350**

- Tube - Special Translucent LLDPE
- Reinforcement - High tensile strength yarn
- Cover - Special "low friction" translucent copolymer

**Features:**

- Extremely lightweight
- Exceptionally low resistance to dragging
- Both core and cover offer excellent chemical-resistance and resistance to environmental stress cracking
- Silicone-free
- One-piece lengths

**Applications:**

- Spot herbicide treatment, while fertilizing
- Automatic dilution of liquid concentrate at the spray head

**Service Temperature Range:** +30 °F (-435°C) to +1250°F (+65°C)

**Series K4350 - EVA spray hose**

Series No.	Size Code	Nominal ID		Nominal OD		Max. Working* Pressure (PSI)		Standard Coil Lengths		Aprox. Wt. per pkg.	
		(in)	(mm)	(in)	(mm)	@70°F (20°C)	@122°F (50°C)	Coil	Reel	Coil	Reel
K4350	06	3/8	9.5	.594	15.1	300	100	300 ft.	500 ft.	22 lbs.	41 lbs.
K4350	08	1/2	12.7	.790	20.0	250	75	300 ft.	500 ft.	26 lbs.	51 lbs.
K4350	12	3/4	19.1	.970	24.6	150	40	300 ft.	--	36 lbs.	--
K4350	16	1	25.4	1.313	33.4	150	30	200 ft.	--	47 lbs.	--

**Series A9350 - Polyethylene dual line spray hose**

Part No.	Nominal ID				Nominal OD				Max. Working* Pressure (PSI)		Standard Coil Lengths	Aprox. Wt. per pkg.
	Nominal ID (in)	Nominal ID (mm)	Nominal ID (in)	Nominal ID (mm)	Nominal ID (in)	Nominal ID (mm)	Nominal ID (in)	Nominal ID (mm)	@70°F (20°C)	@122°F (50°C)		
A9350-04060-03S	1/4	6.5	.457	11.6	3/8	9.5	.593	15.1	250	100	300 ft.	37 lbs.
A9350-04060-04S	1/4	6.5	.457	11.6	3/8	9.5	.593	15.1	250	100	400 ft.	49 lbs.
A9350-04060-03S	1/4	6.5	.457	11.6	1/2	12.7	.740	18.8	250	100	300 ft.	46 lbs.
A9350-04060-04S	1/4	6.5	.457	11.6	1/2	12.7	.740	18.8	250	100	400 ft.	61 lbs.

\* Note: Working Pressure decreases as temperature increases. Pressure ratings can only be obtained with proper coupling procedures. Compatible with popular spray fittings, such as Binks and DeVibiss.

\*\*Caution: This product is designed to dissipate static electricity when the metal wire is properly grounded through the fitting or by other means. BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS OR DISCONTINUE PRODUCTS WITHOUT PRIOR NOTICE.



## NR Spray



### Application

NR Spray is a premium-quality, all-purpose hose for handling a variety of applications such as paint spray or agricultural spray. Will handle spraying paints, automotive finish paints, lacquers, thinners, turpentine, air, oil, and a large variety of solvents and chemicals.

### Construction

**Tube:** Nylon, silicone-free

**Cover:** Black synthetic rubber, RMA Class B (medium/high oil resistance)

**Reinforcement:** Braided synthetic yarn (1/4" and 3/8"-1 braid) (1/2", 3/4" and 1"-2 braid)

### Temperature

-0°F to 190°F (-18°C to 88177°C)

### Packaging

500' reel, maximum 3 pieces, 50' minimum

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
04-NR-SPRAY	1/4	6.35	0.50	12.70	750	5.17	0.08	0.12
06-NR-SPRAY	3/8	9.53	0.70	17.78	750	5.17	0.15	0.22
08-NR-SPRAY	1/2	12.70	0.88	22.35	750	5.17	0.22	0.33
12-NR-SPRAY	3/4	19.05	1.19	30.23	750	5.17	0.36	0.54
16-NR-SPRAY	1	25.40	1.51	38.35	750	5.17	0.53	0.79

Couplings - Contact D.F. Burnham for proper fitting recommendation.

Industrial Hose



# Neptune™ 3000



### Application

For use on pressure washer machines with working pressures up to 3000 psi.

### Construction

**Tube:** Black Nitrile synthetic rubber

**Cover:** Black, Blue or Gray oil-resistant synthetic rubber, RMA Class B (medium/high oil resistance)

**Reinforcement:** Braided (1) steel wire

### Temperature

-20°F to 200°F (-29°C to 93°C)

### Packaging

500' reel, maximum 3 pieces, 50' increments

### Colors Available

Black, Blue and Gray

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
04-NEPTUNE-3000	1/4	6.35	0.53	13.46	3000	20.69	0.16	0.24
06-NEPTUNE-3000	3/8	9.53	0.69	17.53	3000	20.69	0.24	0.36
08-NEPTUNE-3000	1/2	12.70	0.82	20.83	3000	20.69	0.32	0.48

**Note: Not recommended for steam service.**

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**

# Whitewater®



### Application

For use on either steam cleaner machines or combination steam cleaner/pressure washer machines.

### Construction

**Tube:** Black Pyrosyn® synthetic rubber

**Cover:** Black and Red Hysunite® synthetic rubber, RMA Class B (medium/high oil resistance)

**Reinforcement:** Braided (1) steel wire

### Temperature

Handles steam at 325°F/163°C and 350 psi,  
handles hot water at 250°F/121°C and 3000 psi (2500 psi on 1/2")

### Colors Available

Black and Red

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
06-WHITEWATER	3/8	9.53	0.69	17.53	350	2.40	0.23	0.34
08-WHITEWATER	1/2	12.70	0.82	20.83	350	2.40	0.32	0.48

**Note: Not recommended for cold water service.**

For hot water service up to 250°F, handles working pressure up to 3000 psi on 3/8", 2500 psi on 1/2".

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**



**Flexsteel® 250 Steam**



**Application**

Used for cleaning, heat control, fire prevention, pumping, thawing, blow-out service, steam pumps, and hoists in open-end or permanent installation operations. It is used in refineries, shipyards, chemical plants, steel mills, foundries, and heavy industrial applications where high strength is required and where severe environmental conditions are encountered.

**Construction**

**Tube:** Pyrosyn® synthetic rubber  
**Cover:** Black or Red Pyrosyn®, smooth finish, pin-pricked  
**Reinforcement:** Braided steel wire (3/4" and 1" have 2 steel wire braids)

**Temperature**

-0°F to 425°F (-18°C to 218°C)

**Packaging**

Reels or 50' cut lengths (1/2"-4 per box, 3/4"-3 per box, 1"-2 per box)

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
08-FLEX-250	1/2	12.70	1.06	26.92	250	1.72	0.40	0.60
12-FLEX-250	3/4	19.05	1.28	32.51	250	1.72	0.49	0.73
16-FLEX-250	1	25.40	1.63	41.40	250	1.72	0.78	1.16

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**



## Flexsteel® 250 CB Steam



### Application

Used for cleaning, heat control, fire prevention, pumping, thawing, blow-out service, steam pumps, and hoists in open-end or permanent installation operations. It is used in refineries, shipyards, chemical plants, steel mills, foundries, and heavy industrial applications where high strength is required and where severe environmental conditions are encountered.

### Construction

**Tube:** Chlorobutyl synthetic rubber  
**Cover:** Red or Black Pyrosyn® synthetic rubber  
**Reinforcement:** Braided steel wire (3/4" and higher have 2 steel wire braids)

### Temperature

-0°F to 450°F (-18°C to 232°C)

### Packaging

Smooth cover: Reels or 50' cut lengths (1/2"-4'/box, 3/4"-3'/box, 1"-2'/box)  
 Wrapped cover:  
 1/2" - Four 50' exact length/box  
 3/4"-1" - Three 50' exact length/box  
 1-1/4"-2" - One 50' exact length/box

## SF-Smooth Finish (Pin Pricked)

Colors Available  
 539-370  
 Black  
 539-376  
 Red

NOM. ID		NOM. OD		MAX. WP		WEIGHT	
in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
1/2	12.70	1.06	26.92	250	1.72	0.40	0.60
3/4	19.05	1.28	32.51	250	1.72	0.49	0.73
1	25.40	1.63	41.40	250	1.72	0.78	1.16

## WF-Wrapped Finish (Previously Chlorobutyl 250 Steam)

Colors Available  
 539-176  
 1/2" - 1" Red  
 539-176  
 1-1/4" - 2" Red  
 539-176  
 1/2" - 1" Black

NOM. ID		NOM. OD		MAX. WP		WEIGHT	
in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
1/2	12.70	1.00	25.40	250	1.72	0.42	0.63
3/4	19.05	1.31	33.27	250	1.72	0.64	0.95
1	25.40	1.56	39.62	250	1.72	0.77	1.15
1-1/4	31.75	1.75	44.45	250	1.72	1.06	1.58
1-1/2	38.10	2.00	50.80	250	1.72	1.42	2.11
2	50.80	2.50	63.50	250	1.72	1.71	2.54

Couplings - Contact D.F. Burnham for proper fitting recommendation.



# Flexsteel® 250 ORS Steam



### Application

Used for cleaning, heat control, fire prevention, pumping, thawing, blowout service, steam pumps, and hoists in open-end or permanent installation operations. It is used in refineries, shipyards, chemical plants, steel mills, foundries, and heavy industrial applications where the cover is subjected to oil, grease, or animal fats.

### Construction

**Tube:** Pyrosyn® synthetic rubber  
**Cover:** Black or Red Hysunite® synthetic RMA Clas B (medium/high oil resistance), smooth finish, pin pricked  
**Reinforcement:** Braided steel wire (3/4" and 1" have 2 steel wire braids)

### Temperature

-0°F to 425°F (-18°C to 218°C)

### Packaging

Reels or 50' cut lengths (1/2"-4 per box, 3/4"-3 per box, 1"-2 per box)

**Colors Available**

539-098

Black

539-109

Red

NOM. ID		NOM. OD		MAX. WP		WEIGHT	
in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
1/2	12.70	1.06	26.92	250	1.72	0.40	0.60
3/4	19.05	1.28	32.51	250	1.72	0.49	0.73
1	25.40	1.63	41.40	250	1.72	0.78	1.16

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial Hose**

# Goodyear 250 Crimped Steam Assembly



### Application

Used for cleaning, heat control, fire prevention, pumping, thawing, blow-out service, steam pumps, and hoists in open-end or permanent installation service. It is used in refineries, shipyards, chemical plants, steel mills, foundries, and heavy industrial applications where high strength is required and where severe environmental conditions are encountered.

### Construction

**Tube:** Black Pyrosyn® synthetic rubber  
**Cover:** Black or Red Pyrosyn® synthetic rubber (smooth finish, pin-pricked)  
**Reinforcement:** Braided (2) steel wire

### Temperature

-0°F to 425°F (-18°C to 218°C)

### Packaging

25' cut lengths-3 per box, 50' lengths-2 per box, 100' lengths-1 per box

**Colors Available**  
 Black  
 Red

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
12-539-270BK25	3/4	19.05	1.28	32.51	250	1.72	0.62	0.92
12-539-270BK50	3/4	19.05	1.28	32.51	250	1.72	0.62	0.92
12-539-270BK100	3/4	19.05	1.28	32.51	250	1.72	0.62	0.92
16-539-270BK25	1	25.40	1.63	41.40	250	1.72	0.91	1.35
16-539-270BK50	1	25.40	1.63	41.40	250	1.72	0.91	1.35
16-539-270BK100	1	25.40	1.63	41.40	250	1.72	0.91	1.35

**Colors Available**  
 Black  
 Red

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
12-539-276RD25	3/4	19.05	1.28	32.51	250	1.72	0.62	0.92
12-539-276RD50	3/4	19.05	1.28	32.51	250	1.72	0.62	0.92
12-539-276RD100	3/4	19.05	1.28	32.51	250	1.72	0.62	0.92
16-539-276RD25	1	25.40	1.63	41.40	250	1.72	0.91	1.35
16-539-276RD50	1	25.40	1.63	41.40	250	1.72	0.91	1.35
16-539-276RD100	1	25.40	1.63	41.40	250	1.72	0.91	1.35

**Note:** Sold as factory crimped assemblies only. Coupling components not available individually. Spring guards not available. Double spuds available upon request.

Couplings - Contact D.F. Burnham for proper fitting recommendation.



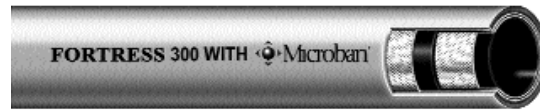
Phone 1-800-989-1770

Fax 1-800-989-1774

www.dfburnham.com

# Fortress™ 300

with  **Microban® Product Protection**



### Application

A high-quality construction for hot water up to 200°F (93°C) cleanup service in food processing plants, dairies, packing houses, bottling plants, breweries, canneries, and creameries. Its super abrasion- and oil-resistant cover provides maximum protection against the adverse of oil and animal fats. The cover of Goodyear's Fortress™ 300 hose incorporates Microban's®\* anti-microbial built-in product protection.

### Construction

- Tube:** Black Nitrile synthetic rubber
- Cover:** Yellow Carbyn® synthetic rubber, RMA Class A (high oil resistance) with Microban® product protection
- Reinforcement:** Spiral synthetic yarn

### Temperature

-20°F to 200°F (-29°C to 93°C)

### Packaging

- 1/2"-3/4" - 500' reels, maximum 3 pieces, 50' increments
- 1" - 450' reels maximum 3 pieces, 50' increments

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
08-FORTRESS-300	1/2	12.70	0.75	19.05	300	2.07	0.29	0.43
10-FORTRESS-300	5/8	15.88	0.86	21.84	300	2.07	0.36	0.54
12-FORTRESS-300	3/4	19.05	1.20	30.48	300	2.07	0.41	0.61
16-FORTRESS-300	1	25.40	1.50	38.10	300	2.07	0.60	0.89

\*Microban® antimicrobial product protection inhibits the growth of bacteria, mold, and fungi that can cause odor, stains, or degradation of the hose cover.

**Microban® is intended to protect the hose cover only. It is not a substitute for good sanitary practices.**

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial Hose**

# Fortress™ 3000

with  **Product Protection**



### Application

Goodyear's Fortress™ 3000 is for use on pressure washer machines with working pressures up to 3000 psi. Applications include washdown in food processing plants, dairies, packing houses, bottling plants, breweries, canneries, and creameries. Its super abrasion- and oil-resistant cover provides maximum protection against the adverse affects of oil and animal fats. The cover of Goodyear's Fortress™ Washdown hose incorporates Microban's®\* antimicrobial built-in product protection.

### Construction

**Tube:** Black Nitrile synthetic rubber

**Cover:** Yellow Carbyn® synthetic rubber, RMA Class A (high oil resistance) with Microbn® product protection

**Reinforcement:** Braided (1) steel wire

### Temperature

-20°F to 200°F (-29°C to 93°C)

### Packaging

500' reels, maximum 3 pieces, 50' increments, coupled lengths available

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
04-FORTRESS-3000	1/4	6.35	0.53	13.46	3000	20.69	0.15	0.22
06-FORTRESS-3000	3/8	9.53	0.69	17.53	3000	20.69	0.24	0.36
08-FORTRESS-3000	1/2	12.70	0.82	20.83	3000	20.69	0.32	0.48

\*Microban antimicrobial product protection inhibits the growth of bacteria, mold, and fungi that can cause odor, stains, or degradation of the hose cover.

Microban is intended to protect the hose cover only. It is not a substitute for good sanitary practices.

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial Hose**



# Nutriflo®

## Suction and Discharge Hose



### Application

For handling almost every type of dry bulk food material or liquid in gravity flow and vacuum service. Nutriflo® conforms to USDA Meat and Poultry, 3-A Sanitary, and FDA Standards and is used for the transmission of raw and pasteurized milk and other high water content dairy items.

### Construction

**Tube:** Clear Pliovic™ (FDA, 3-A, USDA compliant), NSF-61

**Cover:** Clear Pliovic

**Reinforcement:** White or Clear high-density Pliovic™ helix

### Temperature

-15°F to 158°F (-26°C to 70°C)

### Packaging

100' length, coiled, polywrapped

### Colors Available

White and Clear

Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		VACUUM HG		WEIGHT	
	in.	mm.	in.	mm.	psi	Mpa	in.	mm.	in.	mm.	lb./ft.	kg./m.
12-NUTRIFLO	3/4	19.05	0.99	25.15	120	0.83	3.25	83	29	736.6	0.18	0.27
16-NUTRIFLO	1	25.40	1.24	31.50	106	0.73	4.50	114	29	736.6	0.26	0.39
20-NUTRIFLO	1-1/4	31.75	1.55	39.37	99	0.68	5.00	127	29	736.6	0.36	0.54
24-NUTRIFLO	1-1/2	38.10	1.78	45.21	89	0.61	6.00	152	29	736.6	0.43	0.64
32-NUTRIFLO	2	50.80	2.37	60.20	79	0.54	8.00	203	29	736.6	0.67	1.00
40-NUTRIFLO	2-1/2	63.50	2.89	73.41	65	0.45	10.00	254	29	736.6	0.89	1.32
48-NUTRIFLO	3	76.20	3.48	88.39	65	0.45	12.00	305	29	736.6	1.15	1.71
64-NUTRIFLO	4	101.60	4.50	114.30	55	0.38	16.00	406	29	736.6	1.65	2.46
96-NUTRIFLO	6	152.40	6.63	168.40	47	0.32	36.00	914	29	736.6	3.39	5.04

**Industrial  
Hose**

Couplings - Contact D.F. Burnham for proper fitting recommendation.



## Spectra™ 1000

### Application

For use on pressure washer machines with working pressures up to 1000 psi. Its abrasion- and oil-resistant cover provides protection against the affects of oil and animal fats.



### Construction

**Tube:** Black Nitrile synthetic rubber

**Cover:** Yellow Chemivic® synthetic rubber, RMA Class A (high oil resistance)

**Reinforcement:** Braided (1) steel wire



### Temperature

-20°F to 200°F (-29°C to 93°C)

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
06-SPECTRA-1000	3/8	9.53	0.69	17.53	1000	6.9	0.21	0.31
08-SPECTRA-1000	1/2	12.70	0.81	20.57	1000	6.9	0.29	0.43
12-SPECTRA-1000	3/4	19.05	1.10	27.94	1000	6.9	0.44	0.65

**Note:** Not recommended for steam service.

## Sani-Wash™ 300

### Application

All economical hose for hot water washdown up to 205°F cleanup in food processing plants, dairies, packing houses, bottling plants, breweries, canneries, and creameries.

### Construction

**Tube:** Versigard® synthetic rubber

**Cover:** White Versigard® synthetic rubber

**Reinforcement:** Textile reinforced



### Temperature

-40°F to 200°F (-40°C to 93°C)

### Packaging

1/2"-3/4" - 500' reels, maximum 3 pieces, 50' increments

1" - 450' reels maximum 3 pieces, 50' increments

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
08-SANI-WASH	1/2	12.70	0.84	21.34	300	2.07	0.26	0.39
10-SANI-WASH	5/8	15.88	1.00	25.40	300	2.07	0.31	0.46
12-SANI-WASH	3/4	19.05	1.17	29.72	300	2.07	0.42	0.63
16-SANI-WASH	1	25.40	1.48	37.59	300	2.07	0.62	0.92

Couplings - Contact D.F. Burnham for proper fitting recommendation.



Phone 1-800-989-1770

Fax 1-800-989-1774

# Spiraflex® Gray Primeline



### Application

For light-duty water discharge service.

### Construction

**Tube:** Black Pliovic™ compound

**Cover:** Gray Pliovic™ compound

**Reinforcement:** Synthetic fabric

### Temperature

-10°F to 150°F (-23°C to 66°C)

### Packaging

300' continuous one piece, coiled and banded

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
24-SPIRAFLEX-GY	1-1/2	38.1	1.72	43.69	75	0.52	0.19	0.28
32-SPIRAFLEX-GY	2	50.8	2.22	56.39	60	0.41	0.24	0.36
40-SPIRAFLEX-GY	2-1/2	63.5	2.79	70.87	60	0.41	0.36	0.54
48-SPIRAFLEX-GY	3	76.2	3.31	84.07	50	0.34	0.39	0.58
64-SPIRAFLEX-GY	4	101.6	4.33	109.98	45	0.31	0.65	0.97
96-SPRAFLEX-GY	6	152.4	6.38	162.05	35	0.24	1.07	1.59

Note: Working pressures are rated at 720F.

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**



**Versiflo™ 150 Water S&D**



**Application**

General purpose water suction and discharge for medium- to heavy-duty applications. Can used in Lasso® applications.

**Construction**

**Tube:** Black Versigard® synthetic rubber  
**Cover:** Black Versigard® synthetic rubber (wrapped finish)  
**Reinforcement:** Plies of synthetic with wire helix

**Temperature**

-25°F to 200°F (-32°C to 93°C)

**Packaging**

100' lengths, coiled and polywrapped

Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		VACUUM HG		WEIGHT	
	in.	mm.	in.	mm.	psi	Mpa	in.	mm.	in.	mm.	lb./ft.	kg./m.
20-VERSIFLO-150	1-1/2	31.75	1.63	41.40	150	1.03	4	102	29	736.6	0.53	0.79
24-VERSIFLO-150	1-1/2	38.10	1.87	47.50	150	1.03	4	102	29	736.6	0.65	0.97
32-VERSIFLO-150	2	50.80	2.39	60.71	150	1.03	7	178	29	736.6	0.87	1.29
40-VERSIFLO-150	2-1/2	63.50	2.89	73.41	150	1.03	10	254	29	736.6	1.08	1.61
48-VERSIFLO-150	3	76.20	3.42	86.87	150	1.03	14	356	29	736.6	1.44	2.14
64-VERSIFLO-150	4	101.60	4.45	113.03	150	1.03	18	457	29	736.6	2.00	2.98
20-VERSIFLO-150	6	152.40	6.60	167.64	150	1.03	24	610	29	736.6	4.56	6.79

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**



# Plicord® HD Water Discharge



### Application

A heavy-duty, all-purpose hose with excellent abrasion resistance. It is ideal for service in quarries, mines and construction.

### Construction

**Tube:** Black Plioflex® synthetic rubber  
**Cover:** Black Plioflex® synthetic rubber (wrapped finish)  
**Reinforcement:** Spiral-plied (4) plies of synthetic fabric

### Temperature

-25°F to 180°F (-32°C to 82°C)

### Packaging

1"-4" - 100' lengths, coiled and polywrapped  
 4-1/2"-12" - 50' lengths, coiled and polywrapped

**Order Codes**  
 542-437  
 6-5/8" and below  
  
 541-437  
 8" and above

NOM. ID		NOM. OD		MAX. WP		WEIGHT	
in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
1-1/2	38.1	2.00	50.80	200	1.38	0.79	1.18
2	50.8	2.50	63.50	200	1.38	0.97	1.44
2-1/2	63.5	3.06	77.72	200	1.38	1.36	2.02
3	76.2	3.55	90.17	200	1.38	1.60	2.38
4	101.6	4.58	116.33	150	1.03	2.10	3.13
4-1/2	114.3	5.07	128.78	150	1.03	2.34	3.48
5	127.0	5.57	141.48	150	1.03	2.59	3.85
6	152.4	6.53	165.86	150	1.03	2.87	4.27
6-5/8	168.3	7.22	183.39	150	1.03	3.58	5.33
8	203.2	8.57	217.68	100	0.69	4.06	6.04
8-5/8	219.1	9.19	233.40	100	0.69	4.57	6.81
10	254.0	10.63	270.00	100	0.69	5.73	8.54
12	304.8	12.66	321.60	100	0.69	6.79	10.12

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**

# Plicord® Water Discharge 150



**Application**

For use in heavy-duty service for a wide range of applications.

**Construction**

**Tube:** Black Plioflex® synthetic rubber  
**Cover:** Black Plioflex® synthetic rubber  
**Reinforcement:** Spiral-plied synthetic fabric

**Temperature**

-25°F to 180°F (-32°C to 82°C)

**Packaging**

3/4"-6" - 100' lengths, coiled and polywrapped  
 8"-12" - 50' lengths, coiled and polywrapped

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
12-PLICORD-150	3/4	19.05	1.04	26.42	150	1.03	0.23	0.34
16-PLICORD-150	1	25.40	1.29	32.77	150	1.03	0.30	0.45
20-PLICORD-150	1-1/4	31.75	1.60	40.64	150	1.03	0.43	0.64
24-PLICORD-150	1-1/2	38.10	1.84	46.74	150	1.03	0.50	0.74
32-PLICORD-150	2	50.80	2.38	60.45	150	1.03	0.71	1.06
40-PLICORD-150	2-1/2	63.50	2.87	72.90	150	1.03	0.87	1.29
48-PLICORD-150	3	76.20	3.47	88.14	150	1.03	1.37	2.04
56-PLICORD-150	4	101.60	4.50	114.30	150	1.03	1.80	2.68
64-PLICORD-150	5	127.00	5.51	139.95	150	1.03	2.32	3.45
96-PLICORD-150	6	152.40	6.49	164.85	150	1.03	2.53	3.76
128-PLICORD-150	8	203.20	8.45	214.60	150	1.03	3.81	5.68
160-PLICORD-150	10	254.00	10.63	270.00	150	1.03	5.67	8.45
192-PLICORD-150	12	304.80	12.68	322.10	150	1.03	7.02	10.46

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**



# Pyroflex® Hot Tar & Asphalt



### Application

For the transfer of high temperature petroleum based materials such as tar, asphalt, and hot oils. It is suitable for suction and discharge service on tanks trucks, tank cars, or at bulk stations. Heat resistant tube and Flexten reinforcement.

### Construction

- Tube:** Black Nitrile (special heat resistant) synthetic rubber (oil resistance)
- Cover:** Red Wingprene® synthetic rubber (oil resistant) with white spiral stripe
- Reinforcement:** Sprial-pliced Flexten® with wire helix

### Temperature

-25°F to 350°F (-32°C to 177°C)

### Packaging

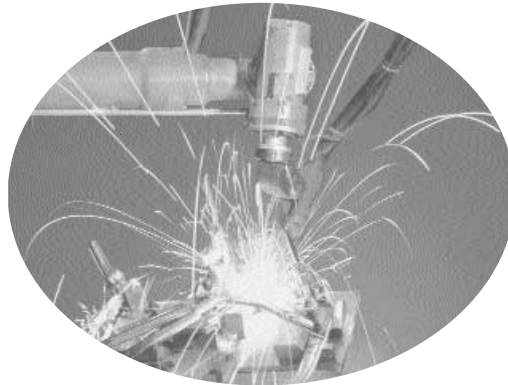
100' lengths, coiled and polywrapped

Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		VACUUM HG		WEIGHT	
	in.	mm.	in.	mm.	psi	Mpa	in.	mm.	in.	mm.	lb./ft.	kg./m.
24-PYROFLEX	1-1/2	38.1	2.29	58.17	150	1.03	4	102	29	736.6	1.29	1.92
32-PYROFLEX	2	50.8	2.73	69.34	150	1.03	5	127	29	736.6	1.65	2.46
40-PYROFLEX	2-1/2	63.5	3.23	82.04	150	1.03	6	152	29	736.6	2.04	3.04
48-PYROFLEX	3	76.2	3.72	94.49	150	1.03	7	178	29	736.6	2.46	3.66
64-PYROFLEX	4	101.6	4.81	122.17	150	1.03	10	254	29	736.6	3.46	5.15

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**

**Push-On**



	Page	Superior Abrasion Cover	MSHA	Non-conductive	Oil Resistance Tube*	Oil Resistance Cover*	Braided	Robotic Service	General Industrial
Autogrip®		Yes	Yes	Yes	B	A	Yes	Yes	Yes
Insta-Grip 250™				Yes	A	A			Yes
Insta-Grip 300™				Yes	A	B	Yes		Yes
Insta-Grip TC™					A	B	Yes		Yes
Ultra-Grip™		Yes	Yes	Yes	A	A	Yes	Yes	Yes

\* Based on RMA Oil Classification.

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial Hose**

# Insta-Grip 300™



### Application

For use with push-on fittings at working pressure of 300 psi. For low-pressure hydraulic and pneumatic systems such as shop air systems, general industrial, maintenance, and automotive applications. Nonconductive, minimum electrical resistance, greater than one (1) megohm per inch of hose length at 1000 Volts DC.

### Construction

- Tube:** Chemivic® oil- and heat-resistant synthetic rubber, RMA Class A (high oil resistance)
- Cover:** Black, Green, Blue, Red, and Gray (others: contact marketing); weather-, abrasion-, and oil-resistant synthetic rubber, RMA Class B (medium/high oil resistance)
- Reinforcement:** Braided (1) high-strength yarn laid at the most effective angle for maximum strength and coupling holding ability

### Temperature

-40°F to 190°F (-40°C to 88°C)

### Colors Available

Black, Green, Gray, Red, and Blue

Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	in.	mm.	lb./ft.	kg./m.
300-535-280-04	1/4	6.35	0.54	13.72	300	2.07	2.5	64	0.09	0.13
300-535-280-05	5/16	7.90	0.62	15.70	300	2.07	3.0	76	0.14	0.21
300-535-280-06	3/8	9.53	0.69	17.53	300	2.07	3.0	76	0.14	0.21
300-535-280-08	1/2	12.70	0.81	20.57	300	2.07	5.0	127	0.16	0.24
300-535-280-10	5/8	15.88	0.93	23.62	300	2.07	6.0	152	0.20	0.30
300-535-280-12	3/4	19.05	1.07	27.18	300	2.07	7.0	178	0.25	0.37
300-535-280-16	1	25.40	1.34	34.04	300	2.07	8.0	203	0.34	0.51

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial Hose**



**Ultra-Grip™**



**Application**

For use with push-on fittings at maximum working pressure of 300 psi. For low-pressure hydraulic pneumatic systems such as robotics, shop air systems, general industrial, maintenance, and automotive applications. Nonconductive, minimum electrical resistance, greater than one (1) megohm per inch of hose length at 1000 Volts DC.

**Construction**

**Tube:** Chemivic® oil- and heat-resistant synthetic rubber, RMA Class A (high oil resistance)

**Cover:** Black, Blue, Gray, Green, Red, White, Brown, and Yellow (others: contact marketing); weather-, abrasion-, and oil-resistant Carbryn® rubber, RMA Class A (high oil resistance)

**Reinforcement:** Braided (1) high-strength yarn laid at an angle for strength and coupling holding ability

**Temperature**

-40°F to 200°F (-40°C to 93°C)

**Colors Available**

Black, Blue, Gray, Green, Red, White, Brown, and Yellow

Part #	NOM. ID		NOM. OD		MAX. WP		BEND RADIUS		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	in.	mm.	lb./ft.	kg./m.
300-03IG	3/16	4.80	0.36	9.10	300	2.07	2.5	64	0.04	0.06
300-04IG	1/4	6.35	0.51	12.95	300	2.07	2.5	64	0.08	0.12
300-06IG	3/8	9.53	0.67	17.02	300	2.07	3	76	0.13	0.19
300-08IG	1/2	12.70	0.76	19.30	300	2.07	5	127	0.14	0.21
300-10IG	5/8	15.88	0.93	23.62	300	2.07	6	152	0.19	0.28
300-12IG	3/4	19.05	1.06	26.92	300	2.07	7	178	0.24	0.36
300-16IG	1	25.40	1.34	34.04	300	2.07	8	203	0.34	0.51

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial Hose**

**Autogrip®**



**Application**

A premium-quality push-on hose specifically designed for the rigors of robotic and automated applications where flexibility, high abuse resistance, and strength are desired. It is ideally suited for use in the demanding applications of the automotive assembly, pharmaceutical, material handling, and welding industries. Nonconductive, minimum electrical resistance greater than one (1) megohm per inch of hose length at 1000 Volts DC.

**Construction**

- Tube:** Neoprene, seamless, heat- and oil-resistant, RMA Class B (medium/high oil resistance)
- Cover:** Weather-, abrasion-, and oil-resistant Carbryn® synthetic rubber, RMA Class C (medium oil resistance), MSHA approved
- Reinforcement:** Braided (1) high-strength yarn laid at the most effective angle for maximum coupling holding ability

**Temperature**

-40°F to 200°F (-40°C to 93°C)

**Colors Available:**

- Black
- Blue
- Gray
- Green
- Red
- White
- Brown
- Yellow

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
300-04AG	1/4	6.35	0.50	12.70	300	2.07	0.09	0.13
300-06AG	3/8	9.53	0.66	16.76	300	2.07	0.12	0.18
300-08AG	1/2	12.70	0.76	19.30	300	2.07	0.14	0.21
300-10AG	5/8	15.88	0.92	23.37	300	2.07	0.17	0.25
300-12AG	3/4	19.05	1.06	26.92	300	2.07	0.22	0.33
300-16AG	1	25.40	1.34	34.04	300	2.07	0.30	0.45

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial Hose**





## Horizon®



### Application

An economical air and water hose, Horizon is for a wide range of industrial, construction, and agricultural applications. Available in 200 and 300 PSI working pressures.

### Construction

**Tube:** Versigard® synthetic rubber, RMA Class C (medium oil resistance)

**Cover:** Black, Red, Yellow, Green or Blue Versigard® synthetic rubber

**Reinforcement:** Spiral synthetic yarn, 2" is braided

### Temperature

-40°F to 190°F (-40°C to 88°C)

## Horizon® 200

**Colors Available:**

- 2" Black
- 2" Red
- Black
- Red
- Yellow
- Blue

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
RAWHH-03-01	3/16	4.76	0.44	11.18	200	1.38	0.08	0.12
RAWHH-04-01	1/4	6.35	0.50	12.70	200	1.38	0.09	0.13
RAWHH-05-01	5/16	7.94	0.58	14.73	200	1.38	0.12	0.18
RAWHH-06-01	3/8	9.53	0.67	17.02	200	1.38	0.15	0.22
RAWHH-08-01	1/2	12.70	0.81	20.57	200	1.38	0.20	0.30
RAWHH-10-01	5/8	15.88	0.97	24.64	200	1.38	0.27	0.40
RAWHH-12-01	3/4	19.05	1.12	28.45	200	1.38	0.34	0.51
RAWHH-16-01	1	25.40	1.44	36.83	200	1.38	0.54	0.80
RAWHH-20-01	1-1/4	31.75	1.73	44.00	200	1.38	0.75	1.12
RAWHH-24-01	1-1/2	38.10	1.98	50.29	200	1.38	0.86	1.28
RAWHH-32-01	2	50.80	2.50	63.50	200	1.38	1.16	1.73

## Horizon® 300

**Colors Available:**

- Red
- Yellow
- Blue

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
RAWHH-04-02	1/4	6.35	0.53	13.46	300	2.07	0.10	0.15
RAWHH-06-02	3/8	9.53	0.70	17.78	300	2.07	0.17	0.25
RAWHH-08-02	1/2	12.70	0.84	21.34	300	2.07	0.22	0.33
RAWHH-12-02	3/4	19.05	1.15	29.21	300	2.07	0.37	0.55
RAWHH-16-02	1	25.40	1.48	37.59	300	2.07	0.58	0.86

Couplings - Contact D.F. Burnham for proper fitting recommendation.



**Pliovic®**



**Application**

A lightweight, economical general purpose hose for carrying air, water, and many spray solutions, Pliovic is suitable for a wide range of industrial, construction, agricultural hand sprayers, and many multipurpose applications. Nonconductive, minimum electrical resistance greater than one (1) megohm per inch of hose length at 1000 Volts DC. Available in a reduced OD, Pliovic® GS construction or a thick cover, Pliovic® Plus construction

**Construction**

**Tube:** Black Pliovic® RMA Class B (medium/high oil resistance)  
**Cover:** Pliovic®, smooth finish, RMA Class B (medium/high oil resistance)  
**Reinforcement:** Spiral synthetic yarn

**Temperature**

-10°F to 158°F (-23°C to 70°C)

**Pliovic® Plus 250 (Thick Cover)**

Colors Available:

- Red
- Blue
- Green
- Black
- Yellow

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
RAWHP-04-01	1/4	6.35	0.50	12.70	250	1.72	0.08	0.12
RAWHP-06-01	3/8	9.53	0.66	16.76	250	1.72	0.13	0.19
RAWHP-08-01	1/2	12.70	0.81	20.57	250	1.72	0.17	0.25
RAWHP-10-01	5/8	15.88	0.94	23.88	250	1.72	0.20	0.30
RAWHP-12-01	3/4	19.05	1.11	28.19	250	1.72	0.28	0.42
RAWHP-16-01	1	25.40	1.38	35.05	200	1.38	0.37	0.55

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial Hose**



# Wingfoot®



### Application

A good-quality, economical general purpose hose for industrial air service, compressor lines, pneumatic tools, low-pressure spray, and many other applications where the need for oil resistance is moderate. Nonconductive, minimum electrical resistance greater than one (1) megohm per inch of length of hose at 1000 V DC. Available in 200 and 300 PSI working pressures.

### Construction

**Tube:** Nitrile synthetic rubber, RMA Class A (high oil resistance)  
**Cover:** Red, Blue or Black Chemivic® synthetic rubber, RMA Class B (medium/high oil resistance)  
**Reinforcement:** Spiral synthetic yarn

### Temperature

-20°F to 190°F (-29°C to 88°C)

## WingFoot® 200

**Colors Available:**  
 Black  
 Red  
 Blue

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
RAWHW-03-01	3/16	4.76	0.44	11.18	200	1.38	0.07	0.10
RAWHW-04-01	1/4	6.35	0.53	13.46	200	1.38	0.10	0.15
RAWHW-05-01	5/16	7.94	0.63	16.00	200	1.38	0.14	0.21
RAWHW-06-01	3/8	9.53	0.69	17.53	200	1.38	0.15	0.22
RAWHW-08-01	1/2	12.70	0.84	21.34	200	1.38	0.21	0.31
RAWHW-10-01	5/8	15.88	1.00	25.40	200	1.38	0.27	0.40
RAWHW-12-01	3/4	19.05	1.13	28.70	200	1.38	0.38	0.57
RAWHW-16-01	1	25.40	1.47	37.34	200	1.38	0.58	0.86

## WingFoot® 300

**Colors Available:**  
 Black  
 Red  
 Blue

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
RAWHW-04-02	1/4	6.35	0.54	13.72	300	2.07	0.14	0.21
RAWHW-05-02	5/16	7.94	0.64	16.26	300	2.07	0.18	0.27
RAWHW-06-02	5/16	7.94	0.69	17.53	300	2.07	0.19	0.28
RAWHW-08-02	1/2	12.70	0.86	21.84	300	2.07	0.26	0.39
RAWHW-10-02	5/8	15.88	1.02	25.91	300	2.07	0.33	0.49
RAWHW-12-02	3/4	19.05	1.19	30.23	300	2.07	0.42	0.63
RAWHW-16-02	1	25.40	1.50	38.10	300	2.07	0.62	0.92
RAWHW-20-02	1-1/4	31.75	1.77	45.20	250	1.72	0.84	1.25
RAWHW-24-02	1-1/2	38.10	2.08	52.90	250	1.72	1.04	1.55

Couplings - Contact D.F. Burnham for proper fitting recommendation.





**Ortac<sup>®</sup>**



**Application**

Goodyear's Ortac<sup>®</sup> (Oil Resistant Tube and Cover) is our most popular premium-quality multipurpose hose. Used in the most abusive industrial applications, Ortac<sup>®</sup> will handle air, oil, water, kerosene, and some chemicals. Nonconductive, minimum electrical resistance greater than one (1) megohm per inch of hose length; at 1000 Volts DC. Available in 250, 300 and 400 PSI working pressures. NOTE: Ortac<sup>®</sup> 400 Yellow is USMSHA approved.

**Construction**

- Tube:** Nitrile synthetic rubber, RMA Class A (high oil resistance)
- Cover:** Red or Yellow Carbryn<sup>®</sup> synthetic rubber, RMA Class A (high oil resistance)
- Reinforcement:** Spiral synthetic yarn, 2" is braided

**Temperature**

-20°F to 190°F (-29°C to 88°C)

**Ortac<sup>®</sup> 250**

**Colors Available:**  
Red  
2" Red

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg/m.
RAWHO-04-01	1/4	6.35	0.53	13.46	250	1.72	0.09	0.13
RAWHO-05-01	5/16	7.94	0.69	17.53	250	1.72	0.14	0.21
RAWHO-06-01	3/8	9.53	0.69	17.53	250	1.72	0.15	0.22
RAWHO-08-01	1/2	12.70	0.84	21.34	250	1.72	0.20	0.30
RAWHO-10-01	5/8	15.88	1.00	25.40	250	1.72	0.26	0.39
RAWHO-12-01	3/4	19.05	1.14	28.96	250	1.72	0.34	0.51
RAWHO-16-01	1	25.40	1.47	37.34	250	1.72	0.51	0.76
RAWHO-20-01	1-1/4	31.75	1.77	45.20	250	1.72	0.70	1.04
RAWHO-24-01	1-1/2	38.10	2.08	52.80	250	1.72	0.96	1.43
RAWHO-32-01	2	50.80	2.50	63.50	250	1.72	1.08	1.61

**Ortac<sup>®</sup> 300**

**Colors Available:**  
Red

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg/m.
RAWHO-03-02	3/16	4.76	0.44	11.18	300	2.07	0.07	0.10
RAWHO-04-02	1/4	6.35	0.61	15.49	300	2.07	0.14	0.21
RAWHO-05-02	5/16	7.94	0.68	17.27	300	2.07	0.16	0.24
RAWHO-06-02	3/8	9.53	0.73	18.60	300	2.07	0.18	0.27
RAWHO-08-02	1/2	12.70	0.89	22.61	300	2.07	0.25	0.37
RAWHO-10-02	5/8	15.88	1.06	26.92	300	2.07	0.35	0.52
RAWHO-12-02	3/4	19.05	1.19	30.23	300	2.07	0.40	0.60
RAWHO-16-02	1	25.40	1.50	38.10	300	2.07	0.59	0.88
RAWHO-20-02	1-1/4	31.75	1.81	46.00	300	2.07	0.76	1.13
RAWHO-24-02	1-1/2	38.10	2.08	52.80	300	2.07	0.88	1.31

Couplings - Contact D.F. Burnham for proper fitting recommendation.



## Arctic Ortac®



### Application

A low-temperature construction for air, water, oil, kerosene, fuel oil, and some chemical operations where temperatures fall as low as -65°F (-54°C).

### Construction

**Tube:** Black low-temp, oil-resistance synthetic rubber

**Cover:** Black ultra-low temperature, oil resistant synthetic rubber (with a blue stripe)

**Reinforcement:** Synthetic cord; static bonding wire built into the hose for static grounding

### Temperature

-65°F to 180°F (-54°C to 82°C)

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
BAWHO-04-01	1/4	6.35	0.63	16.00	300	2.07	0.14	0.21
BAWHO-06-01	3/8	9.53	0.75	19.05	300	2.07	0.19	0.28
BAWHO-08-01	1/2	12.70	0.91	23.11	300	2.07	0.25	0.37
BAWHO-12-01	3/4	19.05	1.18	29.97	300	2.07	0.36	0.54
BAWHO-16-01	1	25.40	1.50	38.10	300	2.07	0.58	0.86
BAWHO-20-01	1-1/4	31.75	1.80	45.72	300	2.07	0.74	1.10
BAWHO-22-01	1-3/8	34.93	1.97	50.04	300	2.07	0.92	1.37
BAWHO-24-01	1-1/2	38.10	2.09	53.09	300	2.07	1.00	1.49

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial Hose**

**Gorilla®**



**Application**

A premium-quality, multipurpose industrial hose with a wide range of applications in factories, construction, agriculture, quarries, mines, railroads, the oil and gas industry, and shipbuilding. All sizes are rated at 500 psi (3.4 Mpa) maximum working pressure. Nonconductive, minimum electrical resistance greater than one (1) megaohm per inch of hose length at 1000 volts DC.

**Construction**

**Tube:** Nitrile Synthetic rubber, RMA Class A (high oil resistance)

**Cover:** Yellow Carbryn® synthetic rubber, RMA Class A (high oil resistance) MSHA approved

**Reinforcement:** Sprial Flexten® yarn 2", is braided synthetic yarn

**Temperature**

-20°F to 190°F (-29°C to 88°C)

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
03-GORILLA	3/16	4.76	0.47	11.94	500	3.45	0.08	0.12
04-GORILLA	1/4	6.35	0.61	15.49	500	3.45	0.17	0.25
05-GORILLA	5/16	7.94	0.69	17.53	500	3.45	0.20	0.30
06-GORILLA	3/8	9.53	0.73	18.60	500	3.45	0.22	0.33
08-GORILLA	1/2	12.70	0.89	22.61	500	3.45	0.28	0.42
10-GORILLA	5/8	15.88	1.06	26.92	500	3.45	0.35	0.52
12-GORILLA	3/4	19.05	1.19	30.23	500	3.45	0.41	0.61
16-GORILLA	1	25.40	1.50	38.10	500	3.45	0.58	0.86
20-GORILLA	1-1/4	31.75	1.77	45.20	500	3.45	0.79	1.18
24-GORILLA	1-1/2	38.10	2.04	51.80	500	3.45	0.86	1.27
32-GORILLA	2	50.80	2.62	66.50	500	3.45	1.19	1.76

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial Hose**



# Flexsteel® Service Station Air



**Application**

For tire inflation service from towers, reels, or curb connections

**Construction**

**Tube:** Nitrile Synthetic rubber, RMA Class B (medium/high oil resistance)

**Cover:** Red or Black nitrile synthetic rubber, abrasion- and oil-resistant, RMA Class B (medium/high oil resistance)

**Reinforcement:** Braided (1) steel wire braid

**Temperature**

-20°F to 190°F (-29°C to 88°C)

**Colors Available**

Red and Black

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
539-078	1/4	6.35	0.61	15.49	250	1.72	0.19	0.28
539-097	3/8	9.53	0.72	18.29	250	1.72	0.23	0.34

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial Hose**



## Plicord® Air



### Application

A versatile, heavy-duty air hose for use in rough industrial applications or for severe service in mines, quarries, and construction jobs.

### Construction

**Tube:** Black Plioflex® synthetic rubber, RMA Class C (medium oil resistance) (conductive)  
**Cover:** Plioflex® synthetic rubber (wrapped impression), RMA Class C (medium oil resistance)  
**Reinforcement:** Spiral-plied synthetic fabric

### Temperature

-25°F to 180°F (-32°C to 82°C)

## Plicord® Air Green 400

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
549-006	1/2	12.70	0.880	22.35	400	2.76	0.23	0.34
549-006	5/8	15.88	1.050	26.67	400	2.76	0.32	0.48
549-006	3/4	19.05	1.230	31.24	400	2.76	0.45	0.67
549-006	1	25.40	1.500	38.10	400	2.76	0.58	0.86
549-006	1-1/4	31.75	1.790	45.47	400	2.76	0.74	1.10
549-006	1-5/16	33.34	1.890	48.01	400	2.76	0.83	1.24
549-006	1-1/2	38.10	2.040	51.82	400	2.76	0.86	1.28
549-006	2	50.80	2.546	64.67	400	2.76	1.11	1.65
549-006	2-1/2	63.50	3.156	80.16	400	2.76	1.64	2.44
549-006	3	76.20	3.700	93.98	400	2.76	2.14	3.18

## Plicord® Air Yellow 300

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
549-007	2-1/2	63.5	3.17	80.52	300	2.07	1.63	2.43
549-007	3	76.2	3.70	93.98	300	2.07	2.13	3.17

Couplings - Contact D.F. Burnham for proper fitting recommendation.





## Braidair™



### Application

A quality braided general purpose hose for industrial service, compressor lines, pneumatic tools, water service, and low-pressure spray where the need for oil resistance is moderate.

### Construction

- Tube:** Black synthetic RMA Class A (high oil resistance)
- Cover:** Red synthetic, RMA Class B (medium/high oil resistance)
- Reinforcement:** Spiral (1) synthetic yarn

### Temperature

-20°F to 190°F (-29°C to 88°C)

Part #	NOM. ID		NOM. OD		MAX. WP		WEIGHT	
	in.	mm.	in.	mm.	psi.	Mpa.	lb./ft.	kg./m.
536-422	1/4	6.35	0.55	13.97	300	2.07	0.11	0.16
536-422	3/8	9.53	0.72	18.29	300	2.07	0.18	0.26
536-422	1/2	12.70	0.85	21.59	300	2.07	0.21	0.31
536-422	3/4	19.05	1.13	28.70	300	2.07	0.32	0.48
536-422	1	25.40	1.47	37.34	300	2.07	0.50	0.74
536-222	1-1/4	31.75	1.80	45.72	300	2.07	0.75	1.12
536-421	1-1/2	38.10	2.09	53.10	300	2.07	1.00	1.49
536-421	2	50.80	2.50	63.50	200	1.38	1.09	1.62

Couplings - Contact D.F. Burnham for proper fitting recommendation.

**Industrial  
Hose**

# Tubing

## CORROSION RESISTANCE VALUES for Plastic Tubing

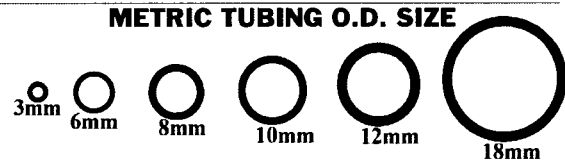
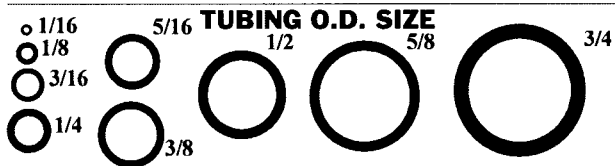
Ratings based on tests at 70°F and should not be exposed to higher temperature without testing

**F**-5000 Poly Vinyl Chloride  
**U**-2000 Polyurethane  
**E**-1000 Low Density Polyethylene  
**N**-6000 Nylon

**P**-1100 Polypropylene  
**D**-4000 EVA  
**T**-7000 Teflon  
**U**-8000 Special Plasticizers PVC

**G**-Good  
**L**-Limited  
**P**-Poor  
**N**-Not Tested

FUELS:	F	U	E	N	P	D	T	U-8000	ACIDS & BASES	F	U	E	N	P	D	T
Butane (1).....	G	G	L	G	L	G	G	N	Acetic, 50%.....	G	P	P	L	G	P	G
Diesel Fuel.....	L	G	L	G	L	P	N	G	Boric.....	G	G	G	G	G	G	G
Gasoline (regular).....	L	G	P	G	L	N	G	G	Carbolic (phenol).....	P	P	G	P	G	P	N
Kerosene.....	L	G	P	G	G	P	G	G	Fatty.....	G	G	P	G	G	N	G
Methane (nat. gas)(1).....	G	G	L	G	G	N	N	N	Formic, 90%.....	G	P	G	P	G	G	G
Propane (1).....	G	G	L	G	L	N	N	N	Hydrochloric, 10%.....	G	G	L	G	G	G	G
OTHERS:									Hydrochloric, 25%.....	G	L	G	P	G	L	G
Acetylene.....	N	G	G	G	G	N	N	N	Hydrochloric, 50%.....	G	L	G	P	G	L	G
Ammonia gas.....	P	G	G	G	G	N	N	N	Hydrocyanic, 50%.....	L	P	G	P	G	G	G
Ammonium salts.....	G	G	G	G	G	N	N	N	Maleic.....	G	P	G	G	G	N	N
Amyl acetate.....	P	P	L	G	P	P	G	N	Nitric, 10%.....	G	P	G	L	G	L	G
Aniline.....	P	P	L	L	G	P	G	N	Nitric, 30%.....	G	P	G	P	L	L	G
Animal oils.....	G	G	P	G	G	N	G	G	Oleic.....	L	G	L	G	G	P	N
Bleach, 7%.....	G	P	G	L	L	N	N	G	Phosphoric, 25%.....	G	L	G	G	G	G	N
Bromine.....	L	G	P	P	P	P	G	N	Sulfuric, 30%.....	G	L	G	L	G	L	G
Butandiol.....	G	G	G	G	N	N	N	N	Sulfuric, 70%.....	L	P	P	P	G	P	G
Calcium salts incl. Chloride.....	G	G	G	G	N	G	G	G	Sulfuric, 98%.....	P	P	P	P	G	P	G
Chlorine gas, dry.....	G	G	P	P	P	P	N	N	Sulfurous, 30%.....	G	P	G	L	G	N	G
Dibutyl phthalate.....	N	P	L	G	L	P	N	G	Tannic.....	G	P	G	G	G	N	G
Glucose.....	G	G	G	G	G	G	G	G	Ammonium hydroxide, 25%... P	G	L	G	G	G	N	N
Glycerine.....	G	G	G	G	G	N	G	G	Potassium hydroxide, 25% L	G	G	G	G	G	G	G
Hydrogen peroxide 10%.....	G	G	G	G	G	G	G	G	Sodium hydroxide, 50%.....G	G	G	G	G	L	G	G
Hydrogen peroxide 25%.....	L	G	G	P	G	G	G	G	SOLVENTS:							
Hydrogen sulfide.....	G	P	G	L	G	N	G	N	Acetone.....	P	P	G	G	L	P	G
Isocyanates.....	N	G	G	G	N	P	N	N	Benzene.....	P	L	P	G	P	P	G
Lead salts (3).....	G	G	G	G	N	N	N	N	Carbon tetrachloride.....	P	L	L	L	P	P	G
Magnesium salts.....	G	G	G	G	N	G	N	N	Chloroform.....	P	P	L	P	P	P	G
Mercury.....	G	G	G	G	G	N	N	N	Cyclohexanone.....	P	P	P	G	L	P	G
Milk.....	G	G	G	G	G	N	G	G	Dimethylformamide.....	P	P	L	N	G	N	N
Mineral Oil.....	G	L	G	L	P	G	G	G	Dioxane.....	N	N	P	G	L	N	N
Nitrous Oxide (1).....	G	G	L	G	N	N	N	N	Ethyl acetate.....	P	L	G	G	L	P	G
Oxygen (1).....	G	G	G	G	G	G	G	G	Ethyl alcohol (1).....	L	G	G	L	G	G	G
Ozone, ambient.....	G	G	L	G	L	N	N	G	Ethyl ether.....	L	L	G	G	L	P	N
Paint, oil base.....	L	G	L	G	N	N	N	G	Ethylene glycol.....	G	G	G	G	G	N	N
Polyglycols.....	G	G	G	G	N	N	N	N	Formaldehyde.....	G	G	G	G	L	N	N
Potassium salts.....	G	G	G	G	N	G	N	N	Freon - 12'.....	L	L	G	G	L	N	G
Pydraul.....	P	P	P	G	N	N	N	N	Methyl alcohol.....	L	G	G	L	G	N	N
Pyridine.....	P	L	G	L	G	N	G	N	Methylene chloride.....	P	P	L	G	L	P	N
Salt Water.....	G	G	G	G	G	G	G	G	Methyl ethyl ketone.....	P	P	G	G	L	P	N
Silver Nitrate.....	G	G	G	G	G	G	N	N	Naphthas (2).....	P	G	P	G	L	P	G
Skydrol.....	P	P	P	G	N	N	N	N	Tolulene.....	P	G	P	G	L	P	N
Soap solution (conc.).....	G	G	L	G	G	N	G	G	Triclorethylene.....	P	P	P	L	P	P	G
Sodium salts.....	G	G	G	G	G	N	G	G	Turpentine.....	G	G	P	G	L	P	G
Sodium thiosulphate.....	G	G	G	G	G	N	G	G	Xylene.....	P	G	P	G	L	P	N
Styrene.....	P	G	P	G	N	N	N	G	HYDRAULIC FLUIDS:							
Trisodium phosphate.....	G	G	N	G	G	N	G	G	Diester base grease.....	N	G	P	G	L	P	N
Uçon oil.....	G	G	G	G	N	N	N	N	Petroleum base grease.....	G	G	L	G	L	P	N
Urea.....	G	G	G	G	N	G	G	G	Phosphate ester.....	L	P	P	G	G	N	N
Vegetable oils (1).....	G	G	G	G	P	N	G	G	Polyol ester.....	P	N	P	G	G	N	N
Water at 730F.....	G	G	G	G	G	G	G	G	Water-glycol.....	G	G	G	G	G	N	N
Water at 1400F.....	L	G	G	G	G	G	G	G	SAE motor oils.....	G	G	G	G	N	N	N
Water at 1700F.....	P	L	N	L	G	P	N	G	Machine oil.....	G	G	L	G	L	N	N
Whiskey, wine (1).....	N	G	G	G	G	N	G	G	MIL-L-7808 H.....	G	G	L	G	G	N	N
Zinc Chloride.....	G	G	G	G	G	G	N	N	Brake Fluid.....	N	N	N	N	N	N	N



**POLYETHYLENE TUBING**

- Economical
- Flexible
- Low Pressure & Temperature



- Low density polyethylene tubing has a wide range of uses including water lines, beverage tubing, air lines, instrumentation, plus uses in industrial, agricultural, and chemical application.
- Has good resistance to alkalis, dilute acid, ammonia gas, ammonium hydroxide, brine water, and most aqueous solutions of metallic salts.
- Food Grade
- Temperature: -40°F to 135°F
- Natural - ASTM D-1248-8f - Type 1 - Class A - Category 4, Colors are Class B.
- 100' foot coils in boxes.

**POLYETHYLENE TUBING**

Part #	Tube O.D.	Tube Wall	Burst PSI
02-X-020PC ...	1/8	0.020	400
53-X-025PC ..	5/32	0.025	400
03-X-030PC ..	3/16	0.030	400
04-X-040PC ..	1/4	0.040	400
04-X-062PC ..	1/4	0.062	800
05-X-062PC ..	5/16	0.062	600
06-X-062PC ..	3/8	0.062	400
08-X-062PC ..	1/2	0.062	300
10-X-062PC ..	5/8	0.062	250
12-X-062PC ..	3/4	0.062	150
12-X-094PC ..	3/4	.0094	200
16-X-125PC ...	1	125	300

**500" NATURAL POLYETHYLENE**

Part #	O.D.
02-X-030PC-5C	1/8
04-X-040PC-5C	1/4
04-X-062PC-5C	1/4
06-X-062PC-4C	3/8
08-X-062PC-5C	1/2

*More colors and lengths available*

**1000" NATURAL  
POLYETHYLENE**

Part #	O.D.
04-X-040PC-1M	1/4
04-X-062PC-1M	1/4
06-X-062PC-1M	3/8
08-X-062PC-1M	1/2

**BLACK  
POLYETHYLENE TUBING**

Part #	O.D.
02-X-020PB	1/8
53-X-025PB	5/32
03-X-030PB	3/16
04-X-040PB	1/4
04-X-062PB	1/4
05-X-062PB	5/16
06-X-062PB	3/8
08-X-062PB	1/2
10-X-062PB	5/8

**500" BLACK REEL**

Part #	O.D.
04-X-040PB-5C	1/4
05-X-062PB-5C	5/16
06-X-062PB-5C	3/8
08-X-062PB-5C	1/2

**1000" BLACK REEL**

Part #	O.D.
06-X-062PB-1M	3/8

**BLUE  
POLYETHYLENE TUBING**

Part #	O.D.
02-X-020PBL	1/8
53-X-025PBL	5/32
03-X-030PBL	3/16
04-X-030PBL	1/4
04-X-062PBL	1/4
05-X-062PBL	5/16
06-X-062PBL	3/8
08-X-062PBL	1/2

**500" BLUE REEL**

Part #	O.D.
04-X-040PBL-5C	1/4
06-X-062PBL-5C	3/8

**1000" BLUE REEL**

Part #	O.D.
04-X-040PBL-1M	1/4

**GREEN  
POLYETHYLENE TUBING**

Part #	O.D.
53-X-025PG	5/32
04-X-040PG	1/4
04-X-062PG	1/4
05-X-062PG	5/16
06-X-062PG	3/8
08-X-062PG	1/2

**500" GREEN REEL**

Part #	O.D.
04-X-040PG-5C	1/4

**1000" GREEN REEL**

Part #	O.D.
04-X-040PG-1M	1/4

**RED  
POLYETHYLENE TUBING**

Part #	O.D.
04-X-040PR	1/4
05-X-062PR	5/16
06-X-062PR	3/8

**500" RED REEL**

Part #	O.D.
04-X-040PR-5C	1/4

**1000" RED REEL**

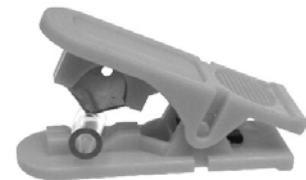
Part #	O.D.
04-X-040PR-1M	1/4

**WHITE  
POLYETHYLENE TUBING**

Part #	O.D.
04-X-040PW	1/4
06-X-062PW	3/8
08-X-062PW	1/2

**PLASTIC TUBE CUTTER**

Range: 1/8" - 3/8" I.D. (3mm-100mm)



Part #	Description
97-707	Cutter w-Blade
91-707B	Pack of 10 Blades

**Tubing**



**YELLOW**

**POLYETHYLENE TUBING**

<b>Part #</b>	<b>O.D.</b>
04-X-.040PY .....	1/4
05-X-.062PY .....	5/16
06-X-.062PY .....	3/8

**ORANGE**

**POLYETHYLENE TUBING**

<b>Part #</b>	<b>O.D.</b>
04-X-.040PO .....	1/4

**GRAY**

**POLYETHYLENE TUBING**

<b>Part #</b>	<b>O.D.</b>
06-X-.062PGY .....	3/8

**POLYETHYLENE  
METRIC TUBING**



<b>Part #</b>	<b>MM O.D.</b>	<b>MM Wall</b>	<b>Length</b>
73-200M1 ....	4	2.5	150
73-201M2 ....	6	4	25
73-201M1 ....	6	4	150
73-202M2 ....	8	6	25
73-202M2 ....	10	8	25
73-203M1 ....	10	8	150

More sizes, lengths  
and colors available.  
Just Ask!

"...as one goes through life one  
learns that if you don't paddle  
your own canoe, you don't  
move."

- Katharine Hepburn

**FLEXIBLE NYLON 11 TUBING**

- High Burst
- Resilient
- Corrosion Resistance



- Lubrication systems, instrumentation lines, fuel lines, refrigerant lines, Vacuum applications, food processing.
- Low moisture absorption, good mechanical properties, and excellent electrical properties.
- Temperature range 400F to 225F
- Has excellent resistance to a wide range of chemicals including oils, gasoline, hydraulic fluids, salt solutions, and bases.
- 1000lb min. burst P.S.I.
- For DOT tubing see air brake section.

<b>Part #</b>	<b>Tube O.D.</b>	<b>Tube Wall</b>
02-X-.017GR1 .....	1/8	.017
53-X-.025GR1 .....	5/32	.025
03-X-.025GR1 .....	3/16	.025
04-X-.035GR1 .....	1/4	.035
04-X-.040GR1 .....	1/4	.040
04-X-.062GR2 .....	1/4	.062
05-X-.040GR1 .....	5/16	.040
06-X-.050GR1 .....	3/8	.050
08-X-.062GR1 .....	1/2	.062
10-X-.062GR1 .....	5/8	.062

**500" NYLON TUBING NATURAL**

<b>Part #</b>	<b>Tube O.D.</b>
04-X-.035GR1-5C .....	1/4

**BLACK NYLON TUBING**

<b>Part #</b>	<b>Tube O.D.</b>
02-X-.017GR1BK .....	1/8
53-X-.025GR1BK .....	5/32
04-X-.035GR1BK .....	1/4
04-X-.040GR1BK .....	1/4
06-X-.050GR1BK .....	3/8
08-X-.062GR1BK .....	1/2

**1000' BLACK NYLON**

<b>Part #</b>	<b>Tube O.D.</b>
02-X-.017GR1BKM .....	1/8



**NYLON 12 METRIC TUBING**

- Same properties as nylon tubing



**1000' LENGTHS**

<b>Part #</b>	<b>MM O.D.</b>	<b>MM I.D.</b>	<b>MM Wall</b>	<b>Min PSI</b>
973-323 ....	4	2.3	0.85	1800
973-3242 ..	5	3	1	1600
973-325 ....	6	4	1	1200
973-326 ....	6	3.5	1.25	1700
973-327 ....	8	6	1	800
973-328 ....	8	5.5	1.25	1100
973-329 ....	10	8	1	600
973-332 ....	12	10	1	480
973-333 ....	12	9	1.5	800
973-334 ....	14	12	1	950

**PLASTIC TUBE CUTTER**

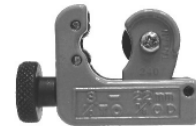
Range: 1/8" - 3/8" I.D. (3mm-10mm)



<b>Part #</b>	<b>Description</b>
97-707 .....	Cutter w-Blade
91-707B .....	Pack of 10 Blades

**MINI-TUBING CUTTER**

- Great for tight places



<b>Part #</b>	<b>Size</b>
990-571 .....	3mm-22mm (1/8"-7/8")

**TUBING CUTTER**



<b>Part #</b>	<b>Size</b>
990-570 .....	1/8"-1-1/8"ade

**POLYVINYL CHLORIDE  
(PVC) TUBING**

FDA recipe  
NSF approved  
Grade A



- Clear, flexible PVC tubing is suitable for use in low pressure applications including drain lines, laboratory tubing, industrial, chemical, agricultural, and food and beverage applications.
- Has good chemical resistance to alkalis, ammonium compounds, brine, and some acids and alcohols.
- Sanctioned by the FDA for food packaging applications.
- Temperature Range: -5°F to 125°F
- 100 foot coils in boxes.

Part #	Tube I.D.	Tube O.D.	Tube Wall	Tube Burst PSI
02-X-.188VT ...	1/8	3/16	1/32	200
02-X-.250VT ...	1/8	1/4	1/16	400
03-X-.313VT ...	3/16	5/16	1/16	250
04-X-.375VT ...	1/4	3/8	1/16	200
05-X-.438VT ...	5/16	7/16	1/16	150
05-X-.500VT ...	5/16	1/2	3/32	250
06-X-.500VT ...	3/8	1/2	1/16	125
06-X-.325VT ...	3/8	5/8	1/8	250
06-X-.563VT ...	3/8	9/16	3/32	200
08-X-.625VT ...	1/2	5/8	1/8	116
12-X-1.00VT ...	3/4	1	1/8	120
16-X-1.25VT ...	1	1-1/4	1/8	100

**POLYURETHANE TUBING**

**100' COILS**



Part #	Tube O.D.	Tube I.D.
02-.062-PUR-XX .....	1/8	1/16
53-.094-PUR-XX .....	5/32	3/32
03-.125-PUR-XX .....	3/16	1/8
04-.125-PUR-XX .....	1/4	1/8
04-.160-PUR-XX .....	1/4	
06-.250-PUR-XX .....	3/8	1/4
08-.375-PUR-XX .....	1/2	3/8

XX = DESIGNATE COLOR  
BK = Black  
BL = Blue  
CL = Clear  
GR = Green  
OR = Orange  
RD = Red  
WH = White  
YW = Yellow

**POLYURETHANE METRIC**



Part #	Tube O.D.	Tube I.D.
4MM-2.5MM-PUR-XX ..	4	2.5
6MM-4MM-PUR-XX .....	6	4
8MM-6MM-PUR-XX .....	8	6

XX = DESIGNATE COLOR  
BK = Black  
BL = Blue  
CL = Clear

More sizes and colors available

*Send DFBurnham your  
volume quotes on  
tubing!*

**ALUMINUM TUBING**

Alloy  
3003-0  
ASTM  
B483



Material to  
ASTM  
B-483

**ALUMINUM VERSATUBE  
50' COILS**

Part #	O.D.	Wall Thick.
972-190 .....	1/8	.025
972-191 .....	3/16	.028
972-192 .....	1/4	.032
972-193 .....	5/16	.035
973-194 .....	3/8	.035
972-195 .....	1/2	.035

**COPPER TUBING**

**REFRIGERATION  
COPPER TUBE (50' Coils)**



Part #	O.D. Nom.	Wt. 50' Coil	Wall Thick
02-X-.030RT ..	1/8	1.74	.030
03-X-.030RT ..	3/16	2.88	.030
04-X-.030RT ..	1/4	4.02	.030
05-X-.032RT ..	5/16	5.45	.032
06-X-.032RT ..	3/8	6.7	.032
08-X-.032RT ..	1/2	9.1	.032
10-X-.035RT ..	5/8	12.55	.035
12-X-.035RT ..	3/4	15.25	.035

**TYPE L SOFT COPPER  
TUBING (60' Coils)**

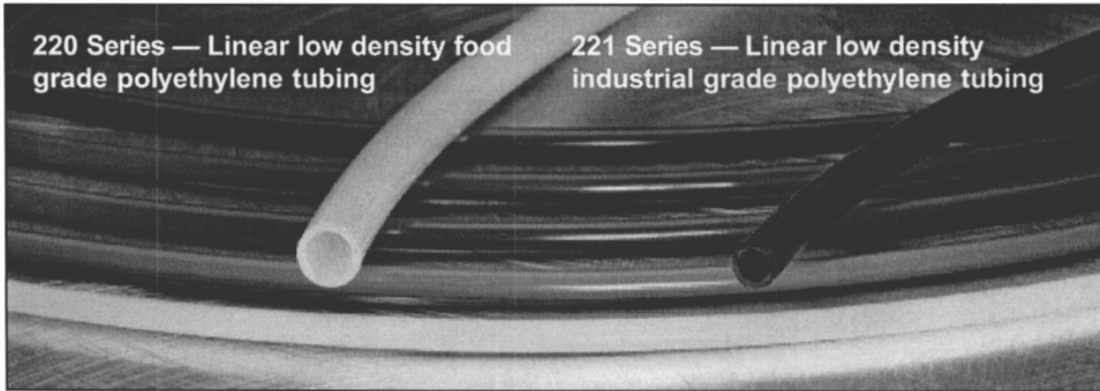


**For residential water lines**

Part #	I.D. Nom.	Wt. Per Ft	Wall Thick
972-171 .....	1/4	.126	.030
972-172 .....	3/8	.198	.035
972-173 .....	1/2	.285	.040

**LLDPE Tubing - 220 Series**  
**Linear low density food grade polyethylene tubing**

**LLDPE Tubing - 221 Series**  
**Linear low density industrial grade polyethylene tubing**



**Construction:**

**220 Series**

- Linear low density polyethylene tubing natural color - food grade

**Features:**

- Economical and lightweight
- LLDPE resin provides excellent environmental stress crack resistance
- Natural color
- Excellent resistance to solvents
- Chemically inert

**Applications:**

- Transfer of air and liquids in industrial applications
- Water lines
- Water softener lines
- Pneumatic logic control lines
- Vending equipment

**Series A9350**

- Linear low density polyethylene tubing - black color

**Features:**

- Economical and lightweight
- LLDPE resin provides excellent environmental stress crack resistance
- Resistant to sunlight and other forms of ultra-violet radiation
- Excellent resistance to solvents
- Chemically inert

**Applications:**

- Transfer of air and liquids in industrial applications
- Humidifier fill lines
- For outdoor uses where exposure to sunlight occurs
- Air conditioning drain lines
- Instrument air lines

The following colors are available on special order:  
 2231-Yellow, 2232-Orange, 2234-Red, 2236-blue, 2237-Green

Service Temperature Range: +30 °F (-435°C) to +1250°F (+65°C)

**220 Series - LLDPE Polyethylene tubing - food grade - natural color**

Series No.	Series Code	Nominal ID		Nominal ID		Nominal ID		Max. Working* Pressure (PSI)		Standard Lengths		Approx. Wt. per Pkg.
		(In)	(mm)	(In)	(mm)	(In)	(mm)	@70°F (20°C)	@70°F (20°C)	Spool/Coil	Pkg.	
220	0440x2K	1/4	6.4	.170	4.3	.040	1.0	140	60	2000 ft.	Spool	22 lbs.
220	0440x500	1/4	6.4	.170	4.3	.040	1.0	140	60	500 ft.	Spool	6 lbs.
220	0440x100	1/4	6.4	.170	4.3	.040	1.0	140	60	100 ft.	Coil	1 lbs.
220	0462x2K	1/4	6.4	.125	3.1	.062	1.6	150	75	2000 ft.	Spool	30 lbs.
220	0562x15C	5/16	7.9	.178	4.8	.062	1.6	150	75	1500 ft.	Spool	30 lbs.
220	0662x1K	3/8	9.5	.250	6.4	.062	1.6	125	50	1000 ft.	Spool	25 lbs.
220	0662x500	3/8	9.5	.250	6.4	.062	1.6	125	50	500 ft.	Spool	13 lbs.
220	0662x100	3/8	9.5	.250	6.4	.062	1.6	125	50	100 ft.	Coil	3 lbs.
220	0862x500	1/2	12.7	.375	9.5	.062	1.6	100	35	500 ft.	Spool	18 lbs.
220	1062x500	5/8	15.9	.500	12.7	.062	1.6	75	25	500 ft.	Coil	23 lbs.

**221 Series - LLDPE Polyethylene tubing- industrial grade - black color**

221	0440x2K	1/4	6.4	.170	4.3	.040	1.0	140	60	2000 ft.	Spool	22 lbs.
221	0462x2K	1/4	6.4	.125	3.1	.062	1.6	150	75	2000 ft.	Spool	30 lbs.
221	0562x15C	5/16	7.9	.188	4.8	.062	1.6	150	75	1500 ft.	Spool	30 lbs.
221	0662x1K	3/8	9.5	.250	6.4	.062	1.6	125	50	1000 ft.	Spool	25 lbs.
221	0862x500	1/2	12.7	.375	9.5	.062	1.6	100	35	500 ft.	Spool	18 lbs.
221	1062x500	5/8	15.9	.500	12.7	.062	1.6	75	25	500 ft.	Coil	23 lbs.

\* Note: Working Pressure decreases as temperature increases. Pressure ratings can only be obtained with proper coupling procedures. Compatible with popular spray fittings, such as Binks and DeVibiss.

\*\*Caution: This product is designed to dissipate static electricity when the metal wire is properly grounded through the fitting or by other means. BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS OR DISCONTINUE PRODUCTS WITHOUT PRIOR NOTICE.





....A Step Ahead In Technology, Quality & Service....

**NEW**

# Ny-Shield® FLAME RETARDANT TUBING

**Ny-Shield®** Tubing is black 95 Durometer Polyurethane Tubing with a flame retardant outer jacket to protect the tubing from sparks associated with welding. In addition, the outer jacket also resists oils, grease, Ultra Violet Light, heat deterioration and many chemicals. Since the outer jacket does not stick to the inner tube, it can be easily peeled back so that push-in, compression or barbed fittings can be installed. **Ny-Shield®** is available in a choice of black, red, yellow or blue outer jackets and can also be coiled into Precision Coils and Self-Storing Air Hoses.

**Benefits**



Add Jacket Color Number and Tubing Length Letter to complete the Part Number.  
**EXAMPLE: W05412-C** is a RED Jacket tube that is 100 feet long.

If no Jacket Color is specified, Black Color Jacketed tubing will be supplied.

Temperature range: -15° to +160°  
 Working Pressure: 115PSI max @ 68°

## Ny-Shield® Tubing Ordering Information

Tube OD	Tube ID	Part Number	Jacket Wall Thickness	Jacket Color Code	Tubing Length Code
5/32"	.093"	W0541 -	0.031	1,2,3,5	C,G,J
	.170"	W0841 -	0.031	1,2,3,5	C,G,J
3/8"	.250"	W1221 -	0.031	1,2,3,5	C,F,G
1/2"	.320"	W1621 -	0.031	1,2,3,5	B,C,F

**COLOR CODES:**

- 1 = BLACK
- 2 = RED
- 3 = BLUE
- 4 = GREEN
- 5 = YELLOW

**LENGTH CODES:**

- B = 50 Feet
- C = 100 Feet
- F = 250 Feet
- G = 500 Feet
- J = 1000 Feet

**Metric Sizes**

6 mm	4 mm	W0631 -	.8 mm	1,2,3,5	C,G,J
8 mm	6 mm	W0831 -	.8 mm	1,2,3,5	C,F,G

Tubing

## Ny-Shield® Coils Ordering Information



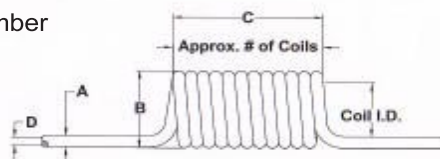
TAIL LENGTH is 10 inches on each ends.

Tube OD "A" (in)	Tube ID "D" (in)	Part Number	Total Length (in)	Tails (in)	Number of Coils	Coil OD "B" (in)	Compact "C" (in)	Jacket Color Code
5/32"	3/32"	W0541 -038	38	18	6	1"	1 5/16"	1,5
5/32"	3/32"	W0541 -044	44	24	12	1"	2 5/8"	1,5
5/32"	3/32"	W0541 -068	68	48	23	1"	5"	1,5
1/4"	.170"	W0841 -044	44	24	6	1 5/8"	1 7/8"	1,2,5
1/4"	.170"	W0841 -068	68	48	12	1 5/8"	3 3/4"	1,2,5
1/4"	.170"	W0841 -092	92	72	18	1 5/8"	5 5/8"	1,2,5
3/8"	1/4"	W1221 -068	68	48	7	2 5/8"	3"	1,5
3/8"	1/4"	W1221 -128	128	108	15	2 5/8"	6 1/2"	1,5

Add Jacket Color Code to complete the Part Number

**Applications**

Water and Pneumatic lines on automatic and manual spot welders, machines, tools and pneumatic plumbing systems.



Note: Although the flame retardant jacket is resistant to weld spatter and sparks, it is not flame proof and should not be used for high temperature applications.





**Nylon Self-Storing Air Hose Assemblies & Bulk Hose Ordering Information**

Hose I. D. & Length	Fittings	Working Length	Nominal Compact Length	Hose Color	Part Number	Previous Part Number	Hose I. D. & Length	Fittings	Working Length	Nominal Compact Length	Hose Color	Part Number	Previous Part Number
1/8" x 12'	1/8" MPT, Swivel	10'	7"	Red	N2GS2-12		3/8" x 25'	1/4" MPT, Swivel	21'	10"	Blue	N6AS3-25	
1/8" x 12'	1/8" MPT, Swivel	10'	7"	Blue	N2GS3-12		3/8" x 25'	1/4" MPT, Swivel	21'	10"	Black	N6AS1-25	
1/8" x 25'	1/8" MPT, Swivel	22'	13"	Red	N2GS2-25		3/8" x 50'	1/4" MPT, Swivel	42'	20"	Red	N6AS2-50	
1/8" x 25'	1/8" MPT, Swivel	22'	13"	Blue	N2GS3-25		3/8" x 50'	1/4" MPT, Swivel	42'	20"	Yellow	N6AS5-50	
1/8" x 50'	1/8" MPT, Swivel	45'	26"	Red	N2GS2-50		3/8" x 50'	1/4" MPT, Swivel	42'	20"	Blue	N6AS3-50	
1/8" x 50'	1/8" MPT, Swivel	45'	26"	Blue	N2GS3-50		3/8" x 50'	1/4" MPT, Swivel	42'	20"	Black	N6AS1-50	
1/8" x 50'	None (Bulk)	N. A.	28"	Red	N2XX2-50		3/8" x 12'	3/8" MPT, Swivel	10'	5"	Red	N6BS2-12	
1/8" x 50'	None (Bulk)	N. A.	28"	Blue	N2XX3-50		3/8" x 12'	3/8" MPT, Swivel	10'	5"	Yellow	N6BS5-12	
3/16" x 12'	1/4" MPT, Swivel	10'	6"	Red	N3AS2-12		3/8" x 12'	3/8" MPT, Swivel	10'	5"	Blue	N6BS3-12	
3/16" x 12'	1/4" MPT, Swivel	10'	6"	Yellow	N3AS5-12		3/8" x 12'	3/8" MPT, Swivel	10'	5"	Black	N6BS1-12	
3/16" x 25'	1/4" MPT, Swivel	22'	12"	Red	N3AS2-25		3/8" x 25'	3/8" MPT, Swivel	21'	10"	Red	N6BS2-25	
3/16" x 25'	1/4" MPT, Swivel	22'	12"	Yellow	N3AS5-25		3/8" x 25'	3/8" MPT, Swivel	21'	10"	Yellow	N6BS5-25	
3/16" x 50'	1/4" MPT, Swivel	45'	22"	Red	N3AS2-50		3/8" x 25'	3/8" MPT, Swivel	21'	10"	Blue	N6BS3-25	
3/16" x 50'	1/4" MPT, Swivel	45'	22"	Yellow	N3AS5-50		3/8" x 25'	3/8" MPT, Swivel	21'	10"	Black	N6BS1-25	
3/16" x 100'	None (Bulk)	N. A.	45"	Red	N3XX2-100		3/8" x 50'	3/8" MPT, Swivel	42'	20"	Red	N6BS2-50	
3/16" x 100'	None (Bulk)	N. A.	45"	Yellow	N3XX5-100		3/8" x 50'	3/8" MPT, Swivel	42'	20"	Yellow	N6BS5-50	
1/4" x 12'	1/4" MPT, Swivel	10'	6"	Red	T4AS2-12		3/8" x 50'	3/8" MPT, Swivel	42'	20"	Blue	N6BS3-50	
1/4" x 12'	1/4" MPT, Swivel	10'	6"	Black	T4AS1-12		3/8" x 50'	3/8" MPT, Swivel	42'	20"	Black	N6BS1-50	
1/4" x 25'	1/4" MPT, Swivel	22'	12"	Red	T4AS2-25		3/8" x 100'	None (Bulk)	N. A.	38"	Red	N6XX2-100	
1/4" x 25'	1/4" MPT, Swivel	22'	12"	Black	T4AS1-25		3/8" x 100'	None (Bulk)	N. A.	38"	Yellow	N6XX5-100	
1/4" x 50'	1/4" MPT, Swivel	45'	22"	Red	T4AS2-50		3/8" x 100'	None (Bulk)	N. A.	38"	Blue	N6XX3-100	
1/4" x 50'	1/4" MPT, Swivel	45'	22"	Black	T4AS1-50		3/8" x 100'	None (Bulk)	N. A.	38"	Black	N6XX1-100	
1/4" x 100'	None (Bulk)	N. A.	45"	Red	T4XX2-100		1/2" x 12'	1/2" MPT, Swivel	9'	5"	Red	N8CS2-12	
1/4" x 100'	None (Bulk)	N. A.	45"	Black	T4XX1-100		1/2" x 12'	1/2" MPT, Swivel	9'	5"	Yellow	N8CS5-12	
1/4" x 12'	1/4" MPT, Swivel	10'	4-1/2"	Red	N4AS2-12		1/2" x 12'	1/2" MPT, Swivel	9'	5"	Black	N8CS1-12	
1/4" x 12'	1/4" MPT, Swivel	10'	4-1/2"	Yellow	N4AS5-12		1/2" x 25'	1/2" MPT, Swivel	18'	9"	Red	N8CS2-25	
1/4" x 12'	1/4" MPT, Swivel	10'	4-1/2"	Blue	N4AS3-12		1/2" x 25'	1/2" MPT, Swivel	18'	9"	Yellow	N8CS5-25	
1/4" x 12'	1/4" MPT, Swivel	10'	4-1/2"	Black	N4AS1-12		1/2" x 25'	1/2" MPT, Swivel	18'	9"	Black	N8CS1-25	
1/4" x 25'	1/4" MPT, Swivel	22'	9"	Red	N4AS2-25		1/2" x 50'	1/2" MPT, Swivel	37'	18"	Red	N8CS2-50	
1/4" x 25'	1/4" MPT, Swivel	22'	9"	Yellow	N4AS5-25		1/2" x 50'	1/2" MPT, Swivel	37'	18"	Yellow	N8CS5-50	
1/4" x 25'	1/4" MPT, Swivel	22'	9"	Blue	N4AS3-25		1/2" x 50'	1/2" MPT, Swivel	37'	18"	Black	N8CS1-50	
1/4" x 25'	1/4" MPT, Swivel	22'	9"	Black	N4AS1-25		1/2" x 100'	None (Bulk)	N. A.	35"	Red	N8XX2-100	
1/4" x 50'	1/4" MPT, Swivel	45'	18"	Red	N4AS2-50		1/2" x 100'	None (Bulk)	N. A.	35"	Yellow	N8XX5-100	
1/4" x 50'	1/4" MPT, Swivel	45'	18"	Yellow	N4AS5-50		1/2" x 100'	None (Bulk)	N. A.	35"	Black	N8XX1-100	
1/4" x 50'	1/4" MPT, Swivel	45'	18"	Blue	N4AS3-50		3/4" x 25'	3/4" MPT, Swivel	17'	9"	Red	N9DS2-25*	
1/4" x 50'	1/4" MPT, Swivel	45'	18"	Black	N4AS1-50		3/4" x 25'	3/4" MPT, Swivel	17'	9"	Black	N9DS1-25*	
1/4" x 100'	None (Bulk)	N. A.	38"	Red	N4XX2-100		3/4" x 50'	3/4" MPT, Swivel	35'	16"	Red	N9DS2-50*	
1/4" x 100'	None (Bulk)	N. A.	38"	Yellow	N4XX5-100		3/4" x 50'	3/4" MPT, Swivel	35'	16"	Black	N9DS1-50*	
1/4" x 100'	None (Bulk)	N. A.	38"	Blue	N4XX3-100		3/4" x 100'	None (Bulk)	N. A.	29"	Red	N9XX2-100	
1/4" x 100'	None (Bulk)	N. A.	38"	Black	N4XX1-100		3/4" x 100'	None (Bulk)	N. A.	29"	Black	N9XX1-100	
5/16" x 12'	1/4" MPT, Swivel	10'	6"	Red	N5AS2-12		1" x 25O	3/4O MPT, Swivel	17"	9"	Red	N1DS2-25*	
5/16" x 12'	1/4" MPT, Swivel	10'	6"	Blue	N5AS3-12		1" x 25O	3/4O MPT, Swivel	17"	9"	Black	N1DS1-25*	
5/16" x 25'	1/4" MPT, Swivel	22'	9"	Red	N5AS2-25		1" x 50O	3/4O MPT, Swivel	35"	18"	Red	N1DS2-50*	
5/16" x 25'	1/4" MPT, Swivel	22'	9"	Blue	N5AS3-25		1" x 50O	3/4O MPT, Swivel	35"	18"	Black	N1DS1-50*	
5/16" x 50'	1/4" MPT, Swivel	45'	20"	Red	N5AS2-50		1" x 25'	1" MPT, Rigid Barb	17"	9"	Red	N1ER2-25*	
5/16" x 50'	1/4" MPT, Swivel	45'	20"	Blue	N5AS3-50		1" x 25'	1" MPT, Rigid Barb	17"	9"	Black	N1ER1-25*	
5/16" x 100'	None (Bulk)	N. A.	36"	Red	N5XX2-100		1" x 50'	1" MPT, Rigid Barb	35"	18"	Red	N1ER2-50*	
5/16" x 100'	None (Bulk)	N. A.	36"	Blue	N5XX3-100		1" x 50'	1" MPT, Rigid Barb	35"	18"	Black	N1ER1-50*	
3/8" x 12'	1/4" MPT, Swivel	10'	5"	Red	N6AS2-12		1" x 80'	None (Bulk)	N. A.	27"	Red	N1XX2-80	
3/8" x 12'	1/4" MPT, Swivel	10'	5"	Yellow	N6AS5-12		1" x 80'	None (Bulk)	N. A.	27"	Black	N1XX1-80	
3/8" x 12'	1/4" MPT, Swivel	10'	5"	Blue	N6AS3-12		1" x 100'	None (Bulk)	N. A.	32"	Red	N1XX2-100	
3/8" x 12'	1/4" MPT, Swivel	10'	5"	Black	N6AS1-12		1" x 100'	None (Bulk)	N. A.	32"	Black	N1XX1-100	
3/8" x 25'	1/4" MPT, Swivel	21'	10"	Red	N6AS2-25		1-1/4" x 100'	None (Bulk)	N. A.	32"	Red	N7XX2-100	
3/8" x 25'	1/4" MPT, Swivel	21'	10"	Yellow	N6AS5-25		1-1/4" x 100'	None (Bulk)	N. A.	32"	Black	N7XX1-100	

\*3/4" & 1" Hose Assemblies Do Not Require Spring Guards

**Tubing**



**Heavy Duty Nylon Self-Storing Air Hose Assemblies & Bulk Hose Ordering Information**

Hose I. D. & Length	Fittings	Working Length	Nominal Compact Length	Hose Color	Part Number
1/4" x 12'	1/4" MPT, Swivel	10'	6"	Blue	H4AS3-
1/4" x 25'	1/4" MPT, Swivel	22'	11"	Blue	H4AS3-
1/4" x 50'	1/4" MPT, Swivel	45'	20"	Blue	H4AS3-
1/4" x 100'	None (Bulk)	N. A.	38"	Blue	H4XX3-1
3/8" x 12'	3/8" MPT, Swivel	10'	6"	Blue	H6BS3-
3/8" x 25'	3/8" MPT, Swivel	21'	11"	Blue	H6BS3-
3/8" x 50'	3/8" MPT, Swivel	42'	20"	Blue	H6BS3-
3/8" x 100'	None (Bulk)	N. A.	39"	Blue	H6XX3-1



**Nylon Self-Storing Air Hoses & Blow Guns**

State of the art lever operated Vari-Flo Blow Guns & the Original Nycoil Self-Storing Air Hose packaged together as a high quality yet economical combination.



