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**MIDLAND METAL MFG.**

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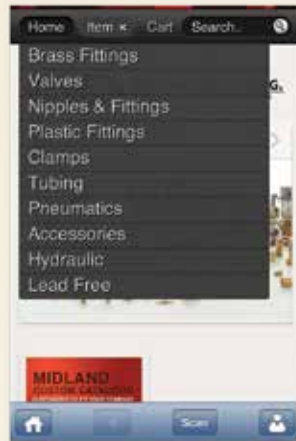
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## PICTORIAL INDEX

BRASS



VALVES



NIPPLES



PLASTIC



CLAMPS



TUBING



PNEUMATICS



ACCESSORIES



HYDRAULICS



## NUMERICAL INDEX

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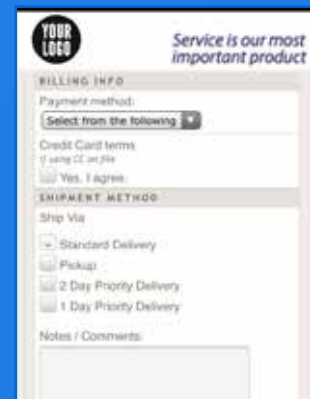
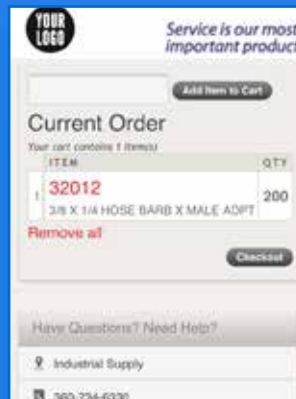
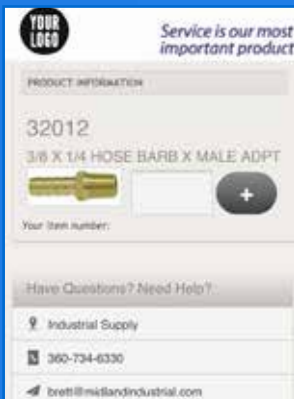


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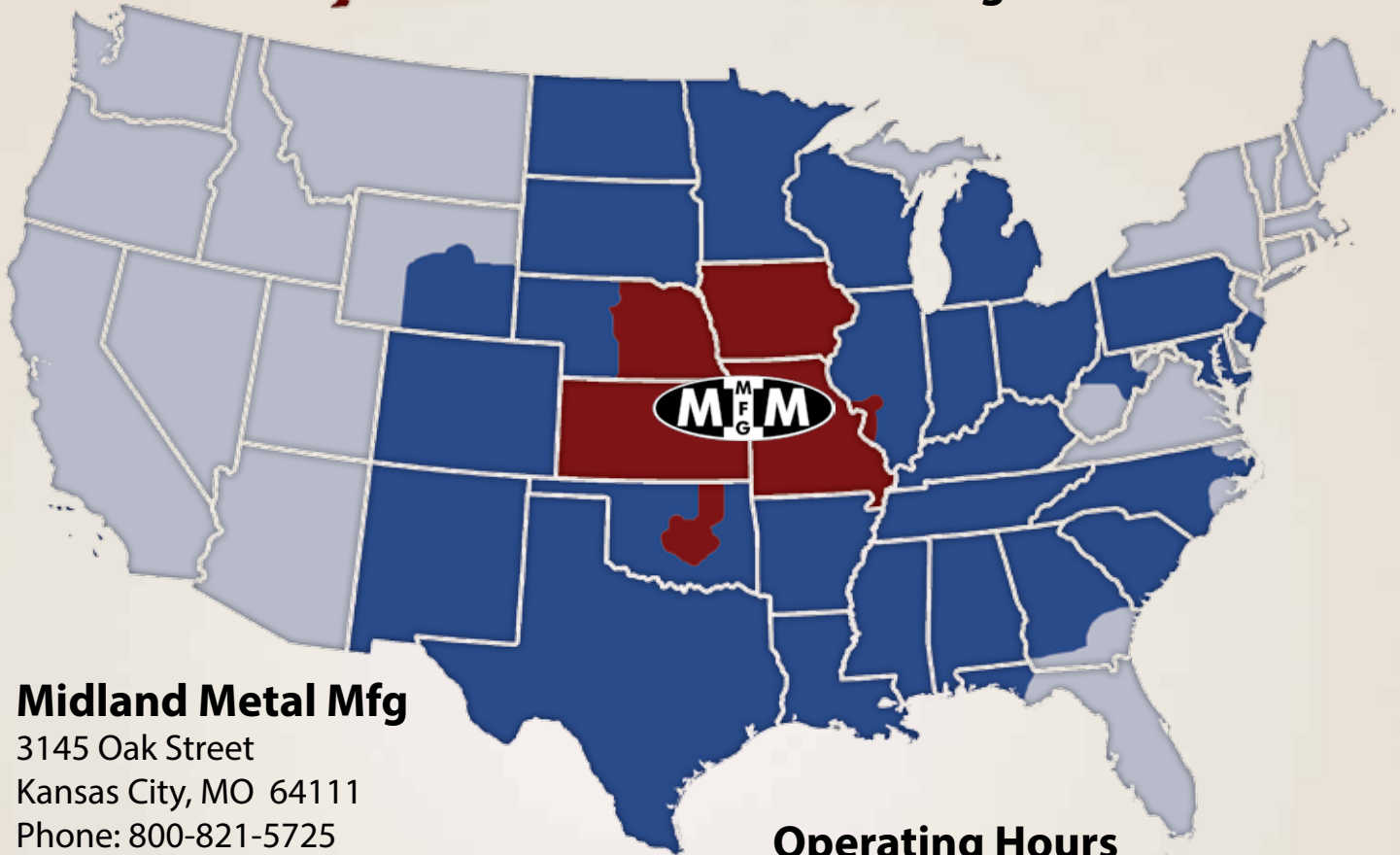


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[www.midlandmetal.com](http://www.midlandmetal.com)

# Kansas City, Missouri

Full Stocking Location



## Midland Metal Mfg

3145 Oak Street

Kansas City, MO 64111

Phone: 800-821-5725

Fax: 800-877-5391

sales@midlandmetal.com

Operating Hours

8:00am - 5:00pm CST

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2 Day Delivery

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***FASTER***

delivery to  
the entire  
West Coast



## **Midland Metal Mfg - West Coast**

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Kerman, CA 93630  
Phone: 559-846-9301  
Fax: 559-846-9302  
ddodge@midlandindustrial.com

**Operating Hours**  
**8:00am - 5:00pm PST**



## **Houston, TX**

**Hose & Accessory Sales**  
5731 Harvey Wilson Drive  
Houston, TX 77020  
Phone: 800-856-8888  
Fax: 713-675-6422  
jimk@hashose.com



## **Atlanta, GA**

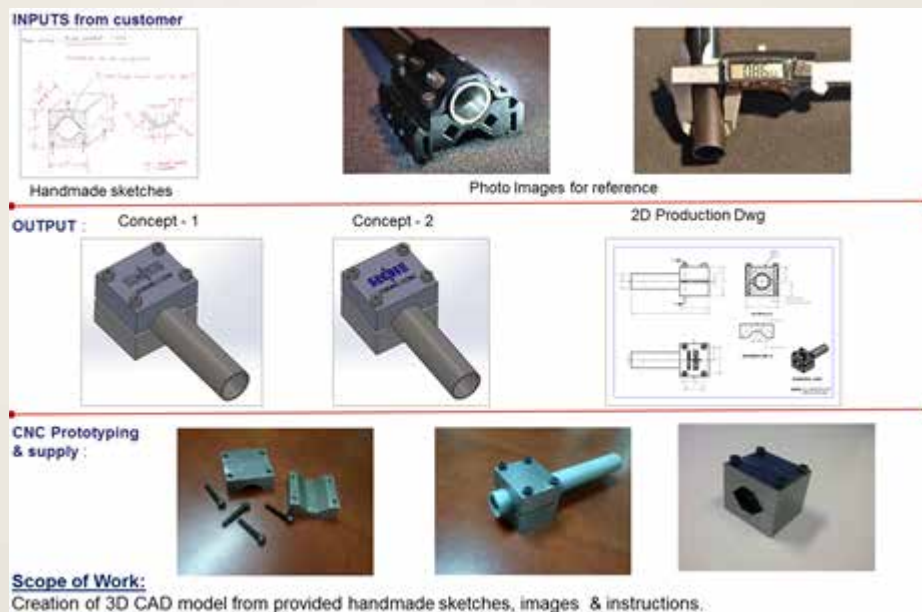
**Fortney Sales Company**  
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Acworth, GA 30101  
Phone: 800-241-3123  
Fax: 800-423-9249  
sales@fortneysales.com

Atlanta and Houston stocking locations have consignment stock and not all product will be available at these locations. You can easily check stock and availability for products at these locations online using Account Manager. All accounting will be handled in Kansas City.

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PLASTIC FITTINGS

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









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










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








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

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


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




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




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

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




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NEW

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


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NEW








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



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SEE WEBSITE FOR MORE!



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MANY NEW SIZES!

















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


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









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

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









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Male Elbow  pg 426	Female Elbow  pg 427	Male Branch  pg 427	Female Branch  pg 427	Union Tee  pg 427
Male O-Ring  pg 427	O-Ring Elbow  pg 427	Male O-Ring  pg 427		








## Stainless Compression

Pages 428-429

Tube Nut  pg 428	Sleeve Set  pg 428	Tube Union  pg 428	Male Connector  pg 428	Fe Connector  pg 428
Union Elbow  pg 428	Male Elbow  pg 429	Female Elbow  pg 429	Union Tee  pg 429	Male O-Ring  pg 429




## Quick Disconnect

Pages 398-400

Thread Conn.  pg 430	ISO-A  pg 430	ISO-B  pg 430	Flush Face  pg 432	LSQ Series  pg 431
KZE Series  pg 432	AG  pg 433			


## Din 2353 Metric

Page 433-435

Tube Plug  pg 433	Union Coupling  pg 434	Union Tee  pg 435
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## Steel Valves

Pages 436

Two-Way  pg 436	Three-Way  pg 436
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## Hydraulic Motors & Pumps

Pages 437-439

Motors  pg 404	Pumps  pg 405
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## High Pressure Flow Control

Pages 440-441

Flow Control  pg 440	Needle Valve  pg 440	Compensating  pg 441	Check Valve  pg 441
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## Actuators

Page 442-448

Pneumatic  pg 442	Electric  pg 446
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## Threading Information

<b>Abbreviation</b>	<b>System Name</b>
<b>BSPP</b>	<b>British Standard Pipe Parallel</b>
<b>BSPT<sub>r</sub></b>	<b>British Standard Pipe Taper</b>
<b>CHT</b>	American Standard Fire Hose Thread (1" National Hose Thread is <b>Chemical Hose Thread</b> , also known as Booster Hose Thread)
<b>GHT</b>	<b>Garden Hose Thread</b> ( FGH - Female Garden Hose ) ( MGH - Male Garden Hose )
<b>IPS</b>	<b>Iron Pipe Straight Thread</b>
<b>IPT</b>	<b>Iron Pipe Thread</b>
<b>JIC</b>	<b>Joint Industrial Committee</b>
<b>NH or NST</b>	American Standard Fire Hose Coupling Thread ( <b>National Hose</b> thread also known as <b>National Standard Thread</b> )
<b>NPT</b>	American Standard Taper Pipe Thread ( <b>National Pipe Tapered</b> )
<b>NPTF</b>	American Standard Taper Pipe Fuel Dryseal Thread ( <b>National Pipe Tapered</b> )(Dryseal)
<b>NPSH</b>	American Standard Straight Pipe for Hose Couplings ( <b>National Pipe Straight Hose</b> )
<b>NPSM</b>	American Standard Straight Mechanical Joints ( <b>National Pipe Straight Mechanical</b> )

## Association Abbreviations

**SAE International (SAE)** is a professional organization for mobility engineering professionals in the aerospace, automotive, and commercial vehicle industries. The Society is a standards development organization for the engineering of powered vehicles of all kinds, including cars, trucks, boats, aircraft, and others.

- AGA** - **American Gas Association**
- JIC** - **Joint Industrial Committee**
- ASA** - **American Statistical Association**
- ASME** - **American Society of Mechanical Engineers**

## Additional information

- Brass Fitting Material Composition .....Intro Page 22
- Thread Size Chart .....Page 417
- Thread Profiles.....Page 418
- Quick Disconnect Crossover reference.....Page 416

For more detailed information, suggested sealing methods, thread compatibility, etc...  
visit **[www.midlandmetal.com](http://www.midlandmetal.com)** and click on "**Knowledge Bank**"

# Need help identifying a fitting?

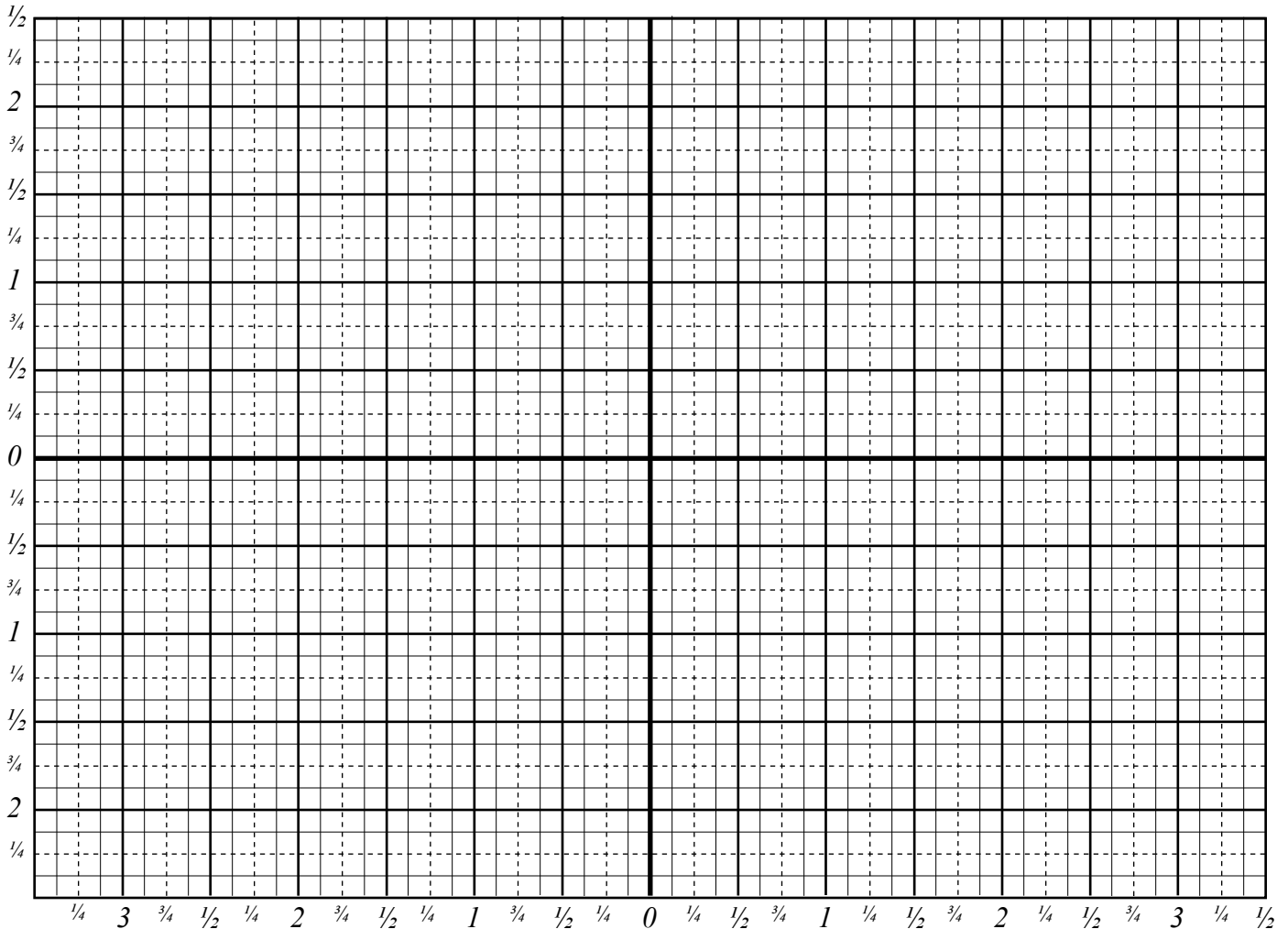
Let our engineering team assist you!

**Step 1** - Determine material. (Brass, Steel, Stainless, etc...)

**Step 2** - Check Threads. (See Intro page 20 for threading types)

**Step 3** - Measure Outer Diameter(O.D.) , Inner Diameter (I.D.), Length and any other relevant measurement.

**Step 4** - If you have the fitting with you, place it on the grid below and take a photo. If the fitting cannot be placed on the grid please use any photo available.



**Step 5**- Email photo of fitting along with information collected to :

**engineer@midlandmetal.com**

Please allow up to 1 business day for a response. If the request is urgent please call 1-800-821-5725

## Material used for Brass Fittings

**Straight bodies:** Barstock CA 360 or CA 345  
**Shape bodies:** Extruded barstock CA 360 or Forged CA 377  
**Nuts:** Barstock CA 360 or Forged CA 377

## MATERIAL COMPOSITION

### CA360 Barstock Brass

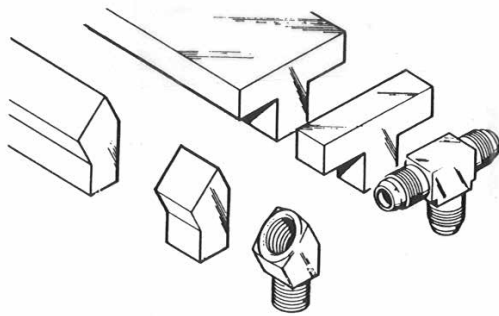
ASTM B16 - 92

Elements	Nominal	Min	Max
Copper	61.5	60	63
Lead	3.1	2.5	3.7
Iron			.35
Other			.50
Zinc	35.4	Balance	

### CA377 Forged Brass

ASTM B 124,283

Elements	Nominal	Min	Max
Copper	59.5	58	61
Lead	2	1.5	2.5
Iron			.30
Zinc	38	Balance	



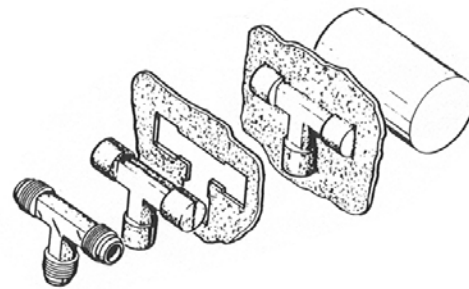
### Extruded Barstock Fittings

Hexagon, round and shaped bars are extruded in the configuration required, drawn to size, cut to length and straightened. First a solid round billet (8 to 12 inches in diameter) is heated to the pliable state and forced by pressure of approximately 80,000 pounds per square inch through a die. The resulting continuous length of bar is cooled and then drawn through dies to the desired external size. (The drawing process also controls the temper). After straightening, the bar is ready for machining.

The process produces a dense, nonporous material somewhat stronger in the longitudinal direction due to an orientated flow of the grain.

### Forged Fittings

Material for forging is extruded in round bars, cut to length and straightened. (At this point in the process, forging rod differs from round extruded machinable bars only in temper and chemical properties). After straightening, the bars are cut again into slugs (short lengths), reheated to the pliable state and pressed under a pressure of approximately 25,000 pounds per square inch between upper and lower die cavities. After cooling, the flash is trimmed away and the forging blank is ready for machining.



This process of forming under extreme pressure produces a uniformly dense material of exceptional strength. Because grain flow follows the contour, the fitting has high impact strength and is resistant to mechanical shock and vibration.

### Why Brass Fittings?

Brass fittings are popular because they are strong and durable and hence widely used in industrial and residential applications. The use of brass to make various fittings provides a distinct look because of its yellow color. The advantages of brass for fittings include its good corrosive resistance, and also its plating, joining, polishing and finishing characteristics. Brass as a material is easily machined and hence can be given any shapes of the various types of fittings available.

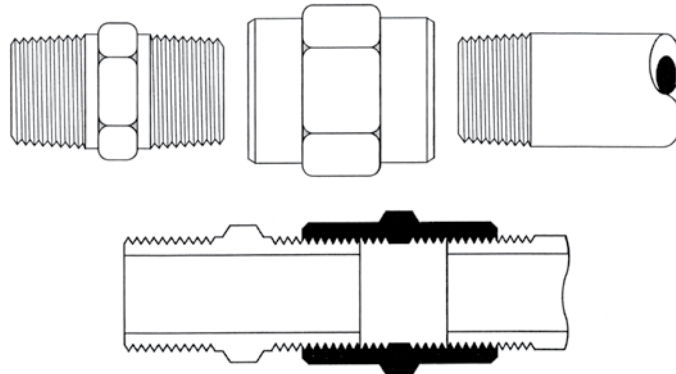
### Features of Brass Fittings:

Brass fittings have certain unique features which make them highly demanded. Some of these properties are as follows:

- Brass fittings are characterized by good strength.
- These fittings have excellent high temperature ductility.
- They have reasonable cold ductility.
- Fittings made of brass have good conductivity.
- They are excellent in corrosion resistance.
- Brass fittings have good bearing properties.
- They have low magnetic permeability.



# Pipe



**• NOT LEAD FREE**

- Lead Free Fittings  
see pages 166-175
- For Bronze & Larger Sizes  
see pages 215-237
- For BSPT/ BSPP  
see pages 116-117

<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>1/2</sup></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>
<b>Thread OD</b>	<b>1/4</b>	<b>3/8</b>	<b>1/2</b>	<b>5/8</b>	<b>3/4</b>	<b>1</b>	<b>1-1/4</b>

**•Typical Application**

Grease, fuels, LP and Natural gas (available on special order), refrigeration, instrumentation and hydraulic systems.

**•Pressure**

Operating pressure up to 1200 PSI.

**•Vibration**

Fair resistance.

**•Temperature Range**

-65°F to +250°F (-53°C to +121°C).

**•Material**

CA360 Brass for Barstock fittings.  
CA377 Brass for forged fittings.

**•Used With**

Brass, bronze, copper, steel, aluminum and iron pipe.

**• Tolerance**

+/- .02 on all dimensions. Dimension Data can change without notice. Please call us when dimensions are critical.

**•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.

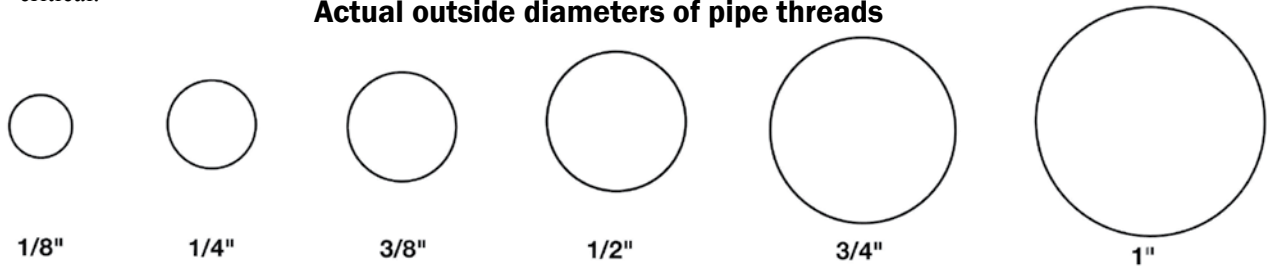
**•Assembly Instructions**

1- Tighten approximately 2-1/2 turns past hand tight.

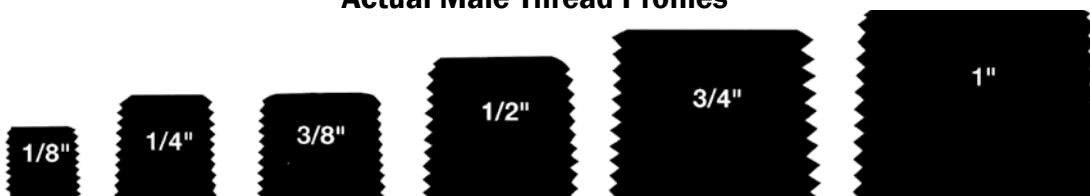
2- Fittings with Everseal tighten two turns past hand tight. Brittle materials require special cautions.

- for larger sizes see bronze fittings on page 227
- see page 321 for plastic pipe fittings. - Many new sizes

**Actual outside diameters of pipe threads**



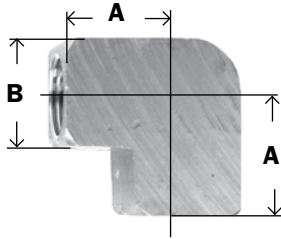
**Actual Male Thread Profiles**



**90° FEMALE ELBOW**

SAE# 130238

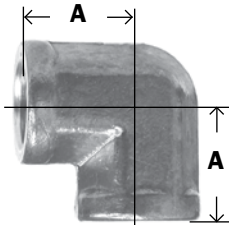
2200P  
3500  
302  
200



Part #	Thread Size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-001	1/8"	0.55	0.56	0.09	2.99
28-002	1/4"	0.78	0.68	0.13	4.55
28-003	3/8"	0.84	0.81	0.16	5.95
28-004	1/2"	1.09	1.00	0.34	8.56
28-005	3/4"	1.16	1.25	0.60	17.69

**90° FORGED FEMALE ELBOW**

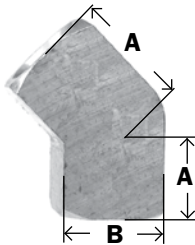
1200P  
E7  
100AF  
100B



Part #	Thread size NPTF	A	Body Width	Approx. Wt. Lbs.	List Price
28-009	1/8"	0.57	0.50	0.04	3.20
28-010	1/4"	0.70	0.68	0.10	4.34
28-011	3/8"	0.81	0.81	0.12	6.21
28-012	1/2"	1.00	1.00	0.23	10.38
28-013	3/4"	1.13	1.25	0.42	22.31
28-014	1/4" x 1/8"	0.72	0.69	0.12	6.84
28-015	3/8" x 1/4"	0.81	0.81	0.15	5.45
28-016	1/2" x 3/8"	1.00	1.00	0.28	14.97
28-017	1"	1.42	1.50	0.75	25.71

**45° FEMALE ELBOW**

129  
2201P  
205  
23355  
45EZ  
105  
100-45A

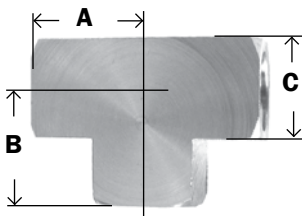


Part #	Thread size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-018	1/8"	0.45	0.56	0.06	4.69
28-019	1/4"	0.66	0.68	0.12	6.13
28-020	3/8"	0.69	0.81	0.16	9.07

**UNION TEE**

SAE# 130438

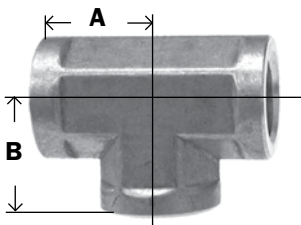
311  
101A  
322  
2203P  
3700  
203



Part #	Thread size NPTF	A	B	C	Approx. Wt. Lbs.	List Price
28-024	1/8"	0.55	0.55	0.56	0.08	3.38
28-025	1/4"	0.78	0.78	0.68	0.17	4.99
28-026	3/8"	0.84	0.84	0.81	0.22	7.89
28-027	1/2"	1.09	1.09	1.00	0.43	12.67
28-028	3/4"	1.16	1.16	1.25	0.64	23.81

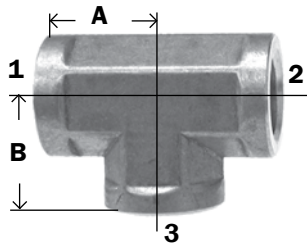
**UNION FORGED TEE**

1203P  
LT7  
101AF  
101B



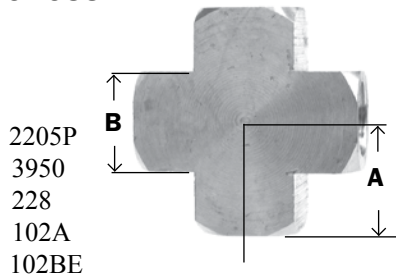
Part #	Thread size NPTF	A & B	Body Width	Approx. Wt. Lbs.	List Price
28-032	1/8"	0.56	0.50	0.06	3.18
28-033	1/4"	0.71	0.68	0.13	5.12
28-034	3/8"	0.81	0.81	0.16	6.06
28-035	1/2"	1.00	1.00	0.27	12.06
28-036	3/4"	1.16	1.25	0.53	18.46
28-023	1"	1.42	1.50	.924	37.15

**REDUCING FORGED TEES**



Part #	1 NPT	2 NPT	3 NPT	A & B	Body Width	Approx. Wt. Lbs.	List Price
28-029	1/8"	1/8"	1/4"	0.72	0.69	0.16	8.61
28-030	1/4"	1/4"	1/8"	0.72	0.69	0.14	6.99
28-031	1/4"	1/4"	3/8"	0.81	0.81	0.21	14.12
28-038	3/8"	1/4"	3/8"	0.81	0.81	0.18	12.48
28-039	3/8"	3/8"	1/4"	0.81	0.81	0.18	13.17
28-046	1/2"	1/2"	3/8"	1.00	1.00	0.30	11.10
28-048	3/4"	3/4"	1/2"	1.16	1.25	0.59	34.71

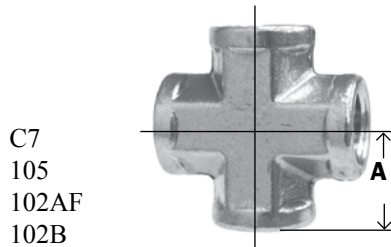
**CROSS**



2205P  
3950  
228  
102A  
102BE

Part #	Thread size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-041	1/8"	0.50	0.50	0.10	7.62
28-042	1/4"	0.78	0.68	0.21	7.59
28-043	3/8"	0.84	0.81	0.25	9.19
28-044	1/2"	1.09	1.00	0.51	18.10
28-045	3/4"	1.16	1.25	0.75	26.72

**FORGED CROSS**

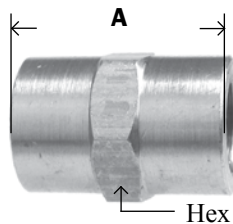


C7  
105  
102AF  
102B

Part #	Thread size NPTF	A	Body Width	Approx. Wt. Lbs.	List Price
28-049	1/8"	0.56	0.50	0.06	6.40
28-050	1/4"	0.72	0.69	0.15	8.06
28-051	3/8"	0.81	0.81	0.18	11.54
28-052	1/2"	1.00	1.00	0.34	18.37

**COUPLING**

**SAE# 130138**



207P  
371  
3300  
103AH  
103B

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-058L	1/8"	0.75	0.50	0.02	0.88
28-058	1/8"	0.75	0.56	0.03	1.88
28-059L	1/4"	0.88	0.63	0.03	1.32
28-059	1/4"	1.12	0.75	0.09	3.03
28-060L	3/8"	1.00	0.81	0.06	2.22
28-060	3/8"	1.12	0.87	0.10	3.97
28-061L	1/2"	1.19	0.93	0.09	4.19
28-061	1/2"	1.50	1.06	0.19	6.48
28-062L	3/4"	1.19	1.25	0.18	6.25
28-062	3/4"	1.53	1.25	0.24	15.87
28-063	1"	1.89	1.50	.357	18.54

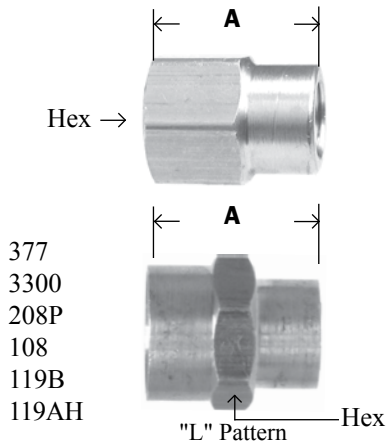
• 1/16" available (28-057) - POR

\* For larger sizes, see bronze couplings on pg. 230

Dimension data can change without notice.  
Please see website when dimensions are critical.

**REDUCING COUPLING**

**SAE# 130138**

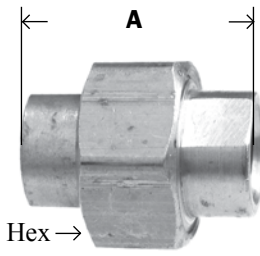


- 377
- 3300
- 208P
- 108
- 119B
- 119AH

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-181L	1/4" x 1/8"	0.94	0.62	0.04	1.93
28-181	1/4" x 1/8"	0.97	0.75	0.08	2.71
28-182	3/8" x 1/8"	0.94	0.87	0.10	5.68
28-183L	3/8" x 1/4"	1.00	0.81	0.06	2.76
28-183	3/8" x 1/4"	1.16	0.87	0.12	4.03
28-180*	1/2" x 1/8"	1.19	0.93	0.15	14.52
28-184L	1/2" x 1/4"	1.11	1.00	0.10	5.86
28-184	1/2" x 1/4"	1.28	1.06	0.20	7.87
28-185L	1/2" x 3/8"	1.19	0.93	0.10	5.26
28-185	1/2" x 3/8"	1.38	1.06	0.20	9.86
28-188*	3/4" x 3/8"	1.32	1.37	0.20	24.45
28-189*	3/4" x 1/2"	1.19	1.18	0.14	10.04

\*Not to SAE specs

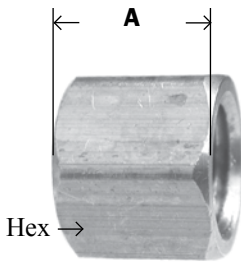
**UNION**



- 3250
- 212P
- 104A
- 104B

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-067	1/8"	1.19	0.94	0.13	22.77
28-068	1/4"	1.31	1.06	0.18	20.82
28-069	3/8"	1.75	1.25	0.33	44.46
28-070	1/2"	1.79	1.56	0.50	30.35

**CAP**

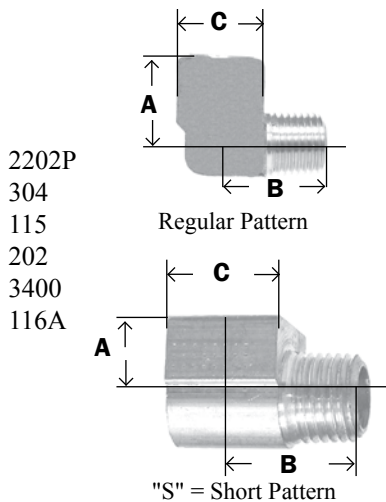


- 3129
- 213P
- 23129
- 108A
- 108B

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-075	1/8"	0.47	0.56	0.03	0.94
28-076	1/4"	0.60	0.68	0.04	1.83
28-077	3/8"	0.69	0.81	0.06	2.58
28-078	1/2"	0.78	0.93	0.08	4.00
28-079	3/4"	0.94	1.25	0.16	8.63
28-080	1"	1.13	1.50	0.23	12.22

**90° STREET ELBOW**

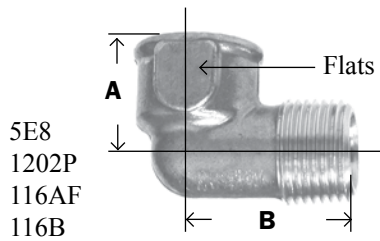
**SAE# 130239**



- 2202P
- 304
- 115
- 202
- 3400
- 116A

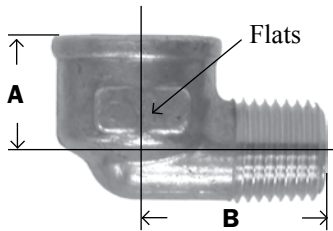
Part #	Thread size NPTF	A	B	C	Approx. Wt. Lbs.	List Price
28-156	1/8"	0.48	0.66	0.56	0.05	2.20
28-156S	1/8" short	0.34	0.57	0.50	0.03	1.46
28-157	1/4"	0.72	0.91	0.68	0.09	3.58
28-157S	1/4" short	0.45	0.78	0.68	0.07	2.57
28-158	3/8"	0.78	0.97	0.81	0.16	5.30
28-159	1/2"	1.03	1.25	1.00	0.33	9.17
28-160	3/4"	1.12	1.38	1.25	0.52	17.58

**FORGED 90° STREET ELBOW**



Part #	Thread size NPTF	A	B	Wrench Flats	Approx. Wt. Lbs.	List Price
28-165	1/8"	0.61	0.85	0.62	0.06	3.50
28-166	1/4"	0.50	0.86	0.72	0.08	3.30
28-167	3/8"	0.70	1.00	0.88	0.10	5.09
28-168	1/2"	0.96	1.43	1.00	0.20	7.63
28-169	3/4"	0.90	1.40	1.25	0.25	12.11

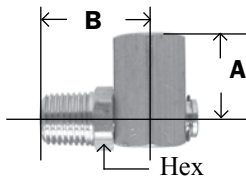
**FORGED REDUCING 90° STREET ELBOW**



Part #	Thread size NPTF FxM	A	B	Wrench flats	Approx. Wt. Lbs.	List Price
28-260	1/8" x 1/4"	0.50	0.87	0.71	0.08	4.90
28-261B*	1/4" x 1/8"	0.53	0.72	0.69	0.07	3.44
28-261	1/4" x 1/8"	0.50	0.81	0.72	0.06	4.92
28-262	1/4" x 3/8"	0.93	1.06	0.59	0.12	6.16
28-263	3/8" x 1/4"	0.58	0.94	0.81	0.07	8.11
28-264	3/8" x 1/2"	0.97	1.36	1.00	0.28	12.94
28-265	1/2" x 3/8"	0.96	1.37	1.00	0.22	14.27

\*Barstock

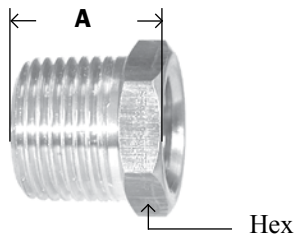
**PIPE SWIVEL 90° STREET ELBOW**



Part #	Thread size NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
28-430	1/4"	1.18	1.25	.625	0.22	33.92

**HEX BUSHING**

**SAE# 130140**



373  
3220  
209P  
110A  
110B

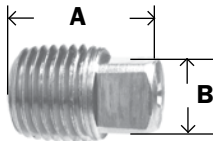
Part #	Thread size NPTF MxF	A	Hex	Approx. Wt. Lbs.	List Price
28-102L	1/4" x 1/8"	0.62	0.56	0.02	0.70
28-102	1/4" x 1/8"	0.75	0.56	0.04	1.12
28-103	3/8" x 1/8"	0.75	0.68	0.05	1.83
28-104L	3/8" x 1/4"	0.69	0.68	0.03	1.25
28-104	3/8" x 1/4"	0.75	0.75	0.05	1.99
28-105L	1/2" x 1/8"	0.81	0.81	0.08	4.20
28-105	1/2" x 1/8"	1.00	0.87	0.10	3.71
28-106L	1/2" x 1/4"	0.81	0.81	0.08	2.42
28-106	1/2" x 1/4"	1.00	0.87	0.11	3.44
28-107L	1/2" x 3/8"	0.81	0.81	0.05	1.75
28-107	1/2" x 3/8"	1.00	0.87	0.10	2.60
28-108	3/4" x 1/8"	0.94	1.06	0.20	10.66
28-109L	3/4" x 1/4"	0.94	1.06	0.18	4.33
28-110L	3/4" x 3/8"	0.94	1.06	0.15	5.10
28-111L	3/4" x 1/2"	0.94	1.06	0.11	3.71
28-111	3/4" x 1/2"	1.00	1.12	0.14	4.98
28-112	1" x 1/4"	1.15	1.37	0.32	8.87
28-113	1" x 3/8"	1.12	1.37	0.30	9.64
28-114	1" x 1/2"	1.31	1.44	0.29	9.48
28-115	1" x 3/4"	1.31	1.37	0.20	7.44

**FACE BUSHING**



Part #	Thread size NPTF MxF	A	Approx. Wt. Lbs.	List Price
28-121	1/4" x 1/8"	0.45	0.01	1.64
28-122	3/8" x 1/8"	0.50	0.03	2.58
28-116	3/8" x 1/4"	0.50	0.02	2.68
28-090	1/2" x 1/8"	0.56	0.06	5.23
28-128	1/2" x 1/4"	0.56	0.05	3.75
28-117	1/2" x 3/8"	0.56	0.03	2.26
28-129	3/4" x 1/4"	0.62	0.11	7.73
28-130	3/4" x 3/8"	0.62	0.08	7.04
28-118	3/4" x 1/2"	0.64	0.03	5.92
28-119	1" x 3/4"	0.77	0.10	12.31

**SQUARE HEAD PLUG**  
1/8 - 1/2 Solid

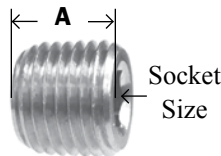


3151  
211P  
109A  
109B

Part #	Thread size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-084	1/8"	0.58	0.27	0.02	0.82
28-085	1/4"	0.80	0.37	0.03	1.15
28-086	3/8"	0.80	0.43	0.06	2.03
28-087	1/2"	1.07	0.55	0.13	3.13
28-088**	3/4"	1.11	0.61	0.20	4.77
28-089**	1"	1.24	0.81	0.35	11.06

\*\* Cored

**COUNTERSUNK HEX PLUG**  
3/4" taper thread



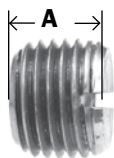
3153  
219P  
109CS  
118

SAE J531

Part #	Thread size NPTF	A	Socket size	Approx. Wt. Lbs.	List Price
28-092	1/16"	0.30	0.12	0.01	1.16
28-093	1/8"	0.30	0.18	0.01	0.93
28-094	1/4"	0.45	0.26	0.02	1.01
28-095	3/8"	0.45	0.31	0.03	1.23
28-096	1/2"	0.61	0.39	0.05	2.39
28-097	3/4"	0.62	0.56	0.10	4.20

See lead free section for flush and square countersunk plugs

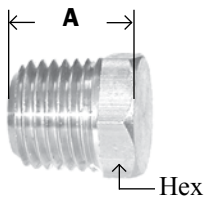
**SLOTTED-HEAD PLUG**



220P  
3150  
117A  
117B

Part #	Thread size NPTF	A	Approx. Wt. Lbs.	List Price
28-174	1/8"	0.31	0.01	0.99
28-175	1/4"	0.42	0.02	1.22
28-176	3/8"	0.45	0.05	2.89

**CORED HEX PLUGS**

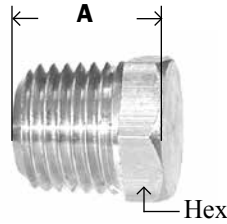


218P  
3152  
121A  
103  
121B  
PPH  
218P

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-201	1/8"	0.55	0.43	0.01	0.65
28-202	1/4"	0.62	0.56	0.02	1.10
28-203	3/8"	0.72	0.68	0.06	1.52
28-204	1/2"	0.81	0.87	0.09	2.85
28-205	3/4"	0.94	1.06	0.16	4.08
28-206	1"	1.16	1.37	0.28	13.67

See our lead free section for more sizes!

**SOLID HEX HEAD PLUGS**



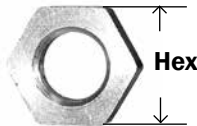
121AS

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-201S	1/8"	0.55	0.43	0.02	1.60
28-202S	1/4"	0.75	0.56	0.05	1.73
28-203S	3/8"	0.66	0.68	0.07	3.32
28-204S	1/2"	0.81	0.87	0.12	3.31
28-205S	3/4"	0.92	1.06	0.24	6.82
28-206S	1"	1.00	1.31	0.38	19.01

**LOCKNUT**

- Jam Nuts
- Straight pipe thread

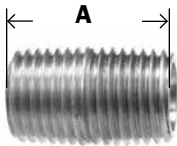
210P  
21102  
111A  
111B



Part #	Thread size NPSL	Hex	Thickness	Approx. Wt. Lbs.	List Price
28-123	1/8"	0.68	0.19	0.02	0.97
28-124	1/4"	0.87	0.25	0.04	1.33
28-125	3/8"	1.00	0.31	0.04	1.62
28-126	1/2"	1.125	0.25	0.04	2.07

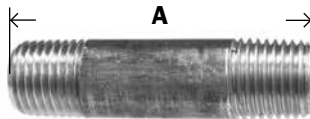
**CLOSE NIPPLE**

165  
215PN  
3326  
112A  
112B



Part #	Thread size NPTF	A	Approx. Wt. Lbs.	List Price
28-131	1/8"	0.75	0.01	0.57
28-132	1/4"	0.88	0.02	1.07
28-133	3/8"	1.00	0.05	1.90
28-134	1/2"	1.12	0.06	2.20
28-135	3/4"	1.31	0.11	4.10

**LONG NIPPLE**



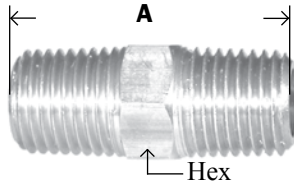
113B  
113A  
166  
3327, 3328, 3329, 3330  
3331  
215PNL

Part #	Thread size NPTF	A Length	Approx. Wt. Lbs.	List Price
28-140	1/8"	1.50	0.03	1.42
28-141	1/8"	2.00	0.04	1.52
28-142	1/8"	2.50	0.06	2.69
28-143	1/8"	3.00	0.06	2.94
28-475	1/8"	3.50	0.07	6.31
28-144	1/4"	1.50	0.03	1.97
28-145	1/4"	2.00	0.05	2.18
28-146	1/4"	2.50	0.08	3.80
28-147	1/4"	3.00	0.10	5.00
28-481	1/4"	3.50	0.12	8.79
28-148	3/8"	1.50	0.06	2.53
28-149	3/8"	2.00	0.10	3.84
28-150	3/8"	2.50	0.10	4.95
28-151	3/8"	3.00	0.13	4.98
28-487	3/8"	3.50	0.17	10.96
28-152	1/2"	1.50	0.08	2.71
28-153	1/2"	2.00	0.12	4.19
28-154	1/2"	2.50	0.16	5.91
28-155	1/2"	3.00	0.20	7.66
28-493	1/2"	3.50	0.24	8.79
28-136	3/4"	1.50	0.12	8.64
28-497	3/4"	2.00	0.18	12.68
28-498	3/4"	2.50	0.23	16.21
28-499	3/4"	3.00	0.28	21.37

• NOTE: For longer lengths and larger diameters, see our red brass nipples section, pg. 214

**HEX NIPPLE**

**SAE# 130137**

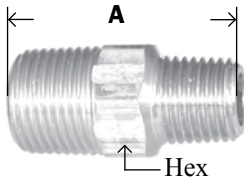


- 216P
- 3325
- 379
- 122AH
- 122B

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-211L	1/8"	0.91	0.43	0.02	0.99
28-211	1/8"	0.97	0.43	0.03	0.99
28-212L	1/4"	1.12	0.56	0.04	1.27
28-212	1/4"	1.38	0.56	0.06	1.69
28-213L	3/8"	1.25	0.68	0.07	1.95
28-213	3/8"	1.41	0.68	0.07	2.67
28-214L	1/2"	1.50	0.87	0.11	3.38
28-214	1/2"	1.81	0.87	0.17	4.11
28-215	3/4"	1.96	1.13	0.23	7.69
28-216	1"	2.30	1.37	0.43	12.93

**REDUCING HEX NIPPLE**

**SAE# 130137**



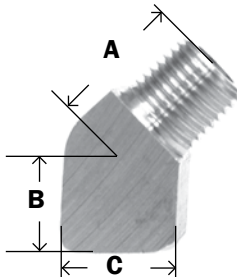
- 216P
- 3325
- 379
- 122AH
- 122B

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-220L	1/4" x 1/8"	1.00	0.56	0.04	1.31
28-220	1/4" x 1/8"	1.19	0.56	0.04	1.69
28-221L	3/8" x 1/8"	1.11	0.68	0.06	3.11
28-221	3/8" x 1/8"	1.22	0.68	0.07	2.99
28-222L	3/8" x 1/4"	1.19	0.68	0.06	1.80
28-222	3/8" x 1/4"	1.41	0.68	0.07	2.50
28-223L	1/2" x 1/4"	1.34	0.87	0.09	3.22
28-223	1/2" x 1/4"	1.62	0.87	0.12	3.50
28-224L	1/2" x 3/8"	1.41	0.87	0.11	3.78
28-224	1/2" x 3/8"	1.62	0.87	0.12	4.15
28-225	3/4" x 1/2"	1.50	1.06	0.15	5.83

• 1/8" x 1/16" available (28-218) - POR

**45° STREET ELBOW**

**SAE# 130339**

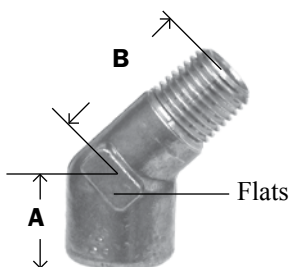


- 306
- 3350
- 2214P
- 224

Part #	Thread size NPTF	B	A	C	Approx. Wt. Lbs.	List Price
28-230	1/8"	0.38	0.50	0.56	0.03	2.58
28-231	1/4"	0.56	0.72	0.68	0.09	3.43
28-232	3/8"	0.56	0.78	0.81	0.12	5.95
28-233	1/2"	0.75	1.00	1.00	0.20	9.09
28-234	3/4"	0.75	1.06	1.25	0.34	29.77

**45° FORGED STREET ELBOW**

- 45E8
- 124B



Part #	Thread size NPTF	A	B	Wrench flats	Approx. Wt. Lbs.	List Price
28-238	1/8"	0.63	0.81	0.56	0.05	5.13
28-239	1/4"	0.63	1.06	0.81	0.11	6.52
28-240	3/8"	0.72	1.06	0.93	0.17	9.29

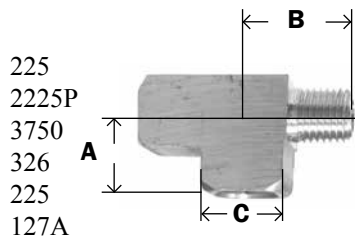


# BRASS FITTINGS

# PIPE

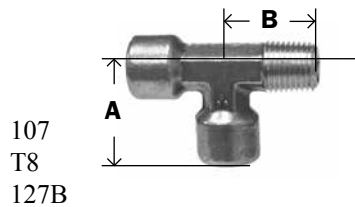
## STREET TEE/ SERVICE TEE/ MALE RUN TEE

SAE# 130424



Part #	Thread size NPTF	A	B	C	Approx. Wt. Lbs.	List Price
28-245	1/8"	0.55	0.66	0.56	0.08	3.23
28-246	1/4"	0.78	0.91	0.68	0.17	6.12
28-247	3/8"	0.84	0.97	0.81	0.22	6.79
28-248	1/2"	1.09	1.25	1.00	0.40	12.46
28-249	3/4"	1.16	1.39	1.25	0.60	20.03

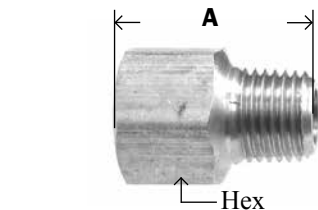
## FORGED STREET TEE



Part #	Thread size NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
28-253	1/8"	0.56	0.75	0.50	0.05	4.96
28-254	1/4"	1.03	1.00	0.46	0.13	5.51
28-255	3/8"	1.19	1.09	0.68	0.24	10.33
28-256	1/2"	1.52	1.40	0.88	0.45	21.51
28-257	3/4"	1.34	1.73	1.25	0.65	51.66

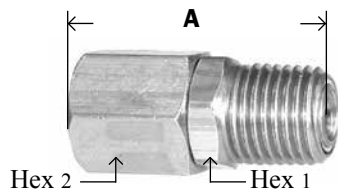
## EXTENDER ADAPTER

SAE# 130139



Part #	Thread size NPTF FxM	A	Hex	Approx. Wt. Lbs.	List Price
28-190L	1/8" x 1/8"	0.83	0.50	0.03	1.63
28-190	1/8" x 1/8"	0.88	0.56	0.04	1.27
28-191L	1/4" x 1/8"	0.94	0.62	0.04	1.31
28-191	1/4" x 1/8"	1.06	0.75	0.07	3.07
28-192L	1/4" x 1/4"	1.00	0.62	0.04	1.45
28-192	1/4" x 1/4"	1.25	0.75	0.07	2.99
28-198	3/8" x 1/8"	1.00	0.81	0.06	5.00
28-193L	3/8" x 1/4"	1.12	0.81	0.08	2.44
28-193	3/8" x 1/4"	1.25	0.87	0.09	3.96
28-194L	3/8" x 3/8"	1.24	0.81	0.10	3.25
28-194	3/8" x 3/8"	1.25	0.87	0.11	3.62
28-199	1/2" x 1/4"	1.46	1.06	0.08	4.86
28-195L	1/2" x 3/8"	1.19	0.93	0.09	4.53
28-195	1/2" x 3/8"	1.47	1.06	0.18	6.99
28-196	1/2" x 1/2"	1.66	1.06	0.12	6.49
28-207	3/4" x 3/8"	1.59	1.25	0.26	30.94
28-208	3/4" x 1/2"	1.69	1.37	0.14	14.76
28-208L	3/4" x 1/2"	1.22	1.25	0.13	14.76
28-209	3/4" x 3/4"	1.69	1.37	0.34	20.14

## PIPE SWIVEL ADAPTER



344R  
3183  
\*300 PSI  
all sizes

Part #	Thread size NPTF FxM	A	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
28-424	1/8"	1.10	0.43	0.50	0.05	4.58
28-425	1/4"	1.34	0.56	0.62	0.06	10.29
28-426	3/8"	1.36	0.68	0.75	0.08	28.07
28-427	1/2"	1.87	0.87	0.95	0.10	30.69

## SWIVEL FITTING

- 360° Turning
- Swivels



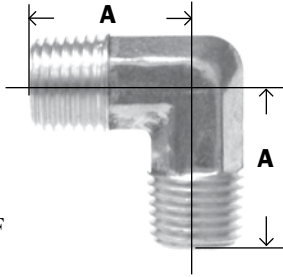
## Male NPT x Female NPT

Part #	Size	List Price
320-061	1/4	10.99

BRASS

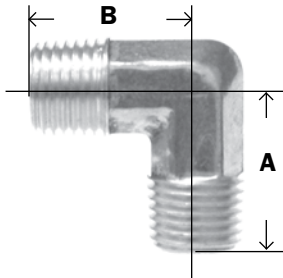
**FORGED 90° MALE ELBOW**

LE5  
3455  
116AMF



Part #	Thread size NPTF	A	Body Width	Approx. Wt. Lbs.	List Price
28-266	1/8"	0.79	0.38	0.04	3.23
28-267	1/4"	0.87	0.45	0.06	3.24
28-268	3/8"	1.00	0.59	0.12	6.22
28-269	1/2"	1.38	0.78	0.21	8.65

**FORGED 90° MALE REDUCING ELBOW**

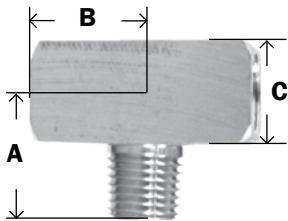


Part #	Thread size NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
28-274	1/4" x 1/8"	0.88	0.78	0.47	0.06	4.65
28-275	3/8" x 1/4"	0.90	0.90	0.46	0.06	4.78
28-276	1/2" x 3/8"	1.12	1.00	0.59	0.12	8.57

**MALE BRANCH TEE**

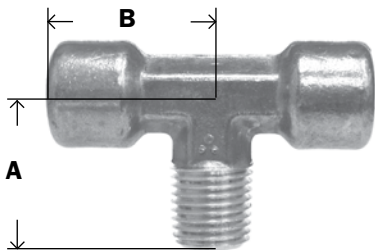
SAE# 130425

T9  
X106  
23601  
3600  
2224P  
226  
329  
128



Part #	Thread size NPTF	A	B	C	Approx. Wt. Lbs.	List Price
28-281	1/8"	0.66	0.55	0.56	0.08	3.33
28-282	1/4"	0.91	0.78	0.68	0.15	6.06
28-283	3/8"	0.97	0.84	0.81	0.22	7.99
28-284	1/2"	1.25	1.09	1.00	0.40	17.83
28-285	3/4"	1.38	1.16	1.25	0.62	23.47

**FORGED MALE BRANCH TEE**



Part #	Thread size NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
28-281F	1/8"	0.75	0.56	0.50	0.06	4.50
28-282F	1/4"	1.00	1.03	0.46	0.12	7.36

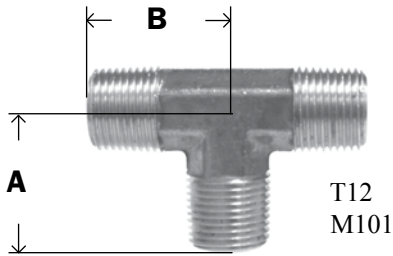
T9



**BIN LABELS ON DEMAND**

SEE INTRO PAGE **4**

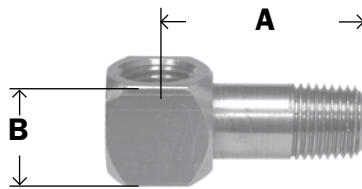
**FORGED ALL MALE TEE**



Part #	Thread size NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
28-290	1/8"	0.75	0.75	0.43	0.06	4.99
28-291	1/4"	0.86	0.86	0.43	0.08	4.89
28-292	3/8"	1.09	1.09	0.60	0.16	9.92
28-293	1/2"	1.22	1.22	0.68	0.22	9.76
28-294	3/4"	1.43	1.43	0.87	0.38	31.18

**LONG STREET ELLS**

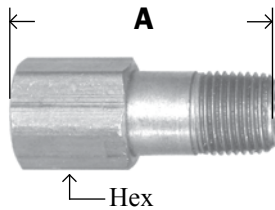
D.O.T. Approved



Part #	Thread size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-440	1/8"	1-3/16"	0.50	0.06	10.30
28-441	1/8"	1-7/16"	0.50	0.06	5.12
28-442	1/8"	1-11/16"	0.50	0.06	8.51
28-443	1/8"	1-7/8"	0.50	0.16	14.95
28-328	1/4"	1-3/16"	0.75	0.12	17.29
28-329	1/4"	1-7/16"	0.75	0.14	14.08
28-330	1/4"	1-11/16"	0.75	0.15	14.05
28-331	1/4"	1-7/8"	0.62	0.09	13.30
28-332	1/4"	2-1/4"	0.75	0.17	19.15
28-333	3/8"	1-3/4"	0.87	0.22	21.93

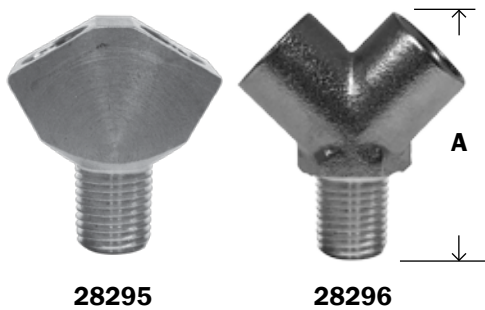
**LONG EXTENSION ADAPTERS**

D.O.T. Approved



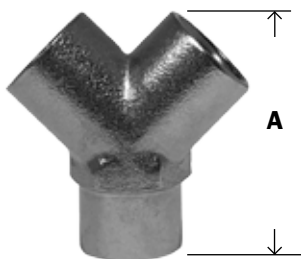
Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-335	1/8"	1-1/4"	0.50	0.04	11.33
28-336	1/8"	1-3/4"	0.50	0.05	12.33
28-337	1/8"	3"	0.50	0.09	22.22
28-338	1/4"	1-9/16"	0.62	0.07	6.80
28-339	1/4"	1-13/16"	0.62	0.08	8.66
28-340	1/4"	2-1/16"	0.62	0.10	8.04

**PIPE WYE FIP x MIP**



Part #	Thread Size NPT	A	Approx. Wt. Lbs.	List Price
28-295	1/4"	1.56	.15	7.00
28-296	1/4 - N/P	1.4	.12	5.76

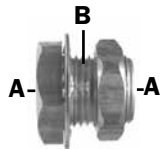
**PIPE WYE FIP x FIP**



Part #	Thread Size NPT	A	Approx. Wt. Lbs.	List Price
28-298	1/4	1.4	.12	5.76

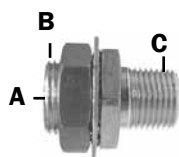
**BULKHEAD / ANCHOR / FRAME COUPLINGS**

**FEMALE PIPE X FEMALE PIPE**



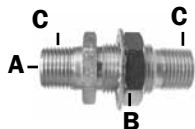
Part #	Terminal Bolts/ Frame			Length (in.)	List Price
	A	B	C		
28-300	1/8-27 NPTF	5/8-18 UNS	----	1-1/2	7.36
28-301	1/4-18 NPTF	3/4-16 UNS	----	15/16	7.04
28-302	1/4-18 NPTF	3/4-16 UNS	----	1-1/2	7.92
28-315*	1/4-18 NPTF	3/4-16 UNS	----	1-1/2	9.80
28-303	3/8-18 NPTF	1-14 UNS	----	1-5/16	10.40
28-304	1/2-14 NPTF	1-1/8-14 UNS	----	1-1/2	13.04
28-311	3/4-14 NPTF	1-5/16-12	----	1-1/2	215.74

\* Same as 28-302 except with a larger mounting nut.



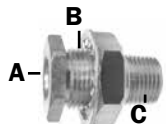
**FEMALE PIPE X MALE PIPE**

28-317	1/4-18 NPTF	1-14 UNS	1/2-14 NPTF	2-1/8	26.46
28-318	3/8-18 NPTF	1-14 UNS	1/2-14 NPTF	1-11/16	15.44
28-319	3/8-18 NPTF	1-14 UNS	1/2-14 NPTF	1-29/32	15.39

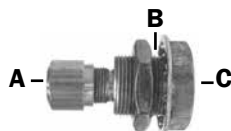


**FEMALE PIPE X MALE PIPE**

28-313	1/4-18 NPTF	1-14 UNS	1/2-14 NPTF	2-7/8	29.14
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28-346	3/8-18 NPTF	1-14 UNS	1/2-14 NPTF	1-7/8	19.26
28-347	1/2-14 NPTF	1-14 UNS	1/2-14 NPTF	2-3/8	26.86



**TUBE X FEMALE PIPE**

28-321	1/2-O.D. Tube	7/8-20 UNCF	3/8-18 NPTF	1-5/16	13.34
28-322	3/8-O.D. Tube	7/8-20 UNCF	3/8-18 NPTF	1-3/8	12.70

S608  
S609



28-348	3/8-18 NPTF	7/8-20 UNCF	3/8-18 NPTF	2-5/16	20.02
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**CROSSOVER NUMBERS**

- 28-300: 207x2 207ACBH-2 ACBH207-2 129A-A 392A-1&1/2 50004 55207
- 28-301: 114-44 1345 207x4 392C-94 ACBHS 207-4 382-44S 129AS-B 55611 S611
- 28-302: 392C-1&1/2 114B-44 1344 207x4 382-44L 50005 ACBH 207-4 207ACBH-4 129A-B 035081 55661
- 28-303: 129A-C 392E-1&5/16 114-66 1346 035087 207x6 ACBH 207-6 382-66  
S661 207ACBH-6 50006 55607 S607
- 28-304: 114-88 207x8 129A-D 1351 ACBH 207-8 207ACBH-8 50007 392F-1&1/2 55807 S807
- 28-317: 117-84 55615 S615
- 28-318: 381-86S 55620 S620
- 28-319: 115-86 035079 1496-DC 381-86L 50001 55646 S646
- 28-312: 115-88 1342 035021 005730 1342 380-84M 50010 55600 S664
- 28-346: 50013 55613 S613
- 28-347: 035029 50012 55629 S629

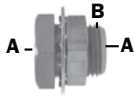
## BRASS FITTINGS

## BULKHEAD/ ANCHOR/ FRAME COUPLINGS

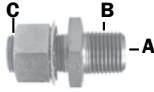
### Terminal Bolts/ Frame

Part #      A                      B                      C                      Length (in.)      List

### STEEL BULKHEAD FITTINGS



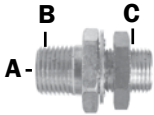
28-306	1/4-18 NPTF	3/4 - 16 UNS		0.94	12.68
28-307	1/4-18 NPTF	3/4 - 16 UNS		1.50	13.61
28-308	3/8-18 NPTF	1 - 14 UNS		1.31	12.54



28-309	1/4-18 NPTF	3/4 - 16 UNS	1/2-14 NPTF	2.16	20.28
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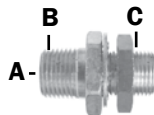
Crossover #: 005498 381-84S 50003 1340 390FC5 55689

28-310	1/4-18 NPTF	3/4 - 16 UNS	1/2-14 NPTF	2.53	36.48
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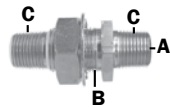
28-345*	1/4-18 NPTF	3/4 - 16 UNS	1/2-14 NPTF	2-5/32	20.78
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\* Steel



### FEMALE PIPE X MALE PIPE

28-325	1/4-18 NPTF	3/4 - 16 UNS	1/2-14 NPTF	1-11/16	22.45	S612
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28-312	1/4-18 NPTF	1-14 UNS	1/2-14 NPTF	2.94	32.98	5664
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### BRASS MARINE BULKHEAD FITTINGS



46-540	5/16 Hose ID	----	----	2.37	12.97
46-541	3/8 Hose ID	----	----	2.37	17.54

### BULKHEAD JAM NUTS



Part #	Size	Weight	List Price
28-301J	3/4-16UNEF	0.05 ea.	2.60
28-321J*	7/8-20UNEF	0.0244 ea.	2.93
28-317J	1-14UNS	0.07 ea.	3.91
28-304J	1-1/8-14UNS	0.07 ea.	4.99

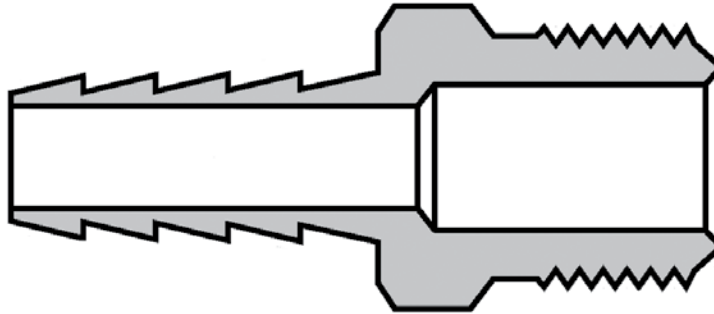
\* Zinc Dichromate

### BULKHEAD LOCK WASHERS



Part #	Size	Material	QTY	Weight	List Price
28-301W	3/4"	Steel	25	0.70 per 100	0.46
28-321W	7/8"	Steel	25	0.90 per 100	0.74
28-317W	1"	Steel	25	1.4 per 100	1.13
28-304W	1-1/8"	Steel	25	1.7 per 100	1.35

# Hose Barb Fittings



• For Lead Free AB1953 Compliant Fittings  
see pages 169-170

• Temperature and Working Pressure Ranges  
From -40°F to + 160°F at 150 PSI maximum.

• Tolerance  
+/- .02 on all dimensions. Dimension Data can change without notice. Please call us when dimensions are critical.

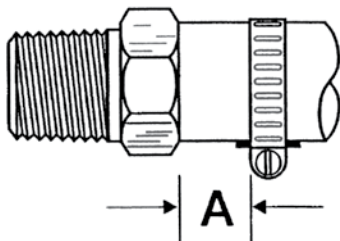
• Material  
CA360 Brass for Barstock fittings.  
CA377 Brass for Forged fittings.

**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.

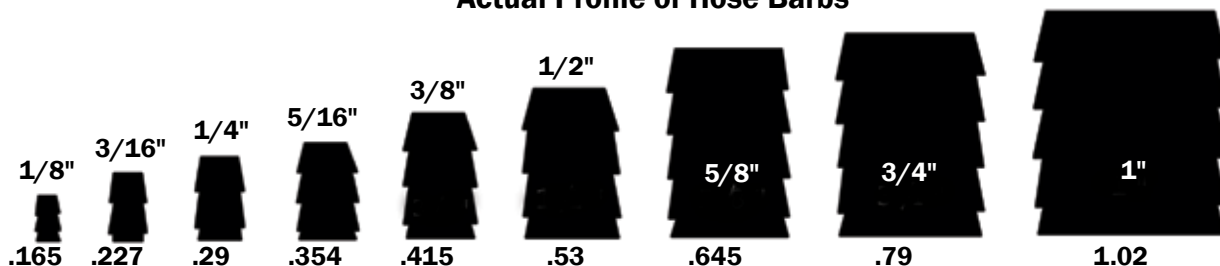
See page 335 for hose ferrules  
See page 341-354 for hose clamps  
See page 323-325 for plastic hose barb fittings  
See page 26 for stainless steel hose barbs  
See page 330 for Barb Fittings for plastic pipe



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"

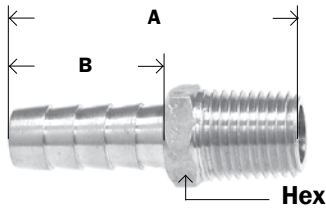
Stainless Steel hose barbs for beverage service available -  
See beverage fitting section, pg. 378-379

### Actual Profile of Hose Barbs



## RIGID MALE ADAPTER

- These are not Lead Free



PGH  
101  
102  
201A  
125HBL  
105B-1  
KF-PS  
MPB

Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
32-001 *	1/8" x 1/8"	1.19	0.69	0.43	0.02	0.99
32-027	1/8" x 1/4"	1.16	0.46	0.56	0.02	1.36
32-002 *	3/16" x 1/8"	1.19	0.75	0.43	0.02	0.94
32-003 *	3/16" x 1/4"	1.37	0.69	0.56	0.04	1.62
32-301	1/4" x 1/16"	1.44	0.88	0.43	0.02	2.95
32-004 *	1/4" x 1/8"	1.47	0.97	0.43	0.02	1.19
32-005 *	1/4" x 1/4"	1.72	0.97	0.56	0.04	1.33
32-006 *	1/4" x 3/8"	1.72	0.97	0.68	0.05	1.98
32-007	1/4" x 1/2"	1.72	0.81	0.87	0.10	3.49
32-008 *	5/16" x 1/8"	1.47	0.97	0.43	0.02	1.12
32-009 *	5/16" x 1/4"	1.72	0.97	0.56	0.04	1.55
32-010 *	5/16" x 3/8"	1.76	0.97	0.68	0.06	2.07
32-390	5/16" x 1/2"	1.88	0.95	0.87	0.10	3.90
32-011 *	3/8" x 1/8"	1.53	0.97	0.56	0.03	1.45
32-012 *	3/8" x 1/4"	1.75	0.97	0.56	0.05	1.35
32-013 *	3/8" x 3/8"	1.72	0.96	0.68	0.06	1.88
32-014 *	3/8" x 1/2"	1.97	0.97	0.87	0.09	3.40
32-026 *	3/8" x 3/4"	1.97	0.97	1.06	0.16	4.55
32-302	1/2" x 1/8"	1.57	0.95	0.56	0.06	3.76
32-015 *	1/2" x 1/4"	1.72	0.97	0.56	0.04	1.94
32-016 *	1/2" x 3/8"	1.76	0.97	0.68	0.07	2.25
32-017 *	1/2" x 1/2"	1.87	0.96	0.87	0.11	2.99
32-018 *	1/2" x 3/4"	1.94	0.97	1.06	0.16	4.56
32-303	1/2" x 1"	2.31	0.99	1.37	0.33	14.05
32-304	5/8" x 1/4"	1.67	0.92	0.68	0.06	4.60
32-019 *	5/8" x 3/8"	1.76	0.97	0.68	0.08	2.59
32-020 *	5/8" x 1/2"	1.87	0.96	0.87	0.11	3.22
32-021 *	5/8" x 3/4"	1.87	0.96	1.06	0.14	4.47
32-305	5/8" x 1"	2.31	0.96	1.37	0.36	17.26
32-306	3/4" x 3/8"	1.65	0.87	0.81	0.12	5.65
32-022 *	3/4" x 1/2"	1.87	0.96	0.87	0.14	4.10
32-023 *	3/4" x 3/4"	1.87	0.96	1.06	0.15	5.39
32-316	3/4" x 1"	2.55	1.15	1.37	0.38	12.44
32-307	1" x 1/2"	1.80	0.87	1.06	0.24	7.52
32-024 *	1" x 3/4"	2.19	1.19	1.06	0.32	6.71
32-025 *	1" x 1"	2.48	1.19	1.37	0.39	10.73
32-029	1-1/4" x 3/4"	2.37	1.19	1.37	0.35	15.77
32-028	1-1/4" x 1"	2.55	1.19	1.37	0.46	14.99

See Bronze insert fittings on pages 330 for larger sizes.

\* See page 26 for stainless steel.

Dimension data can change without notice.  
Please see our website when dimensions are critical.

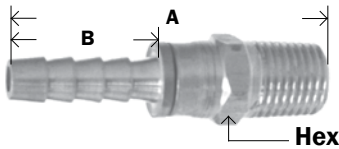
Save 5% by ordering online at  
[www.midlandmetal.com](http://www.midlandmetal.com)

**BRASS RIGID MALE BSPT BARB ADAPTER**



Part #	Hose I.D. x MALE BSPT	List Price
32-450	1/4" x 1/8"	1.40
32-451	1/4" x 1/4"	2.04
32-452	3/8" x 1/4"	2.23
32-453	3/8" x 3/8"	5.63
32-454	3/8" x 1/2"	4.12
32-455	1/2" x 3/8"	3.17
32-456	1/2" x 1/2"	4.57
32-457	3/4" x 3/4"	7.11
32-458	1" x 1"	14.66

**SWIVEL MALE ADAPTER**

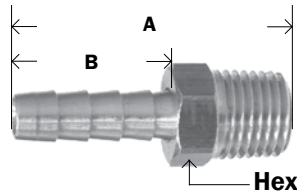


SMS Rotation 360°

103

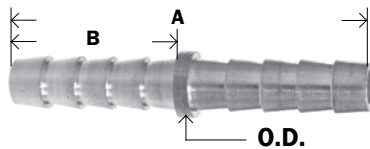
-68

Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
32-329	3/16" x 1/8"	1.95	0.78	0.56	0.06	5.44
32-331	3/16" x 1/4"	1.90	0.78	0.56	0.06	5.54
32-332	1/4" x 1/8"	2.19	0.97	0.56	0.06	5.09
32-349	1/4" x 1/4"	2.12	0.97	0.56	0.06	4.73
32-351	3/8" x 1/8"	2.12	0.97	0.56	0.07	5.26
32-201	3/8" x 1/4"	2.12	0.97	0.56	0.07	4.06
32-360	3/8" x 3/8"	2.12	0.97	0.69	0.08	5.58
32-355	1/2" x 3/8"	2.12	0.97	0.68	0.10	6.00
32-356	1/2" x 1/2"	2.33	0.97	0.87	0.14	8.19
32-357	3/4" x 3/4"	2.33	0.97	1.06	0.20	10.58
32-386	1" x 1"	3.43	1.19	1.38	0.40	72.18



Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
32-200	1/4" x 1/4"	1.65	.89	0.56	0.04	3.96
32-202	3/8" x 3/8"	1.75	1.00	0.68	0.08	4.99

**MENDER/ SPLICER**



MSB

122HBL

HM

129

178

73

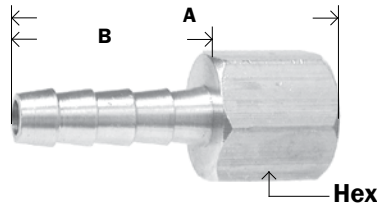
108

Part #	Hose I.D. x Hose I.D.	A	B	O.D.	Approx. Wt. Lbs.	List Price
32-091 *	1/8"	0.98	0.45	0.31	0.01	1.30
32-092	3/16"	1.62	0.77	0.36	0.02	1.73
32-093 *	1/4"	2.00	0.96	0.37	0.02	1.44
32-079 *	1/4" x 1/8"	1.55	0.97	0.56	0.02	3.31
32-094 *	5/16"	2.00	0.96	0.39	0.02	1.37
32-090 *	5/16" x 1/4"	2.00	0.97	0.39	0.03	2.41
32-095 *	3/8"	2.00	0.94	0.51	0.04	1.46
32-080 *	3/8" x 1/4"	2.06	0.97	0.56	0.03	3.98
32-375 *	3/8" x 5/16"	2.00	0.97	0.56	0.03	2.34
32-096 *	1/2"	2.00	0.96	0.62	0.06	2.11
32-087 *	1/2" x 3/8"	2.06	0.97	0.71	0.06	6.01
32-097	5/8"	2.05	0.96	0.75	0.08	2.85
32-088	5/8" x 3/8"	2.06	0.97	0.75	0.06	6.60
32-376	5/8" x 1/2"	2.06	0.97	0.75	0.07	6.78
32-098 *	3/4"	2.50	1.15	0.87	0.10	4.84
32-089	3/4" x 1/2"	2.28	1.19	0.87	0.10	9.43
32-379	3/4" x 5/8"	2.50	1.19	0.87	0.10	5.44
32-380	1" x 3/4"	2.58	1.19	1.12	0.18	5.94
32-099	1"	3.00	1.44	1.02	0.23	12.79

\* Add SS to the end of the part number for Stainless.



**RIGID FEMALE ADAPTER**



209A      FPB  
 128      105B-2  
 29A      KF-RS  
 29F      104  
 126HB    144  
 126

Part #	Hose I.D. x Female NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
32-050	1/8" x 1/8"	0.96	0.46	0.50	0.02	1.54
32-317	1/8" x 1/4"	1.15	0.46	0.62	0.04	5.14
32-051	3/16" x 1/8"	1.10	0.68	0.50	0.02	1.39
32-062	3/16" x 1/4"	1.44	0.75	0.62	0.04	5.56
32-052	1/4" x 1/8"	1.35	0.93	0.50	0.02	1.69
32-053	1/4" x 1/4"	1.60	0.97	0.62	0.06	1.79
32-054	1/4" x 3/8"	1.65	1.03	0.75	0.04	2.53
32-441	1/4" x 1/2"	1.66	0.97	0.93	0.08	8.17
32-055	5/16" x 1/8"	1.47	0.97	0.56	0.04	2.79
32-056	5/16" x 1/4"	1.66	0.97	0.62	0.04	2.36
32-318	5/16" x 3/8"	1.66	0.97	0.75	0.06	5.47
32-320	5/16" x 1/2"	1.67	0.96	0.93	0.08	6.50
32-057	3/8" x 1/8"	1.47	0.97	0.56	0.04	2.37
32-058	3/8" x 1/4"	1.61	0.97	0.62	0.06	2.10
32-059	3/8" x 3/8"	1.63	1.00	0.81	0.08	2.30
32-063	3/8" x 1/2"	1.72	0.94	0.93	0.12	4.35
32-442	3/8" x 3/4"	1.97	0.97	1.18	0.20	14.65
32-064	1/2" x 1/4"	1.66	0.96	0.62	0.08	2.61
32-060	1/2" x 3/8"	1.66	0.97	0.75	0.08	5.25
32-061	1/2" x 1/2"	1.76	0.96	0.93	0.12	4.18
32-443	1/2" x 3/4"	1.97	0.97	1.18	0.26	14.91
32-444	5/8" x 3/8"	1.66	0.97	0.75	0.08	6.18
32-445	5/8" x 1/2"	1.66	0.97	0.93	0.10	8.27
32-446	5/8" x 3/4"	1.97	0.97	1.18	0.21	14.80
32-447	3/4" x 1/2"	1.88	1.19	0.93	0.13	9.25
32-065	3/4" x 3/4"	2.19	1.21	1.18	0.22	7.14
32-049	1" x 3/4"	2.19	1.19	1.18	0.26	18.83
32-321	1" x 1"	2.32	1.19	1.18	0.35	25.29
32-448	1-1/4" x 1"	2.32	1.19	1.43	0.44	24.67

**SWIVEL FEMALE ADAPTER NPTF**

-68



Part #	Hose I.D. x Female NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
32-470	1/4" x 1/4"	1.80	0.97	0.62	0.06	10.20
32-472	3/8" x 1/4"	1.80	0.97	0.62	0.06	10.50
32-473	3/8" x 3/8"	1.82	0.97	0.75	0.09	10.89
32-475	1/2" x 3/8"	1.82	0.97	0.75	0.09	11.31
32-476	1/2" x 1/2"	1.86	0.97	0.93	0.14	12.30



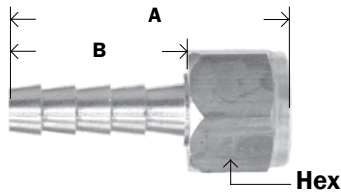
**MIDLAND METAL  
APP**

**SEE INSIDE FRONT  
COVER**

**SWIVEL FEMALE ADAPTER - With Gasket**

• NPSM Thread

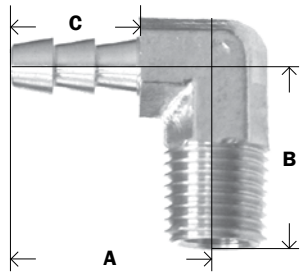
National Pipe Straight Gasket Seal Swivel



130  
126  
29FSG  
KF-RN  
NPSM Gasket

Part #	Hose I.D. x Female NPSM	A	B	Hex	Approx. Wt. Lbs.	List Price
32-131	1/8" x 1/8"	0.90	0.46	0.50	0.02	6.40
32-132	3/16" x 1/8"	1.19	0.75	0.50	0.03	6.29
32-133	3/16" x 1/4"	1.28	0.75	0.62	0.04	6.93
32-120	1/4" x 1/8"	1.41	0.97	0.50	0.02	7.81
32-121	1/4" x 1/4"	1.50	0.97	0.62	0.02	3.00
32-129	1/4" x 3/8"	1.63	0.97	0.75	0.04	7.96
32-130	5/16" x 1/4"	1.50	0.97	0.62	0.04	9.22
32-122	3/8" x 1/4"	1.54	1.00	0.62	0.06	4.95
32-123	3/8" x 3/8"	1.60	0.97	0.75	0.06	8.35
32-354	3/8" x 1/2"	1.66	0.97	0.93	0.10	10.52
32-124	1/2" x 3/8"	1.60	0.97	0.75	0.08	9.76
32-125	1/2" x 1/2"	1.66	0.97	0.93	0.12	8.07
32-117	1/2" x 3/4"	1.82	1.19	1.18	0.16	11.98
32-118	5/8" x 3/4"	1.82	1.19	1.18	0.18	12.76
32-119	3/4" x 3/4"	1.82	1.19	1.18	0.14	8.29

**FORGED HOSE BARB 90° ELBOW**



Grooved End Barb



Square Body

129  
HBE1  
KF-PS90  
HE-1  
29E  
146

Part #	Hose I.D. x Male NPTF	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
32-308	3/16" x 1/8"	0.95	0.70	0.66	0.37	0.02	2.80
32-391	3/16" x 1/4"	1.00	0.84	0.63	0.46	0.10	3.59
32-038 *	1/4" x 1/8"	1.01	0.81	0.71	0.47	0.06	2.40
32-039 *	1/4" x 1/4"	1.01	0.87	0.63	0.47	0.06	3.32
32-309 ***	1/4" x 3/8"	1.08	0.97	0.73	0.69	0.12	4.20
32-036	5/16" x 1/8"	1.01	0.81	0.63	0.47	0.04	2.93
32-040	5/16" x 1/4"	1.01	0.87	0.63	0.47	0.06	3.87
32-310	5/16" x 3/8"	1.06	0.94	0.63	0.50	0.06	6.31
32-046 *	3/8" x 1/8"	1.01	0.81	0.63	0.47	0.06	2.61
32-041 *	3/8" x 1/4"	1.02	0.88	0.65	0.47	0.06	3.33
32-042 *	3/8" x 3/8"	1.09	0.93	0.68	0.50	0.08	4.00
32-047 *	3/8" x 1/2"	1.11	1.09	0.63	0.59	0.10	4.28
32-048	1/2" x 1/4"	1.06	1.00	0.68	0.59	0.10	4.08
32-043 *	1/2" x 3/8"	1.06	1.09	0.69	0.59	0.10	4.95
32-311 *	1/2" x 1/2"	1.31	1.19	0.87	0.56	0.22	6.16
32-044**	5/8" x 3/8"	1.12	1.06	0.61	0.56	0.12	6.69
32-045**	5/8" x 1/2"	1.12	1.12	0.66	0.59	0.14	6.39
32-312	5/8" x 3/4"	1.46	1.26	0.93	1.06	0.32	10.90
32-313	3/4" x 1/2"	1.31	1.28	0.87	0.85	0.22	8.33
32-314 *	3/4" x 3/4"	1.46	1.26	0.91	1.06	0.32	13.36
32-330***	3/4" x 1"	1.57	1.64	0.90	1.34	0.64	25.04
32-315	1" x 3/4"	1.60	1.40	0.95	1.06	0.32	12.29
32-319	1" x 1"	1.69	1.64	0.98	1.34	0.43	50.26

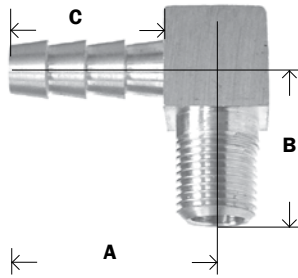
\* Add SS to the end of the part number for Stainless.

\*\* Grooved End Barbs

\*\*\* Square Body

Dimension data can change without notice.  
Please see our website when dimensions are critical.

**BARSTOCK HOSE BARB 90° ELBOW**

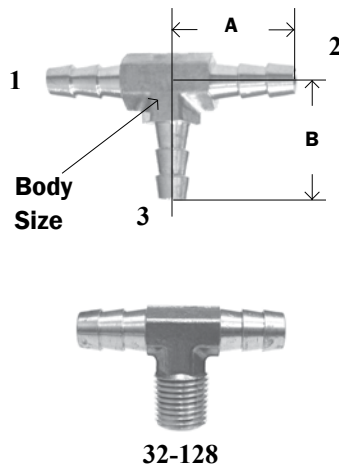


129HB

Part #	Hose I.D. x Male NPTF	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
32-038B	1/4" X 1/8"	1.00	0.75	0.75	0.50	0.02	5.25
32-039B	1/4" X 1/4"	1.02	0.91	0.74	0.56	0.04	6.00
32-041B	3/8" X 1/4"	1.32	0.89	0.97	0.58	0.08	8.33
32-042B	3/8" X 3/8"	1.50	1.06	0.97	0.75	0.14	14.20
32-043B	1/2" X 3/8"	1.53	1.07	0.97	0.72	0.16	11.91

**BRASS**

**HOSE BARB TEES**

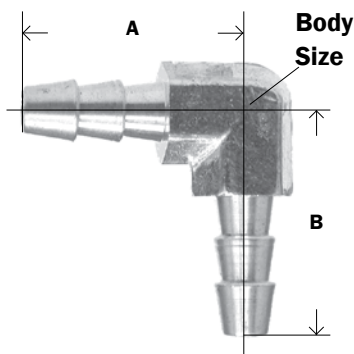


32-128

Part #	Hose Barb Size 1 x 2 x 3	A	B	Body Size	Approx. Wt. Lbs.	List Price
32-367 *	1/8"	0.84	0.83	0.25	0.02	3.81
32-368	3/16"	1.02	1.02	0.37	0.03	3.55
32-365 *	1/4"	1.00	1.00	0.44	0.06	3.21
32-350 *	1/4" x 1/8"	0.94	0.94	0.44	0.04	8.09
32-366	5/16"	1.00	1.00	0.44	0.06	3.99
32-126 *	3/8"	1.01	1.01	0.43	0.06	4.02
32-400 *	1/2"	1.02	1.00	0.43	0.08	4.88
32-352 *	1/2" x 3/8"	1.26	1.26	0.43	0.10	13.81
32-361	5/8"	1.26	1.26	0.75	0.16	18.62
32-363	3/4"	1.26	1.26	0.88	0.18	25.62
32-353	3/4" x 1/2"	1.41	1.41	0.88	0.23	27.07
32-128 *	3/8" HB x 1/4" MIP	1.00	0.94	0.43	0.06	11.27

\* Add SS to the end of the part number for Stainless.

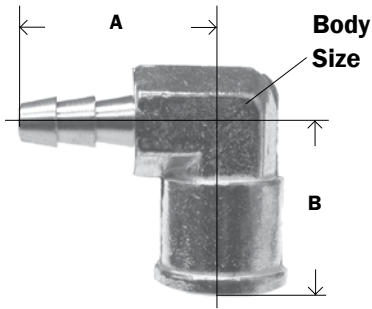
**90° HOSE BARB ELBOW**



Part #	Hose I.D. x Hose I.D.	A	B	Body Size	Approx. Wt. Lbs.	List Price
32-429	1/8" x 1/8"	0.55	0.55	0.37	0.03	7.02
32-433	3/16" x 3/16"	0.90	0.90	0.37	0.03	5.90
32-412	1/4" x 1/8"	1.02	1.02	0.44	0.04	3.00
32-413 *	1/4" x 1/4"	1.01	1.01	0.44	0.04	3.69
32-425	5/16" x 5/16"	1.15	1.15	0.48	0.05	9.03
32-414	3/8" x 1/8"	1.01	1.01	0.44	0.04	5.05
32-415	3/8" x 1/4"	1.00	1.00	0.44	0.04	4.20
32-416 *	3/8" x 3/8"	1.02	1.02	0.44	0.04	6.63
32-417	3/8" x 1/2"	1.24	1.10	0.50	0.06	5.55
32-418	1/2" x 1/4"	1.24	1.08	0.50	0.06	5.31
32-419	1/2" x 3/8"	1.22	1.09	0.50	0.06	9.69
32-420 *	1/2" x 1/2"	1.24	1.24	0.50	0.06	5.56
32-434	5/8" x 5/8"	1.20	1.20	0.75	0.16	20.27
32-435	3/4" x 1/2"	1.41	1.41	0.88	0.21	21.08
32-436	3/4" x 3/4"	1.41	1.41	0.88	0.21	25.22

\* Add SS to the end of the part number for Stainless.

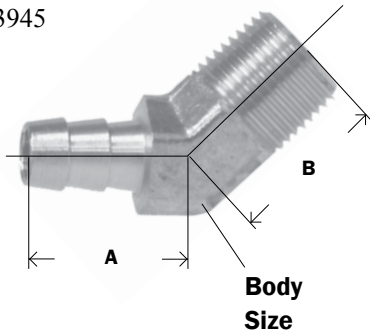
**90° FEMALE HOSE BARB ELBOW**



Part #	Hose I.D. x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
32-401	1/4" x 1/8"	1.01	0.82	0.47	0.06	4.88
32-402	1/4" x 1/4"	1.13	0.91	0.56	0.10	5.95
32-403	3/8" x 1/8"	1.01	0.82	0.47	0.06	4.69
32-404	3/8" x 1/4"	1.15	0.91	0.56	0.10	6.29
32-405	3/8" x 3/8"	1.15	1.11	0.68	0.14	14.02
32-406	3/8" x 1/2"	1.26	1.39	0.75	0.20	10.82
32-407	1/2" x 1/4"	1.26	0.91	0.56	0.10	6.89
32-410	1/2" x 3/8"	1.24	1.11	0.68	0.14	10.15
32-411	1/2" x 1/2"	1.37	1.39	0.75	0.20	10.67
32-409	3/4" x 3/4"	1.52	1.75	0.81	0.50	15.43

**45° ELBOW**

- 140
- HE145
- 139HB
- KF-PS45
- 13945



Part #	Hose I.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
32-110	1/4" x 1/8"	0.91	0.62	0.53	0.04	3.69
32-109*	1/4" x 1/4"	1.00	0.62	0.57	0.06	7.56
32-111	3/8" x 1/8"	0.83	0.66	0.53	0.04	5.23
32-112	3/8" x 1/4"	0.82	0.84	0.53	0.06	4.69
32-113	3/8" x 3/8"	0.93	0.87	0.59	0.08	6.00
32-346	1/2" x 1/4"	1.00	0.84	0.59	0.08	9.49
32-114	1/2" x 3/8"	1.00	0.88	0.59	0.08	7.87
32-116	1/2" x 1/2"	1.15	0.94	0.59	0.12	13.61
32-115**	5/8" x 3/8"	0.97	0.88	0.59	0.10	8.37
32-345	3/4" x 1/2"	1.15	0.94	0.81	0.13	24.16

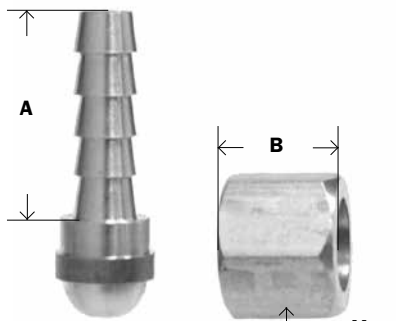


\* Barstock

\*\* Flat Barbs

**BALL END SWIVEL**

NPSM - Ball seat type

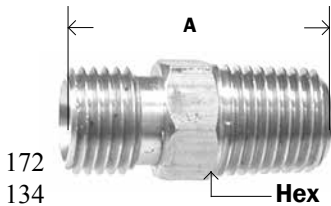


- 128HBLSV
- 29FS
- 209AS
- 124
- 131

Part #	Hose I.D. x NPSM	A	B	Hex	Approx. Wt. Lbs.	List Price
32-066	1/8" x 1/8"	0.46	0.44	0.50	0.03	5.19
32-067	3/16" x 1/8"	0.75	0.44	0.50	0.03	4.45
32-068	3/16" x 1/4"	0.75	0.52	0.62	0.04	2.90
32-069	1/4" x 1/8"	0.97	0.44	0.50	0.04	2.67
32-070	1/4" x 1/4"	0.97	0.53	0.62	0.06	2.63
32-078	1/4" x 3/8"	0.97	0.63	0.75	0.06	6.21
32-071	5/16" x 1/4"	0.97	0.52	0.62	0.05	3.33
32-389	5/16" x 3/8"	0.97	0.63	0.75	0.07	6.16
32-072	3/8" x 1/4"	0.97	0.53	0.62	0.06	2.49
32-073	3/8" x 3/8"	0.97	0.59	0.75	0.08	2.99
32-074	3/8" x 1/2"	0.97	0.69	0.94	0.14	9.32
32-075	1/2" x 3/8"	0.97	0.59	0.75	0.08	2.97
32-076	1/2" x 1/2"	0.97	0.69	0.94	0.10	3.99
32-077	3/4" x 3/4"	0.97	0.70	1.12	0.14	6.73

**BALLSEAT MALE ADAPTER**

Beveled seat

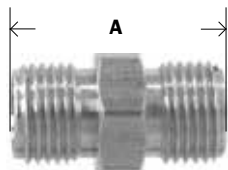


- 172
- 134
- 127HB
- 122AS

30° Seat

Part #	NPSM x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
32-359	1/8" x 1/8"	0.94	0.43	0.03	4.78
32-034	1/4" x 1/8"	1.06	0.56	0.04	3.76
32-030	1/4" x 1/4"	1.25	0.56	0.06	3.51
32-362	3/8" x 1/4"	1.28	0.68	0.08	4.72
32-031	3/8" x 3/8"	1.30	0.68	0.08	4.90
32-392	3/8" x 1/2"	1.47	0.88	0.13	9.92
32-364	1/2" x 3/8"	1.35	0.87	0.10	8.50
32-032	1/2" x 1/2"	1.53	0.87	0.14	6.54
32-033	3/4" x 3/4"	1.53	1.06	0.20	10.44

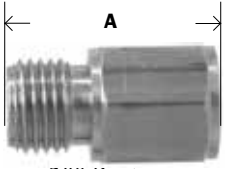
**BALLSEAT UNION**



30° Seat

Part #	NPSM x NPSM	A	Hex	Approx. Wt. Lbs.	List Price
32-460	1/8"	0.79	0.43	0.02	4.15
32-461	1/4"	1.09	0.56	0.04	5.06
32-462	3/8"	1.19	0.68	0.07	6.68
32-463	1/2"	1.31	0.87	0.10	8.71

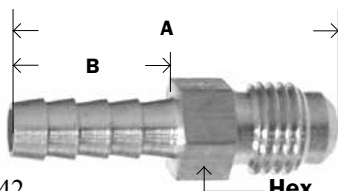
**FEMALE BALLSEAT ADAPTER**



30° Seat

Part #	NPSM x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
32-465	1/4" x 1/4"	1.12	0.62	0.05	6.96
32-466	3/8" x 3/8"	1.15	0.75	0.07	6.91
32-467	1/2" x 1/2"	1.22	0.94	0.10	9.35

**45° FLARE ADAPTER**



- 142
- 201BF
- KF-MS
- KDS

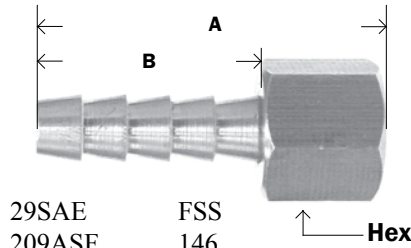
Part #	Hose I.D. x 45° Flare	Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
32-322	3/16" x 1/4"	7/16-20	1.5	0.75	0.43	0.03	5.93
32-081 *	1/4" x 1/4"	7/16-20	1.72	0.97	0.43	0.03	3.51
32-082 *	1/4" x 3/8"	5/8-18	1.82	0.97	0.62	0.07	4.62
32-083	5/16" x 5/16"	1/2-20	1.75	0.97	0.50	0.08	6.06
32-084 *	3/8" x 3/8"	5/8-18	1.82	0.97	0.62	0.08	5.00
32-085	3/8" x 1/2"	3/4-16	1.97	0.97	0.75	0.10	7.23
32-086	1/2" x 1/2"	3/4-16	1.97	0.97	0.75	0.10	6.99

\* Add SS to the end of the part number for Stainless.

## HOSE BARB

## BRASS FITTINGS

## FEMALE 45° FLARE SWIVEL



29SAE FSS  
209ASF 146  
146HBLFSV 144  
KF-NS  
128

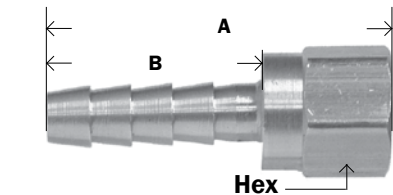


CRIMP STYLE

Part #	Hose I.D. x Female 45° Flare	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
32-326	3/16" x 3/16"	3/8-24	1.19	0.75	0.43	0.04	6.56
30-295**	3/16" x 3/8"	5/8-18	1.82	0.90	0.75	0.04	4.26
32-101	1/4" x 1/4"	7/16-20	1.57	0.97	0.56	0.04	2.16
32-103	1/4" x 3/8"	5/8-18	1.64	0.97	0.75	0.08	2.60
32-104	5/16" x 5/16"	1/2-20	1.58	0.97	0.62	0.05	4.90
32-327	5/16" x 3/8"	5/8-18	1.64	0.97	0.75	0.08	3.61
32-105	3/8" x 3/8"	5/8-18	1.64	0.97	0.75	0.08	3.22
32-105C**	3/8" x 3/8"	5/8-18	1.71	0.97	0.75	0.07	4.28
32-106	3/8" x 1/2"	3/4-16	1.81	0.97	0.87	0.10	8.85
32-100	1/2" x 1/2"	3/4-16	1.68	0.97	0.87	0.12	4.14
32-328	3/4" x 3/4"	1-1/16-14	2.00	0.97	1.25	0.20	17.64

\*\* Swivel crimp style (crimped on the outside of fitting )

## DUAL 45° / 37° FLARE SWIVEL



KDS

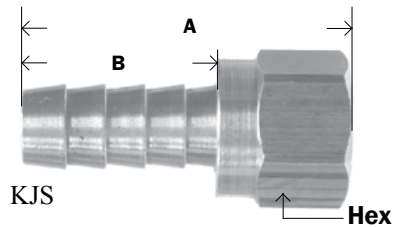


CRIMP STYLE

Part #	Hose ID x Dual Seat	Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
32-107	3/16" x 1/4"	7/16-20	1.34	0.75	0.56	0.04	3.35
32-107C**	3/16 X 1/4	7/16-20	1.42	0.78	0.56	0.04	3.18
32-337	1/4" x 1/4"	7/16-20	1.56	0.97	0.56	0.04	2.73
32-337C**	1/4" X 1/4"	7/16-20	1.60	0.97	0.56	0.04	2.66
32-102	1/4" x 5/16"	1/2-20	1.53	0.97	0.62	0.06	2.82
32-339	5/16" x 5/16"	1/2-20	1.60	0.97	0.62	0.06	3.49
32-340	3/8" x 1/2"	3/4-16	1.68	0.97	0.87	0.10	5.52
32-341	1/2" x 1/2"	3/4-16	1.68	0.97	0.87	0.10	4.69
32-341C**	1/2" X 1/2"	3/4-16	1.75	0.97	0.87	0.09	5.21
32-342	1/2" x 5/8"	7/8-14	1.76	0.97	1.00	0.12	7.07
32-394	5/8" x 5/8"	7/8-14	1.76	0.97	1.00	0.14	7.57

\*\* Swivel crimp style

## FEMALE 37° J.I.C. FLARE SWIVEL



KJS



CRIMP STYLE

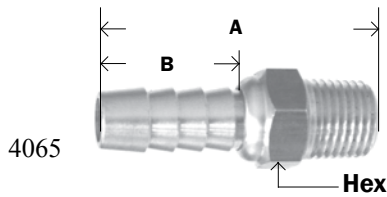
Part #	Hose ID x Female 37° Flare	Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
32-334	1/4" x 3/8"	9/16-18	1.60	0.97	0.68	0.06	3.62
32-335	5/16" x 3/8"	9/16-18	1.60	0.97	0.68	0.06	3.75
32-336	3/8" x 3/8"	9/16-18	1.60	0.97	0.68	0.10	3.26
32-336C**	3/8" X 3/8"	9/16-18	1.66	0.97	0.68	0.06	3.39
32-338*	3/4" x 3/4"	1-1/16-12	2.00	0.97	1.25	0.20	19.56
32-397*	1" x 1"	1-5/16-12	2.54	1.19	1.50	0.33	18.14

\*Available in swivel crimp style - add a "C" at the end of the part # ( 100 piece minimum )

\*\* Swivel crimp style

**HIGH PRESURE MALE SWIVEL**

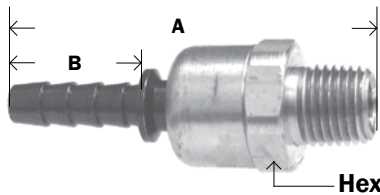
- 300 PSI
- Nitrate O-Ring



Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
32-781	3/8" x 1/4"	1.83	0.87	0.62	0.07	17.80

**HOSE ID x MALE BALL SWIVEL**

**300 PSI. Max. Working Pressure**

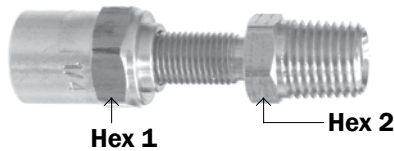


Part #	Hose I.D. x Male ball swivel	A	B	Hex	Approx. Wt. Lbs.	List Price
28-415	1/4" x 1/4"	1.30	0.94	0.81	0.14	35.18

**1/4" MALE THREAD ID x OD**

**Reusable Hose Couplings**

183



Part #	1/4" Male Thread ID x OD	Length	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
32-725	3/8" x 3/4"(23/32)	1.97	0.87	0.56	0.14	9.08
32-726	1/4" x 5/8"	1.86	0.81	0.56	0.13	8.41
32-727	1/4" x 1/2"	1.86	0.69	0.56	0.11	7.44
32-728	1/4" x 9/16"	1.86	0.75	0.56	0.12	12.27
32-741	5/16" x 5/8"	1.97	0.81	0.56	0.13	9.72
32-742	3/8" x 5/8"	1.97	0.81	0.56	0.14	13.16

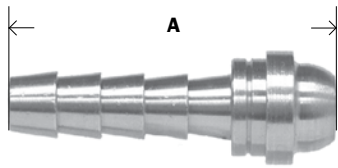
Many more sizes and shapes available...just ask!

Yesterday is not ours to recover, but tomorrow is ours to win or lose.

- Lyndon B. Johnson

Dimension data can change without notice. Please see our website when dimensions are critical.

**STEM ONLY - WELDING HOSE CONNECTOR**

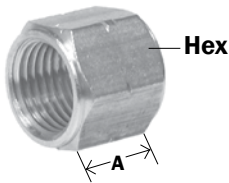


201RWA  
WRS  
WLS

Part #	Hose I.D.	A	Approx. Wt. Lbs.	List Price
30-410	3/16"	1.43	0.02	1.77
30-411	1/4"	1.43	0.02	1.71
30-412	5/16"	1.43	0.03	2.16
30-413	3/8"	1.43	0.04	2.20

Assemble with nuts below.

**RIGHT HAND 9/16 - 18 FOR OXYGEN LINE - WELDING HOSE NUT**

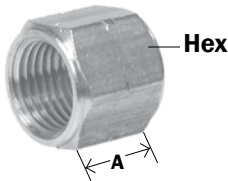


201RWA  
WRS  
KF-PE  
152

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-420	R.H. Nut only	0.63	0.68	0.04	2.04

Assemble with stem above.

**LEFT HAND 9/16 - 18 FOR ACETYLENE LINE - WELDING HOSE NUT**

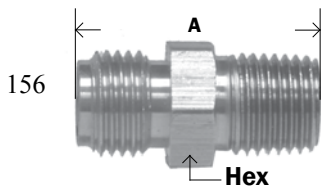


209LWA  
WLS  
154  
KF-RE

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-421	L.H. Nut only	0.63	0.68	0.04	1.90

Assemble with stem above.

**RIGHT HAND 9/16 - 18 #122RWA - WELDING HOSE CONNECTOR**

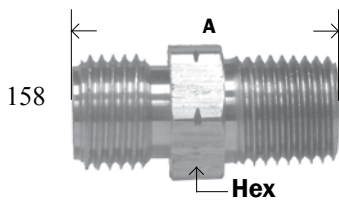


156

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-401	1/4"-18	1.30	0.62	0.06	5.16
32-437	3/8"-18	1.30	0.68	0.09	5.94
32-438*	9/16"-18	1.25	0.68	0.07	5.65

\* Right UNF thread

**LEFT HAND 9/16 - 18 #122LWA - WELDING HOSE CONNECTOR**



158

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-406	1/4"-18	1.30	0.62	0.06	5.21
32-439	3/8"-18	1.30	0.68	0.09	6.48
32-440*	9/16"-18	1.25	0.68	0.07	6.11

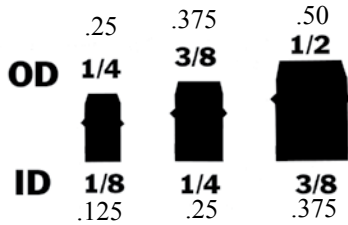
\* Left UNF thread



## BRASS FITTINGS

### 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.)



### UNION



TUBE O.D. (TUBE I.D.) X TUBE O.D. (TUBE I.D.)

Part #	Size	List Price
21-003	1/4(1/8) x 1/4(1/8)	7.00
21-007	3/8(1/4) x 1/4(1/8)	7.39
21-009	3/8(1/4) x 3/8(1/4)	3.17

### MALE ADAPTER



TUBE O.D. (TUBE I.D.) X MALE PIPE

Part #	Size	List Price
21-021	1/4(1/8) x 1/16	6.78
21-023	1/4(1/8) x 1/8	4.26
21-025	1/4(1/8) x 1/4	5.91
21-027	3/8(1/4) x 1/8	5.02

### FEMALE ADAPTER



TUBE O.D. (TUBE I.D.) X FEMALE PIPE

Part #	Size	List Price
21-043	1/4(1/8) x 1/8	19.54

### BULKHEAD UNION



TUBE O.D. (TUBE I.D.)

Part #	Size	List Price
21-082	1/4(1/8)	19.62
21-083	3/8(1/4)	37.60

### UNION ELBOW



TUBE O.D. (I.D.)

Part #	Size	List Price
21-095	1/4(1/8)	10.24
21-097	3/8(1/4)	10.82
21-099	1/2(3/8)	19.39

### MALE 90° ELBOW



TUBE O.D. (I.D.) X MALE PIPE

Part #	Size	List Price
21-111	1/4(1/8) x 1/16	19.53
21-113	1/4(1/8) x 1/8	3.60
21-115	1/4(1/8) x 1/4	6.20
21-117	3/8(1/4) x 1/8	8.75
21-119	3/8(1/4) x 1/4	4.96
21-121	1/2(3/8) x 3/8	32.64

### FEMALE 90° ELBOW



TUBE O.D. (I.D.) X FEMALE PIPE

Part #	Size	List Price
21-133	1/4(1/8) x 1/8	13.27

### UNION TEE



O.D. (I.D.) X O.D. (I.D.) X O.D. (I.D.)

Part #	Size	List Price
21-151	1/4(1/8)	7.73
21-153	3/8(1/4) X 3/8(1/4) X 1/4(1/8)	9.47
21-155	3/8(1/4)	1.70
21-159	1/2(3/8) X 1/2(3/8) X 3/8(1/4)	66.38
21-161	1/2(3/8)	18.69

## HOSE BARB

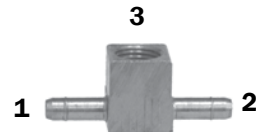
### MALE BRANCH TEE



O.D. (I.D.) X O.D. (I.D.) X MALE PIPE

Part #	Size	List Price
21-193	1/4(1/8) x 1/4(1/8) x 1/8	5.60
21-195	3/8(1/4) x 3/8(1/4) x 1/8	12.17
21-197	3/8(1/4) x 3/8(1/4) x 1/4	15.17

### FEMALE BRANCH TEE

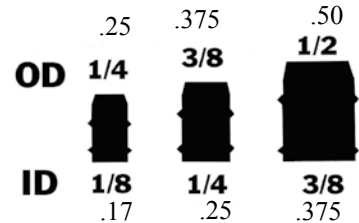


O.D. (I.D.) X O.D. (I.D.) X FEMALE PIPE

Part #	Size	List Price
21-207	1/4(1/8) x 1/4(1/8) x 1/8	13.88

### TWO BARB FITTINGS

More Sizes Available - Please Ask!



### MALE ADAPTER PIPE



TUBE O.D. (I.D.) X MALE PIPE

Part #	Size	List Price
32-150	1/4(1/8) x 1/8	4.08
32-151	1/4(1/8) x 1/4	8.70
32-153	3/8(1/4) x 1/4	8.08

### UNION TEE



Part #	Tube O.D. (I.D.)	List Price
32-159	1/4(1/8 ID)	6.90
32-160	3/8(1/4 ID)	11.94

### 90° ELBOW



Part #	Tube O.D. (I.D.)	List Price
32-170	1/4(1/8 ID)	7.20
32-171	3/8(1/4 ID)	13.26

# HOSE BARB

# STAINLESS STEEL

BRASS

## STAINLESS STEEL HOSE BARBS



• Cast

### 304 STAINLESS STEEL HOSE NIPPLES

Part #	Hose I.D. x Male Pipe	List Price
73-951	1/4"	6.38
73-952	3/8"	10.88
73-953	1/2"	11.92
73-954	3/4"	14.33
73-955	1"	17.01
73-956	1-1/4"	27.73
73-957	1-1/2"	31.31
73-958	2"	44.31
73-959	2-1/2"	104.00
73-960	3"	119.24

### 304 STAINLESS STEEL REDUCING HOSE NIPPLES

Part #	Hose I.D. x Male Pipe	List Price
73-970	1/4" X 1/8"	6.50
73-971	3/8" X 1/4"	7.51
73-972	1/2" X 3/8"	11.22
73-973	1/2" X 1/4"	11.59
73-974	3/4" X 1/2"	14.81
73-975	1" X 3/4"	16.72
73-976	1" X 1/2"	27.23
73-977	1-1/4" X 1"	26.93
73-979	1-1/2" X 1-1/4"	42.33
73-980	1-1/2" X 1"	32.47
73-981	2" X 1-1/2"	56.00
73-982	2" X 1-1/4"	44.78

### 316 STAINLESS STEEL HOSE NIPPLES

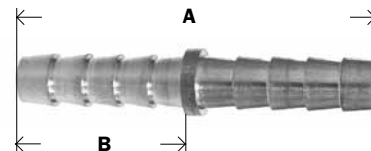
Part #	Hose I.D. x Male Pipe	List Price
973-951	1/4"	7.14
973-952	3/8"	10.16
973-953	1/2"	16.35
973-954	3/4"	18.89
973-955	1"	20.58
973-956	1-1/4"	27.96
973-957	1-1/2"	48.61
973-958	2"	51.79
973-959	2-1/2"	133.67
973-990	3"	164.70
973-991	4"	204.55

• NOTE: See Stainless Steel Hose Barbs for beverage on pg. 377-379



### 316 STAINLESS STEEL MACHINED RIGID MALE ADAPTER

Part #	Hose I.D. x NPT	List Price
32-001SS	1/8" x 1/8"	6.86
32-002SS	3/16" x 1/8"	7.39
32-003SS	3/16" x 1/4"	9.83
32-004SS	1/4" x 1/8"	8.91
32-005SS	1/4" x 1/4"	9.90
32-006SS	1/4" x 3/8"	18.46
32-008SS	5/16" x 1/8"	8.00
32-009SS	5/16" x 1/4"	10.89
32-010SS	5/16" x 3/8"	15.15
32-011SS	3/8" x 1/8"	8.92
32-012SS	3/8" x 1/4"	10.97
32-013SS	3/8" x 3/8"	14.06
32-014SS	3/8" x 1/2"	23.52
32-015SS	1/2" x 1/4"	12.21
32-016SS	1/2" x 3/8"	19.07
32-017SS	1/2" x 1/2"	18.47
32-018SS	1/2" x 3/4"	25.08
32-019SS	5/8" x 3/8"	13.68
32-020SS	5/8" x 1/2"	22.11
32-021SS	5/8" x 3/4"	29.04
32-022SS	3/4" x 1/2"	19.56
32-023SS	3/4" x 3/4"	27.90
32-024SS	1" x 3/4"	28.12



### 316 STAINLESS STEEL SPLICER

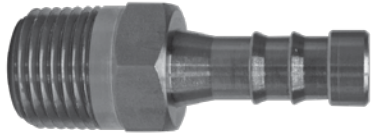
Part #	Hose I.D. x Hose I.D.	A	B	List Price
32-093SS	1/4"	2.03	0.97	5.13
32-095SS	3/8"	2.06	0.97	6.30
32-096SS	1/2"	2.06	0.97	10.23
32-098SS	3/4"	2.50	1.19	15.13



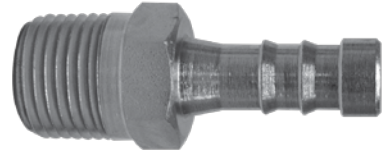
### 316 STAINLESS STEEL BARB ELBOW

Part #	Size	List Price
32-038SS	1/4 x 1/8	14.92
32-039SS	1/4 x 1/4	14.92
32-041SS	3/8 x 1/4	16.77
32-042SS	3/8 x 3/8	16.77
32-043SS	1/2" x 3/8"	28.85
32-311SS	1/2 x 1/2	19.15
32-314SS	3/4" x 3/4"	80.70

**BAND TYPE NIPPLES**



**STEEL**



**#304 STAINLESS STEEL**

**BRASS**

**General Specifications**

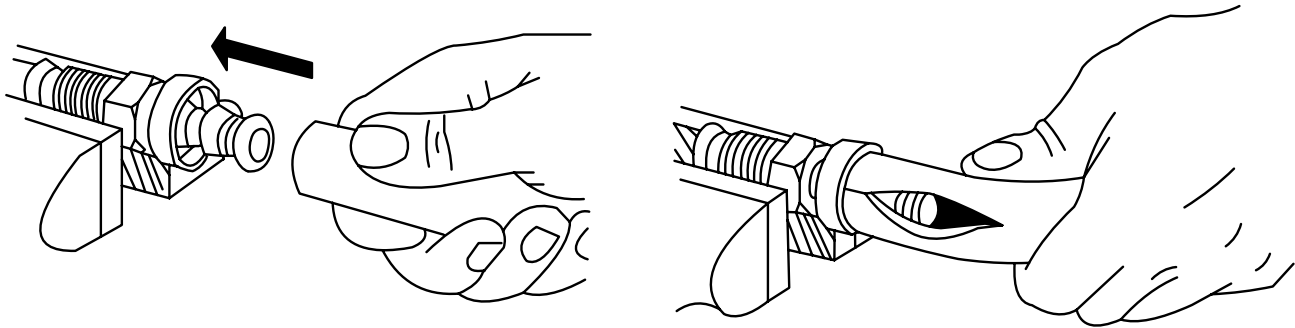
- Dimensions to ANSI 16.3 Pressure to ANSI 16.5 Class 150LB
- Standard Steel Material Specification – C1215 and C12L14 - ASTM A108, ASTM A29
- Steel Parts – Bright Trivalent Plated • ROHS Compliant  
 ASTM B633 Service Condition I, Type II - (Yellow) Type III – (Clear)
- Stainless Steel Parts – (Clean and Dry, No Passivation or Electropolish)
- Aluminum Fittings – Clear Conventional Type II Sulfuric Anodize – Colors Available
- Fittings for use with Air, Water, and Oil
- Maximum Pressure: Fittings - 150PSI @72°F
- Hose to Pipe Temperature Range: -40°F to +350°F (See hose mfg. specifications)
- Hose to Pipe Vacuum Range: 29” Hg @ 72°F (See hose mfg. specifications)

Steel Part #	List Price	Description Hose x Male NPT	Length A	Length B	Dia. C	Stock size	Bore size	Stainless 304 Part #	List Price
34-204	6.23	1/4" x 1/8"	1-11/16"	1.050	.30	9/16" H	.16"	34-204SS	25.16
34-205	6.87	1/4" x 1/4"	1-7/8"	1.050	.30	9/16" H	.16"	34-205SS	27.35
34-206	7.39	1/4" x 3/8"	1-7/8"	1.050	.30	11/16" H	.16"	34-206SS	30.06
34-211	6.35	3/8" x 1/8"	1-11/16"	1.050	.425	9/16" H	.25"	34-211SS	20.71
34-212	6.87	3/8" x 1/4"	1-7/8"	1.050	.425	9/16" H	.25"	34-212SS	21.46
34-213	7.39	3/8" x 3/8"	1-7/8"	1.050	.425	11/16" H	.25"	34-213SS	24.00
34-214	9.29	3/8" x 1/2"	2-1/8"	1.050	.425	7/8" H	.25"	34-214SS	38.49
34-215	6.87	1/2" x 1/4"	1-7/8"	1.050	.550	9/16" H	.38"	34-215SS	21.46
34-216	7.39	1/2" x 3/8"	1-7/8"	1.050	.550	11/16" H	.38"	34-216SS	24.00
34-217	9.41	1/2" x 1/2"	2-1/8"	1.050	.550	7/8" H	.38"	34-217SS	32.02
34-218	11.71	1/2" x 3/4"	2-3/16"	1.050	.550	1-1/8" H	.38"	34-218SS	49.80
34-222	10.67	3/4" x 1/2"	2-5/8"	1.550	.800	1-1/8" H	.56"	34-222SS	36.87
34-223	13.44	3/4" x 3/4"	2-11/16"	1.550	.800	7/8" H	.56"	34-223SS	49.22
34-224	13.44	1" x 3/4"	2-11/16"	1.550	1.050	1-1/8" H	.69"	34-224SS	49.22
34-225	18.35	1" x 1"	2-15/16"	1.550	1.050	1-3/8" H	.75"	34-225SS	72.24

Positive anything is better than negative nothing.