**Nylon Self-Storing Air Hose & Blow Gun Ordering Information**

Item Description	Part Number	Item Description	Part Number
1/4" x 12' Red Nylon Hose & Vari-Flo Safety Tip Blow Gun (Chrome Plated)	GCS-2-12	1/4" x 12' Red Nylon Hose & Vari-Flo Rubber Tip Blow Gun (Chrome Plated)	GCR-2-12
1/4" x 12' Yellow Nylon Hose & Vari-Flo Safety Tip Blow Gun (Chrome Plated)	GCS-5-12	1/4" x 12' Yellow Nylon Hose & Vari-Flo Rubber Tip Blow Gun (Chrome Plated)	GCR-5-12
1/4" x 25' Red Nylon Hose & Vari-Flo Safety Tip Blow Gun (Chrome Plated)	GCS-2-25	1/4" x 25' Red Nylon Hose & Vari-Flo Rubber Tip Blow Gun (Chrome Plated)	GCR-2-25
1/4" x 25' Yellow Nylon Hose & Vari-Flo Safety Tip Blow Gun (Chrome Plated)	GCS-5-25	1/4" x 25' Yellow Nylon Hose & Vari-Flo Rubber Tip Blow Gun (Chrome Plated)	GCR-5-25
1/4" x 12' Red Nylon Hose & Vari-Flo Safety Tip Blow Gun (Black Powder Coat)	GBS-2-12	1/4" x 12' Red Nylon Hose & Vari-Flo Rubber Tip Blow Gun (Black Powder Coat)	GBR-2-12
1/4" x 12' Yellow Nylon Hose & Vari-Flo Safety Tip Blow Gun (Black Powder Coat)	GBS-5-12	1/4" x 12' Yellow Nylon Hose & Vari-Flo Rubber Tip Blow Gun (Black Powder Coat)	GBR-5-12
1/4" x 25' Red Nylon Hose & Vari-Flo Safety Tip Blow Gun (Black Powder Coat)	GBS-2-25	1/4" x 25' Red Nylon Hose & Vari-Flo Rubber Tip Blow Gun (Black Powder Coat)	GBR-2-25
1/4" x 25' Yellow Nylon Hose & Vari-Flo Safety Tip Blow Gun (Black Powder Coat)	GBS-5-25	1/4" x 25' Yellow Nylon Hose & Vari-Flo Rubber Tip Blow Gun (Black Powder Coat)	GBR-5-25

**Dual Bonded Nylon Self-Storing Air Hose Assemblies & Bulk Hose Ordering Information**

Hose I. D. & Length	Fittings	Working Length	Nominal Compact Length	Hose Color	Part Number	Previous Part Number	Hose I. D. & Length	Fittings	Working Length	Nominal Compact Length	Hose Color	Part Number	Previous Part Number
1/8" x 12'	1/8" MPT, Swivel	6'	8-1/2"	Red, Red	2N2GS22-12		3/8" x 12'	3/8" MPT, Swivel	6'	5-1/2"	Red, Red	2N6BS22-12	
1/8" x 12'	1/8" MPT, Swivel	6'	8-1/2"	Red, Blue	2N2GS23-12		3/8" x 12'	3/8" MPT, Swivel	6'	5-1/2"	Red, Blue	2N6BS23-12	
1/8" x 25'	1/8" MPT, Swivel	12-1/2'	17"	Red, Red	2N2GS22-25		3/8" x 25'	3/8" MPT, Swivel	12-1/2'	11"	Red, Red	2N6BS22-25	
1/8" x 25'	1/8" MPT, Swivel	12-1/2'	17"	Red, Blue	2N2GS23-25		3/8" x 25'	3/8" MPT, Swivel	12-1/2'	11"	Red, Blue	2N6BS23-25	
1/8" x 50'	1/8" MPT, Swivel	25'	34"	Red, Red	2N2GS22-50		3/8" x 50'	3/8" MPT, Swivel	25'	22"	Red, Red	2N6BS22-50	
1/8" x 50'	1/8" MPT, Swivel	25'	34"	Red, Blue	2N2GS23-50		3/8" x 50'	3/8" MPT, Swivel	25'	22"	Red, Blue	2N6BS23-50	
1/8" x 50'	None (Bulk)	N. A.	34"	Red, Red	2N2XX22-50		3/8" x 50'	None (Bulk)	N. A.	22"	Red, Red	2N6XX22-50	
1/8" x 50'	None (Bulk)	N. A.	34"	Red, Blue	2N2XX23-50		3/8" x 50'	None (Bulk)	N. A.	22"	Red, Blue	2N6XX23-50	
3/16" x 12'	1/4" MPT, Swivel	6'	7-1/2"	Red, Red	2N3AS22-12		1/2" x 12'	1/2" MPT, Swivel	6'	5-1/2"	Red, Red	2N8CS22-12	
3/16" x 12'	1/4" MPT, Swivel	6'	7-1/2"	Red, Blue	2N3AS23-12		1/2" x 12'	1/2" MPT, Swivel	6'	5-1/2"	Red, Blue	2N8CS23-12	
3/16" x 25'	1/4" MPT, Swivel	12-1/2'	15"	Red, Red	2N3AS22-25		1/2" x 25'	1/2" MPT, Swivel	12-1/2'	11"	Red, Red	2N8CS22-25	
3/16" x 25'	1/4" MPT, Swivel	12-1/2'	15"	Red, Blue	2N3AS23-25		1/2" x 25'	1/2" MPT, Swivel	12-1/2'	11"	Red, Blue	2N8CS23-25	
3/16" x 50'	1/4" MPT, Swivel	25'	30"	Red, Red	2N3AS22-50		1/2" x 50'	1/2" MPT, Swivel	25'	22"	Red, Red	2N8CS22-50	
3/16" x 50'	1/4" MPT, Swivel	25'	30"	Red, Blue	2N3AS23-50		1/2" x 50'	1/2" MPT, Swivel	25'	22"	Red, Blue	2N8CS23-50	
3/16" x 50'	None (Bulk)	N. A.	30"	Red, Red	2N3XX22-50		1/2" x 50'	None (Bulk)	N. A.	22"	Red, Red	2N8XX22-50	
3/16" x 50'	None (Bulk)	N. A.	30"	Red, Blue	2N3XX23-50		1/2" x 50'	None (Bulk)	N. A.	22"	Red, Blue	2N8XX23-50	
1/4" x 12'	1/4" MPT, Swivel	6'	8-1/2"	Red, Red	2N4AS22-12		3/4" x 50'	3/4" MPT, Swivel	25'	22"	Red, Red	2N9DS22-50	
1/4" x 12'	1/4" MPT, Swivel	6'	8-1/2"	Red, Blue	2N4AS23-12		3/4" x 50'	3/4" MPT, Swivel	25'	22"	Red, Black	2N9DS21-50	
1/4" x 25'	1/4" MPT, Swivel	12-1/2'	16-1/2"	Red, Red	2N4AS22-25		3/4" x 50'	None (Bulk)	N. A.	22"	Red, Red	2N9XX22-50	
1/4" x 25'	1/4" MPT, Swivel	12-1/2'	16-1/2"	Red, Blue	2N4AS23-25		3/4" x 50'	None (Bulk)	N. A.	22"	Red, Black	2N9XX21-50	
1/4" x 50'	1/4" MPT, Swivel	25'	33"	Red, Red	2N4AS22-50								
1/4" x 50'	1/4" MPT, Swivel	25'	33"	Red, Blue	2N4AS23-50								
1/4" x 50'	None (Bulk)	N. A.	33"	Red, Red	2N4XX22-50								
1/4" x 50'	None (Bulk)	N. A.	33"	Red, Blue	2N4XX23-50								

All Swivel Fittings Include Reusable Thread Sealant Pre-Applied At The Factory.



**Nylon Hose Specifications**

Series Number	Hose Inside Diameter	Hose Outside Diameter	Nominal Coil Inside Diameter	Nominal Coil Outside Diameter	Working Pressure @ 68° F (20°)
N2	1/8"	.186"	1-1/4"	1-3/4"	385 PSI (26.50 Bars)
N3	3/16"	.249"	2"	2-1/2"	285 PSI (19.75 Bars)
T4	1/4"	.310"	2-1/2"	3"	240 PSI (16.50 Bars)
N4	1/4"	.310"	3"	3-1/2"	240 PSI (16.50 Bars)
N5	5/16"	.373"	4"	4-1/2"	210 PSI (14.50 Bars)
N6	3/8"	.463"	4-1/2"	5-1/2"	225 PSI (15.50 Bars)
N8	1/2"	.623"	6-1/2"	8"	220 PSI (15.25 Bars)
N9	3/4"	.873"	11"	13"	160 PSI (11.00 Bars)
N1	1"	1.197"	14"	16-1/2"	190 PSI (13.00 Bars)
N7	1-1/4"	1.550"	18"	21-1/2"	200 PSI (13.75 Bars)
H4	1/4"	.373"	3-1/2"	4-1/2"	350 PSI (24.00 Bars)
H6	3/8"	.498"	4-1/2"	5-1/2"	310 PSI (21.50 Bars)
2N2	1/8"	.186"	2"	2-3/8"	385 PSI (26.50 Bars)
2N3	3/16"	.249"	3"	3-1/2"	285 PSI (19.75 Bars)
2N4	1/4"	.310"	3-1/2"	4-1/2"	240 PSI (16.50 Bars)
2N6	3/8"	.463"	8"	9"	225 PSI (15.50 Bars)
2N8	1/2"	.623"	11"	12-1/4"	220 PSI (15.25 Bars)
2N9	3/4"	.873"	14"	16"	160 PSI (11.00 Bars)

We are continually developing new innovations to further enhance our product line and, as a result, reserve the right to make design, engineering or specification changes without prior notice.

**Reusable Fittings for Nylon Self-Storing Air Hose** (includes fitting, nut & spring guard)

Hose Size	Fitting Type	Part Number	Hose Size	Fitting Type	Part Number
3/16"	1/4" Male Swivel NPT	01300	3/8"	1/4" Male Swivel NPT	01640
3/16"	1/4" Male Swivel BSPT	01306	3/8"	1/4" Male Swivel BSPT	01646
3/16"	1/4" Male Swivel BSPP	01307	3/8"	1/4" Male Swivel BSPP	01647
1/4"	1/4" Male Swivel NPT	01400	3/8"	3/8" Male Swivel NPT	01600
1/4"	1/4" Male Swivel BSPT	01406	3/8"	3/8" Male Swivel BSPT	01606
1/4"	1/4" Male Swivel BSPP	01407	3/8"	3/8" Male Swivel BSPP	01607
5/16"	1/4" Male Swivel NPT	01500	1/2"	1/2" Male Swivel NPT	01700
5/16"	1/4" Male Swivel BSPT	01506	Our reusable fittings require no ferrules or inserts that become deformed during installation, so the fittings can be used over & over again without replacing any components!		
5/16"	1/4" Male Swivel BSPP	01507			



**Compression Fittings for Nylon Self-Storing Air Hose** (includes fitting, insert, ferrule, nut & spring guard)

Hose Size	Fitting Type	Part Number
1/8"	1/8" Male Swivel NPT	01200
3/4"	3/4" Male Swivel NPT	01802*
1"	3/4" Male Swivel NPT	01980**
1"	1" Male Rigid NPT	01900**
1/4" Heavy Duty	1/4" Male Swivel NPT	06165

\*Spring Guard Not Required    \*\*Hose Barb Fitting



**Compression Fitting Components for Nylon Self-Storing Air Hoses**

Hose Size	Thread Type	Fitting Part Number	Nut Part Number	Ferrule & Insert Part Number	Spring Guard Part Number
1/8"	1/8" Male Swivel NPT	01205	00202	00203	00201
3/16"	1/4" Male Swivel NPT	01305	00302	00303	00301
1/4"	1/4" Male Swivel NPT	01405	00402	00403	00401
5/16"	1/4" Male Swivel NPT	01505	00502	00503	00501
3/8"	1/4" Male Swivel NPT	01645	00602	00603	00601
3/8"	3/8" Male Swivel NPT	01605	00602	00603	00601
1/2"	1/2" Male Swivel NPT	01705	00702	00703	00701
3/4"	3/4" Male Swivel NPT	01806	00802	00803	N. A.

**Splicer Kits for Nylon Self-Storing Air Hoses**

Hose Size	Part Number
1/8"	00206
3/16"	00306
1/4"	00406
5/16"	00506
3/8"	00606
1/2"	00706
3/4"	00806
1"	00906*

(includes 1 fitting, 2 inserts, 2 ferrules & 2 nuts)



\*Kit includes Barb Fitting & 2 Hose Clamps



**Lead-in Hoses (Pigtails)**

Lead-In Hoses, also called Pigtails, Whip Ends or Whip Hoses, are used on the working end of self-storing air hoses as well as straight hoses as a means of minimizing costs by:

**Extending The Life Of The Hose:** Most hose wear and failure occurs near the point of use, where all of the bending and flexing occurs. A Lead-in Hose will take the brunt of the abuse, giving the hose a much longer service life.

**Protecting The Coupler:** High vibration and impact tools will damage the valve of a coupler, causing premature failure. A short Lead-in Hose ("snubber") between the coupler and air tool will absorb the shock and vibration, protecting the coupler from these damaging effects. **Making The Worker More Productive:** Most air supply hoses are heavy or bulky and difficult to work with. A lightweight, flexible Lead-in Hose makes it easier for the worker to manipulate the air tool, reducing fatigue while increasing productivity.

Our Lead-in Hoses are made exclusively from 3/8" Ultra-Lite »SUPERBRAID«, combining lightweight, flexibility, durability and a working pressure (200 psi) that meets the requirements of almost every application. The contemporary looking state-of-the-art strain relief sleeve on the tool end protects the hose at its weakest point (at the barb) while enhancing the appearance of the entire assembly. Other manufacturers use a strain relief that limits the ability of the hose to bend, but ours was uniquely designed to take advantage of Polyurethane's flexibility, giving the user a much wider range of motion without the possibility of kinking ... making it ideal for a Lead-in Hose!

Available in a variety of hose lengths in three (3) configurations:

- 1/4" Male NPT x 1/4" Rigid Female NPT
- 1/4" Male NPT x 1/4" Rigid Male NPT 1/4" Male NPT x 1/4"
- Body Size Industrial Interchange Plug



**3/8" Lead-In Hose (Pigtail)**

**Ordering Information (Male x Female)**

Item Description	Connection Type	Part Number
3/8" x 12"	1/4" Rigid Male NPT x 1/4" Rigid Female NPT	<b>L612F4</b>
3/8" x 24"	1/4" Rigid Male NPT x 1/4" Rigid Female NPT	<b>L624F4</b>
3/8" x 36"	1/4" Rigid Male NPT x 1/4" Rigid Female NPT	<b>L636F4</b>
3/8" x 48"	1/4" Rigid Male NPT x 1/4" Rigid Female NPT	<b>L648F4</b>
3/8" x 60"	1/4" Rigid Male NPT x 1/4" Rigid Female NPT	<b>L660F4</b>
3/8" x 72"	1/4" Rigid Male NPT x 1/4" Rigid Female NPT	<b>L672F4</b>

**3/8" Lead-In Hose (Pigtail)**

**Ordering Information (Male x Male)**

Item Description	Connection Type	Part Number
3/8" x 12"	1/4" Rigid Male NPT x 1/4" Rigid Male NPT	<b>L612M4</b>
3/8" x 24"	1/4" Rigid Male NPT x 1/4" Rigid Male NPT	<b>L624M4</b>
3/8" x 36"	1/4" Rigid Male NPT x 1/4" Rigid Male NPT	<b>L636M4</b>
3/8" x 48"	1/4" Rigid Male NPT x 1/4" Rigid Male NPT	<b>L648M4</b>
3/8" x 60"	1/4" Rigid Male NPT x 1/4" Rigid Male NPT	<b>L660M4</b>
3/8" x 72"	1/4" Rigid Male NPT x 1/4" Rigid Male NPT	<b>L672M4</b>

**3/8" Lead-In Hose (Pigtail)**

**Ordering Information (Male x Industrial Interchange Plug)**

Item Description	Connection Type	Part Number
3/8" x 12"	1/4" Rigid Male NPT x 1/4" Body Industrial Interchange Plug	<b>L612I4P</b>
3/8" x 24"	1/4" Rigid Male NPT x 1/4" Body Industrial Interchange Plug	<b>L624I4P</b>
3/8" x 36"	1/4" Rigid Male NPT x 1/4" Body Industrial Interchange Plug	<b>L636I4P</b>
3/8" x 48"	1/4" Rigid Male NPT x 1/4" Body Industrial Interchange Plug	<b>L648I4P</b>
3/8" x 60"	1/4" Rigid Male NPT x 1/4" Body Industrial Interchange Plug	<b>L660I4P</b>
3/8" x 72"	1/4" Rigid Male NPT x 1/4" Body Industrial Interchange Plug	<b>L672I4P</b>



## Steel and Stainless Steel Tubing

- Seamless ..... SAE J524
- Welded ..... SAE J525
- Welded ..... SAE J526
- Welded ..... SAE J356
- Welded ..... SAE J2435
- Welded ..... SAE J2467

NOTE: Also available in 304 & 316 Stainless



Hydraulic fluid line tubing can be easily bent into angle turns or sweep bends. Pipe fittings, which are subject to leakage, are eliminated. It has a bright smooth, scale free I.D. to minimize turbulence and pressure drop.

### Hdyraulic Tubing

Outside Diameter (OD) and Ga. In.	Wall Dec.-In.	Inside Diameter (ID)	Weight Lbs./Ft.	Seamless	Welded
<b>1/8 OD</b>					
22	0.028	0.069	0.0290	X	X
<b>3/16</b>					
22	0.028	0.131	0.0478	X	—
20	0.035	0.117	0.0572	X	X
18	0.049	0.089	0.0727	X	—
<b>1/4 OD</b>					
22	0.028	0.194	0.0664	X	X
20	0.035	0.180	0.0804	X	X
18	0.049	0.152	0.1052	X	X
16	0.065	0.120	0.1284	X	—
<b>5/16 OD</b>					
20	0.035	0.242	0.1039	X	X
18	0.049	0.215	0.1382	—	X
16	0.065	0.182	0.1722	X	—
14	0.083	0.146	0.2039	X	—
<b>3/8 OD</b>					
22	0.028	0.319	0.1038	X	—
20	0.035	0.305	0.1271	X	X
18	0.049	0.277	0.1706	X	X
17	0.058	0.259	0.1964	X	X
16	0.065	0.245	0.2152	X	X

Tubing



**Hdydraulic Tubing**

Outside Diameter (OD) and Ga. In.	Wall Dec.-In.	Inside Diameter (ID)	Weight Lbs./Ft.	Seamless	Welded
<b>1/2 OD</b>					
20	0.035	0.430	0.1738	X	X
18	0.049	0.402	0.2360	X	X
16	0.065	0.370	0.3020	X	X
14	0.083	0.334	0.3696	X	X
13	0.095	0.310	0.4109	X	—
<b>5/8 OD</b>					
20	0.035	0.555	0.2205	X	X
18	0.049	0.527	0.3014	X	X
16	0.065	0.495	0.3888	X	X
14	0.083	0.459	0.4805	X	X
13	0.095	0.435	0.5377	—	X
<b>3/4 OD</b>					
20	0.035	0.680	0.2673	X	X
18	0.049	0.652	0.3668	X	X
16	0.065	0.620	0.4755	X	X
15	0.072	0.606	0.5214	—	X
14	0.083	0.584	0.5913	X	X
13	0.095	0.560	0.6646	X	X
12	0.109	0.532	0.7462	X	X
11	0.120	0.510	0.8074	X	X
<b>7/8 OD</b>					
20	0.035	0.805	0.3140	X	—
18	0.049	0.777	0.4323	X	X
16	0.065	0.745	0.5623	X	X
14	0.083	0.709	0.7021	X	X
13	0.095	0.685	0.7914	X	X
12	0.109	0.657	0.8917	X	X
11	0.120	0.635	0.9676	X	—
<b>1 OD</b>					
20	0.035	0.930	0.3607	X	—
18	0.049	0.902	0.4977	X	X
16	0.065	0.870	0.6491	X	X
14	0.083	0.834	0.8129	X	X
13	0.095	0.810	0.9182	X	X
12	0.109	0.782	1.0370	X	X
11	0.120	0.760	1.1280	X	X
<b>1-1/8 OD</b>					
16	0.065	0.995	0.7359	—	X
11	0.120	0.885	1.2880	—	X

**Tubing**



**Hdyraulic Tubing**

Outside Diameter (OD) and Ga. In.	Wall Dec.-In.	Inside Diameter (ID)	Weight Lbs./Ft.	Seamless	Welded
<b>1-1/4 OD</b>					
18	0.049	1.152	0.6285	—	X
16	0.065	1.120	0.8226	—	X
14	0.083	1.084	1.0340	—	X
13	0.095	1.060	1.1720	—	X
12	0.109	1.032	1.3280	—	X
11	0.120	1.010	1.4480	—	X
<b>1-1/2 OD</b>					
16	0.065	1.370	0.9962	—	X
14	0.083	1.334	1.2560	—	X
13	0.095	1.310	1.4260	—	X
12	0.109	1.282	1.6190	—	X
11	0.120	1.260	1.7690	—	X
10	0.134	1.232	1.9550	—	X
<b>2 OD</b>					
16	0.065	1.870	1.3430	—	X
13	0.095	1.810	1.9330	—	X
11	0.120	1.760	2.4090	—	X
10	0.134	1.732	2.6700	—	X

**Tubing**



# Hdyraulic Fluid Line Burst Pressures

*(Barlow's Formula)*

$P = (2ST \div D)$  (45,000 PSI Min Tensile)

P = Burst Pressure

S = 45,000 lbs. PSI Tensile Strength

T = Nominal Wall Thickness

D = Outside Diameter

1/4" x 0.035 – 12,600	5/8" x 0.083 – 11,950	1-1/8" x 0.065 – 5,200
1/4 x 0.049 – 17,640	3/4 x 0.035 – 4,200	1-1/8 x 0.083 – 6,640
5/16" x 0.035 – 10,080	3/4" x 0.049 – 5,880	1-1/8 x 0.95 – 7,600
5/16 x 0.049 – 14,110	3/4 x 0.065 – 7,800	1-1/8 x 0.109 – 8,720
3/8" x 0.035 – 8,400	3/4" x 0.083 – 9,960	1-1/4" x 0.065 – 4,680
3/8 x 0.049 – 11,760	3/4 x 0.095 – 11,400	1-1/4 x 0.083 – 5,975
3/8" x 0.065 – 15,600	3/4" x 0.109 – 13,080	1-1/4 x 0.095 – 6,840
7/16 x 0.035 – 7,200	7/8 x 0.049 – 5,040	1-1/4 x 0.109 – 7,848
7/16" x 0.049 – 10,080	7/8" x 0.065 – 6,685	1-1/4 x 0.120 – 8,640
7/16 x 0.065 – 13,370	7/8 x 0.083 – 8,535	1-1/2" x 0.083 – 4,980
1/2" x 0.035 – 6,300	7/8" x 0.095 – 9,770	1-1/2 x 0.095 – 5,700
1/2 x 0.049 – 8,820	1" x 0.049 – 4,410	1-1/2 x 0.109 – 6,540
1/2" x 0.065 – 11,700	1" x 0.065 – 5,850	1-1/2 x 0.120 – 7,200
5/8 x 0.035 – 5,040	1" x 0.083 – 7,470	2" x 0.134 – 6,030
5/8" x 0.049 – 7,055	1" x 0.095 – 8,550	2 x 0.188 – 8,460
5/8 x 0.065 – 9,360		

*Note: To compute safe working pressures, above Burst Pressures should be divided by your desired safety factor.*



**Standard Pipe Schedule 40**

Nominal Pipe Size	Outside Diameter (In.)	Inside Diameter (In.)	Wall Thickness (In.)	Weight per foot (lbs.)	
				Plain End	Threads & Couplings
1/8	.405	.269	.068	.24	.24
1/4	.540	.364	.088	.42	.42
3/8	.675	.493	.091	.57	.57
1/2	.840	.622	.109	.85	.85
3/4	1.050	.824	.113	1.13	1.13
1	1.315	1.049	.133	1.68	1.68
1-1/4	1.660	1.380	.140	2.27	2.28
1-1/2	1.900	1.610	.145	2.72	2.73
2	2.375	2.067	.154	3.65	3.68
2-1/2	2.875	2.469	.203	5.79	5.82
3	3.500	3.068	.216	7.58	7.62
3-1/2	4.000	3.548	.226	9.11	9.20
4	4.500	4.026	.237	10.79	10.89
5	5.563	5.047	.258	14.62	14.81
6	6.625	6.065	.280	18.97	19.18
8	8.625	7.981	.322	28.55	29.35
10	10.750	10.020	.365	40.48	41.85
12 <sup>1</sup>	12.750	12.000	.375	49.56	51.15

Note: 1 NPS 12 dimensions are for standard wall pipe, not schedule 40.

**Product Type and Specification:**

Standard welded pipe is produced in 1/8 to 4 trade sizes. Trade sizes 1/8 to 4 are available in seamless or electric resistance welded. Trade sizes 1/8 to 4 are produced to ASTM A 53, A 501\*, and A 589\* Type II, API 5L and Federal Specification WW-P404. Trade sizes 5 and up are produced to ASTM A 53 and API 5L. All pipe threads conform to ANSI B1.20.1. Merchant couplings comply with ASTM A 865.

\*1/2 through 4 only

**Tubing**





**Standard Pipe Schedule 80**

Nominal Pipe Size	Outside Diameter (In.)	Inside Diameter (In.)	Wall Thickness (In.)	Weight per foot (lbs.) Plain End
1/8	.405	.215	.095	.31
1/4	.540	.302	.119	.54
3/8	.675	.423	.126	.74
1/2	.840	.546	.147	1.09
3/4	1.050	.742	.154	1.47
1	1.315	.957	.179	2.17
1-1/4	1.660	1.278	.191	3.00
1-1/2	1.900	1.500	.200	3.63
2	2.375	1.939	.218	5.02
2-1/2	2.875	2.323	.276	7.66
3	3.500	2.900	.300	10.25
3-1/2	4.000	3.364	.318	12.51
4	4.500	3.826	.337	14.98
5	5.563	4.813	.375	20.78
6	6.625	5.761	.432	28.57
8	8.625	7.625	.500	43.39

**Tubing**

**Product Type and Specification:**

Extra strong welded pipe is produced in 1/8" to 4" trade sizes. Trade sizes 1/8" to 4" are available in seamless or electric resistance welded. Trade sizes 1/8" to 4" are produced to ASTM A 53, A 501\*, and A 589\*\*Type II, API 5L and Federal Specification WW-P404. Trade sizes 5" and up are produced to ASTM A 53 and API 5L. All pipe threads conform to ANSI B1.20.1. Merchant couplings comply with ASTM A 865.

\*1/2" through 4" only

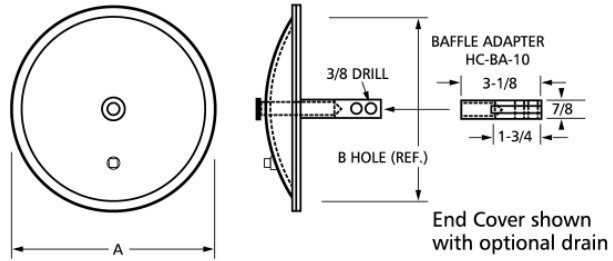
\*\*1" through 4" only



# End Covers

Hydro-Craft® end covers for replacement or retrofit are available in 12- 14- and 18-inch diameters. Available in steel and stainless steel. Steel end covers are zinc plated for corrosion protection. All end covers are available with optional drain. All have a unique formed on Buna-N lip seal which has excellent resistance to cutting and abrasion, and is compatible with all standard hydraulic fluids. Replacement sea ls, if required, are readily available from stock.

The end cover is attached to the reservoir by the unique Hydro-Craft® baffle adapter. The design of the HC-BA-10 allows it to be attached to the baffle with press pins or standard bolts, assuring a tight, shockproof installation, and eliminating the need for welding and subsequent weld splatter, warping and stressing of the baffle. The Hydro-Craft® baffle adapter is also available in type 304 stainless steel.



### SPECIFICATIONS

PART NO.	A	B	C	D	WEIGHT
HC-EC-12	11-7/8	10	7 GA	1-5/8	6-1/4
HC-EC-14	14	12	7 GA	2	8
HC-EC-18	18	16	7 GA	2-5/8	14-1/2
HC-EC-12SS	12	10	12 GA	1-5/8	4
HC-EC-14SS	14-5/8	12	7 GA	2-1/8	9-3/4
HC-EC-18SS	18	16	.194	2-5/8	8

NOTE: Add E or V to End Cover part number for EP Seal or Viton. Add D at end of part number for drain. The Buna-N Lip Seal is the standard seal used on end covers. Maximum tightening torque recommended for end covers: 12" - 20-30 ft. lbs., 14" - 20-30 ft. lbs., 18" - 20-25 ft. lbs.

### END COVER REPLACEMENT SEALS

PART NO.	DESCRIPTION	COVER SIZE
HC-LIP-S-12-E	EP Seal Kit	12
HC-LIP-S-14-E	EP Seal Kit	14
HC-LIP-S-18-E	EP Seal Kit	18
HC-LIP-S-12	Buna-N Lip Seal	12
HC-LIP-S-14	Buna-N Lip Seal	14
HC-LIP-S-18	Buna-N Lip Seal	18
HC-LIP-S-12-V	Viton Lip Seal	12
HC-LIP-S-14-V	Viton Lip Seal	14
HC-LIP-S-18-V	Viton Lip Seal	18

Standard seals compatible with most fluids including phosphate esters.

Clamps

# Self Aligning Cover Bar

The Hydro-Craft® self aligning cover bar is available for 12- and 14-inch end covers. Installed by placing a bolt through the end cover and turning a few threads into the cover bar, it can then be angled through the reservoir access hole. Allowing the cover bar to rest on the bottom of the reservoir, it will automatically align itself to the proper height to be torqued firmly into place. This durable self aligning cover bar is fabricated from 3/8-inch hot rolled, pickled and oiled steel plate. More than ample torque can be applied to insure a perfect seal on the reservoir end cover.

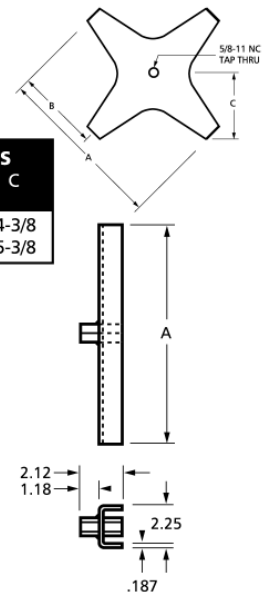
### SPECIFICATIONS

PART NO.	END COVER	ACCESS HOLE DIAMETER	DIMENSIONS		
			A	B	C
HC-X-BAR-12	12	10	12	6	4-3/8
HC-X-BAR-14	14	12	14-1/4	7-1/8	5-3/8

### OPTIONS

PART NO.	DESCRIPTION
HC-BA-10*	Baffle Adapter
HC-BA-P*	Baffle Adapter Pin
HC-EC-CW	Crush Washer
HC-EC-CB-*	End Cover Bolt
	DIMENSION A
HC-C-BAR-12	12
HC-C-BAR-14	14
HC-C-BAR-18	18

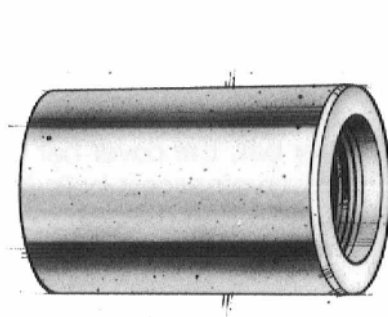
\*Available in stainless steel



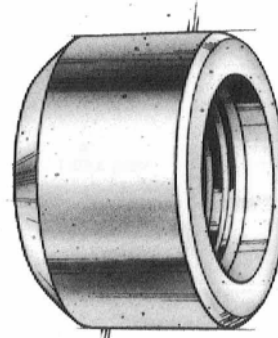
# S.A.E. Adapters

## 3/8 Inch to 2 Inch

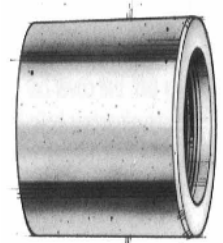
Hydro-Craft® S.A.E. Weld Boss Flanges and Weld Couplings are precision manufactured from 12L14 Leadloy steel. They will save time and labor when mounting S.A.E. components. Used as a downline couplings, they eliminate the need for expensive straight-thread downlines...simply attach the S.A.E. component to the topside, and thread an inexpensive pipe nipple to the NPT side in the reservoir. Adapters are shipped unplated but oiled to prevent corrosion.



**WELD COUPLING FEMALE  
S.A.E. TO FEMALE N.P.T.**



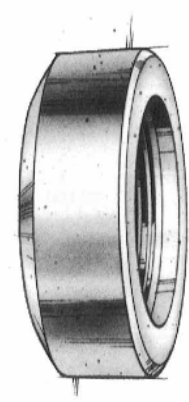
**WELD BOSS FEMALE S.A.E.**



**FEMALE S.A.E. TO N.P.T.**

PART NO.	FEMALE PIPE	FEMALE S.A.E.	L ±03	D DIA.	PSI
WCF-6-6	3/8	9/16-18	1.41	7/8	4000
WCF-8-8	1/2	3/4-16	1.72	1-1/8	3000
WCF-12-12	3/4	1-1/16-12	1.98	1-3/8	2500
WCF-16-16	1	1-5/16-12	2.17	1-5/8	2000
WCF-20-20	1-1/4	1-5/8-12	2.25	2-1/8	1150
WCF-24-24	1-1/2	1-7/8-12	2.26	2-1/2	1000
WCF-32-32	2	2-1/2-12	2.41	3	1000

Add "SS" to the end of part number for 316 stainless steel adapters.



**FEMALE S.A.E. BOSS**

PART NO.	FEMALE S.A.E.	X ±03	D DIA.	PSI
WBF-6	9/16-18	.70	7/8	5000
WBF-8	3/4-16	.85	1-1/8	4500
WBF-10	7/8-14	.95	1-3/8	3500
WBF-12	1-1/16-12	.95	1-3/8	3500
WBF-14	1-3/16-12	1.1	1-5/8	3000
WBF-16	1-5/16-12	1.1	1-5/8	3000
WBF-20	1-5/8-12	1.1	2-1/8	2500
WBF-24	1-7/8-12	1.1	2-1/2	2000
WBF-32	2-1/2-12	1.2	3	1500

Add "SS" to the end of part number for 316 stainless steel adapters.

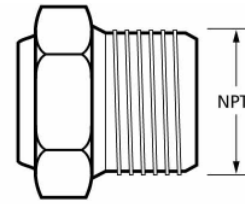
Clamps

# Oil Level Sight Plugs

**HYDRO-CRAFT® SIGHT PLUGS ARE DESIGNED FOR QUICK VISUAL INSPECTION OF LIQUID LEVEL**

HC-SP Series Plugs use a transparent window with synthetic rubber seal. Body is of zinc plated steel, reflecting surface behind glass is stainless steel.

- Eliminate the need for dipsticks
- Presence of liquid is clearly shown in window
- Reflecting surface behind glass provides excellent visibility - even in dark locations
- Compatible with most fluids, including diesel fuel and phosphate esters



**OIL LEVEL SPECIFICATIONS**

PART NO.	NPT	MAX. TEMP	HEX SIZE	SIGHT AREA
HC-SP-8	1/2	500°F	1	9/16
HC-SP-12	3/4	500°F	1-1/4	3/4
HC-SP-16	1	500°F	1-5/8	1-1/8
HC-SP-24	1-1/2	500°F	2-1/4	1-7/16

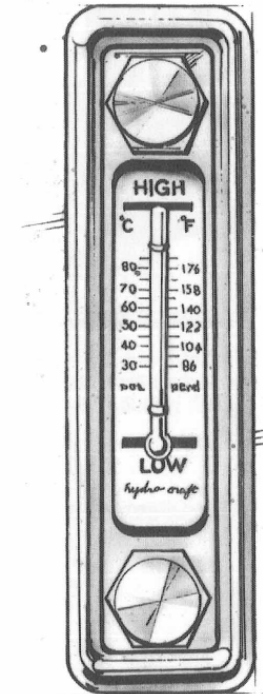
**Clamps**

# Sight Level Gauge\*

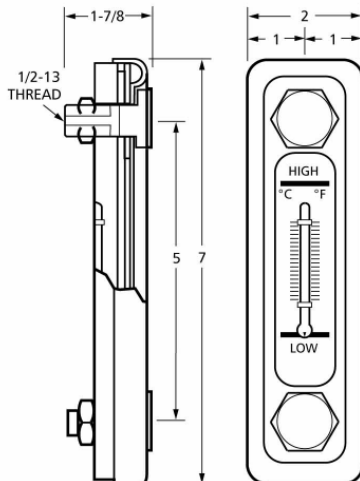
**PART NUMBER HSG-55**

The Hydro-Craft® Standard Sight Level Gauge is available only with temperature indicator. Complete with neoprene gaskets and attaching bolts - ready for immediate installation.

- Can be installed from either outside or inside reservoir unit. Requires only tow mounting holes
- Sturdy low profile outer case
- All external metal parts are plated
- Extra large sight area, nonbreakable 2X magnifier
- Thermometer standard with readings in centigrade and Fahrenheit
- Will withstand temperatures to 225°F
- Available in stainless steel



**TECHNICAL DATA FOR SIGHT LEVEL GAUGES**



Drill 9/16" Hole 2  
Places on 5" Center



\* Cannot be used for pressurized applications. Sight Level gauges are not designed for pressure applications.

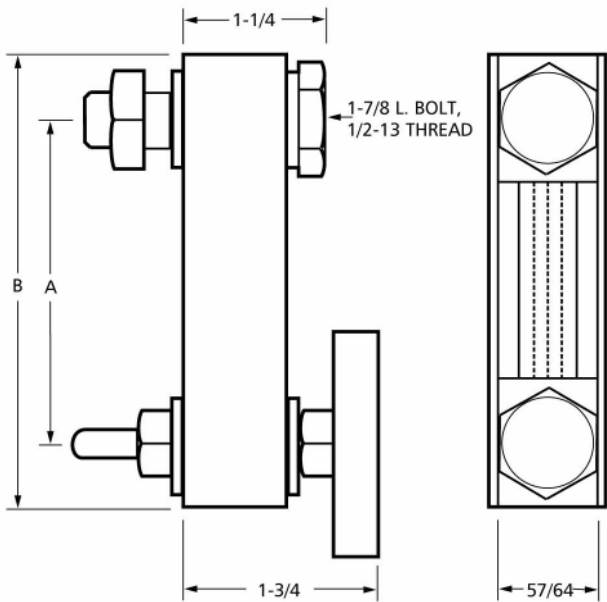
# Sight Level Gauge

**HSG-66 SERIES**

Hydro-Craft® fluid sight level gauges are available in 3- 5- and 10-inch sizes, with or without a dial type thermometer.

- Rugged construction
- Plated steel shell and end blocks
- Durable Lexan tube will not discolor
- Pyrex glass tube available at no additional cost
- Easy to read high visibility design
- Viton O-Ring tube seals
- Unique, easy mounting nylon seals
- Easy to read, precision dial type thermometer
- Will withstand temperatures from 0°-500°F (Pyrex), 0°-250°F (Lexan)

5- and 10-inch gauges are slotted for side viewing



**GAUGE SPECIFICATIONS**

PART NO.	PART NO./W TEMP IND.	MOUNTING CENTER (A)	OVERALL LENGTH (B)
HSG-66-3	HSG-66T-3	3	4-1/8
HSG-66-5	HSG-66T-5	5	6-1/8
HSG-66-10	HSG-66T-10	10	11-1/8

Add PL to end of part number for Pyrex, Lexan is standard.



**Clamps**

Sight level gauges are not designed for pressure applications.

# Filler Breather Assembly Kit



Filler Breather with 4" strainer



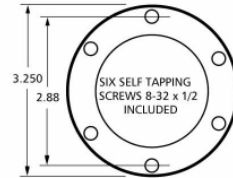
Filler Breather with optional metal filler screen and dipstick

**PART NO. HC-120**

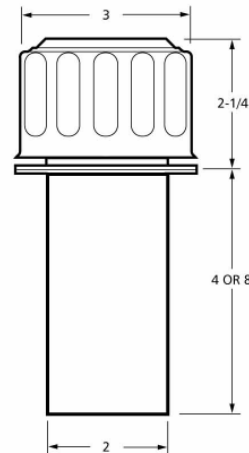
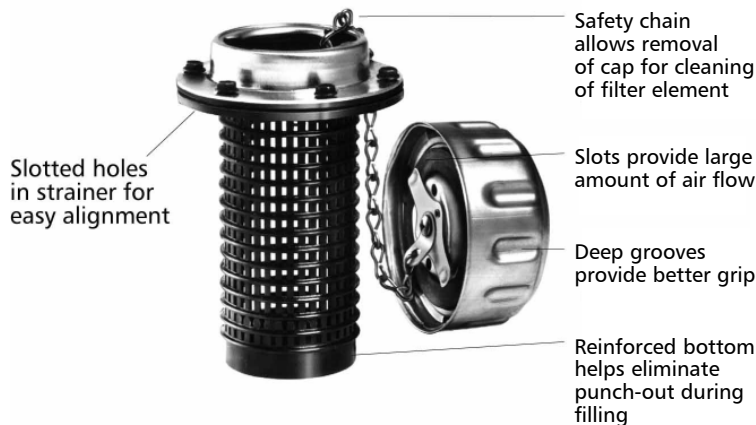
- Nylon strainer with guard...stronger than conventional materials. Will not corrode. Compatible with most fluids.
- Flange on strainer acts as gasket-no unnecessary parts to lose
- 4" or 8" strainer available
- Displaces 192 gallons per minute (25 CFM)
- Available in 10 or 40 micron
- Nylon strainer with openings equivalent to 30 mesh
- Plated cap with safety chain
- All parts included in one package-ready to install
- Locking provision available to accept standard 3/8" padlock
- Pressurized breather available

**OPTIONAL ADDERS**

Add To Part	Description
<b>AS</b>	Anti-Slosh Feature
<b>B</b>	Black Powder Coated Cap
<b>D</b>	6" Dip Stick
<b>L</b>	Stainless Steel Locking Tab
<b>M</b>	10 Micron Element
<b>PB-3</b>	3 P.S.I. Pressurized Breather
<b>PB-5</b>	5 P.S.I. Pressurized Breather
<b>PB-10</b>	10 P.S.I. Pressurized Breather
<b>S-3</b>	3" Stainless Steel Strainer
<b>S-4</b>	4" Nylon Strainer
<b>SS-8</b>	8" Stainless Steel Strainer



**FEATURES**



All dimensions are approximate in inches

**Clamps**

# Air Breathers

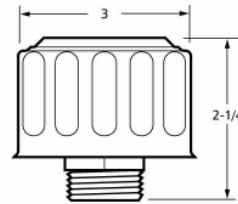
Breather filters are a must for hydraulic systems requiring clean air passing into the reservoir, ensuring long life of system components.

When used as a crankcase ventilator, it helps to prolong the life of the engine oil and the oil filter.

Pressurized breather available.

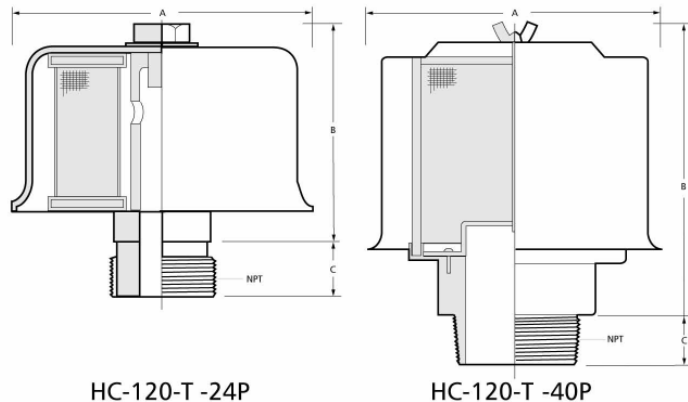
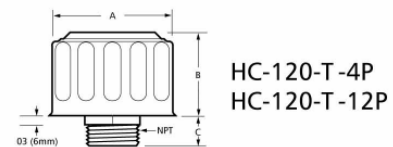
### SPECIFICATIONS-THREADED TYPE, PRESSURIZED

PART NO.	RATING MICRON	DISPLACEMENT GPM	AIR FLOW cfm	NPT
HC-120-P-T-12P-3	40	192	25	3/4
HC-120-P-T-12P-5	40	192	25	3/4
HC-120-P-T-12P-10	40	192	25	3/4



### SPECIFICATIONS-THREADED TYPE, NON PRESSURIZED

PART NO.	FLOW CFM	SIZE (NPT)	A	B	C	MICRON
HC-120-T-4P	10	1/4	1-13/16	2-1/8	3/4	40
HC-120-T-12-P	25	3/4	3	1-3/4	3/4	40
HC-120-T-24-P	75	1-1/2	5-5/32	4-1/4	1-1/4	40
HC-120-T-32-P	120	2	5-13/16	6-1/2	2-9/16	40
HC-120-T-40-P	190	2-1/2	7	8-1/4	2-3/4	40
HC-120-T-48-P	280	3	7	8-1/4	2-3/4	40
HC-120-T-64-P	500	4	7	8-1/4	3-7/8	40



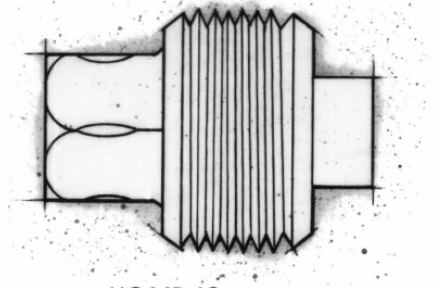
**Clamps**

# Hydro-Craft® Magnetic Filtration

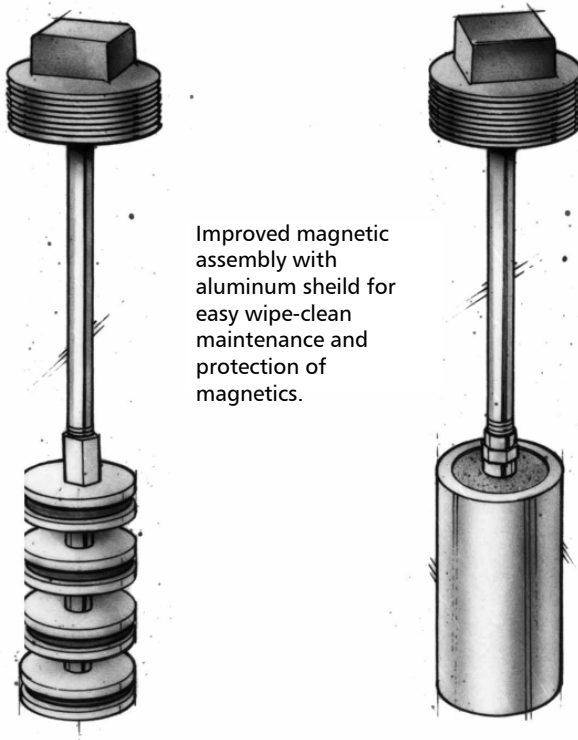
Hydro-Craft® magnetic tank traps and plugs are designed to maintain hydraulic systems by picking up ferrous particles that can clog ordinary filters. They are easily installed, and easily cleaned. The Hydro-Craft® AS series Mag Trap features a wipeclean the ferrous particles from the unit.

The magnetic plug is available in 3/4" NPT.

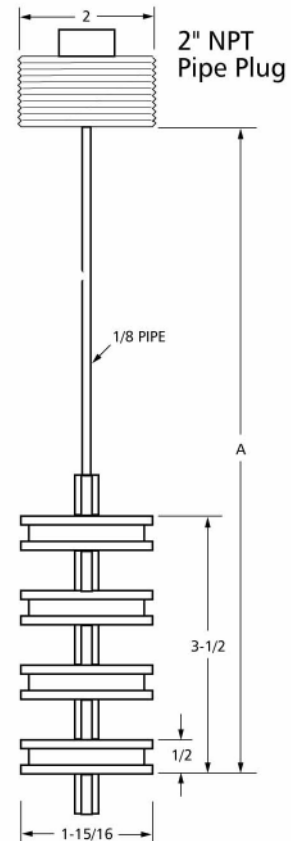
Valuable pump and component protection is provided by these low-cost, easily maintained units.



HC-MP-12  
Magnetic Drain Plug



Improved magnetic assembly with aluminum shield for easy wipe-clean maintenance and protection of magnetics.



We suggest magnet assembly be located within 1" of reservoir bottom.

## SPECIFICATIONS

PART NO.	A
HC-MT-10	10
HC-MT-12	12
HC-MT-16	16
HC-MT-20	20
HC-MT-22	22
HC-MP-12 Drain Plug	

Add "AS" to end of part number when ordering with aluminum shield  
Example: HC-MT-22AS

All dimensions are approximate in inches

Clamps





# Return Line Filters

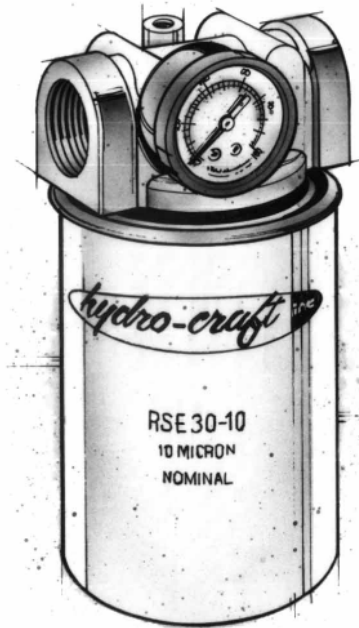
The Hydro-Craft® range of spin-on filters are designed for return line applications and have a nominal retention of 10 micron as standard. Optional 25 micron canisters are available on request.

Three basic models which give interchangeability with most suppliers of this filter type are available. The filters are rated at 200 PSI (13 bar) working pressure and have flow rates of 15 to 50 GPM at 10 micron.

Hydro-Craft® spin-on filters are designed for use with mineral-based oils as used in mobile, industrial, marine and agricultural applications.

**Design Features**

- Full flow 10 micron
- Optional 25 micron
- 200 PSI working pressure
- Interchangeable elements
- Visual indicator
- Disposable spin-on-canister
- With 15 PSI bypass (1 bar)
- Dual-thread design available on 50-series post allows use of replacement canisters from Gresen, Pall, Lenz, MDI, Parker, UCC, etc.



**SPECIFICATIONS**

PART NO.	PORT SIZE (NPT)	FLOW RATE (GPM)	MICRON RATING	DIAL INDICATOR
30 SERIES				
HCRS-30-12X	3/4"	15	10 Micron Std. 25 Micron Opt.	No
HCRS-30-12D	3/4"	15	10 Micron Std. 25 Micron Opt.	Yes
HCRS-30-16X	1"	20	10 Micron Std. 25 Micron Opt.	No
HCRS-30-16D	1"	20	10 Micron Std. 25 Micron Opt.	Yes
50 SERIES				
HCRS-50-20X	1-1/4"	55	10 Micron Std. 25 Micron Opt.	No
HCRS-50-20D	1-1/4"	55	10 Micron Std. 25 Micron Opt.	Yes
BA YONET FLANGE ADAPTOR				
HC-120-BF A				

Our Bayonet Flange Adaptor HC-120-BFA, will replace the filler breather cap, allowing use of a spin on filter. The flange adaptor will accommodate all series RSE filters. Select the appropriate size and micron rating for your application.

**REPLACEMENT ELEMENTS**

PART NO.	MICRON RATING
30 SERIES	
RSE-30-10	10 Micron
RSE-30-25	25 Micron
50 SERIES	
RSE-50-10	10 Micron
RSE-50-25	25 Micron

Replacement dial gauge indicator HCRS-30-D fits 30 and 50 series filters



HC-120-BF A Bayonet Flange Adaptor

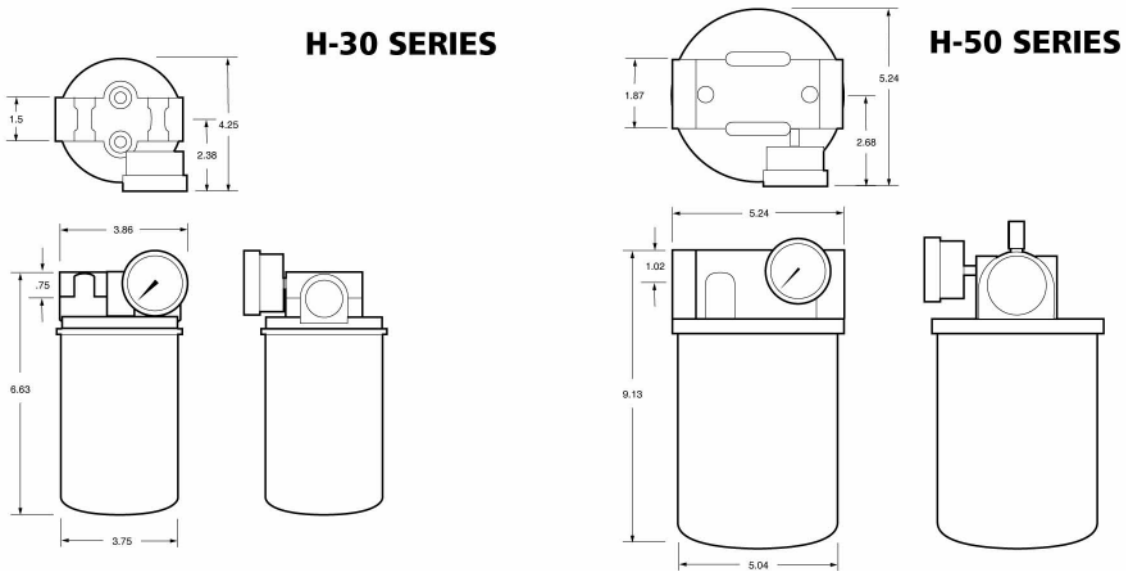
**Clamps**



All dimensions are approximate in inches

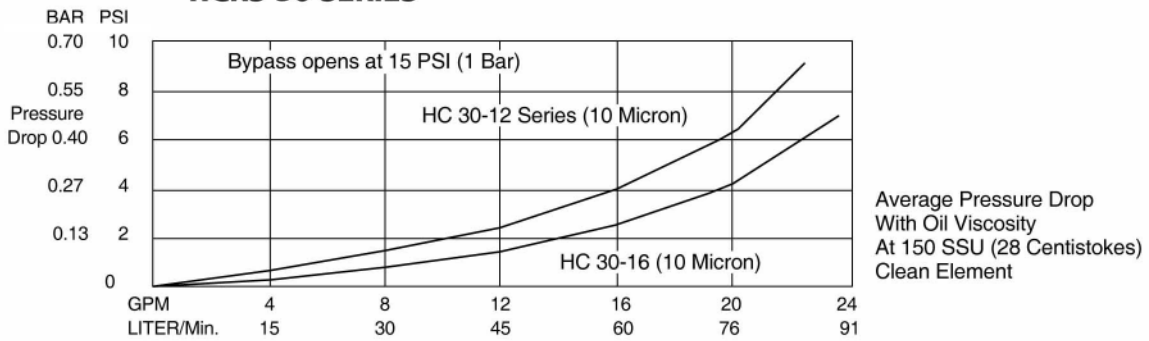
# Series HCRS 30 and 50

**TECHNICAL DATA**

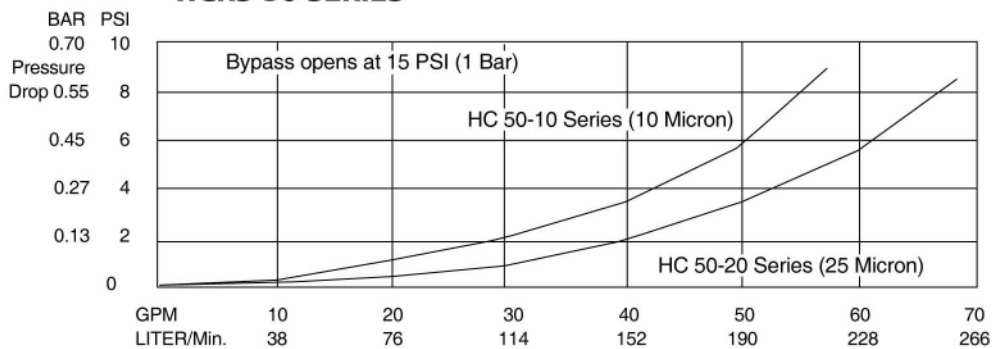


**Clamps**

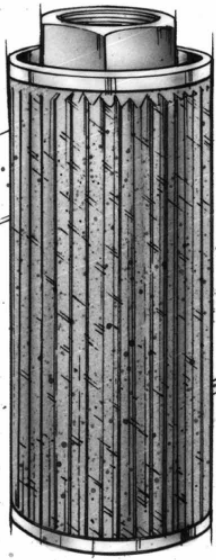
**HCRS-30 SERIES**



**HCRS-50 SERIES**



# Hydro-Craft® Magnetic Filtration



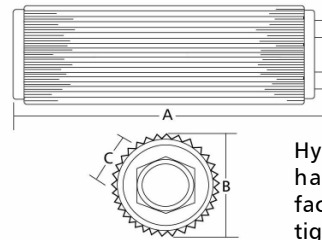
**IN-TANK SUBMERGED TYPE**

Hydro-Craft® offers a complete range of suction-line filters, for use with hydraulic fluids, lubricants, coolants, cutting oil, etc.

**Features**

- Meets or exceeds all J.I.C. standards
- 140 micron filtering
- 100 mesh stainless steel screen, aluminum nut and end caps
- Epoxied ends, hex connection
- Gallon rating and micron size stamped on each filter
- Extremely low pressure drops
- Minimum sizes - maximum flow rates

Pressure drop through a clean element will not exceed 0.2 PSI (0.4-in. Hg) at rated flow of 150 SSU viscosity fluid and 100 mesh.



Hydro-Craft® recommends hand-tightening only to facilitate servicing...wrench tighten is not necessary.

**SPECIFICATIONS**

ALL METAL PART NO.	VALVE OPTION	GPM RATING	FILTERING			A	B	C
			THREAD (NPTF)	AREA (SQ. IN.)				
HA-FS-5		5	3/4"	62	3-1/16"	3-3/16"	1-5/16"	
HA-FS-10	"ADD"	10	1"	125	5-5/16"	3-1/16"	1-5/8"	
HA-FS-20	RV-3	20	1-1/4"	162	7-1/8"	3-1/16"	1-15/16"	
HA-FS-30	3-PSI	30	1-1/2"	310	8-3/4"	4"	2-1/8"	
HA-FS-50	BY PASS	50	2"	340	9-5/8"	4"	2-3/4"	
HA-FS-75		75	2-1/2"	400	12-5/8"	5-1/16"	3-1/2"	
HA-FS-100		100	3"	500	12-5/8"	5-1/16"	4"	

NYLON CONNECT. PART NO.	VALVE OPTION	GPM RATING	FILTERING			A	B	C
			THREAD (NPTF)	AREA (SQ. IN.)				
HP-FS-5		5	3/4"	62	2-1/2"	3-3/16"	1-5/16"	
HP-FS-10	"ADD"	10	1"	125	5-3/8"	3-3/16"	1-5/8"	
HP-FS-20	RV-3	20	1-1/4"	162	7-3/8"	3-3/16"	1-15/16"	
HP-FS-30	3-PSI	30	1-1/2"	310	9-1/8"	4-3/16"	2-1/8"	
HP-FS-50	BY PASS	50	2"	340	9-3/4"	4-3/16"	2-3/4"	
HP-FS-75		75	2-1/2"	400	12-1/2"	5-1/16"	3-1/2"	
HP-FS-100		100	3"	500	12-1/2"	5-1/16"	4"	

**Clamps**



## Shock Mounts

### PART NO. HC-SM-32

The Hydro-Craft® Shock Mount is simple in design, engineered for rugged service and long life, having an inner cylinder attached to the stud, which is insulated from the outer shell by a wall of mechanically bonded rubber. They have an ample safety margin: **Overloaded to destruction they will allow a drop of less than 1/2"**.

- Cut down vibration
- Helps subdue shock and noise
- Easy to install
- Inexpensive
- No maintenance required
- Allows Precision leveling

### MOUNTING METHODS

Place plate through shock mount stud, lock both nuts into proper level position. Weld adapters can be inserted into shock mount base and welded into position. Shock mounts can easily be removed by removing nuts from weld pads.

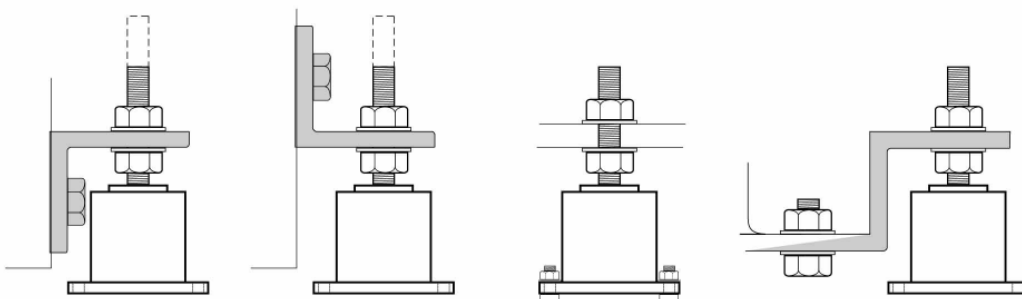
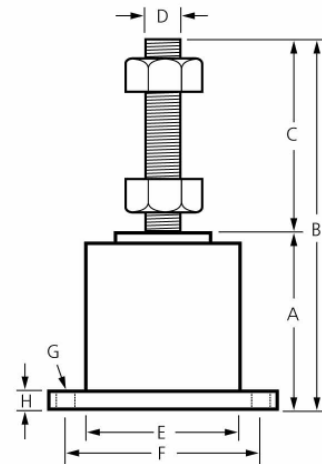


Various other mounting configurations can be used; see illustrations below:





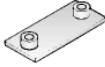
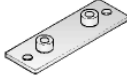
	Load Capacity of Each Mount	200#
	Shipping Weight Each	1lb. 6 oz.
	Maximum (Average) Deflection Under Rated Load	.0625"
A	Height Floor to Top of Lower Face (Min. Ht. Above Floor)	1-7/8"
B	Height Overall, Including Stud	3-7/8"
C	Height of Stud above Lower Face	2"
D	Diameter of Stud	1/2"
E	Diameter of Housing	1-3/4"
F	Bolt Hole Centers	2-3/4"
G	Diameter of Bolt Holes in Base	3/8"
H	Flange Height	11/64"

NOTE: Each mount is rated at 200# capacity (Ex.: If 2,000 lbs. are to be supported, use 10 shock mounts). Determine the mass to be supported and position mounts in a pattern which will best support load in a balanced condition. Bottom shock mount hex nut must be adjusted up from base to properly suspend mass

**Also 100 and 500 lb. Shock Mounts Available**

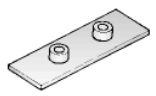
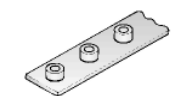
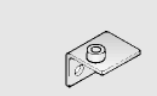
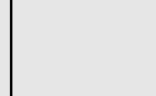

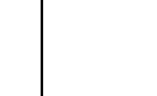
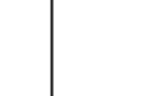
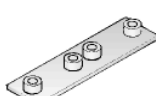
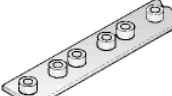
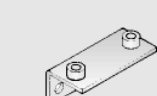
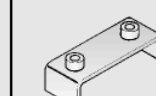


# Standard-Series Order Code-Components

DESIGN OPTIONS								
<ul style="list-style-type: none"> <li>• Metric Threaded Components</li> <li>• Stainless Steel Components Available 304/316</li> <li>• Special Materials Available Upon Request</li> <li>• Special Diameters and Profiles to Order</li> <li>• Rubber Insert Clamps Available</li> <li>• Bushing Adaptor</li> </ul>						<b>GROUP 1</b>	<b>GROUP 1</b>	<b>GROUP 1</b>
								
						<b>GROUP 1 A - 8</b>	<b>GROUP 1 A - 8</b>	<b>GROUP 1 A - 8</b>
Surface Finish of Metal Parts						-	-	-
STAUFF Group	DIN Group	mm O.D.	Pipe Nominal Bore	Tube Inch O.D.	Hose	Clamp Body (2 halves) (xxx - see material code)	Single Weld Plate <b>SP</b>	Elongated Weld Plate <b>SPV</b>
1	0	6				<b>1060</b> xxx	SP 1	SPV 1
		6.4		1/4		<b>1064</b> xxx		
		8		5/16		<b>1080</b> xxx		
		9.5		3/8		<b>1095</b> xxx		
		10	1/8			<b>1100</b> xxx		
1A	1	12				<b>1120</b> xxx	SP 1 A	SPV 1 A
		6				<b>1060 A</b> xxx		
		6.4		1/4		<b>1064 A</b> xxx		
		8		5/16		<b>1080 A</b> xxx		
		9.5		3/8		<b>1095 A</b> xxx		
2	2	10	1/8			<b>1100 A</b> xxx	SP 2	SPV 2
		12				<b>1120 A</b> xxx		
		12.7		1/2		<b>2127</b> xxx		
		13.7	1/4			<b>2137</b> xxx		
		14				<b>2140</b> xxx		
		15				<b>2150</b> xxx		
3	3	16		5/8		<b>2160</b> xxx	SP 3	SPV 3
		17.1	3/8			<b>2171</b> xxx		
		18				<b>2180</b> xxx		
		13.4			1/4	<b>3134</b> xxH		
		17.4			3/8	<b>3174</b> xxH		
		19		3/4		<b>3190</b> xxx		
		20				<b>3200</b> xxx		
		20.5			1/2	<b>3205</b> xxH		
21.3	1/2			<b>3213</b> xxx				
4	4	22.2		7/8		<b>3222</b> xxx	SP 4	SPV 4
		23.9			5/8	<b>3239</b> xxH		
		25.4		1		<b>3254</b> xxx		
		26.6	3/4			<b>4266</b> xxx		
		28				<b>4280</b> xxx		
		30				<b>4300</b> xxx		
		27.8			3/4	<b>5278</b> xxH		
5	5	32		1 1/4		<b>5320</b> xxx	SP 5	SPV 5
		33.4	1			<b>5334</b> xxx		
		35				<b>5350</b> xxx		
		35.7			1	<b>5357</b> xxH		
		38.1		1 1/2		<b>5381</b> xxx		
		40				<b>5400</b> xxx		
		42.2	1 1/4			<b>5422</b> xxx		
		43.8			1 1/4	<b>5438</b> xxH		
44.5		1 3/4		<b>6445</b> xxx				
6	6	48.3	1 1/2			<b>6483</b> xxx	SP 6	SPV 6
		50.8		2		<b>6508</b> xxx		
		57.2		2 1/4		<b>7572</b> xxx		
7	7	60.3	2			<b>7603</b> xxx	SP 7	SPV 7
		63.5		2 1/2		<b>7635</b> xxx		
		70		2 3/4		<b>7700</b> xxx		
		73				<b>7730</b> xxx		
		76.2	2 1/2	3		<b>7762</b> xxx		
8	8	88.9	3			<b>8889</b> xxx	SP 8	SPV 8
		102		4		<b>8102</b> xxx		

**Clamps**















 GROUP 1	 GROUP 1	 GROUP 1	 GROUP 1	 TS	 CRA	 GROUP 1-8
 GROUP 1A-6	 GROUP 1A-6	 GROUP 1A-6	 GROUP 1A-6	-	Fe/Zn 8B	-
Twin Weld Plate <b>DSP</b>	Group Weld Plate <b>RAP</b>	Weld Plate, angled <b>WSP</b>	Bridge Weld Plate <b>BSP</b>	Mounting Rail <b>TS</b>	Channel Rail Adaptor <b>CRA</b>	Rail Nut <b>SM</b>
DSP 1/40 Pipe center spacing (mm) ←	RAP 1/30/10 Pipe center spacing (mm) ← Number of clamps ←	WSP 1				
DSP 1 A/37	RAP 1 A/37/10	WSP 1 A	BSP 1 A			
DSP 2/44	RAP 2/44/10	WSP 2	BSP 2	<u>1M/3.28' long</u>		
DSP 3/52	RAP 3/52/10	WSP 3	BSP 3	TS 11/3 TS 14/3 TS 30/3	CRA1-8 (C Channel Rail Strut)	SM1-8 (Stauff TS Rail)
DSP 4/60	RAP 4/60/5	WSP 4	BSP 4	<u>2M/6.56' long</u>		
DSP 5/75	RAP 5/75/5	WSP 5	BSP 5	TS 11/6 TS 14/6 TS 30/6		
DSP 6/90	RAP 6/90/5	WSP 6	BSP 6			
-	-	-	-		Refer to Pg. 28 for Dimensions	
-	-	-	-			

\*Shaded Components Special

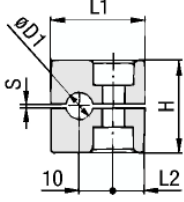
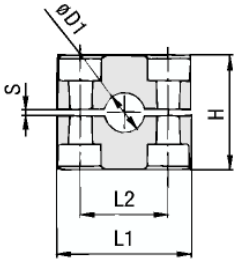
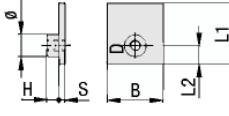
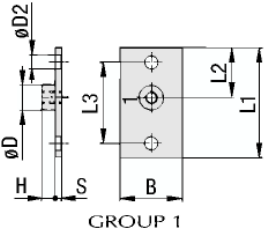
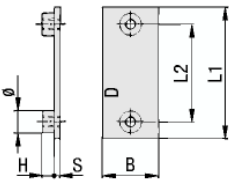
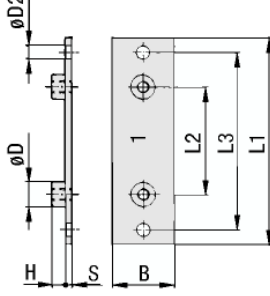
Clamps



 GROUP 1					 GROUP 1	
 GROUP 1A - 8					 GROUP 1A-8	 GROUP 1-8
DIN 50961 Fe/Zn 8 B						
Cover Plate <b>DP</b>	Hexagon Head Bolt <b>AS</b>	Socket Head Cap Screw <b>IS</b>	Hexagon Headbolt (No Coverplate) (For use with E Insert) <b>ASE</b>	Stacking Bolt <b>AF</b>	Safety Locking Plate <b>SIG</b>	Hex Head Bolt Lock <b>HHL</b>
DP 1	ASDP 1-1A 1/4"-20UNC x 1 1/4"	IS 1-1 A	ASE 1-1 A	AF 1-1A	SIG 1	  HHL 1-8
DP 1 A					SIG 1 A	
DP 2	ASDP 2 1/4"-20UNC x 1 3/8"	IS 2	ASE 2	AF 2	SIG 2	Only For Hexagon Head Bolts as DIN 931/933
DP 3	ASDP 3 1/4"-20UNC x 1 1/2"	IS 3	ASE 3	AF 3	SIG 3	
DP 4	ASDP 4 1/4"-20UNC x 1 7/8"	IS 4	ASE 4	AF 4	SIG 4	
DP 5	ASDP 5 1/4"-20UNC x 2 1/2"	IS 5	ASE 5	AF 5	SIG 5	  E Insert ES (steel) EP (plastic)
DP 6	ASDP 6 1/4"-20UNC x 2 3/4"	IS 6	ASE 6	AF 6	SIG 6	
DP 7	ASDP 7 1/4"-20UNC x 4"	-	ASE 7	AF 7	SIG 7	
DP 8	ASDP 8 1/4"-20UNC x 4 7/8"	-	ASE 8	AF 8	SIG 8	



## Standard-Series Dimension Table-Components

<p><b>DESIGN OPTIONS</b></p> <ul style="list-style-type: none"> <li>• Metric Threaded Components</li> <li>• Stainless Steel Components Available 304/316</li> <li>• Special Materials Available Upon Request</li> <li>• Special Diameters and Profiles to Order</li> <li>• Rubber Insert Clamps Available</li> <li>• Bushing Adaptor</li> </ul>				 <p>GROUP 1</p>					 <p>GROUP 1 A - 8</p>					 <p>GROUP 1</p>					 <p>GROUP 1</p>				
				 <p>GROUP 1 A - 8</p>					 <p>GROUP 1 A - 8</p>														
Surface finishing (see also techn. appendix)				-					-					-									
STAUFF Group	DIN Group	Pipe-O.D. Ø D1 (mm)   (in)		Clamp Body (2 halves)						Single Weld Plate SP					Elongated Weld Plate SPV								
				L1	L2	Inside surface			Width	L1	L2	B	S	H	øD	L1	L2	L3	B	S	H	øD1	øD2
						H	S(min)	H															
1	0	6 TO 12	.23" TO .47"	28	9.5	27	0.4	26	30	31.5	10	30	3	6.5	12	58	24.5	44	30	3	6.5	12	6.5
1A	1	6 TO 12	.23" TO .47"	37	20	27	0.4	26	30	36	20	30	3	6.5	12	64	20	50	30	3	6.5	12	6.5
2	2	12.7 TO 18	.50" TO .70"	42	26	33	0.6	32	30	42	26	30	3	6.5	12	70	26	56	30	3	6.5	12	6.5
3	3	19 TO 25	.74" TO .98"	50	33	36	0.6	35.5	30	50	33	30	3	6.5	12	78	33	64	30	3	6.5	12	6.5
4	4	26.9 TO 30	1.06" TO 1.18"	59	40	42	0.6	41.5	30	60	40	30	3	6.5	12	87	40	73	30	3	6.5	12	6.5
5	5	32 TO 42	1.25" TO 1.65"	71	52	58	0.8	56.5	30	71	52	30	3	6.5	12	100	52	86	30	3	6.5	12	6.5
6	6	44.5 TO 50.8	1.75" TO 1.96"	86	66	66	0.8	64.5	30	88	66	30	3	6.5	12	115	66	100	30	3	6.5	12	6.5
7	7	57.2 TO 76.1	2.25" TO 2.99"	121	94	93	0.8	92	30	122	94	30	5	6.5	12	150	94	136	30	5	6.5	12	6.5
8	8	88.9 TO 102	3.50" TO 4.00"	147	120	118	0.8	116	30	148	120	30	5	6.5	12	178	120	162	30	5	6.5	12	6.5

**Clamps**

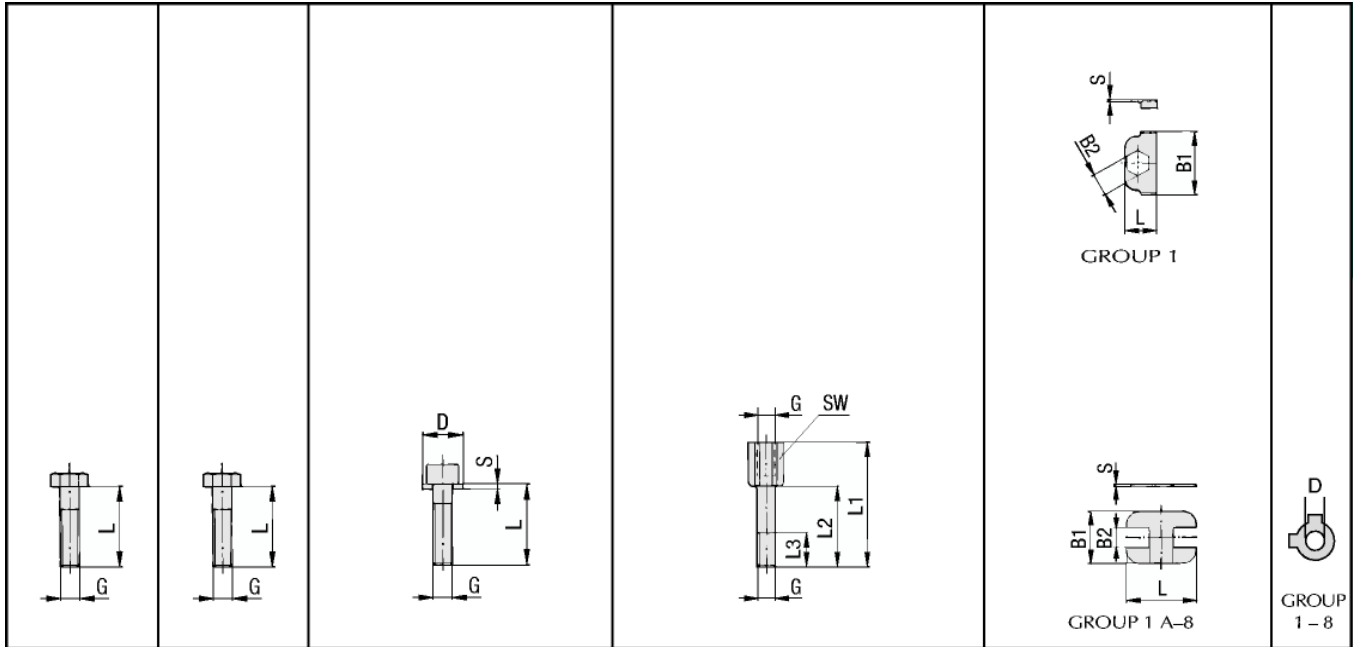




Twin Weld Plate DSP								Group Weld Plate RAP								Mounting Rail TS			Hexagon Rail Nut SM					Cover Plate DP					
L1	L2	L3	B	S	H	øD		L1	L2	L3	B	S	H	øD		B1	B2	S	L	B	H1	H2	øD	L1	L2	B	S	øD	
87	40	40	30	3	6.5	12		315	31	30	30	4	6.5	12											28	9.5	30	3	7
3.42"	1.57"	1.57"	1.18"	.11"	.26"	.47"		12.40"	1.22"	1.18"	1.18"	.15"	.26"	.47"											1.10"	.37"	1.18"	.11"	.27"
77	20	37	30	3	6.5	12		373	20	37	30	4	6.5	12											34	20	30	3	7
3.03"	.78"	1.45"	1.18"	.11"	.26"	.47"		14.69"	.78"	1.45"	1.18"	.15"	.26"	.47"											1.33"	.78"	1.18"	.11"	.27"
86	26	44	30	3	6.5	12		442	26	44	30	4	6.5	12											40.5	26	30	3	7
3.38"	1.02"	1.73"	1.18"	.11"	.26"	.47"		17.40"	1.02"	1.73"	1.18"	.15"	.26"	.47"											1.59"	1.02"	1.18"	.11"	.27"
102	33	52	30	3	6.5	12		521	33	52	30	4	6.5	12											48	33	30	3	7
4.02"	1.29"	2.04"	1.18"	.11"	.26"	.47"		20.51"	1.29"	2.04"	1.18"	.15"	.26"	.47"											1.88"	1.29"	1.18"	.11"	.27"
120	40	60	30	3	6.5	12		300	40	60	30	4	6.5	12		28	11	2	25.4	10.4	13	5	12	57	40	30	3	7	
4.72"	1.57"	1.18"	.11"	.11"	.26"	.47"		11.81"	1.57"	2.36"	1.18"	.15"	.26"	.47"	1.10"	.43"	.07"	1.00"	.41"	.51"	.19"	.47"	2.24"	1.57"	1.18"	.11"	.27"		
145	52	75	30	3	6.5	12		378	52	75	30	4	6.5	12											70	52	30	3	7
5.71"	2.04"	2.95"	1.18"	.11"	.26"	.47"		14.88"	2.04"	2.95"	1.18"	.15"	.26"	.47"											2.75"	2.04"	1.18"	.11"	.27"
178	66	90	30	3	6.5	12		452	66	90	30	4	6.5	12											86	66	30	3	7
7.01"	2.59"	3.54"	1.18"	.11"	.26"	.47"		17.80"	2.59"	3.54"	1.18"	.15"	.26"	.47"											3.38"	2.59"	1.18"	.11"	.27"
-	-	-	-	-	-	-		-	-	-	-	-	-	-											118	94	30	5	7
																									4.65"	3.70"	1.18"	.19"	.27"
-	-	-	-	-	-	-		-	-	-	-	-	-	-											144	120	30	5	7
																									5.67"	4.72"	1.18"	.19"	.27"

**Clamps**





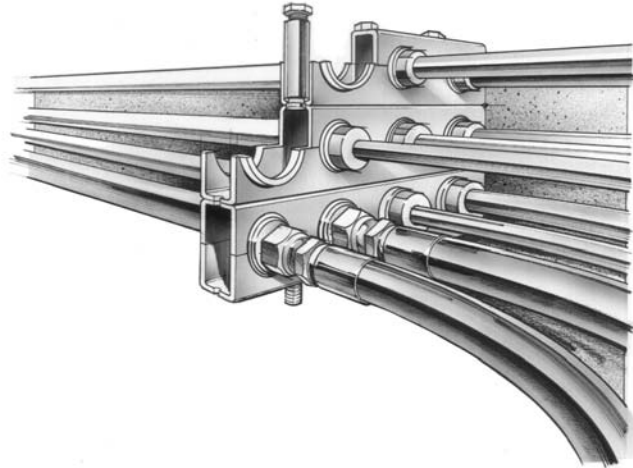
Fe/Zn

Hexagon Head Bolt ASDP	Hexagon Head Bolt ASE	Socket Head Cap Screw IS			Stacking Bolt AF					Safety Locking Plate SIG				Hex Head Bolt Lock HHL
		G x L	G x L	G x L	D	S	G	L1	L2	L3	SW	L	B1	
1/4"-20UNC x 1 1/4"	1/4"-20UNC x 1 1/8"	1/4"-20UNC x 3/4"	11	0.8	1/4"-20UNC	34	20	12 min.	11	17	32	11.1	1	6.4 .25"
			.43"	.03"		1.33"	.78"	.47"	.43"	.66"	1.26"	.44"	.03"	
1/4"-20UNC x 1 1/4"	1/4"-20UNC x 1 1/8"	1/4"-20UNC x 3/4"	11	0.8		34	20	12 min.	11	34	28	11.1	1	
			.43"	.03"		1.33"	.78"	.47"	.43"	1.33"	1.10"	.44"	.03"	
1/4"-20UNC x 1 3/8"	1/4"-20UNC x 1 3/8"	1/4"-20UNC x 1"	11	0.8		38	25.4	15.2 min.	11	40	28	11.1	1	
			.43"	.03"		1.50"	1.00"	0.6"	.43"	1.57"	1.10"	.44"	.03"	
1/4"-20UNC x 1 1/2"	1/4"-20UNC x 1 3/8"	1/4"-20UNC x 1 1/8"	11	0.8		44	30	12 min.	11	47	28	11.1	1	
			.43"	.03"		1.73"	1.18"	.47"	.43"	1.85"	1.10"	.44"	.03"	
1/4"-20UNC x 1 7/8"	1/4"-20UNC x 1 5/8"	1/4"-20UNC x 1 3/8"	11	0.8		48	35	12 min.	11	56	28	11.1	1	
			.43"	.03"	1.88"	1.37"	.47"	.43"	2.20"	1.10"	.44"	.03"		
1/4"-20UNC x 2 1/2"	1/4"-20UNC x 2 3/8"	1/4"-20UNC x 2"	11	0.8	64	50	12.7 min.	11	69	28	11.1	1		
			.43"	.03"	2.51"	1.96"	.50"	.43"	2.71"	1.10"	.44"	.03"		
1/4"-20UNC x 2 3/4"	1/4"-20UNC x 2 3/4"	1/4"-20UNC x 2 3/8"	11	0.8	73	60	12 min.	11	85	28	11.1	1		
			.43"	.03"	2.87"	2.36"	.47"	.43"	3.34"	1.10"	.44"	.03"		
1/4"-20UNC x 4"	1/4"-20UNC x 4"	1/4"-20UNC x 3 3/8"	11	0.8	99	85	12 min.	11	117	28	11.1	1		
			.43"	.03"	3.89"	3.34"	.47"	.43"	4.61"	1.10"	.44"	.03"		
1/4"-20UNC x 4 7/8"	1/4"-20UNC x 4 3/4"	1/4"-20UNC x 4 3/8"	11	0.8	124	110	12 min.	11	143	28	11.1	1		
			.43"	.03"	4.88"	4.33"	.47"	.43"	5.63"	1.10"	.44"	.03"		

Clamps



# The Multi-Clamp® System



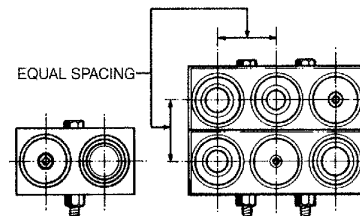
The MULTI-CLAMP SYSTEM enables you to route single line runs, multiple runs of the same line diameters, or multiple runs of various diameters. Multiple line runs can be stacked to conserve space and make installations more rigid. Center line dimensions between all lines remain the same, both horizontal and vertical, when MULTI-CLAMPS are stacked. Mount an additional CLAMPING UNIT upon the existing MULTI-CLAMP and attach it by threading a thread adapter into the stacking nut. MULTI-CLAMPS are progressively built up this way with the last being secured by a standard bolt threaded into the STACKING NUT.

The MULTI-CLAMP SYSTEM provides definite reference for measuring ... so important in laying out line runs. Quite an advantage over clamping devices that change center distance both vertically and horizontally with each change in line diameter. This advantage can be fully realized when stacking line runs, because with MULTI-CLAMP both vertical and horizontal center line distances remain specifically designed to give you exact spacing and ease of installation.

MULTI-CLAMP is available in steel, stainless steel and aluminum. The standard bushing material is Styrene Butadiene.

Using the following charts, determine the series of MULTI-CLAMP required and the number of clamps required. Then refer to the dimensional data and mounting instructions on the following pages.

LINE SIZE	MULTI-CLAMP SERIES
3/16- THRU 3/4-INCH O.D.	HC-10
1/4- THRU 1-INCH O.D.	HC-16
3/8- THRU 2-INCH O.D.	HC-32
1- THRU 2-1/2-INCH I.D.	HC-46
2- THRU 4-INCH I.D.	HC-72
5- THRU 6-INCH I.D.	HC-96



**RECOMMENDED SUPPORT CLAMP SPACING\***

TUBE O.D.	APPROX. SPACE BETWEEN SUPPORTS
1/4-, 5/16-, 3/8-, 1/2- INCH	3- FEET
5/8-, 3/4-, 7/8-INCH	4- FEET
1-INCH	5- FEET
1-1/4-, 1-1/2-INCH	7- FEET
2-INCH & UP	7- TO 10- FEET

\*From Fluid Power Handbook

**Clamps**

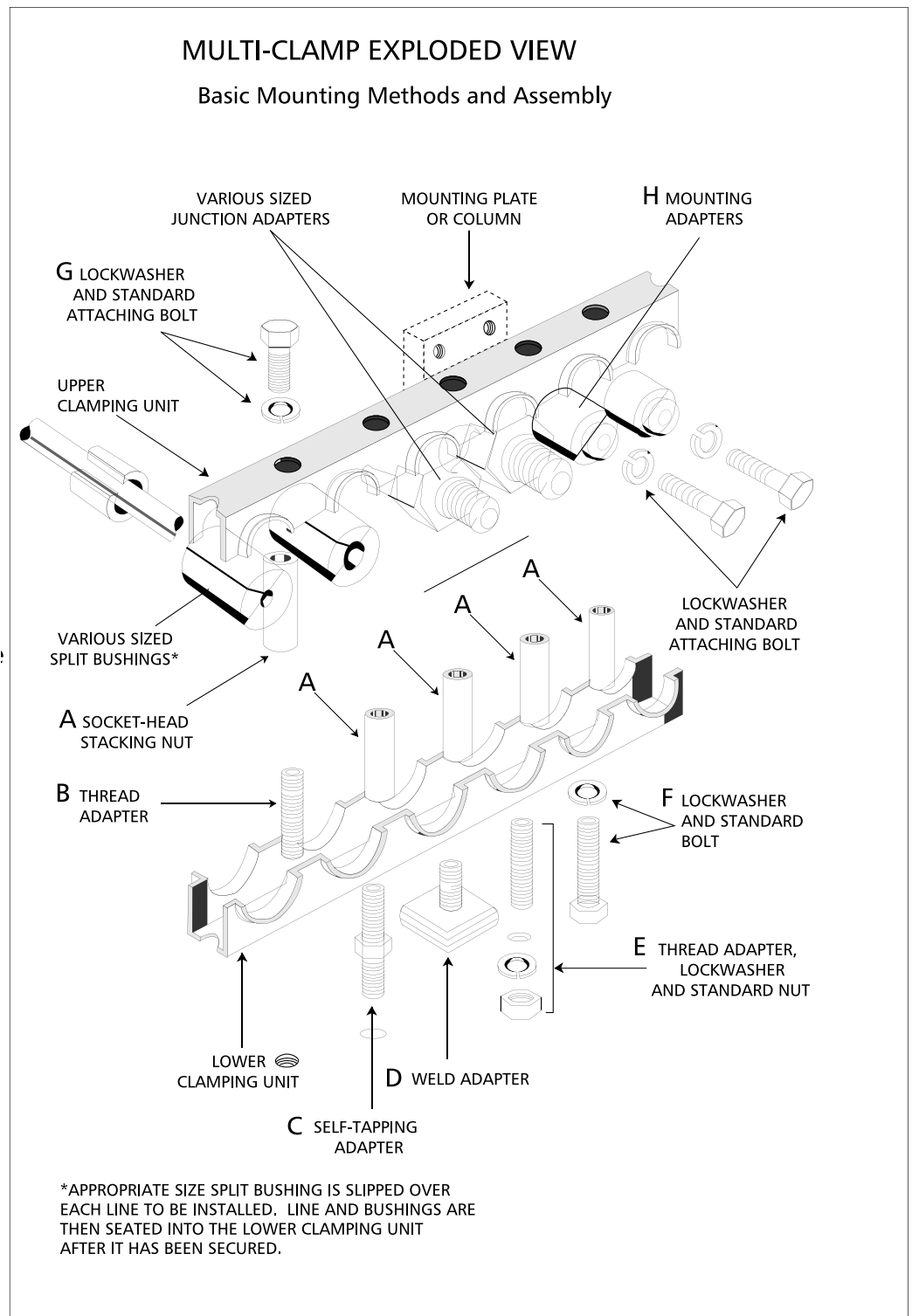


# The Multi-Clamp® System

A Socket-head Stacking Nut, shown at **A**, is used in combination with either **B**, a Thread Adapter, **C**, a Self-tapping Adapter, or **D**, a Weld Adapter, to secure the lower Clamping Unit directly to a mounting surface. The Stacking Nut is also used in combination with **E**, a Thread Adapter, lockwasher, and standard nut to attach the lower Clamping Unit through a drilled hole in mounting to a plate of 3/8 inch (or less) thickness.

After inserting Junction Adapters or Split Bushings and Lines into the lower Clamping Unit, the upper Clamping Unit is attached by positioning it over the Lower Clamping Unit and placing **G**, a standard bolt and lockwasher, through each mounting hole and threading the bolt securely into its corresponding Stacking Nut. This completes the assembly of a basic MULTI-CLAMP

In bridge mounting between two columns, or when a MULTI-CLAMP is suspended from a column, either the **E** combination or **F**, a standard bolt and lockwasher, can be used to secure the Stacking Nut to the lower Clamping Unit. **H** Mounting Adapters are placed into appropriate holes, the lines or Junction Adapters installed, the upper Clamping Unit attached, and the complete assembly then secured by the Mounting Adapters and standard bolts.



**Clamps**

**PLANNING GUIDE**

THE MULTI-CLAMP® SYSTEM PROVIDES FOR VISUAL PLANNING OF LINE INSTALLATIONS

This is a very important part of the total system. Line diameters and routes, bend angles, places and types of mounting, couplings, overhead suspension, and modulation of the installation with JUNCTION ADAPTERS can all be visually preplanned.

The first step in planning is visually determining the most desirable route. You would want to avoid obstructions, moving parts, service openings, and complex contours. Plan around them. Then follow this procedure:

**1. LINES AND DIRECTIONS**

Determine the number of lines required and the directions they must go. Determine the maximum O.D. of the lines. This will enable you to select the proper CLAMPING UNIT series.

**2. EXAMINE CHARACTERISTICS OF PRODUCT**

If the product to be piped consists of more than one component . . . such as a machine tool with hydraulic and coolant tanks . . . plan with the JUNCTION ADAPTER. Remember each unit of the machine tool can then be easily separated at one MULTI-CLAMP® and just as easily reconnected.

**3. ROUTING**

First, consider routing the line runs along the base of the product, being cautious of the obstructions, moving parts, service openings, and contours previously mentioned. If these are prohibitive, consider attaching upright spars to the product for overhead runs, or routing the runs overhead in suspension.

**4. INSTALLATION**

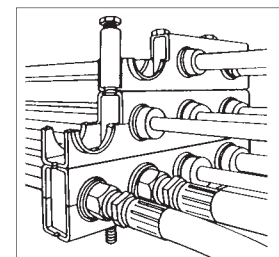
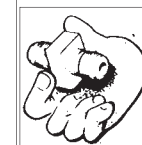
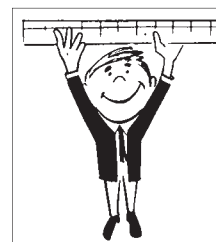
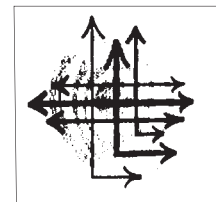
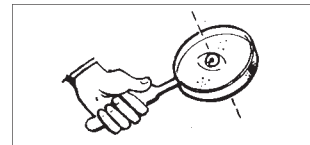
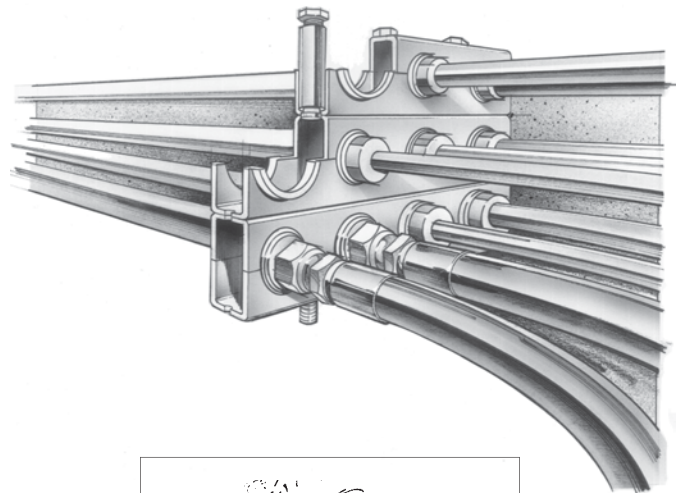
Having determined the route, select the proper CLAMPING UNIT for the maximum O.D. of the required lines. Then, cut lengths to provide sufficient line openings.

Mount the lower CLAMPING UNIT. (Refer to mounting methods shown on pages 6-7.) An excellent feature of this system is the mounted CLAMPING UNIT becomes a reference point for measuring line runs . . . eliminates trying to measure "in-the-air".

Now, position the first line and use this line as a basic guide for measurement; merely add the center distance to the next line opening for the next line, and so on.

Add JUNCTION ADAPTER, when applicable, or slip appropriate sized SPLIT BUSHING over each line and seat into lower CLAMPING UNIT.

Position the upper CLAMPING UNIT and secure it to the lower CLAMPING UNIT. (Refer to exploded view.)



NOTE: If a large number of lines are to be run, the following procedure is recommended: Cut lower CLAMPING UNIT in lengths for total number of lines to be installed. Next, cut upper CLAMPING UNIT in lengths for 2 lines only. Installation is then completed by securing only two lines at a time as the run progresses.



**SUGGESTED MOUNTING METHODS**

Actual installation of a line run, using the MULTI-CLAMP SYSTEM, begins with the mounting of the lower Clamping unit. Various methods are available to the installer for securing the lower Clamping Unit to the machine base, pillar, upright spar, mounting plate, etc.

**WELD ADAPTER**

1. Insert Weld Adapter into mounting hole of lower Clamping Unit.

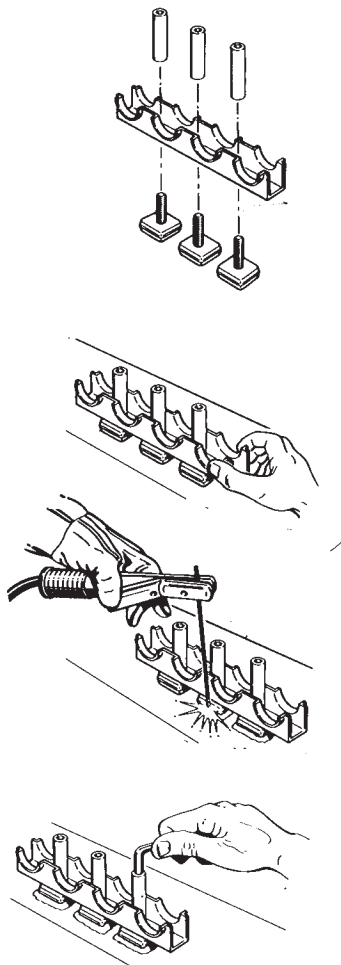
Secure Weld Adapter to lower Clamping Unit with socket head stacking nut (finger tight). Repeat Steps 1 and 2 for each hole of Clamping Unit.

Weld Adapter attached to lower clamping unit provides the basis of this method.

2. Position assembled unit onto mounting surface.

3. Weld base of each Weld Adapter to mounting surface.

4. Tighten all Stacking Nuts securely and proceed with remainder of installation.



**THREAD ADAPTER FOR TAPPED HOLE**

1. Using a scale, or the Clamping Unit itself, measure and mark location on mounting surface for each mounting hole on the lower Clamping Unit. Note that all mounting holes are spaced at even increments.

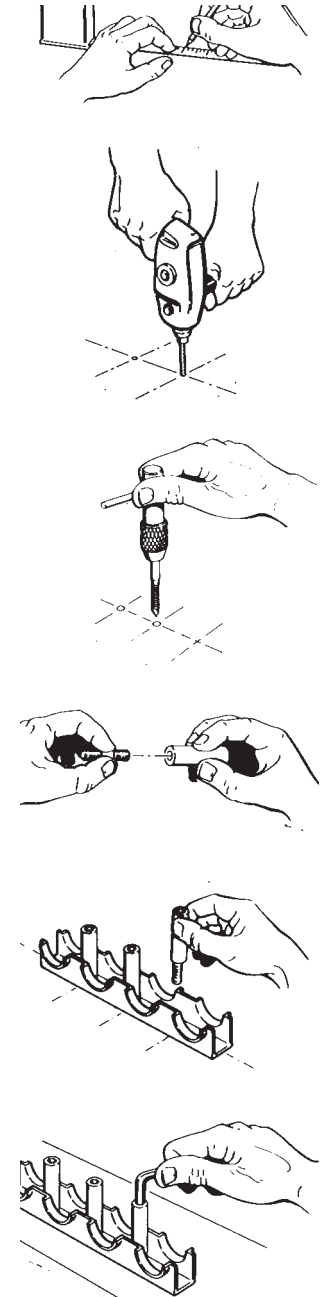
2. Drill appropriate size hole for the particular MULTI-CLAMP series being installed.

3. Using tapping tool, tap each hole with appropriate size thread for series being installed.

4. Assemble required number of Stacking Nuts and Thread Adapters for each mounting hole.

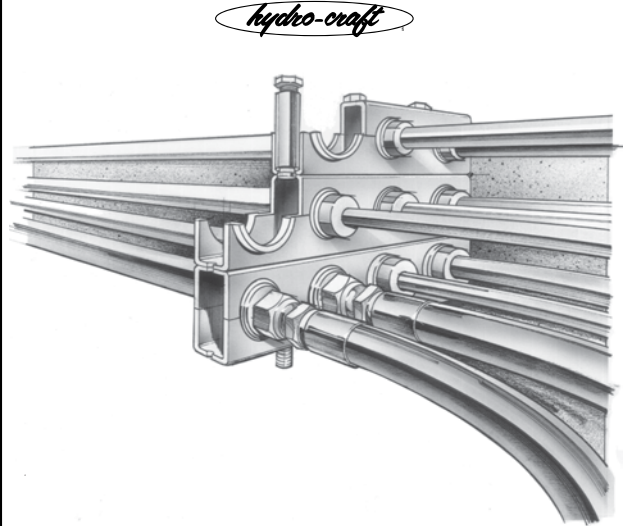
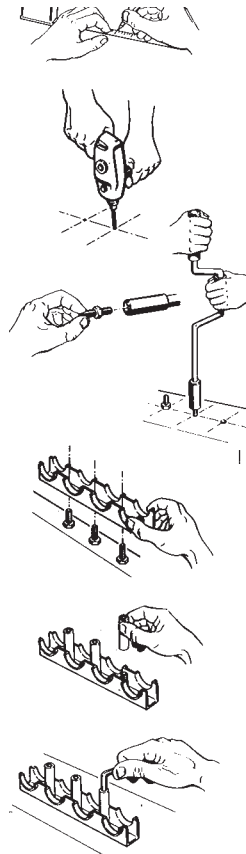
5. Position lower Clamping Unit over tapped holes and thread assembled Thread Adapter-Stacking Nut into each until finger tight.

6. Tighten all Stacking Nuts securely and proceed with remainder of installation.



**SELF-TAPPING ADAPTER**

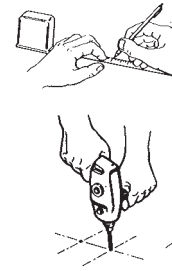
1. Using a scale, or the Clamping Unit itself, measure and mark location on mounting surface for each mounting hole of the lower Clamping Unit. Note that all mounting holes are spaced at even increments.
2. Drill appropriate size hole for particular MULTI-CLAMP® series being installed.
3. Place Self-tapping Adapter into speed wrench and insert into each hole until seated securely.
4. Align lower Clamping Unit over Self-tapping Adapters and position by placing the Adapters through mounting holes.
5. Thread Stacking Nut onto each Self-tapping Adapter until finger tight.
6. Tighten all Stacking Nuts securely and proceed with remainder of installation.



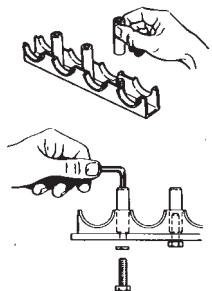
**STANDARD BOLT, LOCKWASHER AND STACKING NUT FOR DRILLED HOLE (A)**

**THREAD ADAPTER FOR DRILLED HOLE (B)**

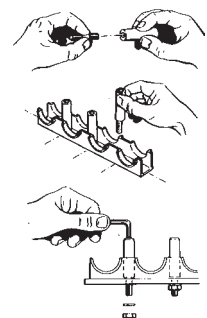
1. (A & B) Using a scale, or the Clamping Unit itself, measure and mark location on mounting surface for each mounting hole of the lower Clamping Unit. Note that all mounting holes are spaced at even increments.
2. (A & B) Drill appropriate size hole for particular MULTI-CLAMP series being installed.



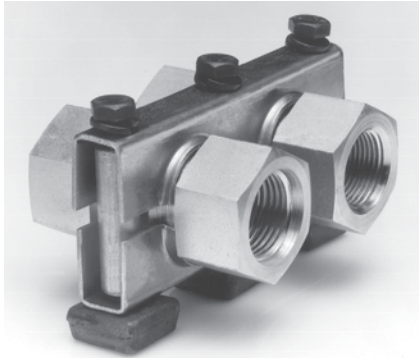
3. (A) Position lower Clamping Unit over tapped holes. Place standard bolt and lockwasher through drilled hole and through lower Clamping Unit. Attach with stacking nut finger tight.
4. (A) Tighten securely and proceed with remainder of installation.



3. (B) Assemble required number of Stacking Nuts and Thread Adapters for each mounting hole.
4. (B) Position lower Clamping Unit over drilled holes. Place threaded portion of assemble Thread Adapter-Stacking Nut through both lower clamping unit mounting hole and drilled hole.
5. (B) Attach lockwasher and nut. Tighten to secure Clamping Unit and proceed with remainder of installation.

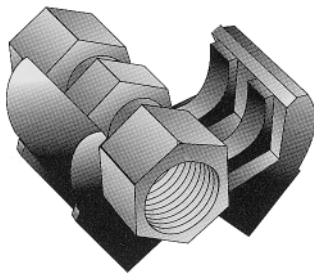


# Hydro-Craft® Junction Adapters - A Fitting Solution



The Hydro-Craft line of patented junction adapters are designed to eliminate traditional union problems. They are engineered to fit securely into the MULTI-CLAMP® and STRUT-ADAPTER® systems. Offered in a wide range of standard sizes in JIC, NPT SAE, and O-Ring Face Seal style, they are manufactured of 12L14 Leadloy and finished in a zinc plating.

They are a critical element in both junction clamping systems, and are available in sizes as listed in the chart below. (See page 13 for dimensions).

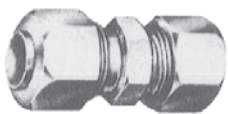


JIC MALE 37° FLARE	FEMALE NPT	FEMALE SAE	O-RING FACE SEAL
1/4"	3/8"	3/4-16	3/8"
3/8"	3/4"	1-1/6-12	1/2"
1/2"	1-1/4"	1-5/8-12	5/8"
5/8"			3/4"
3/4"			1"
7/8"			1-1/4"
1"			1-1/2"

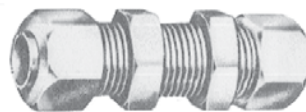
Call for information and quantity requirements on special junction adapters for Strut-Adapter and MULTI-CLAMP such as inverted flare, Japanese and BSP sizes. Fittings are available in a wide range of materials also, including stainless steel and brass.

**Clamps**

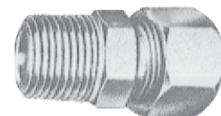
## UNION PROBLEMS THAT HYDRO-CRAFT SYSTEMS HELP PREVENT



When unions are in suspension and improperly secured, they can vibrate and cold-work, causing leaks.



A bulkhead fitting must be inserted into a drilled plate and locked in position from each side. There must be clearance in the plate to locate the fitting, and if the locknuts aren't 100% secure, vibration will cause the assembly to work loose, causing leaks.



With a pipe-tapped junction block, you have an additional connection point in your system. Another joint that can leak.





# Multi-Clamp® Bulkhead Spacer

The MULTI-CLAMP® Bulkhead Spacer is designed to allow adapters for the 2" HC-16 Series MULTI-CLAMP to be applied to the 3" HC-32 Series MULTI-CLAMP. The Bulkhead is a rugged molded thermoplastic elastomer that can withstand the effects of most oils, chemicals, and cleaning compounds from -48°F to 275°F.

The features and benefits of the MULTI-CLAMP Bulkhead Spacer:

All of the HC-16 Series Junction Adapters can be used in the HC-32 Series MULTI-CLAMPS.

The need for bulky and heavy adapters and bushing reducers is eliminated.

The cost to apply the junction adapters is reduced to approximately 1/6 of the previous cost to do the same job.

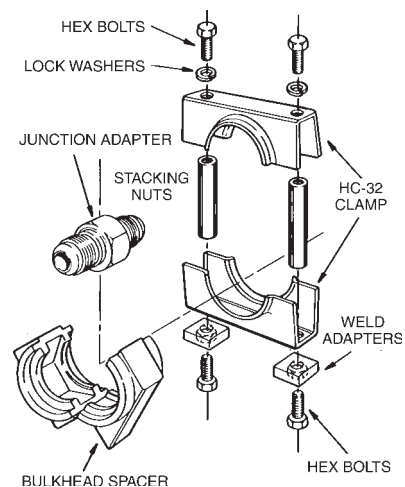
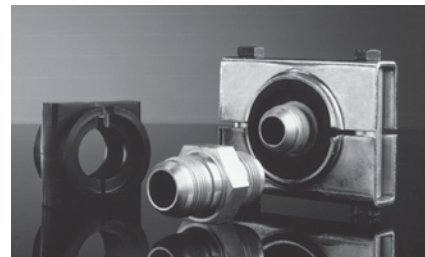
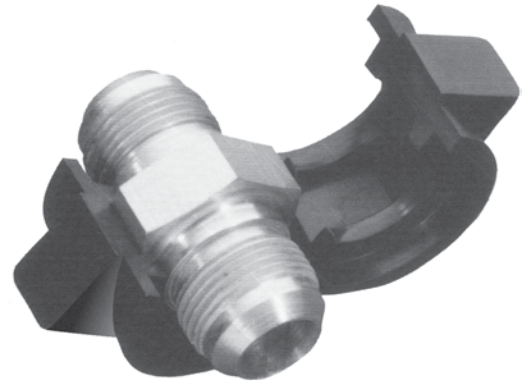
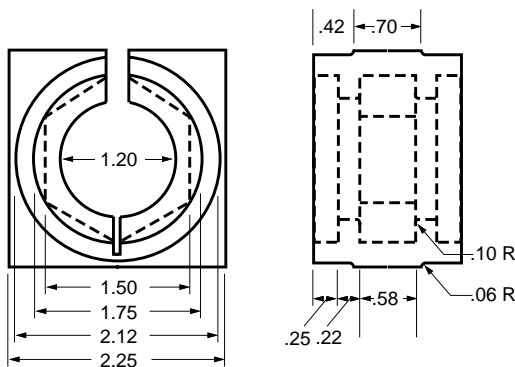
Metal to metal contact is replaced by an elastomer that is actually a cushion that will reduce noise while absorbing shock and vibration.

A Living Hinge allows the MULTI-CLAMP Bulkhead Spacer to be spread apart for quick and easy installation.

Now the junction adapters can be utilized in the HC-32 Series Clamps easier, quicker, at much less cost, and the clamping system is improved considerably. The elimination of the bushing reducers means less potential leak problems and the cushion effect will benefit any industrial clamping system.

## How To Order

Specify the Bulkhead Spacer by part number HC-32-BS-16



**Multi-Clamp®**

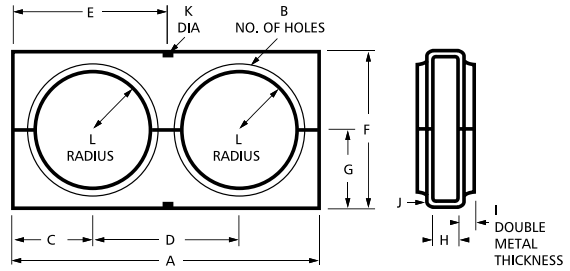
**How To Order**

Choose the part number, select no symbol for zinc-dichromate-plated steel, SS for stainless steel, or A for aluminum. Clamps and bushings can be ordered separately.

**Example: HC-16-3-4 - SS**

This example would provide you with a 2" clamping unit, with 4 mounting holes, in stainless steel.

Clamps can be ordered in special sizes, please call.

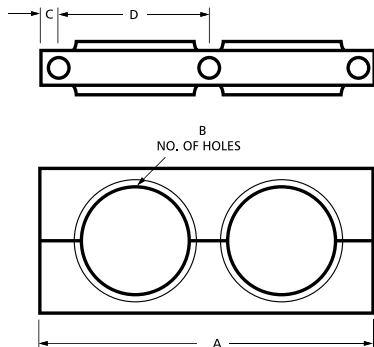


**CLAMPING UNIT**

PART NO.	A	B No. of Holes	C	D	E	F	G	H	I	J	K	L
<b>SERIES HC-10 1-1/2"</b>												
HC-10-1	2-15/16	2	23/32	1-1/2	1-15/32	1-1/2	3/4	47/64	5/32	14 GA.	11/32	27/64
HC-10-1	4-13/32	3	23/32		1-15/32							
HC-10-1	5-15/16	4	23/32		1-15/32							
HC-10-1	7-9/64	5	19/32		1-11/32							
HC-10-1	8-15/16	6	23/32		1-15/32							
HC-10-1	10-3/16	7	19/32		1-11/32							
HC-10-1	48	32										
<b>SERIES HC-16 2"</b>												
HC-16-1	3-7/8	2	15/16	2	1-15/16	2	1	3/4	5/32	14 GA.	11/32	19/32
HC-16-1	5-41/64	3	27/32		1-27/32							
HC-16-1	7-57/64	4	15/16		1-15/16							
HC-16-1	9-43/64	5	27/32		1-27/32							
HC-16-1	11-43/64	6	13/16		1-13/16							
HC-16-1	13-5/8	7	13/16		1-13/16							
HC-16-1	48	24										
<b>SERIES HC-32 3"</b>												
HC-32-1	6-49/64	2	1-7/8	3	3-3/8	3	1-1/2	1	1/4	11 GA.	13/32	1-1/16
HC-32-1	8-45/64	3	1-13/32		2-63/64							
HC-32-1	11-45/64	4	1-13/32		2-51/64							
HC-32-1	14-45/64	5	1-13/32		2-55/64							
HC-32-1	17-45/64	6	1-13/32		2-55/64							
HC-32-1	48	16										

**Clamps**

**CLAMPING UNIT WITH OUTSIDE MOUNTING HOLES**

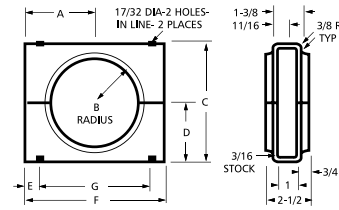


PART NO.	A	B No. of Holes	C	D
<b>SERIES HC-10 1-1/2"</b>				
HC-10-1-2	2-3/16	1	11/32	1-1/2
HC-10-2-3	3-51/64	2	25/64	1-1/2
HC-10-3-4	5-19/64	3	25/64	1-1/2
HC-10-4-5	6-51/64	4	25/64	1-1/2
HC-10-5--6	8-19/64	5	25/64	1-1/2
<b>SERIES HC-16 2"</b>				
HC-16-1-2	2-21/32	1	21/64	2
HC-16-2-3	4-49/64	2	25/64	2
HC-16-3-4	6-51/64	3	25/64	2
HC-16-4-5	8-51/64	4	25/64	2
<b>SERIES HC-32 3"</b>				
HC-32-1-2	4	1	1/2	3
HC-32-2-3	6-55/64	2	27/64	3
HC-32-3-4	9-55/64	3	27/64	3
HC-32-4-5	12-55/64	4	27/64	3



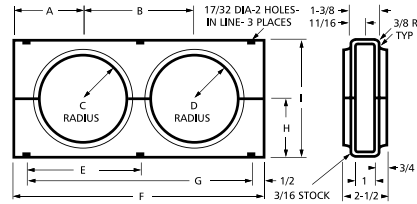
**SINGLE CLAMPING UNIT WITH OUTSIDE MOUNTING HOLES**

PART NO.	A	B	C	D	E	F	G
<b>SERIES HC-46</b>							
HC-46-1	3	1-3/4	5	2-1/2	1/2	6	5
<b>SERIES HC-72</b>							
HC-72-1	3-3/4	2-1/2	6-1/2	3-1/4	1/2	7-1/2	6-1/2
<b>SERIES HC-96</b>							
HC-96-1	5-1/2	3-3/4	9-3/16	4-9/16	3/4	11	9-1/2



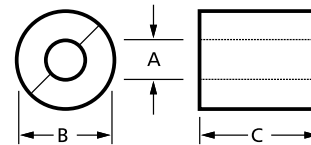
**DOUBLE CLAMPING UNIT**

PART NO.	A	B	C	D	E	F	G	H	I
<b>SERIES HC-46</b>									
HC-46-2	3	5	1-3/4	1-3/4	5	11	10	2-1/2	5
<b>SERIES HC-72</b>									
HC-72-2	3-3/4	6-1/2	2-1/2	2-1/2	6-1/2	14	13	3-1/4	6-1/2



**SPLIT BUSHING FOR TUBE AND PIPE APPLICATIONS**

PART NO.	TUBE SIZE	A INCHES	A-1 (mm)	B DIA.	C DIA.
<b>SERIES HC-10</b>	<b>1-1/2"</b>				
G-10-3	3/16	.172	4.4	7/8	1-5/16
G-10-4	1/4	.234	5.9		
G-10-5	5/16	.297	7.5		
G-10-6	3/8	.359	9.1		
G-10-8	1/2	.484	12.3		
G-10-10	5/8	.609	15.5		
G-10-12	3/4	.734	18.6		
<b>SERIES HC-16</b>	<b>2"</b>				
G-16-4	1/4	.234	5.9	1-1/4	1-5/16
G-16-5	5/16	.297	7.5		
G-16-6	3/8	.359	9.1		
G-16-8	1/2	.484	12.3		
G-16-10	5/8	.609	15.5		
G-16-12	3/4	.734	18.6		
G-16-14	7/8	.859	21.8		
G-16-16	1	.984	25.0		
	<b>PIPE SIZE</b>				
G-16-4-P	1/4	.516	13.1	1-1/4	1-5/16
G-16-6-P	3/8	.656	16.7		
G-16-8-P	1/2	.813	20.7		
G-16-12-P	3/4	1.031	26.2		
<b>SERIES HC-32</b>	<b>3"</b>				
G-32-4	1/4	.234	5.9	2-3/16	1-3/4
G-32-6	3/8	.359	9.1		
G-32-8	1/2	.484	12.3		
G-32-10	5/8	.609	15.5		
G-32-12	3/4	.734	18.6		
G-32-14	7/8	.859	21.8		
G-32-16	1	.984	25.0		
G-32-20	1-1/4	1.234	31.3		
G-32-24	1-1/2	1.484	37.7		
G-32-28	1-3/4	1.734	44.0		
G-32-32	2	1.984	50.4		
	<b>PIPE SIZE</b>				
G-32-4-P	1/4	.516	13.1	2-3/16	1-3/4
G-32-6-P	3/8	.656	16.7		
G-32-8-P	1/2	.813	20.7		
G-32-12-P	3/4	1.031	26.2		
G-32-16-P	1	1.297	32.9		
G-32-20-P	1-1/4	1.641	41.7		
G-32-24-P	1-1/2	1.875	47.6		



Clamps

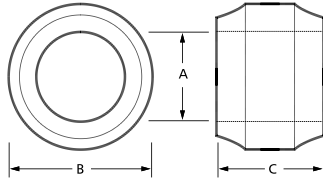
**How To Order**

select by part number. Silicone bushings are available for service up to 500°. Call for pricing and quantity requirements.

All dimensions are approximate in inches



**Multi-Clamp®**



**CLAMPING UNIT**

PART NO.	A INCHES	A-1 (mm)	B	C
<b>SERIES HC-10 1-1/2"</b>				
SG-10-6	.359	9.1	1	1-5/16
SG-10-4-P	.516	13.1		
SG-10-9	.562	14.3		
SG-10-11	.656	16.7		
SG-10-12	.734	18.6		
<b>SERIES HC-16 2"</b>				
SG-16-4	.234	5.9	1-1/2	1-5/16
SG-16-7	.400	10.2		
SG-16-8	.484	12.3		
SG-16-4-P	.516	13.1		
SG-16-9	.562	14.3		
SG-16-10	.609	15.5		
SG-16-6-P	.656	16.7		
SG-16-12	.734	18.6		
SG-16-8-P	.813	20.7		
SG-16-14	.859	21.8		
SG-16-15	.922	23.4		
SG-16-16	.984	25.0		
SG-16-12-P	1.031	26.2		
<b>SERIES HC-32 3"</b>				
G-32-17	1.125	28.6	2-23/64	1-3/4
G-32-19	1.200	30.5		
G-32-23	1.406	35.7		
G-32-25	1.453	36.9		
G-32-26	1.560	39.6		
G-32-27	1.703	43.3		
G-32-29	1.750	44.5		
G-32-31	1.906	48.4		
<b>SERIES HC-46 5"</b>				
G-46-25	1.453	36.9	3-7/8	2-53/64
G-46-27	1.703	43.3		
G-46-31	1.785	45.3		
G-46-32	2.00	50.8		
G-46-33	2.040	51.8		
G-46-34	2.169	55.1		
G-46-40	2.500	63.5		
G-46-43	2.688	68.3		
G-46-39	2.825	71.8		

**Clamps**

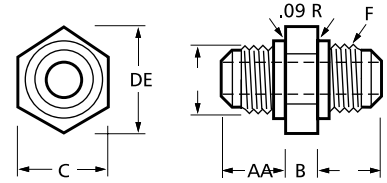
**SPLIT BUSHING FOR PIPE APPLICATIONS**

PART NO.	PIPE SIZE	A INCHES	A-1 (mm)	B	C
<b>SERIES HC-46</b>					
G-46-16-P	1	1.297	32.9	3-55/64	2-3/4
G-46-20-P	1-1/4	1.644	41.8		
G-46-24-P	1-1/2	1.884	47.9		
G-46-32-P	2	2.359	59.9		
G-46-40-P	2-1/2	2.859	72.6		
<b>SERIES HC-72</b>					
G-72-32-P	2	2.359	59.9	5-5/16	2-3/4
G-72-40-P	2-1/2	2.859	72.6		
G-72-48-P	3	3.484	88.5		
G-72-56-P	3-1/2	3.984	101.2		
G-72-64-P	4	4.484	113.9		
<b>SERIES HC-96</b>					
G-96-80-P	5	5.547	140.9	7-7/8	2-3/4
G-96-96-P	6	6.609	167.9		



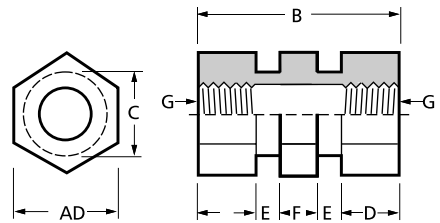
**37° FLARE MALE JUNCTION ADAPTER**

PART NO.	TUBE SIZE	A	B	C	D	E	F	THREAD
<b>SERIES 1-1/2"</b>								
B-10-4	1/4	.76	.56	1	1-9/64	27/32	7/16-20	
B-10-6	3/8	.76					9/16-18	
B-10-8	1/2	.87					3/4-16	
B-10-10	5/8	.96					7/8-14	
<b>SERIES 2"</b>								
B-16-4	1/4	.76	.56	1-1/2	1-23/32	1-13/64	7/16-20	
B-16-6	3/8	.76					9/16-18	
B-16-8	1/2	.87					3/4-16	
B-16-10	5/8	.96					7/8-14	
B-16-12	3/4	1.07					1-1/6-12	
B-16-14	7/8	1.10					1-3/16-12	
B-16-16	1	1.10					1-5/16-12	



**FEMALE JUNCTION ADAPTER**

PART NO.	A	B	C	D	E	F	G	THREAD
BSAE-10-8	1	2-13/16	.843	.84	.28	.56	3/4-16 SAE	
BSAE-16-12	1-1/2	3-1/8	1.20	.93	.34	.56	1-1/16-12 SAE	
BSAE-32-20	2-1/4	2-5/8	2.12	.56	.25	.68	1-5/8-12 SAE	



**FEMALE JUNCTION ADAPTER-PIPE**

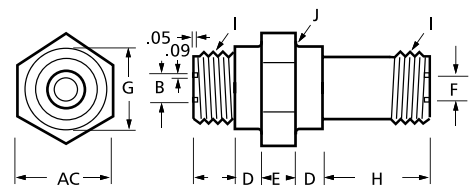
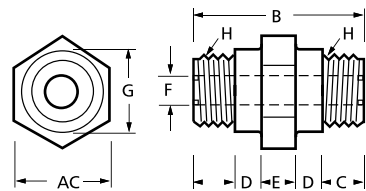
PART NO.	A	B	C	D	E	F	G	THREAD
BFM-10-6-P	1	2-13/16	.843	.84	.28	.56	3/8 N.P.T.	
BFM-16-12-P	1-1/2	3-1/8	1.20	.93	.34	.56	3/4 N.P.T.	
BFM-32-20-P	2-1/4	2-5/8	2.12	.56	.25	.68	1-1/4 N.P.T.	

**O-RING FACE SEAL MALE JUNCTION ADAPTER**

PART NO.	TUBE SIZE	A	B	C	D	E	F	G	H	THREAD
FB-10-6	3/8	1	1.98	.43	.28	.56	.26	.84	11/16-16	
FB-10-8	1/2	1	2.12	.50	.28	.56	.38	.84	13/16-16	
FB-10-10	5/8	1	2.32	.60	.28	.56	.48	.84	1-14	
FB-16-6	3/8	1.5	1.98	.43	.34	.56	.26	1.20	11/16-16	
FB-16-8	1/2	1.5	2.12	.50	.34	.56	.38	1.20	13/16-16	
FB-16-10	5/8	1.5	2.32	.60	.34	.56	.48	1.20	1-14	
FB-16-12	3/4	1.5	2.42	.65	.34	.56	.61	1.20	1-3/16-12	
FB-16-16	1	1.5	2.48	.68	.34	.56	.81	1.20	1-7/16-12	
FB-32-20	1-1/4	2.25	2.98	.68	.437	.75	1.02	2.12	1-11/16-12	
FB-32-24	1-1/2	2.25	2.98	.68	.437	.75	1.26	2.12	2-12	

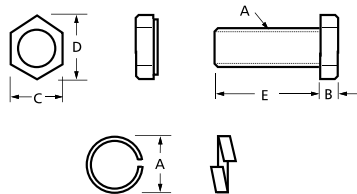
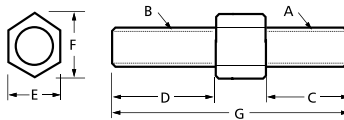
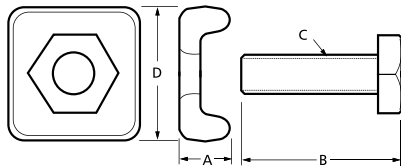
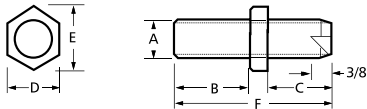
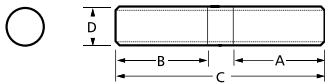
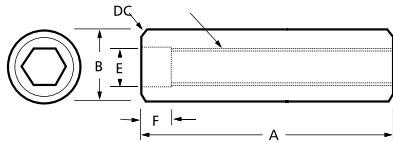
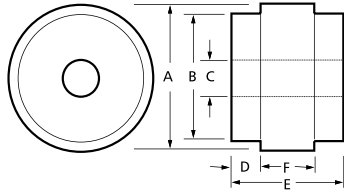
PART NO.	TUBE SIZE	A	B	C	D	E	F	G	H	I	J	THREAD	RADIUS
LFB-10-8	1/2	1	.60	.50	.28	.56	.38	.84	1.50	13/16-16	.09		
LFB-10-10	5/8	1	.74	.60	.28	.56	.48	.84	1.50	1-14	.09		
LFB-16-12	3/4	1.5	.87	.65	.35	.56	.61	1.20	1.90	13/16-12	.10		
LFB-16-16	1	1.5	1.05	.68	.35	.56	.81	1.20	1.93	1-7/16-12	.10		



Clamps

All dimensions are approximate in inches

**Multi-Clamp®**



**MOUNTING ADAPTER (for pillar or spar mounting)**

MULTI-CLAMP SERIES	PART NO.	A DIA.	B DIA.	C DIA.	D	E	F (±.003)
HC-10-1-1/2"	B-10-MO	1	.8390 MAX .8350 MIN	11/32	9/32	1-1/16	.510
HC-16-2"	B-16-MO	1-3/8	1.193 MAX 1.187 MIN	11/32	9/32	1-1/16	.510
HC-32-3"	B-32-MO	2-1/4	2.128 MAX 2.122 MIN	13/32	27/64	1-9/16	.687

**SOCKET-HEAD STACKING NUT (one required for each mounting hole)\***

MULTI-CLAMP SERIES	PART NO.	A	B DIA.	C THREAD	D CHAMFER	E	F
HC-10	N-10	1.335	1/2	5/16-18	1/32x45°	5/16	7/32
HC-16	N-16	1.800	1/2	5/16-18	1/32x45°	5/16	7/32
HC-32	N-32	2.780	11/16	3/8-16	1/16x30°	3/8	9/32
HC-46	N-46	4.500	1	1/2-13	1/16x30°	1/2	
HC-72	N-72	6.00	1	1/2-13	1/16x30°	1/2	
HC-96	N-96	8.750	1	1/2-13	1/16x30°	1/2	

**THREAD ADAPTER (for installing or stacking)\***

MULTI CLAMP SERIES	PART NO.	A	B	C	D THREAD
HC-10 & HC-16	T-10	.62	.62	1.38	5/16-18
HC-32	T-32	.88	.88	2	3/8-16
HC-46,72 & 96	T-72	.50	.62	1.50	1/2-13

**SELF-TAPPING ADAPTER (for drilled hole mounting)**

MULTI CLAMP SERIES	PART NO.	A THREAD	B	C	D	E	F
HC-10 & HC-16	ST-10	5/16-18	3/4	5/8	1/2	.577	1.50

**WELD ADAPTER (for weld mounting)**

MULTI CLAMP SERIES	PART NO.	A	B	C THREAD	D
HC-10 & HC-16	W-10 W-16	.44	.75	5/16-18	1
HC-32	W-32	.47	1	3/8-16	1.25
HC-46,72 & 96	W-72	.53	1.5	1/2-13	1.375

**REDUCER ADAPTER (for stacking HC-10 on HC-32 series clamp)**

MULTI-CLAMP SERIES	PART NO.	A THREAD	B THREAD	C	D	E	F	G
HC-32	R-32	5/16-18	3/8-16	.75	1	.50	.575	2.25

**STANDARD PARTS\***

MULTI CLAMP SERIES	PART NO.	A THREAD	B	C	D	E
HC-10 & HC-16	HB-10	5/16-18	7/32	1/2	0.577	3/4
	HN-10	5/16-18	17/64	1/2	0.577	
HC-32	HB-32	3/8-16	1/4	9/16	0.650	1
	HN-32	3/8-16	21/64	9/16	0.650	
HC-46, 72 & 96	HB-72	1/2-13				1-1/2
	HN-72	1/2-13				
LOCKW ASHER		A				
HC-10 & HC-16	HW-10	5/16				
HC-32	HW-32	3/8				
HC-46, 72 & 96	HW-72	1/2				

**How To Order**

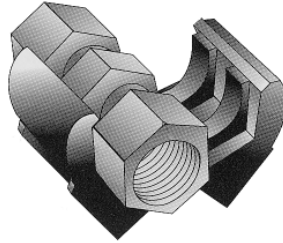
select by part number. \*Add SS to end of part number for stainless steel.

**Clamps**

### A Critical Junction . . .

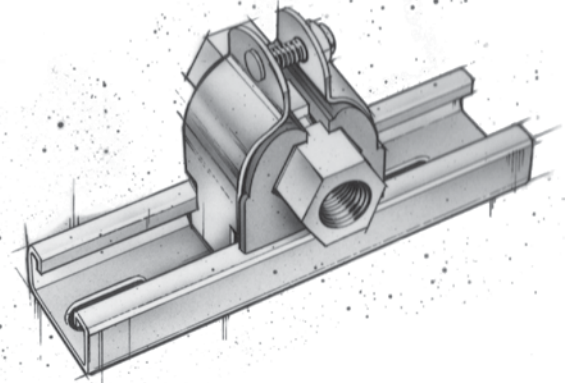
... in any hydraulic system is the connection point between tube and hose, hose and pipe, etc. Improperly secured, they will coldwork, loosen, and LEAK. The MULTI-CLAMP® SYSTEM'S exclusive ability to clamp the line AT THE FITTING is widely used and approved in thousands of plants worldwide. Now, this exclusive advantage is available with Strut-Adapter, the only rail mounted clamp in the world with this feature. The specially designed bushing (shown below), securely accommodates the following Hydro-Craft junction adapters: (see page 13 for dimensions)

- FEMALE S.A.E. straight thread sizes: 1-1/16"-12 and 3/4"-16.
- FEMALE NPT pipe thread sizes: 3/4" and 3/8".
- MALE 37° Flared Junction Adapters: 1/4", 3/8", 1/2", 5/8", 3/4", 7/8", and 1".
- MALE O-RING FACE SEAL, Tube Junction Adapters: 3/8", 1/2", 5/8", 3/4", and 1".



Clamp available in steel and stainless steel.

*hydro-craft*



### How To Order

Select by part number.

**Example: WS-BFM-16-12P**

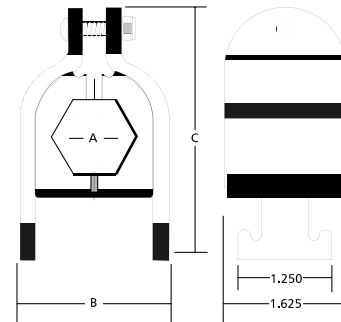
This example would provide you with our female NPT junction adapter with a 3/4" fitting size. Add SS to end of part number for stainless steel clamp.

### Strut-Adapter®

Installation is a snap - clamp, fitting, and cushion are all packaged together and clearly labeled.

Clamps

FITTING SIZE	PART NO.	A	B	C
<b>FEMALE NPT JUNCTION ADAPTERS, HC-10 &amp; HC-16 SERIES</b>				
3/8" FEMALE NPT	WS-BFM-10-6P	3/8	2.07	2.60
3/4" FEMALE NPT	WS-BFM-16-12P	3/4	2.32	2.86
<b>FEMALE SAE JUNCTION ADAPTERS, HC-10 &amp; HC-16 SERIES</b>				
3/4"-16 FEMALE SAE	WS-BSAE-10-8	3/4	2.07	2.60
1-1/16"-12 FEMALE SAE	WS-BSAE-16-12	1-1/16	2.32	2.86
<b>MALE 37° FLARED JUNCTION ADAPTERS, HC-10 SERIES</b>				
1/4" MALE 37° FLARE	WS-B-10-4	1/4	2.07	2.60
3/8" MALE 37° FLARE	WS-B-10-6	3/8	2.07	2.60
1/2" MALE 37° FLARE	WS-B-10-8	1/2	2.07	2.60
5/8" MALE 37° FLARE	WS-B-10-10	5/8	2.07	2.60
<b>MALE 37° FLARED JUNCTION ADAPTERS, HC-16 SERIES</b>				
1/4" MALE 37° FLARE	WS-B-16-4	1/4	2.32	2.86
3/8" MALE 37° FLARE	WS-B-16-6	3/8	2.32	2.86
1/2" MALE 37° FLARE	WS-B-16-8	1/2	2.32	2.86
5/8" MALE 37° FLARE	WS-B-16-10	5/8	2.32	2.86
3/4" MALE 37° FLARE	WS-B-16-12	3/4	2.32	2.86
7/8" MALE 37° FLARE	WS-B-16-14	7/8	2.32	2.86
1" MALE 37° FLARE	WS-B-16-16	1	2.32	2.86
<b>MALE O-RING FACE SEAL, TUBE JUNCTION ADAPTERS, HC-10 SERIES</b>				
3/8" MALE	WS-FB-10-6	3/8	2.07	2.60
1/2" MALE	WS-FB-10-8	1/2	2.07	2.60
5/8" MALE	WS-FB-10-10	5/8	2.07	2.60
3/4" MALE	WS-FB-10-12	3/4	2.07	2.60
<b>MALE O-RING FACE SEAL, TUBE JUNCTION ADAPTERS, HC-16 SERIES</b>				
3/8" MALE	WS-FB-16-6	3/8	2.32	2.86
1/2" MALE	WS-FB-16-8	1/2	2.32	2.86
5/8" MALE	WS-FB-16-10	5/8	2.32	2.86
3/4" MALE	WS-FB-16-12	3/4	2.32	2.86
1" MALE	WS-FB-16-16	1	2.32	2.86

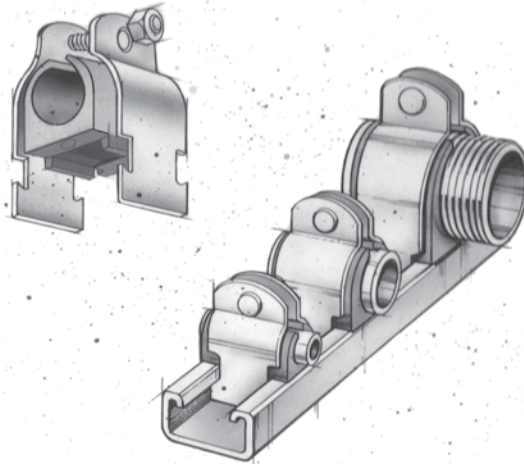


All dimensions are approximate in inches

## Walker-Strut®

The New Channel Mounted Clamp from Hydro-Craft® Reduces:

- Vibration
- Shock
- Surge
- Expansion and Contraction



The WALKER-STRUT® CLAMPING SYSTEM is ideal for line runs through 6" where space is at a premium, or where severe shock and vibration is not present. Used now for several years in the fluid power industry, it has been proven time and again as the most sensible, most economical, most trouble-free rail-mounted clamp available. The Walker-Strut is also widely used in the refrigeration and mobile industries.

### The WALKER-STRUT Clamp

Clamps are available in steel (with electro-chromate finish) and stainless steel.

### The Bushing

Manufactured from a thermoplastic elastomer, it's built tough to withstand the effects of most oils, chemicals and industrial cleaning compounds, in temperatures from - 20°F to 275°F

### Installation

One man, one tool time savings. Retrofits can be added without disassembling your present system.

Despite its exclusive benefits, the Walker-Strut System from Hydro-Craft is priced competitively. Installation is a snap: simply mount the base channel, position the clamp, and tighten!

WALKER-STRUT assemblies are available 5 sets per bag. Larger quantities can be shipped in bulk.

### Hydro-Craft® WALKER-STRUT® Channel

Channel is used to mount Strut-Adapter, Hydro-Strut, Silent-Strut, and Walker-Strut Clamps. Steel Single-Anchor Channel, 14 ga. x 13/16 x 1-5/8" with green baked-on finish. Also available in 304 stainless steel.

Available in pre-cut lengths: 4", 8", 3', 4', 10', and 20'. Special cut sizes available.

PLEASE NOTE: Long channel shipped with a combined length and girth of 120" or more must ship by common carrier. Cut-to-size orders may therefore cost less due to shipping via U.P.S.



**How To Order**

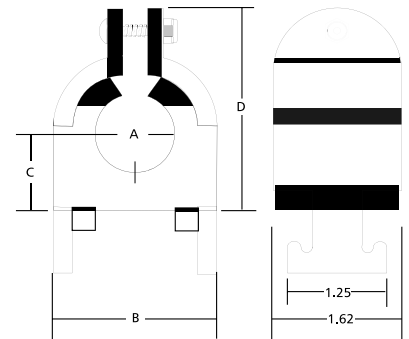
Simply choose the clamp size, select no symbol for zinc-dichromate-plated steel or SS for stainless steel, and the appropriate bushing size.

**Example: WS-06-P - SS**

This example would provide you with a stainless steel clamp, and a cushion for a 3/8" pipe.

**Clamps**

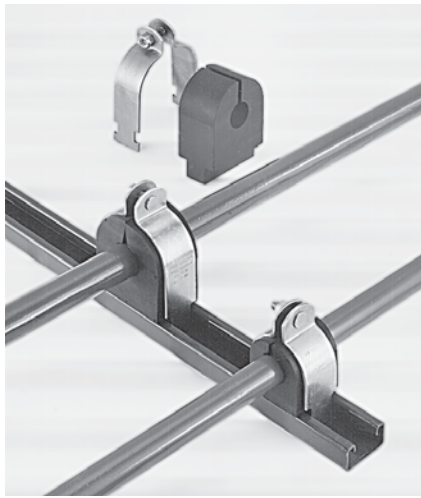
CLAMP NO.	TUBE SIZE		A INCHES	A-1 (mm)	B	C	D
	COPPER & STEEL TUBING	COPPER WATER PIPE(NOM)					
WS-04	1/4		.25	6.4	.62	.27	1.11
WS-06	3/8		.37	9.4	.82	.33	1.24
WS-08	1/2	3/8	.50	12.7	.94	.40	1.36
WS-10	5/8	1/2	.62	15.8	1.06	.46	1.50
WS-12	3/4	5/8	.75	19.1	1.20	.52	1.78
WS-14	7/8	3/4	.87	22.1	1.31	.58	1.91
WS-16	1		1	25.4	1.44	.65	2.03
WS-18	1-1/8	1	1.12	28.5	1.57	.70	2.16
WS-20	1-1/4		1.25	31.8	1.70	.77	2.30
WS-22	1-3/8	1-1/4	1.37	34.8	1.82	.83	2.75
WS-24	1-1/2		1.50	38.1	1.95	.90	2.75
WS-26	1-5/8	1-1/2	1.62	41.2	2.07	.96	3.03
WS-28	1-3/4		1.75	44.5	2.20	1.02	3.03
WS-30	1-7/8		1.87	47.5	2.32	1.09	3.28
WS-32	2		2	50.8	2.45	1.15	3.28
WS-34	2-1/8		2.12	53.9	2.57	1.27	3.53
WS-36	2-1/4		2.25	57.2	2.69	1.34	3.65
WS-38	2-3/8		2.37	60.2	2.82	1.41	3.78
WS-40	2-1/2		2.50	63.5	2.94	1.46	4.03
WS-42	2-5/8		2.62	66.6	3.07	1.53	4.03
WS-46	2-7/8		2.87	72.9	3.32	1.66	4.27
WS-48	3		3	76.2	3.44	1.72	4.52
WS-50	3-1/8		3.12	79.3	3.57	1.78	4.52
WS-56	3-1/2		3.50	88.9	3.95	1.97	4.91
WS-58	3-5/8		3.82	97.0	4.20	2.03	5.03
WS-64	4		4	101.6	4.45	2.28	5.53
WS-66	4-1/8		4.12	104.7	4.57	2.34	5.66
WS-72	4-1/2		4.50	114.3	4.95	2.53	6.03



CLAMP NO.	PIPE SIZE	A INCHES	A-1 (mm)	B	C	D
WS-04P	1/4	.54	13.7	.98	.43	1.41
WS-06P	3/8	.67	17.0	1.13	.49	1.59
WS-08P	1/2	.84	21.3	1.29	.58	1.91
WS-12P	3/4	1.05	26.7	1.50	.70	2.16
WS-16P	1	1.31	33.3	1.76	.81	2.75
WS-20P	1-1/4	1.66	42.2	2.17	.99	3.03
WS-24P	1-1/2	1.90	48.3	2.35	1.09	3.28
WS-32P	2	2.37	60.2	2.82	1.41	3.78
WS-40P	2-1/2	2.87	72.9	3.32	1.66	4.27
WS-48P	3	3.50	88.9	3.95	1.97	4.91
WS-56P	3-1/2	4	101.6	4.45	2.28	5.53
WS-64P	4	4.50	114.3	4.95	2.53	6.03
WS-80P	5	5.58	141.7	6.01	3.06	7.03
WS-96P	6	6.62	168.2	7.07	3.59	8.03



# Hydro-Strut® Clamping System



The Hydro-Strut clamping system is designed for hydraulic, pneumatic, electrical, and fuel line applications, where it retains, guides, protects, and spaces line runs uniformly. This design can easily maintain equal centers, even when the line size varies. Lines are rigid, have a neat appearance, and install easily through channel mounting.

Independent testing shows the Hydro-Strut clamping system, using Styrene Butadiene Rubber (SBR) bushings, to be 80 percent more efficient at reducing noise than conventional cushion clamping systems. The SBR bushing, which provides the cushion for the reduced line noise, is compression molded, and selected for its excellent compatibility with industrial solvents, fuels, and hydraulic fluids. The clamp is available in either stainless or zinc-dichromate-plated steel.

Available standard sizes for tube, hose and pipe range from 1/4-inch through 2-inch. Special sizes are available, please contact the factory for more information.

The New Hydro-Strut Clamping System is the most effective clamp available - greatly reducing noise due to line shock and vibration!

**Reduces line noise by as much as 80%**

**Available in wide range of line sizes from 1/4" to 2"**

**Easy installation through channel mounting**

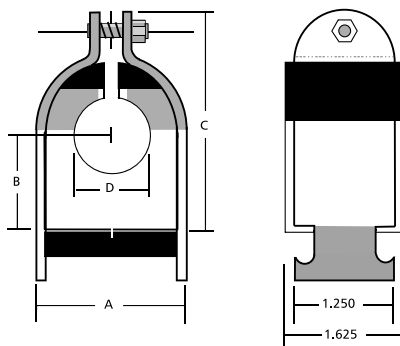
**High-quality materials of construction**

## How To Order

Simply choose the clamp size, select no symbol for zinc- dichromate-plated steel or SS for stainless steel, and the appropriate bushing size. Clamps and bushings can be ordered separately.

**Example: HCS-32-M - SS - RSG-3Z-10**

This example would provide you with our larger, stainless steel clamp, and a bushing for 5/8" tube.



CLAMP NO.	A	B	C
HCS-16-M	1.95	1.20	2.80

CLAMP NO.	A	B	C
HCS-32-M	2.95	1.70	3.77

BUSHING No.	TUBE SIZE	D INCHES	D-1 (mm)
RSG-16-4	1/4	.234	5.9
RSG-16-6	3/8	.359	9.1
RSG-16-8	1/2	.484	12.3
RSG-16-10	5/8	.609	15.5
RSG-16-12	3/4	.734	18.6
RSG-16-14	7/8	.859	21.8
RSG-16-16	1	.984	25.0
RSG-16-20	1-1/4	1.234	31.3
<b>Pipe Size</b>			
RSG-16-4P	1/4	.516	13.1
RSG-16-6P	3/8	.656	16.7
RSG-16-8P	1/2	.813	20.7
RSG-16-12P	3/4	1.031	26.2
RSG-16-16P	1	1.297	32.9

BUSHING No.	TUBE SIZE	D INCHES	D-1 (mm)
RSG-32-6	3/8	.359	9.1
RSG-32-8	1/2	.484	12.3
RSG-32-10	5/8	.609	15.5
RSG-32-12	3/4	.734	18.6
RSG-32-14	7/8	.859	21.8
RSG-32-16	1	.984	25.0
RSG-32-20	1-1/4	1.234	31.3
RSG-32-24	1-1/2	1.484	37.7
RSG-32-32	2	1.984	50.4
<b>Pipe Size</b>			
RSG-32-4P	1/4	.516	13.1
RSG-32-6P	3/8	.656	16.7
RSG-32-8P	1/2	.813	20.7
RSG-32-12P	3/4	1.031	26.2
RSG-32-16P	1	1.297	32.9
RSG-32-20P	1-1/4	1.640	41.7
RSG-32-24P	1-1/2	1.870	47.5
RSG-32-32P	2	2.350	59.7

**Clamps**

# Silent-Strut® Clamping System

The Silent-Strut clamping system is excellent for use in refrigeration, HVAC and electrical applications, but is also effective on hydraulic, pneumatic and fuel line applications. In addition to its low cost, it offers excellent noise reduction due to the materials of construction and design of the channel mounting system. This channel mounting makes for a quick and easy installation. The superior design will maintain equal centers, even when the line size varies. Lines remain rigid and have a neat appearance.

The clamp is made from Zytel® (glass-filled nylon) that is very resistant to corrosion, and much lower in cost than stainless steel. Two clamp sizes are available. All the bushings are made from Styrene Butadiene Rubber (SBR). The bushing is secured in the clamp using stainless steel nuts and bolts. The SBR bushing is compression molded, selected for its compatibility with most oils, chemicals, and cleaning compounds, and provides the cushion for the noise reduction.

Available standard sizes for tube and pipe range from 1/4-inch through 2-inch. Please contact the factory for more information.

## How To Order

Simply choose the clamp size and the appropriate bushing size. Clamps and bushings are ordered separately.

**Example: HC-SS-16 - G-16-10**

This example would provide you with our smaller Zytel® glass-filled nylon clamp and a bushing for 5/8" tube.



Easy channel mounting installation  
Wide range of line sizes from 1/4" to 2"  
High-quality materials of construction  
Greatly reduces line noise

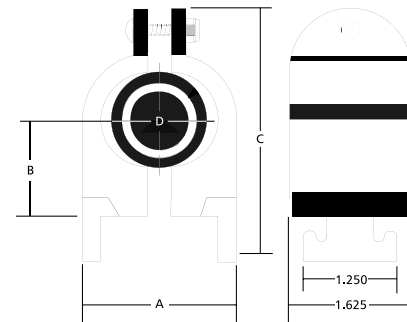
Clamps

CLAMP NO.	A	B	C
HC-SS-16	1.50	1.25	2.62

CLAMP NO.	A	B	C
HC-SS-32	2.82	1.87	3.68

Bushing No.	TUBE SIZE	D INCHES	D-1 (mm)
G-16-4	1/4	.234	5.9
G-16-5	5/16	.297	7.5
G-16-6	3/8	.359	9.1
G-16-8	1/2	.484	12.3
G-16-10	5/8	.609	15.5
G-16-12	3/4	.734	18.6
G-16-14	7/8	.859	21.8
G-16-16	1	.984	25.0
Pipe Size			
G-16-4-P	1/4	.516	13.1
G-16-6-P	3/8	.656	16.7
G-16-8-P	1/2	.813	20.7
G-16-12-P	3/4	1.031	26.2

Bushing No.	TUBE SIZE	D INCHES	D-1 (mm)
G-32-4	1/4	.234	5.9
G-32-6	3/8	.359	9.1
G-32-8	1/2	.484	12.3
G-32-10	5/8	.609	15.5
G-32-12	3/4	.734	18.6
G-32-14	7/8	.859	21.8
G-32-16	1	.984	25.0
G-32-20	1-1/4	1.234	31.3
G-32-24	1-1/2	1.484	37.7
G-32-28	1-3/4	1.734	44.0
G-32-32	2	1.984	50.4
Pipe Size			
G-32-4-P	1/4	.516	13.1
G-32-6-P	3/8	.656	16.7
G-32-8-P	1/2	.813	20.7
G-32-12-P	3/4	1.031	26.2
G-32-16-P	1	1.297	32.9
G-32-20-P	1-1/4	1.641	41.7
G-32-24-P	1-1/2	1.875	47.6



All dimensions are approximate in inches

# Econo-Isolator® Clamping System

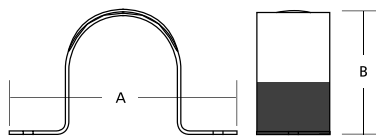
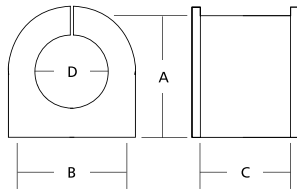


## Inexpensive Cushions To Fit Standard Pipe Straps

The Econo-Isolator clamping system offers a low-cost, high-quality solution for use in plumbing, mechanical, and HVAC/R applications.

Easy mounting using readily-available brackets

Made from high-quality Styrene Butadiene Rubber (SBR)



All dimensions are approximate in inches

The Econo-Isolator is the low-cost answer for your clamping needs. It not only meets the requirements for plumbing, mechanical, and HVAC/R applications, but performs well in hydraulic, pneumatic, fuel line, and electrical applications.

The Econo-Isolator, using standard pipe straps that are readily available, retains, guides, protects and spaces line runs uniformly. Lines are rigid, have a neat appearance, and install easily. The bushing is made from Styrene Butadiene Rubber. It is compression molded and selected for its excellent compatibility with industrial solvents, fuels, hydraulic fluids, other liquids and gases.

## How To Order

Simply choose the bushing number and appropriate strap number that corresponds to the tube or pipe size you need. Bushings and pipe straps are ordered separately.

### Example: EI-10-12 EIM-10

This example would provide you with the correct bushing and strap to fit a 3/4" tube.

Bushing No.	Tube Size	A	B	C	D INCHES	D-1 (mm)
EI-10-4	1/4	.870	.835	1.0	.235	5.9
EI-10-6	3/8				.360	9.1
EI-10-8	1/2				.485	12.3
EI-10-10	5/8				.610	15.5
EI-10-12	3/4				.735	19.6
<b>Pipe Size</b>						
EI-10-4P	1/4				.525	13.3
EI-10-6P	3/8				.660	16.7
<b>Tube Size</b>						
EI-16-14	7/8	1.30	1.24	1.0	.860	21.8
EI-16-16	1				.985	25.6
<b>Pipe Size</b>						
EI-16-8P	1/2				.825	21.0
EI-16-12P	3/4				1.035	26.2

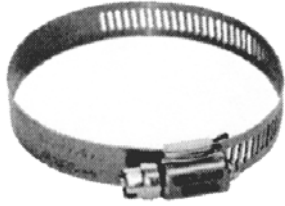
  

Bushing No.	Tube Size	A	B	C	D INCHES	D-1 (mm)
EI-32-18	1-1/8	2.38	2.37	1.50	1.110	28.2
EI-32-20	1-1/4				1.235	31.3
EI-32-22	1-3/8				1.360	34.5
EI-32-24	1-1/2				1.485	37.7
EI-32-26	1-5/8				1.610	40.9
EI-32-28	1-3/4				1.735	44.0
EI-32-30	1-7/8				1.860	47.2
EI-32-32	2				1.985	50.4
EI-32-34	2-1/8				2.110	53.6
<b>Pipe Size</b>						
EI-32-16P	1				1.300	33.0
EI-32-20P	1-1/4				1.645	41.8
EI-32-24P	1-1/2				1.885	47.8

Strap No.	A	B
EIM-10	2-7/16	7/8
EIM-16	3-1/8	1-1/4
EIM-32	4-11/16	2-7/16

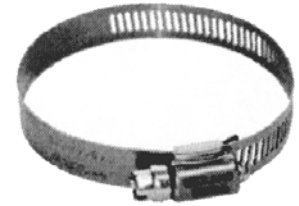
**Clamps**

**AIR BRAKE TUBING**



**Applications**

A general purpose clamp for automobiles, plumping, home and garden general clamping applications, with anit-corrosive properties varying with the number of components made from stainless steel.



**600 Series**

- 5/16" Hex Slotted Carbon Steel Screw
- 1/2" Wide 201 Stainless Steel Band
- Carbon Steel Housing

**611 Series**

- 5/16" Hex Slotted Carbon Steel Screw
- 1/2" Wide 201 Stainless Steel Band
- 301 Stainless Steel Housing

Part #	No.	Diameter Range		Part #	Minimum Box Quantity
		Min.	Max.		
HC-06	6	3/8"	7/8"	HC-06SS	100
HC-08	8	7/16"	1"	HC-08SS	100
HC-10	10	9/16"	1-1/16"	HC-10SS	100
HC-12	12	9/16"	1-1/4"	HC-12SS	100
HC-16	16	11/16"	1-1/2"	HC-16SS	100
HC-20	20	3/4"	1-3/4"	HC-20SS	100
HC-24	24	1-1/16"	2"	HC-24SS	100
HC-28	28	1-5/16"	2-1/4"	HC-28SS	100
HC-32	32	1-9/16"	2-1/2"	HC-32SS	100
HC-36	36	1-13/16"	2-3/4"	HC-36SS	100
HC-40	40	2-1/16"	3"	HC-40SS	100
HC-44	44	2-5/16"	3-1/4"	HC-44SS	100
HC-48	48	2-9/16"	3-1/2"	HC-48SS	100
HC-52	52	2-13/16"	3-3/4"	HC-52SS	100
HC-56	56	3-1/16"	4"	HC-56SS	100
HC-60	60	3-5/16"	4-1/4"	HC-60SS	100
HC-64	64	2-1/2"	4-1/2"	HC-64SS	100
HC--72	72	3"	5"	HC-72SS	100
HC-80	80	3-1/2"	5-1/2"	HC-80SS	100
HC-88	88	4"	6"	HC-88SS	100
HC-96	96	4-1/2"	6-1/2"	HC-96SS	100
HC-104	104	5"	7"	HC-104SS	100
HC-116	116	5-3/4"	7-3/4"	HC-116SS	100
HC-128	128	6-1/2"	8-1/2"	HC-128SS	100
HC-152	152	2"	10"	HC-152SS	100
HC-164	164	1-3/4"	10-3/4"	HC-164SS	100
HC-176	176	9-1/4"	11-1/4"	HC-176SS	100
HC-188	188	2-1/16"	12-1/4"	HC-188SS	100
HC-200	200	11"	13"	HC-200SS	100
HC-212	212	11-3/4"	13-3/4"	HC-212SS	100
HC-224	224	12-1/2"	14-1/2"	HC-224SS	100
HC-248	248	1-3/4"	16"	HC-248SS	100
HC-270	270	15-3/8"	17-3/8"	HC-270SS	100
HC-312	312	18"	20"	HC-312SS	100
HC-332	332	19-1/8"	21-1/4"	HC-332SS	100
HC-390	390	22-7/8"	24-7/8"	HC-390SS	100

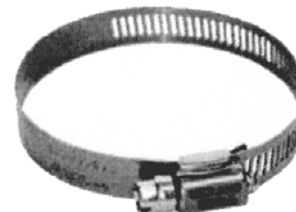
**Clamps**



**1/2" BAND CLAMPS**

Use for marine, underground and other high corrosive application

- 620 Series**
- 5/16" Hex Slotted 305 Stainless Steel Screw
  - 1/2" Wide 301 Stainless Steel Band
  - 301 Stainless Steel Housing



**Clamps**

Part #	No.	Diameter Range		Minimum Box Quantity
		Min.	Max.	
6306-06	6	3/8"	7/8"	100
6308-08	8	7/16"	1"	100
6310-10	10	9/16"	1-1/16"	100
6312-12	12	9/16"	1-1/4"	100
6316-16	16	11/16"	1-1/2"	100
6320-20	20	3/4"	1-3/4"	100
6324-24	24	1-1/16"	2"	100
6328-28	28	1-5/16"	2-1/4"	100
6332-32	32	1-9/16"	2-1/2"	100
6336-36	36	1-13/16"	2-3/4"	100
6340-40	40	2-1/16"	3"	100
6344-44	44	2-5/16"	3-1/4"	100
6348-48	48	2-9/16"	3-1/2"	100
6352-52	52	2-13/16"	3-3/4"	100
6356-56	56	3-1/16"	4"	100
6360-60	60	3-5/16"	4-1/4"	100
6364-64	64	2-1/2"	4-1/2"	100
6372-72	72	3"	5"	100
6380-80	80	3-1/2"	5-1/2"	100
6388-88	88	4"	6"	100
6396-96	96	4-1/2"	6-1/2"	100
63104-104	104	5	7"	100
63114-116	116	5-3/4"	7-3/4"	100
63128-128	128	6-1/2"	8-1/2"	100
63152-152	152	2"	10"	100
63164-164	164	1-3/4"	10-3/4"	100
63176-176	176	9-1/4"	11-1/4"	100
63188-188	188	2-1/16"	12-1/4"	100
63200-200	200	11"	13"	100
63212-212	212	11-3/4"	13-3/4"	100
63224-224	224	12-1/2"	14-1/2"	100
63248-248	248	1-3/4"	16"	100
63270-270	270	15-3/8"	17-3/8"	100
63312-312	312	18"	20"	100
63332-332	332	19-1/8"	21-1/4"	100
63390-390	390	22-7/8"	24-7/8"	100



**MINIATURE CLAMPS - 5/16" BAND**

**Applications**

For marine, agricultural, industrial and automotive uses. Corrosion resistance varies with stainless components. Mechanically interlocked. 3 piece construction for service sealing pressure with out spot welding.

- 300 Series**
- 1/4" Hex Slotted Carbon Steel Screw
  - 5/16" Wide 301 Stainless Steel Band
  - Carbon Steel Housing

Part #	Diameter Range		Minimum Box Quantity
	Min.	Max.	
300-0004	7/32"	5/8"	100
300-005	7/16"	11/16"	100
300-0006	5/16"	7/8"	100
300-0008	7/16"	1"	100
300-010	1/2"	1-1/16"	100
300-012	9/16"	1-1/4"	100
300-016	11/16"	1-1/2"	100
300-0020	7/8"	1-3/4"	100



- 325 Series**
- 1/4" Hex Slotted Carbon Steel Screw
  - 5/16" Wide 301 Stainless Steel Band
  - 301 Stainless Steel Housing

Part #	Diameter Range		Minimum Box Quantity
	Min.	Max.	
6204	1/4"	5/8"	100
62P05	1/4"	11/16"	100
6206	5/16"	7/8"	100
62P08	3/8"	1"	100
62P10	3/8"	1-1/16"	100
62P12	1/2"	1-1/4"	100
62P16	1/2"	1-1/2"	100
62P20	3/4"	1-3/4"	100



- 350 Series**
- 1/4" Hex Slotted 410 Stainless Steel Screw
  - 5/16" Wide 301 Stainless Steel Band
  - 301 Stainless Steel Housing

Part #	Diameter Range		Minimum Box Quantity
	Min.	Max.	
62604	1/4"	5/8"	100
62M05	1/4"	11/16"	100
62606	5/16"	7/8"	100
62M08	3/8"	1"	100
62M10	3/8"	1-1/16"	100
62M12	1/2"	1-1/4"	100
62M16	1/2"	1-1/2"	100
62M20	3/4"	1-3/4"	100



**Clamps**

**QUICK RELEASE**

These clamps feature a unique quick release design between the one piece housing and band allowing for quick and easy installation in restricted or difficult areas.

**Applications**

Quick release action permits easy installation in applications where clamp must be opened to applied. Quick release clamps are used extensively in the telecommunications industry on cable enclosures where open air application demands easy installation.



Open/Close design allows easy installation



- 500 Series**
- 5/16" Hex Slotted Carbon Steel Screw
  - 9/16" 301 Stainless Steel Band
  - Stainless Steel Housing
  - Stainless Steel Bridge

- 500 Series**
- 3/8" Hex Slotted 410 Carbon Steel Screw
  - 9/16" 301 Stainless Steel Band
  - 301 Stainless Steel Housing
  - Stainless Steel Bridge

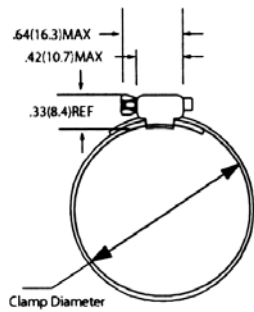
**Clamps**

Part #	No.	Diameter Range		Part #	Minimum Box Quantity
		Min.	Max.		
5612	12	1/2"	1-1/4"	5812	100
5620	20	3/4"	1-3/4"	5820	100
5628	28	1"	2-1/4"	5828	100
5636	36	1"	2-3/4"	5836	100
5648	48	1-1/2"	3-1/2"	5848	100
5656	56	1"	4"	5856	100
5672	72	2"	5"	5872	100
5688	88	2-1/16"	6"	5888	100
56104	104	1-3/4"	7"	58104	100
56128	128	1-3/4"	8-9/16"	58128	100
56152	152	2"	10"	58152	100
56188	188	2-1/16"	12-5/16"	58188	100
56216	216	10-3/16"	14"	58216	100
56248	248	1-3/4"	16"	58248	100
56280	280	14-1/4"	18"	58280	100
56312	312	14"	20"	58312	100

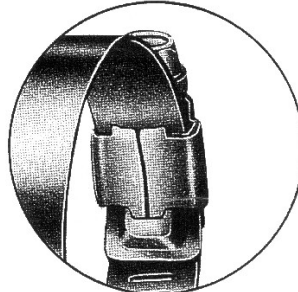
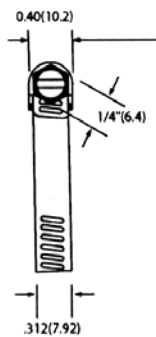




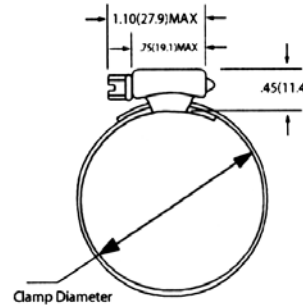
**WORM GEAR HOSE CLAMPS  
830 SERIES**



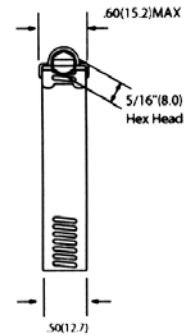
**MINI CLAMP**  
Screw: 1/4" hex-head  
Band: 5/16" wide



**Interlock Construction**  
No welds, no bumps, which strengthens  
under tension to ensure maximum  
torque application



**REGULAR CLAMP**  
Screw: 5/16" hex-head  
Band: 1/2" wide



No.	Diameter Range		Min. Pcs.	Use for General Industrial Application	
	Inch	MM		All Galvanized Steel	400 Series Stainless Steel Band, Housing and Screw
	Min-Max	Min-Max		Part #	Part #
<b>Mini Clamp with 8 mm wide Band (5/16")</b>					
4	7/32 - 5/8	6-16	100	830-185	830-185S
6	7/16 - 3/4	11-20	100	830-184	830-184S
8	1/2 - 7/8	13-23	100	830-183	830-183S
<b>Regular Clamp with 12.7 mm (1/2") wide Band</b>					
10	9/16 - 1-1/16	14-27	100	830-188	830-188S
12	11/16 - 1-1/4	18-32	100	830-189	830-189S
16	13/16 - 1-1/2	21-38	100	830-190	830-190S
20	13/16 - 1-3/4	21-44	100	830-192	830-192S
24	11/16 - 2	27-51	100	830-193	830-193S
28	15/16 - 2-1/4	33-57	100	830-134	830-194S
32	19/16 - 2-1/2	40-63	100	830-132	830-132S
36	1-13/16 - 2-3/4	46-70	100	830-195	830-195S
40	2-1/16 - 3	52-76	100	830-182	830-182S
44	2-5/16" - 3-1/4	59-82	100	830-196	830-196S
48	2-9/16" - 3-3/4	65-89	100	830-197	830-197S
52	2-13/16" - 3-3/4	72-95	100	830-152	830-152S
56	3-1/16" - 4	78-101	100	830-198	830-198S
60	3-5/16" - 4-1/4	84-108	100	830-060	830-060S
64	3-9/16" - 4-1/2	91-114	100	830-064	830-064S
72	4-1/8 - 5	105-127	100	830-072	830-072S
80	4-5/8 - 5-1/2	118-140	100	830-080	830-080S
88	5-1/8 - 6	130-152	100	830-288	830-288S
96	5-5/8 - 6-1/2	143-165	100	830-096	830-096S
104	6-1/8 - 7	155-178	100	830-009	830-009S

Clamps



**Double Bolt Clamps**

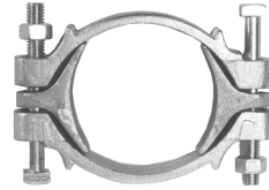
A rugged, plated malleable iron two-bolt clamp with machine bolts and hex nuts. Inner surface has dual gripping ridges. Bolt lugs are reinforced to prevent bending out of alignment. Torque values for clamps are based on "dry bolts". The use of lubricant on bolts will adversely effect clamp performance.

\*Recommended torque rated in FT. LBS.



SAFETY  
ALERT

Consult DF Burnham when using double bolt clamps on helical wire hose.



Double bolt clamp without saddles

Part #	Pkg Qty	Torque *	Hose O.D. Range	
			From:	To:
48	100	15	1-8/64"	1-12/64"
R88DB-12	50	21	1-12/64"	1-24/64"
R88DB-16	25	21	1-28/64"	1-34/64"
L14	25	40	1-40/64"	1-52/64"
R88DB-20	25	27	1-48/64"	2-3/64"
R88DB-24	25	27	2-7/64"	2-19/64"
R88DB-32	25	40	2-20/64"	2-40/64"
R88DB-40	25	40	2-32/64"	2-48/64"
R88DB-45	20	60	2-48/64"	3-4/64"
L328	20	60	3-4/64"	3-24/64"
L350	20	60	3-16/64"	3-32/64"

Double bolt clamp with two saddles

Part #	Pkg Qty	Torque *	Hose O.D. Range	
			From:	To:
400	25	40	3-32/64"	3-52/64"
431	20	40	3-50/64"	4-4/64"
463	20	40	4-2/64"	4-18/64"
525	10	60	4-16/64"	4-60/64"
550	10	60	4-32/64"	5-16/64"
600	10	60	5-8/64"	5-44/64"
639	10	60	5-44/64"	5-60/64"
675	10	60	5-60/64"	6-32/64"
769	10	60	6-32/64"	7-36/64"
818	5	125	7-44/64"	8-12/64"
875	5	125	8-16/64"	8-56/64"
988	5	125	8-60/64"	9-56/64"
1125	5	125	9-60/64"	11-24/64"
1275	3	125	11-12/64"	13"
1360	2	200	12-12/64"	14"
1450	2	200	13-12/64"	15"
1700	2	260	15-4/64"	17-32/64"

NOTE: Measure hose O.D. accurately before ordering clamps.

Optional Pkg./Box Quantity Shown

Clamps

**Single Bolt Clamps**

Torque values for clamps are based on "dry bolts". The use of lubricant on bolts will adversely effect clamp performance



plated malleable iron.  
•Recommended torque rated in FT. LBS.

NOTE: Measure hose O.D. accurately before ordering clamps.

Part #	Torque *	Hose O.D. Range	
		From:	To:
2	6	5/64"	1"
3	6	62/64"	1-8/64"
4	6	1-4/64"	1-12/64"
5	6	1-10/64"	1-16/64"
6	6	1-16/64"	1-24/64"
7	6	1-22/64"	1-28/64"
8	6	1-28/64"	1-36/64"
9	6	1-34/64"	1-44/64"
10	6	1-42/64"	1-48/64"
11	6	1-48/64"	1-56/64"
12	6	1-56/64"	2-2/64"
13	12	2"	2-8/64"
14	12	2-8/64"	2-18/64"
15	12	2-16/64"	2-26/64"

Part #	Torque *	Hose O.D. Range	
		From:	To:
16	12	2-24/64"	2-32/64"
17	12	2-32/64"	2-40/64"
18	12	2-40/64"	2-56/64"
19	12	2-56/64"	3-4/64"
20	12	3-4/64"	3-16/64"
21	12	3-16/64"	3-28/64"
22	21	3-28/64"	3-40/64"
23	21	3-40/64"	3-52/64"
24	21	3-52/64"	4-8/64"
25	21	4-8/64"	4-20/64"
26	21	4-16/64"	4-32/64"
27	21	4-28/64"	4-40/64"
X27	21	4-40/64"	4-56/64"
28	21	4-56/64"	5-16/64"





**Material - 16 Gauge**



**\*SIZE 1/8**

- 1/8 x 1**
- 1/8 x 2**
- 1/8 x 3**
- 1/8 x 4**
- 1/8 x 5**
- 1/8 x 6**
- 1/8 x 7**
- 1/8 x 8**

**SIZE 3/16**

- 3/16 x 1**
- 3/16 x 2**
- 3/16 x 3**
- 3/16 x 4**
- 3/16 x 5**
- 3/16 x 6**
- 3/16 x 7**
- 3/16 x 8**

**SIZE 1/4**

- 1/4 x 1**
- 1/4 x 2**
- 1/4 x 3**
- 1/4 x 4**
- 1/4 x 5**
- 1/4 x 6**
- 1/4 x 7**
- 1/4 x 8**

**SIZE 5/16**

- 5/16 x 1**
- 5/16 x 2**
- 5/16 x 3**
- 5/16 x 4**
- 5/16 x 5**
- 5/16 x 6**
- 5/16 x 7**
- 5/16 x 8**

**SIZE 3/8**

- 3/8 x 1**
- 3/8 x 2**
- 3/8 x 3**
- 3/8 x 4**
- 3/8 x 5**
- 3/8 x 6**
- 3/8 x 7**
- 3/8 x 8**

**SIZE 1/2**

- 1/2 x 1**
- 1/2 x 2**
- 1/2 x 3**
- 1/2 x 4**
- 1/2 x 5**
- 1/2 x 6**
- 1/2 x 7**
- 1/2 x 8**

**SIZE 5/8**

- 5/8 x 1**
- 5/8 x 2**
- 5/8 x 3**
- 5/8 x 4**
- 5/8 x 5**
- 5/8 x 6**
- 5/8 x 7**
- 5/8 x 8**

**SIZE 3/4**

- 3/4 x 1**
- 3/4 x 2**
- 3/4 x 3**
- 3/4 x 4**
- 3/4 x 5**
- 3/4 x 6**
- 3/4 x 7**
- 3/4 x 8**

\* 1/8 Tube Clips have 7/32 Holes & 3/8 wings.

\* 1/4 x 20 3/8 Hex head self tapping screws.

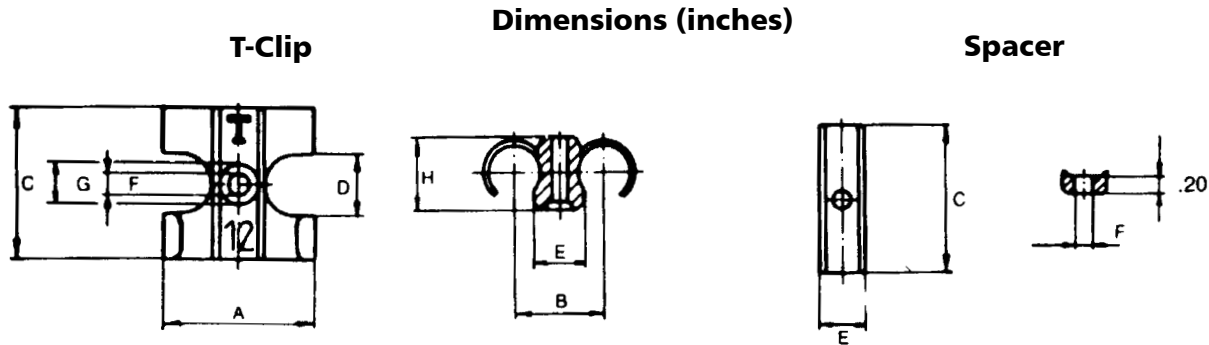
**Clamps**

Can be used with Burnham manifolds for Hoses, Pipe Nipples and Tubing, etc.

T-Clips provide a quick, adaptable and inexpensive answer to securing, attaching and routing of tubes, wires, hose and pipe. They are not only easy to use by the most inexperienced personal, but allow your installations to look extremely neat and professional. T-Clips provide an exact, uniform spacing to dual runs and can be mounted on walls, cabinets, boards, enclosures and bulkheads. T-Clips are available in a wide range of sizes to fit almost any circular-sectioned item. A countersunk centerhole is provided in each T-Clip for the fastener of your choice.

Many commercial applications, such as the installations of hydraulic hoses, electrical conduits and wires, telephone and fibre optics, liquid and gas tubings and pipes, and automotive hoses can benefit from the ease of installation, safety, and the final appearance of the job. Many industries can use them:

Electrical	Plumbing	Automotive
Marine	Hydraulics	Pneumatics
Heating	Air Conditioning	Appliances
Machine Tools	Recreational Vehicles	Refrigeration
Robotics	Medical Equipment	Construction



T-Clip Part#	Spacer Model	Holding Range	A	B	C	D	E	F	G	H
T4	-	5/32-1/4	.60	.40	.72	.24	.28	.12	.24	.36
T6	-	1/4-5/16	.80	.48	.80	.32	.32	.12	.24	.36
T8	D-4	5/16-3/8	1.00	.60	.96	.40	.40	.16	.32	.48
T10	D-10	3/8-1/2	1.24	.72	1.12	.48	.44	.16	.32	.60
T12	D-12	1/2-5/8	1.36	.84	1.40	.56	.48	.16	.36	.68
T15	D-15	5/8-3/4	1.72	1.00	1.68	.68	.56	.20	.40	.80
T18	D-18	3/4-7/8	2.04	1.24	1.96	.80	.64	.20	.48	.92
T22	D-22	7/8-1	2.60	1.56	2.52	1.00	.84	.28	.52	1.16

Spacers are available to fit T-Clips from T8 to T22 to allow for additional spacing between the mounting face and the items to be secured. As many spacers as necessary to provide required clearance can be used as the design allows stacking.

**Specifications**

**Material:** Polyacetal engineered plastic with ultraviolet inhibitors. Other materials are available on special order.

**Temperature Range:** -40° to +212°F, -40° to +100°C.

**Color:** Black is standard. A wide range of colors is available on special order.

T-Clip Part#	Holding Range	A	B	C	D	E	F	G	H
T-2-50	3/32-1/8	2.19	2.00	.43	.12	1.90	N/A	.26	.20
T-6-50	1/4-5/16	2.24	1.93	.77	.31	1.79	.129	.26	.35
T-6-8	*1/4-5/16x5/16-3/8	1.37	1.00	.96	.28	.80	.160	.40	.47
TC-12 (Half Clip)	1/2-5/8	1.36	.82	.876	.493	.460	.138	.17	.64

\* two sided clip, one side - opposite side



# Non Perforated (Lined) Band Clamps

# Clamps

# Non Perforated (Lined) Band Clamps

Band and Housing • SS2333 / AISI 316  
Band Width • (12.2mm) 1/2" wide band  
Screw • SS2333 / AISI 304  
Corrosion Factor • 1000 Industrial

## ALL 316 ACID RESISTANT



Part #	SAE	Size
90-014	3	5/16 - 9/16
90-017	4	7/16 - 11/16
90020	6	1/2 - 13/16
90-024	8	5/8 - 15/16
90-028	10	3/4 - 1/8
90-032	12	7/8 - 1-1/4
90-038	16	1-1/16 - 1-1/2
90-044	20	1-1/4 - 1-3/4
90-050	24	1-1/2 - 2
90-056	28	1-3/4 - 2-1/4
90-065	32	2 - 2-9/16
90-075	40	2-5/16 - 3
90-085	44	2-11/16 - 3-3/8
90-095	52	3 - 3-3/4
90-112	64	3-7/16 - 4-7/16
90-138	80	4-1/8 - 5-7/16
90-165	96	5-1/8 - 7-1/8
90-180	104	5-7/8 - 7-1/8
90-205	122	6-7/8 - 8-1/8
90-231	138	7-7/8 - 9-1/8
90-256	154	8-7/8 - 10-1/16
90-282	170	9-7/8 - 11-1/8
90-307	186	10-7/8 - 12-1/8

## ALUZINC EXHAUST CLAMP



Uniform tightening force around the exhaust tubes for good sealing

Part #	Size
94-030	1.06 - 1.18
94-033	1.18 - 1.30
94-036	1.30 - 1.42
94-038	1.38 - 1.50
94-039	1.44 - 1.56
94-042	1.54 - 1.65
94-043	1.59 - 1.71
94-045	1.65 - 1.77
94-046	1.69 - 1.81
94-047	1.73 - 1.85
94-048	1.77 - 1.89
94-051	1.89 - 2.01
94-052	1.93 - 2.05
94-054	2.00 - 2.13
94-055	2.05 - 2.17
94-056	2.09 - 2.20
94-058	2.17 - 2.28
94-061	2.28 - 2.40
94-064	2.40 - 2.52
94-071	2.68 - 2.80
94-074	2.80 - 2.91

## HOSE CLAMPS

### 304 S.S. RUBBER CLIP



Eliminates hose and cable wear due to vibrations

Part #	Size
96-301	3/16
96-302	1/4
96-303	5/16
96-304	3/8
96-305	7/16
96-306	1/2
96-307	9/16
96-308	5/8
96-310	3/4
96-312	7/8
96-314	1
96-316	1-1/8
96-318	1-1/4
96-320	1-3/8
96-322	1-1/2
96-323	1-3/4

### ALUZINC RUBBER CLIP



Eliminates hose and cable wear due to vibrations

Part #	Size
95-300	1/8
95-301	3/16
95-302	1/4
95-303	5/16
95-304	3/8
95-305	7/16
95-306	1/2
95-307	9/16
95-308	5/8
95-309	11/16
95-310	3/4
95-311	13/16
95-312	7/8
95-313	15/16
95-314	1
95-315	1-1/16
95-316	1-1/8
95-317	1-3/16

95-318	1-1/4
95-319	1-5/16
95-320	1-3/8
95-321	1-7/16
95-322	1-1/2
95-326	1-5/8
95-323	1-3/4
95-328	1-7/8
95-324	2
95-325	2-1/8
95-329	2-3/8
95-327	2-1/2
95-330	2-15/16
95-331	3-5/16

### ALUZINC ROBUST



Band and Housing • Aluzinc / Plated  
Band Width • (9mm) 3/8" wide band  
Screw • Zinc Plated / Chromed  
Corrosion Factor • 100

Part #	Size
97-031	(29-31mm)
97-035	(32-35mm)
97-039	(36-39mm)
97-043	(40-43mm)
97-047	(44-47mm)
97-051	(48-51mm)
97-055	(52-55mm)
97-059	(56-59mm)
97-063	(60-63mm)
97-077	(64-67mm)
97-073	(68-73mm)
97-079	(74-79mm)
97-085	(80-85mm)
97-091	(86-91mm)
97-097	(92-97mm)
97-103	(98-103mm)
97-112	(104-112mm)
97-121	(113-121mm)
97-130	(122-130mm)
97-139	(131-139mm)
97-148	(140-148mm)
97-161	(149-161mm)
97-174	(162-174mm)
97-187	(175-187mm)
97-200	(188-200mm)
97-213	(201-213mm)
97-226	(214-226mm)
97-239	(227-239mm)
97-252	(240-252mm)

Clamps

**T-BOLT CLAMPS**

- All designs meet SAE J1508 specifications.
- .025" Band Thickness
- 3/4" Wide Band
- Band Material: 300 Series Stainless Steel
- Bolt Material: 300 Series Stainless Steel
- Nut Material: 300 Series Stainless Steel
- Nuts are Self-locking
- Torque Rating 75 in/lb.