- Elbert Hubbard

# Push On Barb Fittings



**Typical Application:** Low Pressure Air, Fuel, Lube, and Oil Lines

**Material:** CA360 Brass

- Pressure determined by tube material and hardness. Midland Parts have been tested to max 150 PSI.

**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 is seated under protective plastic cap. Keep hands back from hose end area so that hose can expand.

**• Disassembling Instructions**

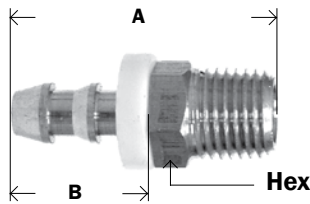
- 1- Split hose as shown above. Do not cut completely through hose. Sealing edge of barb could be damaged.
- 2- Bend hose and remove with a quick pull.

See Page 170 for Lead-Free

**Actual Profile of Push On Barbs**



**MALE ADAPTER**

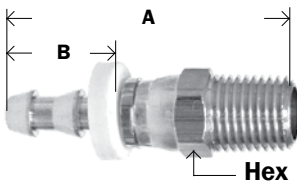


- 301
- P990A
- HLM
- 100B-1
- KA-MB
- 272
- 29PO
- 725
- 625
- BPN
- 941
- 30182

Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
30-200 *	1/4" x 1/8"	1.43	0.87	0.50	0.04	1.36
30-201 *	1/4" x 1/4"	1.66	0.87	0.56	0.06	1.93
30-211	1/4" x 3/8"	1.66	0.87	0.68	0.06	2.80
30-212	5/16" x 1/8"	1.42	0.77	0.43	0.04	2.99
30-213	5/16" x 1/4"	1.66	0.87	0.56	0.06	2.98
30-202	3/8" x 1/8"	1.53	0.97	0.50	0.04	2.08
30-203 *	3/8" x 1/4"	1.69	0.89	0.56	0.07	2.20
30-204 *	3/8" x 3/8"	1.76	0.97	0.68	0.08	2.67
30-205	3/8" x 1/2"	1.97	0.97	0.87	0.10	4.80
30-392	3/8" x 3/4"	1.97	0.92	1.06	0.16	13.28
30-216	1/2" x 1/4"	1.76	0.97	0.68	0.08	2.83
30-206 *	1/2" x 3/8"	1.76	0.97	0.68	0.09	2.79
30-207 *	1/2" x 1/2"	1.97	0.97	0.87	0.14	4.63
30-217	1/2" x 3/4"	1.97	0.97	1.06	0.16	6.25
30-219	5/8" x 3/8"	2.34	1.50	0.75	0.12	10.12
30-209	5/8" x 1/2"	2.45	1.45	0.87	0.16	6.39
30-214	5/8" x 3/4"	2.45	1.45	1.06	0.18	7.60
30-215 *	3/4" x 1/2"	2.45	1.45	0.87	0.21	7.85
30-210 *	3/4" x 3/4"	2.45	1.45	1.06	0.20	7.77
30-238	1" x 3/4"	2.93	1.50	1.25	0.43	27.29
30-239	1" x 1"	3.11	1.50	1.37	0.49	29.94

\* See page 34 for stainless

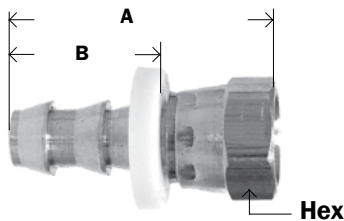
**MALE SWIVEL**



- 921
- HMS
- 285
- 31382

Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
30-422	1/4" x 1/8"	2.07	0.87	0.56	0.06	5.35
30-385	1/4" x 1/4"	2.02	0.87	0.56	0.06	5.28
30-423	3/8" x 1/8"	2.12	0.97	0.56	0.07	5.00
30-386	3/8" x 1/4"	2.12	0.97	0.56	0.08	6.08
30-387	3/8" x 3/8"	2.12	0.97	0.68	0.08	6.81
30-388	1/2" x 3/8"	2.12	0.97	0.68	0.10	6.70
30-389	1/2" x 1/2"	2.33	0.97	0.87	0.14	7.96
30-424	5/8" x 1/2"	2.80	1.45	0.88	0.18	11.06
30-390	3/4" x 3/4"	2.80	1.45	1.06	0.24	11.13

**FEMALE GASKET SEAL SWIVEL - NPSM**



- 280

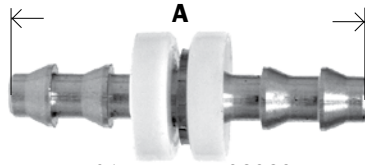
Part #	Hose I.D. x Gasket Swivel (NPSM)	A	B	Hex	Approx. Wt. Lbs.	List Price
30-359	1/4" x 1/8"	1.39	0.77	0.50	0.03	11.28
30-358	1/4" x 1/4"	1.47	0.82	0.68	0.06	6.17
30-360	3/8" x 1/4"	1.61	1.00	0.68	0.06	5.97
30-361	3/8" x 3/8"	1.77	0.97	0.81	0.08	9.79
30-362	3/8" x 1/2"	1.80	0.92	0.93	0.09	15.12
30-363	1/2" x 1/2"	1.88	1.02	0.93	0.11	12.64
30-366	3/4" x 3/4"	2.36	1.55	1.18	0.32	25.27

Dimension data can change without notice. Please see our website when dimensions are critical.

## PUSH ON HOSE BARB

## BRASS FITTINGS

## HOSE SPLICER

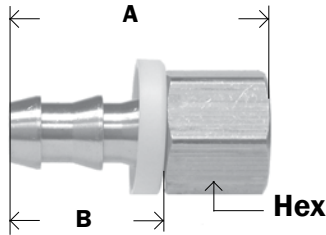


BPM	915	38282
696	100B-Y	
29SPO	KA-RM	
296	MHL	
729	296	

Part #	Hose I.D.	A	Approx. Wt. Lbs.	List Price
30-300 *	1/4"	1.87	0.04	1.69
30-305	5/16"	1.80	0.04	2.80
30-301 *	3/8"	2.00	0.06	2.10
30-302 *	1/2"	2.01	0.08	3.20
30-303	5/8"	3.03	0.14	7.34
30-304	3/4"	3.03	0.14	7.69
30-306	1"	3.21	0.28	21.22

\* See page 34 for stainless

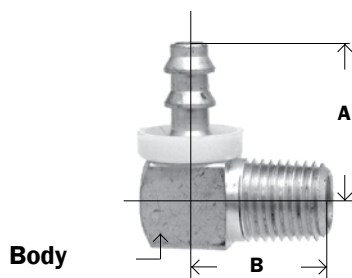
## RIGID FEMALE ADAPTER



30282	274
29FPO	726
HLF	940
626	

Part #	Hose I.D. x Female NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
30-220	1/4" x 1/8"	1.35	0.87	0.50	0.02	2.44
30-221	1/4" x 1/4"	1.51	0.87	0.62	0.06	2.03
30-384	1/4" x 3/8"	1.51	0.77	0.75	0.06	7.15
30-391	5/16" x 1/8"	1.32	0.77	0.50	0.03	5.63
30-222	5/16" x 1/4"	1.51	0.87	0.62	0.06	3.51
30-393	3/8" x 1/8"	1.47	0.92	0.56	0.06	6.54
30-224	3/8" x 1/4"	1.61	0.97	0.62	0.06	2.42
30-225	3/8" x 3/8"	1.63	0.97	0.75	0.06	3.45
30-394	3/8" x 1/2"	1.66	0.92	0.93	0.12	8.29
30-397	3/8" x 3/4"	1.97	0.97	1.18	0.20	17.57
30-223	1/2" x 1/4"	1.76	1.02	0.68	0.08	12.17
30-226	1/2" x 3/8"	1.63	0.97	0.75	0.08	3.92
30-227	1/2" x 1/2"	1.77	0.97	0.93	0.14	6.72
30-396	1/2" x 3/4"	2.07	1.02	1.18	0.20	17.62
30-398	5/8" x 3/8"	2.24	1.55	0.75	0.10	9.15
30-229	5/8" x 1/2"	2.24	1.48	0.93	0.11	8.48
30-399	3/4" x 1/2"	2.24	1.50	0.93	0.14	11.28
30-395	3/4" x 3/4"	2.55	1.50	1.18	0.24	16.68
30-400	1" x 3/4"	2.55	1.55	1.18	0.25	23.06
30-402	1" x 1"	2.68	1.55	1.43	0.37	30.49

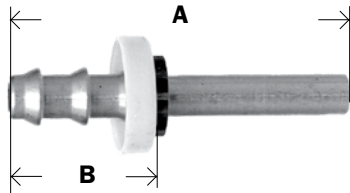
## MALE ELBOW



100-C
29EPO
273

Part #	Hose I.D. x Male NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
30-372	1/4" x 1/8"	0.98	0.75	0.50	0.04	7.77
30-373	1/4" x 1/4"	1.04	0.95	0.56	0.06	7.50
30-374	5/16" x 1/8"	1.02	0.94	0.50	0.06	18.18
30-375	5/16" x 1/4"	1.09	0.94	0.56	0.08	10.03
30-370	3/8" x 1/8"	1.11	0.75	0.50	0.10	5.39
30-371	3/8" x 1/4"	1.13	0.90	0.56	0.10	5.02
30-376	3/8" x 3/8"	1.21	0.92	0.70	0.12	5.63
30-377	3/8" x 1/2"	1.30	1.19	0.87	0.22	20.13
30-382	1/2" x 3/8"	1.54			0.13	13.35
30-378	1/2" x 1/2"	1.50	1.19	0.87	0.22	12.00
30-379	5/8" x 1/2"	1.98	1.19	0.87	0.26	16.69
30-383	3/4" x 1/2"	2.15			0.25	35.33

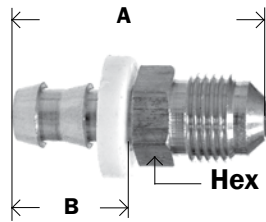
**RIGID TUBE ADAPTER**



294 303  
100B-X 732  
KA-RL 694

Part #	Hose I.D. x O.D Tube	A	B	Approx. Wt. Lbs.	List Price
30-290	1/4" x 3/16"	1.68	0.77	0.04	6.16
30-291	1/4" x 1/4"	1.88	0.77	0.04	1.95
30-292	1/4" x 5/16"	1.88	0.77	0.04	6.35
30-293	5/16" x 5/16"	1.91	0.79	0.04	4.37
30-294	3/8" x 3/8"	2.03	0.92	0.06	3.38
30-426	3/8" x 1/2"	1.81	0.97	0.04	4.90
30-297	1/2" x 1/2"	2.13	1.02	0.06	7.51
30-298	5/8" x 5/8"	2.61	1.50	0.10	10.18
30-299	3/4" x 3/4"	2.61	1.50	0.25	13.84

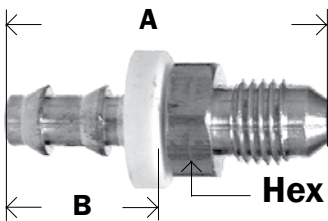
**MALE SAE FLARE ADAPTER**



945  
100B-3 682  
KA-MS 302  
727 282

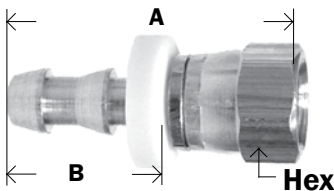
Part #	Hose I.D. x 45° Male Flare	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
30-240	1/4" x 1/4"	7/16-20	1.45	0.75	0.43	0.04	4.20
30-241	1/4" x 5/16"	1/2-20	1.59	0.84	0.50	0.04	4.85
30-249	5/16" x 5/16"	1/2-20	1.60	0.80	0.50	0.06	3.76
30-271	3/8" x 5/16"	1/2-20	1.64	0.86	0.50	0.08	3.96
30-243	3/8" x 3/8"	5/8-18	1.83	0.92	0.62	0.08	4.20
30-245	1/2" x 1/2"	3/4-16	1.98	1.02	0.875	0.10	10.86
30-246	5/8" x 5/8"	7/8-14	2.73	1.50	0.87	0.19	13.29
30-247	3/4" x 3/4"	1-1/16-14	2.98	1.50	1.06	0.32	19.69

**37° MALE JIC FLARE ADAPTER**



Part #	Hose I.D. x Male JIC	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
32-900	1/4" x 1/4"	7/16-20	1.57	0.84	0.50	0.04	5.26
32-901	1/4" x 5/16"	1/2-20	1.60	0.83	0.56	0.04	6.18
32-906	1/4" x 3/8"	9/16-18	1.63	0.77	0.62	0.05	7.84
32-902	3/8" x 3/8"	9/16-18	1.78	0.97	0.62	0.06	8.27
32-903	1/2" x 1/2"	3/4-16	1.97	0.97	0.75	0.10	10.27
32-907	5/8" x 5/8"	7/8-14	2.62	1.50	0.93	0.19	10.86
32-905	3/4" x 3/4"	1-1/16-12	2.79	1.50	1.12	0.29	19.79

**SAE/JIC DUAL 45°/37° FEMALE SWIVEL**



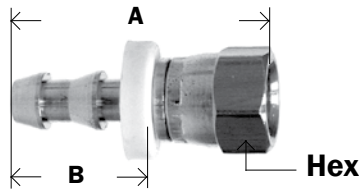
29FDS  
287  
HDF  
309  
735  
690  
P990-K  
305  
935/ 934

Part #	Hose I.D. x Dual Seat	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
30-230 *	1/4" x 1/4"	7/16-20	1.53	0.87	0.56	0.06	2.32
30-231	1/4" x 5/16"	1/2-20	1.57	0.87	0.62	0.04	3.37
30-232	5/16" x 5/16"	1/2-20	1.56	0.87	0.62	0.04	3.50
30-427	3/8" x 5/16"	1/2-20		0.87	0.62	0.06	8.66
30-233	3/8" x 1/2"	3/4-16	1.79	0.97	0.87	0.10	4.99
30-234 *	1/2" x 1/2"	3/4-16	1.77	0.97	0.87	0.10	4.57
30-235	1/2" x 5/8"	7/8-14	1.84	0.97	1.00	0.12	7.55
30-236	5/8" x 1/2"	3/4-16	2.27	1.45	0.87	0.18	8.62
30-237	5/8" x 5/8"	7/8-14	2.33	1.45	1.00	0.14	7.85
30-428	3/4" x 5/8"	7/8-14		1.45	1.00	0.20	9.86

\* See page 34 for stainless

Dimension data can change without notice. Please see our website when dimensions are critical.

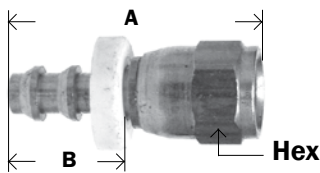
**45° SAE FLARE FEMALE SWIVEL**



Part #	Hose I.D. x 45° Female Flare	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
30-250	1/4" x 1/4"	7/16-20	1.54	0.87	0.56	0.04	2.45
30-251	1/4" x 5/16"	1/2-20	1.57	0.87	0.62	0.04	3.79
30-253	1/4" x 3/8"	5/8-20	1.63	0.87	0.75	0.06	4.74
30-254	5/16" x 5/16"	1/2-20	1.58	0.87	0.68	0.06	16.38
30-260	5/16" x 3/8"	5/8-18	1.63	0.87	0.75	0.08	5.20
30-252	3/8" x 3/8"	5/8-18	1.73	0.97	0.75	0.10	3.72
30-257	3/8" x 1/2"	3/4-16	1.85	0.87	0.87	0.10	9.69
30-261	1/2" x 3/8"	5/8-18	1.92	1.05	0.75	0.10	7.69
30-255	1/2" x 1/2"	3/4-16	1.77	0.97	0.87	0.12	6.12
30-258	5/8" x 5/8"	7/8-14	2.35	1.45	1.00	0.14	10.30
30-259	3/4" x 3/4"	1-1/16-14	2.42	1.45	1.25	0.22	10.01

30882  
728 100S-4  
P990-H KA-NS  
29AEPO HSF  
307 684  
284 934

**FEMALE 37° JIC FLARE SWIVEL**

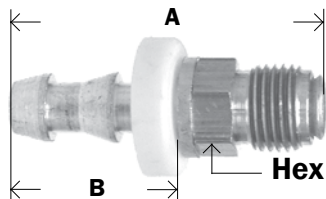


Part #	Hose I.D. x Female JIC	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
30-265	1/4" x 1/4"	7/16-20	1.54	0.87	0.56	0.04	2.20
30-264	1/4" x 3/8"	9/16-18	1.60	0.87	0.68	0.06	3.96
30-270	5/16" x 3/8"	9/16-18	1.60	0.82	0.68	0.06	3.56
30-266 *	3/8" x 3/8"	9/16-18	1.70	0.97	0.68	0.08	3.47
30-267	1/2" x 1/2"	3/4-16	1.78	0.97	0.87	0.10	5.36
30-268	5/8" x 5/8"	7/8-14	2.33	1.45	1.00	0.14	7.32
30-269 *	3/4" x 3/4"	1-1/16-12	2.40	1.45	1.25	0.22	9.61
30-429	1" x 1"	1-5/16-12		1.45	1.50	0.39	27.59

JF 288  
944/934 100B-6  
29J1CPO 308  
HJF P990-F  
688 30682  
738 KA-NJ

\* See page 34 for stainless  
• More sizes available

**INVERTED FLARE MALE SWIVEL**



Part #	Hose I.D. x Male INV Flare	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
30-275	1/4" x 3/16"	3/8-24	1.52	0.87	0.37	0.04	8.47
30-276	1/4" x 1/4"	7/16-24	1.56	0.87	0.43	0.04	4.11
30-277	1/4" x 5/16"	1/2-20	1.62	0.87	0.50	0.04	4.49
30-278	5/16" x 1/4"	7/16-24	1.56	0.87	0.43	0.06	6.31
30-280	5/16" x 5/16"	1/2-20	1.62	0.87	0.50	0.06	5.84
30-283	5/16" x 3/8"	5/8-18	1.63	0.87	0.62	0.06	8.83
30-284	3/8" x 5/16"	1/2-20	1.72	0.97	0.50	0.06	5.45
30-279	3/8" x 3/8"	5/8-18	1.76	0.97	0.62	0.06	5.18
30-282	1/2" x 1/2"	3/4-18	1.84	0.97	0.75	0.10	9.01
30-286	5/8" x 5/8"	7/8-18	2.50	1.57	0.87	0.14	18.28

290  
100B-B  
KA-MF  
1MS  
947



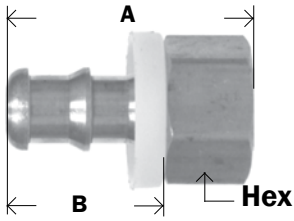
**MIDLAND METAL  
APP**

**SEE INSIDE FRONT  
COVER**





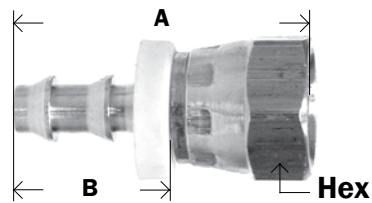
**INVERTED FLARE FEMALE ADAPTER**



306 P990-J  
 100B-A 736  
 KA-NG 692  
 292 946

Part #	Hose I.D. x Female INV Flare	A	B	Hex	Approx. Wt. Lbs.	List Price
30-310	1/4" x 3/16"	1.12	0.84	0.50	0.02	7.45
30-311	1/4" x 1/4"	1.14	0.84	0.56	0.02	5.45
30-312	1/4" x 5/16"	1.18	0.82	0.62	0.02	8.80
30-316	5/16" x 5/16"	1.25	0.81	0.62	0.04	6.90
30-313	3/8" x 5/16"	1.32	0.87	0.62	0.04	8.67
30-314	3/8" x 3/8"	1.35	0.95	0.75	0.06	5.42
30-315	1/2" x 1/2"	1.73	1.04	0.87	0.12	21.61

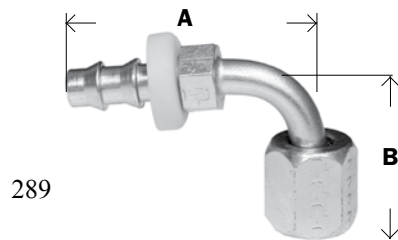
**FEMALE BALLSEAT SWIVEL**



628 731  
 278 NPSM  
 29SPO

Part #	Hose I.D. x Female NPSM	A	B	Hex	Approx. Wt. Lbs.	List Price
30-340	1/4" X 1/8"	1.39	0.85	0.50	0.06	10.30
30-341	1/4" X 1/4"	1.47	0.80	0.68	0.06	7.98
30-342	1/4" x 3/8"	1.40	0.77	0.68	0.09	8.44
30-343	3/8" X 1/4"	1.61	0.97	0.68	0.08	11.51
30-344	3/8" X 3/8"	1.75	0.95	0.81	0.10	10.86
30-430	3/8" x 1/2"	1.79	0.97	0.93	0.11	11.24
30-346	1/2" X 1/2"	1.88	1.09	0.93	0.12	15.54
30-345	1/2" x 3/4"	2.36	1.02	1.18	0.18	18.03
30-349	3/4" X 3/4"	2.36	1.55	1.18	0.22	22.83

**SAE/ JIC 37° / 45° FEMALE SWIVEL 90° ZINC PLATED STEEL**



289

Part #	Hose I.D. x Female 37°/45°	UNF Thread	A	B	Approx. Wt. Lbs.	List Price
30-480	1/4"	7/16-20	1.55	0.83	.064	31.57
30-482	3/8"	9/16-18	1.85	0.91	.095	30.21
30-483*	3/8"	5/8-18	1.98	0.85	.095	39.21
30-484	1/2"	3/4-16	2.33	1.09	.171	43.22
30-486	3/4"	1-1/16-12	3.26	1.81	.281	115.97

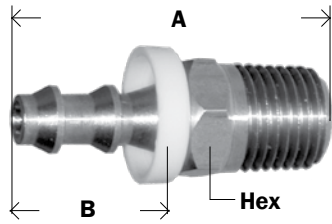
\* SAE

ALL OUR DREAMS CAN COME TRUE, IF WE HAVE THE COURAGE TO PURSUE THEM.

- WALT DISNEY

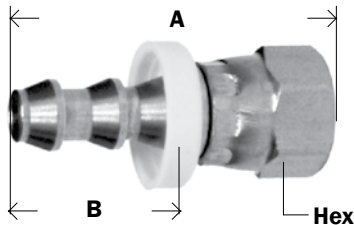
**BRASS**

**STAINLESS STEEL MALE ADAPTERS**



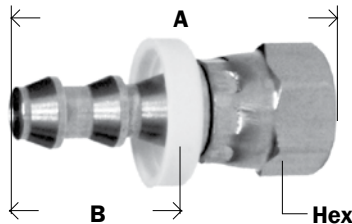
Part #	Hose I.D. x NPT	A	B	Hex	Approx. Wt. Lbs.	List Price
30-200SS	1/4" x 1/8"	1.42	0.77	0.44	0.027	9.99
30-201SS	1/4" x 1/4"	1.61	0.77	0.56	0.043	10.00
30-203SS	3/8" x 1/4"	1.76	0.92	0.56	0.053	11.20
30-204SS	3/8" x 3/8"	1.76	0.92	0.69	0.067	12.25
30-206SS	1/2" x 3/8"	1.86	1.02	0.69	0.071	12.41
30-207SS	1/2" x 1/2"	2.07	1.02	0.88	0.119	27.38
30-215SS	3/4" x 1/2"	2.55	1.50	0.88	0.20	31.30
30-210SS	3/4" x 3/4"	2.55	1.50	1.06	0.194	30.41

**STAINLESS STEEL SAE/ JIC 45° / 37° FEMALE SWIVEL**



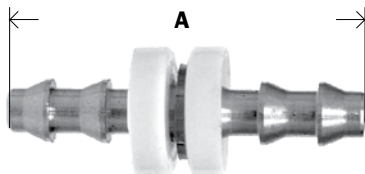
Part #	Hose I.D. x Female 45°/37°	A	B	Hex	Approx. Wt. Lbs.	List Price
30-230SS	1/4" x 1/4"	2.03	0.97	0.56	0.023	27.14
30-234SS	1/2" x 1/2"	2.06	0.97	0.88	0.04	50.50

**STAINLESS STEEL FEMALE 37° JIC FLARE SWIVEL**



Part #	Hose I.D. x Female 37°	A	B	Hex	Approx. Wt. Lbs.	List Price
30-266SS	3/8" x 3/8"	1.75	.92	1.06	0.065	35.90
30-269SS	3/4" x 3/4"	2.53	1.50	1.25	0.259	80.20

**STAINLESS STEEL HOSE SPLICER**



Part #	Hose I.D. x Tube O.D.	A	Approx. Wt. Lbs.	List Price
30-300SS	1/4"	1.73	0.025	46.49
30-301SS	3/8"	2.05	0.051	53.41
30-302SS	1/2"	2.25	0.073	58.92

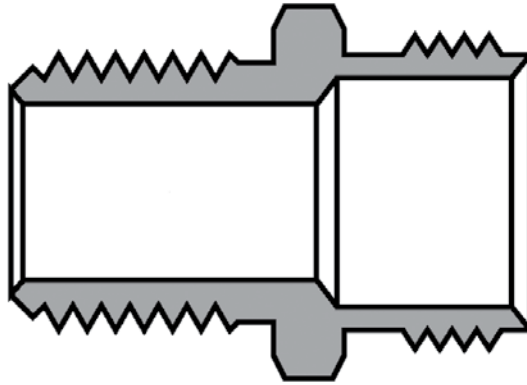


**BIN LABELS ON DEMAND**

**SEE INTRO PAGE 4**



# Garden Hose Fittings



See page 325 for  
Plastic Garden Hose Fittings

Dimension data can change without notice.  
Please see our website when dimensions are  
critical.

## • Temperature and Working Pressure Ranges

From +35°F to +100°F at 75 PSI maximum or  
the recommended working pressure of the gar-  
den 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

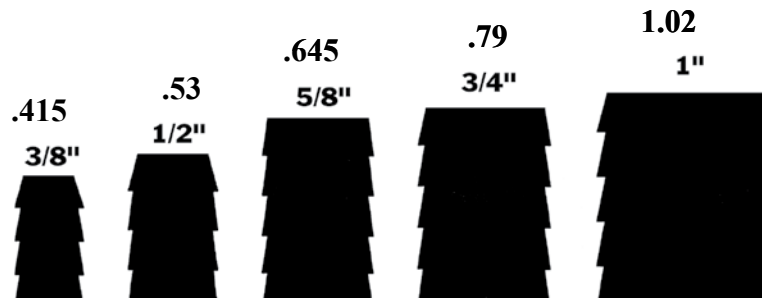
**MGH** = Male Garden Hose threads

Male garden hose threads are all 3/4" with an  
outside diameter of 1.0625 and 11-1/2" threads  
per inch.



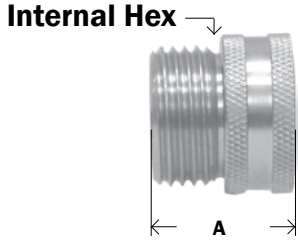
Male Garden Hose Profile

## Actual Profile of Garden Hose Barbs



**SWIVEL - MGH X FGH**

•WASHER INCLUDED

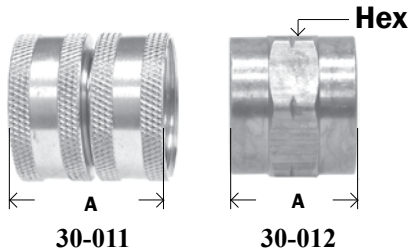


Part #	MGH X FGH	A	Hex	Approx. Wt. Lbs.	List Price
30-000**	3/4" x 3/4"	1.03	0.50*	0.26	5.33

\* Internal Hex  
 \* Not a live swivel  
 \*\* available in swivel crimp style

**SWIVEL - FGH X FGH**

•WASHER INCLUDED



Part #	FGH X FGH	A	Hex	Approx. Wt. Lbs.	List Price
30-011	3/4" x 3/4"	1.03	1.18 O.D.	0.24	4.99
30-012	No Swivel	1.08	1.19	0.24	9.06

HUS 91 203W  
 GSU 101GHSV 22AS  
 506 FS66

**SWIVEL - FGH X FEMALE PIPE**

•WASHER INCLUDED

S1 91Z 197S 98GHSV  
 5AS 21517 502 FS65



Part #	FGH x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-001	3/4" x 1/2"	1.20	1.00	0.11	5.61
30-006	3/4" x 3/4"	1.11	1.12	0.11	5.23

**RIGID - FGH X FEMALE PIPE**

•WASHER INCLUDED



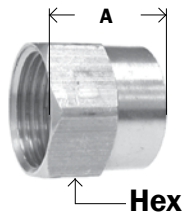
95GH 501

Part #	FGH x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-016	3/4" x 1/8"	1.02	1.18	0.08	11.41
30-017	3/4" x 1/4"	0.65	1.12	0.07	4.60
30-018	3/4" x 3/8"	1.19	1.18	0.11	4.69

THE BEST WAY TO PREDICT THE FUTURE IS TO INVENT IT.  
 - ALAN KAY

**RIGID - FGH X FEMALE PIPE**

FS67  
198  
HU11  
21507  
501  
99GH  
5A  
H15PP

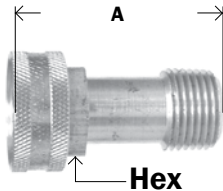


Part #	FGH x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-078	3/4" x 1/2"	1.06	1.18	0.10	4.10
30-083	3/4" x 3/4"	1.06	1.18	0.12	5.36

**SWIVEL - FGH X MALE PIPE**

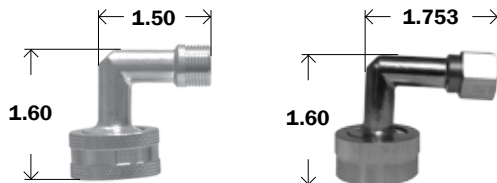
•WASHER INCLUDED

504  
89GH  
W1  
62H4  
88GH  
W1



Part #	FGH x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-047	3/4" x 1/4"	2.04	0.75	0.13	6.00
30-048	3/4" x 3/8"	2.06	0.75	0.14	5.10
30-049	3/4" x 1/2"	2.06	0.87	0.18	6.81

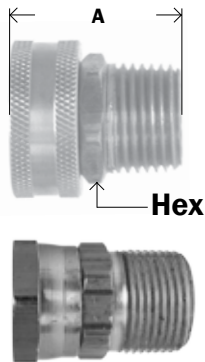
**3/8" Comp 3/4" FGH DISHWASHER 90° ELBOW**



Part #	3/4 Female Garden Hose Thread x 3/8 Compression	List Price
30-055	3/4" x 3/8"	9.21
30-056	3/4" x 3/8" w/ nut & sleeve	10.10

**SWIVEL - FGH X MALE PIPE**

•WASHER INCLUDED

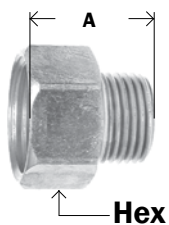


\* Crimp style

Part #	FGH x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-181*	3/4" x 1/4"	1.43	1.18	0.13	5.40
30-184*	3/4" x 3/8"	1.43	1.18	0.15	5.02
30-183	3/4" x 1/2"	1.32	0.81	0.11	7.27
30-182*	3/4" x 3/4"	1.43	1.18	0.14	15.35

**RIGID - FGH X MALE PIPE**

21505  
503  
83GH  
20A  
HU21  
199  
H7

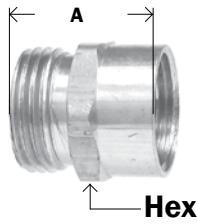


Part #	FGH x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-087	3/4" x 3/8"	1.37	1.18	0.11	4.76
30-088	3/4" x 1/2" (1/2" SWT)**	1.06	1.18	0.09	6.45
30-093	3/4" x 3/4"	1.06	1.18	0.11	4.62
30-094	3/4" x 3/4" (1/2" FIP)	1.17	1.18	0.11	5.75
30-093L*	3/4" x 3/4"	1.22	1.18	0.14	14.59

\* Long pattern

\*\* 1/2 Swt = 5/8 O.D.

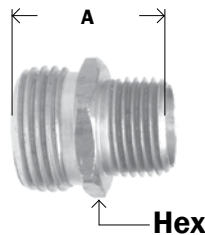
**RIGID - MGH X FEMALE PIPE**



- 197
- 18R
- HU12
- H11PP
- 18A
- 507
- 18H
- 81GH
- 21503
- MF67

Part #	MGH X Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-066	3/4" x 1/4"	1.10	1.06	0.09	5.39
30-067	3/4" x 3/8"	1.09	1.06	0.12	6.60
30-068	3/4" x 1/2"	0.81	1.06	0.10	3.40
30-073	3/4" x 3/4"	1.12	1.18	0.10	4.20

**RIGID - MGH X MALE PIPE**

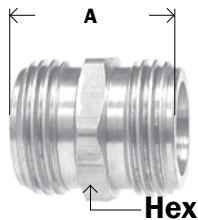


- 19R
- 196
- H530
- 21501
- 508
- HU22
- 514
- 71GH
- 19A

Part #	MGH X Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-053	3/4" x 3/8"	1.25	1.06	0.10	3.73
30-058*	3/4" x 1/2"	1.31	1.06	0.12	3.92
30-063**	3/4" x 3/4" x 1/2"	1.31	1.06	0.13	4.61
30-063BE***	3/4" x 3/4"	1.31	1.06	0.15	6.72
30-063S	3/4" x 3/4" Short	1.10	1.06	0.10	4.36
30-064	3/4" x 1"	1.62	1.37	0.35	11.93

No Tap  
 \* (1/2 Swt = 5/8 O.D.)  
 \*\* (Tapped 1/2 FIP)  
 \*\*\* (Tapped 1/2 FIP Both ends)

**RIGID - MGH X MGH**

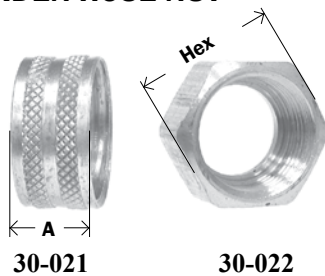


- 21500
- 509
- 75GH
- 23A
- H8
- 19R

Part #	MGH X MGH	A	Hex	Approx. Wt. Lbs.	List Price
30-098	3/4" x 3/4" (1/2" FIP)	1.22	1.06	0.13	4.88
30-099	3/4" x 3/4"	1.22	1.06		4.65
30-100*	1" x 3/4"	1.31	1.37	0.21	7.30

\* 1-11-1/2

**GARDEN HOSE NUT**

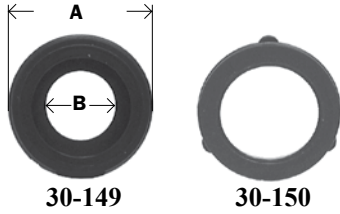


- 94GH
- GHN1
- HNR
- 21514

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-021	Knurled	0.61	1.37 O.D.	0.08	2.91
30-022	Hex Nut	0.51	1.12	0.08	3.90

Dimension data can change without notice. Please see our website when dimensions are critical.

**GARDEN HOSE WASHERS**

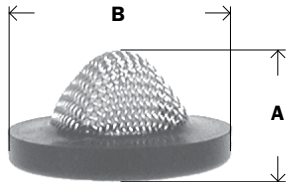


Part #	Size	A	B	Thickness	Approx. Wt. Lbs.	List Price
30-149	recessed washer	1.02	0.49	0.18	0.01	0.37
30-150	black*	0.98	0.68	0.13	0.01	0.22
30-150R	red	1.00	0.68	0.13	0.01	0.19
30-150B	black rubber	1.00	0.68	0.13	0.01	0.28
30-151	1"	1.27	0.86	0.16	0.01	0.53

GHW  
901GH

\* plasticized rubber

**GARDEN HOSE FILTER WASHER**



• 300 Series Stainless Steel Screen

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-180	30 Mesh	0.52	1.00	0.02	1.01
30-180F	60 Mesh	0.52	1.00	0.02	1.12

LA662

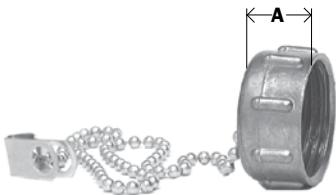
**GARDEN HOSE CAP - Die Cast Brass**



Part #	Size	A	Approx. Wt. Lbs.	List Price
30-103	3/4" Die Cast	0.58	0.04	1.62
30-103B	3/4" Barstock	0.60	0.048	5.04

513  
96GH  
GHN5  
HC1 21518  
LA215 200-W

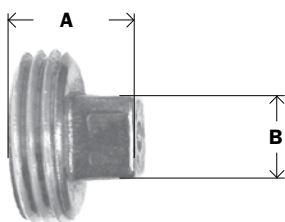
**GARDEN HOSE CAP WITH CHAIN**



Part #	Size	A	Approx. Wt. Lbs.	List Price
30-142	3/4" w/ 8" Chain	0.58	0.06	8.17

\* Zinc die cast

**GARDEN HOSE PLUG**



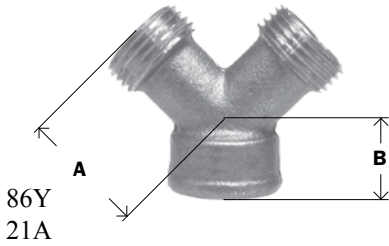
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-026	3/4"	0.69	0.61	0.12	22.50

**GARDEN HOSE**

**BRASS FITTINGS**

**CAST BRASS HOSE - "Y" CONNECTOR**

•WASHER INCLUDED

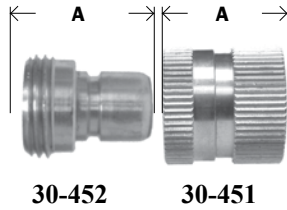


Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-140	3/4"	1.40	0.67	0.22	6.79

• See more Garden Hose "Y"'s on page 45

**QUICK DISCONNECT GARDEN HOSE COUPLERS**

•WASHER INCLUDED

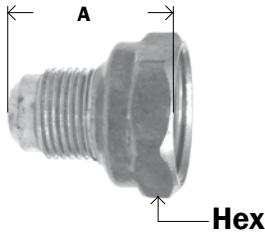


- Unvalved construction allows maximum Flow
- 150 PSI
- NBR Seals

Part #	Size	A	Approx. Wt. Lbs.	List Price
30-450	Complete	-----	0.24	15.69
30-451	Female end	1.14	0.12	8.98
30-452	Male end	1.26	0.12	3.87

LA73C

**MALE FLARE X FGH RIGID**

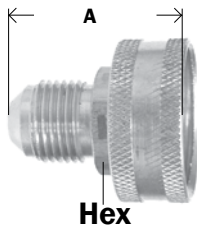


190  
46WH  
HFU21

Part #	Male Flare x FGH	A	Hex	Approx. Wt. Lbs.	List Price
30-123	3/8" x 3/4"	1.31	1.18	0.10	8.16
30-128	1/2" x 3/4"	1.38	1.18	0.12	7.37
30-133	5/8" x 3/4"	1.53	1.18	0.14	10.64

**MALE FLARE x FGH SWIVEL**

•WASHER INCLUDED



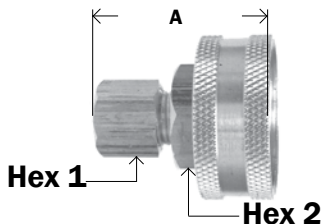
50GHSV  
51GHSV 68H  
W1 191

Part #	Male Flare x FGH	A	Hex	Approx. Wt. Lbs.	List Price
30-052	1/4" x 3/4"	1.24	0.75	0.10	4.87
30-138	3/8" x 3/4"	1.25	0.25*	0.12	13.16
30-139	1/2" x 3/4"	1.49	0.81	0.14	9.32

\* Internal Hex

**COMPRESSION X FGH**

•WASHER INCLUDED



Part #	Compression x FGH	A	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
30-050	1/4" x 3/4"	1.02	0.50	0.75	0.09	8.38
30-051	3/8" x 3/4"	1.04	0.62	0.75	0.12	7.72

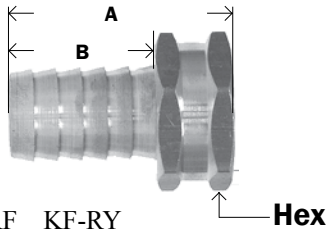


**BARSTOCK BRASS GARDEN HOSE COUPLINGS**

**BRASS**

**FEMALE SWIVEL ONLY**

•WASHER INCLUDED



22RF KF-RY  
591 HU126  
GHF 195

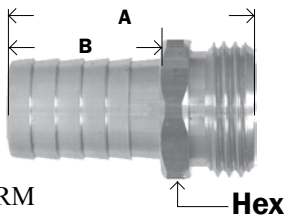
**BRASS**

Part #	Hose Barb x FGH	A	B	Hex	Approx. Wt. Lbs.	List Price
30-031	3/8" x 3/4"	1.82	1.19	1.18	0.11	4.64
30-032	1/2" x 3/4"	1.82	1.19	1.18	0.12	4.60
30-033	5/8" x 3/4"	1.82	1.19	1.18	0.13	4.91
30-034	3/4" x 3/4"	1.82	1.19	1.18	0.15	5.16
30-044	1" x 3/4"	2.10	1.19	1.18	0.18	7.63
30-035	1" x 1"	2.28	1.47	1.50	0.18	14.92

**STAINLESS STEEL 316**

30-032SS	1/2" x 3/4"	1.82	1.19	1.18	0.12	27.41
30-033SS	5/8" x 3/4"	1.82	1.19	1.18	0.13	27.41
30-034SS	3/4" x 3/4"	1.82	1.19	1.18	0.15	31.94

**MALE END ONLY**



22RM  
590 201GH  
GHM 193  
KF-PY HU125

**BRASS**

Part #	Hose Barb x MGH	A	B	Hex	Approx. Wt. Lbs.	List Price
30-039	3/8" x 3/4"	1.88	1.19	1.06	0.12	4.21
30-040	1/2" x 3/4"	1.88	1.19	1.06	0.12	3.78
30-041	5/8" x 3/4"	1.88	1.19	1.06	0.12	4.17
30-042	3/4" x 3/4"	1.88	1.19	1.06	0.13	4.09
30-045	1" x 3/4"	1.94	1.19	1.06	0.21	6.22
30-043	1" x 1"	2.34	1.47	1.37	0.26	14.29

**STAINLESS STEEL 316**

30-040SS	1/2" x 3/4"	1.88	1.19	1.06	0.12	22.91
30-041SS	5/8" x 3/4"	1.88	1.19	1.06	0.12	22.91
30-042SS	3/4" x 3/4"	1.88	1.19	1.06	0.13	26.36

**GARDEN HOSE COUPLING**

•WASHER INCLUDED



GHS 22R  
92GH 592  
936H  
202GHS

See page 16 for Menders

**BRASS**

Part #	Hose Barb	List Price
30-025	3/8"	8.90
30-027	1/2"	9.86
30-028	5/8"	10.24
30-029	3/4"	9.44
30-046	1"(3/4" threads)	30.04
30-030	1"	29.03

**STAINLESS STEEL 316**

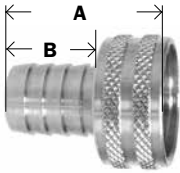
30-027SS	1/2"	55.34
30-028SS	5/8"	55.34
30-029SS	3/4"	59.21

Dimension data can change without notice. Please see our website when dimensions are critical.

## GARDEN HOSE

## BRASS FITTINGS

## FEMALE SWIVEL ONLY - Short Shank Knurled Nut



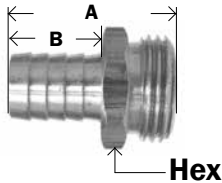
Part #	Hose Barb x FGH	A	B	Approx. Wt. Lbs.	List Price
30-466	1/2" x 3/4"	1.50	0.88	0.08	5.41
30-467	5/8" x 3/4"	1.50	0.88	0.09	4.46
30-468	3/4" x 3/4"	1.47	0.88	0.10	4.80

## FEMALE END ONLY - Short Shank w/ hex



Part #	Hose x FGH	A	B	Hex	Approx. Wt. Lbs.	List Price
30-453	1/2" x 3/4"	1.63	1.00	1.18	0.11	4.19
30-454	5/8" x 3/4"	1.63	1.00	1.18	0.11	4.38
30-455	3/4" x 3/4"	1.63	1.00	1.18	0.13	4.83

## MALE END ONLY - Short Shank



Part #	Hose Barb x MGH	A	B	Hex	Approx. Wt. Lbs.	List Price
30-471	1/2" x 3/4"	1.55	0.88	1.06	0.11	5.65
30-472	5/8" x 3/4"	1.56	0.88	1.06	0.12	4.68
30-473	3/4" x 3/4"	1.56	0.88	1.06	0.13	5.56

## GARDEN HOSE COUPLING SETS - Short Shank with Knurled Nut



Part #	Hose Barb	List Price
30-461	1/2"	10.68
30-462	5/8"	10.68
30-463	3/4"	10.89

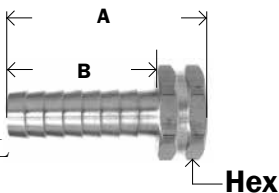
## GARDEN HOSE COUPLING SETS - Short Shank w/ hex nut



Part #	Hose Barb	List Price
30-457	1/2"	9.26
30-458	5/8"	9.26
30-459	3/4"	9.90

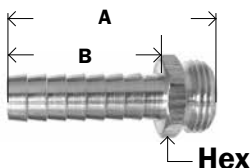
## FEMALE SWIVEL ONLY - 2" SHANK

•WASHER INCLUDED

GHFL  
594

Part #	Hose Barb x FGH	A	B	Hex	Approx. Wt. Lbs.	List Price
30-505	1/2" x 3/4"	2.55	2.04	1.18	0.13	6.58
30-506	5/8" x 3/4"	2.56	2.04	1.18	0.16	6.34
30-507	3/4" x 3/4"	2.67	2.04	1.18	0.17	5.89
30-508	1" x 1"	2.84	2.03	1.43	0.29	9.90

## MALE END ONLY - 2" SHANK

GHML  
593

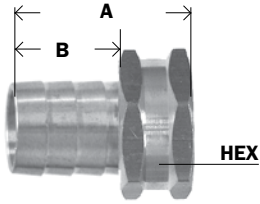
Part #	Hose Barb x MGH	A	B	Hex	Approx. Wt. Lbs.	List Price
30-510	1/2" x 3/4"	2.72	2.04	1.06	0.16	7.22
30-511	5/8" x 3/4"	2.72	2.04	1.06	0.17	17.64
30-512	3/4" x 3/4"	2.72	2.04	1.06	0.20	6.82
30-513	1" x 1"	2.90	2.03	1.37	0.28	10.79

## GARDEN HOSE COUPLING SETS - 2" SHANK



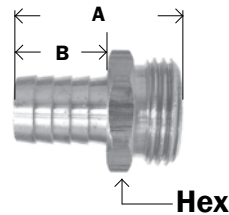
Part #	Hose x FGH	List Price
30-516	1/2"	13.64
30-517	5/8"	13.64
30-518	3/4"	17.01
30-519	1"	49.62

**NPSM FEMALE SHORT SHANK**



Part #	Hose ID	NPSM Thread	A	B	Hex	List Price
30-545	1/2	3/4"	1.45	0.88	1.18	4.62
30-546	5/8	3/4"	1.47	0.88	1.18	4.69
30-547	3/4	3/4"	1.47	0.88	1.18	5.67
30-548	1	1"	1.50	1.00	1.50	9.90

**NPSM MALE SHORT SHANK**



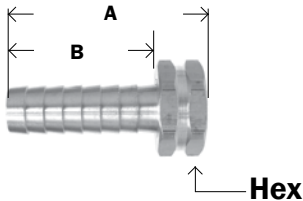
Part #	Hose ID	NPSM Thread	A	B	Hex	List Price
30-550	1/2	3/4"	1.56	0.88	1.06	4.88
30-551	5/8	3/4"	1.56	0.88	1.06	4.55
30-552	3/4	3/4"	1.56	0.88	1.06	5.22
30-553	1	1"	1.77	0.98	1.30	9.64

**NPSM SHORT SHANK SETS**



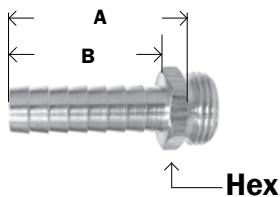
Part #	Size	List Price
30-540	1/2"	9.11
30-541	5/8"	9.31
30-542	3/4"	9.50
30-543	1"	19.60

**NPSM FEMALE LONG SHANK**



Part #	Hose ID	NPSM Thread	A	B	Hex	List Price
30-565	1/2	1/2"	2.09	1.50	0.94	3.97
30-566	5/8	3/4"	2.09	1.50	1.18	6.67
30-567	3/4	3/4"	2.09	1.50	1.18	6.11
30-568	1	1"	2.12	1.53	1.50	15.38

**NPSM MALE LONG SHANK**



Part #	Hose ID	NPSM Thread	A	B	Hex	List Price
30-570	1/2	1/2"	2.18	1.50	0.87	4.42
30-571	5/8	3/4"	2.18	1.50	1.06	5.94
30-572	3/4	3/4"	2.18	1.50	1.06	6.34
30-573	1	1"	2.28	1.53	1.30	13.66

**NPSM LONG SHANK SETS**



Part #	Size	List Price
30-560	1/2"	8.58
30-561	5/8"	12.61
30-562	3/4"	12.74
30-563	1"	29.04

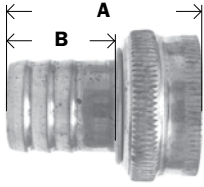
## GARDEN HOSE VALVES

## BRASS FITTINGS

## WROUGHT BRASS

## WROUGHT BRASS - Female end only

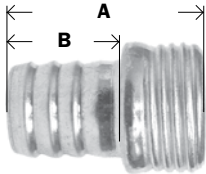
•WASHER INCLUDED



85L

Part #	Hose Barb x FGH	A	B	Approx. Wt. Lbs.	List Price
30-526	5/8" x 3/4"	1.58	0.91	0.05	4.66
30-527	3/4" x 3/4"	1.50	0.84	0.06	4.68

## WROUGHT BRASS COUPLINGS - Male end only

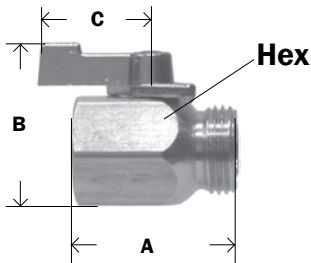


85M

Part #	Hose Barb x MGH	A	B	Approx. Wt. Lbs.	List Price
30-530	1/2" x 3/4"	1.50	0.88	0.02	4.49
30-531	5/8" x 3/4"	1.50	0.88	0.02	2.82

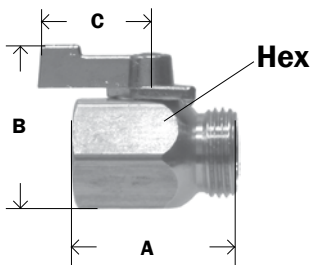
## GARDEN HOSE VALVES

## ONE WAY BRASS BALL VALVE - FGH x MGH



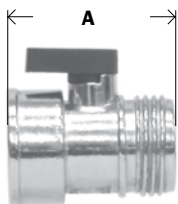
Part #	FGH x MGH	A	B	C	Hex	Approx. Wt. Lbs.	List Price
30-161	3/4" x 3/4"	1.55	1.89	1.31	1.06	0.42	53.63

## ONE WAY BRASS BALL VALVE - Female Pipe x MGH



Part #	Female NPTF x MGH	A	B	C	Hex	Approx. Wt. Lbs.	List Price
30-162	3/4" x 3/4"	1.55	1.89	1.31	1.06	0.42	56.52

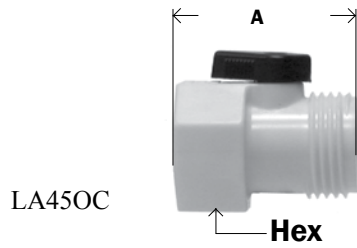
## ZINC ALLOY HOSE SHUT-OFF W/ ONE LEVER



Part #	FGH x MGH	A	Approx. Wt. Lbs.	List Price
30-631	3/4" x 3/4"	1.67	0.08	4.47

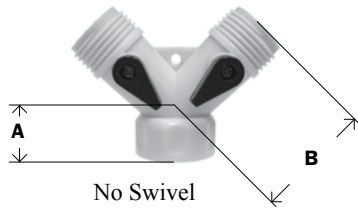
Save 5% by ordering online at  
[www.midlandmetal.com](http://www.midlandmetal.com)

**PLASTIC GARDEN HOSE VALVE • CYCOLAC BODY & BALL**



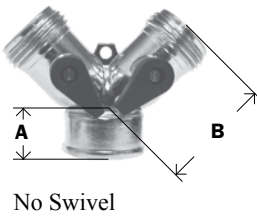
Part #	FGH x MGH	A	Hex	Approx. Wt. Lbs.	List Price
30-163	3/4" x 3/4"	1.75	1.25	0.04	4.80

**PLASTIC, NON-CORROSIVE, 2-WAY HOSE SHUT-OFF "Y"**



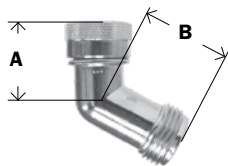
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-160	3/4"	0.74	1.87	0.08	3.48

**"Y" SHAPE ZINC ALLOY CONNECTOR W/ TWO LEVERS**



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-626	3/4"	0.60	1.66	0.10	8.62

**ZINC ALLOY SWIVEL HOSE CONNECTOR**



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-629	3/4"	1.31	1.50	0.08	4.68

**"Y" SHAPE BRASS CONNECTOR W/ 2-WAY SHUT OFF**

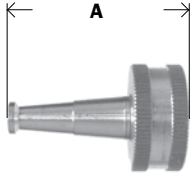


• Brass Levers

Part #	Size	Description	Approx. Wt. Lbs.	List Price
30-627	3/4"	3/4 Double Y valve, swivel inlet	0.56	54.07

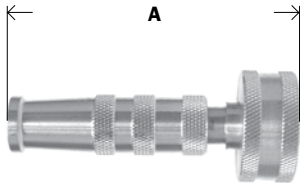
Dimension data can change without notice. Please see our website when dimensions are critical.

**BRASS NOZZLE**



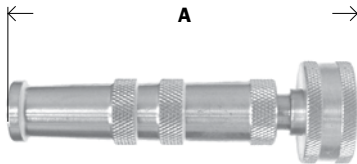
Part #	Size	A	Approx. Wt. Lbs.	List Price
30-637	3/4"	1.87	0.14	6.67

**3" CROSSED PATTERN BRASS NOZZLE**



Part #	Size	A	Approx. Wt. Lbs.	List Price
30-640	3/4"	2.89	0.25	9.68

**4" CROSSED PATTERN BRASS NOZZLE**



Part #	Size	A	Approx. Wt. Lbs.	List Price
30-638	3/4"	3.80	0.50	12.74



5-1/2"

Adjustable Spray

Part #	Size	Zinc Alloy spray nozzle with insulated handle soft grip and front thread protector	List Price
30-600	5-1/2"		17.27



4-1/4"

Lead Free

Part #	Size	Zinc Alloy spray nozzle	List Price
30-620	4-1/4"		6.69



5-1/4"

Lead Free Adjustable Spray

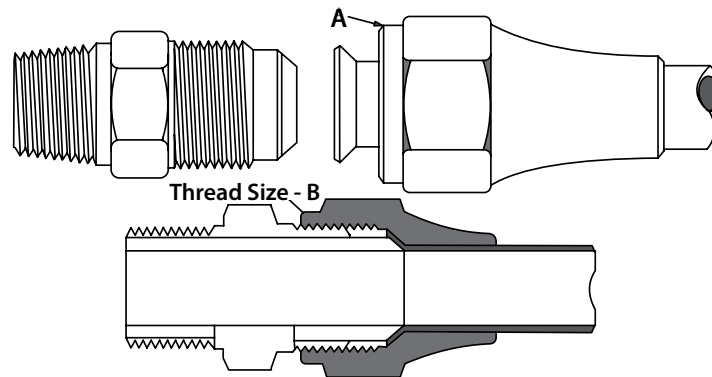
Part #	Size	Zinc Alloy spray nozzle with easily adjustable brass head and plastic grip	List Price
30-609	5-1/4"		17.71



4-1/2"

Part #	Size	Plastic spray nozzle	List Price
30-630	4-1/2"		3.31

# SAE 45° Flare



Tube O.D.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4
Thread Size-B	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

### •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. Temperature 73°F with copper tubing:

PSI	Tube O.D. (in.)	Tube Wall (in.)
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035
450	7/8	.035

### •Vibration

Good resistance - use long nut when greater vibration resistance is required.

### •Temperature Range

-65°F to +250°F (-53°C to +121°C) 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.

### •Tolerance

+/- .03 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical.

### •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.
- 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.

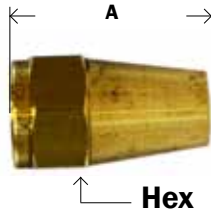
**Note:** Do not over-torque as it may damage the fitting or split the tubing at the flare.

### Actual O.D. of Flare Fittings



**SHORT ROD NUT**

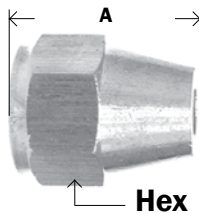
**SAE# 010110**



20910  
41FS  
1110  
N1  
41FX  
441S  
'L'

Part #	Thread Size UNF	Thread	A	Hex	Approx. Wt. Lbs.	List Price
10-013	1/8"	5/16-24	0.50	0.37	0.01	2.09
10-014	3/16"	3/8-24	0.62	0.43	0.02	1.00
10-015	1/4"	7/16-20	0.75	0.56	0.03	1.40
10-015L	1/4"	7/16-20	0.75	0.50	0.03	1.16
10-016	5/16"	1/2-20	0.88	0.62	0.04	2.30
10-017L	3/8"	5/8-18	0.77	0.75	0.05	1.65
10-017	3/8"	5/8-18	1.00	0.75	0.04	2.30
10-018	7/16"	11/16-16	1.06	0.81	0.06	9.27
10-019L	1/2"	3/4-16	0.93	0.87	0.06	3.27
10-019	1/2"	3/4-16	1.12	0.87	0.09	2.95
10-020L	5/8"	7/8-14	1.08	1.00	0.10	4.59
10-020	5/8"	7/8-14	1.31	1.06	0.15	8.42
10-021	3/4"	1-1/16-14	1.50	1.25	0.24	7.79
10-022	7/8"	1-1/4-12	1.62	1.50	0.36	15.52
10-026	1"	1-3/8-12	1.81	1.62	0.44	21.76

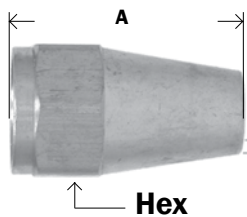
**REDUCING SHORT ROD NUT**



Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-023	3/8" x 1/4"	0.74	0.81	0.06	10.56
10-024	1/2" x 3/8"	0.86	0.94	0.10	11.94
10-025	5/8" x 1/2"	0.99	1.06	0.12	16.49

**LONG ROD NUT**

**SAE# 010111**



41FL  
N2  
241  
441  
41

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-001	1/8"	0.75	0.37	0.01	6.30
10-002	3/16"	0.81	0.43	0.02	2.36
10-003	1/4"	0.94	0.56	0.03	2.29
10-004	5/16"	1.12	0.62	0.04	4.38
10-005	3/8"	1.31	0.75	0.06	4.09
10-006	1/2"	1.62	0.87	0.12	8.33
10-007	5/8"	1.88	1.06	0.20	10.70
10-008	3/4"	2.19	1.25	0.34	39.29



**"L" 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.

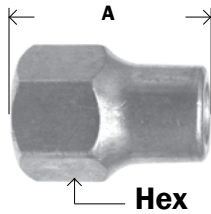
Lead Free fittings available on  
**pg. 171**



**LONG FORGED NUT**

**SAE# 010167**

41FF  
39  
N4  
14FL  
641

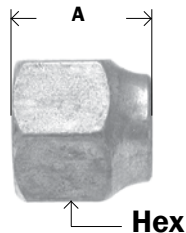


Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-028	1/4"	0.94	0.62	0.05	4.18
10-030	3/8"	1.06	0.81	0.08	6.34
10-031	1/2"	1.19	0.94	0.12	6.74
10-032	5/8"	1.44	1.06	0.26	11.88
10-033	3/4"	1.75	1.31	0.35	15.75

**SHORT FORGED NUT**

**SAE# 010166**

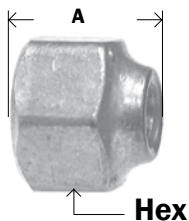
14FS  
41FFS  
40  
641-S  
1116  
NS4



Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-038	3/16"	0.56	0.50	0.02	5.27
10-039	1/4"	0.60	0.62	0.04	1.70
10-040	5/16"	0.66	0.69	0.04	3.23
10-041	3/8"	0.70	0.81	0.06	2.27
10-042	1/2"	0.82	0.94	0.08	3.20
10-043	5/8"	0.95	1.06	0.12	5.15
10-044	3/4"	1.16	1.31	0.22	10.71
10-045	7/8"	1.18	1.38	0.30	13.84

**EXTRA HEAVY SHORT FORGED NUT**

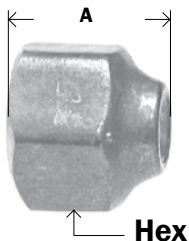
NSA



Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-046	1/4"	0.63	0.75	0.04	3.28
10-047	3/8"	0.72	0.88	0.06	3.63
10-048	1/2"	0.88	1.00	0.08	4.43
10-049	5/8"	0.98	1.12	0.12	6.76

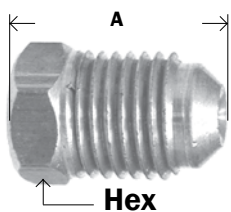
**FORGED REDUCING NUT**

NSR4  
14FS  
41FRS  
40R  
662-S



Part #	Female Flare x OD	A	Hex	Approx. Wt. Lbs.	List Price
10-051	5/16" x 1/4"	0.66	0.75	0.06	11.59
10-052	3/8" x 1/4"	0.72	0.81	0.06	4.98
10-053	3/8" x 5/16"	0.72	0.81	0.08	4.70
10-054	1/2" x 3/8"	0.81	0.94	0.08	4.19
10-055	5/8" x 3/8"	0.96	1.12	0.15	12.15
10-056	5/8" x 1/2"	0.97	1.06	0.12	7.20
10-058	3/4" x 5/8"	1.17	1.31	0.30	16.65

**FLARED PLUG**

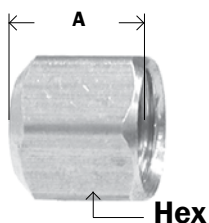


58 57 439  
639F P2  
PF 2229

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-063	3/16"	0.59	0.50	0.02	4.95
10-064 *	1/4"	0.69	0.43	0.02	1.69
10-065 *	5/16"	0.78	0.50	0.04	2.75
10-066 *	3/8"	0.88	0.62	0.06	2.22
10-067	1/2"	1.06	0.75	0.10	3.72
10-068	5/8"	1.19	0.87	0.14	4.01
10-069	3/4"				28.80

\* Available in Stainless Steel. Add SS to the part#

**FLARED CAP**



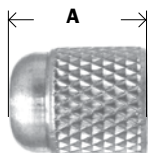
640F N5 440  
41FC 2129  
56 54

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-074	3/16"	0.47	0.50	0.02	3.52
10-075 *	1/4"	0.48	0.50	0.02	0.77
10-076	5/16"	0.62	0.62	0.04	2.68
10-077 *	3/8"	0.58	0.75	0.03	1.92
10-078	1/2"	0.69	0.81	0.14	1.97
10-079	5/8"	0.81	0.94	0.20	2.94
10-080	3/4"	1.17	1.37	0.30	15.48

\* Available in Stainless Steel. Add SS to the part#

**FINGER TIGHTENING CAP**

• O-Ring Included

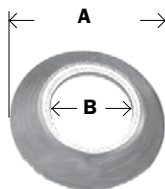


NFT5

Part #	Thread Size UNF	A	Approx. Wt. Lbs.	List Price
10-081	1/4"	0.62	0.02	1.52

**COPPER GASKET**

SAE# 010113

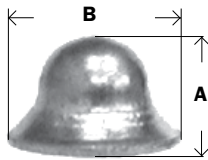


B2  
2GF  
6251  
FG  
157  
59  
463

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
10-084	3/16"	0.31	0.12	0.01	1.27
10-085	1/4"	0.36	0.19	0.01	0.63
10-086	5/16"	0.42	0.22	0.01	0.98
10-087	3/8"	0.55	0.28	0.01	0.75
10-088	1/2"	0.66	0.41	0.01	1.02
10-089	5/8"	0.77	0.50	0.01	1.33
10-090	3/4"	0.95	0.62	0.01	1.56

**COPPER BONNET**

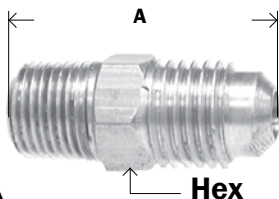
**SAE# 010114**



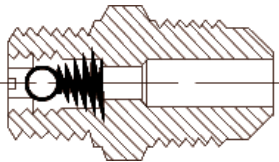
B1 156  
3GF FB  
64C 695  
57 464

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
10-094	3/16"	0.16	0.31	0.01	2.46
10-095	1/4"	0.22	0.36	0.01	2.10
10-097	3/8"	0.34	0.55	0.01	2.22
10-098	1/2"	0.41	0.66	0.01	2.89
10-099	5/8"	0.44	0.77	0.01	2.71
10-100	3/4"	0.56	0.95	0.01	6.30

**MALE BALL CHECK CONNECTOR**



43A

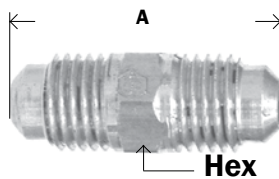


Part #	Male UNF x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
10-131	1/4" x 1/8"	1.06	0.43		22.84
10256WC	1/4" x 1/4"	1.24	0.6	0.04	2.94
10-133	3/8" x 1/4"	1.31	0.62	0.08	28.79

Note: Ball & Spring position may be reversed to change flow/check position. Min working pressure 3 PSI.

**UNION**

**SAE# 010101**



42F  
U2

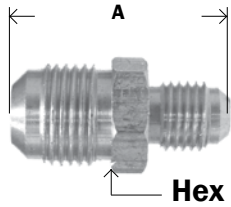
Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-104	1/8"	0.91	0.31	0.02	7.10
10-105	3/16"	1.06	0.37	0.02	4.47
10-106L	1/4"	1.19	0.43	0.03	1.33
10-106 *	1/4"	1.19	0.43	0.03	2.47
10-107	5/16"	1.34	0.50	0.05	2.69
10-108L	3/8"	1.50	0.62	0.09	4.43
10-108 *	3/8"	1.50	0.62	0.09	3.11
10-109L	1/2"	1.67	0.75	0.12	5.60
10-109	1/2"	1.81	0.75	0.14	6.20
10-110L	5/8"	2.00	0.87	0.20	6.36
10-110	5/8"	2.12	0.87	0.20	10.90
10-111	3/4"	2.44	1.06	0.35	19.44
10-112	7/8"	2.72	1.25	0.52	45.41

\* Available in Stainless Steel. Add SS to the part#

"L" 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.

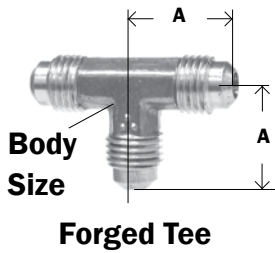
**REDUCING UNION**



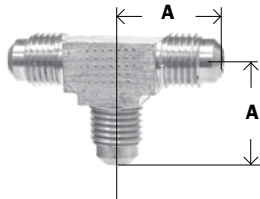
656F  
UR2  
42-R

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-117	5/16" x 1/4"	1.28	0.50	0.04	6.04
10-118	3/8" x 1/4"	1.38	0.62	0.06	4.51
10-119	3/8" x 5/16"	1.44	0.62	0.08	8.28
10-120	1/2" x 1/4"	1.53	0.75	0.10	7.26
10-121	1/2" x 3/8"	1.69	0.75	0.10	6.62
10-122	5/8" x 3/8"	1.88	0.87	0.17	12.00
10-123	5/8" x 1/2"	1.87	0.87	0.14	5.89

**UNION TEE**



**Forged Tee**



**Barstock Tee**

244F  
T2  
144F

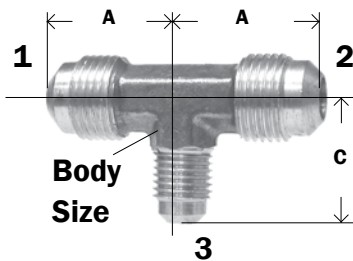
**SAE# 010401**

Part #	Thread Size UNF	A	Body Size	Approx. Wt. Lbs.	List Price
10-157	1/8"	0.67	0.36	0.04	7.65
10-158	3/16"	0.75	0.36	0.06	4.41
10-159 **	1/4"	0.78	0.36	0.06	4.88
10-159B*	1/4"	0.88	0.50	0.08	14.94
10-160 **	5/16"	0.91	0.44	0.10	6.55
10-161 **	3/8"	1.00	0.44	0.12	6.64
10-162	1/2"	1.16	0.59	0.19	6.84
10-163	5/8"	1.41	0.69	0.30	12.55
10-164	3/4"	1.64	0.88	0.53	26.68
10-165	7/8"	1.75	1.25	0.93	54.22

\* Barstock

\*\* Available in Stainless Steel. Add SS to the part#

**REDUCING TEE 1 x 2 x 3**



144F  
TR2  
659F  
684F  
44R

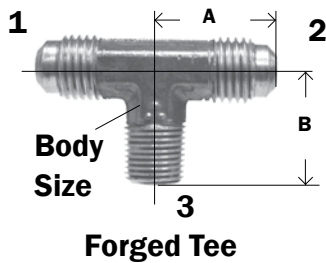
Part #	Thread Size UNF 1x2x3	A	C	Body Size	Approx. Wt. Lbs.	List Price
10-170	1/4" x 1/4" x 3/8"	0.91	1.00	0.44	0.10	7.22
10-171	5/16" x 5/16" x 1/4"	0.94	0.94	0.44	0.12	10.80
10-172	3/8" x 1/4" x 1/4"	0.91	1.00	0.44	0.10	8.63
10-173	3/8" x 1/4" x 3/8"	1.00	0.91	0.44	0.12	10.76
10-174	3/8" x 3/8" x 1/4"	1.00	0.88	0.44	0.11	7.75
10-175	3/8" x 3/8" x 1/2"	1.00	1.19	0.59	0.14	10.80
10-176	3/8" x 3/8" x 5/8"	1.16	1.44	0.69	0.16	20.85
10-178	1/2" x 3/8" x 3/8"	1.16	1.12	0.59	0.18	8.36
10-179	1/2" x 3/8" x 1/2"	1.16	1.09	0.59	0.18	10.01
10-180	1/2" x 1/2" x 1/4"	1.16	0.97	0.59	0.18	13.85
10-181	1/2" x 1/2" x 3/8"	1.16	1.12	0.59	0.19	9.07
10-182	1/2" x 1/2" x 5/8"	1.28	1.41	0.69	0.28	13.20
10-187	5/8" x 1/2" x 5/8"	1.44	1.33	0.69	0.27	20.46
10-188	5/8" x 5/8" x 3/8"	1.38	1.16	0.69	0.30	17.82
10-189	5/8" x 5/8" x 1/2"	1.38	1.28	0.69	0.28	25.43
10-197	3/4" x 3/4" x 5/8"	1.66	1.50	0.88	0.36	44.43

Save 5% by ordering online at [www.midlandmetal.com](http://www.midlandmetal.com)

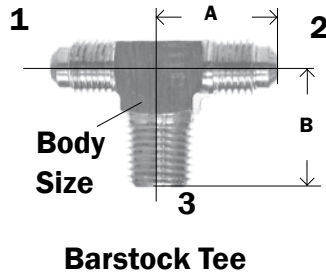


**MALE BRANCH TEE**

**SAE# 010425**



**Forged Tee**



**Barstock Tee**

T1  
145F  
45

Part #	Male Flare x Male NPT (1&2)x3	A	B	Body Size	Approx. Wt. Lbs.	List Price
10-203	3/16" x 1/8"	0.75	0.75	0.36	0.10	5.21
10-204	1/4" x 1/8"	0.78	0.75	0.36	0.05	5.21
10-204B*	1/4" x 1/8"	0.82	0.81	0.47	0.08	40.14
10-205	1/4" x 1/4"	0.88	0.88	0.44	0.08	5.52
10-206	1/4" x 3/8"	0.92	1.00	0.47	0.10	8.94
10-207	5/16" x 1/8"	0.89	0.78	0.44	0.08	6.36
10-208	5/16" x 1/4"	0.94	0.94	0.44	0.08	7.31
10-209	3/8" x 1/8"	1.00	0.91	0.44	0.14	10.63
10-210	3/8" x 1/4"	1.00	0.94	0.44	0.12	7.02
10-211 **	3/8" x 3/8"	1.00	1.00	0.47	0.13	8.49
10-212 **	3/8" x 1/2"	1.12	1.22	0.69	0.22	12.70
10-213	1/2" x 1/4"	1.16	1.00	0.59	0.20	18.71
10-214	1/2" x 3/8"	1.16	1.14	0.59	0.19	13.23
10-215	1/2" x 1/2"	1.22	1.22	0.69	0.24	12.52
10-216	1/2" x 3/4"	1.38	1.41	0.88	0.22	24.95
10-217	5/8" x 3/8"	1.38	1.25	0.69	0.24	21.25
10-218	5/8" x 1/2"	1.41	1.31	0.69	0.29	16.65
10-219	5/8" x 3/4"	1.41	1.41	0.88	0.36	25.10
10-220	3/4" x 1/2"	1.63	1.59	0.88	0.49	31.46
10-221	3/4" x 3/4"	1.63	1.44	0.88	0.48	32.35

\* Barstock

\*\* Available in Stainless Steel. Add SS to the part#

**BRASS**

YOU'RE GOING TO GO THROUGH TOUGH TIMES - THAT'S LIFE. BUT I SAY, 'NOTHING HAPPENS TO YOU, IT HAPPENS FOR YOU.' SEE THE POSITIVE IN NEGATIVE EVENTS.

- JOEL OSTEEN



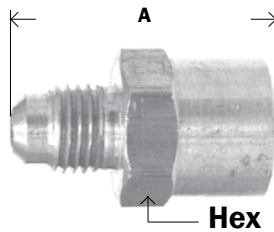
Dimension data can change without notice.  
Please see our website when dimensions are critical.



## FEMALE ADAPTER

SAE# 010103

BRASS

46  
U3

Part #	Male Flare x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
10-227	3/16" x 1/8"	0.97	0.56	0.03	4.60
10-228L	1/4" x 1/8"	1.03	0.56	0.03	1.44
10-228	1/4" x 1/8"	1.03	0.56	0.04	2.98
10-229L	1/4" x 1/4"	1.06	0.68	0.06	3.73
10-229	1/4" x 1/4"	1.23	0.68	0.07	1.69
10-230	1/4" x 3/8"	1.18	0.81	0.08	4.20
10-231	1/4" x 1/2"	1.31	0.94	0.06	6.83
10-232	5/16" x 1/8"	1.06	0.56	0.05	16.77
10-233	5/16" x 1/4"	1.28	0.68	0.08	3.99
10-234	3/8" x 1/8"	1.09	0.62	0.08	4.17
10-235L	3/8" x 1/4"	1.25	0.68	0.08	3.08
10-235	3/8" x 1/4"	1.31	0.81	0.08	4.71
10-236L	3/8" x 3/8"	1.25	0.81	0.08	4.03
10-236	3/8" x 3/8"	1.25	0.81	0.10	6.75
10-237L	3/8" x 1/2"	1.31	0.94	0.08	3.51
10-237	3/8" x 1/2"	1.60	1.00	0.16	10.16
10-238	3/8" x 3/4"	1.41	1.18	0.11	9.49
10-239	1/2" x 1/4"	1.37	0.75	0.10	4.75
10-240L	1/2" x 3/8"	1.38	0.81	0.12	4.22
10-240	1/2" x 3/8"	1.50	0.81	0.14	8.30
10-241L	1/2" x 1/2"	1.42	0.87	0.10	6.02
10-241	1/2" x 1/2"	1.75	1.00	0.12	11.10
10-242	1/2" x 3/4"	1.60	1.12	0.16	5.83
10-243	5/8" x 3/8"	1.24	0.87	0.12	9.58
10-244	5/8" x 1/2"	1.62	0.94	0.12	5.74
10-245	5/8" x 3/4"	1.65	1.12	0.17	7.50
10-246	3/4" x 1/2"	1.74	1.18	0.32	19.86
10-247	3/4" x 3/4"	1.75	1.18	0.22	20.42
10-248	7/8" x 3/4"	1.94	1.31	0.26	20.08

**"L" means light pattern.**

Dimension data can change without notice.  
Please see our website when dimensions are critical.

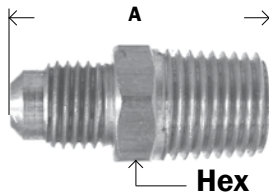
-These fittings are completely interchangeable with full pattern fittings, but have been modified in some way. This modification is usually in the length of the pipe threads. Used in plumbing and light industrial applications.

IF YOU CANNOT DO GREAT THINGS, DO SMALL THINGS IN A GREAT WAY.

- NAPOLEON HILL

## MALE ADAPTER

SAE# 010102

U1  
48

Part #	Male Flare x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
10-253	1/8" x 1/8"	0.92	0.43	0.02	3.69
10-254	3/16" x 1/8"	1.00	0.43	0.03	1.96
10-255L	1/4" x 1/8"	1.06	0.43	0.03	1.33
10-255 *	1/4" x 1/8"	1.06	0.43	0.04	1.22
10-256L	1/4" x 1/4"	1.15	0.56	0.03	1.59
10-256 *	1/4" x 1/4"	1.25	0.56	0.04	1.60
10-257 *	1/4" x 3/8"	1.31	0.68	0.06	2.44
10-258	1/4" x 1/2"	1.44	0.87	0.11	5.79
10-259L	5/16" x 1/8"	1.15	0.50	0.04	3.18
10-259	5/16" x 1/8"	1.16	0.50	0.04	2.59
10-260L	5/16" x 1/4"	1.31	0.56	0.06	3.99
10-260	5/16" x 1/4"	1.34	0.56	0.06	3.04
10-261 *	5/16" x 3/8"	1.38	0.68	0.08	5.77
10-262	3/8" x 1/8"	1.25	0.62	0.07	2.13
10-263L	3/8" x 1/4"	1.31	0.62	0.06	2.42
10-263 *	3/8" x 1/4"	1.44	0.62	0.08	2.29
10-264L	3/8" x 3/8"	1.37	0.68	0.09	2.89
10-264 *	3/8" x 3/8"	1.44	0.68	0.09	2.70
10-265L	3/8" x 1/2"	1.44	0.89	0.12	3.19
10-265 *	3/8" x 1/2"	1.69	0.87	0.14	5.83
10-266	3/8" x 3/4"	1.81	1.06	0.18	7.39
10-267	1/2" x 1/4"	1.60	0.75	0.11	3.55
10-268L	1/2" x 3/8"	1.46	0.75	0.10	3.26
10-268	1/2" x 3/8"	1.62	0.75	0.12	3.65
10-269L	1/2" x 1/2"	1.62	0.87	0.13	3.47
10-269	1/2" x 1/2"	1.79	0.87	0.15	5.12
10-270	1/2" x 3/4"	1.75	1.06	0.22	6.86
10-271	5/8" x 1/4"	1.81	0.87	0.14	10.33
10-272L	5/8" x 3/8"	1.67	0.87	0.14	4.80
10-272	5/8" x 3/8"	1.81	0.87	0.18	7.87
10-273L	5/8" x 1/2"	1.80	0.87	0.11	4.92
10-273	5/8" x 1/2"	2.00	0.87	0.20	8.05
10-274	5/8" x 3/4"	1.85	1.06	0.21	5.70
10-275	3/4" x 1/2"	2.19	1.06	0.28	13.01
10-276	3/4" x 3/4"	2.08	1.06	0.28	8.46
10-277	7/8" x 1/2"	2.22	1.25	0.52	33.69
10-278	7/8" x 3/4"	2.35	1.25	0.41	22.35
10-279	1" x 3/4"	2.44	1.43	0.53	25.42
10-280	1" x 1"	2.44	1.43	0.53	31.21

\* Available in Stainless Steel. Add SS to the part#

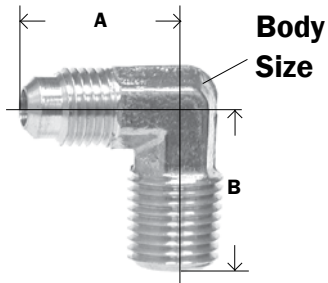
**"L" means light pattern.**

-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.

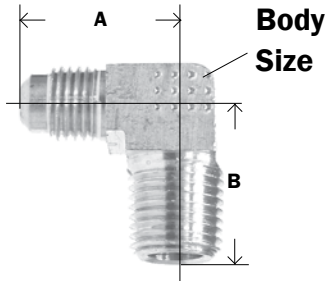
**90° MALE ELBOW**

**SAE# 010202**

**BRASS**



**Forged Elbow**



**Barstock Elbow**

249F  
49  
E1  
149F

Part #	Male Flare x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
10-283	1/8" x 1/8"	0.63	0.73	0.37	0.04	9.40
10-283B*	1/8" x 1/8"	0.62	0.69	0.43	0.04	34.09
10-284	3/16" x 1/8"	0.75	0.75	0.44	0.04	7.98
10-284B*	3/16" x 1/8"	0.75	0.75	0.43	0.06	5.28
10-285	3/16" x 1/4"	0.81	0.88	0.44	0.08	6.04
10-286	1/4" x 1/8"	0.84	0.78	0.38	0.04	3.30
10-286B*	1/4" x 1/8"	0.81	0.78	0.47	0.05	2.36
10-287 **	1/4" x 1/4"	0.81	0.88	0.44	0.05	3.00
10-287B*	1/4" x 1/4"	0.91	0.93	0.59	0.08	3.81
10-288 **	1/4" x 3/8"	0.91	0.91	0.47	0.08	5.24
10-289	1/4" x 1/2"	1.03	1.09	0.59	0.10	6.59
10-290	5/16" x 1/8"	0.91	0.88	0.44	0.06	2.69
10-290B*	5/16" x 1/8"	0.91	0.78	0.52	0.06	8.11
10-291	5/16" x 1/4"	0.98	0.96	0.44	0.08	2.78
10-291B*	5/16" x 1/4"	0.95	0.92	0.62	0.08	12.33
10-292	5/16" x 3/8"	1.06	1.09	0.59	0.08	6.01
10-293	3/8" x 1/8"	1.00	0.91	0.53	0.08	6.07
10-293B*	3/8" x 1/8"	1.03	0.91	0.65	0.08	8.30
10-294	3/8" x 1/4"	1.01	0.89	0.48	0.08	3.52
10-294B*	3/8" x 1/4"	0.97	1.04	0.68	0.11	6.00
10-295 **	3/8" x 3/8"	1.00	0.88	0.47	0.10	3.66
10-295B*	3/8" x 3/8"	1.06	1.09	0.69	0.12	7.38
10-296 **	3/8" x 1/2"	1.10	1.09	0.59	0.12	5.23
10-297	3/8" x 3/4"	1.25	1.31	0.81	0.12	13.64
10-298	1/2" x 1/4"	1.19	1.00	0.59	0.12	5.06
10-298B*	1/2" x 1/4"	1.22	1.19	0.81	0.12	13.44
10-299	1/2" x 3/8"	1.10	1.00	0.59	0.13	5.02
10-299B*	1/2" x 3/8"	1.22	1.12	0.77	0.18	9.67
10-300	1/2" x 1/2"	1.16	1.13	0.59	0.14	5.80
10-300B*	1/2" x 1/2"	1.26	1.36	0.94	0.26	12.00
10-301	1/2" x 3/4"	1.42	1.25	0.81	0.24	10.52
10-311	5/8" x 1/4"	1.34	1.13	0.72	0.28	10.98
10-302	5/8" x 3/8"	1.35	1.22	0.72	0.20	9.50
10-302B*	5/8" x 3/8"	1.41	1.25	0.94	0.20	24.76
10-303	5/8" x 1/2"	1.35	1.22	0.72	0.20	7.81
10-303B*	5/8" x 1/2"	1.41	1.38	0.94	0.20	16.43
10-304	5/8" x 3/4"	1.44	1.31	0.81	0.25	13.19
10-305	3/4" x 1/2"	1.67	1.50	0.88	0.34	16.27
10-306	3/4" x 3/4"	1.67	1.63	0.88	0.30	14.77
10-306B*	3/4" x 3/4"	1.60	1.62	0.91	0.32	27.88
10-307	7/8" x 3/4"	1.75	1.68	1.00	0.44	43.22
10-308	1" x 3/4"	1.94	1.69	1.31	0.75	50.02
10-309	1" x 1"	1.94	1.75	1.25	0.78	44.48

\* Barstock

\*\* Available in Stainless Steel. Add SS to the part#

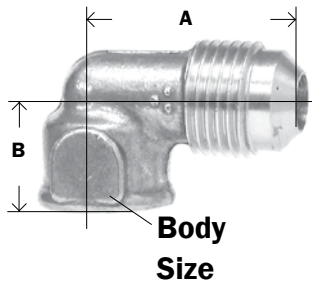
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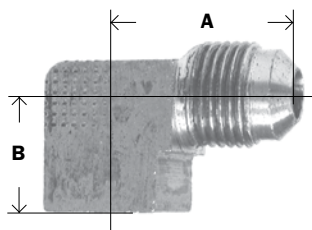


**90° FEMALE ELBOW**

SAE# 010203



**Forged Elbow**



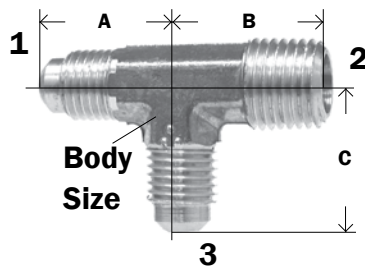
**Barstock Elbow**

E3  
50  
150F

Part #	Male Flare x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
10-312	3/16" x 1/8"	0.81	0.44	0.56	0.05	6.80
10-313	1/4" x 1/8"	0.90	0.46	0.56	0.06	4.13
10-313B*	1/4" x 1/8"	0.88	0.47	0.56	0.06	5.47
10-314	1/4" x 1/4"	0.97	0.59	0.75	0.08	5.81
10-315	1/4" x 3/8"	1.03	0.57	0.81	0.09	8.11
10-333	1/4" x 1/2"	1.08	0.66	1.00	0.12	10.39
10-316	5/16" x 1/8"	0.94	0.88	0.45	0.08	7.16
10-317	5/16" x 1/4"	1.03	0.58	0.75	0.06	11.64
10-318	3/8" x 1/8"	1.00	0.88	0.47	0.10	7.57
10-319	3/8" x 1/4"	1.06	0.59	0.75	0.09	3.53
10-319B*	3/8" x 1/4"	1.09	0.69	0.75	0.10	25.27
10-320	3/8" x 3/8"	1.06	0.57	0.81	0.10	5.33
10-321	3/8" x 1/2"	1.16	0.66	1.00	0.14	6.68
10-322	3/8" x 3/4"	1.28	0.72	1.25	0.12	11.58
10-323	1/2" x 1/4"	1.25	0.70	0.88	0.13	10.10
10-324	1/2" x 3/8"	1.25	0.70	0.88	0.12	7.51
10-325	1/2" x 1/2"	1.29	0.72	1.00	0.18	7.91
10-326	1/2" x 3/4"	1.41	0.72	1.25	0.20	10.78
10-327	5/8" x 3/8"	1.35	1.22	0.72	0.22	13.46
10-328	5/8" x 1/2"	1.38	0.75	1.00	0.20	11.79
10-329	5/8" x 3/4"	1.50	0.76	1.25	0.28	11.92
10-330	3/4" x 1/2"	1.63	1.06	1.06	0.42	22.52
10-331	3/4" x 3/4"	1.88	1.06	1.31	0.40	35.30

\* Barstock

**FORGED MALE RUN TEE**



T3  
151F  
51

Part #	Male Flare x Male NPTF (1&3) x 2	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
10-361	3/16" x 5/16" x 1/8"	0.87	0.78	0.97	0.44	0.08	5.57
10-343	3/16" x 1/8"	0.75	0.75	0.75	0.37	0.05	6.71
10-344	1/4" x 1/8"	0.78	0.75	0.78	0.37	0.06	5.78
10-345	1/4" x 1/4"	0.88	0.88	0.88	0.44	0.08	7.09
10-347	5/16" x 1/8"	0.88	0.80	0.88	0.44	0.08	6.18
10-348	5/16" x 1/4"	0.94	0.94	0.94	0.44	0.08	9.07
10-350	3/8" x 1/4"	1.00	0.94	1.00	0.44	0.12	9.07
10-351	3/8" x 3/8"	1.00	1.00	1.00	0.47	0.10	12.57
10-340	3/8" x 1/2" x 3/8"	1.09	1.09	1.16	0.59	0.18	11.65
10-352	3/8" x 1/2"	1.12	1.22	1.12	0.69	0.12	17.65
10-353	1/2" x 3/8" x 1/2"	1.22	1.22	1.15	0.69	0.22	13.82
10-354	1/2" x 3/8"	1.16	1.09	1.16	0.59	0.18	15.27
10-355	1/2" x 1/2"	1.22	1.22	1.22	0.69	0.22	14.27
10-357	5/8" x 1/2"	1.41	1.31	1.41	0.69	0.28	18.93
10-359	3/4" x 1/2"	1.63	1.59	1.63	0.88	0.48	37.27
10-360	3/4" x 3/4"	1.62	1.44	1.62	0.88	0.48	32.92

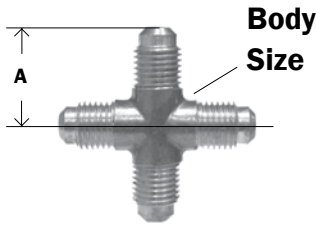
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**FORGED FLARE CROSS**

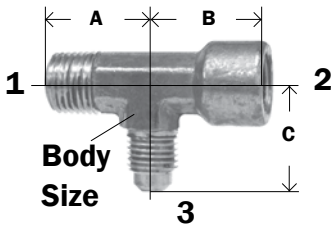
SAE# 010501



455  
C1  
147F  
52

Part #	Thread Size UNF	A	Body Size	Approx. Wt. Lbs.	List Price
10-373	1/4"	0.88	0.44	0.10	13.64
10-374	5/16"	0.92	0.44	0.10	13.36
10-375	3/8"	1.00	0.44	0.16	12.75
10-376	1/2"	1.16	0.59	0.24	15.02

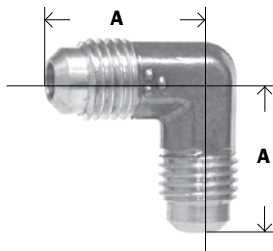
**FORGED ADAPTER TEE / SERVICE TEE**



T17  
53

Part #	Size 1 x 2 x 3	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
10-382	1/8" x 1/8" x 1/4"	0.72	0.53	0.80	0.47	0.08	7.02
10-383	1/4" x 1/4" x 1/4"	0.88	1.00	0.91	0.47	0.11	8.88

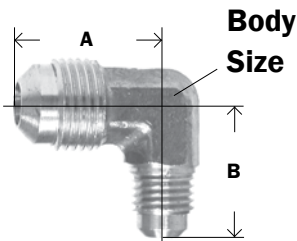
**FORGED 90° FLARE ELBOW**



E2  
155F

Part #	Thread Size UNF	A	Approx. Wt. Lbs.	List Price
10-404	1/8"	0.64	0.04	16.39
10-405	3/16"	0.75	0.06	10.91
10-406	1/4"	0.81	0.08	1.90
10-407	5/16"	0.91	0.10	5.96
10-408	3/8"	1.00	0.10	5.01
10-409	1/2"	1.16	0.14	7.57
10-410	5/8"	1.41	0.22	12.29
10-411	3/4"	1.66	0.68	24.66
10-412	7/8"	1.81	0.82	45.16

**FORGED REDUCING ELBOW**

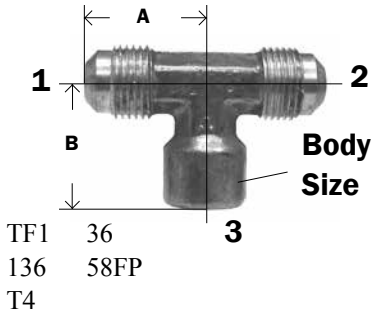


ER2  
657F  
55R

Part #	Male Flare x Male Flare	A	B	Body Size	Approx. Wt. Lbs.	List Price
10-416	3/8" x 1/4"	1.00	0.88	0.47	0.08	6.07
10-419	1/2" x 3/8"	1.19	1.02	0.59	0.14	7.71
10-421	5/8" x 1/2"	1.34	1.23	0.72	0.21	12.33

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[www.midlandmetal.com](http://www.midlandmetal.com)

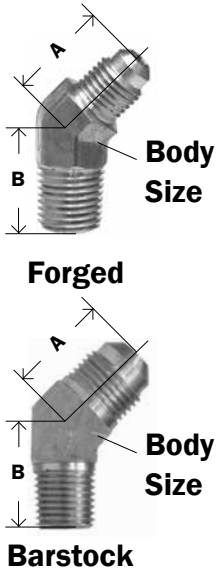
**FORGED FEMALE BRANCH TEE**



Part #	Male Flare x Female NPTF (1&2) x 3	A	B	Body Size	Approx. Wt. Lbs.	List Price
10-429	1/4" x 1/4"	0.97	0.75	0.69	0.12	10.38
10-430	3/8" x 1/4"	1.00	1.03	0.47	0.14	9.69
10-431	3/8" x 3/8"	1.17	0.69	1.05	0.22	14.99
10-432	3/8" x 1/2"	1.16	0.69	1.05	0.19	13.47
10-434	1/2" x 1/2"	1.31	0.69	1.06	0.22	22.52

**45° ELBOW**

**SAE# 010302**



E145 654F 47  
54 59FF 4945  
159F 254

Part #	Male Flare x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
10-448	1/4" x 1/8"	0.67	0.64	0.41	0.04	3.14
10-448B*	1/4" x 1/8"	0.67	0.64	0.44	0.04	10.90
10-449	1/4" x 1/4"	0.75	0.86	0.53	0.07	3.69
10-450	5/16" x 1/8"	0.78	0.64	0.53	0.06	3.70
10-451	5/16" x 1/4"	0.81	0.86	0.53	0.07	6.68
10-452	3/8" x 1/4"	0.91	0.86	0.53	0.09	5.95
10-452B*	3/8" x 1/4"	0.89	0.86	0.64	0.12	10.63
10-453	3/8" x 3/8"	0.93	0.94	0.59	0.11	6.16
10-454	3/8" x 1/2"	0.99	1.17	0.75	0.19	8.94
10-455	1/2" x 3/8"	1.07	0.88	0.59	0.12	7.01
10-455B*	1/2" x 3/8"	1.06	0.94	0.76	0.18	22.91
10-456	1/2" x 1/2"	1.12	1.18	0.75	0.20	10.18
10-460	5/8" x 3/8"	1.13	0.95	0.81	0.22	14.78
10-457	5/8" x 1/2"	1.12	1.17	0.78	0.18	11.09
10-458	3/4" x 1/2"	1.28	1.16	0.88	0.26	17.72
10-459	3/4" x 3/4"	1.41	1.20	0.88	0.31	18.16

\* Barstock

**BRASS GAS RANGE FITTINGS**

**BRASS MALE ADAPTERS**



Part #	Male Flare x Male NPTF	List Price
35-132	1/2" x 1/2" (3/8" FIP TAP)	6.60
35-134	15/16" x 1/2"	6.33
35-135	15/16" x 3/4" (1/2" FIP TAP)	10.26

**BRASS FEMALE ADAPTERS**



Part #	Flare x FIP	List Price
35-136	15/16" x 1/2"	9.31
35-142	15/16" x 3/4"	11.25

**DRUM ADAPTERS**

RD  
IF  
K1



• Straight Thread

**SAE# 010165**

Part #	Male Flare x FIP	List Price
50-011	1/4" x 1/2"	28.35
50-001	1/4" x 3/4"	13.73

**CAP**



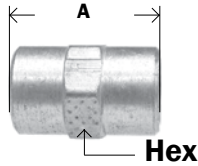
Part #	Size	List Price
35-186	15/16"	26.56

**FEMALE 45° FLARE FITTINGS**

• Use with Copper Gasket

**UNION**

**SAE# 010107**

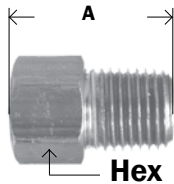


2310  
U4  
660HD  
32

Part #	Female Flare x Female Flare	A	Hex	Approx. Wt. Lbs.	List Price
10-135	1/4"	1.00	0.62	0.06	11.52
10-136	3/8"	1.25	0.81	0.14	19.52
10-137	1/2"	1.43	0.94	0.18	24.93

**FEMALE FLARE ADAPTER**

**SAE# 010106**

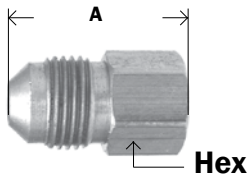


U5  
664FHD  
33  
48-FF

Part #	Female Flare x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
10-440	1/4" x 1/8"	0.91	0.62	0.05	3.99
10-441	1/4" x 1/4"	1.01	0.62	0.06	5.85
10-442	3/8" x 1/4"	1.28	0.81	0.10	6.06
10-443	1/2" x 3/8"	1.36	0.94	0.14	25.04
10-444	1/2" x 1/2"	1.46	0.94	0.14	11.64

**FLARE REDUCER**

**SAE# 010105**



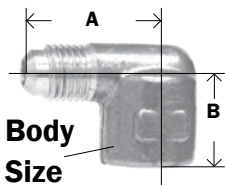
UR3  
661FHD  
227  
46-FF

Part #	Male Flare x Female Flare	A	Hex	Approx. Wt. Lbs.	List Price
10-462	1/4" x 3/8"	1.22	0.81	0.10	6.80
10-461	1/4" x 1/2"	1.36	0.94	0.14	21.80
10-463 *	3/8" x 1/4"	1.12	0.62	0.06	4.69
10-464	3/8" x 1/2"	1.44	0.94	0.14	7.71
10-473	3/8" x 5/8"	1.63	1.12	0.16	16.95
10-467	1/2" x 3/8"	1.41	0.81	0.13	7.28
10-468	1/2" x 5/8"	1.68	1.06	0.20	33.83
10-469	5/8" x 1/2"	1.63	1.00	0.17	19.92
10-470	5/8" x 3/4"	1.97	1.31	0.31	20.34
10-471	3/4" x 5/8"	1.75	1.18	0.32	22.20

\* Available in Stainless Steel. Add SS to the part#

**90° ELBOW**

• Use with Copper Gasket



E4  
669F

Part #	Male Flare x Female Flare	A	B	Body Size	Approx. Wt. Lbs.	List Price
10-500	1/4" x 1/4"	0.97	0.69	0.75	0.56	8.13
10-495	1/2" x 1/2"	1.41	1.12	0.81	0.72	29.56

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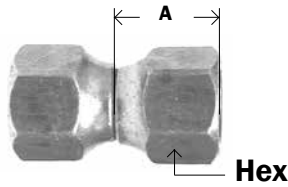
Dimension data can change without notice. Please see our website when dimensions are critical.

**BRASS FLARE SWIVEL FITTINGS**

**FORGED SWIVEL**

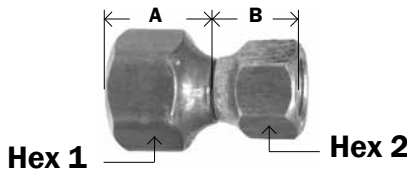
SAE# 010108

1350  
US4  
14FSV  
34



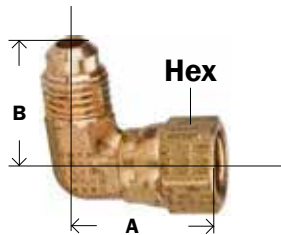
Part #	Female Flare UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-481	1/4"	0.59	0.62	0.04	6.14
10-482	5/16"	0.62	0.68	0.06	8.79
10-483	3/8"	0.69	0.81	0.10	6.54
10-484	1/2"	0.81	0.94	0.16	8.98
10-485	5/8"	0.94	1.06	0.24	11.05
10-486	3/4"	1.12	1.31	0.34	35.52

**REDUCING SWIVELS**



Part #	Female Flare UNF	A	B	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
10-487	3/8" x 1/4"	0.72	0.60	0.81	0.62	0.08	13.37
10-488	1/2" x 3/8"	0.84	0.70	0.94	0.81	0.12	16.33
10-489	5/8" x 1/2"	0.98	0.82	1.03	0.94	0.22	19.96

**FORGED SWIVEL ELBOWS**



ES4

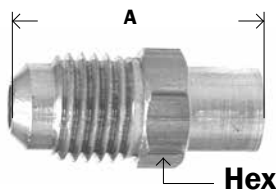
Part #	Male Flare x Female Flare	A	B	Hex	Approx. Wt. Lbs.	List Price
10-493	1/4"	0.93	0.86	.563	0.12	12.94
10-494	3/8"	1.12	1.0	.75	0.20	20.86
10-495	1/2"	1.29	1.20	.88	0.25	29.56
10-496	5/8"	1.50	1.30	1.00	0.37	39.56
10-497	3/4"	1.83	1.60	1.25	0.54	69.05

**BRASS SOLDER FITTINGS**

**FLARE TO SWT UNION**

SAE# 010104

4085 46FS  
US3 277  
672FS



Part #	Male Flare x SWT	A	Hex	Approx. Wt. Lbs.	List Price
10-602	1/4" x 3/8"	1.00	0.50	0.06	5.88
10-611	1/2" x 5/8"	1.56	0.75	0.12	20.90
10-615	3/4" x 3/4"	2.06	1.06	0.32	20.24

**FLARE BALL VALVES**



**MIP x FLARE w/ CHECK VALVE**

Part #	Size	A	B	C	D	List Price
944-060	1/4 x 1/4	2.18	2.78	0.73	1.25	15.51

**FLARE x MIP WITHOUT CHECK VALVE**

Part #	Size	A	B	C	D	List Price
944-026	1/4 x 1/4	1.44	2.64	0.75	1.44	17.74

**JIC 37° FLARE**

Thread Chart	
Size	JIC Thread
1/8	5/16-24
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**

FTXB



Part #	JIC Thread	Pipe Size	List Price
28-701	7/16-20	1/8	2.98
28-702	7/16-20	1/4	6.03
28-703	7/16-20	3/8	15.90
28-704	1/2-20	1/8	46.20
28-705	1/2-20	1/4	20.91
28-706	9/16-18	1/8	6.98
28-707	9/16-18	1/4	6.21
28-708	9/16-18	3/8	4.98
28-709	9/16-18	1/2	9.90
28-710	3/4-16	1/4	12.35
28-711	3/4-16	3/8	9.73
28-712	3/4-16	1/2	13.32
28-713	3/4-16	3/4	28.86
28-714	7/8-14	3/8	21.78
28-715	7/8-14	1/2	20.19
28-716	7/8-14	3/4	22.28
28-717	1-1/16-12	3/4	21.58
28-748	1-1/16-1/2	1/2	28.64
28-749	1-1/16-1	1	45.84
28-718	1-5/16-12	1	40.56

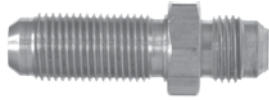
**45° FORGED ELBOW**

VTXB



Part #	JIC Thread	Pipe Size	List Price
28-722F	7/16-20	1/8	8.52
28-724F	7/16-20	1/4	11.41
28-728F	1/2-20	1/4	4.65
28-729F	9/16-18	1/8	28.62
28-731F	9/16-18	1/4	8.84
28-733F	9/16-18	3/8	8.01
28-734F	9/16-18	1/2	17.23
28-736F	3/4-16	3/8	11.96
28-738F	3/4-16	1/2	37.05
28-740F	7/8-14	1/2	19.53
28-742F	1-1/16-12	3/4	64.52

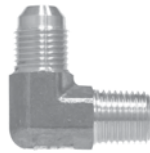
**BULKHEAD TUBE UNION**



Part #	JIC Thread	List Price
28-797	9/16-18	56.60
28-955	1-1/16-12	60.32

**90° FORGED ELBOW**

CCTXB



Part #	JIC Thread	Pipe Size	List Price
28-760F	7/16-20	1/8	7.74
28-762F	7/16-20	1/4	7.00
28-766F	1/2-20	1/4	12.65
28-768F	9/16-18	1/8	20.00
28-770F	9/16-18	1/4	7.10
28-772F	9/16-18	3/8	13.66
28-773F	9/16-18	1/2	23.10
28-774F	3/4-16	3/8	19.92
28-777F	3/4-16	1/2	17.02
28-778F	3/4-16	3/4	34.33
28-780F	7/8-14	1/2	28.15
28-781F	1-1/16-12	1/2	57.38
28-783F	1-1/16-12	3/4	31.13
28-784F	1-5/16-12	3/4	50.11
28-786F	1-5/16-12	1	48.38

**Have Midland quote all of your fitting needs.**

**For Steel 37° Flare JIC fittings see page 393**



**BRASS FITTINGS**

**STRAIGHT SWIVEL ADAPTER**



Part #	JIC Thread	Pipe Size	List Price
28-753	9/16-18	1/4	12.77
28-754	9/16-18	3/8	19.44
28-756	3/4-16	1/2	20.33

**FEMALE STRAIGHT ADAPTER**

GTXB



Part #	JIC Thread	Pipe Size	List Price
28-957	7/16-20	1/8	8.04
28-958	7/16-20	1/4	10.19
28-959	9/16-18	1/4	22.98
28-960	9/16-18	3/8	16.75
28-961	3/4-16	3/8	8.94
28-962	3/4-16	1/2	25.27
28-963	7/8-14	1/2	18.61
28-964	1-1/16-12	3/4	44.20

**STRAIGHT TUBE UNION**

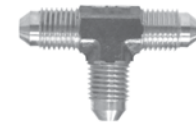
HTXB



Part #	JIC Thread	List Price
28-966	7/16-20	8.37
28-969	9/16-18	10.59
28-970	3/4-16	12.85
28-971	1-1/16-12	63.05
28-972	1-5/16-12	38.42

**TUBE TEE**

JTXB



Part #	JIC Thread	List Price
28-981	7/16-20	61.93
28-982	9/16-18	68.99

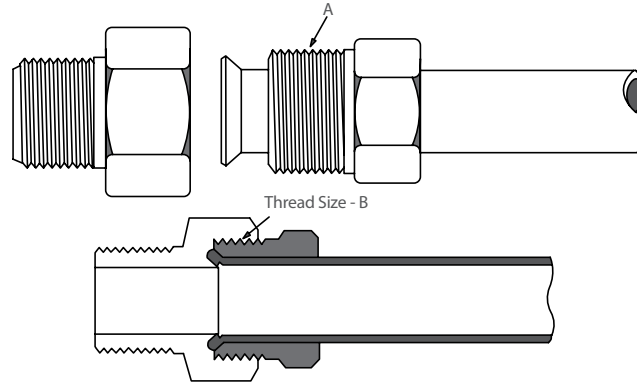
**FEMALE ELBOW (FORGED BODY)**

DTXB



Part #	JIC Thread	Pipe Size	List Price
28-973	7/16-20	1/8	14.33
28-974	7/16-20	1/4	21.86
28-975	9/16-18	1/4	20.83

# Inverted Flare



Tube O.D.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
Thread O.D. threads per inch	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	1-3/16-16	1-5/16-16

**•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:

PSI	Tube O.D. (in.)	Tube Wall (in.)
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035

**•Vibration**

Excellent resistance.

**•Temperature Range**

-65°F to +250°F (-53°C to +121°C) range at maximum operating pressures.

**•Material**

CA360 Brass.

**•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.

**•Tolerance**

+/- .03 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical

**•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 the 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.

**STANDARD METRIC THREADS**

Description Tube Size	Thread O.D.	Crest (Pitch)	Thread Description
Japanese 3/16"	10mm	1.0mm	M10 x 1.0
European 3/16"	10mm	1.0mm	M10 x 1.0
GM 6mm	12mm	1.0mm	M12 x 1.0
Fuel 5/16"	14mm	1.5mm	M14 x 1.5
Fuel 3/8"	16mm	1.5mm	M16 x 1.5

**Measuring Metric Threads:** Measure the O.D. of the threads and the crest to crest distance (pitch) in millimeters between threads.

**Actual O.D. of male inverted flare threads**

5/16"-24 2800 PSI	3/8"-24 1900 PSI	7/16"-24 1400 PSI	1/2"-20 1200 PSI	5/8"-18 1000 PSI	3/4"-18 750 PSI	7/8"-18 650 PSI	1-1/16"-16 550 PSI
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**1/8"**

**3/16"**

**1/4"**

**5/16"**

**3/8"**

**1/2"**

**5/8"**

**3/4"**

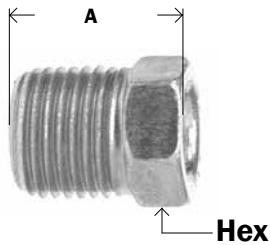
# INVERTED FLARE

# BRASS FITTINGS

BRASS

## ZINC CHROMATE STEEL NUT

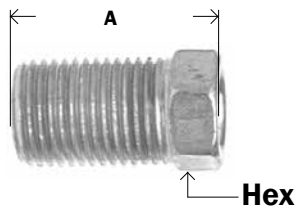
SAE# 040110



121XXX  
2105  
411FS  
105  
41W

Part #	Size	Thread	A	Hex	Approx. Wt. Lbs.	List Price
12-001	1/8"	5/16-24	0.52	0.31	0.01	2.48
12-002	3/16"	3/8-24	0.56	0.37	0.02	0.41
12-018	3/16"	7/16-24				1.98
12-003	1/4"	7/16-24	0.56	0.43	0.02	0.46
12-004	5/16"	1/2-20	0.62	0.50	0.02	0.53
12-005	3/8"	5/8-18	0.66	0.62	0.03	0.89
12-000	7/16"	11/16-18	0.68	0.68	0.04	4.73
12-011	3/8"	11/16-18	0.66	0.68	0.05	6.06
12-006	1/2"	3/4-18	0.74	0.75	0.08	2.94
12-007	5/8"	7/8-18	0.80	0.87	0.10	3.31
12-008	3/4"	1-1/16-16	0.88	1.06	0.10	5.86

## LONG STEEL NUT



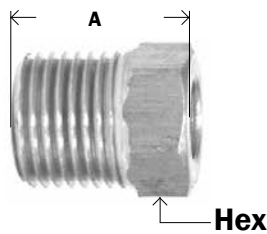
7896

for Domestic lines

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-009	3/16"	0.84	0.37	0.02	1.43
12-010	1/4"	0.81	0.43	0.02	1.64

## INVERTED FLARE BRASS NUT

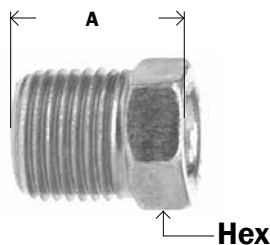
SAE# 040110



2100  
411F  
100  
411B

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-012	1/8"	0.52	0.31	0.01	2.90
12-013	3/16"	0.56	0.37	0.01	1.78
12-014	1/4"	0.56	0.43	0.02	0.62
12-015	5/16"	0.62	0.50	0.03	1.25
12-016	3/8"	0.66	0.62	0.04	1.63
12-017	1/2"	0.74	0.75	0.05	4.41

## ZINC STEEL METRIC TUBE NUTS

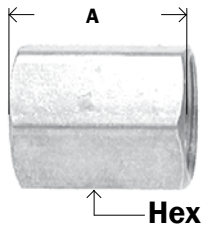


Part #	Tube size	Thread	Ref#	List Price
12-260	3/16 British	3/8-24 Bubble	---	2.04
12-261	3/16 European	M10 x 1.0 Bubble	276110	1.98
12-262	3/16 Japanese	M10 x 1.0 Inv.	121050	1.98
12-263	3/16 Domestic	1/2 x 20 Inv.	---	2.52
12-264	3/16 Domestic	9/16 - 18 Inv.	121039	2.52
12-265	3/16 Imported	M11 x 1.5 Bubble	276011	2.52
12-266	3/16 Imported	M12 x 1.0 Bubble	276012	2.46
12-267	3/16 Imported	M13 x 1.5 Bubble	276013	2.58
12-268	1/4 Domestic	9/16 x 18 Inv.	121049	2.46
12-269	1/4 Domestic	1/2 x 20 Inv.	121045	2.58
12-270	6mm Imported	M12 x 1.0 Bubble		2.58
12-271	6mm GM	M12 x 1.0 Bubble		2.58
12-272	6mm GM	M12 x 1.5 Bubble		2.64
12-273	6mm GM	M14 x 1.5 Bubble		2.64
12-274	5/16 Domestic	M14 x 1.5 Surface Seal	121069	7.80
12-275	3/8 Domestic	M16 x 1.5 Surface Seal	121070	8.16



**UNION INTERNAL**

**SAE# 040101**



302  
2300  
42IFHD

Part #	Inv. Flare X Inv. Flare	A	Hex	Approx. Wt. Lbs.	List Price
12-022	1/8"	0.59	0.40	0.02	10.27
12-023	3/16"	0.62	0.47	0.02	0.80
12-024	1/4"	0.62	0.50	0.03	1.70
12-025	5/16"	0.70	0.56	0.04	2.50
12-026	3/8"	0.80	0.75	0.08	3.02
12-027	1/2"	0.91	0.90	0.10	8.18

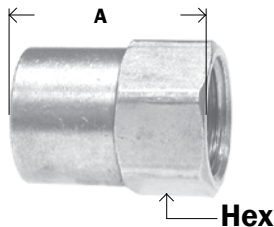
see page 70 for metric unions

**BRASS**

**LOWER**

**FEMALE ADAPTER**

**SAE# 040103**



461FHD  
252  
46W

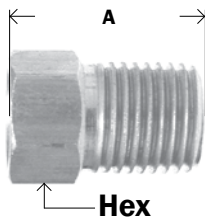
Part #	Inv. Flare X Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
12-032	3/16" x 1/8"	0.75	0.50	0.02	3.00
12-033	1/4" x 1/8"	0.75	0.53	0.02	1.89
12-034	5/16" x 1/8"	0.78	0.59	0.04	5.84
12-035	3/8" x 1/4"	1.03	0.75	0.08	6.30
12-036	1/2" x 3/8"	1.10	0.90	0.12	12.29

**LOWER**

**LOWER**

**MALE ADAPTER**

**SAE# 040102**



2200  
481FHD  
202  
48W  
200

Part #	Inv. Flare X Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
12-041	1/8" x 1/8"	0.63	0.40	0.02	2.69
12-042	3/16" x 1/8"	0.70	0.43	0.02	1.25
12-043	1/4" x 1/8"	0.74	0.50	0.03	1.25
12-044	1/4" x 1/4"	0.89	0.56	0.04	1.50
12-045	5/16" x 1/8"	0.79	0.56	0.03	2.00
12-046	5/16" x 1/4"	0.98	0.56	0.05	2.05
12-047	3/8" x 1/8"	0.88	0.72	0.05	2.75
12-048	3/8" x 1/4"	1.02	0.75	0.06	2.27
12-049	3/8" x 3/8"	1.02	0.75	0.08	4.58
12-038	1/2" x 1/4"	0.97	0.87	0.10	5.20
12-050	1/2" x 3/8"	1.06	0.87	0.08	6.24
12-051	1/2" x 1/2"	1.06	0.87	0.11	6.02
12-052	5/8" x 1/2"	1.32	1.06	0.15	5.25
12-040	3/4" x 3/4"	1.39	1.25	0.24	23.66

**LOWER**

**LOWER**

**LOWER**

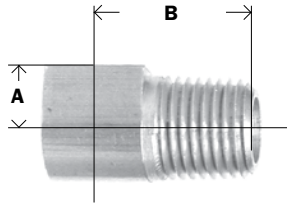
**LOWER**

**LOWER**

Dimension data can change without notice.  
Please see our website when dimensions are  
critical.