**Purpose**

To provide a quick, yet effective means of clamping a variety of fittings to a wide range of hose. T-Bolts can be applied with a standard 7/16" socket wrench. They provide 360° sealing surface by using a shoe or formed bridge.

**Services**

The T-Bolt clamp is a high strength, reliable clamp with numerous applications in both the commercial and industrial markets including hose and ductwork connections for air, oil, water and other types of low pressure fluid lines.

Part #	Nominal Size	O.D. Range	
		From	To
STBC131	1-1/4	1-5/32	1-15/32
STBC150	1-1/2	1-3/8	1-9/16
STBC175	1-3/4	1-5/8	1-13/16
STBC188	1-7/8	1-3/4	1-15/16
STBC200	2	1-7/8	2-1/16
STBC225	2-1/4	2-1/8	2-5/16
STBC238	2-3/8	2-1/4	2-7/16
STBC250	2-1/2	2-3/8	2-9/16
STBC256	2-9/16	2-11/32	2-5/8
STBC263	2-5/8	2-13/32	2-11/16
STBC275	2-3/4	2-17/32	2-13/16
STBC288	2-7/8	2-21/32	2-15/16
STBC300	3	2-25/32	3-1/16
STBC312	3-1/8	2-29/32	3-3/16
STBC325	3-1/4	3-1/32	3-5/16
STBC350	3-1/2	3-9/32	3-9/16
STBC375	3-3/4	3-17/32	3-13/16
STBC382	3-53/64	3-19/32	3-7/8
STBC400	4	3-25/32	4-1-16
STBC425	4-1/4	4-1/32	4-5/16
STBC450	4-1/2	4-9/32	4-9/16
STBC475	4-3/4	4-17/32	4-13/16
STBC500	5	4-25/32	5-1/16
STBC525	5-1/4	5-1/32	5-5/16
STBC550	5-1/2	5-9/32	5-9/16
STBC575	5-3/4	5-17/32	5-13/16
STBC600	6	5-25/32	6-1/16
STBC625	6-1/4	6-1/32	6-5/16
STBC650	6-1/2	6-9/32	6-9/16
STBC675	6-3/4	6-17/32	6-13/16
STBC700	7	6-25/32	7-1/16
STBC750	7-1/2	7-9/32	7-9/16
STBC800	8	7-25/32	8-1/16
STBC850	8-1/4	8-9/32	9-9/16
STBC888	8-7/8	8-21/32	8-15/16
STBC1088	10-7/8	10-21/32	10-15/16
STBC1288	12-7/8	12-15/16	12-15/16

**Clamps**



# Clamps

T-Bolts

T-Bolts

**Styles HTBC & HSTBC -**  
T-bolts can be applied with a standard 1/2" socket wrench.



## Heavy Duty

### Materials

#### Style HTBC -

- 7/8" wide 300 series stainless steel band, .040" thick.
- Opens 3/32" above and tightens 7/32" smaller than nominal I.D. for a total of 5/16" range.
- Carbon Steel bolt.  
Torque rating 240 in/lbs.

#### Style HSTBC -

- 7/8" wide 300 series stainless steel band, .040" thick.
- Opens 3/32" above and tightens 7/32" smaller than nominal I.D. for a total of 5/16" range.
- 300 series Stainless Steel bolt.  
Torque rating 180 in/lbs.

#### Style HTBC

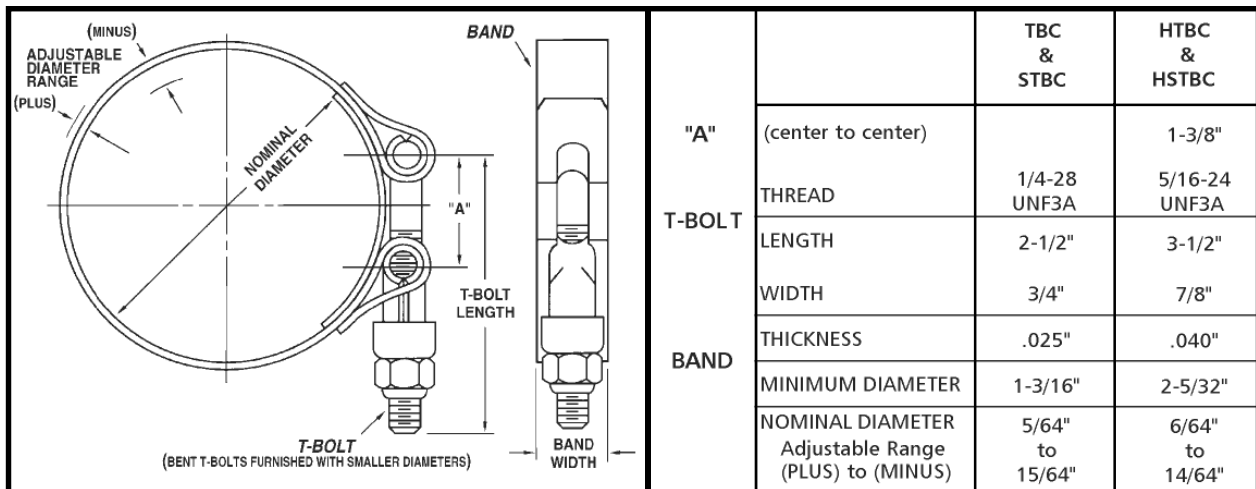
Stainless Steel Band, Carbon Steel Bolt

Part #	Hose O.D. Range	
	From	To
HTBC238	2-10/64"	2-30/64"
HTBC250	2-18/64"	2-38/64"
HTBC300	2-50/64"	3-6/64"
HTBC350	3-18/64"	3-38/64"
HTBC400	3-50/64"	4-6/64"
HTBC450	4-18/64"	4-38/64"
HTBC500	4-50/64"	5-6/64"
HTBC550	5-18/64"	5-38/64"
HTBC600	5-50/64"	6-6/64"
HTBC650	6-18/64"	6-38/64"
HTBC700	6-50/64"	7-6/64"
HTBC750	7-18/64"	7-38/64"
HTBC800	7-50/64"	8-6/64"

#### Style HSTBC

Stainless Steel Band, Stainless Steel Bolt

Part #	Hose O.D. Range	
	From	To
HSTBC238	2-10/64"	2-30/64"
HSTBC250	2-18/64"	2-38/64"
HSTBC300	2-50/64"	3-6/64"
HSTBC350	3-18/64"	3-38/64"
HSTBC400	3-50/64"	4-6/64"
HSTBC450	4-18/64"	4-38/64"
HSTBC500	4-50/64"	5-6/64"
HSTBC550	5-18/64"	5-38/64"
HSTBC600	5-50/64"	6-6/64"
HSTBC650	6-18/64"	6-38/64"
HSTBC700	6-50/64"	7-6/64"
HSTBC750	7-18/64"	7-38/64"
HSTBC800	7-50/64"	8-6/64"



## General Safety Statement

Dixon's couplings and retention devices are designed to work safely for their intended use. The selection of the proper hose, coupling, and retention devices; and the proper application of the coupling to the hose are of utmost importance. Users must consider the size, temperature, application, media, pressure, and hose and coupling manufacturer's recommendations when selecting the proper hose assembly components. Dixon recommends that all hose assemblies be tested in accordance with the Rubber Manufacturers Association's recommendations and be inspected regularly (before each use), to ensure that they are not damaged or have become loose.

Safety devices are integral to the coupling and must be working and utilized. The use of supplementary safety devices, such as safety clips and King Cables, are recommended. If any problem is detected, couplings must be removed from service immediately.

Dixon is available to consult, train, and recommend the proper selection and application of all fittings we sell. We strongly recommend that distributors and end users make use of Dixon's Testing and Recommendations Services.



**CARBON STEEL 1-EAR CLAMPS**

1-Ear Clamps are intended for low pressures applications such as automotive (not fuel lines), appliances, industrial machinery, underground irrigation systems and beverage dispensing equipment. They are specifically designed for mass production applications where inexpensive clamps are needed.

**Pressure**

As a guideline, 1-Ear Clamps have held 30 bar - 441 PSI.  
This was done using a static water pressure test.

**Material**

Hot dipped galvanized carbon steel band - G90



Part #	Ref. #	Nominal Size	Inches	
			Close	Open
1050000	105	3/8"	0.350	0.414
1050001	113	7/16"	0.381	0.444
1050002	123	15/32"	0.394	0.486
1050003	133	1/2"	0.453	0.524
1050006	140	35/64"	0.472	0.551
1050007	145	9/16"	0.496	0.571
1050008	157	5/8"	0.543	0.618
1050009	170	11/16"	0.549	0.669
1050010	185	23/32"	0.618	0.728
1050011	198	3/4"	0.669	0.779
1050012	210	13/16"	0.716	0.827
1050013	226	7/8"	0.779	0.890
1050014	241	15/16"	0.839	0.949
1050015	256	1"	0.898	1.008
1050016	271	1-1/16"	0.945	1.067
1050017	286	1-1/8"	1.004	1.126
1050018	301	1-3/16"	1.063	1.185
1050020	331	1-5/16"	0.181	1.303
1050021	346	1-3/8"	1.240	1.362
1050023	376	1-15/32"	1.358	1.480
1050025	396	1-9/16"	1.437	1.559
1050026	410	1-5/8"	1.492	1.614
1050027	425	1-11/16"	1.551	1.673
1050028	440	1-23/32"	1.610	1.732
1050029	455	1-3/4"	1.669	1.791
1050030	470	1-16/16"	1.728	1.850
1050031	485	1-7/8"	1.787	1.909
1050032	500	1-15/16"	1.846	1.968
1050033	515	2"	1.905	1.028

**2-EAR CLAMPS**

2-Ear Clamps are especially suited for industrial use with heavily vibrating equipment.

This is a medium pressure clamp and is widely used for maintenance and OEM applications. Rubber hose, plastic tubing, coaxial and electrical cable, rope, etc. are all easily clamped. These clamps are installed on air, fluid, gas and steam lines. The one piece design offers a positive, tamper-proof seal without damaging the hose.

**Pressure**

As a guideline, 2-Ear Clamps successfully seal at 54 bar - 800 PSI with 35 pulsating strokes a minute.

**Material**

- Zinc plated carbon steel SAE 1008/1010 or DIN 1.0338
- Stainless steel tubing UNS S30400 or DIN 1.4301



Note: When ordering your 2-Ear Clamps select nominal clamp size nearest to, but always larger than O.D. of material to be clamped after insert has been fitted.

**ZINC PLATED CARBON STEEL**

Part #	Item	Desc.	Inches	
			Close	Open
5/32OC	10100000	0041	5/32"	.122-.161
10100001	10100001	0045	11/64"	.138-.177
03OC	10100002	0305	3/16"	.118-.197
04OC	10100004	0507	1/4"	.197-.276
05OC	10100008	0709	5/16"	.276-.354
06OC	10100011	0811	3/8"	.315-.433
07OC	10100013	0911	7/16"	.354-.433
08OC	10100016	1113	1/2"	.433-.512
09OC	10100019	1315	9/16"	.512-.591
10100022	10100022	1517	19/32"	.544-.669
100C	10100024	1518	5/8"	.591-.708
12OC	10100027	1720	3/4"	.669-.787
10100029	10100029	1922	13/16"	.748-.866
14OC	10100030	2023	7/8"	.787-.905
1500C	10100032	2225	15/16"	.866-.984
16OC	10100034	2327	1"	.905-.063
16.10C	10100035	2528	1-1/16"	.984-1.102
16.20C	10100037	2731	1-1/8"	1.063-1.220
10100039	10100039	2831	1-3/16"	1.102-1.220
16.50C	10100041	3134	1-5/16"	1.220-1.339
16.70C	10100043	3437	1-7/16"	1.339-1.457
24OC	10100045	3740	1-1/2"	1.457-1.575
10100047	10100047	4043	1-5/8"	1.575-1.693
1.120C	10100049	4346	1-3/4"	1.693-1.811

**STAINLESS STEEL**

Part #	Desc.	Inches	
		Close	Open
1510003	1/4"	0.197	0.276
1510004	5/16"	0.276	0.354
1510023	3/8"	0.319	0.433
1510006	1/2"	0.425	0.512
1510007	9/16"	0.492	0.591
1510008	19/32"	0.551	0.669
1510009	5/8"	0.591	0.709
1510010	3/4"	0.638	0.787
1510011	13/16"	0.709	0.866
1510012	7/8"	0.748	0.906
1510013	15/16"	0.827	0.984
1510014	1"	0.886	1.063
1510016	1-1/8"	1.035	1.221
1510019	1-9/16"	1.260	1.457
1510020	1-1/2"	1.378	1.575





**KITS & PINCERS**

**Features**

- Emergency on-the-spot repairs
- A wide variety of uses and applications
- Varous kit types available
- Ideal for in-plant and in-field maintenance



**OETIKER 2-EAR SERVICE CLAMP KIT**

Well suited for industrial us or original equipment (OEM) applications. EPDM rubber hose, plastic tubing, electrical cable, stain relief, insert molding, welding and heavy vibrating equipment hoses are readily clamped.

**Part # 18500064**  
**(stainless) kit includes:**

- 1 pair of standard jaw pincers
- 15 each of 5/16", 3/8", 1/2", 9/16", 5/8" Clamps
- 12 each of 3/4", 7/8", 15/16", 1" Clamps

**OETIKER STEPLESS EAR  
SERVICE CLAMP KIT**

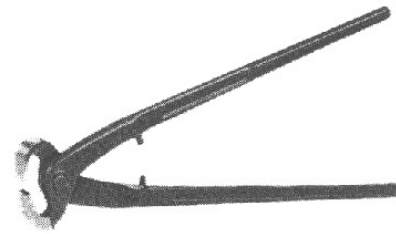
Provide uniform compression and 360° degree seal due to the unique tongue-in-groove design. The term "Stepless" relates to the absence of gaps or steps on the clamps inner circumference.

**Part # 185000660**  
**(stainless) kit includes:**

- 1 pair of standard jaw pincers
- 10 each of 1/2", 9/16", 5/8", 23/32", 7/8", 1", 1-1/8", 1-1/4" Clamps

**PINCERS**

**MODEL 1098 1**  
**STANDARD JAW PINCERS**



**SIDE JAW PINCERS**

This dual purpose, side jaw design allows clamps to be applied or removed in confined areas with pincers held parallel to the hose. Also used like standard pliers.

**Model 1099 I**

## Round Bend U-Bolts Zinc Plated



### U-BOLTS & 2 NUTS

Part #	Dimensions U-Bolts Only	Pipe Size	Stock #
06UB-02	1/4 x 3/4 x 1-1/4	1/4	02
06UB-03	1/4 x 3/4 x 1-1/4	3/8	03
08UB	1/4 x 1 x 1-3/4	1/2	04
12UB-05	1/4 x 1-1/8 x 2	3/4	05
12UB-06	1/4 x 1-1/4 x 2-1/4	3/4	06
16UB-07	1/4 x 1-1/2 x 2-3/4	1	07
20UB	1/4 x 1-3/4 x 3	1-1/4	08
24UB	1/4 x 2 x 3-1/4	1-1/2	09
08UB-10	5/16 x 1 x 2-3/16	1/2	010
12UB	5/16 x 1-1/8 x 2-3/16	3/4	0101
16UB	5/16 x 1-1/2 x 2-3/16	1	012
20UB-13	5/16 x 1-3/4 x 2-11/16	1-1/4	013
32UB-15	5/16 x 2-1/2 x 3-3/16	2	015
40UB	3/8 x 3 x 3-5/8	2-1/2	023
48UB-24	3/8 x 3-1/2 x 4-1/8	3	024
96UB	1/2 x 6-3/4 x 8-3/8	6	030

\*Full Stock Diameter with Cut Thread

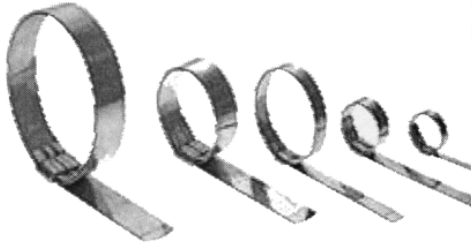
Some sizes also available in Stainless Steel.





**Clamps**

## Preformed Clamping Systems

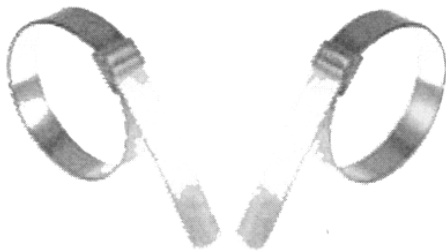


As industrial hose made of stiffer, thinner, thermoplastics replace soft, spongy, thickwalled rubber, a new generation of hose clamps has been developed to prevent leak problems.

The **BAND-IT Jr. Smooth I.D.** clamp is manufactured in a wide variety of widths, sizes and materials that provide a uniform, gap-free, inside diameter with the same strong holding power of the standard BAND-IT Jr. clamp.



The smooth inside diameter produces a uniform clamping surface to prevent leak paths while the lower profile reduces the risk of sangs when dragging industrial hose assemblies



**BAND-IT Jr.'s** are vibration resistant and require no hammering or crimping. They are automatically locked in one simple lever movement.

BAND-IT Jr. clamps are available in type 201 and galvanized carbon steel in 5 different widths. Other materials are available on special order.

Clamp	Clamp I.D.		Band Thickness		Band Width	
	In	mm	In	(mm)	In	(mm)
<b>BAND-IT Jr. Smooth I.D.</b>	1 <sup>3</sup> / <sub>16</sub>	20.6	.020	.51	1/4	6.4
	1	25.4	.020	.51	1/4	6.4
	1 <sup>3</sup> / <sub>8</sub>	34.9	.020	.51	1/4	6.4
	1 <sup>1</sup> / <sub>2</sub>	38.1	.020	.51	1/4	6.4
	2	50.8	.020	.51	1/4	6.4
	2 <sup>1</sup> / <sub>2</sub>	63.5	.020	.51	1/4	6.4
	2 <sup>3</sup> / <sub>4</sub>	69.9	.020	.51	1/4	6.4
	3	76.2	.020	.51	1/4	6.4
	3 <sup>1</sup> / <sub>2</sub>	88.9	.020	.51	1/4	6.4
	4	101.6	.020	.51	1/4	6.4
	4 <sup>1</sup> / <sub>2</sub>	114.3	.020	.51	1/4	6.4
	1 <sup>3</sup> / <sub>16</sub>	20.6	.025	.64	3/8	9.5
	1	25.4	.025	.64	3/8	9.5
	1 <sup>3</sup> / <sub>8</sub>	34.9	.025	.64	3/8	9.5
	2	50.8	.025	.64	3/8	9.5
	2 <sup>1</sup> / <sub>2</sub>	63.5	.025	.64	3/8	9.5
	3	76.2	.025	.64	3/8	9.5
	3 <sup>1</sup> / <sub>2</sub>	88.9	.025	.64	3/8	9.5
	4	101.6	.025	.64	3/8	9.5
	1	25.4	.030	.76	1/2	12.7
	1 <sup>1</sup> / <sub>4</sub>	31.8	.030	.76	1/2	12.7
	1 <sup>1</sup> / <sub>2</sub>	38.1	.030	.76	1/2	12.7
	1 <sup>3</sup> / <sub>4</sub>	44.5	.030	.76	1/2	12.7
	2	50.8	.030	.76	1/2	12.7
	2 <sup>1</sup> / <sub>2</sub>	63.5	.030	.76	1/2	12.7
	2 <sup>3</sup> / <sub>4</sub>	69.9	.030	.76	1/2	12.7
	3	76.2	.030	.76	1/2	12.7
	3 <sup>1</sup> / <sub>2</sub>	88.9	.030	.76	1/2	12.7
	4	101.6	.030	.76	1/2	12.7
	1 <sup>1</sup> / <sub>2</sub>	38.1	.030	.76	5/8	15.9
1 <sup>3</sup> / <sub>4</sub>	44.5	.030	.76	5/8	15.9	
2	50.8	.030	.76	5/8	15.9	
2 <sup>1</sup> / <sub>4</sub>	57.2	.030	.76	5/8	15.9	
2 <sup>1</sup> / <sub>2</sub>	63.5	.030	.76	5/8	15.9	
2	50.8	.030	.76	3/4	19.1	
2 <sup>3</sup> / <sub>4</sub>	69.9	.030	.76	3/4	19.1	
3	76.2	.030	.76	3/4	19.1	
3 <sup>1</sup> / <sub>2</sub>	88.9	.030	.76	3/4	19.1	
4	101.6	.030	.76	3/4	19.1	
4 <sup>1</sup> / <sub>2</sub>	114.3	.030	.76	3/4	19.1	
5	127.0	.030	.76	3/4	19.1	
5 <sup>1</sup> / <sub>4</sub>	133.4	.030	.76	3/4	19.1	
6	152.4	.030	.76	3/4	19.1	
6 <sup>1</sup> / <sub>2</sub>	165.1	.030	.76	3/4	19.1	
7	177.8	.030	.76	3/4	19.1	
8	203.2	.030	.76	3/4	19.1	
<b>BAND-IT Jr.</b>	3/4	19.1	.020	.51	1/4	6.4
	1	25.4	.020	.51	1/4	6.4
	1 <sup>3</sup> / <sub>8</sub>	34.9	.020	.51	1/4	6.4
	1 <sup>1</sup> / <sub>2</sub>	38.1	.020	.51	1/4	6.4
	2	50.8	.020	.51	1/4	6.4
	2 <sup>3</sup> / <sub>4</sub>	69.9	.020	.51	1/4	6.4
	3	76.2	.020	.51	1/4	6.4
	3 <sup>1</sup> / <sub>2</sub>	88.9	.020	.51	1/4	6.4
	4 <sup>1</sup> / <sub>2</sub>	114.3	.020	.51	1/4	6.4
	1 <sup>3</sup> / <sub>16</sub>	20.6	.026	.64	3/8	9.5
	1	25.4	.026	.64	3/8	9.5
	1 <sup>3</sup> / <sub>8</sub>	34.9	.026	.64	3/8	9.5
	2	50.8	.026	.64	3/8	9.5
	3	76.2	.026	.64	3/8	9.5
	3 <sup>1</sup> / <sub>4</sub>	82.5	.026	.64	3/8	9.5
	4	101.6	.026	.64	3/8	9.5
	1	25.4	.030	.76	1/2	12.7
	1 <sup>3</sup> / <sub>8</sub>	31.8	.030	.76	1/2	12.7
	1 <sup>3</sup> / <sub>4</sub>	44.5	.030	.76	1/2	12.7
	2 <sup>3</sup> / <sub>4</sub>	69.9	.030	.76	1/2	12.7
4	101.6	.030	.76	1/2	12.7	

Clamps



# Clamps

316 S.S. Cat. No.	Type of Steel		Galv. Carbon Cat. No.	Weight		Packaging	Application Tools		Applications
	201 S.S. Cat. No.			Lbs	Kg				
NA	◆JS240	NA	2.0	0.9	100/box	IT2000	◆S350 J020 ◆S750 ◆C001 & J001 C002	Hose Boots	
NA	◆JS242	NA	2.1	1.0					
NA	◆JS241	NA	2.5	1.1					
NA	◆JS252	NA	2.6	1.2					
NA	◆JS253	NA	3.2	1.5					
NA	◆JS220	NA	3.7	.7					
NA	JS256	NA	3.8	1.7					
NA	JS244	NA	4.2	1.9					
NA	JS257	NA	4.6	2.1					
NA	JS258	NA	5.3	2.4					
NA	◆JS259	NA	5.7	2.6					
JS401	◆JS201	◆JS301	3.6	1.6					
NA	◆JS243	◆JS343	3.9	1.8					
JS402	◆JS202	◆JS302	5.0	2.3					
JS445	◆JS245	◆JS345	5.9	2.7					
JS421	JS221	JS321	6.8	3.1					
NA	JS246	JS346	7.5	3.4					
JS455	JS255	JS355	8.6	3.9					
JS448	JS248	JS348	9.5	4.3					
JS403	◆JS203	◆JS303	6.5	3.0					
JS404	◆JS204	◆JS304	7.2	3.3					
NA	◆JS231	JS331	8.1	3.7					
NA	◆JS236	◆JS336	8.7	4.0					
JS437	◆JS237	JS337	9.4	4.3					
JS433	◆JS233	◆JS333	10.8	4.9					
NA	◆JS230	◆JS330	11.3	5.1					
JS434	◆JS234	JS334	12.2	5.5					
JS447	◆JS247	JS347	13.6	6.2					
JS449	JS249	JS349	14.9	6.8					
JS405	◆JS205	◆JS305	10.4	4.7					
JS406	◆JS206	◆JS306	11.3	5.1					
JS407	◆JS207	◆JS307	12.2	5.5					
JS408	◆JS208	◆JS308	13.3	6.0					
JS409	◆JS209	◆JS309	13.9	6.3					
JS427	JS227	JS327	14.9	6.8					
JS410	◆JS210	◆JS310	9.2	4.2					
JS411	◆JS211	◆JS311	9.7	4.4					
JS412	◆JS212	◆JS312	10.8	4.9					
JS413	◆JS213	◆JS313	6.1	2.8					
JS414	◆JS214	◆JS314	6.7	3.0					
JS415	◆JS215	◆JS315	7.2	3.3					
JS470	◆JS270	JS370	7.3	3.3					
JS416	◆JS216	◆JS316	8.2	3.7					
NA	JS217	◆JS317	9.2	4.2					
NA	◆JS218	◆JS318	10.2	4.6					
NA	◆JS219	JS319	11.0	5.0					
NA	◆J240	NA	.9	.9					
NA	◆J242	NA	2.1	1.0					
NA	◆J241	NA	2.5	1.1					
NA	◆J252	NA	2.6	1.2					
NA	◆J253	NA	3.2	1.5					
NA	◆J256	NA	3.8	1.7					
NA	◆J244	NA	4.2	1.9					
NA	J257	NA	4.6	2.1					
NA	◆J259	NA	5.7	2.6					
NA	◆J201	◆J301	3.6	1.6					
NA	◆J243	◆J343	3.9	1.8					
NA	◆J202	◆J302	4.7	2.1					
NA	◆J245	◆J345	5.5	2.5					
NA	J246	J346	7.5	3.4					
NA	J255	NA	8.2	3.7					
NA	J248	NA	9.5	4.3					
NA	◆J203	◆J303	6.5	3.0					
NA	◆J204	◆J304	7.2	3.3					
NA	◆J236	J336	8.7	4.0					
NA	J230	◆J330	11.3	5.1					
NA	J249	NA	14.9	6.8					
					50/box				
					25/box				
					100/box				

◆ Most popular items with immediate availability from the Denver or Pennsylvania warehouse. Will ship within 3 working days. Call for availability on other products.

Clamps

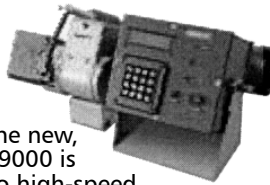


## Preformed Clamping Systems



**BAND-IT Center Punch clamps** are locked with a standard conical punch, ensuring a strong powerful lock for reliable clamping. Both 201 stainless steel and galvanized carbon steel CP clamps are manufactured with 201 stainless steel buckles to provide maximum locking strength.

Center Punch clamps can be installed with BAND-IT'S T300 or S038 hand tools. The new, electric-powered IT9000 is the ideal solution to high-speed production requirements.



The **Universal Clamp** is a single wrap performed, smooth I.D. clamp that can be fastened with either a Tie-Lok or Ultra-Lok termination. Use the A920 or IT1000 for Tie-Lok. For Ultra-Lok, use the A940 or IT3000 tools.



### Worm Gear Clamps

A quality screwdriver type clamp with mechanical interlock eliminating spot weld for greater strength and protection from corrosion. The extra wide band, 9/16", provides more compression area. Band made of 301 S.S.

Clamp	Clamp I.D.		Band Thickness		Band Width		Range Clamp Diameter			
	In	(mm)	In	(mm)	In	(mm)	Inches		mm	
	Min	Max	Min	Max	Min	Max				
<b>BAND-IT Jr.</b> 201 S.S. or GCS	1 1/2	38.1	.030	.76	5/8	15.9				
	1 3/4	44.5	.030	.76	5/8	15.9				
	2	50.8	.030	.76	5/8	15.9				
	2 1/4	57.2	.030	.76	5/8	15.9				
	2 1/2	63.5	.030	.76	5/8	15.9				
	2	50.8	.030	.76	3/4	19.1				
	2 1/2	63.5	.030	.76	3/4	19.1				
	2 3/4	69.9	.030	.76	3/4	19.1				
	3	76.2	.030	.76	3/4	19.1				
	3 1/2	88.9	.030	.76	3/4	19.1				
	4	101.6	.030	.76	3/4	19.1				
	4 1/2	114.3	.030	.76	3/4	19.1				
	5	127.0	.030	.76	3/4	19.1				
	5 1/4	133.4	.030	.76	3/4	19.1				
	6	152.4	.030	.76	3/4	19.1				
	7	177.8	.030	.76	3/4	19.1				
8	203.2	.030	.76	3/4	19.1					
<b>Center Punch</b> 201 S.S. or GCS All buckles 201 S.S.	1 3/16	20	.025	.64	3/8	9.5				
	1 3/8	35	.025	.64	3/8	9.5				
	1	25	.025	.64	5/8	16				
	1 1/4	32	.025	.64	5/8	16				
	1 1/2	38	.025	.64	5/8	16				
	1 3/4	44	.025	.64	5/8	16				
	2	51	.025	.64	5/8	16				
	2 1/4	57	.025	.64	5/8	16				
	2 1/2	64	.025	.64	5/8	16				
	2 3/4	70	.025	.64	5/8	16				
	3	76	.025	.64	5/8	16				
	3 1/2	89	.025	.64	5/8	16				
	4	102	.025	.64	5/8	16				
	4 1/2	114	.025	.64	5/8	16				
	5	127	.025	.64	5/8	16				
	6	152	.025	.64	5/8	16				
7	178	.025	.64	5/8	16					
8	203	.025	.64	5/8	16					
<b>Universal Clamp</b> 201 S.S.	1	25	.015	.38	1/4	6.35				
	1 1/2	38	.015	.38	1/4	6.35				
	2	51	.015	.38	1/4	6.35				
	2 1/2	64	.015	.38	1/4	6.35				
	3	76	.015	.38	1/4	6.35				
	3 1/2	89	.015	.38	1/4	6.35				
	4	102	.015	.38	1/4	6.35				
4 1/2	114	.015	.38	1/4	6.35					
<b>Worm Gear Clamps</b> 301 S.S.			.023	.6	9/16	14	3/8	7/8	9	22
			.023	.6	9/16	14	1/16	1	11	25
			.023	.6	9/16	14	1/2	1 1/8	12	28
			.023	.6	9/16	14	1/2	1 1/4	12	32
			.023	.6	9/16	14	3/4	1 1/2	19	38
			.023	.6	9/16	14	7/8	1 3/4	22	45
			.023	.6	9/16	14	1 1/8	2	28	51
			.023	.6	9/16	14	1 3/8	2 1/4	35	57
			.023	.6	9/16	14	1 5/8	2 1/2	41	64
			.023	.6	9/16	14	1 7/8	2 3/4	48	70
			.023	.6	9/16	14	2 1/8	3	54	76
			.023	.6	9/16	14	2 5/16	3 1/4	58	83
			.023	.6	9/16	14	2 5/8	3 1/2	67	89
			.023	.6	9/16	14	2 7/8	3 3/4	73	95
			.023	.6	9/16	14	3 1/8	4	79	102
			.023	.6	9/16	14	3 1/2	4 1/2	89	114
			.023	.6	9/16	14	4	5	102	127
			.023	.6	9/16	14	4 1/2	5 1/2	114	140
			.023	.6	9/16	14	5 1/8	6	130	152
			.023	.6	9/16	14	6 1/8	7	155	178

Clamps



# Clamps

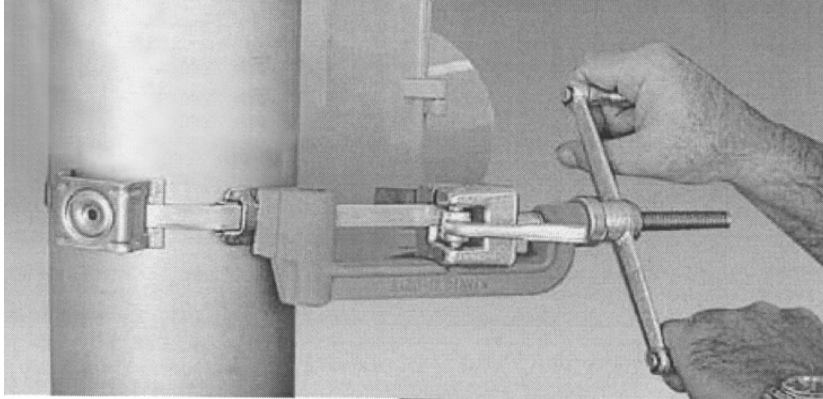
Type of Steel		Weight		Packaging	Application Tools	Applications
S.S. Cat. No.	Galv. Carbon Cat. No.	Lbs	Kg			
◆J205	◆J305	10.4	4.7	100/box	◆S750 ◆C001 ◆C002	Hose Boots
◆J206	◆J306	11.3	5.1			
◆J207	◆J307	12.2	5.5			
◆J208	◆J308	13.3	6.0			
◆J209	◆J309	13.9	6.3			
◆J227	J327	14.9	6.8			
J229	J329	17.0	7.7			
◆J210	◆J310	9.2	4.2			
◆J211	◆J311	9.7	4.4			
◆J212	◆J312	10.8	4.9			
◆J213	◆J313	6.1	2.8	50/box		
◆J214	◆J314	6.7	3.0			
◆J215	◆J315	7.2	3.3			
J270	J370	7.4	3.4			
◆J216	◆J316	8.2	3.7			
◆J218	J318	10.2	4.6			
J219	J319	11.0	5.0			
◆CP3S	◆CP03	3.6	1.6			
◆CP311S	◆CP311	4.6	2.1			
◆CP4S	◆CP04	8.3	3.8			
◆CP5S	◆CP05	8.7	4.0	100/box	◆T300 ◆S038 IT9000	Hose
◆CP6S	◆CP06	9.7	4.4			
◆CP7S	◆CP07	10.6	4.8			
◆CP8S	◆CP08	11.5	5.2			
◆CP9S	◆CP09	12.6	5.7			
◆CP10S	◆CP10	6.8	3.1			
◆CP11S	◆CP11	7.3	3.3			
◆CP12S	◆CP12	7.7	3.5			
◆CP14S	◆CP14	8.7	4.0			
◆CP16S	◆CP16	4.9	2.2			
◆CP18S	◆CP18	5.5	2.5	50/box		
◆CP20S	◆CP20	5.9	2.7			
◆CP24S	◆CP24	6.8	3.1			
◆CP28S	◆CP28	7.4	3.4			
◆CP32S	◆CP32	8.2	3.7			
◆JU242	-	1.2	.54			
◆JU252	-	1.4	.64			
JU253	-	1.7	.77			
JU254	-	1.9	.86			
JU256	-	2.2	1.00			
JU257	-	2.4	1.09			
◆JU258	-	2.6	1.18	100/box	◆A920 IT1000 ◆A940 IT3000	Boots Sleeves
◆JU259	-	2.7	1.23			
◆V006		.5	.2			
◆V008		.5	.2			
◆V010		.6	.3			
◆V012		.6	.3			
◆V016		.6	.3			
◆V020		.6	.3			
◆V024		.7	.3			
◆V028		.7	.3			
◆V032		.8	.3			
◆V036		.8	.4			
◆V040		.8	.4			
◆V044		.9	.4			
◆V048		.9	.4			
◆V052		.9	.4			
◆V056		1.0	.4			
◆V064		1.1	.5			
◆V072		1.3	.6			
◆V080		1.3	.6			
◆V088		1.4	.6			
◆V104		1.5	.7			
				10/box	Screw driver	General Fastening where removal or retightening without special tools is required

◆ Most popular items with immediate availability from the Denver or Pennsylvania warehouse. Will ship within 3 working days. Call for availability on other products.

Clamps

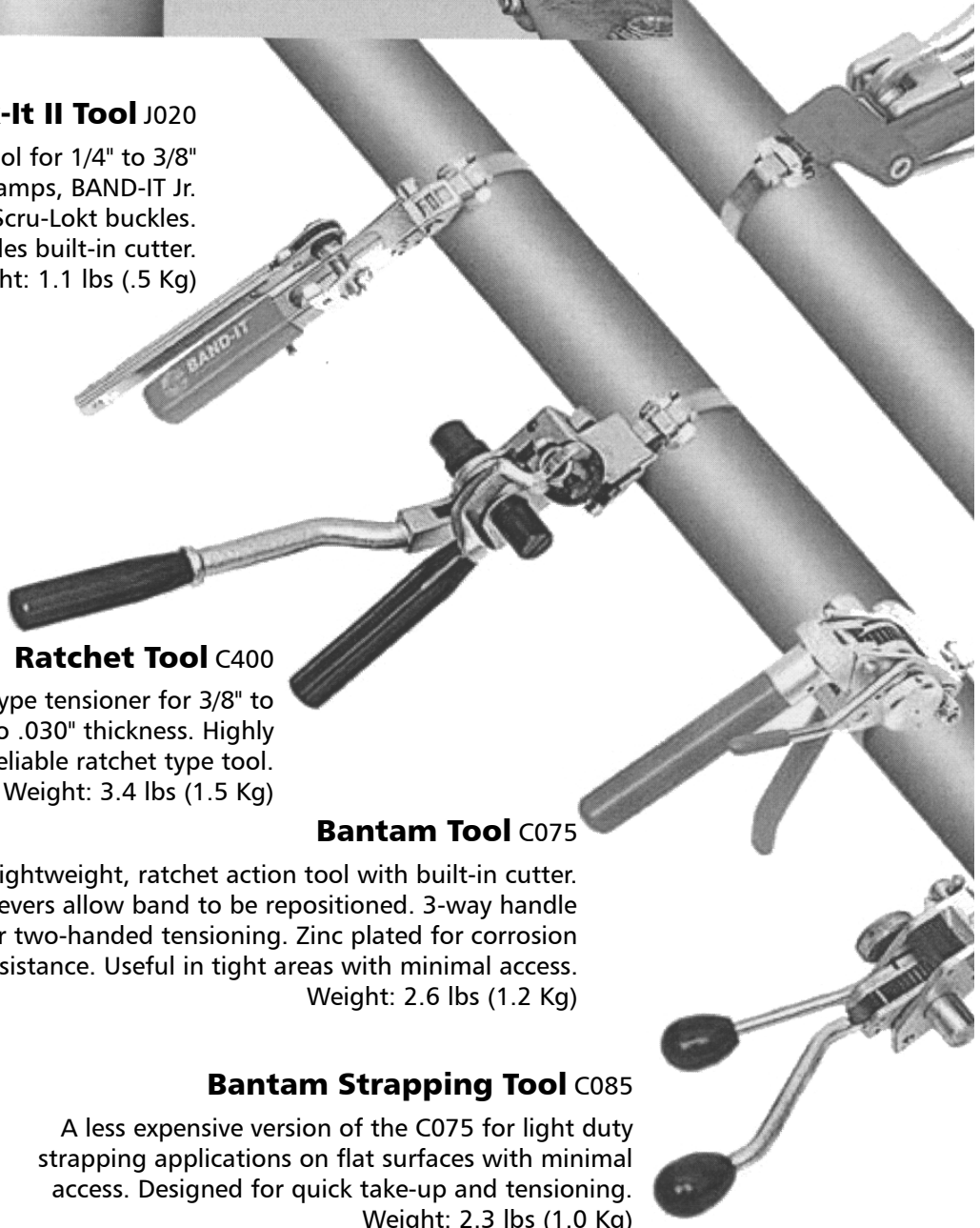


## Hand Tools



### **Pok-It II Tool** J020

Lightweight, pocket size tool for 1/4" to 3/8" wide band, Free-end Clamps, BAND-IT Jr. Clamps, Ear-Lokt and Scru-Lokt buckles. Applies tension and includes built-in cutter.  
Weight: 1.1 lbs (.5 Kg)



### **Ratchet Tool** C400

Heavy duty windlass type tensioner for 3/8" to 3/4" band up to .030" thickness. Highly portable, fast, reliable ratchet type tool.  
Weight: 3.4 lbs (1.5 Kg)

### **Bantam Tool** C075

Compact, lightweight, ratchet action tool with built-in cutter. Tension release levers allow band to be repositioned. 3-way handle adjusts for one or two-handed tensioning. Zinc plated for corrosion resistance. Useful in tight areas with minimal access.  
Weight: 2.6 lbs (1.2 Kg)

### **Bantam Strapping Tool** C085

A less expensive version of the C075 for light duty strapping applications on flat surfaces with minimal access. Designed for quick take-up and tensioning.  
Weight: 2.3 lbs (1.0 Kg)

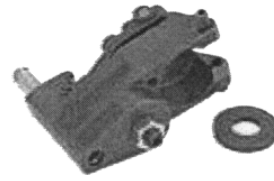


**BAND-It Tool C001**

Drop forged tool with built-in cutter tensions over 2,4000 lbs. Spring-loaded gripper lever and friction-held cutoff lever with plastic grip improves ease-of-use. Blue, epoxy powder coated finish minimizes impact, chemical and corrosive elements. Use to apply band, strapping and Free-End Clamps.  
Weight: 4.4 lbs (2.0 Kg)

**Heavy Duty BAND-It Tool C003**

For applications requiring extra strength. 25% larger tension screw, heavier handle and bearing. Ideal for municipal applications and large diameter hose clamping.  
Weight: 5.1 lbs (2.3 Kg)



**Tension Limiter C065**

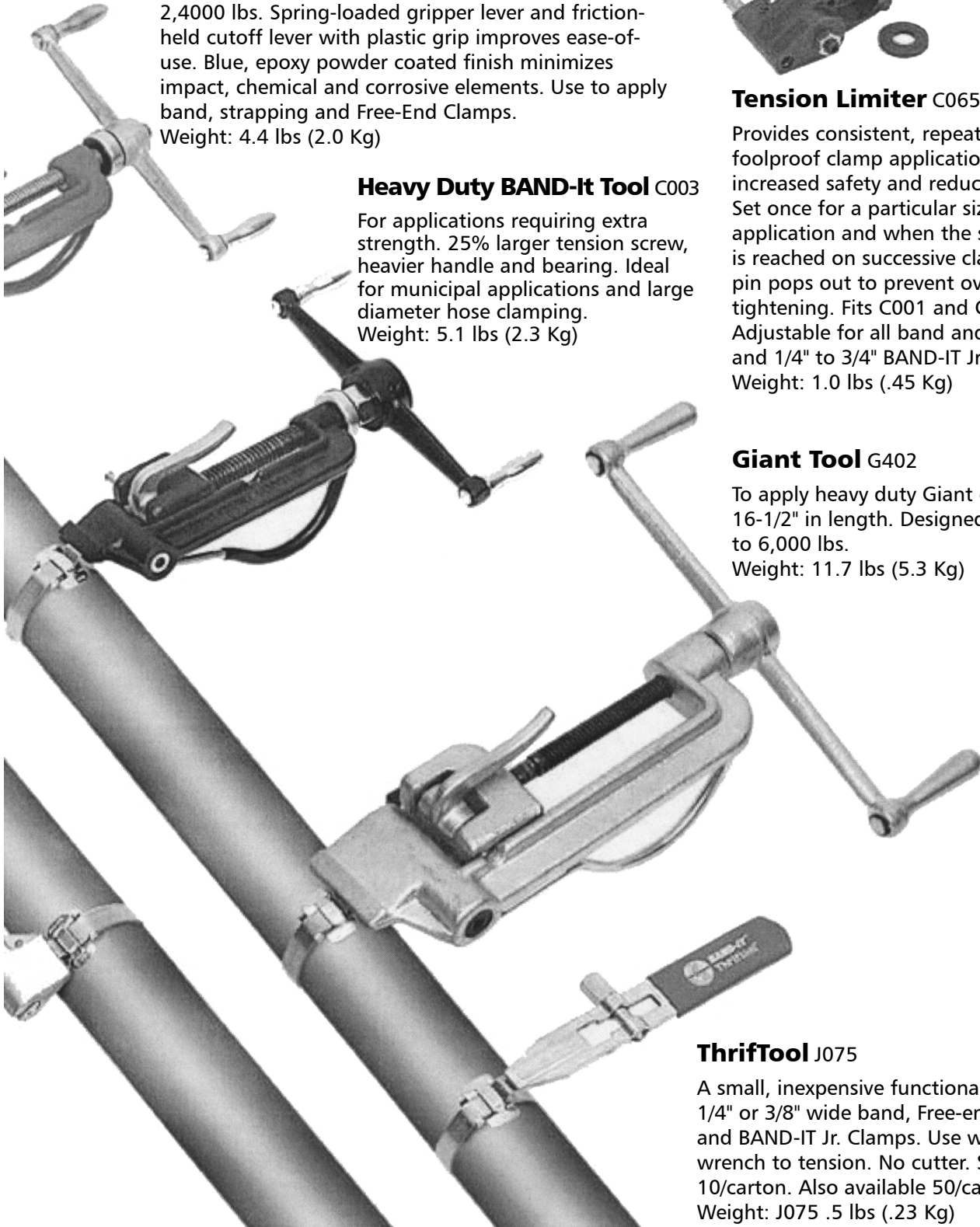
Provides consistent, repeatable foolproof clamp application for increased safety and reduced liability. Set once for a particular size and application and when the same force is reached on successive clamps, a pin pops out to prevent over-tightening. Fits C001 and C002. Adjustable for all band and buckle and 1/4" to 3/4" BAND-IT Jr. Clamps.  
Weight: 1.0 lbs (.45 Kg)

**Giant Tool G402**

To apply heavy duty Giant clamps. 16-1/2" in length. Designed to pull up to 6,000 lbs.  
Weight: 11.7 lbs (5.3 Kg)

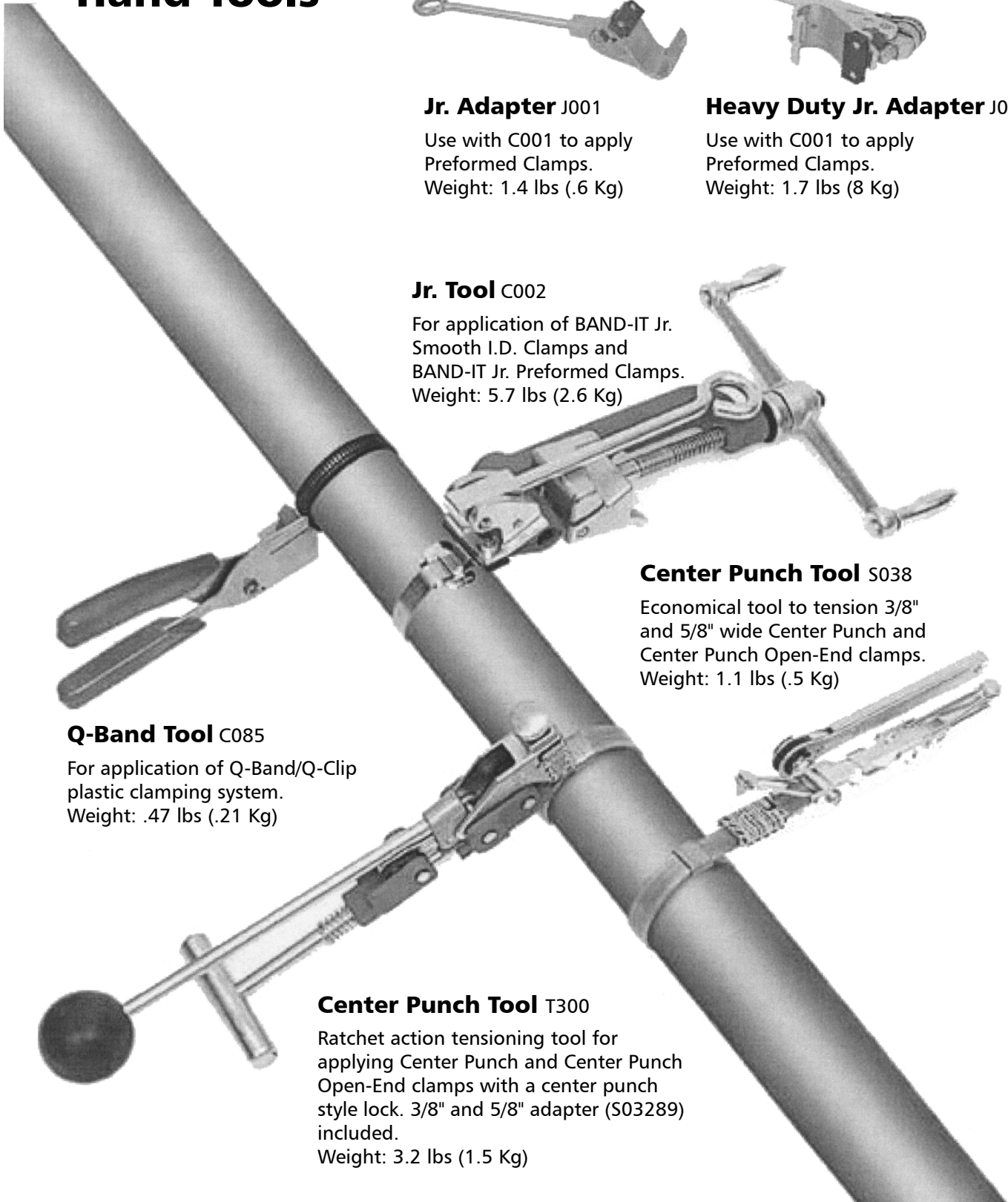
**ThrifTool J075**

A small, inexpensive functional tool for 1/4" or 3/8" wide band, Free-end Clamps and BAND-IT Jr. Clamps. Use with a 1/2" wrench to tension. No cutter. Shipped 10/carton. Also available 50/carton (J076)  
Weight: J075 .5 lbs (.23 Kg)

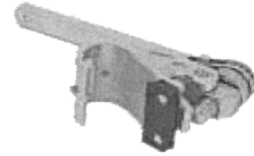


**Clamps**

**Hand Tools**



**Jr. Adapter J001**  
Use with C001 to apply  
Preformed Clamps.  
Weight: 1.4 lbs (.6 Kg)



**Heavy Duty Jr. Adapter J050**  
Use with C001 to apply  
Preformed Clamps.  
Weight: 1.7 lbs (8 Kg)

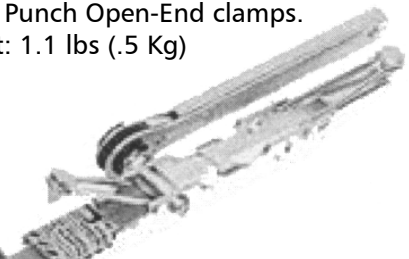
**Jr. Tool C002**

For application of BAND-IT Jr.  
Smooth I.D. Clamps and  
BAND-IT Jr. Preformed Clamps.  
Weight: 5.7 lbs (2.6 Kg)



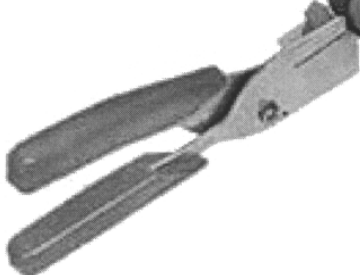
**Center Punch Tool S038**

Economical tool to tension 3/8"  
and 5/8" wide Center Punch and  
Center Punch Open-End clamps.  
Weight: 1.1 lbs (.5 Kg)



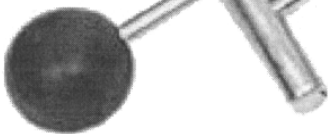
**Q-Band Tool C085**

For application of Q-Band/Q-Clip  
plastic clamping system.  
Weight: .47 lbs (.21 Kg)



**Center Punch Tool T300**

Ratchet action tensioning tool for  
applying Center Punch and Center Punch  
Open-End clamps with a center punch  
style lock. 3/8" and 5/8" adapter (S03289)  
included.  
Weight: 3.2 lbs (1.5 Kg)



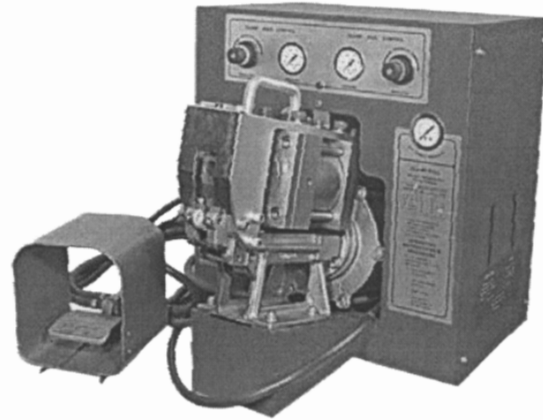
Clamps

**Power Tools**



**Standard Air Tool S750**

The foot controlled standard economy air tool applies the complete range of BAND-IT Jr. Smooth I.D. and Preformed Clamps.



**Automatic Air Tool S350**

For high volume production clamping of all widths and sizes of BAND-IT Jr. Smooth I.D. and Preformed Clamps. Automatically tensions and cuts off clamp tail after locking. Operated on 80-120 p.s.i. air line pressure. Table top mounting with foot pedal operation. The Automatic Air Tool complete assembly consists of S350 and S260 as shown.



**The IT9000 Electric Bench Mount Tool**

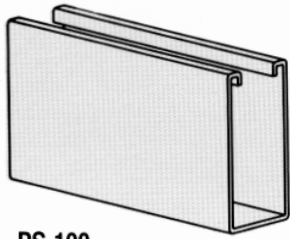
- Dial-in electronically controlled tension
- Automatic tail ejection
- Automatic Lock/cut-off
- Heavy duty gearing
- Automatic reset
- 22 inch single-pull take-up
- Unique long-life gripping system
- Unmatched accuracy and repeatability
- Designed to install Ultra-Lok, Jr. and Center Punch Clamps
- Computer controlled



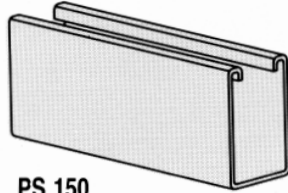
See the IT9000 in action!  
 Ask for a video CD or visit our website:  
[www.band-it-idex.com](http://www.band-it-idex.com)

**Clamps**

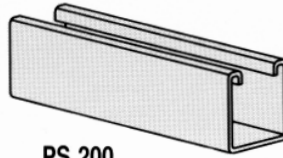
**Framing Channel**



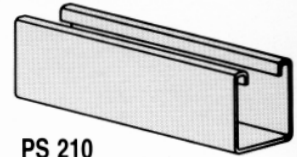
**PS 100**  
1 1/8" x 3 1/4" x 12 ga.



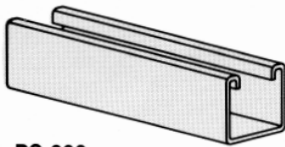
**PS 150**  
1 1/8" x 2 7/16" x 12 ga.



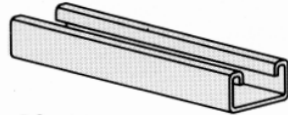
**PS 200**  
1 1/8" x 1 1/8" x 12 ga.



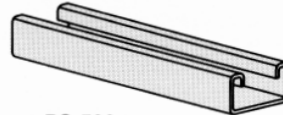
**PS 210**  
1 1/8" x 1 1/8" x 14 ga.



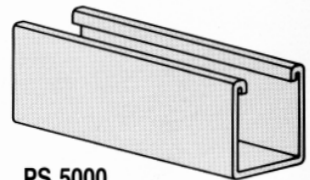
**PS 300**  
1 1/8" x 1 3/8" x 12 ga.



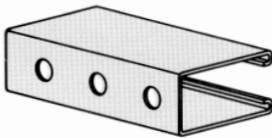
**PS 400**  
1 1/8" x 1" x 12 ga.



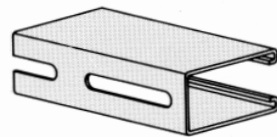
**PS 500**  
1 1/8" x 1 1/16" x 14 ga.



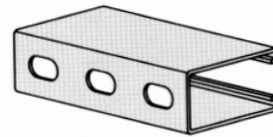
**PS 5000**  
2" x 2" x 10 ga.



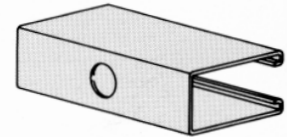
**Channel With Holes**  
PS 100 H PS 300 H  
PS 150 H PS 400 H  
PS 200 H PS 500 H  
PS 210 H



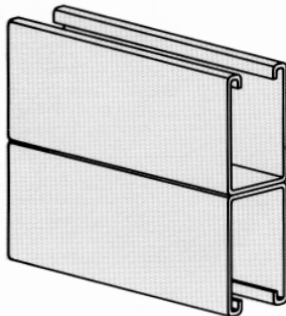
**Channel With Long Slots**  
PS 100 S PS 300 S  
PS 150 S PS 400 S  
PS 200 S PS 500 S  
PS 210 S



**Channel With Elongated Holes**  
PS 100 EH PS 300 EH  
PS 150 EH PS 400 EH  
PS 200 EH PS 500 EH  
PS 210 EH



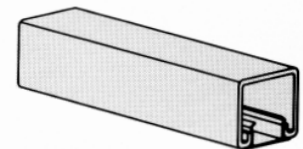
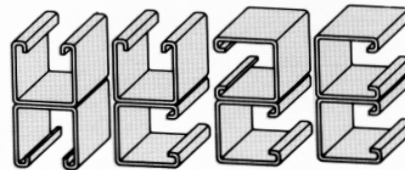
**Channel With Knockouts**  
PS 100 K06 PS 210 K06  
PS 150 K06 PS 300 K06  
PS 200 K06 PS 400 K06



**Welded Channel**  
PS 100 2T3 PS 300 2T3  
PS 150 2T3 PS 400 2T3  
PS 200 2T3 PS 500 2T3  
PS 210 2T3

**MANY COMBINATION AVAILABLE FROM THE BASIC CHANNEL**

For extra heavy duty service, multiple purpose or applications requiring maximum flexibility, Power-Strut channel is available in any combination with 2 or more units welded: back-to-back, side-to-side, etc. Many other combinations are available on special order.



**Closure Strip**  
PS 707  
For all 1 1/8" channels

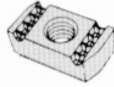
**Clamps**

**Fasteners**

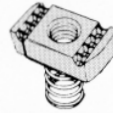


**Topgrip Nut With Spring On Top**

FOR USE WITH ALL POWER-STRUT CHANNELS

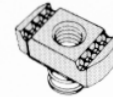


**Clamping Nut Without Spring**



**Clamping Nut With Regular Spring**

for PS 200, PS 210 and PS 300 channels



**Clamping Nut With Short Spring**

for PS 400, PS 500 channels



**Clamping Nut With Long Spring**

for use with PS 100 and PS 150 channels



**Hex Head Cap Screw**

PS 6024  
3/8"-1/2" dia. 3/4"-2" lengths



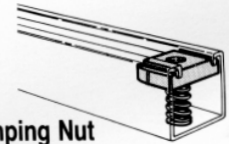
**Continuous Threaded Rod**

G 146  
1/4"-3/4" sizes



**Rod Coupling**

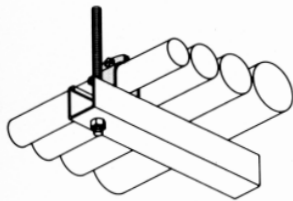
G 135  
1/4"-3/4" sizes



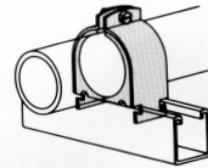
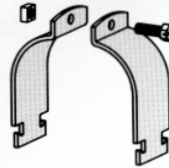
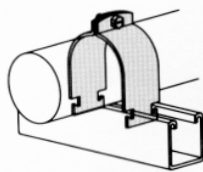
**Clamping Nut PS 9227**

For use with PS 5000 channel

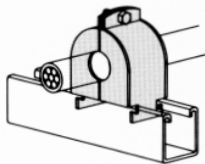
**Conduit and Pipe Clamps**



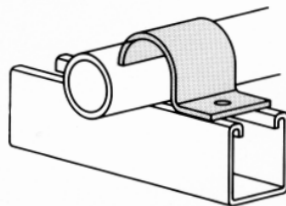
- PS 1000 EMT Conduit Clamp 1/2"-2" conduit sizes
- PS 1100 Standard Pipe Clamp (GRC and IMC) 3/8"-10" pipe sizes
- PS 1200 O.D. Tubing Clamp 1/4"-8 5/8" O.D. sizes
- PS 1300 Universal Pipe Clamp for EMT, IMC & GRC 1/2"-2" pipe sizes



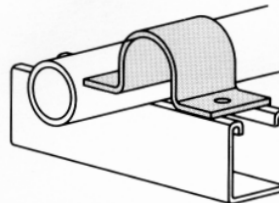
**Clamp With Cushions PS 1400**  
Assembly Includes Clamp and Thermoplastic Cushions  
3/8"-2 1/2" O.D. sizes



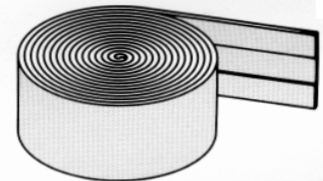
**Porcelain Cable Clamp PS 723**  
3/8"-4 1/2" O.D. cable



**One Hole Clamp For O.D. Tubing PS 1450**  
1/4"-1" tube sizes



**Hold Down Clamp PS 3126**  
1/2"-6" pipe sizes

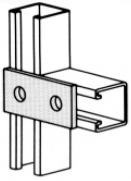


**Power Wrap PS 3792**

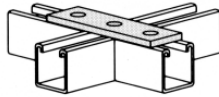
**Clamps**



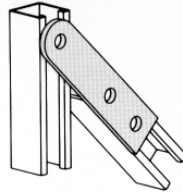
**Channel Fittings**



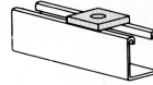
**Two Hole Splice Plate**  
PS 601



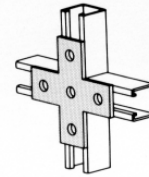
**Three Hole Splice Plate**  
PS 602



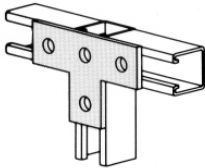
**Three Hole Swivel Plate**  
PS 617



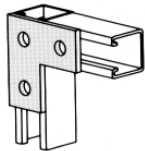
**Square Washer**  
PS 619  
1/4"-7/8" rod sizes



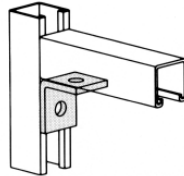
**Cross Plate**  
PS 712



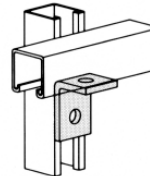
**Tee Plate**  
PS 714



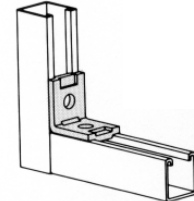
**Flat Angle Plate**  
PS 718



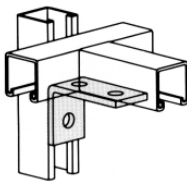
**Two Hole End Angle**  
PS 603



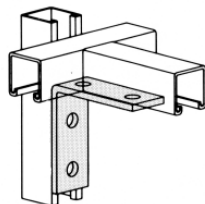
**Two Hole Corner Angle**  
PS 604



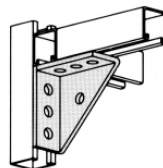
**Two Hole Angle With Impressions On Both Legs**  
PS 806



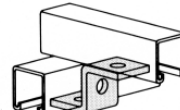
**Three Hole Corner Angle**  
PS 605



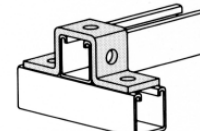
**Four Hole Corner Angle**  
PS 607



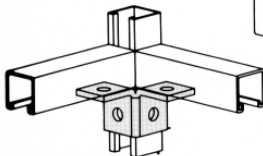
**Universal Angle Bracket**  
PS 3373



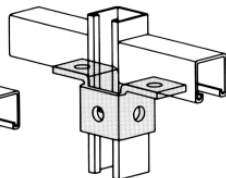
**Zee Support**  
PS 2601 for PS 150  
PS 611 for PS 200 & 210  
PS 711 for PS 300  
PS 612 for PS 400  
PS 928 for PS 500  
PS 756 for PS 200 2T3 & PS 100



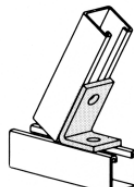
**"U" Support**  
PS 2648 for PS 150  
PS 613 for PS 200 & 210  
PS 710 for PS 300  
PS 978 for PS 400  
PS 929 for PS 500  
PS 679 for PS 100 & 200 2T3



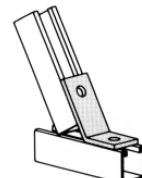
**Four Hole Double Corner Connector**  
PS 665



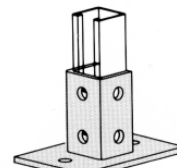
**Five Hole Two Angle Connector**  
PS 923



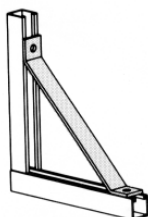
**Two Hole Closed Angle Connector**  
PS 624



**Two Hole Open Angle Connector**  
PS 633



**Post Base**  
PS 3025 for PS 200 & 210  
PS 2064 for PS 200 2T3  
PS 3013 for PS 200 & 210  
PS 3029 for PS 200 2T3  
PS 3064 for PS 200 2T3



**Strut Brace**  
PS 926

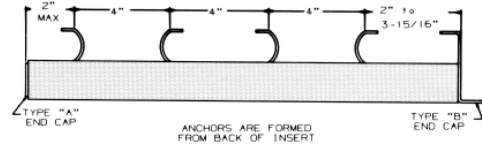


**Diagonal Tube Brace**  
PS 810

**Clamps**



**Concrete Inserts**



**Continuous  
Concrete  
Insert**  
PS 349  
1 3/8" x 1 3/8" x 12 ga.  
3'-20' lengths

**PS 656**  
Type 'A' End Cap

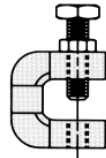
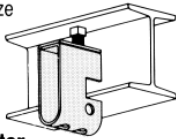
**PS 653**  
Type 'B' End Cap

**PS 6151**  
Plastic Closure Strip

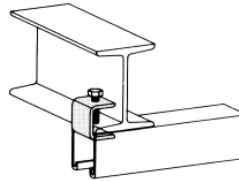
**Concrete  
Insert With  
1/2" x 3" studs**  
PS 5000T

**Beam Clamps**

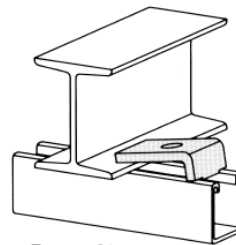
**Beam Clamp**  
PS 2622  
1/2" max. rod size  
**Hook Rod  
Assembly**  
PS 736  
6" or 10"  
**Swing Adaptor**  
PS 2623  
**Swivel Nut**  
PS 3201  
1/4", 3/8" or 1/2"



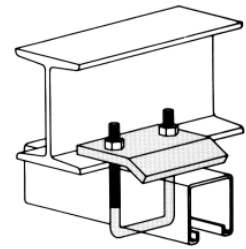
**Clamp With Locknut**  
G 86  
3/8"-7/8" size



**"1" Beam Clamp**  
PS 907



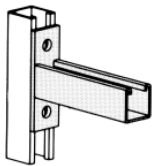
**Beam Clamp**  
PS 686



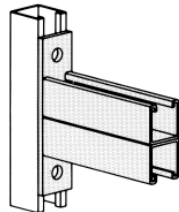
**Beam Clamp**  
PS 2651

**Clamps**

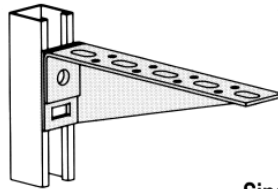
**Supports**



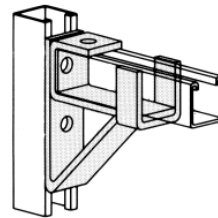
**Reversible Strut Bracket**  
PS 651  
6"-24" lengths



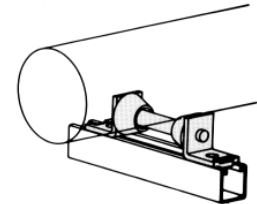
**Double Channel Bracket**  
PS 809  
12"-36" lengths



**Shelf Bracket**  
PS 838  
Right and Left Hand



**Single Channel  
Bracket Support**  
PS 708 for PS 200 & 210  
PS 3164 for PS 210 2T3 & 200 2T3



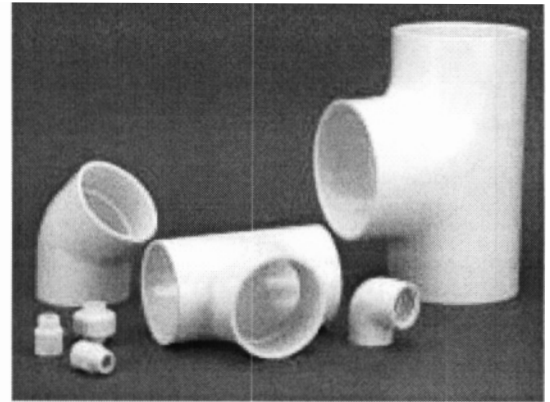
**Pipe Roller Support**  
PS 1901  
1"-8" pipe sizes  
PS 1902  
1"-12" pipe sizes



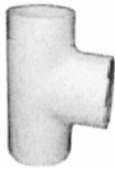
# PVC Fittings

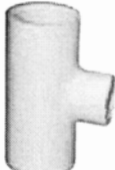
## SCHEDULE 40 Molded

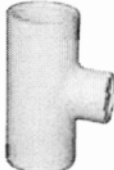
- Material conforms to ASTM D-1784 Type 1, Grade 1, white PVC
- Meets, or exceeds, ASTM D-2466 for socket type PVC fittings
- PTFE tape required for threaded fittings
- Use with Schedule 40 PVC pipe or IPS-sized class (SDR) pipe (pressure rated) systems.
- Applications include irrigation lines, plant service water, utility piping, potable water lines.
- Pressure rating of the fittings is not the same as the pipe. Consult DF Burnham for size and configure pressure recommendations.



Nipples & Fittings

	Size (In.)	Part Number
<b>Tee</b> S 	3/8	401-003
	1/2	401-005
	3/4	401-007
	1	401-010
	1 1/4	401-012
	1 1/2	401-015
	2	401-020
	2 1/2	401-025
	3	401-030
	4	401-040
	5	401-050
	6	401-060
	8	401-080
10	401-100	
12	401-120	

	Size (In.)	Part Number
<b>Reducing Tee</b> S 	3/8x3/8x1/2	401-053
	1/2x1/2x3/4	401-074
	1/2x1/2x1	401-075
	3/4x1/2x1/2	401-094
	3/4x1/2x3/4	401-095
	3/4x3/4x1/2	401-101
	3/4x3/4x1	401-102
	1x1/2x1	401-122
	1x3/4x1/2	401-124
	1x3/4x3/4	401-125
	1x3/4x1	401-126
	1x1x1/2	401-130
	1x1x3/4	401-131
	1x1x1 1/4	401-132
	1x1x1 1/2	401-133
	1 1/4x1x1/2	401-156
	1 1/4x1x3/4	401-157
	1 1/4x1x1	401-158
	1 1/4x1 1/4x1/2	401-166
	1 1/4x1 1/4x3/4	401-167
	1 1/4x1 1/4x1	401-168
	1 1/4x1 1/4x1 1/2	401-169
	1 1/4x1 1/4x2	401-170
	1 1/2x1 1/4x1/2	401-199
	1 1/2x1 1/4x3/4	401-201
	1 1/2x1 1/4x1	401-202
	1 1/2x1 1/2x1/2	401-209

	Size (In.)	Part Number
<b>Reducing Tee</b> S - Continued 	1 1/2x1 1/2x3/4	401-210
	1 1/2x1 1/2x1	401-211
	1 1/2x1 1/2x1 1/4	401-212
	1 1/2x1 1/2x2	401-213
	1 1/2x1 1/2x2 1/2	401-214
	2x1 1/2x3/4	401-238
	2x1 1/2x1	401-239
	2x1 1/2x1 1/2	401-241
	2x2x1/2	401-247
	2x2x3/4	401-248
	2x2x1	401-249
	2x2x1 1/4	401-250
	2x2x1 1/2	401-251
	2 1/2x2 1/2x1/2	401-287
	2 1/2x2 1/2x3/4	401-288
	2 1/2x2 1/2x1	401-289
	2 1/2x2 1/2x1 1/4	401-290
	2 1/2x2 1/2x1 1/2	401-291
	2 1/2x2 1/2x2	401-292
	3x3x1/2	401-333
	3x3x3/4	401-334
	3x3x1	401-335
	3x3x1 1/4	401-336
	3x3x1 1/2	401-337
	3x3x2	401-338
	3x3x4	401-342
	4x4x3/4	401-416
	4x4x1	401-417
	4x4x1 1/4	401-418
	4x4x1 1/2	401-419
	4x4x2	401-420
	4x4x3	401-422
	5x5x2	401-486
5x5x3	401-488	
5x5x4	401-490	
6x6x2	401-528	
6x6x3	401-530	
6x6x4	401-532	
8x8x3	401-580	
8x8x4	401-582	
8x8x6	401-585	
10x10x6	401-626	
12x12x8	401-668	





# PVC Fittings

## SCHEDULE 40 Molded

### Tee

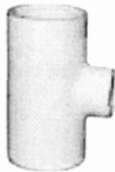
SxFT



Size (In.)	Part Number
3/8	402-003
1/2	402-005
3/4	402-007
1	402-010
1 1/4	402-012
1 1/2	402-015
2	402-020
2 1/2	402-025
3	402-030
4	402-040

### Reducing Tee

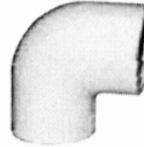
SxFT



1/2x1/2x1/8	402-071
1/2x1/2x1/4	402-072
1/2x1/2x3/4	402-074
3/4x1/2x1/2	402-094
3/4x1/2x3/4	402-095
3/4x3/4x1/2	402-101
1x3/4x1/2	402-124
1x3/4x3/4	402-125
1x1x1/2	402-130
1x1x3/4	402-131
1 1/4x1x1/2	402-156
1 1/4x1x3/4	402-157
1 1/4x1x1	402-158
1 1/4x1 1/4x1/2	402-166
1 1/4x1 1/4x3/4	402-167
1 1/4x1 1/4x1	402-168
1 1/2x1 1/4x1/2	402-199
1 1/2x1 1/4x3/4	402-201
1 1/2x1 1/4x1	402-202
1 1/2x1 1/2x1/2	402-209
1 1/2x1 1/2x3/4	402-210
1 1/2x1 1/2x1	402-211
1 1/2x1 1/2x1 1/4	402-212
2x1 1/2x3/4	402-238
2x1 1/2x1	402-239
2x2x1/2	402-247
2x2x3/4	402-248
2x2x1	402-249
2x2x1 1/4	402-250
2x2x1 1/2	402-251
2 1/2x2 1/2x1/2	402-287
2 1/2x2 1/2x3/4	402-288
2 1/2x2 1/2x1	402-289
2 1/2x2 1/2x1 1/4	402-290
2 1/2x2 1/2x1 1/2	402-291
3x3x1/2	402-333
3x3x3/4	402-334
3x3x1	402-335
3x3x1 1/4	402-336
3x3x1 1/2	402-337
3x3x2	402-338
4x4x1	402-417
4x4x1 1/2	402-419
4x4x2	402-420
4x4x3	402-422
5x5x4	402-490
6x6x2	402-528
6x6x3	402-530
6x6x4	402-532
8x8x3	402-580
8x8x4	402-582

### 90° Elbow

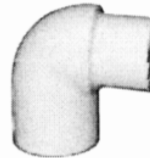
S



Size (In.)	Part Number
3/8	406-003
1/2	406-005
3/4	406-007
1	406-010
1 1/4	406-012
1 1/2	406-015
2	406-020
2 1/2	406-025
3	406-030
4	406-040
5	406-050
6	406-060
8	406-080
10	406-100
12	406-120

### 90° Reducing Elbow

S



3/8x1/2	406-053
3/4x1/2	406-101
1x1/2	406-130
1x3/4	406-131
1 1/4x1/2	406-166
1 1/4x3/4	406-167
1 1/4x1	406-168
1 1/2x1/2	406-209
1 1/2x1	406-211
2x1 1/2	406-251

### 90° Elbow

SxFT



1/2	407-005
3/4	407-007
1	407-010
1 1/4	407-012
1 1/2	407-015
2	407-020
2 1/2	407-025
3	407-030
4	407-040

### 90° Reducing Elbow

SxFT



3/8x1/2	407-053
1/2x3/4	407-074
3/4x1/2	407-101
1x1/2	407-130
1x3/4	407-131
1 1/4x1	407-168
1 1/2x1	407-211
1 1/2x1 1/4	407-212
2x1 1/2	407-251

### 90° Street Elbow

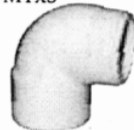
SPxS



1/2	409-005
3/4	409-007
1	409-010
1 1/4	409-012
1 1/2	409-015
2	409-020

### 90° Street Elbow

MTxS

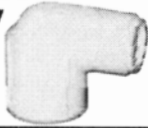



1/2	410-005
3/4	410-007
1	410-010
1 1/4	410-012
1 1/2	410-015
2	410-020
3/4x1/2	410-101

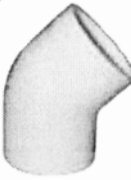
Nipples & Fittings

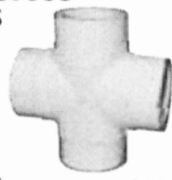
# PVC Fittings

## SCHEDULE 40 Molded


	Size (In.)	Part Number
<b>90° Street Elbow</b> MTxFT 	1/2	412-005
	3/4	412-007
	1	412-010
	1 1/4	412-012
	1 1/2	412-015
	2	412-020


	Size (In.)	Part Number
<b>90° Side Outlet Elbow</b> 	SxSxS	
	1/2	413-005
	SxSxT	
	1/2	414-005
	3/4	414-007
	3/4x3/4x1/2	414-101
	1x1x1/2	414-130


	Size (In.)	Part Number
<b>45° Elbow</b> S 	1/2	417-005
	3/4	417-007
	1	417-010
	1 1/4	417-012
	1 1/2	417-015
	2	417-020
	2 1/2	417-025
	3	417-030
	4	417-040
	5	417-050
	6	417-060
		8
	10	417-100
	12	417-120


	Size (In.)	Part Number
<b>Cross</b> S 	1/2	420-005
	3/4	420-007
	1	420-010
	1 1/4	420-012
	1 1/2	420-015
	2	420-020
	2 1/2	420-025
	3	420-030
	4	420-040


Larger sizes available

	Size (In.)	Part Number
<b>Coupling</b> S 	3/8	429-003
	1/2	429-005
	3/4	429-007
	1	429-010
	1 1/4	429-012
	1 1/2	429-015
	2	429-020
	2 1/2	429-025
	3	429-030
	4	429-040
	5	429-050
	6	429-060
8	429-080	

	Size (In.)	Part Number
<b>Female Adapter</b> SxFT 	3/8	435-003
	1/2	435-005
	3/4	435-007
	1	435-010
	1 1/4	435-012
	1 1/2	435-015
	2	435-020

	Size (In.)	Part Number
<b>Female Adapter</b> SxFT - Continued 	2 1/2	435-025
	3	435-030
	4	435-040
	5	435-050
	6	435-060
	8	435-080
	1/2x1/4	435-072
	1/2x3/8	435-073
	1/2x3/4	435-074
	3/4x1/2	435-101
	3/4x1	435-102
	1x3/4	435-131
1x1/2	435-133	

	Size (In.)	Part Number
<b>Reinforced Female Adapter</b> SxSR FT 	1/4	435-002SR
	3/8	435-003SR
	1/2	435-005SR
	3/4	435-007SR
	1	435-010SR
	1 1/4	435-012SR
	1 1/2	435-015SR
	2	435-020SR
	2 1/2	435-025SR
	3	435-030SR
	4	435-040SR

	Size (In.)	Part Number
<b>Male Adapter</b> MTxS 	3/8	436-003
	1/2	436-005
	3/4	436-007
	1	436-010
	1 1/4	436-012
	1 1/2	436-015
	2	436-020
	2 1/2	436-025
	3	436-030
	4	436-040
	5	436-050
	6	436-060
	8	436-080
	1/2x3/8	436-073
	1/2x3/4	436-074
	3/4x1/2	436-101
	3/4x1	436-102
	1x3/4	436-131
	1x1 1/4	436-132
	1 1/4x1	436-168
	1 1/4x1 1/2	436-169
	1 1/2x1 1/4	436-212
	1 1/2x2	436-213
	2x1 1/2	436-251
	2x2 1/2	436-252
	2 1/2x3	436-294
	2 1/2x4	436-296
	3x4	436-342

Nipples & Fittings



# PVC Fittings

## SCHEDULE 40 Molded

	Size (In.)	Part Number
<b>Reducer Bushing</b> SPxS	1/2x1/4	437-072
	1/2x3/8	437-073
	3/4x1/2	437-101
	1x1/2	437-130
	1x3/4	437-131
	1 1/4x1/2	437-166
	1 1/4x3/4	437-167
	1 1/4x1	437-168
	1 1/2x1/2	437-209
	1 1/2x3/4	437-210
	1 1/2x1	437-211
	1 1/2x1 1/4	437-212
	2x1/2	437-247
	2x3/4	437-248
	2x1	437-249
	2x1 1/4	437-250
	2x1 1/2	437-251
	2 1/2x1/2	437-287
	2 1/2x3/4	437-288
	2 1/2x1	437-289
	2 1/2x1 1/4	437-290
	2 1/2x1 1/2	437-291
	2 1/2x2	437-292
	3x3/4	437-334
	3x1	437-335
	3x1 1/4	437-336
	3x1 1/2	437-337
	3x2	437-338
	3x2 1/2	437-339
	4x2	437-420
	4x2 1/2	437-421
	4x3	437-422
	5x2	437-486
	5x3	437-488
5x4	437-490	
6x2	437-528	
6x3	437-530	
6x4	437-532	
6x5	437-534	
8x4	437-582	
8x6	437-585	
10x6	437-626	
10x8	437-628	
12x8	437-668	
12x10	437-670	

	Size (In.)	Part Number
<b>Reducer Bushing</b> SPxFT	1/2x1/8	438-071
	1/2x1/4	438-072
	1/2x3/8	438-073
	3/4x1/4	438-098
	3/4x1/2	438-101
	1x3/8	438-129
	1x1/2	438-130
	1x3/4	438-131
	1 1/4x1/2	438-166
	1 1/4x3/4	438-167
	1 1/4x1	438-168
	1 1/2x1/4	438-207
	1 1/2x1/2	438-209
	1 1/2x3/4	438-210

	Size (In.)	Part Number
<b>Reducer Bushing</b> SPxFT - Continued	1 1/2x1	438-211
	1 1/2x1 1/4	438-212
	2x1/4	438-245
	2x1/2	438-247
	2x3/4	438-248
	2x1	438-249
	2x1 1/4	438-250
	2x1 1/2	438-251
	2 1/2x1/2	438-287
	2 1/2x3/4	438-288
	2 1/2x1	438-289
	2 1/2x1 1/4	438-290
	2 1/2x1 1/2	438-291
	2 1/2x2	438-292
	3x3/4	438-334
	3x1	438-335
	3x1 1/4	438-336
	3x1 1/2	438-337
	3x2	438-338
	3x2 1/2	438-339
	4x2	438-420
	4x2 1/2	438-421
	4x3	438-422
	5x3	438-488
	5x4	438-490
	6x2	438-528
	6x3	438-530
6x4	438-532	
6x5	438-534	

	Size (In.)	Part Number
<b>Reducer Bushing</b> MTxFT	3/8x1/4	439-052
	1/2x1/4	439-072
	1/2x3/8	439-073
	3/4x1/4	439-098
	3/4x3/8	439-099
	3/4x1/2	439-101
	1x1/2	439-130
	1x3/4	439-131
	1 1/4x1/2	439-166
	1 1/4x3/4	439-167
	1 1/4x1	439-168
	1 1/2x1/2	439-209
	1 1/2x3/4	439-210
	1 1/2x1	439-211
	1 1/2x1 1/4	439-212
	2x1	439-249
	2x1 1/4	439-250
	2x1 1/2	439-251
	2 1/2x2	439-292
3x2	439-338	
3x2 1/2	439-339	

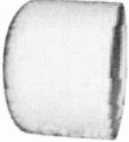
### Key to Abbreviations

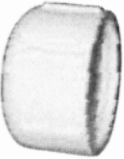
S	=	Socket
FT	=	Female Iron Pipe Thread
MT	=	Male Iron Pipe Thread
SP	=	Spigot
SR	=	Stainless Steel Reinforced
OD	=	Pipe Outside Diameter


Nipples & Fittings


# PVC Fittings


## SCHEDULE 40 Molded


	Size (In.)	Part Number
<b>Cap</b> S 	3/8	447-003
	1/2	447-005
	3/4	447-007
	1	447-010
	1 1/4	447-012
	1 1/2	447-015
	2	447-020
	2 1/2	447-025
	3	447-030
	4	447-040


	Size (In.)	Part Number
<b>Cap</b> FT 	3/8	448-003
	1/2	448-005
	3/4	448-007
	1	448-010
	1 1/4	448-012
	1 1/2	448-015
	2	448-020
	2 1/2	448-025
	3	448-030
	4	448-040


	Size (In.)	Part Number
<b>Plug</b> SP 	3/8	449-003
	1/2	449-005
	3/4	449-007
	1	449-010
	1 1/4	449-012
	1 1/2	449-015
	2	449-020
	2 1/2	449-025
	3	449-030
	4	449-040


	Size (In.)	Part Number
<b>Plug</b> MT 	3/8	450-003
	1/2	450-005
	3/4	450-007
	1	450-010
	1 1/4	450-012
	1 1/2	450-015
	2	450-020
	2 1/2	450-025
	3	450-030
	4	450-040

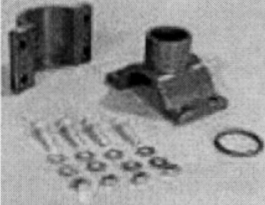
	Size (In.)	Part Number
<b>Union</b> S (Buna-N O-ring; EPDM available.) 	1/2	457-005
	3/4	457-007
	1	457-010
	1 1/4	457-012
	1 1/2	457-015
	2	457-020

	Size (In.)	Part Number
<b>Union</b> FT (Buna-N O-ring; EPDM available.) 	1/2	458-005
	3/4	458-007
	1	458-010
	1 1/4	458-012
	1 1/2	458-015
	2	458-020

	Size (In.)	Part Number
<b>Snap-On Saddle</b> Pipe ODxS 	1/2x1/2	463-005
	3/4x3/4	463-007
	1x1	463-010
	1 1/4x1 1/4	463-012
	1 1/2x1 1/2	463-015
	2x2	463-020
	3/4x1/2	463-101
	1x1/2	463-130

	Size (In.)	Part Number
<b>Snap-On Saddle</b> Pipe ODxFT 	1/2x1/2	464-005
	3/4x3/4	464-007
	1x1	464-010
	3/4x1/2	464-101
	1x1/2	464-130
	1 1/2x3/4	464-210

	Size (In.)	Part Number
<b>Fitting Adapter</b> SPxFT 	1/2	478-005
	3/4	478-007
	1	478-010
	1 1/4	478-012
	1 1/2	478-015
	2	478-020
	3	478-030

	Size (In.)	Part Number
<b>Clamp-On Saddle</b> w/EPDM O-ring seal & stainless steel hardware socket outlet  Schedule 80 shown	2x1/2	466SE-247
	2x3/4	466SE-248
	2x1	466SE-249
	2x1 1/4	466SE-250
	2x1 1/2	466SE-251
	2 1/2x1 1/2	466SE-291
	3x1 1/2*	466SE-333
	3x3/4	466SE-334
	3x1	466SE-335
	3x1 1/4*	466SE-336
	3x1 1/2*	466SE-337
	3x2	466SE-338
	4x1 1/2*	466SE-415
	4x3/4*	466SE-416
	4x1	466SE-417
	4x1 1/4*	466SE-418
	4x1 1/2	466SE-419
	4x2	466SE-420
	4x2 1/2*	466SE-421
	4x3	466SE-422
	6x1 1/2*	466SE-523
	6x3/4*	466SE-524
	6x1	466SE-525
	6x1 1/4*	466SE-526
	6x1 1/2*	466SE-527
	6x2	466SE-528
	6x2 1/2*	466SE-529
	6x3	466SE-530
	6x4	466SE-532

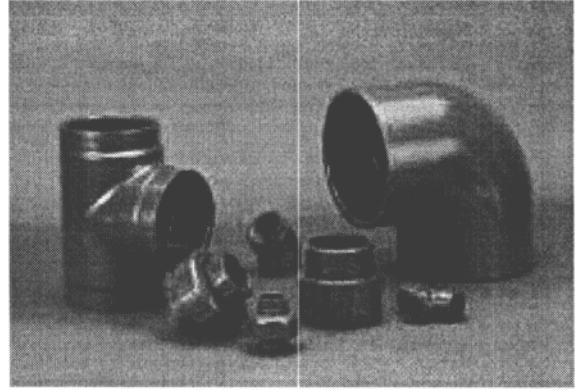
Nipples & Fittings



# PVC Fittings

## SCHEDULE 80 PVC Molded Fittings

- Type 1, Grade 1 (Cell Class 12545-B) meets ASTM D-1784
- Approved by National Sanitation Foundation (NSF) for use with potable cold water.
- Meets ASTM D-2464 (threaded fittings).
- PTFE tape required for threaded fittings to prevent galling of threaded fittings and is necessary for leak-tight threaded joints.
- Meets ASTM D-2467 (socket fittings)
- Gray in color.
- Fittings carry a pressure rating different from the pipe. Contact DF Burnham for specific pressure recommendations.



	Size (in.)	Part Number
<b>Tee</b> S	1/4	801-002
	3/8	801-003
	1/2	801-005
	3/4	801-007
	1	801-010
	1 1/4	801-012
	1 1/2	801-015
	2	801-020
	2 1/2	801-025
	3	801-030
	4	801-040
	6	801-060
8	801-080	
10	801-100	
12	801-120	

	Size (in.)	Part Number
<b>Reducing Tee</b> S	3/4x3/4x1/2	801-101
	1x1x1/2	801-130
	1x1x3/4	801-131
	1 1/4x1x3/4	801-157
	1 1/4x1 1/4x1	801-168
	1 1/2x1 1/2x3/4	801-210
	1 1/2x1 1/2x1	801-211
	1 1/2x1 1/2x1 1/4	801-212
	2x2x1/2	801-247
	2x2x3/4	801-248
	2x2x1	801-249
	2x2x1 1/2	801-251
	3x3x2	801-338
	4x4x2	801-420
4x4x3	801-422	
6x6x3	801-530	
6x6x4	801-532	
8x8x6	801-585	

	Size (in.)	Part Number
<b>Tee</b> S	1/2	802-005
	3/4	802-007
	1	802-010
	1 1/2	802-015
	2	802-020

	Size (in.)	Part Number
<b>Tee</b> FT	1/4	805-002
	3/8	805-003
	1/2	805-005
	3/4	805-007
	1	805-010
	1 1/4	805-012
	1 1/2	805-015
	2	805-020
	2 1/2	805-025
3	805-030	
4	805-040	

	Size (in.)	Part Number
<b>90° Elbow</b> S	1/4	806-002
	3/8	806-003
	1/2	806-005
	3/4	806-007
	1	806-010
	1 1/4	806-012
	1 1/2	806-015
	2	806-020
	2 1/2	806-025
	3	806-030
	4	806-040
	6	806-060
8	806-080	
10	806-100	
12	806-120	


	Size (in.)	Part Number
<b>90° Elbow</b> SxFT	1/2	807-005
	3/4	807-007
	1	807-010
	1 1/4	807-012
	1 1/2	807-015
2	807-020	


Key to Abbreviations	
S	= Socket
FT	= Female Iron Pipe Thread
MT	= Male Iron Pipe Thread
SP	= Spigot
SR	= Stainless Steel Reinforced


Nipples & Fittings


# PVC Fittings


## SCHEDULE 80 PVC Molded Fittings


	Size (In.)	Part Number
<b>90° Elbow</b> FT 	1/4	808-002
	3/8	808-003
	1/2	808-005
	3/4	808-007
	1	808-010
	1 1/4	808-012
	1 1/2	808-015
	2	808-020
	2 1/2	808-025
	3	808-030
4	808-040	


	Size (In.)	Part Number
<b>45° Elbow</b> S 	1/4	817-002
	3/8	817-003
	1/2	817-005
	3/4	817-007
	1	817-010
	1 1/4	817-012
	1 1/2	817-015
	2	817-020
	2 1/2	817-025
	3	817-030
	4	817-040
	6	817-060
	8	817-080
10	817-100	
12	817-120	


	Size (In.)	Part Number
<b>45° Elbow</b> FT 	1/4	819-002
	3/8	819-003
	1/2	819-005
	3/4	819-007
	1	819-010
	1 1/4	819-012
	1 1/2	819-015
	2	819-020
	2 1/2	819-025
	3	819-030
4	819-040	


	Size (In.)	Part Number
<b>Cross</b> S 	1/4	820-002
	3/4	820-007
	1	820-010
	1 1/4	820-012
	1 1/2	820-015
	2	820-020
	2 1/2	820-025
	4	820-040

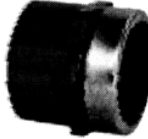
	Size (In.)	Part Number
<b>Coupling</b> S 	1/4	829-002
	3/8	829-003
	1/2	829-005
	3/4	829-007
	1	829-010
	1 1/4	829-012
	1 1/2	829-015
	2	829-020
	2 1/2	829-025
	3	829-030
	4	829-040
	6	829-060
	8	829-080
	10	829-100
12	829-120	


	Size (In.)	Part Number
<b>Reducer Coupling</b> S 	3/4x1/2	829-101
	1x1/2	829-130
	1x3/4	829-131
	1 1/4x1	829-168
	1 1/2x1	829-211
	1 1/2x1 1/4	829-212
	2x1 1/2	829-251
	3x2	829-338
	4x3	829-422
6x4	829-532	
8x6	829-585	

	Size (In.)	Part Number
<b>Coupling</b> FT 	1/4	830-002
	3/8	830-003
	1/2	830-005
	3/4	830-007
	1	830-010
	1 1/4	830-012
	1 1/2	830-015
	2	830-020
	2 1/2	830-025
	3	830-030
4	830-040	

	Size (In.)	Part Number
<b>Reducer Coupling</b> FT 	3/4x1/2	830-101
	1x1/2	830-130
	1x3/4	830-131
	1 1/4x3/4	830-167
	1 1/2x1	830-211
	2x1 1/2	830-251

	Size (In.)	Part Number
<b>Female Adapter</b> SxFT 	1/4	835-002
	3/8	835-003
	1/2	835-005
	3/4	835-007
	1	835-010
	1 1/4	835-012
	1 1/2	835-015
	2	835-020
2 1/2	835-025	
3	835-030	
4	835-040	

	Size (In.)	Part Number
<b>Female Adapter</b> SxSR FT 	1/4	835-002SR
	3/8	835-003SR
	1/2	835-005SR
	3/4	835-007SR
	1	835-010SR
	1 1/4	835-012SR
	1 1/2	835-015SR
	2	835-020SR
	2 1/2	835-025SR
	3	835-030SR
4	835-040SR	


	Size (In.)	Part Number
<b>Female Adapter</b> SPxSR FT 	1/2	878-005SR
	3/4	878-007SR
	1	878-010SR
	1 1/4	878-012SR
	1 1/2	878-015SR
	2	878-020SR
	3	878-030SR
4	878-040SR	


Nipples & Fittings





# PVC Fittings


## SCHEDULE 80 PVC Molded


	Size (In.)	Part Number
<b>Male Adapter</b> SxMT 	1/2	836-005
	3/4	836-007
	1	836-010
	1 1/4	836-012
	1 1/2	836-015
	2	836-020
	2 1/2	836-025
	3	836-030
	4	836-040
	6	836-060

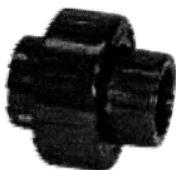
	Size (In.)	Part Number
<b>Cap</b> S 	1/4	847-002
	3/8	847-003
	1/2	847-005
	3/4	847-007
	1	847-010
	1 1/4	847-012
	1 1/2	847-015
	2	847-020
	2 1/2	847-025
	3	847-030
	4	847-040
	6	847-060
	8	847-080

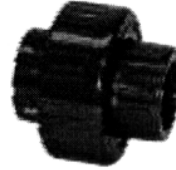
	Size (In.)	Part Number
<b>Cap</b> FT 	1/4	848-002
	3/8	848-003
	1/2	848-005
	3/4	848-007
	1	848-010
	1 1/4	848-012
	1 1/2	848-015
	2	848-020
	2 1/2	848-025
	3	848-030
	4	848-040

	Size (In.)	Part Number
<b>Plug</b> MT 	1/4	850-002
	3/8	850-003
	1/2	850-005
	3/4	850-007
	1	850-010
	1 1/4	850-012
	1 1/2	850-015
	2	850-020
	2 1/2	850-025
	3	850-030
	4	850-040
	6	850-060

	Size (In.)	Part Number
<b>Union</b> S (EPDM O-ring)  235 psi max	1/4	897-002
	3/8	897-003
	1/2	897-005
	3/4	897-007
	1	897-010
	1 1/4	897-012
	1 1/2	897-015
	2	897-020
	3	897-030
	4	897-040

	Size (In.)	Part Number
<b>Union</b> S (Viton® O-ring) 	1/4	857-002
	3/8	857-003
	1/2	857-005
	3/4	857-007
	1	857-010
	1 1/4	857-012
	1 1/2	857-015
	2	857-020
	3	857-030
	4	857-040

	Size (In.)	Part Number
<b>Union</b> FT (EPDM O-ring) 	1/4	898-002
	3/8	898-003
	1/2	898-005
	3/4	898-007
	1	898-010
	1 1/4	898-012
	1 1/2	898-015
	2	898-020
	3	898-030
	4	898-040

	Size (In.)	Part Number
<b>Union</b> FT (Viton® O-ring) 	1/4	858-002
	3/8	858-003
	1/2	858-005
	3/4	858-007
	1	858-010
	1 1/4	858-012
	1 1/2	858-015
	2	858-020
	3	858-030
	4	858-040

	Size (In.)	Part Number
<b>Reducer Bushing</b> SPxS 	3/8x1/4	837-052
	1/2x1/4	837-072
	1/2x3/8	837-073
	3/4x1/2	837-101
	1x1/2	837-130
	1x3/4	837-131
	1 1/4x1/2	837-166
	1 1/4x3/4	837-167
	1 1/4x1	837-168
	1 1/2x1/2	837-209
	1 1/2x3/4	837-210
	1 1/2x1	837-211
	1 1/2x1 1/4	837-212
	2x1/2	837-247
	2x3/4	837-248
	2x1	837-249
	2x1 1/4	837-250
	2x1 1/2	837-251
	2 1/2x1 1/2	837-291
	2 1/2x2	837-292
	3x1	837-335
	3x1 1/4	837-336
	3x1 1/2	837-337
	3x2	837-338
	3x2 1/2	837-339
	4x2	837-420
4x3	837-422	

Nipples & Fittings

# PVC Fittings

## SCHEDULE 80 PVC Molded

	Size (In.)	Part Number
<b>Reducer Bushing</b> SPxS - Continued	6x2	837-528
	6x3	837-530
	6x4	837-532
	8x6	837-585
	10x6	837-626
	10x8	837-628
	12x8	837-668
	12x10	837-670

	Size (In.)	Part Number
<b>Reducer Bushing</b> SPxFT	3/8x1/4	838-052
	1/2x1/8	838-071
	1/2x1/4	838-072
	1/2x3/8	838-073
	3/4x1/4	838-098
	3/4x1/2	838-101
	1x3/8	838-129
	1x1/2	838-130
	1x3/4	838-131
	1 1/4x1/2	838-166
	1 1/4x3/4	838-167
	1 1/4x1	838-168
	1 1/2x1/2	838-209
	1 1/2x3/4	838-210
	1 1/2x1	838-211
	1 1/2x1 1/4	838-212
	2x1/2	838-247
	2x3/4	838-248
	2x1	838-249
	2x1 1/4	838-250
	2x1 1/2	838-251
	2 1/2x1/2	838-287
	2 1/2x3/4	838-288
	2 1/2x1	838-289
	2 1/2x1 1/4	838-290
	2 1/2x1 1/2	838-291
	2 1/2x2	838-292
	3x3/4	838-334
	3x1	838-335
	3x1 1/4	838-336
	3x1 1/2	838-337
	3x2	838-338
	3x2 1/2	838-339
4x2	838-420	
4x2 1/2	838-421	
4x3	838-422	
6x2	838-528	
6x3	838-530	
6x4	838-532	

	Size (In.)	Part Number
<b>Reducer Bushing</b> MTxFT	3/8x1/4	839-052
	1/2x1/4	839-072
	1/2x3/8	839-073
	3/4x1/4	839-098
	3/4x3/8	839-099
	3/4x1/2	839-101
	1x1/4	839-128
	1x3/8	839-129
	1x1/2	839-130
	1x3/4	839-131
	1 1/4x1/2	839-166
	1 1/4x3/4	839-167
	1 1/4x1	839-168
1 1/2x1/2	839-209	

	Size (In.)	Part Number
<b>Reducer Bushing</b> MTxFT - Continued	1 1/2x3/4	839-210
	1 1/2x1	839-211
	1 1/2x1 1/4	839-212
	2x1/2	839-247
	2x3/4	839-248
	2x1	839-249
	2x1 1/4	839-250
	2x1 1/2	839-251
	2 1/2x2	839-292
	3x1 1/2	839-337
	3x2	839-338
3x2 1/2	839-339	
4x2	839-420	
4x3	839-422	

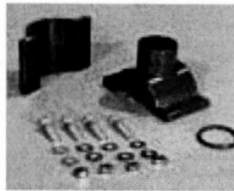


### Wye



Additional sizes available.

	Size (In.)	Part Number
<b>Clamp-On Saddle</b> w/Viton® O-ring seal & stainless steel hardware socket outlet	1/2	875-005
	1	875-010
	1 1/4	875-012
	2	875-020
	3	875-030
	4	875-040
	6	875-060
	6x4	875-532
	2x1/2	866SV-247
	2x3/4	866SV-248
	2x1	866SV-249
	2x1 1/4	866SV-250
	2x1 1/2	866SV-251
	2 1/2x1 1/2	866SV-291
	3x3/4	866SV-334
	3x1	866SV-335
	3x1 1/4*	866SV-336
	3x1 1/2*	866SV-337
	3x2	866SV-338
	4x1 1/2*	866SV-415
	4x3/4*	866SV-416
	4x1	866SV-417
	4x1 1/4*	866SV-418
	4x1 1/2	866SV-419
	4x2	866SV-420
	4x2 1/2*	866SV-421
	4x3	866SV-422
6x1 1/2*	866SV-523	
6x3/4*	866SV-524	
6x1	866SV-525	
6x1 1/4*	866SV-526	
6x1 1/2*	866SV-527	
6x2	866SV-528	
6x2 1/2*	866SV-529	
6x3	866SV-530	
6x4	866SV-532	



- Outlet sized with bushing.

Additional seal and hardware materials available. Sizes 8" x 1/2" thru 8" x 6", 10" x 4", 10" x 4" and 12" x 6" also available.



# PVC Fittings

## SCHEDULE 40 PVC Pipe



Δ Do not test or use PVC piping for air or compressed gases.

Δ Care should be taken to avoid ketones, chlorinated hydrocarbon and aromatic solvents.

- IPS-Sized (inches) 1/4" through 24"
- Schedule 40 pipe is not suitable for threading
- Pipe sizes 1/4", 3/8", and 3-1/2" are grey in color. All other pipe is normally white
- Available in larger sizes on request

Pipe Size (In.)	Part Number	Approx. Wt/100 Ft. (Lbs.)	Maximum Working Pressure @ 73.4°F	Outside Diameter (In.)	Minimum Wall Thickness (In.)
1/4	400-002	8.1	780	.540	.088
3/8	400-003	10.9	620	.675	.091
1/2	400-005	16.4	600	.840	.109
3/4	400-007	21.8	480	1.050	.113
1	400-010	32.1	450	1.315	.133
1 1/4	400-012	43.4	370	1.660	.140
1 1/2	400-015	51.8	330	1.900	.145
2	400-020	69.5	280	2.375	.154
2 1/2	400-025	109.6	300	2.875	.203
3	400-030	143.5	260	3.500	.216
4	400-040	204.3	220	4.500	.237
5	400-050	272.6	190	5.563	.258
6	400-060	360.9	180	6.625	.280
8	400-080	545.3	160	8.625	.322
10	400-100	791.3	140	10.750	.365
12	400-120	1053.2	130	12.750	.406
14	400-140	1247.0	130	14.00	.437
16	400-160	1675.0	130	16.00	.500
18	400-180	2111.0	130	18.00	.562
20	400-200	2490.0	130	20.00	.593
24	400-240	3451.0	130	24.00	.687

Nipples & Fittings



# PVC Fittings

## SCHEDULE 80 PVC Pipe

### Polyvinyl Chloride (PVC)

PVC is the most commonly used plastic material for manufacturing plastic pipe. It has a relatively high tensile strength and modulus of elasticity and, therefore, is stronger and more rigid than most other thermoplastics. Joining methods are by solvent cementing, threading (Schedule 80 only) or flanging.

PVC has been successfully in such areas as chemical processing, industrial plating, chilled water distribution, salt water, chemical drainage, and irrigation systems.

Pressure ratings given are solvent cemented systems. When adding valves, flanges or other components, the system must be derated to the rating of the lowest systems; flanged fittings are rated at 150 psi; union fittings are rated at 235 psi. See manufacturers' recommendations for other ratings.

- Conforms to ASTM D-1785, Type 1, Grade 1.
- National Sanitation Foundation (NSF) approved for pipe sizes 1/2" through 12" for use in potable water service.
- Service length: 20 feet.
- Handles temperatures up to 140°F.
- Not affected by soil in buried applications; requires water-based latex paint for outdoor, sunlight-exposed installations.
- Economical to install and maintain.
- Available in larger sizes on request.

- IPS-sized (inches) 1/8" through 24"
- Can be threaded.
- Normally gray in color.

Pipe Size (In.)	Part Number	Approx. Wt/100 Ft. (Lbs.)	Maximum Working Pressure @ 73.4°F	Outside Diameter (In.)	Minimum Wall Thickness (In.)
1/8	800-001	5.8	1225	.405	.095
1/4	800-002	10.1	1130	.540	.119
3/8	800-003	13.8	920	.675	.126
1/2	800-005	20.5	850	.840	.147
3/4	800-007	27.8	690	1.050	.154
1	800-010	40.4	630	1.315	.179
1 1/4	800-012	56.7	520	1.660	.191
1 1/2	800-015	68.9	470	1.900	.200
2	800-020	94.9	400	2.375	.218
2 1/2	800-025	144.9	425	2.875	.276
3	800-030	193.8	375	3.500	.300
3 1/2	800-035	232.2	350	4.000	.318
4	800-040	283.3	324	4.500	.337
5	800-050	386.7	290	5.563	.375
6	800-060	541.1	280	6.625	.432
8	800-080	821.9	250	8.625	.500
10	800-100	1227.7	230	10.750	.593
12	800-120	1710.4	230	12.750	.687
14	800-140	2126.0	220	14.00	.750
16	800-160	2732.0	220	16.00	.843
18	800-180	3440.0	220	18.00	.937
20	800-200	4009.1	220	20.00	1.031
24	800-240	5688.2	210	24.00	1.218



Machined Schedule 80 PVC nipples comply fully with ASTM D2464, threads conform to ASTM F1498, and the pipe is extruded from PVC 1120-1220 meeting ASTM D1784 and meets ASTM D1785, products standard 21-70



**1/2" Diameter**

Part #	Length
55-060	Close (1-1/8)
55-061	1-1/2"
55-062	2"
55-063	2-1/2"
55-064	3"
55-065	3-1/2"
55-066	4"
55-067	4-1/2"
55-068	5"
55-069	5-1/2"
55-070	6"
55-072	8"
55-076	12"
55-241	24"
55-243	36"

**3/4" Diameter**

Part #	Length
55-080	Close (1-3/8)
55-081	1-1/2"
55-082	2"
55-083	2-1/2"
55-084	3"
55-085	3-1/2"
55-086	4"
55-087	4-1/2"
55-088	5"
55-089	5-1/2"
55-090	6"
55-253	36"

**1" Diameter**

Part #	Length
55-100	Close (1-1/2)
55-101	2"
55-102	2-1/2"
55-103	3"
55-104	3-1/2"
55-105	4"
55-106	4-1/2"
55-107	5"
55-108	5-1/2"
55-109	6"
55-111	8"
55-115	12"

**1-1/4" Diameter**

Part #	Length
55-120	Close (1-5/8)
55-121	2"
55-122	2-1/2"
55-123	3"
55-124	3-1/2"
55-125	4"
55-126	4-1/2"
55-127	5"
55-128	5-1/2"
55-129	6"

**1-1/2" Diameter**

Part #	Length
55-140	Close (1-3/4)
55-141	2"
55-142	2-1/2"
55-143	3"
55-144	3-1/2"
55-145	4"
55-146	4-1/2"
55-147	5"
55-148	5-1/2"
55-149	6"

**2" Diameter**

Part #	Length
55-160	Close (2)
55-161	2-1/2"
55-162	3"
55-163	3-1/2"
55-164	4"
55-165	4-1/2"
55-166	5"
55-167	5-1/2"
55-168	6"
55-174	12"

*More sizes available.*

**Nipples &  
Fittings**



## PLASTIC PUSH-IN TUBE FITTINGS

**(W)** White Nylon-made from virgin grade formulated to resist physical stress and abrasion. This material meets F.D.A. requirements of Code of Federal Regulation part 177.1500 and is therefore suitable for food contact surfaces.

**Temperature:**  
-40°F to +200°F  
**Working Pressure:**  
125 PSI maximum

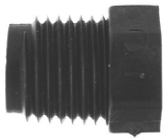
**(B)** Black Polyethylene-made from a high molecular weight linear polyethylene formulated for chemical compatibility and high impact resistance at lower temperatures. Polyethylene is NSF approved for potable water.

**Temperature:**  
-65°F to +190°F  
**Working Pressure:**  
125 PSI maximum

**(P)** Polypropylene-made from the finest polypropylene resins. Polypropylene is used for its resistance to a wide range of chemicals. Working pressures decrease as temperatures increase.

- NSF - approved materials
- FDA - approved materials

### HEX HEAD PLUGS



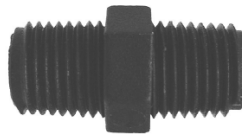
Part #	Size
28-601 .....	1/8
28-602 .....	1/4
28-603 .....	3/8
28-604 .....	1/2
28-605 .....	3/4
28-606W .....	1
28-607W .....	1-1/4
28-608W .....	1-1/2
28-609W .....	2

### PIPE CAP



Part #	Size
28-640W .....	1/4
28-641W .....	3/8
28-642W .....	1/2
28-643W .....	3/4

### HEX NIPPLES



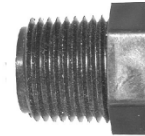
Part #	Size
28-611 .....	1/8
28-612 .....	1/4
28-613 .....	3/8
28-614 .....	1/2
28-615 .....	3/4
28-616W .....	1
28-617W .....	1-1/4
28-618W .....	1-1/2

### REDUCER NIPPLES



Part #	Size
28-620W .....	1/4x1/8
28-621W .....	3/8x1/8
28-622W .....	3/8x1/4
28-623 .....	1/2x1/4
28-624 .....	1/2x3/8
28-628 .....	3/4x3/8
28-625 .....	3/4x1/2
28-629P .....	1x3/4
28-631P .....	1-1/4x3/4
28-634P .....	2x1-1/4
28-635P .....	3x2

### HEX BUSHINGS



Part #	Size
28-659 .....	1/4x1/8
28-660 .....	3/8x1/8
28-661 .....	3/8x1/4
28-663 .....	1/2x1/4
28-664 .....	1/2x3/8
28-665W .....	3/4x1/8
28-666 .....	3/4x1/4
28-667W .....	3/4x3/8
28-668 .....	3/4x1/2
28-671 .....	1x1/2
28-672 .....	1x3/4
28-674W .....	1-1/4x3/4
28-675W .....	1-1/4x1
28-678 .....	1-1/2x3/4
28-679W .....	1-1/2x1
28-680 .....	1-1/2x1-1/4
28-682W .....	2x3/4
28-683W .....	2x1
28-685W .....	2x1-1/2

### ALL HOSE BARB "Y"



Part #	Size
33-300 .....	1/4
33-301 .....	3/8
33-302 .....	1/2



# Plastic Fittings

**Plastic**

**Plastic**

**ELBOW**



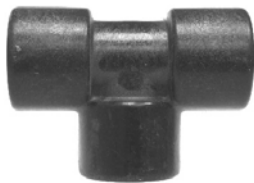
Part #	Size
28-701W .....	1/4
28-702 .....	3/8
28-703W .....	1/2
28-704 .....	3/4
28-705W .....	1
28-706W .....	1-1/4

**STREET ELBOW**



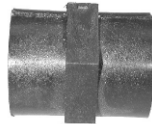
Part #	Size
28-720W .....	1/4
28-721W .....	3/8
28-723 .....	1/2
28-724W .....	3/4
28-725W .....	1
28-726 .....	1-1/4

**TEE**



Part #	Size
28-741 .....	1/4
28-742P .....	3/8
28-743 .....	1/2
28-744 .....	3/4
28-745W .....	1
28-746W .....	1-1/4
28-747W .....	1-1/2

**COUPLING**



Part #	Size
28-760 .....	1/8
28-761 .....	1/4
28-762 .....	3/8
28-763 .....	1/2
28-764 .....	3/4
28-765W .....	1
28-767W .....	1-1/2
28-768W .....	2

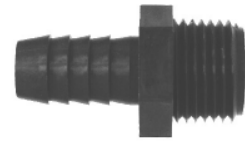
**HOSE BARB ADAPTERS**

**FEMALE ADAPTERS**



Part #	Size
33-053 .....	1/4x1/4
33-058 .....	3/8x1/4
33-059W .....	3/8x3/8
33-060W .....	3/8x1/2
33-062P .....	1/2x3/8
33-061W .....	1/2x1/2
33-063W .....	5/8x3/4
33-064W .....	3/4x1/2
33-065W .....	3/4x3/4

**MALE ADAPTERS**



HOSE ID x MIP	
Part #	Size
33-002 .....	3/16x1/8
33-003W .....	3/16x1/4
33-004 .....	1/4x1/8
33-005 .....	1/4x1/4
33-006 .....	1/4x3/8
33-007 .....	1/4x1/2
33-380W .....	1/4x3/4
33-008 .....	5/16x1/8
33-009 .....	5/16x1/4
33-010W .....	5/16x3/8
33-011W .....	3/8x1/8
33-012 .....	3/8x1/4
33-013 .....	3/8x3/8
33-014 .....	3/8x1/2
33-026 .....	3/8x3/4
33-015 .....	1/2x3/4
33-016 .....	1/2x3/8
33-017 .....	1/2x1/2
33-018 .....	1/2x3/4
33-019 .....	5/8x3/8
33-020 .....	5/8x1/2
33-021 .....	5/8x3/4
33-022 .....	3/4x1/2
33-023 .....	3/4x3/4
33-000W .....	3/4x1
33-024 .....	1x3/4
33-025 .....	1x1
33-029W .....	1x1-1/4
33-028 .....	1-1/4x1
33-030W .....	1-1/4x1-1/4
33-033 .....	1-1/2x1-1/2
33-035W .....	2x2

**Nipples & Fittings**



# Plastic Fittings

**Plastic**

**Plastic**

**HOSE BARB ADAPTERS  
- CONTINUED -**

**ELBOWS**



**HOSE ID x MALE PIPE**

Part #	Size
33-308B	3/16x1/8
33-381W	3/16x1/4
33-038	1/4x1/8
33-039	1/4x1/4
33-309W	1/4x3/8
33-040	5/16x1/4
33-310	5/16x3/8
33-046	3/8x1/8
33-041	3/8x1/4
33-042	3/8x3/8
33-047	3/8x1/2
33-384	3/8x3/4
33-048	1/2x1/4
33-043	1/2x3/8
33-311	1/2x1/2
33-385	1/2x3/4
33-044W	5/8x3/8
33-045	5/8x1/2
33-312	5/8x3/4
33-313	3/4x1/2
33-314	3/4x3/4
33-315W	3/4x1
33-386W	1x3/4
33-316	1x1
33-460W	1x1-1/4
33-461	1-1/4x1-1/4
33-463	1-1/2x1-1/2
33-464W	2x2

**HOSE BARB X FEMALE ELBOW**



**HOSE ID x MALE PIPE**

Part #	Size
33-402	1/2x3/8
33-403W	1/2x3/4
33-471W	3/4x3/4

**UNION ELBOWS**



Part #	Size
33-390	1/4
33-391	3/8
33-394	1/2
33-395	5/8
33-396	3/4
33-397W	1
33-398W	1-1/4
33-399W	1-1/2
33-389W	2

**REDUCING UNION ELBOWS**

Part #	Size
33-392W	1/2x1/4

**UNIONS/CONNECTORS/ SPLICERS**



Part #	Size
33-091	1/8
33-092	1/5
33-093	1/4
33-094W	5/16
33-095	3/8
33-096	1/2
33-097	5/8
33-098	3/4
33-099	1
33-480W	1-1/4
33-481W	1-1/2
33-482W	2

**REDUCER CONNECTORS**

Part #	Size
33-406	3/8x1/4
33-407W	1/2x1/4
33-408	1/2x3/8
33-409W	5/8x3/8
33-410	5/8x1/2

**TEES BARBED ON ALL SIDES**



Part #	Size
33-415	1/8
33-418*	3/16
33-420	3/16
33-422	1/4
33-426	1/3
33-429	3/8
33-433	1/2
33-436	5/8
33-437	3/4
33-438	1
33-439W	1-1/4
33-440	1-1/2
33-441W	2

\*Single barb

**REDUCING TEES**

Part #	Size
33-416	1/8x5/32x5/32
33-417	5/32x5/32x5/32
33-423	1/4x3/8x3/8
33-424	1/4x1/2x1/2
33-430	3/8x1/2x1/2
33-431W	3/8x5/8x5/8
33-432	1/2x3/8x3/8
33-435	1/2x3/4x3/4

**TEES**



**1 & 2 x 3**

Part #	Size
33-448	1/4x1/4
33-450W	3/8x1/4
33-451W	3/8x3/8
33-453W	1/2x1/4
33-454W	1/2x3/8
33-456W	3/4x3/4

*More sizes available*



**Nipples & Fittings**

**PLASTIC GARDEN HOSE FITTINGS**  
"Fittings with garden hose thread"

**GARDEN HOSE CAP**



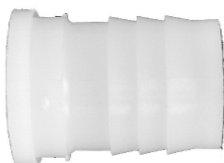
<b>Part #</b>	<b>Size</b>
30-103P .....	3/4

**GARDEN HOSE NUT**



<b>Part #</b>	<b>Size</b>
31-022 .....	3/4

**GARDEN HOSE ADAPTER INSERTS**



<b>Part #</b>	<b>Size</b>
31-034 .....	3/4

**GARDEN HOSE THREAD ADAPTERS**



<b>Part #</b>	<b>Size</b>
31-040 .....	1/2
31-041 .....	5/8

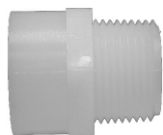
*More sizes available*

**MALE GARDEN HOSE X FEMALE PIPE**



<b>Part #</b>	<b>Size</b>
31-068 .....	MGH x 1/2 FIP

**FEMALE GARDEN HOSE X MALE PIPE**



<b>Part #</b>	<b>Size</b>
31-093 .....	FGH x 3/4 MPT

**FEMALE GARDEN HOSE X FEMALE PIPE**



<b>Part #</b>	<b>Size</b>
31-096 .....	FGH x 1/2 FIP

**ADAPTERS GARDEN TO PIPE THREAD**



<b>Part #</b>	<b>Size</b>
31-058 .....	GHT x 1/2
31-063 .....	GHT x 3/4

*More sizes available*

**PLASTIC COMPRESSION FITTINGS**

- Standard nut and sleeve provided

Corrosion resistant thermoresins designed to resist vibration, provide good electrical insulation, low flow resistance, and resistance to scale buildup.

Add letter to the end of part no. to denote the type you prefer.

- N = Nylon
- P = Polypropylene
- C = Celcon

Standard nut and sleeves will be provided (sleeve is integral part of nut). Other sizes available upon request.

**FERRULE NUTS**



<b>Part #</b>	<b>Size</b>
17-035 .....	1/4
17-036N .....	5/16
17-037N .....	3/8
17-039N .....	1/2

Nut with Plastic Gripper Ferrule

17-013N .....	1/4
17-015 .....	3/8
17-016N .....	1/2

Nut with Stainless Steel Gripper Ferrule

17-024 .....	1/2
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**INSERTS**



<b>Part #</b>	<b>Size</b>
17-360 .....	1/4
17-362 .....	3/8
17-363 .....	1/2

**Nipples & Fittings**

**PLASTIC COMPRESSION  
- CONTINUED -**

**UNION & REDUCING UNION  
CONNECTORS**



Part #	Size
17-064	1/4
17-065N	5/16
17-078N	5/16x1/4
17-066	3/8
17-079	3/8x1/4
17-068	1/2
17-081	1/2x3/8

**BULKHEAD UNIONS**



Part #	Size
17-088N	1/4
17-090N	3/8
17-091N	1/2

**UNION TEES**



Part #	Size
17-101N	1/8
17-103	1/4
17-105	3/8
17-106	1/2

**UNION ELBOWS**



Part #	Size
17-124	1/4
17-126	3/8
17-127	1/2

**FEMALE CONNECTORS**



Part #	Size
17-145	1/4x1/8
17-146	1/4x1/4
17-153	3/8x1/4
17-154	3/8x3/8
17-155	3/8x1/2
17-158	1/2x3/8
17-159	1/2x1/2

**MALE CONNECTORS**



Part #	Size
17-176	1/8x1/8
17-179	1/4x1/8
17-180	1/4x1/4
17-181	1/4x3/8
17-183	5/16x1/8
17-184	5/16x1/4
17-187	3/8x1/8
17-188	3/8x1/4
17-189	3/8x3/8
17-190	3/8x1/2
17-193	1/2x1/4
17-194	1/2x3/8
17-195	1/2x1/2

**MALE ELBOWS**



Part #	Size
17-224	1/4x1/8
17-225	1/4x1/4
17-226N	1/4x3/8
17-229	5/16x1/4
17-233	3/8x1/4
17-234	3/8x3/8
17-237	1/2x3/8
17-238	1/2x1/2

**FEMALE ELBOWS**



Part #	Size
17-254	1/4x1/4
17-258	3/8x1/4
17-259	3/8x3/8
17-262	1/2x3/8
17-263	1/2x1/2

**MALE RUN TEES**



Part #	Size
17-279P	3/8x1/4
17-282P	1/2x1/2

**MALE BRANCH TEES**



Part #	Size
17-291	1/4x1/8
17-292	1/4x1/4
17-296	3/8x1/4
17-297P	3/8x3/8
17-299P	1/2x3/8





**PLASTIC PUSH-IN TUBE FITTINGS**

**Fitting Working Specifications**

- **Temperature:**  
Air: -140°F to +167°F (-25°C to 75°C)  
Water: -33°F to +140°F (-1°C to 60°C)

- **Pressure:**  
Air: 0 - 150 lbs. psi  
Liquid: 0 - 150 lbs. psi  
Suitable for Vacuum

**Material Specifications**

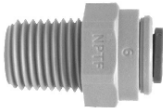
- **Bodies:**  
Food Grade, Acetal Copolymer or Polypropylene
- **O'Rings:**  
Food Grade Nitrile Rubber or EPDM
- **Collet:**  
Food Grade Acetal Copolymer,  
stainless steel teeth



**Fitting Tube Types**

- **Plastic Tube:**  
Polyethylene, nylon, polyurethane (for soft tubing or thin wall tube, tube supports are recommended).
- **Braided Tube:**  
For Braided Tube, the use of Tube to Hose Stems and Elbows is required. To retain braided tube on barbs, the use of clamps is also recommended.
- **Metal Tube (soft):**  
Brass, Copper and Mild Steel; Ends must be de-burred, no sharp edges.
- **Metal Tube (hard):**  
Superseal fittings are recommended for stainless steel and other hard metal tubes; Ends must be deburred, no sharp edges.

**MALE CONNECTOR**



Part #	Tube OD	Tube NPTF
20-050P	5/32	1/8
20-046P	5/32	1/4
20-052P	3/16	1/8
20-054P	1/4	1/8
20-055P	1/4	1/4
20-531P	5/16	1/4
20-056P	1/4	3/8
20-532P	5/16	3/8
20-057P	3/8	1/8
20-058P	3/8	1/4
20-059P	3/8	3/8
20-062P	3/8	1/2
20-061P	1/2	3/8
20-063P	1/2	1/2

More sizes available upon request.

Also available in metric sizes.

**UNION CONNECTOR**



Part #	Tube OD2
20-018P	5/32
20-702P	3/16
20-019P	1/4
20-703P	5/16
20-020P	3/8
20-021P	1/2

**CROSS**



Part #	Tube OD2
20-143P	3/8

**REDUCING UNION**



Part #	Tube OD	Tube NPTF
20-750P	1/4	3/16
20-751P	5/16	5/32
20-752P	5/16	3/16
20-753P	5/16	1/4
20-754P	3/8	3/16
20-755P	3/8	1/4
20-756P	3/8	5/16
20-757P	1/2	5/16
20-758P	1/2	3/8

**UNION ELBOW**



Part #	Tube OD2
20-151P	5/32
20-704P	3/16
20-152P	1/4
20-155P	5/16
20-153P	3/8
20-154P	1/2

**Nipples & Fittings**

**REDUCING ELBOW**



Part #	Tube OD	Tube OD
20-730P	5/16	5/32
20-731P	5/16	3/16
20-732P	5/16	1/4
20-733P	3/8	3/16
20-734P	3/8	1/4
20-735P	3/8	5/16
20-736P	1/2	3/8

**FIXED ELBOW**



Part #	Tube OD	Thread NPTF
20-068P	1/4	1/8
20-069P	1/4	1/4
20-070P	1/4	3/8
20-072P	3/8	1/4
20-073P	3/8	3/8

**PLUG-IN ELBOW**

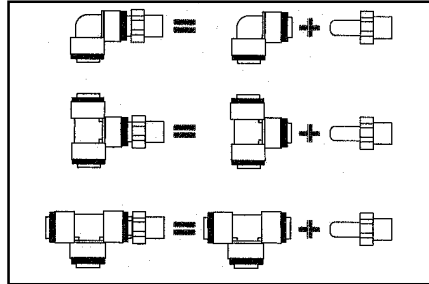


Part #	Stem OD	Tube OD
20-740P	5/32	5/32
20-741P	3/16	3/16
20-742P	1/4	1/4
20-743P	5/16	5/16
20-744P	3/8	3/16
20-745P	3/8	1/4
20-746P	3/8	5/16
20-747P	3/8	3/8
20-748P	1/2	1/2

*More sizes available upon request*

**Adapatability**

Products can be coupled together to form new, intergral fittings.



Use to get reducing swivel sizes you need!

**STEM ADAPTER**



Part #	Stem OD	Thread NPTF
20-522P	5/32	1/8
20-523P	5/32	1/4
20-700P	3/16	1/8
20-524P	1/4	1/8
20-526P	5/16	1/8
20-525P	1/4	1/4
20-527P	5/16	1/4
20-701P	5/16	3/8
20-528P	3/8	1/4
20-529P	3/8	3/8
20-530P	1/2	3/8
20-533P	1/2	1/2

**REDUCER**



Part #	Stem OD	Tube OD
20-759P	3/16	5/32
20-760P	5/16	3/16
20-761P	5/16	1/4
20-762P	3/8	3/16
20-512P	3/8	1/4
20-763P	3/8	5/16
20-764P	1/2	5/16
20-514P	1/2	3/8

**UNION TEE**



Part #	Tube OD
20-026P	5/32
20-027P	3/16
20-028P	1/4
20-031P	5/16
20-029P	3/8
20-030P	1/2

**REDUCING BRANCH TEE**



Part #	Tube OD Ends	Tube OD Branch
20-724P	1/2	3/8
20-725P	3/8	1/4

**BULKHEAD UNION**



Part #	Tube OD
20-125P	5/32
20-126P	3/16
20-127P	1/4
20-123P	5/16
20-128P	3/8
20-129P	1/2

**FEMALE CONNECTOR**



Part #	Tube OD	Thread NPTF
20-993P	1/4	1/8
20-035P	1/4	1/4
20-944P	3/8	1/8
20-036P	3/8	1/4

**Nipples & Fittings**



# Black and Galvanized Steel Nipples

**PRODUCT SPECIFICATIONS**

Welded steel pipe nipples both galvanized and black in diameters ranging from 1/8" up to 4" in lengths from close to 12" and cut-pipe up to 120".

**TECHNICAL SPECIFICATIONS**

**Standards:** Product complies with ASTM A-53, A0733 and ANSI B1.20.1 for threading, dimensions and pipe specifications.

**Pipe:** Complies with ASTM A-53 mill tested schedule 40 and 80. Meets ANSI B36.1. All pipe is hydrostatic tested.

**Galvanized:** Zinc coating applied by hot dipped. Galvanized complying with ASTM A-123.

**Black:** Protected against oxidation with varnish coating.

**Cutting Procedure:**

All pipe is roller cut. A visual inspection of seams, excessive galvanizing, mid-welds, poor galvanizing, bends, out of roundness, under and over weight of the pipe is made at the time it is cut. This is done for every length of pipe. Pipe lengths are cut to a tolerance of + or - 1/16" of the actual length.

**Threading Procedure:**

All pipe is chaser thread cut to American Standard Tapered Pipe Thread standards. This is 3/4" taper per foot. Pipe is visually inspected for roundness of threads and other visual faults as it is removed from the threading machine.

**Steel and Wrought Iron Welded**

Normal Size	Outside Diameter	Schedule 40 Standard			Schedule 80 Extra Heavy		
		Wall Thickness	Inside Diameter	Weight per Foot P.E.	Wall Thickness	Inside Diameter	Weight per Foot P.E.
1/8"	.405	.068	.269	.24	.095	.215	.31
1/4"	.540	.088	.364	.42	.119	.302	.54
3/8"	.675	.091	.493	.57	.126	.423	.74
1/2"	.840	.109	.622	.85	.147	.546	1.09
3/4"	1.050	.113	.824	1.13	.154	.742	1.47
1"	1.315	.133	1.049	1.68	.179	.957	2.17
1-1/4"	1.660	.140	1.380	2.27	.191	1.278	3.00
1-1/2"	1.900	.145	1.610	2.72	.200	1.500	3.63
2"	2.375	.154	2.067	3.65	.218	1.939	5.02
2-1/2"	2.875	.203	2.469	5.79	.276	2.323	7.66
3"	3.500	.216	3.068	7.58	.300	2.900	10.25
3-1/2"	4.000	.226	3.548	9.11	.318	3.364	12.51
4"	4.500	.237	4.026	10.79	.337	3.826	14.98
5"	5.563	.258	5.047	14.62	.375	4.813	20.78
6"	6.25	.280	6.065	18.97	.432	5.761	28.57

**Chemical Composition**

Maximum%  
C 0.25  
Mn 0.95

**Tensile Requirements**

	Kg/Mm2	PSI	MPA
<b>Tensile Strength Min.</b>	33.7	48000	331
<b>Tensile Strength Min.</b>	20.0	28500	196

**Pounds per 100 pcs. approximate**

Diameter	Length Close/RC	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"	6"	7"	8"	9"	10"	11"	12"
1/8"	1.3	2.4	3.5	4.4	5.4	6.8	7.4	8.5	9.5	11.2	11.4	13.4	15.4	17.4	19.1	20.8	23.1
1/4"	2.4	4.3	6.1	8.3	9.0	11.8	13.5	16.1	16.8	19.1	19.9	24.7	28.7	32.0	35.1	38.1	41.4
3/8"	3.6	6.0	7.8	9.9	13.4	15.4	17.8	20.3	22.7	24.9	28.4	32.6	36.6	40.8	44.8	48.7	52.9
1/2"	6.1	8.7	12.7	15.9	19.3	24.2	26.0	31.6	34.5	39.2	43.1	50.0	58.0	66.1	74.5	82.3	89.0
3/4"	11.0	12.2	21.8	23.1	26.1	31.6	37.0	41.6	47.1	52.6	55.9	65.4	79.1	79.6	94.9	111.9	116.9
1"	15.3		22.0	28.4	37.0	44.2	52.1	59.4	66.6	76.5	79.7	94.8	111.6	124.5	136.3	153.6	175.0
1-1/4"	22.7		32.0	41.9	51.3	61.9	68.1	81.9	90.7	98.2	115.1	133.4	149.3	174.8	199.2	219.3	236.6
1-1/2"	29.9		37.9	46.8	80.6	72.6	85.8	99.1	112.7	120.3	134.5	162.1	184.9	208.5	219.4	247.5	277.8
2"	51.8			63.1	82.1	97.1	110.0	128.4	142.0	165.0	166.9	208.5	246.7	276.9	303.2	334.4	369.2
2-1/2"	82.6				109.0	133.5	156.2	172.9	209.9	232.8	253.4	318.9	337.3	408.1	457.6	514.3	554.4
3"	116.5				147.2	181.6	210.4	247.7	274.1	213.6	338.0	389.2	469.4	555.1	599.2	649.4	747.1
4"	172.7						265.3	326.2	344.4	405.7	451.7	547.3	632.2	721.8	832.7	927.1	1057.0
6"																	



**1/8" DIAMETER**



GALVANIZED		BLACK
Part #	Length	Part #
02-X-CLOSEGN	x Close (3/4")	02-X-CLOSESN
02-X-1.5GN	x 1-1/2"	02-X-1.5SN
02-X-2GN	x 2"	02-X-2SN
02-X-2.5GN	x 2-1/2"	02-X-2.5SN
02-X-3GN	x 3"	02-X-3SN
02-X-3.5GN	x 3-1/2"	02-X-3.5SN
02-X-4GN	x 4"	02-X-4SN
02-X-4.5GN	x 4-1/2"	02-X-4.5SN
02-X-5GN	x 5"	02-X-5SN
02-X-5.5GN	x 5-1/2"	02-X-5.5SN
02-X-6GN	x 6"	02-X-6SN
02-X-7GN	x 7"	02-X-7SN
02-X-8GN	x 8"	02-X-8SN
02-X-9GN	x 9"	02-X-9SN
02-X-10GN	x 10"	02-X-10SN
02-X-11GN	x 11"	02-X-11SN
02-X-12GN	x 12"	02-X-12SN

**1/4" DIAMETER**



GALVANIZED		BLACK
Part #	Length	Part #
04-X-CLOSEGN	x Close (7/8")	04-X-CLOSESN
04-X-1.5GN	x 1-1/2"	04-X-1.5SN
04-X-2GN	x 2"	04-X-2SN
04-X-2.5GN	x 2-1/2"	04-X-2.5SN
04-X-3GN	x 3"	04-X-3SN
04-X-3.5GN	x 3-1/2"	04-X-3.5SN
04-X-4GN	x 4"	04-X-4SN
04-X-4.5GN	x 4-1/2"	04-X-4.5SN
04-X-5GN	x 5"	04-X-5SN
04-X-5.5GN	x 5-1/2"	04-X-5.5SN
04-X-6GN	x 6"	04-X-6SN
04-X-7GN	x 7"	04-X-7SN
04-X-8GN	x 8"	04-X-8SN
04-X-9GN	x 9"	04-X-9SN
04-X-10GN	x 10"	04-X-10SN
04-X-11GN	x 11"	04-X-11SN
04-X-12GN	x 12"	04-X-12SN
04-X-18GN	x 18"	04-X-18SN
04-X-24GN	x 24"	04-X-24SN

**3/8" DIAMETER**



GALVANIZED		BLACK
Part #	Length	Part #
06-X-CLOSEGN	x Close (1")	06-X-CLOSESN
06-X-1.5GN	x 1-1/2"	06-X-1.5SN
06-X-2GN	x 2"	06-X-2SN
06-X-2.5GN	x 2-1/2"	06-X-2.5SN
06-X-3GN	x 3"	06-X-3SN
06-X-3.5GN	x 3-1/2"	06-X-3.5SN
06-X-4GN	x 4"	06-X-4SN
06-X-4.5GN	x 4-1/2"	06-X-4.5SN
06-X-5GN	x 5"	06-X-5SN
06-X-5.5GN	x 5-1/2"	06-X-5.5SN
06-X-6GN	x 6"	06-X-6SN
06-X-7GN	x 7"	06-X-7SN
06-X-8GN	x 8"	06-X-8SN
06-X-9GN	x 9"	06-X-9SN
06-X-10GN	x 10"	06-X-10SN
06-X-11GN	x 11"	06-X-11SN
06-X-12GN	x 12"	06-X-12SN
06-X-16GN	x 16"	06-X-16SN
06-X-18GN	x 18"	06-X-18SN
06-X-24GN	x 24"	06-X-24SN

**1/2" DIAMETER**



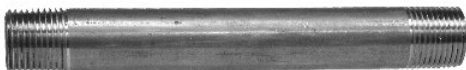
GALVANIZED		BLACK	
Part #	Length	Part #	Part #
08-X-CLOSEGN	x Close (1-1/8)	08-X-CLOSESN	
08-X-1.5GN	x 1-1/2"	08-X-1.5SN	
08-X-2GN	x 2"	08-X-2SN	
08-X-2.5GN	x 2-1/2"	08-X-2.5SN	
08-X-3GN	x 3"	08-X-3SN	
08-X-3.5GN	x 3-1/2"	08-X-3.5SN	
08-X-4GN	x 4"	08-X-4SN	
08-X-4.5GN	x 4-1/2"	08-X-4.5SN	
08-X-5GN	x 5"	08-X-5SN	
08-X-5.5GN	x 5-1/2"	08-X-5.5SN	
08-X-6GN	x 6"	08-X-6SN	
08-X-7GN	x 7"	08-X-7SN	
08-X-8GN	x 8"	08-X-8SN	
08-X-9GN	x 9"	08-X-9SN	
08-X-10GN	x 10"	08-X-10SN	
08-X-11GN	x 11"	08-X-11SN	
08-X-12GN	x 12"	08-X-12SN	
08-X-18GN	x 18"	08-X-18SN	
08-X-24GN	x 24"	08-X-4SN	

**1" DIAMETER**



GALVANIZED		BLACK	
Part #	Length	Part #	Part #
16-X-CLOSEGN	x Close (1-1/2)	16-X-CLOSESN	
16-X-2GN	x 2"	16-X-2SN	
16-X-2.5GN	x 2-1/2"	16-X-2.5SN	
16-X-3GN	x 3"	16-X-3SN	
16-X-3.5GN	x 3-1/2"	16-X-3.5SN	
16-X-4GN	x 4"	16-X-4SN	
16-X-4.5GN	x 4-1/2"	16-X-4.5SN	
16-X-5GN	x 5"	16-X-5SN	
16-X-5.5GN	x 5-1/2"	16-X-5.5SN	
16-X-6GN	x 6"	16-X-6SN	
16-X-7GN	x 7"	16-X-7SN	
16-X-8GN	x 8"	16-X-8SN	
16-X-9GN	x 9"	16-X-9SN	
16-X-10GN	x 10"	16-X-10SN	
16-X-11GN	x 11"	16-X-11SN	
16-X-12GN	x 12"	16-X-12SN	
16-X-18GN	x 18"	16-X-18SN	
16-X-24GN	x 24"	16-X-24SN	

**3/4" DIAMETER**



GALVANIZED		BLACK	
Part #	Length	Part #	Part #
12-X-CLOSEGN	x Close (1-3/8)	12-X-CLOSESN	
12-X-1.5GN	x 1-1/2"	12-X-1.5SN	
12-X-2GN	x 2"	12-X-2SN	
12-X-2.5GN	x 2-1/2"	12-X-2.5SN	
12-X-3GN	x 3"	12-X-3SN	
12-X-3.5GN	x 3-1/2"	12-X-3.5SN	
12-X-4GN	x 4"	12-X-4SN	
12-X-4.5GN	x 4-1/2"	12-X-4.5SN	
12-X-5GN	x 5"	12-X-5SN	
12-X-5.5GN	x 5-1/2"	12-X-5.5SN	
12-X-6GN	x 6"	12-X-6SN	
12-X-7GN	x 7"	12-X-7SN	
12-X-8GN	x 8"	12-X-8SN	
12-X-9GN	x 9"	12-X-9SN	
12-X-10GN	x 10"	12-X-10SN	
12-X-11GN	x 11"	12-X-11SN	
12-X-12GN	x 12"	12-X-12SN	
12-X-18GN	x 18"	12-X-18SN	
12-X-24GN	x 24"	12-X-24SN	

**1-1/4" DIAMETER**



GALVANIZED		BLACK	
Part #	Length	Part #	Part #
20-X-CLOSEGN	x Close (1-5/8)	20-X-CLOSESN	
20-X-2GN	x 2"	20-X-2SN	
20-X-2.5GN	x 2-1/2"	20-X-2.5SN	
20-X-3GN	x 3"	20-X-3SN	
20-X-3.5GN	x 3-1/2"	20-X-3.5SN	
20-X-4GN	x 4"	20-X-4SN	
20-X-4.5GN	x 4-1/2"	20-X-4.5SN	
20-X-5GN	x 5"	20-X-5SN	
20-X-5.5GN	x 5-1/2"	20-X-5.5SN	
20-X-6GN	x 6"	20-X-6SN	
20-X-7GN	x 7"	20-X-7SN	
20-X-8GN	x 8"	20-X-8SN	
20-X-9GN	x 9"	20-X-9SN	
20-X-10GN	x 10"	20-X-10SN	
20-X-11GN	x 11"	20-X-11SN	
20-X-12GN	x 12"	20-X-12SN	
20-X-18GN	x 18"	20-X-18SN	
20-X-24GN	x 24"	20-X-24SN	



**Nipples & Fittings**

**1-1/2" DIAMETER**



<b>GALVANIZED</b>		<b>BLACK</b>
<b>Part #</b>	<b>Length</b>	<b>Part #</b>
24-X-CLOSEGN .....	x Close (1-3/4) .....	24-X-CLOSESN
24-X-2GN .....	x 2" .....	24-X-2SN
24-X-2.5GN .....	x 2-1/2" .....	24-X-2.5SN
24-X-3GN .....	x 3" .....	24-X-3SN
24-X-3.5GN .....	x 3-1/2" .....	24-X-3.5SN
24-X-4GN .....	x 4" .....	24-X-4SN
24-X-4.5GN .....	x 4-1/2" .....	24-X-4.5SN
24-X-5GN .....	x 5" .....	24-X-5SN
24-X-5.5GN .....	x 5-1/2" .....	24-X-5.5SN
24-X-6GN .....	x 6" .....	24-X-6SN
24-X-7GN .....	x 7" .....	24-X-7SN
24-X-8GN .....	x 8" .....	24-X-8SN
24-X-9GN .....	x 9" .....	24-X-9SN
24-X-10GN .....	x 10" .....	24-X-10SN
24-X-11GN .....	x 11" .....	24-X-11SN
24-X-12GN .....	x 12" .....	24-X-12SN
24-X-18GN .....	x 18" .....	24-X-18SN
24-X-24GN .....	x 24" .....	24-X-24SN

**2" DIAMETER**



<b>GALVANIZED</b>		<b>BLACK</b>
<b>Part #</b>	<b>Length</b>	<b>Part #</b>
32-X-CLOSEGN .....	x Close (2) .....	32-X-CLOSESN
32-X-2GN .....	x 2" .....	32-X-2SN
32-X-2.5GN .....	x 2-1/2" .....	32-X-2.5SN
32-X-3GN .....	x 3" .....	32-X-3SN
32-X-3.5GN .....	x 3-1/2" .....	32-X-3.5SN
32-X-4GN .....	x 4" .....	32-X-4SN
32-X-4.5GN .....	x 4-1/2" .....	32-X-4.5SN
32-X-5GN .....	x 5" .....	32-X-5SN
32-X-5.5GN .....	x 5-1/2" .....	32-X-5.5SN
32-X-6GN .....	x 6" .....	32-X-6SN
32-X-7GN .....	x 7" .....	32-X-7SN
32-X-8GN .....	x 8" .....	32-X-8SN
32-X-9GN .....	x 9" .....	32-X-9SN
32-X-10GN .....	x 10" .....	32-X-10SN
32-X-11GN .....	x 11" .....	32-X-11SN
32-X-12GN .....	x 12" .....	32-X-12SN
32-X-18GN .....	x 18" .....	32-X-18SN
32-X-24GN .....	x 24" .....	32-X-24SN

**Nipples & Fittings**

**2-1/2" DIAMETER**



**4" DIAMETER**



<b>GALVANIZED</b>		<b>BLACK</b>
<b>Part #</b>	<b>Length</b>	<b>Part #</b>
40-X-CLOSEGN .....	x Close (2-1/2) .....	40-X-CLOSESN
40-X-3GN .....	x 3" .....	40-X-3SN
40-X-3.5GN .....	x 3-1/2" .....	40-X-3.5SN
40-X-4GN .....	x 4" .....	40-X-4SN
40-X-4.5GN .....	x 4-1/2" .....	40-X-4.5SN
40-X-5GN .....	x 5" .....	40-X-5SN
40-X-5.5GN .....	x 5-1/2" .....	40-X-5.5SN
40-X-6GN .....	x 6" .....	40-X-6SN
40-X-7GN .....	x 7" .....	40-X-7SN
40-X-8GN .....	x 8" .....	40-X-8SN
40-X-9GN .....	x 9" .....	40-X-9SN
40-X-10GN .....	x 10" .....	40-X-10SN
40-X-11GN .....	x 11" .....	40-X-11SN
40-X-12GN .....	x 12" .....	40-X-12SN

<b>GALVANIZED</b>		<b>BLACK</b>
<b>Part #</b>	<b>Length</b>	<b>Part #</b>
64-X-CLOSEGN .....	x Close (2-78) .....	64-X-CLOSESN
64-X-4GN .....	x 4" .....	64-X-4SN
64-X-4.5GN .....	x 4-1/2" .....	64-X-4.5SN
64-X-5GN .....	x 5" .....	64-X-5SN
64-X-5.5GN .....	x 5-1/2" .....	64-X-5.5SN
64-X-6GN .....	x 6" .....	64-X-6SN
64-X-7GN .....	x 7" .....	64-X-7SN
64-X-8GN .....	x 8" .....	64-X-8SN
64-X-9GN .....	x 9" .....	64-X-9SN
64-X-10GN .....	x 10" .....	64-X-10SN
64-X-11GN .....	x 11" .....	64-X-11SN
64-X-12GN .....	x 12" .....	64-X-12SN

**3" DIAMETER**



<b>GALVANIZED</b>		<b>BLACK</b>
<b>Part #</b>	<b>Length</b>	<b>Part #</b>
48-X-CLOSEGN .....	x Close (2-5/8) .....	48-X-CLOSESN
48-X-3GN .....	x 3" .....	48-X-3SN
48-X-3.5GN .....	x 3-1/2" .....	48-X-3.5SN
48-X-4GN .....	x 4" .....	48-X-4SN
48-X-4.5GN .....	x 4-1/2" .....	48-X-4.5SN
48-X-5GN .....	x 5" .....	48-X-5SN
48-X-5.5GN .....	x 5-1/2" .....	48-X-5.5SN
48-X-6GN .....	x 6" .....	48-X-6SN
48-X-7GN .....	x 7" .....	48-X-7SN
48-X-8GN .....	x 8" .....	48-X-8SN
48-X-9GN .....	x 9" .....	48-X-9SN
48-X-10GN .....	x 10" .....	48-X-10SN
48-X-11GN .....	x 11" .....	48-X-11SN
48-X-12GN .....	x 12" .....	48-X-12SN

**Nipples & Fittings**



**EXTRA HEAVY WEIGHT NIPPLES  
1/8" DIAMETER**



<b>GALVANIZED</b>		<b>BLACK</b>
Part #	Length	Part #
02-X-CLOSEGXH	CLOSE (3/4)	02-X-CLOSEXH
02-X-1.5GXH	1-1/2"	02-X-1.5XH
02-X-2GXH	2"	02-X-2XH
02-X-2.5GXH	2-1/2"	02-X-2.5XH
02-X-3GXH	3"	02-X-3XH
02-X-3.5GXH	3-1/2"	02-X-3.5XH
02-X-4GXH	4"	02-X-4XH
02-X-4.5GXH	4-1/2"	02-X-4.5XH
02-X-5GXH	5"	02-X-5XH
02-X-5GXH	5-1/2"	02-X-5XH
02-X-6GXH	6"	02-X-6XH
02-X-7GXH	7"	02-X-7XH
02-X-8GXH	8"	02-X-8XH
02-X-9GXH	9"	02-X-9XH
02-X10GXH	10"	02-X10XH
02-X11GXH	11"	02-X11XH
02-X12GXH	12"	02-X12XH

**EXTRA HEAVY WEIGHT NIPPLES  
1/4" DIAMETER**



<b>GALVANIZED</b>		<b>BLACK</b>
Part #	Length	Part #
04-X-CLOSEGXH	CLOSE (7/8)	04-X-CLOSEXH
04-X-1.5GXH	1-1/2"	04-X-1.5XH
04-X-2GXH	2"	04-X-2XH
04-X-2.5GXH	2-1/2"	04-X-2.5XH
04-X-3GXH	3"	04-X-3XH
04-X-3.5GXH	3-1/2"	04-X-3.5XH
04-X-4GXH	4"	04-X-4XH
04-X-4.5GXH	4-1/2"	04-X-4.5XH
04-X-5GXH	5"	04-X-5XH
04-X-5GXH	5-1/2"	04-X-5XH
04-X-6GXH	6"	04-X-6XH
04-X-7GXH	7"	04-X-7XH
04-X-8GXH	8"	04-X-8XH
04-X-9GXH	9"	04-X-9XH
04-X10GXH	10"	04-X10XH
04-X11GXH	11"	04-X11XH
04-X12GXH	12"	04-X12XH

**EXTRA HEAVY WEIGHT NIPPLES  
3/8" DIAMETER**



<b>GALVANIZED</b>		<b>BLACK</b>
Part #	Length	Part #
06-X-CLOSEGXH	CLOSE (1)	06-X-CLOSEXH
06-X-1.5GXH	1-1/2"	06-X-1.5XH
06-X-2GXH	2"	06-X-2XH
06-X-2.5GXH	2-1/2"	06-X-2.5XH
06-X-3GXH	3"	06-X-3XH
06-X-3.5GXH	3-1/2"	06-X-3.5XH
06-X-4GXH	4"	06-X-4XH
06-X-4.5GXH	4-1/2"	06-X-4.5XH
06-X-5GXH	5"	06-X-5XH
06-X-5GXH	5-1/2"	06-X-5XH
06-X-6GXH	6"	06-X-6XH
06-X-7GXH	7"	06-X-7XH
06-X-8GXH	8"	06-X-8XH
06-X-9GXH	9"	06-X-9XH
06-X10GXH	10"	06-X10XH
06-X11GXH	11"	06-X11XH
06-X12GXH	12"	06-X12XH

**EXTRA HEAVY WEIGHT NIPPLES  
1/2" DIAMETER**



<b>GALVANIZED</b>		<b>BLACK</b>
Part #	Length	Part #
08-X-CLOSEGXH	CLOSE(1-1/8)	08-X-CLOSEXH
08-X-1.5GXH	1-1/2"	08-X-1.5XH
08-X-2GXH	2"	08-X-2XH
08-X-2.5GXH	2-1/2"	08-X-2.5XH
08-X-3GXH	3"	08-X-3XH
08-X-3.5GXH	3-1/2"	08-X-3.5XH
08-X-4GXH	4"	08-X-4XH
08-X-4.5GXH	4-1/2"	08-X-4.5XH
08-X-5GXH	5"	08-X-5XH
08-X-5GXH	5-1/2"	08-X-5XH
08-X-6GXH	6"	08-X-6XH
08-X-7GXH	7"	08-X-7XH
08-X-8GXH	8"	08-X-8XH
08-X-9GXH	9"	08-X-9XH
08-X10GXH	10"	08-X10XH
08-X11GXH	11"	08-X11XH
08-X12GXH	12"	08-X12XH

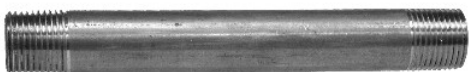


**EXTRA HEAVY WEIGHT NIPPLES  
3/4" DIAMETER**



GALVANIZED		BLACK
Part #	Length	Part #
12-X-CLOSEGXH	CLOSE (1-3/8) ...	12-X-CLOSEXH
12-X-1.5GXH	1-1/2" .....	12-X-1.5XH
12-X-2GXH	2" .....	12-X-2XH
12-X-2.5GXH	2-1/2" .....	12-X-2.5XH
12-X-3GXH	3" .....	12-X-3XH
12-X-3.5GXH	3-1/2" .....	12-X-3.5XH
12-X-4GXH	4" .....	12-X-4XH
12-X-4.5GXH	4-1/2" .....	12-X-4.5XH
12-X-5GXH	5" .....	12-X-5XH
12-X-5GXH	5-1/2" .....	12-X-5XH
12-X-6GXH	6" .....	12-X-6XH
12-X-7GXH	7" .....	12-X-7XH
12-X-8GXH	8" .....	12-X-8XH
12-X-9GXH	9" .....	12-X-9XH
12-X10GXH	10" .....	12-X10XH
12-X11GXH	11" .....	12-X11XH
12-X12GXH	12" .....	12-X12XH

**EXTRA HEAVY WEIGHT NIPPLES  
1" DIAMETER**



GALVANIZED		BLACK
Part #	Length	Part #
16-X-CLOSEGXH	CLOSE (1-1/2) ...	16-X-CLOSEXH
16-X-2GXH	2" .....	16-X-2XH
16-X-2.5GXH	2-1/2" .....	16-X-2.5XH
16-X-3GXH	3" .....	16-X-3XH
16-X-3.5GXH	3-1/2" .....	16-X-3.5XH
16-X-4GXH	4" .....	16-X-4XH
16-X-4.5GXH	4-1/2" .....	16-X-4.5XH
16-X-5GXH	5" .....	16-X-5XH
16-X-5GXH	5-1/2" .....	16-X-5XH
16-X-6GXH	6" .....	16-X-6XH
16-X-7GXH	7" .....	16-X-7XH
16-X-8GXH	8" .....	16-X-8XH
16-X-9GXH	9" .....	16-X-9XH
16-X10GXH	10" .....	16-X10XH
16-X11GXH	11" .....	16-X11XH
16-X12GXH	12" .....	16-X12XH

**EXTRA HEAVY WEIGHT NIPPLES  
1-1/4" DIAMETER**



GALVANIZED		BLACK
Part #	Length	Part #
20-X-CLOSEGXH	CLOSE (1-5/8) ...	20-X-CLOSEXH
20-X-2GXH	2" .....	20-X-2XH
20-X-2.5GXH	2-1/2" .....	20-X-2.5XH
20-X-3GXH	3" .....	20-X-3XH
20-X-3.5GXH	3-1/2" .....	20-X-3.5XH
20-X-4GXH	4" .....	20-X-4XH
20-X-4.5GXH	4-1/2" .....	20-X-4.5XH
20-X-5GXH	5" .....	20-X-5XH
20-X-5GXH	5-1/2" .....	20-X-5XH
20-X-6GXH	6" .....	20-X-6XH
20-X-7GXH	7" .....	20-X-7XH
20-X-8GXH	8" .....	20-X-8XH
20-X-9GXH	9" .....	20-X-9XH
20-X10GXH	10" .....	20-X10XH
20-X11GXH	11" .....	20-X11XH
20-X12GXH	12" .....	20-X12XH

**EXTRA HEAVY WEIGHT NIPPLES  
1-1/2" DIAMETER**



GALVANIZED		BLACK
Part #	Length	Part #
24-X-CLOSEGXH	CLOSE (1-3/4) ...	24-X-CLOSEXH
24-X-2GXH	2" .....	24-X-2XH
24-X-2.5GXH	2-1/2" .....	24-X-2.5XH
24-X-3GXH	3" .....	24-X-3XH
24-X-3.5GXH	3-1/2" .....	24-X-3.5XH
24-X-4GXH	4" .....	24-X-4XH
24-X-4.5GXH	4-1/2" .....	24-X-4.5XH
24-X-5GXH	5" .....	24-X-5XH
24-X-5GXH	5-1/2" .....	24-X-5XH
24-X-6GXH	6" .....	24-X-6XH
24-X-7GXH	7" .....	24-X-7XH
24-X-8GXH	8" .....	24-X-8XH
24-X-9GXH	9" .....	24-X-9XH
24-X10GXH	10" .....	24-X10XH
24-X11GXH	11" .....	24-X11XH
24-X12GXH	12" .....	24-X12XH

**Nipples & Fittings**



**EXTRA HEAVY WEIGHT NIPPLES  
2" DIAMETER**



<b>GALVANIZED</b>		<b>BLACK</b>
Part #	Length	Part #
32-X-CLOSEGXH	CLOSE (2)	32-X-CLOSEXH
32-X-2.5GXH	2-1/2"	32-X-2.5XH
32-X-3GXH	3"	32-X-3XH
32-X-3.5GXH	3-1/2"	32-X-3.5XH
32-X-4GXH	4"	32-X-4XH
32-X-4.5GXH	4-1/2"	32-X-4.5XH
32-X-5GXH	5"	32-X-5XH
32-X-5GXH	5-1/2"	32-X-5XH
32-X-6GXH	6"	32-X-6XH
32-X-7GXH	7"	32-X-7XH
32-X-8GXH	8"	32-X-8XH
32-X-9GXH	9"	32-X-9XH
32-X-10GXH	10"	32-X-10XH
32-X-11GXH	11"	32-X-11XH
32-X-12GXH	12"	32-X-12XH

**EXTRA HEAVY WEIGHT NIPPLES  
2-1/2" DIAMETER**



<b>GALVANIZED</b>		<b>BLACK</b>
Part #	Length	Part #
40-X-CLOSEGXH	CLOSE (2-1/2)	40-X-CLOSEXH
40-X-3GXH	3"	40-X-3XH
40-X-3.5GXH	3-1/2"	40-X-3.5XH
40-X-4GXH	4"	40-X-4XH
40-X-4.5GXH	4-1/2"	40-X-4.5XH
40-X-5GXH	5"	40-X-5XH
40-X-5GXH	5-1/2"	40-X-5XH
40-X-6GXH	6"	40-X-6XH
40-X-7GXH	7"	40-X-7XH
40-X-8GXH	8"	40-X-8XH
40-X-9GXH	9"	40-X-9XH
40-X-10GXH	10"	40-X-10XH
40-X-11GXH	11"	40-X-11XH
40-X-12GXH	12"	40-X-12XH

**EXTRA HEAVY WEIGHT NIPPLES  
3" DIAMETER**



<b>GALVANIZED</b>		<b>BLACK</b>
Part #	Length	Part #
48-X-CLOSEGXH	CLOSE (2-2/8)	48-X-CLOSEXH
48-X-3GXH	3"	48-X-3XH
48-X-3.5GXH	3-1/2"	48-X-3.5XH
48-X-4GXH	4"	48-X-4XH
48-X-4.5GXH	4-1/2"	48-X-4.5XH
48-X-5GXH	5"	48-X-5XH
48-X-5GXH	5-1/2"	48-X-5XH
48-X-6GXH	6"	48-X-6XH
48-X-7GXH	7"	48-X-7XH
48-X-8GXH	8"	48-X-8XH
48-X-9GXH	9"	48-X-9XH
48-X-10GXH	10"	48-X-10XH
48-X-11GXH	11"	48-X-11XH
48-X-12GXH	12"	48-X-12XH

**EXTRA HEAVY WEIGHT NIPPLES  
4" DIAMETER**



<b>GALVANIZED</b>		<b>BLACK</b>
Part #	Length	Part #
64-X-CLOSEGXH	CLOSE (2-7/8)	64-X-LOSEXH
64-X-4GXH	4"	64-X-4XH
64-X-4.5GXH	4-1/2"	64-X-4.5XH
64-X-5GXH	5"	64-X-5XH
64-X-5GXH	5-1/2"	64-X-5XH
64-X-6GXH	6"	64-X-6XH
64-X-7GXH	7"	64-X-7XH
64-X-8GXH	8"	64-X-8XH
64-X-9GXH	9"	64-X-9XH
64-X-10GXH	10"	64-X-10XH
64-X-11GXH	11"	64-X-11XH
64-X-12GXH	12"	64-X-12XH

**Product Specifications**

Welded steel couplings both galvanized and black in diameters from 1/8" up to 4"

**Technical Specifications**

**Standards:** Product complies with ASTM A-53, A-733 and ANSI B1.20.1 for threading, dimensions and pipe specifications.

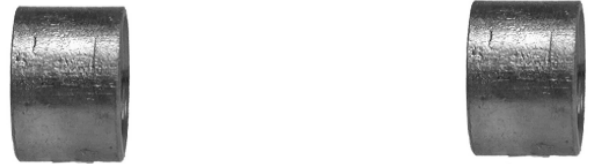
**Pipe:** Complies with ASTM A-53 mill tested schedule 40 and 80. Meets ANSI B36.1. All pipe is hydrostatic tested.

**Galvanized:** Zinc coating applied by hot dipping. Galvanized complying with ASTM-A-123.

**MERCHANT COUPLINGS**



**HALF MERCHANT COUPLINGS**



**Nipples &  
Fittings**

**GALVANIZED**

Part #	Size	BLACK Part #
910-02G	1/8	910-02M
910-04G	1/4	910-04M
910-06G	3/8	910-06M
910-08G	1/2	910-08M
910-12G	3/4	910-12M
910-16G	1	910-16M
910-20G	1-1/4	910-20M
910-24G	1-1/2	910-24M
910-32G	2	910-32M
910-40G	2-1/2	910-40M
910-48G	3	910-48M
910-64G	4	910-64M

**GALVANIZED**

Part #	Size	BLACK Part #
.....	1/4	910-04M HALF
.....	3/8	910-06M HALF
910-08G HALF	1/2	910-08M HALF
910-12G HALF	3/4	910-12M HALF
910-16G HALF	1	910-16M HALF
910-20G HALF	1-1/4	910-20M HALF
910-24G HALF	1-1/2	910-24M HALF
910-32G HALF	2	910-32M HALF
.....	2-1/2	910-40M HALF
.....	3	910-48M HALF
.....	4	910-64M HALF

**MERCHANT COUPLINGS SPECIFICATIONS**

Size	Outside Diameter	Length Inches	Threads per Inch	Threads
				Type
1/2"	1.063"	1-9/16"	14	Straight
3/4"	1.313"	1-5/8"	14	Straight
1"	1.576"	2"	11-1/2	Straight
1-1/4"	1.900"	2-1/16"	11-1/2	Straight
1-1/2"	2.200"	2-1/16"	11-1/2	Straight
2"	2.750"	2-1/3"	11-1/2	Straight
2-1/2"	3.250"	3-1/8"	8	Taper Tapped
3"	4.000"	3-1/4"	8	Taper Tapped
4"	5.000"	3-1/2"	8	Taper Tapped



**Standard Specifications**

Material: ASTM A 197 Cupola Malleable Iron. ASTM A 153- Zinc Coating ANSI B 16.3 - Malleable Iron Fittings.

Dimension: ANSI B 16.14 Ferrous Pipe, Plugs, Bushings, Etc. ANSI B 16.39 - Malleable Iron Threaded Pipe Unions

Thread: ANSI B 2.1 or BS 21

ISO 9002 Manufacturer

**ELBOWS 90°**



**GALVANIZED**

Part #	Size	BLACK Part #
916-02G	1/8	916-02M
916-04G	1/4	916-04M
916-06G	3/8	916-06M
916-08G	1/2	916-08M
916-12G	3/4	916-12M
916-16G	1	916-16M
916-20G	1-1/4	916-20M
916-24G	1-1/2	916-24M
916-32G	2	916-32M
916-40G	2-1/2	916-40M
916-48G	3	916-48M
916-64G	4	916-64M
916-96G	6	916-96M

**BLACK**

**90° STREET ELBOWS**



**GALVANIZED**

Part #	Size	BLACK Part #
914-02G	1/8	914-02M
914-04G	1/4	914-04M
914-06G	3/8	914-06M
914-08G	1/2	914-08M
914-12G	3/4	914-12M
914-16G	1	914-16M
914-20G	1-1/4	914-20M
914-24G	1-1/2	914-24M
914-32G	2	914-32M
914-40G	2-1/2	914-40M
914-48G	3	914-48M
914-64G	4	914-64M

**BLACK**

**REDUCING ELBOWS 90°**

**GALVANIZED**

Part #	Size	BLACK Part #
916-04-02RG	3/8x1/8	916-04-02RM
916-06-02RG	3/8x1/4	916-06-02RM
916-06-04RG	1/2x1/4	916-06-04RM
916-08-04RG	1/2x3/8	916-08-04RM
916-08-06RG	3/4x3/8	916-08-06RM
916-12-06RG	3/4x1/2	916-12-06RM
916-12-08RG	1x1/2	916-12-08RM
916-16-08RG	1x3/4	916-16-08RM
916-16-12RG	1-1/4x3/4	916-16-12RM
916-20-12RG	1-1/4x1	916-20-12RM
916-20-16RG	1-1/2x3/4	916-20-16RM
916-24-12RG	1-1/2x1	916-24-12RM
916-24-16RG	1-1/2x1-1/4	916-24-16RM
916-24-20RG	2x3/4	916-24-20RM
916-32-12RG	2x1	916-32-12RM
916-32-16RG	2x1-1/4	916-32-16RM
916-32-20RG	2x1-1/2	916-32-20RM
916-32-24RG	2-1/2x1-1/2	916-32-24RM
916-40-24RG	2-1/2x2	916-40-24RM
916-48-32RG	3x1-1/2	916-40-32RM
916-48-40RG	3x2-1/2	916-48-24RM
916-64-32RG	4x2	916-48-40RM
916-64-40RG	4x2-1/2	916-64-32RM
916-64-48RG	4x3	916-64-48RM

**BLACK**

**ELBOWS 45°**



**GALVANIZED**

Part #	Size	BLACK Part #
925-02G	1/8	925-02M
925-04G	1/4	925-04M
925-06G	3/8	925-06M
925-08G	1/2	925-08M
925-12G	3/4	925-12M
925-16G	1	925-16M
925-20G	1-1/4	925-20M
925-24G	1-1/2	925-24M
925-32G	2	925-32M
925-40G	2-1/2	925-40M
925-48G	3	925-48M
925-64G	4	925-64M
925-96G	6	925-96M

**BLACK**

**Nipples & Fittings**

**Standard Specifications**

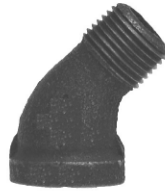
Material: ASTM A 197 Cupola Malleable Iron. ASTM A 153- Zinc Coating ANSI B 16.3 - Malleable Iron Fittings.

Dimension: ANSI B 16.14 Ferrous Pipe, Plugs, Bushings, Etc. ANSI B 16.39 - Malleable Iron Threaded Pipe Unions

Thread: ANSI B 2.1 or BS 21

ISO 9002 Manufacturer

**45° STREET ELBOWS**



**GALVANIZED**

**BLACK**

Part #	Size	Part #
915-02G	1/8	915-02M
915-04G	1/4	915-04M
915-06G	3/8	915-06M
915-08G	1/2	915-08M
915-12G	3/4	915-12M
915-16G	1	915-16M
915-20G	1-1/4	915-20M
915-24G	1-1/2	915-24M
915-32G	2	915-32M
915-40G	2-1/2	915-40M
915-48G	3	915-48M
915-64G	4	915-64M

**BULLHEAD TEES**



**GALVANIZED**

**BLACK**

Part #	Size	Part #
917-02G	1/8	917-02M
917-04G	1/4	917-04M
917-06G	3/8	917-06M
917-08G	1/2	917-08M
917-12G	3/4	917-12M
917-16G	1	917-16M
917-20G	1-1/4	917-20M
917-24G	1-1/2	917-24M
917-32G	2	917-32M
917-40G	2-1/2	917-40M
917-48G	3	917-48M
917-64G	4	917-64M
917-96G	6	917-96M

**TEES**

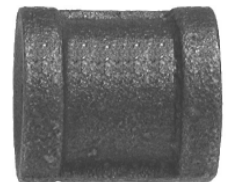


**GALVANIZED**

**BLACK**

Part #	Size	Part #
917-08-12RG	1/2x1/2x3/4	917-08-12RG
917-08-16RG	1/2x1/2x1	917-08-16RG
917-12-16RG	3/4x3/4x1	917-12-16RG
917-12-20RG	3/4x3/4x1-1/4	917-12-20RG
917-16-20RG	1x1x1-1/4	917-16-20RG
917-16-24RG	1x1x1-1/2	917-16-24RG
917-20-24RG	1-1/4x1-1/4x1-1/2	917-20-24RG
917-24-32RG	1-1/2x1-1/2x2	917-24-32RG

**COUPLINGS**



**GALVANIZED**

**BLACK**

Part #	Size	Part #
910-02G	1/8	910-02M
910-04G	1/4	910-04M
910-06G	3/8	910-06M
910-08G	1/2	910-08M
910-12G	3/4	910-12M
910-16G	1	910-16M
910-20G	1-1/4	910-20M
910-24G	1-1/2	910-24M
910-32G	2	910-32M
910-40G	2-1/2	910-40M
910-48G	3	910-48M
910-64G	4	910-64M
910-96G	6	910-96M

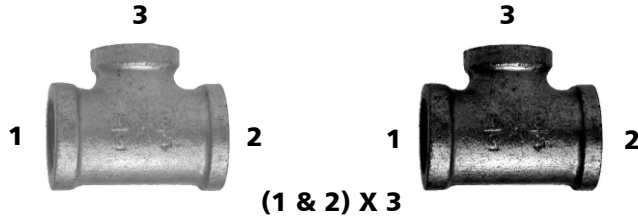
More sizes available. Just ask!



**Standard Specifications**

Material: ASTM A 197 Cupola Malleable Iron. ASTM A 153- Zinc Coating ANSI B 16.3 - Malleable Iron Fittings.  
Dimension: ANSI B 16.14 Ferrous Pipe, Plugs, Bushings, Etc. ANSI B 16.39 - Malleable Iron Threaded Pipe Unions  
Thread: ANSI B 2.1 or BS 21

**REDUCING TEES  
(Same size on run, reducing on branch)**



GALVANIZED		BLACK
Part #	Size	Part #
917-06-04RG	3/8x1/4	917-06-04RM
917-08-04RG	1/2x1/4	917-08-04RM
917-08-06RG	1/2x3/8	917-08-06RM
917-12-04RG	3/4x1/4	917-12-04RM
917-12-06RG	3/4x3/8	917-12-06RM
917-12-08RG	3/4x1/2	917-12-08RM
917-16-04RG	1x1/4	917-16-04RM
917-16-06RG	1x3/8	917-16-06RM
917-16-08RG	1x1/2	917-16-08RM
917-16-12RG	1x3/4	917-16-12RM
917-20-08RG	1-1/4x1/2	917-20-08RM
917-20-12RG	1-1/4x1/2	917-20-12RM
917-20-16RG	1-1/4x1	917-20-16RM
917-24-12RG	1-1/2x3/4	917-24-12RM
917-27-16RG	1-1/2x1	917-24-16RM
917-24-20RG	1-1/2x1-1/4	917-24-20RM
917-32-08RG	2x1/2	917-32-08RM
917-32-12RG	2x3/4	917-32-12RM
917-32-16RG	2x1	917-32-16RM
917-32-20RG	2x1-1/4	917-32-20RM
917-32-24RG	2x1-1/2	917-32-24RM
917-40-24RG	2-1/2x1-1/2	917-40-24RM
917-48-32RG	3x2	917-48-32RM

**LOCKNUTS**

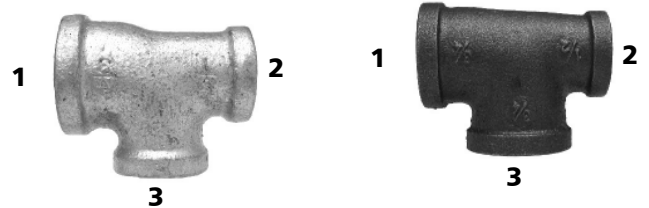


**GALVANIZED**

Part #	Size
924-08G	1/2
924-12G	3/4
924-16G	1
924-20G	1-1/4
924-24G	1-1/2
924-32G	2

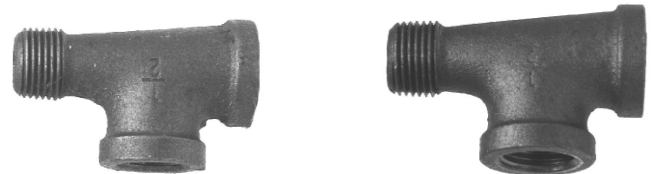
*Black available upon request*

**REDUCING TEES  
(Reducing on run)**



GALVANIZED		BLACK
Part #	Size	Part #
917-12-08-08RG	3/4x1/2x1/2	917-12-08-08RM
917-12-08-12RG	3/4x1/2x3/4	917-12-08-12RM

**MALLEABLE SERVICE TEE**



**(STREET TEE)**

GALVANIZED		BLACK
Part #	Size	Part #
921-08G	1/2	921-08M
921-12G	3/4	921-12M

**SIDE OUTLET TEES**



GALVANIZED		BLACK
Part #	Size	Part #
08-SIDE-OUT-G	1/2	08-SIDE-OUT-M
12-SIDE-OUT-G	3/4	12-SIDE-OUT-M
16-SIDE-OUT-G	1	16-SIDE-OUT-M
20-SIDE-OUT-G	1-1/4	20-SIDE-OUT-M

*More sizes available...Just ask!*

**Nipples &  
Fittings**

**Standard Specifications**

Material: ASTM A 197 Cupola Malleable Iron. ASTM A 153- Zinc Coating ANSI B 16.3 - Malleable Iron Fittings.