**ELBOW**

**SAE# 040202**



Part #	Inv. Flare X Male NPTF	A	B	Approx. Wt. Lbs.	List Price
12-057	1/8" x 1/8"	0.26	0.59	0.03	8.83
12-058	3/16" x 1/8"	0.26	0.61	0.03	2.81
12-059	1/4" x 1/8"	0.33	0.65	0.04	1.60
12-054*	1/4" x 1/8"	0.33	0.65	0.04	28.67
12-060	1/4" x 1/4"	0.28	0.82	0.06	3.20
12-061	5/16" x 1/8"	0.47	0.68	0.05	2.20
12-062	5/16" x 1/4"	0.45	0.85	0.08	3.20
12-063	3/8" x 1/8"	0.54	0.76	0.14	5.26
12-064	3/8" x 1/4"	0.53	0.92	0.14	4.73
12-065	3/8" x 3/8"	0.50	0.94	0.12	9.80
12-066	1/2" x 3/8"	0.59	1.03	0.16	6.60
12-067	1/2" x 1/2"	0.66	1.22	0.25	8.60
12-056	5/8" x 3/8"	0.67	1.09	0.20	16.93
12-068	5/8" x 1/2"	0.67	1.29	0.18	9.43
12-069	3/4" x 1/2"	0.80	1.39	0.42	53.25
12-080	7/8" x 3/4"	0.94	1.43	0.48	83.49
12-081	1" x 1"	1.02	1.69	0.60	97.97

**LOWER**

**LOWER**

**LOWER**

**LOWER**

**LOWER**

**LOWER**

**LOWER**

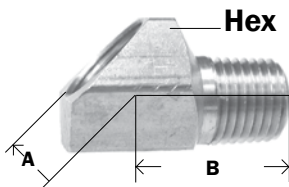
**LOWER**

400  
2400  
249IFHD 249IF  
402 49W

\* Restricted pipe end .062

**45° ELBOW**

**SAE# 040302**



Part #	Inv. Flare X Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
12-072	3/16" x 1/8"	0.25	0.55	0.53	0.02	8.16
12-073	1/4" x 1/8"	0.27	0.58	0.56	0.04	3.91
12-074	5/16" x 1/8"	0.36	0.56	0.62	0.06	6.03
12-075	5/16" x 1/4"	0.23	0.83	0.62	0.06	19.05
12-076	3/8" x 1/4"	0.51	0.84	0.78	0.09	12.67
12-077	1/2" x 3/8"	0.38	0.91	0.84	0.11	13.14
12-079	5/8" x 1/2"	0.44	1.00	1.06	0.21	56.26

**LOWER**

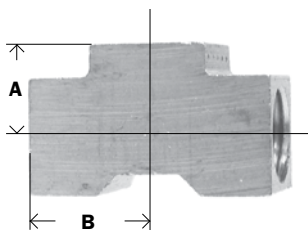
**LOWER**

**LOWER**

154  
2352  
259IFHD  
352 94W

**UNION TEE**

**SAE# 040401**



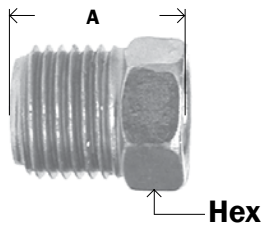
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
12-085	1/8"	0.33	0.47	0.04	22.74
12-086	3/16"	0.39	0.55	0.04	4.12
12-087	1/4"	0.42	0.56	0.08	6.63
12-088	5/16"	0.45	0.63	0.09	11.65
12-089	3/8"	0.56	0.74	0.17	12.69
12-090	1/2"	0.67	0.88	0.24	28.86

244IFHD  
702  
44I

**STEEL PLUG**

• cored

**SAE# 040109**



106  
41IP  
131  
2131

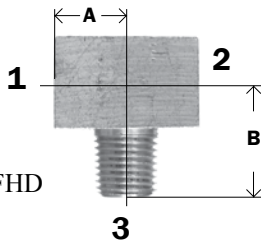
Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-091	3/16"	0.53	0.37	0.01	0.83
12-092	1/4"	0.54	0.43	0.02	1.04
12-093	5/16"	0.59	0.50	0.03	1.15
12-094	3/8"	0.66	0.62	0.04	2.69

**BRASS**

**LOWER**

**MALE BRANCH TEE**

**SAE# 040425**

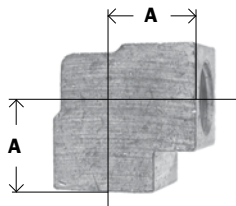


145  
245IFHD  
602  
2600  
600

Part #	Inv. Flare x Male NPTF (1&2)x3	A	B	Approx. Wt. Lbs.	List Price
12-100	3/16" x 1/8"	0.41	0.60	0.04	4.69
12-101	1/4" x 1/8"	0.42	0.64	0.06	6.56
12-102	5/16" x 1/8"	0.47	0.68	0.07	10.56
12-103	3/8" x 1/4"	0.58	0.93	0.15	34.17

**FEMALE ELBOW**

**SAE# 040203**



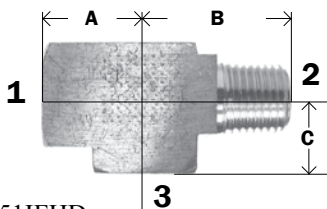
450

Part #	Inv. Flare x Female NPTF	A	Approx. Wt. Lbs.	List Price
12-110	1/4" x 1/8"	0.55	0.07	11.11
12-111	5/16" x 1/8"	0.51	0.08	20.71
12-112	3/8" x 1/4"	0.68	0.10	12.12

**LOWER**

**MALE RUN TEE**

**SAE# 040424**



251IFHD  
752  
550  
151

Part #	Inv. Flare x Male NPTF (1&3)x2	A	B	C	Approx. Wt. Lbs.	List Price
12-118	3/16" x 1/8"	0.53	0.72	0.39	0.06	36.97
12-119	1/4" x 1/8"	0.56	0.75	0.42	0.08	36.52
12-120	5/16" x 1/8"	0.62	0.85	0.45	0.10	11.90
12-121	3/8" x 1/4"	0.75	1.08	0.56	0.14	33.71

**LOWER**

Save 5% by ordering online at  
[www.midlandmetal.com](http://www.midlandmetal.com)

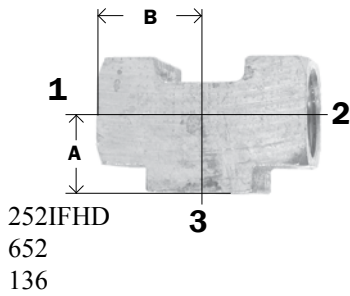
# INVERTED FLARE

# BRASS FITTINGS

BRASS

## FEMALE BRANCH TEE

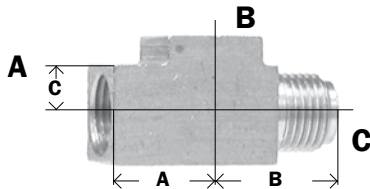
SAE# 040427



Part #	Inv. Flare x Female NPTF (1&2)x3	A	B	Approx. Wt. Lbs.	List Price
12-127	3/16" x 1/8"	0.39	0.55	0.06	15.55
12-129	5/16" x 1/8"	0.45	0.63	0.12	31.10
12-130	3/8" x 1/4"	0.56	0.74	0.17	25.25

LOWER

## TOWED TRAILER BRAKE TEE

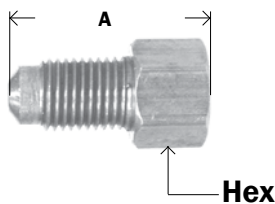


Part #	A	B	C	Reference #	Approx. Wt. Lbs.	List Price
12-147	3/16" 0.57	3/16" 0.76	3/16" 0.42	7900	0.08	7.00
12-145	3/16" (1/2-20) 0.68	3/16" (3/8-24) 0.94	3/16" (1/2-20) 0.47	7906	0.17	35.37
12-148	3/16" (9/16-18)	3/16" (3/8-24)	3/16" (9/16-18)	7933	0.10	13.62
12-144	3/16" (9/16-20) 0.82	3/16" (3/8-24) 0.94	3/16" (9/16-20) 0.47	7905	0.18	51.47
12-146	3/16" (7/16-24) 0.54	3/16" (3/8-24) 0.78	1/4" (7/16-24) 0.42	7914	0.08	30.18
12-150	1/4" 0.56	3/16" 0.77	1/4" 0.43	7901	0.10	28.68
12-149	1/4" (9/16-18) 0.81	3/16" (3/8-24) 0.93	1/4" (9/16-18) 0.50	7904	0.10	45.81
12-151	1/4" 0.56	1/4" 0.77	1/4" 0.43	7898	0.12	16.62

LOWER

## INVERTED FLARE AUTO FITTINGS

### DUAL MASTER CYLINDER ADAPTER



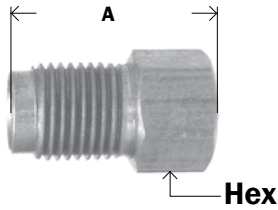
Part #	Male Flare x Female Inv.	A	Hex	Reference #	Approx. Wt. Lbs.	List Price
12-200	3/16" x 3/16"	1.00	0.50	1441	0.03	3.89
12-202	5/16" x 3/16"	0.96	0.68	7897	0.07	8.94

YOU MISS 100% OF THE SHOTS YOU DON'T TAKE.

- WAYNE GRETZKY



**DUAL MASTER CYLINDER ADAPTER**

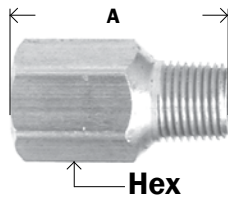


- Other sizes available
- \* Seals on hex face

47W

Part #	Male	Female	Ref#	List Price
12-210	3/8-24 (3/16)	7/16-24 (1/4)	7828	2.96
12-212	7/16-24 (1/4)	3/8-24 (3/16)	7818	2.69
12-214*	7/16-20	1/4	7732	7.85
12-217	7/16-24 Inv. (1/4)	1/2-20 (5/16)	7917	5.82
12-216	1/2-20 (5/16)	3/8-24 (3/16)	7909	4.79
12-218*	5/16"	1/4	7727	7.55
12-220	1/2-20 (5/16)	7/16-24 (1/4)	7829	5.45
12-222*	5/16"	5/16	1074	2.18
12-208	1/2-20 (5/16)	9/16-18	7912	6.42
12-206	9/16-18	3/8-24 (3/16)	7911	7.02
12-211	9/16-18	7/16-24 (1/4)	7908	6.42
12-209	9/16-18	1/2-20 (5/16)	7913	6.42
12-217	5/8-18 (3/8)	1/2-20 (5/16)	7916	5.82
12-224	3/8" MPT	5/16	7771	16.79
12-205	M10 x 1.0 Japanese	3/8-24 (3/16)	1443	4.68
12-335	M10 x 1.0 European	3/8-24 (3/16)	1442	3.78
12-336	M11 x 1.5 Metric Bubble	3/8-24 (3/16)	7973	11.22
12-341	M12 x 1.0 Metric Bubble	3/8-24 (3/16)	7974	18.13
12-339	M13 x 1.5 Metric Bubble	3/8-24 (3/16)	7972	21.34
12-326	M11 x 1.5 Metric Bubble	M10 x 1.0 (3/16)	7935	17.40
12-327	M12 x 1.0 GM 6mm	M10 x 1.0 (3/16)	7936	16.79
12-328	M13 x 1.5 Metric Bubble	M10 x 1.0 (3/16)	7937	17.40
12-329	M9 x 1.0 Metric Inv.	3/8-24 (3/16)	-	9.18
12-330	7/16-20 Bubble	3/8-24 (3/16)	-	6.18

**CARBURETOR TO FUEL LINE ADAPTER - FORD**

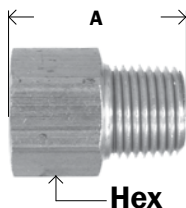


1513

Part #	Size	A	Hex	Ref #	Approx. Wt. Lbs.	List Price
12-230	1/4"(1/2-20) x 1/8"MPT	1.06	0.56	1513	0.04	17.18

**RESTRICTION PIPE ADAPTER**

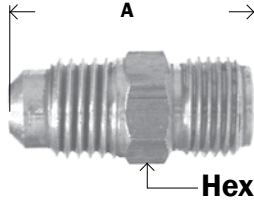
(.0625 ORIFICE)



1510

Part #	Size FIP x MIP	A	Hex	Ref #	Approx. Wt. Lbs.	List Price
12-310	1/8"	0.75	0.50	1512	0.02	7.27

Dimension data can change without notice. Please see our website when dimensions are critical.

**INVERTED FLARE****BRASS FITTINGS****SAE FLARE X INVERTED FLARE**

4205

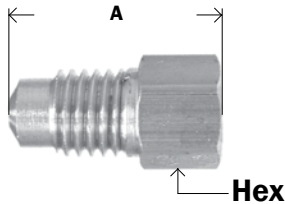
Part #	SAE Flare x Inv. Flare	A	Hex	Ref #	Approx. Wt. Lbs.	List Price
12-250	1/4" x 3/16"	1.03	0.43	1518	0.02	19.05
12-252	1/4" x 1/4"	1.03	0.43	1522	0.03	2.69
12-254	3/8" x 5/16"	1.34	0.63	1553	0.08	24.33
12-256	3/8" x 3/8"	1.37	0.63	1563	0.09	11.55
12-257	3/8" x 7/16"	1.40	0.68	1554	0.10	21.53

LOWER

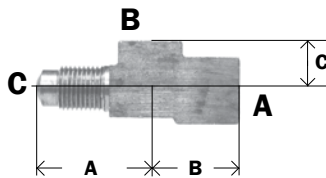
LOWER

LOWER

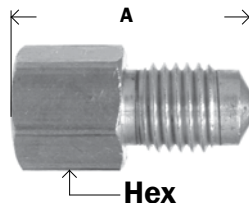
LOWER

**METRIC HYDRAULIC BRAKE FITTINGS****METRIC ADAPTER**

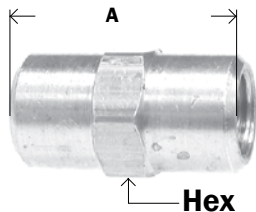
Part #	Male	O.D.	A	Hex	Ref #	Approx. Wt. Lbs.	List Price
12-335	M10x1.0	3/16"(3/8-24)	1.02	0.50	1442	0.02	3.78
12-326	M11x1.5	3/16"(M10x1.0)	1.06	0.50	7935	0.02	17.40
12-327	M12x1.0	3/16"(M10x1.0)	1.02	0.53	7936	0.04	16.79
12-328	M16x1.5	3/16"(M10x1.0)	1.02	0.56	7937	0.06	17.40

**METRIC TOWED TRAILER BRAKE TEE**

Part #	A	B	C	Ref #	Approx. Wt. Lbs.	List Price
12-333	3/16" (M12x1.0) 1.03	3/16" (3/8-24) 0.75	3/16" (M12x1.0) 0.49	7921	0.16	39.78

**ADAPTER STANDARD TO METRIC BUBBLE**

Part #	Female	Male	A	Hex	Reference #	Approx. Wt. Lbs.	List Price
12-337	3/16" (3/8-24)	4.762(3/16") (10x1.25)	1.00	0.50	7970	0.02	19.86
12-339	3/16" (3/8-24)	13x1.5	1.03	0.56	7972	0.04	21.34
12-341	3/16" (3/8-24)	12x1.0	1.02	0.53	7974	0.04	18.13

**METRIC UNION**

Part #	Size	A	Hex	Ref #	Approx. Wt. Lbs.	List Price
12-342	British Brake Lines 3/16 (3/8-24 Bubble)			1594		7.32
12-343	European Brake Lines 3/16"(10.0MM)	1.04	0.56	7975	0.04	16.50
12-344	Japanese Brake Lines 3/16 (M10 x 1.0) Inverted			7934A		7.32
12-345	GM Brake Lines 6mm M12 x 1.0 Bubble					7.20

## BRASS FITTINGS

## POL (BOTTLE GAS)/ SPACE HEATER

### POL BRASS FITTINGS (BOTTLE GAS)

Used for making connections in LP gas systems

POL Thread 880 - 14LH

Note: All bottle fittings are UL listed.

### TEE CHECK



POL-T1  
2000  
1000

Part #	Pipe Size	List Price
34-001	M2000	34.25

### TAILPIECE WITH FLATS

1001AUL  
21605



POL-LPT  
POL-LTPH  
M-2001-A

1/4 NPT

Part #	Length	List Price
34-011	2.34 w/ wrench Flats	19.10
34-012	2.13 w/ Hex	9.23

### STANDARD NUT

7/8" Hex



1001BUL  
POL-N  
21601  
M-2001-B

Part #	Pipe Size	List Price
34-016	.880-14 LH	4.32

### TAILPIECE & NUT ASSEMBLY



2002AB

Part #	Pipe Size	List Price
34-022	1/4	21.53

### POL CAP



POL-N5  
2004  
1004A  
M-2004

Part #	Pipe Size	List Price
34-031	.880-14LH	12.13

### ADAPTERS

POL 2005  
POL 2006  
POL 2007



21607  
POL-U2  
1015

Part #	Pipe Size	List Price
34-041	3/8 Flare x .880-14LH	17.59
34-046	1/2 Flare x .880-14LH	17.49
34-051	5/8 Flare x .880-14LH	22.28

### BRASS SPACE HEATER FITTINGS

#### NUT

#M-80SH



Part #	Size	List Price
14-001	3/8	3.50

#### MALE ADAPTER

#M-83SH



Part #	Size	List Price
14-016	3/8 x 3/8	6.43
14-017	3/8 x 1/2	6.76

#### FEMALE ADAPTER



Part #	Size	List Price
14-018	3/8 x 3/8	6.56
14-025	3/8 x 1/2	3.32

#### UNION

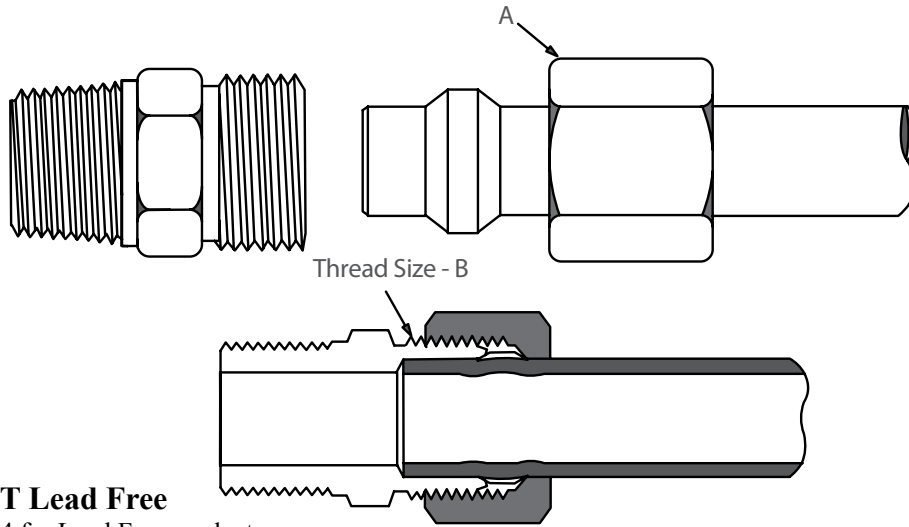
#M-82SH



Part #	Size	List Price
14-011	3/8	10.39

BRASS

# Compression Fittings



**These are NOT Lead Free**

See pages 172-174 for Lead Free products

<b>Tube O.D.</b>	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8
<b>Thread Size-B</b>	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
<b>Working Pressure</b>	400	400	300	300	200	200	200	150	100	75

**•Typical Application**

Use with copper, aluminum and thermoplastic tubing. Not recommended for steel tubing. Manufactured for low and medium pressure tubing connection work where excessive vibration or tube movement is not involved. Not recommended for application using gaseous media.

**•Pressure**

See table above for working pressures at 73°F.

**•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 fittings.  
CA377 Brass for forged fittings.

**•Used With**

Aluminum, copper, brass and plastic tubing. Plastic tubing requires insert. Not recommended for steel tubing.

**•Tolerance**

+/- .02 on all dimensions. Dimension data can change

without notice. Please call us when dimensions are critical.

**• Conformance**

Meets specifications and standards of ASA, ASME and SAE.

**•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.
- 3- Insert tubing into fitting body. Be sure tubing is bottomed on fitting shoulder.
- 4- Lubricate threads and assemble nut to fitting body.
- 5- Tighten nut hand tight. From that point, tighten with a wrench the number of turns indicated in the chart below.

Tube Size	Additional Turns from Hand Tight
1/8" thru 1/4"	1-1/4"
5/16"	1-3/4"
3/8" thru 1"	2-1/4"

**• "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.

*Actual Profile of Compression Threads*

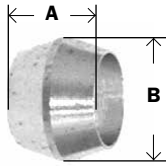




**BRASS SLEEVE**

SAE# 060115

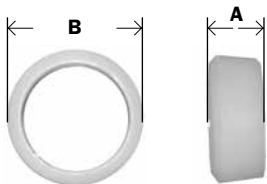
• FERRULES



60  
260

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
18-001	1/8"	0.19	0.19	0.01	0.29
18-002	3/16"	0.22	0.27	0.01	0.20
18-003	1/4"	0.25	0.34	0.01	0.24
18-004	5/16"	0.25	0.41	0.01	0.19
18-005	3/8"	0.25	0.47	0.02	0.23
18-006	7/16"	0.31	0.53	0.02	0.56
18-007	1/2"	0.38	0.59	0.02	0.57
18-008	5/8"	0.38	0.71	0.03	0.61
18-009	3/4"	0.44	0.87	0.03	1.60
18-010	7/8"	0.41	0.99	0.03	1.02

**DELTRIN SLEEVE**

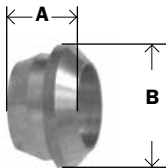


60-P

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
18-015	1/4"	0.19	0.37	0.01	0.16
18-016	5/16"	0.19	0.43	0.01	0.98
18-017	3/8"	0.19	0.50	0.02	0.22
18-018	1/2"	0.25	0.63	0.02	0.14
18-019	5/8"	0.22	0.74	0.02	0.20

**SELF-ALIGN SLEEVE - See page 88 for self-align sleeve assemblies**

601



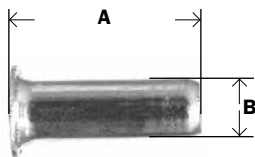
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
27-001	1/8"	0.19	0.25	0.01	0.30
27-002	3/16"	0.20	0.31	0.01	0.93
27-003	1/4"	0.21	0.37	0.02	0.36

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
27-005	3/8"	0.23	0.50	0.03	0.74
27-006	1/2"	0.35	0.62	0.03	2.13

\* Note: To buy compression fittings with self-align sleeve, simply delete the 18- prefix on the same size compression fitting and substitute 27- prefix. Pricing available upon request. 72 Hour lead time.

**BRASS INSERT**

• SLEEVE



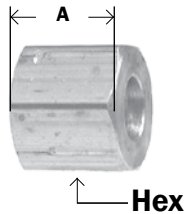
63-BI  
60AE  
2030  
63PT

Part #	Size	A	B	Approx. Wt. Lbs.	Wall	List Price
22-008	1/8"	0.46	0.080	0.01	.016	0.69
22-009	3/16"	0.45	0.135	0.01	.025	0.69
22-009A	3/16"	0.52	0.095	0.01	.040	0.78
22-010	1/4"	0.50	0.163	0.02	.04	0.39
22-010A	1/4"	0.59	0.125	0.02		1.10
22-010B	1/4"	0.53	0.172	0.02		1.73
22-011A	5/16"	0.50	0.232	0.02	.04	1.67
22-011	5/16"	0.53	0.187	0.02	.062	0.69
22-012	3/8"	0.56	0.250	0.03	.062	0.61
22-013	1/2"	0.72	0.370	0.03	.062	0.79
22-014	5/8"	0.72	0.483	0.03	.062	1.60
22-015	3/4"	1.03	0.563	0.03		4.78

**BRASS NUT**

**SAE# 060110**

**BRASS**



Part #	Size	Thread	A	Hex	Approx. Wt. Lbs.	List Price
18-033	1/8"	5/16-24	0.38	0.37	0.01	0.88
18-034	3/16"	3/8-24	0.41	0.43	0.01	0.52
18-035L	1/4"	7/16-24	0.44	0.50	0.02	0.57
18-035	1/4"	7/16-24	0.44	0.50	0.02	0.77
18-036	5/16"	1/2-24	0.44	0.56	0.02	0.83
18-037L	3/8"	9/16-24	0.47	0.62	0.04	0.86
18-037	3/8"	9/16-24	0.47	0.62	0.04	1.33
18-038	7/16"	5/8-24	0.50	0.68	0.04	3.87
18-039L	1/2"	11/16-20	0.56	0.75	0.04	1.75
18-039	1/2"	11/16-20	0.62	0.81	0.04	2.60
18-040L	5/8"	13/16-18	0.56	0.87	0.06	1.80
18-040	5/8"	13/16-18	0.62	0.94	0.06	3.10
18-041	3/4"	1-18	0.68	1.12	0.08	3.86
18-042	7/8"	1-1/8 - 18	0.62	1.25	0.10	4.75

61  
261

**CHROME PLATED NUT**



Part #	Size	List Price
18-054	1/4"	0.72
18-055	3/8"	0.72
18-056	1/2"	1.74
18-057	5/8"	1.75

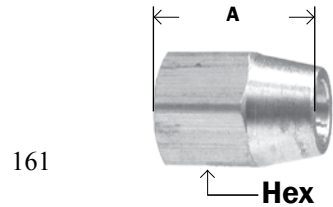
COURAGE IS THE FIRST OF HUMAN QUALITIES BECAUSE IT IS THE QUALITY WHICH GUARANTEES ALL OTHERS.

– WINSTON CHURCHILL

These are NOT Lead Free - See pages 172-174 for Lead Free products



**LONG NUT COMPRESSION - Can be assembled on any compression fitting**



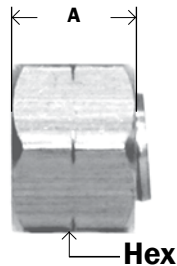
161

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
24-003	1/4"	0.75	0.50	0.02	1.85
24-004	5/16"	0.84	0.56	0.02	1.34
24-005	3/8"	0.97	0.62	0.04	2.79
24-006	1/2"	1.06	0.81	0.06	7.20
24-007	5/8"	1.19	0.94		7.15

• More sizes available

\* Note: To buy compression fittings with long nut, simply delete the 18- prefix on the same size compression fitting and substitute a 24- prefix. Pricing available upon request. 72 hour lead time.

**CAPTIVE SLEEVE NUT - See captive sleeve fittings on page 86-87**

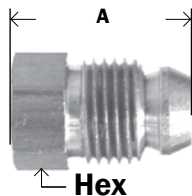


Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
26-001	1/8"	0.38	0.37	0.02	1.50
26-002	3/16"	0.40	0.43	0.02	1.57
26-003	1/4"	0.40	0.50	0.04	1.27
26-004	5/16"	0.44	0.56	0.04	1.75
26-005	3/8"	0.46	0.62	0.06	1.64
26-007	1/2"	0.50	0.81	0.08	3.28
26-008	5/8"	0.51	0.94	0.10	5.87

\* Note: To buy compression fittings with captive sleeve, simply delete the 18- prefix on the same size compression fitting and substitute a 26- prefix. Pricing available upon request. 72 hour lead time.

**BREAK-AWAY NUT**

181-BA  
21604  
99LB  
81LB



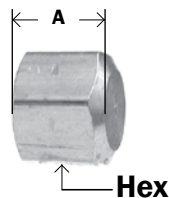
• 1-Piece Fiting

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
16-090	3/16"	0.57	0.37	0.02	7.98
16-010	1/4"	0.62	0.43	0.02	1.98

\* Threaded sleeve fittings on page 85.

**CAP**

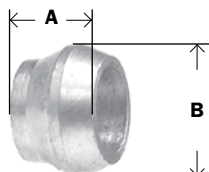
61-CC  
N5CT



Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-047	1/4"	0.44	0.50	0.02	1.39
18-048	3/8"	0.40	0.62	0.04	1.58
18-049	1/2"	0.48	0.75	0.06	2.74
18-050	5/8"	0.56	0.94	0.10	6.16

**COMPRESSION PLUG**

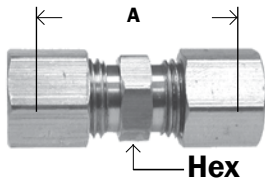
CSP



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
18-029	3/8"	0.31	0.47	0.04	1.93
18-030	1/2"	0.34	0.59	0.06	2.83

**UNION**

**SAE# 060101BA**



M-62

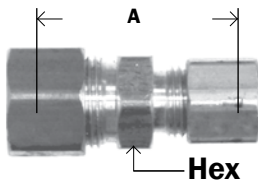
Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-062	1/8"	0.64	0.31	0.03	4.59
18-063	3/16"	0.75	0.37	0.04	2.28
18-064L	1/4"	0.79	0.43	0.06	2.43
18-064	1/4"	0.81	0.43	0.06	2.76
18-065	5/16"	0.88	0.50	0.06	3.54
18-066L	3/8"	0.96	0.56	0.09	3.55
18-066	3/8"	0.98	0.56	0.10	3.47
18-067	7/16"	1.02	0.62	0.12	19.44
18-068L	1/2"	1.06	0.68	0.16	7.30
18-068	1/2"	1.25	0.68	0.16	8.73
18-069L	5/8"	1.43	0.81	0.24	8.16
18-069	5/8"	1.25	0.81	0.26	10.26
18-070	3/4"	1.41	1.00	0.35	20.69
18-071L	7/8"	1.03	1.12	0.34	17.33
18-071	7/8"	1.00	1.12	0.36	17.12

**CHROME PLATED UNION**



Part #	Size	List Price
31-066	3/8"	6.44

**REDUCING UNION**

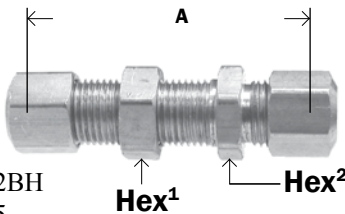


62-R

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-076	1/4" x 1/8"	0.73	0.44	0.04	4.20
18-077	1/4" x 3/16"	0.78	0.44	0.06	7.99
18-078	5/16" x 1/4"	0.81	0.50	0.06	4.75
18-079	3/8" x 1/4"	0.90	0.56	0.10	7.20
18-080	3/8" x 5/16"	0.94	0.56	0.10	7.13
18-081	1/2" x 3/8"	1.03	0.68	0.12	8.12
18-082	5/8" x 3/8"	1.03	0.81	0.15	8.00
18-083	5/8" x 1/2"	1.10	0.81	0.15	9.20
18-084	7/8" x 5/8"	1.23	1.18	0.20	29.44

**BULKHEAD UNIONS**

**SAE# 060101**



62BH  
75  
274

Part #	Size	A	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
18-088	1/4"	1.58	0.56	0.56	0.10	8.21
18-090	3/8"	1.76	0.68	0.68	0.14	22.16

**BULKHEAD NUTS**

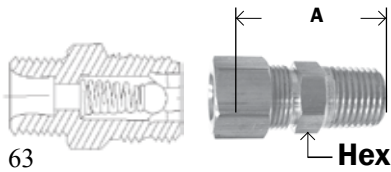


20102

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-097	1/4"	0.25	0.56	0.02	5.01
18-099	3/8"	0.25	0.68	0.04	5.59
18-100	1/2"	0.38	0.94	0.06	22.91

Dimension data can change without notice. Please see our website when dimensions are critical.

**BALL CHECK VALVE - Min. Working pressure 3 psi.**

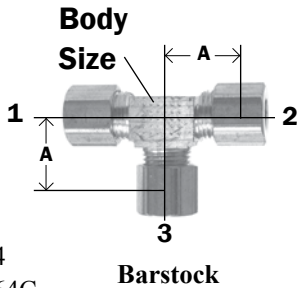
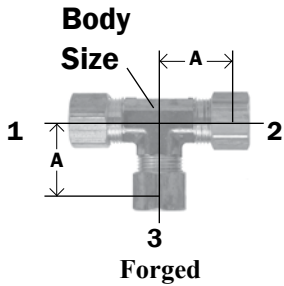


63  
263  
63A

Part #	Tube OD x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
18-092	1/8" x 1/8"	0.78	0.44	0.04	11.63
18-094	1/4" x 1/8"	0.88	0.44	0.04	12.20
18-096	3/8" x 1/4"	1.16	0.56	0.08	16.11

**TEE**

**SAE# 060401**

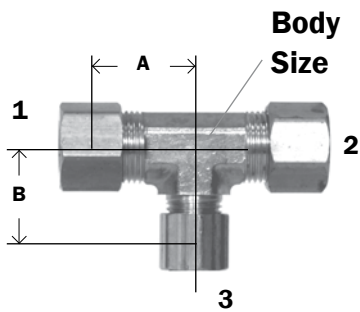


64  
264C

Part #	Size	A	Body Size	Approx. Wt. Lbs.	List Price
18-101	1/8"	0.61	0.37	0.04	12.96
18-101B*	1/8"	0.62	0.33	0.04	11.29
18-102	3/16"	0.59	0.36	0.08	5.80
18-102B*	3/16"	0.60	0.38	0.08	8.20
18-103	1/4"	0.63	0.36	0.10	5.35
18-103B*	1/4"	0.62	0.49	0.10	10.20
18-104	5/16"	0.72	0.50	0.13	8.49
18-104B*	5/16"	0.60	0.50	0.14	13.33
18-105	3/8"	0.75	0.50	0.16	6.67
18-105B*	3/8"	0.73	0.59	0.16	12.84
18-106	1/2"	0.94	0.59	0.22	13.61
18-106B*	1/2"	0.94	0.69	0.24	29.29
18-107	5/8"	1.06	0.69	0.28	14.51
18-108	3/4"	1.22	0.88	0.32	47.28
18-109	7/8"	1.25	0.94	0.34	37.98

\* Barstock

**FORGED REDUCING TEE**

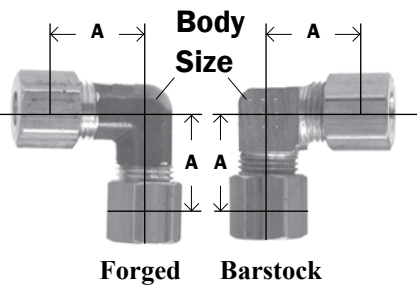


64-R

Part #	Size 1 x 2 x 3	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-114	1/4" x 1/4" x 1/8"	0.62	0.59	0.38	0.09	7.28
18-110	1/4" x 1/4" x 3/8"	0.69	0.75	0.50	0.14	16.10
18-111	3/8" x 1/4" x 1/4"	0.75	0.69	0.50	0.12	9.90
18-115	3/8" x 3/8" x 1/4"	0.75	0.69	0.50	0.14	7.27
18-116	1/2" x 1/2" x 1/4"	0.94	0.81	0.59	0.16	13.74
18-117	1/2" x 1/2" x 3/8"	0.94	0.81	0.59	0.24	14.79
18-118	5/8" x 5/8" x 3/8"	1.06	0.94	0.69	0.28	17.69
18-119	5/8" x 5/8" x 1/2"	1.06	1.06	0.69	0.30	19.58

**UNION ELBOW**

**SAE# 060201**

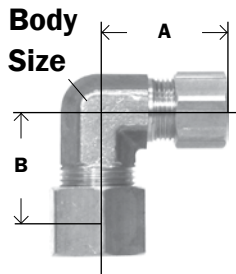


65  
BSE2  
165C Forged  
265C Barstock

Part #	Size	A	Body Size	Approx. Wt. Lbs.	List Price
18-122B*	1/8"	0.62	0.35	0.04	7.89
18-123	3/16"	0.61	0.37	0.06	7.05
18-123B*	3/16"	0.62	0.41	0.06	7.14
18-124	1/4"	0.66	0.38	0.08	4.55
18-124B*	1/4"	0.60	0.48	0.08	7.89
18-125	5/16"	0.69	0.47	0.09	7.50
18-125B*	5/16"	0.62	0.52	0.09	10.08
18-126	3/8"	0.72	0.43	0.12	6.00
18-127	1/2"	0.94	0.59	0.19	9.67
18-127B*	1/2"	0.94	0.71	0.19	19.50
18-128	5/8"	1.06	0.72	0.26	10.15
18-129	3/4"	1.19	0.94	0.48	25.67
18-130	7/8"	1.25	0.94	0.44	28.44

\* Barstock

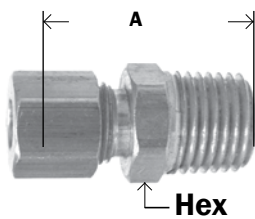
**REDUCING ELBOW - Forged**



65-R

Part #	Size	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-135	3/8" x 1/4"	0.69	0.75	0.47	0.12	10.02
18-136	1/2" x 3/8"	0.88	0.94	0.59	0.15	11.02
18-137	5/8" x 3/8"	0.88	0.97	0.56	0.18	15.26
31-137	3/8" OD x 5/8" OD	Chrome Plated				9.06

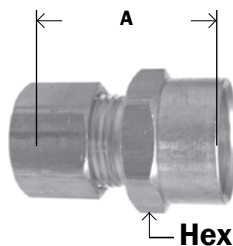
**TANK ADAPTER DRILLED THRU (NO STOP)**



68-T  
682C  
80F

Part #	Comp. X Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
18-208	1/4" x 1/8"	0.88	0.43	0.04	3.17
18-209	1/4" x 1/4"	0.99	0.56	0.05	2.38
18-210	3/8" x 1/4"	1.16	0.56	0.05	4.44
18-211	3/8" x 3/8"	1.09	0.68	0.08	3.68
18-212	3/8" x 1/2"	1.19	0.87	0.10	5.90
18-213	1/2" x 3/8"	1.22	0.68	0.12	7.96
18-214	1/2" x 1/2"	1.09	0.81	0.14	6.44
18-215	5/8" x 1/2"	1.12	0.81	0.18	7.59

**COMP X SWEAT ADAPTER**

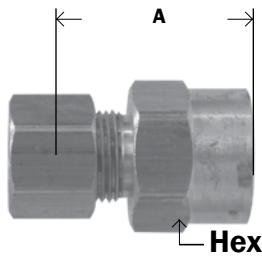


66-S

Part #	Comp. X Sweat Adapter	A	Hex	Approx. Wt. Lbs.	List Price
18-171	3/8" x 1/2" nom.swt.	0.98	0.75	0.08	6.24
31-171	3/8" OD x 1/2" SWT	Chrome Plated			4.14

**SAE# 060103**

**FEMALE ADAPTER**



66

Part #	Comp. X Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
18-142	1/8" x 1/8"	0.75	0.56	0.02	3.25
18-143	3/16" x 1/8"	0.78	0.56	0.04	4.22
18-144	3/16" x 1/4"	0.96	0.68	0.04	9.88
18-145L	1/4" x 1/8"	0.84	0.50	0.05	1.86
18-145	1/4" x 1/8"	0.78	0.56	0.05	2.67
18-146L	1/4" x 1/4"	0.88	0.62	0.09	3.69
18-146	1/4" x 1/4"	1.03	0.68	0.09	6.07
18-148	1/4" x 1/2"	1.02	0.87	0.12	9.06
18-149	5/16" x 1/8"	0.81	0.56	0.05	3.74
18-150	5/16" x 1/4"	0.91	0.62	0.06	5.53
18-152	3/8" x 1/8"	0.88	0.56	0.06	3.69
18-153L	3/8" x 1/4"	0.97	0.62	0.08	4.70
18-153	3/8" x 1/4"	1.06	0.68	0.08	4.98
18-154L	3/8" x 3/8"	1.03	0.75	0.08	3.14
18-154	3/8" x 3/8"	1.06	0.81	0.10	7.08
18-155	3/8" x 1/2"	1.12	1.00	0.08	5.30
18-156	3/8" x 3/4"	1.19	1.16	0.14	16.01
18-157	1/2" x 1/4"	1.09	0.68	0.10	9.82
18-158L	1/2" x 3/8"	0.94	0.81	0.12	8.01
18-158	1/2" x 3/8"	1.12	0.81	0.12	8.01
18-159L	1/2" x 1/2"	1.19	1.00	0.12	6.36
18-159	1/2" x 1/2"	1.31	1.00	0.12	13.09
18-160	1/2" x 3/4"	1.25	1.16	0.18	15.31
18-162L	5/8" x 1/2"	1.20	0.94	0.18	6.99
18-162	5/8" x 1/2"	1.38	1.00	0.18	11.43
18-163	5/8" x 3/4"	1.20	1.12	0.22	10.03
18-164	3/4" x 1/2"	1.25	1.06	0.26	18.10
18-165	3/4" x 3/4"	1.28	1.19	0.28	26.19
18-167	7/8" x 1/2"	1.28	1.19	0.32	17.43
18-166	7/8" x 3/4"	1.31	1.12	0.34	12.21

**CHROME PLATED FEMALE ADAPTER**



Part #	Size	List Price
31-154	3/8" OD x 3/8" FIP	5.09
31-155	3/8" OD x 1/2" FIP	7.79
31-159	1/2" OD x 1/2" FIP	14.24

**DRILLED THRU COMP. UNION**



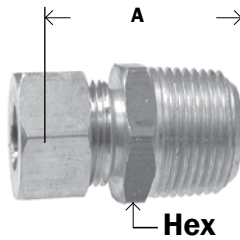
\* Straight Thru/ No Stem

Part #	Size	List Price
18-066D	3/8"	5.42
18-069D	5/8"	12.68
18-071D	7/8"	29.06

Dimension data can change without notice. Please see our website when dimensions are critical.

**MALE ADAPTER**

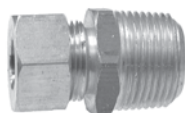
**SAE# 060102**



68

Part #	Comp. X Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
18-175	1/8" x 1/16"	0.78	0.37	0.02	8.05
18-176	1/8" x 1/8"	0.78	0.43	0.04	2.13
18-177	3/16" x 1/8"	0.84	0.43	0.04	1.85
18-178	3/16" x 1/4"	0.94	0.56	0.06	4.74
18-179L	1/4" x 1/8"	0.88	0.56	0.04	1.96
18-179	1/4" x 1/8"	0.88	0.43	0.04	1.91
18-180L	1/4" x 1/4"	0.94	0.56	0.05	1.68
18-180	1/4" x 1/4"	1.06	0.56	0.06	3.11
18-181	1/4" x 3/8"	1.03	0.68	0.08	3.06
18-182	1/4" x 1/2"	1.09	0.81	0.10	4.23
18-183	5/16" x 1/8"	0.91	0.50	0.05	2.60
18-184L	5/16" x 1/4"	1.01	0.56	0.06	3.36
18-184	5/16" x 1/4"	1.09	0.56	0.06	3.11
18-185	5/16" x 3/8"	1.06	0.68	0.07	5.65
18-186	5/16" x 1/2"	1.14	0.87	0.10	8.82
18-187L	3/8" x 1/8"	0.94	0.56	0.06	2.91
18-187	3/8" x 1/8"	0.97	0.56	0.06	4.01
18-188L	3/8" x 1/4"	1.03	0.56	0.06	3.16
18-188	3/8" x 1/4"	1.16	0.56	0.07	3.38
18-189L	3/8" x 3/8"	1.09	0.68	0.08	3.26
18-189	3/8" x 3/8"	1.14	0.69	0.08	4.35
18-190L	3/8" x 1/2"	1.19	0.88	0.12	5.00
18-190	3/8" x 1/2"	1.34	0.87	0.13	5.55
18-191	3/8" x 3/4"	1.29	1.06	0.16	10.96
18-192	7/16" x 1/4"	1.06	0.62	0.10	10.30
18-204	7/16" x 3/8"	1.10	0.68	0.12	8.42
18-193L	1/2" x 1/4"	1.09	0.69	0.11	6.00
18-193	1/2" x 1/4"	1.22	0.68	0.11	6.00
18-194L	1/2" x 3/8"	1.16	0.68	0.12	4.41
18-194	1/2" x 3/8"	1.16	0.69	0.12	4.75
18-195L	1/2" x 1/2"	1.09	0.81	0.12	5.41
18-195	1/2" x 1/2"	1.41	0.87	0.19	7.67
18-196	1/2" x 3/4"	1.38	1.06	0.22	7.67
18-197	5/8" x 3/8"	1.22	0.87	0.24	6.03
18-198	5/8" x 1/2"	1.12	0.81	0.24	6.90
18-199	5/8" x 3/4"	1.31	1.06	0.26	7.11
18-200	3/4" x 1/2"	1.44	1.00	0.26	11.36
18-201	3/4" x 3/4"	1.50	1.06	0.26	11.39
18-202	7/8" x 1/2"	1.18	1.12	0.26	17.87
18-203	7/8" x 3/4"	1.22	1.12	0.28	10.11
18-205	7/8" x 1"	1.67	1.37	0.32	25.30

**CHROME PLATED MALE ADAPTER**

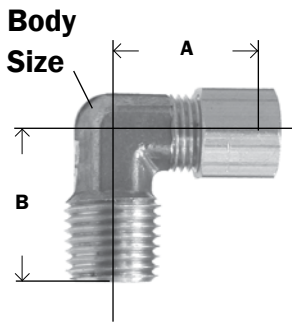


Part #	Size	List Price
31-189	3/8" OD x 3/8" MIP	4.61
31-190	3/8" OD x 1/2" MIP	9.25
31-191	1/2" OD x 1/2" MIP	7.44
31-194	1/2" OD x 3/8" MIP	7.19

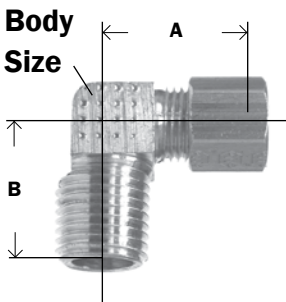


**MALE ELBOW**

**SAE# 060202**



**Forged**



**Barstock**

69  
269C  
BSE1  
169C

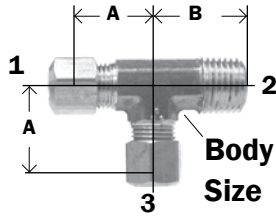
Part #	Comp. X Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-220	1/8" x 1/8"	0.59	0.75	0.34	0.02	3.40
18-220B*	1/8" x 1/8"	0.60	0.67	0.43	0.04	3.42
18-221	3/16" x 1/8"	0.63	0.72	0.34	0.04	4.20
18-221B*	3/16" x 1/8"	0.62	0.69	0.43	0.06	3.24
18-223	3/16" x 1/4"	0.60	0.81	0.39	0.05	4.92
18-224	1/4" x 1/8"	0.60	0.75	0.37	0.06	3.50
18-224B*	1/4" x 1/8"	0.62	0.75	0.43	0.06	2.86
18-225	1/4" x 1/4"	0.65	0.94	0.36	0.08	3.33
18-225B*	1/4" x 1/4"	0.61	0.81	0.56	0.08	3.42
18-226	1/4" x 3/8"	0.75	0.91	0.47	0.08	4.57
18-227	1/4" x 1/2"	0.81	1.13	0.56	0.12	7.39
18-228	5/16" x 1/8"	0.66	0.75	0.47	0.06	4.85
18-228B*	5/16" x 1/8"	0.62	0.75	0.42	0.06	4.00
18-229	5/16" x 1/4"	0.66	0.81	0.47	0.07	4.81
18-229B*	5/16" x 1/4"	0.69	0.84	0.57	0.08	6.31
18-230	5/16" x 3/8"	0.75	0.91	0.47	0.10	5.66
18-231	5/16" x 1/2"	0.84	1.12	0.56	0.12	9.08
18-232	3/8" x 1/8"	0.72	0.66	0.39	0.06	3.88
18-232B*	3/8" x 1/8"	0.69	0.69	0.57	0.06	6.65
18-233	3/8" x 1/4"	0.75	0.82	0.46	0.08	5.11
18-233B*	3/8" x 1/4"	0.75	0.94	0.57	0.08	5.13
18-234	3/8" x 3/8"	0.81	0.94	0.46	0.10	5.36
18-234B*	3/8" x 3/8"	0.71	0.83	0.69	0.10	9.04
18-235	3/8" x 1/2"	0.87	1.12	0.56	0.14	11.01
18-235B*	3/8" x 1/2"	0.88	1.16	0.94	0.14	17.83
18-248	3/8" x 3/4"	1.03	1.19	0.81	0.18	11.48
18-247	7/16" x 1/4"	0.84	1.00	0.56	0.14	9.75
18-236	1/2" x 1/4"	0.88	0.97	0.56	0.14	7.87
18-237	1/2" x 3/8"	0.88	1.03	0.56	0.19	7.00
18-237B*	1/2" x 3/8"	0.94	1.12	0.70	0.19	10.09
18-238	1/2" x 1/2"	0.94	1.13	0.59	0.17	7.33
18-238B*	1/2" x 1/2"	0.94	1.31	0.86	0.17	16.01
18-239	1/2" x 3/4"	1.16	1.25	0.81	0.18	13.95
18-240	5/8" x 3/8"	1.06	1.12	0.68	0.18	8.58
18-241	5/8" x 1/2"	1.06	1.16	0.68	0.20	9.29
18-241B*	5/8" x 1/2"	1.06	1.31	0.86	0.20	16.06
18-242	5/8" x 3/4"	1.16	1.31	0.81	0.24	14.76
18-243	3/4" x 1/2"	1.19	1.31	0.94	0.26	15.91
18-245	3/4" x 3/4"	1.19	1.38	0.94	0.30	18.00
18-246	7/8" x 3/4"	1.25	1.38	0.94	0.35	27.58

\* Barstock

Dimension data can change without notice.  
Please see our website when dimensions are critical.



**FORGED MALE RUN TEE**

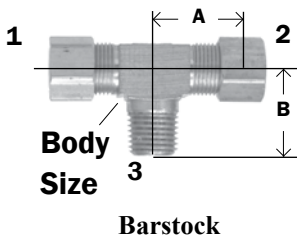
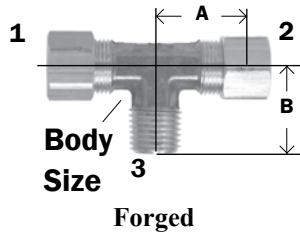


71  
171C  
BST3

Part #	Comp. X Male NPTF (1&3) X 2	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-272	1/8" x 1/8"	0.63	0.69	0.36	0.06	6.30
18-273	3/16" x 1/8"	0.63	0.69	0.36	0.07	6.30
18-274	1/4" x 1/8"	0.63	0.75	0.36	0.08	5.43
18-275	1/4" x 1/4"	0.69	0.88	0.44	0.10	6.43
18-276	5/16" x 1/8"	0.72	0.75	0.50	0.10	8.46
18-277	5/16" x 1/4"	0.75	0.88	0.44	0.10	8.22
18-278	3/8" x 1/8"	0.75	0.75	0.50	0.14	9.10
18-279	3/8" x 1/4"	0.79	0.87	0.44	0.18	7.04
18-280	3/8" x 3/8"	0.88	1.00	0.47	0.20	10.85
18-281	1/2" x 3/8"	0.94	1.09	0.59	0.24	13.21
18-282	1/2" x 1/2"	0.97	1.19	0.69	0.26	17.24
18-283	5/8" x 1/2"	1.06	1.31	0.69	0.28	16.09
18-284	3/4" x 1/2"	1.22	1.34	0.88	0.30	38.16

**MALE BRANCH TEE**

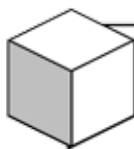
**SAE# 060203**



72  
BST1  
172C

Part #	Comp. X Male NPTF (1&2) X 3	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-290	3/16" x 1/8"	0.63	0.69	0.36	0.08	8.21
18-291	1/4" x 1/8"	0.62	0.75	0.36	0.10	5.88
18-291B*	1/4" x 1/8"	0.64	0.73	0.45	0.10	10.06
18-292	1/4" x 1/4"	0.69	0.86	0.44	0.10	6.81
18-293	5/16" x 1/8"	0.72	0.75	0.50	0.11	6.81
18-294	5/16" x 1/4"	0.75	0.88	0.44	0.12	7.61
18-295	3/8" x 1/8"	0.75	0.75	0.50	0.14	9.09
18-296	3/8" x 1/4"	0.78	0.88	0.44	0.16	6.97
18-296B*	3/8" x 1/4"	0.78	0.91	0.62	0.16	12.98
18-297	3/8" x 3/8"	0.78	0.97	0.47	0.18	10.21
18-298	3/8" x 1/2"	0.88	1.22	0.69	0.20	15.63
18-304	1/2" x 1/4"	0.94	0.97	0.59	0.22	13.52
18-299B*	1/2" x 3/8"	0.96	1.09	0.70	0.24	25.38
18-299	1/2" x 3/8"	0.94	1.12	0.59	0.24	12.94
18-300	1/2" x 1/2"	0.97	1.19	0.69	0.30	16.35
18-301	5/8" x 1/2"	1.06	1.31	0.69	0.32	18.42
18-302	3/4" x 1/2"	1.22	1.34	0.88	0.50	40.93
18-303	3/4" x 3/4"	1.25	1.50	0.88	0.54	38.54

\* Barstock



**DROP SHIP PROGRAM**

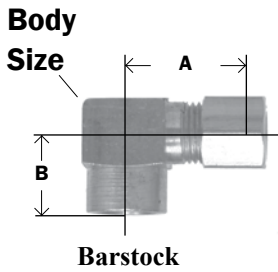
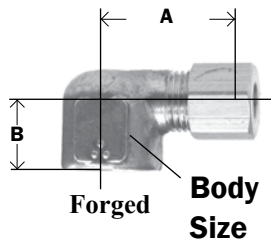
**SEE INTRO PAGE**

**5**



**FEMALE ELBOW**

**SAE# 060203**

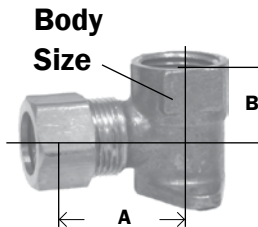


70  
270C  
BSE3  
170C

Part #	Comp. X Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-251	1/8" x 1/8"	0.69	0.56	0.56	0.04	8.02
18-252	3/16" x 1/8"	0.69	0.47	0.56	0.04	4.75
18-253	1/4" x 1/8"	0.69	0.47	0.56	0.06	4.72
18-253B*	1/4" x 1/8"	0.69	0.56	0.56	0.06	5.69
18-254	1/4" x 1/4"	0.75	0.50	0.72	0.08	5.35
18-267	1/4" x 3/8"	0.81	0.58	0.81	0.08	7.57
18-268	1/4" x 1/2"	0.89	0.66	1.00	0.10	10.02
18-255	5/16" x 1/8"	0.72	0.84	0.47	0.08	8.73
18-256	5/16" x 1/4"	0.78	0.50	0.72	0.09	6.81
18-257	3/8" x 1/8"	0.75	0.84	0.47	0.10	5.63
18-258	3/8" x 1/4"	0.84	0.59	0.75	0.10	6.00
18-259	3/8" x 3/8"	0.88	0.58	0.81	0.12	6.93
18-260	3/8" x 1/2"	0.97	0.66	1.00	0.14	7.95
18-250	3/8" x 3/4"	1.09	0.72	1.25	0.18	12.68
18-261	1/2" x 1/4"	1.06	0.70	0.88	0.18	11.05
18-262	1/2" x 3/8"	1.00	0.70	0.88	0.16	9.22
18-263	1/2" x 1/2"	1.03	0.72	1.00	0.20	9.52
18-270	1/2" x 3/4"	1.16	0.72	1.25	0.23	13.67
18-269	5/8" x 3/8"	1.09	0.77	1.00	0.20	13.99
18-264	5/8" x 1/2"	1.09	0.77	1.00	0.22	10.88
18-265	5/8" x 3/4"	1.22	0.77	1.25	0.24	14.93
18-266	3/4" x 1/2"	1.25	1.25	0.94	0.28	24.45

\* Barstock

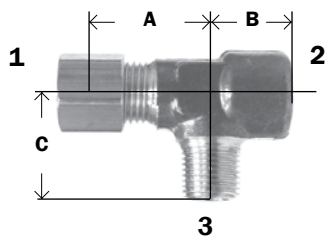
**FORGED DROP-EAR ELBOW**



BSE3-DE

Part #	Comp. X Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-271	5/8" x 1/2"	1.18	0.72	1.00	0.18	20.32

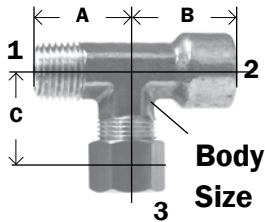
**FORGED TEE**



71  
171C  
BST3

Part #	Comp. X Female NPTF x Male NPTF 1x(2&3)	A	B	C	Approx. Wt. Lbs.	List Price
18-307	1/4" x 1/8"	0.72	0.53	0.72	0.20	7.33

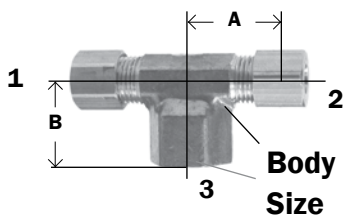
**ADAPTER TEE**



Part #	Male NPTF x Female NPTF x Comp. 3x (1&2)	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
18-314	1/8" x 1/4"	0.72	0.53	0.72	0.47	0.08	8.11
18-316	3/8" x 1/4"	0.84	0.97	0.81	0.47	0.10	9.45

76  
176C

**FEMALE BRANCH FORGED TEE**

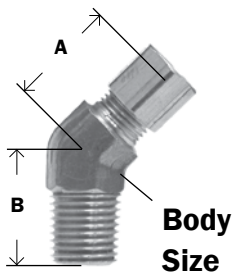


Part #	Comp. X Female NPTF (1&2)x3	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-321	1/4" x 1/8"	0.78	0.75	0.45	0.10	6.99
18-328	1/4" x 1/4"	0.78	0.75	0.44	0.12	10.91
18-325	3/8" x 1/8"	0.75	0.63	0.50	0.12	9.07
18-322	3/8" x 1/4"	0.81	0.97	0.47	0.14	10.99
18-323	3/8" x 3/8"	0.97	0.69	1.05	0.16	16.42
18-326	1/2" x 1/8"	0.94	0.75	0.59	0.20	14.38
18-324	1/2" x 3/8"	1.00	0.72	0.88	0.22	21.62
18-327	5/8" x 1/8"	1.06	0.81	0.69	0.26	19.50

78      2908  
BST4  
77  
177C

**45° ELBOW**

**SAE# 060302**



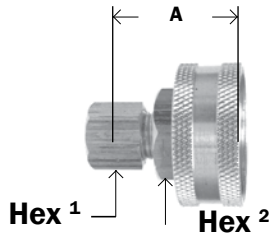
Part #	Comp. X Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-329	3/16" x 1/8"	0.40	0.63	0.41	0.04	5.42
18-330	1/4" x 1/8"	0.40	0.61	0.41	0.04	4.99
18-336	1/4" x 1/4"	0.59	0.84	0.53	0.06	7.31
18-331	5/16" x 1/8"	0.59	0.65	0.53	0.06	8.03
18-332	5/16" x 1/4"	0.59	0.83	0.53	0.08	8.49
18-333	3/8" x 1/4"	0.62	0.83	0.53	0.08	6.53
18-338	3/8" x 3/8"	0.75	0.95	0.59	0.10	17.77
18-334	1/2" x 3/8"	0.75	0.88	0.59	0.14	8.08
18-339	1/2" x 1/2"	0.94	1.14	0.75	0.14	15.68
18-335	5/8" x 1/2"	0.78	1.14	0.78	0.14	16.68

6945      273  
45BSE1   77  
74  
179C

Dimension data can change without notice.  
Please see our website when dimensions are  
critical.

**GARDEN HOSE SWIVEL**

•WASHER INCLUDED



Part #	Compression x FGH	A	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
30-050	1/4" x 3/4"	1.02	0.50	0.75	0.09	8.38
30-051	3/8" x 3/4"	1.04	0.62	0.75	0.12	7.72

**BRASS**

**DOUBLE COMPRESSION THREADED SLEEVE FITTINGS**

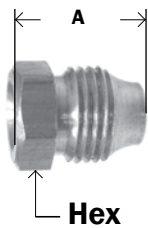
- Use with aluminum and copper tubing or plastic tubing with internal tube support. Not recommended for steel tubing.
- Easy to assemble, no flaring, two piece construction.
- For use on oil, air, water and grease lubrication systems.
- When design makes a dimension critical, contact us for information.

Tube OD	1/8	3/16	1/4	5/16	3/8
Thread	5/16-24	3/8-24	7/16-24	1/2-20	9/16-20
Working Pressure	500	500	500	250	250

\* For break away nut, see page 75.

**NUT**

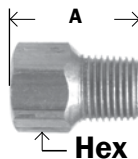
181  
6100  
11



Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
16-001	1/8"	0.50	0.37	0.02	1.12
16-002	3/16"	0.53	0.43	0.02	1.90
16-003	1/4"	0.56	0.50	0.04	2.77
16-004	5/16"	0.61	0.56	0.04	2.27
16-005	3/8"	0.61	0.62	0.04	3.00

**MALE ADAPTER**

188  
6200  
12

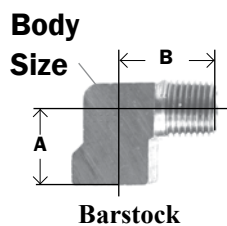


Part #	THRD Sleeve x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
16-117	1/8" x *	0.62	0.43	0.02	12.57
16-118	1/8" x 1/8"	0.62	0.43	0.02	2.48
16-119	3/16" x 1/8"	0.69	0.43	0.02	3.13
16-121	1/4" x 1/8"	0.75	0.50	0.04	2.72
16-122	5/16" x 1/8"	0.89	0.56	0.04	5.42
16-123	3/8" x 1/4"	0.84	0.62	0.06	5.60

\* 1/4 - 28 Male Thread Tapered.

**90° ELBOW**

189  
6400  
15



Part #	THRD Sleeve x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
16-127	1/8" x *	0.50	0.52	0.41	0.02	9.29
16-128	1/8" x 1/8"	0.50	0.66	0.43	0.02	14.16
16-129	3/16" x 1/8"	0.56	0.62	0.44	0.02	30.93
16-130	1/4" x 1/8"	0.52	0.62	0.50	0.04	22.33

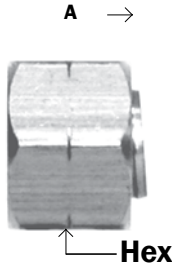
\* 1/4 - 28 Male Thread Tapered

**CAPTIVE SLEEVE COMPRESSION**

**BRASS FITTINGS**

**CAPTIVE SLEEVE NUT**

CS61  
61CA



Part #	Size	List Price
26-001	1/8"	1.50
26-002	3/16"	1.57
26-003	1/4"	1.27
26-004	5/16"	1.75
26-005	3/8"	1.64
26-007	1/2"	3.28
26-008	5/8"	5.87

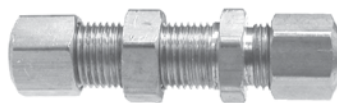
**UNION**

CS62  
62CA



Part #	Size	List Price
26-062	1/8"	4.59
26-063	3/16"	2.40
26-064	1/4"	3.05
26-077	1/4" x 3/16"	8.94
26-065	5/16"	3.54
26-066	3/8"	3.54
26-079	3/8" x 1/4"	7.30
26-068	1/2"	8.73
26-069	5/8"	11.26
26-082	5/8" x 3/8"	8.20

**BULKHEAD UNIONS**



C262L  
62CABA

Part #	Size	List Price
26-088	1/4"	8.20
26-090	3/8"	22.16

**BALL CHECK VALVE**

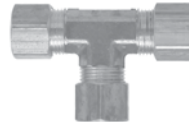
CS863



Part #	Tube OD x Male NPTF	List Price
26-092	1/8" x 1/8"	12.05

**TEE**

CS64  
164CA



Part #	Size	List Price
26-101	1/8"	13.25
26-102	3/16"	6.76
26-103	1/4"	6.76
26-104	5/16"	8.49
26-105	3/8"	7.30
26-115	3/8"x3/8"x1/4"	7.58
26-106	1/2"	14.05
26-107	5/8"	15.89

**UNION ELBOW**

CS65  
165CA



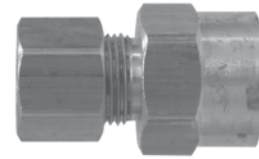
Part #	Size	List Price
26-123	3/16"	7.45
26-124	1/4"	5.31
26-125	5/16"	7.50
26-126	3/8"	6.00
26-127	1/2"	9.67
26-128	5/8"	11.15

**Interchangeable with compress-align fittings.**

These are NOT Lead Free  
See pages 167 for  
Lead Free products

**FEMALE ADAPTER**

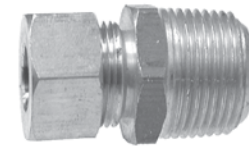
CS66  
66CA



Part #	Comp. X Female NPTF	List Price
26-142	1/8" x 1/8"	3.54
26-143	3/16" x 1/8"	4.62
26-144	3/16" x 1/4"	10.50
26-145	1/4" x 1/8"	3.18
26-146	1/4" x 1/4"	6.54
26-149	5/16" x 1/8"	4.15
26-150	5/16" x 1/4"	5.78
26-152	3/8" x 1/8"	3.89
26-153	3/8" x 1/4"	5.50
26-154	3/8" x 3/8"	7.74
26-155	3/8" x 1/2"	5.87
26-156	3/8" x 3/4"	16.01
26-157	1/2" x 1/4"	10.20
26-158	1/2" x 3/8"	8.25
26-159	1/2" x 1/2"	13.56

**MALE ADAPTER**

CS68  
68CA



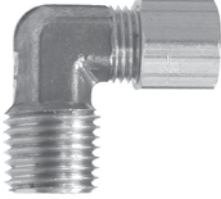
Part #	Comp. X Male NPTF	List Price
26-175	1/8" x 1/16"	8.43
26-176	1/8" x 1/8"	2.40
26-177	3/16" x 1/8"	2.64
26-178	3/16" x 1/4"	4.82
26-179	1/4" x 1/8"	2.51
26-180	1/4" x 1/4"	3.42
26-180L	1/4" x 1/4"	2.40
26-181	1/4" x 3/8"	3.30
26-182	1/4" x 1/2"	4.42
26-183	5/16" x 1/8"	3.18
26-184	5/16" x 1/4"	3.24
26-187	3/8" x 1/8"	4.25
26-188	3/8" x 1/4"	3.66
26-189	3/8" x 3/8"	4.32
26-190	3/8" x 1/2"	5.70
26-193	1/2" x 1/4"	7.20
26-194	1/2" x 3/8"	5.55
26-195	1/2" x 1/2"	7.67
26-196	1/2" x 3/4"	7.67
26-197	5/8" x 3/8"	6.76
26-198	5/8" x 1/2"	6.90

## BRASS FITTINGS

## CAPTIVE SLEEVE COMPRESSION

### MALE ELBOW

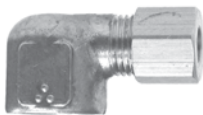
CS69  
169CA



Part #	Comp. X Male NPTF	List Price
26-220	1/8" x 1/8"	5.46
26-220B	1/8" x 1/8"	3.05
26-221	3/16" x 1/8"	4.56
26-221B	3/16" x 1/8"	3.34
26-223	3/16" x 1/4"	5.23
26-224B	1/4" x 1/8"	2.71
26-224	1/4" x 1/8"	3.42
26-225	1/4" x 1/4"	4.25
26-225B	1/4" x 1/4"	3.25
26-226	1/4" x 3/8"	4.68
26-228	5/16" x 1/8"	4.95
26-229	5/16" x 1/4"	4.81
26-230	5/16" x 3/8"	5.66
26-232	3/8" x 1/8"	3.88
26-233	3/8" x 1/4"	5.11
26-233B	3/8" x 1/4"	4.91
26-234	3/8" x 3/8"	5.76
26-235	3/8" x 1/2"	11.01
26-236	1/2" x 1/4"	7.87
26-237	1/2" x 3/8"	7.68
26-238	1/2" x 1/2"	7.51
26-240	5/8" x 3/8"	9.06
26-241	5/8" x 1/2"	10.86

### FEMALE ELBOW

CS70  
170CA



Part #	Comp. X Female NPTF	List Price
26-251	1/8" x 1/8"	9.25
26-252	3/16" x 1/8"	5.35
26-253	1/4" x 1/8"	5.35
26-254	1/4" x 1/4"	5.96
26-258	3/8" x 1/4"	6.10
26-262	1/2" x 3/8"	9.22
26-270	1/2" x 3/4"	13.67
26-269	5/8" x 3/8"	13.99

### MALE BRANCH TEE

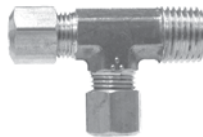
CS72  
172CA



Part #	Comp. X Male NPTF (1&2) X 3	List Price
26-291	1/4" x 1/8"	6.45
26-292	1/4" x 1/4"	7.56
26-293	5/16" x 1/8"	7.56
26-294	5/16" x 1/4"	8.56
26-295	3/8" x 1/8"	9.89
26-296	3/8" x 1/4"	8.52
26-297	3/8" x 3/8"	10.80
26-299	1/2" x 3/8"	13.74

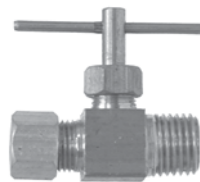
### FORGED MALE RUN TEE

CS71  
171CA



Part #	Comp. X Male NPTF (1&3) X 2	List Price
26-272	1/8" x 1/8"	6.74
26-274	1/4" x 1/8"	6.83
26-275	1/4" x 1/4"	7.02
26-279	3/8" x 1/4"	9.20
26-280	3/8" x 3/8"	11.45
26-281	1/2" x 3/8"	14.04

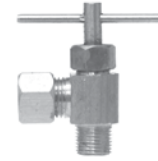
### CAPTIVE SLEEVE x MALE PIPE NEEDLE VALVE



Part #	Comp X Male Pipe	List Price
26-031	3/16" x 1/8"	26.60
26-032X	1/4" x 1/8"	16.45

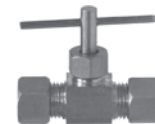
\* Heavy Pattern

### CAPTIVE SLEEVE x MALE PIPE ANGLE NEEDLE VALVE



Part #	Comp X Male Pipe	List Price
26-010	3/16" x 1/8"	23.76
26-011	1/4" x 1/8"	6.76
26-011X	Heavy Pattern	18.90
26-012	1/4" x 1/4"	17.02
26-013	5/16" x 1/8"	19.56
26-014	5/16" x 1/4"	46.38

### CAPTIVE SLEEVE x CAPTIVE SLEEVE NEEDLE VALVE



Part #	Comp X Comp	List Price
26-020	3/16"	25.19
26-021	1/4"	6.80
26-022	5/16"	18.84
26-023	3/8"	11.10

CUSTOM CATALOG

**+** BIN LABELS

**+** APP

**+** DROP SHIP

Your Brand is our Brand

**SELF-ALIGN COMPRESSION**

- Use with copper, brass, aluminum and plastic tubing. Soft plastic tubing. Soft plastic tubing requires support inside. Not recommended for steel tubing.
- Instrumentation: water, air and lubrication system applications

**SELF-ALIGN SLEEVE**

860  
601



Part #	Size	List Price
27-001	1/8"	0.30
27-002	3/16"	0.93
27-003	1/4"	0.36

860



Part #	Size	List Price
27-005	3/8"	0.74
27-006	1/2"	2.13

862  
621

**UNION**



Part #	Size	List Price
27-062	1/8"	4.98
27-063	3/16"	4.28
27-064	1/4"	3.76
27-066	3/8"	4.56
27-068	1/2"	9.73
27-081	1/2" x 3/8"	10.12

**BALL CHECK VALVE**

863  
631



Part #	Tube OD x Male NPTF	List Price
27-092	1/8" x 1/8"	12.84
27-094	1/4" x 1/8"	13.20
27-096	3/8" x 1/4"	17.11

**BRASS FITTINGS**

**TEE**

864  
641



Part #	Size	List Price
27-102	3/16"	6.80
27-103	1/4"	6.35
27-105	3/8"	11.28
27-115	3/8"x3/8"x1/4"	10.27
27-116	1/2"x1/2"x1/4"	16.86
27-117	1/2"x1/2"x3/8"	17.79

**UNION ELBOW**

865  
651



Part #	Size	List Price
27-126	3/8"	7.74
27-127	1/2"	12.00

**TANK ADAPTER DRILLER THRU (NO STOP)**

863  
631



Part #	Size	List Price
27-208	1/4"x1/8"	3.25
27-209	1/4"x1/4"	2.56
27-211	3/8"x3/8"	4.98
27-213	1/2"x3/8"	9.00

**FEMALE ADAPTER**

866  
661



Part #	Comp. X Female NPTF	List Price
27-142	1/8" x 1/8"	3.56
27-145	1/4" x 1/8"	2.98
27-147	1/4" x 3/8"	4.21
27-148	1/4" x 1/2"	5.09
27-153	3/8" x 1/4"	6.56
27-158	1/2" x 3/8"	9.01

**MALE ADAPTER**

868  
681



Part #	Comp. X Male NPTF	List Price
27-175	1/8" x 1/16"	8.56
27-176	1/8" x 1/8"	2.70
27-177	3/16" x 1/8"	3.30
27-179	1/4" x 1/8"	1.91
27-180	1/4" x 1/4"	3.36
27-187	3/8" x 1/8"	5.01
27-188	3/8" x 1/4"	4.50
27-189	3/8" x 3/8"	5.22
27-190	3/8" x 1/2"	6.70
27-193	1/2" x 1/4"	7.80
27-194	1/2" x 3/8"	6.55
27-195	1/2" x 1/2"	8.67
27-196	1/2" x 3/4"	8.67

**FEMALE ELBOW**

870  
201



Part #	Comp. X Female NPTF	List Price
27-253	1/4" x 1/8"	7.68
27-254	1/4" x 1/4"	6.52
27-258	3/8" x 1/4"	7.00
27-262	1/2" x 3/8"	10.85
27-263	1/2" x 1/2"	11.05

**MALE ELBOW**

869  
691

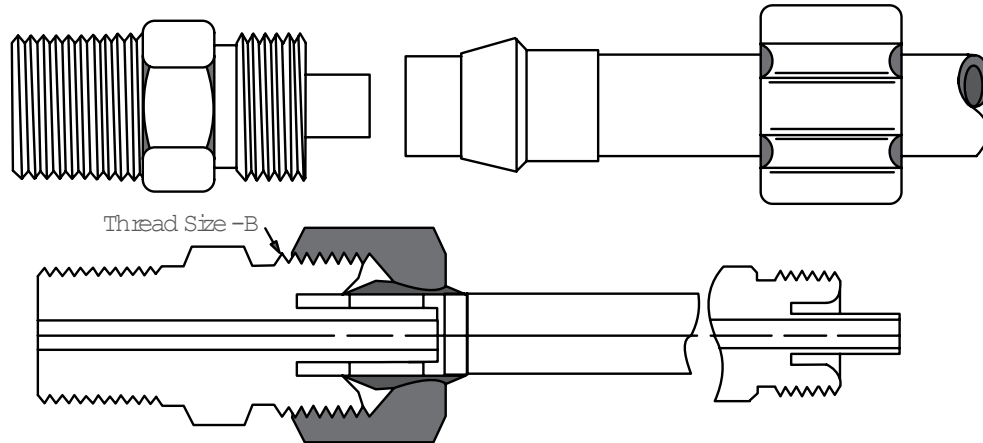


Part #	Comp. X Male NPTF	List Price
27-220	1/8" x 1/8"	5.25
27-221	3/16" x 1/8"	6.00
27-224	1/4" x 1/8"	3.34
27-225	1/4" x 1/4"	4.51
27-226	1/4" x 3/8"	4.57
27-232	3/8" x 1/8"	4.88
27-233	3/8" x 1/4"	6.42
27-234	3/8" x 3/8"	6.72
27-235	3/8" x 1/2"	9.04
27-236	1/2" x 1/4"	8.88
27-237	1/2" x 3/8"	8.24
27-238	1/2" x 1/2"	9.00
27-239	1/2" x 3/4"	15.30



# Flareless

Flareless Brass Tube Fittings are Interchangeable with Poly-Flo®, Poly-Tite® and Poly-Line® and Poly-Fit®



Built-in SS  
Tube Support

Tube O.D.	1/8	3/16	1/4	5/16	3/8	1/2
Thread Size-B	5/16-24	3/8-24	3/8-24	7/16-24	1/2-24	1 1/16-20

#### •Typical Application

Pneumatic instrumentation circuits, lubricant and cooling lines.

#### •Working Pressure and Temperature Ranges

Up to 150 PSI from 0°F to + 150°F with thermoplastic tubing. Up to 300 PSI from 0°F to + 175°F with soft metal tubing.

#### •Maximum allowable metal tube wall thickness for use with Poly-Tite fittings:

1/8", 3/16" O.D. --no limitation,  
1/4" O.D.--.035 5/16", 3/8", 1/2" O.D.--.049

#### •Vibration

Excellent Resistance.

#### •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 or brass sleeve.  
Stainless Steel Tube Support

#### •Used With

Aluminum & copper tubing. Hard plastic tubing requires brass sleeve. Not recommended for steel tubing.

#### •Tolerance

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical.

#### •Advantages

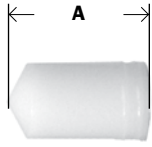
No flaring of tubing required. Easy installation, captive sleeve, pre-assembled for installation and can be reassembled. Nuts rotate around the sleeve during tightening, preventing twisting of tubing.

#### •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 an additional 3/4 turn.

Save 5% by ordering online at  
[www.midlandmetal.com](http://www.midlandmetal.com)

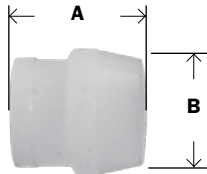
**PLASTIC CAP**



1229  
59P  
259P

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-201	1/4"	0.50	0.01	1.99
20-203	3/8"	0.56	0.01	1.60
20-204	1/2"	0.59	0.01	2.65

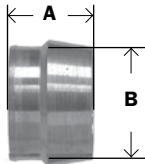
**PLASTIC SLEEVE**



260FF  
1260  
60P  
260P

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
20-205	1/4"	0.34	0.26	0.01	0.31
20-206	5/16"	0.39	0.32	0.01	0.35
20-207	3/8"	0.41	0.38	0.01	0.74
20-208	1/2"	0.44	0.51	0.01	1.07

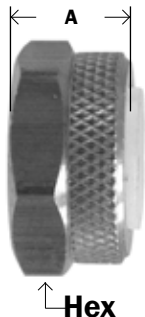
**BRASS SLEEVE**



260FB

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
20-380	1/8"	0.19	0.12	0.01	2.14
20-382	1/4"	0.32	0.25	0.01	1.25
20-384	3/8"	0.37	0.38	0.02	1.96

**NUT AND PLASTIC SLEEVE ASSEMBLY**

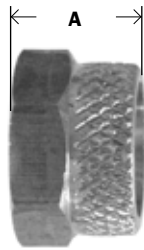


261PF  
1261  
61PN  
261U

Part #	Tube O.D.	Thread	A	Hex (Dia.)	Approx. Wt. Lbs.	List Price
20-211	1/4"	3/8-24	0.34	0.43	0.02	1.44
20-212	5/16"	7/16-24	0.45	0.50	0.02	2.58
20-213	3/8"	1/2-24	0.38	0.56	0.04	1.89
20-214	1/2"	11/16-20	0.42	0.81	0.04	3.37

**NUT**

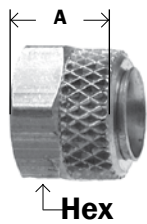
61PN  
1261  
261FPN



Part #	Tube O.D.	Thread	A	Hex (Dia.)	Approx. Wt. Lbs.	List Price
20-218	1/8"	5/16-24	0.37	0.37	0.01	1.33
20-219	3/16"	3/8-24	0.41	0.44	0.01	1.20
20-220	1/4"	3/8-24	0.34	0.44	0.02	1.40
20-221	5/16"	7/16-24	0.34	0.50	0.02	0.98
20-222	3/8"	1/2-24	0.38	0.56	0.04	2.00
20-223	1/2"	11/16-20	0.42	0.81	0.06	2.55

**UNIVERSAL NUT AND BRASS SLEEVE ASSEMBLY**

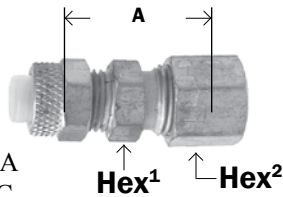
261PFB  
1261B  
61PB  
261UB



Part #	Tube O.D.	Thread	A	Hex	Approx. Wt. Lbs.	List Price
20-227	1/8"	5/16-24	0.37	0.37	0.02	1.84
20-228	3/16"	3/8-24	0.41	0.44	0.02	2.20
20-229	1/4"	3/8-24	0.34	0.43	0.02	2.01
20-230	5/16"	7/16-24	0.34	0.50	0.02	2.16
20-231	3/8"	1/2-24	0.37	0.56	0.04	3.08
20-232	1/2"	11/16-20	0.42	0.81	0.04	4.18

**UNION TUBE #M62C - FLARELESS X STANDARD COMPRESSION**

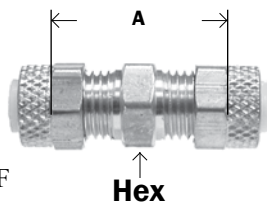
262S  
62PCA  
262PC



Part #	Tube O.D.	A	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
20-235	1/4"	0.75	0.44	0.50	0.04	9.14
20-237	3/8"	0.84	0.62	0.62	0.08	9.55

**UNION**

262PF  
1262  
62P  
262P



Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-240	1/8"	0.66	0.31	0.02	7.85
20-241	3/16"	0.75	0.37	0.04	8.59
20-242	1/4"	0.69	0.37	0.04	3.39
20-243	5/16"	0.69	0.44	0.04	10.03
20-244	3/8"	0.72	0.50	0.10	10.08
20-200	3/8" x 1/4"	0.72	0.50	0.08	14.63
20-245	1/2"	0.84	0.69	0.14	14.69



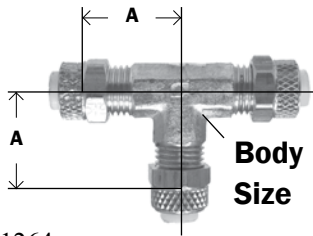
**MIDLAND METAL  
APP**

**SEE INSIDE FRONT  
COVER**

Dimension data can change without notice.  
Please see our website when dimensions are critical.

**UNION TEE**

**BRASS**

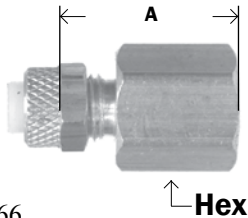


1264  
164P  
264P

Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
20-248	1/8"	0.62	0.31	0.02	14.56
20-249	3/16"	0.62	0.31	0.04	12.69
20-250	1/4"	0.73	0.44	0.06	10.00
20-251	5/16"	0.62	0.37	0.08	14.50
20-252	3/8"	0.86	0.56	0.08	11.25
20-330*	3/8" x 1/4"	0.72	0.44	0.08	21.48
20-253	1/2"	0.81	0.62	0.24	31.03

\* Reducing Branch

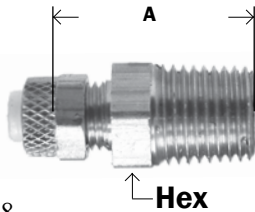
**FEMALE CONNECTOR**



1266  
66P  
266P

Part #	Tube O.D. x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-256	1/8" x 1/8"	0.75	0.56	0.03	6.99
20-257	3/16" x 1/8"	0.78	0.56	0.05	7.08
20-258	3/16" x 1/4"	0.97	0.69	0.05	20.58
20-259	1/4" x 1/8"	0.76	0.50	0.04	8.06
20-260	1/4" x 1/4"	1.08	0.62	0.05	7.21
20-261	5/16" x 1/8"	0.75	0.50	0.03	7.62
20-265	3/8" x 1/8"	0.77	0.56	0.05	14.67
20-262	3/8" x 1/4"	0.94	0.62	0.05	8.23
20-263	1/2" x 3/8"	1.00	0.81	0.12	12.45

**MALE CONNECTOR**



1268  
68P  
268P

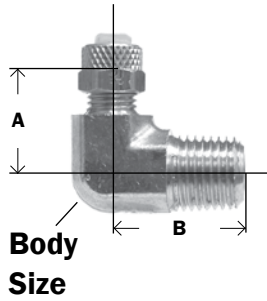
Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-267	1/8" x 10-32*	0.59	0.37	0.02	18.25
20-268	1/8" x 1/8"	0.80	0.34	0.04	4.92
20-269	3/16" x 1/8"	0.86	0.44	0.04	4.52
20-280	1/4" x 1/16"	0.81	0.43	0.03	15.23
20-270	1/4" x 10-32*	0.75	0.37	0.02	8.53
20-271	1/4" x 1/8"	0.82	0.44	0.03	3.49
20-272	1/4" x 1/4"	1.00	0.56	0.05	4.23
20-273	1/4" x 3/8"	1.03	0.69	0.08	7.88
20-274	5/16" x 1/8"	0.81	0.44	0.04	4.86
20-275	5/16" x 1/4"	1.00	0.56	0.05	5.44
20-276	3/8" x 1/8"	0.84	0.50	0.06	5.26
20-277	3/8" x 1/4"	1.03	0.56	0.08	6.48
20-278	3/8" x 3/8"	1.03	0.69	0.10	7.76
20-279	1/2" x 3/8"	1.09	0.69	0.16	7.25
20-282	1/2" x 1/2"	1.33	0.88	0.18	14.46

\* Furnished with gasket.

Save 5% by ordering online at  
[www.midlandmetal.com](http://www.midlandmetal.com)



**MALE ELBOW**

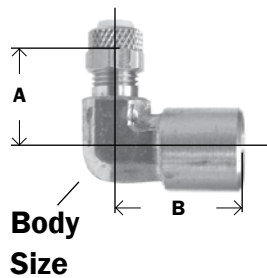


Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-287	1/8" x 1/8"	0.62	0.69	0.31	0.02	5.27
20-288	3/16" x 1/8"	0.62	0.69	0.37	0.04	5.31
20-289*	1/4" x 1/8"	0.53	0.73	0.50	0.04	4.43
20-290	1/4" x 1/4"	0.66	0.94	0.37	0.06	6.93
20-291	1/4" x 3/8"	0.75	1.03	0.50	0.10	11.54
20-292	5/16" x 1/8"	0.62	0.75	0.41	0.04	5.57
20-293	3/8" x 1/8"	0.91	0.81	0.56	0.08	7.18
20-294	3/8" x 1/4"	0.72	0.94	0.44	0.10	8.28
20-295	3/8" x 3/8"	0.78	1.03	0.50	0.14	10.54
20-296	1/2" x 3/8"	1.09	1.10	0.73	0.16	8.50

1269  
169P  
269P

\* Barstock

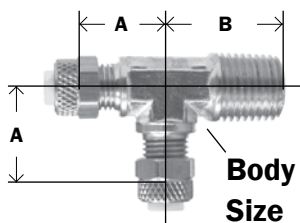
**FEMALE ELBOW**



Part #	Tube O.D. x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-300	1/8" x 1/8"	0.69	0.55	0.56	0.02	7.98
20-301	3/16" x 1/8"	0.72	0.55	0.56	0.02	9.03
20-302	1/4" x 1/8"	0.62	0.75	0.37	0.08	8.62
20-303	1/4" x 1/4"	0.72	0.88	0.50	0.10	9.49
20-304	3/8" x 1/4"	0.72	0.88	0.50	0.12	9.13
20-305	1/2" x 3/8"	0.91	0.94	0.63	0.16	18.46

1270  
170P  
270P

**MALE RUN TEE**



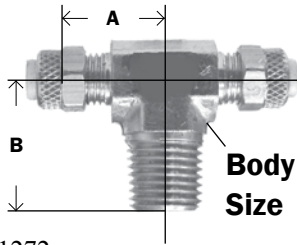
Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-308	1/8" x 1/8"	0.62	0.69	0.31	0.04	11.61
20-309	3/16" x 1/8"	0.62	0.69	0.31	0.04	11.22
20-310	1/4" x 1/8"	0.62	0.75	0.37	0.08	10.45
20-311	1/4" x 1/4"	0.66	0.94	0.37	0.10	13.94
20-312	5/16" x 1/8"	0.62	0.75	0.37	0.08	11.49
20-313	3/8" x 1/4"	0.66	0.94	0.44	0.10	14.66
20-314	1/2" x 3/8"	0.81	1.06	0.63	0.16	19.18

1271  
171P  
271P

Dimension data can change without notice.  
Please see our website when dimensions are critical.

**MALE BRANCH TEE**

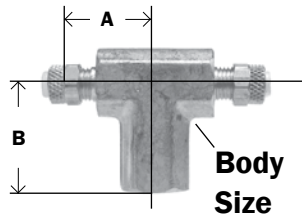
**BRASS**



1272  
172P  
272P

Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-317	1/8" x 1/8"	0.63	0.69	0.31	0.04	16.04
20-318	3/16" x 1/8"	0.63	0.69	0.31	0.04	11.32
20-319	1/4" x 1/8"	0.63	0.75	0.37	0.07	10.18
20-320	1/4" x 1/4"	0.66	0.94	0.37	0.09	13.07
20-321	5/16" x 1/8"	0.63	0.75	0.37	0.10	11.75
20-322	3/8" x 1/8"	0.63	0.75	0.44	0.08	18.05
20-323	3/8" x 1/4"	0.66	0.94	0.44	0.11	14.53
20-324	1/2" x 3/8"	0.81	1.06	0.63	0.21	30.76

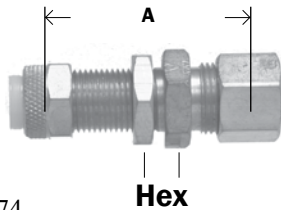
**FEMALE BRANCH TEE**



1277  
177P  
277P

Part #	Tube O.D. x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-327	1/4" x 1/8"	0.66	0.94	0.37	0.12	21.24
20-328	1/4" x 1/4"	0.84	1.16	0.56	0.16	17.79

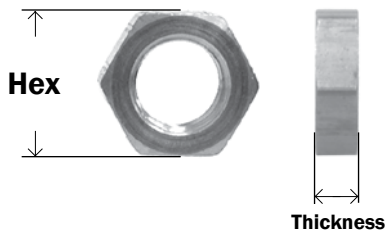
**BULKHEAD UNION - FLARELESS X COMPRESSION**



1274

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-333	1/4"	1.31	0.56	0.07	12.15
20-334	3/8"	1.44	0.69	0.12	15.54

**BULKHEAD NUT**



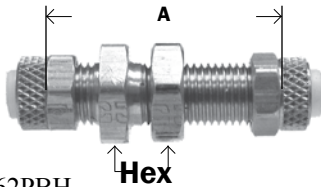
Part #	Tube O.D.	Hex	Thickness	Approx. Wt. Lbs.	List Price
20-370	1/8"	0.31	0.25	0.01	4.39
20-372	5/16"	0.62	0.19	0.02	2.98

Dimension data can change without notice. Please see our website when dimensions are critical.

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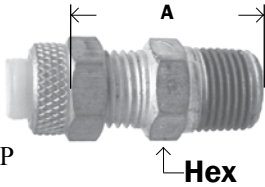
**BULKHEAD UNION**



62PBH  
329P  
282P

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-337	1/4"	1.25	0.56	0.06	11.45
20-338	5/16"	1.25	0.62	0.08	14.11
20-339	3/8"	1.31	0.69	0.10	16.01

**QUICK DISCONNECT FITTING**

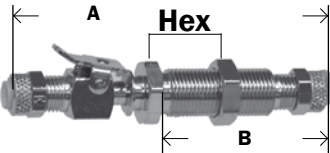


292P

Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-344	1/4" x 1/8"	0.87	0.44	0.06	30.40

**QUICK DISCONNECT COUPLERS**

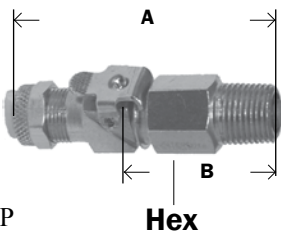
**TUBE X TUBE - Single end Shut-Off**



349P

Part #	Tube O.D.	A	B	Hex	Approx. Wt. Lbs.	List Price
20-401	1/4"	3.00	1.72	0.62	0.06	85.88
20-403	3/8"	3.56	1.92	0.81	0.10	84.71

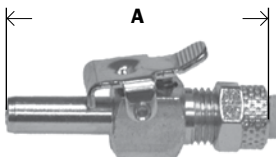
**TUBE TO MALE THREAD - Single end Shut-Off, Connector, Quick Coupler.**



398P  
391P + 393P

Part #	Tube O.D. x Male Pipe	A	B	Hex	Approx. Wt. Lbs.	List Price
20-409	1/4" x 1/8"	2.31	1.28	0.50	0.12	62.36
20-411	1/4" x 1/4"	2.31	1.28	0.56	0.14	74.09
20-413	3/8" x 1/4"	2.63	1.42	0.62	0.18	85.78

**INSERT ONLY - Thru type insert. No Shut-Off.**



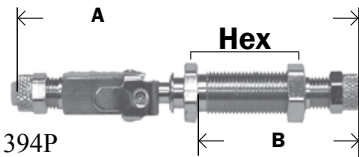
393P

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-417	1/4"	1.69	0.04	30.21
20-419	3/8"	1.93	0.06	34.41

## FLARELESS

## BRASS FITTINGS

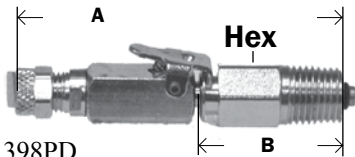
## TUBE TO TUBE - Double end Shut-Off Type.



394P  
392P + 393PD

Part #	Tube O.D.	A	B	Hex	Approx. Wt. Lbs.	List Price
20-425	1/4"	3.67	1.79	0.62	0.18	99.99
20-427	3/8"	3.82	1.97	0.81	0.26	110.15

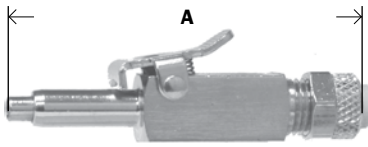
## TUBE X MALE PIPE - Double End Shut-Off, Connector, Quick coupler.



398PD  
393PD + 391P

Part #	Tube O.D. x Male Pipe	A	B	Hex	Approx. Wt. Lbs.	List Price
20-435	1/4" x 1/8"	2.89	1.28	0.50	0.14	84.47
20-437	1/4" x 1/4"	2.91	1.27	0.56	0.18	96.99
20-439	3/8" x 1/4"	3.02	1.40	0.62	0.24	97.63

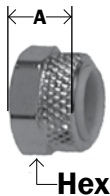
## INSERT ONLY - Double End Shut-Off



393PD

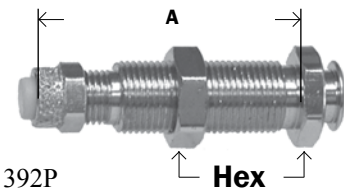
Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-445	1/4"	2.40	0.08	50.25

## CHROME PLATED NUT AND PLASTIC SLEEVE



Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-451	1/4"	0.34	0.43	0.01	2.08
20-453	3/8"	0.38	0.56	0.01	2.80

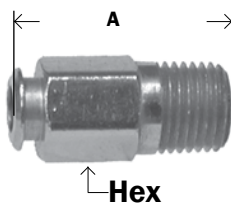
## TUBE CONNECTION - Single end or Double end Shut-Off Type body only.



392P

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-455	1/4"	1.79	0.62	0.10	53.59
20-457	3/8"	1.97	0.81	0.16	68.15

## MALE PIPE CONNECTION - Internal Shut-Off



391P

Part #	Tube O.D. x Male Pipe	A	Hex	Approx. Wt. Lbs.	List Price
20-461	1/4" x 1/8"	1.28	0.50	0.06	35.39
20-463	1/4" x 1/4"	1.27	0.56	0.08	42.33
20-465	3/8" x 1/4"	1.40	0.62	0.08	51.36

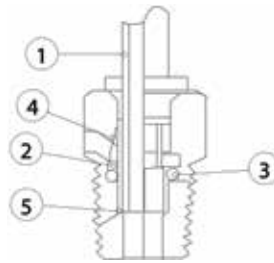


**BRASS PUSH-IN FITTINGS**

**PAGES 97-102**

**ENGINEERING AND DESIGN**

- **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 materials 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 tees are forged brass.
- **CHOICE** of convenient swivel of 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.
- **WORKING TEMPERATURE**:  
-10°F to 200°F (other ranges available on request).
- **PIPE THREAD**: NPTF with Teflon® based sealant pre-applied.



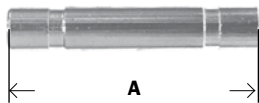
When tubing (1) is inserted into the fitting, it first passes through the gripping teeth (2). Just beyond the gripping teeth is the o-ring (3) which provides the leak proof seal against the OD of the tube. The gripping teeth grab the tube, which

expands the insert. Pulling back on the tube only tightens the grip as the insert moves onto the camming surface (4). Pressure through the tube also serves to tighten the grip. The tube bottoms against a positive tube stop (5) in a cavity providing tube support to prevent leakage.

• **Tolerance**

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical

**DOUBLE MALE UNION - NICKEL PLATED**

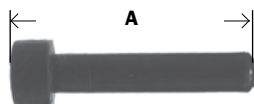


AQ34

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-004	1/8"	1.28	0.01	7.37
20-005	5/32"	1.28	0.01	16.94
20-006	1/4"	1.40	0.02	9.46
20-007	5/16"	1.59	0.02	9.28
20-008	3/8"	1.81	0.02	10.71
20-000	1/2"	1.89	0.03	22.70

( For polyurethane or other soft plastic tubing )

**PLASTIC PLUG**



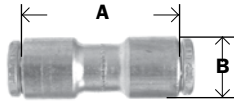
• Cored

- 284PP 6900
- AQ59 639PL
- 209-OF 12-004
- 1129 50-526

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-009	5/32"	1.16	0.01	1.46
20-010	1/4"	1.40	0.01	1.81
20-011	3/8"	1.40	0.02	3.52
20-013	1/2"	1.50	0.02	4.55



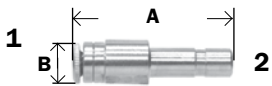
**UNION CONNECTOR**



AQ62 KQH 1162  
 6580 12-020 262PP  
 3106 50-562  
 62PL 262-OF

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
20-017	1/8"	1.07	0.38	0.03	5.55
20-018	5/32"	1.07	0.38	0.03	7.26
20-019	1/4"	1.50	0.44	0.05	6.91
20-022	3/8" x 1/4"	1.46	0.56	0.05	9.33
20-020	3/8"	1.44	0.56	0.06	9.60
20-021	1/2"	1.63	0.81	0.18	14.05

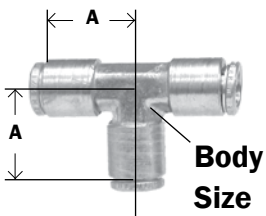
**REDUCER - NICKEL PLATED - TUBE OD X STUD**



67PPL  
 286PP

Part #	Tube O.D. 1 X 2	A	B	Approx. Wt. Lbs.	List Price
20-510	1/8" x 1/4"	1.38	0.39	0.02	15.52
20-511	5/32" x 1/4"	1.33	0.35	0.02	15.39
20-512	1/4" x 3/8"	1.50	0.51	0.04	18.63

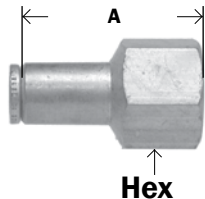
**UNION TEE**



KQT 1164  
 12-060 AQ64  
 50-564 6540  
 264OF 3140  
 264PP 164PL

Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
20-025	1/8"	0.65	0.31	0.04	6.34
20-026	5/32"	0.67	0.31	0.04	7.89
20-027	3/16"	0.75	0.37	0.06	14.19
20-028	1/4"	0.92	0.37	0.09	9.57
20-031	5/16"	0.89	0.49	0.10	27.15
20-029	3/8"	0.98	0.50	0.13	13.15
20-030	1/2"	1.16	0.62	0.24	20.19

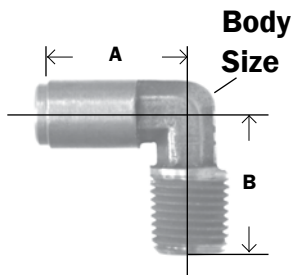
**FEMALE CONNECTOR**



266PP  
 AQ66 12-426  
 6463 50-566  
 3114 266-OF  
 66PL 1166

Part #	Tube O.D. x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-032	1/8" x 1/8"	0.96	0.56	0.04	9.94
20-038	1/8" x 1/4"	1.04	0.67	0.04	25.79
20-012	5/32" x 1/8"	1.09	0.56	0.05	14.45
20-034	1/4" x 1/8"	1.23	0.56	0.06	6.69
20-035	1/4" x 1/4"	1.42	0.75	0.09	11.99
20-036	3/8" x 1/4"	1.32	0.75	0.09	16.96
20-037	3/8" x 3/8"	1.31	0.87	0.12	10.35

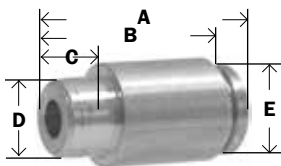
**FIXED MALE ELBOW**



269PP 12-445  
 AQ69-P 1169  
 6500  
 169PLNS

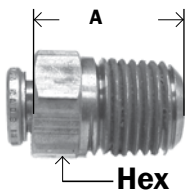
Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-065	1/8" x 1/8"	0.69	0.69	0.31	0.03	7.32
20-066	5/32" x 1/8"	0.68	0.68	0.31	0.03	11.46
20-067	3/16" x 1/8"	0.75	0.71	0.37	0.04	8.15
20-068	1/4" x 1/8"	0.89	0.75	0.37	0.06	5.99
20-069	1/4" x 1/4"	0.95	0.96	0.37	0.08	5.83
20-070	1/4" x 3/8"	1.00	0.98	0.50	0.10	11.66
20-071	3/8" x 1/8"	0.99	0.80	0.50	0.06	9.89
20-072	3/8" x 1/4"	0.98	0.98	0.50	0.09	7.85
20-073	3/8" x 3/8"	0.97	0.98	0.50	0.12	14.57
20-074	1/2" x 1/4"	1.15	1.05	0.62	0.15	12.57
20-075	1/2" x 3/8"	1.18	1.05	0.62	0.22	12.24
20-064	1/2" x 1/2"	1.16	1.66	0.62	0.20	14.39

**PRESS-IN CARTRIDGE**



Part #	Tube O.D.	A	B	C	D	E	List Price
20-040	1/8"	0.67	0.59	0.20	0.30	0.38	9.59
20-041	5/32"	0.67	0.59	0.20	0.30	0.38	3.17
20-043	1/4"	0.93	0.85	0.26	0.38	0.50	5.89
20-044	3/8"	1.21	1.13	0.26	0.38	0.63	9.97

**MALE CONNECTOR**



268PP KQH  
 AQ68 12-425  
 6510 50-568  
 3115 268-OF  
 68PL 1168

Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-047	1/8" x 10-32"*	0.69	0.37	0.02	5.44
20-045	1/8" x 1/16"	0.68	0.37	0.02	11.03
20-048	1/8" x 1/8"	0.61	0.43	0.02	3.80
20-023	1/8" x 1/4"	0.98	0.56	0.04	5.57
20-049	5/32" x 10-32"*	0.67	0.37	0.02	5.99
20-050	5/32" x 1/8"	0.67	0.43	0.03	4.62
20-046	5/32" x 1/4"	0.85	0.56	0.05	9.77
20-051	3/16" x 10-32"*	0.80	0.37	0.02	2.69
20-052	3/16" x 1/8"	0.93	0.43	0.03	5.74
20-053	1/4" x 10-32"*	0.87	0.43	0.03	4.10
20-039	1/4" x 1/16"	0.92	0.43	0.06	10.49
20-054	1/4" x 1/8"	0.93	0.43	0.06	4.44
20-055	1/4" x 1/4"	0.93	0.56	0.10	5.24
20-056	1/4" x 3/8"	0.94	0.68	0.08	7.47
20-530	5/16" x 1/8"	1.07	0.56	0.05	17.71
20-531	5/16" x 1/4"	0.98	0.56	0.10	18.64
20-532	5/16" x 3/8"	1.06	0.75	0.08	20.31
20-057	3/8" x 1/8"	1.10	0.56	0.06	7.31
20-058	3/8" x 1/4"	1.11	0.56	0.05	6.79
20-059	3/8" x 3/8"	1.02	0.68	0.08	7.25
20-062	3/8" x 1/2"	1.02	0.87	0.08	12.50
20-060	1/2" x 1/4"	1.36	0.81	0.11	9.41
20-061	1/2" x 3/8"	1.30	0.81	0.12	10.82
20-063	1/2" x 1/2"	1.23	0.87	0.14	13.65

LOWER

LOWER

LOWER

LOWER

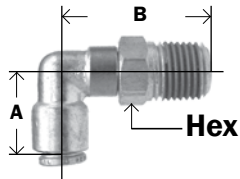
LOWER

\* Furnished with gaskets

Dimension data can change without notice.  
 Please see our website when dimensions are critical.



**SWIVEL MALE ELBOW**

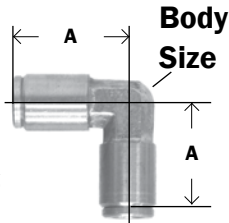


Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
20-079	1/8" x 1/8"	0.69	0.98	0.43	0.07	7.15
20-535*	1/8" x 1/4"	0.76	0.87	0.56	0.06	21.44
20-076**	5/32" x 10-32"	0.67	0.71	0.37	0.04	15.07
20-080	5/32" x 1/8"	0.68	0.89	0.43	0.05	7.85
20-077	5/32" x 1/4"	0.68	1.08	0.56	0.07	11.77
20-078**	1/4" x 10-32"	0.86	0.79	0.31	0.05	10.91
20-081	1/4" x 1/8"	0.90	0.93	0.37	0.08	6.98
20-082	1/4" x 1/4"	0.90	0.99	0.56	0.10	7.90
20-086	1/4" x 3/8"	0.98	1.14	0.68	0.09	15.26
20-538*	5/16" x 1/4"	0.91	0.85	0.56	0.07	23.79
20-539*	5/16" x 3/8"	0.91	0.87	0.75	0.08	36.26
20-087	3/8" x 1/8"	0.94	1.08	0.50	0.09	12.74
20-083	3/8" x 1/4"	0.99	1.15	0.56	0.10	9.72
20-084	3/8" x 3/8"	1.00	1.24	0.68	0.20	11.12
20-088	3/8" x 1/2"	1.00	1.54	0.87	0.19	18.12
20-085	1/2" x 3/8"	1.16	1.34	0.62	0.18	14.00
20-092	1/2" x 1/2"	1.16	1.61	0.62	0.24	20.91

AQ69-PS 12-447  
 56520 50-579  
 3109 269-OFS  
 169PL 11695  
 KQL

\* Nickel Plated      \*\* Furnished with gaskets

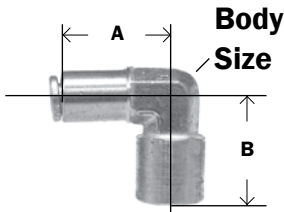
**UNION ELBOW**



AQ65  
 6550  
 3102 12-040  
 165PL 50-565  
 KQL 265-OF

Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
20-150	1/8"	0.65	0.31	0.02	11.66
20-151	5/32"	0.67	0.31	0.04	10.55
20-152	1/4"	0.87	0.37	0.06	10.41
20-155	5/16"	0.91	0.47	0.08	30.87
20-153	3/8"	0.97	0.50	0.09	13.09
20-154	1/2"	1.15	0.62	0.18	18.51

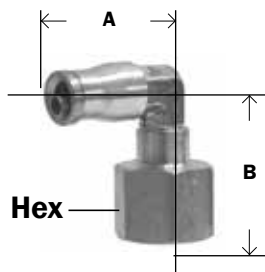
**FEMALE ELBOW**



AQ70-P  
 3009

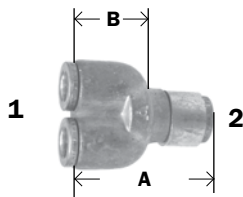
Part #	Tube O.D. x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-192	1/8" x 1/8"	0.78	0.82	0.31	0.02	8.38
20-094	5/32" x 1/8"	0.68	0.82	0.37	0.02	9.93
20-089	1/4" x 1/8"	0.91	0.75	0.37	0.06	11.26
20-090	1/4" x 1/4"	1.03	1.03	0.50	0.11	13.35
20-091	3/8" x 1/4"	0.98	0.95	0.50	0.16	20.39

**FEMALE SWIVEL ELBOW**



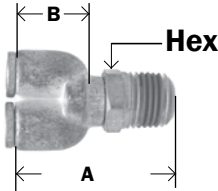
Part #	Tube O.D. x Female NPTF	A	B	Hex	List Price
20-094S	5/32" x 1/8"	0.76	1.06	0.56	15.59
20-089S	1/4" x 1/8"	0.98	1.08	0.56	15.32
20-090S	1/4" x 1/4"	0.98	1.26	0.75	13.82
20-091S	3/8" x 1/4"	1.07	1.48	0.75	20.22

**UNION "Y"**



Part #	Tube O.D. 1 X 2	A	B	Approx. Wt. Lbs.	List Price
20-551	5/32" x 5/32"	1.36	0.81	0.11	57.95
20-552	1/4" x 1/8"	1.61	1.06	0.12	40.05
20-553	1/4" x 1/4"	1.81	1.16	0.14	37.39

**MALE "Y"**



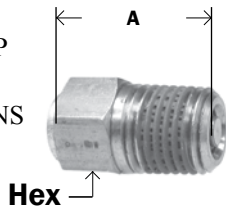
12-445  
50-569  
1169

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
20-557	1/4" x 1/4"	1.90	1.06	0.56	0.20	49.40

**QUICK DISCONNECT**

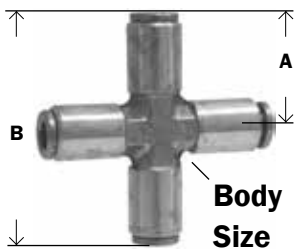
When tube is disconnected, flow shuts off automatically.

AQ92-P  
6500  
169PLNS



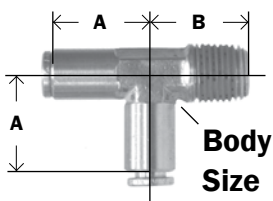
Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-133	1/4" x 1/8"	0.92	0.43	0.10	36.22
20-134	1/4" x 1/4"	0.92	0.56	0.12	25.86

**CROSS**



Size	Size	A	B	Body Size	List Price
20-142	1/4"	1.03	2.06	0.37	25.94
20-143	3/8"	1.06	2.12	0.50	25.41

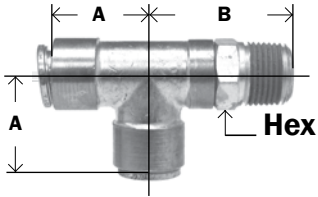
**FIXED MALE RUN TEE**



AQ71-P

Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-095	1/8" x 1/8"	0.65	0.72	0.31	0.04	13.01
20-097	3/16" x 1/8"	0.75	0.73	0.37	0.06	16.74
20-098	1/4" x 1/8"	0.92	0.74	0.37	0.08	12.29
20-093	1/4" x 1/4"	0.92	0.92	0.43	0.10	13.99
20-099	3/8" x 1/8"	0.94	0.82	0.50	0.14	15.04
20-100	3/8" x 1/4"	0.98	0.98	0.50	0.12	17.97
20-101	3/8" x 3/8"	1.05	1.05	0.62	0.10	18.13
20-102	1/2" x 3/8"	1.14	1.05	0.62	0.18	26.90

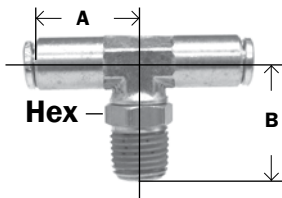
**SWIVEL MALE RUN TEE**



AQ71-PS 12-468  
 56440 50-571  
 3103 271-OFS  
 171PL 11715  
 KQY

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
20-160	1/8" x 1/8"	0.65	0.86	0.43	0.08	11.29
20-161	5/32" x 1/8"	0.67	1.04	0.43	0.09	13.50
20-162	1/4" x 1/8"	0.92	1.04	0.44	0.09	12.56
20-163	1/4" x 1/4"	0.92	1.13	0.56	0.11	14.10
20-164	3/8" x 1/4"	0.94	1.19	0.56	0.11	15.04
20-165	3/8" x 3/8"	0.96	1.24	0.50	0.12	23.42
20-174	1/2" x 1/4"	1.12	1.18	0.51	0.16	58.97
20-166	1/2" x 3/8"	1.14	1.31	0.68	0.14	26.77
20-167	1/2" x 1/2"	1.14	1.61	0.87	0.16	33.76

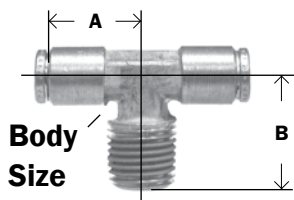
**SWIVEL MALE BRANCH TEE**



Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
20-103	1/8" x 1/8"	0.65	0.81	0.31	0.04	18.87
20-104	5/32" x 10-32"*	0.65	0.71	0.31	0.04	24.76
20-109	5/32" x 1/8"	0.67	0.94	0.37	0.06	15.54
20-105	1/4" x 1/8"	0.92	0.97	0.37	0.08	15.33
20-106	1/4" x 1/4"	0.92	1.09	0.37	0.10	11.51
20-107	3/8" x 1/4"	0.96	1.14	0.56	0.18	15.83
20-108	3/8" x 3/8"	0.96	1.23	0.69	0.16	21.46
20-110	1/2" x 3/8"	1.16	1.34	0.69	0.24	26.02
20-111	1/2" x 1/2"	1.16	1.64	0.87	0.28	31.20

\* Furnished with gaskets

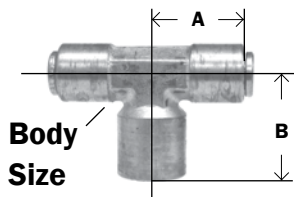
**FIXED MALE BRANCH TEE**



AQ72-P

Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-112	1/8" x 1/8"	0.69	0.72	0.31	0.04	12.64
20-113	5/32" x 1/8"	0.69	0.65	0.31	0.04	14.44
20-115	1/4" x 1/8"	0.92	0.74	0.37	0.12	13.07
20-116	1/4" x 1/4"	0.91	0.93	0.37	0.10	14.06
20-117	3/8" x 1/8"	0.98	0.80	0.50	0.08	16.72
20-118	3/8" x 1/4"	0.98	0.97	0.50	0.12	17.71
20-119	3/8" x 3/8"	0.98	0.97	0.50	0.14	18.39
20-120	1/2" x 3/8"	1.16	1.05	0.62	0.18	25.54

**FEMALE BRANCH TEE**

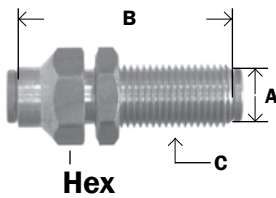


AQ77-P  
 3008  
 177PL

Part #	Tube O.D. x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-130	1/4" x 1/8"	0.89	0.75	0.43	0.06	18.43
20-132	3/8" x 1/4"	0.96	0.98	0.50	0.12	23.89



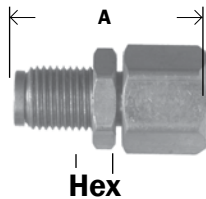
**BULKHEAD UNION**



AQ82-P 12-029  
 6590 50-582  
 62PLBH 282-OF  
 KQE 1174

Part #	Tube O.D. A	B	C	Hex	Approx. Wt. Lbs.	List Price
20-124	1/8"	1.12	7/16-20	0.62	0.03	27.41
20-125	5/32"	1.12	7/16-20	0.62	0.03	30.03
20-126	3/16"	1.27	1/2-20	0.68	0.04	27.24
20-127	1/4"	1.69	1/2-20	0.68	0.06	18.10
20-128	3/8"	1.69	3/4-16	0.81	0.13	22.79
20-129	1/2"	1.85	15/16-20	1.12	0.16	36.84

**FEMALE BULKHEAD UNION**



AQ86-P  
 1166BH

Part #	Tube O.D. x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-170	1/4" x 1/8"	1.19	0.68	0.08	15.79
20-171	1/4" x 1/4"	1.36	0.75	0.10	22.45
20-172	3/8" x 1/4"	1.71	0.75	0.14	24.49

Dimension data can change without notice.  
 Please call us when dimensions are critical.

**NICKEL PLATED PUSH-IN FITTINGS**

PAGES 103-111

Component Parts and Materials	
Body	Brass - Nickel Plated
Thrust Ring	Plastic
Sleeve	Brass - Nickel Plated
Gripper Collet	Stainless Steel
Safety Ring	PA66
Lip Seal ( 1/8 O-Ring Seal)	NBR 70
Thread Seal	NBR 70

**Max Operating Pressure:** 0-250 psi (17 bar ) Vacuum service.  
**Min Temperature:** 0°F (-18°C )  
**Max Temperature:** 160°F (+70°C )  
**Tubing:** Nylon, Polyethylene, Polyurethane.  
 - For best results use 95 Durometer  
**Media:** Compressed air, water.

**• Tolerance**

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical.

**GLOBAL THREAD**

**Works With Inch or Metric Threads**

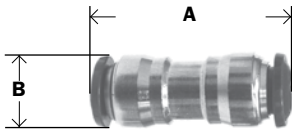


**Look for this  
 Logo**

“Global Thread” fittings can be assembled with female threads produced to the following standards:  
 Tapered NPTF  
 Parallel (BSPP, BSP, ISO 7)  
 Tapered (BSPT, PT, ISO 7, ISO 228)

**NICKEL PLATED PUSH-IN FITTINGS**

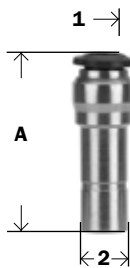
**UNION CONNECTOR**



62PL  
88040

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
20-017N	1/8"	1.06	0.34	0.03	7.54
20-018N	5/32"	1.20	0.41	0.03	7.62
20-016N	5/32" x 1/4"	1.20	0.40	0.04	8.13
20-019N	1/4"	1.38	0.49	0.05	7.32
20-015N	5/16"	1.46	0.57	0.06	8.22
20-020N	3/8"	1.69	0.69	0.06	10.90
20-022N	3/8" x 1/4"	1.69	0.68	0.06	10.98
20-021N	1/2"	1.93	0.81	0.18	15.09
20-024N	1/2" x 3/8"	1.84	0.80	0.17	13.01

**REDUCER**

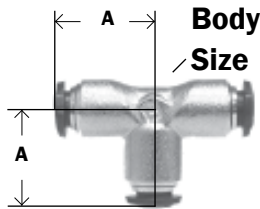


67PPL  
88700

Part #	Tube O.D. 2	Tube O.D. 1	A	List Price
20-510N	1/4"	1/8"	1.142	5.39
20-511N	1/4"	5/32"	1.181	5.63
20-512N	3/8"	1/4"	1.496	7.30
20-513N	1/2"	1/4"	1.693	7.30
20-514N	1/2"	3/8"	1.693	9.26

**UNION TEE**

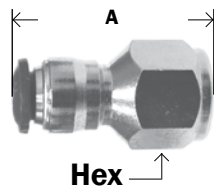
164PL  
88230



Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
20-025N	1/8"	0.67	0.35	0.04	11.10
20-026N	5/32"	0.67	0.35	0.04	21.26
20-028N	1/4"	0.83	0.43	0.09	11.77
20-031N	5/16"	0.87	0.51	0.10	16.22
20-029N	3/8"	1.04	0.63	0.13	16.21
20-030N	1/2"	1.20	0.74	0.24	22.46

**FEMALE CONNECTOR**

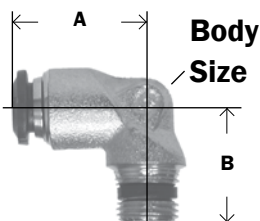
66PL  
88030



Part #	Tube O.D. x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-032N	1/8" x 1/8"	0.93	0.51	0.04	12.42
20-038N	1/8" x 1/4"	1.14	0.63	0.04	11.28
20-034N	1/4" x 1/8"	1.06	0.51	0.06	9.94
20-035N	1/4" x 1/4"	1.26	0.63	0.09	10.90
20-036N	3/8" x 1/4"	1.38	0.71	0.09	18.60
20-037N	3/8" x 3/8"	1.38	0.79	0.12	18.24

**FIXED MALE ELBOW**

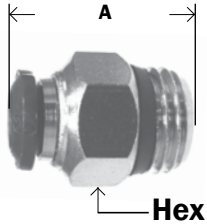
W169P  
88100



Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-068N	1/4" x 1/8"	0.83	0.73	0.43	0.06	6.30
20-069N	1/4" x 1/4"	0.83	0.91	0.43	0.08	6.89
20-072N	3/8" x 1/4"	1.04	1.04	0.63	0.09	10.88
20-073N	3/8" x 3/8"	1.04	1.00	0.63	0.12	11.77



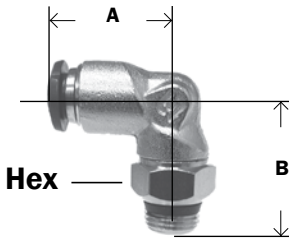
**MALE CONNECTOR**



68PL  
87000

Part #	Tube O.D. x Male Global Thread	A	Hex	Approx. Wt. Lbs.	List Price
20-047N	1/8" x 10-32"	0.75	0.31	0.02	6.02
20-048N	1/8" x 1/8"	0.77	0.43	0.02	5.48
20-023N	1/8" x 1/4"	0.97	0.55	0.04	5.36
20-049N	5/32" x 10-32"	0.83	0.39	0.02	5.91
20-050N	5/32" x 1/8"	0.83	0.43	0.03	4.58
20-046N	5/32" x 1/4"	0.98	0.55	0.05	7.14
20-053N	1/4" x 10-32"	0.97	0.51	0.03	6.73
20-054N	1/4" x 1/8"	0.98	0.51	0.06	4.71
20-055N	1/4" x 1/4"	0.98	0.55	0.10	5.39
20-056N	1/4" x 3/8"	0.98	0.71	0.08	6.89
20-530N	5/16" x 1/8"	0.98	0.55	0.05	7.87
20-531N	5/16" x 1/4"	1.08	0.55	0.10	7.82
20-532N	5/16" x 3/8"	1.08	0.71	0.08	9.60
20-057N	3/8" x 1/8"	1.38	0.67	0.06	7.82
20-058N	3/8" x 1/4"	1.32	0.67	0.05	7.28
20-059N	3/8" x 3/8"	1.32	0.71	0.08	8.11
20-062N	3/8" x 1/2"	1.32	0.87	0.08	14.58
20-060N	1/2" x 1/4"	1.54	0.79	0.11	10.52
20-061N	1/2" x 3/8"	1.42	0.79	0.12	12.80
20-063N	1/2" x 1/2"	1.58	0.87	0.14	15.69

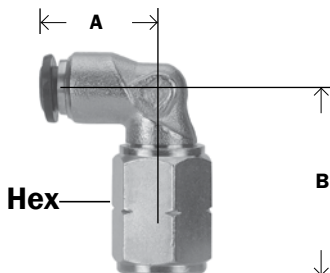
**SWIVEL MALE ELBOW**



W169PL  
87110

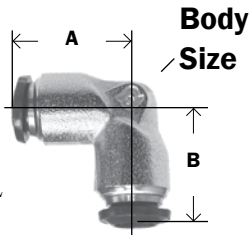
Part #	Tube O.D. x Male Global Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
20-079N	1/8" x 1/8"	0.67	0.78	0.51	0.07	7.96
20-535N	1/8" x 1/4"	0.67	0.95	0.59	0.06	10.04
20-076N	5/32" x 10-32"	0.67	0.95	0.59	0.04	9.17
20-080N	5/32" x 1/8"	0.67	0.79	0.51	0.05	8.49
20-081N	1/4" x 1/8"	0.83	0.87	0.51	0.08	7.81
20-082N	1/4" x 1/4"	0.83	0.98	0.59	0.10	8.71
20-086N	1/4" x 3/8"	0.83	1.10	0.67	0.09	14.49
20-538N	5/16" x 1/4"	0.89	1.02	0.59	0.07	11.28
20-539N	5/16" x 3/8"	0.87	1.10	0.67	0.08	13.65
20-087N	3/8" x 1/8"	1.04	1.02	0.51	0.09	13.38
20-083N	3/8" x 1/4"	1.04	1.10	0.59	0.10	11.31
20-084N	3/8" x 3/8"	1.04	1.18	0.67	0.20	14.06
20-088N	3/8" x 1/2"	1.04	1.30	0.83	0.19	19.11
20-085N	1/2" x 3/8"	1.20	1.24	0.59	0.18	17.77
20-092N	1/2" x 1/2"	1.20	1.42	0.83	0.24	19.97

**FEMALE SWIVEL ELBOW**



Part #	Tube O.D. x Female NPTF	A	B	Hex	List Price
20-094N	5/32" x 1/8"	0.669	0.994	0.354	9.97
20-089N	1/4" x 1/8"	0.826	1.023	0.433	11.80
20-090N	1/4" x 1/4"	0.826	1.200	0.433	11.62
20-762N	3/8" x 1/8"	0.885	1.082	0.511	12.69
20-091N	3/8" x 1/4"	0.885	1.240	0.511	13.45

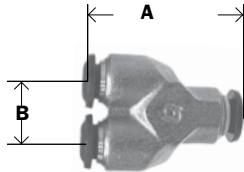
**UNION ELBOW**



165PL  
88130

Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
20-150N	1/8"	0.67	0.35	0.02	10.26
20-151N	5/32"	0.67	0.35	0.04	8.51
20-152N	1/4"	0.83	0.43	0.06	8.79
20-155N	5/16"	0.87	0.51	0.08	10.80
20-153N	3/8"	1.04	0.63	0.09	13.12
20-154N	1/2"	1.20	0.75	0.18	18.93

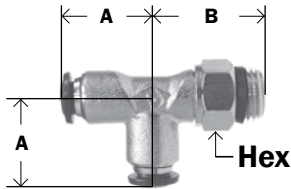
**UNION "Y"**



662PL  
88310

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
20-553N	1/4" x 1/4"	1.44	0.53	0.14	24.98

**SWIVEL MALE RUN TEE**



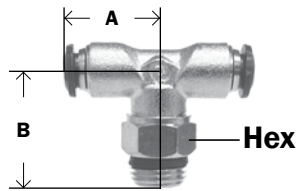
W171PL  
87222



**NEW**

Part #	Tube O.D. x Male Global Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
20-162N	1/4" x 1/8"	0.83	0.87	0.51	0.09	12.99
20-163N	1/4" x 1/4"	0.83	0.98	0.59	0.11	13.85
20-168N	3/8" x 1/4"	1.04	1.10	0.59		20.18
20-164N	1/4" x 3/8"	0.83	1.10	0.59	0.11	15.04
20-165N	3/8" x 3/8"	1.04	1.18	0.67	0.12	22.54
20-174N	1/2" x 1/4"	1.20	1.24	0.59	0.16	28.51
20-166N	1/2" x 3/8"	1.20	1.30	0.67	0.14	27.08

**SWIVEL MALE BRANCH TEE**



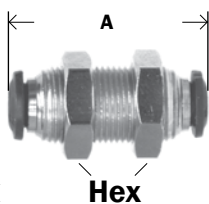
W172PL  
87210



**NEW**

Part #	Tube O.D. x Male Global Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
20-103N	1/8" x 1/8"	0.67	0.78	0.51	0.04	11.89
20-104N	5/32" x 10-32"	0.67	0.79	0.31	0.04	12.64
20-105N	1/4" x 1/8"	0.83	0.87	0.51	0.08	12.99
20-106N	1/4" x 1/4"	0.83	0.98	0.59	0.10	12.99
20-156N	1/4" x 3/8"	1.043	1.10	0.59	0.18	15.05
20-107N	3/8" x 1/4"	1.04	1.10	0.59	0.18	17.88
20-108N	3/8" x 3/8"	1.04	1.18	0.67	0.16	21.25
20-158N	3/8" x 1/2"	1.04	1.30	0.82		24.68
20-110N	1/2" x 3/8"	1.20	1.30	0.67	0.24	27.08
20-111N	1/2" x 1/2"	1.20	1.42	0.82	0.28	28.44

**BULKHEAD UNION**



62PLBH  
88050

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-127N	1/4"	1.38	0.67	0.06	13.48
20-123N	5/16"	1.45	0.74	0.08	17.11
20-128N	3/8"	1.69	0.94	0.13	19.28

## Push-In Ball Valves

**Pressure Range:**  
0-250 PSI ( 17 bar )  
Vacuum service

**Temperatures:**  
**Minimum:** 0°F ( -18°C )  
**Maximum:** 160°F ( +70°C )

**Media:**  
Air, Oil, Water, Gas  
(Consult factory for seal compatibility)

POS	Components	Materials
1	Body	Chrome plated brass
2	Ball Seats	Teflon
3	Stem Seal	NBR 70 (Viton & other compounds on request)
4	Stem	Chrome plated brass
5	Handle	Glass filled nylon
6	Color Plate	Nylon (Std. Blue, optional, green, yellow, red, white)
7	Handle Screw	Steel - Plated for corrosion resistance
8	Ball Retainer Seal	NBR 70 (Viton & other compounds on request)
9	Ball Retainer	Chrome plated brass
10	Ball	Chrome plated brass



## BALL VALVE WITH PUSH-FIT CONNECTIONS

Part #	Tube	List Price
28-400	1/8"	34.50
28-401	1/4"	38.14
28-402	3/8"	44.07

BALL VALVE MALE NPTF  
PUSH-FIT CONNECTIONS

Part #	NPTF	Tube	List Price
28-403	1/8"	5/32"	25.69
28-404	1/4"	1/4"	27.10
28-405	3/8"	3/8"	30.55

The great thing in this world is not so much where you stand, as in what direction you are moving.

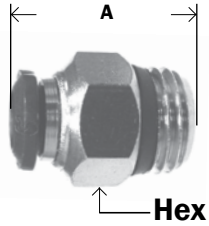
– Oliver Wendell Holmes

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[www.midlandmetal.com](http://www.midlandmetal.com)

**NICKEL PLATED METRIC PUSH-IN FITTINGS**

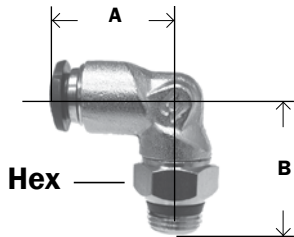
**BRASS**

**METRIC TUBE STRAIGHT MALE**



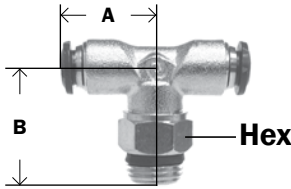
Part #	Tube O.D. (mm)	Global Thread	A	Hex	List Price
20-630N	4	1/8"	0.702	0.429	4.51
20-631N	4	1/4"	0.760	0.546	5.87
20-700N	5	1/8"	0.78	0.429	5.27
20-701N	5	1/4"	0.78	0.546	5.65
20-632N	6	1/8"	0.78	0.546	5.27
20-633N	6	1/4"	0.819	0.546	5.65
20-702N	8	1/8"	0.955	0.546	5.84
20-634N	8	1/4"	0.858	0.546	5.91
20-635N	8	3/8"	0.897	0.663	6.53
20-703N	8	1/2"	0.897	0.663	7.87
20-636N	10	1/4"	1.092	0.663	7.68
20-637N	10	3/8"	1.092	0.663	8.27
20-704N	10	1/2"	1.014	0.663	8.95
20-801N	12	1/4"	1.267	0.78	9.21
20-638N	12	3/8"	1.267	0.78	9.97
20-705N	12	1/2"	1.209	0.78	10.09
20-706N	14	3/8"	1.287	0.858	11.74
20-707N	14	1/2"	1.248	0.858	12.69

**METRIC TUBE SWIVEL MALE ELBOW**



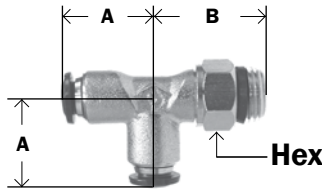
Part #	Tube O.D. (mm)	Global Thread	A	B	Hex	List Price
20-708N	4	1/8"	0.663	0.780	0.507	9.14
20-709N	4	1/4"	0.663	0.936	0.585	9.97
20-710N	5	1/8"	0.780	0.858	0.507	9.21
20-642N	6	1/8"	0.819	0.858	0.507	8.73
20-803N	6	1/4"	0.819	0.975	0.585	9.97
20-711N	8	1/8"	0.878	0.917	0.507	10.17
20-805N	8	1/4"	0.878	1.014	0.585	11.13
20-655N	8	3/8"	0.878	1.092	0.663	14.48
20-712N	8	1/2"	0.878	1.404	0.819	15.68
20-656N	10	1/4"	1.034	1.092	0.585	14.03
20-657N	10	3/8"	1.034	1.170	0.663	15.68
20-713N	10	1/2"	1.034	1.287	0.819	18.22
20-658N	12	3/8"	1.190	1.287	0.663	18.08
20-659N	12	1/2"	1.190	1.404	0.819	20.63
20-714N	14	3/8"	1.268	1.404	0.663	21.77
20-715N	14	1/2"	1.268	1.443	0.819	23.10

**METRIC TUBE SWIVEL MALE BRANCH TEE**



Part #	Tube O.D. (mm)	Global Thread	A	B	Hex	List Price
20-680N	4	1/8"	0.663	0.780	0.507	12.76
20-716N	4	1/4"	0.663	0.936	0.585	13.90
20-717N	5	1/8"	0.78	0.858	0.507	12.76
20-682N	6	1/8"	0.819	0.858	0.507	12.76
20-683N	6	1/4"	0.819	0.975	0.585	13.90
20-809N	8	1/8"	0.877	0.917	0.507	15.49
20-684N	8	1/4"	0.877	1.014	0.585	15.81
20-686N	10	1/4"	1.033	1.092	0.585	20.56
20-687N	10	3/8"	1.033	1.170	0.663	21.77
20-810N	10	1/2"	1.033	1.287	0.819	23.10
20-688N	12	3/8"	1.189	1.287	0.663	24.12
20-689N	12	1/2"	1.189	1.404	0.819	26.08
20-718N	14	3/8"	1.267	1.404	0.663	30.15
20-719N	14	1/2"	1.267	1.443	0.819	32.49

**METRIC TUBE SWIVEL MALE RUN TEE**



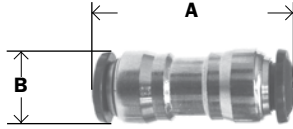
Part #	Tube O.D. (mm)	Global Thread	A	B	Hex	List Price
20-670N	4	1/8"	0.663	0.780	0.507	12.76
20-720N	4	1/4"	0.663	0.936	0.585	13.90
20-721N	5	1/8"	0.780	0.858	0.507	12.76
20-672N	6	1/8"	0.819	0.858	0.507	12.76
20-673N	6	1/4"	0.819	0.975	0.585	13.90
20-811N	8	1/8"	0.819	0.917	0.507	15.49
20-674N	8	1/4"	0.878	1.014	0.585	15.81
20-676N	10	1/4"	0.878	1.092	0.585	20.56
20-677N	10	3/8"	1.034	1.170	0.663	21.77
20-722N	10	1/2"	1.034	1.287	0.819	23.10
20-678N	12	3/8"	1.190	1.287	0.663	24.12
20-679N	12	1/2"	1.190	1.404	0.819	26.08

EVERY TRUTH PASSES THROUGH THREE STAGES BEFORE IT IS RECOGNIZED. IN THE FIRST, IT IS RIDICULED. IN THE SECOND, IT IS OPPOSED. IN THE THIRD, IT IS REGARDED AS SELF EVIDENT.

– ARTHUR SCHOPENHAUER

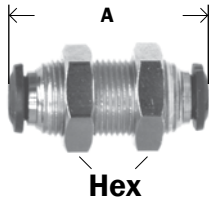
**BULKHEAD UNION**

**BRASS**



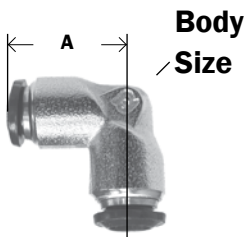
Part #	Tube O.D. (mm)	Tube O.D. (mm)	A	B	List Price
20-723N	3		1.014	0.332	11.87
20-600N	4		1.190	0.410	8.32
20-724N	5		1.287	0.449	8.64
20-725N	6	4	1.248	0.488	8.64
20-601N	6		1.326	0.488	8.64
20-726N	8	6	1.365	0.566	9.46
20-727N	8		1.404	0.566	9.65
20-728N	10	8	1.638	0.683	11.87
20-603N	10		1.638	0.683	11.87
20-729N	12	10	1.833	0.800	14.03
20-604N	12		1.833	0.800	14.03
20-730N	14		1.911	0.839	21.01

**BULKHEAD**



Part #	Tube O.D. (mm)	M	A	Hex	List Price
20-731N	3	M10x1	1.014	0.546	19.29
20-732N	4	M12x1	1.229	0.663	16.56
20-733N	5	M14x1	1.287	0.663	14.16
20-734N	6	M14x1	1.365	0.663	14.16
20-735N	8	M16x1	1.443	0.741	15.49
20-736N	10	M20x1	1.677	0.936	20.50
20-737N	12	M22x1	1.872	1.014	24.56

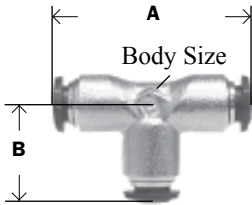
**UNION ELBOW**



Part #	Tube O.D. (mm)	A	Body Size	List Price
20-738N	3	0.663	0.51	11.87
20-206N	4	0.663	0.351	9.21
20-739N	5	0.780	0.429	9.33
20-660N	6	0.780	0.429	9.33
20-661N	8	0.878	0.507	10.98
20-807N	10	1.034	0.624	13.52
20-808N	12	1.190	0.741	17.78
20-740N	14	1.268	0.741	21.90

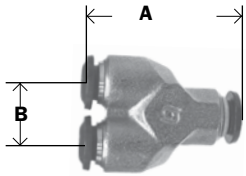
AN OBSTACLE IS OFTEN A STEPPING STONE.  
- WILLIAM PRESCOTT

**UNION TEE**



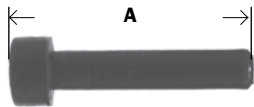
Part #	Tube O.D. (mm)	A	B	Body Size	List Price
20-741N	3	1.326	0.663	0.351	16.50
20-610N	4	1.326	0.663	0.351	12.69
20-742N	5	1.560	0.780	0.429	13.39
20-611N	6	1.638	0.819	0.429	13.39
20-612N	8	1.755	0.878	0.507	15.49
20-613N	10	2.067	1.034	0.624	20.12
20-614N	12	2.379	1.190	0.741	24.95
20-743N	14	2.379	2.535	0.741	32.06

**UNION Y**



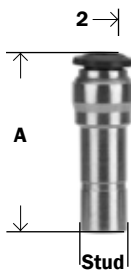
Part #	Tube O.D. (mm)	B	A	List Price
20-744N	3	0.390	1.131	23.35
20-813N	4	0.429	1.248	17.52
20-745N	5	0.527	1.365	18.54
20-814N	6	0.527	1.424	18.54
20-815N	8	0.605	1.599	21.01
20-746N	10	0.728	1.890	29.65

**PLUG**



Part #	Tube O.D. (mm)	A	List Price
20-748N	4	0.917	1.14
20-749N	5	0.956	1.14
20-750N	6	0.956	1.14
20-751N	8	1.014	1.40
20-752N	10	1.112	1.42
20-753N	12	1.190	1.43

**REDUCER**

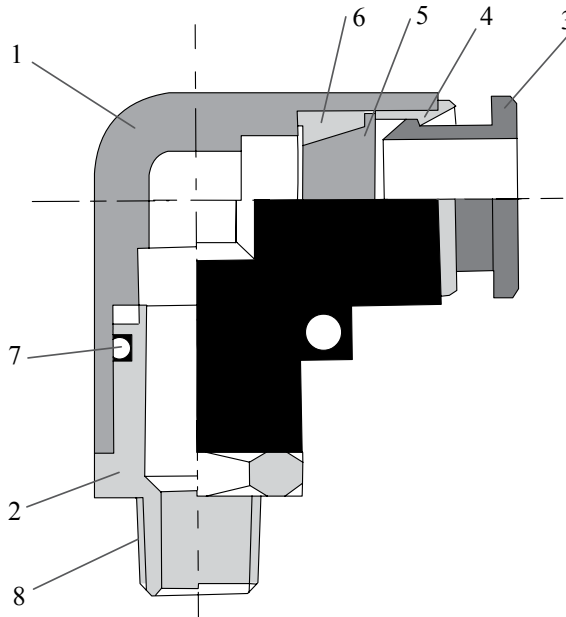


Part #	Stud (mm)	Tube O.D. 2 (mm)	A	List Price
20-754N	4	3	1.053	10.09
20-755N	5	4	1.131	5.27
20-756N	6	4	1.170	5.27
20-757N	6	5	1.248	5.27
20-758N	8	6	1.326	5.59
20-759N	10	8	1.482	5.91
20-760N	12	8	1.521	6.35

# Composite Body Push-In Fittings

BRASS

• For Food Grade, see page 293



### Specifications

Fluid admitted	Air
Working pressure range	0-150 PSI (10BAR)
Min. Burst pressure	340PSI (23BAR)
Working Temperature range	-104°F ~180°F

The latest generation of composite material is used in the body construction in addition to brass on threaded components and stainless steel on the tube gripper.

### • Tolerance

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical.

### Materials of Construction:

1	Body	Composite Polyacetal (hemopolymer,copolymer)
2	Body	Brass
3	Tube Release	Acetal Resin
4	Retainer	Brass
5	Gripper Ring	Stainless Steel
6	Spacer	Brass
7	O-Ring	NBR 70
8	Threads	Brass w/ white sealant



**UNION**



PQ62P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-018C	5/32"	0.01	6.75
20-019C	1/4"	0.01	3.44
20-020C	3/8"	0.02	4.40
20-021C	1/2"	0.03	7.55

**UNION TEE**



PQ64P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-028C	1/4"	0.02	2.75
20-029C	3/8"	0.02	5.46
20-030C	1/2"	0.08	10.39

**FEMALE CONNECTOR**

- Brass



PQ66P

Part #	Tube O.D. x Female NPT	Approx. Wt. Lbs.	List Price
20-034C	1/4" x 1/8"	0.02	6.89
20-035C	1/4" x 1/4"	0.04	6.23
20-036C	3/8" x 1/4"	0.04	5.11
20-037C	3/8" x 3/8"	0.06	4.08

**MALE CONNECTOR**

- Nickel Plated



PQ68P

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-054C	1/4" x 1/8"	0.02	3.59
20-055C	1/4" x 1/4"	0.02	2.21
20-056C	1/4" x 3/8"	0.04	4.46
20-058C	3/8" x 1/4"	0.06	3.51
20-059C	3/8" x 3/8"	0.06	3.63
20-062C	3/8" x 1/2"	0.08	6.69
20-060C	1/2" x 1/4"	0.06	6.72
20-061C	1/2" x 3/8"	0.08	6.01
20-063C	1/2" x 1/2"	0.10	6.48

**SWIVEL MALE ELBOW**

- Swivels for installation only.
- Not a live swivel



PQ69PS

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-081C	1/4" x 1/8"	0.02	3.94
20-082C	1/4" x 1/4"	0.04	3.75
20-086C	1/4" x 3/8"	0.06	4.79
20-087C	3/8" x 1/8"	0.04	4.98
20-083C	3/8" x 1/4"	0.08	5.20
20-084C	3/8" x 3/8"	0.10	4.96
20-088C	3/8" x 1/2"	0.12	8.65
20-085C	1/2" x 3/8"	0.16	10.42

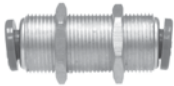
**COMPOSITE BODY PUSH-IN FITTINGS****BRASS FITTINGS****BRASS****SWIVEL MALE BRANCH TEE**

- Swivels for installation only.
- Not a live swivel



PQ72PS

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-105C	1/4" x 1/8"	0.04	9.13
20-106C	1/4" x 1/4"	0.06	5.69
20-121C	1/4" x 3/8"	0.08	6.11
20-107C	3/8" x 1/4"	0.10	10.45
20-108C	3/8" x 3/8"	0.12	10.07

**BULKHEAD UNION**

PQ82P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-127C	1/4"	0.04	8.44
20-128C	3/8"	0.06	6.67

**90° UNION ELBOW**

PQ65P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-152C	1/4"	0.02	5.13
20-153C	3/8"	0.02	6.03

**SWIVEL MALE RUN TEE**

- Swivels for installation only.
- Not a live swivel



PQ71PS

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-162C	1/4" x 1/8"	0.04	9.06
20-163C	1/4" x 1/4"	0.04	5.16
20-099C	3/8" x 1/8"	0.06	6.22
20-100C	3/8" x 1/4"	0.08	5.77
20-165C	3/8" x 3/8"	0.10	6.86

**UNION "Y" CONNECTOR**

PQ89P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-553C	1/4"	0.02	3.69
20-555C	3/8"	0.02	9.55

**SWIVEL "Y" CONNECTOR**

- Swivels for installation only.
- Not a live swivel



PQ88PS

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-557C	1/4" x 1/4"	0.02	10.89

**IN-LINE NEEDLE VALVE**

PQ310C

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-487C	1/4"	0.04	26.80

**RIGHT ANGLE FLOW CONTROL METER IN**

JPQ

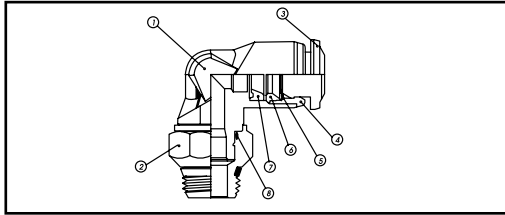
Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-728C	1/4" x 1/4"	0.04	23.33

# BRASS FITTINGS

# METRIC COMPOSITE BODY PUSH-IN FITTINGS

BRASS

## Technical Characteristics



PART 1	BODY	COMPOSITE
PART 2	BODY	NICKEL PLATED BRASS
PART 3	TUBE RELEASE	ACETAL RESIN
PART 4	RETAINER	NICKEL PLATED BRASS
PART 5	GRIPPER RING	STAINLESS STEEL
PART 6	SPACER	COMPOSITE
PART 7	THREAD PACKING	NBR 70
PART 8	O-RING	NBR 70
PART 9	THREAD SEAL	NBR70

### Operating Range

Pressure: 0 to 220 PSI (15 bar)

Vacuum: 0 to 29hg (-.99 bar)

### Temperature

-5° F to + 175° F (-20° C to + 80° C)

### Media

Compressed air.

Non-toxic fluids (water)

### Materials

The latest generation of composite material is used in the body construction in addition to nickel-plated brass on threaded components and stainless steel on the tube gripper.

### MALE ADAPTER

3175



#### Nickel Plated

Part #	Tube OD (mm)	BSPT Thread	List Price
20-630	4	1/8"	5.90
20-631	4	1/4"	6.82
20-632	6	1/8"	6.69
20-633	6	1/4"	6.21
20-634	8	1/4"	3.69
20-635	8	3/8"	8.40
20-636	10	1/4"	8.88
20-637	10	3/8"	9.70
20-801	12	1/4"	11.41
20-638	12	3/8"	12.33

### UNION 90° ELBOW

3102



Part #	Tube O.D. (mm)	List Price
20-806	4	6.69
20-660	6	4.80
20-661	8	7.12
20-807	10	16.76
20-808	12	22.21

### UNION TEE

3104



Part #	Tube O.D. (mm)	List Price
20-610	4	16.31
20-611	6	5.55
20-612	8	5.69
20-613	10	25.20
20-614	12	25.63

### UNION

3106



Part #	Tube O.D. (mm)	List Price
20-600	4	6.69
20-601	6	2.50
20-602	8	6.00
20-603	10	8.43
20-604	12	4.16

### SWIVEL MALE BRANCH TEE



Part #	Tube OD (mm)	BSPT Thread	List Price
20-680	4	1/8"	12.41
20-682	6	1/8"	12.03
20-683	6	1/4"	14.01
20-809	8	1/8"	14.55
20-684	8	1/4"	20.50
20-685	8	3/8"	24.27
20-686	10	1/4"	19.66
20-687	10	3/8"	28.88
20-810	10	1/2"	28.89
20-688	12	3/8"	21.58
20-689	12	1/2"	25.99

### SWIVEL MALE RUN TEE



Part #	Tube OD (mm)	BSPT Thread	List Price
20-670	4	1/8"	12.29
20-672	6	1/8"	13.31
20-673	6	1/4"	12.35
20-811	8	1/8"	14.95
20-674	8	1/4"	14.61
20-675	8	3/8"	16.04
20-676	10	1/4"	27.14
20-677	10	3/8"	28.89
20-678	12	3/8"	23.03
20-679	12	1/2"	25.08

### SWIVEL MALE 90° ELBOW



Part #	Tube OD (mm)	BSPT Thread	List Price
20-642	6	1/8"	6.45
20-803	6	1/4"	9.69
20-805	8	1/4"	14.35
20-655	8	3/8"	18.42
20-656	10	1/4"	13.27
20-657	10	3/8"	18.88
20-658	12	3/8"	21.83
20-659	12	1/2"	24.09

### UNION Y CONNECTOR



Part #	Tube OD (mm)	List Price
20-813	4	21.43
20-814	6	14.55
20-815	8	25.65



## NICKEL PLATED BSPT/ BSPP FITTINGS

## BRASS FITTINGS

## MALE BSPP NIPPLE



Part #	Size	List Price
28-800	1/8 X 1/8	12.93
28-801	1/4 X 1/8	14.60
28-802	1/4 X 1/4	17.18
28-803	3/8 X 1/8	18.47
28-804	3/8 X 1/4	17.26
28-805	3/8 X 3/8	24.13
28-806	1/2 X 1/4	41.15
28-807	1/2 X 3/8	41.15
28-808	1/2 X 1/2	32.31
28-810	3/4 X 1/2	58.05
28-811	3/4 X 3/4	63.64
28-812	1 X 3/4	69.77
28-813	1 X 1	72.64
28-814	1-1/2 X 1-1/4	250.66

## MALE NIPPLE



## BSPT X MALE NPT

Part #	Size	List Price
28-815*	1/8 X 1/8	33.53
28-816*	1/4 X 1/4	29.37
28-817*	3/8 X 3/8	33.43
28-818*	1/2 X 1/2	55.81
28-819*	3/4 X 3/4	110.31
28-839	1 X 1	158.69

## MALE BSPT NIPPLE



Part #	Size	List Price
28-820	1/8 X 1/8	11.15
28-821	1/4 X 1/8	13.99
28-822	1/4 X 1/4	12.35
28-823	3/8 X 1/8	23.31
28-824	3/8 X 1/4	18.07
28-825	3/8 X 3/8	16.10
28-826	1/2 X 1/8	37.54
28-827	1/2 X 1/4	37.67
28-828	1/2 X 3/8	28.69
28-829	1/2 X 1/2	29.13
28-832	3/4 X 1/2	73.16
28-833	3/4 X 3/4	54.26
28-945	1 X 3/4	100.14
28-910	1 X 1	105.15

## MALE BSPP X MALE NPT



Part #	Size	List Price
28-976	1/4 X 1/4	12.93
28-977	3/8 X 1/4	14.60
28-978	3/8 X 3/8	17.18
28-979	1/2 X 1/2	18.47

## BSPP COUNTERSUNK SEALED PLUG



Part #	Size	List Price
28-835	1/8	12.04
28-836	1/4	16.78
28-837	3/8	12.05
28-838	1/2	35.92

## BSPT HEX COUNTERSUNK PLUG



Part #	Size	List Price
28-840*	1/8	4.79
28-841*	1/4	8.88
28-842*	3/8	21.44
28-843*	1/2	27.59
28-844*	3/4	53.80

## FEMALE BSP CAP



## BSP seals w/ both BSPT &amp; BSPP

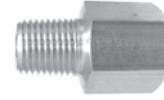
Part #	Size	List Price
28-855	1/8	14.04
28-856	1/4	18.05
28-857	3/8	18.40
28-858	1/2	48.80
28-859	3/4	37.07

## BARB X FE BSPP SWIVEL



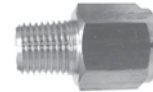
Part #	Size	List Price
28-851	1/4 X 1/4	12.93
28-852	3/8 X 3/8	14.60
28-853	1/2 X 1/2	17.18
28-854	3/4 X 3/4	18.47

## BSPT MALE X FEMALE NPT



Part #	Size	List Price
28-860*	1/8 X 1/8	12.76
28-861*	1/4 X 1/4	25.61
28-862*	3/8 X 3/8	37.99
28-863*	1/2 X 1/2	99.97
28-864*	3/4 X 3/4	109.31
28-866	1 X 1	184.63

## NPT MALE X FEMALE BSP



Part #	Size	List Price
28-867*	1/8 X 1/8	17.27
28-868*	1/4 X 1/4	23.22
28-869*	3/8 X 3/8	52.75
28-870*	1/2 X 1/2	84.30
28-871*	3/4 X 3/4	114.38

## BUSHING BSPT MALE X BSP FEMALE



Part #	Size	List Price
28-872	1/8 X 1/8	11.04
28-845	1/8 X 3/8	23.03
28-873	1/4 X 1/8	9.59
28-846	1/4 X 3/8	22.25
28-847	1/4 X 1/2	32.56
28-874	3/8 X 1/8	15.30
28-875	3/8 X 1/4	14.92
28-848	3/8 X 3/8	23.71
28-876	1/2 X 1/4	20.12
28-877	1/2 X 3/8	22.28
28-878	3/4 X 1/2	32.43
28-879	1 X 3/4	69.77

## BARB X BSPP



Part #	Size	List Price
29-122	3/8 X 1/4	34.15
29-123	1/2 X 1/4	34.93

All fittings are Nickel Plated except (\*) which are Yellow Brass.

## BRASS FITTINGS

## NICKEL PLATED BSPT/ BSPP FITTINGS

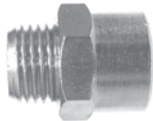
### BRASS RIGID MALE BARB ADAPTER



Part #	Hose I.D. x BSPT	List Price
32-450*	1/4" x 1/8"	1.40
32-451*	1/4" x 1/4"	2.04
32-452*	3/8" x 1/4"	2.23
32-453*	3/8" x 3/8"	5.63
32-454*	3/8" x 1/2"	4.12
32-455*	1/2" x 3/8"	3.17
32-456*	1/2" x 1/2"	4.57
32-457*	3/4" x 3/4"	7.11
32-458*	1" x 1"	14.66
28-968	1/2 X 3/4	33.88

All Fittings are Nickel Plated except (\*) which are Yellow Brass

### MALE BSPP X FEMALE BSP ADAPTER



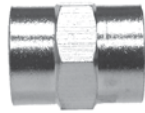
Part #	Size	List Price
28-880	1/8 X 1/8	14.16
28-881	1/8 X 1/4	13.10
28-882	1/4 X 1/8	12.35
28-883	1/4 X 1/4	18.90
28-884	1/4 X 3/8	21.30
28-885	3/8 X 1/8	25.56
28-886	3/8 X 1/4	17.49
28-887	3/8 X 3/8	35.26
28-888	3/8 X 1/2	34.17
28-889	1/2 X 1/4	28.54
28-890	1/2 X 3/8	33.82
28-891	1/2 X 1/2	55.17
28-951	1/2 X 1/8	23.80
28-892	3/4 X 1/4	59.33
28-893	3/4 X 1/2	42.50

### FE BSPP X FE NPT



Part #	Size	List Price
29-111	1/8 X 1/8	41.04
29-112	1/4 X 1/4	38.35
29-113	3/8 X 1/4	56.18
29-114	3/8 X 3/8	49.89
29-115	1/2 X 1/4	53.35
29-116	1/2 X 1/2	80.30
29-119	1-1/2 X 1-1/2	276.34
29-120	2 X 2	520.02

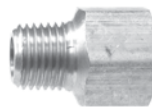
### FEMALE BSP COUPLING



Part #	Size	List Price
28-894	1/8 X 1/8	15.87
28-895	1/4 X 1/8	21.70
28-896	1/4 X 1/4	16.90
28-897	3/8 X 1/8	31.06
28-898	3/8 X 1/4	37.67
28-899	3/8 X 3/8	26.56
28-900	1/2 X 1/4	39.94
28-901	1/2 X 3/8	54.99
28-902	1/2 X 1/2	45.57
28-903	3/4 X 3/4	55.72

All Fittings are Nickel Plated

### MALE NPT X FE BSPT



Part #	Size	List Price
29-104	1/8 X 1/8	30.64
29-105	1/4 X 1/4	31.74
29-106	3/8 X 3/8	34.47
29-107	1/2 X 1/2	54.77
29-108	3/4 X 3/4	84.63
29-109	1 X 1	113.95
29-110	1-1/4 X 1-1/4	163.75

### 90° BSPT MALE ELBOW



Part #	Size	List Price
28-905	1/8 X 1/8	23.42
28-906	1/4 X 1/4	27.64
28-907	3/8 X 3/8	48.93
28-908	1/2 X 1/2	87.97
28-909	3/4 X 3/4	79.16

### MALE BSPT X FEMALE BSP 90° ELBOW



Part #	Size	List Price
28-911	1/8 X 1/8	21.76
28-912	1/4 X 1/4	33.14
28-944	3/8 X 3/8	37.80
28-915	3/4 X 3/4	79.16

### BSP FEMALE 90° ELBOW



Part #	Size	List Price
28-917	1/8 X 1/8	23.93
28-918	1/4 X 1/4	42.05
28-919	3/8 X 3/8	39.80
28-920	1/2 X 1/2	99.55
28-921	3/4 X 3/4	79.16

### BSPT TEE



Part #	Size	List Price
28-927	1/2	86.18
28-928	3/4	106.38

### BSP FEMALE TEE



Part #	Size	List Price
28-930	1/8	29.85
28-931	1/4	45.98
28-932	3/8	99.43
28-933	1/2	104.86
28-934	3/4	101.32

### BSP MALE RUN TEE



Part #	Size	List Price
28-947	1/8	26.55
28-948	1/4	35.83
28-949	3/8	58.89
28-950	1/2	111.93

### 45° MALE BSPT X FE BSPT

Part #	Size	List Price
28-965	1/8 X 1/8	25.65

### FE BSP BRANCH TEE

Part #	Size	List Price
29-129	1/4	37.26

## STEEL GREASE FITTINGS

## BRASS FITTINGS

- 8000 PSI max. pressure
- Exceeds 12hr salt spray

Meets SAE #J-534C

- Assortments also available

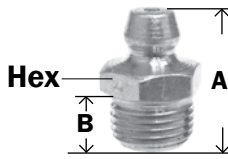
Many types available on special order.

- See website for Grease Fittings Adapters

## PIPE THREAD

## BALL CHECK

#610  
1610  
2800  
1720  
5000

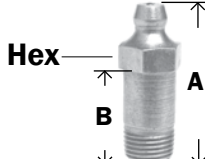


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-110	1/8" -27 NPTF	0.66	0.28	0.437	0.01	0.95
36-110SS	303 SS	0.68	0.29	0.437	0.01	4.04
36-111	Thread Forming	0.62	0.23	0.437	0.01	1.18

## PIPE THREAD

## BALL CHECK

#607  
1607  
2800  
1669  
5003



Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-112	1/8" -27 NPTF	1.25	0.22	0.437	0.02	3.71
36-113	1/8" -27 NPTF	1.75	1.26	0.437	0.02	2.70

## PIPE THREAD

## 30° ANGLE BALL CHECK

#611  
1611  
2830  
5100

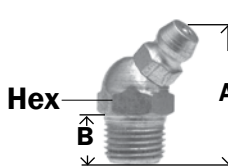


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-114	1/8" -27 NPTF	0.90	0.30	0.437	0.01	1.49

## PIPE THREAD

## 45° ANGLE BALL CHECK

#688  
1688  
2845  
5200

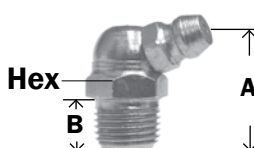


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-116	1/8" -27 NPTF	0.88	0.22	0.437	0.01	1.59
36-116SS	303 SS	0.95	0.29	0.437	0.01	5.77

## PIPE THREAD

## 65° ANGLE BALL CHECK

#612  
1612  
2865  
5300

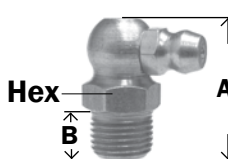


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-118	1/8" -27 NPTF	0.86	0.30	0.437	0.01	1.42

## PIPE THREAD

## 90° ANGLE BALL CHECK

#613  
1613  
2890  
5400  
5407

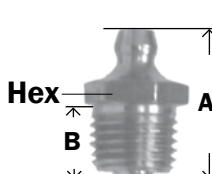


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-120	1/8" -27 NPTF	0.84	0.30	0.437	0.01	1.41
36-120SS	303 SS	0.84	0.29	0.437	0.01	5.82
36-121	1/8" -27 NPTF	1.81	1.25	0.437	0.01	4.84

## PIPE THREAD

## BALL CHECK

#627  
1627  
2900K  
5050

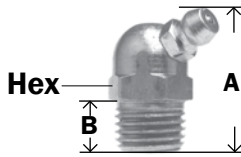


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-130	1/4" -18 NPTF	0.84	0.30	0.437	0.02	1.58
36-130SS	303 SS	0.87	0.42	0.437	0.02	11.31

• See website for 1/4-28 Grease Fittings Adapters

**PIPE THREAD**

#629  
1629  
2965  
5350

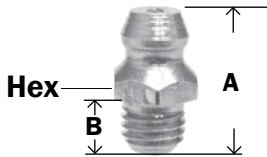


**65° ANGLE BALL CHECK**

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-132	1/4"-18 NPTF	0.97	0.34	0.56	0.02	2.43

**1/4-28 TAPER THREAD**

#641  
1641  
2400  
3038  
5010

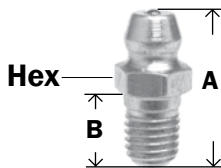


**SHORT BALL CHECK**

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-140	1/4"-28 NPTF	0.54	0.18	0.31	0.01	0.54
36-140SS	303 SS	0.54	0.18	0.31	0.01	1.62
36-141	Thread Forming	0.55	0.10	0.31	0.01	0.53

**1/4-28 TAPER THREAD**

#652  
1652  
2400  
5013

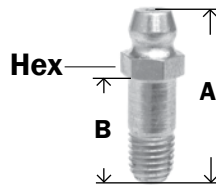


**LONG BALL CHECK**

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-142	1/4"-28 Taper Thread	0.69	0.34	0.312	0.01	0.73

**1/4-28 TAPER THREAD**

#680  
1680  
2400  
5014

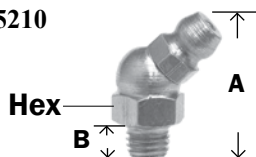


**EXTRA LONG BALL CHECK**

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-144	1/4"-28 Taper Thread	0.92	0.25	0.312	0.02	1.15

**1/4-28 TAPER THREAD**

#637 5210  
1637  
2445  
1665  
2465  
3010

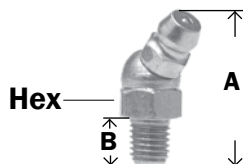


**SHORT 45° BALL CHECK**

Part #	Size	Angle	A	B	Hex	Approx. Wt. Lbs.	List Price
36-146	1/4"-28 Taper Thread	45°	0.82	0.20	0.375	0.02	1.25
36-146SS	303 SS	45°	0.81	0.20	0.375	0.02	5.17
36-147	1/4"-28 Taper Thread	65°	0.78	0.20	0.375	0.02	1.32

**1/4-28 TAPER THREAD**

#636  
1630  
2445

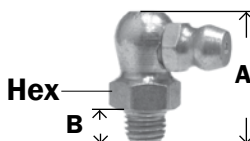


**LONG 45° BALL CHECK**

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-148	1/4"-28 Taper Thread	0.94	0.30	0.375	0.02	2.07

**1/4-28 TAPER THREAD**

#911  
1911  
2490  
3054  
5410



**90° ANGLE BALL CHECK**

**SAE# A515002**

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-150	1/4"-28 Taper Thread	0.75	0.10	0.375	0.02	1.06
36-150SS	303 SS	0.75	0.20	0.375	0.02	5.17
36-152	Thread Forming	0.75	0.16	0.375	0.02	2.35

## STEEL GREASE FITTINGS

## BRASS FITTINGS

## DRIVE TYPE

## BALL CHECK

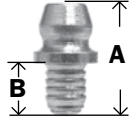
• See website for Grease Fittings Adapters

#608  
1608  
5021

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
36-160	5/16"	0.55	0.25	0.01	0.79

## DRIVE TYPE

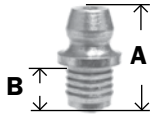
## BALL CHECK

#728  
1728  
2316  
5033

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
36-164	3/16"	0.52	0.25	0.01	0.71
36-164SS	303 SS	0.51	0.25	0.01	2.58

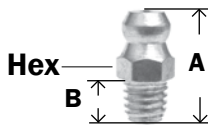
## DRIVE TYPE

## BALL CHECK

#743  
1743  
214  
5029

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
36-166	1/4"	0.55	0.23	0.01	0.59
36-166SS	303 SS	0.55	0.23	0.01	2.58

## METRIC

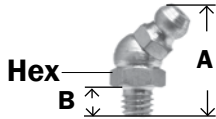
#711  
6000  
2106  
2M6  
5175

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-168	6MM x 1	16	3.7	7	0.01	0.92

( Diameter x Pitch )

## METRIC

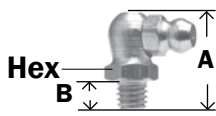
## 45° ANGLE

#712  
6045  
2107  
5176

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-170	6MM x 1	21	3.7	9	0.02	1.24

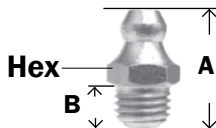
## METRIC

## 90° ANGLE

#713  
6090  
2108  
ZM906  
5177

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-172	6MM x 1	18	3.7	9	0.02	1.30

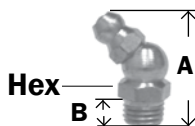
## METRIC

#811  
8000  
2103  
ZM58  
5178

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-174	8MM x 1	16	3.7	9	0.02	0.78

## METRIC

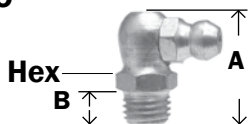
## 45° ANGLE

#812  
8045  
2104  
ZM458  
5179

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-176	8MM x 1	21	3.7	9	0.02	1.35

## METRIC

## 90° ANGLE

#813  
8090  
2105  
ZM908  
5180

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-178	8MM x 1	18	3.7	9	0.02	1.52

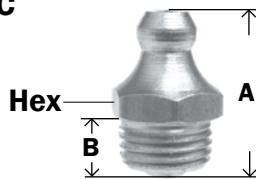


## BRASS FITTINGS

## STEEL GREASE FITTINGS

### METRIC

#911  
9000  
2109  
ZM510  
5181



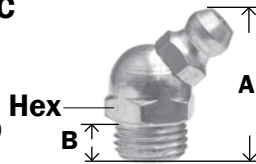
• See website for Grease Fittings Adapters

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-180	10MM x 1	16	3.7	11	0.02	1.17

• Diameter x pitch (extra fine)

### METRIC

#912  
9045  
2110  
ZM4510

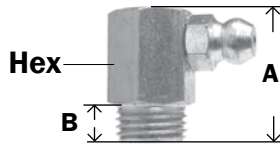


### 45° ANGLE

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-182	10MM x 1	21	3.7	11	0.02	1.71

### METRIC

#913  
9090  
2111  
ZM9010  
5183

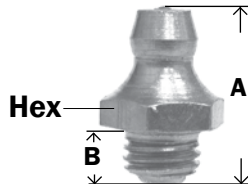


### 90° ANGLE

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-184	10MM x 1	18	3.7	11	0.02	1.52

### #711-B

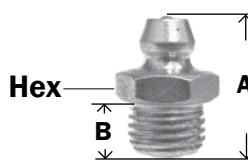
1711  
2500



Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-186	5/16"-24	0.65	0.12	0.375	0.02	0.94

### #710-B

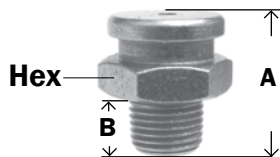
1710  
2600



Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-188	3/8"-24	0.65	0.14	0.437	0.01	1.55

## BUTTON HEAD

1184  
1186



Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-200	1/8"-27 PTF	0.75	0.34	0.625	0.03	3.74
36-205	1/4"-18 NPT	0.83	0.44	0.625	0.03	3.98

## WHIP HOSE - EXCEEDS SAE 100R1-AT - use with hand grease guns only

### 10,000 PSI Burst Pressure Rubber Hose



3/16" ID

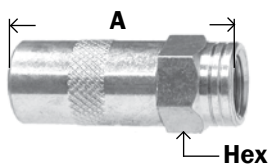
1/8" NPT Solid Base

Part #	Length	List Price
36-210	12" RUBBER	36.93
36-212	18" RUBBER	24.68
36-214	24" RUBBER	30.79
36-216	36" RUBBER	46.72

3,000 PSI Working pressure

## 4 JAW GREASE GUN COUPLER

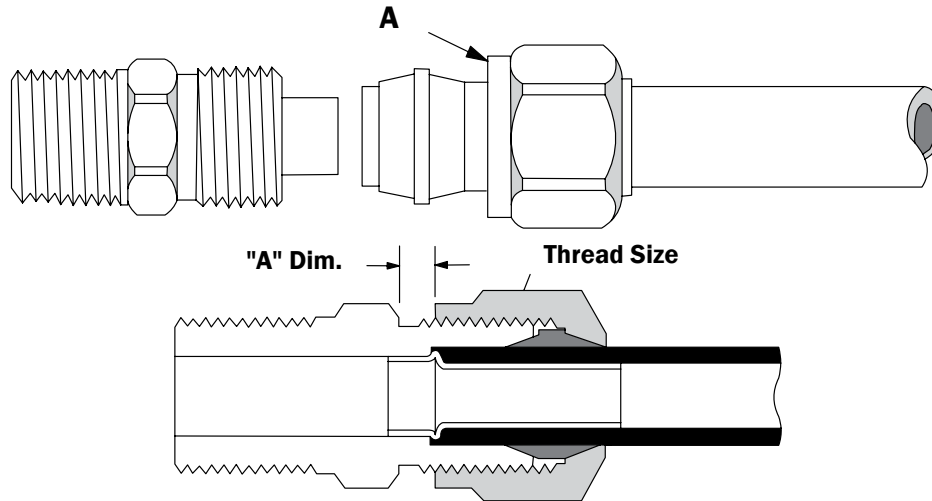
Provides quick, positive, leakproof connection w/ grease fittings.



1/8" NPTF

Part #	A	Hex	Approx. Wt. Lbs.	List Price
36-220	1.50	0.56	0.05	13.05

# D.O.T. Air Brake - Nylon Tubing



Tube O.D	1/4	3/8	1/2	5/8	3/4
Thread Size-B	7/16-24	17/32-24	11/16-20	13/16-18	1-18

**•Typical Application**

Air brake systems except where temperatures exceed +200°F or where battery acid can drip on tubing.

**•Pressure**

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.

**•Tolerance**

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical

**•Advantages**

Easy to assemble (no tube preparation or flaring required.) Built in tube support. Fittings utilize a ribbed sleeve for compression and positive grip. 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 tubing. Threaded end of nut "A" must face toward fitting body.
- 3-Insert tubing into the preassembled fitting. Be sure tubing is bottomed in fitting.
- 4- Tighten nut to required torque as indicated on chart.

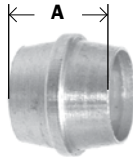
**Disassembling:** Remove nut and pull tubing out of fitting body. Insert will remain in tubing.

**Reassembly:** Push tubing and insert into fitting body until it bottoms. Thread nut onto fitting body and torque as in step 4.

Tube Size	Additional Number of Turns from Hand-Tight
1/4	3
3/8, 1/2	4
5/8, 3/4	3-1/2

**SLEEVE**

**SAE# 100115**

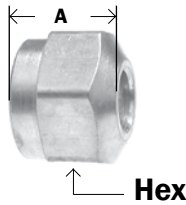


60NAB  
60NTA  
1460

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-001	1/4"	0.30	0.01	0.41
38-002	3/8"	0.39	0.02	0.54
38-003	1/2"	0.43	0.02	0.75
38-004	5/8"	0.48	0.03	1.20
38-005	3/4"	0.53	0.04	2.15

**NUT**

**SAE# 100110**

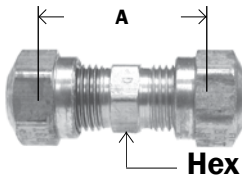


61NAB  
61NTA  
1461

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
38-010	1/4"	0.45	0.56	0.02	0.84
38-011	3/8"	0.63	0.62	0.02	1.07
38-012	1/2"	0.72	0.81	0.04	2.62
38-013	5/8"	0.77	0.94	0.04	2.78
38-014	3/4"	0.81	1.12	0.06	4.68

**UNION**

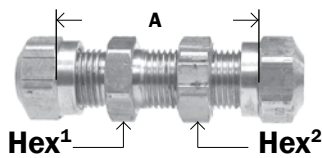
**SAE# 100101BA**



62NAB  
62NTA  
1462

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
38-019	1/4"	0.85	0.43	0.08	5.65
38-020	3/8"	1.10	0.56	0.18	6.83
38-021	1/2"	1.31	0.68	0.20	11.00
38-022	5/8"	1.43	0.81	0.26	22.99
38-023	3/4"	1.60	1.00	0.48	34.88

**BULKHEAD UNION**

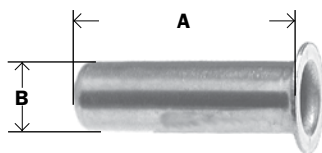


62NBH  
1474  
475

Part #	Tube O.D.	A	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
38-028	1/4"	1.38	0.56	0.56	0.11	15.05
38-029	3/8"	1.61	0.69	0.75	0.16	18.50
38-030	1/2"	1.88	0.81	0.87	0.26	29.98

**STAINLESS STEEL INSERT**

• 300 series stainless



59A  
63NTA

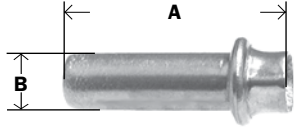
• For SAE# J844 TUBING

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
38-035	1/4"	0.53	0.16	0.01	1.04
38-036	3/8"	0.64	0.24	0.02	0.79
38-037	1/2"	0.81	0.37	0.02	1.37
38-038	5/8"	0.86	0.43	0.03	3.35
38-039	3/4"	1.04	0.56	0.03	3.99

## D.O.T. AIR BRAKE - NYLON TUBING

## BRASS FITTINGS

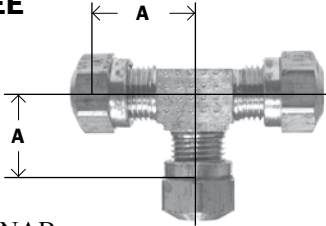
## BRASS INSERT



1484  
463

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
38-040	1/4"	0.64	0.16	0.01	0.83
38-041	3/8"	0.76	0.24	0.02	0.83
38-042	1/2"	0.94	0.37	0.02	1.64
38-043	5/8"	1.06	0.43	0.02	1.77
38-048	3/4"	1.21	0.56	0.04	2.82

## TEE

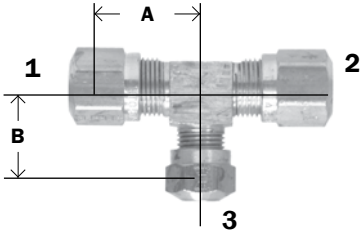


64NAB  
264NTA  
1464

## SAE# 100401BA

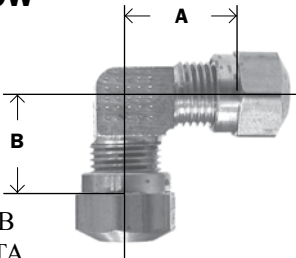
Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-044	1/4"	0.61	0.14	12.24
38-045	3/8"	0.78	0.18	11.76
38-046	1/2"	0.92	0.36	18.65
38-047	5/8"	1.09	0.46	40.20

## REDUCING BRANCH TEE



Part #	Tube O.D. (1&2) x 3	A	B	Approx. Wt. Lbs.	List Price
38-049	3/8" x 1/4"	0.72	0.69	0.24	44.94
38-057	1/2" x 3/8"	0.92	0.85	0.30	23.72

## ELBOW

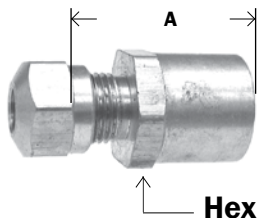


65NAB  
265NTA  
1465

## SAE# 100201BA

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-052	1/4"	0.61	0.10	11.99
38-053	3/8"	0.78	0.12	9.99
38-054	1/2"	0.92	0.26	24.42
38-055	5/8"	1.09	0.34	29.00

## FEMALE ADAPTER



66NAB  
66NTA  
1466  
66NBH

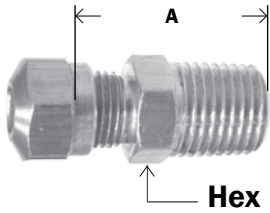
## SAE# 100103BA

Part #	Tube O.D. x Female NPT	A	Hex	Approx. Wt. Lbs.	List Price
38-060	1/4" x 1/8"	0.83	0.56	0.07	4.76
38-061	1/4" x 1/4"	1.06	0.68	0.08	6.58
38-062	3/8" x 1/8"	1.00	0.56	0.10	6.36
38-063	3/8" x 1/4"	1.18	0.68	0.10	7.98
38-064	3/8" x 3/8"	1.18	0.87	0.12	9.00
38-065	1/2" x 3/8"	1.27	0.87	0.16	12.35
38-066	1/2" x 1/2"	1.43	1.06	0.26	18.46
38-067	5/8" x 3/8"	1.31	0.87	0.28	19.76
38-068	5/8" x 1/2"	1.50	1.06	0.28	23.30

Dimension data can change without notice.  
Please see our website when dimensions are critical.

**MALE ADAPTER**

**SAE# 100102BA**

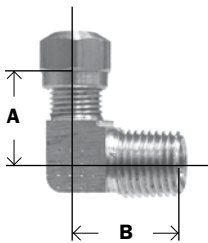


68NAB  
68NTA  
1468

Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
38-072	1/4" x 1/16"	0.90	0.43	0.05	18.29
38-073	1/4" x 1/8"	0.88	0.43	0.05	3.81
38-074	1/4" x 1/4"	1.09	0.56	0.07	6.50
38-075	1/4" x 3/8"	1.13	0.68	0.09	7.98
38-076	3/8" x 1/8"	1.03	0.56	0.08	4.33
38-077	3/8" x 1/4"	1.20	0.56	0.10	4.58
38-078	3/8" x 3/8"	1.24	0.68	0.10	5.12
38-079	3/8" x 1/2"	1.43	0.87	0.16	7.45
38-080	1/2" x 1/4"	1.32	0.68	0.13	7.57
38-081	1/2" x 3/8"	1.32	0.68	0.14	6.54
38-082	1/2" x 1/2"	1.51	0.87	0.21	8.45
38-087	1/2" x 3/4"	1.57	1.06	0.23	31.54
38-083	5/8" x 3/8"	1.39	0.81	0.17	16.02
38-084	5/8" x 1/2"	1.57	0.87	0.20	13.69
38-088	5/8" x 3/4"	1.71	1.06	0.25	19.46
38-085	3/4" x 1/2"	1.68	1.00	0.28	19.00
38-086	3/4" x 3/4"	1.71	1.06	0.33	22.26

**MALE ELBOW**

**SAE# 100202BA**

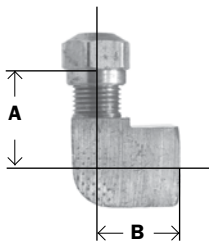


1469

Part #	Tube O.D. x Male NPTF	A	B	Approx. Wt. Lbs.	List Price
38-091	1/4" x 1/8"	0.61	0.65	0.06	4.82
38-092	1/4" x 1/4"	0.67	0.86	0.09	6.07
38-093	1/4" x 3/8"	0.72	0.85	0.12	6.53
38-094	3/8" x 1/8"	0.72	0.73	0.09	6.77
38-095	3/8" x 1/4"	0.80	0.93	0.11	6.44
38-090	3/8" x 1/4" LONG	0.80	1.44	0.14	20.42
38-101	3/8" x 3/8"	0.83	0.90	0.14	7.46
38-102	3/8" x 1/2"	0.93	1.09	0.21	9.69
38-103	1/2" x 1/4"	0.85	0.98	0.18	9.39
38-104	1/2" x 3/8"	0.92	0.98	0.19	10.26
38-109	1/2" x 3/8" LONG	0.94	1.38	0.26	43.16
38-105	1/2" x 1/2"	1.02	1.17	0.28	11.01
38-106	5/8" x 3/8"	1.00	1.05	0.24	18.66
38-107	5/8" x 1/2"	1.10	1.25	0.28	17.59
38-110	5/8" x 3/4"	1.09	1.24	0.38	27.52
38-108	3/4" x 1/2"	1.19	1.33	0.41	27.99

**FEMALE ELBOW**

**SAE# 100203BA**

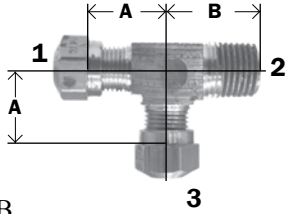


70NAB  
1470  
270NTA

Part #	Tube O.D. x Female NPTF	A	B	Approx. Wt. Lbs.	List Price
38-113	1/4" x 1/8"	0.68	0.52	0.08	7.30
38-114	1/4" x 1/4"	0.77	0.70	0.12	14.60
38-115	3/8" x 1/8"	0.82	0.58	0.14	19.88
38-116	3/8" x 1/4"	0.88	0.76	0.10	12.98
38-117	3/8" x 3/8"	0.93	0.76	0.12	16.93
38-118	1/2" x 3/8"	1.02	0.81	0.23	18.50
38-119	1/2" x 1/2"	1.13	1.01	0.36	28.04
38-120	5/8" x 1/2"	1.19	1.07	0.38	36.89

**MALE RUN TEE**

**SAE# 100424BA**

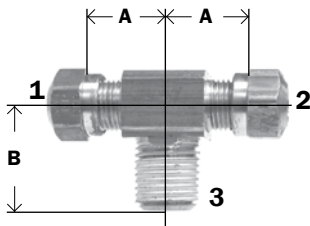


71NAB  
271NTA  
1471

Part #	Tube O.D. x Male NPTF x Tube O.D. 1x2x3	A	B	Approx. Wt. Lbs.	List Price
38-125	1/4" x 1/8" x 1/4"	0.61	0.65	0.10	13.80
38-126	1/4" x 1/4" x 1/4"	0.68	0.86	0.14	11.42
38-124	3/8" x 1/4" x 1/4"	0.72	0.69	0.14	30.16
38-127	3/8" x 1/4" x 3/8"	0.78	0.91	0.16	11.56
38-128	3/8" x 3/8" x 3/8"	0.83	0.90	0.20	10.00
38-129	1/2" x 3/8" x 1/2"	0.92	0.98	0.30	13.05

**MALE BRANCH TEE**

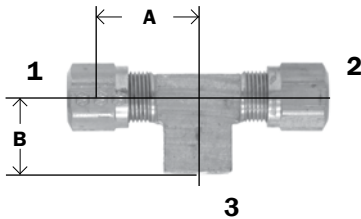
**SAE# 100425BA**



72NAB  
272NTA  
1472

Part #	Tube O.D. x Tube O.D. x Male NPTF 1x2x3	A	B	Approx. Wt. Lbs.	List Price
38-136	1/4" x 1/4" x 1/8"	0.61	0.65	0.10	9.60
38-137	1/4" x 1/4" x 1/4"	0.67	0.86	0.13	16.14
38-138	3/8" x 3/8" x 1/8"	0.71	0.73	0.14	16.11
38-132	3/8" x 1/4" x 1/4"	0.80	0.93	0.15	48.35
38-139	3/8" x 3/8" x 1/4"	0.78	0.91	0.16	11.24
38-133	1/2" x 1/2" x 1/4"	0.87	1.00	0.26	28.69
38-140	3/8" x 3/8" x 3/8"	0.83	0.90	0.20	11.65
38-134	1/2" x 3/8" x 3/8"	0.94	1.00	0.26	37.75
38-141	1/2" x 1/2" x 3/8"	0.92	0.98	0.30	14.76
38-142	1/2" x 1/2" x 1/2"	1.02	1.17	0.38	23.35
38-143	5/8" x 5/8" x 1/2"	1.09	1.24	0.44	52.50

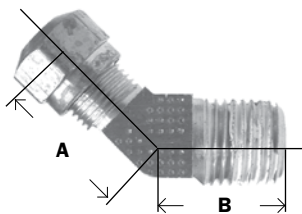
**FEMALE BRANCH TEE**



Part #	Tube O.D. x Tube O.D. x Female NPTF 1x2x3	A	B	Approx. Wt. Lbs.	List Price
38-144	3/8" x 3/8" x 1/4"	0.90	0.78	0.21	49.39
38-146	5/8" x 5/8" x 1/4"	1.04	0.89	0.48	76.80

**45° ELBOW**

**SAE# 100302BA**



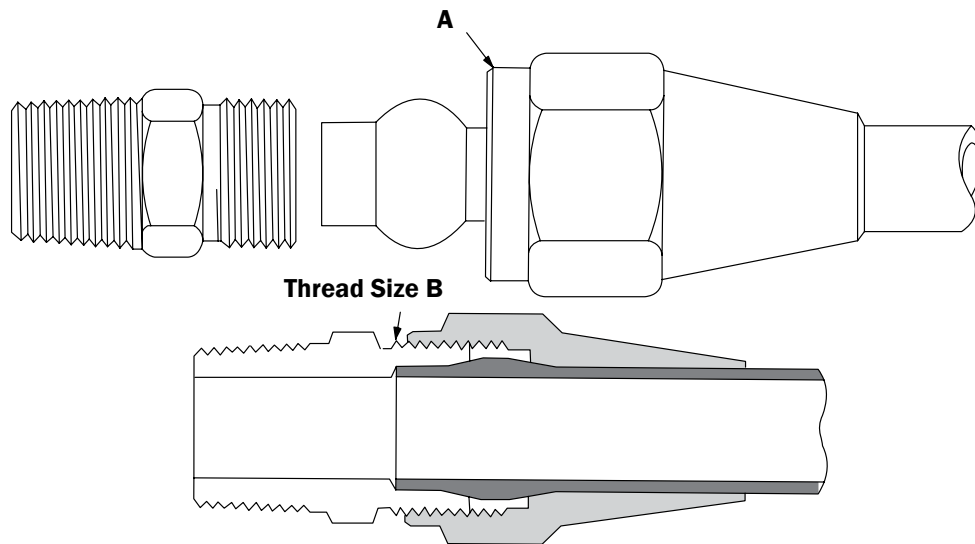
6945NAB  
279NTA  
1480

Part #	Tube O.D. x Male NPTF	A	B	Approx. Wt. Lbs.	List Price
38-148	1/4" x 1/8"	0.49	0.63	0.06	10.09
38-149	1/4" x 1/4"	0.60	0.85	0.08	11.24
38-150	3/8" x 1/8"	0.71	0.67	0.10	22.46
38-151	3/8" x 1/4"	0.72	0.86	0.10	8.19
38-152	3/8" x 3/8"	0.76	0.95	0.14	11.59
38-153	3/8" x 1/2"	0.78	1.20	0.24	19.03
38-157	1/2" x 1/4"	0.85	0.95	0.20	13.25
38-154	1/2" x 3/8"	0.84	0.94	0.20	13.35
38-155	1/2" x 1/2"	0.87	1.16	0.24	18.27
38-156	5/8" x 1/2"	1.00	1.20	0.28	21.33
38-158	3/4" x 1/2"	1.10	1.18	0.38	44.04

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[www.midlandmetal.com](http://www.midlandmetal.com)



# D.O.T. Air Brake - Copper Tubing



Tube O.D.	1/4	3/8	1/2	5/8	3/4
Thread Size-B	7/16-24	17/32-24	11/16-20	13/16-18	1-18

#### •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.

#### •Tolerance

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical.

#### •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 tubing. Threaded end "A" 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:

Tube Size	Additional Number of Turns from Hand Tight
1/4, 3/8	1-3/4
1/2, 5/8, 3/4	3-1/4

**SLEEVE**

**SAE# 120115BA**

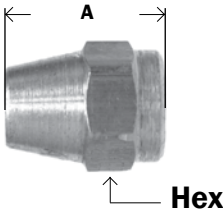


Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-161	1/4"	0.25	0.01	0.52
38-162	3/8"	0.31	0.02	0.75
38-163	1/2"	0.38	0.02	0.83
38-164	5/8"	0.44	0.02	1.33
38-165	3/4"	0.50	0.04	3.57

60AB  
1360

**NUT**

**SAE# 120111BA**

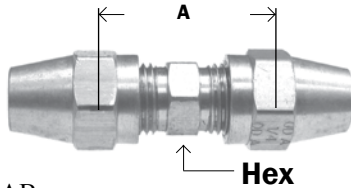


Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
38-170	1/4"	0.75	0.56	0.02	1.79
38-171	3/8"	1.13	0.62	0.04	2.10
38-172	1/2"	1.25	0.81	0.08	4.51
38-173	5/8"	1.38	0.94	0.12	4.70
38-174	3/4"	1.56	1.12	0.18	10.04

20961  
61AB  
1361

**UNION**

**SAE# 120101BA**

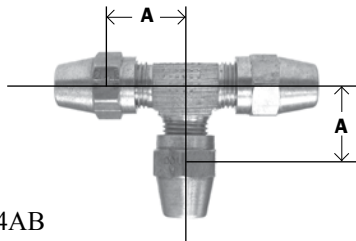


Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
38-179	1/4"	0.81	0.44	0.08	6.18
38-180	3/8"	1.10	0.56	0.14	7.76
38-181	1/2"	1.07	0.69	0.24	15.71
38-182	5/8"	1.41	0.81	0.34	20.35
38-183	3/4"	1.59	1.00	0.54	42.57

62AB  
1362

**TEE**

**SAE# 120401BA**



Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-188	1/4"	0.62	0.16	12.53
38-189	3/8"	0.82	0.24	15.19
38-190	1/2"	0.94	0.48	28.41
38-191	5/8"	1.09	0.60	38.76

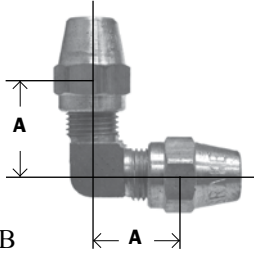
264AB  
1364

Dimension data can change without notice.  
Please see our website when dimensions are critical.



**ELBOW**

**SAE# 120201BA**



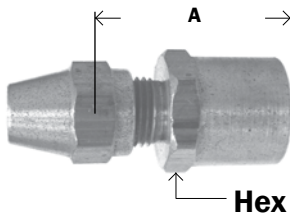
265AB  
1365

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-196	1/4"	0.62	0.10	16.03
38-197*	3/8"	0.78	0.16	11.61
38-198	1/2"	0.92	0.28	33.35
38-199	5/8"	1.10	0.42	98.44

\* Forged

**FEMALE ADAPTER**

**SAE# 120103BA**

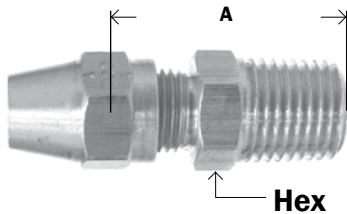


66AB  
1366

Part #	Tube O.D. x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
38-204	1/4" x 1/8"	0.84	0.56	0.08	5.69
38-205	1/4" x 1/4"	1.07	0.68	0.10	9.50
38-206	3/8" x 1/8"	1.00	0.56	0.10	25.56
38-207	3/8" x 1/4"	1.19	0.68	0.12	7.31
38-208	3/8" x 3/8"	1.18	0.87	0.16	8.28
38-209	1/2" x 3/8"	1.27	0.87	0.18	39.06
38-210	1/2" x 1/2"	1.44	1.06	0.20	17.39
38-211	5/8" x 3/8"	1.31	0.87	0.24	17.34
38-212	5/8" x 1/2"	1.50	1.06	0.26	25.84

**MALE ADAPTER**

**SAE# 120102BA**



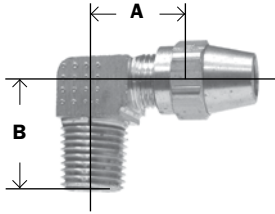
68AB  
1368

Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
38-217	1/4" x 1/8"	0.88	0.43	0.06	3.68
38-218	1/4" x 1/4"	0.97	0.56	0.08	5.19
38-219	1/4" x 3/8"	1.14	0.68	0.10	6.36
38-220	3/8" x 1/8"	1.02	0.56	0.08	8.08
38-221	3/8" x 1/4"	1.09	0.56	0.10	5.82
38-222	3/8" x 3/8"	1.19	0.69	0.12	6.25
38-223	3/8" x 1/2"	1.45	0.87	0.18	6.67
38-224	1/2" x 1/4"	1.32	0.69	0.16	12.46
38-225	1/2" x 3/8"	1.35	0.69	0.18	9.44
38-226	1/2" x 1/2"	1.51	0.87	0.24	15.18
38-227	5/8" x 3/8"	1.39	0.81	0.22	16.08
38-228	5/8" x 1/2"	1.57	0.87	0.24	17.76
38-229	3/4" x 1/2"	1.67	1.00	0.34	19.85
38-230	3/4" x 3/4"	1.71	1.06	0.40	28.15

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**90° MALE ELBOW**

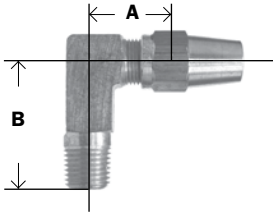
**SAE# 120202BA**



269AB  
1369

Part #	Tube O.D. x Male NPTF	A	B	Approx. Wt. Lbs.	List Price
38-235	1/4" x 1/8"	0.64	0.76	0.08	5.96
38-236	1/4" x 1/4"	0.69	0.88	0.10	9.41
38-237	1/4" x 3/8"	0.73	0.86	0.14	10.02
38-238	3/8" x 1/8"	0.73	0.75	0.12	9.87
38-239	3/8" x 1/4"	0.80	0.93	0.12	8.65
38-240	3/8" x 3/8"	0.83	0.90	0.16	9.52
38-241	3/8" x 1/2"	0.95	1.11	0.24	10.52
38-242	1/2" x 1/4"	0.85	0.98	0.24	20.09
38-243	1/2" x 3/8"	0.92	0.98	0.22	12.47
38-244	1/2" x 1/2"	1.04	1.19	0.30	20.31
38-245	5/8" x 3/8"	1.01	1.06	0.34	20.05
38-246	5/8" x 1/2"	1.10	1.25	0.36	22.37
38-247	3/4" x 1/2"	1.19	1.32	0.44	28.95

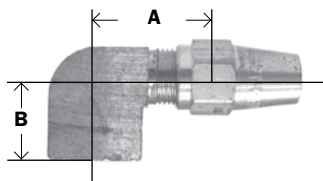
**LONG PATTERN ELBOW**



Part #	Tube O.D. x Male NPTF	A	B	Approx. Wt. Lbs.	List Price
38-249	3/8" x 1/4"	0.81	1.44	0.16	19.73

**90° FEMALE ELBOW**

**SAE# 120203BA**

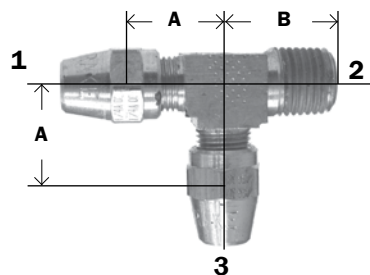


270AB  
1370

Part #	Tube O.D. x Female NPTF	A	B	Approx. Wt. Lbs.	List Price
38-252	1/4" x 1/8"	0.69	0.52	0.10	26.95
38-253	1/4" x 1/4"	0.78	0.71	0.14	14.15
38-255	3/8" x 1/4"	0.84	0.78	0.16	8.10
38-256	3/8" x 3/8"	0.93	0.77	0.18	17.51
38-257	1/2" x 3/8"	1.03	0.82	0.26	35.78
38-259	5/8" x 1/2"	1.19	1.07	0.44	31.22

**MALE RUN TEE**

**SAE# 120424BA**

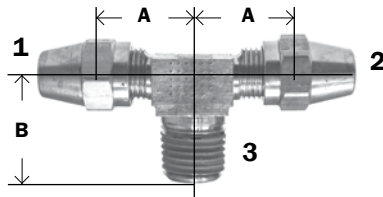


271AB  
1371

Part #	Tube O.D. x Male NPTF (1&3)x2	A	B	Approx. Wt. Lbs.	List Price
38-264	1/4" x 1/8"	0.62	0.66	0.12	20.21
38-265	1/4" x 1/4"	0.68	0.87	0.16	19.02
38-266	3/8" x 1/4"	0.79	0.92	0.20	17.80
38-267	3/8" x 3/8"	0.83	0.90	0.24	15.38
38-269	1/2" x 1/2"	1.03	1.18	0.42	20.37

**MALE BRANCH TEE**

**SAE# 120425BA**



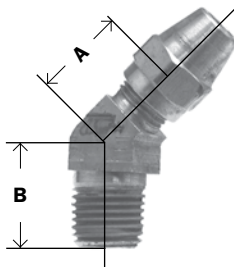
Part #	Tube O.D. x Male NPTF (1&2)x3	A	B	Approx. Wt. Lbs.	List Price
38-278	3/8" x 1/4"	0.78	0.91	0.18	19.63
38-279	3/8" x 3/8"	0.85	0.92	0.24	12.09
38-280	1/2" x 3/8"	0.91	0.98	0.36	16.04
38-281	1/2" x 1/2"	1.03	1.18	0.42	36.48

272AB  
1372

**BRASS**

**45° MALE ELBOW**

**SAE# 120302BA**



Part #	Tube O.D. x Male NPTF	A	B	Approx. Wt. Lbs.	List Price
38-287	1/4" x 1/8"	0.49	0.63	0.08	8.41
38-288	1/4" x 1/4"	0.60	0.85	0.10	15.48
38-290	3/8" x 1/4"	0.72	0.86	0.18	7.57
38-291	3/8" x 3/8"	0.75	0.94	0.20	14.13
38-292	3/8" x 1/2"	0.78	1.16	0.22	23.96
38-293*	1/2" x 3/8"	0.82	0.94	0.18	26.31
38-294	1/2" x 1/2"	0.87	1.16	0.24	25.85

\* Forged

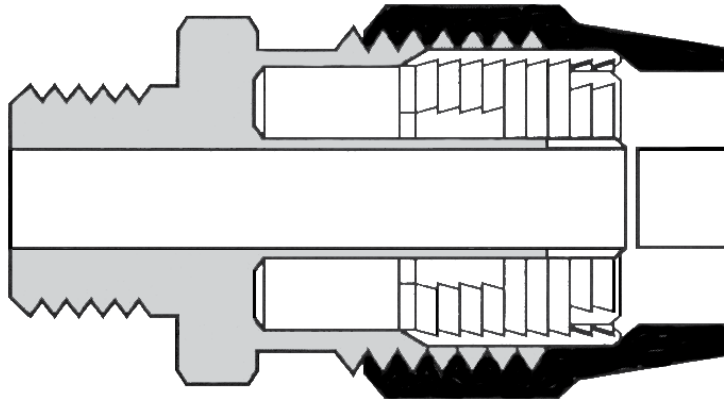
279AB  
1380

THE DIFFERENCE BETWEEN A SUCCESSFUL PERSON AND OTHERS IS NOT LACK OF STRENGTH NOT A LACK OF KNOWLEDGE BUT RATHER A LACK OF WILL.

– VINCE LOMBARDI

# D.O.T. Air Brake - Hose/ Ends

BRASS



**•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°F to + 120° F (-40°C to +48°C )

**•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.

**• Tolerance**

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical.

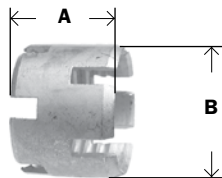
**•Assembly Instructions**

- 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**

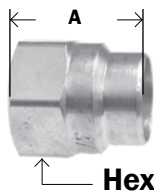
- #60HC
- 3380-A
- 0903610
- 367
- 60RB



Part #	Hose I.D. Size	A	B	Approx. Wt. Lbs.	List Price
38-300	3/8"	0.69	0.90	0.02	2.16
38-301	1/2"	0.64	1.03	0.02	3.74

**NUT**

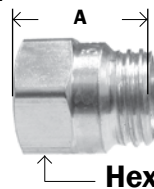
- 61RB
- #61HC
- 369
- 3380-B
- 0903624



Part #	Hose I.D. Size	A	Hex	Approx. Wt. Lbs.	List Price
38-306	3/8"	1.26	1.03	0.04	7.18
38-307	1/2"	1.20	1.25	0.06	5.87

**SPRING NUT**

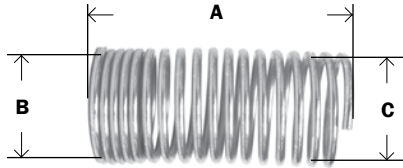
- #61HCS
- 0903613
- 3380-D
- 61RBSG



Part #	Hose I.D. Size	Thread	A	Hex	Approx. Wt. Lbs.	List Price
38-312	3/8"	31/32-20	1.25	1.03	0.04	4.59
38-313	1/2"	1-3/32-20	1.20	1.25	0.06	6.01



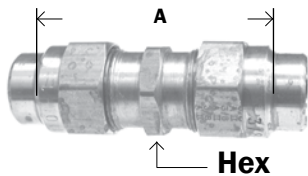
**SPRING**



Part #	Hose I.D.	A	B	C	Approx. Wt. Lbs.	List Price
38-351	3/8"	2.75	0.84	0.78	0.20	1.86
38-352	1/2"	2.75	1.10	1.10	0.22	3.55

#60SG      3380-C  
0901045    377

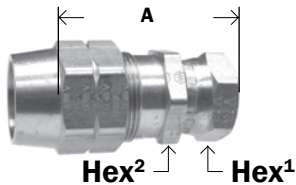
**UNION**



Part #	Hose I.D.	Thread	A	Hex	Approx. Wt. Lbs.	List Price
38-318	3/8"	31/32-30	2.55	0.97	0.32	29.10
38-319	1/2"	1-1/8-20	2.55	1.12	0.48	46.79

#62HC      362  
3380B-Y0

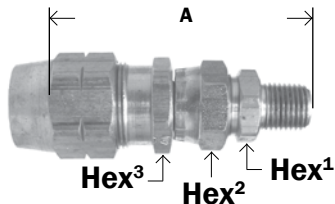
**FEMALE CONNECTOR HOSE**



Part #	Hose I.D. x Female ABS	A	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
38-357	3/8" x 3/4-20	1.96	0.87	0.97	0.24	32.85
38-358	1/2" x 7/8-20	2.1	1.06	1.12	0.38	44.23

#66ABS      3380B-Y7  
66RBSV     386

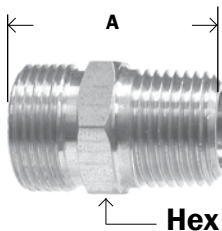
**MALE CONNECTOR**



Part #	Hose I.D. x Male Pipe	A	Hex 1	Hex 2	Hex 3	Approx. Wt. Lbs.	List Price
38-363	3/8" x 1/4"	2.90	0.75	0.87	0.97	0.38	35.37
38-364	1/2" x 3/8"	2.96	0.87	1.06	1.12	0.46	82.34

#68ABS      3380B-Y8  
09155      387

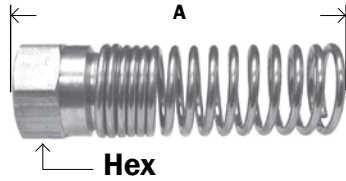
**ADAPTER**



Part #	Male ABS x Male Pipe	ABS Thread	A	Hex	Approx. Wt. Lbs.	List Price
38-369	3/8" x 1/4"	3/4-20	1.14	0.75	0.06	3.63
38-368	3/8" x 3/8"	3/4-20	1.14	0.75	0.08	3.38
38-372	3/8" x 1/2"	3/4-20	1.37	0.87	0.12	5.47
38-370	1/2" x 3/8"	7/8-20	1.18	0.87	0.10	6.81
38-371	1/2" x 1/2"	7/8-20	1.38	0.87	0.12	11.22

#68ABS      76RB  
1390      388

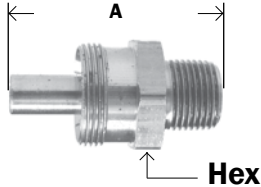
**NUT AND SPRING ASSEMBLY**



379  
67RBSG  
0999999

Part #	Hose I.D. Size	A	Hex	Approx. Wt. Lbs.	List Price
38-015	3/8"	3.55	1.03	0.18	4.90
38-016	1/2"	3.50	1.25	0.24	8.54

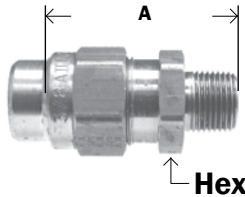
**ADAPTER BODY**



#68B  
W1391Z

Part #	Hose I.D. x Male Pipe	A	Hex	Approx. Wt. Lbs.	List Price
38-324	3/8" x 1/4"	1.93	0.97	0.12	5.56
38-325	3/8" x 3/8"	1.92	0.97	0.14	5.66
38-326	3/8" x 1/2"	2.02	1.00	0.20	6.12
38-327	1/2" x 3/8"	2.07	1.12	0.18	16.31
38-328	1/2" x 1/2"	2.06	1.12	0.20	9.34

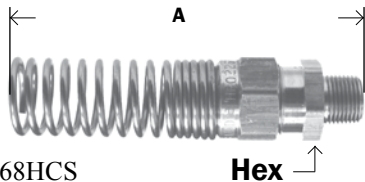
**MALE ADAPTER**



#68HC  
368  
3380B-Y2  
68RB

Part #	Hose I.D. x Male Pipe	A	Hex	Approx. Wt. Lbs.	List Price
38-333	3/8" x 1/4"	1.91	0.97	0.22	11.32
38-334	3/8" x 3/8"	1.94	0.97	0.24	12.80
38-335	3/8" x 1/2"	2.12	0.97	0.26	14.51
38-336	1/2" x 3/8"	2.07	1.12	0.33	17.25
38-337	1/2" x 1/2"	2.07	1.12	0.36	18.77

**MALE ADAPTER**



#68HCS  
3380B-Y3  
68RBSG  
378

Part #	Hose I.D. x Male Pipe	A	Hex	Approx. Wt. Lbs.	List Price
38-342	3/8" x 1/4"	4.91	1.00	0.32	13.31
38-343	3/8" x 3/8"	4.96	1.00	0.34	13.53
38-344	3/8" x 1/2"	5.53	1.00	0.38	15.01
38-345	1/2" x 3/8"	4.75	1.12	0.48	18.99
38-346	1/2" x 1/2"	4.88	1.12	0.52	21.97

**HOSE END KITS**



• Consists of two swivel ends and a hex wrench for 3/8" ID J1402 type A. All and All hose with a minimum of 3/4" O.D.

Part #		List Price
38-375	3/8" NPTF	18.07
38-376	1/2" NPTF	23.60

**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 standard. 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.

lation of tubing. All male threads have a pre-applied Teflon® based pipe sealant to provide for easy assembly and leak proof seal.

• **Materials:**

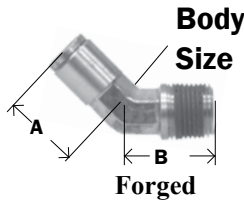
CA360 Brass - Barstock CA377 - Forged  
"O" Ring: Buna - Nitrile (90 Durometer)  
EP (Ethylene Propylene)

• **Working Pressures & Temperature Ranges**

Vacuum to 150 PSI  
-40°F to 200° F ( -40°C to +93°C )

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 instal-

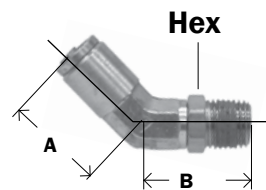
**MALE 45° ELBOW**



AQ54DOT  
179MTNS  
1880  
DQ54DOT

Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
540402	1/4" x 1/8"	0.87	0.81	0.56	0.06	11.44
540404	1/4" x 1/4"	0.89	0.98	0.56	0.06	12.88
540602	3/8" x 1/8"	1.02	0.93	0.75	0.08	12.46
540604	3/8" x 1/4"	1.06	1.10	0.75	0.10	14.41
540606	3/8" x 3/8"	1.10	1.12	0.75	0.10	16.33
540608	3/8" x 1/2"	1.14	1.30	0.87	0.15	18.10
540804	1/2" x 1/4"	1.22	1.10	0.87	0.13	24.93
540806	1/2" x 3/8"	1.26	1.12	0.87	0.16	17.90
540808	1/2" x 1/2"	1.30	1.30	0.87	0.18	25.62
541006	5/8" x 3/8"	1.46	1.02	1.06	0.22	48.70
541008	5/8" x 1/2"	1.46	1.22	1.06	0.21	26.92
541208	3/4" x 1/2"	1.52	1.30	1.00	0.28	34.59
541212	3/4" x 3/4"	1.36	1.18	0.94	0.32	40.98

**MALE 45° SWIVEL ELBOW**

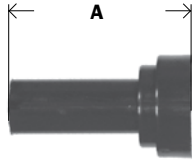


AQ54DOTS  
179PMT  
1880  
DQ54DOTS

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
540402S	1/4" x 1/8"	0.99	0.98	0.43	0.06	17.75
540404S	1/4" x 1/4"	0.77	0.94	0.55	0.09	17.90
540602S	3/8" x 1/8"	1.07	1.08	0.43	0.10	16.47
540604S	3/8" x 1/4"	1.07	1.13	0.56	0.11	16.55
540606S	3/8" x 3/8"	1.08	1.23	0.68	0.14	17.37
540804S	1/2" x 1/4"	1.22	1.22	0.56	0.14	31.38
540806S	1/2" x 3/8"	1.20	1.31	0.68	0.16	27.72
540808S	1/2" x 1/2"	1.20	1.61	0.88	0.18	24.39
541008S	5/8" x 1/2"	1.39	1.68	0.87	0.24	37.07

Dimension data can change without notice. Please see our website when dimensions are critical.

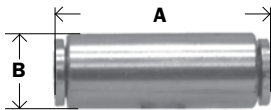
**PLUG**



1829  
DQ59DOT  
639PMT

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
595320	5/32"	1.16	0.01	1.16
590400	1/4"	0.81	0.02	2.37
590600	3/8"	1.34	0.02	2.25
590800	1/2"	0.99	0.04	4.09

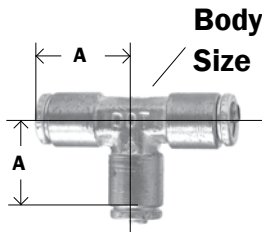
**UNION**



AQ62DOT  
62PMT  
1862  
DQ62DOT

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
620532	5/32"	1.18	0.39	0.06	9.05
620400	1/4"	1.40	0.51	0.08	11.27
620600	3/8"	1.74	0.67	0.14	10.98
620604	3/8" x 1/4"	1.70	0.67	0.18	28.60
620800	1/2"	2.01	0.81	0.19	10.87
621000	5/8"	2.42	1.00	0.30	22.92
621200	3/4"	2.48	1.18	0.44	45.76

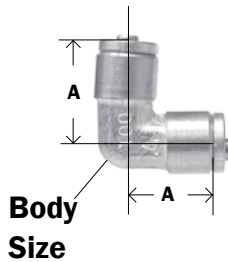
**UNION TEE**



AQ64DOT  
164 PMT  
1864  
DQ64DOT

Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
640400	1/4"	0.83	0.37	0.11	16.51
640600	3/8"	1.07	0.52	0.22	20.26
640800	1/2"	1.26	0.62	0.25	27.81
641000	5/8"	1.32	0.69	0.32	43.10

**UNION ELBOW**

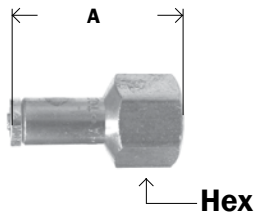


AQ65DOT  
165 PMT  
1865  
DQ65DOT

Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
655320	5/32"	0.66	0.29	0.03	22.85
650400	1/4"	0.83	0.37	0.06	11.60
650600	3/8"	1.07	0.50	0.10	15.93
650800	1/2"	1.26	0.62	0.18	21.41



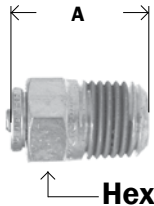
## FEMALE CONNECTOR



AQ66DOT  
66PMT  
1866  
DQ66DOT

Part #	Tube O.D. x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
660402	1/4" x 1/8"	1.31	0.56	0.06	10.25
660404	1/4" x 1/4"	1.59	0.68	0.10	13.89
660602	3/8" x 1/8"	1.45	0.68	0.09	34.53
660604	3/8" x 1/4"	1.74	0.68	0.11	12.53
660606	3/8" x 3/8"	1.78	0.87	0.14	22.56
660804	1/2" x 1/4"	1.66	0.87	0.14	46.62
660806	1/2" x 3/8"	1.59	0.87	0.16	27.49
660808	1/2" x 1/2"	2.11	0.68	0.25	31.16

## MALE CONNECTOR

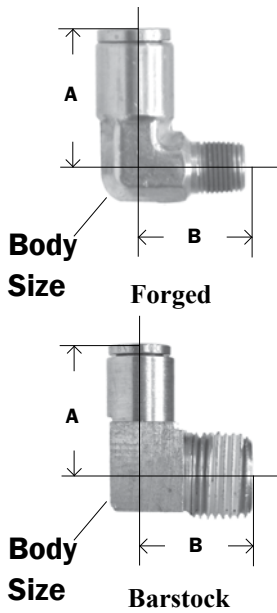


AQ68DOT  
68PM  
1868  
DQ68DOT  
68PMT

Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
685320	5/32" x 10/32"	0.90	0.37	0.02	11.75
685321	5/32" x 1/16"	0.78	0.37	0.02	8.15
685322	5/32" x 1/8"	0.79	0.43	0.02	9.07
680302	3/16" x 1/8"	1.02	0.50	0.02	10.54
680421	1/4" x 1/16"	1.17	0.44	0.02	12.44
680402	1/4" x 1/8"	1.04	0.50	0.04	5.16
680404	1/4" x 1/4"	1.17	0.56	0.05	5.55
680406	1/4" x 3/8"	1.20	0.68	0.08	9.75
680602	3/8" x 1/8"	1.32	0.68	0.04	7.83
680604	3/8" x 1/4"	1.48	0.68	0.08	7.06
680606	3/8" x 3/8"	1.42	0.68	0.08	7.68
680608	3/8" x 1/2"	1.46	0.87	0.14	13.57
680804	1/2" x 1/4"	1.68	0.87	0.11	16.55
680806	1/2" x 3/8"	1.64	0.87	0.12	9.81
680808	1/2" x 1/2"	1.72	0.87	0.14	10.16
681006	5/8" x 3/8"	1.87	1.06	0.18	18.75
681008	5/8" x 1/2"	2.12	1.06	0.18	20.38
681208	3/4" x 1/2"	2.11	1.18	0.20	26.11
681212	3/4" x 3/4"	2.03	1.18	0.20	32.31

Dimension data can change without notice. Please see our website when dimensions are critical.

**MALE ELBOW**

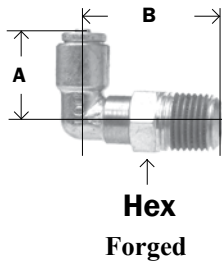


Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
695302*	5/32" x 1/16"	0.75	0.59	0.32	0.03	14.54
695322	5/32" x 1/8"	0.78	0.69	0.32	0.03	9.82
690302	3/16" x 1/8"	0.81	0.75	0.47	0.03	19.00
690402	1/4" x 1/8"	0.81	0.79	0.55	0.05	8.65
690404	1/4" x 1/4"	0.87	1.02	0.71	0.06	9.09
690406	1/4" x 3/8"	0.94	1.10	0.87	0.11	11.49
690602	3/8" x 1/8"	1.08	0.87	0.71	0.14	12.47
690604	3/8" x 1/4"	1.06	1.02	0.71	0.14	10.86
690606	3/8" x 3/8"	1.14	1.10	0.89	0.15	11.95
690608	3/8" x 1/2"	1.14	1.38	0.94	0.20	20.01
690804	1/2" x 1/4"	1.22	1.14	0.87	0.22	17.13
690806	1/2" x 3/8"	1.26	1.14	0.87	0.22	17.02
690808	1/2" x 1/2"	1.28	1.38	0.94	0.24	22.21
691006	5/8" x 3/8"	1.44	1.22	0.87	0.30	24.66
691008	5/8" x 1/2"	1.54	1.42	1.18	0.32	25.61
691208	3/4" x 1/2"	1.52	1.48	0.94	0.32	34.44
691212	3/4" x 3/4"	1.59	1.50	1.18	0.34	41.60

\* Barstock

AQ69DOT  
169 PMTNS  
1869  
DQ69DOT

**MALE SWIVEL ELBOW**



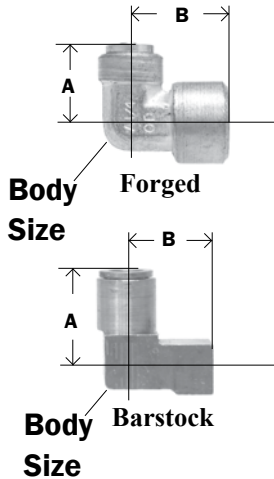
Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
695322S	5/32" x 1/8"	0.79	0.88	0.44	0.07	11.99
690402S	1/4" x 1/8"	0.83	0.91	0.43	0.07	11.07
690404S	1/4" x 1/4"	0.83	1.12	0.56	0.10	15.69
690406S	1/4" x 3/8"	1.02	1.13	0.68	0.10	20.01
690602S	3/8" x 1/8"	1.07	1.05	0.55	0.10	12.47
690604S	3/8" x 1/4"	1.07	1.29	0.75	0.10	14.27
690606S	3/8" x 3/8"	1.10	1.23	0.68	0.14	14.77
690608S	3/8" x 1/2"	1.07	1.44	0.87	0.19	21.75
690804S	1/2" x 1/4"	1.27	1.27	0.87	0.16	39.00
690806S	1/2" x 3/8"	1.27	1.42	0.87	0.18	18.41
690808S	1/2" x 1/2"	1.27	1.62	0.87	0.26	24.09
691006S	5/8" x 3/8"	1.54	1.41	0.68	0.28	24.08
691008S	5/8" x 1/2"	1.54	1.71	0.87	0.30	28.71
691208S	3/4" x 1/2"	1.40	2.04	1.06	0.50	92.84
691212S	3/4" x 3/4"	1.40	1.60	1.06	0.56	51.47

AQ69DOTS  
169PMT  
1869  
DQ69DOTS

IF NOT US, WHO? IF NOT NOW, WHEN?

– JOHN F. KENNEDY

**FEMALE ELBOW**



Part #	Tube O.D. x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
700402	1/4" x 1/8"	0.94	0.71	0.55	0.06	9.95
700404	1/4" x 1/4"	1.13	1.03	0.50	0.10	12.39
700406	1/4" x 3/8"	1.27	0.98	0.62	0.16	15.68
700602	3/8" x 1/8"	1.11	0.96	0.71	0.15	52.28
700604	3/8" x 1/4"	1.08	0.98	0.50	0.12	12.44
700606	3/8" x 3/8"	1.08	1.05	0.62	0.17	17.30
700806*	1/2" x 3/8"	1.22	1.11	0.82	0.26	42.70
700808	1/2" x 1/2"	1.37	1.31	0.62	0.30	50.78

\* Barstock

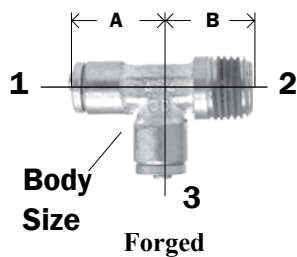
AQ70DOTS  
1870  
DQ70DOTS  
170PMTNS

**FEMALE SWIVEL ELBOW**



Part #	Size	List Price
700404S	1/4" x 1/4"	9.86

**MALE RUN TEE**

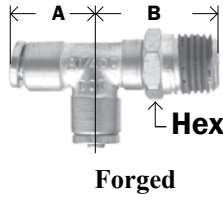


Part #	Tube O.D. x Male NPTF (1 x 3) x 2	A	B	Body Size	Approx. Wt. Lbs.	List Price
710402	1/4" x 1/8"	0.88	0.79	0.55	0.06	13.99
71040604	(1/4" x 3/8") x 1/4"	0.89	0.96	0.71	0.20	40.51
710404	1/4" x 1/4"	0.88	0.96	0.71	0.08	14.94
710604	3/8" x 1/4"	1.09	0.96	0.71	0.20	18.41
71060404	(3/8" x 1/4") x 1/4"	1.09	0.96	0.71	0.20	50.95
710606	3/8" x 3/8"	1.14	1.10	0.87	0.12	17.60
71060406	(3/8" x 1/4") x 3/8"	1.14	1.10	0.87	0.20	37.94
710608	3/8" x 1/2"	1.09	1.11	0.94	0.14	61.95
710806	1/2" x 3/8"	1.30	1.14	0.87	0.28	28.58
71080804	1/2" x 1/4"	1.30	1.14	0.87	0.28	84.40

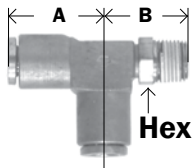
AQ71DOT  
171PMTNS  
1871  
DQ71DOT

**MALE SWIVEL RUN TEE**

AQ71DOTS  
171PMT  
1871  
DQ71DOTS



**Forged**



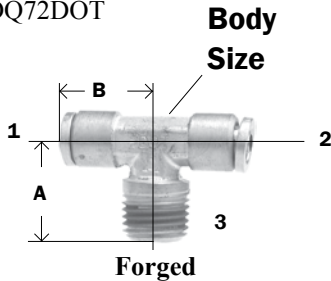
**Barstock**

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
710402S	1/4" x 1/8"	0.84	0.91	0.43	0.10	15.69
710404S	1/4" x 1/4"	0.83	1.12	0.56	0.11	17.61
710604S	3/8" x 1/4"	1.07	1.29	0.75	0.15	21.07
710606S	3/8" x 3/8"	1.06	1.17	0.50	0.14	22.04
710804S*	1/2" x 1/4"	1.21	1.22	0.56	0.24	92.78
710806S	1/2" x 3/8"	1.24	1.28	0.62	0.24	35.74
710808S	1/2" x 1/2"	1.24	1.58	0.62	0.30	37.48

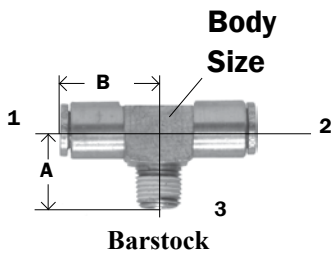
\* Barstock

**MALE BRANCH TEE**

AQ72DOT  
172PMTNS  
1872  
DQ72DOT



**Forged**



**Barstock**

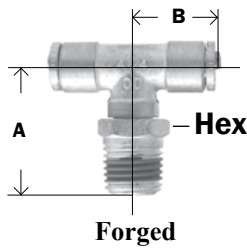
Part #	Tube O.D. x Male NPTF (1 x 2) x 3	A	B	Body Size	Approx. Wt. Lbs.	List Price
720302*	3/16" x 1/8"	0.64	0.75	0.41	0.07	30.29
720402	1/4" x 1/8"	0.79	0.85	0.55	0.10	14.20
720404	1/4" x 1/4"	0.96	0.89	0.71	0.10	14.73
720604	3/8" x 1/4"	0.96	1.08	0.71	0.20	20.14
72060404	(3/8" x 1/4") x 1/4"	0.96	0.89	0.71	0.20	58.93
720606	3/8" x 3/8"	1.10	1.14	0.87	0.10	28.00
720804	1/2" x 1/4"	1.14	1.22	0.87	0.20	30.92
720806	1/2" x 3/8"	1.07	1.26	0.62	0.24	27.09
720808	1/2" x 1/2"	1.42	1.34	0.94	0.32	39.58
72100808	(5/8" x 1/2") x 1/2"	1.46	1.30	1.18	0.20	72.89

\* Barstock

DON'T WORRY ABOUT FAILURES, WORRY ABOUT THE CHANCES YOU MISS WHEN YOU DON'T EVEN TRY.

– JACK CANFIELD

**MALE SWIVEL BRANCH TEE**



AQ72DOTS  
172PMT  
1872  
DQ72DOTS

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
720402S	1/4" x 1/8"	0.91	0.83	0.43	0.12	15.63
720404S	1/4" x 1/4"	1.04	1.01	0.56	0.14	16.93
720602S	3/8" x 1/8"	1.07	1.08	0.43	0.19	18.67
720604S	3/8" x 1/4"	1.29	1.08	0.75	0.20	22.39
720606S	3/8" x 3/8"	1.21	0.98	0.68	0.18	22.12
720804S	1/2" x 1/4"	1.39	1.28	0.87	0.30	27.96
720806S	1/2" x 3/8"	1.26	1.31	0.68	0.34	29.26
720808S	1/2" x 1/2"	1.26	1.61	0.87	0.22	31.05

**FEMALE BRANCH TEE**



**(RUN) BRANCH**

Part #	(1 & 2) x 3	List Price
770402	1/4" x 1/8"	17.91
770404	1/4" x 1/4"	22.59
770604	3/8" x 1/4"	17.68

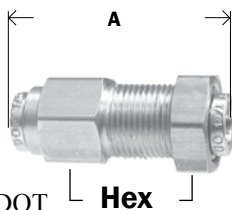
**GLADHAND BULKHEAD CONNECTOR**



**TUBE OD x MALE NPTF**

Part #	Size	List Price
830808	1/2" x 1/2"	55.94

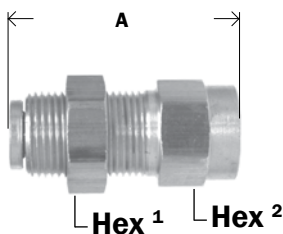
**BULKHEAD UNION**



AQ82DOT  
62PMTBH  
1874  
DQ82DOT

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
820400	1/4"	1.90	0.68	0.16	20.88
820600	3/8"	1.55	1.06	0.21	35.89
820800	1/2"	1.82	1.18	0.14	39.32
821000	5/8"	2.42	1.25	0.30	47.15

**FEMALE BULKHEAD UNION**



AQ86DOT  
1873  
DQ86DOT  
66PMTBH

Part #	Tube O.D. x Female NPTF	A	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
860404	1/4 x 1/4"	1.59	0.94	0.87	0.10	13.64
860604	3/8" x 1/4"	1.87	0.94	0.94	0.14	15.13
860606	3/8" x 3/8"	2.20	1.12	0.94	0.16	21.01
860808	1/2" x 1/2"	2.64	1.31	1.06	0.32	35.52

• Jam nuts not available seperately

**AIR BRAKE - SPLIT SLEEVE/ ACCESSORIES**

**BRASS FITTINGS**

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

**TRANSMISSION BRASS FITTINGS**

APPLICATIONS: Used with SAE J844 Type A nylon tube in pressure protected air transmission applications.

TECHNICAL DATA: Maximum working pressure up to 150 PSI. Fittings will withstand variations from -40°F to +220°F (-40°C to + 104°C)

Ideally suited for use in passive protected air transmission applications. A specially designed slotted sleeve helps eliminate notch stress related to over torque.

1460  
90791  
280  
90946

**COLLET**



Part #	Tube O.D.	List Price
38-711	5/32"	1.56
25-001	1/8"	1.57

1461  
90790  
281  
90885

**NUT**



Part #	Tube O.D.	List Price
38-732	5/32"	1.88
25-033	1/8"	1.77

1462  
90792  
283  
90891

**DOUBLE END UNION**



Part #	Tube O.D.	List Price
38-761	5/32"	14.36
25-062	1/8"	8.38

1468  
90794  
282  
90985

**CONNECTOR**



Part #	Tube O.D.	Pipe Thread	List Price
38-769	5/32"	1/16"	9.49
38-770	5/32"	1/8"	8.99
25-175	1/8"	1/16"	9.48
25-176	1/8"	1/8"	8.59

**ELBOW**



Part #	Tube O.D.	Pipe Thread	List Price
38-718	5/32"	1/8"	8.45
25-220	1/8"	1/8"	8.42

**AIR BRAKE ACCESSORIES  
GLADHAND COUPLINGS**

- Die Cast Aluminum Body
- Conforms to SAE J318
- Connects to 1/2" pipe
- Rubber seal
- SS wear plates
- Premium
- Plated finish for durability
- Clamp plate wraps around for extra security
- 3/8" Mounting Bolt hole



44105  
36101

W79850  
• polarized

**SERVICE (Signal) Blue**  
connects only to service

Part #	List Price
38-712	17.12

441016

W79851 **EMERGENCY (Supply Line) Red**

36201

• polarized

Part #	connects only to emergency	List Price
38-714		17.12

441017

GH017

**UNIVERSAL - Gold**

36301

W76150

• non-polarized

Part #	connects to both styles	List Price
38-716		18.48

**GLADHAND SEAL**



Part #	List Price
38-720	<b>Full Face</b> 2.00
38-720B	<b>Blue</b> 1.88
38-720R	<b>Red</b> 1.88

**GLADHAND GRIPS**

**TEC-Grip Handles**



- Sold in a package of 1 red and 1 blue.
- Non-slip, hex shape body from a UV-resistant polymer that is more shatter proof.
- Inside edges are beveled to eliminate hose chafing.

**Flex Grip Set**

**NEW**

Part #	List Price
38-724	45.54



**NEW**

- Rubberized to be used on rubber hose assemblies.
- Protects hose/tubing during connection.
- Allows gradual bend restriction during tight turns.

- Pack of 1 red and 1 blue

Part #	List Price
38-725	48.28

## BRASS FITTINGS

## AIR BRAKE - TUBING



- Air Brake Tubing available from inventory in a large variety of colors and sizes
- Superior cold weather flexibility and abrasion resistance
- UV and ozone resistant nylon
- Meets or exceeds SAEJ844 (Type A - non-reinforced & Type B - reinforced)
- Meets or exceeds DOT requirements for use with compression fittings (NOTE: SAE does not recognize 1/8", 5/32" or 3/16" O.D. tubing for use with air brake systems)
- Air Brake Tubing identified per SAE J844 & FMVSS No. 106 Brake Hoses, 49 CFR 571.106
- Conforms to our own rigorous qualification and inspection testing which exceeds SAE and DOT requirements
- Designed to operate at up to 150 psi in air brake systems
- Resistant to attack by gasoline, diesel fuel and commonly used road and cleaning chemicals
- Air Brake Tubing available on bulk spools or by packages
- Operating range: -40° - 200°F - Not made for fuel

BRASS

Part Number	Color	Length	Nominal O.D.	Nominal Wall	List Price
38-950B2	Black	2000'	1/8"	0.023"	1800.00
38-950	Black	100'	1/8"	0.023"	101.70
38-95BA	Black	50'	1/8"	0.023"	60.00
38-951B1	Black	1000'	5/32"	0.032"	1380.00
38-951	Black	100'	5/32"	0.032"	1380.00
38-951BA	Black	50'	5/32"	0.032"	81.00
38-953B1	Black	1000'	3/16"	0.035"	1800.00
38-953	Black	100'	3/16"	0.035"	198.00
38-953BA	Black	50'	3/16"	0.035"	111.00
38-9523	Black	1000'	1/4"	0.040"	1395.00
38-952	Black	100'	1/4"	0.040"	124.65
38-952BA	Black	50'	1/4"	0.040"	66.00
38-952U1	Blue	1000'	1/4"	0.040"	1080.00
38-952U	Blue	100'	1/4"	0.040"	178.73
38-952UA	Blue	50'	1/4"	0.040"	72.00
38-952O1	Orange	1000'	1/4"	0.040"	1140.00
38-952O	Orange	100'	1/4"	0.040"	120.00
38-952OA	Orange	50'	1/4"	0.040"	78.00
38-952G1	Green	1000'	1/4"	0.040"	1140.00
38-952G	Green	100'	1/4"	0.040"	120.00
38-952GA	Green	50'	1/4"	0.040"	78.00
38-952R1	Red	1000'	1/4"	0.040"	1140.00
38-952R	Red	100'	1/4"	0.040"	133.39
38-952RA	Red	50'	1/4"	0.040"	78.00
38-952Y1	Yellow	1000'	1/4"	0.040"	1140.00
38-952Y	Yellow	100'	1/4"	0.040"	120.00
38-952YA	Yellow	50'	1/4"	0.040"	78.00
38-954B5	Black	500'	5/16"	0.040"	750.00
38-954	Black	100'	5/16"	0.040"	156.00
38-954BA	Black	50'	5/16"	0.040"	93.00
38-960B5	Black	500'	3/8"	0.062"	1472.00
38-960	Black	100'	3/8"	0.062"	280.72
38-960BA	Black	50'	3/8"	0.062"	117.00
38-960U5	Blue	500'	3/8"	0.062"	960.00
38-960U	Blue	100'	3/8"	0.062"	366.47
38-960UA	Blue	50'	3/8"	0.062"	117.00
38-960O5	Orange	500'	3/8"	0.062"	960.00
38-960O	Orange	100'	3/8"	0.062"	210.00
38-960OA	Orange	50'	3/8"	0.062"	117.00
38-960G5	Green	500'	3/8"	0.062"	960.00
38-960G	Green	100'	3/8"	0.062"	210.00
38-960GA	Green	50'	3/8"	0.062"	117.00
38-960R5	Red	500'	3/8"	0.062"	960.00
38-960R	Red	100'	3/8"	0.062"	210.00

38-960RA	Red	50'	3/8"	0.062"	117.00
38-960Y5	Yellow	500'	3/8"	0.062"	960.00
38-960Y	Yellow	100'	3/8"	0.062"	210.00
38-960YA	Yellow	50'	3/8"	0.062"	117.00
38-965B5	Black	500'	1/2"	0.062"	1799.55
38-965	Black	100'	1/2"	0.062"	384.80
38-965BA	Black	50'	1/2"	0.062"	150.00
38-965U5	Blue	500'	1/2"	0.062"	1290.00
38-965U	Blue	100'	1/2"	0.062"	270.00
38-965UA	Blue	50'	1/2"	0.062"	150.00
38-965O5	Orange	500'	1/2"	0.062"	1290.00
38-965O	Orange	100'	1/2"	0.062"	270.00
38-965OA	Orange	50'	1/2"	0.062"	150.00
38-965G5	Green	500'	1/2"	0.062"	1290.00
38-965G	Green	100'	1/2"	0.062"	270.00
38-965GA	Green	50'	1/2"	0.062"	150.00
38-965R5	Red	500'	1/2"	0.062"	1290.00
38-965R	Red	100'	1/2"	0.062"	463.68
38-965RA	Red	50'	1/2"	0.062"	150.00
38-965Y5	Yellow	500'	1/2"	0.062"	1290.00
38-965Y	Yellow	100'	1/2"	0.062"	270.00
38-965YA	Yellow	50'	1/2"	0.062"	150.00
38-970BC	Black	250'	5/8"	0.092"	1140.00
38-970	Black	100'	5/8"	0.092"	478.43
38-970BA	Black	50'	5/8"	0.092"	243.00
38-970GC	Green	250'	5/8"	0.092"	1140.00
38-970G	Green	100'	5/8"	0.092"	462.00
38-970GA	Green	50'	5/8"	0.092"	243.00
38-970RC	Red	250'	5/8"	0.092"	1140.00
38-970R	Red	100'	5/8"	0.092"	462.00
38-970RA	Red	50'	5/8"	0.092"	243.00
38-975BC	Black	250'	3/4"	0.092"	1470.00
38-975	Black	100'	3/4"	0.092"	684.40
38-975BA	Black	50'	3/4"	0.092"	312.00
38-975GC	Green	250'	3/4"	0.092"	1470.00
38-975G	Green	100'	3/4"	0.092"	594.00
38-975GA	Green	50'	3/4"	0.092"	312.00

**STEEL BRAKE LINES**



**SEE OUR WEBSITE FOR SIZES AND LENGTHS OFFERED**

**STEEL BRAKE LINE** tubing is produced by wrapping copper-coated steel around itself twice to form the tubing. This double-wall tube is what provides the strength and structural integrity to withstand the extreme pressures required, yet still remain pliable enough to be formed and bent to the shapes required to be routed beneath the vehicle. The finished tube is fused and zinc-coated to provide excellent rust and corrosion resistance as well.