Dimension: ANSI B 16.14 Ferrous Pipe, Plugs, Bushings, Etc. ANSI B 16.39 - Malleable Iron Threaded Pipe Unions

Thread: ANSI B 2.1 or BS 21

**REDUCING COUPLINGS**



Galvanized Part #	Size	Black Part #
910-04-02BRG	1/4x1/8	910-04-02BR
910-06-02BRG	3/8x1/8	910-06-02BR
910-06-04BRG	3/8x1/4	910-06-04BR
910-08-02BRG	1/2x1/8	910-08-02BR
910-08-04BRG	1/2x1/4	910-08-04BR
910-08-06BRG	1/2x3/8	910-08-06BR
910-12-02BRG	3/4x1/8	910-12-02BR
910-12-04BRG	3/4x1/4	910-12-04BR
910-12-06BRG	3/4x3/8	910-12-06BR
910-12-08BRG	3/4x1/2	910-12-08BR
910-16-04BRG	1x1/4	910-16-04BR
910-16-06BRG	1x3/8	910-16-06BR
910-16-08BRG	1x1/2	910-16-08BR
910-16-12BRG	1x3/4	910-16-12BR
910-20-06BRG	1-1/4x3/8	910-20-06BR
910-20-08BRG	1-1/4x1/2	910-20-08BR
910-20-12BRG	1-1/4x3/4	910-20-12BR
910-20-16BRG	1-1/4x1	910-20-16BR
910-24-06BRG	1-1/2x3/8	910-24-06BR
910-24-08BRG	1-1/2x1/2	910-24-08BR
910-24-12BRG	1-1/2x3/4	910-24-12BR
910-24-16BRG	1-1/2x1	910-24-16BR
910-24-20BRG	1-1/2x1-1/4	910-24-20BR
910-32-08BRG	2x1/2	910-32-08BR
910-32-12BRG	2x3/4	910-32-12BR
910-32-16BRG	2x1	910-32-16BR
910-32-20BRG	2x1-1/4	910-32-20BR
910-32-24BRG	2x1-1/2	910-32-24BR
910-40-24BRG	2-1/2x1-1/2	910-40-24BR
910-40-32BRG	2-1/2x2	910-40-32BR
910-48-32BRG	3x1-1/2	910-48-32BR
910-48-40BRG	3x2	910-48-40BR
910-64-32BRG	3x2-1/2	910-64-32BR
910-64-32BRG	4x2	910-64-32BR
910-64-40BRG	4x2-1/2	910-64-40BR
910-64-48BRG	4x3	910-64-48BR
910-96-64BRG	6x4	910-96-64BR

**HEX BUSHING**



Galvanized Part #	Size	Black Part #
912-04-02G	1/4x1/8	912-04-02M
912-06-02G	3/8x1/8	912-06-02M
912-06-04G	3/8x1/4	912-06-04M
912-08-02G	1/2x1/8	912-08-02M
912-08-04G	1/2x1/4	912-08-04M
912-08-06G	1/2x3/8	912-08-06M
912-12-02G	3/4x1/8	912-12-02M
912-12-04G	3/4x1/4	912-12-04M
912-12-06G	3/4x3/8	912-12-06M
912-12-08G	3/4x1/2	912-12-08M
912-16-04G	1x1/4	912-16-04M
912-16-06G	1x3/8	912-16-06M
912-16-08G	1x1/2	912-16-08M
912-16-12G	1x3/4	912-16-12M
912-20-04G	1-1/4x1/4	912-20-04M
912-20-06G	1-1/4x3/8	912-20-06M
912-20-08G	1-1/4x1/2	912-20-08M
912-20-12G	1-1/4x3/4	912-20-12M
912-20-16G	1-1/4x1	912-20-16M
912-24-06G	1-1/2x1/4	912-24-06M
912-24-06G	1-1/2x3/8	912-24-06M
912-24-08G	1-1/2x1/2	912-24-08M
912-24-12G	1-1/2x3/4	912-24-12M
912-24-16G	1-1/2x1	912-24-16M
912-24-20G	1-1/2x1-1/4	912-24-20M
912-32-06G	2x3/8	912-32-06M
912-32-08G	2x1/2	912-32-08M
912-32-12G	2x3/4	912-32-12M
912-32-16G	2x1	912-32-16M
912-32-20G	2x1-1/4	912-32-20M
912-32-24G	2x1-1/2	912-32-24M
912-40-08G	2-1/2x1/2	912-40-08M
912-40-12G	2-1/2x3/4	912-40-12M
912-40-16G	2-1/2x1	912-40-16M
912-40-20G	2-1/2x1-1/4	912-40-20M
912-40-24G	2-1/2x1-1/2	912-40-24M
912-40-32G	2-1/2x2	912-40-32M
912-48-16G	3x1	912-48-16M
912-48-20G	3x1-1/4	912-48-20M
912-48-24G	3x1-1/2	912-48-24M
912-48-32G	3x2	912-48-32M
912-48-40G	3x2-1/2	912-48-40M
912-64-12G	4x3/4	912-64-12M
912-64-16G	4x1	912-64-16M
912-64-20G	4x1-1/4	912-64-20M
912-64-24G	4x1-1/2	912-64-24M
912-64-32G	4x2	912-64-32M
912-64-40G	4x2-1/2	912-64-40M
912-64-48G	4x3	912-64-48M
912-96-64G	6x4	917-96-64M

See page 138 for Galvanized and Black Steel Fittings.



**Standard Specifications**

**Material:** ASTM A 197 Cupola Malleable Iron. ASTM A 153- Zinc Coating. ANSI B 16.3 - Malleable Iron Fittings.

**Dimension:** ANSI B 16.14 Ferrous Pipe, Plugs, Bushings, Etc. ANSI B 16.39 - Malleable Iron Threaded Pipe Unions

**Thread:** ANSI B 2.1 or BS 21

**ISO 9002 Manufacturer**

**UNIONS**



**GALVANIZED**

Part #	Size	BLACK Part #
02-UNIONG	1/8	02-UNIONM
04-UNIONG	1/4	04-UNIONM
06-UNIONG	3/8	06-UNIONM
08-UNIONG	1/2	08-UNIONM
12-UNIONG	3/4	12-UNIONM
16-UNIONG	1	16-UNIONM
20-UNIONG	1-1/4	20-UNIONM
24-UNIONG	1-1/2	24-UNIONM
32-UNIONG	2	32-UNIONM
40-UNIONG	2-1/2	40-UNIONM
48-UNIONG	3	48-UNIONM
64-UNIONG	4	64-UNIONM

**SQUARE HEAD PLUGS**



**GALVANIZED**

Part #	Size	BLACK Part #
932-08GSH	1/2	932-08MSH
932-12GSH	3/4	932-12MSH
932-16GSH	1	932-16MSH
932-20GSH	1-1/4	932-20MSH
932-24GSH	1-1/2	932-24MSH
932-32GSH	2	932-32MSH
932-40GSH	2-1/2	932-40MSH
932-48GSH	3	932-48MSH
932-64GSH	4	932-64MSH

\*Use steel fitting for smaller sizes

See page 138 for Galvanized & Black Steel fittings

**CROSSES**



**GALVANIZED**

Part #	Size	BLACK Part #
918-02G	1/8*	918-02M
918-04G	1/4*	918-04M
918-06G	3/8*	918-06M
918-08G	1/2	918-08M
918-12G	3/4	918-12M
918-16G	1	918-16M
918-20G	1-1/4	918-20M
918-24G	1-1/2	918-24M
918-32G	2	918-32M
918-40G	2-1/2	918-40M
918-48G	3	918-48M
918-64G	4	918-64M

**CAPS**



**GALVANIZED**

Part #	Size	BLACK Part #
02-CAPG	1/8*	02-CAPM
04-CAPG	1/4*	04-CAPM
06-CAPG	3/8	06-CAPM
08-CAPG	1/2	08-CAPM
12-CAPG	3/4	12-CAPM
16-CAPG	1	16-CAPM
20-CAPG	1-1/4	20-CAPM
24-CAPG	1-1/2	24-CAPM
32-CAPG	2	32-CAPM
40-CAPG	2-1/2	40-CAPM
48-CAPG	3	48-CAPM
64-CAPG	4	64-CAPM
96-CAPG	6	96-CAPM

\* Use Steel fittings for smaller sizes

See page 138 for Galvanized & Black Steel fittings.

**FLOOR FLANGES**



**GALVANIZED**

Part #	Size	BLACK Part #
08FLOOR-FLANGEG	1/2	08FLOOR-FLANGEM
12FLOOR-FLANGEG	3/4	12FLOOR-FLANGEM
16FLOOR-FLANGEG	1	16FLOOR-FLANGEM
20FLOOR-FLANGEG	1-1/4	20FLOOR-FLANGEM
24FLOOR-FLANGEG	1-1/2	24FLOOR-FLANGEM
32FLOOR-FLANGEG	2	32FLOOR-FLANGEM





**HEX BUSHINGS**



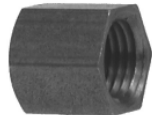
**GALVANIZED**

Part #	Size
912-04-02G	1/4x1/8
912-06-02G	3/8x1/8
912-06-04G	3/8x1/4
912-08-02G	1/2x1/8
912-08-04G	1/2x1/4
912-08-06G	1/2x3/8
912-12-02G	3/4x1/8
912-12-04G	3/4x1/4
912-12-06G	3/4x3/8
912-12-08G	3/4x1/2
912-16-04G	1x1/4
912-16-06G	1x1/8
912-16-08G	1x1/2
912-16-12G	1x3/4

**BLACK**

Part #	Size
912-04-02M	1/4x1/8
912-06-02M	3/8x1/8
912-06-04M	3/8x1/4
912-08-02M	1/2x1/8
912-08-04M	1/2x1/4
912-08-06M	1/2x3/8
912-12-02M	3/4x1/8
912-12-04M	3/4x1/4
912-12-06M	3/4x3/8
912-12-08M	3/4x1/2
912-16-04M	1x1/4
912-16-06M	1x1/8
912-16-08M	1x1/2
912-16-12M	1x3/4

**CAPS**



**GALVANIZED**

Part #	Size
910-02BG	1/8
910-04BG	1/4
910-06BG	3/8
910-08BG	1/2
910-12BG	3/4
910-16BG	1

**BLACK**

Part #	Size
910-02BM	1/8
910-04BM	1/4
910-06BM	3/8
910-08BM	1/2
910-12BM	3/4
910-16BM	1

**SQUARE HEAD PLUGS**



**GALVANIZED**

Part #	Size
932-02GSH	1/8
932-04GSH	1/4
932-06GSH	3/8
932-08GSH	1/2
932-12GSH	3/4
932-16GSH	1
932-20GSH	1-1/4
932-24GSH	1-1/2
932-32GSH	2

**BLACK**

Part #	Size
932-02SH	1/8
932-04SH	1/4
932-06SH	3/8
932-08SH	1/2
932-12SH	3/4
932-16SH	1
932-20SH	1-1/4
932-24SH	1-1/2
932-32SH	2

**HEX HEAD PLUG**



**GALVANIZED**

Part #	Size
G932-02P	1/8
G932-04P	1/4
G932-06P	3/8
G932-08P	1/2
G932-12P	3/4
G932-16P	1

**BLACK**

Part #	Size
032-02P	1/8
932-04P	1/4
932-06P	3/8
932-08P	1/2
932-12P	3/4
932-16P	1

**FLUSH COUNTERSUNK PLUG**



**GALVANIZED**

Part #	Size
932-02GF	1/8
932-04GF	1/4
932-06GF	3/8
932-08GF	1/2
932-12GF	3/4
932-16GF	1
932-20GF	1-1/4
932-24GF	1-1/2
932-32GF	2

**BLACK**

Part #	Size
932-02F	1/8
932-04F	1/4
932-06F	3/8
932-08F	1/2
932-12F	3/4
932-16F	1
932-20F	1-1/4
932-20F	1-1/2
932-32F	2

**HEX SOCKET PLUG**



**GALVANIZED**

Part #	Size
932-1/16GS	1/16
932-02GS	1/8
932-04GS	1/4
932-06GS	3/8
932-08GS	1/2
932-12GS	3/4
932-16GS	1
932-20GS	1-1/4
932-24GS	1-1/2
932-32GS	2

**BLACK**

Part #	Size
932-1/16S	1/16
932-02S	1/8
932-04S	1/4
932-06S	3/8
932-08S	1/2
932-12S	3/4
932-16S	1
932-20S	1-1/4
932-20S	1-1/2
932-32S	2

**FACE BUSHING**



**GALVANIZED**

Part #	Size
912-04-02GFB	1/4x1/8
912-06-02GFB	3/8x1/8
912-06-04GFB	3/8x1/4
912-08-04GFB	1/2x1/4
912-08-06GFB	1/2x3/8
912-12-06GFB	3/4x3/8
912-12-08GFB	3/4x1/2
912-16-08GFB	1x1/2
912-16-12GFB	1x3/4

**BLACK**

Part #	Size
912-04-02FB	1/4x1/8
912-06-02FB	3/8x1/8
912-06-04FB	3/8x1/4
912-08-04FB	1/2x1/4
912-08-06FB	1/2x3/8
912-12-06FB	3/4x3/8
912-12-08FB	3/4x1/2
912-16-08FB	1x1/2
912-16-12FB	1x3/4



300 LB Fittings ASTM: A197 ANSI: B16.3, B16.4

**90° ELBOW**



**GALVANIZED**

Part #	Length
916-04GXH	1/4
916-06GXH	3/8
916-08GXH	1/2
916-12GXH	3/4
916-16GXH	1
916-20GXH	1-1/4
916-24GXH	1-1/2
916-32GXH	2

**BLACK**

Part #
916-04XH
916-06XH
916-08XH
916-12XH
916-16XH
916-20XH
916-24XH
916-32XH

**45° ELBOW**



**GALVANIZED**

Part #	Length
925-04GXH	1/4
925-06GXH	3/8
925-08GXH	1/2
925-12GXH	3/4
925-16GXH	1
925-20GXH	1-1/4
925-24GXH	1-1/2
925-32GXH	2

**BLACK**

Part #
925-04XH
925-06XH
925-08XH
925-12XH
925-16XH
925-20XH
925-24XH
925-32XH

**90° STREET ELBOWS**



**GALVANIZED**

Part #	Length
914-04GXH	1/4
914-06GXH	3/8
914-08GXH	1/2
914-12GXH	3/4
914-16GXH	1
914-20GXH	1-1/4
914-24GXH	1-1/2
914-32GXH	2

**BLACK**

Part #
914-04XH
914-06XH
914-08XH
914-12XH
914-16XH
914-20XH
914-24XH
914-32XH

**TEES**



**GALVANIZED**

Part #	Length
917-06GXH	3/8
917-08GXH	1/2
917-12GXH	3/4
917-16GXH	1
917-20GXH	1-1/4
917-24GXH	1-1/2
917-32GXH	2

**BLACK**

Part #
917-06XH
917-08XH
917-12XH
917-16XH
917-20XH
917-24XH
917-32XH

300 LB Fittings ASTM: A197 ANSI: B16.3, B16.4

**COUPLINGS**



**GALVANIZED**

Part #	Length
910-04GXH	1/4
910-06GXH	3/8
910-08GXH	1/2
910-12GXH	3/4
910-16GXH	1
910-20GXH	1-1/4
910-24GXH	1-1/2
910-32GXH	2

**BLACK**

Part #
910-04XH
910-06XH
910-08XH
910-12XH
910-16XH
910-20XH
910-24XH
910-32XH

**REDUCING COUPLING**



**GALVANIZED**

Part #	Length
910-06-04BRGXH	3/8x1/4
910-08-04BRGXH	1/2x1/4
910-08-06BRGXH	1/2x3/8
910-12-08BRGXH	3/4x1/2
910-16-08BRGXH	1x1/2
910-16-12BRGXH	1x3/4

**BLACK**

Part #
910-06-04BRXH
910-08-04BRXH
910-08-06BRXH
910-12-08BRXH
910-16-08BRXH
910-16-12BRXH

**CAPS**



**GALVANIZED**

Part #	Length
04-CAPGXH	1/4
06-CAPGXH	3/8
08-CAPGXH	1/2
12-CAPGXH	3/4
16-CAPGXH	1
20-CAPGXH	1-1/4
24-CAPGXH	1-1/2
32-CAPGXH	2

**BLACK**

Part #
04-CAPXH
06-CAPXH
08-CAPXH
12-CAPXH
16-CAPXH
20-CAPXH
24-CAPXH
32-CAPXH

**UNIONS**



**GALVANIZED**

Part #	Length
02-UNIONGXH	1/8
04-UNIONGXH	1/4
06-UNIONGXH	3/8
08-UNIONGXH	1/2
12-UNIONGXH	3/4
16-UNIONGXH	1
20-UNIONGXH	1-1/4
24-UNIONGXH	1-1/2
32-UNIONGXH	2

**BLACK**

Part #
02-UNIONXH
04-UNIONXH
06-UNIONXH
08-UNIONXH
12-UNIONXH
16-UNIONXH
20-UNIONXH
24-UNIONXH
32-UNIONXH

**Nipples & Fittings**

**3000 LB FORGED STEEL THREADED FITTINGS  
ASTM: A105 ANSI: B16.11**

**90° ELBOWS**



Part #	Size
916-08-08FS-3/M .....	1/2"
916-12-12FS-3/M .....	3/4"
916-16-16FS-3/M .....	1"
916-20-20FS-3/M .....	1-1/4"
916-24-24FS-3/M .....	1-1/2"
916-32-32FS-3/M .....	2"

**STREET ELBOWS**



Part #	Size
914-08-08FS-3/M .....	1/2"
914-12-12FS-3/M .....	3/4"
914-16-16FS-3/M .....	1"
914-20-20FS-3/M .....	1-1/4"
914-24-24FS-3/M .....	1-1/2"
914-32-32FS-3/M .....	2"

**45° ELBOWS**



Part #	Size
925-08-08FS-3/M .....	1/2"
925-12-12FS-3/M .....	3/4"
925-16-16FS-3/M .....	1"
925-20-20FS-3/M .....	1-1/4"
925-24-24FS-3/M .....	1-1/2"
925-32-32FS-3/M .....	2"

**TEES**



Part #	Size
917-08FS-3/M .....	1/2"
917-12FS-3/M .....	3/4"
917-16FS-3/M .....	1"
917-20FS-3/M .....	1-1/4"
917-24FS-3/M .....	1-1/2"
917-32FS-3/M .....	2"

**CROSS**



Part #	Size
918-08FS-3/M .....	1/2"
918-12FS-3/M .....	3/4"
918-16FS-3/M .....	1"
918-20FS-3/M .....	1-1/4"
918-24FS-3/M .....	1-1/2"
918-32FS-3/M .....	2"

**HALF COUPLINGS**



Part #	Size
101-773 .....	1/2"
101-774 .....	3/4"
101-775 .....	1"
101-776 .....	1-1/4"
101-777 .....	1-1/2"
101-778 .....	2"

**CAPS**



Part #	Size
08-CAPFS-3/M .....	1/2"
12-CAPFS-3/M .....	3/4"
16-CAPFS-3/M .....	1"
20-CAPFS-3/M .....	1-1/4"
24-CAPFS-3/M .....	1-1/2"
32-CAPFS-3/M .....	2"

*2000 and 6000 lb threaded and socket weld fittings available.*

**COUPLINGS**



Part #	Size
910-08-08FS-3/M .....	1/2"
910-12-12FS-3/M .....	3/4"
910-16-16FS-3/M .....	1"
910-20-20FS-3/M .....	1-1/4"
910-24-24FS-3/M .....	1-1/2"
910-32-32FS-3/M .....	2"

**REDUCING COUPLINGS**

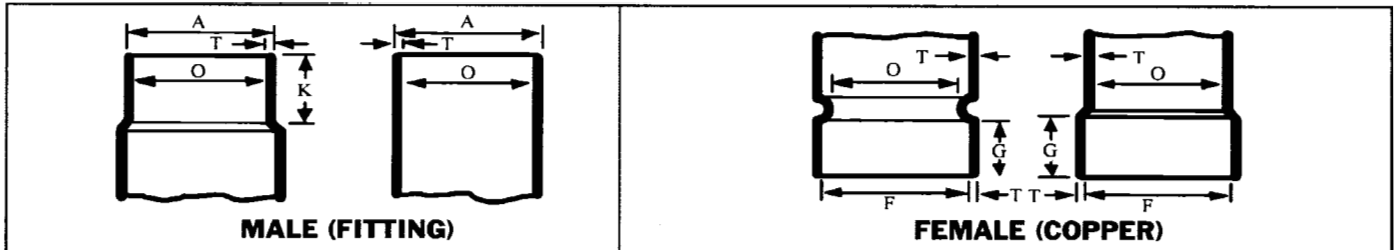
Part #	Size
910-08-06FS-3/M .....	1/2x3/8"
910-08-04FS-3/M .....	1/2x1/4"
910-12-08FS-3/M .....	3/4x1/2"
910-12-06FS-3/M .....	3/4x3/8"
910-16-12FS-3/M .....	1x3/4"
910-16-08FS-3/M .....	1x1/2"
910-16-06FS-3/M .....	1x3/8"
910-20-16FS-3/M .....	1-1/4x1"
910-20-12FS-3/M .....	1-1/4x3/4"
910-20-08FS-3/M .....	1-1/4x1/2"
910-20-06FS-3/M .....	1-1/4x3/8"
910-24-20FS-3/M .....	1-1/2x1-1/4"
910-24-16FS-3/M .....	1-1/2x1"
910-24-08FS-3/M .....	1-1/2x1/2"
910-32-24FS-3/M .....	2x1-1/2"
910-32-20FS-3/M .....	2x1-1/4"
910-32-16FS-3/M .....	2x1"
910-32-12FS-3/M .....	2x3/4"
910-32-08FS-3/M .....	2x1/2"

**UNIONS**



Part #	Size
08-UNIONFS-3/M .....	1/2"
12-UNIONFS-3/M .....	3/4"
16-UNIONFS-3/M .....	1"
20-UNIONFS-3/M .....	1-1/4"
24-UNIONFS-3/M .....	1-1/2"
32-UNIONFS-3/M .....	2"





Nominal Size	Joint Ends										Metal Thickness T (in)	Inside Diameter O (in)	
	Male End					Female End							
	Outside Diameter (A) in	Average Tolerance (mm)	Actual MIN in	O.D. MAX in	Length (Min) H (in)	Inside Diameter F (in)	Average Tolerance (mm)	Actual MIN in	O.D. MAX in	Length (Min) G (in)			
1/8	2/8	0.03	2/8	2/8	3/8	2/8	0.03	2/8	2/8	3/8	0	2/8	
1/4	3/8		3/8	3/8	3/8	3/8		3/8	3/8	3/8	3/8	0	2/8
3/8	4/8		4/8	4/8	3/8	4/8		4/8	4/8	4/8	3/8	0	3/8
1/2	5/8		5/8	5/8	4/8	5/8		5/8	5/8	5/8	3/8	0	4/8
5/8	6/8		6/8	6/8	5/8	6/8		6/8	6/8	6/8	5/8	0	4/8
3/4	7/8		7/8	7/8	6/8	7/8		7/8	7/8	7/8	5/8	0	5/8
1	1-1/8	0.04	1-1/8	1-1/8	7/8	1-1/8	0.04	1-1/8	1-1/8	7/8	0	7/8	
1-1/4	1-3/8		1-3/8	1-3/8	1	1-3/8		1-3/8	1-3/8	1	0	1-1/8	
1-1/2	1-5/8	0.05	1-5/8	1-5/8	1-1/8	1-5/8	0.05	1-5/8	1-5/8	1-1/8	0	1-3/8	
2	2-1/8		2-1/8	2-1/8	1-3/8	2-1/8		2-1/8	2-1/8	1-2/8	0	1-6/8	
2-1/2	2-5/8		2-5/8	2-5/8	1-4/8	2-5/8		2-5/8	2-5/8	1-4/8	1/8	2-1/8	
3	3-1/8		3-1/8	2-1/8	1-6/8	3-1/8		3-1/8	3-1/8	1-5/8	1/8	2-5/8	
4	4-1/8		4-1/8	4-1/8	2-1/8	4-1/8		4-1/8	4-1/8	2-1/8	1/8	3-4/8	
5	5-1/8		5-1/8	5-1/8	2-6/8	5-1/8		5-1/8	5-1/8	2-5/8	1/8	4-5/8	
6	6-1/8	0.08	6-1/8	6-1/8	3-2/8	6-1/8	0.08	6-1/8	6-1/8	3-1/8	1/8	5-6/8	
8	8-1/8		8-1/8	8-1/8	4-1/8	8-1/8		8-1/8	8-1/8	3-7/8	1/8	7-4/8	
10	10-1/8	0.35	10-1/8	10-1/8	4-4/8	10-2/8	0.35	10-1/8	10-2/8	4-3/8	2/8	9-2/8	

Send DF Burnham all your volume quotes!

**Symbol of Joint Ends**

- C** Solder joint fitting end made to receive copper tube diameter
- Ftg.** Solder joint fitting end made to receive copper tube diameter
- F** Internal ANSI Standard Taper Pipe Thread-Female
- M** External ANSI Standard Taper Pipe Thread-Male

The above conforms to ASTM B 88 & ASTM B 306

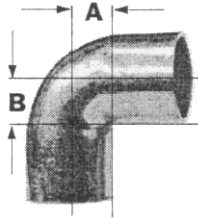
**Warranty:** Seller warrants that all fittings will be free from defects in materials and construction that will impair their usefulness, provided they are used as recommended. Any fitting that proves to be defective will be replaced or a credit issued but no incidental labor charges, expenses or damages will be allowed.

**Dimensions:** We have included roughing-in dimensions in this catalog. These dimensions are provided with the latest information available at the time of publication and are for estimating purposes only.

See copper fitting brushes on Page 189



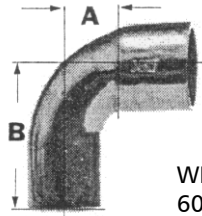
**90° ELL C x C**



WE-500-R  
607-R  
107-C

Part #	Nominal	Approx. Net Wt.	A	B
107-C-02C	1/8"	0.01	1/4	1/4
107-C-04C	1/4"	0.01	1/4	1/4
107-C-06C	3/8"	0.03	3/8	3/8
107-C-06-04C	3/8" x 1/4"	0.03	5/8	1/2
107-C-08C	1/2"	0.04	3/8	3/8
107-C-08-06C	1/2" x 3/8"	-	5/8	1/2
107-C-10C	5/8"	0.07	3/8	3/8
107-C-12C	3/4"	0.09	1/2	1/2
107-C-12-08C	3/4" x 1/2"	0.12	3/4	3/4
107-C-16C	1"	0.17	3/4	3/4
107-C-16-08C	1" x 3/4"	0.23	7/8	7/8
107-C-16-12C	1" x 1/2"	0.23	1-1/4	3/4
107-C-20C	1-1/4"	0.27	7/8	7/8
107-C-24C	1-1/2"	0.41	1-1/8	1-1/8
107-C-32C	2"	0.73	1-1/4	1-1/4
107-C-32-24C	2" x 1-1/2"	0.73	1-5/8	1-1/4
107-C-40C	2-1/2"	1.16	1-5/8	1-5/8
107-C-48C	3"	1.87	1-7/8	1-7/8
107-C-64C	4"	3.79	2-3/4	2-3/4

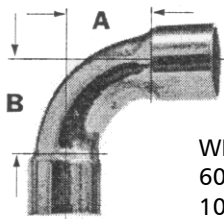
**90° STREET ELL  
Ftg. x C**



WE-503  
607-2  
107-C-2

107-C-2-04C	1/4"	0.01	3/8	3/4
107-C-2-06C	3/8"	0.03	3/8	7/8
107-C-2-08C	1/2"	0.05	1/2	1
107-C-2-10C	5/8"	0.07	5/8	1-1/4
107-C-2-12C	3/4"	0.12	3/4	1-1/2
107-C-2-16C	1"	0.22	7/8	1-3/4
107-C-2-20C	1-1/4"	0.33	1-1/8	2-1/8
107-C-2-24C	1-1/2"	0.45	1-3/8	2-1/2
107-C-2-32C	2"	0.87	1-3/4	3-1/8
107-C-2-48C	3"	1.93	2-3/8	4

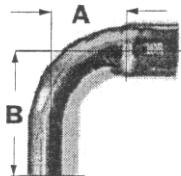
**90° LONG TURN ELL  
C x C**



WE-500-L  
607-LT  
107-L

107-L-02C	1/8"	0.01	1/4	1/4
107-L-04C	1/4"	0.02	3/8	3/8
107-L-05C	5/16" 00	0.03	5/8	5/8
107-L-06C	3/8"	0.04	3/4	3/4
107-L-08C	1/2"	0.06	7/8	7/8
107-L-10C	5/8"	0.1	1	1
107-L-12C	3/4"	0.15	1-1/4	1-1/4

**90° LONG TURN STREET ELL  
Ftg. x C**

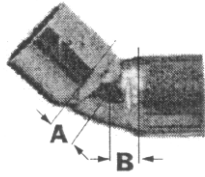


WE-503-L  
607-2LT

107-C-2-02C	1/8"	0.01	1/2	1/2
107-C-2-04C	1/4"	0.22	3/8	3/4
107-C-2-06C	3/8"	0.04	-	-
107-C-2-08C	1/2"	0.06	7/8	1-3/8
107-C-2-10C	5/8"	0.11	1	1-3/4
107-C-2-12C	3/4"	0.15	1-1/4	2



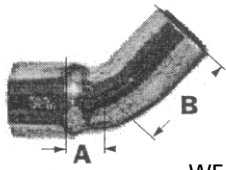
**45° ELL C x C**



WE-504  
606  
106

Part #	Nominal	Approx. Net Wt.	A	B
106-02C	1/8"	0.01	1/4	1/4
106-04C	1/4"	0.01	1/4	1/4
106-04C	3/8"	0.02	1/4	1/4
106-08C	1/2"	0.04	1/4	1/4
106-10C	5/8"	0.06	3/8	3/8
106-12C	3/4"	0.1	3/8	3/8
106-16C	1"	0.19	1/2	1/2
106-20C	1-1/4"	0.27	3/4	3/4
106-24C	1-1/2"	0.39	3/4	3/4
106-32C	2"	0.75	7/8	7/8
107-40C	2-1/2"	1.23	1-1/8	1-1/8

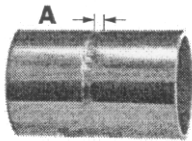
**STREET 45°  
Ftg. x C**



WE-505  
606-2

106-2-04C	1/4"	0.01	1/8	3/8
106-2-06C	3/8"	0.02	1/8	1/2
106-2-08C	1/2"	0.06	1/4	3/4
106-2-10C	5/8"	0.06	1/4	3/4
106-2-12C	3/4"	0.1	3/8	1-1/8
106-2-16C	1"	0.18	1/2	1-1/2
106-2-20C	1-1/4"	0.27	3/4	1-3/4
106-2-24C	1-1/2"	0.38	3/4	1-3/4
106-2-32C	2"	0.75	7/8	2-1/4

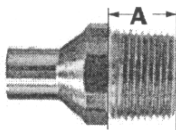
**COUPLING (SOCKET)  
W/ROLLED TUBE STOP  
C x C**



WC-400  
100

100-02C	1/8"	0	0	-
100-04C	1/4"	0.01	0	-
100-06C	3/8"	0.02	1/8	-
100-08C	1/2"	0.03	1/8	-
100-10C	5/8"	0.04	0	-
100-12C	3/4"	0.06	1/8	-
100-16C	1"	0.1	1/8	-
100-20C	1-1/4"	0.15	1/8	-
100-24C	1-1/2"	0.22	1/8	-
100-32C	2"	0.39	1/8	-
100-40C	2-1/2"	0.71	1/8	-
100-48C	3"	0.98	1/8	-
100-64C	4"	2.01	1/4	-

**COUPLING (SOCKET)  
LESS TUBE STOP  
C x C**

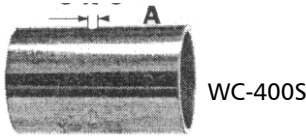


WC-400NS  
601

101-02C	1/8"	0	5/8	-
101-04C	1/4"	-	3/4	-
101-08C	1/2"	0.03	1-1/8	-
101-12C	3/4"	0.06	1-5/8	-
101-16C	1"	0.1	2	-
101-20C	1-1/4"	0.15	2	-
101-24C	1-1/2"	0.22	2-3/8	-
101-32C	2"	0.39	2-3/4	-

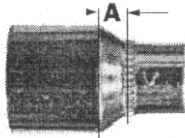
**Nipples &  
Fittings**

**COUPLING (SOCKET)  
w/DIMPLED TUBE STOP**



Part #	Nominal	Approx. Net Wt.	A
77-238	1/2"	0.03	1/8
77-240	3/4"	0.06	1/8
77-241	1"	0.1	1/8
77-242	1-1/4"	0.15	1/8
77-244	2"	0.39	1/8
77-247	4"	2.01	1/4

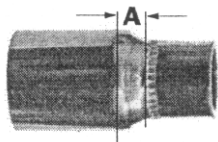
**REDUCER COUPLING  
w/STOP  
C x C**



WC-400R  
600-R

101-R-04-02C	1/4" x 1/8"	0.01	1/4
101-R-06-04C	3/8" x 1/4"	0.02	1/8
101-4-08-06C	1/2" x 3/8"	0.03	1/4
101-R-08-04C	1/2" x 1/4"	0.03	1/4
101-R-10-08C	5/8" x 1/2"	0.04	1/8
101-R-12-08C	3/4" x 1/2"	0.06	1/4
101-R-12-06C	3/4" x 3/8"	0.06	3/8
101-R-12-04C	3/4" x 1/4"	0.06	3/8
101-R-16-12C	1" x 3/4"	0.12	3/8
101-R-16-08C	1" x 1/2"	0.1	1/2
101-R-20-16C	1-1/4" x 1"	0.17	1/4
101-R-20-12C	1-1/4" x 3/4"	0.17	1/2
101-R-20-08C	1-1/4" x 1/2"	0.14	1/2
101-R-24-20C	1-1/2" x 1-1/4"	0.24	1/4
101-R-24-16C	1-1/2" x 1"	0.24	1/2
101-R-32-24C	1-1/2" x 3/4"	0.25	5/8
101-R-32-20C	1-1/2" x 1/2"	0.19	7/8
101-R-32-16C	2" x 1-1/2"	0.42	5/8
101-R-40-32C	2" x 1-1/4"	0.46	5/8
101-R-48-40C	2" x 1"	0.48	5/8
101-R-40-32C	2-1/2" x 2"	0.79	3/4
101-R-32-40C	2" x 2-1/2"	1.15	1/2

**REDUCER COUPLING  
w/STOP  
C x C**

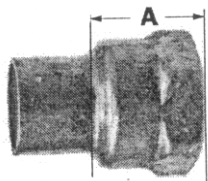


WC-403  
600-2

77-291	3/8" x 1/4"	0.02	1/8
77-292	3/8" x 1/8"	0.01	5/8
77-294	1/2" x 1/4"	0.03	3/4
77-295	5/8" x 1/2"	0.03	1/8
77-296	3/4" x 5/8"	0.08	1/8
77-297	3/4" x 1/2"	0.06	1/8
77-298	3/4" x 3/8"	0.05	1-1/8
77-299	3/4" x 1/4"	0.05	1-1/8
77-300	1" x 3/4"	0.11	1/4
77-352	1" x 1/2"	0.1	1/4
77-354	1-1/4" x 1"	0.17	1/4
77-355	1-1/4" x 3/4"	0.15	1/4
77-356	1-1/4" x 1/2"	0.14	1/2
77-357	1-1/2" x 1-1/4"	0.21	1/4
77-358	1-1/2" x 1"	0.22	1/4
77-359	1-1/2" x 3/4"	0.21	1/2
77-360	1-1/2" x 1/2"	0.21	5/8
77-361	2" x 1-1/2"	0.39	1/2
77-362	2" x 1-1/4"	0.38	1/2
77-363	2" x 1"	0.4	5/8
77-364	2" x 3/4"	0.39	3/4
77-365	2" x 1/2"	0.40	7/8
77-370	2" x 2-1/2"	0.39	1/2



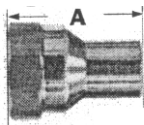
**FEMALE ADAPTERS  
C x F**



WC-402  
603  
WC-402R  
603R

Part #	Nominal	Approx. Net Wt.	A/X
103-02C	1/8"	0.03	1/2
103-04C	1/4"	0.04	1/2
103-06C	3/8"	0.06	5/8
103-06-08C	3/8" x 1/2"	0.1	7/8
103-08C	1/2"	0.1	7/8
103-08-12C	1/2" x 3/4"	0.15	7/8
103-08-06C	1/2" x 3/8"	0.07	5/8
103-08-04C	1/2" x 1/4"	0.05	5/8
103-12C	3/4"	0.14	3/4
103-12-08C	3/4" x 1/2"	0.11	3/4
103-16C	1"	0.24	1
103-16-12C	1" x 3/4"	0.22	5/8
103-16-08C	1" x 1/2"	0.29	3/4
103-20C	1-1/4"	0.43	1-1/8
103-20-24C	1-1/4" x 1-1/2"	0.52	1-1/4
103-20-12C	1-1/4" x 3/4"	0.26	1/2
103-24C	1-1/2"	0.58	1-1/8
103-32C	2"	0.74	1-1/4
103-48C	3"	1.83	1-1/2

**FITTING FEMALE ADAPTERS  
Ftg. x F**

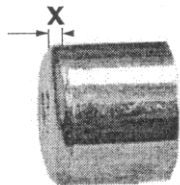


WC-405  
603-2

WC-405R  
603R

103-2-06C	3/8"	0.05	1-1/8
103-2-08C	1/2"	0.11	1-3/8
103-2-12C	3/4"	0.19	1-3/4
103-2-16 C	1"	0.25	2
103-2-24C	1-1/2"	0.55	2/1/02
103-2-32C	2"	0.68	2-5/8

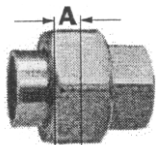
**CAP**



WC-407

117-02C	1/8"	0.003	0
117-04C	1/4"	0.01	0
117-06C	3/8"	0.01	0
117-08C	1/2"	0.02	0
117-10C	5/8"	0.03	1/8
117-12C	3/4"	0.04	1/8
117-16C	1"	0.08	1/8
117-20C	1-1/4"	0.11	1/8
117-24C	1-1/2"	0.18	1/8
117-32C	2"	0.3	0

**UNIONS C x C**



WC-407

102-02C	1/8"	0.13	3/8
102-04C	1/4"	0.11	3/8
102-06C	3/8"	0.11	1/2
102-08C	1/2"	0.17	1/2
102-12C	3/4"	0.37	5/8
102-16C	1"	0.51	1/2

**U-TYPE STRAP**



WS-1100

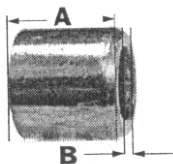
120-02C	1/8"	0.01	-
120-04C	1/4"	0.02	-
120-06C	3/8"	0.02	-
120-08C	1/2"	0.03	-
120-12C	3/4"	0.03	-
120-16C	1"	0.04	-
120-20C	1-1/4"	0.04	-
120-24C	1-1/2"	0.05	-
120-32C	2"	0.06	-

**Nipples &  
Fittings**



**FLUSH BUSHING**

**Ftg. x C**

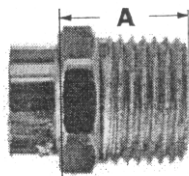


WC-106  
618

Part #	Nominal	Approx. Net Wt.	A
119-12-08C	3/4" x 1/2"	0.08	7/8
119-12-10C	3/4" x 5/8"	0.04	7/8
119-16-12C	1" x 3/4"	0.13	1
119-16-08C	1" x 1/2"	0.22	1
119-20-12C	1-1/4" x 3/4"	0.39	1
119-24-20C	1-1/2" x 1-1/4"	0.22	1-1/8
119-32-24C	2" x 1-1/2"	0.68	1-3/8

**MALE ADAPTER**

**C x M**

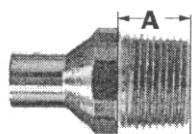


WC-401  
604

104-02C	1/8"	0.02	3/8
104-04C	1/4"	0.03	1/2
104-04-08C	1/4" x 1/2"	0.09	1
104-04-06C	1/4" x 3/8"	0.06	5/8
104-04-02C	1/4" x 1/8"	0.02	7/8
104-06C	3/8"	0.06	7/8
104-08C	1/2"	0.08	5/8
104-08-12C	1/2" x 3/4"	0.16	3/4
104-12C	3/4"	0.14	7/8
104-12-16C	3/4" x 1"	0.29	7/8
104-16C	1"	0.24	7/8
104-16-12C	1" x 3/4"	0.18	1-7/8
104-20C	1-1/4"	0.41	1-1/2
104-24C	1-1/2"	0.5	1-5/8
104-24-20C	1-1/2" x 1-1/4"	0.44	1-3/4
104-32C	2"	0.87	7/8

**FITTING MALE ADAPTERS**

**Ftg. x C**

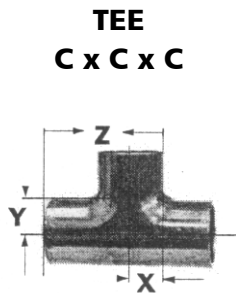


WC-404  
604-2

104-2-08C	1/2"	0.09	1-1/2
104-2-08-12C	1/2" X 3/4"	0.15	-
104-2-12C	3/4"	0.15	1-7/8
104-2-20C	1-1/4"	0.41	2-1/2
104-2-32C	2"	0.86	2-7/8

**Nipples & Fittings**





WT-600  
611

Part #	Nominal	Approx. Net Wt.	A/X	B/Y	Z
111-02C	1/8"	0.02	1/8	1/8	
111-04C	1/4"	0.03	1/4	1/4	
111-06C	3/8"	0.05	1/4	3/8	
111-08C	1/2"	0.08	3/8	3/8	
111-08-16C	1/2"x1/2"x 1"	-	1-1/4	5/8	
111-10C	5/8"	-	3/8	1/2	
111-12C	3/4"	0.18	1/2	1/2	
111-12-16C	2/4"x3/4"x1"	0.25	1	7/8	
111-12-08C	3/4"x3/4"x1/2"	0.15	3/8	1/2	
111-12-08-12C	3/4"x1/2"x3/4"	0.19	3/8	1/4	
111-12-08-08C	3/4"x1/2"x1/2"	0.15	2/8	1/2	1-3/8
111-16C	1"	0.35	5/8	5/8	
111-16-20C	1"x1"x1-1/4"	0.64	1-1/8	1	
111-16-12C	1"x1"x3/4"	0.29	1/2	5/8	
111-16-08C	1"x1"x1/2"	0.24	3/8	5/8	
111-16-12-16C	1"x3/4"x1"	0.38	3/4	5/8	
111-16-12-12C	1"x3/4"x3/4"	0.31	1/2	5/8	1-5/8
111-16-12-08C	1"x3/4"x1/2"	0.27	1/2	3/4	
111-16-08-16C	1"x1/2"x1"	0.34	3/4	5/8	
111-16-08-12C	1"x1/2"x3/4"	0.34	3/8	3/4	
111-20C	1-1/4"	0.58	3/4	5/8	
111-20-24C	1-1/4"x1-1/4"x1-1/2"	0.79	1-1/4	1	
111-20-16C	1-1/4"x1-1/4"x1"	0.47	5/8	3/4	
111-20-12C	1-1/4"x1-1/4"x3/4"	0.39	3/8	3/4	
111-20-08C	1-1/4"x1-1/4"x1/2"	0.33	3/8	3/4	
111-20-16-20C	1-1/4"x1"x1-1/4"	-	3/4	3/4	
111-20-16-16C	1-1/4"x1"x1"	0.5	5/8	7/8	
111-20-12-20C	1-1/4"x3/4"x1-1/4"	0.63	3/4	7/8	
111-20-12-12C	1-1/4"x3/4"x3/4"	-	1/2	7/8	
111-20-08-20C	1-1/4"x1/2"x1-1/4"	-	3/4	7/8	
111-24C	1-1/2"	-	1	1	
111-24-20C	1-1/2"x1-1/2"x1-1/4"	-	3/4	1	
111-24-16C	1-1/2"x1-1/2"x1"	-			
111-24-12C	1-1/2"x1-1/2"x3/4"	0.51	3/4	1	
111-24-08C	1-1/2"x1-1/2"x1/2"	0.46	3/8	1	
111-32C	2"	1.35	1-1/8	1-1/4	
111-32-24C	2"x2"x1-1/2"	1.17	7/8	1-1/4	
111-32-20C	2"x2"x1-1/4"	1.01	7/8	1-3/8	
111-32-16C	2"x2"x1"	0.99	7/8	1-1/4	
111-32-12C	2"x2"x3/4"	0.9	5/8	1-1/4	
111-32-08C	2"x2"x3/4"	0.77	5/8	1-1/4	
111-32-24-12C	2"x1-1/2"x3/4"	1.4	5/8	1-1/4	
111-32-20-20C	2"x1-1/4"x1-1/4"	1.14	7/8	1-3/8	
111-32-16-32C	2"x1"x2"	1.34	1-1/8	1-1/4	
111-32-16-16C	2"x1"x1"	0.98	1/2	1-1/4	
111-40C	2-1/2"	2.21	1-1/2	1-5/8	
111-48-32C	3"x3"x2"	2.53	1-1/8	1-1/4	
111-48-20C	3"x3"x1-1/4"	2.18	3/4	1-7/8	
111-48-16C	3"x3"x1"	2.14	5/8	1-3/4	

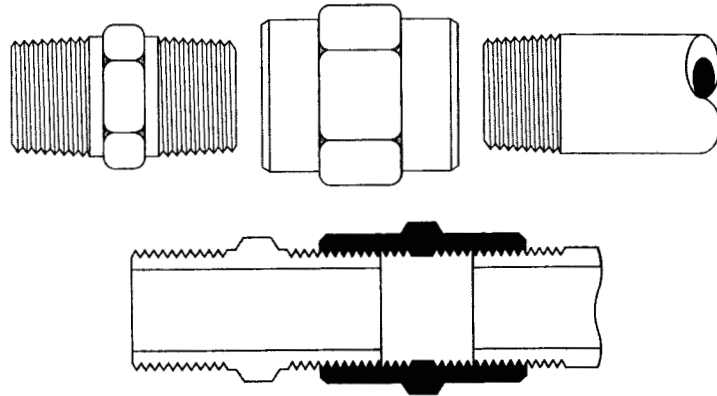
**Nipples &  
Fittings**

Send DFBurnham all your high volume quotes!



# Brass Fittings

## Pipe



**Brass**

<b>Pipe Size</b>	<b>1/16</b>	<b>1/8</b>	<b>1/4</b>	<b>3/8</b>	<b>1/2</b>	<b>3/4</b>	<b>1</b>
<b>Thread Size</b>	<b>1/16-27</b>	<b>1/8-27</b>	<b>1/4-18</b>	<b>3/8-18</b>	<b>1/2-14</b>	<b>3/4-14</b>	<b>1-11<sup>1</sup>/<sub>2</sub></b>
<b>Working Pressure</b>	<b>1200</b>	<b>1200</b>	<b>1200</b>	<b>1200</b>	<b>1200</b>	<b>1000</b>	<b>1000</b>

**•Typical Application**

Grease, fuels, LP and Natural gas (available on special order), refrigeration, in instrumentation and hydraulic systems.

**•Pressure**

Operating pressure up to 1200 PSI.

**•Vibration**

Fair resistance.

**•Temperature Range**

-650F to +2500F (-530C to +1210C).

**•Material**

CA360 Brass for Barstock fittings  
CA377 Brass for forged fittings

**•Used With**

Brass, bronze, copper, steel, aluminum and iron pipe

**•Conformance**

Meets specifications and standards of ASA, ASME and SAE.

**• "L" at the end of a Part# means Light Pattern**

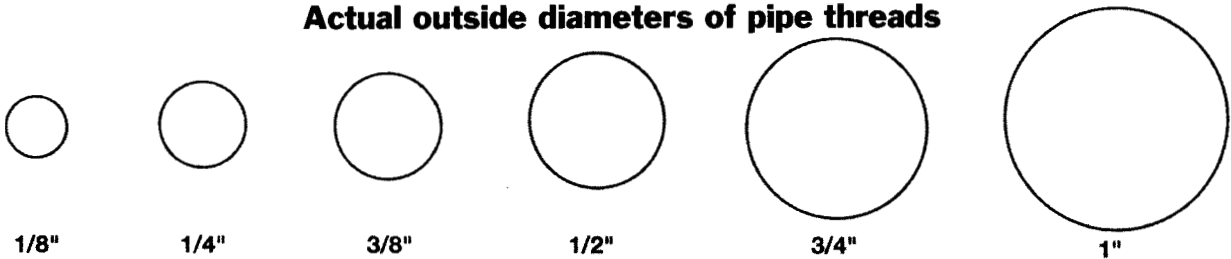
- these fittings are completely interchangeable with full pattern fittings, but have been modified in some way. This modification is usually in the length of the pipe threads. Used in plumbing and light industrial applications.

**•Assembly Instructions**

1- Tighten approximately 2-1/2 turns past hand tight.  
2- Fittings with Everseal tighten two turns past hand tight. Brittle materials require special cautions.

- for larger sizes see bronze fittings on page 114
- see page 152 for plastic pipe fittings.
- see page 212 for steel pipe fittings.

**Actual outside diameters of pipe threads**



**Actual Male Thread Profiles**



# Brass Fittings

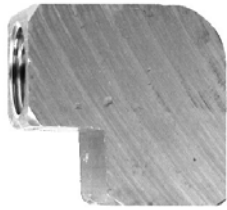
**Pipe**

**Pipe**

**Brass**

**90° FEMALE ELBOW**

**SAE#  
130238**



2200P  
3500  
302  
200

Part #	Size
916-02-02B .....	1/8
916-04-04B .....	1/4
916-06-06B .....	3/8
916-08-08B .....	1/2
916-12-12B .....	3/4

**90° FORGED FEMALE ELBOW**



1200P  
E7  
100AF  
100B

Part #	Size
FG916-02-02B .....	1/8
FG916-04-04B .....	1/4
FG916-06-06B .....	3/8
FG916-08-08B .....	1/2
FG916-12-12B .....	3/4
FG916-04-02B .....	1/4x1/8
FG916-06-04B .....	3/8x1/4
FG916-08-06B .....	1/2x3/8

**45° FEMALE ELBOW**

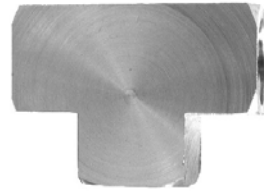


129  
2201P  
205  
23355  
45EZ  
105  
100-45A

Part #	Size
925-02-02B .....	1/8
925-04-04B .....	1/4
925-06-06B .....	3/8
925-08-08B .....	1/2

**UNION TEE**

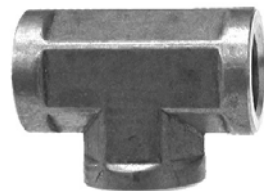
**SAE#  
130438**



322  
2203P  
3700  
203  
101A  
311

Part #	Size
917-02B .....	1/8
917-04B .....	1/4
917-06B .....	3/8
917-08B .....	1/2
917-12B .....	3/4

**UNION FORGED TEE**



1203P  
LT7  
101AF  
101B

Part #	Size
FG917-02B .....	1/8
FG917-04B .....	1/4
FG917-06B .....	3/8
FG917-08B .....	1/2
FG917-12B .....	3/4

**REDUCING FORGED TEES**

Part #	Size		
	1	2	3
FG917-02-04RB .....	1/8	1/8	1/4
FG917-04-02RB .....	1/4	1/4	1/8
FG917-04-06RB .....	1/4	1/4	3/8
FG917-06-02RB .....	3/8	3/8	1/8
FG917-06-04-06RB .....	3/8	1/4	3/8
FG917-06-04RB .....	3/8	3/8	1/4
FG917-08-06RB .....	1/2	1/2	3/8
FG917-12-08-12RB .....	3/4	1/2	3/4
FG917-12-08RB .....	3/4	3/4	1/2

\* More sizes available...Just Ask!

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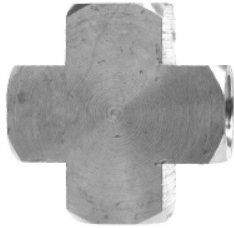


# Brass Fittings

**Pipe**

**Pipe**

**CROSS**



2205P  
3950  
228  
102A  
102BE

Part #	Size
918-02B .....	1/8
918-04B .....	1/4
918-06B .....	3/8
918-08B .....	1/2
918-12B .....	3/4

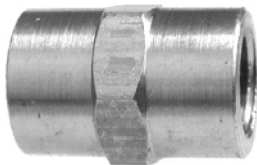
**FORGED CROSS**



C7  
105  
102AF  
102B

Part #	Size
FG918-02B .....	1/8
FG918-04B .....	1/4
FG918-06B .....	3/8
FG918-08B .....	1/2

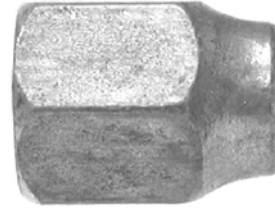
**COUPLING**



SAE#	Size
130238	207P
	371
	3300
	103AH
	103B

Part #	Size
910-02-02B .....	1/8
910-04-04B .....	1/4
910-06-06B .....	3/8
910-08-08B .....	1/2
910-12-12B .....	3/4

**REDUCING COUPLING**

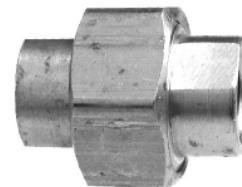


SAE#  
130138

377  
3300  
208P  
108  
119B  
119AH

Part #	Size
910-04-02B .....	1/4x1/8
910-06-02B .....	3/8x1/8
910-06-04B .....	3/8x1/4
910-08-02B .....	1/2x1/8
910-08-04B .....	1/2x1/4
910-08-06B .....	1/2x3/8
910-12-06B .....	3/4x3/8
910-12-08B .....	3/4x1/2

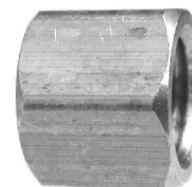
**UNION**



3250  
212P  
104A  
104B

Part #	Size
02-UNIONB .....	1/8
04-UNIONB .....	1/4
06-UNIONB .....	3/8
08-UNIONB .....	1/2

**CAP**



3129  
213P  
23129  
108A  
108B

Part #	Size
02-CAPB .....	1/8
04-CAPB .....	1/4
06-CAPB .....	3/8
08-CAPB .....	1/2
12-CAPB .....	3/4

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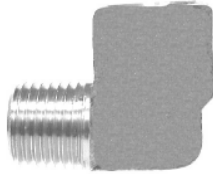
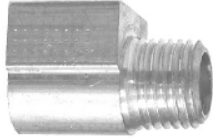
# Brass Fittings

**Pipe**

**Pipe**

## 90° STREET ELBOW

**SAE#**  
130239



2202P  
304  
115  
202  
3400  
116A

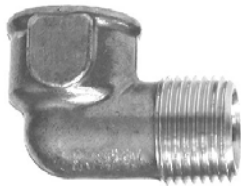
**MAILBOX PATTERN**

**REGULAR PATTERN**

Part #	Size
914-02-02B .....	1/8
MB914-02-02B .....	1/8 short
914-04-04B .....	1/4
MB914-04-04B .....	1/4 short
914-06-06B .....	3/8
MB914-06-06B .....	3/8 short
914-08-08B .....	1/2
914-12-12B .....	3/4

See page 8 for Long Street Elbows.

## FORGED 90° STREET ELBOW



5EB  
1202P  
116AF  
116B

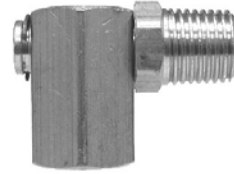
Part #	Size
FG914-02-02B .....	1/8
FG914-04-04B .....	1/4
FG914-06-06B .....	3/8
FG914-08-08B .....	1/2
FG914-12-12B .....	3/4

## FORGED REDUCING 90° STREET ELBOW

### FEMALE X MALE

Part #	Size
FG914-02-04RB .....	1/8x1/4
914-02-04RB .....	1/4FIPx1/8MIP (Barstock)
FG914-04-02RB .....	1/4x1/8
FG914-04-06RB .....	1/4x3/8
FG914-06-04RB .....	3/8x1/4
FG914-06-08RB .....	3/8x1/2
FG914-08-06RB .....	1/2x3/8

## PIPE SWIVEL 90° STREET ELBOW



Part #	Size
914-04-04MSB .....	1/4

## HEX BUSHING

**SAE#**  
130140



373  
3220  
209P  
110A  
110B

## MALE X FEMALE

Part #	Size
912-04-02B .....	1/4x1/8
912-06-02B .....	3/8x1/8
912-06-04B .....	3/8x1/4
912-08-02B .....	1/2x1/8
912-08-04B .....	1/2x1/4
912-08-06B .....	1/2x3/8
912-12-02B .....	3/4x1/8
912-12-04B .....	3/4x1/4
912-12-06B .....	3/4x3/8
912-12-08B .....	3/4x1/2
912-16-04B .....	1x1/4
912-16-06B .....	1x3/8
912-16-08B .....	1x1/2
912-16-12B .....	1x3/4

## FACE BUSHING



## MALE X FEMALE

Part #	Size
912-04-02FB .....	1/4x1/8
912-06-02FB .....	3/8x1/8
912-06-04FB .....	3/8x1/4
912-08-02FB .....	1/2x1/8
912-08-04FB .....	1/2x1/4
912-08-06FB .....	1/2x3/8
912-12-04FB .....	3/4x1/4
912-12-06FB .....	3/4x3/8
912-12-08FB .....	3/4x1/2
912-16-12FB .....	1x3/4

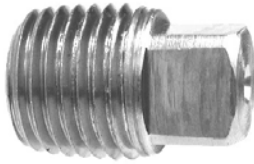


# Brass Fittings

**Pipe**

**Pipe**

**SQUARE HEAD PLUG**



3151  
211P  
109A  
109B

Part #	Size
932-02BSH .....	1/8
932-04BSH .....	1/4
932-06BSH .....	3/8
932-08BSH .....	1/2
932-12BSH .....	3/4
932-16BSH .....	1

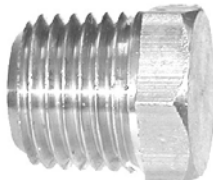
**COUNTERSUNK HEX HEAD PLUG**



31552  
19P  
109CS  
118

Part #	Size
932-1/16B .....	1/16
932-02B .....	1/8
932-04B .....	1/4
932-06B .....	3/8
932-08B .....	1/2
932-12B .....	3/4

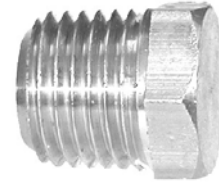
**CORED HEX PLUGS**



218P  
3152  
121A  
103  
121B  
PPH  
218P

Part #	Size
28-201 .....	1/8
28-202 .....	1/4
28-203 .....	3/8
28-204 .....	1/2
28-205 .....	3/4
28-206 .....	1

**SOLID HEX HEAD PLUGS**



121AS

Part #	Size
932P-02B .....	1/8
932P-04B .....	1/4
932P-06B .....	3/8
932P-08B .....	1/2
932P-12B .....	3/4
932P-16B .....	1

**LOCKNUT**



•Jam Nuts  
•Straight  
Pipe Thread

210P  
21102  
111A  
111B

Part #	Size
28-123 .....	1/8
28-124 .....	1/4
28-125 .....	3/8
28-126 .....	1/2
28-127* .....	1/2

\* Die Cast

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all your high volume quotes!*

**Brass**

# Brass Fittings

Pipe

Pipe

Brass

## CLOSE NIPPLE



165  
215PN  
3326  
112A  
112B

Part #	Diameter	Length
02BNC	1/8	0.75
04BNC	1/4	0.88
06BNC	3/8	1.00
08BNC	1/2	1.13
12BNC	3/4	1.38

## LONG NIPPLE



113B  
113A  
166  
3327  
3331  
215PNL

## DIAMETER X LENGTH

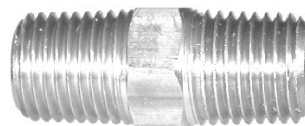
Part #	Size
02-X-1.5BN	1/8x1-1/2
02-X-2BN	1/8x2
02-X-2.5BN	1/8x2-1/2
02-X-3BN	1/8x3
04-X-1.5BN	1/4x1-1/2
04-X-2BN	1/4x2
04-X-2.5BN	1/4x2-1/2
04-X-3BN	1/4x3
06-X-1.5BN	3/8x1-1/2
06-X-2BN	3/8x2
06-X-2.5BN	3/8x2-1/2
06-X-3BN	3/8x3
08-X-1.5BN	1/2x1-1/2
08-X-2BN	1/2x2
08-X-2.5BN	1/2x2-1/2
08-X-3BN	1/2x3

See Red Brass Nipples for larger sizes!

"I can't do it" never accomplished anything. "I will try" has performed wonders.

- George P. Burnham

## HEX NIPPLE

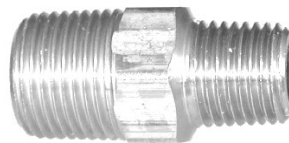


SAE#  
130137

216P  
3325  
379  
122AH  
122B

Part #	Size
911-02-02B	1/8
911-04-04B	1/4
911-06-06B	3/8
911-08-08B	1/2
911-12-12B	3/4
911-16-16B	1

## REDUCING HEX NIPPLE



SAE#  
130137

216P  
3325  
379  
122AH  
122B

Part #	Size
911-04-02B	1/4x1/8
911-06-02B	3/8x1/8
911-06-04B	3/8x1/4
911-08-04B	1/2x1/4
911-08-06B	1/2x3/8
911-12-08B	3/4x1/2

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Enthusiasm is the greatest asset in the world. It beats money, power and influence.

- George P. Burnham





# Brass Fittings

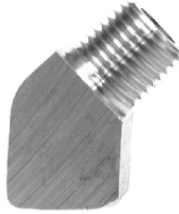
**Pipe**

**Pipe**

**Brass**

## 45° STREET ELBOW

**SAE#**  
130339



306  
3350  
2214P  
224

Part #	Size
915-02-02B .....	1/8
915-04-04B .....	1/4
915-06-06B .....	3/8
915-08-08B .....	1/2
915-12-12B .....	3/4

## 45° FORGED STREET ELBOW

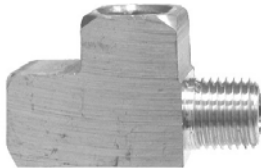


45E8  
124B

Part #	Size
FG915-02-02B .....	1/8
FG915-04-04B .....	1/4
FG915-06-06B .....	3/8

## STREET TEE

**SAE#**  
130424

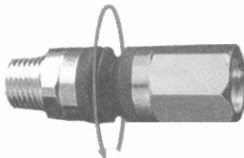


225  
2225P  
3750  
326  
225  
127A

Part #	Size
921-02-02B .....	1/8
921-04-04B .....	1/4
921-06-06B .....	3/8
921-08-08B .....	1/2
921-12-12B .....	3/4

## MALE NPT X FEMALE NPT 360° TURNING SWIVEL FITTING

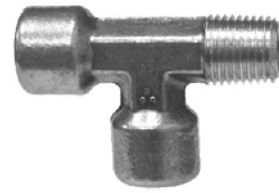
360° Turning



**NEW**

Part #	Size
320-061 .....	1/4

## FORGED STREET TEE

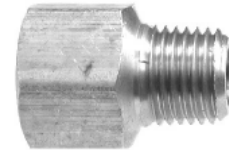


107  
T8  
127B

Part #	Size
FG921-02-02B .....	1/8
FG921-04-04B .....	1/4
FG921-06-06B .....	3/8
FG921-08-08B .....	1/2
FG921-12-12B .....	3/4

## EXTENDER / ADAPTER

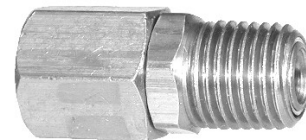
**SAE#**  
130139



375  
222P  
3200  
R1  
120AH  
120B

Part #	Size
909-02-02B .....	1/8x1/8
909-04-02B .....	1/4x1/8
909-04-04B .....	1/4x1/4
909-06-02B .....	3/8x1/8
909-06-04B .....	3/8x1/4
909-06-06B .....	3/8x3/8
909-08-04B .....	1/2x1/4
909-08-06B .....	1/2x3/8
909-08-08B .....	1/2x1/2
909-12-06B .....	3/4x3/8
909-12-08B .....	3/4x1/2
909-12-12B .....	3/4x3/4

## PIPE SWIVEL ADAPTER



344R  
3183

Part #	Size
28-425 .....	1/4
28-426 .....	3/8

See page 8 for long extender / adapters

# Brass Fittings

**Pipe**

**Pipe**

**Brass**

**FORGED 90° MALE ELBOW**



LE5  
3455  
116AMF

Part #	Size
FG920-02-02B .....	1/8
FG920-04-04B .....	1/4
FG920-06-06B .....	3/8
FG920-08-08B .....	1/2

**90° MALE REDUCING ELBOW**

Part #	Size
920-04-02B .....	1/4x1/8
920-06-04B .....	3/8x1/4
920-08-06B .....	1/2x3/8

**MALE BRANCH TEE**



SAE#	X106
130425	23601
	3600
	2224P
	226
	329
	128

Part #	Size
922-02-02B .....	1/8
922-04-04B .....	1/4
922-06-06B .....	3/8
922-08-08B .....	1/2
922-12-12B .....	3/4

**FORGED MALE BRANCH TEE**



Part #	Size
FG922-02-02B .....	1/8
FG922-04-04B .....	1/4

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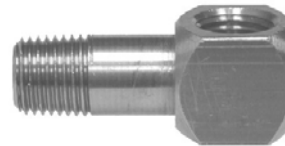
**FORGED ALL MALE TEE**



T12  
M101

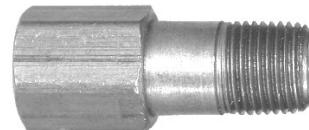
Part #	Size
FG926-02-02B .....	1/8
FG926-04-04B .....	1/4
FG926-06-06B .....	3/8
FG926-08-08B .....	1/2
FG926-12-12B .....	3/4

**LONG STREET ELLS**



Part #	Size	Length
914-02-02D1B .....	1/8	1-3/16"
914-02-02D2B .....	1/8	1-7/16"
914-02-02D3B .....	1/8	1-11/16"
914-02-02D4B .....	1/8	1-7/8"
914-04-04D1B .....	1/4	1-3/16"
914-04-04D2B .....	1/4	1-7/16"
914-04-04D3B .....	1/4	1-11/16"
914-04-04D4B .....	1/4	1-7/8"
914-04-04D5B .....	1/4	2-1/4"
914-06-06D1B .....	3/8	1-3/4"
914-06-06D2B .....	3/8	2-1/4"

**LONG EXTENSION ADAPTERS**

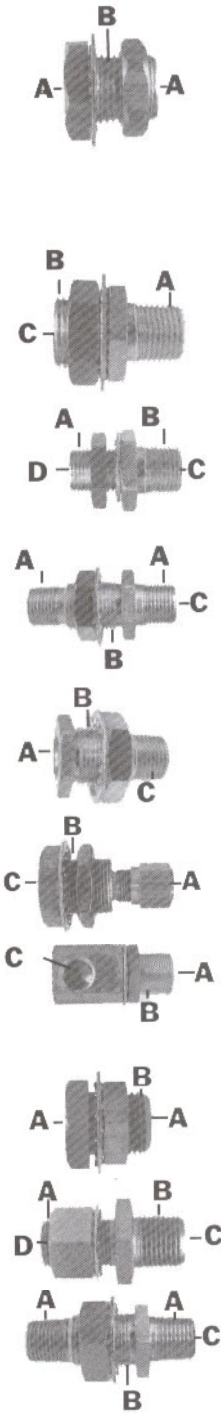


Part #	Size	Length
909-02-02D1B .....	1/8	1-1/4"
909-02-02D2B .....	1/8	1-3/4"
909-02-02D3B .....	1/8	3"
909-04-04D1B .....	1/4	1-9/16"
909-04-04D2B .....	1/4	1-13/16"
909-04-04D3B .....	1/4	2-1/16"
909-04-04D4B .....	1/4	2-1/2"

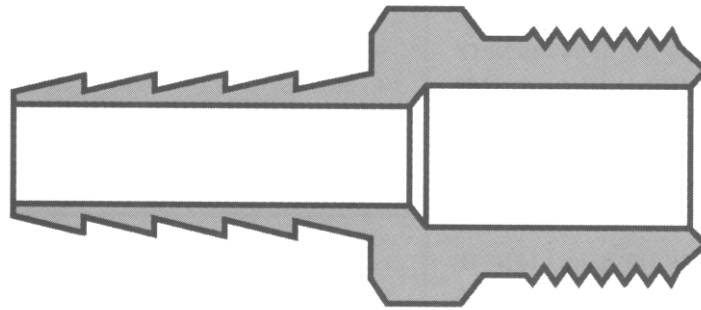


**BULKHEAD / ANCHOR / FRAME COUPLINGS**

<b>TERMINAL BOLTS / FRAME COUPLINGS</b>					
<b>PART #</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>LENGTH</b>
28-300	1/8 - 27 NPTF	5/8 - 18 UNS	---	---	1-1/2
28-303	3/8 - 18 NPTF	1 - 14 UNS	---	---	15-16
28-301	1/4 - 18 NPTF	3/4 - 16 UNS	---	---	15-16
28-302	1/4 18 NPTF	3/4 - 16 UNS	---	---	1-1/2
28-315*	1/4 - 18 NPTF	3/4 - 16 UNS	---	---	
*(same as 28-302 except with larger mounting nut)					
28-304	1/4 - 18 NPTF	1-1/8 - 14 UNS	---	---	1-1/2
28-317	1/2 - 14 NPTF	1 - 14 UNS	1/4 - 18 NPTF	---	2-1/8
29-318	1/2 - 14 NPTF	1 - 14 UNS	3/8 - 18 NPTF	---	1-11/16
28-319	1/2 - 14 NPTF	1 - 14 UNS	3/8 - 18 NPTF	---	1-29/32
28-325	1/2 - 14 NPTF	3/4 - 16 UNS	1/4 - 18 NPTF	1/4 - 18 NPTF	1-11/16
28-3435	1/2 - 14 NPTF	3/4 - 16 UNS	1/4 - 18 NPTF	---	2-5/32
28-313	1/2 - 14 NPTF	1 - 14 UNS	1/4 - 18 NPTF	---	2-7/8
28-314*	1/2 - 14 NPTF	1 - 14 UNS	1/4 - 18 NPTF	---	2-7/8
*(same as 29-313 except with larger mounting nuts)					
28-316	1/2 - 14 NPTF	1 - 14 UNS	1/4 - 18 NPTF	---	3-15/16
28-346	3/8 - 18 NPTF	1 - 14 UNS	1/2 - 14 NPTF	---	1-7/8
28-347	1/2 - 14 NPTF	1 - 14 UNS	1/2 - 14 NPTF	---	2-3/8
28-321	1/2 - O.D. Tube	7/8 - 20 UNCF	3/8 - 18 NPTF	---	1-5/16
28-322	3/8 - O.D. Tube	7/8 - 20 UNCF	3/8 - 18 NPTF	---	1-3/8
28-348	3/8 - 18 NPTF	7/8 - 20 UNCF	3/8 - 18 NPTF	---	2-15/16
<b>STEEL BULKHEAD FITTINGS</b>					
28-306	1/4 - 18 NPTF	3/4 - 16 UNS	---	---	.94
28-307	1/4 - 18 NPTF	3/4 - 16 UNS	---	---	1.50
28-309	1/2 - 14 NPTF	3/4 - UNS	1/4 - 18 NPTF	1/4 - 18 NPTF	2.16
28-310	1/2 - 14 NPTF	3/4 - UNS	1/4 - 18 NPTF	---	2.53
28-312	1/2 - 14 NPTF	1 - 14 UNS	1/4 - 18 NPTF	---	2.53



# Hose Barb Fittings



See Page 147 for plastic hose barb fittings

**•Temperature and Working Pressure Ranges**

From -40°F to + 160°F at 150 PSI maximum.

**See Page 160 for hose clamps**

**•Material**

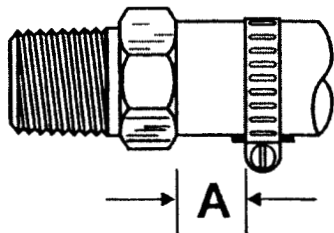
CA360 Brass for Barstock fittings.

CA377 Brass for Forged fittings.

**Note:** These fittings are intended for use with hose clamp, similar type clamp or a crimped ferrule

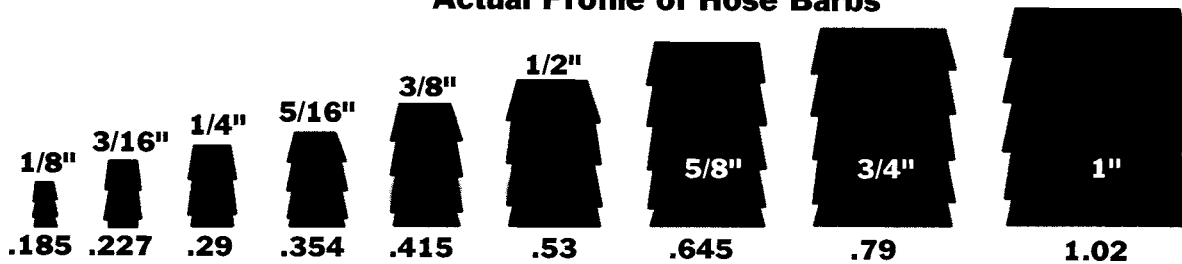
**•Assembly Instructions**

- 1 - Cut hose cleanly and squarely to length.
- 2 - Slide clamp on hose
- 3 - Lubricate hose. Push hose on fitting until hose bottoms against stop ring or hex.
- 4 - Position hose clamp as shown below and secure with a screwdriver or wrench. Maintain "A" dimension noted below for proper clamp positioning.



Hose Size	A
3/16"	1/4"
1/4"	1/4"
5/16"	1/4"
3/8"	1/8"
1/2"	1/8"
5/8"	1/8"
3/4"	1/8"

**Actual Profile of Hose Barbs**



# Brass Fittings

**Hose Barb**

**Hose Barb**

**RIGID MALE ADAPTER**

PGH  
101  
102  
201A



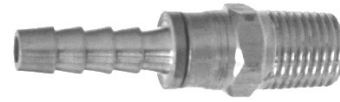
125HBL  
105B-1  
KF-PS  
MPB

**HOSE I.D. X MALE PIPE**

Part #	Size
180-02-1/16B	1/8x1/16
180-02-02B	1/8x1/8
180-02-04B	1/8x1/4
180-03-02B	3/16x1/8
180-03-04B	3/16x1/4
180-04-1/16B	1/4x1/16
180-04-02B	1/4x1/8
180-04-04B	1/4x1/4
180-04-06B	1/4x3/8
180-04-08B	1/4x1/2
180-05-02B	5/16x1/8
180-05-04B	5/16x1/4
180-05-06B	5/16x3/8
180-05-08B	5/16x1/2
180-06-02B	3/8x1/8
180-06-04B	3/8x1/4
180-06-06B	3/8x3/8
180-06-08B	3/8x1/2
180-06-12B	3/8x3/4
180-08-02B	1/2x1/8
180-08-04B	1/2x1/4
180-08-06B	1/2x3/8
180-08-08B	1/2x1/2
180-08-12B	1/2x3/4
180-08-16B	1/2x1
180-10-04B	5/8x1/4
180-10-06B	5/8x3/8
180-10-08B	5/8x1/2
180-10-12B	5/8x3/4
180-10-16B	5/8x1
180-12-06B	3/4x3/8
180-12-08B	3/4x1/2
180-12-12B	3/4x3/4
180-12-16B	3/4x1
180-16-06B	1x3/8
180-16-08B	1x1/2
180-16-12B	1x3/4
180-16-16B	1x1
180-20-16B	1-1/4x1

**SWIVEL MALE ADAPTER**

Rotation 360°



SMS  
103

**HOSE I.D. X NPTF**

Part #	Size
180MS-04-04B	1/4x1/4
180MS-06-04B	3/8x1/4
180MS-06-06B	3/8x3/8
180MS-08-06B	1/2x3/8
180MS-08-08B	1/2x1/2
180MS-12-12B	3/4x3/4

**MENDER / SPLICER**



MSB  
122HBL  
HM  
129  
178  
73  
108

**HOSE I.D. X HOSE I.D.**

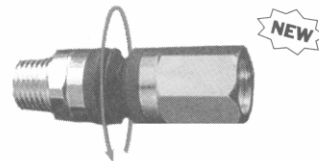
Part #	Size
115SB-02-02B	1/8
115SB-03-03B	3/16
115SB-04-04B	1/4
115SB-05-05B	5/16
115SB-06-06B	3/8
115SB-08-08B	1/2
115SB-10-10B	5/8
115SB-12-12B	3/4

See Bronze insert fittings on page 191 for longer sizes.

See Hose Clamps on page 160

**Male NPT x Female NPT  
360° turning swivel fitting**

360° Turning



Part #	Size
320-061	1/4

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all your high volume quotes!*

**Brass**



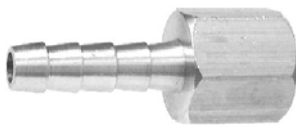
# Brass Fittings

**Hose Barb**

**Hose Barb**

**RIGID FEMALE ADAPTER**

209A  
128  
29A  
29F  
126HB  
126



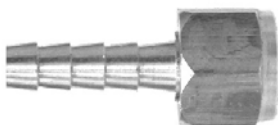
FPB  
105B-2  
KF-RS  
104

**HOSE I.D. X FEMALE PIPE**

Part #	Size
103SB-02-02B	1/8x1/8
103SB-02-04B	1/8x1/4
103SB-03-02B	3/16x1/8
103SB-03-04B	3/16x1/4
103SB-04-02B	1/4x1/8
103SB-04-04B	1/4x1/4
103SB-04-06B	1/4x3/8
103SB-05-02B	5/16x1/8
103SB-05-04B	5/16x1/4
103SB-05-06B	5/16x3/8
103SB-05-08B	5/16x1/2
103SB-06-02B	3/8x1/8
103SB-06-04B	3/8x1/4
103SB-06-06B	3/8x3/8
103SB-06-08B	3/8x1/2
103SB-08-04B	1/2x1/4
103SB-08-06B	1/2x3/8
103SB-08-08B	1/2x1/2
103SB-12-12B	3/4x3/4
103SB-16-12B	1x3/4

**SWIVEL FEMALE ADAPTER  
With Gasket**

130  
126  
29FSG  
KF-RN

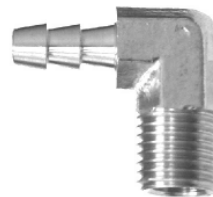


5/Bag  
NPF  
  
NPSM-  
GASKET SEAT

**HOSE I.D. X NPSM**

Part #	Size
32-120	1/4x1/8
32-121	1/4x1/4
32-129	1/4x3/8
32-130	5/16x1/4
32-122	3/8x1/4
32-123	3/8x3/8
32-354	3/8x1/2
32-124	1/2x3/8
32-125	1/2x1/2
32-117	1/2x3/4
32-118	5/8x3/4
32-119	3/4x3/4

**FORGED HOSE BARB  
90° ELBOW**



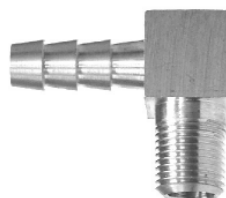
129  
HBE1  
KF-PS90  
HE-1  
29E  
139

**HOSE I.D. X MALE PIPE**

Part #	Size
190SB-03-02B	3/16x1/8
190SB-03-04B	3/16x1/4
190SB-04-02B	1/4x1/8
190SB-04-04B	1/4x1/4
190SB-04-06B	1/4x3/8
190SB-05-02B	5/16x1/8
190SB-05-04B	5/16x1/4
190SB-05-06B	5/16x3/8
190SB-06-02B	3/8x1/8
190SB-06-04B	3/8x1/4
190SB-06-06B	3/8x3/8
190SB-06-08B	3/8x1/2
190SB-08-04B	1/2x1/4
190SB-08-06B	1/2x3/8
190SB-08-08B	1/2x1/2
190SB-10-06B	5/8x3/8
190SB-10-08B	5/8x1/2
190SB-10-12B	5/8x3/4
190SB-12-08B	3/4x1/2
190SB-12-12B	3/4x3/4
190SB-12-16B	3/4x1
190SB-16-12B	1x3/4

See Bronze insert fittings on page 191 for larger sizes

**BARSTOCK HOSE BARB  
90° ELBOW**



129HB

**HOSE I.D. X MALE PIPE**

Part #	Size
190BS-03-02B	3/16x1/8
190BS-04-02B	1/4x1/8
190BS-04-04B	1/4x1/4
190BS-06-04B	3/8x1/4
190BS-06-06B	3/8x3/8
190BS-08-06B	1/2x3/8

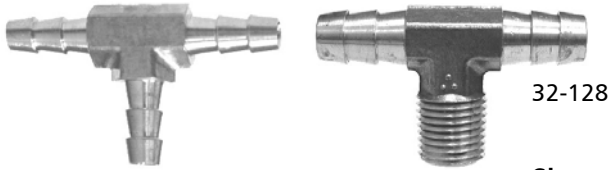


# Brass Fittings

**Hose Barb**

**Hose Barb**

**HOSE BARB TEES**



32-128

Part #	Size
32-367 .....	1/8
32-365 .....	1/4
32-366 .....	5/16
32-126 .....	3/8
32-400 .....	1/2
23-128 .....	3/8x1/4 MIP Branch

See Bronze insert fittings on page 191 for larger sizes

**90° HOSE BARB ELBOW**



**HOSE I.D X HOSE I.D.**

Part #	Size
32-412 .....	1/4x1/8
32-413 .....	1/4x1/4
32-414 .....	3/8x1/8
32-415 .....	3/8x1/4
32-416 .....	3/8x3/8
32-417 .....	3/8x1/2
32-418 .....	1/2x1/4
32-419 .....	1/2x3/8
32-420 .....	1/2x1/2

**90° FEMALE HOSE BARB ELBOW**



**HOSE I.D. X FEMALE PIPE**

Part #	Size
32-401 .....	1/4x1/8
32-402 .....	1/4x1/4
32-403 .....	3/8x1/8
32-404 .....	3/8x1/4
32-405 .....	3/8x3/8
32-406 .....	3/8x1/2
32-407 .....	1/2x1/4
32-410 .....	1/2x3/8
32-411 .....	1/2x1/2

See hose clamps on page 160

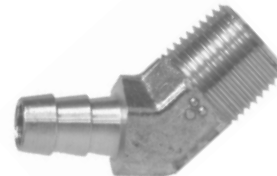
**90° HOSE BARB X SWIVEL MALE PIPE**



**HOSE I.D. X MALE PIPE**

Part #	Size
190SB-04-02MSB .....	1/4x1/8
190SB-04-04MSB .....	1/4x1/4
190SB-06-02MSB .....	3/8x1/8
190SB-06-04MSB .....	3/8x1/4
190SB-06-06MSB .....	3/8x3/8
190SB-06-08MSB .....	3/8x1/2
190SB-08-04MSB .....	1/2x1/4
190SB-08-06MSB .....	1/2x3/8
190SB-08-08MSB .....	1/2x1/2

**45° ELBOW ELBOW**



140  
HE145  
139HB  
KF-PS45  
139

**HOSE I.D. X MALE PIPE**

Part #	Size
145SB-04-02B .....	1/4x1/8
145SB-04-04B .....	1/4x1/4
145SB-06-02B .....	3/8x1/8
145SB-06-04B .....	3/8x1/4
145SB-06-06B .....	3/8x3/8
145SB-08-04B .....	1/2x1/4
145SB-08-06B .....	1/2x3/8
145SB-10-06B .....	5/8x3/8

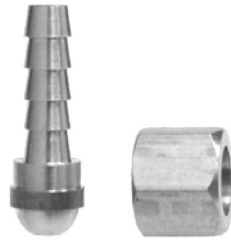


**Brass**

**BALLSEAT FITTINGS**

**BALL END SWIVEL**

NPSM  
BALL SEAT  
TYPE



128HBLSV  
29FS  
209AS  
124  
131

**HOSE I.D. X NPSM**

Part #	Size
119BS-02-02B	1/8x1/8
119BS-03-02B	3/16x1/8
119BS-03-04B	3/16x1/4
119BS-04-02B	1/4x1/8
119BS-04-04B	1/4x1/4
119BS-04-06B	1/4x3/8
119BS-05-04B	5/16x1/4
119BS-06-04B	3/8x1/4
119BS-06-06B	3/8x3/8
119BS-06-08B	3/8x1/2
119BS-08-06B	1/2x3/8
119BS-08-08B	1/2x1/2
119BS-12-12B	3/4x3/4

**BALLSEAT MALE ADAPTER**

Beveled Seat



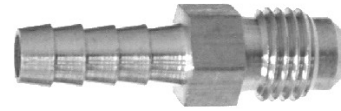
134  
127HB  
122AS  
172

**NPSM X MALE PIPE**

Part #	Size
816BS-02-02B	1/8x1/8
816BS-04-02B	1/4x1/8
816BS-04-04B	1/4x1/4
816BS-06-04B	3/8x1/4
816BS-06-06B	3/8x3/8
816BS-08-06B	1/2x3/8
816BS-08-08B	1/2x1/2
816BS-12-12B	3/4x3/4

**HOSE BARB X FLARE ADAPTER**

**45° FLARE ADAPTER**

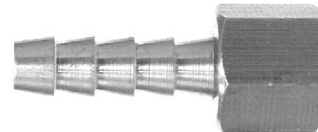


142  
201BF  
KF-MS

**HOSE I.D. X 45° FLARE**

Part #	Size
32-322	3/16x1/4
32-081	1/4x1/4
32-082	1/4x3/8
32-083	5/16x5/16
32-084	3/8x3/8

**FEMALE 45° FLARE ADAPTER**



29SAE  
209ASF  
146HBLFSV  
KF-NS  
128  
FSS  
146

**HOSE I.D. X 45° FLARE**

Part #	Size
32-326	3/16x3/16
32-107	3/16x1/4
32-101	1/4x1/4
32-102	1/4x5/16
32-103	1/4x3/8
32-104	5/16x5/16
32-327	5/16x3/8
32-105	3/8x3/8
32-106	3/8x1/2
32-100	1/2x1/2

**FEMALE 37° J.I.C. FLARE SWIVEL**

**HOSE I.D. X 37° FLARE**



Part #	Size
119SB-04-06B	1/4x3/8
119SB-05-06B	5/16x3/8
119SB-06-06B	3/8x3/8
119SB-12-12B	3/4x3/4
119SB-16-16B	1x1

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Brass





# Brass Fittings

Hose Barb

Hose Barb

## HOSE BARB X FLARE ADAPTER

### DUAL 45° / 37° FLARE SWIVEL



### HOSE I.D. X DUAL SEAT

Part #	Size
119SB-04-04B	1/4x1/4
119SB-05-05B	5/16x5/16
119SB-06-08B	3/8x1/2
119SB-08-08B	1/2x1/2
119SB-08-10B	1/2x5/8

### INVERTED FLARE SWIVEL



### HOSE I.D. X INVERTED FLARE

Part #	Size
32-369	1/4x1/4
32-370	5/16x5/16
32-371	3/8x3/8
32-372	1/2x1/2
32-373	5/8x5/8

See page 81 for Beaded Hose Barbs

## BRASS WELDING CONNECTORS

• Combine type of nut needed with proper stem size to get your required configuration

### STEM ONLY



201RWA  
WRS  
WLS

Part #	Size
30-410	3/16
30-411	1/4
30-412	5/16
30-413	3/8

### RIGHT HAND 9/16-18 FOR OXYGEN LINE



201RWA  
WRS  
KR-PE  
152

Part #	Size
30-420	R.H. Nut Only

### LEFT HAND 9/16-18 FOR ACETYLENE LINE



209LWA  
WLS  
154  
KF-RE

Part #	Size
30-421	L.H. Nut Only

## WELDING HOSE ADAPTERS

### RIGHT HAND 9/16-18 #122RWA



Part #	Size
30-401	1/4-18

### LEFT HAND 9/16-18 #122LWA



Part #	Size
30-406	1/4-18

Brass



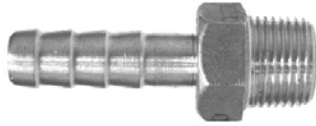
# Brass Fittings

Hose Barb

Hose Barb

## STAINLESS STEEL HOSE BARB

### 304 STAINLESS STEEL HOSE NIPPLES



Part #	Hose I.D. x Male Pipe
73-951	1/4"
73-952	3/8"
73-953	1/2"
73-954	3/4"
73-955	1"
73-956	1-1/4"
73-957	1-1/2"
73-958	2"
73-959	2-1/2"
73-960	3"
73-961	4"

### 304 STAINLESS STEEL REDUCING HOSE NIPPLES

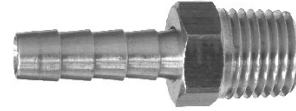
Part #	Barb x Male Pipe
73-970	1/4x1/4
73-971	3/8x1/4
73-972	1/2x3/8
73-973	1/2x1/4
73-974	3/4x1/2
73-975	1x3/4
73-976	1x1/2
73-977	1-1/4x1
73-978	1-1/4x3/4
73-979	1-1/2x1-1/4
73-980	1-1/2x1
73-981	2x1-1/2
73-982	2x1-1/4

### 316 STAINLESS STEEL HOSE NIPPLES

Part #	Barb x Male
973-951	1/4"
973-952	3/8"
973-953	1/2"
973-954	3/4"
973-955	1"
973-956	1-1/4"
973-957	1-1/2"
973-958	2"
973-959	2-1/2"
973-990	3"
973-991	4"

## BRASS MALE SWIVEL HOSE BARBS

### MALE SWIVEL



4015  
6065  
8085

### HOSE I.D. X MALE PIPE

Part #	Size
180MS-04-04B	1/4x1/4
180MS-06-06B	3/8x3/8
180MS-08-08B	1/2x1/2

See page 11 for more Male Swivel fittings

### HI VOLUME MALE SWIVEL



4065

### HOSE I.D. X MALE PIPE

Part #	Size
32-781	3/8x1/4



300 PSI MAX.  
WORKING  
PRESSURE

### HOSE I.D. X MALE BALL SWIVEL

Part #	Size
28-415	1/4x1/4
28-417	3/8x1/4

## REUSEABLE HOSE COUPLINGS



183

### 1/4" MALE THREAD I.D. X O.D.

Part #	Size
32-725	3/8x3/4(23/32)
32-726	1/4x5/8
32-727	1/4x1/2
32-728	1/4x19/32
32-741	5/16x5/8
32-742	3/8x5/8

More sizes and configurations available

Send DF Burnham & Company  
all your high volume quotes!