The Standard Steel line has been the choice of professional installers/mechanics and do-it-yourself mechanics for many years. When properly installed, the standard steel line can provide a long-lasting repair or replacement for many types of vehicles and for all types of fluid transfer systems, including braking systems. However, when a vehicle is expected to see harsh environments like snow, road treatments, salt, air, etc...on a regular basis or when the longest replacement life is required; other premium lines like Poly-Armour® and NiCopp® should be considered.

**Poly-Armour®** is different from anything else on the market due to its PVF or Poly-Vinyl Fluorine coat. This coating is actually a highly durable 'plastic' coating that is 'baked and cured' to the line. This provides extra protection from corrosion, debris, and road surfacing solutions. It also offers superior bend-ability without kinking. That makes Poly-Armour® the easiest to work with line - period!

Underneath the PVF-coating is a double-wall, low carbon steel, copper brazed tubing which meets all international and U.S. requirements for brake tubing. The difference being that Poly-Armour® offers 30 times the corrosion resistance of galvanized steel alone. PVF-coated lines are now the standard in many vehicles on the road today, including: Volkswagen/Audi, Honda, Toyota, and Mercedes. Considered a premium line, Poly-Armour® should be used on any vehicle that will see any type of harsh environment including snow, road treatments, salt air, dirt/gravel, etc. When extending the life of the lines is important, Poly-Armour® should also be used, such as on commercial vehicles or when exact OEM replacement is required or desired.

**NiCopp®** is a nickel-copper alloy brake tubing that meets SAE Standard J1047 and ISO 4038, meeting all international and U.S. requirements for brake tubing. This alloy is approximately 9.2% nickel, 1.4% iron, 0.8% manganese, and 88.6% copper. Under the UNS system, this alloy is designated as UNS C70600. NiCopp® therefore has the strength and structural integrity of steel lines, but with the added benefit of being much more corrosion resistant. NiCopp® is also easier to bend and form than steel tubing. Nickel-copper, commonly referred to as '90-10 copper', has been used on several European vehicle brake systems since the 1970's, including: Volvo, Audi, Porsche, and Aston Martin.

NiCopp® has been used on hydraulic/fluid transfer systems on vehicles where steel lines and tubing are commonly used. This includes brake, fuel and transmission systems. NiCopp® is considered the super-premium brand in brake lines and should be considered where the underbody of the vehicle is subjected to the harshest environments, where the longest life-span for lines is required, and/or where direct OEM replacement is desired.

**HEX BALL FOOT CHUCK**



Part #		List Price
46-600	1/4" Female Pipe	3.51

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



Part #		List Price
46-607	1/4" I.D. Hex	3.50

**DUEL FOOT CHUCKS**

6999		99941
693		50-065
108		6569
DFG-1		

Standard straight-on chuck with 30° reverse angle chuck.

Part #		List Price
320-000	1/4" NPT Female Thread	32.13

**ANGLE CHUCK**

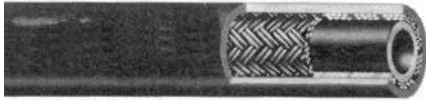
690	
6172	

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

Part #		List Price
320-005	1/4" NPT Female Thread	10.48



**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.
- Meets SAE J1402

Part #	ID	OD	Length	List Price
38-920	3/16	13/32	25'	160.50
38-926	5/16	9/16	25'	196.50
38-923	1/4	1/2	25'	172.50
38-927	3/8	5/8	50'	252.00

**AIR BRAKE HOSE**



- Black

- Spiral synthetic cord reinforcement with neoprene cover.
- 40° F to +200° F temperature range.
- Max operating pressure 255 psi
- Max burst pressure 900 psi
- Meets SAE J1402

Part #	ID	OD	Length	List Price
38-910	3/8	3/4	50'	120.44
38-915	1/2	7/8	50'	180.48

**REMOTE CONTROL DRAIN VALVES**

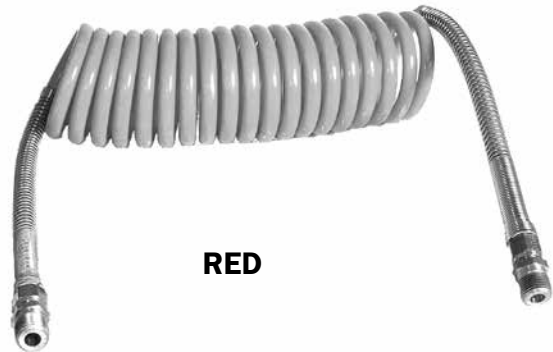
401045  
401046



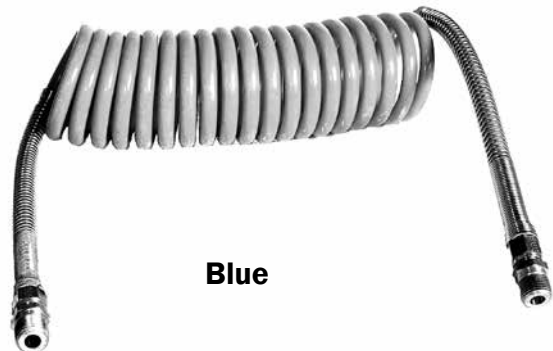
- Brass Body and stainless steel spring.
- Steel cable, nylon coated, certified to 200lbs pull test.
- Low profile to minimize accidental hits and damages.
- Pipe thread 1/4" NPTF.
- Cable or O-Ring operates drain valve from any direction
- Automatically closes upon release of cable or O-Ring

Part #	Length	List Price
46-492	Standard 48"	27.54
46-493	Standard 60"	28.19

**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 connectors.
- Spring guards zinc plated for maximum corrosion resistance.
- Color coding, red for emergency and blue for service, 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	List Price
38-700	12'	6"	166.91
38-705	12'	12"	349.54
38-710	15'	12"	186.52

## AIR BRAKE - FUEL FITTINGS

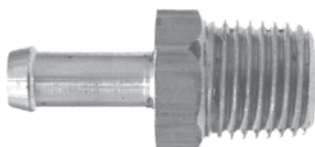
## BRASS FUEL HOSE FITTINGS

**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.

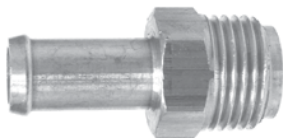
68HB

## MALE CONNECTOR



## HOSE BARB X MALE PIPE

Part #	Hose ID	Size	Ind #	List Price
38-800	3/16	1/8	1541	2.54
38-802	1/4	1/8	1537	2.08
32-377	1/4	1/4	1581	2.11
38-806	5/16	1/8	1551	2.76
38-808	5/16	1/4	1555	2.57
38-810	3/8	1/8	1565	3.69
32-381	3/8	1/4	1564	2.39
32-382	3/8	3/8	1566	4.70
32-383	1/2	3/8		3.36
32-384	1/2	1/2		5.31
32-182	5/8	3/8	1411	6.17
32-385	5/8	1/2	1431	7.32
32-387	3/4	1/2	1430	6.08
32-388	3/4	3/4		8.45
32-185	1	3/4		16.22

INVERTED FLARE  
MALE CONNECTOR

## HOSE BARB X INVERTED FLARE

Part #	Hose ID	Inv. Flare	Ind #	List Price
38-828	5/16	1/4	1598	4.01
38-830	5/16	5/16	1560	2.95
38-832	5/16	3/8	1561	5.00
38-834	3/8	5/16	1568	4.41
38-836	3/8	3/8	1570	7.59

See Hose Clamps starting on page 341

## BRASS FITTINGS

## 90° MALE ELBOW

269HB



## HOSE BARB X MALE PIPE

Part #	Hose ID	Size	Ind #	List Price
38-860	1/4	1/8	1582	5.98
38-862	5/16	1/8	1556	9.52
38-864	5/16	1/4	1557	6.67
38-866	3/8	1/8	1572	6.76
38-868	3/8	1/4	1571	6.37
32-186	3/8	3/8		10.85
32-187	1/2	3/8		14.54
32-191	1/2	1/2		19.68
32-188	5/8	3/8		10.56
32-189	5/8	1/2		12.26
32-190	3/4	1/2		17.32

INVERTED FLARE MALE SWIVEL 90°  
ELBOW

## HOSE BARB X TUBE O.D.

Part #	Hose ID	Inv. Flare	Ind #	List Price
38-873	5/16	5/16	1405	40.79
38-874	3/8	3/8	1407	13.67

## LONG STREET ELLS



Part #	Size	Length	List Price
28-440	1/8	1-3/16"	10.30
28-441	1/8	1-7/16"	5.12
28-442	1/8	1-11/16"	8.51
28-328	1/4	1-3/16"	17.29
28-329	1/4	1-7/16"	14.08
28-330	1/4	1-11/16"	14.05
28-332	1/4	2-1/4"	19.15
28-333	3/8	1-3/4"	21.93

## EXTENSION ADAPTERS D.O.T.

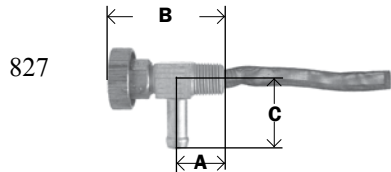


Part #	Size	Length	List Price
28-335	1/8	1-1/4"	11.33
28-336	1/8	1-3/4"	12.33
28-338	1/4	1-9/16"	6.80
28-339	1/4	1-13/16"	8.66
28-340	1/4	2-1/16"	8.04

**DRAIN COCKS**

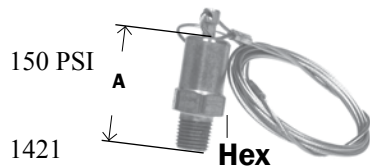
- For use with low pressure air, water and fluids.
- Designed for a working pressure of 150 PSI.
- Hand-tightening provides a metal-to-metal seal.
- Not intended for natural gas, LPG, nuclear or aircraft applications.

**GASOLINE SHUT OFF w/ SCREEN FILTER**



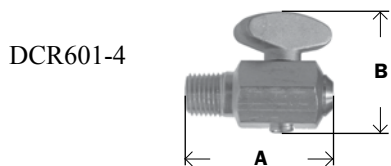
Part #	Barb X Male Pipe	A	B	C	Approx. Wt. Lbs.	List Price
46-064	1/4" x 1/8"	0.55	1.34	0.66	0.06	81.74

**AIR TANK DRAIN VALVE - Self Sealing w/ 5ft. remote cable**



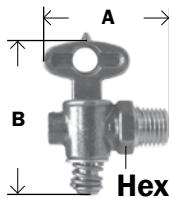
Part #	Male Pipe	A	Hex	Approx. Wt. Lbs.	List Price
46-065	1/4"	1.74	0.75	0.16	65.01

**DRAIN COCK 150 PSI - Trunk Air Tank**



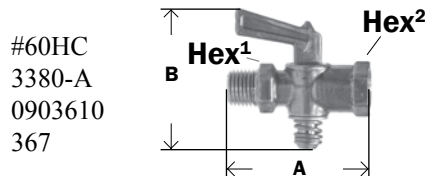
Part #	Male Pipe	A	B	Approx. Wt. Lbs.	List Price
46-066	1/4"	1.73	1.41	0.22	26.18

**TRUCK DRAIN - 125 P.S.I.G**



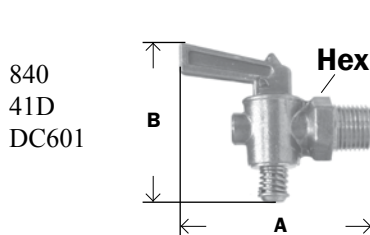
Part #	Male Pipe	Industry Number	A	B	Hex	Approx. Wt. Lbs.	List Price
46-067	1/8"		1.53	1.95	0.62	0.14	18.94
46-068	1/4"	W15310	1.53	1.95	0.62	0.18	18.95

**SHUT OFF - 150 P.S.I max.**



Part #	Male Pipe x Female Pipe	Industry Number	A	B	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
46-069	1/4"	W20332	1.96	1.96	0.75	0.62	0.20	29.77

**LEVER HANDLE**



Part #	Male Pipe	Industry Number	A	B	Hex	Approx. Wt. Lbs.	List Price
46-070	1/8"	M-41-P	1.99	1.80	0.62	0.04	15.12
46-071	1/4"	M-42-P	2.06	1.81	0.62	0.06	15.12
46-072	3/8"	M-43-P	2.30	2.29	0.81	0.08	18.48
46-073	1/2"	M-44-P	3.00	2.50	0.87	0.16	51.45

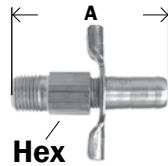
\*Valve is closed when handle is in the position of the picture

## DRAIN COCKS

## BRASS FITTINGS

## INTERNAL SEAT

DC602  
808  
400A  
1800A



Part #	Male Pipe	Industry Number	A	Hex	Approx. Wt. Lbs.	List Price
46-079	1/8"	6783	1.63	0.40	0.02	22.62

## INTERNAL SEAT

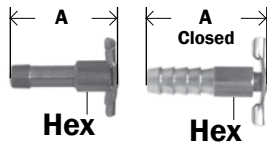
HB - 5/16  
803  
305A



Part #	Male Pipe	Industry Number	A	Hex	Approx. Wt. Lbs.	List Price
46-074	1/8"	130	0.92	0.40	0.04	10.54
46-075	1/4"	140	0.94	0.56	0.06	6.00
46-077	3/8"	230	1.34	0.68	0.08	13.91

## LONG INTERNAL SEAT

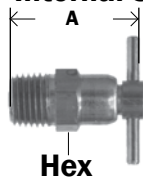
809



Part #	Size	Ind #	A	Hex	Approx. Wt. Lbs.	List Price
46-078	1/8" MIP	185	1.72	0.43	0.02	34.06
46-076	3/8" Hose I.D.		1.65	0.43	0.02	13.31

## TEE HANDLE - Internal Seat

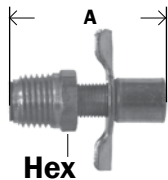
DC603  
802



Part #	Male Pipe	Industry Number	A	Hex	Approx. Wt. Lbs.	List Price
46-080	1/8"	M-200-P	1.22	0.50	0.04	17.18
46-081	1/4"	M-201-P	1.31	0.56	0.06	12.26
46-082	3/8"	M-202-P	1.69	0.68	0.12	23.31

## EXTERNAL SEAT w/ SPOUT

200A  
239  
DC606  
807

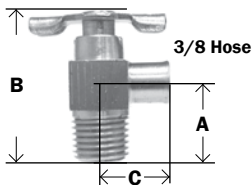


Part #	Male Pipe	Industry Number	A	Hex	Approx. Wt. Lbs.	List Price
46-084*	1/4"	6788	1.56	0.56	0.02	9.98

\* Replaces GM # 511771 & Chrysler #836015

## BIBB NEEDLE VALVE

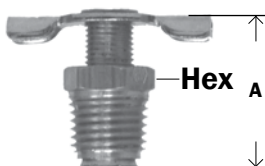
804  
DC607  
2019  
201DH



Part #	Male Pipe	Industry Number	A	B	C	Approx. Wt. Lbs.	List Price
46-088	1/8"	150	0.55	1.19	0.38	0.04	26.14
46-089	1/4"	120	0.82	1.76	0.66	0.06	49.20
46-089A	1/4"	6660	0.55	1.34	0.66	0.06	8.15

## RADIATOR TYPE - External Seat

320D  
240  
DC604  
801

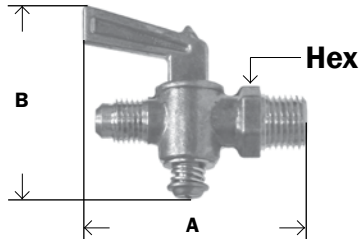


Part #	Male Pipe	Industry Number	Ind #	A	Hex	Approx. Wt. Lbs.	List Price
46-085	1/8"	M-320-P	135	0.90	0.43	0.02	3.56
46-086	1/4"	M-321-P	145	1.00	0.56	0.04	3.51
46-087	3/8"	M-322-P	270	1.25	0.68	0.08	10.45
46-083	1/2"	108	108	1.52	0.87	0.12	32.17

- 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 30 PSI.
- Forged brass bodies and brass handles.
- Instantaneous off-on operation with 360° rotation.
- Not good for gasoline.

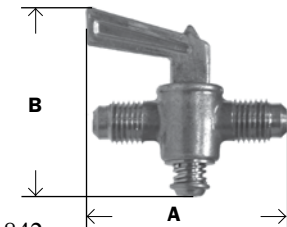
**FLARE X MALE PIPE**



V402F  
848

Part #	Male Flare X Male Pipe	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-100	1/4" x 1/8"	27SAE	2.16	1.88	0.50	0.14	15.58
46-101	1/4" x 1/4"	227SAE	2.19	1.84	0.62	0.16	20.16
46-102	5/16" x 1/8"	29SAE	2.06	1.88	0.50	0.14	17.14
46-103	5/16" x 1/4"	229SAE	2.12	1.82	0.69	0.16	20.81
46-104	3/8" x 1/4"	57SAE	2.27	1.84	0.62	0.17	19.29
46-107	1/2" x 3/8"	67SAE	2.36	2.27	0.82	0.20	19.49

**FLARE X FLARE**

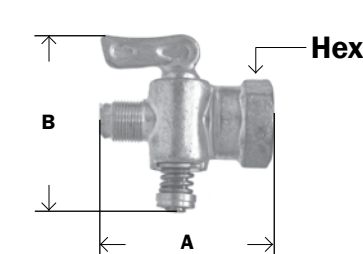


842  
V203F  
136C

Part #	Male Flare X Male Flare	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-115	1/4"	28SAE	1.94	1.87	0.13	17.70
46-116	5/16"	30SAE	2.00	1.90	0.16	32.05
46-117	3/8"	58SAE	2.20	1.83	0.18	18.57
46-118	1/2"	68SAE	2.50	2.31	0.50	22.62
46-119	5/8"	1010SAE	3.05	2.59	0.70	20.63

\* Please request AGA valves

**FLARE X FEMALE PIPE**



138C  
2046

Part #	Male Flare X Female Pipe	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-127	3/8" x 3/8"	163SAE	2.28	2.38	1.03	0.40	57.50
46-125	3/8" x 1/2"	161SAE	2.45	2.31	1.03	0.32	54.87
46-126*	3/8" x 1/2"	161SAE	2.26	2.32	1.03	0.28	37.00
46-128	1/2" x 1/2"	164SAE	2.52	2.19	1.03	0.34	42.46
46-123	5/8" x 1/2"	164SAE	2.61	2.12	1.25	0.54	66.08

\* Heater Valve

Save 5% by ordering online at  
[www.midlandmetal.com](http://www.midlandmetal.com)

Dimension data can change without notice.  
Please see our website when dimensions are critical.

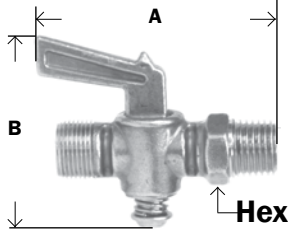
# SHUT-OFF COCKS

# BRASS FITTINGS

BRASS

## COMPRESSION X MALE PIPE

\* See pg. 73-74 to order nut and sleeve separately.

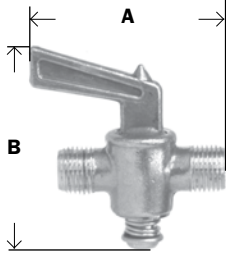


868 133C  
V304C VC206  
2068

Part #	Comp X Male Pipe	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-130	1/4" x 1/8"	27-C	1.87	1.81	0.51	0.14	17.08
46-131	1/4" x 1/4"	227-C	2.05	1.86	0.62	0.15	21.52
46-132	5/16" x 1/8"	29-C	2.05	1.90	0.50	0.16	17.08
46-134	3/8" x 1/4"	57-C	2.05	1.83	0.62	0.15	18.06

## COMPRESSION X COMPRESSION

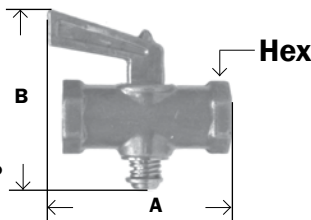
\* See pg. 73-74 to order nut and sleeve separately.



V3030F  
2062  
134C

Part #	Comp X Comp	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-140	1/4"	28-C	1.82	1.84	0.12	19.29
46-141	5/16"	30-C	1.84	1.88	0.14	20.19
46-142	3/8"	58-C	1.87	1.80	0.14	19.86
46-143	1/2"	68-C	2.21	2.32	0.22	30.08

## FEMALE X FEMALE PIPE

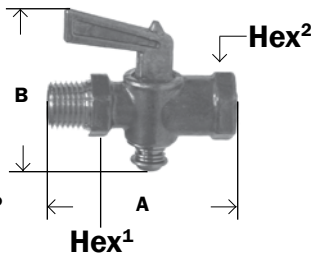


V403P  
132C  
875

Part #	Female Pipe X Female Pipe	A	B	Hex	Approx. Wt. Lbs.	List Price
46-151	1/8"	1.77	1.79	0.56	0.12	15.18
46-152	1/4"	2.28	1.82	0.69	0.20	16.04
46-152T*	1/4"	2.28	2.00	0.68	0.20	23.92
46-153	3/8"	2.44	2.28	0.81	0.30	25.89

\* 150 PSI

## MALE PIPE X FEMALE

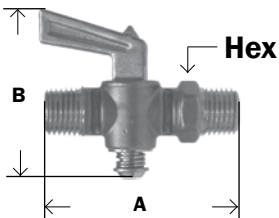


880  
V402P  
130C

Part #	Male Pipe X Female Pipe	Ind. #	A	B	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
46-160	1/8"	48-P	2.03	1.84	0.50	0.56	0.14	15.34
46-161	1/4"	49-P	2.26	1.84	0.69	0.69	0.18	16.04
46-161T*	1/4"		2.26	1.98	0.69	0.69	0.20	21.75
46-162	3/8"	50-P	2.33	2.28	0.82	0.82	0.28	25.89

\* 150 PSI

## MALE PIPE X MALE PIPE



1V401P  
890

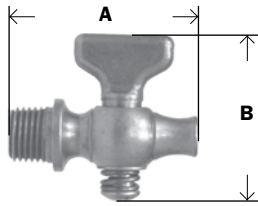
Part #	Male Pipe X Male Pipe	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-165	1/8"	76-P	2.09	1.77	0.50	0.12	16.24
46-166	1/4"	77-P	2.22	1.84	0.70	0.17	17.19
46-166T*	1/4"		2.23	2.00	0.68	0.18	22.44
46-167	3/8"	78-P	2.43	2.24	0.82	0.22	30.15

\* 150 PSI

- 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.

**MIB X BIBB**

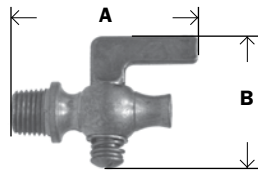
- tee handle
- no hex



Part #	MIP x BIBB	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-300	1/8"	6	1.53	1.55	0.12	22.94
46-301	1/4"	7	1.61	1.54	0.14	29.57

**MIP X BIBB**

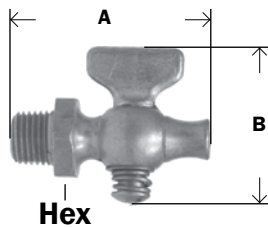
- lever handle
- no hex



Part #	MIP x BIBB	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-305	1/8"	12	2.01	1.71	0.14	21.33
46-306	1/4"	13	2.09	1.66	0.14	27.01

**MIP X BIBB**

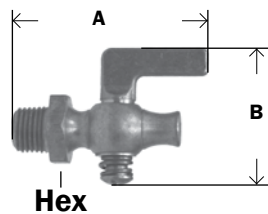
- tee handle
- hex



Part #	MIP x BIBB	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-310	1/8"	63	1.64	1.51	0.56	0.14	32.64
46-311	1/4"	64	1.69	1.54	0.62	0.14	29.40
46-312	3/8"	8	1.75	1.48	0.75	0.17	23.22

**MIP X BIBB**

- lever handle
- hex



Part #	MIP x BIBB	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-315	1/8"	65	2.11	1.71	0.62	0.14	29.04
46-316	1/4"	66	2.16	1.71	0.62	0.16	31.06
46-317	3/8"	14	2.26	1.71	0.75	0.18	30.64
46-318	1/2"	15	2.32	1.46	0.87	0.26	35.99

Save 5% by ordering online at [www.midlandmetal.com](http://www.midlandmetal.com)

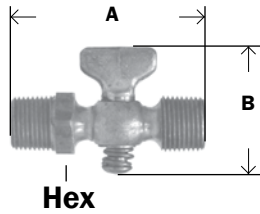
Dimension data can change without notice. Please see our website when dimensions are critical.

## BRASS AIR COCKS

## BRASS FITTINGS

## MIP X MIP

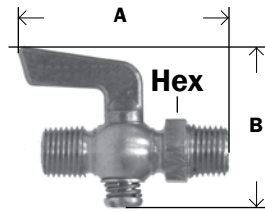
- tee handle
- hex



Part #	MIP X MIP	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-320	1/8"	18	1.81	1.51	0.75	0.14	23.81
46-321	1/4"	19	1.92	1.55	0.62	0.16	40.88
46-322	3/8"	20	2.34	1.55	0.75	0.19	24.95
46-323	1/2"	21	2.18	1.50	0.87	0.26	29.55

## MIP X MIP

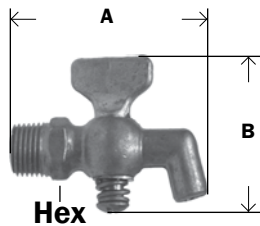
- lever handle
- hex



Part #	MIP X MIP	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-324	1/8"	22	2.09	1.69	0.56	0.14	32.52
46-325	1/4"	23	2.18	1.69	0.62	0.16	36.13
46-326	3/8"	24	2.26	1.72	0.75	0.20	36.06
46-327	1/2"	25	2.57	1.81	0.91	0.36	34.67

## MIP X BIBB NOSE

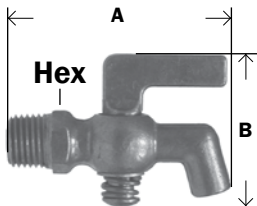
- tee handle
- hex



Part #	MIP X BIBB NOSE	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-330	1/8"	26	2.18	1.75	0.56	0.14	36.73
46-331	1/4"	27	2.11	1.57	0.56	0.16	38.06

## MIP X BIBB NOSE

- lever handle
- hex



Part #	MIP X BIBB NOSE	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-335	1/8"	29	2.25	1.68	0.56	0.14	42.79
46-336	1/4"	30	2.20	1.67	0.56	0.17	33.50
46-337	3/8"	31	2.25	1.72	0.87	0.20	58.45
46-338	1/2"	32	2.31	1.71	0.87	0.22	68.82



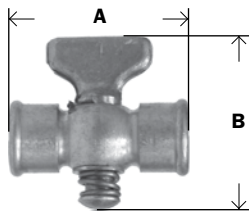
MIDLAND METAL  
APP

SEE INSIDE FRONT  
COVER



**FIP X FIP**

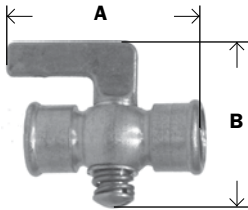
- tee handle
- no hex



Part #	FIP X FIP	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-340	1/8"	37	1.62	1.50	0.14	27.41
46-341	1/4"	38	1.93	1.56	0.16	28.94
46-342	3/8"	39	2.00	1.55	0.20	34.95

**FIP X FIP**

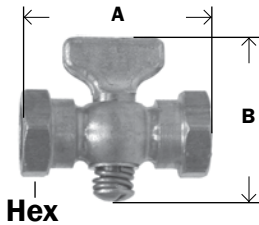
- lever handle
- no hex



Part #	FIP X FIP	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-345	1/8"	43	1.94	1.68	0.14	30.13
46-346	1/4"	44	2.10	1.71	0.16	31.70
46-347	3/8"	45	2.14	1.69	0.20	40.72

**FIP X FIP**

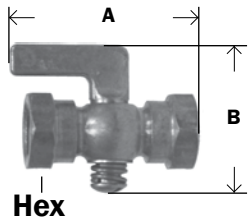
- tee handle
- hex



Part #	FIP X FIP	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-350	1/8"	55	1.62	1.54	0.75	0.17	25.52
46-351	1/4"	56	1.94	1.55	0.75	0.18	36.65
46-352	3/8"	57	1.99	1.58	0.81	0.20	29.82

**FIP X FIP**

- lever handle
- hex



Part #	FIP X FIP	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-355	1/8"	58	1.97	1.70	0.56	0.15	31.18
46-356	1/4"	59	2.10	1.71	0.75	0.18	28.94
46-357	3/8"	60	2.10	1.69	0.81	0.20	48.70
46-358	1/2"	60A	2.50	2.02	1.00	0.36	49.61

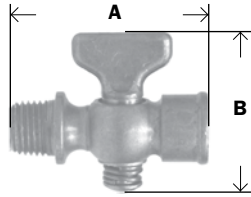
EITHER YOU RUN THE DAY, OR THE DAY RUNS YOU.

– JIM ROHN

## BRASS AIR COCKS

## BRASS FITTINGS

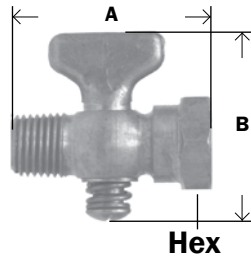
## MIP X FIP



- tee handle
- no hex

Part #	MIP X FIP	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-360	1/8"	40	1.70	1.55	0.14	25.60
46-361	1/4"	41	1.94	1.55	0.16	28.53
46-362	3/8"	42	2.06	1.50	0.20	38.70

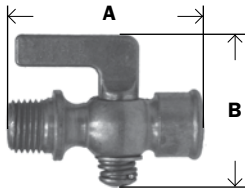
## MIP X FIP



- tee handle
- hex

Part #	MIP X FIP	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-370	1/8"	49	1.81	1.55	0.56	0.14	36.25
46-371	1/4"	50	2.06	1.55	0.75	0.20	31.20
46-372	3/8"	51	2.12	1.53	0.81	0.22	30.22
46-373	1/2"	51A	2.13	1.62	1.00	0.30	49.66

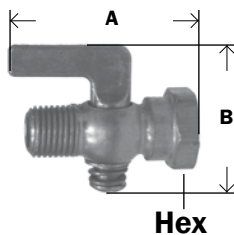
## MIP X FIP



- lever handle
- no hex

Part #	MIP X FIP	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-365	1/8"	46	1.94	1.72	0.14	27.66
46-366	1/4"	47	2.10	1.65	0.16	32.12
46-367	3/8"	48	2.20	1.81	0.24	41.12
46-368	1/2"	48A	2.50	1.95	0.42	46.95

## MIP X FIP



- lever handle
- hex

Part #	MIP X FIP	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-375	1/8"	52	1.93	1.69	0.56	0.16	37.09
46-376	1/4"	53	2.06	1.76	0.75	0.20	39.36
46-377	3/8"	54	2.13	1.71	0.81	0.22	46.65
46-378	1/2"	54A	2.65	1.96	1.00	0.28	55.12

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[www.midlandmetal.com](http://www.midlandmetal.com)

Dimension data can change without notice.  
 Please see our website when dimensions are  
 critical.

**NEEDLE VALVES**

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

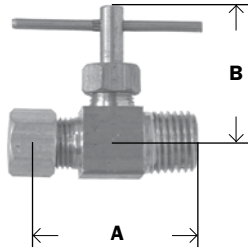
- Used on instrumentation, hydraulic, and pneumatic systems.
- Designed for a maximum working pressure of 150 PSI.

- 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.

These are NOT Lead Free

See pages 166-182 for Lead Free products

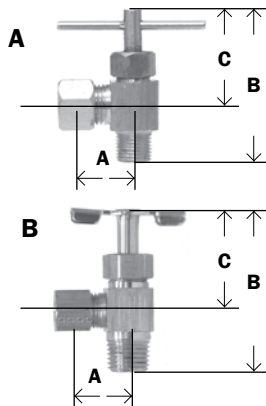
**COMP X MALE PIPE**



NV106C 820  
2205 3068

Part #	Comp X Male Pipe	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-001	3/16" x 1/8"	M-133-C	1.16	0.88	0.06	60.99
46-002	1/4" x 1/8"	M-101-C	1.29	1.12	0.07	20.36
46-002X	Heavy Pattern	M-101-C	1.19	0.88	0.09	51.50
46-003	1/4" x 1/4"	M-101-C	1.27	1.14	0.10	9.36
46-004	5/16" x 1/8"	M-102-C	1.50	1.25	0.14	325.31
46-005	3/8" x 1/4"	M-143-C	1.53	1.22	0.18	18.97

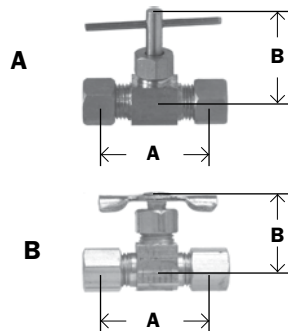
**COMP X MALE PIPE-ANGLE**



NV104C 821  
2203 3069

Part #	Comp X Male Pipe	Handle	Ind. #	A	B	C	Approx. Wt. Lbs.	List Price
46-010	3/16" x 1/8"	B	M-33-C	0.50	1.50	0.82	0.07	43.98
46-011	1/4" x 1/8"	A	M-103-C	0.56	1.48	0.93	0.08	6.36
46-011X	Heavy Pattern	B	M-103-C	0.53	1.53	0.83	0.08	19.00
46-012	1/4" x 1/4"	B	M-104-C	0.62	1.67	0.90	0.13	16.91
46-013	5/16" x 1/8"	B	M-104-C	0.63	1.63	0.95	0.10	22.49
46-014	5/16" x 1/4"	B	M-104-C	0.69	1.73	0.92	0.14	67.36
46-016	3/8" x 1/4"	A	M-303-C	0.65	1.71	0.92	0.16	14.02

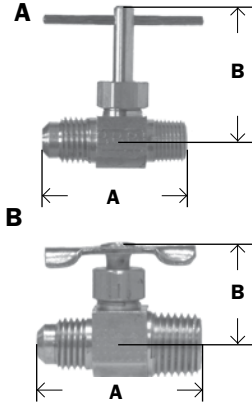
**COMP X COMP**



NV105C 2201  
3062 822

Part #	Comp X Comp	Handle	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-020	3/16"	B	M-105-C	1.06	0.88	0.08	82.25
46-021	1/4"	A	M-106-C	1.17	1.12	0.10	7.27
46-022	5/16"	A	M-107-C	1.22	1.08	0.12	19.15
46-023	3/8"	B	M-113-C	1.31	1.15	0.13	11.88

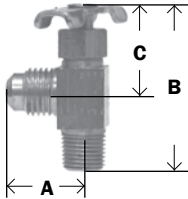
**FLARE X MALE PIPE**



Part #	Male Flare X Male Pipe	Handle	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-028	1/4" x 1/8"	A	M-104-SAE	1.35	1.12	0.07	18.65
46-029	1/4" x 1/4"	B	M-1040-SAE	1.38	0.88	0.09	25.62
46-031	3/8" x 1/4"	B	M-108-SAE	1.73	1.22	0.18	79.28

NV103F  
2405  
823  
3048

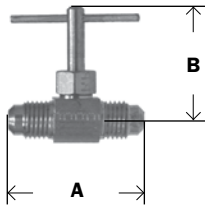
**FLARE X MALE PIPE**



Part #	Male Flare X Male Pipe	Ind. #	A	B	C	Approx. Wt. Lbs.	List Price
46-036	1/4" x 1/8"	M-103-SAE	0.68	1.54	0.86	0.08	14.14
46-038	5/16" x 1/8"	M-203-SAE	0.88	1.59	0.94	0.11	49.91
46-039	5/16" x 1/4"	M-204-SAE	0.90	1.94	1.00	0.14	21.70
46-040	3/8" x 1/4"	M-303-SAE	0.97	1.84	0.90	0.17	73.23

NV101F 824  
2403 3049

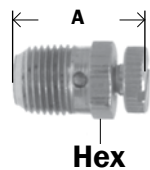
**FLARE X FLARE**



Part #	Male Flare X Male Flare	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-045	1/4"	M-110-SAE	1.48	1.20	0.18	5.39
46-046	3/8"	M-115-SAE	1.79	1.19	0.20	23.63

NV102F  
3042  
825  
2401

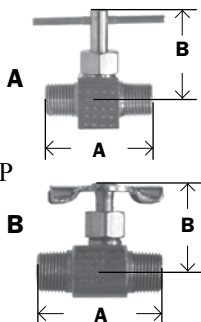
**MULTI-PURPOSE AIR VENT**



Part #	Male Pipe	A	Hex	Approx. Wt. Lbs.	List Price
46-048	1/8"	0.78	0.43	0.02	3.56

705

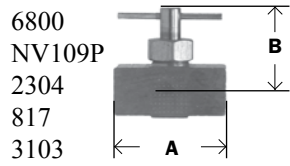
**MALE PIPE TO MALE PIPE**



Part #	Male Pipe X Male Pipe	Handle	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-050	1/8"	A	M-108-P	1.25	1.09	0.08	23.24
46-051	1/4"	B	M-110-P	1.69	1.00	0.16	17.81

NV107P  
2301  
826  
3122

**FEMALE PIPE X FEMALE PIPE**

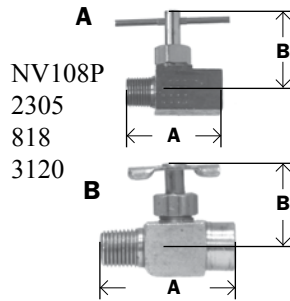


6800  
NV109P  
2304  
817  
3103

Part #	Female Pipe X Female Pipe	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-055*	1/8"	M-304-P	1.18	0.84	0.18	19.99
46-056	1/4"	M-3044-P	1.60	1.24	0.21	9.66
46-056P*	1/4" Heavy	M-3044-P	1.62	2.53	0.20	14.83

\* Pressed on handle

**MALE X FEMALE PIPE**



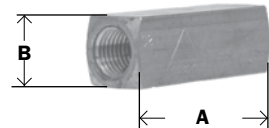
NV108P  
2305  
818  
3120

Part #	Male Pipe X Female Pipe	Handle	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-060	1/8"	A	M-305-P	1.18	1.09	0.10	6.68
46-061	1/4"	A	M-3055-P	1.60	1.14	0.18	10.59
46-061L	1/4" Light Pattern	B	M-3055-P	1.88	1.09	0.21	29.05

**FLOW CONTROL NEEDLE & CHECK VALVES**

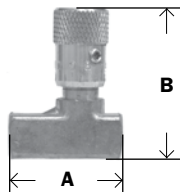
- Precision calibrated dial to determine and allow a return to required flow settings.
- Safe positive stop for needle travel.
- Positive no-leak stem seal.
- 2PSI cracking pressure.
- 1000 PSI maximum operating pressure.
- One piece forged housing.
- Nickel Plated available.
- Suitable for natural gas.

**CHECK VALVE**



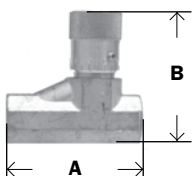
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
20-473	1/4"	1.94	0.68	0.20	97.74

**FLOW CONTROL**



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
20-485	1/8"	1.47	1.48	0.18	129.83
20-487	1/4"	1.94	1.92	0.27	130.99

**NEEDLE VALVE**



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
20-501	1/8"	1.47	1.80	0.18	102.39
20-503	1/4"	1.94	2.00	0.28	122.24

## NEEDLE 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.s.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 Inlet Outlet	Style	Maximum Orifice	List Price
46-768	1/8 Male x 1/8 Female	Regular	0.141	50.78
46-769	1/8 Male x 1/8 Female	Panel	0.141	67.94
46-770	1/4 Male x 1/4 Female	Regular	0.188	50.71
46-771	1/4 Male x 1/4 Female	Panel	0.188	66.27

FIP X FIP STRAIGHT

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-780	1/8 Female x 1/8 Female	Regular	0.172	46.72
46-781	1/8 Female x 1/8 Female	Panel	0.172	65.01
46-782	1/4 Female x 1/4 Female	Regular	0.188	48.71
46-783	1/4 Female x 1/4 Female	Panel	0.188	63.76

## 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.

## BRASS FITTINGS



MIP X FIP ANGLE

(Bottom = Male, Side = Female)

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-786	1/8 Male x 1/8 Female	Regular	0.188	51.04
46-787	1/8 Male x 1/8 Female	Panel	0.188	66.00
46-788	1/4 Male x 1/4 Female	Regular	0.281	51.26

MIP X MIP ANGLE

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-792	1/8 Male x 1/8 Male	Regular	0.188	60.19
46-793	1/8 Male x 1/8 Male	Panel	0.188	60.00
46-794	1/4 Male x 1/4 Male	Regular	0.281	54.09
46-795	1/4 Male x 1/4 Male	Panel	0.281	67.28

FIP X FIP ANGLE

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-798	1/8 Female x 1/8 Female	Regular	0.188	43.08
46-799	1/8 Female x 1/8 Female	Panel	0.188	63.16
46-800	1/4 Female x 1/8 Female	Regular	0.281	48.10
46-801	1/4 Female x 1/4 Female	Panel	0.281	64.41

## SELF PIERCING SADDLE VALVES



FITS 3/8" OD  
THRU 3/4" OD

## SELF PIERCING

## NEEDLE VALVE KIT #M-104-VSP

- INDIVIDUALLY BAGGED WITH NEEDLE VALVE
- SADDLE CLAMP
- 2 NUTS
- 2 BOLTS & WASHERS

Has brass sleeve for copper tube installation & delrin sleeve & brass insert for plastic tube installation.

Part #	Tube O.D.	Min Pkg Qty	List Price
46-090A	1/4"	1	5.97

These are NOT Lead Free

See page 173 for Lead Free products

**MICRO-METERING VALVES**

**MICRO-METERING 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 150° 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 Inlet Outlet	Style	Maximum Orifice	List Price
46-741	1/8 Male x 1/8 Female	Regular	0.102	53.38
46-742	1/8 Male x 1/8 Female	Panel	0.102	71.18
46-743	1/4 Male x 1/4 Female	Regular	0.172	61.90
46-744	1/4 Male x 1/4 Female	Panel	0.175	67.94

**MIP X MIP STRAIGHT**

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-747	1/4 Male x 1/4 Male	Regular	0.172	64.38
46-748	1/4 Male x 1/4 Male	Panel	0.172	72.46

**FIP X FIP STRAIGHT**

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-752	1/8 Female x 1/8 Female	Regular	0.141	54.51
46-753	1/8 Female x 1/8 Female	Panel	0.141	74.08
46-754	1/4 Female x 1/4 Female	Regular	0.172	60.37
46-755	1/4 Female x 1/4 Female	Panel	0.172	70.66

Dimension data can change without notice. Please see our website when dimensions are critical.



**MIP X FIP ANGLE**

(Bottom = Male, Side = Female)

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-756	1/8 Male x 1/8 Female	Regular	0.182	56.18
46-757	1/8 Male x 1/8 Female	Panel	0.182	69.32
46-758	1/4 Male x 1/4 Female	Regular	0.182	62.65

**FIP X FIP ANGLE**

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-765	1/8 Female x 1/8 Female	Panel	0.182	76.43
46-766	1/4 Female x 1/4 Female	Regular	0.182	55.42
46-767	1/4 Female x 1/4 Female	Panel	0.182	65.37

*Some valves only available on made-to-order basis.*

Save 5% by ordering online at [www.midlandmetal.com](http://www.midlandmetal.com)

**BRASS**



## INDUSTRIAL INSTRUMENTATION BALL VALVES

## BRASS FITTINGS

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

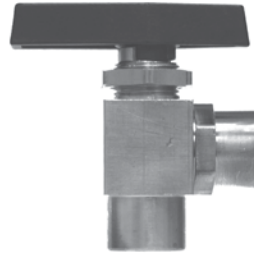
Part #	Size	List Price
46-830	1/8 x 1/8	83.52
46-832	1/4 x 1/4	88.82
46-833	3/8 x 3/8	185.43
46-834	1/2 x 1/2	210.88

## FEMALE X MALE

Part #	Size	List Price
46-835	1/8 x 1/8	90.36
46-838	1/4 x 1/4	90.51
46-840	1/2 x 1/2	229.22

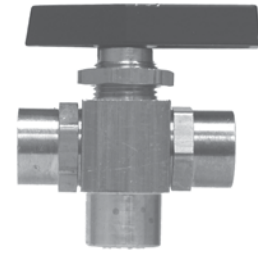
## MALE X MALE

Part #	Size	List Price
46-841	1/8 x 1/8	104.86
46-843	1/4 x 1/4	105.12
46-845	3/8 x 3/8	195.10
46-846	1/2 x 1/2	239.75

INDUSTRIAL  
INSTRUMENTATION  
ANGLE BALL VALVES

## FEMALE X FEMALE

Part #	Size	List Price
46-875	1/8 x 1/8	84.71
46-876	1/8 x 1/4	94.11
46-877	1/4 x 1/8	94.31
46-878	1/4 x 1/4	79.88

INDUSTRIAL  
INSTRUMENTATION  
3-WAY BALL VALVES

Part #	Size	List Price
46-951	1/8 FPT	81.83
46-956	1/4 FPT	86.16
46-959	3/8 FPT	216.45
46-960	1/2 FPT	224.32

Any size and Any combination of male pipe, female pipe, hose barb, compression or flare connections are available...just ask!

*Some valves only available on  
made-to-order basis*

Many of life's failures are experienced by people who did not realize how close they were to success when they gave up."

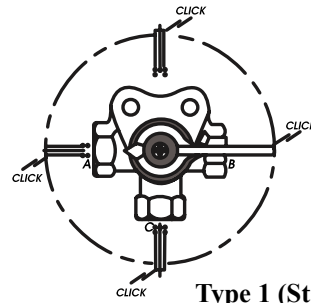
– Thomas Edison



**THREE AND FOUR-WAY SELECTOR VALVES**

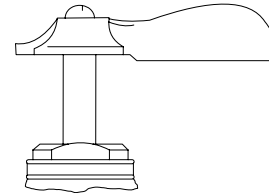
NON-LUBRICATED PLUG VALVES are designed to operate in systems where INSTANTANEOUS PORT SELECTION is desired. Since LUBRICANTS ARE NOT USED, relubrication is not required. There is no lubricant to freeze and lock the valve or to contaminate fine fluids. The O-RING SEALED CAP and STEM eliminate leakage 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 is 9/32 (.281) diameter for 1/8 and 1/4 sizes, 5/16 (.312) diameter for the 3/8 size. **(Consult factory for applications requiring a higher pressure).**



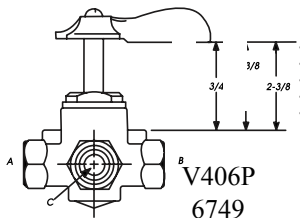
**Type 1 (Standard)**

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



PANEL MOUNTING AVAILABLE

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



V406P  
6749



- 1-3/8" Stem
- Side Outlet
- Bracket Mounting
- O-Ring Sealed
- 4-way celcon roter standard

**LESS CLICK**

Part #	A-B-C Female Pipe Thread	Length of Stem	List Price
46-247	1/4	1-3/8"	35.71
46-248	3/8	1-3/8"	42.08

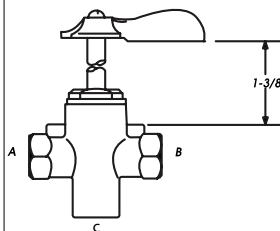
**M-108-MID WITH CLICK 360°**

Part #	A-B-C Female Pipe Thread	Length of Stem	List Price
46-250	1/8	1-3/8"	37.19
46-251	1/4	1-3/8"	36.35
46-252	3/8	1-3/8"	42.78

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)**



A

B



- 1-3/8" Stem
- Side Outlet
- Bracket Mounting
- O-Ring Sealed
- 4-way celcon roter standard

**LESS CLICK**

Part #	A-B-C Female Pipe Thread	Length of Stem	List Price
46-241	1/4	1-3/8"	37.25

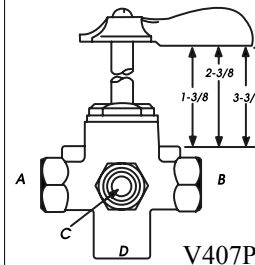
**WITH CLICK 360°**

Part #	A-B-C Female Pipe Thread	Length of Stem	List Price
46-243	1/8	1-3/8"	43.35
46-244	1/4	1-3/8"	38.96

Openings:

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

**FOUR-WAY VALVES**



A

V407P



- Side Outlet
- Bracket Mounting
- O-Ring Sealed
- 4-way celcon roter standard

**LESS CLICK**

Part #	A-B-C-D Female Pipe Thread	Length of Stem	List Price
46-257	1/4	1-3/8"	33.57

**M-114-MID WITH CLICK (360°)**

Part #	A-B-C-D Female Pipe Thread	Length of Stem	List Price
46-255	1/4	1-3/8"	39.50
46-256	3/8	1-3/8"	47.15

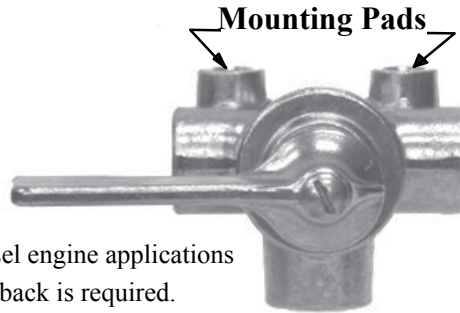
**WITH 2-3/8" LONG STEM M-115-MID**

Part #	A-B-C-D Female Pipe Thread	Length of Stem	List Price
46-260	1/4	2-3/8"	39.93

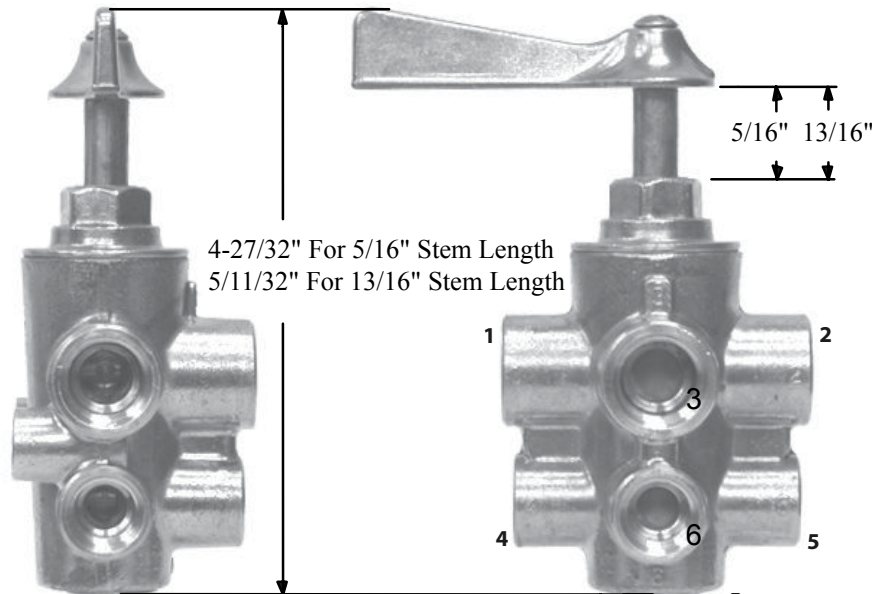
Openings:

- 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"

**SIX PORT VALVES**



- Designed primarily for diesel engine applications where a fuel return or spill back is required.



Maximum Handle Travel 180° Mounting Pads for Bolt Mounting Openings

With Handle Lever over 1:  
(All Ports Closed)

With Handle Lever over 2:  
(Open: 2-3 and 5-6, Closed: 1 and 4)

With Handle Lever over 3:  
(Open: 1-3 and 4-6, Closed: 2 and 5)

Part #	Ind. #	Female Pipe Thread of 1-2-3 4-5-6	Stem	Length Type	List Price
46-238	SK-1036	1/2 x 3/8	13/16	1	731.87

**MARINE FITTINGS**

- Calibrated to support 30" column of gasoline.
- Flo direction <-



**ANTI-SIPHON VALVES**  
NPT X NPT

Part #	Size	List Price
46-520	1/4 x 1/4	18.56
46-521	3/8 x 3/8	30.97



**ANTI-SIPHON VALVES**  
BARB X NPT

Part #	Size	List Price
46-530	5/16 x 1/4	17.93
46-531	3/8 x 1/4	16.37
46-532	3/8 x 3/8	30.05
46-533	1/2 x 3/8	30.05

## BRASS FITTINGS

## SPECIALTY VALVES

### BRASS TRUCK VALVES

200 PSI



404V

#### HOSE TO MALE PIPE

Part #	Size	List Price
46-450	3/8 x 3/8	17.90
46-451	5/8 x 3/8	17.89



404V

#### HOSE TO MALE PIPE

Part #	Size	List Price
46-455	5/8 x 1/2	35.78
46-457	3/4 x 3/8	44.59
46-456	3/4 x 1/2	37.69



405V

#### FEMALE TO MALE PIPE

Part #	Size	List Price
46-465	3/8 x 3/8	22.46
46-466	3/8 x 1/2	45.32
46-467	1/2 x 1/2	30.00



409V

#### FLARE TO MALE PIPE

Part #	Size	List Price
46-475	1/2 x 1/2	63.80
46-476	5/8 x 1/2	30.07



412V

#### MALE PIPE TO FLARE

Part #	Size	List Price
46-485	1/2 x 5/8	24.24

### SOLID BOTTOM VALVES

- Designed for instantaneous on-off operation.

- 360° rotation standard.
- 30 PSI
- Packed with grease.

1035D

M-70-SBV



#### O-RING SEALED

#### MIP X FIP

Part #	Size	List Price
46-400	1/8	29.19
46-401	1/4	26.78
46-402	3/8	29.60

- Good for Propane

8875



#M-72-SBV

FIP x FIP

Part #	Size	List Price
46-411	1/4	31.71



#M-75-SBV

MIP x FLARE

Part #	Size	List Price
46-429	1/4 x 3/8	29.25

### 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 positions.
- 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

#### MALE X FEMALE

Part #	Size	List Price
46-400M	1/8 x 1/8	49.23
46-401M	1/4 x 1/4	36.40
46-402M	3/8 x 3/8	43.20



8990

PIPE

#### MALE x MALE

Part #	Size	List Price
46-406M	1/4 x 1/4	44.95

- Good for Propane

8975



PIPE

#### FEMALE X FEMALE

Part #	Size	List Price
46-411M	1/4 x 1/4	43.79



8948

#### MALE PIPE X FLARE

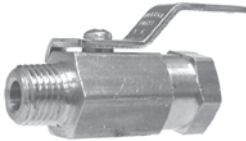
Part #	Size	List Price
46-429M	1/4 x 3/8	41.00
46-430M	3/8 x 3/8	66.28

BRASS

**MINIATURE BALL 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 Needs 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.
- Not good for steam.
- Good for propane, gas and diesel.



**MALE X FEMALE**

Part #	Size	List Price
46-900	1/8 x 1/8	25.15
46-903	1/4 x 1/4	25.13



**MALE X MALE**

Part #	Size	List Price
46-910	1/8 x 1/8	27.86
46-912	1/4 x 1/4	27.19



**MALE PIPE X HOSE BARB**

Part #	Size	List Price
47-042	1/8 x 1/4	31.36
46-980	1/4 x 1/4	25.36
46-981	1/4 x 3/8	23.77

- 46-920
- 46-921
- 46-922



- 46-922A
- 46-923



- 46-924



- 46-925



**FEMALE X FEMALE**

Part #	Size	List Price
46-920	1/8 x 1/8	25.78
46-921	1/8 x 1/4	29.04
46-922	1/4 x 1/4	25.01
46-922A	1/4 x 1/4	18.89
46-923	3/8 x 3/8	31.13
46-924	1/2 x 1/2	50.10
46-925	3/4 x 3/4	51.50

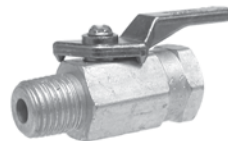
**U.L. TWO WAY VALVES**

- Buna-N Seal, Teflon Seat Plated metal handle, plated brass ball.
- 250 PSI Working Pressure



**U.L. TWO WAY VALVES  
FNPT X FNPT**

Part #	Size	List Price
46-440	1/4 x 1/4	24.97



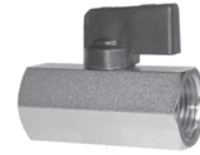
**U.L. TWO WAY VALVES  
MNPT X FNPT**

Part #	Size	List Price
46-443	1/4 x 1/4	25.97

**BRASS FITTINGS**

**MINI BALL VALVES**

• See p. 184 for specifications



**FEMALE X FEMALE**

Part #	Size	List Price
46-922 I	1/4	15.16
46-923 I	3/8	15.16
46-924 I	1/2	17.52

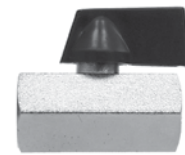


**MALE X FEMALE**

Part #	Size	List Price
46-903 I	1/4	14.84
46-904 I	3/8	14.84
46-905 I	1/2	16.45

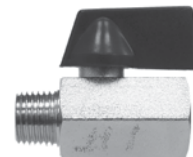
**ECONOMY MINI BALL VALVES**

- Max Working Pressure: 450psi
- Maximum Temperatures: 356°F at 142 psi  
212°F at 355 psi
- 1/4 Turn Handle



**FEMALE X FEMALE**

Part #	Size	Dimensions (In)				List Price
		A	B	C	D	
46-934	1/8	1.57	1.69	0.78	1.46	7.56
46-935	1/4	1.57	1.69	0.78	1.46	7.56
46-936	3/8	1.57	1.69	0.78	1.46	8.27
46-937	1/2	1.77	1.77	0.94	1.56	8.57



**MALE X FEMALE**

Part #	Size	Dimensions (In)				List Price
		A	B	C	D	
46-930	1/8	1.67	1.69	0.78	1.46	6.87
46-931	1/4	1.57	1.69	0.78	1.46	7.56
46-932	3/8	1.57	1.69	0.78	1.46	7.11
46-933	1/2	1.77	1.77	0.94	1.56	8.50



# BRASS FITTINGS

# CHECK VALVES

BRASS

## BRASS CHECK VALVES

- 500 PSI
- 180° temp rating
- 1 PSI Cracking Pressure
- Buna-N Seal for water, air and inert gas
- Viton Seal for oil, gas and diesel fuel (add V to part#)



**FIP X FIP**

Part #	Size	Buna-N List	Viton List
46-560	1/8"	26.66	26.66
46-561	1/4"	29.68	29.68
46-562	3/8"	43.10	43.10
46-563	1/2"	52.62	52.62
46-564	3/4"	84.87	84.87



**FEMALE X MALE**

- Viton Seal - (add V to part#)

Part #	Size	Buna-N List	List Price
46-565	1/8"	26.66	26.66
46-566	1/4"	25.53	25.53
46-567	3/8"	31.91	31.91
46-568	1/2"	38.91	38.91
46-569	3/4"	91.56	91.56



**MALE X MALE**

- Viton Seal - (add V to part#)

Part #	Size	Buna-N List	List Price
46-570	1/8"	26.66	26.66
46-571	1/4"	25.53	25.53
46-572	3/8"	31.91	31.91
46-573	1/2"	38.91	38.91



**MALE X FEMALE**

- Viton Seal - (add V to part#)

Part #	Size	Buna-N List	List Price
46-575	1/8"	26.66	26.66
46-576	1/4"	25.53	25.53
46-577	3/8"	31.91	31.91
46-578	1/2"	38.91	38.91

MAX. 2500 PSI

Cracking Pressure 1 PSI

- Opening diameter .187
- 180° max operating temp.
- SS ball and spring



**MNPT X MNPT**

Part #	Size	Opening Dia.	List Price
46-500	1/4 x 1/4	0.187	23.88

MAX. 2500 PSI

- Flo direction ->
- Opening diameter .187
- 180° max operating temp.
- Buna Seal
- SS ball and spring



**MNPT X FNPT**

Part #	Size	Opening Dia.	List Price
46-505	1/4 x 1/4	0.187	22.79

MAX. 1200 PSI

- O-Ring poppet seal Bubble tight operation
- 180°F max operating temp.



**FNPT X FNPT**

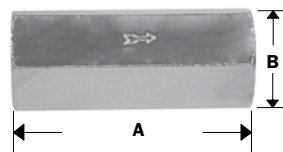
Part #	Size	Opening Dia.	List Price
46-510	1/4 x 1/4	0.25	26.56
46-511	3/8 x 3/8	0.375	32.01
46-512	1/2 x 1/2	0.437	41.96

## 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



NPT-Inlet NPSM-Outlet

Part #	Size	Dimensions (In.)		List Price
		A	B	
46-200	1/4	1.97	0.67	18.03
46-201	3/8	1.97	0.83	18.75
46-202	1/2	2.48	0.98	38.69

## HIGH PRESSURE CHECK VALVES

- Operates in any position, and is available in mixed or matched end combinations.
- Standard cracking pressure 1 p.s.i. with a maximum operating pressure of 3000 p.s.i. and a maximum operating temperature of 180°F using Buna-N seals.
- Buna-N seals standard, other seals available.
- Guided 316 stainless steel ball + spring.
- Fixed ringed seat prevents extrusion of seal.
- Opening diameter .28
- Approximate CV 1.2
- Brass
- Water G.P.M. @ 10 p.s.i. is 4.0
- Good for air



**FEMALE X FEMALE**

Part #	Size	List Price
46-513	1/4	50.41
46-517	3/8	56.04

- Flo direction ->



**FEMALE X MALE**

Part #	Size	List Price
46-514	1/4	50.41
46-518	3/8	56.04

- Flo direction ->



**MALE X FEMALE**

Part #	Size	List Price
46-516	1/4	50.41
46-539	3/8	56.03



**MALE X MALE**

Part #	Size	List Price
46-515	1/4	48.47
46-519	3/8	56.04

See page 208 for Stainless Steel

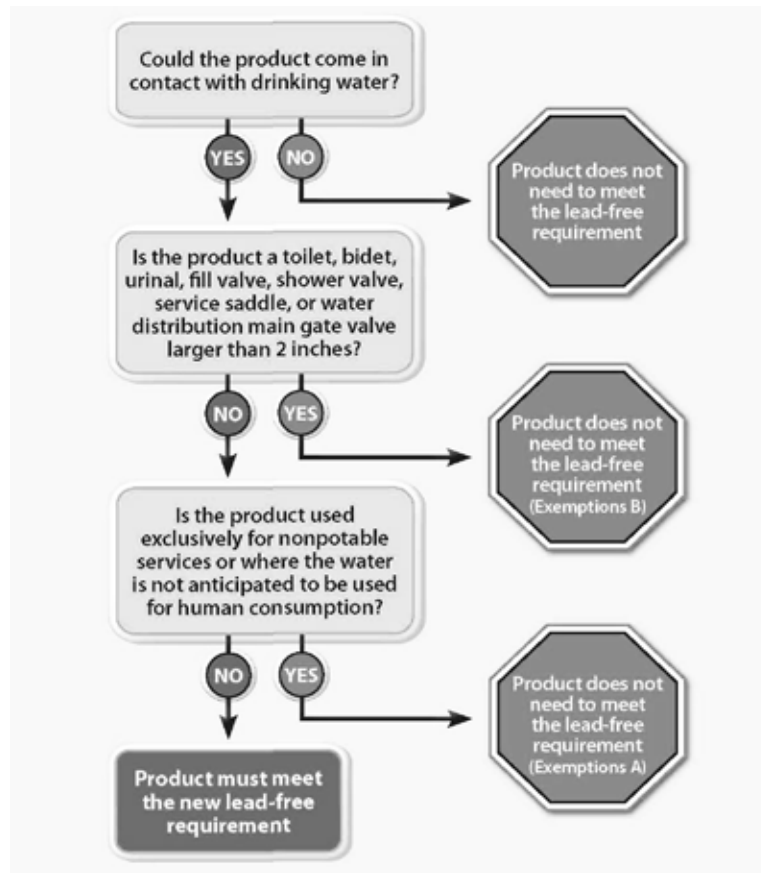
**What is the new lead-free requirement?**

In 2011, the Reduction of Lead in Drinking Water Act was signed into law. The Act has reduced the lead content allowed in drinking water system and plumbing materials by changing the definition of "lead-free" in Section 1417 of the Safe Drinking Water Act.

*The term "lead-free" has been updated from not more than 8% lead content to mean "not more than a weighted average of 0.25% lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings and fixtures."*

**How do I know which products must meet the new lead-free requirement?**

The prohibitions on use and introduction into commerce apply to all pipe, pipe fittings, plumbing fittings, and fixtures (henceforth referred to as "products"), including stocked inventories that have not been installed. This includes coated or uncoated brass or bronze materials. By using the flowchart below as a guide, you can determine if a product must meet the new lead-free requirement:



**Lead-Free Requirement Exemptions**

(A) The new requirement does not apply to pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers, that are used exclusively for nonpotable service such as manufacturing, industrial processing, irrigation, outdoor watering or any other uses where the water is not anticipated to be used for human consumption.

(B) The new requirement does not apply to toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, service saddles or water distribution main gate valves 2 inches in diameter or larger.

**LEADFREE**

**90° FEMALE ELBOW**

2200P  
3500  
302  
200



Part #	Thread Size NPTF	List Price
28-001LF	1/8"	4.13
28-002LF	1/4"	6.54
28-003LF	3/8"	11.07
28-004LF	1/2"	20.87
28-005LF	3/4"	27.75

**UNION TEE**

311  
101A  
322  
2203P  
3700  
203



Part #	Thread size NPTF	List Price
28-024LF	1/8"	7.36
28-025LF	1/4"	13.27
28-026LF	3/8"	15.76
28-027LF	1/2"	24.70
28-028LF	3/4"	61.57

**90° FORGED FEMALE ELBOW**



Part #	Thread size NPTF	List Price
28-010LF	1/4"	10.05
28-011LF	3/8"	7.99
28-012LF	1/2"	9.21
28-013LF	3/4"	15.36

**UNION FORGED TEE**



Part #	Thread size NPTF	List Price
28-032LF	1/8"	4.56
28-033LF	1/4"	5.78
28-034LF	3/8"	10.84
28-035LF	1/2"	12.05
28-036LF	3/4"	24.14

**90° STREET ELBOW**



Part #	Thread size NPTF	List Price
28-165LF	1/8"	2.57
28-166LF	1/4"	3.04
28-167LF	3/8"	4.36
28-168LF	1/2"	8.63
28-169LF	3/4"	10.29

**COUPLING**



Part #	Thread size NPTF	List Price
28-058LF	1/8"	2.18
28-059LF	1/4"	2.38
28-061LF	1/2"	5.94

**REDUCING COUPLING**



Part #	Thread size NPTF	List Price
28-185LF	1/2" x 3/8"	5.21
28-189LF	3/4" x 1/2"	6.92

**HEX BUSHING**



Part #	Thread size NPTF MxF	List Price
28-102LF	1/4" x 1/8"	1.68
28-103LF	3/8" x 1/8"	3.72
28-104LF	3/8" x 1/4"	2.48
28-105LF	1/2" x 1/8"	6.27
28-106LF	1/2" x 1/4"	3.65
28-107LF	1/2" x 3/8"	4.70
28-108LF	3/4" x 1/8"	11.93
28-109LF	3/4" x 1/4"	8.08
28-110LF	3/4" x 3/8"	8.58
28-111LF	3/4" x 1/2"	6.64
28-119LF	1" x 1/8"	21.93
28-112LF	1" x 1/4"	27.42
28-113LF	1" x 3/8"	25.42
28-114LF	1" x 1/2"	17.19
28-115LF	1" x 3/4"	15.58

**LEADFREE**

**FACE BUSHING**



Part #	Thread size NPTF MxF	List Price
28-121LF	1/4" x 1/8"	2.08
28-122LF	3/8" x 1/8"	6.92
28-116LF	3/8" x 1/4"	3.92
28-090LF	1/2" x 1/8"	4.60
28-128LF	1/2" x 1/4"	4.50
28-117LF	1/2" x 3/8"	6.30
28-129LF	3/4" x 1/4"	7.43
28-130LF	3/4" x 3/8"	7.05
28-118LF	3/4" x 1/2"	10.14

**HEX CAP**



Part #	Thread size NPTF	List Price
28-075LF	1/8"	3.11
28-076LF	1/4"	3.36
28-077LF	3/8"	1.73
28-078LF	1/2"	4.15
28-079LF	3/4"	5.06
28-080LF	1"	22.50

**SOLID SQUARE HEAD PLUG**



Part #	Thread size NPTF	List Price
28-084LF	1/8"	1.26
28-085LF	1/4"	1.13
28-086LF	3/8"	4.41
28-087LF	1/2"	3.55
28-088LF	3/4"	4.15
28-089LF	1"	22.45

**COUNTERSUNK HEX PLUG**



Part #	Thread size NPTF	List Price
28-092LF	1/16"	0.77
28-093LF	1/8"	0.81
28-094LF	1/4"	3.49
28-095LF	3/8"	3.58
28-096LF	1/2"	4.58
28-097LF	3/4"	8.31
28-098LF	1"	14.92
28-099LF	1-1/4"	23.08

**COUNTERSUNK SQUARE PLUG**



Part #	Thread size NPTF	List Price
28-092SLF	1/16"	0.77
28-093SLF	1/8"	0.81
28-094SLF	1/4"	1.85
28-095SLF	3/8"	2.77
28-096SLF	1/2"	5.48
28-097SLF	3/4"	8.31
28-098SLF	1"	15.52
28-099SLF	1-1/4"	21.93

**CORED HEX PLUGS**



Part #	Thread size NPTF	List Price
28-201LF	1/8"	1.15
28-202LF	1/4"	2.87

**7/8 TAPER HEX SOCKET (FLUSH)**



Part #	Pipe Size inches	List Price
28-092TLF	1/16"	1.15
28-093TLF	1/8"	1.15
28-094TLF	1/4"	1.85
28-095TLF	3/8"	2.71
28-096TLF	1/2"	5.48
28-097TLF	3/4"	8.31
28-098TLF	1"	14.92
28-099TLF	1-1/4"	23.08

**HEX HEAD PLUGS (SOLID)**



Part #	Pipe Size inches	List Price
28-201SLF	1/8"	1.85
28-202SLF	1/4"	2.60
28-203SLF	3/8"	3.98
28-204SLF	1/2"	6.85
28-205SLF	3/4"	11.93
28-206SLF	1"	21.06

**LEADFREE**



## LEAD FREE BRASS FITTINGS

## PIPE / HOSE BARBS

### CLOSE NIPPLE



Part #	Thread size NPTF	List Price
28-131LF	1/8"	1.05
28-132LF	1/4"	1.70
28-133LF	3/8"	2.11
28-134LF	1/2"	2.94
28-135LF	3/4"	4.09

### LONG NIPPLE



Part #	Thread size NPTF	List Price
28-143LF	1/8" x 3"	3.14
28-476LF	1/8" x 4"	3.93
28-480LF	1/8" x 6"	6.35
28-144LF	1/4" x 1-1/2"	1.92
28-145LF	1/4" x 2"	2.80
28-147LF	1/4" x 3"	3.86
28-482LF	1/4" x 4"	5.29
28-485LF	1/4" x 5-1/2"	8.88
28-486LF	1/4" x 6"	7.81
28-148LF	3/8" x 1-1/2"	2.72
28-149LF	3/8" x 2"	4.09
28-150LF	3/8" x 2-1/2"	5.76
28-151LF	3/8" x 3"	5.74
28-488LF	3/8" x 4"	9.07
28-489LF	3/8" x 4-1/2"	10.11
28-490LF	3/8" x 5"	9.46
28-491LF	3/8" x 5-1/2"	12.25
28-492LF	3/8" x 6"	13.50
28-152LF	1/2" x 1-1/2"	3.41

### HEX NIPPLE



Part #	Thread size NPTF	List Price
28-211LF	1/8"	2.09
28-212LF	1/4"	2.98
28-214LF	1/2"	7.25
28-225LF	3/4" x 1/2"	16.19

### MALE BRANCH TEE



Part #	Thread size NPTF	List Price
28-283LF	3/8"	11.96

### EXTENDER ADAPTER



Part #	Thread size NPTF FxM	List Price
28-191LF	1/4" X 1/8"	2.80
28-192LF	1/4" x 1/4"	4.43
28-198LF	3/8" x 1/8"	7.58
28-193LF	3/8" x 1/4"	10.53
28-194LF	3/8" x 3/8"	12.86
28-199LF	1/2" x 1/4"	11.52
28-195LF	1/2" x 3/8"	10.16
28-196LF	1/2" X 1/2"	10.92
28-208LF	3/4" x 1/2"	8.00

### STREET TEE/ SERVICE TEE



Part #	Thread size NPTF	List Price
28-246LF	1/4"	8.99

## HOSE BARBS

### RIGID MALE ADAPTER



Part #	Hose I.D. x Male NPTF	List Price
32-027LF	1/8" x 1/4"	4.87
32-002LF	3/16" x 1/8"	2.50
32-004LF	1/4" x 1/8"	2.86
32-005LF	1/4" x 1/4"	1.86
32-006LF	1/4" x 3/8"	2.51
32-007LF	1/4" x 1/2"	4.01
32-008LF	5/16" x 1/8"	1.44
32-009LF	5/16" x 1/4"	3.71
32-010LF	5/16" x 3/8"	5.72
32-011LF	3/8" x 1/8"	3.56
32-012LF	3/8" x 1/4"	2.55
32-013LF	3/8" x 3/8"	2.93
32-014LF	3/8" x 1/2"	3.95
32-026LF	3/8" x 3/4"	5.81
32-015LF	1/2" x 1/4"	5.66
32-016LF	1/2" x 3/8"	3.40
32-017LF	1/2" x 1/2"	4.90
32-018LF	1/2" x 3/4"	6.73
32-019LF	5/8" x 3/8"	4.06
32-020LF	5/8" x 1/2"	5.37
32-021LF	5/8" x 3/4"	9.22
32-022LF	3/4" x 1/2"	5.47
32-023LF	3/4" x 3/4"	6.93
32-024LF	1" x 3/4"	12.42
32-025LF	1" x 1"	13.79

**MENDER/ SPLICER**



Part #	Hose I.D. x Hose I.D.	List Price
32-092LF	3/16"	4.45
32-093LF	1/4"	4.13
32-094LF	5/16"	4.36
32-095LF	3/8"	5.16
32-096LF	1/2"	7.68
32-097LF	5/8"	8.74
32-098LF	3/4"	11.05

**RIGID FEMALE ADAPTER**



Part #	Hose I.D. x Female NPTF	List Price
32-050LF	1/8" x 1/8"	3.25
32-317LF	1/8" x 1/4"	5.14
32-052LF	1/4" x 1/8"	3.99
32-053LF	1/4" x 1/4"	5.47
32-058LF	3/8" x 1/4"	2.68
32-059LF	3/8" x 3/8"	8.78
32-063LF	3/8" x 1/2"	8.38
32-064LF	1/2" x 1/4"	6.65
32-060LF	1/2" x 3/8"	7.70
32-061LF	1/2" x 1/2"	4.12
32-065LF	3/4" x 3/4"	8.23

**FORGED HOSE BARB 90° ELBOW**



Part #	Hose I.D. x Male NPTF	List Price
32-038LF	1/4" x 1/8"	5.18
32-039LF	1/4" x 1/4"	2.56
32-036LF	5/16" x 1/8"	3.92
32-040LF	5/16" x 1/4"	2.32
32-046LF	3/8" x 1/8"	2.56
32-041LF	3/8" x 1/4"	2.75
32-042LF	3/8" x 3/8"	3.20
32-047LF	3/8" x 1/2"	5.19
32-048LF	1/2" x 1/4"	3.74
32-043LF	1/2" x 3/8"	5.73

**HOSE BARB TEES**



Part #	Hose Barb Size	List Price
32-365LF	1/4"	2.81
32-126LF	3/8"	3.95

**DUAL 45°/ 37° FLARE SWIVEL**



Part #	Hose I.D. x Dual Seat	List Price
32-337LF	1/4" x 1/4"	2.96

**PUSH-ON**

**MALE ADAPTER**



Part #	Hose I.D. x Male NPTF	List Price
30-200LF	1/4" x 1/8"	2.45
30-201LF	1/4" x 1/4"	3.29
30-203LF	3/8" x 1/4"	3.40
30-204LF	3/8" x 3/8"	4.64
30-206LF	1/2" x 3/8"	5.35
30-207LF	1/2" x 1/2"	8.83

**SAE/JIC DUAL 45°/37° FEMALE SWIVEL**



Part #	Hose I.D. x Female 45°/37°	List Price
30-230LF	1/4" x 1/4"	3.37

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**SAE 45° FLARE**

**SHORT ROD NUT**



Part #	Thread Size UNF	List Price
10-015LF	1/4"	2.16
10-017LF	3/8"	4.13
10-019LF	1/2"	4.20

**SHORT FORGED NUT**



Part #	Thread Size UNF	List Price
10-041LF	3/8"	9.03
10-042LF	1/2"	6.04

**FLARED CAP**



Part #	Thread Size UNF	List Price
10-075LF	1/4"	1.54
10-077LF	3/8"	2.49
10-078LF	1/2"	3.56
10-079LF	5/8"	6.06

**UNION**



Part #	Thread Size UNF	List Price
10-106LF	1/4"	2.89
10-108LF	3/8"	5.66
10-109LF	1/2"	7.99
10-110LF	5/8"	11.74

**FEMALE ADAPTER**



Part #	Male Flare x Female NPTF	List Price
10-236LF	3/8" x 3/8"	5.23
10-237LF	3/8" x 1/2"	5.63
10-240LF	1/2" x 3/8"	6.41
10-241LF	1/2" x 1/2"	6.32
10-242LF	1/2" x 3/4"	9.43

**MALE ADAPTER**



Part #	Male Flare x Male NPTF	List Price
10-255LF	1/4" x 1/8"	3.13
10-256LF	1/4" x 1/4"	2.89
10-258LF	1/4" x 1/2"	10.35
10-262LF	3/8" x 1/8"	4.56
10-263LF	3/8" x 1/4"	4.46
10-264LF	3/8" x 3/8"	5.18
10-265LF	3/8" x 1/2"	7.50
10-268LF	1/2" x 3/8"	7.34
10-269LF	1/2" x 1/2"	7.03
10-270LF	1/2" x 3/4"	11.61
10-276LF	3/4" x 3/4"	22.33

**90° MALE ELBOW**



**Forged Elbow**

Part #	Male Flare x Male NPTF	List Price
10-286LF	1/4" x 1/8"	5.65
10-287LF	1/4" x 1/4"	9.63
10-288LF	1/4" x 3/8"	9.70
10-294LF	3/8" x 1/4"	10.02
10-295LF	3/8" x 3/8"	10.37
10-296LF	3/8" x 1/2"	15.00
10-299LF	1/2" x 3/8"	15.59
10-300LF	1/2" x 1/2"	16.41
10-301LF	1/2" x 3/4"	27.43

**FORGED MALE RUN TEE**



Part #	Male Flare x Male NPTF (1&3) x 2	List Price
10-355LF	1/2" x 1/2"	9.48

**FORGED SWIVEL**



Part #	Female Flare UNF	List Price
10-483LF	3/8"	12.86
10-484LF	1/2"	16.01
10-485LF	5/8"	39.50

# COMPRESSION

# LEAD FREE BRASS FITTINGS

## BRASS SLEEVE

60  
260



• FERRULES

Part #	Size	List Price
18-002LF	3/16"	0.17
18-003LF	1/4"	0.17
18-004LF	5/16"	0.20
18-005LF	3/8"	0.29
18-007LF	1/2"	0.32
18-008LF	5/8"	0.40
18-010LF	7/8"	0.93

## DELRIN SLEEVE

60-P



Part #	Size	List Price
18-015	1/4"	0.16
18-016	5/16"	0.98
18-017	3/8"	0.22
18-018	1/2"	0.14
18-019	5/8"	0.20

## BRASS INSERT

63-BI  
60AE  
2030  
63PT



• SLEEVE

Part #	Size	List Price
22-010LF	1/4"	0.15
22-011LF	5/16"	0.24
22-012LF	3/8"	0.21
22-013LF	1/2"	0.31
22-014LF	5/8"	0.54

## CAP



61-CC  
N5CT

Part #	Size	List Price
18-047LF	1/4"	0.67
18-048LF	3/8"	0.87
18-049LF	1/2"	2.29
18-050LF	5/8"	2.88

## UNION

M-62



Part #	Size	List Price
18-062LF	1/8"	3.76
18-063LF	3/16"	4.46
18-064LF	1/4"	2.90
18-065LF	5/16"	2.90
18-066LF	3/8"	4.18
18-067LF	7/16"	10.01
18-068LF	1/2"	5.99
18-069LF	5/8"	7.24
18-070LF	3/4"	28.03
18-071LF	7/8"	15.29

## REDUCING UNION

62-R



Part #	Size	List Price
18-076LF	1/4" x 1/8"	6.20
18-077LF	1/4" x 3/16"	5.89
18-078LF	5/16" x 1/4"	8.00
18-079LF	3/8" x 1/4"	3.76
18-080LF	3/8" x 5/16"	10.97
18-081LF	3/8" x 1/2"	5.44
18-082LF	3/8" x 5/8"	6.19
18-083LF	1/2" x 5/8"	7.08

## TEE

64  
264C



Part #	Size	List Price
18-101LF	1/8"	5.67
18-102LF	3/16"	7.32
18-103LF	1/4"	4.65
18-104LF	5/16"	12.51
18-105LF	3/8"	6.70
18-106LF	1/2"	10.92
18-107LF	5/8"	14.28
18-109LF	7/8"	68.43

## FORGED REDUCING TEE

64-R



Part #	Size	List Price
18-115LF	3/8" x 3/8" x 1/4"	6.92
18-117LF	1/2" x 1/2" x 3/8"	26.07

LEADFREE

# LEAD FREE BRASS FITTINGS

# COMPRESSION LEAD FREE

## UNION ELBOW

65  
BSE2  
165C  
265C



Part #	Size	List Price
18-124LF	1/4"	3.42
18-125LF	5/16"	9.76
18-126LF	3/8"	4.52
18-127LF	1/2"	7.71
18-128LF	5/8"	10.57
18-129LF	3/4"	25.97
18-130LF	7/8"	23.53

## REDUCING ELBOW - Forged

65-R



Part #	Size	List Price
18-135LF	3/8" x 1/4"	8.85
18-137LF	3/8" x 5/8"	8.95

## COMP X SWEAT ADAPTER

66-S



Part #	Comp. X Sweat Adapter	List Price
18-171LF	3/8" x 1/2" nom.swt.	3.00

## FEMALE ADAPTER

66



Part #	Comp. X Female NPTF	List Price
18-142LF	1/8" x 1/8"	7.41
18-143LF	3/16" x 1/8"	4.31
18-145LF	1/4" x 1/8"	4.56
18-146LF	1/4" x 1/4"	3.71
18-147LF	1/4" x 3/8"	5.33
18-148LF	1/4" x 1/2"	5.92
18-150LF	5/16" x 1/4"	5.02
18-151LF	5/16" x 3/8"	9.52
18-152LF	3/8" x 1/8"	6.22
18-153LF	3/8" x 1/4"	2.97
18-154LF	3/8" x 3/8"	3.39
18-155LF	3/8" x 1/2"	3.74
18-156LF	3/8" x 3/4"	9.13
18-158LF	1/2" x 3/8"	4.17
18-159LF	1/2" x 1/2"	4.77
18-160LF	1/2" x 3/4"	17.98
18-162LF	5/8" x 1/2"	5.10
18-163LF	5/8" x 3/4"	7.68
18-166LF	7/8" x 3/4"	11.00

## MALE ADAPTER

68



Part #	Comp. X Male NPTF	List Price
18-176LF	1/8" x 1/8"	3.17
18-177LF	3/16" x 1/8"	3.53
18-178LF	3/16" x 1/4"	4.10
18-179LF	1/4" x 1/8"	2.11
18-180LF	1/4" x 1/4"	2.52
18-181LF	1/4" x 3/8"	3.29
18-182LF	1/4" x 1/2"	4.94
18-183LF	5/16" x 1/8"	4.59
18-184LF	5/16" x 1/4"	5.43
18-187LF	3/8" x 1/8"	4.87
18-188LF	3/8" x 1/4"	2.93
18-189LF	3/8" x 3/8"	3.51
18-190LF	3/8" x 1/2"	4.98
18-191LF	3/8" x 3/4"	9.57
18-192LF	7/16" x 1/4"	11.14
18-193LF	1/2" x 1/4"	7.24
18-194LF	1/2" x 3/8"	4.17
18-195LF	1/2" x 1/2"	5.83
18-196LF	1/2" x 3/4"	7.47
18-197LF	5/8" x 3/8"	5.60
18-198LF	5/8" x 1/2"	6.08
18-199LF	5/8" x 3/4"	7.15
18-201LF	3/4" x 3/4"	23.36
18-202LF	7/8" x 1/2"	11.06
18-203LF	7/8" x 3/4"	11.06

## MALE ELBOW

69  
269C  
BSE1  
169C



Forged

Part #	Comp. X Male NPTF	List Price
18-221LF	3/16" x 1/8"	4.58
18-224LF	1/4" x 1/8"	2.75
18-225LF	1/4" x 1/4"	3.22
18-226LF	1/4" X 3/8"	3.74
18-227LF	1/4" x 1/2"	11.10
18-228LF	5/16" x 1/8"	6.78
18-229LF	5/16" x 1/4"	7.07
18-232LF	3/8" x 1/8"	7.92
18-233LF	3/8" x 1/4"	3.67
18-234LF	3/8" x 3/8"	4.52
18-235LF	3/8" x 1/2"	6.17
18-236LF	1/2" x 1/4"	13.38
18-237LF	1/2" x 3/8"	5.80
18-238LF	1/2" x 1/2"	7.01
18-239LF	1/2" x 3/4"	17.32
18-240LF	5/8" x 3/8"	15.85
18-241LF	5/8" x 1/2"	8.10
18-242LF	5/8" x 3/4"	9.33
18-246LF	7/8" x 3/4"	31.08

## MISCELLANEOUS LEAD FREE

70  
270C  
BSE3  
170C

### FEMALE ELBOW



Forged

Part #	Comp. X Female NPTF	List Price
18-253LF	1/4" x 1/8"	8.19
18-254LF	1/4" x 1/4"	12.02
18-267LF	1/4" x 3/8"	9.33
18-259LF	3/8" x 3/8"	13.59
18-260LF	3/8" x 1/2"	6.24
18-262LF	1/2" x 3/8"	11.80
18-263LF	1/2" x 1/2"	14.49
18-264LF	5/8" x 1/2"	8.11

## NEEDLE VALVES

### COMP X MALE PIPE



Part #	Comp x Male Pipe	List Price
46-003LF	1/4" x 1/4"	15.96
46-005LF	3/8" x 1/4"	10.05

### FEMALE PIPE X FEMALE PIPE



Part #	Female x Female	List Price
46-055LF	1/8" x 1/8"	14.41
46-056LF	1/4" FIP x 1/4" FIP	12.81

### MALE X FEMALE PIPE



Part #	Male x Female	List Price
46-061LF	1/4" x 1/4" MIP	12.59

### COMP X MALE PIPE-ANGLE



Part #	Comp x Male Pipe	List Price
46-011LF	1/4" x 1/8"	15.36
46-012LF	1/4" x 1/4"	26.29

### COMP X COMP

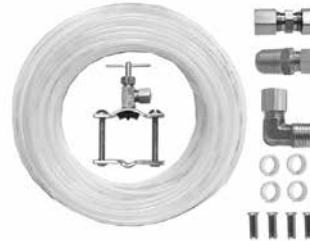


Part #	Comp x Comp	List Price
46-021LF	1/4"	20.98
46-023LF	3/8"	29.94

## LEAD FREE BRASS FITTINGS

### Ice Maker Kits

#### ICE MAKER WATER SUPPLY KIT with Poly Tubing



592-025

- Bag with Header Card
- 25' 1/4" O.D. Polyethylene Tubing
- Self Piercing Saddle Valve
- 1/4" O.D. Compression x 1/8" MIP Elbow & Adapter
- 1/4" O.D. Compression Union
- 1/4" Inserts & Sleeves

Part #	Description	List Price
43-265LF	Kit	34.53

#### ICE-MAKER WATER SUPPLY KIT

- Economy
- 25' Polyethylene Tubing
- Self Piercing Saddle Valve
- 1/4" Compression Union
- 1/4" Inserts & Sleeves



Part #	List Price
43-266LF	27.18

## SELF PIERCING SADDLE VALVES

FITS 3/8" OD  
THRU 3/4" OD



### SELF PIERCING NEEDLE VALVE KIT #M-104-VSP

- INDIVIDUALLY BAGGED WITH NEEDLE VALVE
- SADDLE CLAMP
- 2 NUTS
- 2 BOLTS & WASHERS

Has brass sleeve for copper tube installation & delrin sleeve & brass insert for plastic tube installation.

Part #	Tube O.D.	Min Pkg Qty	List Price
46-090ALF	1/4	1	10.75

#M-302-BSV1.60

### LEAD FREE MINI BALL VALVES BARB x BARB



Part #	H.B. x H.B.	List Price
944-142LF	1/4"	12.73
944-134LF	3/8"	12.88

LEADFREE

**COMPLIES WITH AB 1953**

**90° ELBOW**



Part #	Size	Approx Wt. Lbs	Box/Case	List Price
44-100LF	1/8"	0.06	50 / 600	7.84
44-101LF	1/4"	0.10	35 / 420	5.27
44-102LF	3/8"	0.15	90 / 360	5.27
44-103LF	1/2"	0.25	50 / 200	8.02
44-104LF	3/4"	0.41	35 / 105	10.80
44-105LF	1"	0.69	20 / 60	16.66
44-106LF	1-1/4"	1.02	20 / 40	26.49
44-107LF	1-1/2"	1.36	15 / 30	33.07
44-108LF	2"	2.14	8 / 16	53.80

**90° STREET ELL**



Part #	Size	Approx Wt. Lbs	Box/Case	List Price
44-160LF	1/8"	0.06	60 / 720	11.92
44-161LF	1/4"	0.11	35 / 420	8.02
44-162LF	3/8"	0.16	60 / 240	8.02
44-163LF	1/2"	0.24	60 / 180	9.97
44-164LF	3/4"	0.38	35 / 105	14.06
44-165LF	1"	0.66	45 / 90	23.27
44-166LF	1-1/4"	0.99	25 / 50	35.61
44-167LF	1-1/2"	1.15	9 / 27	46.39
44-168LF	2"	2.07	8 / 16	78.65

**45° ELBOW**



Part #	Size	Approx Wt. Lbs	Box/Case	List Price
44-181LF	1/4"	0.09	30 / 360	5.77
44-182LF	3/8"	0.14	75 / 300	19.04
44-183LF	1/2"	0.19	50 / 200	7.34
44-184LF	3/4"	0.36	40 / 120	10.80
44-185LF	1"	0.59	20 / 60	21.26
44-186LF	1-1/4"	0.87	20 / 40	29.15
44-187LF	1-1/2"	1.13	10 / 30	36.53
44-188LF	2"	1.65	12 / 24	59.20

**45° STREET ELBOW**



Part #	Size	Approx Wt. Lbs	Box/Case	List Price
44-201LF	1/4"	0.09	40 / 480	30.38
44-202LF	3/8"	0.12	100 / 400	30.38
44-203LF	1/2"	0.22	75 / 225	9.97
44-204LF	3/4"	0.31	40 / 120	14.06
44-205LF	1"	0.52	25 / 75	23.27
44-206LF	1-1/4"	0.72	10 / 40	35.61
44-207LF	1-1/2"	1.05	10 / 30	47.81

**TEE**



Part #	Size	Approx Wt. Lbs	Box/Case	List Price
44-251LF	1/4"	0.13	75 / 300	7.34
44-252LF	3/8"	0.21	45 / 180	7.34
44-253LF	1/2"	0.35	40 / 120	9.23
44-254LF	3/4"	0.55	35 / 70	13.28
44-255LF	1"	0.92	20 / 40	23.58
44-256LF	1-1/4"	1.34	14 / 28	33.07
44-257LF	1-1/2"	1.82	12 / 24	45.50
44-258LF	2"	2.80	8 / 16	74.55

**REDUCING TEE**

**3**

**1**



**2**

**REDUCING ON THE BRANCH**

Part #	Size (1 & 2) x 3	Approx Wt. Lbs	Box/Case	List Price
44-286LF	3/4" x 1/2"	0.47	20 / 80	15.90
44-291LF	1" x 1/2"	0.70	15 / 60	29.05
44-298LF	1" x 3/4"	0.78	12 / 48	29.05
44-330LF	2" x 1"	2.06	10/20	92.06
44-334LF	2" x 1-1/4"	2.29	8/16	240.01

• Brass Nipples are Lead Free on pg. 214

**COMPLIES WITH AB 1953**

**BULKHEAD TEE**



Part #	Size	List Price
44-280LF	1/2" x 3/4"	17.47

**CROSS**



Part #	Size	Approx Wt. Lbs	Box/Case	List Price
44-391LF	1/4"	0.15	60 / 240	12.25
44-392LF	3/8"	0.25	50 / 150	12.25
44-393LF	1/2"	0.38	30 / 90	14.89
44-394LF	3/4"	0.59	20 / 60	21.51
44-395LF	1"	0.94	15 / 30	34.11
44-396LF	1-1/4"	1.43	10 / 20	53.35
44-397LF	1-1/2"	1.89	8 / 16	68.22
44-398LF	2"	2.95	5 / 10	142.10

**COUPLING**



Part #	Size	Approx Wt. Lbs	Box/Case	List Price
44-411LF	1/4"	0.09	40 / 480	5.27
44-412LF	3/8"	0.13	40 / 480	5.27
44-413LF	1/2"	0.21	60 / 240	6.61
44-414LF	3/4"	0.32	50 / 150	8.74
44-415LF	1"	0.53	25 / 100	13.28
44-416LF	1-1/4"	0.73	16 / 64	20.74
44-417LF	1-1/2"	0.97	18 / 36	28.18
44-418LF	2"	1.51	12 / 24	46.39

**REDUCING COUPLING**



Part #	Size	Approx Wt. Lbs	Box/Case	List Price
44-432LF	3/8" x 1/4"	0.11	30 / 360	5.65
44-434LF	1/2" x 1/4"	0.16	75 / 300	7.06
44-435LF	1/2" x 3/8"	0.17	60 / 240	7.06
44-436LF	3/4" x 1/4"	0.20	45 / 180	11.67
44-437LF	3/4" x 3/8"	0.23	45 / 180	10.50
44-438LF	3/4" x 1/2"	0.26	60 / 180	10.50
44-441LF	1" x 1/2"	0.38	30 / 120	17.46
44-442LF	1" x 3/4"	0.43	25 / 100	17.46
44-445LF	1-1/4" x 3/4"	0.57	25 / 75	28.18
44-446LF	1-1/4" x 1"	0.65	15 / 60	28.18
44-448LF	1-1/2" x 3/4"	0.74	15 / 60	40.10
44-449LF	1-1/2" x 1"	0.83	25 / 50	35.61
44-450LF	1-1/2" x 1-1/4"	0.87	12 / 48	35.61
44-452LF	2" x 1"	1.19	12 / 36	59.64
44-453LF	2" x 1-1/4"	1.22	9 / 27	54.05
44-454LF	2" x 1-1/2"	1.28	9 / 27	52.88

**CAP**



Part #	Size	Approx Wt. Lbs	Box/Case	List Price
44-471LF	1/4"	0.06	80 / 960	9.98
44-473LF	1/2"	0.13	75 / 300	5.27
44-474LF	3/4"	0.21	40 / 160	6.97
44-475LF	1"	0.35	25 / 100	10.92
44-476LF	1-1/4"	0.52	20 / 80	16.61
44-477LF	1-1/2"	0.65	18 / 54	22.42
44-478LF	2"	1.14	12 / 36	38.06

**UNION**

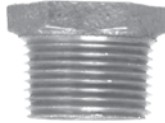


Part #	Size	Approx Wt. Lbs	Box/Case	List Price
44-601LF	1/4"	0.27	20 / 240	18.70
44-602LF	3/8"	0.39	40 / 160	41.85
44-603LF	1/2"	0.44	50 / 100	20.33
44-604LF	3/4"	0.59	35 / 70	28.18
44-605LF	1"	0.90	20 / 40	37.33
44-606LF	1-1/4"	1.33	15 / 30	54.67
44-607LF	1-1/2"	1.80	10 / 20	64.53
44-608LF	2"	2.66	6 / 12	99.33

**LEADFREE**

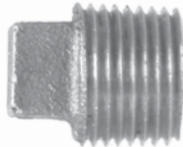


**HEX BUSHING**



Part #	Size	Approx Wt. Lbs	Box/Case	List Price
44-500LF	1/4" x 1/8"	0.03	120 / 1440	6.41
44-502LF	3/8" x 1/4"	0.04	75 / 900	5.52
44-503LF	1/2" x 1/8"	0.09	150 / 600	5.85
44-504LF	1/2" x 1/4"	0.10	150 / 600	4.20
44-505LF	1/2" x 3/8"	0.08	150 / 600	4.20
44-507LF	3/4" x 1/4"	0.18	75 / 300	6.97
44-508LF	3/4" x 3/8"	0.17	75 / 300	5.77
44-509LF	3/4" x 1/2"	0.14	75 / 300	5.77
44-510LF	1" x 1/4"	0.28	50 / 200	10.60
44-512LF	1" x 1/2"	0.30	50 / 200	8.74
44-513LF	1" x 3/4"	0.21	50 / 200	8.74
44-516LF	1-1/4" x 1/2"	0.39	30 / 120	39.94
44-517LF	1-1/4" x 3/4"	0.43	30 / 120	14.89
44-518LF	1-1/4" x 1"	0.42	30 / 120	14.89
44-521LF	1-1/2" x 1/2"	0.51	25 / 75	23.27
44-522LF	1-1/2" x 3/4"	0.54	25 / 75	23.27
44-523LF	1-1/2" x 1"	0.57	25 / 75	19.02
44-524LF	1-1/2" x 1-1/4"	0.46	25 / 75	19.02
44-529LF	2" x 1"	0.77	20 / 60	33.95
44-530LF	2" x 1-1/4"	0.88	20 / 60	28.18
44-531LF	2" x 1-1/2"	0.71	20 / 60	28.18

**CORED SQUARE HEAD PLUG**



Part #	Size	Approx Wt. Lbs	Box/Case	List Price
44-670LF	1/8"			4.99
44-671LF	1/4"	0.04	150 / 1800	5.23
44-672LF	3/8"	0.06	120 / 1440	10.37
44-653LF	1/2"	0.10	50 / 600	5.52
44-654LF	3/4"	0.13	30 / 360	6.32
44-655LF	1"	0.22	20 / 240	8.33
44-656LF	1-1/4"	0.32	40 / 120	12.40
44-657LF	1-1/2"	0.47	30 / 90	15.80
44-658LF	2"	0.68	20 / 60	24.92

**CHROME PLATED 90° ELBOW**



Part #	Size	List Price
45-101LF	1/4"	49.08
45-102LF	3/8"	49.09
45-103LF	1/2"	47.56
45-104LF	3/4"	65.62
45-105LF	1"	106.77

**CHROME PLATED TEE**



Part #	Size	List Price
45-251LF	1/4"	55.86
45-252LF	3/8"	57.63
45-253LF	1/2"	55.86
45-254LF	3/4"	79.37
45-255LF	1"	143.23

**CHROME PLATED COUPLING**



Part #	Size	List Price
45-411LF	1/4"	41.07
45-412LF	3/8"	41.06
45-413LF	1/2"	39.78
45-414LF	3/4"	55.86
45-415LF	1"	98.30

**CHROME PLATED CAP**



Part #	Size	List Price
45-471LF	1/4"	32.63
45-472LF	3/8"	32.63
45-473LF	1/2"	32.63
45-474LF	3/4"	41.06
45-475LF	1"	74.47

See website for more sizes. See pg. 235 for Leaded Chrome Plated fittings.

**LEADFREE**

**COMPLIES WITH AB 1953**

**1/4" CHROME PLATED NIPPLE**



Part #	Size	List Price
41-022LF	x 2"	15.64
41-024LF	x 3"	19.89
41-025LF	x 3-1/2"	21.65
41-026LF	x 4"	25.45
41-028LF	x 5"	30.11
41-030LF	x 6"	36.71

**3/8" CHROME PLATED NIPPLE**

Part #	Size	List Price
41-040LF	x Close	9.56
41-041LF	x 1-1/2"	11.32
41-042LF	x 2"	13.74
41-043LF	x 2-1/2"	14.91
41-044LF	x 3"	18.23
41-045LF	3-1/2"	19.66
41-046LF	x 4"	23.40
41-047LF	x 4-1/2"	24.92
41-048LF	x 5"	27.33
41-049LF	x 5-1/2"	29.71
41-050LF	x 6"	32.13
41-054LF	x 10"	52.12
41-056LF	x 12"	61.70
41-057LF	x 18"	75.42
41-058LF	x 24"	100.43

**1/2" CHROME PLATED NIPPLE**

Part #	Size	List Price
41-060LF	x Close	12.75
41-061LF	x 1-1/2"	14.77
41-062LF	x 2"	17.34
41-063LF	x 2-1/2"	20.62
41-064LF	x 3"	24.21
41-065LF	x 3-1/2"	27.64
41-066LF	x 4"	31.67
41-067LF	x 4-1/2"	34.37
41-068LF	x 5"	37.87
41-069LF	x 5-1/2"	41.59
41-070LF	x 6"	46.11
41-072LF	x 8"	59.86
41-073LF	x 9"	66.41
41-074LF	x 10"	73.45
41-075LF	x 11"	80.36
41-076LF	x 12"	87.40
41-077LF	x 18"	141.95
41-079LF	x 24"	190.23
41-244LF	x 36"	367.35
41-245LF	x 48"	487.48

**3/4" CHROME PLATED NIPPLE**

Part #	Size	List Price
41-080LF	x Close	23.79
41-081LF	x 1-1/2"	25.36
41-082LF	x 2"	29.96
41-083LF	x 2-1/2"	34.74
41-084LF	x 3"	40.07
41-085LF	x 3-1/2"	44.97
41-086LF	x 4"	52.27
41-087LF	x 4-1/2"	56.86
41-088LF	x 5"	62.75
41-089LF	x 5-1/2"	68.58
41-090LF	x 6"	76.35
41-096LF	x 12"	146.32
41-093LF	x 18"	238.32
41-097LF	x 24"	317.68
41-098LF	x 36"	474.33
41-099LF	x 48"	631.32

**1" CHROME PLATED NIPPLE**

Part #	Size	List Price
41-101LF	x 2"	43.27
41-102LF	x 2-1/2"	50.49
41-103LF	x 3"	58.13
41-104LF	x 3-1/2"	67.31
41-105LF	x 4"	75.71
41-106LF	x 4-1/2"	84.43
41-107LF	x 5"	93.36
41-108LF	x 5-1/2"	102.26
41-109LF	x 6"	111.48
41-111LF	x 8"	148.65
41-113LF	x 10"	183.99
41-115LF	x 12"	219.41

**DIELECTRIC UNION  
SWEAT TO STEEL IPS**



Part #	Description	List Price
973-110LF	1/2 CC x 1/2 FIP	6.00
973-111LF	3/4 CC x 3/4 FIP	7.79

**DIELECTRIC NIPPLE WITH THERMO  
PLASTIC WATERWAY**



Part #	Description	List Price
973-153LF	3/4" x 3"	2.49

LEADFREE

# BALL VALVES

# LEAD FREE BRASS

## 600PSI LEAD FREE, FULL PORT BRASS BALL VALVES FEMALE X FEMALE

Lead Free Brass Ball Valve NPT,Female\*Female  
 Lead Free and dezincification resistant (DZR) material  
 IAPMO listed to NSF/ANSI-61, NSF/ANSI-372 ,IGC-157  
 CSA listed to NSF/ANSI-61, NSF/ANSI-372 ,IGC-157

600 psi (WOG) 150 psi (WSP) Service  
 Thread conform ANSI B1.20.1  
 Temperature Range : -40° F to 365° F  
 Construction:Forging Brass Body  
 PTFE Ball Seats  
 Blow Out Proof Brass Stem  
 Stainless Steel Ball  
 Steel Handle w/Vinyl Grip

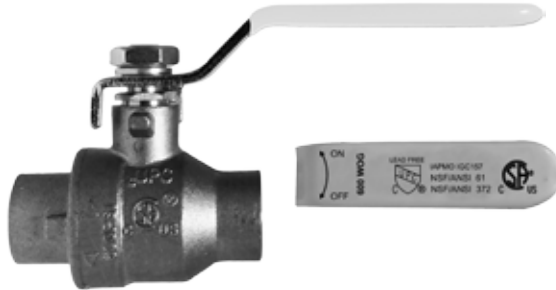
**MADE IN CHINA**



IAPMO IGC 157 - 2004b

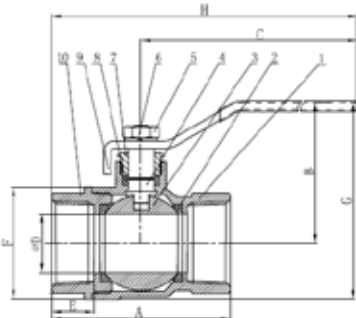
## FIP X FIP LEAD FREE BALL VALVE

Part #	Size	OD	A	B	C	E	F	G	H	List Price
941151LF	1/4"	0.394	1.73	1.69	3.35	0.453	0.945	2.154	4.331	9.75
941152LF	3/8"	0.394	1.73	1.69	3.35	0.473	0.945	2.154	4.331	9.75
941153LF	1/2"	0.524	1.89	1.73	3.35	0.472	1.083	2.276	4.291	10.99
941154LF	3/4"	0.748	2.28	1.89	3.35	0.563	1.378	2.579	4.488	16.05
941155LF	1"	0.984	2.80	2.14	4.29	0.650	1.772	3.031	5.689	24.84
941156LF	1-1/4"	1.240	3.15	2.32	4.29	0.669	2.165	3.398	5.866	37.88
941157LF	1-1/2"	1.476	3.44	2.66	5.63	0.701	2.50	3.909	7.343	57.10
941158LF	2"	1.949	4.06	3.01	5.63	0.708	3.244	4.638	7.638	87.81



## SWT X SWT LEAD FREE BALL VALVE

Part #	Size	OD	A	B	C	E	0F	F	G	H	List Price
941163LF	1/2"	0.524	1.945	1.73	3.35	0.504	0.630	1.083	2.276	4.319	10.49
941164LF	3/4"	0.748	2.654	1.89	3.35	0.748	0.878	1.378	2.579	4.665	14.20
941165LF	1"	0.984	3.315	2.14	4.29	0.909	1.130	1.772	3.031	5.949	25.02
941166LF	1-1/4"	1.240	3.741	2.32	4.29	0.968	1.378	2.165	3.398	6.165	38.46
941167LF	1-1/2"	1.476	4.252	2.66	5.63	1.091	1.630	2.50	3.909	7.756	57.88
941168LF	2"	1.949	5.276	3.01	5.63	1.343	2.130	3.244	4.638	8.268	68.36



No	Item	Qty	Material
1	Body	1	Lead Free Brass
2	Seat	2	PTFE
3	Ball	1	Stainless Steel
4	Stem	1	Brass
5	Handle Nut	1	Plated Steel
6	Lock Washer	1	Plated Steel
7	Packing Nut	1	Brass
8	Packing	1	PTFE
9	Handle	1	Plated Steel
10	Cap	1	Lead Free Brass

**LEAD FREE BRASS BALL VALVE NPT**

1/2" - 2" Sizes Gas Approved



**ISO 9002 Manufacturer  
FEATURES**

1/4-2" 600 PSI non-shock cold water, gas, oil -  
150 PSI saturated steam

2-1/2"- 4" 400 PSI non-shock cold water, gas, oil

- Leadfree Brass Ball valve NPT, Female \* Female
- Lead free and dezincification resistant (DZR) material
- Size 1-1/4" thru 4" with Stainless steel ball
- IAMPO listed to cUPC, NSF/ ANSI 61 & 372, IGC 157
- CSA - 1/4" thru 2": ANSI Z21.15/ CSA 9.1 for 1/2 psig valves  
ASME B16.44, CGA CR91-002 for 2 & 5 psig valves;  
CAN/ CGA-3.16, ASME B16.33 (1/2"-2") for 125 psig valves
- UL 125, UL 1477, UL 842 - for size 1/4" thru 4", 250 psig
- UL 258 - for size 1/4" thru 2", 175 psig
- FM - for size 1/4" thru 2"
- Suitable for full range of liquids and gases
- Minimal pressure drop due to large full size ports
- Bottom loaded, pressure retaining stem
- Pressure rated for 1/4"-2" at 600psi (42 bars) and 2-1/2"-4" at 400 psi WOG (non-shock) and 150 WSP (10.34 bars) saturated steam. Virgin PTFE stem packing seal, thrust washer and seats
- White 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: 302°F (150° C)
- Minimum operating temperature: -22°F (-30°C)
- 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

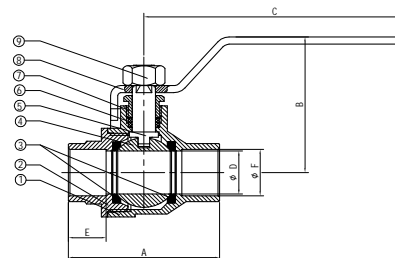
POS	Components	Materials
1	Body	Lead Free Brass
2	End Cap	Lead Free Brass
3	Ball Seat	PTFE
4	Ball	1/4-1" Lead Free Brass 1 1/4-4" SS316 Hollowball
5	Stem	Brass
6	Stem Padding	PTFE
7	Padding Nut	Brass
8	Lever Handle	Nickel plating steel
9	Stem Nut	Brass plating steel
10	Seal	PTFE



**MADE IN CHINA**



• Generic Handles



Part#	Size	DIMENSIONS								List Price
		A	B	C	D	E	F	G	H	
940-171LF	1/4"	1.756	1.732	3.543	0.394	0.457	1.012	2.238	4.421	12.24
940-172LF	3/8"	1.756	1.732	3.543	0.394	0.457	1.012	2.238	4.421	11.28
940-173LF	1/2"	2.047	2.040	3.543	0.583	0.520	1.240	2.559	4.567	15.78
940-174LF	3/4"	2.362	2.260	3.780	0.748	0.563	1.492	2.854	4.961	23.94
940-175LF	1"	2.756	2.579	4.528	0.945	0.630	1.791	3.476	5.906	38.40
940-176LF	1-1/4"	3.307	3.050	4.528	1.260	0.709	2.343	4.134	6.181	64.86
940-177LF	1-1/2"	3.661	3.366	5.420	1.575	0.717	2.835	4.783	7.343	96.96
940-178LF	2"	4.181	3.701	6.160	1.969	0.748	3.425	5.413	7.602	135.42
940-179LF	2-1/2"	4.181	4.650	8.870	2.520	1.024	4.331	6.969	11.350	313.80
940-180LF	3"	6.039	4.970	8.870	2.913	1.102	4.921	7.579	11.681	379.68
940-181LF	4"	7.386	6.130	10.85	3.898	1.220	6.430	9.055	13.299	831.60

**SWT X SWT LEAD FREE BALL VALVE**

Part #	SWT	A	B	C	D	E	F	List Price
943-612LF	1/2"	2.047	1.839	3.543	0.583	0.512	0.630	12.81
943-613LF	3/4"	2.748	2.14	3.780	0.748	0.748	0.878	22.14
943-614LF	1"	3.228	2.449	4.528	0.945	0.906	1.130	35.31
943-615LF	1-1/4"	3.819	3.04	4.36	1.260	0.972	1.378	56.05
943-616LF	1-1/2"	4.425	3.169	5.39	1.575	1.088	1.630	81.75
943-617LF	2"	5.377	3.488	6.307	1.989	1.346	2.130	114.71

**LEADFREE**

**LEAD FREE FORGED BRASS BALL VALVE F X F AND SWT X SWT**



**ISO 9002 Manufacturer FEATURES**

600 PSI non-shock cold water, gas, oil  
- 150 PSI saturated steam

CSA AGA 3.88 5 PSIG IAMPO IGC 157 - 2004b

- **SOLID CHROME PLATED BRASS BALL**
- Suitable for full range of liquids and gases
- Minimal pressure drop due to large full size ports
- Bottom loaded, pressure retaining stem
- Pressure rated at 600psi (42 bars) WOG (non-shock) and 150 WSP (10.34 bars) saturated steam. Virgin TFE stem packing seal, thrust washer and seats.
- Blue vinyl insulator on heavy duty plated carbon steel handles.
- Fast 1/4 turn open or close operation
- Low operating torque
- Flow can go both directions

- Adjustable stem packing gland
- Maximum operating temperature: 248°F (120° C) at 600 PSI
- Minimum operating temperature: -20°F (-40°C)
- 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

• Generic Handles



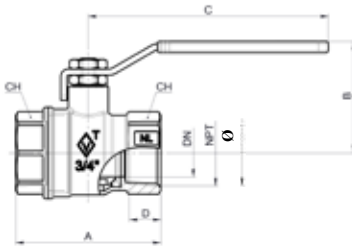
ANSI/INSE 61-8



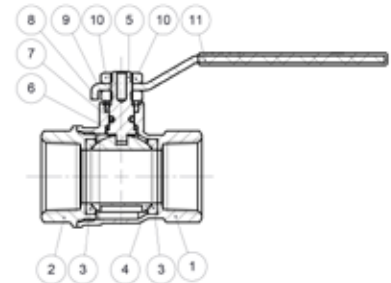
**FIP X FIP**

**MADE IN ITALY**

**SWT X SWT**



POS	Components	Materials
1	Body	CW510L
2	End Connection	CW510L
3	Ball Seal	PTFE
4	Seal	CW510L
5	Stem	CW614N
6	Lower Stem	PTFE
7	O-Ring	NBR70sh
8	Upper Seal	PTFE
9	Brass Ring	CW614N
10	Nut	Steel
11	Handle	Steel P10



**FIP X FIP LEAD FREE FORGED BRASS BALL VALVE**

Part #	NPT	DN	A	B	C	D	CH	Weight (lbs)	Box Qty	Case	List Price
943-233LF	1/2"	0.57	2.09	1.57	3.35	0.46	0.98	0.39	20	80	17.05
943-234LF	3/4"	0.75	2.28	1.77	3.80	0.49	1.22	0.56	14	56	25.50
943-235LF	1"	0.94	2.80	2.03	3.80	0.59	1.50	0.89	6	24	42.45
943-236LF	1-1/4"	1.24	3.23	2.32	4.72	0.62	1.85	1.44	4	16	67.89
943-237LF	1-1/2"	1.49	3.70	2.60	4.72	0.64	2.13	2.19	2	8	105.16
943-238LF	2"	1.96	4.13	3.27	6.38	0.65	2.64	3.62	2	8	141.12

**SWT X SWT LEAD FREE FORGED BRASS BALL VALVE**

Part #	SWT	Ø	DN	A	B	C	D	CH	Weight (lbs)	Box Qty	Case	List Price
940-212LF	1/2"	0.63	0.57	2.25	1.57	3.35	0.42	0.79	0.35	20	80	16.45
940-213LF	3/4"	0.866	0.75	3.05	1.77	3.80	0.61	1.06	0.55	10	40	24.50
940-214LF	1"	1.102	0.94	3.68	2.03	3.80	0.73	1.34	0.87	6	24	37.45
940-215LF	1-1/4"	1.377	1.24	4.18	2.32	4.72	0.91	1.61	1.41	6	24	61.74
940-216LF	1-1/2"	1.61	1.49	4.96	2.60	4.72	1.06	1.89	2.08	2	8	87.15
940-217LF	2"	2.125	1.96	5.87	3.27	6.38	1.26	2.40	3.62	1	4	141.12

## LEAD FREE VALVES

- 200 WOG (Cold water, oil, gas)
- 125 WSP (Saturated Steam)
- Brass Forged body/bonList- stronger than sand castings.
- Superior quality and finish.
- Each valve individually tested.
- Threaded ends to ANSI B1.20.1, Solder ends to ANSI B16.18
- Non rising stem.
- Cast iron handle.



CHINA

### BRASS GATE VALVE IPS

Part#	Size	List Price
940-130LF	1/4	13.75
940-131LF	3/8	13.00
940-132LF	1/2	18.53
940-133LF	3/4	22.13
940-134LF	1	28.35
940-135LF	1-1/4	53.91
940-136LF	1-1/2	78.35
940-137LF	2	83.53

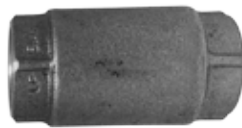
### BRASS GATE VALVE C X C



Part#	Size	List Price
940-142LF	1/2"	14.67
940-143LF	3/4"	20.01
940-144LF	1"	28.35
940-145LF	1-1/4"	46.85
940-146LF	1-1/2"	59.20
940-147LF	2"	84.01

### BRASS CHECK VALVE

NO	Part	Material
1	Cap	C37700
2	Gasket	NBR
3	Spring	Stainless Steel
4	Positioning Seat	BRASS
5	Screw	BRASS
6	Body	C37700



### LEAD-FREE

Part #	Size	List Price
944-430LF	1/2	27.72
944-431LF	3/4	37.42
944-432LF	1	52.07
944-433LF	1-1/4	70.50
944-434LF	1-1/2	99.00
944-435LF	2	170.28

## LEAD FREE VALVES

### CAST BRASS SWING CHECK VALVE IPS

#### SCREWED ENDS

- Working pressure non-shock: 200 psi W.O.G. (cold water, oil, gas) 125 psi WSP (saturated steam)
- Swing type disc.
- Screwed Cap.
- Hard Seat.
- 90° Straight Pattern.
- Used to prevent reverse flow in commercial and industrial applications.
- Threaded ends to ANSI B1.20.1
- Integral seat.



CHINA

Part #	Size	List Price
940-352LF	1/2"	22.56
940-353LF	3/4"	22.71
940-354LF	1"	31.44
940-355LF	1-1/4"	50.35
940-356LF	1-1/2"	64.16
940-357LF	2"	95.65

### C X C SWING CHECK VALVE



Part #	Size	List Price
940-362LF	1/2	57.77
940-363LF	3/4	30.56
940-364LF	1	41.03
940-365LF	1-1/4	71.42
940-366LF	1-1/2	86.57
940-367LF	2	143.33

### CLASS 150 BRASS Y-PATTERN STRAINER



#### LEAD-FREE

Part#	Size	A	B	C	D	List Price
940-523LF	1/2"	2.65	2.59	1.4	3.49	38.36



**BRASS BALL VALVES**

Full Port Ball Valves ..... 184  
 -w/ Locking Handle ..... 185  
 -w/ Tee Handle..... 186  
 F x F 600 WOG..... 187  
 MxF FP 600 WOG ..... 188  
 MxF FP 600 WOG ..... 189  
 Gas Ball Valve ..... 190  
 Mini Ball Valve..... 191  
 Mini Check Valves..... 192  
 3-Way Ball..... 193

**NEW**

**MISC. BRASS VALVES**

OSHA Valves ..... 194  
 Vacuum Breaker..... 194  
 Hose Bibbs ..... 194  
 Barrel Faucets..... 194  
 Freeze Tolerant Ball Valves 195  
 Gate Valve..... 196  
 Y-Strainer..... 197  
 Swing Check..... 198  
 Barrel Check..... 199  
 In-Line Check ..... 200

**STAINLESS STEEL**

2,000lb Ball Valve..... 201  
 1,000 STD Port ..... 202  
 1,000lb Full Port ..... 203-204  
 Mini Ball Valve..... 205  
 Check..... 206  
 In-Line Check ..... 207  
 Spring Check - 1500# ..... 208  
 Y-Spring Check..... 209  
 Barrel Spring Check ..... 209  
 SS Y Strainer..... 210  
 SS Check Valve..... 210  
 SS Globe Valve ..... 210  
 SS Gate ..... 210  
 Carbon Steel Ball..... 211  
 PVC Ball Valves..... 212  
 Pl. Drum Faucets ..... 212

For Lead Free Valves see pages 179-181



**BALL VALVE PRIVATE LABEL PROGRAM**

Midland will put your company name and logo on our ball valve handle for FREE. Simply place a minimum blanket order of 10 cases per size and Midland will stock them under a special part # for your access only. Please allow 90-120 days for delivery on the first shipment only: Then have them delivered as you need them!

**LEADFREE**

**FULL PORT 600WOG FORGED BRASS BALL VALVE**

1/2" - 2" Sizes Gas Approved



**ISO 9002 Manufacturer FEATURES**

1/4"-2" 600 PSI non-shock cold water, gas, oil - 150 PSI saturated steam

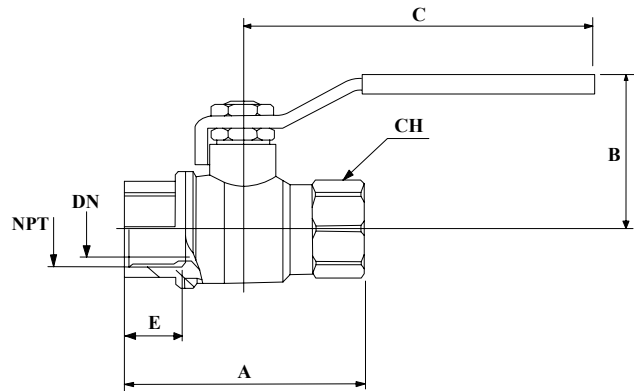
2-1/2"- 4" 400 PSI non-shock cold water, gas, oil

Made in China

- Suitable for full range of liquids and gases
- Minimal pressure drop due to large full size ports
- Bottom loaded, pressure retaining stem
- Pressure rated for 1/4"-2" at 600psi (42 bars) and 2-1/2"-4" at 400 psi WOG (non-shock) and 150 WSP (10.34 bars) saturated steam. Virgin PTFE stem packing seal, thrust washer and seats
- Yellow vinyl insulator on heavy duty plated carbon steel handles
- Fast 1/4 turn open or close operation
- Not Lead Free

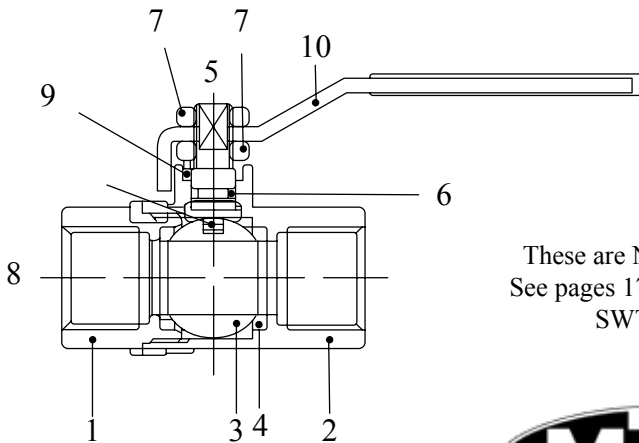
- Low operating torque
- Adjustable stem packing gland
- Maximum operating temperature: 302°F (150°C)
- Minimum operating temperature: -22°F (-30°C)
- Each valve individually tested
- Forged Brass - for more strength
- Threaded ends to ANSI B1.20.1
- Hard chromium plated solid ball
- Bottom entry, blow-out proof stem
- Deeper threads - for better connections

**VALVES**



Part#	Size NPT	Dimension Inches						Box	Case	List Price
		DN	A	B	C	E	CH			
940-171	1/4"	0.39	1.75	1.27	3.54	0.46	0.78	70	140	9.08
940-172	3/8"	0.41	1.75	1.27	3.54	0.46	0.78	70	140	9.08
940-173	1/2"	0.58	2.05	1.92	3.54	0.52	0.98	50	100	10.89
940-174	3/4"	0.75	2.36	2.08	3.78	0.56	1.20	30	60	15.95
940-175	1"	0.94	2.75	2.56	4.52	0.66	1.50	20	40	24.82
940-176	1-1/4"	1.26	3.30	2.95	4.52	0.70	1.82	12	24	36.53
940-177	1-1/2"	1.57	3.66	3.34	5.51	0.72	2.09	9	18	54.16
940-178	2"	1.97	4.18	3.68	5.51	0.74	2.62	6	12	84.72
940-179*	2-1/2"	2.52	5.38	4.76	8.66	1.01	3.36	4	8	213.21
940-180*	3"	2.95	6.04	5.08	8.66	1.11	3.86	2	4	249.34
940-181*	4"	3.89	7.38	5.86	9.00	1.22	4.89	1	2	471.55

\* 400 PSI



These are NOT Lead Free  
See pages 178 for Lead Free  
SWT Valves

POS	Components	Materials	N
1	Body	Forged Brass	1
2	End Connection	Forged Brass	1
3	Ball	CP Brass	1
4	Ball Seat	P.T.F.E.	2
5	Stem	Brass	1
6	Gland	Brass	1
7	Nut	Steel	1
8	Spring Inseat	Steel	1
9	Stem Seal	P.T.F.E.	1
10	Handle	Steel	1

Some product stocked in Houston and Atlanta.

• Not Lead Free AB1953 Compliant





**LOCKING HANDLE BALL VALVE**

• BRASS • 600WOG • FULL PORT

1/2" - 2" Sizes Gas Approved

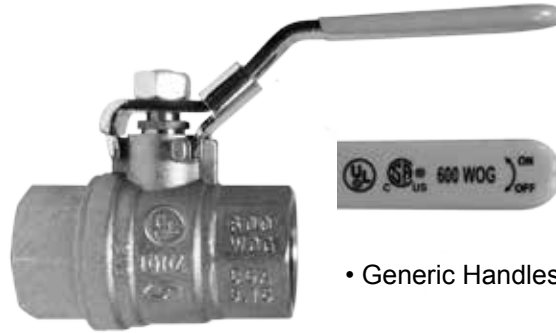


**ISO 9002 Manufacturer FEATURES**

1/4-2" 600 PSI non-shock cold water, gas, oil - 150 PSI saturated steam

Made in China

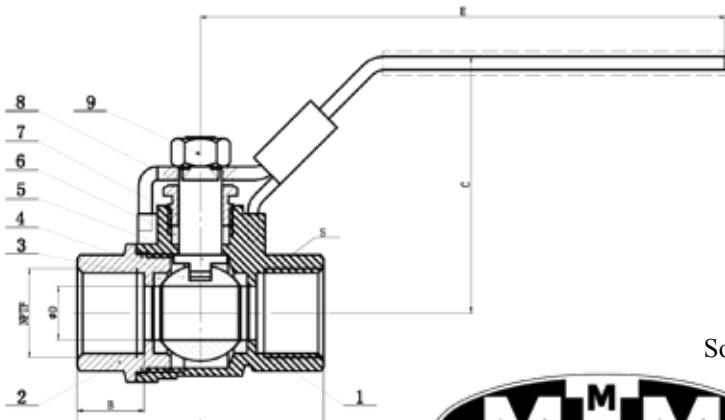
- Suitable for full range of liquids and gases
- Minimal pressure drop due to large full size ports
- Bottom loaded, pressure retaining stem
- Pressure rated for 1/4"-2" at 600psi (42 bars) and 2-1/2"-4" at 400 psi WOG (non-shock) and 150 WSP (10.34 bars) saturated steam. Virgin PTFE stem packing seal, thrust washer and seats
- Yellow vinyl insulator on heavy duty plated carbon steel handles
- Fast 1/4 turn open or close operation
- Not Lead Free
- Low operating torque
- Adjustable stem packing gland
- Maximum operating temperature: 302°F (150° C)
- Minimum operating temperature: -22°F (-30°C)
- 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



• Generic Handles

**VALVES**

Part#	Size NPTF	Dimension Inches						Min. Order Box	Case	List Price
		DN	A	B	C	E	CH			
940-171L	1/4"	0.31	1.73	1.84	3.15	0.49	0.71	70	140	10.50
940-172L	3/8"	0.39	1.81	1.88	3.86	0.49	0.79	70	140	10.50
940-173L	1/2"	0.58	2.23	2.09	3.86	0.61	0.98	50	100	12.24
940-174L	3/4"	0.75	2.48	2.24	4.06	0.62	1.20	30	60	18.60
940-175L	1"	0.94	2.95	2.67	4.73	0.73	1.50	20	40	27.80
940-176L	1-1/4"	1.26	3.42	3.05	4.73	0.77	1.81	12	24	42.30
940-177L	1-1/2"	1.57	3.78	3.51	5.71	0.78	2.09	9	18	64.92
940-178L	2"	1.97	4.18	3.84	5.71	0.75	2.60	6	12	93.00



POS	Components	Materials	N
1	Body	Forged Brass	1
2	End Connection	Forged Brass	1
3	Ball	CP Brass	1
4	Ball Seat	P.T.F.E.	2
5	Stem	Brass	1
6	Gland	Brass	1
7	Nut	Steel	1
8	Spring Inseat	Steel	1
9	Stem Seal	P.T.F.E.	1
10	Handle	Steel	1

Some product stocked in Houston and Atlanta.

• Not Lead Free AB1953 Compliant



**FULL PORT FEMALE X FEMALE 600WOG FORGED BRASS BALL VALVE**

1/2" - 3/4" Sizes Gas Approved



**ISO 9002 Manufacturer FEATURES**

1/4-3/4" 600 PSI non-shock cold water, gas, oil  
- 150 PSI saturated steam

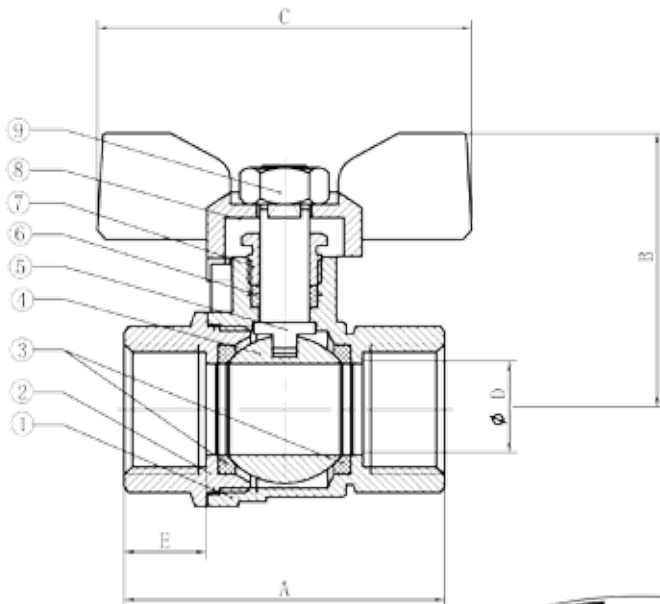
Made in China

- Suitable for full range of liquids and gases
- Minimal pressure drop due to large full size ports
- Bottom loaded, pressure retaining stem
- Pressure rated for 1/4"-3/4" at 600psi (42 bars) and 150 WSP (10.34 bars) saturated steam. Virgin PTFE stem packing seal, thrust washer and seats
- Fast 1/4 turn open or close operation
- Low operating torque
- Adjustable stem packing gland
- Maximum operating temperature: 302°F (150° C)
- Minimum operating temperature: -22°F (-30°C)
- 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
- Not Lead Free

**VALVES**



Part#	Size	A	B	C	D	E	Box	Case	List Price
	NPT								
940-171T	1/4"	1.677	1.488	1.831	0.315	0.457	70	140	10.50
940-172T	3/8"	1.756	1.488	1.831	0.394	0.457	70	140	10.50
940-173T	1/2"	2.047	1.756	2.394	0.583	0.520	50	100	12.24
940-174T	3/4"	2.362	1.921	2.394	0.748	0.563	30	60	18.60



POS	Components	Materials
1	Body	C37700
2	End Cap	C37700
3	Ball Seat	PTFE
4	Ball	C37700
5	Stem	C37700
6	Stem Packing	PTFE
7	Packing Nut	C37700
8	Lever Handle	ZL102
9	Stem Nut	A570

• Not Lead Free AB1953 Compliant



**FULL PORT 600WOG FORGED BRASS BALL VALVE**



**ISO 9002 Manufacturer FEATURES**

CSA AGA 3.88 5 PSIG IAMPO IGC 157 - 2004b

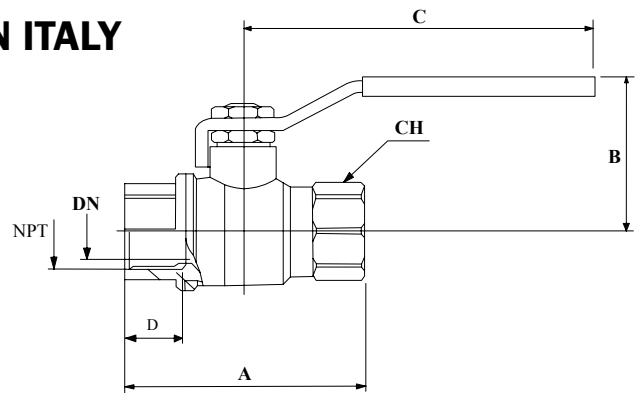
- **SOLID CHROME PLATED BRASS BALL**
- Suitable for full range of liquids and gases
- Minimal pressure drop due to large full size ports
- Bottom loaded, pressure retaining stem
- Pressure rated at 600psi (42 bars) WOG (non-shock) and 150 WSP (10.34 bars) saturated steam. Virgin TFE stem packing seal, thrust washer and seats.
- Yellow vinyl insulator on heavy duty plated carbon steel handles.
- Fast 1/4 turn open or close operation
- Low operating torque
- Flow can go both directions
- Generic Handles

- **Adjustable stem packing gland**
- Maximum operating temperature: 248°F (120° C) at 600 PSI
- Minimum operating temperature: -20°F (-40°C)
- 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
- **REVERSIBLE HANDLES**

**MADE IN ITALY**



**Female x Female**



Part#	Size		Dimension Inches					Box	Case	List Price
	NPT	DN	A	B	C	D	CH			
943-200	1/4"	.39	1.96	1.53	3.34	.43	.75	24	96	16.37
943-201	3/8"	.39	1.96	1.53	3.31	.43	.86	20	80	16.70
943-202*	1/2"	.57	2.09	1.57	3.35	.46	.98	20	80	13.99
943-203*	3/4"	.75	2.28	1.77	3.80	.49	1.22	14	56	22.22
943-204*	1"	.94	2.80	2.03	3.80	.59	1.50	6	24	35.22
943-205*	1-1/4"	1.24	3.23	2.32	4.72	.62	1.85	4	16	55.12
943-206*	1-1/2"	1.49	3.70	2.60	4.72	.64	2.13	2	8	82.18
943-207*	2"	1.96	4.13	3.27	6.38	.65	2.64	2	8	120.28
942-208	2-1/2"	2.48	5.94	4.30	7.54	1.06	3.31	---	5	341.12
942-209	3"	2.99	6.85	5.63	8.86	1.14	3.89	---	3	408.19
942-210	4"	3.54	7.67	6.04	8.86	1.22	4.80	---	1	840.99

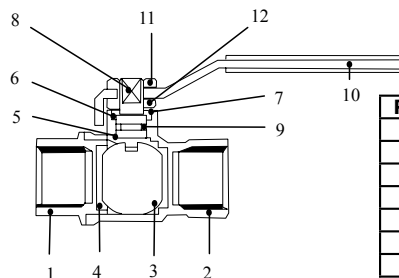
**HANDLE OPTIONS**

**TEE HANDLES**

Part #	Valve Size	List Price
43-200T	1/4" - 3/4"	2.51
43-204T	1"	4.07

**LOCKING HANDLES**

Part #	Valve Size	List Price
43-200L	1/4" - 3/4"	16.05
43-204L	1"	28.75
43-206L	1-1/4" - 1-1/2"	38.55
43-207L	2"	207L



\*Dimensions on these parts have changed.

POS	Components	Materials	N
1	Body	Forged Brass	1
2	End Connection	Forged Brass	1
3	Ball	CP Brass	1
4	Ball Stems	P.T.F.E.	2
5	Stem Antif. Seat	P.T.F.E.	1
6	Stem Seat	P.T.F.E.	1
7	Brass Ring	Brass	1
8	Stem	Brass	1
9	O-Ring	NBR 80	1
10	Handle	Steel	1
11	Nut	Steel	1
12	Nut	Brass	1

• Not Lead Free AB1953 Compliant

Fax 1-800-877-5391



sales@midlandmetal.com

**VALVES**

Gas Approved

**FULL PORT 600WOG FORGED BRASS BALL VALVE**



UL842, UL258, UL125, FM

CSA AGA 3.88 5 PSIG

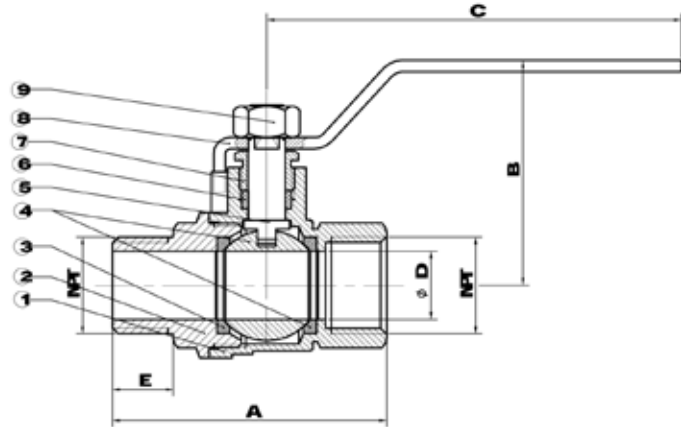
- Solid chrome plated brass ball
- Suitable for full range of liquids and gases.
- Minimal pressure drop due to large full size ports.
- Bottom loaded, pressure retaining stem.
- Pressure rated at 600psi (42 bars) WOG ( non-shock) and 150psi (10.34 bars) saturated steam. Virgin TFE stem packing seal, thrust washer and seats.
- Yellow vinyl insulator on heavy duty plated carbon steel handles.
- Fast 1/4 turn open or close operation.
- Flow both directions.
- Low operating torque.
- Adjustable stem packing gland.
- Generic Handles

- Maximum operating temperature: 248°F (120°C)
- Minimum operating temperature: -20°F (-40°C)
- 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.

POS	Components	Materials
1	Body	C37700
2	End Cap	CS7700
3	Ball Seat	PTFE
4	Ball	CS7700
5	Stem	CS7700
6	Stem Reducing	PTFE
7	Reducing Nut	CS7700
8	Lever Handle	1008
9	Stem Nut	A570 Gr.A

**VALVES**

**MADE IN CHINA**



Part#	Size	NPT	A	B	C	D	E	Box	Case	List Price
948-170	1/4	1/4 - 18	2.016	1.689	2.756	0.315	0.457	70	140	9.75
948-171	3/8	3/8 - 18	2.094	1.732	3.543	0.394	0.457	70	140	10.01
948-172	1/2	1/2 - 14	2.343	1.941	3.543	0.583	0.520	50	100	12.17
948-173	3/4	3/4 - 14	2.618	2.106	3.780	0.748	0.563	30	60	18.13
948-174	1	1 - 11.5	3.000	2.579	4.528	0.945	0.630	20	40	26.81
948-175	1-1/4	1-1/4 - 11.5	3.563	2.953	4.528	1.260	0.709	12	24	39.24
948-176	1-1/2	1-1/2 - 11.5	3.965	3.346	5.512	1.575	0.717	9	18	58.37
948-177	2	2 - 11.5	4.496	3.681	5.512	1.969	0.748	6	12	84.55

Note: Locking and Tee handles available in case quantity and extended delivery.

• Not Lead Free



**FULL PORT 600WOG FORGED BRASS BALL VALVE**

Gas Approved



CSA AGA 3.88 5 PSIG

Made in Italy

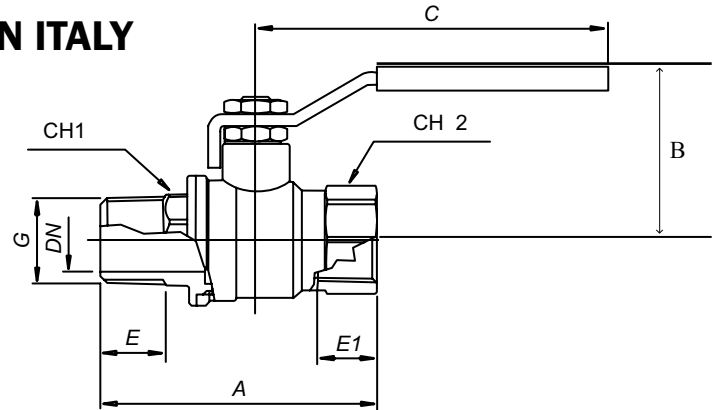
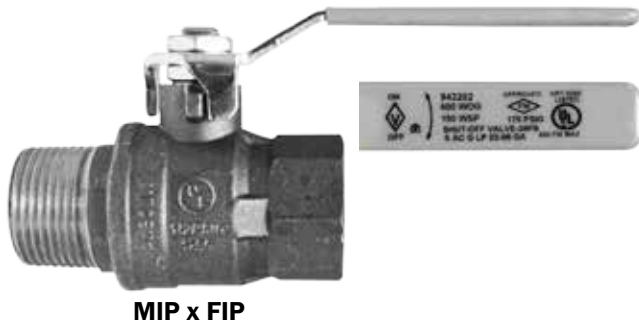
**ISO 9002 Manufacturer FEATURES**

- Solid chrome plated brass ball
- Suitable for full range of liquids and gases.
- Minimal pressure drop due to large full size ports.
- Bottom loaded, pressure retaining stem.
- Pressure rated at 600psi (42 bars) WOG ( non-shock) and 150psi (10.34 bars) saturated steam. Virgin TFE stem packing seal, thrust washer and seats.
- Yellow vinyl insulator on heavy duty plated carbon steel handles.
- Fast 1/4 turn open or close operation.
- Generic Handles

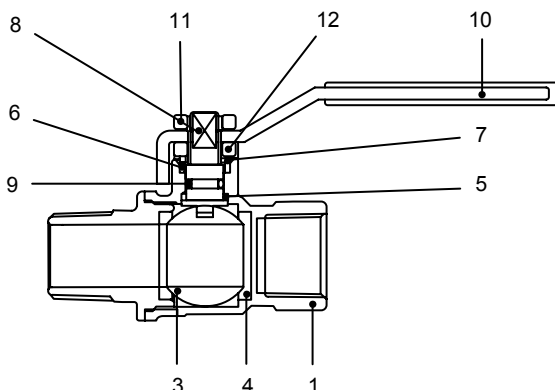
- Low operating torque.
- Adjustable stem packing gland.
- Maximum operating temperature: 248°F (120°C) at 600 p.s.i
- Minimum operating temperature: -20°F (-40°C)
- KV: Pressure drop m<sup>3</sup>/h.
- Each valve individually tested.
- Forged Brass - for more strength.
- Threaded ends to ANSI B1.20.1
- Hard chromium plated solid ball
- Bottom entry, blow-out proof stem.
- Deeper threads - for better connections.

**VALVES**

**MADE IN ITALY**



Part#	Size	DN	A	B	C	E	E1	CH1	CH2	Box	Case	List Price
948-101	1/4	.39	2.18	1.53	3.34	.39	.43	.55	.75	24	96	16.73
948-102	3/8	.39	2.20	1.53	3.34	.43	.43	.71	.86	24	96	18.20
948-103	1/2	.57	2.54	1.57	3.35	.53	.46	.87	.98	14	56	17.89
948-104	3/4	.75	2.75	1.77	3.80	.55	.49	1.12	1.22	12	48	27.44
948-105	1	.94	3.23	2.03	3.80	.69	.59	1.34	1.50	6	24	41.99
948-106	1-1/4	1.24	3.76	2.32	4.72	.71	.62	1.69	1.85	4	16	69.78
948-107	1-1/2	1.49	4.11	2.60	4.72	.73	.64	2.20	2.13	2	8	95.50
948-108	2	1.96	4.72	3.27	6.38	.85	.65	2.40	2.64	1	4	153.78



POS	Components	Materials	N
1	Body	CW617N Forged Brass	1
2	End Connection	CW617N Forged Brass	1
3	Ball	CW617N CP Brass	1
4	Ball Stems	P.T.F.E.	2
5	Stem Antif. Seat	P.T.F.E.	1
6	Stem Seat	P.T.F.E.	1
7	Brass Ring	CW617N Brass	1
8	Stem	CW617N Brass	1
9	O-Ring	NBR 80	1
10	Handle	UNI EN 10025 Steel	1
11	Nut	UN 5771 Steel	1
12	Nut	CW617N Brass	1



# GAS BALL VALVES

# BRASS BALL VALVES



CSA AGA 3.88 5 PSIG



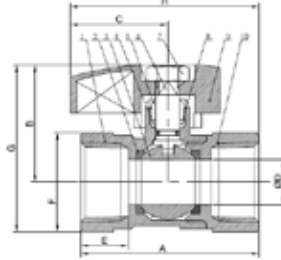
UL 842, UL 258, UL 125

Manual Valve LISTED Threaded NPT

## GAS BALL VALVES ISO 9002 Manufacturer FEATURES

# CHINA

- Material: C37700
- Forged brass, Regular port, Thread\*Flare Thread
- Thread ends in ANSI B1.20.1
- Working temperature: 0-65° (32-149°)
- Pressure : 1/2PSI; 5PSI;
- ASEM B16.44/CR91; ANSI Z21.15/CSA9.1
- UL 125 For LP-Gas 125psig



10	BALL VALVE CAP	1	BRASS
9	HANDLE	1	AL-alloy
8	PACKING	1	PTFE
7	HANDLE NUT	1	PLATED STEEL
6	STEM	1	BRASS
5	PACKING NUT	1	BRASS
4	O-RING	1	NBR
3	BALL	1	BRASS
2	SEALING WASHER	2	PTFE
1	BALL VALVE BODY	1	BRASS
NO.	ITEM	TOTAL	MATERIAL

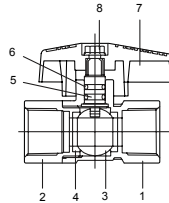
### GAS BALL VALVE (2-Piece) FEMALE x FEMALE

Part#	Size	List Price
943-311	3/8"	7.35
943-312	1/2"	7.35
943-313	3/4"	10.80

SIZE	∅D	A	B	C	E	F	G	H
3/8"	0.394	1.752	1.437	1.28	0.472	0.945	1.909	2.146
1/2"	0.394	2.204	1.437	1.28	0.606	1.043	1.961	2.461
3/4"	0.591	2.362	1.535	1.28	0.626	1.299	2.815	2.476

- For use with natural, manufactured, mixed liquified. petroleum and LP gas-air mixtures.
- Deeper thread connections. Smooth quarter-turn.
- 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.
- Solid chrome plated brass ball
- 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.
- Red Reversible handle.
- May be used with water 400 WOG.

## MADE IN ITALY



	Components	Materials
1	Body	Forged Brass
2	End Connection	Forged Brass
3	Ball	Forged Brass
4	Ball Seats	P.T.F.E.
5	Stem	Brass
6	O-Ring	NBR
7	Butterfly	Steel
8	Screw	UNI 5771 Steel



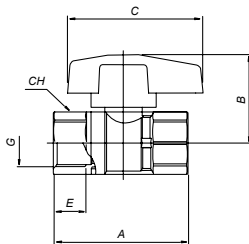
CSA AGA 3.88 5 PSIG



UL 842, UL 258, UL 125

Manual Valve LISTED Threaded NPT

### GAS BALL VALVES FEMALE x FEMALE



Part#	Size	Dimension Inches						PN in psi	Box	Case	List Price
	G	DN	A	B	C	E	CH				
943-212	1/2"	.47	2.26	1.45	2.28	.55	.98	600	20	80	13.57
943-213	3/4"	.59	2.48	1.57	2.28	.57	1.22	600	10	40	19.69

VALVES

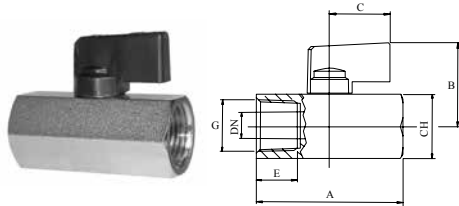
**CHROME PLATED BRASS MINI BALL VALVE**

Made in Italy

ISO 9002 Manufacturer

**FEATURES**

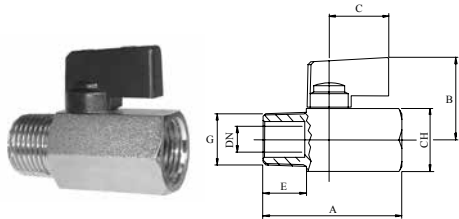
- Solid chrome plated brass ball
- Max working pressure 235 psi will handle 300psi@75° F
- Longer body style for longer, deeper thread connections
- One piece drawn sand blasted chrome plated body.
- Each valve is seal tested for maximum safety.
- Double seal system allows valve to be operated in both directions making installation easier.
- Blowout-proof brass stem.
- NPT taper ANSI B1.20.1 threads.
- 32°F to +176°F temperature.
- 1/4 Turn Nylon handle with mechanical stop.
- NSF Approved valves available upon request!
- Also available in Stainless Steel.



Part#	Size		Dimension Inches							
	G	DN	A	B	C	E	CH	BOX	CASE	List Price
46-922 I	1/4"	0.31	1.81	1.17	0.9	0.51	0.83	50	200	15.16
46-923 I	3/8"	0.31	1.85	1.17	0.9	0.51	0.83	50	200	15.16
46-924 I	1/2"	0.39	2.18	1.26	0.9	0.61	0.98	40	160	17.52

**Female x Female**

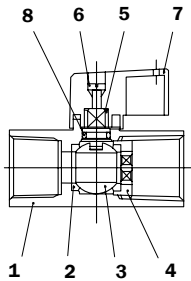
Made in Italy



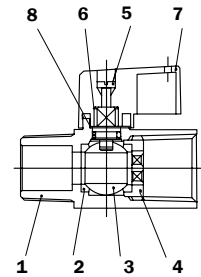
Part#	Size		Dimension Inches							
	G	DN	A	B	C	E	CH	BOX	CASE	List Price
46-903 I	1/4"	0.31	1.75	1.17	0.9	.40	0.83	50	200	14.84
46-904 I	3/8"	0.31	1.81	1.17	0.9	.41	0.83	50	200	14.84
46-905 I	1/2"	0.39	2.14	1.26	0.9	.52	0.98	40	160	16.45

**Male x Female**

\* 1/4" Brass (Non-Plated) metal black handle available



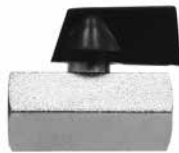
POS	Components	Materials	N
1	Body	CW517N Forged Brass	1
2	Ball Seats	P.T.F.E	2
3	Ball	CW517N CP Brass	1
4	Ring Unit	CW614N Brass	1
5	Stem	CW614N Brass	1
6	Screw	UNI 5771 Steel	1
7	Handle	Nylon	1
8	O-Ring	NBR 80	1



**ECONOMY MINI BALL VALVES**

- Max Working Pressure: 450psi
- Maximum Temperatures: 356°F at 142 psi, 212°F at 355 psi
- 1/4 Turn Handle

*Send us your volume quotes!*

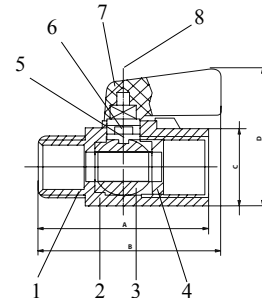


Part #	Size	Dimensions (In)				List Price
		A	B	C	D	
46-934	1/8	1.57	1.69	0.78	1.46	7.56
46-935	1/4	1.57	1.69	0.78	1.46	7.56
46-936	3/8	1.57	1.69	0.78	1.46	8.27
46-937	1/2	1.77	1.77	0.94	1.56	8.57

**MALE X FEMALE**



Part #	Size	Dimensions (In)				List Price
		A	B	C	D	
46-930	1/8	1.67	1.69	0.78	1.46	6.87
46-931	1/4	1.57	1.69	0.78	1.46	7.56
46-932	3/8	1.57	1.69	0.78	1.46	7.11
46-933	1/2	1.77	1.77	0.94	1.56	8.50



Pos	Components	Materials	N
1	Body	CP Forged Brass	1
2	Ball Seats	P.T.F.E	2
3	Ball	CP Brass	1
4	Ring Unit	Brass	1
5	Stem	Brass	1
6	O-Ring	NBR 80	1
7	Handle	Alumzinc	1
8	Screw	Steel	1

See page 205 for stainless steel mini ball valves

## MINI BALL VALVES

## BRASS BALL VALVES

### FORGED BRASS MINI-BALL VALVES

- 180° operational handle, blow out proof stem. Stem with double "O" Rings
- 200 WOG
- 125SWSP

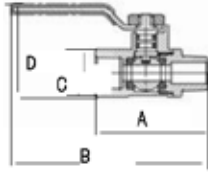
NO	Part Name	Material	QTY
1	Nut	Steel	1
2	Handle	Steel	1
3	Cover	PVC	1
4	O-Ring	NBR	2
5	Stem	Brass	1
6	Body	Brass	1
7	Seat	Teflon	2
8	Ball Disc	Brass	1
9	End Plug	Brass	1

- Generic Handles



### FEMALE x FEMALE

Part #	Size	A	B	C	D	List Price
944-116	1/4X1/4	1.53	2.80	0.73	1.42	10.81
944-118	1/4X1/2	1.88	2.34	0.98	1.67	10.12



### MALE x FEMALE

Part #	Size	A	B	C	D	List Price
944-106	1/8X1/8	1.69	3.02	0.73	1.46	10.12
944-100	1/8X1/4	1.70	3.00	0.73	1.44	13.70
944-101	1/4X1/4	1.70	3.00	0.73	1.46	11.99
944-102	1/4X3/8	1.72	2.90	0.89	1.66	10.12



### MALE x MALE

Part #	Size	A	B	C	D	List Price
944-111	1/4X1/2	1.96	2.47	0.83	1.52	10.12
944-112	1/2X1/2	2.17	4.62	0.89	2.05	12.87



### HOSE BARB x MALE

Part #	Size	A	B	C	D	List Price
944-138	1/4X1/4	2.05	2.98	0.73	1.51	8.00
944-128	3/8X1/4	2.08	3.04	0.73	1.51	7.51



### HOSE BARB x HOSE BARB

Part #	Size	A	B	C	D	List Price
944-142	1/4X1/4	2.49	3.19	0.73	1.55	10.73
944-134	3/8X3/8	2.49	3.18	0.73	1.55	10.88



## BRASS BALL VALVES



### FEMALE x HOSE BARB

Part #	Size	A	B	C	D	List Price
944-135	1/8X1/8	1.78	2.34	0.62	1.38	10.30
944-136	1/4X1/4	1.97	2.87	0.73	1.55	9.53

### NICKEL PLATED MINI BALL VALVES

- With and without internal check valve.



### BARB x MALE PIPE w/ CHECK

Part #	Size	A	B	C	D	List Price
944-051	1/4 x 1/4	2.34	2.73	0.75	1.31	14.78
944-052	3/8 x 1/4	2.34	2.77	0.75	1.28	15.89

### BARB x MALE PIPE WITHOUT CHECK

Part #	Size	List Price
944-012	3/8 x 1/4	14.29



### MIP x FLARE w/ CHECK VALVE

Part #	Size	A	B	C	D	List Price
944-060	1/4 x 1/4	2.18	2.78	0.73	1.25	15.51

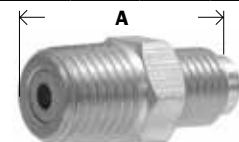
### FLARE x MIP WITHOUT CHECK VALVE

Part #	Size	A	B	C	D	List Price
944-026	1/4 x 1/4	1.44	2.64	0.75	1.44	17.74



### BARB x BARB NO CHECK

Part #	Size	A	B	C	D	List Price
944-005	1/4	2.46	2.81	0.75	1.32	14.99
944-013	3/8					15.74



### MIP x FLARE WITH CHECK

- Plain Brass

Part #	Size	A	Hex	List Price
10-131	1/4" x 1/8"			22.84
10-256WC	1/4 x 1/4	1.24	0.55	2.94
10-133	3/8" x 1/4"	1.31	0.62	28.79

Private label handle available on volume purchases.



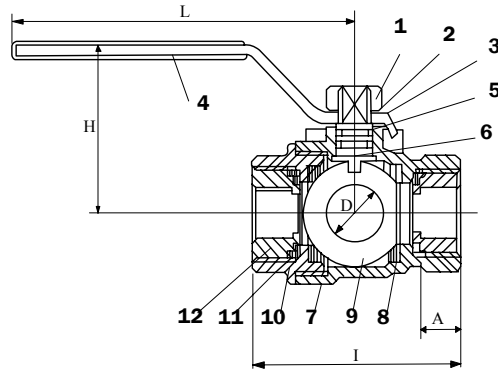
**SIDE OUTLET 3 WAY BALL VALVE**

• **600 WOG**

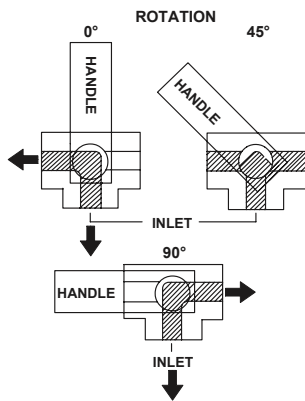
- Forged Brass
- 600 WOG
- Temp Rating 0-230°F



• **Side outlet**



- Full Port
- Blow-out proof stem
- double o-ring stem packing
- PTFE Seal



**Nomenclature & Materials**

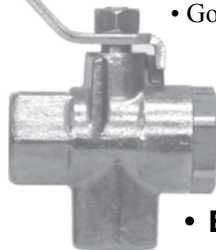
NO	Part Name	Material	Qty
1	Nut	Steel	1
2	Spring Washer	Steel	1
3	Handle	Steel	1
4	Cover	PVC	1
5	O-Ring	NBR	2
6	Stem	Brass	1
7	Body	Forged Brass	1
8	Seat	Teflon	2
9	Ball Disc	Brass	1
10	End Plug	Brass	1
11	O-Ring	NBR	3
12	Socket	Brass	3

Part#	Size	I	H	D	L	A	Box	Case	List Price
940-464	1/4"	1.89	1.73	0.39	3.35	0.47	50	100	42.45
940-465	3/8"	1.89	1.73	0.39	3.35	0.47	50	100	44.17
940-461	1/2"	2.11	1.80	0.50	3.35	0.51	30	60	35.20
940-462	3/4"	2.56	2.16	0.74	4.41	0.55	20	40	57.18

**BOTTOM OUTLET 3 WAY BALL VALVE**

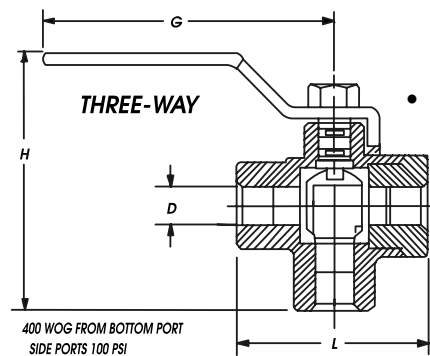
- Forged Brass
- Bottom Port is inlet 400 psi
- Side Ports are inlet 100 psi

• **90° Handle Rotation**



- Double O-Ring Seal
- Blow out proof stem
- Made in USA
- Threaded ports
- Good for propane

• **Bottom outlet**



Part#	Size	D	G	H	L	Cv	List Price
940-121	1/4"	.44	3.50	3.12	2.25	5.2	58.45
940-122	3/8"	.50	3.50	3.12	2.25	5.5	54.10
940-123	1/2"	.50	3.50	3.12	2.25	5.5	61.36

**VALVES**



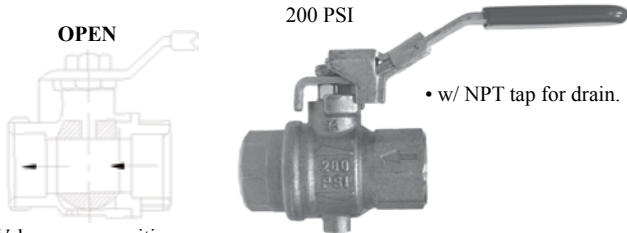
## MISC VALVES

### EXHAUST VALVES

#### AUTOMATIC DRAIN & LATCH LOCK HANDLE

Full port hot forged brass ball valve, blow-out proof stem, downstream automatic vent with lockable handle in compliance with OSHA requirements.

- Maximum working pressure: 200 PSI (CWP).
- Temperature rating: -4°F through +350°F.



Valve - open position.  
Drain vent shut off.



Valve - closed and draining occurs. Upstream seat prevents air flow. Downstream system is vented to atmosphere.

Part#	Size	List Price
948-131	1/4"	54.96
948-132	3/8"	58.30
948-133	1/2"	60.87
948-134	3/4"	83.43
948-135	1"	92.11

### VACUUM BREAKER

- Male hose and female hose threads can be broken off for permanent attachment
- Set screw
- Vandal proof
- Rough brass construction
- Prevents back-siphonage on hoses to prevent potable water from getting contaminated
- Certified under ASSE Std. 1011
- UPC
- IAMPO



#### VACUUM BREAKER

Part #	Size	List Price
947-055	3/4" x 3/4"	11.04

### RADIATOR AIR VALVE

#### COIN SLOT OR LOSSE KEY



Part #	Size	List Price
943-284	1/8" MIP	3.25
943-287	Key only	0.54

### ANGLE SILLCOCKS

#### 3/4" Hose Thread Outlet

- Notched flange for convenient installation.
- Heavy brass construction.
- Cast Iron handle.



#### FEMALE IPS

Part #	Size	Box	List Price
942-142	1/2"	12	17.25

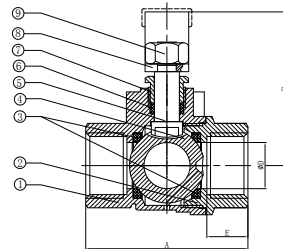
## BALL VALVES

### SAFETY EXHAUST BALL VALVE

- Threaded - Two Piece Body - Full Port
- Blow-out Proof Stem - PTFE Seats
- 400 PSI WOG
- To Exhaust and Downstream Air in the Closed Position w/ locking lever handle.
- Vented



Part #	Size	A	B	D	E	List Price
948-141	1/4"	1.756	1.732	0.394	0.457	11.34
948-142	3/8"	1.756	1.732	0.394	0.457	10.38
948-143	1/2"	2.047	1.941	0.583	0.520	14.88
948-144	3/4"	2.362	2.126	0.748	0.563	22.98



#### MATERIAL LIST

Item	Part	Material
1	Body	Brass
2	End Cap	Brass
3	Ball Seat	PTFE
4	Ball	Brass
5	Stem	Brass
6	Stem Packing	PTFE
7	Packing Nut	Brass
8	Lever Handle	Nickel plating steel
9	Stem Nut	Nickel plating steel

### HOSE BIBBS

#### 3/4" Hose Thread Outlet



IPS

Part #	Size	Box	List Price
942-170	1/2 (1/2"C)	12	20.15
942-171	3/4"	12	16.10

### DRUM & BARREL FAUCET VALVE



- Die cast body w/ nylon seat and steel spring.
- For use with all petroleum products except trichlorethylene.

G261N

Not suitable for potable water

#### SELF-CLOSING DRUM & BARREL FAUCET

Part #	Size	List Price
46-270	3/4"	12.87

# BRASS BALL VALVES

# FREEZE TOLERANT BALL VALVES

## FULL PORT 600 WOG "FREEZE-TOLERANT" BRASS BALL VALVES

CSS APPROVED

ISO 9002 Manufacturer

- Engineered for freezing conditions

### FEATURES

#### REPLACEABLE FREEZE PLUG

Full Port

#### SOLID CHROME PLATED BRASS BALL

Pressure rated at 600 psi water, Working Temperature:

-22°F ≤ t ≤ 392°F

Applicable Medium: Water, Oil, Gas, Non-Causticity Liquid Saturated Steam.

Fast 1/4 turn open or close operation.

Bottom entry, blow-out proof stem

Adjustable stem packing gland

Vinyl insulated heavy duty plated steel handles

Non-corrosive Stainless steel nut for handle

#### STAINLESS STEEL STEM ON 1.5, 2 & 4 INCH SIZES

PTFE Stem packing and seats

Freeze Plug (tested by 3rd party) rated at minimum 1500psi burst pressure

Valve body wall thickness is minimum 2 times that of normal ball valve

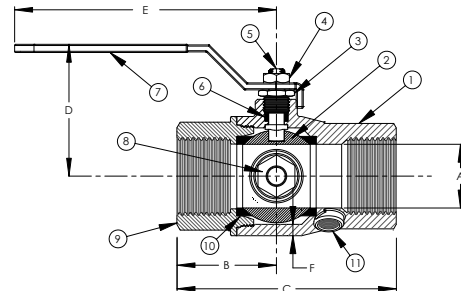
#### 5 YEAR WARRANTY AGAINST CRACKING SIDE WALL OF VALVE BODY CAVITY

\*Warranty void if any other plug is installed in place of OEM Freeze plug.

All threads are standard NPT on valves and freeze plugs.



LEVER HANDLE



Part#	Size	Material	Dimension inches						Freeze Plug 8	wt	Box	Case	List Price
			A	B	C	D	E	F					
948183	1/2"	LF Brass	0.59	1.16	2.13	1.9	4.1	0.14	3/8	0.595	10	60	69.84
948184	3/4"	Bronze	0.74	1.25	2.56	2.08	4.28	0.157	1/2	0.91	6	48	102.98
948185	1"	Bronze	0.97	1.49	2.98	2.56	5.26	0.157	3/4	1.56	4	32	159.33
948187	1-1/2"	Brass	1.49	2.4	4.3	3.5	7.65	0.275	1	5.01	2	4	337.50
948188	2"	Bronze	1.96	2.25	4.75	3.7	7.65	0.315	1-1/4	7.8	2	4	705.73
948191	4"	Bronze	3.75	3.75	8	6	10.5	0.47	3	42.2	1	1	4333.34
TEE HANDLE													
948184T	3/4"	Bronze	0.74	1.25	2.56	2.08	4.28	0.157	1/2	0.91	6	48	90.00
948185T	1"	Bronze	0.97	1.49	2.98	2.56	5.26	0.157	3/4	1.56	4	32	120.00

#### REPLACEMENT FREEZE PLUG KIT (TOOL INCLUDED)

Part#	Valve Size	List Price
948183FP	1/2 inch	35.70
948184FP	3/4 inch	41.70
948185FP	1 inch	29.70
948187FP	1-1/2 inch	90.00
948188FP	2 inch	150.00

#### PLUG

948191FP	4 inch Plug	294.00
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#### TOOL

948191T	4 inch Tool	270.00
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#### NOMENCLATURE & MATERIALS

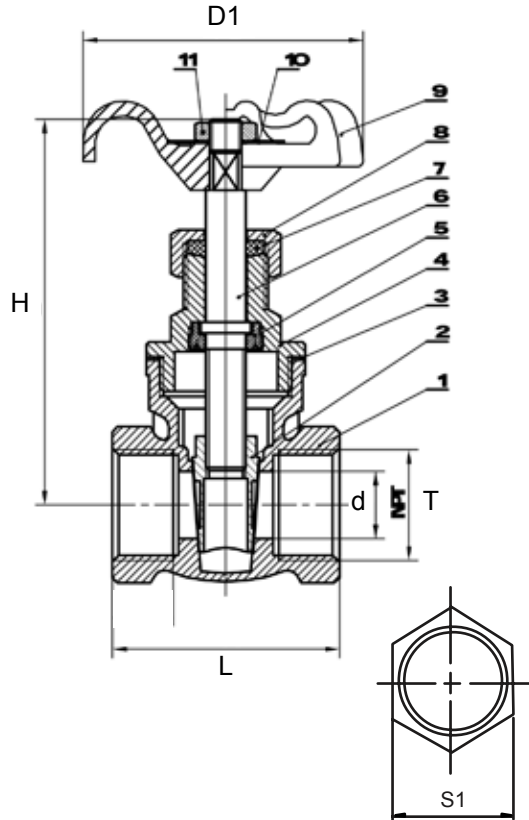
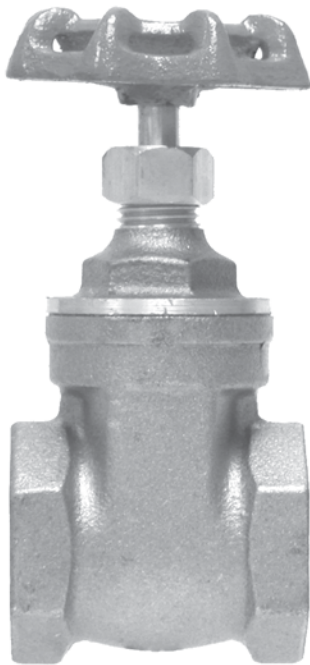
No	Part Name	Material	Qty
1	Body	C84400 Bronze	1
2	Ball (solid)	CP Brass	1
3	Packing nut	Brass	1
4	Nut	Stainless Steel	1
5	Stem	Brass	1
	Stem	SS on 1.5, 2 & 4 inch	
6	Stem packing	PTFE	1
7	Lever handle	Steel	1
8	Freeze plug	Brass	1
9	End cap	C84400 Bronze	1
10	Ball seat	PTFE	2
11	1/4 in threaded plug	Brass	1

**FULL PORT BRASS GATE VALVE**

- 200 WOG (cold water, oil, gas).
- 125 WSP (Saturated Steam).
- Full-port design for a better water flow.
- Screw-in Bonnet - Non-Rising Stem - Solid Wedge
- NPT Threaded ends to ANSI B1.20.1
- Cast iron handle.
- Forged Brass Body for 1/2" - 1"
- Cast brass body for 1-1/4" - 4".
- Each valve individually air tested under water.
- Good for diesel fuel.

• NOT LEAD FREE

**VALVES**



NO	Description	Material
1	Body	C37700
2	Disk	C37700
3	Seat	PTFE
4	Cap	C37700
5	Packing	C37700
6	Stem	C37700
7	Rubber Seat	NBR
8	Packing Nut	C37700
9	Handle	HT200
10	Nameplate	AL
11	Stem Nut	A570 Gr.A

**BRASS GATE VALVES IPS**

Part#	Size	L	H	D1	d	T	S1	Box	Case	List Price
940-130	1/4	1.57	2.91	2.09	.24	1/4-18 NPT	.85	10	120	21.87
940-131	3/8	1.61	2.91	2.09	.39	3/8-18 NPT	.85	10	120	22.00
940-132	1/2	1.575	2.874	2.087	0.50	1/2-14 NPT	1.03	10	100	15.13
940-133	3/4	1.752	3.228	2.087	0.748	3/4-14 NPT	1.26	5	60	20.33
940-134	1	1.984	3.661	2.283	0.984	1-11.5 NPT	1.51	5	40	27.86
940-135	1-1/4	2.165	4.567	2.835	1.22	1-1/4-11.5 NPT	1.89	5	30	50.50
940-136	1-1/2	2.283	4.98	3.11	2.496	1-1/2-11.5 NPT	2.17	4	24	64.64
940-137	2	2.677	5.846	3.819	1.85	2-11.5 NPT	2.60	2	16	85.05
940-138	2-1/2	3.661	7.638	4.252	2.48	2-1/2-8 NPT	3.27	2	8	147.72
940-139	3	3.819	8.839	4.961	2.835	3-8 NPT	3.86	1	6	220.69
940-140	4	4.567	10.189	4.961	3.661	4-8 NPT	4.88	1	3	355.33

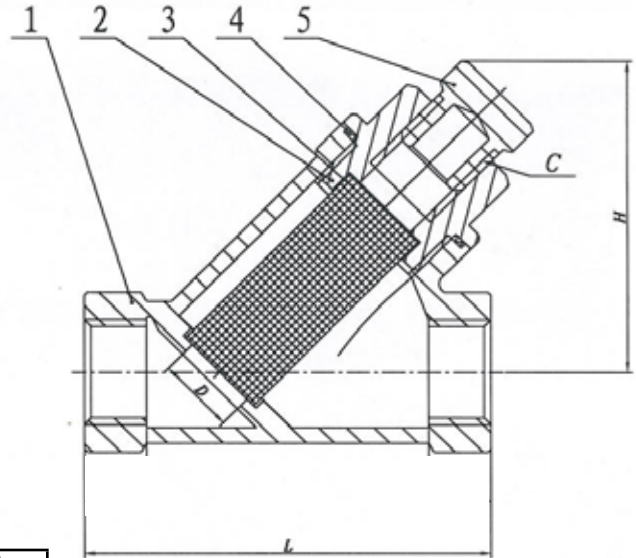
• See page 180 for Lead Free and SWT Gate Valves



**CLASS 150 BRASS Y-PATTERN STRAINER**

- Forged Brass body, size 1/4"-3".
- Pressure rating: 150 WOG (water, oil, gas)/PN25  
150 WSP (Saturated Stem)
- NPT Threaded ends to ANSI B1.20.1
- Protects regulators, pumps, meters and other controls from damage due to sediment scale, metal chips or other foreign materials.

- 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.
- NOT LEAD FREE



Part#	Size	L	H	C	List Price
940-521	1/4"	2.60	1.67	NPT 1/4	36.32
940-522	3/8"	2.60	1.67	NPT 1/4	38.30
940-523	1/2"	3.13	2.33	NPT 1/4	28.60
940-524	3/4"	3.43	2.17	NPT 1/4	41.46
940-525	1"	4.09	2.66	NPT 1/2	71.96
940-526	1-1/4"	4.90	3.24	NPT 1/2	98.67
940-527	1-1/2"	5.59	3.51	NPT 1/2	130.54
940-528	2"	6.69	4.34	NPT 1/2	215.16
940-529	2-1/2"	8.26	5.61	NPT 3/4	500.00
940-530	3"	9.37	6.69	NPT 3/4	716.11

NO	Name	Material
1	BODY	BRASS
2	BONNET	BRASS
3	STRAINER	S.S.
4	SPRING SEAL	PTFE
5	END CAP	BRASS

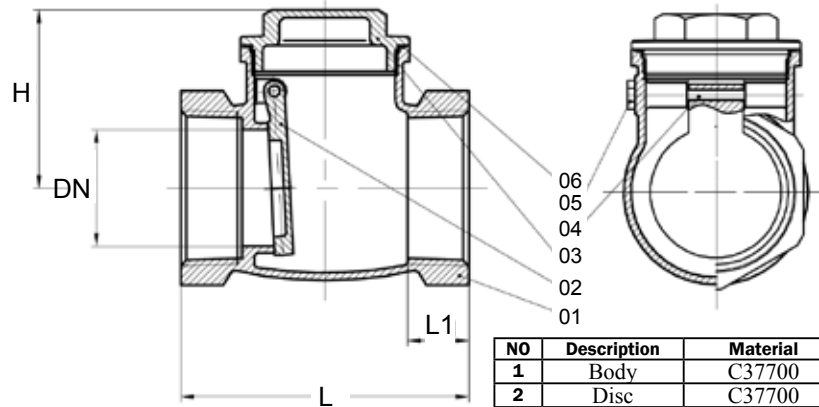
• See page 180 for 1/2" Lead Free

**BRASS SWING CHECK VALVES**

- Working pressure non-shock: 200 psi W.O.G. (cold water, oil, gas) 125 psi WSP (saturated steam)
- Swing type disc.
- Screwed Cap.
- Hard Seat.

- 90° Straight Pattern.
- Used to prevent reverse flow in commercial and industrial applications.
- Threaded ends to ANSI B1.20.1
- Integral seat.
- Temp range -5° - 150F°
- NOT LEAD FREE

**VALVES**



NO	Description	Material
1	Body	C37700
2	Disc	C37700
3	Cap	C37700
4	Brass Bar	C37700
5	Screw	C37700
6	Gasket	PTFE

**CAST BRASS SWING CHECK VALVES IPS SCREWED ENDS**

Part #	Size	L	H	L1	DN	Box	Case	List Price
940-352	1/2	2.071	1.299	0.531	0.512	10	120	17.25
940-353	3/4	2.382	1.417	0.579	0.728	10	80	19.41
940-354	1	2.835	1.614	0.748	0.925	5	60	27.81
940-355	1-1/4	3.228	1.969	0.748	1.201	4	36	43.88
940-356	1-1/2	3.740	2.244	0.846	1.417	4	24	60.54
940-357	2	4.212	2.638	0.886	1.772	4	16	90.90
940-358	2-1/2	5.591	3.346	1.063	2.224	2	8	171.93
940-359	3	6.024	3.504	1.102	2.579	1	6	241.83
940-360	4	7.008	4.212	1.102	3.602	1	4	392.81

• See page 180 for Lead Free Brass Swing Check Valves

**Y PATTERN BRASS SWING CHECK VALVE SCREWED ENDS**



Part #	Size	List Price
940-351B	3/8"	58.73
940-352B	1/2"	58.73
940-353B	3/4"	78.26
940-354B	1"	100.28
940-355B	1-1/4"	150.27
940-356B	1-1/2"	180.38
940-357B	2"	249.80
940-358B	2-1/2"	586.74
940-359B	3"	801.13

**Y PATTERN BRASS SWING CHECK VALVE COPPER x COPPER**



Part #	Size	List Price
940-362B	1/2"	58.73
940-363B	3/4"	78.26
940-364B	1"	100.28
940-365B	1-1/4"	150.27
940-366B	1-1/2"	180.38
940-367B	2"	249.80

## BRASS CHECK VALVES

S.S. SPRING LOADED BRONZE POPPET

For positive sealing &amp; self-cleaning.

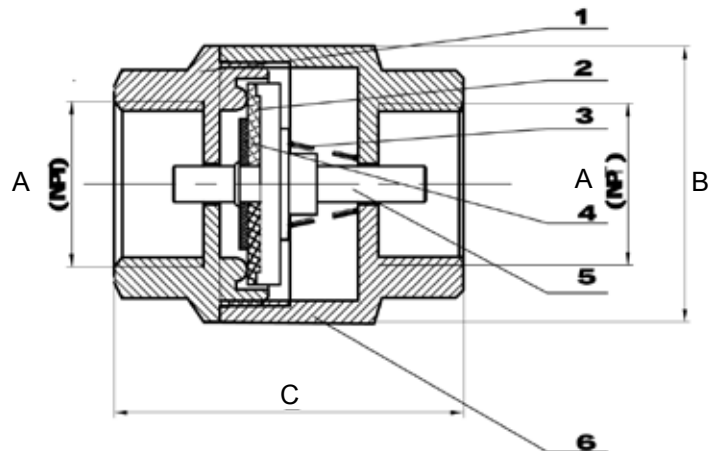
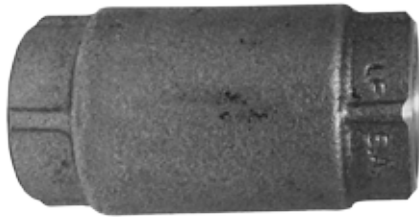
Insures against leakage.

- Inline Lift Type - Resilient Discs - Spring Actuated - Threaded.
- Pressure rating: 200 WOG (water, oil, gas)  
125 WSP (Saturated Steam)
- Spring in stainless steel AISI 304.
- Resilient washer hold/ disc in brass.
- Forged Brass Body for 1/2"-2"
- Corrosion resistant material.
- Can be used vertically or horizontally.
- Opens & Closes with flow of media.
- No cracking pressure.
- NOT LEAD FREE

## Temp Range

-10°C - 110°C

14°F - 248°F



Brass Check Valve (Inches)

Part#	Size	Enters Pipe Size	A NPT	B	C	Box	Case	List Price
944-428	1/4"	-	1/4"	1.26	2.28	24	192	17.97
944-429	3/8"	-	3/8"	1.50	2.28	21	168	21.04
944-430	1/2"	1-1/4"	1/2"	1.299	1.89	10	100	16.49
944-431	3/4"	1-1/4"	3/4"	1.594	2.126	10	100	24.51
944-432	1"	2"	1"	1.85	2.303	10	60	32.85
944-433	1-1/4"	2-1/2"	1-1/4"	2.205	2.52	10	40	47.91
944-434	1-1/2"	3"	1-1/2"	2.618	2.717	5	30	59.15
944-435	2"	3-1/2"	2"	3.091	3.071	2	20	92.54

- See page 180 for Lead Free Brass Check Valves

**BRASS IN-LINE CHECK VALVES**

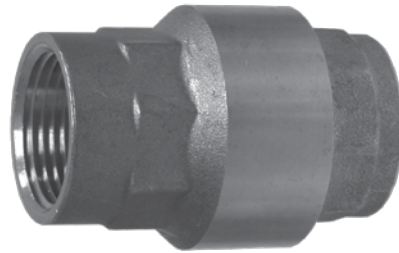
**High Capacity, Size 1/4"-2" 400 WOG, 2 1/2"-4" 175 WOG**

- Soft Seat for Bubble Tight Shutoff, Spring Loaded for Fast Seating Action.
- Compact design.
- Low Cracking Pressure 1/2 psi.
- Flow Profile Designed to Minimize Head Loss.
- Perfect Seating both at High and Low Pressure, Wide Temperature Range: +10° to 210°F.
- Polyetherimide Disc to ensure the Best Resistance For Corrosion and Abrasion.
- Patented Disc Guide to Prevent Any Side Loading.
- Connection: FNPT x FNPT.

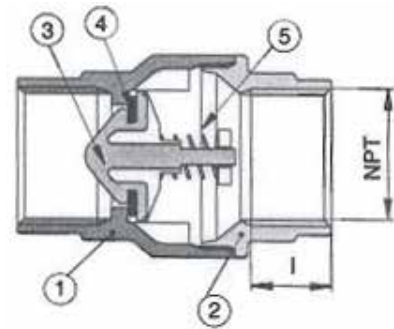
NBR for water, oils and general purpose.

With VITON® Seal for fuels and hydrocarbons. Max working TEMPERATURE 325°F/125 psi steam

**Add V to part# for Viton®**



NO	Part	Material	PCS
1	BODY	BRASS	1
2	END CONNECTION	BRASS	1
3	DISC	POLYETHERIMIDE	1
4	SEAT	100002 NBR	1
		100003 Viton	1
5	SPRING	STAINLESS STEEL	1



**Brass In-Line Check**

Part#	Size	I	psi	Lbs	NBR List	Viton Part#	Viton List
944-401	1/4"	0.39	400	0.22	20.27		
944-402	3/8"	0.40	400	0.37	20.27	944-402V	20.88
944-403	1/2"	0.53	400	0.32	22.37	944-403V	23.28
944-404	3/4"	0.55	400	0.49	30.52	944-404V	32.70
944-405	1"	0.66	400	0.68	40.12	944-405V	42.17
944-406	1-1/4"	0.68	400	1.13	63.05	944-406V	67.25
944-407	1-1/2"	0.68	400	1.61	94.90	944-407V	99.81
944-408	2"	0.69	400	2.28	128.37	944-408V	133.88
944-409	2-1/2"	0.93	175	4.83	293.75	944-409V	304.59
944-410	3"	1.01	175	6.70	397.82	944-410V	411.02
944-411	4"	1.09	175	12.43	640.09	944-411V	648.12

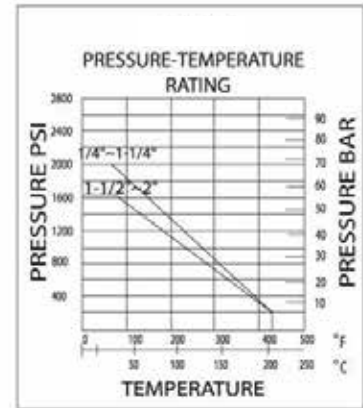


**#316 2-PC BALL VALVE, FULL PORT, THREADED END, 2000 WOG**

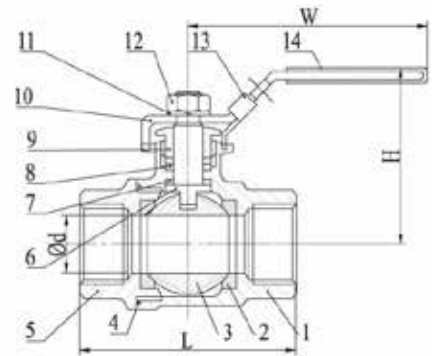
- Investment Castings for body and cap.
- Internal Entry blow-out proof stem.
- Pressure rating: 2000PSI.
- Threaded Ends: ANSI B2,1
- Material: CF8M (316SS)
- Pressure test: API 598
- Generic Handles



**LOCKING HANDLE**



NO	Part	Material	QTY
1	BODY	316SS	1
2	BALL SEAT	PTFE	2
3	BALL	316SS	1
4	BODY SEAL	PTFE	1
5	CAP	316SS	1
6	STEM	SS316	1
7	THRUST WASHER	PTFE	1
8	PACKING	PTFE	1
9	GLAND NUT	SS304	1
10	HANDLE	SS304	1
11	WASHER	SS304	1
12	NUT	SS304	1
13	LOCK DEVICE	SS304	1
14	HANDLE COVER	PLASTIC	1



Part#	Size	D	L	H	W	N.M	lbs/ pc	List Price
949-171	1/4"	.492	2.224	1.89	4.134	.157	.616	34.14
949-172	3/8"	.492	2.224	1.89	4.134	.157	.616	34.14
949-173	1/2"	.591	2.579	2.087	4.331	.197	.946	43.92
949-174	3/4"	.787	3.051	2.441	5.315	.315	1.298	60.48
949-175	1"	.984	3.504	2.953	5.906	.394	2.332	90.72
949-176	1-1/4"	1.26	4.094	2.854	5.906	.551	3.30	134.64
949-177	1-1/2"	1.496	4.803	3.583	6.969	.709	5.258	187.32
949-178	2"	1.969	4.901	4.016	7.205	.984	7.48	260.46

**VALVES**

**ONE PIECE STANDARD PORT BALL VALVE**

316 Stainless Steel

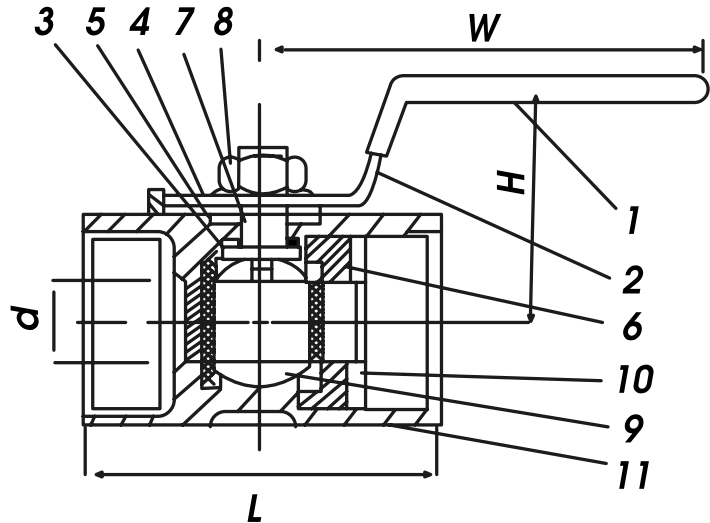
**1000 PSI**

- Manufactured for harsh environments with female NPT threads.
- Locking handle for greater security.
- Standard port has restricted flow.
- Made with corrosion resistant stainless steel materials.
- PTFE seat and seals.
- Investment Castings for Body and Cap.
- Internal Entry Blow-out proof stem.
- Pressure rating: 1000PSI (PN63)
- Threaded Ends: ANSI B2.1
- Material: CF8M
- Pressure Test: API 598

**VALVES**



**LOCKING HANDLE**



Valves will accept a pad-lock on the handle.

dimensions (inches)

Part#	Size	D	L	H	W	List Price
949-101	1/4"	.18	2.24	1.54	3.15	32.68
949-102	3/8"	.27	2.24	1.73	3.15	33.15
949-103	1/2"	.36	2.48	2.20	3.62	36.82
949-104	3/4"	.49	2.95	2.32	3.62	43.10
949-105	1"	.59	3.50	2.80	4.13	55.21
949-106	1-1/4"	.79	4.13	3.07	4.13	96.48
949-107	1-1/2"	.98	4.65	3.27	5.08	98.29
949-108	2"	1.26	5.35	3.94	5.08	139.91

Larger sizes available on special order basis

Item	Parts	Material
1	Plastic Cover	Plastic
2	Handle	AISI 304 SS
3	Thrust Washer	PTFE
4	Packing Ring	AISI 304 SS
5	Stem Packing	PTFE
6	Seat	PTFE
7	Seat	AISI 316 SS
8	Stem Nut	AISI 304 SS
9	Ball	316SS ASTM-A351 CF8M
10	Cap	316SS ASTM-A351 CF8M
11	Body	316SS ASTM-A351 CF8M

SS = Stainless Steel



**1000 PSI 2 PC FULL PORT STAINLESS STEEL VALVE**

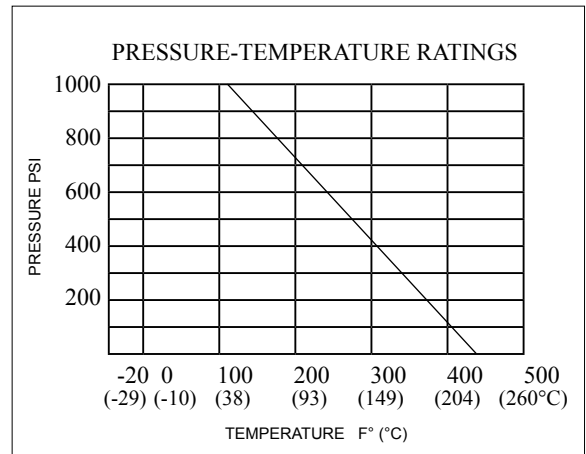
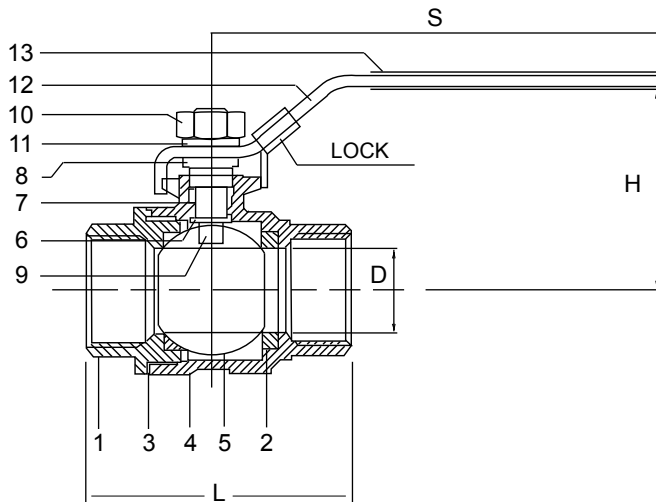
Materials: CFM8M (SS316), DIN 1.4408

Features:

- Investment Casting body
- Working pressure 1000 psi for W.O.G.
- Adjustable stem packing
- Pure teflon seals and seats
- Temperature range: -60 to 450°F
- Blow-out proof stem and safe pressure-reducing hole
- 100% leakage tested at 100 psi air under water
- Hydrostatic test pressure: 1500 psi
- Locking handle w/ blue generic sleeve
- 125 Steam rated



**VALVES**



Valves will accept a pad-lock on the handle.

NO.	NAME	MATERIAL	QTY
1	CAP	316 SS	1
2	BALL SEAT	PTFE	2
3	JOINT GASKET	PTFE	1
4	BODY	316 SS	1
5	BALL	316 SS	1
6	THRUST WASHER	PTFE	1
7	STEM PACKING	PTFE	1
8	GLAND NUT	304 SS	1
9	STEM	316 SS	1
10	STEM NUT	304 SS	1
11	SPRING WASHER	304 SS	1
12	HANDLE	304 SS	1
13	PLASTIC SLEEVE	PVC	1

Part #	Size	D	L	H	S	Approx. Wt. Lbs.	List Price
949-181	1/4"	0.46	1.84	1.89	4.06	0.44	37.81
949-182	3/8"	0.46	1.91	1.89	4.06	0.55	38.45
949-183	1/2"	0.59	2.28	1.89	4.06	0.66	41.79
949-184	3/4"	0.79	2.56	2.05	4.84	0.77	49.75
949-185	1"	0.98	3.03	2.45	4.84	1.43	74.23

Save 5% by ordering online at [www.midlandmetal.com](http://www.midlandmetal.com)



**TWO PIECE FULL PORT BALL VALVE**

316 Stainless Steel

**1000 PSI**

Materials: CFM8M (SS316)

**Features:**

- Quality manufactured for harsh environments.
- Corrosion resistant.
- Investment Casting body
- Working pressure 1000 psi for W.O.G.
- Adjustable stem packing
- Pure teflon seals and seats
- Temperature range: -60 to 450°F
- Blow-out proof stem and safe pressure-reducing hole
- 100% leakage tested at 100 psi air under water
- Hydrostatic test pressure: 1500 psi
- Locking handle w/ blue generic sleeve
- 125 Steam rated
- Generic Handles



**VALVES**

Valves will accept a pad-lock on the handle.

dimensions (inches)

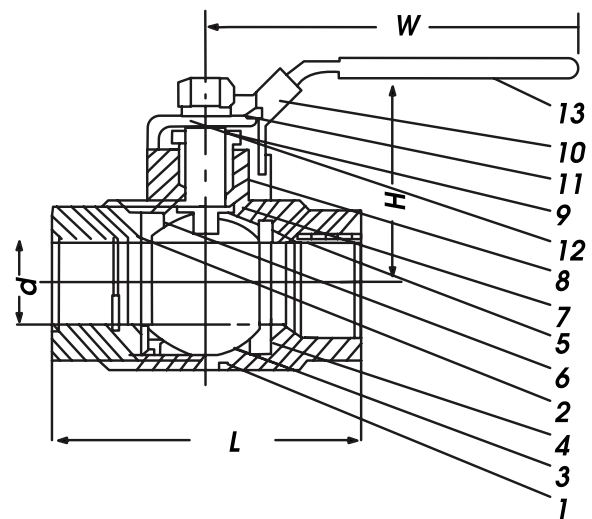
Part#	Size	D	L	H	W	List Price
949-161	1/4"	.46	2.24	1.93	4.13	57.03
949-162	3/8"	.50	2.24	1.93	4.13	47.93
949-163	1/2"	.59	2.48	2.01	4.13	64.71
949-164	3/4"	.78	2.95	2.28	5.12	68.66
949-165	1"	.98	3.50	2.76	5.71	86.86
949-166	1-1/4"	1.26	4.13	2.87	5.71	133.89
949-167	1-1/2"	1.50	4.65	3.29	7.48	176.42
949-168	2"	2	5.35	3.62	7.48	211.07
949-169	2-1/2"	2.56	5.79	4.96	9.92	292.71
949-170	3"	2.99	6.81	5.43	9.92	383.71
949-180	4"	3.70	8.74	6.22	11.14	720.56

Larger sizes available on special order basis

Dimensions may change without notice. Please see our website if they are critical.

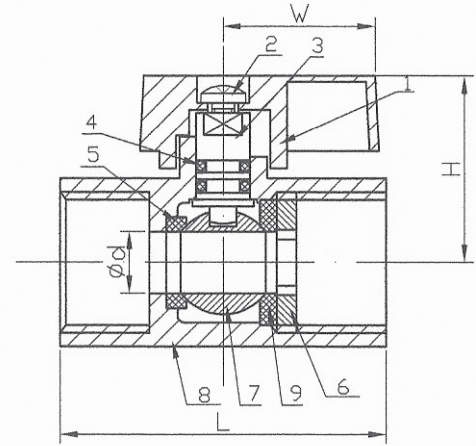
Item	Parts	Material
1	Body	316SS ASTM-A351 CF8M
2	Body Cap	316SS ASTM-A351 CF8M
3	Ball	316SS ASTM-A351 CF8M
4	Seat	Reinforced PTFE
5	Stem	AISI 316 SS
6	Seal	Reinforced PTFE
7	Thrust Washer	Reinforced PTFE
8	Packing	Reinforced PTFE
9	Gland Nut	AISI 304SS
10/11	Nut & Washer	AISI 304SS
12	Handle	AISI 304SS
13	Plastic Cover	Plastic

SS = Stainless Steel

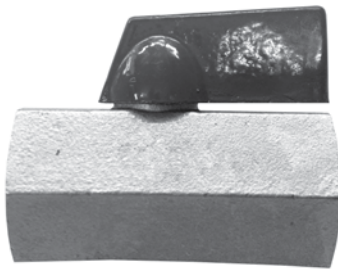


- 316 Stainless Steel
- Working pressure 400PSI
- Working Temperature -10°C to 150°C

NO	Part	Material	QTY
1	LEVER	ALUMINIUM ALLOY	1
2	BOLT	304	1
3	STEM	304/ 316	1
4	"O" RING	NBR	1~2
5	BALL SEAT (A)	PTFE	1
6	CAP	CF8/ CF8M	1
7	BALL	CF8/ CF8M	1
8	BODY	CF8/ CF8M	1
9	BALL SEAT (B)	PTFE	1

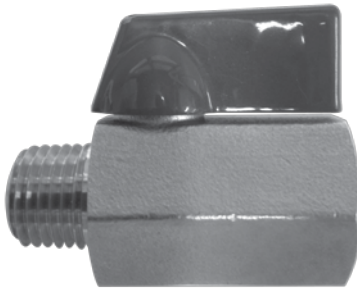


**VALVES**



**FEMALE PIPE x FEMALE PIPE**

Part#	Size	W	D	H	L	List Price
46934SS	1/8"	.898	.197	.985	1.693	19.50
46935SS	1/4"	.898	.276	.984	1.693	19.50
46936SS	3/8"	.898	.276	.984	1.693	20.46
46937SS	1/2"	.898	.362	1.114	1.811	25.19

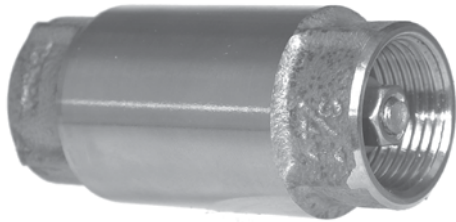
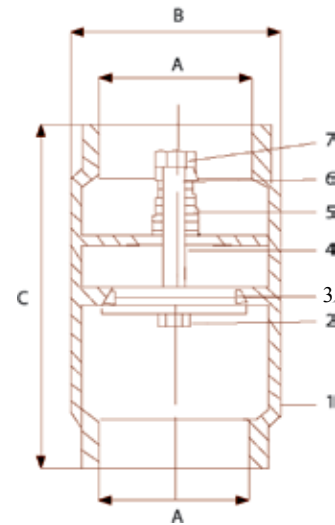


**MALE PIPE x FEMALE PIPE**

Part#	Size	W	D	H	L	List Price
46930SS	1/8"	.898	.197	.985	1.693	18.53
46931SS	1/4"	.898	.276	.984	1.693	18.53
46932SS	3/8"	.898	.276	.984	1.693	19.44
46933SS	1/2"	.898	.362	1.114	1.811	24.56

**#304 STAINLESS STEEL  
CHECK VALVE**

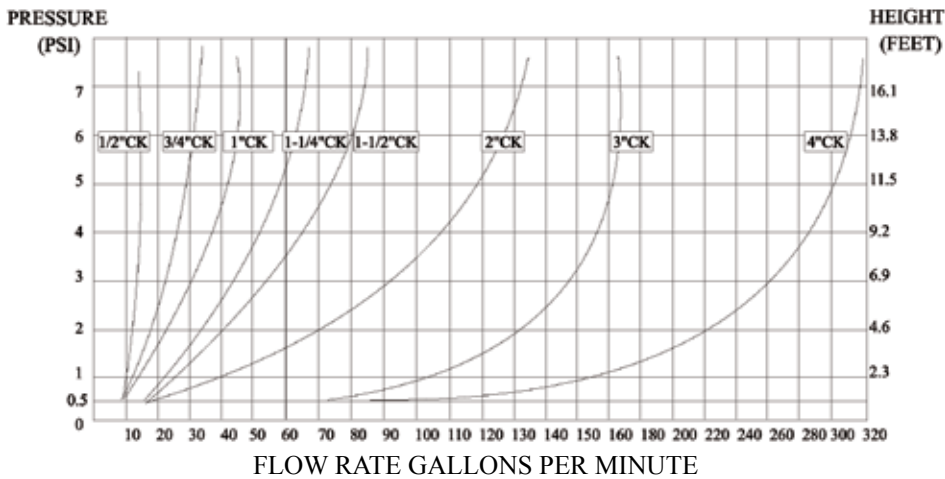
- No Lead.
- Water wells need a check valve installed above the pumps between lengths of drop pipes.
- Opens & Closes with flow of media.
- No cracking pressure.**
- Working pressure unavailable.



**Dimensions (Inches)**

Part#	Size	A NPT	B	C	Box	Case	List Price
949-430	1/2"	1/2"	1.26	2.43	10	100	37.68
949-431	3/4"	3/4"	1.50	2.72	10	80	52.04
949-432	1"	1"	1.77	3.23	10	60	65.24

More sizes available on a special order basis.



NO	Part	Material
1	Body	S.S 304
2	Stopper	S.S 304
3	O-Ring	Viton
4	Washer	PE
5	Spring	S.S 304
6	Cap	S.S 304
7	Nut	S.S 304



**CUSTOM  
CATALOGS**

**SEE INSIDE BACK  
COVER**

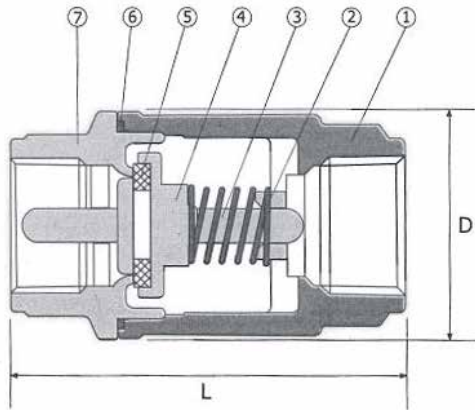


**STAINLESS STEEL IN-LINE CHECK VALVE**

**High Capacity, Size 1/4"-2" 800 WOG**

- Soft PTFE Seat for Bubble Tight Shutoff, Spring Loaded for Fast Seating Action
- Low Cracking Pressure 1/2 psi.
- Flow Profile Designed to Minimize Head Loss.
- Perfect Seating both at High and Low Pressure, Wide Temperature Range: +10° to 450°F.
- Corrosion Resistant-Excellent for use on Chemicals.
- ASTM A351-CF8M Investment Casting.
- Connection: FNPT x FNPT.
- 125WSP Saturated Steam.
- ANSI B1.20.1 Threads.
- Dual Guided Stem & Disc.

**VALVES**



NO	Part	Material	PCS
1	BODY	ASTM A351-CF8M	1
2	SPRING	SS316	1
3	CENTER GUIDE	ASTM A351-CF8M	1
4	DISC	ASTM A351-CF8M	1
5	SEAT	PTFE	1
6	GASKET	PTFE	1
7	END CAP	ASTM A351-CF8M	1

**Stainless Steel In-Line Check**

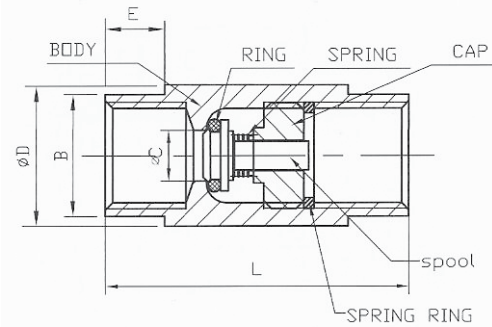
Part#	Size	D	L	psi	Lbs	List
949-401	1/4"	1.35	2.31	800	0.42	145.00
949-402	3/8"	1.35	2.31	800	0.42	145.00
949-403	1/2"	1.35	2.31	800	0.40	157.50
949-404	3/4"	1.81	2.87	800	0.85	215.00
949-405	1"	2.13	3.50	800	1.30	248.75
949-406	1-1/4"	2.46	4.18	800	2.50	496.88
949-407	1-1/2"	2.88	4.93	800	3.40	690.63
949-408	2"	3.56	6.00	800	6.0	1012.75

**SPRING CHECK VALVE**

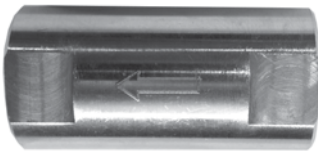
- Working Pressure: 1500PSI (PN100)
- Working Temperature: -10 -150°C
- Opening Pressure: 2~3PSI
- Suitable Medium: W.O.G.
- Threaded End: NPT

**VALVES**

NO	Part	Material	QTY
1	BODY	316	1
2	RING	VITON	1
3	SPRING	304	1
4	CAP	CF8M	1
5	SPOOL	316	1
6	SPRING RING	304	1

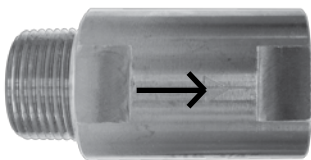


**FEMALE PIPE x FEMALE PIPE**



Part#	Size	L	C	D	B	E	lbs/ pc	List Price
949-451	1/4"	2.165	.217	.748	.699	.394	.176	30.24
949-452	3/8"	2.165	.295	.866	.787	.394	.22	30.24
949-453	1/2"	2.165	.413	1.063	.945	.472	.286	34.92
949-454	3/4"	2.677	.591	1.417	1.26	.472	.638	50.70
949-455	1"	3.268	.787	1.693	1.496	.591	1.056	68.28

**MALE PIPE x FEMALE PIPE**



Part#	Size	L	C	D	B	E	lbs/ pc	List Price
949-471	1/4"	2.165	.217	.748	.699	.394	.176	30.24
949-472	3/8"	2.165	.295	.866	.787	.394	.22	30.24
949-473	1/2"	2.165	.413	1.063	.945	.472	.286	34.92
949-474	3/4"	2.677	.591	1.417	1.26	.472	.638	50.70
949-475	1"	3.268	.787	1.693	1.496	.591	1.056	68.28

FLOWS MALE -> FEMALE

THE ONLY WAY OF FINDING THE LIMITS OF THE POSSIBLE IS BY GOING BEYOND THEM INTO THE IMPOSSIBLE. – ARTHUR C. CLARKE



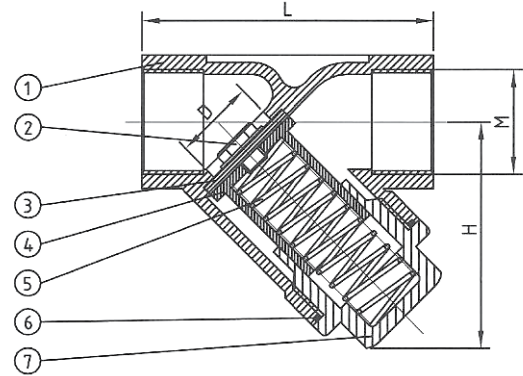
CUSTOM CATALOGS

SEE INSIDE BACK COVER

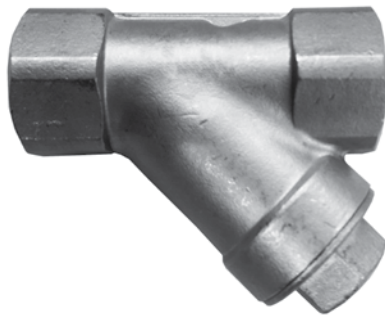


**Y-SPRING CHECK VALVE**

- Working Pressure: 800PSI (PN55)
- Working Temperature: -10 -150°C
- Opening Pressure: 1.5PSI
- Suitable Medium: W.O.G.



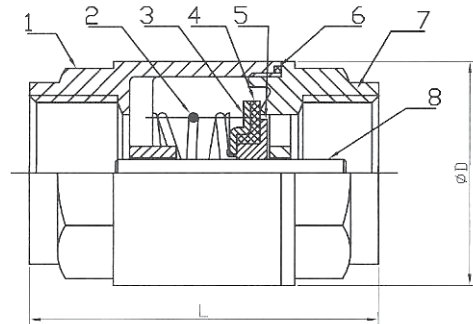
NO	Part	Material	QTY
1	BODY	CF8M/ CF8	1
2	BOLT	304	1
3	SEAT	PTFE	1
4	DISC	304	1
5	SPRING	316/ 304	1
6	GASKET	PTFE	1
7	CAP	CF8M/ CF8	1



Part#	Size	L	H	D	lbs/ pc	Case	List Price
949-481	1/4"	2.559	1.661	.472	.572	200	35.10
949-482	3/8"	2.559	1.661	.472	.528	200	35.10
949-483	1/2"	2.559	1.634	.591	.528	300	39.00
949-484	3/4"	3.15	2.067	.787	.946	300	63.42
949-485	1"	3.543	2.657	.984	1.76	200	102.42
949-486	1-1/4"	4.134	2.795	1.26	2.20	100	117.06
949-487	1-1/2"	4.724	3.169	1.575	2.234	100	156.06
949-488	2"	5.512	3.74	1.969	5.214	100	224.34

**2PC BARREL TYPE SPRING CHECK VALVE**

- Working Pressure: 300PSI (PN20)
- Working Temperature: -10 -120°C
- Opening Pressure: 2PSI
- Suitable Medium: W.O.G.
- Threaded end: NPT



NO	Part	Material	QTY
1	BODY	CF8M/ CF8	1
2	BOLT	304	1
3	SEAT	PTFE	1
4	DISC	304	1
5	SPRING	316/ 304	1
6	GASKET	PTFE	1
7	CAP	CF8M/ CF8	1



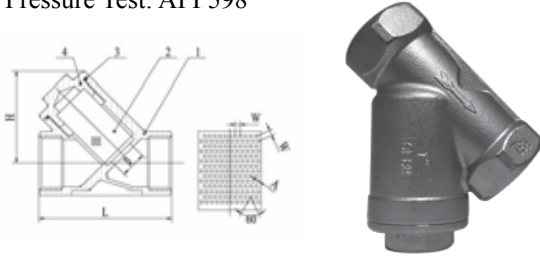
Part#	Size	L	D	Case	List Price
949-441	1/4"	2.008	1.142	200	30.24
949-442	3/8"	2.008	1.142	200	30.24
949-443	1/2"	2.244	1.28	300	34.92
949-444	3/4"	2.441	1.594	300	45.84
949-445	1"	2.953	1.89	200	66.30
949-446	1-1/4"	3.228	2.362	100	81.90
949-447	1-1/2"	3.465	2.756	100	113.16
949-448	2"	3.937	3.425	100	175.56

**VALVES**

## STAINLESS STEEL VALVES

### SS Y STRAINER

- Investment Castings for Body
- Pressure Rating: 800PSI (PN40)
- Threaded Ends: ANSI B2.1, BS 21, DIN 259/2999
- Material: CF8M, CF8, CF3M, WCB
- Pressure Test: API 598



- 40 Mesh screen

	Part	Material	QTY
1	BODY	CF8M	1
2	SCREEN	SS316	1
3	JOINT GASKET	PTFE	1
4	BONNET	CF8M	1

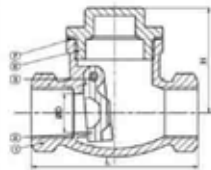
Part #	Size	d	L	H	W	ØA	Kgs	List Price
949-521	1/4"	10	50	51	2	1	0.20	27.41
949-522	3/8"	12	50	51	2	1	0.17	27.41
949-523	1/2"	15	58	51	2	1	0.20	28.50
949-524	3/4"	20	65	60	2	1	0.33	37.85
949-525	1"	25	80	72	2	1	0.58	57.06
949-526	1-1/4"	32	92	77	2	1	0.75	68.09
949-527	1-1/2"	40	105	87	2	1	1.05	93.42
949-528	2"	50	125	102	2	1	1.57	128.88

### 316 SS SWING CHECK VALVE

- 200PSI(PN16)
- ANSI B2.1, BS21, DIN259/ 2999
- CF8M, CF8, CF3M, WCB
- API598



	Part	Material	QTY
1	BODY	CF8/CF8M	1
2	DISC	CF8/CF8M	1
3	PIPE PLUG	CF8	1
4	SCREW	CF8	1
5	SCREW GASKET	PTFE	1
6	CAP	CF8/CF8M	1
7	CAP GASKET	PTFE	1



Part #	Size	D	L	H	Kgs	List Price
949-353	1/2"	15	63	40	0.21	39.86
949-354	3/4"	20	78	45	0.35	49.42
949-355	1"	25	85	50	0.46	64.02
949-356	1-1/4"	32	100	56	0.73	75.93
949-357	1-1/2"	40	112	61	0.95	126.15
949-358	2"	50	132	70	1.32	146.04

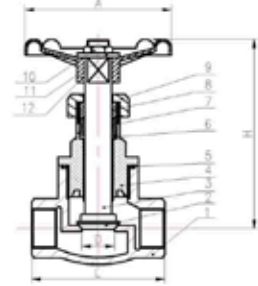
## STAINLESS STEEL VALVES

### 316 SS GLOBE VALVES

- 200PSI(PN16)
- ANSI B2.1, BS21, DIN259/ 2999
- CF8M, CF8, CF3M, WCB
- API598



	Part	Material	QTY
1	BODY	CF8M	1
2	DISC	CF8M	1
3	STEM	CF8M	1
4	CAP	CF8M	1
5	SEAL	PTFE	1
6	GASKET	CF8	1
7	PACKING	PTFE	1
8	GASKET	CF8	1
9	GLAND	CF8	1
10	NUT	CF8	1
11	SPRING WASHER	CF8	1
12	HANDLE WHEEL	CF8	1



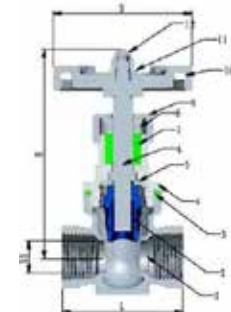
Part #	Size	L	Kgs	List Price
949-303	1/2	58	0.31	34.33
949-304	3/4	68	0.45	44.72
949-305	1	78	0.61	62.43
949-306	1-1/4	88	0.95	88.45
949-307	1-1/2	102	1.32	69.31
949-308	2	115	1.93	156.08

### 316 SS GATE VALVES

- 200PSI(PN16)
- ANSI B2.1, BS21, DIN259/ 2999
- CF8M, CF8, CF3M, WCB
- API598



	Part	Material	QTY
1	BODY	CF8M	1
2	DISC	CF8M	1
3	SEAL	CF8M	1
4	CAP	CF8M	1
5	SEAL	PTFE	1
6	STEM	CF8	1
7	SEAL	PTFE	1
8	GLAND	CF8	1
9	NUT	CF8	1
10	HANDLE WHEEL	CF8	1
11	GASKET	CF8	1
12	CAP NUT	CF8	1



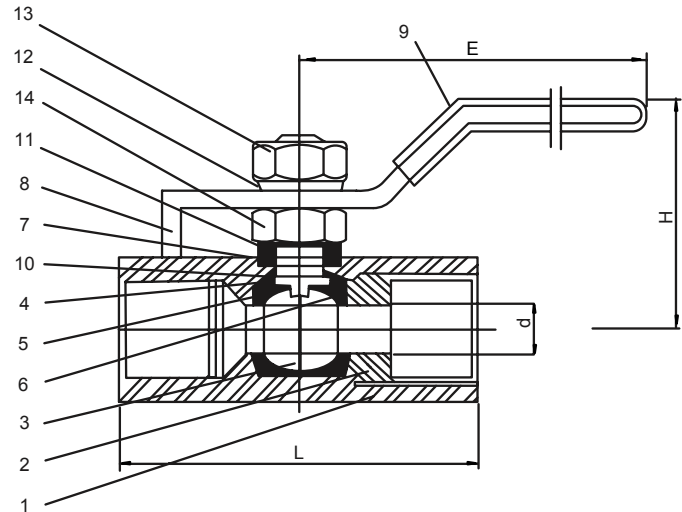
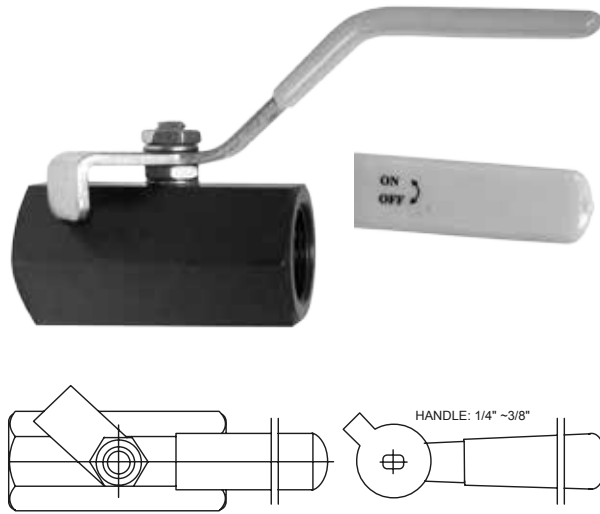
Part #	Size	L	D	D1	H	Kgs	List Price
949-253	1/2	42	58	14	85	0.265	37.45
949-254	3/4	47	58	19	95	0.335	46.79
949-255	1	54	72	24	105	0.510	63.70
949-256	1-1/4	62	72	30	110	0.686	95.49
949-257	1-1/2	64	98	38	135	1.055	121.75
949-258	2	75	98	47	150	1.45	177.95

**STANDARD PORT CARBON STEEL BALL VALVE**

- For chemical and industrial applications.
- Blow-out proof stem design.
- 100% air tested under water, at 100 psi, open and closed positions.
- Generic handles

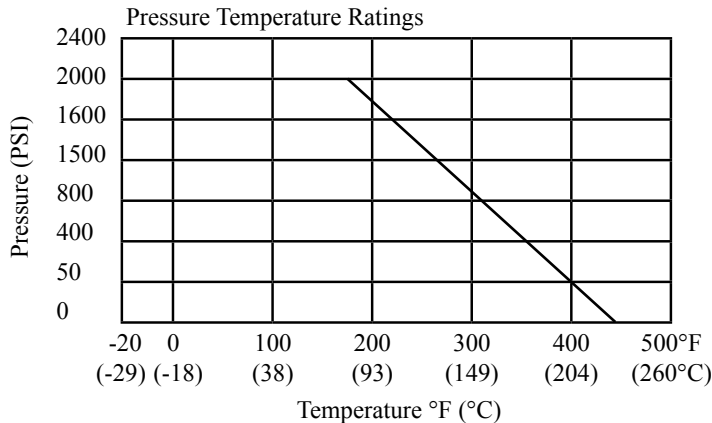
**SPECIFICATIONS**

- Working Pressure: 1/4" ~ 1" 2000 psi WOG,  
1-1/4" ~ 2" 1500 psi WOG,
- Temperature Range: -60° to 450°F
- End types: Threaded
- 1 piece ball valve reducing bore
- Reinforced PTFE seat



**2000 PSI STANDARD PORT**

Part #	Size	d	H	E	L	Box	Case	List Price
949-121	1/4	.20	1.14	2.40	1.71	10	100	65.21
949-122	3/8	.28	1.38	3.55	1.87	10	100	60.81
949-123	1/2	.36	2.60	4.08	2.20	5	75	58.64
949-124	3/4	.49	2.72	4.21	2.58	5	60	65.76
949-125	1	.59	2.95	4.65	3.19	6	36	84.43
949-126	1-1/4	.78	3.07	5.83	3.62	4	20	137.33
949-127	1-1/2	1.02	3.39	5.83	3.78	3	15	158.13
949-128	2	1.26	3.86	5.90	4.49	3	12	226.37



Item	Parts	Material
1	Body	ASTM A108 CL. 1018 or AISI 1021 C.S.
2	Unscrewed Seat Retainer	
3	Ball	SS304
4	Stem	SS316
5	Ball Seat	RPTFE
6	Cap Seal	PTFE
7	Packing	PTFE
8	Handle	SS304
9	Handle Sleeve	Vinyl Grip
10	Thrust Washer	PTFE
11	Gland	SS304
12	Washer	SS304
13	Handle Nut	SS304
14	Stem Nut	SS304

**VALVES**



## PVC VALVES

- Quarter turn **WHITE PVC BALL VALVES**
- Solvent ends comply with ASTM D2466
- Designed for use in residential, commercial & industrial system as well as 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 73°F
- Threaded ends comply with ANSI B1.20.1



### MOLDED IN PLACE - WHITE PIPE THREADS

Part#	Size	Box	Case	List Price
940-284	1/2"	10	260	4.61
940-285	3/4"	5	160	7.37
940-286	1"	5	80	10.36
940-287	1-1/4"	5	60	21.45
940-288	1-1/2"	4	44	20.40
940-289	2"	4	24	33.61
940-291	3"	3	10	138.74
940-292	4"	2	6	193.12



### WHITE SOCKET - SLIP X SLIP

Part #	Size	Box	Case	List Price
940-294	1/2"	10	100	5.97
940-295	3/4"	5	60	7.66
940-296	1"	5	40	11.24
940-297	1-1/4"	5	30	20.55
940-298	1-1/2"	4	24	25.51
940-299	2"	4	16	29.03
940-300	2-1/2"			82.31
940-301	3"			136.84
940-302	4"			259.71

## COMPACT BALL VALVES

### CPVC Ball Valve White - SLIP X SLIP

Part#	Size	List Price
940-281	1/2 "	10.97
940-282	3/4 "	15.18

## PVC VALVES

### FEATURES

- Sizes range from 1/2" to 4"
- Excellent flow characteristics
- Leak-tight shut-off
- EPPM O-Ring
- Test pressure: 225 psi @ 73°F
- Working Pressure: 150 psi @ 73°F



### FIP X FIP THREADED BALL VALVE

Part #	Size	List Price
899000	1/2"	15.93
899001	3/4"	15.26
899002	1"	22.83
899003	1-1/4"	28.57
899004	1-1/2"	47.71
899005	2"	60.02
899006	2-1/2"	241.25
899007	3"	317.17
899008	4"	603.96



### SLIP X SLIP BALL VALVE

Part #	Size	List Price
899050	1/2"	15.03
899051	3/4"	17.28
899052	1"	20.60
899053	1-1/4"	25.04
899054	1-1/2"	51.00
899055	2"	67.22
899056	2-1/2"	241.25
899057	3"	358.96
899058	4"	719.51

## PLASTIC DRUM FAUCETS

- Pipe threads to ANSI B1.20.1
- Hose threads to ANSI B 1.20.7

The FLO-RITE faucet has been engineered to meet the demand for greater chemical resistance, using linear polyethylene for the stem.



### "FLO-RITE" DRUM FAUCET

Part #	Size	List Price
46-277	3/4"	13.97



### "FLO-KING" DRUM FAUCET

Part #	Size	List Price
46-278	2	125.55

**INLINE PLASTIC  
SPRING CHECK VALVE**

Socket x Socket

- 200 PSI working pressure @ 77°F .5 PSI to open.



Part#	Size	List Price
940-325	1/2"	15.37
940-326	3/4"	15.23
940-327	1"	21.73
940-328	1-1/4"	29.13
940-329	1-1/2"	30.65
940-330	2"	36.01

**INLINE PLASTIC SPRING CHECK  
VALVE FEMALE THREADED ENDS**

- 200 PSI working pressure @ 77°F .5 PSI to open.



Part#	Size	List Price
940-331	1/2"	14.42
940-332	3/4"	17.06
940-333	1"	20.93
940-334	1-1/4"	29.04
940-335	1-1/2"	52.10
940-336	2"	48.63

DO NOT GO WHERE THE PATH MAY LEAD, GO INSTEAD WHERE  
THERE IS NO PATH AND LEAVE A TRAIL.

– RALPH WALDO EMERSON

# BRASS NIPPLES

# BRASS NIPPLES

We hereby certify that to the best of our knowledge and belief the CDA 230 alloy seamless Red Brass Pipe from which our nipples are produced meet the requirements of ASTM Specifications B43 and is free of mercury contamination. The chemical analysis is 85% copper, 15% Zinc and conforms to federal Specifications WWN-351. Our brass nipples meet ANSI/ASTM B687-96 and MS51846 for standard brass nipples, and MS51872 for extra heavy brass nipples.

Threads: Nipples are threaded with American Standard taper pipe threads (NPT) in accordance with screw-thread standard for Federal Services Handbook H-58. ANSI B1.20.1

Brass nipples are in compliance with California's Health & Safety code section 116875 (AB1953) and Vermont Act 193. This product is certified by NSF to NSF/ANSI 61 for use in drinking water supplies of pH 6.5 and above.

## STANDARD RED BRASS 85% PIPE WITH THREADED 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	.146	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					

No-Lead 125LB seamless Threaded Red Brass Nipples - 2200

# LEAD FREE

- Meets legislation for potable water applications.
- Federal Government 5.3874
- Federal Public Law 111-380
- California AB 1953
- Maryland HB-372
- Louisiana Act No. 362
- Vermont Statute, Title 9 Chapter 63: 247h

## EXTRA HEAVY RED BRASS 85% PIPE WITH THREADED 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	.205	.100	1/8"	1960	1960	1960	1240
1/4"	.540	.294	.123	1/4"	2210	2210	2210	1340
3/8"	.675	.421	.127	3/8"	1840	1840	1840	1150
1/2"	.840	.542	.149	1/2"	1760	1760	1760	1100
3/4"	1.050	.736	.157	3/4"	1510	1510	1510	950
1"	1.315	.951	.182	1"	1340	1340	1340	850
1-1/4"	1.660	1.272	.194	1-1/4"	1160	1160	1160	730
1-1/2"	1.900	1.494	.203	1-1/2"	1090	1090	1090	680
2"	2.375	1.933	.221	2"	1000	1000	1000	630
3"	2.875	2.315	.280	2-1/2"	970	970	970	620
3-1/2"	3.500	2.892	.304	3"	910	910	910	570
4"	4.000	3.358	.321	3-1/2"	860	860	860	550
4-1/2"	4.500	3.818	.341	4"	840	840	840	530
5"	5.562	4.812	.375	5"	770	770	770	480
6"	6.625	5.751	.437	6"	800	800	800	500

- ASTM B43
- ANSI B1.20.1, WW-N-351
- ANSI/ ASTM B687-96
- NSF-61 Approved
- MS51846 STD Brass Nipples
- MS51872 Extra Heavy Brass Nipples
- RoHS compliant

### 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	268.5	314.0	349.0	390.0
4"	2-7/8"	226.3				253.1	307.0	357.5	422.5	450.0	516.3	563.8

Approximate weight per 100 pieces.

Standard Brass Nipples.