**SMOOTH BRASS HOSE FERRULES**



Part #	Ferrule#	I.D.	Length	Pierce	Gauge
32-500	6231	0.330	0.484	0.250	0.016
32-501	833	0.358	0.500	0.270	0.016
32-502	622	0.380	0.500	0.270	0.016
32-550	619	0.400	0.469	0.265	0.016
32-504	620	0.410	0.500	0.270	0.016
32-551	769R	0.450	0.563	0.343	0.016
32-552	4750	0.475	0.687	0.328	0.016
32-553	624R	0.500	0.500	0.343	0.016
32-554	7322	0.500	1.000	0.344	0.025
32-555	625	0.525	0.469	0.359	0.016
32-517	625A	0.525	0.625	0.343	0.016
32-556	7323	0.525	1.000	0.375	0.025
32-521	9974	0.529	1.000	0.437	0.025
32-557	7324	0.531	1.000	0.437	0.025
32-558	626	0.550	0.469	0.375	0.016
32-559	7325	0.562	1.000	0.437	0.025
32-561	7326	0.593	1.000	0.437	0.025
32-562	JJ	0.600	0.484	0.437	0.016
32-563	JJ	0.600	0.499	0.500	0.019
32-526	II	0.625	0.484	0.437	0.016
32-564	7327	0.625	1.000	0.437	0.025
32-565	HH	0.650	0.484	0.437	0.016
32-566	7328	0.656	1.000	0.437	0.025
32-567	GG	0.675	0.500	0.437	0.016
32-568	7329	0.687	1.000	0.437	0.025
32-570	7330	0.718	1.000	0.500	0.025
32-571	EE	0.725	0.536	0.500	0.016
32-572	DD	0.750	0.563	0.500	0.016
32-573	7331	0.750	1.000	0.500	0.025
32-574	CC	0.775	0.563	0.500	0.016
32-533	7332	0.781	1.000	0.500	0.025
32-575	7332	0.781	1.000	0.625	0.025
32-576	BB	0.800	0.563	0.562	0.016
32-577	7333	0.812	1.000	0.625	0.025
32-578	AA	0.830	0.563	0.562	0.016
32-579	7244	0.875	0.875	0.625	0.025
32-580	7113	0.925	0.875	0.687	0.023
32-545	5235	1.000	0.875	0.687	0.025
32-549	7145A	1.050	0.850	0.693	0.025
32-584	5027	1.100	0.875	0.812	0.025
32-588	7088	1.175	0.875	0.875	0.025
32-589	7088A	1.175	0.840	0.875	0.025
32-590	8751	1.200	0.875	0.875	0.025
32-591	7291	1.218	1.000	0.875	0.025

**SMOOTH BRASS HOSE FERRULES**

**HOSE CRIMPERS**

• Provides production capability and "big tool" crimping advantages at just a fraction of the cost of other tools offering comparable results



**HOSE CRIMPER COMES WITH 5 DIES**  
#308-071 THRU #308-075

Part #	
308-070	Hose Crimper

**REPLACEMENT DIES**

Part #	Size
308-071	5/8"
308-072	37/64"
308-073	17/32"
308-074	31/64"
308-075	11/16"
308-076	7/16"
307-077	3/4"
308-078	13/16"
308-079	3/8"

**BRASS BARBS FOR  
POLYETHYLENE TUBING**

- Quick connecting fittings that do not require tube preparations for hand assembly. Inexpensive with excellent resistance to vibration.
- All sizes are tube O.D. (I.D.) 90° ELBOW

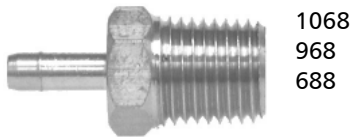
**UNION**



**TUBE O.D. (TUBE I.D.) X  
TUBE O.D. (TUBE I.D.)**

Part #	Size
815MB-04-04B	1/4(1/8)x1/4(1/8)
815MB-06-04B	3/8(1/4)x1/4(1/8)
815MB-06-06B	3/8(1/4)x3/8(1/4)

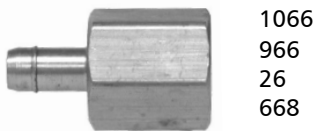
**MALE ADAPTER**



**TUBE O.D. (TUBE I.D.) X  
MALE PIPE**

Part #	Size
816MB-04-02B	1/4(1/8)x1/8
816MB-04-04B	1/4(1/8)x1/4
816MB-06-06B	3/8(1/4)x3/8

**FEMALE ADAPTER**



**TUBE O.D. (TUBE I.D.) X  
FEMALE PIPE**

Part #	Size
854MB-04-02B	1/4(1/8)x1/8
854MB-06-04B	3/8(1/4)x1/8

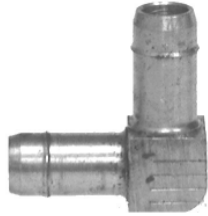
**BULKHEAD UNION**



**TUBE O.D. (TUBE I.D.)**

Part #	Size
832MB-06-06B	3/8(1/4)

**UNION ELBOW**



1065  
965

**TUBE O.D. (I.D.)**

Part #	Size
821MB-04-04B	1/4(1/8)
821MB-06-06B	3/8(1/4)
821MB-08-08B	1/2(3/8)

\*Also available in Two Barb

**MALE 90° ELBOW**



1069  
969  
229

**TUBE O.D. (TUBE I.D.) X  
MALE PIPE**

Part #	Size
822MB-04-1/16B	1/4(1/8)x1/16
822MB-04-02B	1/4(1/8)x1/8
822MB-06-02B	3/8(1/4)x1/8
822MB-06-04B	3/8(1/4)x1/4
822MB-08-06B	1/2(3/8)x3/8

**FEMALE 90° ELBOW**

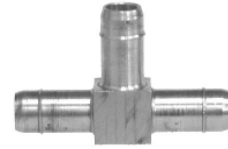


1070  
970  
230

**TUBE X FEMALE PIPE**

Part #	Size
855MB-04-02B	1/4(1/8)x1/8

**UNION TEE**



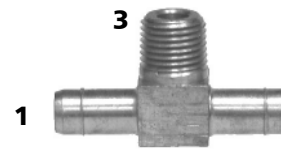
1064  
964  
224

**O.D. (I.D.) X O.D. (I.D.)  
X O.D. (I.D.)**

Part #	Size
824MB-04B	1/4(1/8)
824MB-06B	3/8(1/4)
824MB-08B	1/2(3/8)

\* Also available in Two Barb

**MALE BRANCH TEE**

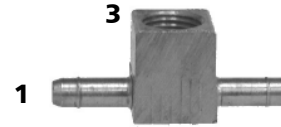


1072  
972  
232

**O.D. (I.D.) X O.D. (I.D.) X  
MALE PIPE**

Part #	Size
825MB-04-02B	1/4(1/8)x1/4(1/8)x1/8
825MB-06-02B	3/8(1/4)x3/8(1/4)x1/8
825MB-06-04B	3/8(1/4)x3/8(1/4)x1/4

**FEMALE BRANCH TEE**



1077  
978

**O.D. (I.D.) X O.D. (I.D.)  
X FEMALE PIPE**

Part #	Size 1x2x3
856MB-04-02B	1/4 (1/8)x1/4 (1/8)x1/8

**TWO BARB FITTINGS**

	.25	.375	.50
<b>OD</b>	1/4	3/8	1/2
<b>ID</b>	1/8 .17	1/4 .25	3/8 .375

**MALE ADAPTER PIPE**



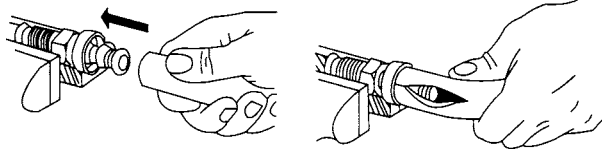
Tube O.D.

(I.D.) Part #	X Male Pipe
816MB-04-02B	1/4 (1/8) x 1/8
816MB-04-04B	1/4 (1/8) x 1/4



816MB-06-04B ..... 3/8 (1/4) x 1/4

**PUSH ON BARB FITTINGS**



**Typical Application:** Low Pressure Air, Fuel, Lube, and Oil Lines

**Material:** CA360 Brass

**Advantages:** Easy assembly. No clamps needed!

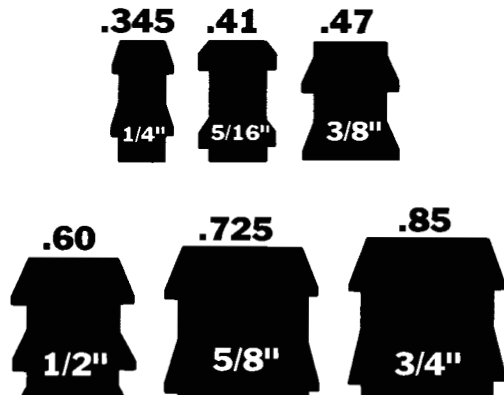
**ASSEMBLY INSTRUCTIONS:**

- 1) Lubricate insert.
- 2) Hold hose at angle as shown & push on and up over first barb.
- 3) Continue to push straight on until hose seated under protective plastic cap. Keep hands back from hose end area so that hose can expand.

**DISASSEMBLY INSTRUCTIONS:**

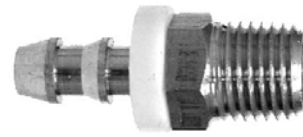
- 1) Split hose as shown above. Do not cut completely through hose. Sealing edge of barb could be damaged.
- 2) Bend hose and remove with a quick pull

**Actual Push On Barb Profiles**



29PO  
625

**MALE ADAPTER**



**I.D. HOSE X MALE PIPE**

301  
P990A  
HLM  
100B-1  
KA-MB  
272  
725

Part #	Size
105-04-02B	1/4x1/8
105-04-04B	1/4x1/4
105-04-06B	1/4x3/8
105-05-02B	5/16x1/8
105-05-04B	5/16x1/4
105-06-02B	3/8x1/8
105-06-04B	3/8x1/4
105-06-06B	3/8x3/8
105-06-08B	3/8x1/2
105-08-04B	1/2x1/4
105-08-06B	1/2x3/8
105-08-06B	1/2x1/2
105-08-12B	1/2x3/4
105-10-06B	5/8x3/8
105-10-08B	5/8x1/2
105-10-12B	5/8x3/4
105-12-08B	3/4x1/2
105-12-12B	3/4x3/4

**MALE SWIVEL**

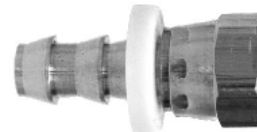


**HOSE I.D. X MALE PIPE**

HMS  
285

Part #	Barb x Male
105MS-04-04B	1/4x1/4
105MS-06-04B	3/8x1/4
105MS-06-06B	3/8x3/8
105MS-08-06B	1/2x3/8
105MS-08-08B	1/2x1/2
105MS-12-12B	3/4x3/4

**FEMALE SWIVEL**



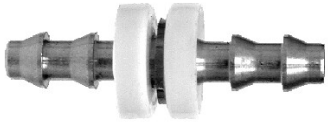
**HOSE I.D. X GASKET SWIVEL**

Part #	Size
30-358	1/4x1/4
30-360	3/8x1/4
30-361	3/8x3/8
30-365	5/8x3/4
30-366	3/4x3/4



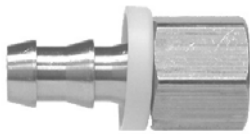
**HOSE SPLICER**

696	100B-Y
29SPO	KA-RM
296	MHL
729	296



Part #	Size
115-04-04B	1/4
115-05-05B	5/16
115-06-06B	3/8
115-08-08B	1/2
115-10-10B	5/8
115-12-12B	3/4

**RIGID FEMALE ADAPTER**



29FPO
HLF
626
274
726

**HOSE I.D. X FEMALE PIPE**

Part #	Size
103-04-02B	1/4x1/8
103-04-04B	1/4x1/4
103-05-04B	5/16x1/4
103-06-04B	3/8x1/4
103-06-06B	3/8x3/8
103-08-04B	1/2x1/4
103-08-06B	1/2x3/8
103-08-08B	1/2x1/2

**MALE ELBOW**

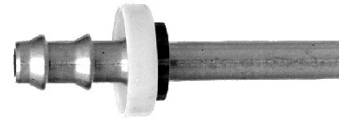


100-C
29EPO

**HOSE I.D. X MALE PIPE**

Part #	Size
190-04-02B	1/4x1/8
190-04-04B	1/4x1/4
190-05-02B	5/16x1/8
190-05-04B	5/16x1/4
190-06-02B	3/8x1/8
190-06-04B	3/8x1/4
190-06-06B	3/8x3/8
190-06-08B	3/8x1/2
190-08-08B	1/2x1/2
190-10-08B	5/8x1/2
190-10-12B	5/8x3/4
190-12-12B	3/4x3/4

**RIGID TUBE ADAPTER**

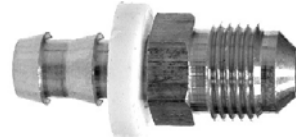


294
100B-X
KA-RL
303
732
694

**HOSE I.D. X O.D. TUBE**

Part #	Size
116-04-03B	1/4x3/16
116-04-04B	1/4x1/4
116-04-05B	1/4x5/16
116-05-05B	5/16x5/16
116-06-06B	3/8x3/8
116-08-08B	1/2x1/2

**MALE SAE 45° FLARE ADAPTER**

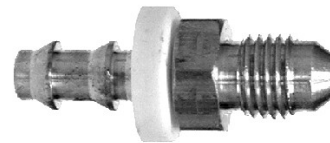


100B-3
KA-MS
727
682
302
282

**HOSE I.D. X O.D. TUBE**

Part #	Size
30-240	1/4x1/4
30-241	1/4x5/16
30-349	5/16x5/16
30-271	3/8x5/16
30-243	3/8x3/8
30-245	1/2x1/2

**MALE JIC FLARE ADAPTER**



**HOSE I.D. X MALE JIC**

Part #	Size
106-04-04B	1/4x1/4
106-04-05B	1/4x5/16
106-06-06B	3/8x3/8
106-08-08B	1/2x1/2
106-12-12B	3/4x3/4

*Send DF Burnham & Company  
all your high volume quotes!*



**SAE/JIC**

**DUAL 45°/37° FLARE FEMALE SWIVEL**

728  
P990-H  
29AEPO  
307



284  
100S-4  
KA-MB  
HSF  
684

**HOSE I.D. X O.D.**

Part #	Size
118-04-04B	1/4x1/4
118-04-05B	1/4x5/16
118-04-06B	1/4x3/8
118-05-05B	5/16x5/16
118-05-06B	5/16x3/8
118-06-60B	3/8x3/8
118-06-08B	3/8x1/2
118-08-06B	1/2x3/8
118-08-08B	1/2x1/2
118-08-10B	1/2x5/8
118-10-08B	5/8x1/2
118-10-10B	5/8x5/8
118-12-12B	3/4x3/4

**FEMALE 37° JIC FLARE SWIVEL**

29J1CPO  
HJF  
688

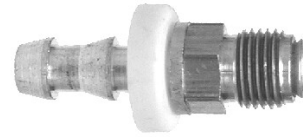


738  
288  
100B-6  
308  
P990-F

**HOSE I.D. X O.D. TUBE**

Part #	Size
119-04-04B	1/4x1/4
119-04-06B	1/4x3/8
119-06-06B	3/8x3/8
119-08-08B	1/2x1/2
119-10-10B	5/8x5/8
119-12-12B	3/4x3/4
119-16-16B	1x1

**INVERTED FLARE MALE SWIVEL**

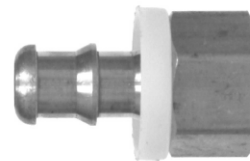


290  
100B-B  
KA-MF  
1MS

**HOSE I.D. X O.D. TUBE THREAD**

Part #	Size
120-04-03B	1/4x3/16
120-04-04B	1/4x1/4
120-04-05B	1/4x5/16
120-05-04B	5/16x1/4
120-05-05B	5/16x5/16
120-05-06B	5/16x3/8
120-06-05B	3/8x5/16
120-06-06B	3/8x3/8
120-06-08B	3/8x1/2
120-08-06B	1/2x3/8
120-08-08B	1/2x1/2
120-10-10B	5/8x5/8

**INVERTED FLARE FEMALE ADAPTER**



306  
100B-A  
KA-NG  
292  
P990-J  
736  
692

**HOSE I.D. X O.D. TUBE**

Part #	Size
30-310	1/4x3/16
30-311	1/4x1/4
30-312	1/4x5/16
30-316	5/16x5/16
30-313	3/8x5/16
30-314	3/8x3/8
30-315	1/2x1/2

**FEMALE BALLSEAT SWIVEL**



628  
278  
29SPO  
731  
NPSM

**HOSE I.D. X BALLSEAT NPSM**

Part #	Size
BS119-04-02B	1/4x1/8
BS119-04-04B	1/4x1/4
BS119-06-04B	3/8x1/4
BS119-06-06B	3/8x3/8
BS119-08-08B	1/2x1/2
BS119-12-12B	3/4x3/4



Thread Chart	
Size	JIC Thread
1/8	3/16-24
3/16	3/8-24
1/4	7/16-20
5/16	1/2-20
3/8	9/16-18
1/2	3/4-16
5/8	7/8-14
3/4	1-1/16-12
1	1-5/16-12

**STRAIGHT**



Part #	JIC Thread	Pipe Size
816-04-02B	7/16-20	1/8
816-04-04B	7/16-20	1/4
816-05-02B	1/2-20	1/8
816-05-04B	1/2-20	1/4
816-06-02B	9/16-18	1/8
816-06-04B	9/16-18	1/4
816-06-06B	9/16-18	3/8
816-06-08B	9/16-18	1/2
816-08-04B	3/4-16	1/4
816-08-06B	3/4-16	3/8
816-08-08B	3/4-16	1/2
816-08-12B	3/4-16	3/4
816-10-06B	7/8-14	3/8
816-10-08B	7/8-14	1/2
816-10-12B	7/8-14	3/4
816-12-12B	1-1/16-12	3/4
816-16-16B	1-5/16-12	1

**45° FORGED ELBOW**



Part #	JIC Thread	Pipe Size
823-04-02B	7/16-20	1/8
823-04-04B	7/16-20	1/4
823-05-02B	1/2-20	1/8
823-05-04B	1/2-20	1/4
823-06-02B	9/16-18	1/8
823-06-04B	9/16-18	1/4
823-06-06B	9/16-18	3/8
823-06-08B	9/16-18	1/2
823-08-06B	3/4-16	3/8
823-08-08B	3/4-16	1/2
823-10-08B	7/8-14	1/2
823-12-12B	1-1/16-12	3/4

**90° ELBOW**



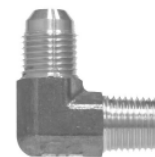
Part #	JIC Thread	Pipe Size
627-04-02B	7/16-20	1/8
627-04-04B	7/16-20	1/4
627-06-02B	9/16-18	1/8
627-06-04B	9/16-18	1/4
627-06-06B	9/16-18	3/8
627-08-06B	3/4-16	3/8
627-08-08B	3/4-16	1/2

**BULKHEAD TUBE UNION**



Part #	OD	A Diam.	B Diam.
832-04-04B	1/4	7/16-20	7/16-20
832-06-06B	3/8	9/16-18	9/16-18
832-08-08B	1/2	3/4-16	3/4-16
832-10-10B	5/8	7/8-14	7/8-14
832-12-12B	3/4	1-1/16-12	1-1/16-12
832-16-16B	1	1-5/16-12	1-5/16-12

**90° FORGED ELBOW**



Part #	JIC Thread	Pipe Size
822-04-02B	7/16-20	1/8
822-04-04B	7/16-20	1/4
822-05-02B	1/2-20	1/8
822-05-04B	9/16-18	1/4
822-06-02B	9/16-18	1/8
822-06-04B	9/16-18	1/4
822-06-06B	9/16-18	3/8
822-06-08B	3/4-16	1/2
822-08-06B	3/4-16	3/8
822-08-08B	3/4-16	1/2
822-10-08B	7/8-14	1/2
822-12-08B	1-1/16-12	1/2
822-12-12B	1-1/16-12	3/4
822-16-12B	1-5/16-12	3/4
822-16-16B	1-5/16-12	1



Part #	JIC Thread	Pipe Size
877-06-04B	9/16-18	1/4
877-06-06B	9/16-18	3/8

*Other sizes available*

**STRAIGHT**

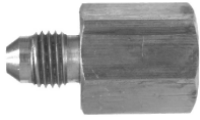


Part #	JIC Thread	Pipe Size
618-04-02B	7/16-20	1/8
618-04-04B	7/16-20	1/4
618-06-02B	9/16-18	1/8
618-06-04B	9/16-18	1/4
618-06-06B	9/16-18	3/8
618-08-06B	3/4-16	3/8
618-08-08B	3/4-16	1/2
618-12-12B	1-1/16-12	3/4





**FEMALE STRAIGHT ADAPTER**



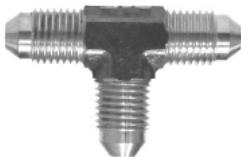
Part #	JIC Thread	Pipe Size
854-04-02B	7/16-20	1/8
854-04-04B	7/16-20	1/4
854-06-04B	9/16-18	1/4
854-06-06B	9/16-18	3/8
854-08-06B	3/4-16	3/8
854-08-08B	3/4-16	1/2
854-10-08B	7/8-14	1/2
854-12-12B	1-1/16-12	3/4
854-16-16B	1-5/16-12	1

**STRAIGHT TUBE UNION**



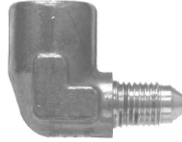
Part #	OD	A Diam.	B Diam.
815-04-04B	1/4	7/16-20	7/16-20
815-06-06B	3/8	9/16-18	9/16-18
815-08-08B	1/2	3/4-16	3/4-16
815-10-10B	5/8	7/8-14	7/8-14
815-12-12B	3/4	1-1/16-12	1-1/16-12
815-16-16B	1	1-5/16-12	1-5/16-12

**TUBE TEE**



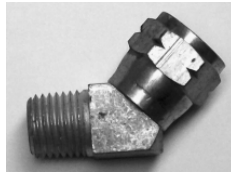
Part #	JIC Thread
824-04B	7/16-20
824-06B	9/16-18
824-08B	3/4-16
824-10B	7/8-14
824-12B	1-1/16-12
824-16B	1-5/16-12

**FEMALE ELBOW (FORGED BODY)**



Part #	JIC Thread	Pipe Size
855-04-02B	7/16-20	1/8
855-04-04B	7/16-20	1/4
855-06-04B	9/16-18	1/4
855-06-06B	9/16-18	3/8
855-08-06B	3/4-16	3/8
855-08-08B	3/4-16	1/2
855-10-08B	7/8-14	1/2
855-12-12B	1-1/16-12	3/4
855-16-16B	1-5/16-12	1

**45° ELBOW**

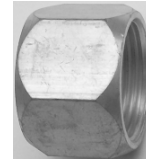


Part #	JIC Thread	Pipe Size
645-04-02B	7/16-20	1/8
645-04-04B	7/16-20	1/4
645-06-02B	9/16-18	1/4
645-06-04B	9/16-18	1/8
645-06-06B	9/16-18	3/8
645-08-06B	3/4-16	3/8
645-08-08B	3/4-16	1/2



Part #	JIC Thread
821-04-04B	7/16-20
821-06-06B	9/16-18
821-08-08B	3/4-16
821-10-10B	7/8-14
821-12-12B	1-1/16-12
821-16-16B	1-5/16-12
821-20-20B	1-5/8-12
821-24-24B	1-7/8-12

**TUBE NUT**



Part #	JIC Thread
818-04B	7/16-20
818-06B	9/16-18
818-08B	3/4-16
818-10B	7/8-14
818-12B	1-1/16-12
818-16B	1-5/16-12
818-20B	1-5/8-12
818-24B	1-7/8-12

**TUBE SLEEVE**



Part #	JIC Thread
819-04B	7/16-20
819-06B	9/16-18
819-08B	3/4-16
819-10B	7/8-14
819-12B	1-1/16-12
819-16B	1-5/16-12
819-20B	1-5/8-12
819-24B	1-7/8-12

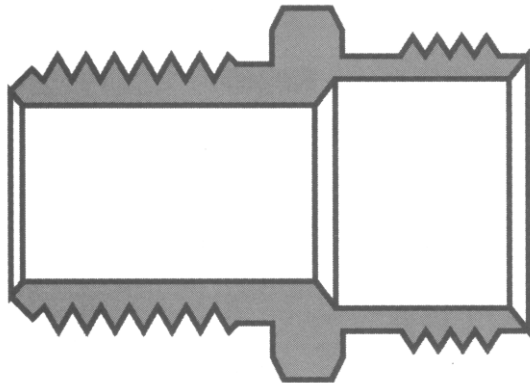
**TUBE CAP**



Part #	JIC Thread
820-04B	7/16-20
820-06B	9/16-18
820-08B	3/4-16
820-10B	7/8-14
820-12B	1-1/16-12
820-16B	1-5/16-12



**GARDEN HOSE FITTINGS**



**Brass**

See page 155 for Plastic garden hose fittings.

**• Temperature and Working Pressure Ranges**

From +350F to +1000F at 75 PSI maximum or the recommended working pressure of the garden hose. (Not to exceed 150 PSI.)

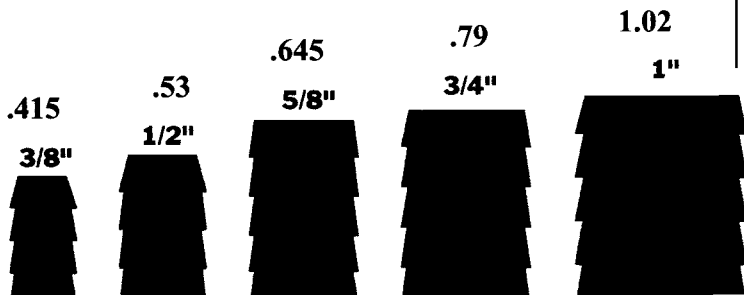
**Note:** All female connector ends should have a rubber washer inserted prior to usage.

**FGH** = Female Garden Hose Threads  
**MGH** = Male Garden Hose Threads



**Male Garden Hose Profile**

Male garden hose threads are all 3/4" with an out side diameter of 1.0625 and 11-1/2" threads per inch.



**Actual size of Garden Hose Barbs**

**•WASHER INCLUDED**



**SWIVEL  
MGH X FGH**

Part #	Size
MF69-12-16 .....	3/4x3/4

**•WASHER INCLUDED**

HUS  
91  
203W



**SWIVEL  
FGH X FGH**

GSU  
101GHSV  
22AS  
506  
FS66

Part #	Size
FS66-12-12 .....	3/4x3/4
FS69-16-16 .....	no swivel

**•WASHER INCLUDED**

HSU11  
91Z  
197S



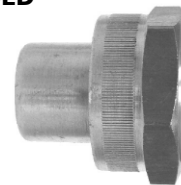
**SWIVEL  
FGH X FEMALE PIPE**

98GHSV  
5AS  
21517  
502  
FS65

Part #	Size
FF65-12-08 .....	3/4x1/2
FF67-12-12 .....	3/4x3/4

**•WASHER INCLUDED**

95GH  
501



**RIGID  
FGH X FEMALE PIPE**

Part #	Size
30-016 .....	3/4x1/8
30-017 .....	3/4x1/4
30-018 .....	3/4x3/8



FS67  
198  
HU11  
21507



502  
99GH  
5A  
H15PP

**RIGID  
FGH X FEMALE PIPE**

Part #	Size
30-078	3/4x1/2
30-083	3/4x3/4

•WASHER INCLUDED



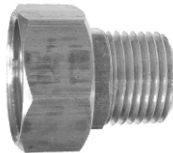
504  
89GH  
W1  
62H4  
88GH  
W1

**SWIVEL  
FGH X MALE PIPE**

Part #	Size
30-047	3/4x1/4
30-048	3/4x3/8
30-049	3/4x1/2

•WASHER INCLUDED

WITH FILTER



**SWIVEL  
FGH X MALE PIPE**

Part #	Size
30-183	3/4x1/2



21505  
503  
83GH  
20A  
HU21  
199  
H7

**RIGID  
FGH X MALE PIPE**

Part #	Size
30-088	3/4x1/2(1/2SWT)**
30-093	3/4x3/4
30-094	3/4x3/4(1/2)TAP
30-093L*	3/4x3/4

\*long pattern  
\*1/2 Swt = 5/8 O.D.

197  
18R  
HU12  
H11PP



18A  
507  
18H  
81GH  
21503  
MF67

**RIGID  
MGH X FEMALE PIPE**

Part #	Size
30-066	3/4x1/4
30-067	3/4x3/8
30-068	3/4x1/2
30-073	3/4x3/4

19R  
196  
H530



21501  
508  
HU22  
71GH  
19A

**RIGID  
MGH X MALE PIPE**

Part #	Size
30-053	3/4x3/8
30-058**	3/4x1/2
30-063*	3/4x3/4x1/2
30-063BE***	3/4x3/4
30-063L	long pattern 1-1/2"
30-063S	3/4x3/4 short

No Tap  
\*(Tapped 1/2 Female)  
\*\*(1/2SWT=5/8 O.D.)  
\*\*\* (Tapped 1/2 FIP both ends)



21500  
509  
75GH  
23A  
H8  
19R

**RIGID  
MGH X MGH**

Part #	Size
30-098	3/4
30-099	3/4x3/4
	(1/2 Tap)



**GARDEN HOSE NUT**



30-021



30-022

94GH  
GHN1  
HNR  
21514

Part #	Size
30-021 .....	knurled
30-022 .....	hexnut

**GARDEN HOSE WASHERS**



30-021



30-022

GHW  
901GH

Part #	Size
30-150 .....	black*
30-150R .....	red
30-149 .....	recessed washer

\*plasticized rubber

**FILTER WASHER**

• SCREEN: 30 MESH



LA662

Part #	Size
30-180 .....	rough mesh
30-180F .....	fine mesh

**HOSE CAP**



513  
96GH  
GHN5  
HC1  
LA215  
21518  
200-W

Part #	Size
30-103 .....	die cast (cut thread)

**HOSE CAP WITH CHAIN**



(FEMALE HOSE)

Part #	Size
30-142 .....	3/4w/8" Chain

**GARDEN HOSE PLUG**



Part #	Size
30-026 .....	3/4

**CAST BRASS HOSE "Y" CONNECTOR**

• WASHER INCLUDED

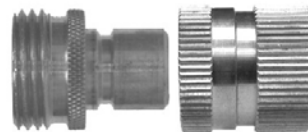


21A

Part #	Size
30-140 .....	3/4x3/4x3/4

**QUICK DISCONNECT COUPLERS**

• WASHER INCLUDED

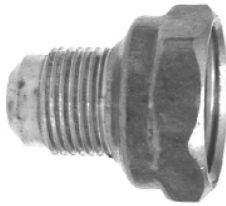


LA73C

Part #	Size
30-450 .....	complete
30-451 .....	female end
30-452 .....	male end



•WASHER INCL

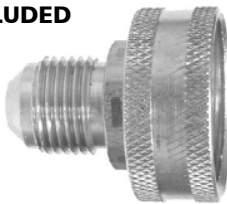


190  
46WH  
HFU21

**MALE FLARE X FEMALE HOSE RIGID**

Part #	Size
30-123 .....	3/8x3/4
30-128 .....	1/2x3/4
30-133 .....	5/8x3/4

•WASHER INCLUDED

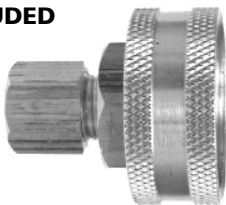


50GHSV  
51GHSV  
W1  
68h  
191

**SWIVEL  
MALE FLARE X FEMALE HOSE**

Part #	Size
30-052 .....	1/4x3/4
30-138 .....	3/8x3/4
30-139 .....	1/2x3/4

•WASHER INCLUDED



**COMPRESSION X FGH**

Part #	Size
30-050 .....	1/4x3/4
20-051 .....	3/8x3/4

*Never trust a stock broker who is married to a travel agent.*

**BARSTOCK BRASS  
GARDEN HOSE COUPLINGS**

**GARDEN HOSE COUPLING**



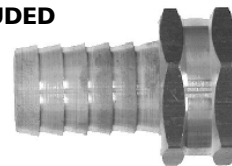
GHS  
92GH  
936H  
202GHS  
22R  
592

**COMPLETE ROD  
BRASS - 1-19" SHANK**

Part #	Size
192-06-06B .....	3/8
192-08-08B .....	1/2
192-10-10B .....	5/8
192-12-12B .....	3/4
192-16-16B .....	1

**FEMALE SWIVEL ONLY**

•WASHER INCLUDED

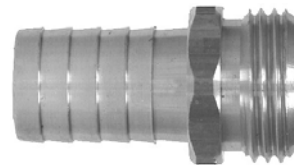


22RF  
591  
GHF  
KF-RY  
HU126  
195

**BARB X FGH**

Part #	Size
30-031 .....	3/8
30-032 .....	1/2
30-033 .....	5/8
30-034 .....	3/4
30-035 .....	1

**MALE END ONLY**



22RM  
590  
GHM  
KF-PY  
201GH  
193  
HU125

**BARB X MGH**

Part #	Size
30-039 .....	3/8
30-040 .....	1/2
30-041 .....	5/8
30-042 .....	3/4
30-043 .....	1



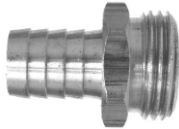
**GARDEN HOSE COUPLING  
SHORT SHANK (1"), ROUND NUT**



**FEMALE SWIVEL ONLY**

Part #	Size
30-466 .....	1/2
30-467 .....	5/8
30-468 .....	3/4

**GARDEN HOSE COUPLING  
SHORT SHANK (1"), ROUND NUT**



**MALE END ONLY**

Part #	Size
30-471 .....	1/2
30-472 .....	5/8
30-473 .....	3/4

**ROD BRASS - 2" SHANK**

•WASHER INCLUDED



GHFL  
594

**FEMALE END**

Part #	Size
30-505 .....	1/2
30-506 .....	5/8
30-507 .....	3/4

**ROD BRASS - 2" SHANK**



GHML  
593

**MALE END**

Part #	Size
30-510 .....	1/2
30-511 .....	5/8
30-512 .....	3/4

**WROUGHT BRASS**

**WROUGHT BRASS COUPLINGS**

•WASHER INCLUDED



85L

**FEMALE END ONLY**

Part #	Size
30-526 .....	5/8
30-527 .....	3/4

**WROUGHT BRASS COUPLINGS**

•WASHER INCLUDED



85M

**MALE END ONLY**

Part #	Size
30-530 .....	1/2
30-531 .....	5/8

**GARDEN HOSE VALVES**

**ONE WAY BRASS BALL VALVE**

Brass



**MGH X FGH**

Part #	Size
30-161 .....	3/4x3/4

Brass



**MGH X 3/4 FEMALE PIPE**

Part #	Size
30-162 .....	3/4x3/4



# Brass Nipples

## Brass Nipples

## Brass Nipples

### 1/8" DIAMETER



Part #	Length
02BNC .....	Close (3/4)
02-X-1.5BN .....	x 1-1/2"
02-X-2BN .....	x 2"
02-X-2.5BN .....	x 2-1/2"
02-X-3BN .....	x 3"
02-X-3.5BN .....	x 3-1/2"
02-X-4BN .....	x 4"
02-X-4.5BN .....	x 4-1/2"
02-X-5BN .....	x 5"
02-X-5.5BN .....	x 5-1/2"
02-X-6BN .....	x 6"
02-X-7BN .....	x 7"
02-X-8BN .....	x 8"
02-X-9BN .....	x 9"
02-X-10BN .....	x 10"
02-X-11BN .....	x 11"
02-X-12BN .....	x 12"
02-X-14BN .....	x 14"
02-X-16BN .....	x 16"

### 1/4" Diameter



Part #	Length
04BNC .....	Close (7/8)
04-X-1.5BN .....	x 1-1/2"
04-X-2BN .....	x 2"
04-X-2.5BN .....	x 2-1/2"
04-X-3BN .....	x 3"
04-X-3.5BN .....	x 3-1/2"
04-X-4BN .....	x 4"
04-X-4.5BN .....	x 4-1/2"
04-X-5BN .....	x 5"
04-X-5.5BN .....	x 5-1/2"
04-X-6BN .....	x 6"
04-X-7BN .....	x 7"
04-X-8BN .....	x 8"
04-X-9BN .....	x 9"
04-X-10BN .....	x 10"
04-X-11BN .....	x 11"
04-X-12BN .....	x 12"

### 3/8" Diameter



Part #	Length
06BNC .....	Close (1)
06-X-1.5BN .....	x 1-1/2"
06-X-2BN .....	x 2"
06-X-2.5BN .....	x 2-1/2"
06-X-3BN .....	x 3"
06-X-3.5BN .....	x 3-1/2"
06-X-4BN .....	x 4"
06-X-4.5BN .....	x 4-1/2"
06-X-5BN .....	x 5"
06-X-5.5BN .....	x 5-1/2"
06-X-6BN .....	x 6"
06-X-7BN .....	x 7"
06-X-8BN .....	x 8"
06-X-9BN .....	x 9"
06-X-10BN .....	x 10"
06-X-11BN .....	x 11"
06-X-12BN .....	x 12"

### 1/2" Diameter



Part #	Length
08BNC .....	Close (1-1/8)
08-X-1.5BN .....	x 1-1/2"
08-X-2BN .....	x 2"
08-X-2.5BN .....	x 2-1/2"
08-X-3BN .....	x 3"
08-X-3.5BN .....	x 3-1/2"
08-X-4BN .....	x 4"
08-X-4.5BN .....	x 4-1/2"
08-X-5BN .....	x 5"
08-X-5.5BN .....	x 5-1/2"
08-X-6BN .....	x 6"
08-X-7BN .....	x 7"
08-X-8BN .....	x 8"
08-X-9BN .....	x 9"
08-X-10BN .....	x 10"
08-X-11BN .....	x 11"
08-X-12BN .....	x 12"



Nipples & Fittings

**3/4" Diameter**



Part #	Length
12-BNC .....	Close (1-3/8)
12-X-1.5BN .....	x 1-1/2"
12-X-2BN .....	x 2"
12-X-2.5BN .....	x 2-1/2"
12-X-3BN .....	x 3"
12-X-3.5BN .....	x 3-1/2"
12-X-4BN .....	x 4"
12-X-4.5BN .....	x 4-1/2"
12-X-5BN .....	x 5"
12-X-5.5BN .....	x 5-1/2"
12-X-6BN .....	x 6"
12-X-7BN .....	x 7"
12-X-8BN .....	x 8"
12-X-9BN .....	x 9"
12-X-10BN .....	x 10"
12-X-11BN .....	x 11"
12-X-12BN .....	x 12"

**1" Diameter**



Part #	Length
16BNC .....	Close (1-1/2)
16-X-1.5BN .....	x 1-1/2"
16-X-2BN .....	x 2"
16-X-2.5BN .....	x 2-1/2"
16-X-3BN .....	x 3"
16-X-3.5BN .....	x 3-1/2"
16-X-4BN .....	x 4"
16-X-4.5BN .....	x 4-1/2"
16-X-5BN .....	x 5"
16-X-5.5BN .....	x 5-1/2"
16-X-6BN .....	x 6"
16-X-7BN .....	x 7"
16-X-8BN .....	x 8"
16-X-9BN .....	x 9"
16-X-10BN .....	x 10"
16-X-11BN .....	x 11"
16-X-12BN .....	x 12"

**1-1/4" Diameter**



Part #	Length
20BNC .....	Close (1-5/8)
20-X-1.5BN .....	x 1-1/2"
20-X-2BN .....	x 2"
20-X-2.5BN .....	x 2-1/2"
20-X-3BN .....	x 3"
20-X-3.5BN .....	x 3-1/2"
20-X-4BN .....	x 4"
20-X-4.5BN .....	x 4-1/2"
20-X-5BN .....	x 5"
20-X-5.5BN .....	x 5-1/2"
20-X-6BN .....	x 6"
20-X-7BN .....	x 7"
20-X-8BN .....	x 8"
20-X-9BN .....	x 9"
20-X-10BN .....	x 10"
20-X-11BN .....	x 11"
20-X-12BN .....	x 12"

**1-1/2" Diameter**



Part #	Length
24BNC .....	Close (1-3/4)
24-X-1.5BN .....	x 1-1/2"
24-X-2BN .....	x 2"
24-X-2.5BN .....	x 2-1/2"
24-X-3BN .....	x 3"
24-X-3.5BN .....	x 3-1/2"
24-X-4BN .....	x 4"
24-X-4.5BN .....	x 4-1/2"
24-X-5BN .....	x 5"
24-X-5.5BN .....	x 5-1/2"
24-X-6BN .....	x 6"
24-X-7BN .....	x 7"
24-X-8BN .....	x 8"
24-X-9BN .....	x 9"
24-X-10BN .....	x 10"
24-X-11BN .....	x 11"
24-X-12BN .....	x 12"

**Nipples & Fittings**





# Brass Nipples

# Brass Nipples

# Brass Nipples

## 2" Diameter



Part #	Length
32BNC	Close (2)
32-X-2.5BN	x 2-1/2"
32-X-3BN	x 3"
32-X-3.5BN	x 3-1/2"
32-X-4BN	x 4"
32-X-4.5BN	x 4-1/2"
32-X-5BN	x 5"
32-X-5.5BN	x 5-1/2"
32-X-6BN	x 6"
32-X-7BN	x 7"
32-X-8BN	x 8"
32-X-9BN	x 9"
32-X-10BN	x 10"
32-X-11BN	x 11"
32-X-12BN	x 12"
32-X-18BN	x 18"
32-X-24BN	x 24"
32-X-30BN	x 30"
32-X-36BN	x 36"

## 2-1/2" Diameter



Part #	Length
40BNC	Close (2-1/2)
40-X-3BN	x 3"
40-X-3.5BN	x 3-1/2"
40-X-4BN	x 4"
40-X-4.5BN	x 4-1/2"
40-X-5BN	x 5"
40-X-5.5BN	x 5-1/2"
40-X-6BN	x 6"
40-X-7BN	x 7"
40-X-8BN	x 8"
40-X-9BN	x 9"
40-X-10BN	x 10"
40-X-11BN	x 11"
40-X-12BN	x 12"

## 3" Diameter



Part #	Length
48BNC	Close (2-5/8)
48-X-3BN	x 3"
48-X-3.5BN	x 3-1/2"
48-X-4BN	x 4"
48-X-4.5BN	x 4-1/2"
48-X-5BN	x 5"
48-X-5.5BN	x 5-1/2"
48-X-6BN	x 6"
48-X-7BN	x 7"
48-X-8BN	x 8"
48-X-9BN	x 9"
48-X-10BN	x 10"
48-X-11BN	x 11"
48-X-12BN	x 12"

## 4" Diameter



Part #	Length
64BNC	Close (2-7/8)
64-X-3BN	x 3"
64-X-3.5BN	x 3-1/2"
64-X-4BN	x 4"
64-X-4.5BN	x 4-1/2"
64-X-5BN	x 5"
64-X-5.5BN	x 5-1/2"
64-X-6BN	x 6"
64-X-8BN	x 8"
64-X-12BN	x 12"

Things come to those who wait,  
but only the things left by those  
who hustle.

- Abraham Lincoln



# Brass Nipples

## Brass Nipples

## Brass Nipples

We hereby certify that to the best of our knowledge and belief the CDA 230 alloy Red Brass Pipe from which our nipples are produced meet the requirements of ASTM Specifications B43-91 and is free of mercury contamination. The chemical analysis is 85% copper, 15% Zinc and conforms to Federal Specifications WWN-35LA.

Out brass nipples meet ASTM B687-88 and MS51846 for standard brass and copper nipples, and MS51872 for extra heavy brass nipples and extra heavy copper nipples.

Threads: Nipples are threaded with American Standard taper pipe threads (NPT) in accordance with screw-thread standard for Federal Services Handbook H-28.

### RED BRASS 85% PIPE WITH TREADED ENDS SPECIFICATIONS:

Pipe Size in Inches	Dimension in Inches			Allowable Pressure POUNDS PER SQUARE INCH				
	O.D.	I.D.	Wall Thickness	Standard Size (Inches)	@ 100°F	@ 200°F	@ 300°F	@ 400°F
1/8"	.405	.281	.062	1/8"	370	370	320	140
1/4"	.540	.376	.082	1/4"	870	870	760	330
3/8"	.675	.495	.090	3/8"	890	890	780	340
1/2"	.840	.626	.107	1/2"	900	900	790	340
3/4"	1.050	.822	.114	3/4"	810	810	710	310
1"	1.315	1.063	.126	1"	630	630	560	240
1-1/4"	1.660	1.368	1.46	1-1/4"	690	690	610	260
1-1/2"	1.900	1.600	.150	1-1/2"	630	630	560	240
2"	2.375	2.063	.156	2"	540	540	480	210
2-1/2"	2.875	2.501	.187	2-1/2"	450	450	390	170
3"	3.500	3.062	.219	3"	510	510	450	190
3-1/2"	4.000	3.500	.250	3-1/2"	570	570	500	220
4"	4.500	4.000	.250	4"	510	510	440	190
4-1/2"	5.000	4.500	.250	5"	410	410	360	160
5"	5.563	5.063	.250	6"	340	340	300	130
6"	6.625	6.125	.250					

**Nipples & Fittings**

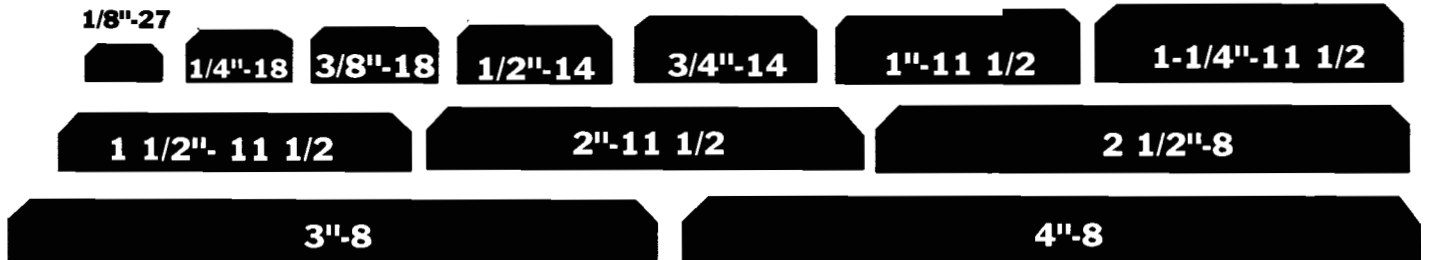
### NIPPLE WEIGHT CHART

Diameter	Length of Close	Close	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"	6"
1/8"	3/4"	1.4	3.0	3.8	5.2	6.2	7.2	8.4	9.2	11.0	12.2	13.2
1/4"	7/8"	2.4	4.8	6.4	8.2	10.4	12.2	14.0	16.0	18.0	20.2	22.0
3/8"	1"	3.8	6.2	8.6	11.0	13.4	16.2	18.4	20.4	23.4	25.6	28.0
1/2"	1-1/8"	5.6	8.6	11.6	16.2	19.4	22.4	27.4	29.6	33.0	37.4	40.4
3/4"	1-3/8"	10.2	11.8	16.2	21.4	22.6	31.0	35.6	40.2	45.6	50.0	55.0
1"	1-1/2"	15.6		23.4	29.6	37.0	44.2	52.6	59.2	68.4	74.8	76.8
1-1/4"	1-5/8"	26.5		36.0	45.0	56.5	68.0	81.0	92.0	98.5	110.5	125.0
1-1/2"	1-3/4"	35.0		42.0	55.5	67.0	81.0	95.5	108.0	121.5	131.0	144.0
2"	2"	54.5			72.0	88.5	107.0	125.0	143.5	155.0	179.0	190.0
2-1/2"	2-1/2"	90.0				116.5	148.5	168.5	180.0	218.5	239.5	262.0
3"	2-5/8"	134.5				170.0	210.0	239.0	268.50	314.0	349.0	390.0
4"	2-7/8"	226.3				253.1	307.0	357.5	422.5	450.0	516.30	563.8

Approximate weight per 100 pieces. Standard Brass Nipples.

For Extra Heavy Brass multiply above weight by 1.37

### Pipe Threads



**Class 125 (150) for steam, water, gas, oil and air service**

Standard specifications  
 Materials - ASTM B62-82 (85,5,5,5)  
 Dimensions - ANSI B 16.15

Threads - ANS B2.1 or BA 21 and Fed. WW-P-460

Bronze threaded fittings are manufactured from smooth-cored castings, designed to provide full flow with minimum restriction. All threads are accurately machined and gauged to ensure a perfect fit with the pipe.

All fittings are individually tested under water to ensure quality.

**90° ELBOWS**



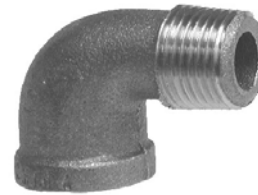
Part #	Size
916-02-02BRZ .....	1/8
916-04-04BRZ .....	1/4
916-06-06BRZ .....	3/8
916-08-08BRZ .....	1/2
916-12-12BRZ .....	3/4
916-16-16BRZ .....	1
916-20-20BRZ .....	1-1/4
916-24-24BRZ .....	1-1/2
916-32-32BRZ .....	2
916-40-40BRZ .....	2-1/2
916-48-48BRZ .....	3
916-64-64BRZ .....	4

**90° REDUCING ELBOWS**

Part #	Size
916-04-02BRZ .....	1/4x1/8
916-08-04BRZ .....	1/2x1/4
916-08-06BRZ .....	1/2x3/8
916-12-08BRZ .....	3/4x1/2
916-16-12BRZ .....	1x3/4
916-20-16BRZ .....	1-1/4x1
916-24-16BRZ .....	1-1/2x1
916-32-16BRZ .....	2X1

*More sizes available*

**90° STREET ELLS**



Part #	Size
914-02-02BRZ .....	1/8
914-04-04BRZ .....	1/4
914-06-06BRZ .....	3/8
914-08-08BRZ .....	1/2
914-12-12BRZ .....	3/4
914-16-16BRZ .....	1
914-20-20BRZ .....	1-1/4
914-24-24BRZ .....	1-1/2
914-32-32BRZ .....	2
914-40-40BRZ .....	2-1/2
914-48-48BRZ .....	3

**45° ELBOWS**



Part #	Size
925-02-02BRZ .....	1/8
925-04-04BRZ .....	1/4
925-06-06BRZ .....	3/8
925-08-08BRZ .....	1/2
925-12-12BRZ .....	3/4
925-16-16BRZ .....	1
925-20-20BRZ .....	1-1/4
925-24-24BRZ .....	1-1/2
925-32-32BRZ .....	2

*More sizes available*



**45° STREET ELLS**



Part #	Size
915-02-02BRZ .....	1/8
915-04-04BRZ .....	1/4
915-06-06BRZ .....	3/8
915-08-08BRZ .....	1/2
915-12-12BRZ .....	3/4
915-16-16BRZ .....	1
915-20-20BRZ .....	1-1/4
915-24-24BRZ .....	1-1/2
915-32-32BRZ .....	2

**TEES**



Part #	Size
917-02BRZ .....	1/8
917-04BRZ .....	1/4
917-06BRZ .....	3/8
917-08BRZ .....	1/2
917-12BRZ .....	3/4
917-16BRZ .....	1
917-20BRZ .....	1-1/4
917-24BRZ .....	1-1/2
917-32BRZ .....	2
917-40BRZ .....	2-1/2
917-48BRZ .....	3

**REDUCING TEES  
(REDUCING ON THE BRANCH)**



**(1 & 2) X 3**

Part #	Size
917-08-04BRZ .....	1/2x1/4
917-12-04BRZ .....	3/4x1/4
917-12-06BRZ .....	3/4x3/8
917-12-08BRZ .....	3/4x1/2
917-16-08BRZ .....	1x1/2
917-16-12BRZ .....	1x3/4
917-20-08BRZ .....	1-1/4x1/2
917-20-12BRZ .....	1-1/4x3/4
917-20-16BRZ .....	1-1/4x1

**CROSSES**



Part #	Size
918-04BRZ .....	1/4
918-06BRZ .....	3/8
918-08BRZ .....	1/2
918-12BRZ .....	3/4
918-16BRZ .....	1
918-20BRZ .....	1-1/4
918-24BRZ .....	1-1/2
918-32BRZ .....	2

**COUPLINGS**



Part #	Size
910-02-02BRZ .....	1/8
910-04-04BRZ .....	1/4
910-06-06BRZ .....	3/8
910-08-08BRZ .....	1/2
910-12-12BRZ .....	3/4
910-16-16BRZ .....	1
910-20-20BRZ .....	1-1/4
910-24-24BRZ .....	1-1/2
910-32-32BRZ .....	2
910-48-48BRZ .....	3

**Nipples & Fittings**

**REDUCING COUPLINGS**



Part #	Size
910-04-02BRZ	1/4x1/8
910-06-02BRZ	3/8x1/8
910-06-04BRZ	3/8x1/4
910-08-02BRZ	1/2x1/8
910-08-04BRZ	1/2x1/4
910-08-06BRZ	1/2x3/8
910-12-04BRZ	3/4x1/4
910-12-06BRZ	3/4x3/8
910-12-08BRZ	3/4x1/2
910-16-06BRZ	1x3/8
910-16-08BRZ	1x1/2
910-16-12BRZ	1x3/4
910-20-08BRZ	1-1/4x1/2
910-20-12BRZ	1-1/4x3/4
910-20-16BRZ	1-1/4x1
910-24-08BRZ	1-1/2x1/2
910-24-12BRZ	1-1/2x3/4
910-24-16BRZ	1-1/2x1
910-24-20BRZ	1-1/2x1-1/4
910-32-08BRZ	2x1/2
910-32-12BRZ	2x3/4
910-32-16BRZ	2x1
910-32-20BRZ	2x1-1/4
910-32-24BRZ	2x1-1/2
910-40-24BRZ	2-1/2x1-1/2
910-40-32BRZ	2-1/2x2
910-48-32BRZ	3x2
910-48-40BRZ	3x2-1/2

*More sizes available*

**CAPS**



Part #	Size
02-CAP-BRZ	1/8
04-CAP-BRZ	1/4
06-CAP-BRZ	3/8
08-CAP-BRZ	1/2
12-CAP-BRZ	3/4
16-CAP-BRZ	1
20-CAP-BRZ	1-1/4
24-CAP-BRZ	1-1/2
32-CAP-BRZ	2
48-CAP-BRZ	3

**UNIONS**



Part #	Size
02-UNION-BRZ	1/8
04-UNION-BRZ	1/4
06-UNION-BRZ	3/8
08-UNION-BRZ	1/2
12-UNION-BRZ	3/4
16-UNION-BRZ	1
20-UNION-BRZ	1-1/4
24-UNION-BRZ	1-1/2
32-UNION-BRZ	2
40-UNION-BRZ	2-1/2
48-UNION-BRZ	3

*Domestic Bronze Fittings available on request.*

**Nipples & Fittings**



**HEX BUSHINGS**



Part #	Size
912-04-02BRZ	1/4x1/8
912-06-02BRZ	3/8x1/8
912-06-04BRZ	3/8x1/4
912-08-02BRZ	1/2x1/8
912-08-04BRZ	1/2x1/4
912-08-06BRZ	1/2x3/8
912-12-02BRZ	3/4x1/8
912-12-04BRZ	3/4x1/4
912-12-06BRZ	3/4x3/8
912-12-08BRZ	3/4x1/2
912-16-04BRZ	1x1/4
912-16-06BRZ	1x3/8
912-16-08BRZ	1x1/2
912-16-12BRZ	1x3/4
912-20-04BRZ	1-1/4x1/4
912-20-06BRZ	1-1/4x3/8
912-20-08BRZ	1-1/4x1/2
912-20-12BRZ	1-1/4x3/4
912-20-16BRZ	1-1/4x1
912-24-04BRZ	1-1/2x1/4
912-24-06BRZ	1-1/2x3/8
912-24-08BRZ	1-1/2x1/2
912-24-12BRZ	1-1/2x3/4
912-24-16BRZ	1-1/2x1
912-24-20BRZ	1-1/2x1-1/4
912-32-04BRZ	2x1/4
912-32-08BRZ	2x1/2
912-32-12BRZ	2x3/4
912-32-16BRZ	2x1
912-32-20BRZ	2x1-1/4
912-32-24BRZ	2x1-1/2
912-40-16BRZ	2-1/2x1
912 40-24BRZ	2-1/2x1-1/2
912-40-32BRZ	2-1/2x2
912-48-24BRZ	3x1-1/2
912-48-32BRZ	3x2
912-48-40BRZ	3x2-1/2

*More sizes available*

**BRONZE COUNTERSUNK PLUGS**



Part #	Size
932-08BRZ	1/2
932-12BRZ	3/4
932-16BRZ	1
932-20BRZ	1-1/4
932-24BRZ	1-1/2
932-32BRZ	2
932-40BRZ	2-1/2
932-48BRZ	3

**SOLID SQUARE HEAD PLUGS**



Part #	Size
932-02BRZSH	1/8
932-04BRZSH	1/4
932-06BRZSH	3/8
932-08BRZSH	1/2
932-12BRZSH	3/4
932-16BRZSH	1
932-20BRZSH	1-1/4
932-24BRZSH	1-1/2
932-32BRZSH	2

**Nipples & Fittings**

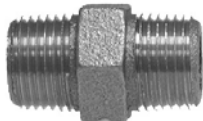


**HEX LOCKNUTS**



Part #	Size
924-02BRZ .....	1/8
924-04BRZ .....	1/4
924-06BRZ .....	3/8
924-08BRZ .....	1/2
924-12BRZ .....	3/4
924-16BRZ .....	1
924-20BRZ .....	1-1/4
924-24BRZ .....	1-1/2
924-32BRZ .....	2

**HEX NIPPLES**



Part #	Size
911-02-02BRZ .....	1/8
911-04-04BRZ .....	1/4
911-08-08BRZ .....	1/2
911-12-12BRZ .....	3/4
911-16-16BRZ .....	1
911-20-20BRZ .....	1-1/4
911-24-24BRZ .....	1-1/2
911-32-32BRZ .....	2
911-40-40BRZ .....	2-1/2

**BRONZE REDUCING NIPPLES**



Part #	Size
911-04-02BRZ .....	1/4x1/8
911-06-04BRZ .....	3/8x1/4
911-08-06BRZ .....	1/2x3/8
911-12-08BRZ .....	3/4x1/2
911-16-08BRZ .....	1x1/2
911-18-12BRZ .....	1x3/4
911-20-16BRZ .....	1-1/4x1
911-24-16BRZ .....	1-1/2x1
911-24-20BRZ .....	1-1/2x1-1/4
911-32-24BRZ .....	2x1-1/2

*More sizes available*

**Nipples & Fittings**



Schedule 40 Welded  
NPT threaded both ends

See Brass Nipple Section header  
for detailed specifications  
(They are the same)



**1/8" DIAMETER**

304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
02-X-CLOSESSN	x Close (3/4")	02-X-CLOSESSN-316	x Close (3/4")
02-X-1.5SSN-304	x 1-1/2"	02-X-1.5SSN-316	x 1-1/2"
02-X-2SSN-304	x 2"	02-X-2SSN-316	x 2"
02-X-2.5SSN-304	x 2-1/2"	02-X-2.5SSN-316	x 2-1/2"
02-X-3SSN-304	x 3"	02-X-3SSN-316	x 3"
02-X-3.5SSN-304	x 3-1/2"	02-X-3.5SSN-316	x 3-1/2"
02-X-4SSN-304	x 4"	02-X-4SSN-316	x 4"
02-X-4.5SSN-304	x 4-1/2"	02-X-4.5SSN-316	x 4-1/2"
02-X-5SSN-304	x 5"	02-X-5SSN-316	x 5"
02-X-5.5SSN-304	x 5-1/2"	02-X-5.5SSN-316	x 5-1/2"
02-X-6SSN-304	x 6"	02-X-6SSN-316	x 6"
02-X-7SSN-304	x 7"	02-X-7SSN-316	x 7"
02-X-8SSN-304	x 8"	02-X-8SSN-316	x 8"
02-X-9SSN-304	x 9"	02-X-9SSN-316	x 9"
02-X-10SSN-304	x 10"	02-X-10SSN-316	x 10"



**1/4" DIAMETER**

304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
04-X-CLOSESSN	x Close (7/8")	04-X-CLOSESSN-316	x Close (7/8")
04-X-1.5SSN-304	x 1-1/2"	04-X-1.5SSN-316	x 1-1/2"
04-X-2SSN-304	x 2"	04-X-2SSN-316	x 2"
04-X-2.5SSN-304	x 2-1/2"	04-X-2.5SSN-316	x 2-1/2"
04-X-3SSN-304	x 3"	04-X-3SSN-316	x 3"
04-X-3.5SSN-304	x 3-1/2"	04-X-3.5SSN-316	x 3-1/2"
04-X-4SSN-304	x 4"	04-X-4SSN-316	x 4"
04-X-4.5SSN-304	x 4-1/2"	04-X-4.5SSN-316	x 4-1/2"
04-X-5SSN-304	x 5"	04-X-5SSN-316	x 5"
04-X-5.5SSN-304	x 5-1/2"	04-X-5.5SSN-316	x 5-1/2"
04-X-6SSN-304	x 6"	04-X-6SSN-316	x 6"
04-X-7SSN-304	x 7"	04-X-7SSN-316	x 7"
04-X-8SSN-304	x 8"	04-X-8SSN-316	x 8"
04-X-9SSN-304	x 9"	04-X-9SSN-316	x 9"
04-X-10SSN-304	x 10"	04-X-10SSN-316	x 10"



**3/8" DIAMETER**

304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
06-X-CLOSESSN	x Close (1")	06-X-CLOSESSN-316	x Close (1")
06-X-1.5SSN-304	x 1-1/2"	06-X-1.5SSN-316	x 1-1/2"
06-X-2SSN-304	x 2"	06-X-2SSN-316	x 2"
06-X-2.5SSN-304	x 2-1/2"	06-X-2.5SSN-316	x 2-1/2"
06-X-3SSN-304	x 3"	06-X-3SSN-316	x 3"
06-X-3.5SSN-304	x 3-1/2"	06-X-3.5SSN-316	x 3-1/2"
06-X-4SSN-304	x 4"	06-X-4SSN-316	x 4"
06-X-4.5SSN-304	x 4-1/2"	06-X-4.5SSN-316	x 4-1/2"
06-X-5SSN-304	x 5"	06-X-5SSN-316	x 5"
06-X-5.5SSN-304	x 5-1/2"	06-X-5.5SSN-316	x 5-1/2"
06-X-6SSN-304	x 6"	06-X-6SSN-316	x 6"
06-X-7SSN-304	x 6-1/2"	06-X-7SSN-316	x 6-1/2"
06-X-8SSN-304	x 8"	06-X-8SSN-316	x 8"
06-X-9SSN-304	x 9"	06-X-9SSN-316	x 9"
06-X-10SSN-304	x 10"	06-X-10SSN-316	x 10"



**1/2" DIAMETER**

304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
08-X-CLOSESSN	x Close (7/8")	08-X-CLOSESSN-316	x Close (7/8")
08-X-1.5SSN-304	x 1-1/2"	08-X-1.5SSN-316	x 1-1/2"
08-X-2SSN-304	x 2"	08-X-2SSN-316	x 2"
08-X-2.5SSN-304	x 2-1/2"	08-X-2.5SSN-316	x 2-1/2"
08-X-3SSN-304	x 3"	08-X-3SSN-316	x 3"
08-X-3.5SSN-304	x 3-1/2"	08-X-3.5SSN-316	x 3-1/2"
08-X-4SSN-304	x 4"	08-X-4SSN-316	x 4"
08-X-4.5SSN-304	x 4-1/2"	08-X-4.5SSN-316	x 4-1/2"
08-X-5SSN-304	x 5"	08-X-5SSN-316	x 5"
08-X-5.5SSN-304	x 5-1/2"	08-X-5.5SSN-316	x 5-1/2"
08-X-6SSN-304	x 6"	08-X-6SSN-316	x 6"
08-X-7SSN-304	x 7"	08-X-7SSN-316	x 7"
08-X-8SSN-304	x 8"	08-X-8SSN-316	x 8"
08-X-9SSN-304	x 9"	08-X-9SSN-316	x 9"
08-X-10SSN-304	x 10"	08-X-10SSN-316	x 10"

**Nipples &  
Fittings**





**3/4" DIAMETER**

304 STAINLESS		316 STAINLESS
Part #	Size	Part #
12-X-CLOSESSN	x Close (1-3/8")	12-X-CLOSESSN-316
12-X-1.5SSN-304	x 1-1/2"	12-X-1.5SSN-316
12-X-2SSN-304	x 2"	12-X-2SSN-316
12-X-2.5SSN-304	x 2-1/2"	12-X-2.5SSN-316
12-X-3SSN-304	x 3"	12-X-3SSN-316
12-X-3.5SSN-304	x 3-1/2"	12-X-3.5SSN-316
12-X-4SSN-304	x 4"	12-X-4SSN-316
12-X-4.5SSN-304	x 4-1/2"	12-X-4.5SSN-316
12-X-5SSN-304	x 5"	12-X-5SSN-316
12-X-5.5SSN-304	x 5-1/2"	12-X-5.5SSN-316
12-X-6SSN-304	x 6"	12-X-6SSN-316
12-X-7SSN-304	x 7"	12-X-7SSN-316
12-X-8SSN-304	x 8"	12-X-8SSN-316
12-X-9SSN-304	x 9"	12-X-9SSN-316
12-X-10SSN-304	x 10"	12-X-10SSN-316



**1" DIAMETER**

304 STAINLESS		316 STAINLESS
Part #	Size	Part #
16-X-CLOSESSN	x Close (1-1/2")	16-X-CLOSESSN-316
16-X-2SSN-304	x 2"	16-X-2SSN-316
16-X-2.5SSN-304	x 2-1/2"	16-X-2.5SSN-316
16-X-3SSN-304	x 3"	16-X-3SSN-316
16-X-3.5SSN-304	x 3-1/2"	16-X-3.5SSN-316
16-X-4SSN-304	x 4"	16-X-4SSN-316
16-X-4.5SSN-304	x 4-1/2"	16-X-4.5SSN-316
16-X-5SSN-304	x 5"	16-X-5SSN-316
16-X-5.5SSN-304	x 5-1/2"	16-X-5.5SSN-316
16-X-6SSN-304	x 6"	16-X-6SSN-316
16-X-7SSN-304	x 7"	16-X-7SSN-316
16-X-8SSN-304	x 8"	16-X-8SSN-316
16-X-9SSN-304	x 9"	16-X-9SSN-316
16-X-10SSN-304	x 10"	16-X-10SSN-316



**1-1/4" DIAMETER**

304 STAINLESS		316 STAINLESS
Part #	Size	Part #
20-X-CLOSESSN	x Close (1-5/8")	20-X-CLOSESSN-316
20-X-2SSN-304	x 2"	20-X-2SSN-316
20-X-2.5SSN-304	x 2-1/2"	20-X-2.5SSN-316
20-X-3SSN-304	x 3"	20-X-3SSN-316
20-X-3.5SSN-304	x 3-1/2"	20-X-3.5SSN-316
20-X-4SSN-304	x 4"	20-X-4SSN-316
20-X-4.5SSN-304	x 4-1/2"	20-X-4.5SSN-316
20-X-5SSN-304	x 5"	20-X-5SSN-316
20-X-5.5SSN-304	x 5-1/2"	20-X-5.5SSN-316
20-X-6SSN-304	x 6"	20-X-6SSN-316
20-X-7SSN-304	x 7"	20-X-7SSN-316
20-X-8SSN-304	x 8"	20-X-8SSN-316
20-X-9SSN-304	x 9"	20-X-9SSN-316
20-X-10SSN-304	x 10"	20-X-10SSN-316



**1-1/2" DIAMETER**

304 STAINLESS		316 STAINLESS
Part #	Size	Part #
24-X-CLOSESSN	x Close (2")	24-X-CLOSESSN-316
24-X-2SSN-304	x 2"	24-X-2SSN-316
24-X-2.5SSN-304	x 2-1/2"	24-X-2.5SSN-316
24-X-3SSN-304	x 3"	24-X-3SSN-316
24-X-3.5SSN-304	x 3-1/2"	24-X-3.5SSN-316
24-X-4SSN-304	x 4"	24-X-4SSN-316
24-X-4.5SSN-304	x 4-1/2"	24-X-4.5SSN-316
24-X-5SSN-304	x 5"	24-X-5SSN-316
24-X-5.5SSN-304	x 5-1/2"	24-X-5.5SSN-316
24-X-6SSN-304	x 6"	24-X-6SSN-316
24-X-7SSN-304	x 7"	24-X-7SSN-316
24-X-8SSN-304	x 8"	24-X-8SSN-316
24-X-9SSN-304	x 9"	24-X-9SSN-316
24-X-10SSN-304	x 10"	24-X-10SSN-316





**2" DIAMETER**

304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
32-X-CLOSESSN	x Close (2")	32-X-CLOSESSN-316	x Close (2")
32-X-2.5SSN-304	x 2-1/2"	32-X-2.5SSN-316	x 2-1/2"
32-X-3SSN-304	x 3"	32-X-3SSN-316	x 3"
32-X-3.5SSN-304	x 3-1/2"	32-X-3.5SSN-316	x 3-1/2"
32-X-4SSN-304	x 4"	32-X-4SSN-316	x 4"
32-X-4.5SSN-304	x 4-1/2"	32-X-4.5SSN-316	x 4-1/2"
32 X-5SSN-304	x 5"	32-X-5SSN-316	x 5"
32-X-5.5SSN-304	x 5-1/2"	32-X-5.5SSN-316	x 5-1/2"
32-X-6SSN-304	x 6"	32 X-6SSN-316	x 6"
32-X-7SSN-304	x 7"	32-X-7SSN-316	x 7"
32-X-8SSN-304	x 8"	32-X-8SSN-316	x 8"
32-X-9SSN-304	x 9"	32-X-9SSN-316	x 9"
32-X-10SSN-304	x 10"	32-X-10SSN-316	x 10"



**2-1/2" DIAMETER**

304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
40-X-CLOSESSN	x Close (2-1/2")	40-X-CLOSESSN-316	x Close (2-1/2")
40-X-5SSN-304	x 1/2"	40-X-5SSN-316	x 1/2"
40-X-5.5SSN-304	x 5-1/2"	40-X-5.5SSN-316	x 5-1/2"

*More sizes available*



**3" DIAMETER**

304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
48-X-CLOSESSN-304	x Close (2-5/8")	48-X-CLOSESSN-316	x Close (2-5/8")
48-X-3SSN-304	x 3"	48-X-3SSN-316	x 3"
48-X-4SSN-304	x 4"	48-X-4SSN-316	x 4"
48-X-5SSN-304	x 5"	48-X-5SSN-316	x 5"
48-X-6SSN-304	x 6"	48-X-6SSN-316	x 6"
48-X-7SSN-304	x 7"	48-X-7SSN-316	x 7"
48-X-8SSN-304	x 8"	48-X-8SSN-316	x 8"
48-X-12SSN-304	x 12"	48-X-12SSN-316	x 12"



**4" DIAMETER**

304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
64-X-CLOSESSN-304	x Close (2-7/8")	64-X-CLOSESSN-316	x Close (2-7/8")
64-X-5SSN-304	x 5"	64-X-5SSN-316	x 5"
64-X-6SSN-304	x 6"	64-X-6SSN-316	x 6"

*More sizes available*

Other Stainless Steel Nipples available

- Schedule 80 welded
- Schedule 80 & 40 seamless

**90° ELBOWS**



304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
916-02-02SS-304	1/8"	916-02-02SS-316	1/8"
916-04-04SS-304	1/4"	916-04-04SS-316	1/4"
916-06-06SS-304	3/8"	916-06-06SS-316	3/8"
916-08-08SS-304	1/2"	916-08-08SS-316	1/2"
916-12-12SS-304	3/4"	916-12-12SS-316	3/4"
916-16-16SS-304	1"	916-16-16SS-316	1"
916-20-20SS-304	1-1/4"	916-20-20SS-316	1-1/4"
916-24-24SS-304	1-1/2"	916-24-24SS-316	1-1/2"
916-32-32SS-304	2"	916-32-32SS-316	2"
916-40-40SS-304	2-1/2"	916-40-40SS-316	2-1/2"
916-48-48SS-304	3"	916-48-48SS-316	3"
916-64-64SS-304	4"	916-64-64SS-316	4"

**90° STREET ELLS**



304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
914-02-02SS-304	1/8"	914-02-02SS-316	1/8"
914-04-04SS-304	1/4"	914-04-04SS-316	1/4"
914-06-06SS-304	3/8"	914-06-06SS-316	3/8"
914-08-08SS-304	1/2"	914-08-08SS-316	1/2"
914-12-12SS-304	3/4"	914-12-12SS-316	3/4"
914-16-16SS-304	1"	914-16-16SS-316	1"
914-20-20SS-304	1-1/4"	914-20-20SS-316	1-1/4"
914-24-24SS-304	1-1/2"	914-24-24SS-316	1-1/2"
914-32-32SS-304	2"	914-32-32SS-316	2"

**45° ELBOWS**



304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
925-02-02SS-304	1/8"	925-02-02SS-316	1/8"
925-04-04SS-304	1/4"	925-04-04SS-316	1/4"
925-06-06SS-304	3/8"	925-06-06SS-316	3/8"
925-08-08SS-304	1/2"	925-08-08SS-316	1/2"
925-12-12SS-304	3/4"	925-12-12SS-316	3/4"
925-16-16SS-304	1"	925-16-16SS-316	1"
925-20-20SS-304	1-1/4"	925-20-20SS-316	1-1/4"
925-24-24SS-304	1-1/2"	925-24-24SS-316	1-1/2"
925-32-32SS-304	2"	925-32-32SS-316	2"

**TEES**



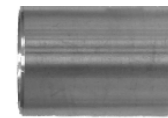
304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
917-02SS-304	1/8"	917-02SS-316	1/8"
917-04SS-304	1/4"	917-04SS-316	1/4"
917-06SS-304	3/8"	917-06SS-316	3/8"
917-08SS-304	1/2"	917-08SS-316	1/2"
917-12SS-304	3/4"	917-12SS-316	3/4"
917-16SS-304	1"	917-16SS-316	1"
917-20SS-304	1-1/4"	917-20SS-316	1-1/4"
917-24SS-304	1-1/2"	917-24SS-316	1-1/2"
917-32SS-304	2"	917-32SS-316	2"
917-48SS-304	3"	917-48SS-316	3"

**CROSSES**



304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
918-02SS-304	1/8"	918-02SS-316	1/8"
918-04SS-304	1/4"	918-04SS-316	1/4"
918-06SS-304	3/8"	918-06SS-316	3/8"
918-08SS-304	1/2"	918-08SS-316	1/2"
918-12SS-304	3/4"	918-12SS-316	3/4"
918-16SS-304	1"	918-16SS-316	1"
918-20SS-304	1-1/4"	918-20SS-316	1-1/4"
918-24SS-304	1-1/2"	918-24SS-316	1-1/2"
918-32SS-304	2"	918-32SS-316	2"

**STAINLESS STEEL OD MACHINED  
COUPLINGS**

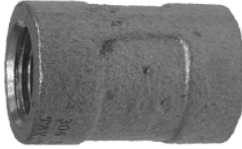


304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
910-02-02SS-304	1/8"	910-02-02SS-316	1/8"
910-04-04SS-304	1/4"	910-04-04SS-316	1/4"
910-06-06SS-304	3/8"	910-06-06SS-316	3/8"
910-08-08SS-304	1/2"	910-08-08SS-316	1/2"
910-12-12SS-304	3/4"	910-12-12SS-316	3/4"
910-16-16SS-304	1"	910-16-16SS-316	1"
910-20-20SS-304	1-1/4"	910-20-20SS-316	1-1/4"
910-24-24SS-304	1-1/2"	910-24-24SS-316	1-1/2"
910-32-32SS-304	2"	910-32-32SS-316	2"

**Nipples & Fittings**



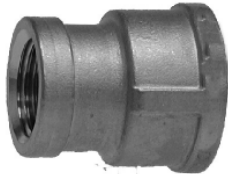
**COUPLINGS**



**304 STAINLESS**

Part #	Size	316 STAINLESS Part #
910-08-08SS-304	1/2"	910-08-08SS-316
910-12-12SS-304	3/4"	910-12-12SS-316
910-16-16SS-304	1"	910-16-16SS-316
910-20-20SS-304	1-1/4"	910-20-20SS-316
910-24-24SS-304	1-1/2"	910-24-24SS-316
910-32-32SS-304	2"	910-32-32SS-316
910-40-40SS-304	2-1/2"	910-40-40SS-316
910-48-48SS-304	3"	910-48-48SS-316
910-64-64SS-304	4"	910-64-64SS-316

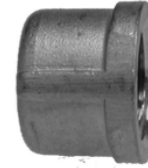
**REDUCING COUPLINGS**



**304 STAINLESS**

Part #	Size	316 STAINLESS Part #
910-04-02SS-304	1/4x1/8	910-04-02SS-316
910-06-02SS-304	3/8x1/8	910-06-02SS-316
910-06-04SS-304	3/8x1/4	910-06-04SS-316
910-08-02SS-304	1/2x1/8	910-08-02SS-316
910-08-04SS-304	1/2x1/4	910-08-04SS-316
910-08-06SS-304	1/2x3/8	910-08-06SS-316
910-12-02SS-304	3/4x1/8	910-12-02SS-316
910-12-04SS-304	3/4x1/4	910-12-04SS-316
910-12-06SS-304	3/4x3/8	910-12-06SS-316
910-12-08SS-304	3/4x1/2	910-12-08SS-316
910-16-06SS-304	1x3/8	910-16-02SS-316
910-16-08SS-304	1x1/2	910-16-08SS-316
910-16-12SS-304	1x3/4	910-16-12SS-316
910-20-12SS-304	1-1/4x3/4	910-20-12SS-316
910-20-16SS-304	1-1/4x1	910-20-16SS-316
910-24-08SS-304	1-1/2x1/2	910-24-08SS-316
910-24-12SS-304	1-1/2x3/4	910-24-12SS-316
910-24-16SS-304	1-1/2x1	910-24-16SS-316
910-24-20SS-304	1-1/2x1-1/4	910-24-20SS-316
910-32-16SS-304	2x1	910-32-16SS-316
910-32-20SS-304	2X1-1/4	910-32-20SS-316
910-32-24SS-304	2X1-1/2	910-32-24SS-316

**CAPS**



**304 STAINLESS**

Part #	Size	316 STAINLESS Part #
02-CAPSS-304	1/8"	02-CAPSS-316
04-CAPSS-304	1/4"	04-CAPSS-316
06-CAPSS-304	3/8"	06-CAPSS-316
08-CAPSS-304	1/2"	08-CAPSS-316
12-CAPSS-304	3/4"	12-CAPSS-316
16-CAPSS-304	1"	16-CAPSS-316
20-CAPSS-304	1-1/4"	20-CAPSS-316
24-CAPSS-304	1-1/2"	24-CAPSS-316
32-CAPSS-304	2"	32-CAPSS-316
40-CAPSS-304	2-1/2"	40-CAPSS-316
48-CAPSS-304	3"	48-CAPSS-316

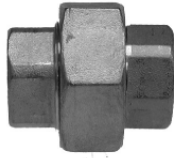
**HEX BUSHINGS**



**304 STAINLESS**

Part #	Size	316 STAINLESS Part #
912-04-02SS-304	1/4x1/8	912-04-02SS-316
912-06-02SS-304	3/8x1/8	912-06-02SS-316
912-06-04SS-304	3/8x1/4	912-06-04SS-316
912-08-02SS-304	1/2x1/8	912-08-02SS-316
912-08-04SS-304	1/2x1/4	912-08-04SS-316
912-08-06SS-304	1/2x3/8	912-08-06SS-316
912-12-02SS-304	3/4x1/8	912-12-02SS-316
912-12-04SS-304	3/4x1/4	912-12-04SS-316
912-12-06SS-304	3/4x3/8	912-12-06SS-316
912-12-08SS-304	3/4x1/2	912-12-08SS-316
912-16-08SS-304	1x1/2	912-16-08SS-316
912-16-12SS-304	1x3/4	912-16-12SS-316
912-20-08SS-304	1-1/4x1/2	912-20-08SS-316
912-20-12SS-304	1-1/4x3/4	912-20-12SS-316
912-20-16SS-304	1-1/4x1	912-20-16SS-316
912-24-08SS-304	1-1/2x1/2	912-24-08SS-316
912-24-12SS-304	1-1/2x3/4	912-24-12SS-316
912-24-16SS-304	1-1/2x1	912-24-16SS-316
912-24-20SS-304	1-1/2x1-1/4	912-24-20SS-316
912-32-08SS-304	2x1/2	912-32-08SS-316
912-32-12SS-304	2x3/4	912-32-12SS-316
912-32-16SS-304	2x1	912-32-16SS-316
912-32-20SS-304	2x1-1/4	912-32-20SS-316
910-32-24SS-304	2x1-1/2	912-32-24SS-316
910-40-24SS-304	2-1/2x1-1/2	910-40-24SS-316
910-40-32SS-304	2-1/2X2	912-40-32SS-316
912-48-32SS-304	3X2	912-48-32SS-316
912-48-40SS-304	3X2-1/2	912-48-40SS-316
912-64-48SS-304	4X3	912-64-32SS-316

## UNIONS



304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
02-UNIONSS-304	1/8"	02-UNIONSS-316	1/8"
04-UNIONSS-304	1/4"	04-UNIONSS-316	1/4"
06-UNIONSS-304	3/8"	06-UNIONSS-316	3/8"
08-UNIONSS-304	1/2"	08-UNIONSS-316	1/2"
12-UNIONSS-304	3/4"	12-UNIONSS-316	3/4"
16-UNIONSS-304	1"	16-UNIONSS-316	1"
20-UNIONSS-304	1-1/4"	20-UNIONSS-316	1-1/4"
24-UNIONSS-304	1-1/2"	24-UNIONSS-316	1-1/2"
32-UNIONSS-304	2"	32-UNIONSS-316	2"
40-UNIONSS-304	2-1/2"	40-UNIONSS-316	2-1/2"
48-UNIONSS-304	3"	48-UNIONSS-316	3"

## HEX HEAD PLUGS



304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
932P-02SS-304	1/8"	932P-02SS-316	1/8"
932P-04SS-304	1/4"	932P-04SS-316	1/4"
932P-06SS-304	3/8"	932P-06SS-316	3/8"
932P-08SS-304	1/2"	932P-08SS-316	1/2"
932P-12SS-304	3/4"	932P-12SS-316	3/4"
932P-16SS-304	1"	932P-16SS-316	1"
932P-20SS-304	1-1/4"	932P-20SS-316	1-1/4"
932P-24SS-304	1-1/2"	932P-24SS-316	1-1/2"
932P-32SS-304	2"	932P-32SS-316	2"

## HEX NIPPLES



304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
911-02-02SS-304	1/8"	911-02-02SS-316	1/8"
911-04-04SS-304	1/4"	911-04-04SS-316	1/4"
911-06-06SS-304	3/8"	911-06-06SS-316	3/8"
911-08-08SS-304	1/2"	911-08-08SS-316	1/2"
911-12-12SS-304	3/4"	911-12-12SS-316	3/4"
911-16-16SS-304	1"	911-16-16SS-316	1"
911-20-20SS-304	1-1/4"	911-20-20SS-316	1-1/4"
911-24-24SS-304	1-1/2"	911-24-24SS-316	1-1/2"
911-32-32SS-304	2"	911-32-32SS-316	2"

## SQUARE HEAD PLUGS



304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
932-02SSH-304	1/8"	932-02SSH-316	1/8"
932-04SSH-304	1/4"	932-04SSH-316	1/4"
932-06SSH-304	3/8"	932-06SSH-316	3/8"
932-08SSH-304	1/2"	932-08SSH-316	1/2"
932-12SSH-304	3/4"	932-12SSH-316	3/4"
932-16SSH-304	1"	932-16SSH-316	1"
932-20SSH-304	1-1/4"	932-20SSH-316	1-1/4"
932-24SSH-304	1-1/2"	932-24SSH-316	1-1/2"
932-32SSH-304	2"	932-32SSH-316	2"

## HEX LOCKNUTS



304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
924-02SS-304	1/8"	924-02SS-316	1/8"
924-04SS-304	1/4"	924-04SS-316	1/4"
924-06SS-304	3/8"	924-06SS-316	3/8"
924-08SS-304	1/2"	924-08SS-316	1/2"
924-12SS-304	3/4"	924-12SS-316	3/4"
924-16SS-304	1"	924-16SS-316	1"
924-20SS-304	1-1/4"	924-20SS-316	1-1/4"
924-24SS-304	1-1/2"	924-24SS-316	1-1/2"
924-32SS-304	2"	924-32SS-316	2"

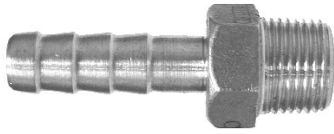
## STAINLESS TELL HALF COUPLINGS



304 STAINLESS		316 STAINLESS	
Part #	Size	Part #	Size
62-771	1/4"	63-771-316	1/4"
62-772	3/8"	63-772-316	3/8"
62-773	1/2"	63-773-316	1/2"
62-774	3/4"	62-773-316	3/4"
62-775	1"	62-775-316	1"
62-776	1-1/4"	62-776-316	1-1/4"
62-777	1-1/2"	62-777-316	1-1/2"
62-778	2"	62-778-316	2"



**HOSE NIPPLES**



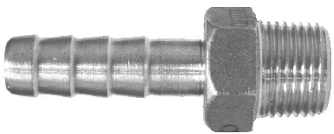
**HOSE I.D. X MALE PIPE**

Part #	Size
180-04-04SS .....	1/4"
180-06-06SS .....	3/8"
180-08-08SS .....	1/2"
180-12-12SS .....	3/4"
180-16-16SS .....	1"
180-20-20SS .....	1-1/4"
180-24-24SS .....	1-1/2"
180-32-32SS .....	2"
180-40-40SS .....	2-1/2"
180-48-48SS .....	3"
180-64-64SS .....	4"

**REDUCING HOSE NIPPLES  
304 STAINLESS**

**HOSE I.D. X MALE PIPE**

Part #	Size
180-04-02SS .....	1/4x1/8
180-06-04SS .....	3/8x1/4
180-08-06SS .....	1/2x3/8
180-08-04SS .....	1/2x1/4
180-12-08SS .....	3/4x1/2
180-16-12SS .....	1x3/4



**316 STAINLESS STEEL  
HOSE NIPPLES**

**HOSE I.D. X MALE PIPE**

Part #	Size
180-04-04SS .....	1/4"
180-06-06SS .....	3/8"
180-08-08SS .....	1/2"
180-12-12SS .....	3/4"
180-16-16SS .....	1"
180-20-20SS .....	1-1/4"
180-24-24SS .....	1-1/2"
180-32-32SS .....	2"
180-40-40SS .....	2-1/2"
180-48-48SS .....	3"
180-64-64SS .....	4"

*More sizes available*

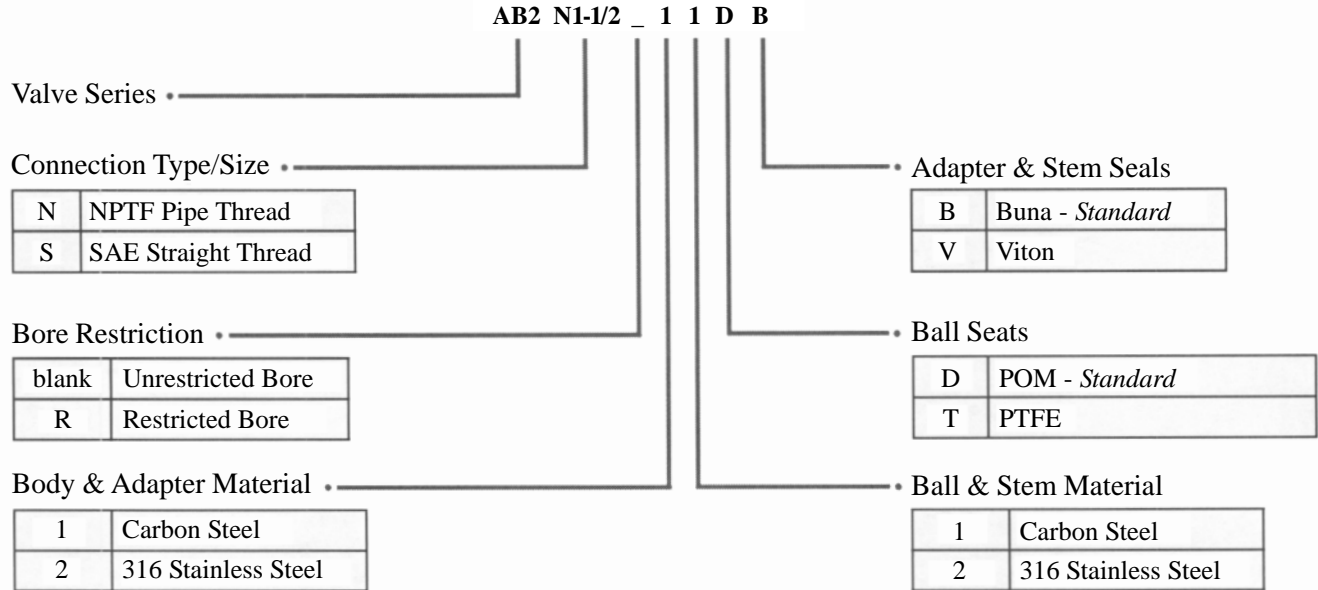
**ENLIGHTENED PERSPECTIVE**

I've learned...

- That the best classroom in the world is at the feet of an elderly person.
- That when you're in love, it shows.
- That just one person saying to me, "You've made my day!" makes my day.
- That having a child fall asleep in your arms is one of the most peaceful feelings in the world.
- That being kind is more important than being right.
- That you should never say no to a gift from a child.
- That I can always pray for someone when I don't have the strength to help him in some other way.
- That no matter how serious your life requires you to be, everyone needs a friend to act goofy with.
- That sometimes all a person needs is a hand to hold an da heart to understand.
- That simple walks with my father around the block on summer nights when I was a child did wonders for me as an adult.
- That life is like a roll of toilet paper. The closer it gets to the end, the faster it goes.
- That we should be glad God doesn't give us everything we ask for.
- That money doesn't buy class.
- That it's those small daily happenings that make life so spectacular.
- That under everyone's hard shall is someone who wants to be appreciated and loved.
- That the Lord didn't do it all in one day. What makes me think I can?
- That to ignore the facts does not change the facts.
- That when you plan to get even with someone, you are only letting that person continue to hurt you.
- That love, not time, heals all wounds.
- That the easiest way for me to grow as a person is to surround myself with people smarter than I am.
- That everyone you meet deserves to be greeted with a smile.
- That there's nothing sweeter than sleeping with your babies and feeling their breath on your cheeks.
- That no one is perfect until you fall in love with them.
- That life is tough, but I'm tougher.
- That opportunities are never lost; someone will take the ones you miss.
- That when you harbor bitterness, happiness will dock elsewhere.
- That I wish I could have told my Dad that I love him one more time before he passes away.
- That one should keep his words both soft and tender, because tomorrow he may have to eat them.
- That a smile is an inexpensive way to improve your looks.
- That I can't choose how I feel, but I can choose what I do about it.
- That when your newly born grandchild holds your little finger in his little fist, that you're hooked for life.
- That everyone wants to live on top of the mountain, but all the happiness and growth occurs while you're climbing it.
- That it is best to give advice in only two circumstances; when it is requested and when it is a life threatening situation.
- That the less time I have to work with, the more things I get done.

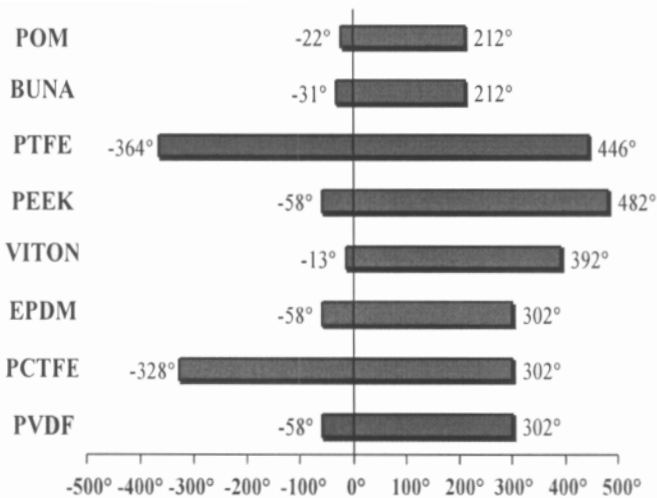
— Andy Rooney

**Model Code Breakdown**



*Locking Kit available by adding an "L" to the end of the part #.*

**MAXIMUM & MINIMUM  
WORKING TEMPERATURES  
FOR SEAL MATERIALS**



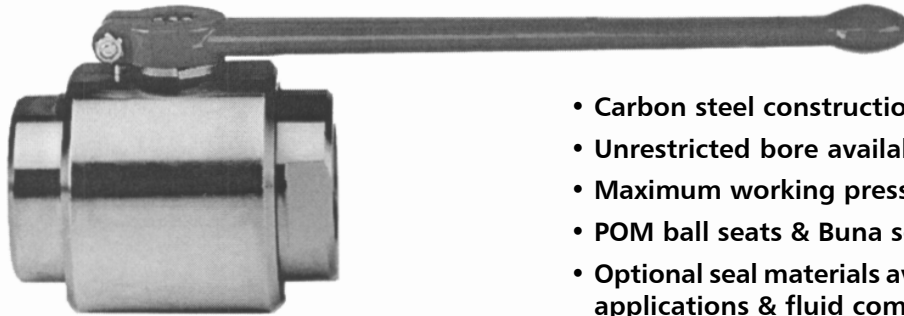
*All temperatures are in degrees Fahrenheit.*

**SEAL KITS AVAILABLE  
FROM STOCK**

Valve Size	POM & Buna	PTFE & Viton	POM & Viton
1/4"	KEST1AH	KEST1GH	KEST1BH
3/8"	KEST2AH	KEST2GH	KEST2BH
1/2"	KEST3AH	KEST3GH	KEST3BH
3/4"	KEST4AH	KEST4GH	KEST4BH
1"	KEST5AH	KEST5GH	KEST5BH
1-1/4" R	KEST5AH	KEST5GH	KEST5BH
1-1/2" R	KEST5AH	KEST5GH	KEST5GH

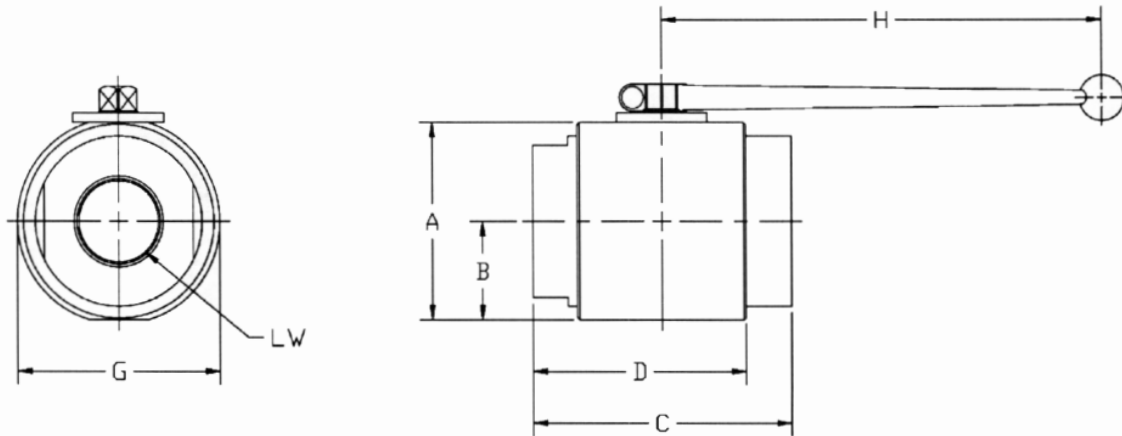
*Seal kit includes 2 ball seats, 1 stem seal, 2 adapter o-rings, & 1 stem o-ring.*

**AB2 Series / Two-Way Round Body Threaded**  
**Sizes: 1-1/4" to 2"**



- Carbon steel construction with Zinc Dichromate plating
- Unrestricted bore available through 2" size
- Maximum working pressure of up to 5075 PSI
- POM ball seats & Buna seals standard
- Optional seal materials available for extreme temperature applications & fluid compatibility (*Consult Factory*)

**Valves**



Standard handle supplied is C2890AV.

	SERIES		PSI Max	Bore	A	B	C	D	G	H	Weight
	NPT	SAE									
Full Bore	AB2 N1-1/4	AB2 S20	5075	1.26	3.25	1.65	4.53	3.74	3.46	11.81	8.3 lbs
	AB2 N1-1/2	AB2 S24	5075	1.57	3.86	1.89	5.16	4.25	4.02	11.81	12.5 lbs
	AB2 N2	AB2 S32	5075	1.97	4.06	2.03	5.51	4.53	4.29	11.81	14.6 lbs
Reduced Bore	AB2 N2R	N/A	5075	1.57	3.86	1.89	5.16	4.25	4.02	11.81	13.5 lbs

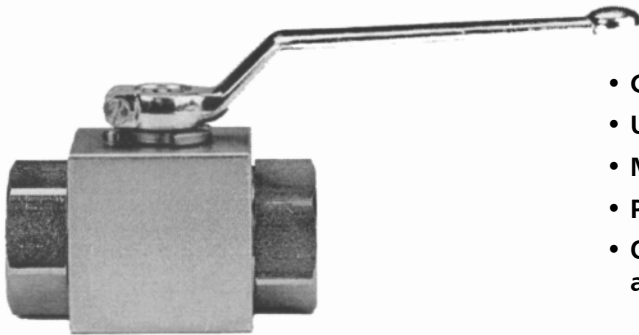
NPT threads in accordance with ANSI B.1.20.1 specifications • SAE threads in accordance with SAE J1926/1 specifications



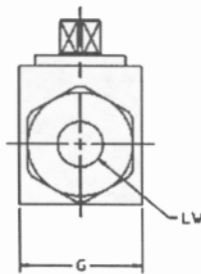


**AE2 Series / Two-Way Block Body Threaded**

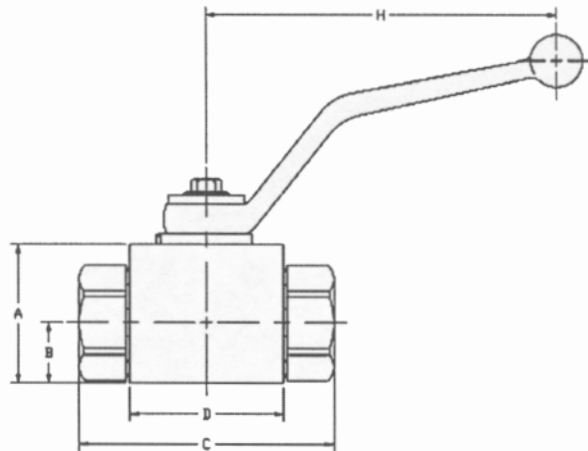
**Sizes: 1/8" to 1-1/2"**



- Carbon steel construction with Zinc Dichromate plating
- Unrestricted bore up to 1" size
- Maximum working pressure of up to 7250 PSI
- POM ball seats & Buna seals standard
- Optional seal materials available for extreme temperature applications & fluid compatibility (*Consult Factory*)



Standard handles supplied are:



1/8" - 1/2"  
3/4" - 1-1/2"

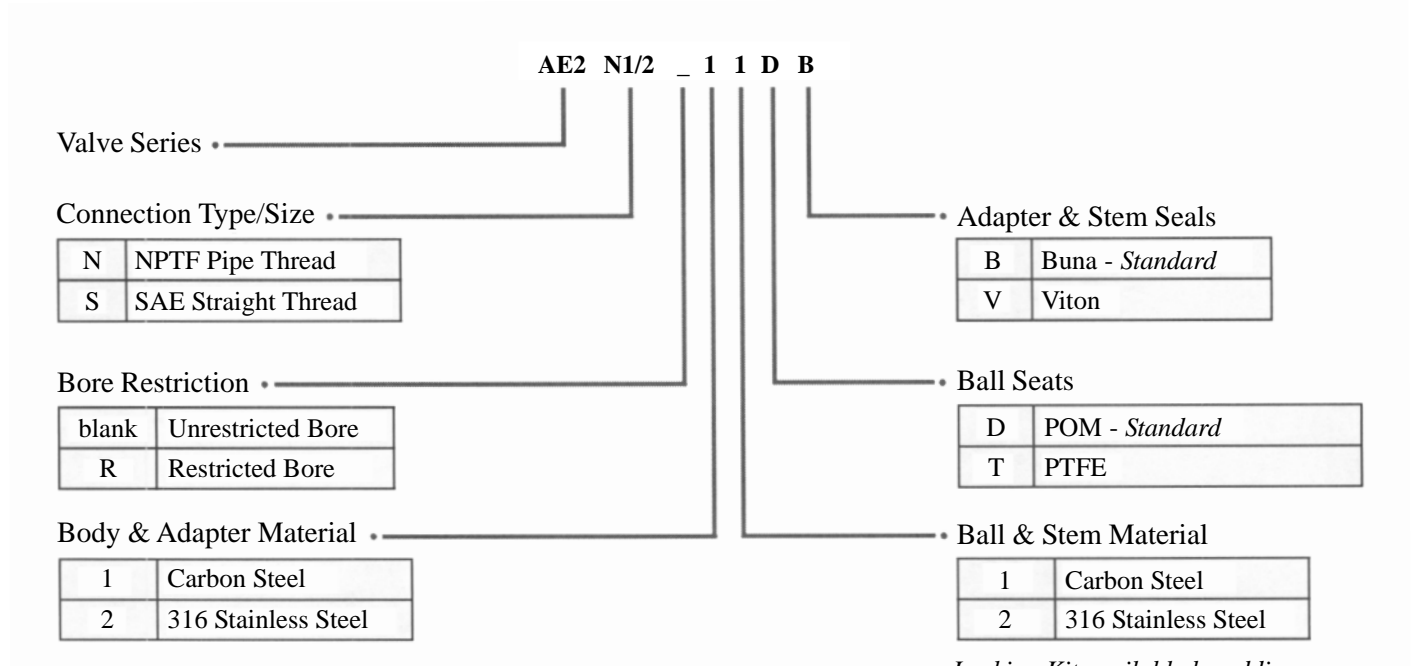
C1010ZB  
C1200ZB

	SERIES				A				G						
	NPT	SAE	PSI Max	Bore	Carbon	Stainless	C/F	B	C	D	Carbon	Stainless	C/F	H	Weight
Full Bore	AE2 N1/8	N/A	7250	.16	1.38	1.38	C/F	0.55	2.80	1.65	1.18	1.18	C/F	4.33	1.1 lbs
	AE2 N1/4	AE2 S4	7250	.24	1.38	1.38		0.55	2.80	1.65	1.18	1.38		4.33	1.1 lbs
	AE2 N3/8	AE2 S6	7250	.39	1.57	1.57		0.67	2.87	1.73	1.38	1.57		4.33	1.4 lbs
	AE2 N1/2	AE2 S8	7250	.51	1.69	1.77		0.71	3.27	1.89	1.46	1.77		4.33	1.7 lbs
	AE2 N3/4	AE2 S12	5800	.79	2.17	2.17		0.91	3.74	2.44	1.77	2.17		7.09	3.1 lbs
	AE2 N1	AE2 S16	5075	.98	2.56	2.56		1.14	4.45	2.60	2.17	2.56		7.09	4.7 lbs
Reduced Bore	AE2 N1-1/4R	AE2 S20R	5075	.98	2.56	2.56		1.14	4.76	2.60	2.17	2.56		7.09	5.0 lbs
	AE2 N1-1/2R	AE2 S24R	5075	.98	2.56	2.56		1.14	4.88	2.60	2.17	2.56		7.09	5.2 lbs

NPT threads in accordance with ANSI B.1.20.1 specifications • SAE threads in accordance with SAE J1926/1 specifications



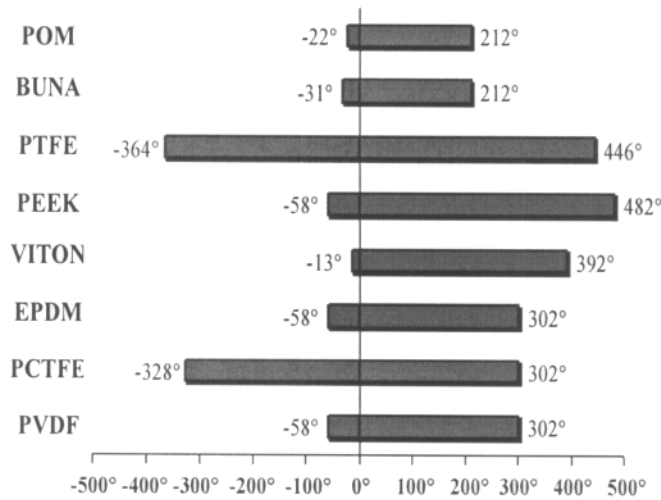
**Model Code Breakdown**



**Valves**

*Locking Kit available by adding an "L" to the end of the part #.*

**MAXIMUM & MINIMUM WORKING TEMPERATURES FOR SEAL MATERIALS**



*All temperatures are in degrees Fahrenheit.*

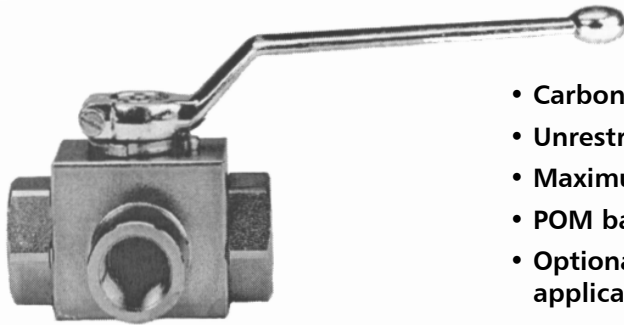
**SEAL KITS AVAILABLE FROM STOCK**

Valve Size	POM & Buna	PTFE & Viton	POM & Viton
1-1/4"	KBST6AH	KBST6GH	KBST6BH
1-1/2"	KBST7AH	KBST7GH	KBST7BH
2" R	KBST7AH	KBST7GH	KBST7BH
2"	KBST8AH	KBST8GH	KBST8BH

*Seal kit includes 2 ball seats, 1 stem seal, 2 adapter o-rings, & 1 stem o-ring.*

**AE3 Series / Three-Way Block Body Threaded**

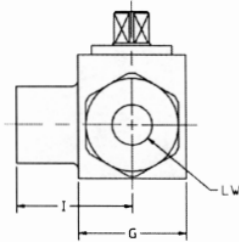
**Sizes: 1/8" to 1-1/2"**



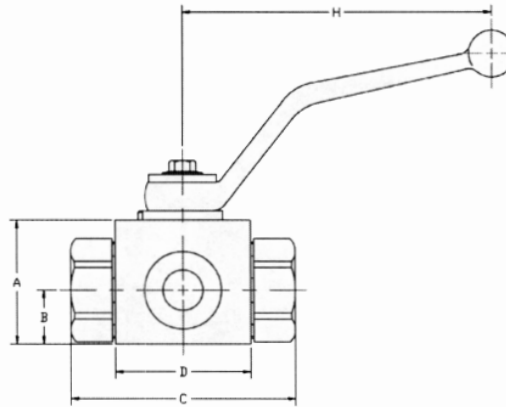
- Carbon steel construction with Zinc Dichromate plating
- Unrestricted bore up to 1" size
- Maximum working pressure of up to 7250 PSI
- POM ball seats & Buna seals standard
- Optional seal materials available for extreme temperature applications & fluid compatibility (*Consult Factory*)



L Port      T Port  
L Port is standard, T Port is available  
(*Consult Factory*)



Standard handles supplied are:



1/8" - 1/2"  
3/4" - 1-1/2"

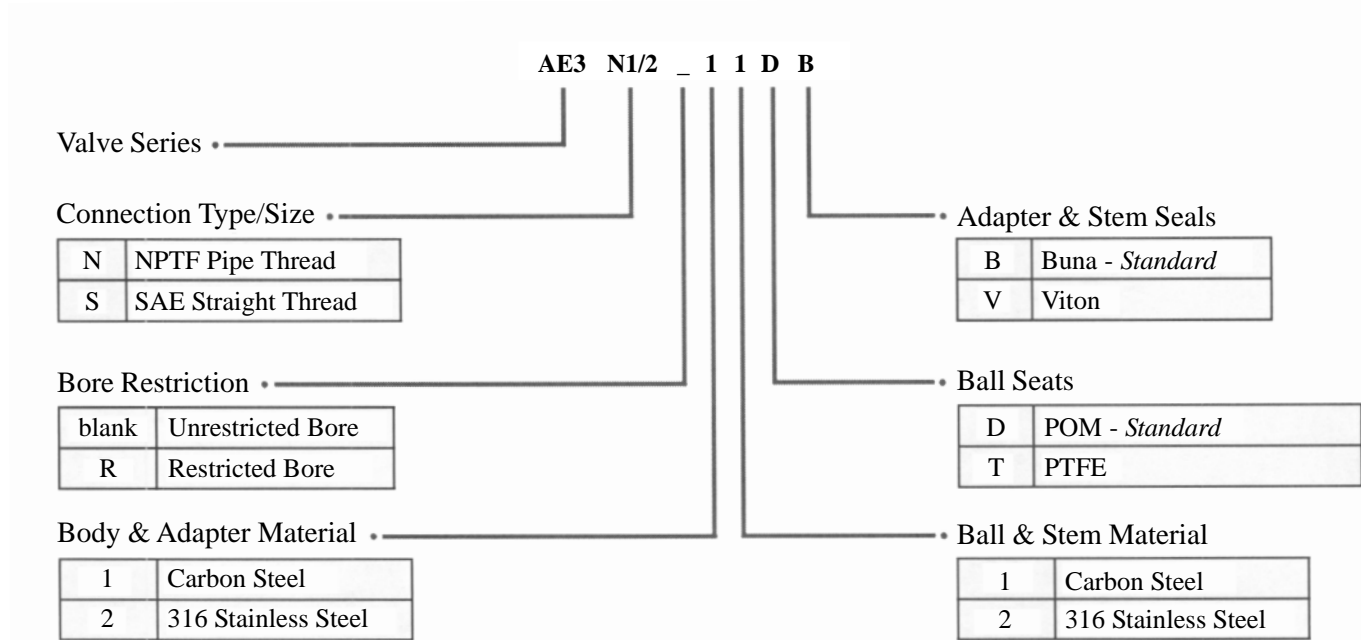
C1010ZB  
C1200ZB

	SERIES		PSI Max	Bore	A	B	C	D	G	H	I	Weight
	NPT	SAE										
Full Bore	AE3 N1/8	N/A	5800	.16	1.38	0.55	2.80	1.65	1.18	4.33	1.32	1.1 lbs
	AE3 N1/4	AE3 S4	5800	.24	1.38	0.55	2.80	1.65	1.18	4.33	1.32	1.1 lbs
	AE3 N3/8	AE3 S6	5800	.39	1.57	0.67	2.87	1.73	1.38	4.33	1.46	1.5 lbs
	AE3 N1/2	AE3 S8	5075	.51	1.69	0.71	3.27	1.89	1.46	4.33	1.57	1.8 lbs
	AE3 N3/4	AE3 S12	5075	.79	2.17	0.91	3.74	2.44	1.77	7.09	2.05	3.3 lbs
	AE3 N1	AE3 S16	5075	.98	2.56	1.14	4.45	2.60	2.17	7.09	2.36	5.2 lbs
Reduced Bore	AE3 N1-1/4R	AE3 S20R	5075	.98	2.56	1.14	4.76	2.60	2.17	7.09	2.42	5.5 lbs
	AE3 N1-1/2R	AE3 S24R	5075	.98	2.56	1.14	4.88	2.60	2.17	7.09	2.42	6.0 lbs

*NPT threads in accordance with ANSI B.1.20.1 specifications • SAE threads in accordance with SAE J1926/1 specifications*



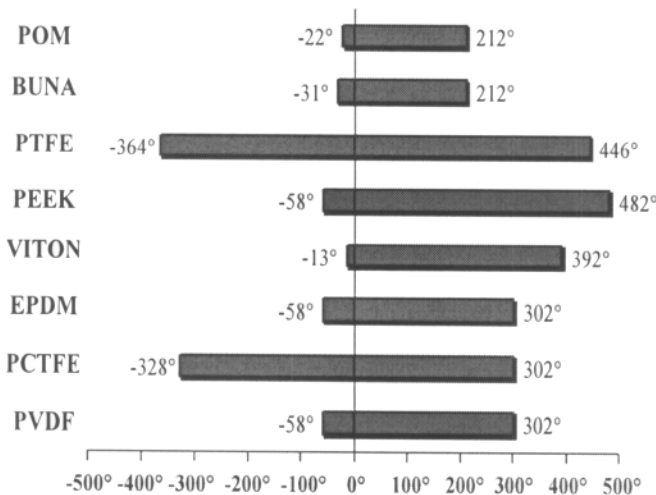
**Model Code Breakdown**



**Valves**

*Locking Kit available by adding an "L" to the end of the part #.*

**MAXIMUM & MINIMUM  
WORKING TEMPERATURES  
FOR SEAL MATERIALS**



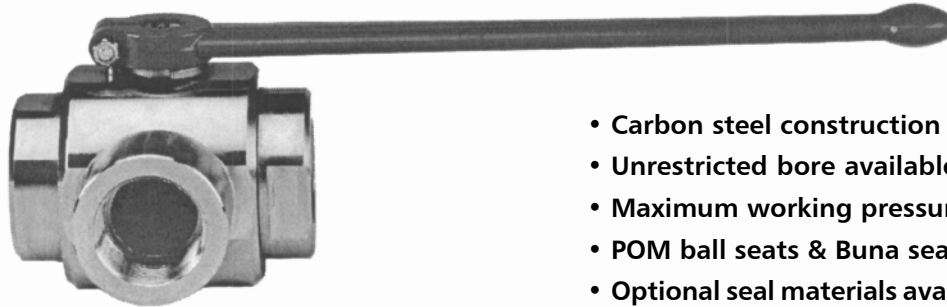
*All temperatures are in degrees Fahrenheit.*

**SEAL KITS AVAILABLE  
FROM STOCK**

Valve Size	POM & Buna	PTFE & Viton	POM & Viton
1/4"	KEST1AH	KEST1GH	KEST1BH
3/8"	KEST2AH	KEST2GH	KEST2BH
1/2"	KEST3AH	KEST3GH	KEST3BH
3/4"	KEST4AH	KEST4GH	KEST4BH
1"	KEST5AH	KEST5GH	KEST5BH
1-1/4" R	KEST5AH	KEST5GH	KEST5BH
1-1/2" R	KEST5AH	KEST5GH	KEST5GH

*Seal kit includes 2 ball seats, 1 stem seal, 2 adapter o-rings, & 1 stem o-ring.*

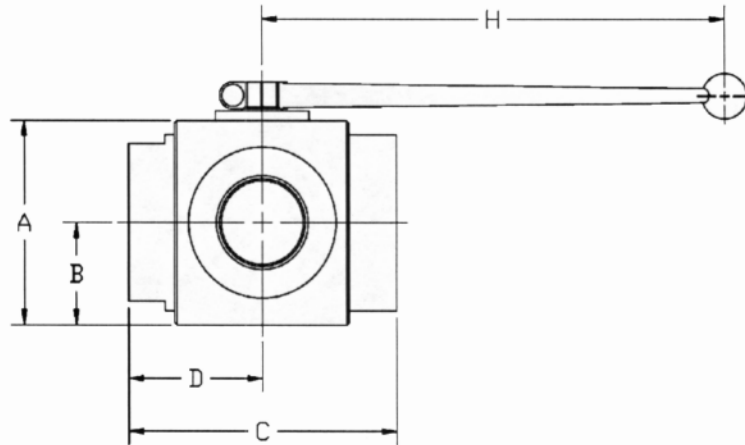
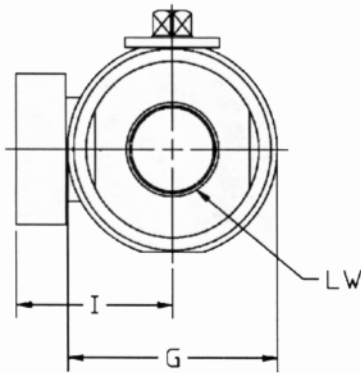
**AB3 Series / Three-Way Round Body Threaded**  
**Sizes: 1-1/4" to 2"**



L Port      T Port

L Port is standard, T Port is available  
 (Consult Factory)

- Carbon steel construction with Zinc Dichromate plating
- Unrestricted bore available through 2" size
- Maximum working pressure of up to 5075 PSI
- POM ball seats & Buna seals standard
- Optional seal materials available for extreme temperature applications & fluid compatibility (Consult Factory)



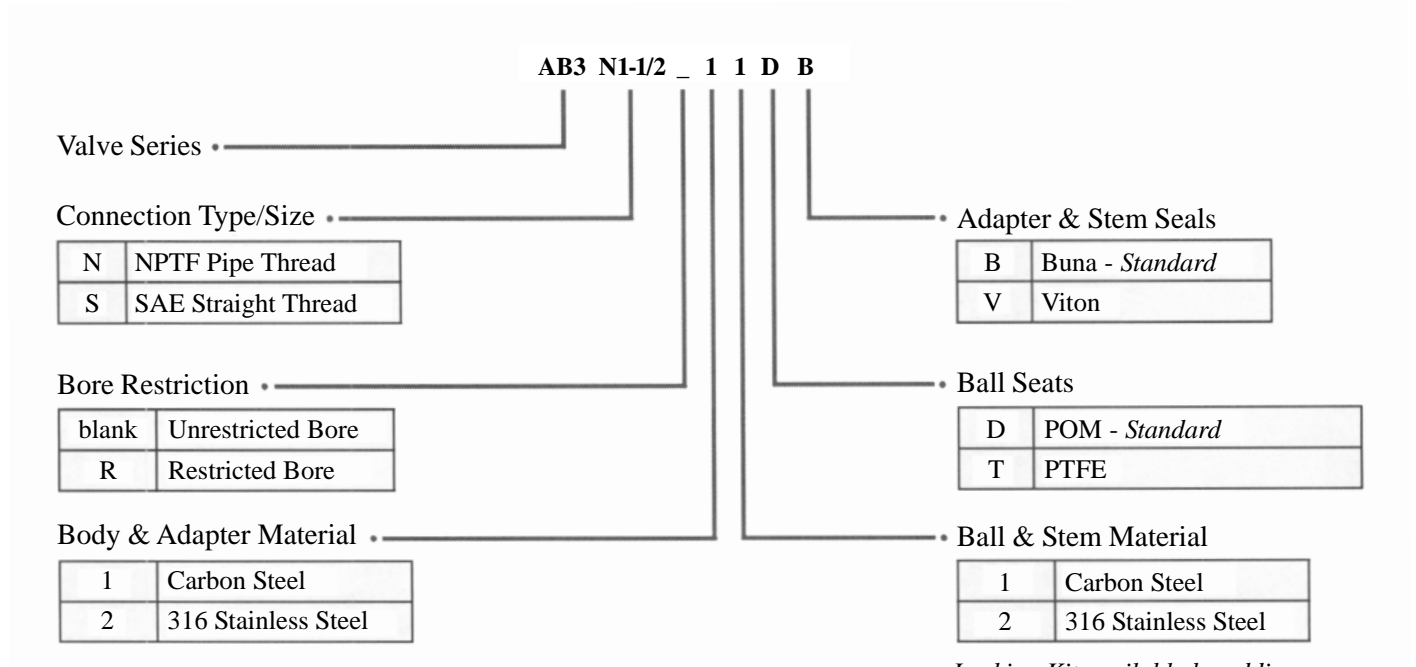
Standard handle supplied is C2890AV.

	SERIES		PSI Max	Bore	A	B	C	D	G	H	I	Weight
	NPT	SAE										
Full Bore	AB3 N1-1/4	AB3 S20	5075	1.26	3.25	1.65	4.53	3.74	3.46	11.81	3.07	8.6 lbs
	AB3 N1-1/2	AB3 S24	5075	1.57	3.86	1.89	5.16	4.25	4.02	11.81	3.46	13.1 lbs
	AB3 N2	AB3 S32	5075	1.97	4.06	2.03	5.51	4.53	4.29	11.81	3.66	16.6 lbs
Reduced Bore	AB3 N2R	N/A	5075	1.57	3.86	1.89	5.16	4.25	4.02	11.81	3.46	15.5 lbs

NPT threads in accordance with ANSI B.1.20.1 specifications • SAE threads in accordance with SAE J1926/1 specifications



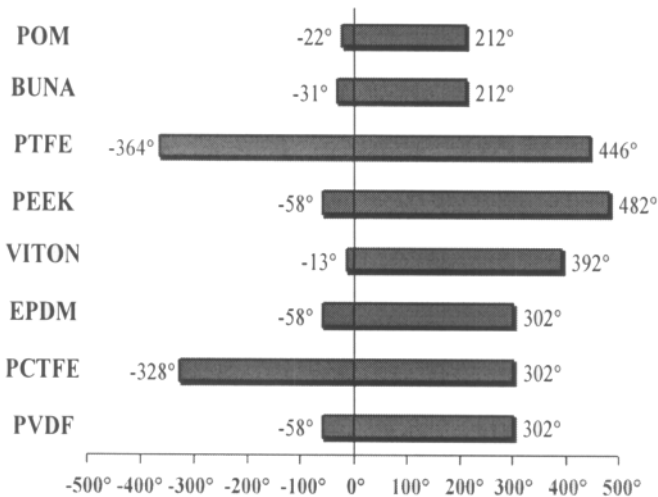
**Model Code Breakdown**



**Valves**

*Locking Kit available by adding an "L" to the end of the part #.*

**MAXIMUM & MINIMUM WORKING TEMPERATURES FOR SEAL MATERIALS**



*All temperatures are in degrees Fahrenheit.*

**SEAL KITS AVAILABLE FROM STOCK**

Valve Size	POM & Buna	PTFE & Viton	POM & Viton
1-1/4"	KBST6AH	KBST6GH	KBST6BH
1-1/2"	KBST7AH	KBST7GH	KBST7BH
2" R	KBST7AH	KBST7GH	KBST7BH
2"	KBST8AH	KBST8GH	KBST8BH

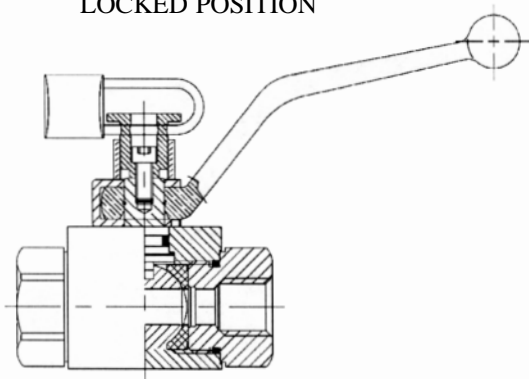
*Seal kit includes 2 ball seats, 1 stem seal, 2 adapter o-rings, & 1 stem o-ring.*

# Locking Kits & Handles

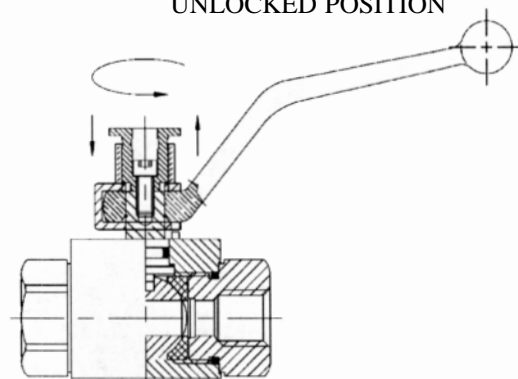
## LOCKING KITS

Part Number	Valve Size	Material
LK-6	1/4" - 1/2"	Carbon Steel
LK-20	3/4" - 2"	Carbon Steel
LK-6-S/S	1/4" - 1/2"	Stainless Steel
LK-20-S/S	3/4" - 2"	Stainless Steel

LOCKED POSITION

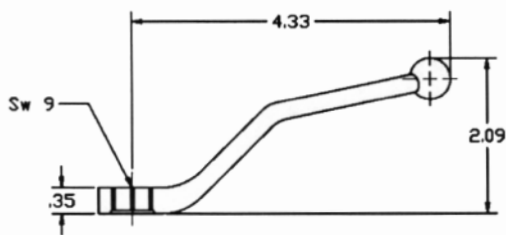


UNLOCKED POSITION

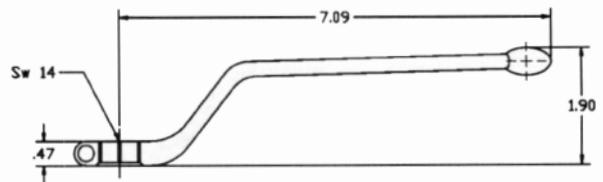


## HANDLES

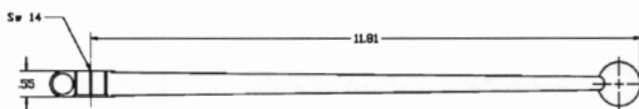
C101ZB



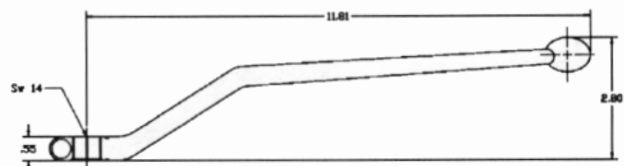
C1200ZB



C2890AV



C0360AV



## Seal & Fluid Compatibility Table

Seal Material	Applications	Resistant	Not Resistant
<b>POM</b>	<i>Ball Seats</i>	Hydraulic oils, Water,	Strong acids & bases
	<i>Stem Packing</i>	Air, Glycol	
<b>BUNA</b>	<i>Adapter Seals</i>	Petroleum-based oils,	Phosphate esters,
	<i>Stem Seals</i>	Greases, Water, Air	Acids, Brake fluid
<b>PTFE</b>	<i>Ball Seats</i>	Fluids for human	Fluorines, Liquid
	<i>Stem Packing</i>	consumption, Solvents, Lyes, & many acids	alkali metals
<b>PEEK</b>	<i>Ball Seats</i>	Most all organic &	Sulfuric acid
	<i>Stem Packing</i>	inorganic chemicals	
<b>VITON</b>	<i>Adapter Seals</i>	Petroleum-based oils,	Ketones, phosphate esters
	<i>Stem Seals</i>	Greases, many acids & bases	
<b>EPDM</b>	<i>Adapter Seals</i>	Phosphate esters, many	Petroleum-based oils,
	<i>Stem Seals</i>	acids, Brake fluid	fluids made of chlorinated hydrocarbons
<b>PCTFE</b>	<i>Ball Seats</i>	Solvents, Lyes, & many	Fluorines, some fluids
	<i>Stem Packing</i>	acids	made of chlorinated hydrocarbons
<b>PVDF</b>	<i>Ball Seats</i>	Solvents, Lyes, & many	Liquid alkali metals,
	<i>Stem Packing</i>	acids	Fluorines, Esters

Listed above are the more common generic fluids that are used in industrial applications, as they relate to seal compatibility. This information is to be used for reference purposes only. Anchor Flange Co. does not guarantee the accuracy of this information. Please consult your system's seal manufacturer for recommendation of seal selection, as Anchor Flange Co. does not accept responsibility for seal selections.

**Valves**





### FORGED BRASS MINI-BALL VALVES

- 200 WOG
- 125SWP

180° operational handle, blow out proof stem.  
Stem with double "O" Rings.



**FEMALE X FEMALE**

Part #	Size
944-114 .....	1/8x1/8
944-115 .....	1/8x1/4
944-116 .....	1/4x1/4
944-117 .....	3/8x3/8
944-118 .....	1/4x1/2
944-140 .....	1/2x1/2



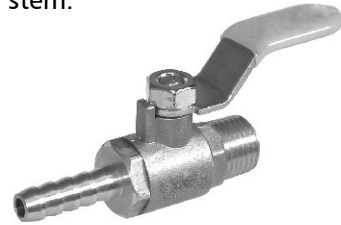
**MALE X FEMALE**

Part #	Size
944-114 .....	1/8x1/8
944-106 .....	1/8x1/8
944-100 .....	1/8x1/4
944-101 .....	1/4x1/4
944-102 .....	3/8x3/8
944-103 .....	1/4x1/2
944-104 .....	1/2x1/2



**MALE X MALE**

Part#	Size
944-108 .....	1/8x1/4
944-109 .....	1/4x1/4
944-110 .....	3/8x3/8
944-111 .....	1/4x1/2
944-112 .....	1/2x1/2



**MALE X HOSE BARB**

Part#	Size
944-137 .....	1/8x1/8
944-126 .....	1/8x3/8
944-138 .....	1/4x1/4
944-128 .....	1/4x3/8
944-132 .....	1/2x3/8
944-139 .....	1/2x1/2



**HOSE BARB X HOSE BARB**

Part#	Size
944-142 .....	1/4x1/4
944-133 .....	5/16x5/16
944-134 .....	3/8x3/8



**FEMALE X HOSE BARB**

Part#	Size
944-135 .....	1/8x1/8
944-120 .....	1/8x3/8
944-136 .....	1/4x1/4
944-122 .....	1/4x3/8
944-123 .....	3/8x3/8

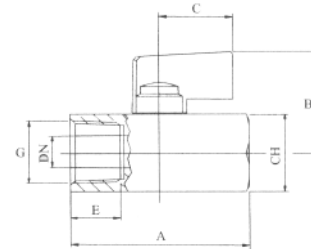
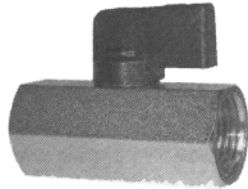
NO	Part Name	Materials
1	Nut	Steel
2	Handle	Steel
3	Cover	PVC
4	O-Ring	NBR
5	Stem	Brass
6	Body	Brass
7	Seat	Teflon
8	Ball Disc	Brass
9	End Plug	Brass

**FULL PORT 600WOG FORGED BRASS BALL VALVE  
ISO 9002 Manufacturer**

Made in Italy

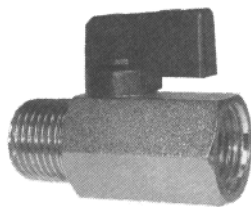
**FEATURES**

- Longer body style for longer, deeper thread connections.
- One piece drawn sand blasted body.
- Finest brass according to UNI 5705-65 spec.
- Each valve seal is tested for maximum safety.
- NPT taper ANSI B1.20.1 threads.
- Double seal system allows valve to be operated in both directions making installation easier.
- -4°F to +200°F temperature.
- 1/4 turn handle with mechanical stop.

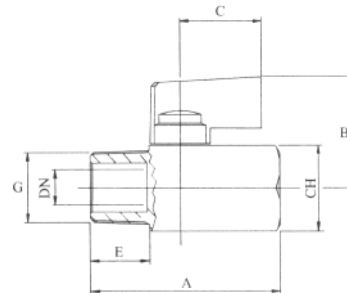


**FEMALE X FEMALE**

Part #	Size		Dimension					
	G	DN	A	B	C	E	CH	KV
2930-02	1/8"	0.24	1.51	1.2	0.9	0.31	0.83	0.9
2930-04	1/4"	0.31	1.88	1.2	0.9	0.51	0.83	0.9
2930-06	3/8"	0.31	1.88	1.2	0.9	0.51	0.83	0.9
2930-08	1/2"	0.39	2.18	1.28	0.9	0.61	0.96	2.3

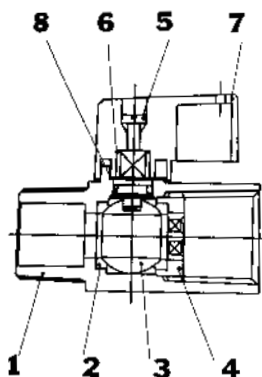


Made in Italy

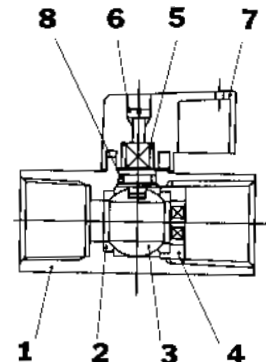


**MALE X FEMALE**

Part #	Size		Dimension					
	G	DN	A	B	C	E	CH	KV
2931-02	1/8"	0.24	1.5	1.2	0.9	0.34	0.83	0.9
2931-04	1/4"	0.31	1.77	1.2	0.9	0.48	0.83	0.9
2931-06	3/8"	0.31	1.81	1.2	0.9	0.49	0.83	0.9
2931-08	1/2"	0.39	2.15	1.28	0.9	0.65	0.96	2.3



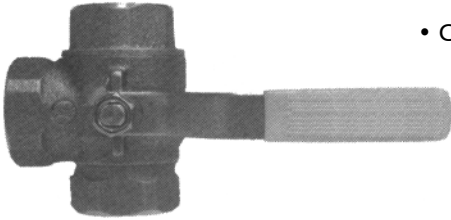
POS	Components	Materials
1	Body	CW517N Forged Brass
2	End Connection	P.T.F.E.
3	Ball	CW517N CP Brass
4	Ball Stems	CW614N Brass
5	Stem. Antif. Seat	CW614N Brass
6	Stem Seat	UNI 5771 Steel
7	Brass Ring	Nylon
8	Stem	NBR 80



- Side Outlet

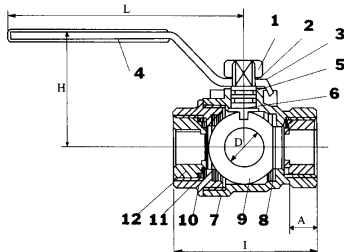
### 3 WAY BALL VALVE

- 200 WOG
- 125 WSP
- 180° Turn Handle
- Cast Brass



Part #	Size	I	H	D	L	A
940-464	1/4	2.16	1.73	.51	3.35	.37
940-465	3/8	2.16	1.73	.51	3.35	.37
940-461	1/2	2.16	1.73	.51	3.35	.55
940-46	3/4	2.44	2.01	.75	4.72	.55
940-463	1	3.07	3.07	.94	4.72	.67

More sizes available on a special order basis

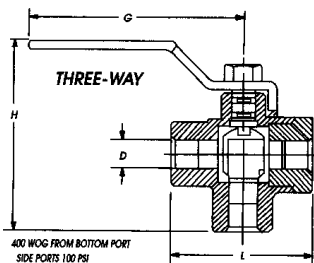


#### Nomenclature & Materials

NO	Part Name	Material
1	Nut	Steel
2	Spring Washer	Steel
3	Handle	Steel
4	Cover	PVC
5	O-Ring	NBR
6	Stem	Brass
7	Body	Brass
8	Seat	Teflon
9	Ball Disc	Brass
10	End Plug	Brass
11	O-Ring	NBR
12	Socket	Brass

### 3 WAY BALL VALVE

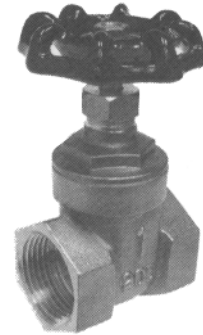
- Bottom Outlet, Forged Brass, 400 WOG from bottom Port, Side Ports 100 PSI



Part #	Size	D	G	H	L	CV
940-121	1/4	.44	1.50	2.78	1.68	5.2
940-122	3/8	.50	1.50	2.78	1.68	5.2
940-123	1/2	.50	1.50	2.78	1.68	5.2

### BRASS GATE VALVES

- 200 WOG (Cold Water, Oil, Gas)
- 125 WSP (Saturated Steam)
- Full Port
- Brass pressure die cast body/bonnet-stronger than sand castings.
- Higher copper content alloy - 67% CU
- Teflon packing with gland follower.
- Superior quality and finish.
- Each Valve individually tested.
- Threaded ends to ANSI B1.20.1, Solder ends to ANSI B16.18
- Non-rising stem



### BRASS GATE VALVES IPS

Part #	Size
04GTV	1/4
06GTV	3/8
08GTV	1/2
12GTV	3/4
16GTV	1
20GTV	1-1/4
24GTV	1-1/2
32GTV	2
40GTV	2-1/2
48GTV	3
64GTV	4

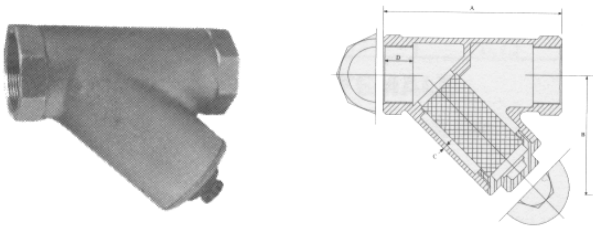
#### Materials

<b>Nut</b>	Brass
<b>Name Plate</b>	Aluminum
<b>Hand</b>	Cast Iron
<b>Stem</b>	Brass ASTM B16
<b>Packing Nut</b>	Brass ASTM B16
<b>Packing</b>	Brass ASTM B16
<b>Gland</b>	Teflon Pipe
<b>Packing</b>	Brass ASTM B16
<b>Locknut</b>	Teflon PTFE
<b>Gasket</b>	Brass 67% CU
<b>Bonnet</b>	Brass 67% CU
<b>Wedge</b>	Brass 67% CU

### Y-Strainer

## CLASS 150 BRONZE Y-PATTERN STRAINER

- Protects regulators, pumps, meters and other controls from damage due to sediment scale, metal chips or other foreign materials.
- Threaded ends.
- 300 PSI WOG non-shock.
- 150 PSI SATURATED STEAM.
- Screwed cap is threaded & gasketed.
- Tapped drain plug opening in cap.
- 304 stainless steel screen #20 mesh.
- Self-cleaning.
- Self-cleaning can be accomplished by opening the valve or plug connected to the blow-off outlet.
- Hydrostatic test pressures shell 450 PSI.



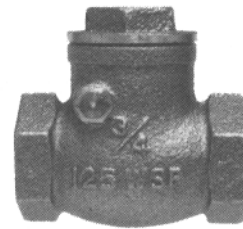
Part #	Size	A	B	C	D	Plug Size
105-501	1/4	2.60	1.89	.09	.41	1/4
105-502	3/8	2.60	1.89	.09	.41	1/4
105-503	1/2	3.13	2.28	.10	.39	1/4
105-504	3/4	3.43	2.36	.11	.55	1/4
105-505	1	4.09	2.83	.12	.63	3/8
105-506	1-1/4	4.90	3.23	.14	.79	3/8
105-507	1-1/2	5.59	3.74	.15	.80	1/2
105-508	2	6.69	4.72	.2	1.10	1/2
105-509	2-1/2	8.39	5.83	.21	.93	3/4
105-510	3	9.06	6.69	.22	1.12	3/4

Materials	
<b>Body</b>	Bronze
<b>Cap</b>	Bronze
<b>Screen</b>	Type 304 S.S. #20 Mesh
<b>Gasket</b>	Non-Abrasive
<b>Plug</b>	Brass

**REPLACEMENT SCREENS  
304 S.S. #20 MESH**

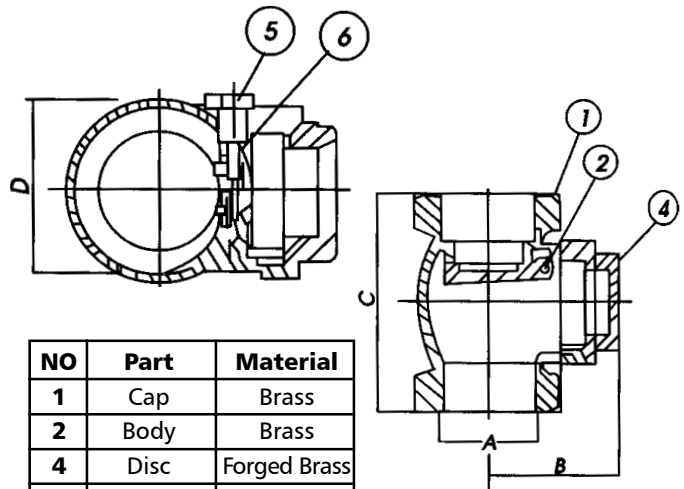
## CAST BRASS SWING CHECK VALVES

- Working pressure non-shock: 200 PSI W.O.G. (cold water, oil, gas) 125 PSI S.W.P. (saturated steam).
- Swing type disc.
- Screwed cap.
- Hard Seat.
- 90o Straight Pattern.
- Used to prevent reverse flow in commercial and industrial applications.
- Threaded ends to ANSI b1.20.1
- Integral seat.



### CAST BRASS SWING CHECK VALVES IPS SCREWED ENDS

Part #	Size
105-101	1/4
105-103	1/2
105-104	3/4
105-105	1
105-106	1-1/4
105-107	1-1/2
105-108	2
105-109	2-1/2
105-110	3
105-111	4

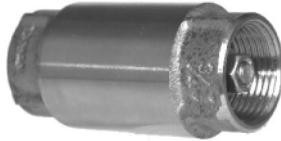


NO	Part	Material
1	Cap	Brass
2	Body	Brass
4	Disc	Forged Brass
5	Hinge Pin	Brass
6	Screw	Brass

**BRASS**

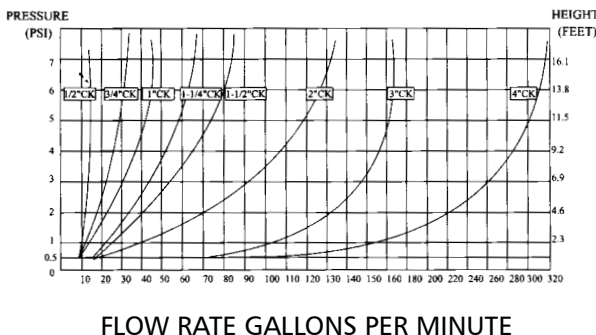
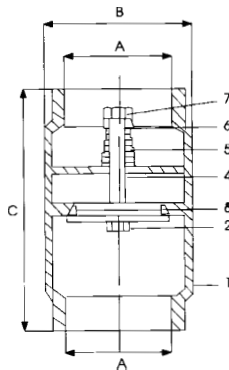
S.S. SPRING LOADED BRONZE POPPET  
For positive sealing & self-cleaning.  
Insures against leakage.

- 200 WOG
- Corrosion resistant material
- Cast red Brass body
- S.S. Spring
- Neoprene O-Ring seal
- Can be used vertically or horizontally
- Individually boxed
- Hydraulic Burst test result: 232 Kg/cm<sup>2</sup>



Brass Check Valve (Inches)							
Part #	Size	Enters Pipe Side	A NPT	B	C	Box	Case
944-428	1/4"	-	1/4"	1.26	2.28	24	192
944-429	3/8"	-	3/8"	1.50	2.28	21	168
944-430	1/2"	1-1/4"	1/2"	1.77	2.43	10	100
944-431	3/4"	1-1/4"	3/4"	2.13	2.72	10	80
944-432	1"	2"	1"	2.36	3.23	10	60
944-433	1-1/4"	2-1/2"	1-1/4"	3.03	3.62	5	40
944-434	1-1/2"	3"	1-1/2"	4.04	4.04	5	30
944-435	2"	3-1/2"	2"	5.51	5.04	5	20

NO	Part	Material
1	Body	Brass
2	Stopper	Brass
3	O-Ring	NBR
4	Washer	PE
5	Spring	S.S.
6	Cap	S.S.
7	Nut	S.S.



Note: Use this valve in place of Part #'s 944-503 through 944-508

**BRASS CHECK VALVES**

MAX. 2500 PSI

Cracking Pressure 1/3-3 PSI

- Bubble tight operations
- O-Ring poppet seal
- 180° max operating temp. • SS ball and spring



**MNPT X MNPT**

Part #	Size	Opening Dia.
46-500	1/4x1/4	0.187

MAX. 2500 PSI

- O-Ring poppet seal
- 180° max operating temp.
- SS ball and spring



**MNPT X FNPT**

Part #	Size	Opening Dia.
46-505	1/4x1/4	0.187

MAX. 2500 PSI

- Bubble tight operations
- O-Ring poppet seal
- 180° max operating temp.



**FNPT X FNPT**

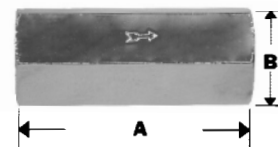
Part #	Size	Opening Dia.
46-510	1/4x1/4	0.25
46-511	3/8X3/8	0.375
46-512	1/2X1/3	0.437

**PNEUMATIC CHECK VALVES**

- Max operating pressure: 220 PSI
- Working pressure: 14.5-145 PSI
- Cracking pressure: 2.8 PSI
- Maximum temperatures: 140° F

**Materials**

<b>Body</b>	Chrome Plated Brass
<b>Spring</b>	Steel
<b>O-Ring</b>	NBR Rubber



Dimensions (in.)

Part #	Size	A	B
46-200	1/4	1.97	67
46-201	3/8	1.97	83
46-202	1/2	2.48	98

**WHITE PVC BALL VALVES**

- Quarter turn
- Solvent ends comply with ASTM D2466
- Designed for use in residential, commercial & industrial system as well waste water, chemical, agricultural applications, marine, food processing, swimming pools
- Corrosion resistant
- EPDM seal
- EPDM O-ring
- Fits both Sch. 40 & 80 pipe
- NSF approved
- Rated for 150 PSI at 730
- Threaded ends comply with ANSI B1.20.1

**MOULDED IN PLACE  
WHITE PIPE THREADS**



Part #	Size	Box	Case
940-284	1/2"	10	100
940-285	3/4"	5	60
940-286	1"	5	40
940-287	1-1/4"	5	30
940-288	1-1/2"	4	24
940-289	2"	4	16
940-290	2-1/2"	3	12
940-291	3"	3	12
940-292	4"	2	8

**WHITE SOCKET  
SLIP X SLIP**



Part #	Size	Box	Case
940-294	1/2"	10	100
940-295	3/4"	5	60
940-296	1"	5	40
940-297	1-1/4"	5	30
940-298	1-1/2"	4	24
940-299	2"	4	16

Grey also available in some sizes.  
Just change prefix to 941 instead of 940.

**HOSE BIBBS  
3/4" HOSE THREAD OUTLET**

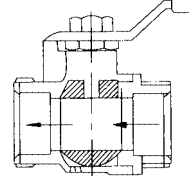


**MOULDED IN PLACE**

Part #	Male Pipe Size	Box	Case
942-170	1/2 (1/2")	12	72
942-171	3/4	12	72

**FULL PORT  
AUTOMATIC DRAIN & LATCH LOCK HANDLE**

OPEN

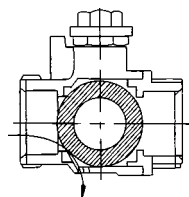


Valve - open position.  
Drain vent shut off.

200 PSI



CLOSED



Valve - closed and drained occurs. Upstream seat prevents air flow.  
Downstream system is vented to atmosphere.

Part #	Size	Box	Case
948-131	1/4"		
948-132	3/8"		
948-133	1/2"	10	120
948-134	3/4"	10	90
948-135	1"	4	60

Do more than exist - live.  
Do more than touch - feel.  
Do more than look - observe.  
Do more than read - absorb.  
Do more than hear - listen.  
Do more than listen - understand.

- John H. Rhoades



- Pipe threads to ANSI B1.20.1
- Hose threads to ANSI B1.20.7

**PLASTIC DRUM FAUCETS**



The FLO-RITE faucet has been engineered to meet the demand for greater chemical resistance, using linear polyethylene for the stem.

**SPECIFICATION DATA**

- Body made of high-density polyethylene for greater strength and more positive thread engagement. Stem made of low density for more positive seal.
- Not affected by most acids, caustics or oils. Will eliminate chemical reaction and contamination of products in drums.
- Lightweight yet strong and rugged two-piece construction. Eliminates mechanical difficulty.

**"FLOW-RITE" DRUM FAUCET**

<b>Part #</b>	<b>Size</b>
46-277 .....	3/4



The FLO-RITE faucet made of virgin polyethylene easily handles viscous materials. The faucet shoulder and gasket - made of EPDM material - provide a leakproof seal.

**SPECIFICATION DATA**

- Constructed of highest quality virgin polyethylene.
- Molded of attractive metallic gold plastic.
- Not affected by most acids, caustics or petroleum products.

**"FLOW-KING" DRUM FAUCET**

<b>Part #</b>	<b>Size</b>
46-278 .....	2

**CAUTION:** Never use this product in temperatures exceeding 125°F or with heated container. Failure to follow these instructions can lead to hazardous condition.

**BRONZE DRUM & BARREL FAUCET VALVE**

- Quarter turn operation
- 3/4" MIP inlet
- Lockable handle



**MIP X FIP**

<b>Part #</b>	<b>Size</b>
46-271 .....	3/4 Hose Outlet

- Die cast body w/nylon seat and steel spring
- For use with all petroleum products except trichlorethylene
- Lockable handle

G261N

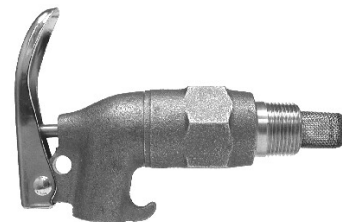


**SELF-CLOSING STEEL DRUM & BARREL FAUCET**

<b>Part #</b>	<b>Size</b>
46-270 .....	3/4

**BRONZE BARREL FAUCET**

- Individually boxed
- Screen inlet
- Fine thread outlet
- Screen protected by plastic cap
- 3/4" MIP



**SELF CLOSING BRONZE BARREL FAUCET**

<b>Part #</b>	<b>Size</b>
46-275 .....	3/4IPS

**Valves**

**SCREW STEM SHUT-OFF VALVES  
NEEDLE VALVES**

**NEEDLE VALVES** are constructed to meter fluids and gases. They are **O-RING SEALED** to eliminate valve maintenance. The O-ring is positioned between the actuating threads and the seat, and seals the closely fitted cylinder to give the lowest possible internal volume and protect threads from contamination.

**NEEDLE VALVES** have a medium tipped stem (37°) to offer **RAPID SHUT OFF, FULL FLOW** and a **SEMI-METERING FUNCTION**.

The standard construction is a forged brass body, brass stem, thrust washer, cap and a BUNA "n" 'O'-RING seal. This valve is rated for 1,000 P.A.I.G. service from -40° to 250° F.

**FACTORY MUST BE CONSULTED WHEN VALVES ARE TO BE USED WITH FLAMMABLE FLUIDS IN ORDER TO DETERMINE WORKING PRESSURE AND O-RING COMPATIBILITY.**

COMPRESSION AND FLARE ENDS CAN BE SUBSTITUTED FOR PIPE ENDS IN MOST CASES.

(Price on application)



**MIP X FIP STRAIGHT**

Part #	Pipe Thread		Style	Maximum Orifice
	Inlet	Outlet		
46-768	1/8Male	1/8Female	Regular	.141
46-769	1/8Male	1/8Female	Panel Mntg.	.141
46-770	1/4Male	1/4Female	Regular	.188
46-771	1/4male	1/4Female	Panel Mntg.	.188

**MIP X MIP STRAIGHT**

Part #	Thread	Straight	
		Style	Maximum Orifice
46-774	1/8Male	1/8Male	Regular .141
46-775	1/8Male	1/8Male	Panel .141
46-776	1/4Male	1/4Male	Regular .188
46-777	1/4Male	1/4Male	Panel .188

**FIP X FIP STRAIGHT**

Part #	Thread	Straight	
		Style	Maximum Orifice
46-780	1/8Female	1/8Female	Regular .172
46-781	1/8Female	1/8Female	Panel .172
46-782	1/4Female	1/4Female	Regular .188
46-783	1/4Female	1/4Female	Panel .188



**MIP X FIP ANGLE**

Part #	Thread	Style	Maximum
			Orifice
46-786	1/8Male	1/8Female	Regular .188
46-787	1/8Male	1/8Female	Panel Mntg. .188
46-788	1/4Male	1/4Female	Regular .281
46-789	1/4Male	1/4Female	panel Mntg. .281

**MIP X MIP ANGLE**

Part #	Thread	Style	Maximum
			Orifice
46-792	1/8Male	1/8Male	Regular .188
46-793	1/8Male	1/8Male	Panel .188
46-794	1/4Male	1/4Male	Regular .281
46-795	1/4Male	1/4Male	Panel .281

**FIP X FIP ANGLE**

Part #	Thread	Style	Maximum
			Orifice
46-798	1/8Female	1/8Female	Regular .188
46-799	1/8Female	1/8Female	Panel .188
46-800	1/4Female	1/4Female	Regular .281
46-801	1/4Female	1/4Female	Panel .281

**SPECIAL VERSIONS**

Many special versions of these valves have been produced for other services. If your application is not described here or covered by our recommendations, please contact us. It is quite possible that one of these valve types can be economically adapted to your requirements.





**MICRO-METERING VALVES**

VALVES offer PRECISE FLUID CONTROL through a full metering tip ( 5°) and lubricated micrometer threads. Our O-ring seal arrangement eliminates contamination of system media by the thread lubricant.

The standard construction is forged brass body, brass stem and cap, a CELCON\* thrust bearing and a BUNA "N" 'O'-RING seal. It is rated for 3,500 P.S.I.G. service from -40° to 50° F.

Many variations and modifications have been made in these valves to accommodate customer applications. It is quite possible they can be economically adapted to your requirements.



**MIP X FIP STRAIGHT**

Part #	Pipe Thread		Style	Maximum Orifice
	Inlet	Outlet		
46-741	1/8Male	1/8Female	Regular	.102
46-742	1/8Male	1/8Female	Panel Mntg.	.102
46-743	1/4Male	1/4Female	Regular	.172
46-744	1/4male	1/4Female	Panel Mntg.	.175

**MIP X MIP STRAIGHT**

Part #	Pipe Thread		Style	Maximum Orifice
	Inlet	Outlet		
46-745	1/8Male	1/8Male	Regular	.102
46-746	1/8Male	1/8Male	Panel	.102
46-747	1/4Male	1/4Male	Regular	.172
46-748	1/4Male	1/4Male	Panel	.172

**FIP X FIP STRAIGHT**

Part #	Pipe Thread		Style	Maximum Orifice
	Inlet	Outlet		
46-752	1/8Female	1/8Female	Regular	.141
46-753	1/8Female	1/8Female	Panel	.141
46-754	1/4Female	1/4Female	Regular	.172
46-755	1/4Female	1/4Female	Panel	.172



**MIP X FIP ANGLE**

Part #	Pipe Thread		Style	Maximum Orifice
	Inlet	Outlet		
46-756	1/8Male	1/8Female	Regular	.182
46-757	1/8Male	1/8Female	Panel Mntg.	.182
46-758	1/4Male	1/4Female	Regular	.182
46-759	1/4Male	1/4Female	Panel Mntg.	.182

**MIP X MIP ANGLE**

Part #	Pipe Thread		Style	Maximum Orifice
	Inlet	Outlet		
46-760	1/8Male	1/8Male	Regular	.182
46-761	1/8Male	1/8Male	Panel	.182
46-762	1/4Male	1/4Male	Regular	.182
46-763	1/4Male	1/4Male	Panel	.182

**MIP X FIP ANGLE**

Part #	Pipe Thread		Style	Maximum Orifice
	Inlet	Outlet		
46-764	1/8Female	1/8Female	Regular	.182
46-765	1/8Female	1/8Female	Panel	.182
46-766	1/4Female	1/4Female	Regular	.182
46-767	1/4Female	1/4Female	Panel	.182

COMPRESSION AND FLARE ENDS CAN BE SUBSTITUTED FOR PIPE ENDS IN MOST CASES

*Some valves only available on made-to-order basis.*

**Valves**

**TOGGLE VALVES**

**TOGGLE SHUT OFF VALVES** are constructed to INSTANTANEOUSLY OPEN and CLOSE the flow of fluids and gases. It is ideally suited for use in gas sampling and analysis systems as well as test equipment.

This valve is O-RING SEALED to eliminate leakage and maintenance. The O-ring is positioned between the operating mechanism and the seat, and seals the closely fitted cylinder to give the lowest possible internal volume and protect the mechanism from contamination.

The standard construction is forge brass body, brass cylinder, cap and lever, Viton seat, BUNA "N" 'O'-RING seal, steel spring, and stainless steel lever pin.

This valve is rated for 200 P.S.I.G. service from -40° to 250° F and is available in the angle and straight pattern, both of which are available for panel or bracket mounting.



**MIP X FIP STRAIGHT**

Part #	Pipe Thread		Style	Maximum Orifice
	Inlet	Outlet		
46-808	1/8Male	1/8Female	Regular	.102
46-805	1/8Male	1/8Female	Panel Mntg.	.102
46-806	1/4Male	1/4Female	Regular	.172
46-807	1/4male	1/4Female	Panel Mntg.	.175

**MIP X MIP STRAIGHT**

Part #	Pipe Thread		Style	Maximum Orifice
	Inlet	Outlet		
46-808	1/8Male	1/8Male	Regular	.102
46-809	1/8Male	1/8Male	Panel	.102
46-810	1/4Male	1/4Male	Regular	.172
46-811	1/4Male	1/4Male	Panel	.172

**FIP X FIP STRAIGHT**

Part #	Pipe Thread		Style	Maximum Orifice
	Inlet	Outlet		
46-812	1/8Female	1/8Female	Regular	.141
46-813	1/8Female	1/8Female	Panel	.141
46-814	1/4Female	1/4Female	Regular	.172
46-815	1/4Female	1/4Female	Panel	.172



**MIP X FIP ANGLE**

Part #	Pipe Thread		Style	Maximum Orifice
	Inlet	Outlet		
46-816	1/8Male	1/8Female	Regular	.182
46-817	1/8Male	1/8Female	Panel Mntg.	.182
46-818	1/4Male	1/4Female	Regular	.182
46-819	1/4Male	1/4Female	Panel Mntg.	.182

**MIP X MIP ANGLE**

Part #	Pipe Thread		Style	Maximum Orifice
	Inlet	Outlet		
46-820	1/8Male	1/8Male	Regular	.182
46-821	1/8Male	1/8Male	Panel	.182
46-822	1/4Male	1/4Male	Regular	.182
46-823	1/4Male	1/4Male	Panel	.182

**MIP X FIP ANGLE**

Part #	Pipe Thread		Style	Maximum Orifice
	Inlet	Outlet		
46-824	1/8Female	1/8Female	Regular	.182
46-825	1/8Female	1/8Female	Panel	.182
46-826	1/4Female	1/4Female	Regular	.182
46-827	1/4Female	1/4Female	Panel	.182

COMPRESSION AND FLARE ENDS CAN BE SUBSTITUTED FOR PIPE ENDS IN MOST CASES

*Some valves only available on made-to-order basis.*

Valves



**INDUSTRIAL  
INSTRUMENTATION  
BALL VALVES**

- With Double O-RING STEM SEALS provide 20,000 leak-free performance cycles without leakage. Valves also have an exclusive stem seal design that never needs tightening and can be panel mounted for instrumentation applications. For systems with working pressures up to 1,500 P.S.I.G.
- TEFLON\* Ball Seats
- Blow Out Proof Stem Seal
- Double O-Ring
- Up to 1,500 P.S.I.

**FEMALE X FEMALE**



Part #	Size
46-830	1/8X1/8
46-832	1/4X1/4
46-833	3/8X3/8
46-834	1/2X1/2

**FEMALE X MALE**

Part #	Size
46-835	1/8X1/8
46-838	1/4X1/4
46-839	3/8X3/8
46-840	1/2X1/2

**MALE X MALE**

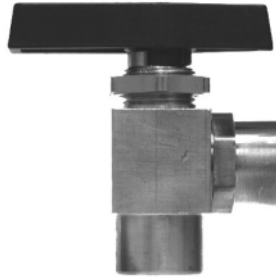
Part #	Size
46-841	1/8X1/8
46-842	1/4X1/4
46-843	3/8X3/8
46-844	1/2X1/2

**HOSE BARB X MALE PIPE  
THREAD**

Part #	Size
46-849	1/4X1/4
46-850	3/8X1/4

**INDUSTRIAL  
INSTRUMENTATION  
ANGLE BALL VALVES**

**FEMALE X FEMALE ANGLE**



Part #	Size
46-875	1/8X1/8
46-876	1/8X1/4
46-877	1/4X1/8
46-878	1/4X1/4

**FEMALE X MALE**

Part #	Size
46-880	1/8X1/8
46-881	1/8X1/4
46-882	1/4X1/8
46-883	1/4X1/4
46-884	1/4X3/8
46-885	3/8X1/2

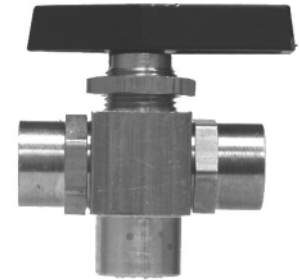
**MALE X MALE MALE PIPE  
THREADS**

Part #	Size
46-886	1/8X1/8
46-887	1/8X1/4
46-888	1/4X1/8
46-889	1/4X1/4
46-891	3/8X1/4

**HOSE BIB X MALE PIPE  
THREAD**

Part #	Size
46-893	1/4X1/8
46-894	1/4X1/4
46-895	3/8X1/8

**INDUSTRIAL  
INSTRUMENTATION  
3-WAY BALL VALVES**



Part #	Port A	Port B	Port C
46-951	1/8 FPT	1/8 FPT	1/8 FPT
46-956	1/4 FPT	1/4 FPT	1/4 FPT
46-959	3/8 FPT	3/8 FPT	3/8 FPT
46-960	1/2 FPT	1/2 FPT	1/2 FPT

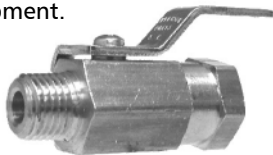
*Some valves only available  
on made-to-order basis*

**Valves**



**BRASS DOMESTIC  
MINIATURE BALL VALVES**

- Working pressure up to 1000 P.S.I.G.
- ASTM B-16 corrosion resistant brass body.
- Non-adjusting Viton O-ring Stem seal design never need tightening.
- Highly inert Teflon seats
- Long life nickel plated brass ball.
- Blow-out proof stem for safety.
- Temperature: -40° F to 300° F
- 1/4 turn instantaneous on-off operation.
- Quarter turn handle design.
- Water, oil and air pressure systems.
- Ideal for tight, confined areas, or when routing aesthetics are desired. Applications include instrumentation, gas sampling systems, high pressure gauges, test stands, hydraulic and pneumatic service lines on capital equipment.



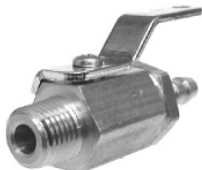
**MALE X FEMALE**

Part #	Size
46-900 .....	1/8X1/8
46-903 .....	1/4X1/4



**MALE X MALE**

Part #	Size
46-910 .....	1/8X1/8
46-912 .....	1/4X1/4



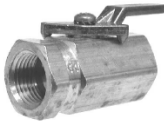
**HOSE BARB X MALE PIPE**

Part #	Size
47-042 .....	1/4X1/8
47-043 .....	3/8X1/8
46-980 .....	1/4X1/4
46-981 .....	3/8X1/4

46-920  
46-921  
46-922



46-922A  
46-923



46-924



46-925



**FEMALE X FEMALE**

Part #	Size
46-920 .....	1/8X1/8
46-921 .....	1/8X1/4
46-922 .....	1/4X1/4
46-922A .....	1/4X1/4
46-923 .....	3/8X3/8
46-924 .....	1/2X1/2
46-925 .....	3/4X3/4

**U.L. TWO WAY VALVES**

- BUNA-N-Seal Teflon seat
- Plated metal handle, plated brass ball.
- 240 PSI working pressure.



**U.L. TWO WAY VALVES  
FNPT X FNPT**

Part #	Size
46-440 .....	1/4x1/4



**U.L. TWO WAY VALVES  
FNPT X MNPT**

Part #	Size
46-443 .....	1/4x1/4

**U.L. TWO WAY VALVES**

MAX. 2500 PSI  
Cracking Pressure 1/3-3 PSI

- Bubble tight operations
- O-Ring poppet seal
- 180° max operating temp.



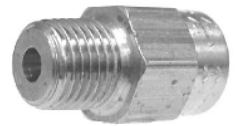
• SS ball and spring

**MNPT X MNPT**

Part #	Size	Opening Dia.
46-500 .....	1/4x1/4	0.187

MAX. 2500 PSI

- O-Ring poppet seal
- 180° max operating temp.
- SS ball and spring



**MNPT X FNPT**

Part #	Size	Opening Dia.
46-505 .....	1/4x1/4	0.187

MAX. 2500 PSI

- Bubble tight operation
- O-Ring poppet seal
- 180° max operating temp.



**FNPT X FNPT**

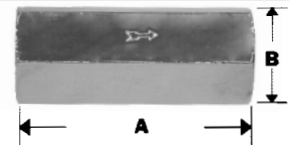
Part #	Size	Opening Dia.
46-510 .....	1/4x1/4	0.25
46-511 .....	3/8X3/8	0.375
46-512 .....	1/2X1/3	0.437

**PNEUMATIC CHECK VALVES**

- Max Operating Pressure: 220 psi
- Working Pressure: 14.5-145 psi
- Cracking Pressure: 2.8 psi
- Maximum Temperatures: 140 °F

**Materials**

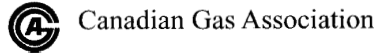
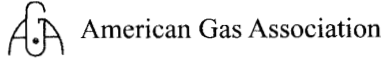
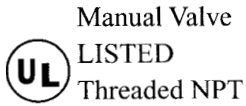
Body	Chrome Plated Brass
Spring	Steel
O-Ring	NBR Rubber



Dimensions (in.)

Part #	Size	A	B
46-200 .....	1/4	1.97	.67
46-201 .....	3/8	1.97	.83
46-202 .....	1/2	2.48	.98

**GAS BALL VALVES  
ISO 9002 Manufacturer**



- Bottom entry.
- Blow out proof design.
- Double viton O-Rings stem seals.
- Teflon seats for durability.
- Forged construction for greater strength.
- Larger ports for increased flow capacity.
- For use with natural, manufactured, mixed Liquefied petroleum and LP gas-air mixes.
- Manufactured to ANSI Z21.15, C.G.A. 9.1-M81, 9.2-M88, 1/2 psig. 372 also to A.G.A. 3-8, C.G.A. CR91-002, 2 psig.
- Reversible handle.
- May be used with water 400 WOG.

Materials	
<b>Handle Nut</b>	Steel
<b>Handle</b>	Epoxy Coated Aluminum
<b>Stem</b>	Brass ASTM B16
<b>Stem Seals</b>	Viton
<b>Seats</b>	Teflon PTFE
<b>Ball</b>	Chromium Plated Brass
<b>Body</b>	Forged Brass
<b>Connector</b>	Forged Brass

**GAS BALL VALVES**



Part #	Size
943-212 .....	1/2
943-213 .....	3/4

**APPLIANCE CONNECTOR VALVES  
FIP X FLARE**



Part #	Size
935-122 .....	3/8x1/2
935-123 .....	1/2x1/2
935-124 .....	5/8x3/4

**FLARE X FLARE GAS BALL VALVES  
AGA/UL GAS BALL VALVES**



Part #	Size
935-129 .....	3/8x3/8
935-130 .....	1/2x1/2

**Valves**

**FULL PORT 600WOG FORGED BRASS BALL VALVE**

**ISO 9002 Manufacturer  
FEATURES**

600 PSI non-shock cold water, gas, oil - 150 PSI saturated steam

1/4" - 2" Gas Approved

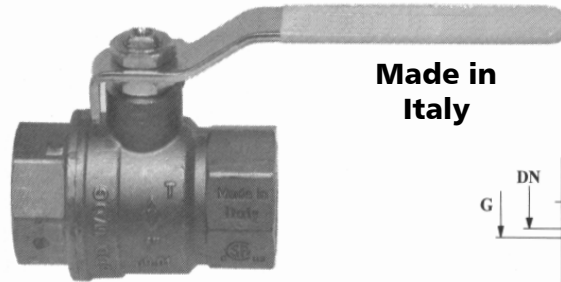


CSA AGA 3.88 5 PSIG

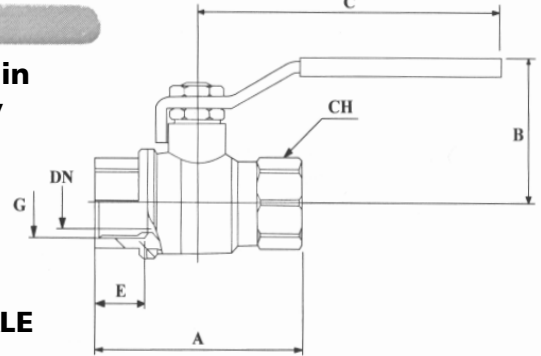
- Optional SS parts or Nickle Plated Body
- Many options available
- Suitable for full range of liquids and gases
- Minimal pressure drop due to large full size ports
- Bottom loaded, pressure retaining stem
- Pressure rated 600 PSI (42 bars) WOG (non-stock) and 150 PSI (10.34 bars) saturated steam. Virgin TFE stem packing seal, thrust washer and seats.
- Vinyl insulator on heavy duty plated carbon steel handles
- Fast 1/4 turn opne or close operation
- Low operating torque
- Adjustable stem packing gland
- Maximum operating temperature: 28°F (120°C)
- Minimum operating temperature: -20°F (-40°F)

- KV: Pressure drop  $m^3/h$
- Each valve individually tested
- Forged Brass - for more strength
- Threaded ends to ANSI B.1.20.1
- Hard chromium plated solid ball
- Bottom entry, blow-out proof stem
- Deeper threads - for better connections

**Valves**

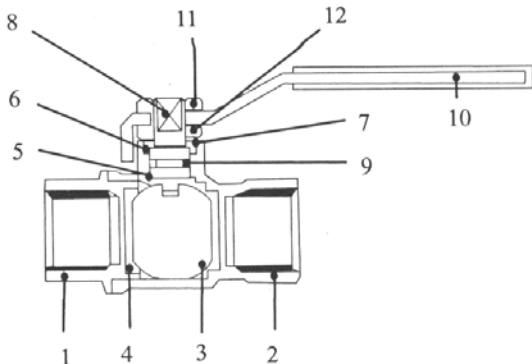


**Made in Italy**



**FEMALE X FEMALE**

Part #	Size G	Dimension						
		DN	A	B	C	E	CH	KV
04BV	1/4"	.31	1.96	1.57	3.43	.43	.74	.21
06BV	3/8"	.39	1.96	1.57	3.43	.43	.86	.23
08BV	1/2"	.59	2.28	1.49	3.27	.60	.94	.64
12BV	3/4"	.78	2.44	1.57	3.27	.64	1.22	1.16
16BV	1"	.98	2.95	1.93	3.74	.75	1.50	1.6*9
20BV	1-1/4"	1.26	3.46	2.36	4.61	.84	1.89	3.50
24BV	1-1/2"	1.57	3.94	3.00	4.61	.84	2.12	9.05
32BV	2"	1.97	4.44	2.95	4.61	1.01	2.63	1.04
40BV	2-1/2"	2.56	5.75	4.05	7.48	1.06	3.30	21.2
48BV	3"	3.15	6.69	5.45	9.84	1.14	3.89	34.3
64BV	4"	3.94	7.87	6.16	9.84	1.22	4.88	54.7



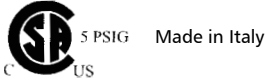
POS	Components	Materials
1	Body	Forged Brass
2	End Connection	Forged Brass
3	Ball	CP Brass
4	Ball Stems	P.T.F.E
5	Stem. Antif. Seat	P.T.F.E
6	Stem Seat	P.T.F.E
7	Brass Ring	Brass
8	Stem	Brass
9	O-Ring	NBR 80
10	Handle	Steel
11	Nut	Steel
12	Nut	Brass



**FULL PORT 600WOG FORGED BRASS BALL VALVE**

**ISO 9002 Manufacturer  
FEATURES**

Gas Approved



- Suitable for full range of liquids and gasses.
- Minimal pressure drop due to large full size ports.
- Bottom loaded, pressure retaining stem.
- Pressure rated at 600 PSI (42 bars) WOG (non-shock) and 150 PSI (10.34 bars) saturated steam. Virgin TFE stem packing seal, thrust washer and seats.
- Vinyl insulator on heavy duty plated carbon steel handles.
- Fast 1/4 turn open or close operation.

- Low operating torque.
- Adjustable stem packing gland.
- Maximum operating temperature: 248°F (120°F)
- Minimum operating temperature: -20°F (-40°C)
- KV: Pressure drop  $m^3/h$ .
- Each valve individually tested.
- Forged Brass - for more strength.
- Threaded ends to ANSI B1.20.1
- Hard chromium plated solid ball.
- Bottom entry, blow-out proof stem.
- Deeper threads - for better connections.



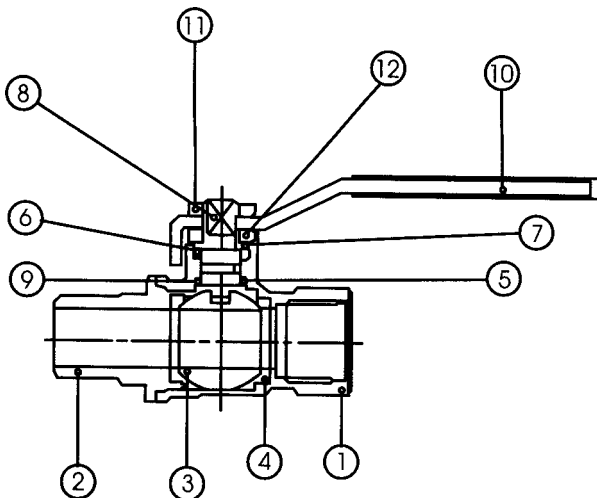
**MIP X FIP**



**MIP X MIP**

Part #	Size
04BVMF .....	1/4
06BVMF .....	3/8
08BVMF .....	1/2
12BVMF .....	3/4
16BVMF .....	1
20BVMF .....	1-1/4
24BVMF .....	1-1/2
32BVMF .....	2

Part #	Size
04BVMM .....	1/4
06BVMM .....	3/8
08BVMM .....	1/2
12BVMM .....	3/4
16BVMM .....	1
20BVMM .....	1-1/4
24BVMM .....	1-1/2
32BVMM .....	2



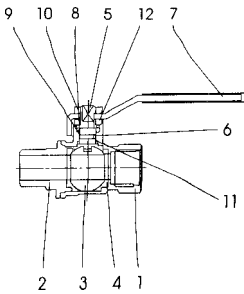
POS	Components	Materials
1	Body	CW617N Forged Brass
2	End Connection	CW617N Forged Brass
3	Ball	CW617N CP Brass
4	Ball Stems	P.T.F.E.
5	Stem. Antif. Seat	P.T.F.E.
6	Stem Seat	P.T.F.E.
7	Brass Ring	CW617N Brass
8	Stem	CW617N Brass
9	O-Ring	MBR 80
10	Handle	UNI EN 10025 Steel
11	Nut	UN 5771 Steel
12	Nut	CW617N Brass

**Valves**

**FULL PORT 600WOG  
FORGED BRASS VALVE  
ISO 9002 Manufacturer**

600 PSI non-shock cold water, gas,  
oil - 150 PSI saturated steam

- Many options available.
- Minimal pressure drop due to large full size ports.
- Bottom loaded, pressure retaining stem.
- Pressure rated at 600 PSI (42 bars) WOG (non-shock) and 150 PSI (10.34 bars) saturated steam. Virgin TFE stem packing seal, thrust washer and seats.
- Vinyl insulator on heavy duty plated carbon steel handles.
- Fast 1/4 turn open or close operation.
- Low operating torque.
- Adjustable stem packing gland.
- Maximum operating temperature: 248°F (120°F)
- Minimum operating temperature: -20°F (-40°C)
- KV: Pressure drop  $m^3/h$ .
- Each valve individually tested.
- Forged Brass - for more strength.
- Tube ends to ANSI B1.20.1
- Hard chromium plated solid ball.
- Bottom entry, blow-out proof stem



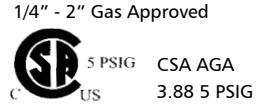
Part #	Size
08BVSWT .....	1/2
12BVSWT .....	3/4
16BVSWT .....	1/2
20BVSWT .....	1-1/4
24BVSWT .....	1-1/2
32BVSWT .....	2-1/4

*Mores sizes available upon request.*

POS	Components	Materials
1	Body	Forged Brass
2	End Connection	Forged Brass
3	Ball	CP Brass
4	Ball Seats	P.T.F.E.
5	Stem	Brass
6	O-Ring	NBR 80
7	Handle	Steel
8	Nut	UNI 5771 Steel
9	Stem Seat	P.T.F.E.
10	Brass Ring	Brass
11	Stem Seat	P.T.F.E.
12	Nut	Brass

**FORGED BRASS VALVE  
STANDARD PORT  
ISO 9002 Manufacturer**

400 PSI non-shock cold water, gas,  
oil - 125 PSI saturated steam



- Threaded ends to ANSI B1.20.1
- Each Valve individually tested.
- Hard chromium plated solid ball.
- Bottom entry, blow-out proof stem.
- Double stem packing, Teflon seats.

Mfg. in Italy,  
Yellow Handle



**FORGED BRASS BALL VALVE IPS  
SCREWED ENDS**

Part #	Size
100-403 .....	1/2
100-404 .....	3/4
100-405 .....	1/2
100-406 .....	1-1/4
100-407 .....	1-1/2
100-408 .....	2-1/4

POS	Components	Materials
1	Body	Forged Brass
2	End Connection	Forged Brass
3	Ball	CP Brass
4	Ball Stems	P.T.F.E
5	Stem. Antif. Seat	P.T.F.E
6	Stem Seat	P.T.F.E
7	Brass Ring	Brass
8	Stem	Brass
9	O-Rinig	NBR 80
10	Handle	Steel
11	Nut	Steel
12	Nut	Brass