For Extra Heavy Brass multiply above weight by 1.37

FOR THREAD CHARTS PLEASE SEE PAGE 442

## COMPLIES WITH AB 1953

## 1/8" Diameter



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
40-001	Close ( 3/4" )	25/600	0.02	3.97
40-002	x 1-1/2"	25/600	0.03	4.49
40-003	x 2"	25/600	0.04	4.81
40-004	x 2-1/2"	25/600	0.05	5.46
40-005	x 3"	25/600	0.06	5.89
40-006	x 3-1/2"	25/600	0.07	6.36
40-007	x 4"	25/600	0.08	7.14
40-008	x 4-1/2"	25/400	0.10	8.06
40-009	x 5"	25/400	0.11	8.73
40-010	x 5-1/2"	25/400	0.12	9.44
40-011	x 6"	25/400	0.13	10.12
40-012	x 7"	25/200	0.15	12.02
40-013	x 8"	25/200	0.17	13.26
40-014	x 9"	25/200	0.19	16.30
40-015	x 10"	25/150	0.21	17.83
40-016	x 11"	25/150	0.23	19.34
40-017	x 12"	25/150	0.25	20.59
40-018	x 12ft	1/1	3.11	24.37

## 1/4" Diameter



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
40-020	Close ( 7/8" )	25/600	0.03	4.63
40-021	x 1-1/2"	25/600	0.05	5.36
40-022	x 2"	25/600	0.07	6.07
40-023	x 2-1/2"	25/600	0.09	6.58
40-024	x 3"	25/600	0.11	7.72
40-025	x 3-1/2"	25/400	0.13	8.40
40-026	x 4"	25/400	0.14	9.88
40-027	x 4-1/2"	25/400	0.16	10.74
40-028	x 5"	25/300	0.18	11.69
40-029	x 5-1/2"	25/300	0.20	12.68
40-030	x 6"	25/300	0.22	14.26
40-031	x 7"	25/200	0.25	16.25
40-032	x 8"	25/200	0.29	17.81
40-033	x 9"	25/200	0.33	19.79
40-034	x 10"	25/150	0.36	21.73
40-035	x 11"	25/150	0.40	23.71
40-036	x 12"	25/150	0.43	25.66
40-227	x 6 ft	1/1	2.58	135.31
40-228	x 12 ft	1/1	5.16	277.99

**BRASS NIPPLES****BRASS NIPPLES****3/8" Diameter**

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
40-040	Close ( 1" )	25/600	0.05	4.81
40-041	x 1-1/2"	25/600	0.08	5.69
40-042	x 2"	25/600	0.10	6.91
40-043	x 2-1/2"	25/400	0.13	7.48
40-044	x 3"	25/400	0.16	9.16
40-045	x 3-1/2"	25/400	0.18	9.88
40-046	x 4"	25/300	0.21	11.76
40-047	x 4-1/2"	25/300	0.23	15.24
40-048	x 5"	25/300	0.26	13.73
40-049	x 5-1/2"	25/200	0.29	14.93
40-050	x 6"	25/200	0.31	16.16
40-051	x 7"	25/200	0.36	19.61
40-052	x 8"	25/150	0.42	21.98
40-053	x 9"	25/150	0.47	26.00
40-054	x 10"	25/100	0.52	26.19
40-055	x 11"	25/100	0.57	28.59
40-056	x 12"	25/100	0.62	31.01
40-237	x 6 ft	1/1	3.72	180.59
40-238	x 12 ft	1/1	7.44	362.30

**1/2" Diameter**

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
40-060	Close ( 1-1/8" )	25/600	0.09	6.40
40-061	x 1-1/2"	25/600	0.12	7.41
40-062	x 2"	25/600	0.16	8.71
40-063	x 2-1/2"	25/400	0.20	10.36
40-064	x 3"	25/400	0.23	12.17
40-065	x 3-1/2"	25/300	0.27	13.88
40-066	x 4"	25/300	0.31	15.91
40-067	x 4-1/2"	25/200	0.35	17.28
40-068	x 5"	25/200	0.39	19.03
40-069	x 5-1/2"	25/200	0.43	20.91
40-070	x 6"	25/200	0.47	23.17
40-071	x 7"	25/100	0.55	26.84
40-072	x 8"	25/100	0.62	30.07
40-073	x 9"	25/100	0.70	33.37
40-074	x 10"	25/75	0.78	36.92
40-075	x 11"	25/75	0.86	40.39
40-076	x 12"	25/75	0.94	43.91
40-078	x 18"	1/1	1.41	108.65
40-079	x 24"	1/1	1.88	74.74
40-245	x 36"	1/1	2.82	100.35
40-246	x 48"	1/1	3.76	141.53
40-250	x 60"	1/1	4.70	184.45
40-247	x 6 ft	1/1	5.64	228.81
40-248	x 12 ft	1/1	11.28	511.16



## 3/4" Diameter



Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
40-080	Close (1- 3/8" )	25/400	0.15	9.24
40-081	x 1-1/2"	25/400	0.16	9.85
40-082	x 2"	25/300	0.21	11.63
40-083	x 2-1/2"	25/300	0.27	13.49
40-084	x 3"	25/200	0.32	15.55
40-085	x 3-1/2"	25/200	0.37	17.47
40-086	x 4"	25/150	0.43	20.31
40-087	x 4-1/2"	25/150	0.48	22.07
40-088	x 5"	25/100	0.53	24.37
40-089	x 5-1/2"	25/100	0.59	26.62
40-090	x 6"	25/100	0.64	29.65
40-091	x 7"	25/75	0.75	34.74
40-092	x 8"	25/75	0.85	39.13
40-093	x 9"	25/75	0.96	43.32
40-094	x 10"	25/50	1.06	47.74
40-095	x 11"	25/50	1.17	52.10
40-096	x 12"	25/50	1.28	56.82
40-097	x 18"	1/1	1.92	96.45
40-098	x 24"	1/1	2.56	72.35
40-099	x 36"	1/1	3.84	148.32
40-257	x 6 ft	1/1	7.68	348.48
40-258	x 12 ft	1/1	15.36	705.34

## 1" Diameter



Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
40-100	Close ( 1-1/2" )	25/300	0.23	13.62
40-101	x 2"	25/200	0.30	16.81
40-102	x 2-1/2"	25/200	0.38	19.61
40-103	x 3"	25/150	0.45	22.57
40-104	x 3-1/2"	25/150	0.53	26.14
40-105	x 4"	25/100	0.60	29.41
40-106	x 4-1/2"	25/100	0.68	32.79
40-107	x 5"	25/100	0.75	36.25
40-108	x 5-1/2"	25/75	0.83	39.71
40-109	x 6"	25/75	0.94	43.30
40-110	x 7"	25/50	1.05	50.57
40-111	x 8"	25/50	1.20	57.73
40-112	x 9"	25/50	1.35	64.42
40-113	x 10"	25/50	1.50	71.46
40-114	x 11"	25/50	1.65	77.09
40-115	x 12"	25/50	1.80	85.20
40-118	x 18"	1/1	2.50	100.84
40-119	x 24"	1/1	3.60	134.50
40-262	x 36"	1/1	5.40	221.70
40-267	x 6 ft	1/1	10.80	360.45
40-268	x 12 ft	1/1	21.60	856.56

# BRASS NIPPLES

# BRASS NIPPLES

## 1-1/4" Diameter



Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
40-120	Close ( 1-5/8" )	25/150	0.36	20.55
40-121	x 2"	25/150	0.44	23.47
40-122	x 2-1/2"	25/150	0.56	26.54
40-123	x 3"	25/100	0.67	31.42
40-124	x 3-1/2"	25/100	0.78	36.76
40-125	x 4"	25/100	0.89	41.37
40-126	x 4-1/2"	25/75	1.00	45.82
40-127	x 5"	25/75	1.11	50.53
40-128	x 5-1/2"	25/75	1.22	55.26
40-129	x 6"	25/50	1.33	60.37
40-130	x 7"	25/50	1.56	71.20
40-131	x 8"	25/50	1.78	80.65
40-132	x 9"	25/50	2.00	95.66
40-133	x 10"	20/40	2.22	99.74
40-134	x 11"	20/40	2.45	114.18
40-135	x 12"	15/30	2.67	145.11
40-136	x 18"	1/1	4.00	162.59
40-137	x 24"	1/1	5.34	215.37
40-139	x 36"	1/1	8.01	315.81
40-277	x 6 ft	1/1	16.02	569.96

## 1-1/2" Diameter



Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
40-140	Close ( 1-3/4" )	25/100	0.46	26.73
40-141	x 2"	25/75	0.53	28.75
40-142	x 2-1/2"	25/75	0.66	34.44
40-143	x 3"	25/50	0.79	39.58
40-144	x 3-1/2"	25/50	0.93	45.46
40-145	x 4"	25/50	1.06	51.56
40-146	x 4-1/2"	25/50	1.19	57.94
40-147	x 5"	25/50	1.32	64.10
40-148	x 5-1/2"	25/50	1.46	70.14
40-149	x 6"	25/50	1.59	76.19
40-150	x 7"	20/40	1.85	89.03
40-151	x 8"	20/40	2.12	101.16
40-152	x 9"	10/30	2.38	113.23
40-153	x 10"	15/30	2.65	125.32
40-154	x 11"	1/20	2.91	137.41
40-155	x 12"	1/20	3.18	149.48
40-156	x 18"	1/1	4.77	188.58
40-158	x 24"	1/1	6.36	232.70
40-159	x 36"	1/1	9.54	376.53
40-287	x 6 ft	1/1	19.08	700.77

**2" Diameter**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
40-160	Close ( 2" )	25/75	0.69	40.70
40-161	x 2-1/2"	25/50	0.86	43.93
40-162	x 3"	25/50	1.03	50.71
40-163	x 3-1/2"	25/50	1.20	58.37
40-164	x 4"	1/25	1.37	66.33
40-165	x 4-1/2"	1/25	1.54	73.96
40-166	x 5"	1/25	1.72	82.02
40-167	x 5-1/2"	1/25	1.89	89.96
40-168	x 6"	1/25	2.06	97.93
40-169	x 7"	1/20	2.40	114.55
40-170	x 8"	1/20	2.74	130.64
40-171	x 9"	1/20	3.09	145.67
40-172	x 10"	1/15	3.43	196.78
40-173	x 11"	1/15	3.77	174.85
40-174	x 12"	1/15	4.12	192.98
40-175	x 18"	1/1	6.18	207.02
40-176	x 24"	1/1	8.24	276.03
40-177	x 30"	1/1	10.30	386.17
40-178	x 36"	1/1	12.36	425.06
40-179	x 48"	1/1	16.48	647.80
40-298	x 12ft	1/1	49.44	2475.24

**2-1/2" Diameter**

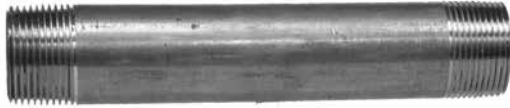
Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
40-180	Close ( 2-1/2" )	20/40	1.26	107.40
40-181	x 3"	20/40	1.51	112.29
40-182	x 3-1/2"	1/30	1.76	127.23
40-183	x 4"	1/30	2.02	141.43
40-184	x 4-1/2"	1/30	2.27	184.52
40-185	x 5"	1/20	2.52	202.99
40-186	x 5-1/2"	1/20	2.77	179.77
40-187	x 6"	1/20	3.03	196.81
40-188	x 7"	1/20	3.53	224.21
40-189	x 8"	1/10	4.03	257.51
40-190	x 9"	1/10	4.54	285.82
40-191	x 10"	1/10	5.04	315.82
40-192	x 11"	1/10	5.55	340.31
40-193	x 12"	1/10	6.05	373.36
40-197	x 24"	1/1	12.10	666.21

*Send Midland all your high volume quotes!*

# BRASS NIPPLES

# BRASS NIPPLES

## 3" Diameter



Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
40-200	Close ( 2-5/8" )	30/30	1.89	146.05
40-201	x 3"	20/20	2.16	151.78
40-202	x 3-1/2"	1/15	2.52	208.80
40-203	x 4"	1/15	2.88	193.39
40-204	x 4-1/2"	1/15	3.24	212.59
40-205	x 5"	1/15	3.60	233.89
40-206	x 5-1/2"	1/15	3.96	254.14
40-207	x 6"	1/10	4.32	276.27
40-208	x 7"	1/7	5.04	350.36
40-209	x 8"	1/7	5.76	367.25
40-210	x 9"	1/7	6.48	402.16
40-211	x 10"	1/5	7.20	446.14
40-212	x 11"	1/5	7.92	485.16
40-213	x 12"	1/5	8.64	534.38
40-216	x 18"	1/1	12.96	677.37

## 4" Diameter



Part #	Size	Box/Case	Approx. WT. Lbs.	List Price
40-220	Close ( 2-7/8 )	1/20		154.75
40-221	x 3"	1/10	2.72	169.37
40-222	x 3-1/2"	1/10	3.18	190.17
40-223	x 4"	1/10	3.71	214.17
40-224	x 4-1/2"	1/8	4.24	234.26
40-225	x 5"	1/8	4.77	258.74
40-226	x 5-1/2"	1/8	5.30	275.91
40-234	x 6"	1/8	6.36	304.65
40-229	x 8"	1/4	8.48	396.73
40-233	x 12"	1/4	12.71	578.91

## 6" Diameter



Part #	Size	Box/Case	Approx. WT. Lbs.	List Price
40-254	Close	5	4.94	536.99
40-256	x 4"	5	6.54	649.31
40-259	x 4-1/2"	5	7.12	744.21
40-260	x 5"	5	7.91	878.09
40-261	x 6"	5	9.49	1023.36
40-263	x 8"	4	12.65	1334.19
40-264	x 10"	3	15.82	1634.76
40-265	x 12"	3	18.99	1925.24

**1/4" CHROME PLATED NIPPLE**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
41-022	x 2"	5/25	0.70	15.17
41-024	x 3"	5/25	0.11	19.89
41-025	x 3-1/2"	5/25	0.13	21.26
41-026	x 4"	5/25	0.14	24.99
41-028	x 5"	5/25	0.18	29.58
41-030	x 6"	5/25	0.22	36.05

**3/8" CHROME PLATED NIPPLE**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
41-040	X Close	5/25	0.05	9.38
41-041	x 1-1/2"	5/25	0.08	11.11
41-042	x 2"	5/25	0.10	13.49
41-043	x 2-1/2"	5/25	0.13	14.63
41-044	x 3"	5/25	0.16	17.89
41-045	x 3-1/2"	5/25	0.18	19.30
41-046	x 4"	5/25	0.21	22.96
41-047	x 4-1/2"	5/25	0.23	24.45
41-048	x 5"	5/25	0.26	26.82
41-049	x 5-1/2"	5/25	0.29	29.16
41-050	x 6"	5/25	0.31	31.54
41-054	x 10"	1/1	0.52	51.14
41-056	x 12"	1/1	0.62	60.54
41-057	x 18"	1/1	0.93	90.25
41-058	x 24"	1/1	1.24	120.18

**1/2" CHROME PLATED NIPPLE**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
41-060	X Close	5/25	0.09	12.51
41-061	x 1-1/2"	5/25	0.12	14.48
41-062	x 2"	5/25	0.16	17.01
41-063	x 2-1/2"	5/25	0.20	20.24
41-064	x 3"	5/25	0.23	23.76
41-065	x 3-1/2"	5/25	0.27	27.12
41-066	x 4"	5/25	0.31	31.08
41-067	x 4-1/2"	5/25	0.35	33.73
41-068	x 5"	5/25	0.39	37.16
41-069	x 5-1/2"	5/25	0.43	40.81
41-070	x 6"	5/25	0.47	45.25
41-072	x 8"	1/1	0.62	58.73
41-073	x 9"	1/1	0.70	70.38
41-074	x 10"	1/1	0.78	82.94
41-075	x 11"	1/1	0.86	83.78
41-076	x 12"	1/1	0.94	88.64
41-077	x 18"	1/1	1.41	127.72
41-079	x 24"	1/1	1.88	205.45
41-244	x 36"	1/1	2.82	237.01
41-245	x 48"	1/1	3.76	314.56

**3/4" CHROME PLATED NIPPLE**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
41-080	X Close	5/25	0.15	23.35
41-081	x 1-1/2"	5/25	0.16	24.88
41-082	x 2"	5/25	0.21	29.40
41-083	x 2-1/2"	5/25	0.27	34.09
41-084	x 3"	5/25	0.32	39.32
41-085	x 3-1/2"	5/25	0.37	44.12
41-086	x 4"	5/25	0.43	52.27
41-087	x 4-1/2"	5/25	0.48	55.79
41-088	x 5"	5/25	0.53	61.58
41-089	x 5-1/2"	5/25	0.59	67.29
41-090	x 6"	5/25	0.64	74.93
41-096	x 12"	1/1	1.28	143.58
41-093	x 18"	1/1	1.92	210.77
41-097	x 24"	1/1	2.56	315.11
41-098	x 36"	1/1	3.84	419.46
41-099	x 48"	1/1	4.12	543.05

**1" CHROME PLATED NIPPLE**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
41-101	x 2"	5/15	0.30	42.46
41-102	x 2-1/2"	5/15	0.38	49.55
41-103	x 3"	5/15	0.45	57.04
41-104	x 3-1/2"	5/15	0.53	66.04
41-105	4"	5/15	0.60	74.29
41-106	4-1/2"	5/15	0.68	82.84
41-107	5"	5/15	0.75	91.61
41-108	5-1/2"	5/15	0.83	100.35
41-109	6"	5/15	0.94	109.40
41-111	8"	5/15	1.20	145.87
41-113	10"	1/1	1.50	180.54
41-115	12"	1/1	1.80	215.31

**NIPPLES & FITTINGS**



## EXTRA HEAVY SCHEDULE 80

## 1/4" Diameter



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
42-020	Close ( 7/8 )	5/25	0.04	9.00
42-021	x 1-1/2"	5/25	0.07	10.41
42-022	x 2"	5/25	0.10	11.79
42-023	x 2-1/2"	5/25	0.12	12.77
42-024	x 3"	5/25	0.15	14.98
42-025	x 3-1/2"	5/25	0.17	16.31
42-026	x 4"	5/25	0.20	19.17
42-027	x 4-1/2"	5/25	0.22	20.81
42-028	x 5"	5/25	0.25	22.69
42-029	x 5-1/2"	5/25	0.27	24.59
42-030	x 6"	5/25	0.30	27.65

## 3/8" Diameter



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
42-040	Close ( 1 )	5/25	0.07	9.32
42-041	x 1-1/2"	5/25	0.11	11.04
42-042	x 2"	5/25	0.14	13.41
42-043	x 2-1/2"	5/25	0.18	14.53
42-044	x 3"	5/25	0.22	17.77
42-045	x 3-1/2"	5/25	0.25	19.17
42-046	x 4"	5/25	0.29	22.82
42-047	x 4-1/2"	5/25	0.32	24.29
42-048	x 5"	5/25	0.36	26.64
42-049	x 5-1/2"	5/25	0.39	28.96
42-050	x 6"	5/25	0.43	31.32

## 1/2" Diameter



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
42-060	Close ( 1-1/8 )	5/25	0.12	12.43
42-061	x 1-1/2"	5/25	0.16	14.39
42-062	x 2"	5/25	0.22	16.90
42-063	x 2-1/2"	5/25	0.27	20.12
42-064	x 3"	5/25	0.32	23.61
42-065	x 3-1/2"	5/25	0.38	26.95
42-066	x 4"	5/25	0.43	30.87
42-067	x 4-1/2"	5/25	0.48	33.51
42-068	x 5"	5/25	0.54	36.92
42-069	x 5-1/2"	5/25	0.59	40.54
42-070	x 6"	5/25	0.65	44.95
42-072	x 8"	5/25	0.75	58.35
42-074	x 10"	5/25	0.86	71.84
42-076	x 12"	5/25	0.97	85.53

## EXTRA HEAVY SCHEDULE 80

## 3/4" Diameter



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
42-080	Close ( 3/4 )	5/25	0.20	17.92
42-081	x 1-1/2"	5/25	0.22	19.10
42-082	x 2"	5/25	0.29	22.57
42-083	x 2-1/2"	5/25	0.37	26.17
42-084	x 3"	5/25	0.44	30.19
42-085	x 3-1/2"	5/25	0.51	33.88
42-086	x 4"	5/25	0.59	39.38
42-087	x 4-1/2"	5/25	0.66	42.84
42-088	x 5"	5/25	0.73	47.28
42-089	x 5-1/2"	5/25	0.81	51.67
42-090	x 6"	5/25	0.88	57.52
42-092	x 8"	5/25	1.18	76.23
42-094	x 10"	5/25	1.47	92.96
42-096	x 12"	5/25	1.76	110.63

## 1" Diameter



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
42-100	Close ( 1-1/2 )	5/25	0.31	26.43
42-101	x 2"	5/25	0.41	31.89
42-102	x 2-1/2"	5/25	0.52	38.04
42-103	x 3"	5/25	0.62	43.80
42-104	x 3-1/2"	5/25	0.73	50.71
42-105	x 4"	5/25	0.83	54.76
42-106	x 4-1/2"	5/25	0.93	63.61
42-107	x 5"	5/25	1.07	70.33
42-108	x 5-1/2"	5/25	1.14	77.04
42-109	x 6"	5/25	1.30	83.99
42-111	x 8"	5/25	1.66	112.44
42-113	x 10"	5/25	2.07	139.11
42-115	x 12"	5/25	2.49	165.97



## EXTRA HEAVY SCHEDULE 80

## 1-1/4" Diameter



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
42-120	Close ( 1 )	5/25	0.50	39.87
42-121	x 2"	5/25	0.61	45.54
42-122	x 2-1/2"	5/25	0.77	51.50
42-123	x 3"	5/25	0.92	60.94
42-124	x 3-1/2"	5/25	1.07	71.31
42-125	x 4"	5/25	1.23	80.26
42-126	x 4-1/2"	5/25	1.38	88.88
42-127	x 5"	5/25	1.53	98.01
42-128	x 5-1/2"	5/25	1.69	107.22
42-129	x 6"	5/25	1.84	117.10
42-131	x 8"	5/25	2.46	157.08
42-133	x 10"	5/25	3.07	194.22
42-135	x 12"	5/25	3.68	232.36

## 1-1/2" Diameter



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
42-140	Close ( 1-3/4 )	5/25	0.64	51.85
42-141	x 2"	5/25	0.73	55.79
42-142	x 2-1/2"	5/25	0.91	66.83
42-143	x 3"	5/25	1.10	76.81
42-144	x 3-1/2"	5/25	1.28	88.19
42-145	x 4"	5/25	1.46	100.04
42-146	x 4-1/2"	5/25	1.64	112.42
42-147	x 5"	5/25	1.83	124.38
42-148	x 5-1/2"	5/25	2.01	136.09
42-149	x 6"	5/25	2.19	147.80
42-151	x 8"	5/25	2.92	196.97
42-153	x 10"	5/25	3.65	244.12
42-155	x 12"	5/25	4.38	291.16

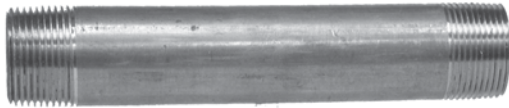
## 2" Diameter



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
42-160	Close ( 2 )	5/10	0.95	76.79
42-161	x 2-1/2"	5/10	1.18	85.25
42-162	x 3"	5/10	1.42	98.38
42-163	x 3-1/2"	5/10	1.66	113.25
42-164	x 4"	5/10	1.89	128.72
42-165	x 4-1/2"	5/10	2.13	143.49
42-166	x 5"	5/10	2.37	159.11
42-167	x 5-1/2"	5/10	2.60	174.53
42-168	x 6"	5/10	2.84	190.02
42-170	x 8"	5/10	3.79	254.42
42-172	x 10"	5/10	4.73	304.00
42-174	x 12"	5/10	5.68	374.43

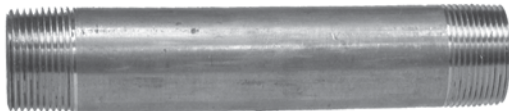
**EXTRA HEAVY SCHEDULE 80**

**3" Diameter**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
42-200	Close ( 2-5/8 )	1/1	2.61	267.45
42-201	x 3"	1/1	2.98	294.47
42-202	x 3-1/2"	1/1	3.48	333.13
42-203	x 4"	1/1	3.97	375.21
42-204	x 4-1/2"	1/1	4.47	412.46
42-205	x 5"	1/1	4.97	453.82
42-206	x 5-1/2"	1/1	5.46	493.10
42-207	x 6"	1/1	5.96	536.01
42-209	x 8"	1/1	7.94	715.28
42-211	x 10"	1/1	9.93	868.90
42-213	x 12"	1/1	11.92	1040.78

**4" Diameter**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
42-220	Close ( 2-7/8 )	1/1	4.20	426.36
42-221	x 3"	1/1	3.76	433.05
42-223	x 4"	1/1	5.12	554.53
42-234	x 6"	1/1	8.77	778.94
42-229	x 8"	1/1	11.70	1018.25
42-231	x 10"	1/1	14.78	1259.33
42-233	x 12"	1/1	17.55	1485.85

**NIPPLES & FITTINGS**



# BRONZE FITTINGS

# BRONZE FITTINGS



UL842, UL258, UL125,FM

## Class 125 (150) For steam, water, gas, oil and air service

Standard specifications

Materials - ASTM B62-93 (85,5,5,5) C83600

Dimensions - ANSI B 16.15

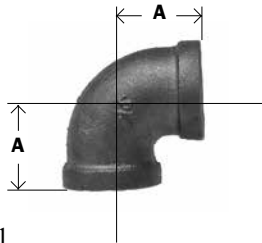
Threads - ANSI B2.1 or BA 21 and Fed. WW-P-460C, MSS-SP-106, ANSI/ASME B1.20.1

- UL/ FM Approved
- ISO 9001:2000
- Not Lead Free
- RoHS Compliant

### See pages 175-176 for Lead Free Bronze Fittings

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. Bronze provides a tighter seal and is easier to install than other metals. Can be used for water, plumbing, heating, pneumatic and marine applications. Able to resist the harmful effects of corrosion when coming into contact with salt water or fresh water polluted with mineral acids or peaty soils.

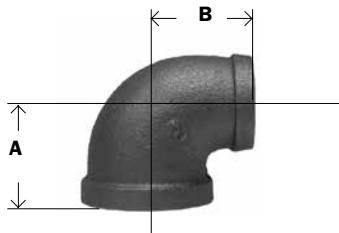
### 90° ELBOWS



X101

Part #	Size	A	Box/Case	Approx. Wt. Lbs.	List Price
44-100	1/8"	0.55	25/600	0.08	6.52
44-101	1/4"	0.72	25/300	0.12	6.52
44-102	3/8"	0.83	25/300	0.17	6.52
44-103	1/2"	1.03	25/200	0.24	9.92
44-104	3/4"	1.19	25/100	0.34	13.34
44-105	1"	1.43	75/75	0.61	20.60
44-106	1-1/4"	1.71	10/50	0.95	32.76
44-107	1-1/2"	1.87	5/35	1.30	40.91
44-108	2"	2.14	2/20	2.07	66.61
44-109	2-1/2"	2.74	5/10	3.80	130.64
44-110	3"	3.10	2/6	4.76	200.40
44-112	4"	3.80	2/4	9.71	483.30

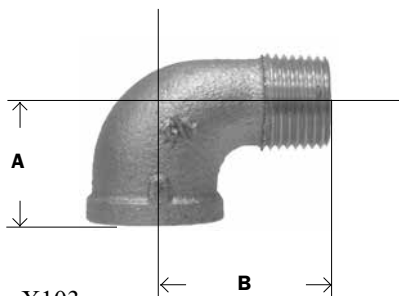
### 90° REDUCING ELBOWS



X101

Part #	Size	A	B	Box/Case	Approx. Wt. Lbs.	List Price
44-120	1/4" x 1/8"	0.67	0.60	25/300	0.10	10.10
44-122	3/8" x 1/4"	0.75	0.78	25/150	0.24	10.56
44-123	1/2" x 1/4"	0.93	0.90	25/200	0.44	10.71
44-124	1/2" x 3/8"	0.93	0.90	25/100	0.58	10.71
44-127	3/4" x 1/2"	1.08	1.11	10/60	0.80	14.61
44-131	1" x 3/4"	1.30	1.31	10/50	1.07	25.65
44-134	1-1/4" x 1"	1.52	1.60	60/10	0.80	40.05
44-137	1-1/2" x 1"	1.56	1.72	50/10	1.07	50.61

### 90° STREET ELLS

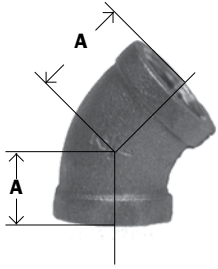


X103

Part #	Size	A	B	Box/Case	Approx. Wt. Lbs.	List Price
44-160	1/8"	0.55	0.92	25/600	0.07	9.92
44-161	1/4"	0.72	1.11	25/600	0.11	9.92
44-162	3/8"	0.83	1.24	25/300	0.18	9.92
44-163	1/2"	1.03	1.51	25/200	0.24	12.32
44-164	3/4"	1.19	1.66	25/100	0.37	17.40
44-165	1"	1.43	1.98	25/75	0.67	26.37
44-166	1-1/4"	1.71	2.26	10/40	1.00	44.04
44-167	1-1/2"	1.87	2.46	5/35	1.37	57.38
44-168	2"	2.14	2.98	10/20	1.93	97.28
44-169	2-1/2"	2.74	3.92	5/10	4.05	153.80
44-170	3"	3.10	4.45	3/6	6.16	230.70

NIPLLES & FITTINGS

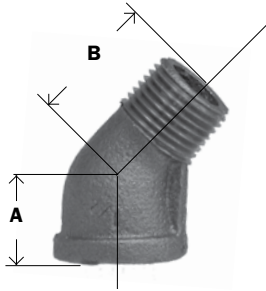
**45° ELBOWS**



X102

Part #	Size	A	Box/Case	Approx. Wt. Lbs.	List Price
44-180	1/8"	0.43	25/600	0.08	7.15
44-181	1/4"	0.55	25/300	0.13	7.15
44-182	3/8"	0.63	25/300	0.17	7.15
44-183	1/2"	0.79	25/200	0.21	9.06
44-184	3/4"	0.91	25/100	0.32	13.34
44-185	1"	1.07	25/75	0.52	22.56
44-186	1-1/4"	1.23	10/50	0.86	36.06
44-187	1-1/2"	1.31	10/40	1.10	45.19
44-188	2"	1.47	5/25	1.71	73.25
44-189	2-1/2"	1.95	6/12	3.24	144.03
44-190	3"	2.17	4/2	4.12	231.53

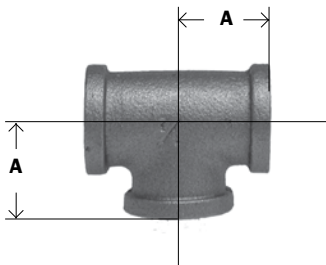
**45° STREET ELBOWS**



X103A

Part #	Size	A	B	Box/Case	Approx. Wt. Lbs.	List Price
44-200	1/8"	0.26	0.43	25/600	0.06	10.10
44-201	1/4"	0.35	0.56	25/300	0.11	10.10
44-202	3/8"	0.37	0.63	25/300	0.13	10.10
44-203	1/2"	0.45	0.79	25/200	0.18	12.32
44-204	3/4"	0.52	0.91	25/100	0.28	24.24
44-205	1"	0.60	1.07	25/75	0.52	28.77
44-206	1-1/4"	0.67	1.23	10/50	0.77	44.04
44-207	1-1/2"	0.70	1.31	10/40	0.97	59.16
44-208	2"	0.76	1.47	5/25	2.04	100.27

**TEES**

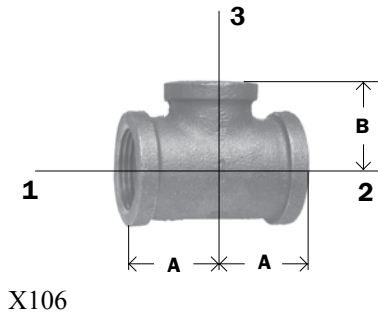


X106

Part #	Size	A	Box/Case	Approx. Wt. Lbs.	List Price
44-250	1/8"	0.55	25/600	0.11	9.06
44-251	1/4"	0.72	25/300	0.17	9.06
44-252	3/8"	0.83	25/200	0.25	9.06
44-253	1/2"	1.03	25/100	0.31	11.41
44-254	3/4"	1.19	25/75	0.50	16.41
44-255	1"	1.43	10/40	0.85	29.17
44-256	1-1/4"	1.71	5/35	1.29	40.91
44-257	1-1/2"	1.87	6/24	1.68	56.29
44-258	2"	2.14	5/15	2.70	92.20
44-259	2-1/2"	2.74	4/8	5.14	179.30
44-260	3"	3.10	4/4	7.59	274.21

**REDUCING TEES**

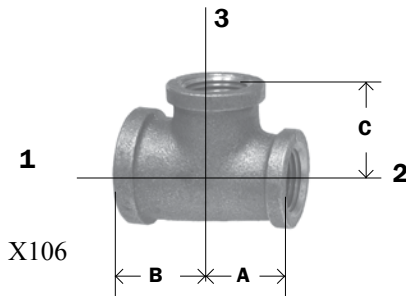
**REDUCING ON THE BRANCH**



Part #	Size (1 & 2) x 3	A	B	Box/ Case	Approx. Wt. Lbs.	List Price
44-276	1/2" x 1/4"	0.87	0.87	25/200	0.24	13.85
44-279	1/2" x 3/8"	0.93	0.90	25/100	0.35	15.84
44-280	1/2" x 3/4"	2.42	1.155	25/100	0.46	21.63
44-282	3/4" x 1/4"	1.05	1.08	25/100	0.43	19.66
44-283	3/4" x 3/8"	1.00	1.00	25/100	0.45	19.66
44-286	3/4" x 1/2"	1.08	1.11	25/100	0.53	19.66
44-291	1" x 1/2"	1.20	1.24	10/40	0.60	35.95
44-298	1" x 3/4"	1.30	1.31	10/40	0.80	35.95
44-301	1-1/4" x 1/2"	1.34	1.53	9/45	0.85	50.61
44-303	1-1/4" x 3/4"	1.30	1.31	10/40	0.90	50.61
44-306	1-1/4" x 1"	1.58	1.67	5/35	1.21	50.61

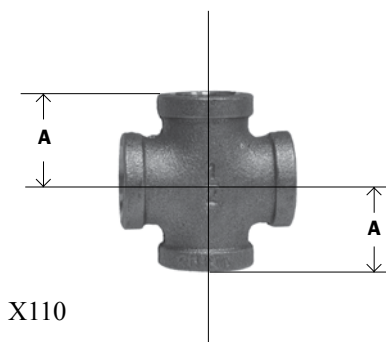
**REDUCING TEES**

**REDUCING ON THE RUN**



Part #	Size 1x2x3	A	B	C	Box/ Case	Approx. Wt. Lbs.	List Price
44-287	3/4" x 1/2" x 1/2"	1.12	1.20	1.22	25/100	0.37	21.63
44-296	1" x 3/4" x 3/4"	1.31	1.37	1.45	10/40	0.71	39.15

**CROSSES**



Part #	Size	A	Box/Case	Approx. Wt. Lbs.	List Price
44-391	1/4"	0.72	25/200	0.20	15.16
44-392	3/8"	0.83	25/150	0.15	15.16
44-393	1/2"	1.03	25/75	0.45	18.41
44-394	3/4"	1.19	10/40	0.76	26.60
44-395	1"	1.19	10/40	1.04	42.19
44-396	1-1/4"	1.71	12/24	1.63	66.04
44-397	1-1/2"	1.87	12/24	2.10	84.36
44-398	2"	2.14	6/12	3.28	175.80

THE JOURNEY OF A THOUSAND MILES BEGINS WITH ONE STEP.

– LAO TZU

**COUPLINGS**



X111

Part #	Size	A	Box/Case	Approx. Wt. Lbs.	List Price
44-410	1/8"	0.80	25/600	0.12	6.52
44-411	1/4"	0.80	25/600	0.11	6.52
44-412	3/8"	1.05	25/300	0.15	6.52
44-413	1/2"	1.29	25/200	0.18	8.20
44-414	3/4"	1.43	25/100	0.28	10.81
44-415	1"	1.68	25/100	0.45	16.41
44-416	1-1/4"	1.86	25/75	0.63	25.65
44-417	1-1/2"	1.92	10/50	0.82	34.87
44-418	2"	2.20	15/30	1.38	57.38
44-419	2-1/2"	2.88	9/18	2.63	95.35
44-420	3"	3.18	6/12	3.80	131.81

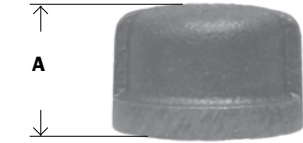
**REDUCING COUPLINGS**



X112

Part #	Size	A	Box/Case	Approx. Wt. Lbs.	List Price
44-430	1/4" x 1/8"	0.88	25/600	0.08	7.00
44-431	3/8" x 1/8"	0.92	25/300	0.11	7.00
44-432	3/8" x 1/4"	0.92	25/300	0.13	7.00
44-433	1/2" x 1/8"	1.17	25/300	0.16	10.10
44-434	1/2" x 1/4"	1.17	25/200	0.16	8.72
44-435	1/2" x 3/8"	1.17	25/200	0.18	8.72
44-436	3/4" x 1/4"	1.35	25/200	0.23	14.43
44-437	3/4" x 3/8"	1.35	25/200	0.24	12.99
44-438	3/4" x 1/2"	1.35	25/200	0.23	12.99
44-440	1" x 3/8"	1.56	25/100	0.40	24.35
44-441	1" x 1/2"	1.56	25/100	0.33	21.60
44-442	1" x 3/4"	1.56	25/100	0.44	21.60
44-444	1-1/4" x 1/2"	1.77	10/90	0.62	41.38
44-445	1-1/4" x 3/4"	1.77	10/90	0.64	34.87
44-446	1-1/4" x 1"	1.77	10/70	0.54	34.87
44-447	1-1/2" x 1/2"	1.80	10/70	0.80	49.59
44-448	1-1/2" x 3/4"	1.80	10/80	0.83	49.59
44-449	1-1/2" x 1"	1.80	25/75	0.68	44.04
44-450	1-1/2" x 1-1/4"	1.80	10/60	0.99	44.04
44-458	2" x 1/2"	2.03	10/50	1.28	73.77
44-451	2" x 3/4"	2.03	10/60	0.97	73.77
44-452	2" x 1"	2.03	10/50	1.40	73.77
44-453	2" x 1-1/4"	2.03	10/50	1.09	65.46
44-454	2" x 1-1/2"	2.03	6/12	3.60	65.46
44-461	2-1/2" x 1-1/2"	3.15	10/50	1.26	115.96
44-462	2-1/2" x 2"	3.15	10/20	2.29	116.00
44-456	3" x 2"	3.69	10/20	2.49	153.69
44-463	3" x 2-1/2"	3.69	6/12	3.92	153.69

**CAPS**

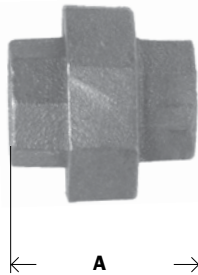


X116

Part #	Size	A	Box/Case	Approx. Wt. Lbs.	List Price
44-470	1/8"	0.53	350/1400	0.04	4.88
44-471	1/4"	0.58	350/1400	0.06	4.88
44-472	3/8"	0.66	25/600	0.10	4.88
44-473	1/2"	0.75	25/300	0.13	6.52
44-474	3/4"	0.87	25/200	0.19	8.62
44-475	1"	1.03	25/200	0.30	13.51
44-476	1-1/4"	1.10	25/100	0.51	20.54
44-477	1-1/2"	1.12	25/100	0.66	27.73
44-478	2"	1.35	35/70	1.00	47.06
44-480	3"	1.83	5/25	2.74	142.90

**NIPPLES & FITTINGS**

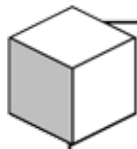
**UNIONS**



X187

Part #	Size	A	Box/Case	Approx. Wt. Lbs.	List Price
44-600	1/8"	1.18	25/300	0.17	23.12
44-601	1/4"	1.26	25/150	0.25	23.12
44-602	3/8"	1.50	25/150	0.37	23.12
44-603	1/2"	1.57	25/75	0.52	25.15
44-604	3/4"	1.89	25/75	0.78	34.87
44-605	1"	2.13	10/40	1.18	46.18
44-606	1-1/4"	2.36	5/35	1.64	67.64
44-607	1-1/2"	2.68	5/25	2.08	79.82
44-608	2"	2.99	9/18	3.24	122.85
44-609	2-1/2"	3.35	5/10	5.31	241.76
44-610	3"	3.74	4/8	6.94	373.50

See pages 175-176 for Lead Free **Bronze Fittings**



**DROP SHIP PROGRAM**

SEE INTRO PAGE **5**

**HEX BUSHINGS**



X114

Part #	Size	A	Hex	Box/Case	Approx. Wt. Lbs.	List Price
44-500	1/4" x 1/8"	0.58	0.66	25/600	0.02	4.41
44-501	3/8" x 1/8"	0.64	0.72	25/600	0.06	4.41
44-502	3/8" x 1/4"	0.64	0.75	25/600	0.04	4.41
44-503	1/2" x 1/8"	0.75	0.92	125/450	0.10	6.18
44-504	1/2" x 1/4"	0.75	0.93	125/450	0.09	5.19
44-505	1/2" x 3/8"	0.75	0.92	125/450	0.08	5.19
44-506	3/4" x 1/8"	0.87	1.15	25/300	0.17	8.62
44-507	3/4" x 1/4"	0.85	1.14	25/300	0.15	8.62
44-508	3/4" x 3/8"	0.85	1.14	25/300	0.14	7.15
44-509	3/4" x 1/2"	0.85	1.15	25/300	0.14	7.15
44-510	1" x 1/4"	1.05	1.43	25/150	0.23	13.12
44-511	1" x 3/8"	1.05	1.50	25/150	0.22	13.12
44-512	1" x 1/2"	1.00	1.40	25/150	0.25	10.81
44-513	1" x 3/4"	1.00	1.43	25/150	0.21	10.81
44-514	1-1/4" x 1/4"	1.22	1.10	12/120	0.34	22.23
44-515	1-1/4" x 3/8"	1.19	1.84	12/120	0.35	23.83
44-516	1-1/4" x 1/2"	1.14	1.33	12/120	0.34	22.23
44-517	1-1/4" x 3/4"	1.08	1.75	12/120	0.40	18.41
44-518	1-1/4" x 1"	1.08	1.76	12/120	0.33	18.41
44-519	1-1/2" x 1/4"	1.09	2.12	12/120	0.47	28.77
44-520	1-1/2" x 3/8"	1.35	2.16	12/120	0.45	28.77
44-521	1-1/2" x 1/2"	1.20	2.10	12/120	0.44	28.77
44-522	1-1/2" x 3/4"	1.20	2.12	12/120	0.48	28.77
44-523	1-1/2" x 1"	1.14	2.08	25/100	0.53	23.52
44-524	1-1/2" x 1-1/4"	1.14	2.12	25/100	0.45	23.52
44-527	2" x 1/2"	1.27	1.32	9/90	0.67	42.00
44-528	2" x 3/4"	1.27	1.62	9/90	0.74	42.00
44-529	2" x 1"	1.29	1.95	9/90	0.76	42.00
44-530	2" x 1-1/4"	1.22	2.47	8/80	0.86	34.87
44-531	2" x 1-1/2"	1.22	2.50	8/80	0.83	34.87
44-532	2-1/2" x 1"	1.53	1.94	30/60	1.16	86.47
44-534	2-1/2" x 1-1/2"	1.50	2.38	30/60	1.36	69.71
44-535	2-1/2" x 2"	1.43	2.97	30/60	1.13	69.71
44-537	3" x 1-1/2"	1.61	2.68	15/30	1.82	137.04
44-538	3" x 2"	1.61	3.70	15/30	2.33	105.41
44-539	3" x 2-1/2"	1.53	3.70	12/24	2.19	105.41
44-543	4" x 3"	2.01	4.62	12/24	4.22	242.70



**MIDLAND METAL  
APP**

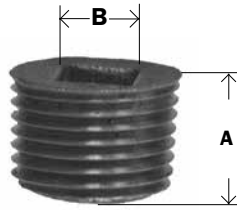
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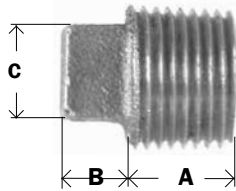


**BRONZE COUNTERSUNK PLUGS**



Part #	Size	A	Socket Size	Box/Case	Approx. Wt. Lbs.	List Price
44-633	1/2"	0.57	0.43	25/600	0.06	5.34
44-634	3/4"	0.58	0.47	25/300	0.11	6.36
44-635	1"	0.75	0.59	25/200	0.22	11.43
44-636	1-1/4"	0.74	0.72	10/180	0.33	19.03
44-637	1-1/2"	0.79	0.72	12/120	0.50	28.58
44-638	2"	0.80	0.85	10/50	0.88	46.52
44-639	2-1/2"					95.15
44-640	3"					155.34
44-641	4"					226.26

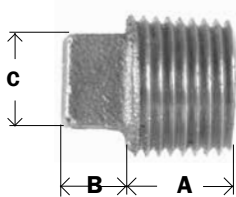
**CORED SQUARE HEAD PLUGS**



X117

Part #	Size	A	B	C	Box/Case	Approx. Wt. Lbs.	List Price
44-650	1/8"	0.27	0.24	0.28	350/1400	0.02	4.88
44-651	1/4"	0.41	0.28	0.37	350/1400	0.04	4.88
44-652	3/8"	0.41	0.31	0.43	350/1400	0.06	4.88
44-653	1/2"	0.54	0.38	0.56	25/600	0.10	6.82
44-654	3/4"	0.55	0.44	0.62	25/300	0.13	7.81
44-655	1"	0.69	0.50	0.81	25/200	0.25	10.30
44-656	1-1/4"	0.71	0.56	0.93	10/180	0.39	15.32
44-657	1-1/2"	0.73	0.62	1.12	10/120	0.57	19.54
44-658	2"	0.76	0.68	1.31	10/50	0.77	30.84
44-659	2-1/2"	1.07	0.74	1.50	20/40	1.25	52.78
44-660	3"	1.13	0.80	1.68	15/30	2.02	84.36
44-662	4"	1.22	0.92	2.25		3.20	164.80

**SOLID SQUARE HEAD PLUGS**



X117A

Part #	Size	A	B	C	Box/Case	Approx. Wt. Lbs.	List Price
44-670	1/8"	0.27	0.24	0.28	350/1400	0.02	5.19
44-671	1/4"	0.41	0.28	0.37	350/1400	0.04	5.19
44-672	3/8"	0.41	0.31	0.43	350/1400	0.06	4.33
44-673	1/2"	0.54	0.38	0.56	25/600	0.12	8.20
44-674	3/4"	0.55	0.44	0.62	25/300	0.18	10.69
44-675	1"	0.69	0.50	0.81	25/200	0.36	18.22
44-676	1-1/4"	0.71	0.56	0.93	10/180	0.63	32.82
44-677	1-1/2"	0.73	0.62	1.12	10/120	0.84	42.66
44-678	2"	0.76	0.68	1.31	10/50	1.27	67.64

**HEX LOCKNUTS**

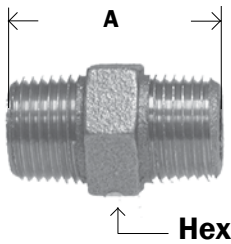


X119

• Straight Thread

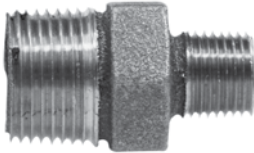
Part #	Size	A	Thickness	Box/Case	Approx. Wt. Lbs.	List Price
44-700	1/8"	0.50	0.19	350/1400	0.01	3.23
44-701	1/4"	0.66	0.25	350/1400	0.03	3.23
44-702	3/8"	0.77	0.28	350/1400	0.04	3.23
44-703	1/2"	0.97	0.31	100/400	0.09	5.19
44-704	3/4"	1.23	0.34	25/300	0.10	6.18
44-705	1"	1.50	0.38	25/200	0.17	9.22
44-706	1-1/4"	1.86	0.42	25/160	0.22	14.98
44-707	1-1/2"	2.12	0.47	25/100	0.29	19.43
44-708	2"	2.63	0.53	10/80	0.45	30.87

**HEX NIPPLES**



Part #	Size	A	Hex	Box/Case	Approx. Wt. Lbs.	List Price
44-720	1/8"	1.25	0.50	25/600	0.05	7.60
44-721	1/4"	1.25	0.61	25/600	0.06	12.60
44-723	1/2"	1.65	1.03	25/400	0.18	12.95
44-724	3/4"	1.77	1.21	25/400	0.24	13.60
44-725	1"	2.06	1.46	25/200	0.36	14.66
44-726	1-1/4"	2.12	1.81	25/200	0.47	30.45
44-727	1-1/2"	2.25	2.07	25/100	0.76	46.52
44-728	2"	2.50	2.41	1/50	1.50	56.29
44-729	2-1/2"	2.80	3.10	1/50	2.10	57.99

**REDUCING HEX NIPPLES**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
44-740	1/4" x 1/8"	25/400	0.06	12.16
44-742	1/2" x 3/8"	25/400	0.16	16.25
44-743	3/4" x 1/2"	25/400	0.21	21.31
44-744	1" x 1/2"	25/400	0.31	27.73
44-750	1-1/2" x 1"	25/100	0.64	53.24
44-753	1-1/2" x 1-1/4"	25/100	0.68	56.90

**FLOOR FLANGE**



Part #	Size	Box/Case	Approx. WT. Lbs.	List Price
44-780	1/2"	50 / 200	0.80	19.00
44-781	3/4"	30 / 120	1.04	26.54
44-782	1"	20 / 80	1.53	42.53
44-783	1-1/4"	15 / 60	2.00	47.78
44-784	1-1/2"	12 / 48	2.57	67.84
44-785	2"	8 / 32	3.91	90.39

**COMPANION FLANGE**



Part #	Size	Box/Case	Approx. WT. Lbs.	List Price
44-790	1/2"	10 / 50	0.80	51.91
44-791	3/4"	20 / 40	1.04	75.88
44-792	1"	10 / 30	1.53	89.72
44-793	1-1/4"	10 / 20	2.00	145.35
44-794	1-1/2"	5 / 15	2.57	150.48
44-795	2"	1 / 10	3.91	248.39
44-796	2-1/2"	1 / 5	5.92	384.03
44-797	3"	1 / 4	7.49	425.59
44-798	4"	1 / 2	11.33	624.43

**CHROME PLATED FITTINGS****CHROME PLATED BRONZE FITTINGS**

• See page 177 for Lead Free

**90° ELBOW**

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
45-101	1/4"	5/25	0.12	34.40
45-102	3/8"	5/25	0.17	34.40
45-103	1/2"	5/25	0.24	34.40
45-104	3/4"	5/25	0.34	45.98
45-105	1"	5/25	0.61	74.79

**REDUCING ELBOW**

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
45-124	1/2" X 3/8"	5/25	0.24	55.08
45-127	3/4" X 1/2"	5/25	0.44	65.59

**90° STREET ELL**

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
45-161	1/4"	5/25	0.11	47.90
45-162	3/8"	5/25	0.18	45.98
45-163	1/2"	5/25	0.24	45.98
45-164	3/4"	5/25	0.37	63.30
45-165	1"	5/25	0.67	97.83

**45° ELBOW**

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
45-181	1/4"	5/25	0.13	40.25
45-182	3/8"	5/25	0.17	41.09
45-183	1/2"	5/25	0.21	42.26
45-184	3/4"	5/25	0.32	60.01
45-185	1"	5/25	0.52	102.38

**REDUCING COUPLING**

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
45-434	3/8" x 1/4"	5/25	0.16	35.83
45-435	1/2" x 3/8"	5/25	0.18	39.48
45-438	3/4" x 1/2"	5/25	0.23	44.71
45-439	1" x 3/4"	5/25	0.44	77.91

**TEE**

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
45-251	1/4"	5/25	0.17	45.12
45-252	3/8"	5/25	0.25	41.65
45-253	1/2"	5/25	0.31	39.27
45-254	3/4"	5/25	0.50	55.80
45-255	1"	5/25	0.85	100.71

**CHROME PLATED BRONZE FITTINGS****CHROME PLATED FITTINGS****COUPLING**

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
45-411	1/4"	5/25	0.11	29.97
45-412	3/8"	5/25	0.15	29.90
45-413	1/2"	5/25	0.18	28.78
45-414	3/4"	5/25	0.28	39.27
45-415	1"	5/25	0.45	71.77

**CAP**

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
45-471	1/4"	5/25	0.06	25.31
45-472	3/8"	5/25	0.10	22.22
45-473	1/2"	5/25	0.13	22.85
45-474	3/4"	5/25	0.19	28.77
45-475	1"	5/25	0.30	54.37

**UNION**

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
45-602	1/4"	5/25	0.37	97.90
45-603	1/2"	5/25	0.52	115.59
45-604	3/4"	5/25	0.78	134.57
45-605	1"	5/25	1.18	194.03

**HEX BUSHING**

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
45-502	3/8" x 1/4"	5/25	0.04	25.35
45-505	1/2" x 3/8"	5/25	0.08	25.35
45-509	3/4" x 1/2"	5/25	0.14	31.92
45-510	1 x 3/4"	5/25	0.23	49.23

## 90° ELBOW EXTRA HEAVY SCHEDULE 80



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
43-101	1/4"	5/25	0.17	33.14
43-102	3/8"	5/25	0.24	39.05
43-103	1/2"	5/25	0.34	48.58
43-104	3/4"	5/25	0.47	103.61
43-105	1"	5/25	0.85	150.09
43-106	1-1/4"	5/25	1.32	174.78
43-107	1-1/2"	5/25	1.80	259.55
43-108	2"	1/1	2.87	520.60
43-110	2-1/2"	1/1	6.62	1113.55
43-109	3"	1/1	5.28	1016.61

## 90° STREET ELBOW EXTRA HEAVY SCHEDULE 80



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
43-165	1"	5/25	0.93	261.93
43-167	1-1/2"	5/25	1.90	444.34

## 45° ELBOW EXTRA HEAVY SCHEDULE 80



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
43-183	1/2"	5/25	0.29	48.73
43-184	3/4"	5/25	0.44	65.05
43-185	1"	5/25	0.72	128.23
43-186	1-1/4"	5/25	1.19	172.54
43-187	1-1/2"	5/25	1.53	260.18
43-188	2"	5/25	2.37	712.71
43-189	2-1/2"	1/1	4.51	518.62
43-190	3"	1/1	6.32	752.69

## TEE EXTRA HEAVY SCHEDULE 80



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
43-251	1/4"	5/25	0.23	51.92
43-252	3/8"	5/25	0.35	51.92
43-253	1/2"	5/25	0.43	58.55
43-254	3/4"	5/25	0.70	107.56
43-255	1"	5/25	1.19	205.45
43-256	1-1/4"	5/25	1.79	244.28
43-257	1-1/2"	5/25	2.34	345.89
43-258	2"	5/25	3.76	794.14
43-259	2-1/2"	1/1	7.15	734.85
43-262	4"	1/1	11.62	2724.85

## REDUCING TEE EXTRA HEAVY SCHEDULE 80



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
43-276	1/2" x 1/4"	5/25	0.34	69.14
43-298	1" x 3/4"	5/25	1.12	172.81
43-291	1" x 1/2"	5/25	0.84	165.41

**CROSS EXTRA HEAVY SCHEDULE 80**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
43-393	1/2"	5/25	0.63	99.96
43-394	3/4"	5/25	1.06	145.64
43-395	1"	5/25	1.45	242.02
43-396	1-1/4"	5/25	2.27	323.02
43-397	1-1/2"	5/25	2.92	499.07
43-398	2"	5/25	4.56	1360.44

**COUPLING EXTRA HEAVY SCHEDULE 80**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
43-411	1/4"	5/25	0.15	46.06
43-412	3/8"	5/25	0.21	40.80
43-413	1/2"	5/25	0.25	48.76
43-414	3/4"	5/25	0.39	72.10
43-415	1"	5/25	0.62	109.42
43-416	1-1/4"	5/25	0.87	158.48
43-417	1-1/2"	5/25	1.14	200.97
43-418	2"	5/25	1.91	319.88
43-419	2-1/2"	1/1	3.65	355.56

**REDUCING COUPLING EXTRA HEAVY SCHEDULE 80**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
43-438	3/4" x 1/2"	5/25	0.32	57.94
43-441	1" x 1/2"	5/25	0.46	109.87
43-442	1" x 3/4"	5/25	0.61	126.20
43-446	1-1/4" x 1"	5/25	0.75	207.85
43-449	1-1/2" x 1"	5/25	0.95	277.45
43-450	1-1/2" x 1-1/4"	5/25	1.37	261.99
43-454	2" x 1-1/2"	5/25	1.52	569.97

**UNION EXTRA HEAVY SCHEDULE 80**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
43-601	1/4"	5/25	0.34	65.13
43-602	3/8"	5/25	0.52	74.44
43-603	1/2"	5/25	0.72	360.3
43-604	3/4"	5/25	1.08	104.80
43-605	1"	5/25	1.64	187.85
43-606	1-1/4"	5/25	2.28	198.66
43-607	1-1/2"	5/25	2.90	228.20
43-608	2"	5/25	4.50	473.94
43-609	2-1/2"	1/1	7.38	609.91
43-610	3"	1/1	9.65	1223.46

**CAP EXTRA HEAVY SCHEDULE 80**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
43-473	1/2"	5/25	0.18	49.76
43-474	3/4"	5/25	0.27	62.78
43-475	1"	5/25	0.42	95.28
43-476	1-1/4"	5/25	0.71	136.79
43-477	1-1/2"	5/25	0.92	189.04
43-478	2"	5/25	1.39	338.75

Schedule 40 Welded - NPT threaded both ends

Stainless steel pipe nipples are manufactured from stainless steel pipe that conforms to specification ASTM A312/ SA312. All stainless steel nipples conform to specification ASTM A733. Threads conform to the requirements of ANSI B1.20.1.

Why Stainless Steel - Corrosion-resistant to hundreds of industrial and chemical solutions, high strength at high temperatures. Can be used with water, oil and gas. Is sanitary and does not contaminate product being transported, makes it an excellent choice for pharmaceutical, dairy, brewery, beverage and food industries.

- Max. Pressure: 150 PSI WOG @ 150°F
- Temp. Range: -60° to 450°F

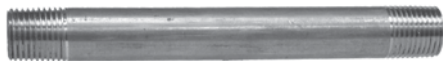
304 stainless steel offers great corrosion resistance at an economical price. Type 316 has a larger nickel content and offers even better corrosion resistance.

**1/8" DIAMETER**



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
48-001	2.19	X Close (3/4")	500/2500	0.01	49-001	2.73
48-002	2.88	x 1-1/2"	500/2500	0.03	49-002	3.82
48-003	3.43	x 2"	250/1000	0.04	49-003	4.65
48-004	3.97	x 2-1/2"	200/800	0.05	49-004	5.47
48-005	4.52	x 3"	200/800	0.06	49-005	6.31
48-006	5.07	x 3-1/2"	200/800	0.07	49-006	7.14
48-007	5.64	x 4"	200/800	0.07	49-007	7.98
48-008	6.18	x 4-1/2"	150/600	0.09	49-008	8.81
48-009	6.73	x 5"	150/600	0.10	49-009	9.66
48-010	7.30	x 5-1/2"	150/600	0.11	49-010	10.49
48-011	7.84	x 6"	100/400	0.12	49-011	11.33
48-015	11.04	x 10"	50/150	0.19		

**1/4" DIAMETER**



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
48-020	2.49	X Close (7/8")	200/800	0.02	49-020	3.07
48-021	3.08	x 1-1/2"	150/600	0.04	49-021	3.93
48-022	3.70	x 2"	150/600	0.06	49-022	4.78
48-023	4.38	x 2-1/2"	125/500	0.07	49-023	5.70
48-024	5.06	x 3"	50/250	0.09	49-024	6.72
48-025	5.74	x 3-1/2"	50/250	0.11	49-025	7.55
48-026	6.47	x 4"	50/250	0.13	49-026	8.55
48-027	7.16	x 4-1/2"	50/250	0.14	49-027	9.46
48-028	7.84	x 5"	50/250	0.16	49-028	10.40
48-029	8.53	x 5-1/2"	50/250	0.18	49-029	11.32
48-030	9.21	x 6"	50/250	0.19	49-030	12.24
48-032	12.11	x 8"	40/100	0.25		
48-034	14.83	x 10"	25/100	0.35		
48-036	17.56	x 12"	25/100	0.44		

# SCH 40 STAINLESS STEEL NIPPLES

# STAINLESS STEEL

## 3/8" DIAMETER



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
48-040	2.98	X Close (1")	50/750	0.03	49-040	3.78
48-041	3.61	x 1-1/2"	50/700	0.06	49-041	4.73
48-042	4.38	x 2"	50/250	0.07	49-042	5.80
48-043	5.21	x 2-1/2"	50/250	0.10	49-043	6.95
48-044	6.04	x 3"	50/250	0.12	49-044	8.12
48-045	6.89	x 3-1/2"	50/250	0.15	49-045	9.27
48-046	7.72	x 4"	50/200	0.17	49-046	10.43
48-047	8.55	x 4-1/2"	50/200	0.19	49-047	11.58
48-048	9.38	x 5"	50/200	0.22	49-048	12.75
48-049	10.21	x 5-1/2"	50/200	0.23	49-049	13.89
48-050	11.06	x 6"	50/200	0.26	49-050	15.06
48-052	14.65	x 8"	50/100	0.34		
48-054	17.99	x 10"				

## 1/2" DIAMETER



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
48-060	3.84	X Close 1-1/8"	50/250	0.05	49-060	5.04
48-061	4.63	x 1-1/2"	50/250	0.07	49-061	6.20
48-062	5.55	x 2"	50/250	0.10	49-062	7.58
48-063	6.66	x 2-1/2"	50/200	0.14	49-063	9.17
48-064	7.75	x 3"	50/200	0.18	49-064	10.75
48-065	8.86	x 3-1/2"	50/150	0.20	49-065	12.34
48-066	10.00	x 4"	50/150	0.25	49-066	13.10
48-067	11.09	x 4-1/2"	50/150	0.28	49-067	15.55
48-068	12.19	x 5"	50/100	0.31	49-068	16.96
48-069	13.28	x 5-1/2"	50/100	0.34	49-069	18.72
48-070	14.40	x 6"	50/100	0.39	49-070	20.31
48-071	16.78	x 7"	40/80	0.41		
48-072	18.98	x 8"	25/75	0.52		
48-073	21.18	x 9"	25/75	0.54		
48-074	23.39	10"	25/75	0.58		
48-075	25.59	x 11"	25/75	0.64		
48-076	27.78	x 12"	25/75	0.69		

\* Stainless Steel Nipples available in SCH80 seamless beginning on page 245





**3/4" DIAMETER**



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
48-080	5.19	X Close (1-3/8")	50/250	0.08	49-080	6.57
48-081	5.52	x 1-1/2"	50/250	0.13	49-081	7.01
48-082	6.62	x 2"	50/200	0.14	49-082	8.57
48-083	7.95	x 2-1/2"	50/150	0.17	49-083	10.36
48-084	9.27	x 3"	36/144	0.22	49-084	12.15
48-085	10.61	x 3-1/2"	36/144	0.27	49-085	13.95
48-086	11.93	x 4"	25/75	0.32	49-086	15.74
48-087	13.26	x 4-1/2"	25/75	0.38	49-087	17.55
48-088	14.60	x 5"	25/75	0.40	49-088	19.33
48-089	15.93	x 5-1/2"	25/75	0.42	49-089	21.14
48-090	17.25	x 6"	25/75	0.48	49-090	22.94
48-091	20.06	x 7"	25/75	0.45		
48-092	22.72	x 8"	25/50	0.67		
48-094	28.05	x 10"	25/50	0.94	49-094	37.44
48-096	33.37	x 12"	14/28	1.03		

**1" DIAMETER**



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
48-100	6.81	X Close (1-1/2")	50/150	0.13	49-100	9.11
48-101	8.54	x 2"	50/150	0.20	49-101	11.56
48-102	10.13	x 2-1/2"	30/90	0.25	49-102	13.87
48-103	11.85	x 3"	25/75	0.33	49-103	16.32
48-104	13.56	x 3-1/2"	30/60	0.40	49-104	18.75
48-105	15.27	x 4"	30/60	0.47	49-105	21.21
48-106	16.99	x 4-1/2"	30/60	0.53	49-106	23.65
48-107	18.70	x 5"	30/60	0.55	49-107	26.08
48-108	20.42	x 5-1/2"	15/45	0.60	49-108	28.53
48-109	22.13	x 6"	15/45	0.71	49-109	30.96
48-110	25.91	x 7"	20/40	0.57		
48-111	29.35	x 8"	5/35	1.02		
48-113	36.21	x 10"	5/30	1.16		
48-115	44.76	x 12"				

\* Stainless Steel Nipples available in SCH80 seamless beginning on page 245

**NIPPLES & FITTINGS**



# SCH 40 STAINLESS STEEL NIPPLES

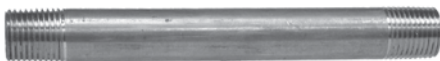
# STAINLESS STEEL

## 1-1/4" DIAMETER



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
48-120	9.16	X Close (1-5/8")	30/90	0.17	49-120	12.47
48-121	10.78	x 2"	30/90	0.23	49-121	14.85
48-122	12.78	x 2-1/2"	30/60	0.35	49-122	17.79
48-123	14.96	x 3"	30/60	0.46	49-123	20.94
48-124	17.13	x 3-1/2"	30/60	0.52	49-124	24.09
48-125	19.30	x 4"	15/30	0.65	49-125	27.24
48-126	21.47	x 4-1/2"	15/30	0.53	49-126	30.38
48-127	23.65	x 5"	15/30	0.60	49-127	33.53
48-128	25.82	x 5-1/2"	15/30	0.61	49-128	36.68
48-129	27.98	x 6"	15/30	0.71	49-129	39.83
48-131	36.80	x 8"	5/25	1.34		
48-135	54.17	x 12"	5/25	1.54		

## 1-1/2" DIAMETER



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
48-140	11.21	x 1-3/4"	25/75	0.25	49-140	15.40
48-141	12.29	x 2"	30/60	0.32	49-141	17.05
48-142	14.86	x 2-1/2"	15/45	0.41	49-142	20.77
48-143	17.42	x 3"	15/45	0.52	49-143	24.49
48-144	19.99	x 3-1/2"	9/36	0.62	49-144	28.20
48-145	22.55	x 4"	9/36	0.73	49-145	31.92
48-146	25.13	x 4-1/2"	9/36	0.86	49-146	35.65
48-147	27.69	x 5"	12/24	0.95	49-147	39.35
48-148	30.25	x 5-1/2"	12/24	1.01	49-148	43.07
48-149	32.81	x 6"	12/24	1.19	49-149	46.79
48-151	43.35	x 8"	10/20	1.63		
48-152	48.49	x 9"	10/20	1.88		
48-153	43.76	x 10"				

NIPPLES & FITTINGS



**2" DIAMETER**



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
48-160	17.41	X Close (2")	9/36	0.37	49-160	23.93
48-161	19.39	x 2-1/2"	9/36	0.54	49-161	27.37
48-162	22.44	x 3"	9/36	0.65	49-162	31.97
48-163	25.79	x 3-1/2"	10/30	0.88	49-163	36.87
48-164	29.13	x 4"	9/18	1.02	49-164	41.78
48-165	32.47	x 4-1/2"	5/15	1.16	49-165	46.67
48-166	35.82	x 5"	6/12	1.29	49-166	51.59
48-167	39.15	x 5-1/2"	5/25	1.46	49-167	56.48
48-168	42.50	x 6"	10/20	1.57	49-168	61.37
48-169	49.82	x 7"	10/20	1.92	49-169	71.87
48-170	56.51	x 8"	9/14	2.01		
48-171	63.20	x 9"	9/14	2.55		
48-172	69.88	x 10"	9/14	2.69		
48-174	80.28	x 12"	9/14	2.89		

**2-1/2" DIAMETER**



Part # 304 S.S.	Length	Box/Case	Approx. Wt. Lbs.	List Price
48-180	X Close (2-1/2")	9/36	0.64	35.30

**3" DIAMETER**



Part # 304 S.S.	Length	Box/Case	Approx. Wt. Lbs.	List Price
48-200	X Close (2-5/8")	9/18	0.95	49.67
48-201	x 3"	7/14	1.32	54.84
48-203	x 4"	7/14	1.66	68.65
48-205	x 5"	7/14	1.72	78.63
48-207	x 6"	4/8	1.88	92.44
48-209	x 8"	1/4	1.91	124.47
48-213	x 12"	1/4	2.12	179.71

**4" DIAMETER**



Part # 304 S.S.	Length	Box/Case	Approx. Wt. Lbs.	List Price
48-220	X Close (2-7/8")	1/4	1.15	63.47
48-227	x 6"	1/4	2.31	118.65

\* Stainless Steel Nipples available in SCH80 seamless beginning on page 245

**NIPPLES & FITTINGS**



**304 STAINLESS STEEL TOE NIPPLES/ WELDING NIPPLES**

Toe nipples are only threaded on one end to allow for easy connections, unthreaded end allows for welding a permanent leak-resistenteant bond. • Roller cut • Flare on outside edge, burring on inside.



**NIPPLES & FITTINGS**

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
48-021T	1/4" x 1-1/2"	5/25	0.04	8.26
48-022T	1/4" x 2"	5/25	0.06	8.73
48-041T	3/8" x 1-1/2"	5/25	0.06	9.41
48-042T	3/8" x 2"	5/25	0.07	10.80
48-061T	1/2" x 1-1/2"	5/25	0.07	10.82
48-062T	1/2" x 2"	5/25	0.10	12.33
48-081T	3/4" x 1-1/2"	5/25	0.13	13.92
48-082T	3/4" x 2"	5/25	0.14	14.89
48-101T	1" x 2"	5/25	0.20	18.66
48-102T	1" x 2-1/2"	5/25	0.25	21.15
48-121T	1-1/4" x 2"	5/25	0.23	22.01
48-122T	1-1/4" x 2-1/2"	5/25	0.35	23.51
48-141T	1-1/2" x 2"	5/25	0.32	24.91
48-142T	1-1/2" x 2-1/2"	5/25	0.41	25.82
48-160T	2" x 2"	5/25	0.37	33.45
48-161T	2" x 2-1/2"	5/25	0.54	96.42

Reamed & Chamfer or Saw Cut available upon request. Bevel on outside, clean inside.



**SCHEDULE 80 SEAMLESS STAINLESS STEEL NIPPLES**

- SEAMLESS FOR UNRESTRICTED FLOW
- USE WITH AIR, WATER, OIL, NATURAL GAS, STEAM
- FITTINGS: USE THREADED CLASS 3000 HIGH-PRESSURE STAINLESS STEEL.
- ASTM A733
- ASTM A312
- ANSI/ ASME B1.20.1
- PSI 3000

**1/8" DIAMETER**



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
51-001	6.73	X Close (3/4")	5/25	0.01	52-001	8.34
51-002	9.45	X 1-1/2"	5/25	0.03	52-002	11.70
51-003	10.35	X 2"	5/25	0.04	52-003	14.27
51-004	12.17	X 2-1/2"	5/25	0.05	52-004	17.92
51-005	13.85	X 3"	5/25	0.07	52-005	20.74
51-006	15.56	X 3-1/2"	5/25	0.09	52-006	25.23
51-007	17.25	X 4"	5/25	0.15	52-007	28.21
51-008	18.94	X 4-1/2"	5/25	0.19	52-008	27.02
51-009	20.65	X 5"	5/25	0.22	52-009	29.58
51-010	22.37	X 5-1/2"	5/25	0.26	52-010	37.07
51-011	24.05	X 6"	5/25	0.30	52-011	34.72

**1/4" DIAMETER**

Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
51-020	7.30	X Close (7/8")	5/25	0.03	52-020	9.37
51-021	9.05	X 1-1/2"	5/25	0.06	52-021	12.86
51-022	10.88	X 2"	5/25	0.07	52-022	15.75
51-023	12.89	X 2-1/2"	5/25	0.10	52-023	18.75
51-024	14.90	X 3"	5/25	0.12	52-024	21.79
51-025	19.51	X 3-1/2"	5/25	0.15	52-025	26.67
51-026	19.08	X 4"	5/25	0.17	52-026	30.21
51-027	21.09	X 4-1/2"	5/25	0.20	52-027	33.48
51-028	23.10	X 5"	5/25	0.22	52-028	31.86
51-029	25.11	X 5-1/2"	5/25	0.24	52-029	39.99
51-030	31.32	X 6"	5/25	0.25	52-030	37.51

**3/8" DIAMETER**

Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
51-040	9.14	X CLOSE (1")	5/25	0.04	52-040	12.43
51-041	11.93	X 1-1/2"	5/25	0.50	52-041	14.47
51-042	13.41	X 2"	5/25	0.06	52-042	19.07
51-043	15.97	X 2-1/2"	5/25	0.08	52-043	24.61
51-044	18.51	X 3"	5/25	0.11	52-044	24.86
51-045	21.09	X 3-1/2"	5/25	0.13	52-045	32.91
51-046	27.24	X 4"	5/25	0.15	52-046	36.87
51-047	26.20	X 4-1/2"	5/25	0.18	52-047	40.95
51-048	28.73	X 5"	5/25	0.21	52-048	39.06
51-049	36.11	X 5-1/2"	5/25	0.23	52-049	49.13
51-050	33.85	X 6"	5/25	0.25	52-050	46.15

# SCH 80 SEAMLESS SS NIPPLES

# STAINLESS STEEL

## 1/2" DIAMETER



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
51-060	11.33	X Close (1-1/8)	5/25	0.10	52-060	15.42
51-061	13.66	X 1-1/2"	5/25	0.14	52-061	18.96
51-062	16.37	X 2"	5/25	0.14	52-062	24.90
51-063	19.61	X 2-1/2"	5/25	0.19	52-063	32.44
51-064	22.85	X 3"	5/25	0.24	52-064	32.94
51-065	26.09	X 3-1/2"	5/25	0.28	52-065	43.65
51-066	29.43	X 4"	5/25	0.32	52-066	42.81
51-067	32.69	X 4-1/2"	5/25	0.34	52-067	54.96
51-068	35.92	X 5"	5/25	0.37	52-068	59.94
51-069	45.19	X 5-1/2"	5/25	0.42	52-069	66.18
51-070	42.40	X 6"	5/25	0.48	52-070	71.79

## 3/4" DIAMETER



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
51-080	18.31	X Close (1-3/8")	5/25	0.12	52-080	21.54
51-081	16.91	X 1-1/2"	5/25	0.16	52-081	21.50
51-082	20.28	X 2"	5/25	0.22	52-082	28.12
51-083	24.34	X 2-1/2"	5/25	0.32	52-083	36.66
51-084	28.41	X 3"	5/25	0.33	52-084	39.96
51-085	32.50	X 3-1/2"	5/25	0.38	52-085	49.34
51-086	42.21	X 4"	5/25	0.43	52-086	55.66
51-087	46.92	X 4-1/2"	5/25	0.47	52-087	53.77
51-088	44.72	X 5"	5/25	0.49	52-088	59.26
51-089	56.34	X 5-1/2"	5/25	0.57	52-089	64.77
51-090	60.99	X 6"	75/25	0.57	52-090	75.31

## 1" DIAMETER



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
51-100	20.09	X Close (1-1/2")	5/25	0.20	52-100	27.94
51-101	25.16	X 2"	5/25	0.32	52-101	35.43
51-102	29.86	X 2-1/2"	5/25	0.44	52-102	49.07
51-103	34.91	X 3"	5/25	0.47	52-103	53.54
51-104	39.96	X 3-1/2"	5/25	0.52	52-104	66.32
51-105	45.01	X 4"	5/25	0.56	52-105	74.98
51-106	50.05	X 4-1/2"	5/25	0.60	52-106	72.43
51-107	63.57	X 5"	5/25	0.63	52-107	92.25
51-108	60.19	X 5-1/2"	5/25	0.68	52-108	87.41
51-109	65.23	X 6"	5/25	0.82	52-109	109.50

**1-1/4" DIAMETER**



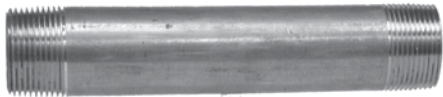
Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
51-120	30.07	X Close (1-5/8")	5/25	0.26	52-120	38.23
51-121	33.05	X 2"	5/25	1.03	52-121	45.47
51-122	39.15	X 2-1/2"	5/25	0.44	52-122	54.51
51-123	45.82	X 3"	5/25	0.48	52-123	64.18
51-124	52.48	X 3-1/2"	5/25	0.52	52-124	73.80
51-125	59.14	X 4"	5/25	0.65	52-125	96.47
51-126	65.79	X 4-1/2"	5/25	0.72	52-126	93.10
51-127	72.44	X 5"	5/25	0.78	52-127	102.75
51-128	79.10	X 5-1/2"	5/25	0.88	52-128	129.66
51-129	85.76	X 6"	5/25	1.10	52-129	122.03

**1-1/2" DIAMETER**



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
51-140	35.39	X Close (1-3/4")	5/25	0.45	52-140	47.21
51-141	36.23	X 2"	5/25	0.50	52-141	52.24
51-142	43.77	X 2-1/2"	5/25	0.64	52-142	73.46
51-143	51.32	X 3"	5/25	0.77	52-143	75.03
51-144	58.92	X 3-1/2"	5/25	0.82	52-144	99.72
51-145	66.45	X 4"	5/25	0.87	52-145	97.82
51-146	74.03	X 4-1/2"	5/25	1.03	52-146	125.99
51-147	81.57	X 5"	5/25	1.40	52-147	120.60
51-148	89.13	X 5-1/2"	5/25	1.55	52-148	138.47
51-149	96.69	X 6"	5/25	1.64	52-150	119.49

**2" DIAMETER**



Part # 304 S.S.	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
51-160	61.55	X Close (2")	5/25	0.60	52-160	73.33
51-161	68.54	X 2-1/2"	5/25	0.82	52-161	96.82
51-162	73.72	X 3"	5/25	1.08	52-162	97.98
51-163	79.02	X 3-1/2"	5/25	1.26	52-163	130.35
51-164	102.99	X 4"	5/25	1.45	52-164	128.01
51-165	99.49	X 4-1/2"	5/25	1.68	52-165	165.01
51-166	109.74	X 5"	5/25	1.82	52-166	182.40
51-167	119.98	X 5-1/2"	5/25	1.97	52-167	199.71
51-168	130.24	X 6"	5/25	2.29	52-168	217.05

**150# 304 & 316 Schedule 40 Stainless Steel Fittings**

Midland Metal offers high quality, reliable stainless steel fittings at very competitive prices. Our high quality standard pattern 150lb rated stainless steel threaded fittings are manufactured to the highest standards. All stainless steel fittings are monitored by our quality control personnel for strict compliance with applicable standards and specifications. Stainless steel fittings are investment castings and the full size range is available in stock in both grades of stainless steel – 304 and 316. Fittings are threaded NPT in compliance to ASME B1.20.1 and castings to ASTM A-351.

These stainless steel pipe fittings are excellent for uses that involve chemicals or liquids that may be corrosive. Along with fighting corrosion, a stainless steel pipe fitting will prevent contamination making it useful to many professionals. Browse our large selection of stainless steel fittings to locate the fitting you need. All of our products are located on our very user friendly website [www.midlandmetal.com](http://www.midlandmetal.com).

- Use with air, water, oil, natural gas, steam
- NPT and FNPT threads conform to ASME B1.20.1
- Maximum Pressure: 150 psi @ 72 F; 150 psi @ 366 F for steam
- Maximum Steam Pressure: 150 psi
- NPT and FNPT threads conform to ASME B1.20.1
- Material Conforms to ASTM A-351, Threads Conform To ANSME B1.20.1, Meets MSS-SP-114 for heat treating, material thickness, and marking. Class 150 Pressure Ratings
- Manufacturing facility is ISO 9001:2008
- 304 Stainless Steel is economically priced, chromium-nickel material that offers very good corrosion resistance. 316 Stainless Steel has higher nickel content and contains molybdenum for even better corrosion resistance.

**90° ELBOW**



Part # 304 S.S.	List Price	Size	Box/ Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-100	5.88	1/8"	50/600	0.06	63-100	7.54
62-101	5.88	1/4"	35/420	0.06	63-101	7.54
62-102	7.30	3/8"	45/540	0.11	63-102	9.15
62-103	7.77	1/2"	50/400	0.13	63-103	10.11
62-104	11.16	3/4"	35/210	0.20	63-104	14.66
62-105	15.81	1"	20/120	0.33	63-105	18.40
62-106	27.74	1-1/4"	20/80	0.55	63-106	31.54
62-107	36.93	1-1/2"	10/60	0.77	63-107	42.07
62-108	46.82	2"	8/32	1.10	63-108	53.19
62-109	106.67	2-1/2"	6/18	2.09	63-109	86.81
62-110	135.91	3"	7/14	2.84	63-110	97.15
62-112	265.23	4"	2/6	5.00	63-112	295.40

**90° STREET ELLS**



Part # 304 S.S.	List Price	Size	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-160	8.40	1/8"	60/720	0.04	63-160	10.09
62-161	8.40	1/4"	35/420	0.07	63-161	10.29
62-162	10.11	3/8"	35/210	0.09	63-162	12.65
62-163	11.90	1/2"	60/360	0.15	63-163	14.88
62-164	16.51	3/4"	35/210	0.24	63-164	19.61
62-165	28.56	1"	30/120	0.31	63-165	31.31
62-166	41.48	1-1/4"	25/75	0.51	63-166	46.79
62-167	49.07	1-1/2"	9/54	0.84	63-167	52.12
62-168	66.45	2"	10/30	1.26	63-168	74.45



**STAINLESS STEEL**

**304 & 316 150# SS FITTINGS**

**45° ELBOW**



Part # 304 S.S	List Price	Size	Box/ Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-180	7.43	1/8"	50/600	0.04	63-180	8.98
62-181	7.43	1/4"	30/360	0.07	63-181	8.98
62-182	8.74	3/8"	50/600	0.09	63-182	10.96
62-183	9.60	1/2"	50/400	0.13	63-183	12.03
62-184	14.01	3/4"	40/240	0.20	63-184	15.80
62-185	17.10	1"	20/120	0.33	63-185	19.79
62-186	27.39	1-1/4"	20/80	0.49	63-186	31.14
62-187	32.59	1-1/2"	10/60	0.66	63-187	37.03
62-188	45.85	2"	12/36	0.93	63-188	51.78

**TEES**



Part # 304 S.S	List Price	Size	Box/ Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-250	7.89	1/8"	80/960	0.07	63-250	9.37
62-251	7.89	1/4"	50/600	0.07	63-251	9.37
62-252	10.05	3/8"	30/360	0.11	63-252	12.42
62-253	10.54	1/2"	40/240	0.20	63-253	13.09
62-254	16.78	3/4"	35/140	0.29	63-254	19.31
62-255	21.37	1"	20/80	0.42	63-255	24.26
62-256	42.50	1-1/4"	14/56	0.66	63-256	48.27
62-257	52.83	1-1/2"	15/45	0.99	63-257	58.56
62-258	67.86	2"	10/30	1.43	63-258	75.44
62-259	132.31	2-1/2"	8/16	1.43		
62-260	209.76	3"	6/12	3.66		

**CROSSES**



Part # 304 S.S	List Price	Size	Box/ Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
		1/8"	40/480	0.06	63-390	16.95
62-391	13.72	1/4"	40/480	0.09	63-391	16.95
62-392	16.36	3/8"	25/300	0.13	63-392	19.94
62-393	20.14	1/2"	30/180	0.29	63-393	24.74
62-394	34.46	3/4"	20/120	0.37	63-394	43.23
62-395	51.01	1"	15/60	0.64	63-395	52.19
62-396	60.56	1-1/4"	20/40	0.97	63-396	75.44
62-397	75.04	1-1/2"	18/36	1.26	63-397	94.15
62-398	107.42	2"	10/20	1.54	63-398	129.70

**HEX NIPPLES**



Part # 304 S.S	List Price	Size	Box/ Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-720	5.73	1/8"	300/3600	0.02	63-720	6.43
62-721	5.39	1/4"	150/1800	0.04	63-721	6.43
62-722	6.36	3/8"	100/1200	0.07	63-722	7.13
62-723	7.55	1/2"	50/600	0.11	63-723	8.44
62-724	9.28	3/4"	30/360	0.18	63-724	11.04
62-725	13.59	1"	20/240	0.22	63-725	15.19
62-726	20.81	1-1/4"	40/240	0.37	63-726	24.81
62-727	26.30	1-1/2"	30/180	0.46	63-727	29.44
62-728	42.24	2"	20/120	0.61	63-728	60.02

**NIPPLES & FITTINGS**

# 304 & 316 150# SS FITTINGS

# STAINLESS STEEL

## COUPLINGS



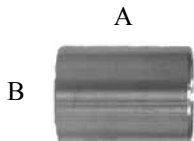
Part # 304 S.S.	List Price	Size	Box/ Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-413	6.28	1/2"	40/480	0.13	63-413	7.27
62-414	9.07	3/4"	50/300	0.18	63-414	10.50
62-415	13.78	1"	25/150	0.24	63-415	15.66
62-416	44.19	1-1/4"	16/128	0.44	63-416	24.87
62-417	26.00	1-1/2"	18/72	0.51	63-417	29.57
62-418	36.65	2"	12/48	0.79	63-418	41.62
62-419	80.43	2-1/2"	8/32	1.28	63-419	97.79
62-420	103.98	3"	12/24	1.87	63-420	126.32
62-421	161.65	4"	6/12	2.80	63-421	195.10

## REDUCING COUPLINGS



Part # 304 S.S.	List Price	Size	Box/ Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-430	6.14	1/4" x 1/8"	50/600	0.04	63-430	7.00
62-431	7.77	3/8" x 1/8"	35/420	0.04	63-431	7.77
62-432	6.83	3/8" x 1/4"	30/360	0.04	63-432	7.77
62-433	9.32	1/2" x 1/8"	50/600	0.09	63-433	9.32
62-434	6.51	1/2" x 1/4"	50/600	0.09	63-434	9.32
62-435	6.51	1/2" x 3/8"	40/480	0.09	63-435	9.32
62-455	11.56	3/4" x 1/8"	30/360	0.13	63-455	11.56
62-436	9.81	3/4" x 1/4"	30/360	0.11	63-436	11.96
62-437	9.81	3/4" x 3/8"	30/360	0.13	63-437	11.96
62-438	9.81	3/4" x 1/2"	60/360	0.15	63-438	11.96
62-440	19.73	1" x 3/8"	30/240	0.22	63-440	19.73
62-441	13.41	1" x 1/2"	30/240	0.24	63-441	19.73
62-442	13.41	1" x 3/4"	25/200	0.24	63-442	19.73
62-445	19.55	1-1/4" x 3/4"	25/150	0.33	63-445	25.76
62-446	19.55	1-1/4" x 1"	15/120	0.35	63-446	25.76
62-447	28.19	1-1/2" x 1/2"	20/120	0.40	63-447	34.40
62-448	28.19	1-1/2" x 3/4"	15/120	0.42	63-448	34.40
62-449	28.19	1-1/2" x 1"	25/100	0.44	63-449	34.40
62-450	28.19	1-1/2" x 1-1/4"	12/96	0.46	63-450	34.40
62-452	47.09	2" x 1"	14/84	0.57	63-452	58.01
62-453	47.09	2" x 1-1/4"	12/72	0.62	63-453	58.01
62-454	47.09	2" x 1-1/2"	12/72	0.62	63-454	58.01

## OD MACHINED COUPLINGS

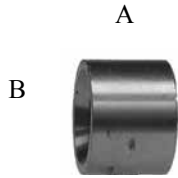


Part # 304 S.S.	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-410B	4.92	1/8"	0.83	0.57	70/840	0.04	63-410B	5.72
62-411B	4.78	1/4"	0.97	0.69	40/480	0.04	63-411B	5.72
62-412B	6.13	3/8"	1.11	0.83	50/600	0.07	63-412B	6.24
62-413B	6.60	1/2"	1.35	1.02	40/480	0.09	63-413B	8.75
62-414B	9.14	3/4"	1.48	1.2	50/300	0.16	63-414B	12.29
62-415B	17.97	1"	1.67	1.5	25/150	0.21	63-415B	19.96
62-416B	23.47	1-1/4"	1.9	1.06	16/128	0.31	63-416B	27.99
62-417B	31.30	1-1/2"	2.03	2.08	18/72	0.41	63-417B	35.00
62-418B	45.40	2"	2.2	2.67	12/48	0.68	63-418B	52.47

**STAINLESS STEEL**

**304 & 316 150# SS FITTINGS**

**HALF COUPLINGS**



Part # 304 S.S.	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-771	2.55	1/4"	0.97	0.69	80/960	0.02	63-771	2.69
62-772	2.76	3/8"	1.11	0.83	100/1200	0.02	63-772	3.14
62-773	3.83	1/2"	1.35	1.02	80/960	0.09	63-773	4.58
62-774	5.12	3/4"	1.48	1.2	100/600	0.11	63-774	5.82
62-775	6.57	1"	1.67	1.5	50/300	0.13	63-775	8.85
62-776	10.73	1-1/4"	1.9	1.06	32/256	0.24	63-776	13.42
62-777	13.76	1-1/2"	2.03	2.08	36/144	0.26	63-777	17.86
62-778	18.86	2"	2.2	2.67	24/96	0.44	63-778	23.36

**UNIONS**

• Stainless Steel Seat



Part # 304 S.S.	List Price	Size	Box/ Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-600	19.86	1/8"	30/360	0.09	63-600	22.52
62-601	19.86	1/4"	20/240	0.13	63-601	22.52
62-602	20.23	3/8"	20/240	0.22	63-602	22.91
62-603	21.90	1/2"	50/200	0.26	63-603	24.87
62-604	27.74	3/4"	35/140	0.46	63-604	31.55
62-605	41.85	1"	20/80	0.60	63-605	47.63
62-606	72.60	1-1/4"	15/60	0.90	63-606	82.35
62-607	82.11	1-1/2"	10/40	1.10	63-607	93.47
62-608	98.30	2"	6/24	1.81	63-608	111.47
62-610	335.29	3"	7/14	3.40	3.40	398.32

**HEX BUSHINGS**



Part # 304 S.S.	List Price	Size M x F	Box/ Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-500	3.83	1/4" x 1/8"	120/1440	0.04	63-500	4.32
62-501	3.83	3/8" x 1/8"	75/900	0.04	63-501	4.94
62-502	4.19	3/8" x 1/4"	75/900	0.04	63-502	4.94
62-503	5.30	1/2" x 1/8"	100/1200	0.09		
62-504	5.30	1/2" x 1/4"	100/1200	0.09	63-504	5.80
62-505	5.30	1/2" x 3/8"	100/1200	0.11	63-505	5.80
62-506	7.75	3/4" x 1/8"	50/600	0.13	63-506	8.62
62-507	4.36	3/4" x 1/4"	50/600	0.15	63-507	8.62
62-508	7.75	3/4" x 3/8"	50/600	0.15	63-508	9.74
62-509	7.75	3/4" x 1/2"	50/600	0.15	63-509	8.62
62-510	10.77	1" x 1/4"	50/400	0.22	63-510	12.31
62-511	10.77	1" x 3/8"	50/400	0.24	63-511	12.31
62-512	10.77	1" x 1/2"	50/400	0.24	63-512	12.31
62-513	10.77	1" x 3/4"	50/400	0.24	63-513	12.31
62-516	12.16	1-1/4" x 1/2"	30/240	0.37	63-516	24.05
62-517	19.28	1-1/4" x 3/4"	30/240	0.37	63-517	24.05
62-518	19.28	1-1/4" x 1"	30/240	0.37	63-518	24.05
62-521	23.07	1-1/2" x 1/2"	25/150	0.44	63-521	28.43
62-522	23.07	1-1/2" x 3/4"	25/150	0.46	63-522	28.43
62-532	28.20	1-1/2" x 1"	15/60	0.49	63-523	28.43
62-524	23.07	1-1/2" x 1-1/4"	25/150	0.46	63-524	28.43
62-527	35.19	2" x 1/2"	20/120	0.66		
62-528	35.19	2" x 3/4"	20/120	0.66	63-528	40.38
62-529	35.19	2" x 1"	20/120	0.66	63-529	40.38
62-530	35.19	2" x 1-1/4"	20/120	0.68	63-530	40.38
62-531	35.19	2" x 1-1/2"	20/120	0.68	63-531	40.38
62-534	60.30	2-1/2" x 1-1/2"	15/60	1.23	63-534	68.61
62-535	60.30	2-1/2" x 2"	15/60	1.21	63-535	68.61
62-538	92.40	3" x 2"	12/48	1.72	63-538	105.50
62-539	92.40	3" x 2-1/2"	12/48	1.81		
62-543		4" x 3"	5/20	2.43		

**NIPLLES & FITTINGS**

**HEX LOCKNUTS**

- Straight Thread
- Minimum Qty may apply



Part # 304 S.S	List Price	Size	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-700		1/8"				
62-701	12.09	1/4"	100/1000	0.05	63-701	13.18
62-702	12.09	3/8"	100/1000	0.06	63-702	13.18
62-703	12.09	1/2"	100/1000	0.07	63-703	13.18
62-704	14.74	3/4"	40/480	0.11	63-704	16.54
62-705	16.72	1"	40/480	0.15	63-705	18.59
62-706	34.58	1-1/4"	40/240	0.22	63-706	37.64
62-707	34.62	1-1/2"	40/240	0.29	63-707	37.64
62-708	38.07	2"	40/240	0.35	63-708	41.31

**CAPS**

- Cast



Part # 304 S.S	List Price	Size	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-470	2.96	1/8"	120/1440	0.02	63-470	3.59
62-471	4.24	1/4"	80/960	0.02	63-471	4.83
62-472	4.99	3/8"	60/720	0.04	63-472	5.69
62-473	5.18	1/2"	50/600	0.07	63-473	6.59
62-474	6.48	3/4"	40/320	0.11	63-474	7.57
62-475	9.73	1"	25/200	0.18	63-475	11.59
62-476	17.63	1-1/4"	20/160	0.29	63-476	22.77
62-477	23.12	1-1/2"	18/108	0.40	63-477	29.21
62-478	29.48	2"	12/72	0.60	63-478	37.39
62-480	73.52	3"	18/36	1.28	63-480	77.06
62-481	122.28	4"	7/21	1.54		

**HEX CAPS**

- Barstock



Part # 304 S.S	List Price	Size	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-075	1.80	1/8"	600/1200	0.04	63-075	3.21
62-076	2.43	1/4"	400/800	0.09	63-076	3.21
62-077	3.00	3/8"	200/600	0.11	63-077	3.21
62-078	2.42	1/2"	50/600	0.13	63-078	3.84
62-079	3.56	3/4"	40/320	0.22	63-079	4.98
62-080	7.32	1"	25/200	0.22	63-080	6.79
62-081	11.67	1-1/4"	20/160	0.29	63-081	15.45
62-082	14.40	1-1/2"	18/108	0.40	63-082	46.91
62-083	14.23	2"	12/72	0.49	63-083	28.49

**HEX SOCKET PLUGS**

- With Taper Thread



Part # 316 S.S	Size	Box/Case	Approx. Wt. Lbs.	List Price
63-759	1/16"	5/25	0.03	3.53
63-760	1/8 "	5/25	0.05	3.16
63-761	1/4 "	5/25	0.07	4.50
63-762	3/8 "	5/25	0.10	6.34
63-763	1/2 "	5/25	0.14	10.57
63-764	3/4 "	5/25	0.21	25.33

- more sizes available

**STAINLESS STEEL**

**304 & 316 150# SS FITTINGS**

**SQUARE HEAD PLUGS**



Part # 304 S.S.	List Price	Size	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-670	2.54	1/8"	300/3600	0.02	63-670	2.74
62-671	3.00	1/4"	150/1800	0.03	63-671	3.48
62-672	4.02	3/8"	100/1200	0.04	63-672	4.59
62-653	5.74	1/2"	50/600	0.06	63-653	6.48
62-654	7.00	3/4"	30/360	0.09	63-654	7.93
62-655	8.85	1"	20/240	0.13	63-655	9.90
62-656	17.63	1-1/4"	40/240	0.22	63-656	23.42
62-657	21.01	1-1/2"	30/180	0.29	63-657	25.87
62-658	24.86	2"	20/120	0.46	63-658	35.70
62-660	59.56	3"	16/48	0.88		

**SOLID SQUARE HEAD PLUGS**



Part # 316 S.S.	Size	Box/Case	Approx. Wt. Lbs.	List Price
63-680	1/8"	300/3600	0.04	5.92
63-681	1/4"	150/1800	0.04	7.96
63-682	3/8"	100/1200	0.05	9.33
63-683	1/2"	50/600	0.06	14.00
63-684	3/4"	30/360	0.12	26.65

**SOLID HEX HEAD PLUGS**



Part # 316 S.S.	Size	Box/Case	Approx. Wt. Lbs.	List Price
63-660	1/8"	300/3600	0.04	6.51
63-661	1/4"	150/1800	0.06	8.20
63-662	3/8"	100/1200	0.08	12.00
63-663	1/2"	50/600	0.12	21.33
63-664	3/4"	30/360	0.15	28.70
63-665	1"	40/240	0.24	41.65

**HEX HEAD PLUGS**

- Cored
- Solid Hex Head



Part # 304 S.S.	List Price	Size	Box/Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
62-630	2.81	1/8"	300/3600	0.02	63-630	3.49
62-631	2.81	1/4"	150/1800	0.02	63-631	3.49
62-632	3.48	3/8"	100/1200	0.04	63-632	3.94
62-633	5.49	1/2"	50/600	0.07	63-633	6.59
62-634	6.90	3/4"	30/360	0.11	63-634	8.32
62-635	11.90	1"	40/240	0.18	63-635	13.25
62-636	19.09	1-1/4"	40/240	0.26	63-636	22.88
62-637	20.90	1-1/2"	30/180	0.33	63-637	27.09
62-638	28.84	2"	20/120	0.55	63-638	39.08

**NIPLLES & FITTINGS**

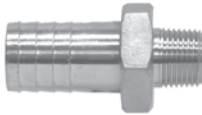


**HOSE NIPPLES**



Part # 304 S.S	List Price	Hose I.D. x Male Pipe	Box/ Case	Approx. Wt. Lbs.	Part # 316 S.S.	List Price
73-951	6.38	1/4"	40/480	0.04	973-951	7.14
73-952	10.88	3/8"	50/600	0.07	973-952	10.16
73-953	11.92	1/2"	40/480	0.13	973-953	16.35
73-954	14.33	3/4"	50/300	0.20	973-954	18.89
73-955	17.01	1"	25/150	0.33	973-955	20.58
73-956	27.73	1-1/4"	16/128	0.47	973-956	27.96
73-957	31.31	1-1/2"	18/72	0.67	973-957	48.61
73-958	44.31	2"	12/48	0.88	973-958	51.79
73-959	104.00	2-1/2"	8/32	1.45	973-959	133.67
73-960	119.24	3"	12/24	1.94	973-990	164.70
73-961	377.81	4"	6/12	3.57	973-991	204.55

**REDUCING HOSE NIPPLES - 304 S.S.**



Part # 304 S.S	Hose I.D. x Male Pipe	Box/Case	Approx. Wt. Lbs.	List Price
73-970	1/4" x 1/8"	40/480	0.04	6.50
73-971	3/8" x 1/4"	50/600	0.07	7.51
73-972	1/2" x 3/8"	40/480	0.13	11.22
73-973	1/2" x 1/4"	40/480	0.13	11.59
73-974	3/4" x 1/2"	50/300	0.20	14.81
73-975	1" x 3/4"	25/150	0.33	16.72
73-976	1" x 1/2"	25/150	0.33	27.23
73-977	1-1/4" x 1"	16/128	0.46	26.93
73-979	1-1/2" x 1-1/4"	18/72	0.66	42.33
73-980	1-1/2" x 1"	18/72	0.66	32.47
73-981	2" x 1-1/2"	12/48	0.88	56.00
73-982	2" x 1-1/4"	12/48	0.88	44.78

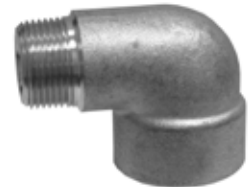
**NIPPLES & FITTINGS**



**HIGH PRESSURE 3000# FORGED STAINLESS STEEL FITTINGS**

At Midland Metal we believe in quality first. Our products are manufactured with a quality management system that has been certified with ISO 9001:2008. Midland Metal will continue to do our best to exceed our customers expectations by providing top quality products. These heavy duty fittings are classified 3000# because they have extra-strong forged construction that stands up to high-pressure applications, meets A182 and ANSI/ASME B16.11. Type 304 Stainless Steel offers very good corrosion resistance for an economical alternative to type 316. Type 316 stainless steel contains more nickel and has molybdenum for better resistance to corrosion than type 304.

- Use with air, water, oil, natural gas, steam
- Maximum Pressure:  
Type 304 SS: 2,570 psi @ 72°F;  
1,965 psi @ 350°F for steam  
Type 316 SS: 3,000 psi @ 72°F  
2810 psi @ 350°F for steam
- Pipe Nipples and Pipe: Use threaded Schedule 80 thickwall stainless steel

**90° ELBOWS****45° ELBOWS****STREET ELBOWS****COUPLINGS****TEES****UNIONS****SEE OUR WEBSITE FOR****FULL SPECIFICATION INFORMATION**

- FOR 3000# 316 STAINLESS STEEL SOCKET WELD FITTINGS, REPLACE THE 105 PREFIX WITH 106
- FOR 3000# 304 STAINLESS STEEL SOCKET WELD FITTINGS REPLACE THE 103 PREFIX WITH 104

# 304 & 316 3000# THREADED FITTINGS

# STAINLESS STEEL

## 90° ELBOWS



Part # 304	List Price	Size	Case	Approx. Wt. Lbs.	Part # 316	List Price
103-100	17.35	1/8"	150	0.12	105-100	24.47
103-101	21.86	1/4"	150	0.18	105-101	24.47
103-102	25.27	3/8"	100	0.29	105-102	32.74
103-103	26.13	1/2"	80	0.55	105-103	41.69
103-104	37.76	3/4"	50	0.77	105-104	65.81
103-105	57.80	1"	30	1.17	105-105	103.82
103-106	85.36	1-1/4"	20	1.81	105-106	133.90
103-107	136.29	1-1/2"	15	2.27	105-107	228.13
103-108	172.87	2"	8	3.75	105-108	336.34
		2-1/2"	4	7.89	105-109	1285.20
		3"	2	10.60	105-110	1408.96

## 45° ELBOWS



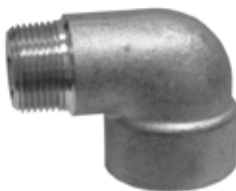
Part # 304	List Price	Size	Case	Approx. Wt. Lbs.	Part # 316	List Price
103-180	38.24	1/8"	150	0.11	105-180	63.13
103-181	38.24	1/4"	150	0.18	105-181	63.13
103-182	38.24	3/8"	100	0.22	105-182	63.13
103-183	38.24	1/2"	80	0.44	105-183	63.13
103-184	52.09	3/4"	50	0.60	105-184	81.45
103-185	71.83	1"	30	0.90	105-185	108.52
103-186	105.78	1-1/4"	20	1.50	105-186	140.53
103-187	127.18	1-1/2"	15	1.81	105-187	189.18
103-188	152.86	2"	10	3.11	105-188	230.08
103-189	662.59	2-1/2"	5	5.73	105-189	1073.86
103-190	1096.70	3"	2	9.33	105-190	1831.65

## TEES



Part # 304	List Price	Size	Case	Approx. Wt. Lbs.	Part # 316	List Price
103-250	22.30	1/8"	100	0.18	105-250	32.75
103-251	22.90	1/4"	100	0.26	105-251	32.75
103-252	31.24	3/8"	80	0.37	105-252	44.68
103-253	35.40	1/2"	50	0.68	105-253	53.51
103-254	46.76	3/4"	35	0.95	105-254	82.47
103-255	81.00	1"	20	1.52	105-255	139.75
103-256	123.40	1-1/4"	15	2.36	105-256	186.50
103-257	187.17	1-1/2"	10	3.06	105-257	297.90
103-258	217.57	2"	6	4.76	105-258	398.53
		2-1/2"	3	9.06	105-259	1389.92
		3"	2	13.49	105-260	1569.85

## STREET ELBOWS



Part # 304	Size	Case	Approx. Wt. Lbs.	List Price
103-160	1/8"	150	0.18	30.65
103-161	1/4"	150	0.24	27.73
103-162	3/8"	80	0.49	39.77
103-163	1/2"	50	0.68	49.63
103-164	3/4"	30	1.17	71.85
103-165	1"	20	2.25	111.06
103-166	1-1/4"	15	2.49	278.67
103-167	1-1/2"	8	4.43	381.66

See our website for #304 and #316 Stainless Steel 3000# Socket Weld Fittings.

- for Socket Weld 304 fittings replace the 103 prefix with 104 prefix.
- for Socket Weld 316 fittings replace the 105 prefix with 106 prefix.



**STAINLESS STEEL**

**304 & 316 3000# THREADED FITTINGS**

**COUPLINGS**



Part # 304	List Price	Size	Case	Approx. Wt. Lbs.	Part # 316	List Price
103-410	6.17	1/8"	200	0.11	105-410	20.06
103-411	6.72	1/4"	250	0.09	105-411	8.94
103-412	7.83	3/8"	200	0.13	105-412	15.77
103-413	9.43	1/2"	100	0.29	105-413	14.41
103-414	12.57	3/4"	70	0.42	105-414	19.95
103-415	21.31	1"	35	0.99	105-415	33.77
103-416	47.92	1-1/4"	20	1.79	105-416	69.61
103-417	55.69	1-1/2"	15	2.38	105-417	83.32
103-418	79.58	2"	10	3.09	105-418	122.03
103-419	211.34	2-1/2"	5	5.05	105-419	346.53
103-420	300.83	3"	3	7.45	105-420	500.75
103-421	300.83	4"	2	13.85		

**REDUCING COUPLINGS**



Part # 304	List Price	Size	Case	Approx. Wt. Lbs.	Part # 316	List Price
103-434	19.47	1/2" x 1/4"	100	0.29	105-434	23.53
103-435	19.68	1/2" x 3/8"	100	0.29	105-435	23.53
103-437	28.19	3/4" x 3/8"	70	0.42	105-437	34.46
103-438	35.55	3/4" x 1/2"	70	0.42	105-438	34.46
103-440	38.70	1" x 3/8"	35	0.99	105-440	59.64
103-441	38.70	1" x 1/2"	35	0.99	105-441	59.64
103-442	41.62	1" x 3/4"	35	0.99	105-442	59.64
103-443	66.11	1-1/4" x 3/8"	20	1.79	105-443	89.47
103-444	66.11	1-1/4" x 1/2"	20	1.79	105-444	89.47
103-445	66.11	1-1/4" x 3/4"	20	1.79	105-445	89.47
103-446	66.11	1-1/4" x 1"	20	1.79	105-446	89.47
103-447	71.43	1-1/2" x 1/2"	15	2.36	105-447	113.90
103-448	71.43	1-1/2" x 3/4"	15	2.36	105-448	113.90
103-449	71.43	1-1/2" x 1"	15	2.36	105-449	113.90
103-450	71.43	1-1/2" x 1-1/4"	10	3.09	105-450	113.90
103-458	102.12	2" x 1/2"	10	3.09	105-458	162.93
103-451	102.12	2" x 3/4"	10	3.09	105-451	162.93
103-452	102.12	2" x 1"	10	3.09	105-452	162.93
103-453	102.12	2" x 1-1/4"	10	3.09	105-453	162.93
103-454	102.12	2" x 1-1/2"			105-454	162.93

**HALF COUPLINGS**



Part # 304	List Price	Size	Case	Approx. Wt. Lbs.	Part # 316	List Price
103-770	6.34	1/8"	1200	0.04	105-770	5.52
103-771	10.73	1/4"	800	0.05	105-771	5.82
103-772	7.86	3/8"	500	0.07	105-772	8.11
103-773	9.21	1/2"	250	0.13	105-773	9.83
103-774	12.57	3/4"	150	0.22	105-774	13.90
103-775	20.75	1"	80	0.51	105-775	23.04
103-776	33.30	1-1/4"	35	0.75	105-776	43.76
103-777	43.79	1-1/2"	30	1.19	105-777	58.32
103-778	61.92	2"	20	1.54	105-778	83.31
103-779	178.98	2-1/2"	12	2.49	105-779	222.77
103-780	224.67	3"	6	3.70	105-780	323.68
103-781	497.44	4"	4	6.86		

**NIPLLES & FITTINGS**

# 304 & 316 3000# THREADED FITTINGS

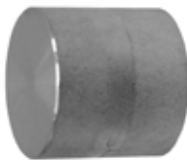
# STAINLESS STEEL

## UNIONS



Part # 304	List Price	Size	Case	Approx. Wt. Lbs.	Part # 316	List Price
103-600	46.42	1/8"	150	0.62	105-600	59.14
103-601	47.22	1/4"	70	0.62	105-601	59.14
103-602	49.62	3/8"	70	0.53	105-602	68.49
103-603	50.61	1/2"	50	0.75	105-603	68.58
103-604	60.82	3/4"	30	1.06	105-604	89.42
103-605	98.13	1"	20	1.70	105-605	174.76
103-606	155.79	1-1/4"	14	2.27	105-606	213.15
103-607	166.02	1-1/2"	10	3.59	105-607	268.43
103-608	221.97	2"	6	5.36	105-608	341.30
103-609	428.40	2-1/2"	2	8.00	105-609	677.82
103-610	706.38	3"	2	11.62	105-610	1041.49

## CAPS



Part # 304	List Price	Size	Case	Approx. Wt. Lbs.	Part # 316	List Price
103-470	6.94	1/8"	600	0.04	105-470	21.46
103-471	7.20	1/4"	300	0.09	105-471	10.77
103-472	7.37	3/8"	250	0.11	105-472	12.09
103-473	9.58	1/2"	130	0.24	105-473	16.47
103-474	12.62	3/4"	80	0.40	105-474	20.22
103-475	22.46	1"	50	0.82	105-475	31.05
		1-1/4"	30	1.37	105-476	46.42
103-477	40.86	1-1/2"	25	1.59	105-477	63.79
103-478	49.49	2"	15	2.40	105-478	105.26
		2-1/2"	10	4.89	105-479	272.27
		3"	4	7.72	105-480	348.43

## HEX BUSHING



Part # 304	List Price	Size M x F	Case	Approx. Wt. Lbs.	Part # 316	List Price
		1/4" x 1/8"	600	0.02	105-500	11.79
		3/8" x 1/4"	500	0.02	105-502	20.31
103-504	12.68	1/2" x 1/4"	400	0.07	105-504	18.85
103-505	12.02	1/2" x 3/8"	400	0.07	105-505	19.50
103-508	15.19	3/4" x 3/8"	200	0.11	105-508	23.97
103-509	15.19	3/4" x 1/2"	200	0.11	105-509	22.61
103-511	24.64	1" x 3/8"	100	0.20	105-511	35.30
103-512	24.64	1" x 1/2"	100	0.20	105-512	35.30
103-513	24.64	1" x 3/4"	100	0.20	105-513	35.30
103-515	46.76	1-1/4" x 3/8"	60	0.55	105-515	55.56
103-516	46.76	1-1/4" x 1/2"	60	0.55	105-516	55.56
103-517	46.76	1-1/4" x 3/4"	60	0.55	105-517	58.80
103-518	46.76	1-1/4" x 1"	60	0.55	105-518	55.56
103-521	52.67	1-1/2" x 1/2"	50	0.75	105-521	55.51
103-522	75.09	1-1/2" x 3/4"	50	0.75	105-522	51.48
103-523	52.67	1-1/2" x 1"	50	0.75	105-523	52.42
103-524	52.67	1-1/2" x 1-1/4"	50	0.75	105-524	52.42
103-527	75.38	2" x 1/2"	25	0.99	105-527	92.71
103-528	75.38	2" x 3/4"	25	0.99	105-528	92.71
103-529	75.38	2" x 1"	25	0.99	105-529	92.71
103-530	74.03	2" x 1-1/4"	25	0.99	105-530	92.71
103-531	75.38	2" x 1-1/2"	25	0.99	105-531	95.38

NIPPLES & FITTINGS



**HIGH PRESSURE HEX NIPPLES**



Part # 316	Size	Case	Approx. Wt. Lbs.	PSI	List Price
SS54044	1/4 x 1-1/2	10	0.61	5000	7.94
SS540442.0	1/4 x 2	10	0.66	5000	9.40
SS540443.0	1/4 x 3	10	0.72	5000	13.09
SS54046	3/8 x 1-1/2	10	1.35	4000	11.66
SS54048	1/2 x 1-7/8	10	1.52	3000	16.72
SS540482.0	1/2 x 2	10	1.57	3000	19.97
SS540483.0	1/2 x 3	10	1.64	3000	24.19

**SQUARE PLUG**



Part # 316	Size	Case	Approx. Wt. Lbs.	List Price
105-650	1/8"	800	0.04	9.61
105-651	1/4"	800	0.11	6.13
105-652	3/8"	500	0.15	8.58
105-653	1/2"	300	0.26	13.57
105-654	3/4"	200	0.44	17.31
105-655	1"	150	0.75	24.93
105-656	1-1/4"	80	1.21	48.40
105-657	1-1/2"	50	1.74	53.39
105-658	2"	30	3.24	84.91

**NIPPLES & FITTINGS**

SEE PAGE 265-266 FOR STAINLESS STEEL FLANGES



# 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". -200°-150° Temp Rating.

## 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 for both Welded & Seamless Meets ANSI B36.1. All pipe is hydrostatic tested. For pressure ratings, see the knowledge bank on our website.

**Galvanized:** Zinc coating applied by hot dipped. Galvanized complying with ASTM A-123, NSF approved, RoHS compliant.

**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, 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.

## Chemical Composition

	Maximum%
C	0.25
Mn	0.95

## Tensile Requirements

	Kg/ Mm2	PSI	MPA
Tensile Strength Min.	33.7	48000	331
Tensile Strength Min.	20.0	28500	196

## Steel and Wrought Iron Welded

Nominal 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"	6.625	.280	6.065	18.97	.432	5.761	28.57



**1/8" DIAMETER**



Part # Galv	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # Black	List Price
56-001	1.89	X Close (3/4")	5/600	0.02	57-001	1.34
56-002	1.95	x 1-1/2"	5/600	0.03	57-002	1.51
56-003	2.19	x 2"	5/600	0.04	57-003	1.63
56-004	2.38	x 2-1/2"	5/600	0.06	57-004	1.81
56-005	2.70	x 3"	5/600	0.07	57-005	2.01
56-006	2.89	x 3-1/2"	5/600	0.08	57-006	2.19
56-007	3.19	x 4"	5/600	0.09	57-007	2.54
56-008	4.10	x 4-1/2"	5/400	0.10	57-008	3.30
56-009	5.38	x 5"	5/400	0.11	57-009	3.80
56-010	5.80	x 5-1/2"	5/400	0.12	57-010	4.17
56-011	6.05	x 6"	5/400	0.13	57-011	4.62
56-012	7.55	x 7"	5/400	0.15	57-012	5.49
56-013	7.96	x 8"	5/400	0.18	57-013	5.80
56-014	8.37	x 9"	5/400	0.21	57-014	6.03
56-015	9.07	x 10"	5/200	0.25		
56-017	10.16	x 12"	5/200	0.29		

**1/4" DIAMETER**



Part # Galv	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # Black	List Price
56-020	1.97	X Close (7/8")	5/600	0.04	57-020	1.62
56-021	2.12	x 1-1/2"	5/600	0.06	57-021	1.72
56-022	2.46	x 2"	5/600	0.06	57-022	1.91
56-023	2.84	x 2-1/2"	5/600	0.08	57-023	2.16
56-024	3.21	x 3"	5/600	0.10	57-024	2.38
56-025	3.45	x 3-1/2"	5/400	0.12	57-025	2.64
56-026	3.60	x 4"	5/400	0.14	57-026	2.91
56-027	4.33	x 4-1/2"	5/400	0.17	57-027	3.53
56-028	5.10	x 5"	5/300	0.19	57-028	4.17
56-029	5.92	x 5-1/2"	5/300	0.21	57-029	4.60
56-030	6.18	x 6"	5/300	0.23	57-030	5.12
56-031	7.44	x 7"	5/200	0.27	57-031	6.01
56-032	7.58	x 8"	5/200	0.31	57-032	6.12
56-033	7.96	x 9"	5/200	0.35	57-033	6.66
56-034	8.99	x 10"	5/150	0.40	57-034	7.22
56-035	11.45	x 11"	5/150	0.44	57-035	7.55
56-036	11.66	x 12"	5/150	0.48	57-036	8.00
56-038	30.19	x 18"	5/150	0.54		
56-037	13.65	x 24"	5/10	0.96		

**NIPPLES & FITTINGS**



**3/8" DIAMETER**



Part # Galv	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # Black	List Price
56-040	2.31	X Close (1")	5/600	0.05	57-040	1.77
56-041	2.67	x 1-1/2"	5/600	0.07	57-041	1.89
56-042	2.76	x 2"	5/600	0.08	57-042	2.34
56-043	3.09	x 2-1/2"	5/400	0.11	57-043	2.31
56-044	3.47	x 3"	5/400	0.13	57-044	2.75
56-045	4.47	x 3-1/2"	5/400	0.16	57-045	2.91
56-046	4.47	x 4"	5/300	0.19	57-046	3.22
56-047	4.71	x 4-1/2"	5/300	0.21	57-047	3.53
56-048	6.11	x 5"	5/300	0.24	57-048	4.71
56-049	6.60	x 5-1/2"	5/200	0.27	57-049	4.99
56-050	6.94	x 6"	5/200	0.29	57-050	5.29
56-051	7.36	x 7"	5/200	0.35	57-051	6.34
56-052	7.68	x 8"	5/150	0.40	57-052	6.94
56-053	9.28	x 9"	5/150	0.45	57-053	7.39
56-054	9.56	x 10"	5/100	0.51	57-054	7.85
56-055	9.74	x 11"	5/100	0.56	57-055	8.30
56-056	10.20	x 12"	5/100	0.62	57-056	8.53
56-430	24.89	x 18"	5/100	0.71	57-430	31.64
		x 24"			57-431	23.24
		x 36"			57-433	30.03

**1/2" DIAMETER**



Part # Galv	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # Black	List Price
56-060	1.40	X Close (1-1/8")	5/600	0.08	57-060	1.25
56-061	1.58	x 1-1/2"	5/600	0.08	57-061	1.34
56-062	1.74	x 2"	5/600	0.12	57-062	1.43
56-063	1.83	x 2-1/2"	5/400	0.15	57-063	1.51
56-064	1.97	x 3"	5/400	0.19	57-064	1.70
56-065	2.19	x 3-1/2"	5/300	0.23	57-065	1.87
56-066	2.42	x 4"	5/300	0.27	57-066	2.12
56-067	2.70	x 4-1/2"	5/200	0.30	57-067	2.28
56-068	2.92	x 5"	5/200	0.34	57-068	2.51
56-069	3.10	x 5-1/2"	5/200	0.38	57-069	2.81
56-070	3.30	x 6"	5/200	0.42	57-070	3.00
56-071	5.29	x 7"	5/100	0.49	57-071	4.55
56-072	5.78	x 8"	5/100	0.57	57-072	4.90
56-073	6.73	x 9"	5/100	0.65	57-073	5.52
56-074	6.88	x 10"	5/75	0.72	57-074	5.87
56-075	7.42	x 11"	5/75	0.80	57-075	6.56
56-076	7.83	x 12"	5/75	0.87	57-076	9.57
56-240	13.44	x 18"	1/3	1.29	57-240	15.65
56-241	21.08	x 24"	1/3	1.74	57-241	19.15
56-242	22.72	x 30"	1/3	2.16	57-242	23.56
56-243	29.48	x 36"	1/3	2.61	57-243	25.45
56-244	64.96	x 42"	1/3	3.03	57-244	54.10
56-245	33.92	x 48"	1/3	3.48	57-245	30.68
56-246	43.21	x 60"	1/3	4.35	57-246	35.64
56-247	65.65	x 72"	1/3	5.22	57-247	45.40

**3/4" DIAMETER**



Part # Galv	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # Black	List Price
56-080	1.87	X Close (1-3/8")	5/400	0.13	57-080	1.70
56-081	1.97	x 1-1/2"	5/400	0.10	57-081	1.79
56-082	2.12	x 2"	5/300	0.15	57-082	1.88
56-083	2.29	x 2-1/2"	5/300	0.20	57-083	2.08
56-084	2.52	x 3"	5/200	0.24	57-084	2.28
56-085	2.78	x 3-1/2"	5/200	0.29	57-085	2.53
56-086	3.05	x 4"	5/150	0.34	57-086	2.77
56-087	3.33	x 4-1/2"	5/150	0.39	57-087	3.03
56-088	3.85	x 5"	5/100	0.43	57-088	3.35
56-089	4.40	x 5-1/2"	5/100	0.48	57-089	3.61
56-090	4.28	x 6"	5/100	0.53	57-090	3.90
56-091	7.25	x 7"	5/75	0.63	57-091	5.55
56-092	7.51	x 8"	5/75	0.72	57-092	6.17
56-093	8.19	x 9"	5/75	0.82	57-093	7.41
56-094	8.23	x 10"	5/50	0.91	57-094	7.76
56-095	9.57	x 11"	5/50	1.01	57-095	7.94
56-096	9.21	x 12"	5/50	1.10	57-096	8.23
56-250	15.02	x 18"	1/3	1.63	57-250	13.29
56-251	19.30	x 24"	1/3	2.20	57-251	15.74
56-252	23.04	x 30"	1/3	2.73	57-252	20.60
56-253	27.11	x 36"	1/3	3.30	57-253	23.82
56-254	69.72	x 42"	1/3	3.83	57-254	60.28
56-255	40.68	x 48"	1/3	4.40	57-255	30.28
56-256	46.04	x 60"	1/3	5.50	57-256	38.92
56-257	54.75	x 72"	1/3	6.60	57-257	44.63

**NIPPLES & FITTINGS**



**1" DIAMETER**



**NIPPLES & FITTINGS**

Part # Galv	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # Black	List Price
56-100	2.75	X Close (1-1/2")	5/300	0.16	57-100	2.50
56-101	2.89	x 2"	5/200	0.23	57-101	2.77
56-102	3.15	x 2-1/2"	5/200	0.29	57-102	2.77
56-103	3.47	x 3"	5/150	0.36	57-103	3.09
56-104	4.17	x 3-1/2"	5/150	0.43	57-104	3.41
56-105	4.75	x 4"	5/100	0.50	57-105	3.78
56-106	4.74	x 4-1/2"	5/100	0.56	57-106	4.05
56-107	4.97	x 5"	5/100	0.63	57-107	4.37
56-108	5.54	x 5-1/2"	5/75	0.70	57-108	4.71
56-109	5.69	x 6"	5/75	0.77	57-109	5.12
56-110	8.53	x 7"	5/50	0.90	57-110	6.97
56-111	9.31	x 8"	5/50	1.03	57-111	7.63
56-112	17.43	x 9"	5/50	1.17	57-112	8.44
56-113	17.97	x 10"	5/50	1.30	57-113	9.06
56-114	21.97	x 11"	5/50	1.44	57-114	12.31
56-115	21.97	x 12"	5/50	1.57	57-115	10.57
56-260	27.33	x 18"	1/3	2.34	57-260	23.25
56-261	33.06	x 24"	1/3	3.14	57-261	26.90
56-262	55.31	x 30"	1/3	3.91	57-262	40.80
56-263	48.28	x 36"	1/3	4.71	57-263	38.24
56-264	88.87	x 42"	1/3	5.48	57-264	79.96
56-265	70.27	x 48"	1/3	6.28	57-265	49.80
56-266	84.30	x 60"	1/3	7.85	57-266	74.64
56-267	93.67	x 72"	1/3	9.42	57-267	104.90





**1-1/4" DIAMETER**



Part # Galv	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # Black	List Price
56-120	3.70	X Close (1-5/8")	5/150	0.25	57-120	3.29
56-121	3.84	x 2"	5/150	0.32	57-121	3.53
56-122	4.18	x 2-1/2"	5/150	0.41	57-122	3.79
56-123	4.58	x 3"	5/100	0.50	57-123	4.16
56-124	5.25	x 3-1/2"	5/100	0.60	57-124	4.55
56-125	6.05	x 4"	5/100	0.69	57-125	5.04
56-126	6.72	x 4-1/2"	5/75	0.78	57-126	5.43
56-127	6.47	x 5"	5/75	0.87	57-127	5.97
56-128	7.13	x 5-1/2"	5/75	0.96	57-128	6.17
56-129	7.32	x 6"	5/50	1.06	57-129	6.60
56-130	14.19	x 7"	5/50	1.24	57-130	9.16
56-131	12.30	x 8"	5/50	1.42	57-131	10.15
56-132	19.17	x 9"	5/50	1.61	57-132	10.94
56-133	19.76	x 10"	5/40	1.79	57-133	11.71
56-134	19.98	x 11"	5/40	1.97	57-134	13.97
56-135	24.89	x 12"	5/30	2.16	57-135	21.32
56-270	32.78	x 18"	1/3	3.22	57-270	25.27
56-271	42.67	x 24"	1/3	4.32	57-271	32.78
56-272	49.77	x 30"	1/3	3.22	57-272	50.97
56-273	64.13	x 36"	1/3	6.48	57-273	64.11
		x 42"	1/3	7.54	57-274	75.89
		x 48"	1/3	8.64	57-275	81.60
		x 60"	1/3	10.80	57-276	81.96
		x 72"	1/3	12.96	57-277	116.56

**NIPPLES & FITTINGS**

I AM ALWAYS DOING THAT WHICH I CANNOT DO, IN ORDER THAT I MAY LEARN HOW TO DO IT.

- PABLO PICASSO



**1-1/2" DIAMETER**



Part # Galv	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # Black	List Price
56-140	4.62	X Close (1-3/4")	5/100	0.31	57-140	3.96
56-141	4.86	x 2"	5/75	0.37	57-141	4.08
56-142	5.10	x 2-1/2"	5/75	0.47	57-142	4.53
56-143	5.59	x 3"	5/50	0.58	57-143	5.10
56-144	6.10	x 3-1/2"	5/50	0.68	57-144	5.78
56-145	6.66	x 4"	5/50	0.78	57-145	6.13
56-146	7.49	x 4-1/2"	5/50	0.89	57-146	6.76
56-147	7.73	x 5"	5/50	1.10	57-147	6.88
56-148	8.63	x 5-1/2"	5/50	1.10	57-148	7.29
56-149	8.77	x 6"	5/50	1.20	57-149	7.63
56-150	13.19	x 7"	5/40	1.41	57-150	10.61
56-151	14.45	x 8"	5/40	1.62	57-151	11.61
56-152	18.90	x 9"	5/30	1.83	57-152	12.99
56-153	18.02	x 10"	5/30	2.04	57-153	13.73
56-154	23.43	x 11"	5/20	2.25	57-154	22.85
56-155	23.25	x 12"	5/20	2.46	57-155	16.02
56-280	35.13	x 18"	1/3	3.66	57-280	33.21
56-281	50.72	x 24"	1/3	4.92	57-281	46.44
		x 30"	1/3	6.12	57-282	59.60
		x 36"	1/3	7.38	57-283	72.27
		x 42"	1/3	8.58	57-284	96.35
		x 48"	1/3	9.84	57-285	111.46
		x 60"	1/3	12.30	57-286	124.51
		x 72"	1/3	14.76	57-287	156.56

**NIPPLES & FITTINGS**



# STEEL NIPPLES

# BLACK & GALVANIZED SCH 40

## 2" DIAMETER



Part # Galv	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # Black	List Price
56-160	6.30	X Close (2")	5/75	0.55	57-160	5.24
56-161	7.27	x 2-1/2"	5/50	0.70	57-161	6.30
56-162	7.54	x 3"	5/50	0.86	57-162	6.60
56-163	8.51	x 3-1/2"	5/50	1.01	57-163	7.76
56-164	9.84	x 4"	5/25	1.16	57-164	7.68
56-165	10.20	x 4-1/2"	5/25	1.31	57-165	8.65
56-166	11.71	x 5"	5/25	1.47	57-166	9.18
56-167	11.21	x 5-1/2"	5/25	1.62	57-167	9.96
56-168	12.34	x 6"	5/25	1.77	57-168	10.34
56-169	18.72	x 7"	5/20	2.08	57-169	14.20
56-170	19.20	x 8"	5/20	2.39	57-170	16.42
56-171	33.01	x 9"	5/20	2.70	57-171	18.14
56-172	22.50	x 10"	5/15	3.00	57-172	20.42
56-173	25.76	x 11"	5/15	3.31	57-173	22.45
56-174	28.83	x 12"	5/15	3.62	57-174	26.83
56-290	41.66	x 18"	1/3	5.39	57-290	44.14
56-291	54.25	x 24"	1/3	5.26	57-291	61.43
56-292	83.84	x 30"	1/3	7.03	57-292	68.79
56-293	88.20	x 36"	1/3	10.86	57-293	78.45
56-294	153.23	x 42"	1/3	12.63	57-294	127.83
56-295	116.59	x 48"	1/3	14.48	57-295	133.04
56-296	149.37	x 60"	1/3	18.10	57-296	154.43
56-297	192.10	x 72"	1/3	18.10	57-297	189.43

## 2-1/2" DIAMETER



Part # Galv	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # Black	List Price
56-180	18.42	X Close (2-1/2")	5/40	1.09	57-180	13.50
56-181	18.96	x 3"	5/40	1.33	57-181	13.85
56-182	23.93	x 3-1/2"	5/30	1.57	57-182	16.30
56-183	20.87	x 4"	5/30	1.82	57-183	16.30
56-184	23.54	x 4-1/2"	5/30	2.06	57-184	20.53
56-185	23.25	x 5"	5/20	2.30	57-185	21.61
56-186	26.00	x 5-1/2"	5/20	2.54	57-186	23.52
56-187	25.54	x 6"	5/20	2.78	57-187	23.67
56-188	32.40	x 7"	5/20	3.27	57-188	39.01
56-189	40.77	x 8"	5/10	3.75	57-189	32.68
56-190	38.93	x 9"	5/10	4.24	57-190	42.21
56-191	40.06	x 10"	5/10	4.72	57-191	32.72
56-192	42.29	x 11"	5/10	5.21	57-192	41.70
56-193	42.45	x 12"	5/10	5.69	57-193	39.55

NIPPLES & FITTINGS



**3" DIAMETER**



Part # Galv	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # Black	List Price
56-200	22.49	X Close (2-5/8")	5/30	1.52	57-200	15.85
56-201	23.70	x 3"	5/15	1.76	57-201	16.05
56-202	26.09	x 3-1/2"	5/15	2.08	57-202	18.00
56-203	26.66	x 4"	5/15	2.39	57-203	18.00
56-204	32.13	x 4-1/2"	5/15	2.71	57-204	35.18
56-205	32.95	x 5"	5/15	3.03	57-205	22.31
56-206	35.85	x 5-1/2"	5/15	3.35	57-206	25.05
56-207	34.70	x 6"	5/10	3.66	57-207	25.05
56-208	42.60	x 7"	5/7	4.30	57-208	39.55
56-209	43.03	x 8"	5/7	4.93	57-209	33.35
56-210	48.33	x 9"	5/7	5.57	57-210	46.62
56-211	51.79	x 10"	5/5	6.20	57-211	37.45
56-212	52.53	x 11"	1/3	7.20	57-212	57.16
56-213	68.90	x 12"	1/3	7.47	57-213	41.60
		x 24"	1/3	14.94	57-311	172.06

**4" DIAMETER**



Part # Galv	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part # Black	List Price
56-220	32.15	X Close (2-7/8")	5/20	2.40	57-220	20.85
56-221	33.00	3-1/2"	5/20			
56-223	35.36	x 4"	5/10	3.41	57-223	24.10
56-224	44.82	x 4-1/2"	5/10	3.86	57-224	27.55
56-225	44.48	x 5"	5/10	4.31	57-225	28.55
56-226	59.27	x 5-1/2"	5/10	4.76	57-226	29.45
56-227	47.96	x 6"	5/10	5.21	57-227	29.45
56-330	81.96	x 7"	5/10	6.48	57-330	34.00
56-229	79.58	x 8"	5/10	7.01	57-229	34.00
56-331	82.34	x 9"	5/10	7.54	57-331	38.70
56-332	96.59	x 10"	5/10	8.14	57-332	38.70
56-228	96.06	x 12"	5/10	8.54	57-228	115.46

**6" DIAMETER**



Part # Galv	List Price	6" Dia.	Box/Case	Approx. Wt. Lbs.	Part # Black	List Price
56-300	198.85	Close (3-1/8")	1/5	4.94	57-300	73.56
		x 6"	1/5	16.45	57-301	102.80

**NIPPLES & FITTINGS**



**BLACK STEEL TOE NIPPLE**

Toe nipples are only threaded on one end to allow for easy connections, unthreaded end allows for welding a permanent leak-resistenteant bond.

- Roller cut • Minimum Quantity may apply
- Reamed and Chamfer or Saw Cut available upon request.



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
57-021T	1/4" x 1-1/2"	1/1	0.06	5.72
57-022T	1/4" x 2"	1/1	0.06	5.72
57-041T	3/8" x 1-1/2"	1/1	0.07	5.91
57-042T	3/8" x 2"	1/1	0.08	6.25
57-061T	1/2" x 1-1/2"	1/1	0.08	4.66
57-062T	1/2" x 2"	1/1	0.12	4.66
57-081T	3/4" x 1-1/2"	1/1	0.10	5.72
57-082T	3/4" x 2"	1/1	0.15	5.72
57-101T	1" x 2"	1/1	0.23	8.49
57-102T	1" x 2-1/2"	1/1	0.29	8.95
57-121T	1-1/4" x 2"	1/1	0.32	10.58
57-122T	1-1/4" x 2-1/2"	1/1	0.41	11.24
57-141T	1-1/2" x 2"	1/1	0.37	12.53
57-142T	1-1/2" x 2-1/2"	1/1	0.47	13.99
57-160T	2" x 2"	1/1	0.55	57.17
57-161T	2" x 2-1/2"	1/1	0.70	18.17
57-181T*	2-1/2" x 3"	1/1	1.33	50.80
57-201T*	3" x 3"	1/1	1.76	64.01
57-223T*	4" x 4"	1/1	3.41	102.56

\* Saw Cut

**Product Specifications**

Welded steel couplings both galvanized and black in diameters from 1/8" up to 4".

See page 298 for  
**API Line Couplings**

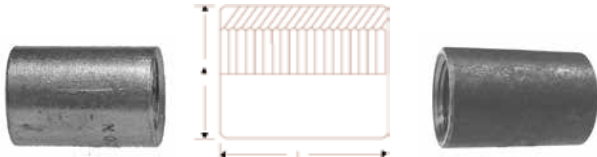
**Technical Specifications**

**Standards:** Product complies with ASTM A865 and ANSI B1.20.1 for threading, dimensions and pipe specifications. Federal Spec WW-P-404

**Pipe:** Complies with ASTM A-53 milltested 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**



• Straight threads thru 2"

Part # Galv	List Price	Size	Part # Black	List Price
64-770	3.51	1/8"	65-770	2.19
64-771	4.53	1/4"	65-771	3.09
64-772	4.14	3/8"	65-772	2.60
64-773	3.62	1/2"	65-773	2.53
64-774	5.14	3/4"	65-774	3.72
64-775	8.25	1"	65-775	5.85
64-776	9.81	1-1/4"	65-776	8.08
64-777	12.52	1-1/2"	65-777	8.66
64-778	20.52	2"	65-778	12.31
64-779	43.72	2-1/2"	65-779	37.50
64-780	87.46	3"	65-780	72.39
		3-1/2"	65-782	202.86
64-781	116.65	4"	65-781	92.86
		5"	65-783	208.47
		6"	65-784	142.72

**HALF MERCHANT COUPLINGS**



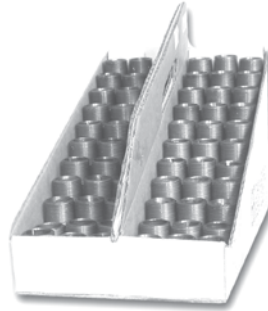
• Straight threads thru 2"

Part # Galv	List Price	Size	Part # Black	List Price
		1/4"	65-771H	3.62
		3/8"	65-772H	4.19
64-773H	2.86	1/2"	65-773H	2.80
64-774H	3.88	3/4"	65-774H	3.71
64-775H	7.84	1"	65-775H	5.40
64-776H	6.94	1-1/4"	65-776H	7.00
64-777H	9.88	1-1/2"	65-777H	8.08
64-778H	17.35	2"	65-778H	10.97
		2-1/2"	65-779H	35.56
64-780H	19.00	3"	65-780H	51.22
64-781H	35.00	4"	65-781H	69.41

Also available:  
**L&R Merchant Coupling**  
**Extra Heavy Merchant Couplings**

**MERCHANT COUPLINGS SPECIFICATIONS**

Size	Outside Diam.	Length	Weight 100 pcs approx.	Quantity per box	Threads per Inch	Threads
		Inches	Pounds			Type
1/8"	.59"	.78	3.5	1000	27	Straight
1/4"	.73"	1.18	7.5	500	18	Straight
3/8"	.86"	1.18"	9	600	18	Straight
1/2"	1.063"	1-9/16"	13.0	100	14	Straight
3/4"	1.313"	1-5/8"	28.3	50	14	Straight
1"	1.576"	2"	40.1	30	11-1/2	Straight
1-1/4"	1.900"	2-1/16"	49.5	25	11-1/2	Straight
1-1/2"	2.200"	2-1/16"	71.48	25	11-1/2	Straight
2"	2.750"	2-1/8"	112.0	20	11-1/2	Straight
2-1/2"	3.250"	3-1/8"	231.2	8	8	Taper Tapped
3"	4.000"	3-1/4"	353.8	5	8	Taper Tapped
4"	5.000"	3-1/2"	471.8	4	8	Taper Tapped



**B "6" ASSORTMENTS**

Black		LENGTH											Wt. Lbs.	Total Pieces	List Prices	
		Close	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"	6"				
973-567	1/2"	6	6	6	6	6	6	6	6	6	6	6	6	20	66	166.34
973-568	3/4"	6	6	6	6	6	6	6	6	6	6	6	6	27	66	202.33
973-569	1"	6		6	6	6	6	6	6	6	6	6	6	34	60	281.97

Galv.		LENGTH											Wt. Lbs.	Total Pieces	List Prices	
		Close	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"	6"				
973-667	1/2"	6	6	6	6	6	6	6	6	6	6	6	6	20	66	206.65
973-668	3/4"	6	6	6	6	6	6	6	6	6	6	6	6	27	66	253.09
973-669	1"	6		6	6	6	6	6	6	6	6	6	6	34	60	348.18

**STEEL TOTE TRAYS**



Part #	Size	Capacity	List Price
990-781	1/2"	77pcs	73.13
990-782	3/4"	66pcs	79.46
990-783	1"	50pcs	87.34
990-786	1-1/4"	40pcs	97.99
990-784	1-1/2"	30pcs	94.79
990-785	2"	27pcs	118.48

**NIPPLES & FITTINGS**

**STANDARDS & SPECIFICATIONS**

- DIMENSIONAL: ASTM A733      • MATERIAL: ASTM A53 Type F or Type E      • GALVANIZING: Hot dip galvanizing
- THREADING: ASME B 1.20.1

**For pressure ratings, see the knowledge bank on our website.**

**1/8" SCHEDULE 80 EXTRA HEAVY NIPPLES**



**Galvanized**

**Black**

Part #	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part #	List Price
58-001	6.10	Close (3/4")	25/600	0.02	59-001	3.83
58-002	7.30	1-1/2"	25/600	0.04	59-002	4.43
58-003	7.30	2"	25/600	0.05	59-003	4.34
58-004	8.65	2-1/2"	25/600	0.07	59-004	4.84
58-005	9.46	3"	25/600	0.08	59-005	5.15
58-006	10.58	3-1/2"	25/600	0.09	59-006	6.61
58-007	10.93	4"	25/600	0.11	59-007	7.28
58-008	19.41	4-1/2"	25/400	0.12	59-008	13.33
58-009	20.34	5"	25/400	0.13	59-009	14.59
58-010	64.24	5-1/2"	25/400	0.14	59-010	13.32
58-011	21.90	6"	25/400	0.16	59-011	14.42
		7"	25/200	0.18	59-012	28.74
		8"	25/200	0.21	59-013	18.30
		9"	25/200	0.24	59-014	19.34
		10"	25/150	0.26	59-015	20.42
		11"	25/150	0.29	59-016	21.50
		12"	25/150	0.32	59-017	22.32

**1/4" SCHEDULE 80 EXTRA HEAVY NIPPLES**



**Galvanized**

**Black**

Part #	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part #	List Price
58-020	6.58	Close (3/4")	25/600	0.04	59-020	3.71
58-021	7.57	1-1/2"	25/600	0.07	59-021	4.64
58-022	40.98	2"	25/600	0.09	59-022	4.70
58-023	9.86	2-1/2"	25/600	0.11	59-023	6.05
58-024	9.91	3"	25/600	0.13	59-024	6.24
58-025	8.51	3-1/2"	25/400	0.16	59-025	6.44
58-026	11.48	4"	25/400	0.18	59-026	6.65
58-027	13.46	4-1/2"	25/400	0.20	59-027	11.26
58-028	16.75	5"	25/300	0.22	59-028	10.54
58-029	18.88	5-1/2"	25/300	0.25	59-029	11.24
58-030	18.36	6"	25/300	0.27	59-030	11.95
		7"	25/200	0.31	59-031	19.14
		8"	25/200	0.36	59-032	21.50
		9"	25/200	0.40	59-033	22.56
		10"	25/150	0.45	59-034	22.85
		11"	25/150	0.49	59-035	24.19
		12"	25/150	0.54	59-036	25.25



**STEEL NIPPLES****BLACK & GALVANIZED SCHEDULE 80****3/8" DIAMETER SCHEDULE 80 EXTRA HEAVY NIPPLES**

Galvanized					Black	
Part #	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part #	List Price
58-040	7.08	Close (1")	25/600	0.06	59-040	4.16
58-041	8.35	1-1/2"	25/600	0.09	59-041	5.20
58-042	8.78	2"	25/600	0.12	59-042	5.24
58-043	10.90	2-1/2"	25/400	0.15	59-043	6.30
58-044	10.57	3"	25/400	0.18	59-044	6.24
58-045	13.69	3-1/2"	25/400	0.22	59-045	7.70
58-046	14.12	4"	25/300	0.25	59-046	7.45
58-047	16.80	4-1/2"	25/300	0.28	59-047	10.08
58-048	17.75	5"	25/300	0.31	59-048	9.80
58-049	73.83	5-1/2"	25/200	0.34	59-049	12.62
58-050	19.37	6"	25/200	0.37	59-050	11.96
		7"	25/200	0.43	59-051	22.56
		8"	25/150	0.49	59-052	33.81
		9"	25/150	0.55	59-053	25.25
		10"	25/100	0.62	59-054	26.05
		11"	25/100	0.68	59-055	26.86
		12"	25/100	0.74	59-056	28.90

**1/2" DIAMETER SCHEDULE 80 EXTRA HEAVY NIPPLES**

Galvanized					Black	
Part #	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part #	List Price
58-060	6.47	Close (1-1/8")	25/600	0.10	59-060	3.80
58-061	7.21	1-1/2"	25/600	0.14	59-061	3.92
58-062	7.08	2"	25/600	0.18	59-062	4.15
58-063	14.49	2-1/2"	25/400	0.23	59-063	4.54
58-064	9.48	3"	25/400	0.27	59-064	4.92
58-065	10.61	3-1/2"	25/300	0.32	59-065	5.44
58-066	46.44	4"	25/300	0.36	59-066	5.94
58-067	11.48	4-1/2"	25/200	0.41	59-067	6.55
58-068	12.31	5"	25/200	0.45	59-068	6.82
58-069	13.14	5-1/2"	25/200	0.59	59-069	7.22
58-070	13.10	6"	25/200	0.54	59-070	7.66
		7"	25/100	0.64	59-071	13.09
		8"	25/100	0.73	59-072	15.06
		9"	25/100	0.82	59-073	16.13
		10"	25/75	0.91	59-074	17.20
		11"	25/75	1.00	59-075	18.79
		12"	25/75	1.09	59-076	18.50

**NIPPLES & FITTINGS**

**3/4" DIAMETER SCHEDULE 80 EXTRA HEAVY NIPPLES**



**Galvanized**

**Black**

Part #	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part #	List Price
58-080	7.07	Close (1-3/8")	25/400	0.17	59-080	3.96
58-081	7.19	1-1/2"	25/400	0.19	59-081	4.84
58-082	7.76	2"	25/300	0.25	59-082	4.34
58-083	9.50	2-1/2"	25/300	0.31	59-083	4.99
58-084	9.20	3"	25/200	0.37	59-084	5.45
58-085	11.29	3-1/2"	25/200	0.42	59-085	6.05
58-086	11.00	4"	25/150	0.49	59-086	6.54
58-087	13.69	4-1/2"	25/150	0.55	59-087	7.63
58-088	18.39	5"	25/100	0.62	59-088	8.02
58-089	15.70	5-1/2"	25/100	0.68	59-089	9.53
58-090	15.41	6"	25/100	0.74	59-090	9.56
		7"	25/75	0.86	59-091	15.34
		8"	25/75	0.99	59-092	18.55
		9"	25/75	1.11	59-093	25.92
		10"	25/50	1.23	59-094	20.79
		11"	25/50	1.36	59-095	22.72

**1" DIAMETER SCHEDULE 80 EXTRA HEAVY NIPPLES**



**Galvanized**

**Black**

Part #	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part #	List Price
58-100	11.51	Close (1-1/2")	25/300	0.27	59-100	5.86
58-101	11.72	2"	25/200	0.36	59-101	6.14
58-102	13.14	2-1/2"	25/200	0.45	59-102	7.15
58-103	13.00	3"	25/150	0.54	59-103	7.73
58-104	14.94	3-1/2"	25/150	0.64	59-104	8.69
58-105	15.06	4"	25/100	0.73	59-105	9.37
58-106	18.26	4-1/2"	25/100	0.82	59-106	10.92
58-107	20.89	5"	25/100	0.91	59-107	11.15
58-108	21.46	5-1/2"	25/75	1.00	59-108	17.93
58-109	21.74	6"	25/75	1.09	59-109	13.14
		7"	25/50	1.27	59-110	22.72
		8"	25/50	1.45	59-111	23.69
		9"	25/50	1.63	59-112	27.02
		10"	25/50	1.81	59-113	25.60
		11"	25/50	2.00	59-114	30.83

**STEEL NIPPLES****BLACK & GALVANIZED SCHEDULE 80****1-1/4" DIAMETER SCHEDULE 80 EXTRA HEAVY NIPPLES**

Galvanized					Black	
Part #	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part #	List Price
58-120	13.19	Close (1-5/8")	25/150	0.41	59-120	7.73
58-121	13.44	2"	25/150	0.50	59-121	7.99
58-122	15.54	2-1/2"	25/150	0.63	59-122	9.70
58-123	16.63	3"	25/100	0.75	59-123	10.36
58-124	17.78	3-1/2"	25/100	0.88	59-124	11.95
58-125	18.49	4"	25/100	1.00	59-125	12.16
58-126	23.41	4-1/2"	25/75	1.13	59-126	15.06
58-127	26.00	5"	25/75	1.25	59-127	14.96
58-128	28.10	5-1/2"	25/75	1.38	59-128	17.00
58-129	32.22	6"	25/50	1.50	59-129	16.81
		7"	25/50	1.75	59-130	26.53
58-131	49.81	8"	25/50	2.00	59-131	28.02
		9"	25/50	2.25	59-132	34.08
		10"	20/40	2.50	59-133	36.25
		11"	20/40	2.75	59-134	38.38
		12"	15/30	3.00	59-135	37.24

**1-1/2" DIAMETER SCHEDULE 80 EXTRA HEAVY NIPPLES**

Galvanized					Black	
Part #	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part #	List Price
58-140	16.61	Close (1-3/4")	25/100	0.53	59-140	9.04
58-141	20.72	2"	25/75	0.61	59-141	10.12
58-142	19.82	2-1/2"	25/75	0.76	59-142	12.12
58-143	18.78	3"	25/50	0.91	59-143	12.07
58-144	25.88	3-1/2"	25/50	1.06	59-144	15.55
58-145	29.00	4"	25/50	1.21	59-145	14.48
58-146	26.39	4-1/2"	25/50	1.36	59-146	17.00
58-147	78.96	5"	25/50	1.51	59-147	16.91
58-148	30.79	5-1/2"	25/50	1.73	59-148	19.58
58-149	40.16	6"	25/50	1.82	59-149	19.31
		7"	20/40	2.12	59-150	32.45
		8"	20/40	2.42	59-151	33.96
		9"	15/30	2.73	59-152	37.84
		10"	15/30	3.03	59-153	41.63
		11"	1/20	3.33	59-154	46.51
58-155	72.64	12"	1/20	3.64	59-155	50.28

**NIPPLES & FITTINGS**

**2" DIAMETER SCHEDULE 80 EXTRA HEAVY NIPPLES**



**Galvanized**

**Black**

Part #	List Price	Length	Box/Case	Approx. Wt. Lbs.	Part #	List Price
58-160	27.38	Close (2")	25/75	0.84	59-160	13.28
58-161	25.91	2-1/2"	25/50	1.05	59-161	15.19
58-162	26.03	3"	25/50	1.26	59-162	15.95
58-163	35.35	3-1/2"	20/40	1.47	59-163	17.16
58-164	32.32	4"	20/40	1.68	59-164	18.35
58-165	35.45	4-1/2"	20/40	1.88	59-165	29.77
58-166	39.26	5"	20/40	2.09	59-166	31.26
58-167	44.72	5-1/2"	15/30	2.30	59-167	33.79
58-168	46.72	6"	15/30	2.51	59-168	38.63
		7"	1/20	2.93	59-169	59.24
		8"	1/20	3.35	59-170	64.36
		9"	1/20	3.77	59-171	69.53
58-172	96.16	10"	1/20	4.19	59-172	78.43
		11"	1/15	4.61	59-173	89.22
		12"	1/15	5.03	59-174	102.31

**2-1/2" DIAMETER SCHEDULE 80 EXTRA HEAVY NIPPLES - BLACK**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-180	Close (2-1/2")	20/40	1.28	61.49
59-181	3"	20/40	1.92	45.19
59-182	3-1/2"	15/30	2.24	54.25
59-183	4"	15/30	2.55	52.63
59-184	4-1/2"	15/30	2.88	64.63
59-185	5"	1/20	3.19	62.87
59-186	5-1/2"	1/20	3.51	73.38
59-187	6"	1/20	3.83	69.53

**3" DIAMETER SCHEDULE 80 EXTRA HEAVY NIPPLES - BLACK**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-200	Close (2-5/8")	15/30	2.15	49.51
59-201	3"	1/20	2.57	65.40
59-202	3-1/2"	1/15	2.99	67.19
59-203	4"	1/15	3.42	64.80
59-204	4-1/2"	1/15	3.85	73.38
59-205	5"	1/15	4.28	75.55
59-206	5-1/2"	1/15	4.70	85.64
59-207	6"	1/10	5.13	77.16
59-213	12"			148.24

**4" DIAMETER SCHEDULE 80 EXTRA HEAVY NIPPLES - BLACK**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-220	Close (2-7/8")	1/20	2.50	110.50
59-221	4"	1/10	5.00	95.30
59-222	4-1/2"	1/8	5.62	112.52
59-223	5"	1/8	6.25	114.12
59-224	5-1/2"	1/8	6.87	114.86
59-225	6"	1/8	7.50	118.20
59-227	8"			139.06

**EXTRA HEAVY SEAMLESS STEEL PIPE NIPPLES**

- ASTM A106 Grade B Seamless Pipe
- ASTM A 53/ API 5L
- WWN 351
- Standard NPT Tapered Pipe Threads as per ANSI B 1.20.1 Specification
- Hydrostatic Test (2500 PSI)

**1/8" DIAMETER BLACK EXTRA HEAVY SCH. 80 SEAMLESS**



Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-001SMLS	1/8" x Close	25/600	0.02	11.43
59-003SMLS	1/8" x 2"	25/600	0.05	13.06
59-005SMLS	1/8" x 3"	25/600	0.08	15.73
59-007SMLS	1/8" x 4"	25/600	0.11	19.06
59-011SMLS	1/8" x 6"	25/400	0.16	32.68

**1/4" DIAMETER BLACK EXTRA HEAVY SCH. 80 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-020SMLS	x Close (7/8")	40 / 480	0.03	2.45
59-021SMLS	x 1-1/2"	100 / 400	0.06	2.90
59-022SMLS	x 2"	100 / 400	0.08	2.90
59-023SMLS	x 2-1/2"	80 / 320	0.10	3.75
59-024SMLS	x 3"	40 / 240	0.12	3.75
59-025SMLS	x 3-1/2"	40 / 240	0.15	4.10
59-026SMLS	x 4"	40 / 240	0.17	4.10
59-027SMLS	x 4-1/2"	40 / 120	0.19	6.45
59-028SMLS	x 5"	40 / 120	0.21	6.45
59-029SMLS	x 5-1/2"	40 / 80	0.24	7.35
59-030SMLS	x 6"	40 / 80	0.26	7.35
59-031SMLS	x 7"	40 / 80	0.30	12.35
59-032SMLS	x 8"	40 / 80	0.35	12.35
59-033SMLS	x 9"	40 / 80	0.39	13.15
59-034SMLS	x 10"	40 / 80	0.44	13.15
59-036SMLS	x 12"	40 / 80	0.53	14.50

**3/8" DIAMETER BLACK EXTRA HEAVY SCH. 80 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-040SMLS	X Close (3/8")	40 / 480	0.05	2.55
59-041SMLS	x 1-1/2"	100 / 400	0.08	3.20
59-042SMLS	x 2"	100 / 400	0.11	3.20
59-043SMLS	x 2-1/2"	80 / 320	0.14	3.80
59-044SMLS	x 3"	40 / 240	0.17	3.80
59-045SMLS	x 3-1/2"	40 / 240	0.20	4.50
59-046SMLS	x 4"	40 / 240	0.23	4.50
59-047SMLS	x 4-1/2"	40 / 160	0.26	6.45
59-048SMLS	x 5"	40 / 120	0.29	6.45
59-049SMLS	x 5-1/2"	40 / 120	0.32	7.35
59-050SMLS	x 6"	40 / 80	0.35	7.35
59-054SMLS	x 3/8" x 10"	40/80	0.53	56.30
59-056SMLS	x 12"	40/80	0.65	62.77

**1/2" DIAMETER BLACK EXTRA HEAVY SCH. 80 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-060SMLS	X Close (1-1/8")	40 / 480	0.07	2.35
59-061SMLS	x 1-1/2"	100 / 400	0.11	2.35
59-062SMLS	x 2"	100 / 400	0.15	2.35

**NIPPLES & FITTINGS**

**1/2" DIAMETER BLACK EXTRA HEAVY SCH. 80 SEAMLESS (CONTINUED)**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-063SMLS	1/2" x 2-1/2"	80 / 320	0.20	2.80
59-064SMLS	x 3"	40 / 240	0.24	2.80
59-065SMLS	1/2" x 3-1/2"	40 / 240	0.29	3.35
59-066SMLS	x 4"	40 / 240	0.33	3.35
59-066SMLS	x 4"	40 / 240	0.33	3.35
59-067SMLS	1/2" x 4-1/2"	40 / 160	0.38	3.85
59-068SMLS	x 5"	40 / 120	0.42	3.80
59-069SMLS	1/2" x 5-1/2"	40 / 120	0.47	4.35
59-070SMLS	x 6"	40 / 80	0.51	4.35
59-071SMLS	1/2" x 7"	40 / 80	0.60	8.30
59-072SMLS	x 8"	40 / 80	0.69	8.30
59-073SMLS	x 9"	40/80	0.73	26.94
59-074SMLS	x 10"	40 / 80	0.88	9.40
59-075SMLS	x 11"	32/64	0.96	37.89
59-076SMLS	x 12"	32 / 64	1.06	10.80

**3/4" DIAMETER BLACK EXTRA HEAVY SCH. 80 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-080SMLS	X Close (1-3/8")	40/240	0.13	2.65
59-081SMLS	3/4" x 1-1/2"	100/200	0.15	2.70
59-082SMLS	x 2"	100/200	0.21	2.70
59-083SMLS	3/4" x 2-1/2"	40/160	0.27	3.25
59-084SMLS	x 3"	40/160	0.33	3.25
59-085SMLS	3/4" x 3-1/2"	40/120	0.39	3.80
59-086SMLS	x 4"	40/120	0.45	3.80
59-087SMLS	3/4" x 4-1/2"	40/120	0.51	4.75
59-088SMLS	x 5"	40/120	0.57	4.75
59-089SMLS	3/4" x 5-1/2"	48/96	0.64	5.65
59-090SMLS	x 6"	40/80	0.69	5.65
59-091SMLS	3/4" x 7"	40/80	0.82	9.75
59-092SMLS	x 8"	40/80	0.94	9.75
59-094SMLS	x 10"	32/64	1.19	11.35
59-096SMLS	x 12"	24/48	1.44	12.85

**1" DIAMETER BLACK EXTRA HEAVY SCH. 80 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-100SMLS	X Close (1-1/2")	40 / 160	0.21	3.95
59-101SMLS	x 2"	40 / 120	0.30	4.45
59-102SMLS	1" x 2-1/2"	40 / 120	0.37	4.60
59-103SMLS	x 3"	40 / 80	0.47	4.60
59-104SMLS	1" x 3-1/2"	40 / 80	0.56	5.50
59-105SMLS	x 4"	40 / 80	0.65	5.50
59-106SMLS	1" x 4-1/2"	40 / 80	0.74	6.55
59-107SMLS	x 5"	40 / 80	0.83	6.55
59-108SMLS	1" x 5-1/2"	40 / 80	0.92	7.75
59-109SMLS	x 6"	32 / 64	1.01	7.75
59-110SMLS	x 7"	20 / 40	1.19	13.10
59-111SMLS	x 8"	20 / 40	1.37	13.10
59-112SMLS	x 9"	20 / 40	1.55	15.70
59-113SMLS	x 10"	12 / 24	1.74	15.70
59-114SMLS	1" x 11"	12 / 24	1.92	16.95
59-115SMLS	x 12"	12 / 24	2.10	16.95

**STEEL NIPPLES****BLACK EXTRA HEAVY SCH 80 SEAMLESS****1-1/4" DIAMETER BLACK EXTRA HEAVY SCH. 80 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-120SMLS	X Close (1-5/8")	40 / 80	0.31	4.85
59-121SMLS	x 2"	40 / 80	0.42	5.25
59-122SMLS	1-1/4" x 2-1/2"	40 / 80	0.52	5.70
59-123SMLS	x 3"	40 / 80	0.64	5.70
59-124SMLS	1-1/4" x 3-1/2"	24 / 48	0.77	7.15
59-125SMLS	x 4"	24 / 48	0.90	7.15
59-126SMLS	1-1/4" x 4-1/2"	24 / 48	1.02	8.80
59-127SMLS	x 5"	20 / 40	1.15	8.80
59-128SMLS	1-1/4" x 5-1/2"	20 / 40	1.27	9.90
59-129SMLS	x 6"	20 / 40	1.40	9.90
59-130SMLS	1-1/4" x 7"	20 / 40	1.65	16.50
59-131SMLS	x 8" x 9"	12 / 24	1.90	16.50
59-132SMLS	1-1/4" x 9"	12 / 24	2.15	19.05
59-133SMLS	x 10"	12 / 24	2.40	19.05
59-134SMLS	1-1/4" x 11"	8 / 16	2.65	21.95
59-135SMLS	x 12"	8 / 16	2.90	21.95

**1-1/2" DIAMETER BLACK EXTRA HEAVY SCH. 80 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-140SMLS	X Close (1-3/4")	40 / 80	0.41	6.10
59-141SMLS	x 2"	32 / 64	0.51	6.60
59-142SMLS	x 2-1/2"	32 / 64	0.64	7.10
59-143SMLS	x 3"	32 / 64	0.78	7.10
59-144SMLS	x 3-1/2"	20 / 40	0.94	8.55
59-145SMLS	x 4"	20 / 40	1.09	8.55
59-146SMLS	x 4-1/2"	20 / 40	1.23	9.95
59-147SMLS	x 5"	20 / 40	1.39	9.95
59-148SMLS	x 5-1/2"	16 / 32	1.54	11.40
59-149SMLS	x 6"	12 / 24	1.69	11.40
59-150SMLS	x 7"	12 / 24	2.00	19.05
59-151SMLS	x 8"	12 / 24	2.30	19.05
59-152SMLS	x 9"	12 / 24	2.61	21.95
59-153SMLS	x 10"	8 / 16	2.90	21.95
59-154SMLS	x 11"	8 / 16	3.20	26.50
59-155SMLS	x 12"	8 / 16	3.51	26.50

**2" DIAMETER BLACK EXTRA HEAVY SCH. 80 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-160SMLS	X Close (2")	1 / 50	1.36	8.35
59-161SMLS	x 2-1/2"	20 / 40	0.90	9.40
59-162SMLS	x 3"	20 / 40	1.10	9.40
59-163SMLS	x 3-1/2"	12 / 24	1.31	10.80
59-164SMLS	x 4"	12 / 24	1.52	10.80
59-165SMLS	x 4-1/2"	12 / 24	1.72	13.35
59-166SMLS	x 5"	12 / 24	1.94	13.35
59-167SMLS	x 5-1/2"	12 / 24	2.15	15.40
59-168SMLS	x 6"	8 / 16	2.35	15.40
59-169SMLS	x 7"	8 / 16	2.78	26.50
59-170SMLS	x 8"	8 / 16	3.19	26.50
59-171SMLS	x 9"	1 / 8	3.62	30.85
59-172SMLS	x 10"	1 / 8	4.03	30.85
59-173SMLS	x 11"	1 / 8	4.44	35.55
59-174SMLS	x 12"	1 / 8	4.87	35.55

**NIPPLES & FITTINGS**

**2-1/2" DIAMETER BLACK EXTRA HEAVY SCH. 80 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-180SMLS	x Close ( 2-1/2" )	1 / 16	1.25	25.55
59-181SMLS	x 3"	1 / 16	1.57	26.65
59-182SMLS	x 3-1/2"	1 / 16	1.82	31.00
59-183SMLS	x 4"	1 / 16	2.15	31.00
59-184SMLS	x 4-1/2"	1 / 16	1.75	35.25
59-185SMLS	x 5"	1 / 16	2.78	35.25
59-186SMLS	x 5-1/2"	1 / 8	2.25	38.40
59-187SMLS	x 6"	1 / 8	3.41	38.40
59-188SMLS	x 7"	1 / 8	3.89	46.35
59-189SMLS	x 8"	1 / 8	4.69	46.35
59-190SMLS	x 9"	1 / 8	5.34	52.35
59-191SMLS	x 10"	1 / 6	5.97	52.35
59-192SMLS	x 11"	1 / 6	4.89	57.75
59-193SMLS	x 12"	1 / 5	7.26	57.75

**3" DIAMETER BLACK EXTRA HEAVY SCH. 80 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-200SMLS	X Close (2-5/8")	1 / 16	1.79	31.20
59-201SMLS	x 3"	1 / 16	2.11	34.70
59-202SMLS	x 3-1/2"	1 / 16	2.55	40.20
59-203SMLS	x 4"	1 / 8	2.89	40.20
59-204SMLS	x 4-1/2"	1 / 8	3.30	44.45
59-205SMLS	x 5"	1 / 8	3.73	44.45
59-206SMLS	x 5-1/2"	1 / 8	4.17	48.50
59-207SMLS	x 6"	1 / 8	4.57	48.50
59-208SMLS	x 7"	1 / 6	5.45	66.35
59-209SMLS	x 8"	1 / 6	6.29	66.35
59-210SMLS	x 9"	1 / 6	7.17	73.95
59-211SMLS	x 10"	1 / 4	8.01	73.95
59-212SMLS	x 11"	1 / 4	8.85	80.00
59-213SMLS	x 12"	1 / 4	9.72	80.00

**4" DIAMETER BLACK EXTRA HEAVY SCH. 80 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-220SMLS	X Close (2-7/8")	1 / 8	2.91	47.05
59-221SMLS	x 4"	1 / 6	4.26	53.45
59-223SMLS	x 5"	1 / 5	5.49	60.05
59-225SMLS	x 6"	1 / 5	6.72	65.25
59-226SMLS	x 7"	1 / 3	7.33	226.74
59-227SMLS	x 8"	1 / 3	9.23	76.80
59-229SMLS	x 10"	1 / 3	11.73	88.45
59-231SMLS	x 12"	1 / 3	14.24	98.15



**STEEL NIPPLES****BLACK EXTRA HEAVY SCH 160 SEAMLESS****1/2" DIAMETER BLACK EXTRA HEAVY SCH. 160 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-060SMLSXX	x Close	100 / 200	0.31	8.95
59-062SMLSXX	x 2"	100 / 200	0.58	10.60
59-064SMLSXX	x 3"	50 / 100	0.62	12.85
59-066SMLSXX	x 4"	50 / 100	0.66	16.05
59-070SMLSXX	x 6"	25 / 50	0.75	23.90

**3/4" DIAMETER DIAMETER BLACK EXTRA HEAVY SCH. 160 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-082SMLSXX	x 2"	50 / 100	0.62	14.60
59-086SMLSXX	x 4"	25 / 50	0.68	22.90
59-090SMLSXX	x 6"	25 / 50	0.71	32.95

**1" DIAMETER DIAMETER BLACK EXTRA HEAVY SCH. 160 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-100SMLSXX	x close	50 / 100	0.88	18.40
59-101SMLSXX	x 2"	50 / 100	1.07	19.45
59-105SMLSXX	x 4"	20 / 40	1.14	30.25
59-109SMLSXX	x 6"	20 / 40	1.75	43.50
59-111SMLSXX	x 8"	1 / 25	1.88	65.90
59-115SMLSXX	x 12"	1 / 15	2.15	86.70

**2" DIAMETER DIAMETER BLACK EXTRA HEAVY SCH. 160 SEAMLESS**

Part #	Length	Box/Case	Approx. Wt. Lbs.	List Price
59-160SMLSXX	x close	1 / 25	1.36	28.00
59-161SMLSXX	x 2-1/2"	1 / 20	1.67	32.05
59-162SMLSXX	x 3"	1 / 20	2.09	41.30
59-163SMLSXX	x 3-1/2"	1 / 12	2.51	44.50
59-164SMLSXX	x 4"	1 / 12	2.86	49.65
59-168SMLSXX	x 6"	1 / 11	3.20	71.70
59-169SMLSXX	x 7"	1 / 8	4.35	75.65
59-170SMLSXX	x 8"	1 / 8	5.86	80.50
59-171SMLSXX	x 9"	1 / 8	6.58	84.05
59-172SMLSXX	x 10"	1 / 8	7.31	88.00
59-174SMLSXX	x 12"	1 / 5	8.88	105.60
59-179SMLSXX	x 24"	1 / 3	18.13	368.90

**ISO 9002 - CERTIFICATE OF QUALITY - UL/FM LISTED AND APPROVED AT 300 PSI**

Our quality fittings are made with care and attention to detail. With better molds we can reduce parting lines and rough edges resulting in better fluid flow. By using a low temperature galvanizing process the coating is more durable which means a longer lasting fitting. All Fittings are 100% Pressure Tested to 300# Class.

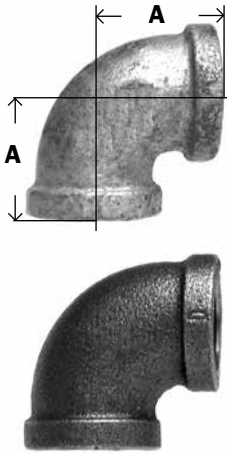
*(Every fitting is subjected to an underwater fitness test to ensure the highest quality)*

**SPECIFICATIONS**

- MATERIAL: ASTM A 197 - Cuppla Malleable Iron, ASTM A 153 - Hot dipped galvanizing • Coating ASTM A164 LS
- DIMENSIONS: ANSI B 16.3 - Malleable Iron threaded fittings, ANSI B 16.14 - Ferrous Pipe Plugs, Bushings etc..., ANSI B 16.39 - Malleable Iron threaded pipe unions.
- THREADS: ANSI B 2.1 or BS 21 ASME B1.20.1 • RoHS Compliant • PHYSICAL PROPERTIES: Tensile Strength - 28.4kg ./mm. Min. Elongation - 5% min.

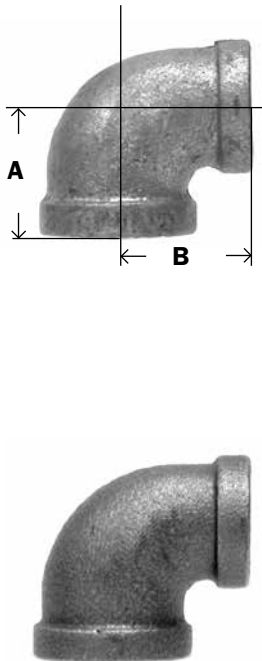
MCM 300 PSI  
Steam ISO

**ELBOWS 90°**



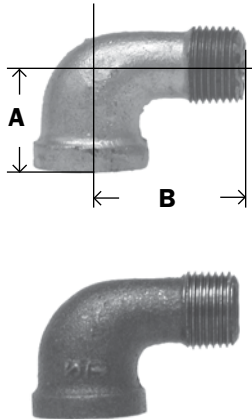
Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-100	3.99	1/8"	0.69	50/600	0.07	65-100	2.68
64-101	3.79	1/4"	0.81	35/420	0.10	65-101	2.44
64-102	3.59	3/8"	0.95	45/540	0.16	65-102	2.44
64-103	2.31	1/2"	1.12	50/400	0.23	65-103	1.94
64-104	3.08	3/4"	1.31	35/210	0.35	65-104	2.65
64-105	5.15	1"	1.50	20/120	0.57	65-105	4.24
64-106	8.68	1-1/4"	1.75	20/80	0.86	65-106	6.38
64-107	11.43	1-1/2"	1.94	10/60	1.31	65-107	8.48
64-108	17.36	2"	2.25	8/32	1.79	65-108	13.56
64-109	47.52	2-1/2"	2.70	6/18	3.35	65-109	31.06
64-110	79.77	3"	3.08	7/14	5	65-110	43.90
64-112	133.68	4"	3.79	2/6	9.02	65-112	98.47
64-114	472.31	6"	5.13	2/2	23.68	65-114	317.41

**REDUCING ELBOWS 90°**



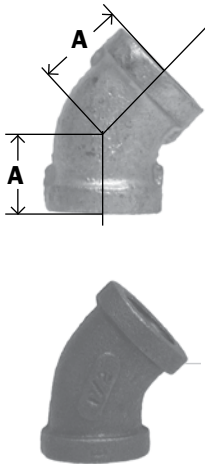
Part # Galvanized	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-121	7.16	3/8" x 1/8"	0.81	0.85	70/840	0.11	65-121	6.53
64-122	5.65	3/8" x 1/4"	0.88	0.90	60/720	0.16	65-122	3.88
64-123	4.68	1/2" x 1/4"	0.97	0.98	40/480	0.21	65-123	4.02
64-124	4.40	1/2" x 3/8"	1.04	1.03	50/400	0.24	65-124	3.54
64-126	6.30	3/4" x 3/8"	1.12	1.13	25/300	0.31	65-126	5.05
64-127	5.07	3/4" x 1/2"	1.20	1.22	30/240	0.44	65-127	3.83
64-130	6.48	1" x 1/2"	1.26	1.40	30/180	0.52	65-130	5.18
64-131	6.57	1" x 3/4"	1.37	1.45	25/150	0.58	65-131	4.90
64-133	13.90	1-1/4" x 3/4"	1.45	1.62	15/120	0.79	65-133	9.05
64-134	10.88	1-1/4" x 1"	1.58	1.67	10/80	0.80	65-134	8.47
64-136	15.76	1-1/2" x 3/4"	1.52	1.75	15/90	0.88	65-136	13.07
64-137	16.72	1-1/2" x 1"	1.65	1.80	10/80	1.07	65-137	11.40
64-138	12.82	1-1/2" x 1-1/4"	1.82	1.88	15/60	1.12	65-138	11.42
64-139	25.27	2" x 3/4"	1.60	1.97	10/60	1.20	65-139	19.18
64-140	24.80	2" x 1"	1.73	2.02	14/56	1.41	65-140	20.08
64-141	23.24	2" x 1-1/4"	1.90	2.10	10/40	1.53	65-141	20.08
64-142	20.31	2" x 1-1/2"	2.02	2.16	10/40	1.65	65-142	16.53
64-145	97.16	2-1/2" x 1-1/2"	2.16	2.51	8/24	2.97	65-145	46.25
64-146	70.62	2-1/2" x 2"	2.39	2.60	12/24	3.18	65-146	45.37
64-148	111.53	3" x 1-1/2"	2.28	2.83	9/18	4.54	65-148	78.21
		3" x 2-1/2"	2.83	2.99	9/18	4.39	65-151	78.21
		3" x 2"			9/18	4.22	65-150	78.21
		4" x 3"			5/10	8.44	65-154	176.31

**90° STREET ELBOWS**



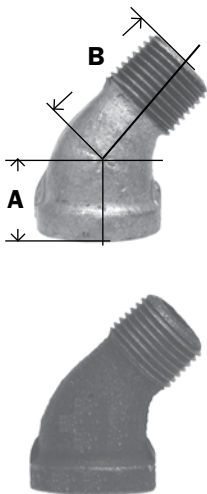
Part # Galvanized	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-160	4.89	1/8"	0.69	1.00	60/720	.06	65-160	3.88
64-161	4.97	1/4"	0.80	1.17	35/420	.10	65-161	3.70
64-162	5.15	3/8"	0.95	1.48	40/480	.15	65-162	3.70
64-163	5.05	1/2"	1.10	1.59	60/360	.22	65-163	3.80
64-164	4.87	3/4"	1.28	1.85	35/210	.39	65-164	3.65
64-165	6.64	1"	1.47	2.10	30/120	.60	65-165	5.37
64-166	11.89	1-1/4"	1.75	2.57	25/75	.95	65-166	8.18
64-167	14.63	1-1/2"	1.90	2.63	9/54	1.37	65-167	10.43
64-168	23.12	2"	2.21	3.19	10/30	2.25	65-168	17.69
64-169	68.81	2-1/2"	2.65	3.78	9/18	3.32	65-169	45.09
64-170	103.85	3"	3.02	4.42	7/14	5.27	65-170	66.57
64-171	171.42	4"	3.72	5.57	2/6	8.94	65-171	100.42

**ELBOWS 45°**



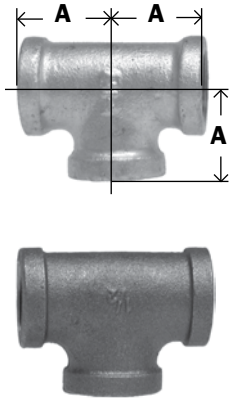
Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-180	5.69	1/8"	0.63	50/600	.07	65-180	4.10
64-181	5.07	1/4"	0.73	30/360	.10	65-181	4.15
64-182	5.07	3/8"	0.80	50/600	.14	65-182	3.78
64-183	3.88	1/2"	0.88	50/400	.21	65-183	3.26
64-184	5.41	3/4"	0.98	40/240	.33	65-184	4.02
64-185	6.24	1"	1.12	20/120	.50	65-185	5.13
64-186	11.36	1-1/4"	1.29	20/80	.74	65-186	8.94
64-187	13.58	1-1/2"	1.43	10/60	1.01	65-187	11.08
64-188	20.24	2"	1.68	12/36	1.53	65-188	16.12
64-189	68.56	2-1/2"	1.95	9/27	2.78	65-189	47.08
64-190	99.68	3"	2.17	10/20	4.49	65-190	59.13
64-191	167.08	4"	2.61	2/16	7.44	65-191	118.69
64-192	590.40	6"	3.46	2/2	18.63	65-192	469.63

**45° STREET ELBOWS**



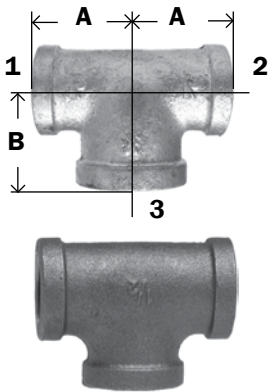
Part # Galvanized	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-200	7.43	1/8"	0.63	0.83	70/840	.05	65-200	6.32
64-201	6.32	1/4"	0.73	0.94	40/480	.09	65-201	4.47
64-202	7.28	3/8"	0.80	1.03	50/600	.14	65-202	5.35
64-203	5.63	1/2"	0.86	1.30	75/450	.19	65-203	4.29
64-204	9.05	3/4"	0.96	1.48	40/240	.28	65-204	6.23
64-205	11.20	1"	1.10	1.69	25/150	.48	65-205	7.69
64-206	16.80	1-1/4"	1.26	1.87	10/80	.71	65-206	12.86
64-207	18.21	1-1/2"	1.40	2.05	10/60	1.02	65-207	16.35
64-208	34.99	2"	1.65	2.38	12/36	1.68	65-208	28.98
64-209	82.32	2-1/2"	1.95	2.72	12/24	2.69	65-209	61.54
64-210	133.13	3"	2.17	3.16	6/18	4.61	65-210	90.70
64-211	276.63	4"	2.61	3.90	7/7	7.74	65-211	168.39

**TEES**



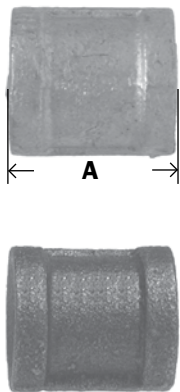
Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-250	5.35	1/8"	0.69	80/960	.11	65-250	4.14
64-251	4.67	1/4"	0.81	50/600	.15	65-251	3.69
64-252	4.92	3/8"	0.95	30/360	.22	65-252	3.69
64-253	2.93	1/2"	1.12	40/240	.36	65-253	2.35
64-254	5.12	3/4"	1.31	35/140	.48	65-254	3.49
64-255	7.58	1"	1.50	20/80	.83	65-255	5.99
64-256	13.17	1-1/4"	1.75	14/56	1.29	65-256	9.72
64-257	16.43	1-1/2"	1.94	15/45	1.66	65-257	12.09
64-258	27.42	2"	2.26	10/30	2.50	65-258	20.56
64-259	73.63	2-1/2"	2.70	8/16	4.45	65-259	46.48
64-260	86.38	3"	3.08	6/12	6.72	65-260	63.54
64-261	204.23	4"	3.79	2/6	11.31	65-261	163.86
64-262	629.79	6"	5.13	2/2	30.75	65-262	469.63

**BULLHEAD TEES**



Part # Galvanized	List Price	Size (1&2) x 3	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-280	8.05	1/2" x 3/4"	1.22	1.20	30/180	.4	65-280	6.57
64-733	12.13	1/2" x 1"	1.36	1.26	40/160	.50	65-733	15.02
64-289	11.89	3/4" x 1"	1.45	1.37	20/120	.60	65-289	8.33
64-299	18.91	1" x 1-1/4"	1.67	1.58	15/60	.96	65-299	15.49
64-300	32.14	1" x 1-1/2"	1.80	1.65	15/60	1.11	65-300	24.66
64-317	27.25	1-1/4" x 1-1/2"	1.88	1.82	14/56	1.07	65-317	38.46
64-319	50.79	1-1/2" x 2"	2.12	1.98	2/6	2.10	65-319	53.46

**COUPLINGS**



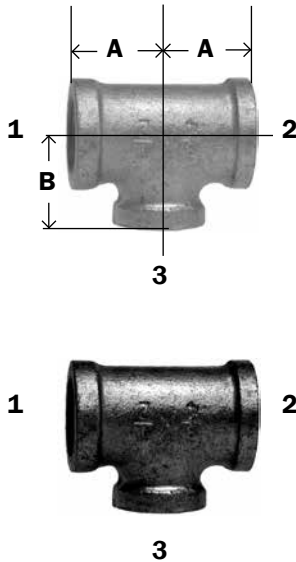
Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-410	4.73	1/8"	0.96	70/840	.07	65-410	3.84
64-411	4.40	1/4"	1.06	40/480	.09	65-411	3.63
64-412	4.40	3/8"	1.16	50/600	.13	65-412	3.94
64-413	3.49	1/2"	1.34	40/480	.19	65-413	3.94
64-414	4.07	3/4"	1.52	50/300	.28	65-414	3.22
64-415	6.70	1"	1.67	25/150	.45	65-415	4.90
64-416	9.21	1-1/4"	1.93	16/128	.66	65-416	6.25
64-417	10.52	1-1/2"	2.15	18/72	.84	65-417	8.39
64-418	15.33	2"	2.54	12/48	1.39	65-418	11.43
64-419	46.86	2-1/2"	2.88	8/32	2.42	65-419	33.16
64-420	62.64	3"	3.18	12/24	3.49	65-420	44.80
64-421	133.03	4"	3.69	6/12	5.81	65-421	89.41
64-422	347.49	6"	4.23	1/1	28.62	65-422	239.93

# MALLEABLE FITTINGS

# BLACK & GALVANIZED MALLEABLE IRON 150#

## REDUCING TEES

(SAME SIZE ON RUN, REDUCING ON BRANCH)

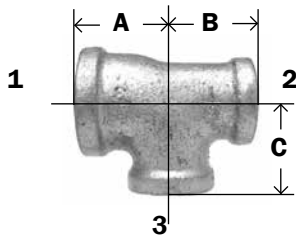


Part # Galvanized	List Price	Size (1&2) x 3	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-273	7.74	3/8" x 1/4"	0.81	0.90	25/300	.18	65-273	7.41
64-276	5.89	1/2" x 1/4"	0.97	0.98	25/300	.24	65-276	4.46
64-279	6.86	1/2" x 3/8"	1.04	1.03	45/270	.35	65-279	5.58
64-282	7.29	3/4" x 1/4"	1.05	1.08	25/200	.43	65-282	8.04
64-283	7.76	3/4" x 3/8"	1.12	1.13	30/180	.39	65-283	7.14
64-286	8.25	3/4" x 1/2"	1.20	1.18	30/180	.49	65-286	5.38
64-268	13.88	1" x 1/4"	1.11	1.22	25/150	.51	65-268	8.00
64-269	12.12	1" x 3/8"	1.18	1.27	15/20	.55	65-269	10.35
64-291	9.88	1" x 1/2"	1.26	1.40	15/120	.63	65-291	7.33
64-298	9.88	1" x 3/4"	1.37	1.45	25/100	.71	65-298	7.33
64-301	23.12	1-1/4" x 1/2"	1.34	1.45	20/80	.91	65-301	13.29
64-303	15.26	1-1/4" x 3/4"	1.45	1.62	12/72	.99	65-303	11.67
64-306	15.26	1-1/4" x 1"	1.58	1.66	16/64	1.07	65-306	12.65
64-316	18.91	1-1/2" x 3/4"	1.41	1.75	10/60	1.23	65-316	14.72
64-318	20.15	1-1/2" x 1"	1.65	1.88	13/52	1.33	65-318	14.72
64-322	24.26	1-1/2" x 1-1/4"	1.65	1.88	15/45	1.52	65-322	19.04
64-327	27.51	2" x 1/2"	1.49	1.88	10/40	1.64	65-327	23.08
64-328	27.51	2" x 3/4"	1.60	1.97	10/40	1.71	65-328	23.08
64-330	27.51	2" x 1"	1.73	2.02	12/36	1.88	65-330	23.08
64-334	34.57	2" x 1-1/4"	1.86	2.06	8/32	2.03	65-334	24.38
64-336	34.57	2" x 1-1/2"	1.98	2.12	8/32	2.22	65-336	24.38
64-343	93.77	2-1/2" x 1-1/2"	2.16	2.51	8/24	2.97	65-343	60.46
64-351	118.86	3" x 2"	2.52	2.89	6/12	5.35	65-351	80.72

NIPPLES & FITTINGS

## REDUCING TEES

(REDUCING ON RUN)



Part # Black	Size 1 x 2 x 3	A	B	C	Box/Case	Approx. Wt. Lbs.	List Price
65-287	3/4" x 1/2" x 1/2"	1.18	1.18	1.20	30/180	.39	5.96
65-288	3/4" x 1/2" x 3/4"	1.28	1.20	1.28	40/160	.49	6.57
65-292	1" x 1/2" x 1/2"	1.31	1.22	1.31	20/120	.51	9.91
65-296	1" x 3/4" x 3/4"	1.34	1.28	1.42	25/100	.63	7.72
65-297	1" x 3/4" x 1"				2/100	.62	10.28
65-309	1-1/4" x 1" x 1"	1.55	1.47	1.63	18/72	1.00	16.93
65-346	1-1/4" x 3/4" x 1/2"				18/72	1.05	17.52
65-349	1-1/4" x 1" x 1/2"				18/72	1.10	14.07
65-372	1-1/2" x 1" x 1"				18/60	1.28	17.36
65-375	1-1/2" x 1-1/4" x 3/4"				18/60	1.30	17.36
65-377	1-1/2" x 1-1/4" x 1-1/4"				18/60	1.35	23.48

## LOCKNUTS

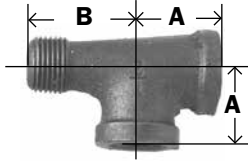
• Minimum Quantity may apply



Part # Galvanized	Size	Hex	Thickness	Box/ Case	Approx. Wt. Lbs.	List Price
64-703	1/2"	1.18	0.32	100/1200	.06	3.00
64-704	3/4"	1.43	0.35	60/720	.08	3.41
64-705	1"	1.75	0.39	40/480	.14	6.46
64-706	1-1/4"	2.10	0.43	30/360	.19	6.29
64-707	1-1/2"	2.35	0.48	45/270	.25	8.91
64-708	2"	2.88	0.54	25/150	.39	13.60

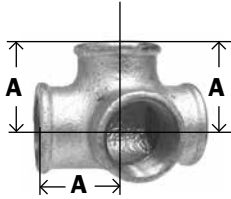
\* Black locknuts available on special order basis.

**MALLEABLE SERVICE TEE (STREET TEE)**



Part # Galvanized	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-363	9.67	1/2"	1.12	1.62	40/120	0.31	65-363	6.74
64-364	10.62	3/4"	1.31	1.89	25/150	0.49	65-364	8.94
64-365	32.95	1"			25/100	.55		

**SIDE OUTLET TEES**



Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-383	15.07	1/2"	1.12	25/200	.39	65-383	11.64
64-384	19.04	3/4"	1.31	15/120	.58	65-384	14.85
64-385	30.86	1"	1.50	25/75	.88	65-385	23.81
64-386	51.35	1-1/4"	1.75	12/36	1.32	65-386	37.29

**REDUCING COUPLINGS**



Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-430	4.07	1/4" x 1/8"	1.00	50/600	.07	65-430	3.00
64-431	4.13	3/8" x 1/8"	1.13	35/420	.09	65-431	3.26
64-432	4.13	3/8" x 1/4"	1.13	30/360	.11	65-432	3.00
64-433	4.62	1/2" x 1/8"	1.25	50/600	.13	65-433	3.24
64-434	3.76	1/2" x 1/4"	1.25	50/600	.11	65-434	3.00
64-435	3.49	1/2" x 3/8"	1.25	40/480	.15	65-435	2.73
64-439	5.07	3/4" x 1/8"	1.44	40/480	.18	65-439	3.78
64-436	4.68	3/4" x 1/4"	1.44	30/360	.19	65-436	3.70
64-437	4.68	3/4" x 3/8"	1.44	30/360	.21	65-437	3.70
64-438	4.13	3/4" x 1/2"	1.44	60/360	.25	65-438	2.95
64-459	8.26	1" x 1/4"	1.69	45/270	.34	65-459	5.73
64-440	8.45	1" x 3/8"	1.69	30/240	.35	65-440	5.82
64-441	6.46	1" x 1/2"	1.69	30/240	.36	65-441	4.98
64-442	6.32	1" x 3/4"	1.69	25/200	.39	65-442	4.87
64-460	17.23	1-1/4" x 3/8"	2.06	25/150	.55	65-460	13.22
64-444	10.78	1-1/4" x 1/2"	2.06	25/150	.53	65-444	7.20
64-445	8.73	1-1/4" x 3/4"	2.06	25/150	.57	65-445	6.25
64-446	8.73	1-1/4" x 1"	2.06	15/120	.61	65-446	6.86
64-443	20.24	1-1/2" x 3/8"	2.31	20/120	.71	65-443	11.69
64-447	12.71	1-1/2" x 1/2"	2.31	20/120	.69	65-447	9.17
64-448	12.71	1-1/2" x 3/4"	2.31	15/120	.71	65-448	10.34
64-449	11.24	1-1/2" x 1"	2.31	25/100	.78	65-449	9.17
64-450	10.64	1-1/2" x 1-1/4"	2.31	12/96	.87	65-450	7.92
64-458	29.31	2" x 1/2"	2.81	14/84	1.14	65-458	14.91
64-451	18.36	2" x 3/4"	2.81	14/84	1.14	65-451	13.14
64-452	15.33	2" x 1"	2.81	14/84	1.21	65-452	12.40
64-453	16.21	2" x 1-1/4"	2.81	12/72	1.19	65-453	13.14
64-454	15.33	2" x 1-1/2"	2.81	12/72	1.38	65-454	11.47
64-461	48.35	2-1/2" x 1-1/2"	3.25	20/40	2.07	65-461	34.17
64-462	47.44	2-1/2" x 2"	3.25	20/40	2.23	65-462	29.31
64-486	70.03	3" x 1-1/2"	3.69	16/32	3.23	65-486	45.72
64-456	61.28	3" x 2"	3.69	16/32	3.30	65-456	34.53
64-463	63.07	3" x 2-1/2"	3.69	12/24	3.55	65-463	45.72
64-464	136.45	4" x 2"	4.38	4/12	5.55	65-464	91.61
64-465	125.13	4" x 2-1/2"	4.38	6/18	5.90	65-465	91.61
64-457	136.45	4" x 3"	4.38	4/12	6.05	65-457	86.23
		6" x 4"	4.24	4/8	10.86	65-491	347.44

**MALLEABLE FITTINGS**

**BLACK & GALVANIZED MALLEABLE IRON 150#**

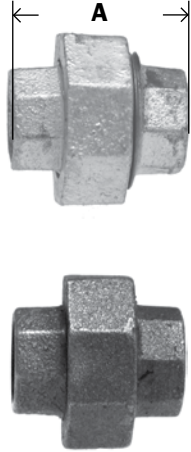
**HEX BUSHING**



Part # Galvanized	List Price	Size M x F	A	Hex	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
		*1/4" x 1/8"	}	Use steel fittings for smaller sizes				
		*3/8" x 1/8"						
		*3/8" x 1/4"						
64-503	5.65	1/2" x 1/8"	0.84	1.03	100/120	.09	65-503	3.73
64-505	5.65	1/2" x 3/8"	0.75	1.03	100/1200	.07	65-505	3.49
64-506	6.02	3/4" x 1/8"	0.85	1.15	50/600	.14	65-506	3.65
64-507	5.82	3/4" x 1/4"	0.85	1.15	50/600	.13	65-507	3.60
64-508	6.15	3/4" x 3/8"	0.85	1.15	50/600	.12	65-508	3.65
64-509	5.26	3/4" x 1/2"	0.93	1.15	50/600	.10	65-509	3.09
64-510	6.30	1" x 1/4"	1.13	1.12	50/400	.20	65-510	4.29
64-511	9.88	1" x 3/8"	1.13	1.12	50/400	.18	65-511	4.41
64-512	5.69	1" x 1/2"	1.10	1.42	50/400	.21	65-512	3.02
64-513	5.07	1" x 3/4"	1.10	1.42	50/400	.17	65-513	3.02
64-514	8.56	1-1/4" x 1/4"	1.24	1.12	30/240	.29	65-514	5.53
64-515	8.56	1-1/4" x 3/8"	1.24	1.12	30/240	.29	65-515	4.92
64-516	7.99	1-1/4" x 1/2"	1.24	1.24	30/240	.31	65-516	4.75
64-517	7.29	1-1/4" x 3/4"	1.08	1.76	30/240	.35	65-517	4.24
64-518	7.29	1-1/4" x 1"	1.08	1.76	30/240	.29	65-518	4.24
64-519	18.52	1-1/2" x 1/4"	1.30	1.12	25/150	.40	65-519	6.56
64-520	18.52	1-1/2" x 3/8"	1.30	1.12	25/150	.38	65-520	6.56
64-521	10.62	1-1/2" x 1/2"	1.30	1.34	25/150	.38	65-521	5.21
64-522	10.62	1-1/2" x 3/4"	1.30	1.44	25/150	.40	65-522	5.21
64-523	9.53	1-1/2" x 1"	1.23	2.00	25/150	.45	65-523	4.98
64-524	8.80	1-1/2" x 1-1/4"	1.23	2.00	25/150	.34	65-524	4.98
64-525	75.13	2" x 3/8"	1.28	1.12	20/120	.57	65-525	8.16
		2" x 1/4"			20/100	.57	65-526	15.69
64-527	13.21	2" x 1/2"	1.39	1.34	20/120	.57	65-527	8.16
64-528	12.31	2" x 3/4"	1.39	1.63	20/120	.63	65-528	6.90
64-529	11.64	2" x 1"	1.39	1.77	20/120	.66	65-529	6.90
64-530	11.64	2" x 1-1/4"	1.50	2.48	20/120	.74	65-530	6.90
64-531	9.89	2" x 1-1/2"	1.50	2.48	20/120	.61	65-531	6.90
64-546	29.00	2-1/2" x 1/2"	1.51	1.34	15/60	.97	65-546	11.69
64-547	19.16	2-1/2" x 3/4"	1.51	1.63	15/60	.91	65-547	11.69
64-532	27.41	2-1/2" x 1"	1.51	1.95	15/60	.97	65-532	11.69
64-533	18.72	2-1/2" x 1-1/4"	1.51	2.39	15/60	1.03	65-533	11.69
64-534	18.76	2-1/2" x 1-1/2"	1.51	2.98	15/60	1.16	65-534	11.69
64-535	16.71	2-1/2" x 2"	1.54	2.98	15/60	1.01	65-535	11.69
64-550	25.25	3" x 1"	1.61	1.95	12/48	1.41	65-550	15.57
64-549	29.65	3" x 1-1/4"	1.61	2.39	12/48	1.42	65-549	17.00
64-537	22.49	3" x 1-1/2"	1.61	2.68	12/48	1.51	65-537	17.00
64-538	23.77	3" x 2"	1.61	3.86	12/48	1.71	65-538	17.00
64-539	45.23	3" x 2-1/2"	1.61	3.86	12/48	1.68	65-539	15.97
64-551	86.85	4" x 3/4"	2.15	4.90	5/20	3.88	65-551	40.53
64-553	56.53	4" x 1"	2.00	4.75	5/20	3.79	65-553	34.99
64-552	36.84	4" x 1-1/4"				2.39	65-552	32.59
64-540	62.87	4" x 1-1/2"	1.82	2.68	5/20	2.39	65-540	34.03
64-541	46.70	4" x 2"	1.82	3.31	5/20	2.52	65-541	33.34
64-542	52.97	4" x 2-1/2"	2.06	3.87	5/20	2.87	65-542	29.16
64-543	47.89	4" x 3"	2.17	4.96	5/20	2.95	65-543	31.82
		5" x 4"			4/8	6.80	65-544	80.00
64-545	101.71	6" x 4"	2.33	5.79	4/8	7.11	65-545	89.08

**NIPPLES &  
FITTINGS**

**UNIONS**



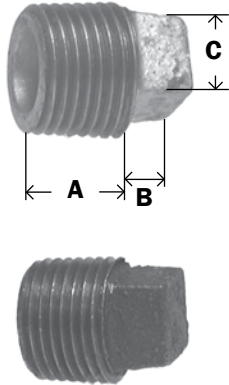
• Brass Seat

Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-600	17.55	1/8"	1.26	30/360	.17	65-600	14.60
64-601	17.00	1/4"	1.44	20/240	.25	65-601	13.44
64-602	11.33	3/8"	1.61	20/240	.37	65-602	10.85
64-603	10.78	1/2"	1.72	50/200	.52	65-603	8.16
64-604	11.83	3/4"	1.94	35/140	.78	65-604	10.62
64-605	14.77	1"	2.06	20/80	1.18	65-605	12.73
64-606	22.90	1-1/4"	2.26	15/60	1.64	65-606	17.00
64-607	28.27	1-1/2"	2.41	10/40	2.08	65-607	22.27
64-608	36.64	2"	2.75	6/24	3.24	65-608	31.50
64-609	110.79	2-1/2"	3.22	8/16	5.31	65-609	80.96
64-610	155.07	3"	3.50	7/14	6.94	65-610	93.84
64-611	335.90	4"	3.85	7/7	12.02	65-611	246.54

**NIPPLES & FITTINGS**

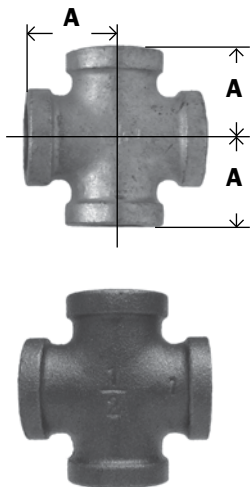
**SQUARE HEAD PLUGS**

• Cored



Part # Galvanized	List Price	Size	A	B	C	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
		*1/8"	} Use steel fittings for smaller sizes						
		*1/4"							
		*3/8"							
64-653	2.53	1/2"	0.58	0.38	0.56	50/600	.08	65-653	1.51
64-654	3.93	3/4"	0.65	0.44	0.63	30/360	.13	65-654	1.68
64-655	3.60	1"	0.75	0.50	0.82	20/240	.22	65-655	2.35
64-656	6.03	1-1/4"	0.82	0.56	0.94	40/240	.33	65-656	3.60
64-657	8.18	1-1/2"	0.85	0.62	1.13	30/180	.41	65-657	4.35
64-658	10.12	2"	0.91	0.68	1.31	20/120	.68	65-658	5.57
64-659	19.97	2-1/2"	1.26	0.74	1.50	16/64	.89	65-659	13.14
64-660	27.48	3"	1.16	0.80	1.69	16/48	1.68	65-660	18.64
64-661	35.43	4"	1.22	1.00	2.28	8/16	3.02	65-661	38.84
		6"				5/10	11.41	65-662	72.02

**CROSSES**



Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-390	16.85	1/8"	0.65	50/600	.14	65-390	13.27
64-391	16.85	1/4"	0.80	40/480	.17	65-391	11.35
64-392	16.85	3/8"	0.95	25/300	.26	65-392	11.35
64-393	16.85	1/2"	1.12	30/180	.42	65-393	11.35
64-394	18.75	3/4"	1.31	20/120	.64	65-394	12.96
64-395	21.18	1"	1.50	15/60	.98	65-395	14.40
64-396	30.66	1-1/4"	1.75	20/40	1.45	65-396	23.38
64-397	37.22	1-1/2"	1.94	18/36	1.90	65-397	28.95
64-398	71.01	2"	2.25	10/20	2.96	65-398	47.94
64-399	177.43	2-1/2"	2.71	4/12	5.49	65-399	107.80
64-400	239.01	3"	3.06	4/8	7.71	65-400	171.80
		4"		2/4	14.77	65-401	364.91





# MALLEABLE FITTINGS

# BLACK & GALVANIZED MALLEABLE IRON 150#

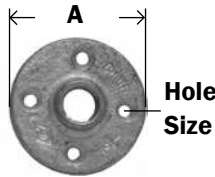
## CAPS



Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-472	3.55	1/4"	0.62	100/800	.07	65-471	1.56
64-473	2.72	3/8"	0.74	60/720	.08	65-472	1.93
64-474	3.90	1/2"	0.87	50/600	.13	65-473	2.00
64-474	3.90	3/4"	0.97	40/320	.18	65-474	2.64
64-475	4.32	1"	1.16	25/200	.30	65-475	2.92
64-476	6.27	1-1/4"	1.28	20/160	.47	65-476	3.97
64-477	7.99	1-1/2"	1.33	18/108	.66	65-477	5.64
64-478	10.10	2"	1.45	12/72	.99	65-478	6.69
64-479	32.13	2-1/2"	1.70	28/56	1.58	65-479	17.31
64-480	38.92	3"	1.80	18/36	2.51	65-480	27.35
64-481	77.28	4"	2.08	7/21	4.09	65-481	42.70
64-482	281.30	6"	2.55	4/8		65-482	171.81

\* Use steel fittings for smaller sizes. See page 282 for Galvanized and Black Steel Fittings.

## FLOOR FLANGES



Part # Galvanized	List Price	Size	A	Thickness	Hole Size	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-692	16.57	1/2"	3.50	0.50	0.25	25/100	.63	65-692	7.64
64-693	18.49	3/4"	3.50	0.63	0.25	15/90	.73	65-693	7.92
64-694	20.35	1"	4.00	0.69	0.25	15/60	1.02	65-694	11.42
64-695	23.18	1-1/4"	4.00	0.75	0.25	10/60	1.00	65-695	12.73
64-696	28.92	1-1/2"	4.50	0.87	0.31	8/48	1.37	65-696	13.98
64-697	38.09	2"	5.50	1.00	0.31	8/32	2.11	65-697	18.05

## EXTENSION FIP X MIP



Part #	Size	Approx. WT. Lbs.	Box/Case	List Price
65-621	1/2"	0.12	75 / 300	8.59
65-622	3/4"	0.23	40 / 160	12.54
65-623	1"	0.32	30 / 90	17.51

## STEEL MAGNETIC PLUGS

### Steel Magnetic Drain Plugs - NPT Threaded

**Magnetic Drain Plugs** are similar to standard pipe or straight thread drain plugs with one important difference - a permanent magnet is fastened to the plug body. This magnet attracts and holds abrasive, ferrous metal particles preventing their circulation through the lubrication or hydraulic system.

These abrasive, ferrous metal particles appear in lubricating or hydraulic systems as a result of the following conditions:

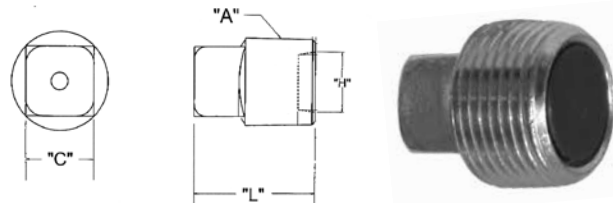
- The constant flaking effect of normal wear of moving parts.
- Particles not removed by flushing operations after boring or machining.
- Chipping due to sub-surface casting flaws.
- Minute component breakdown caused by stress usage.

**Magnetic Drain Plugs** prevent excessive wear to the system's components.

**Magnetic Plugs** are used by numerous manufacturers of gear boxes, transmissions, engines, and hydraulic systems for the automotive, aircraft, agricultural and machinery industries.

Typical applications include:

- Outbound Engines
- Earthmoving Equipment
- Combines
- Balers
- Crawler Tractors
- Lift Trucks
- Mining Equipment
- Military Vehicles
- Turbine Engines
- Truck Axles
- Heavy-Duty Transmissions



Part	Size "A"	Head Width "C"	Recess Dia. "H"	O/L Length "L"	List Price
28-996	3/8 - 18	.428 - .440	.435 - .445	.805 - .860	3.37
28-997	1/2 - 14	.553 - .565	.560 - .570	.970 - 1.04	4.03
28-998	3/4 - 14	.615 - .627	.725 - .735	1.120 - 1.170	5.10
28-999	1-11 1/2	.803 - .815	.895 - .905	1.25 - 1.33	7.39

# BLACK & GALVANIZED STEEL FITTINGS

# STEEL FITTINGS

ROHS, WEE, REACH COMPLIANT - MADE IN THE USA

## HEX BUSHINGS



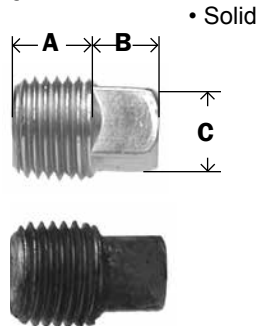
Part # Galvanized	List Price	Size M x F	A	Hex	Approx. Wt. Lbs.	Part # Black	List Price
66-500	1.36	1/4" x 1/8"	0.63	0.62	0.02	67-500	1.66
66-501	1.84	3/8" x 1/8"	0.66	0.68	0.04	67-501	2.15
66-502	1.61	3/8" x 1/4"	0.66	0.68	0.02	67-502	2.11
66-503	2.60	1/2" x 1/8"	0.80	0.87	0.10	67-503	2.34
66-504	2.59	1/2" x 1/4"	0.80	0.87	0.08	67-504	2.34
66-505	2.50	1/2" x 3/8"	0.80	0.87	0.06	67-505	2.36
66-506	3.82	3/4" x 1/8"	0.94	1.06	0.18	67-506	3.57
66-507	4.52	3/4" x 1/4"	0.94	1.06	0.14	67-507	3.75
66-508	4.54	3/4" x 3/8"	0.94	1.06	0.14	67-508	3.69
66-509	4.28	3/4" x 1/2"	0.94	1.06	0.10	67-509	3.54
66-510	7.18	1" x 1/4"	1.00	1.31	0.16	67-510	6.10
66-511	7.18	1" x 3/8"	1.00	1.31	0.26	67-511	6.28
66-512	9.23	1" x 1/2"	1.00	1.31	0.22	67-512	6.28
66-513	7.91	1" x 3/4"	1.00	1.31	0.14	67-513	6.49
		1-1/4" x 1/8"				67-514	9.66

## CAPS



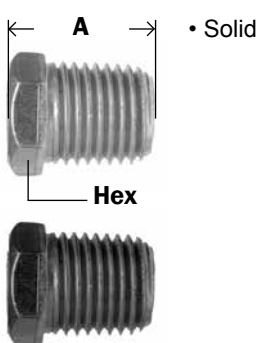
Part # Galvanized	List Price	Size NPTF	A	Hex	Approx. Wt. Lbs.	Part # Black	List Price
66-470	1.23	1/8"	0.53	0.56	0.02	67-470	1.13
66-471	1.34	1/4"	0.63	0.62	0.04	67-471	1.31
66-472	2.23	3/8"	0.69	0.81	0.06	67-472	2.10
66-473	4.77	1/2"	0.87	1.00	0.12	67-473	3.24
66-474	5.15	3/4"	0.97	1.18	0.16	67-474	4.78
66-475	7.88	1"	1.16	1.50	0.30	67-475	6.84
66-476	38.38	1-1/4"	1.28	2.00	0.68	67-476	31.88
66-477	48.27	1-1/2"	1.35	2.25	0.83	67-477	47.34
66-478	101.38	2"	1.45	2.625	1.36		

## SQUARE HEAD PLUGS



Part # Galvanized	List Price	Size NPTF	A	B	C	Approx. Wt. Lbs.	Part # Black	List Price
		1/16"	0.33	0.18	0.22	0.01	67-669	0.50
66-670	0.56	1/8"	0.33	0.24	0.28	0.01	67-670	0.52
66-671	0.61	1/4"	0.45	0.28	0.37	0.02	67-671	0.49
66-672	0.98	3/8"	0.50	0.31	0.43	0.04	67-672	0.77
66-653	1.59	1/2"	0.59	0.38	0.55	0.12	67-653	1.33
66-654	2.20	3/4"	0.63	0.44	0.62	0.18	67-654	1.97
66-655	8.22	1"	0.75	0.5	0.81	0.34	67-655	7.08
66-656	13.86	1-1/4"	0.80	0.56	0.93	0.62	67-656	11.73
66-657	23.19	1-1/2"	0.83	0.62	1.12	0.82	67-657	17.77
66-658	28.75	2"	0.88	0.68	1.31	1.36	67-658	24.90

## HEX HEAD PLUGS



Part # Galvanized	List Price	Size NPTF	A	Hex	Approx. Wt. Lbs.	Part # Black	List Price
66-770	0.52	1/8"	0.55	0.43	0.01	67-770	0.39
66-771	0.88	1/4"	0.74	0.56	0.04	67-771	0.72
66-772	1.44	3/8"	0.67	0.68	0.06	67-772	1.35
66-773	2.51	1/2"	0.80	0.70	0.12	67-773	2.23
66-774	4.67	3/4"	0.94	1.06	0.18	67-774	3.47
66-775	7.92	1"	1.00	1.31	0.22	67-775	6.10
66-776	12.02	1-1/4"	1.17	1.75	0.7	67-776	10.80
66-777	39.60	1-1/2"	1.51	2.00	1.2	67-777	21.83
66-778	60.98	2"	1.65	2.50	2.06	67-778	40.18

NIPPLES & FITTINGS

- 1010 Carbon Steel, 3/4 taper threads ( see hydraulic section for 7/8 taper threads.)
- Finish or coating • Black Dipped in rust resistant • Galvanized, Zinc Plated (Inside and Out)

**COUNTERSUNK PLUG - Square Socket**



Galvanized						Black	
Part #	List Price	Size NPTF	A	Socket Size	Approx. Wt. Lbs.	Part #	List Price
66-630	0.39	1/8"	0.29	0.19	0.01	67-630	0.36
66-631	0.53	1/4"	0.45	0.25	0.02	67-631	0.53
66-632	0.76	3/8"	0.45	0.31	0.04	67-632	0.64
66-633	1.13	1/2"	0.59	0.38	0.08	67-633	0.99
66-634	1.87	3/4"	0.60	0.50	0.12	67-634	1.56
66-635	4.51	1"	0.75	0.50	0.16	67-635	3.88
66-636	7.18	1-1/4"	0.80	0.75	0.32	67-636	6.69
66-637	16.83	1-1/2"	0.83	0.75	0.45	67-637	13.48
66-638	36.64	2"	0.88	0.875	2.06	67-638	24.94

**COUNTERSUNK PLUG - Hex Socket**



Galvanized						Black	
Part #	List Price	Size NPTF	A	Socket Size	Approx. Wt. Lbs.	Part #	List Price
66-760	0.55	1/16"	0.29	0.15	0.01	67-760	0.50
66-761	0.39	1/8"	0.29	0.18	0.01	67-761	0.50
66-762	0.52	1/4"	0.44	0.25	0.02	67-762	0.50
66-763	0.66	3/8"	0.44	0.31	0.04	67-763	0.66
66-764	1.01	1/2"	0.59	0.37	0.08	67-764	0.99
66-765	1.86	3/4"	0.60	0.56	0.14	67-765	1.54
66-766	4.95	1"	0.75	0.625	0.22	67-766	3.15
66-767	6.77	1-1/4"	0.80	0.75	0.37	67-767	5.81
66-768	15.41	1-1/2"	0.83	1.0	0.45	67-768	13.70
66-769	27.97	2"	0.88	1.0	0.86	67-769	23.75

• Flush plugs available upon request

**FACE BUSHING**



Galvanized					Black	
Part #	List Price	Size M x F	A	Approx. Wt. Lbs.	Part #	List Price
66-700	1.31	1/4" x 1/8"	0.44	0.01	67-700	1.35
66-701	1.61	3/8" x 1/8"	0.48	0.02	67-701	1.44
66-702	2.43	3/8" x 1/4"	0.48	0.02	67-702	1.44
		1/2" x 1/8"	0.56	0.04	67-703	2.17
66-704	2.27	1/2" x 1/4"	0.56	0.04	67-704	2.21
66-705	2.43	1/2" x 3/8"	0.56	0.04	67-705	2.31
		3/4" x 1/4"	0.62	0.12	67-707	2.86
66-708	3.51	3/4" x 3/8"	0.62	0.10	67-708	2.86
66-709	3.72	3/4" x 1/2"	0.62	0.10	67-709	2.94
		1" x 3/8"	0.75	0.18	67-711	5.27
66-712	5.99	1" x 1/2"	0.75	0.16	67-712	5.27
66-713	8.12	1" x 3/4"	0.75	0.16	67-713	5.43

Max. pressure: 300 psi WOG @ 72°F; 150 psi WOG saturated steam

- Meet ANSI/ ASME B1.20.1 standards
- Galvanized meet ASME B16.3 Standards
- Black meet ASTM 197 standards

**90° ELBOW**



Part #	Size	List Price
69-101	1/4"	20.43
69-102	3/8"	16.78
69-103	1/2"	9.30
69-104	3/4"	10.67
69-105	1"	15.83
69-106	1-1/4"	24.48
69-107	1-1/2"	32.91
69-108	2"	79.42

**45° ELBOW**



Part #	Size	List Price
69-181	1/4"	59.75
69-182	3/8"	56.02
69-183	1/2"	31.30
69-184	3/4"	37.58
69-185	1"	41.14
69-186	1-1/4"	61.69
69-187	1-1/2"	79.69
69-188	2"	121.49

**90° STREET ELBOW**



Part #	Size	List Price
69-161	1/4"	22.39
69-162	3/8"	28.00
69-163	1/2"	15.34
69-164	3/4"	21.63
69-165	1"	23.52
69-166	1-1/4"	26.91
69-167	1-1/2"	37.61
69-168	2"	128.75

**TEE**



Part #	Size	List Price
69-252	3/8"	28.36
69-253	1/2"	16.17
69-254	3/4"	17.42
69-255	1"	22.52
69-256	1-1/4"	35.55
69-257	1-1/2"	47.40
69-258	2"	73.65

**COUPLING**



Part #	Size	List Price
69-411	1/4"	15.79
69-412	3/8"	15.79
69-413	1/2"	9.57
69-414	3/4"	11.89
69-415	1"	14.49
69-416	1-1/4"	28.93
69-417	1-1/2"	44.53
69-418	2"	144.40

**MALLEABLE FITTINGS****BLACK EXTRA HEAVY 300# MALLEABLE IRON****REDUCING COUPLING**

Part #	Size	List Price
69-432	3/8 x 1/4"	25.74
69-434	1/2 x 1/4"	26.36
69-435	1/2 x 3/8"	25.10
69-438	3/4 x 1/2"	25.66
69-441	1 x 1/2"	36.60
69-442	1 x 3/4"	40.27

**CAP**

Part #	Size	List Price
69-471	1/4"	17.45
69-472	3/8"	20.50
69-473	1/2"	19.81
69-474	3/4"	21.85
69-475	1"	28.69
69-476	1-1/4"	36.13
69-477	1-1/2"	52.81
69-478	2"	69.65

**UNION**

• Brass Seat



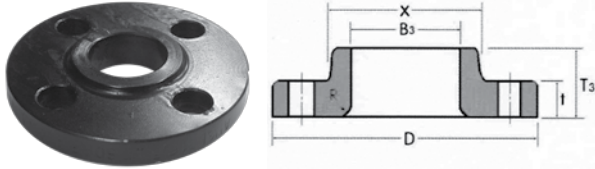
Part #	Size	List Price
69-600	1/8"	50.56
69-601	1/4"	56.97
69-602	3/8"	60.79
69-603	1/2"	50.56
69-604	3/4"	52.01
69-605	1"	54.29
69-606	1-1/4"	85.20
69-607	1-1/2"	115.96
69-608	2"	102.59

ASTMA105  
ASME SA105  
ANSI B16.5

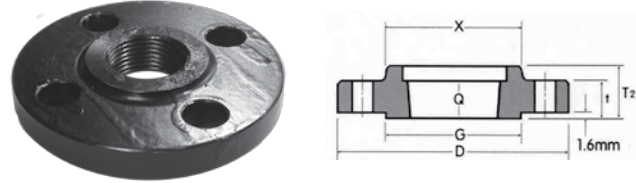
# Forged Steel Flanges

• A105 Forged Steel • 300 LBS GASKETS  
• CLASS 150

( 1-1/2 thru 6" available in #316 Stainless Steel add SS to part# )



**SLIP-ON 1/16" RAISED FACE FORGED STEEL FLANGE**



**THREADED 1/16" RAISED FACE FORGED STEEL FLANGE**

Part #	Size	List Price
107-020	1/2"	21.13
107-021	3/4"	21.09
107-022	1"	21.20
107-023	1-1/4"	18.15
107-024	1-1/2"	18.13
107-025	2"	16.10
107-026	2-1/2"	28.38
107-027	3"	31.08
107-029	4"	36.45
107-031	6"	49.99
107-032	8"	90.25
107-033	10"	147.80
107-034	12"	199.08

Part #	Size	List Price
107-060	1/2"	31.13
107-061	3/4"	31.04
107-062	1"	31.24
107-063	1-1/4"	31.02
107-064	1-1/2"	31.02
107-065	2"	34.75
107-066	2-1/2"	42.59
107-067	3"	42.85
107-069	4"	49.80
107-071	6"	86.14
107-072	8"	147.84
107-073	10"	268.71
107-074	12"	375.03

Nominal Pipe Size	Depth of Socket in.	DRILLING				BOLTING			APPROXIMATE WEIGHT		
		Bolt Circle Diameter	Number of Holes	Diameter of Holes	Diameter of Bolts (inch)	Machine Bolt Length	Stud Bolt Length		Welding Neck	Slip-on and Threaded	Blind
							Y	Y			
1/2	.382	2.382	4	.618	1/2	2.00	2.252	-	1.146	1.036	1.036
3/4	.441	2.752	4	.618	1/2	2.00	2.50	-	2.028	1.653	1.389
1	.500	3.118	4	.618	1/2	2.252	2.50	3.00	2.425	1.893	2.094
1-1/4	.559	3.50	4	.618	1/2	2.252	2.752	3.252	3.086	3.086	3.086
1-1/2	.618	3.882	4	.618	1/2	2.50	2.752	3.252	3.99	3.109	3.571
2	.689	4.752	4	.752	5/8	2.752	3.252	3.752	6.173	4.982	5.82
2-1/2	.752	5.5	4	.752	5/8	3.00	3.50	4.00	9.436	7.562	8.951
3	.811	6.0	4	.752	5/8	3.00	3.50	4.00	11.42	8.818	11.023
4	.941	7.50	8	.752	5/8	3.00	3.50	4.00	16.138	12.677	16.535
6	1.059	9.50	8	.882	3/4	3.252	4.00	4.50	24.824	17.196	26.455
8	1.252	11.752	8	.882	3/4	3.50	4.252	4.752	39.683	28.66	44.092
10	1.311	14.252	12	1.00	7/8	4.00	4.50	5.00	55.116	37.699	66.139
12	1.559	17	12	1.00	7/8	4.00	4.752	5.252	85.936	61.024	97.003

**NIPPLES & FITTINGS**



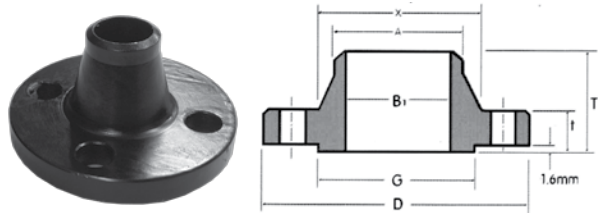
ASTMA105  
ASME SA105  
ANSI B16.5

# Forged Steel Flanges

• A105 Forged Steel

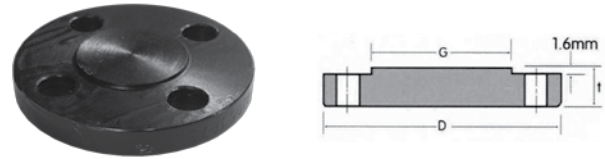
• CLASS 150

( 1-1/2 thru 6" available in #316 Stainless Steel add SS to part# )



**WELD NECK FORGED STEEL FLANGE**

Part #	Size	List Price
107-000	1/2"	32.25
107-001	3/4"	32.14
107-002	1"	32.19
107-003	1-1/4"	30.11
107-004	1-1/2"	30.11
107-005	2"	34.48
107-006	2-1/2"	37.49
107-007	3"	40.92
107-009	4"	49.67
107-011	6"	75.03
107-012	8"	132.55
107-013	10"	212.29
107-014	12"	308.50



**BLIND 1/16" RAISED FACE FORGED STEEL FLANGE**

Part #	Size	List Price
107-040	1/2"	28.42
107-041	3/4"	8.00
107-042	1"	28.53
107-043	1-1/4"	24.71
107-044	1-1/2"	24.71
107-045	2"	27.58
107-046	2-1/2"	41.96
107-047	3"	35.16
107-049	4"	49.28
107-051	6"	75.03
107-052	8"	123.11
107-053	10"	237.10
107-054	12"	357.10

Nominal Pipe Size	Outside Diameter	O.D of Raised Face	Diameter at Base of Hub	Thickness	BORE		LENGTH THRU HUB	
					Welding Neck Socket Welding	Welding Neck	Welding Neck	Slip-on Threaded Socket Welding
					B1	T1	T2	
D	G	X	T	B1	T1	T2		
1/2	3.504	1.382	1.189	.441	.618	1.882	.618	
3/4	3.898	1.689	1.50	.50	.819	2.059	.618	
1	4.252	2.00	1.941	.559	1.051	2.189	.689	
1-1/4	4.606	2.50	2.311	.618	1.382	2.252	.811	
1-1/2	5.00	2.882	2.559	.689	1.610	2.441	.882	
2	5.984	3.618	3.059	.752	2.071	2.50	1.00	
2-1/2	7.008	4.118	3.559	.882	2.469	2.752	1.118	
3	7.52	5.00	4.252	.941	3.071	2.752	1.189	
4	9.016	6.189	5.311	.941	4.031	3.00	1.311	
6	10.984	8.50	7.559	1.00	6.071	3.50	1.559	
8	13.504	10.618	9.689	1.118	7.980	4.00	1.752	
10	15.984	12.752	12.00	1.189	10.02	4.00	1.941	
12	19.016	15.00	14.382	1.252	12.00	4.50	2.189	

**NIPPLES & FITTINGS**



## SWAGES

## SWAGES AND BULL PLUGS

### STANDARD BULL PLUG

- Sch 40 150#
- Zinc plated



Part #	Description	List Price
91-008	2"	39.00
91-007	2" w/ 1/2" TAP	54.15
91-009	2-1/2"	84.60
91-010	3"	104.40
91-011	4"	170.95

### XH BULL PLUG

- Made from sch. 80 pipe.
- Zinc plated
- Hollow



Part #	Description	List Price
90-001	1/4"	7.05
90-002	3/8"	11.31
90-003	1/2"	11.60
90-004	3/4"	12.45
90-005	1"	19.65
90-006	1-1/4"	18.20
90-007	1-1/2"	22.05
90-008	2"	39.60
90-213	2" w/ 1/4" TAP	45.10
90-212	2" w/ 1/2" TAP	45.10
93-212*	2"XXH w/1/2" TAP	60.25
90-009	2-1/2"	75.50
90-010	3"	109.30
90-215	3" w/ 1/2" TAP	214.70
90-011	4"	176.05

\* XXH

### STANDARD SCH. 40 SWAGE MIP X MIP

- Zinc plated



Part #	Description	List Price
93-113	1-1/4" x 1"	24.66
93-121	2" x 1"	37.45
93-122	2" x 1-1/4"	32.75
93-123	2" x 1-1/2"	31.25
93-124	2-1/2" x 2"	50.75
93-125	3" x 1"	91.70
93-127	3" x 1-1/2"	80.66
93-128	3" x 2"	74.95
93-129	3" x 2-1/2"	76.45
93-130	4" x 2"	112.25
93-131	4" x 3"	108.15
93-139	6" x 3"	442.20



**SWAGES AND BULL PLUGS**

**SWAGES**

**SCH 80 XH SWAGES  
MIP X MIP**



Part #	Description	List Price
90-100	1/4" x 1/8"	10.65
90-102	1/2" x 1/4"	13.40
90-103	1/2" x 3/8"	12.55
90-104	3/8" x 1/4"	11.80
90-105	3/4" x 1/4"	15.00
90-106	3/4" x 3/8"	13.86
90-107	3/4" x 1/2"	17.25
90-108	1" x 1/4"	20.20
90-109	1" x 3/8"	19.60
90-110	1" x 1/2"	22.20
90-111	1" x 3/4"	20.95
90-140	1-1/4" x 3/4"	25.65
90-141	1-1/4" x 1"	29.44
90-114	1-1/2" x 1/2"	33.40
90-115	1-1/2" x 3/4"	31.90
90-116	1-1/2" x 1"	39.85
90-117	1-1/2" x 1-1/4"	35.15
90-118	2" x 1/4"	74.40
90-119	2" x 1/2"	60.70
90-120	2" x 3/4"	64.95
90-121	2" x 1"	40.95
90-122	2" x 1-1/4"	37.30
90-123	2" x 1-1/2"	37.95
90-124	2-1/2" x 2"	76.25
90-125	3" x 1"	114.35
90-126	3" x 1-1/4"	69.49
90-127	3" x 1-1/2"	114.40
90-128	3" x 2"	83.75
90-129	3" x 2-1/2"	80.05
90-133	4" x 1"	186.30
90-130	4" x 2"	128.35
90-131	4" x 3"	128.35
90-132	6" x 4"	519.00
90-150	6" x 2"	563.95
90-152	6" x 3"	554.80

**NIPPLES &  
FITTINGS**

**XXH SWAGE**



Part #	Description	List Price
92-102	1/2" x 1/4"	15.83
92-107	3/4" x 1/2"	24.11
92-108	1" x 1/4"	25.88
92-109	1" x 3/8"	25.88
92-110	1" x 1/2"	24.80
92-111	1" x 3/4"	20.95
92-114	1-1/2" x 1/2"	28.13
92-115	1-1/2" x 3/4"	28.13
92-116	1-1/2" x 1"	35.44
92-119	2" x 1/2"	42.09
92-120	2" x 3/4"	42.09
92-121	2" x 1"	69.40
92-122	2" x 1-1/4"	83.60
92-123	2" x 1-1/2"	51.28
92-128	3" x 2"	134.90

**Product Specifications**

These couplings are manufactured in accordance with American Petroleum Institute specifications 5L & 5B.

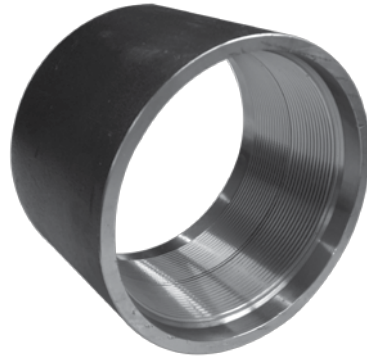
All couplings are phosphated.

All sizes are taper tapped 3/4" per foot on the diameter.

**\*Certified by the American Petroleum Institute**

**A105**

- Black Steel
- API line API SL



- Each end has a short, unthreaded space before the threads start.
- Use with sch 80 & sch. 160 nipples & pipe.
- Max. pressure: 300PSI

**API LINE PIPE COUPLINGS**

Part #	NPT Size	Threads per Inch	Outside Diameter	Length	Unit Weight	List Price
65770API	1/8"	27	0.563	1-1/16	0.04	3.19
65771API	1/4"	18	0.719	1-5/8	0.10	3.36
65772API	3/8"	18	0.875	1-5/8	0.13	4.17
65773API	1/2"	14	1.063	2-1/8	0.24	7.37
65774API	3/4"	14	1.313	2-1/8	0.35	7.60
65775API	1"	11.5	1.576	2-5/8	0.52	9.24
65776API	1-1/4"	11.5	2.054	2-3/4	1.00	12.50
65777API	1-1/2"	11.5	2.200	2-3/4	0.88	12.95
65778API	2"	11.5	2.875	2-7/8	1.83	24.53
65779API	2-1/2"	8	3.375	4-1/8	3.28	48.64
65780API	3"	8	4.000	4-1/4	4.09	63.51
65781API	4"	8	5.200	4-1/2	7.59	103.32
65783API	6"		7.390	4-5/8	12.92	196.56

TWENTY YEARS FROM NOW YOU WILL BE MORE DISAPPOINTED BY THE THINGS THAT YOU DIDN'T DO THAN BY THE ONES YOU DID DO. SO THROW OFF THE BOW-LINES. SAIL AWAY FROM THE SAFE HARBOR. CATCH THE TRADE WINDS IN YOUR SAILS. EXPLORE. DREAM. DISCOVER.

- H. JACKSON BROWN, JR.



**BUSHINGS AND PLUGS****FORGED STEEL FITTINGS**

- Water, oil and steam in the chemical, petrochemical, pulp, paper, shipbuilding, waste incineration and semiconductor industries.
- Max pressure determined by the fittings threaded into.
- 6,000 PSI use with sch 160 pipe.
- ASME

**FORGED BUSHING**

Part #	M x F	List Price
107-500	1/4" x 1/8"	2.78
107-501	3/8" x 1/8"	2.78
107-502	3/8" x 1/4"	2.78
107-503	1/2" x 1/8"	2.84
107-504	1/2" x 1/4"	2.84
107-505	1/2" x 3/8"	2.84
107-508	3/4" x 3/8"	3.45
107-509	3/4" x 1/2"	3.45
107-510	1" x 1/4"	5.62
107-511	1" x 3/8"	5.62
107-512	1" x 1/2"	5.62
107-513	1" x 3/4"	5.62
107-515	1-1/4" x 3/8"	9.17
107-516	1-1/4" x 1/2"	9.17
107-517	1-1/4" x 3/4"	9.17
107-518	1-1/4" x 1"	9.17
107-519	1-1/2" x 1/4"	10.00
107-521	1-1/2" x 1/2"	10.61
107-522	1-1/2" x 3/4"	10.61
107-523	1-1/2" x 1"	10.61
107-524	1-1/2" x 1-1/4"	10.61
107-526	2" x 1/4"	15.92
107-527	2" x 1/2"	15.92
107-528	2" x 3/4"	15.92
107-529	2" x 1"	15.92
107-530	2" x 1-1/4"	15.92
107-531	2" x 1-1/2"	15.92
107-532	2-1/2" x 1"	49.80
107-533	2-1/2" x 1-1/4"	49.80
107-534	2-1/2" x 1-1/2"	49.80
107-535	2-1/2" x 2"	49.80
107-550	3" x 1"	77.05
107-537	3" x 1-1/2"	77.05
107-538	3" x 2"	77.05
107-539	3" x 2-1/2"	77.05

**HEX HEAD FORGED PLUG**

Part #	Size	List Price
107-630	1/8"	1.70
107-631	1/4"	1.70
107-632	3/8"	1.75
107-633	1/2"	1.75
107-634	3/4"	3.30
107-635	1"	4.64
107-636	1-1/4"	7.83
107-637	1-1/2"	11.18
107-638	2"	17.31
107-639	2-1/2"	39.04
107-640	3"	71.33
107-641	4"	117.42

**FORGED STEEL FITTINGS****BUSHINGS AND PLUGS****SQUARE HEAD FORGED PLUG**

- Solid



Part #	Size	List Price
107-670	1/8"	2.01
107-671	1/4"	2.01
107-672	3/8"	2.11
107-673	1/2"	2.22
107-674	3/4"	2.78
107-675	1"	4.23
107-676	1-1/4"	8.76
107-677	1-1/2"	9.99
107-678	2"	15.81
107-679	2-1/2"	40.64
107-680	3"	67.98

**HIGH PRESSURE FORGED STEEL FITTINGS**

At Midland Metal we believe in quality first. Our products are manufactured with a quality management system that has been certified with ISO 9001:2008. Midland Metal will continue to do our best to exceed our customers expectations by providing top quality products.

These heavy duty fittings are classified 2000# and 3000# because they have extra-strong forged construction that stands up to high-pressure applications.

**2000#, 3000# High-Pressure Forged Steel Threaded Pipe Fittings**

- Use with air, water, oil, natural gas, steam
- Maximum Pressure: 3,000 psi @ 72°F, except plugs are rated 6,000 psi @ 72°F
- Pipe Nipples and Pipe: Use threaded Schedule 160 extra-thick-wall black steel
- Flanges: Use threaded extreme-pressure steel
- The thick walls on these Class 2000 and 3000 forged steel fittings stand up to high pressures
- Meet ASTM A105 and ANSI/ASME B1.20.1; also meet ANSI/ ASME B16.11 (revision of ASME B16.11-2009)

**NIPLLES & FITTINGS**

**90° ELBOWS**



**45° ELBOWS**



**STREET ELBOWS**



**COUPLINGS**



**TEES**



**UNIONS**



**SEE OUR WEBSITE FOR  
FULL SPECIFICATION INFORMATION**

- FOR 3000# SOCKET WELD FORGED STEEL FITTINGS, REPLACE THE 101 PREFIX WITH 111

## 2000 LB FORGED STEEL THREADED FITTINGS - ASTM: A105 ANSI: B16.11

## 90° ELBOW



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
100-100	1/8"	200	0.22	11.79
100-101	1/4"	150	0.18	8.35
100-102	3/8"	100	0.29	9.68
100-103	1/2"	80	0.55	8.45
100-104	3/4"	50	0.77	9.22
100-105	1"	30	1.17	11.90
100-106	1-1/4"	20	1.81	27.29
100-107	1-1/2"	15	2.34	29.00
100-108	2"	8	3.75	39.76
100-109	2-1/2"	4	7.89	104.65
100-110	3"	2	10.60	161.61
100-111	4"	1	22.51	529.83

## 45° ELBOW



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
100-181	1/4"	150	0.18	18.10
100-182	3/8"	100	0.22	14.84
100-183	1/2"	80	0.44	12.89
100-184	3/4"	50	0.60	14.44
100-179	1"	30	0.90	16.89
100-186	1-1/4"	20	1.50	25.50
100-187	1-1/2"	15	1.81	32.09
100-188	2"	10	3.11	50.06
100-189	2-1/2"	5	5.73	133.80
100-190	3"	2	9.33	216.04
100-191	4"	1	19.75	543.33

## TEE



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
100-251	1/4"	100	0.26	10.66
100-252	3/8"	80	0.37	11.90
100-253	1/2"	50	0.68	10.25
100-254	3/4"	35	0.95	13.91
100-255	1"	20	1.52	19.26
100-256	1-1/4"	15	2.36	34.15
100-257	1-1/2"	10	3.06	41.31
100-258	2"	6	4.76	51.66
100-259	2-1/2"	3	9.06	130.92
100-260	3"	2	13.49	225.62
100-261	4"	1	32.50	559.55

## CROSS



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
100-392	3/8"	40	0.46	34.05
100-393	1/2"	40	0.86	33.70
100-394	3/4"	30	1.19	35.74
100-395	1"	20	1.83	44.02
100-396	1-1/4"	10	2.78	80.43
100-397	1-1/2"	6	3.86	98.65
100-398	2"	4	5.84	135.06

## FORGED STEEL 3000# FITTINGS

## 90° ELBOW

• Threaded



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
101-100	1/8"	150	0.22	12.52
101-101	1/4"	100	0.31	15.98
101-102	3/8"	80	0.64	15.98
101-103	1/2"	50	0.95	9.17
101-104	3/4"	25	1.52	11.49
101-105	1"	20	2.51	17.10
101-106	1-1/4"	15	3.13	51.00
101-107	1-1/2"	6	5.80	41.87
101-108	2"	5	6.44	50.83
101-109	2-1/2"	2	13.21	165.54
101-110	3"	2	19.58	183.48
101-111	4"	1	32.74	637.74

## STREET ELBOW



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
101-161	1/4"	150	0.24	20.52
101-162	3/8"	80	0.49	18.07
101-163	1/2"	50	0.68	17.26
101-164	3/4"	30	1.17	21.79
101-165	1"	20	2.25	29.05
101-166	1-1/4"	15	2.49	82.76
101-167	1-1/2"	8	4.43	100.03
101-168	2"	5	6.42	91.78

## 45° ELBOW



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
101-180	1/8"	200	0.17	15.89
101-181	1/4"	100	0.26	15.89
101-182	3/8"	80	0.53	15.89
101-183	1/2"	50	0.75	14.96
101-184	3/4"	30	1.23	27.16
101-185	1"	20	2.07	36.98
101-186	1-1/4"	15	2.27	32.50
101-187	1-1/2"	8	4.52	56.66
101-188	2"	6	4.92	65.35
101-189	2-1/2"	2	8.18	165.54
101-190	3"	2	13.16	244.68

## TEE



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
101-250	1/8"	100	0.29	15.21
101-251	1/4"	80	0.44	10.71
101-252	3/8"	50	0.84	10.71
101-253	1/2"	35	1.23	13.08
101-254	3/4"	20	2.03	18.94
101-255	1"	15	3.28	23.23
101-256	1-1/4"	10	3.88	45.12
101-257	1-1/2"	5	7.21	52.64
101-258	2"	4	7.78	68.03
101-259	2-1/2"	2	15.41	226.80
101-260	3"	1	22.47	343.87
101-261	4"	1	42.17	572.99

**3000 LB FORGED STEEL THREADED FITTINGS - ASTM A105/ASME SA105 & ANSI B16.11**

**CROSS**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
101-390	1/8"	100	0.37	65.67
101-391	1/4"	40	0.57	57.22
101-392	3/8"	40	0.97	57.22
101-393	1/2"	30	1.59	36.93
101-394	3/4"	20	2.34	48.72
101-395	1"	12	3.95	78.55
101-396	1-1/4"	6	4.70	90.85
101-397	1-1/2"	4	8.66	121.03
101-398	2"	4	9.41	163.15
101-399	2-1/2"	1	18.76	414.58
101-400	3"	1	27.45	548.94
101-401	4"	1	48.35	780.33

**HALF COUPLINGS**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
101-770	1/8"		0.04	2.64
101-771	1/4"	800	0.04	2.79
101-772	3/8"	500	0.07	2.53
101-773	1/2"	250	0.13	2.32
101-774	3/4"	150	0.22	3.95
101-775	1"	80	0.51	4.59
101-776	1-1/4"	35	0.75	14.29
101-777	1-1/2"	30	1.19	13.96
101-778	2"	20	1.54	14.83
101-779	2-1/2"	12	2.49	33.42
101-780	3"	6	3.70	68.39
101-781	4"	4	6.86	119.48

**CAP**



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
101-470	1/8"	400	0.04	4.64
101-471	1/4"	300	0.09	4.48
101-472	3/8"	250	0.11	4.48
101-473	1/2"	130	0.24	4.38
101-474	3/4"	80	0.40	7.64
101-475	1"	50	0.82	14.35
101-476	1-1/4"	30	1.37	25.88
101-477	1-1/2"	25	1.59	27.61
101-478	2"	15	2.40	35.74
101-479	2-1/2"	10	4.89	78.30
101-480	3"	4	7.72	144.30
101-481	4"	3	10.67	182.10

**COUPLING**



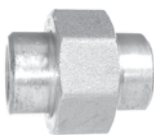
Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
101-410	1/8"	300	0.11	4.64
101-411	1/4"	250	0.09	4.64
101-412	3/8"	200	0.13	4.64
101-413	1/2"	100	0.29	3.81
101-414	3/4"	70	0.42	5.00
101-415	1"	35	0.99	8.65
101-416	1-1/4"	20	1.79	14.44
101-417	1-1/2"	15	2.38	18.70
101-418	2"	10	3.09	23.33
101-419	2-1/2"	5	5.05	57.68
101-420	3"	3	7.45	94.20
101-421	4"	2	13.85	204.51



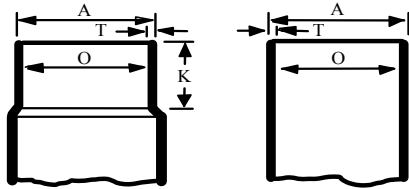
## REDUCING COUPLING

Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
101-431	1/4" x 1/8"	250	0.09	7.48
101-432	3/8" x 1/8"	200	0.13	7.81
101-433	3/8" x 1/4"	200	0.13	7.81
101-434	1/2" x 1/4"	100	0.29	11.70
101-435	1/2" x 3/8"	100	0.29	11.70
101-437	3/4" x 3/8"	70	0.42	13.89
101-438	3/4" x 1/2"	70	0.42	8.85
101-440	1" x 3/8"	35	0.99	18.09
101-441	1" x 1/2"	35	0.99	18.09
101-442	1" x 3/4"	35	0.99	20.26
101-443	1-1/4" x 3/8"	20	1.79	31.67
101-444	1-1/4" x 1/2"	20	1.79	31.67
101-445	1-1/4" x 3/4"	20	1.79	31.67
101-446	1-1/4" x 1"	20	1.79	35.47
101-447	1-1/2" x 1/2"	15	2.36	38.53
101-449	1-1/2" x 1"	15	2.36	34.40
101-450	1-1/2" x 1-1/4"	15	2.36	34.40
101-451	2" x 3/4"	10	3.09	55.87
101-452	2" x 1"	10	3.09	55.87
101-453	2" x 1-1/4"	10	3.09	55.87
101-454	2" x 1-1/2"	10	3.09	55.87
101-458	2" x 1/2"	10	3.09	49.88
101-459	2-1/2" x 1-1/2"	5	5.05	148.22
101-460	2-1/2" x 2"	5	5.05	132.34
101-461	3" x 1-1/2"	3	7.45	175.02
101-462	3" x 2"	3	7.45	180.33
101-463	3" x 2-1/2"	3	7.45	175.02
101-464	4" x 1-1/2"	2	13.85	267.97
101-465	4" x 2"	2	13.85	267.97
101-466	4" x 2-1/2"	2	13.85	267.97
101-467	4" x 3"	2	13.85	267.97

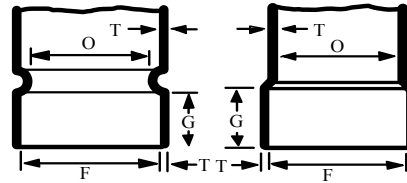
## UNION



Part #	Size	Box/Case	Approx. Wt. Lbs.	List Price
101-600	1/8"	100	0.62	18.80
101-601	1/4"	70	0.62	18.80
101-602	3/8"	70	0.53	19.11
101-603	1/2"	50	0.75	16.23
101-604	3/4"	30	1.06	19.88
101-605	1"	20	1.70	25.96
101-606	1-1/4"	14	2.27	44.32
101-607	1-1/2"	10	3.59	49.13
101-608	2"	6	5.36	66.59
101-609	2-1/2"	2	8.00	181.62
101-610	3"	2	11.62	194.31
101-611	4"	1	26.46	396.54



**MALE (FITTING)**



**FEMALE (COPPER)**

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	0.08	4-1/8	4-1/8	2-1/8	4-1/8	0.08	4-1/8	4-1/8	2-1/8	1/8	3-4/8	
5	5-1/8		1-1/8	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		6-1/8	6-1/8	3-2/8	6-1/8		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	

• Temp range 32° to 200°F

Pressure @100° - 1/8-1 : 500 PSI  
 - 1-1/4-2 : 400 PSI  
 - 2-1/2 - 3: 300 PSI

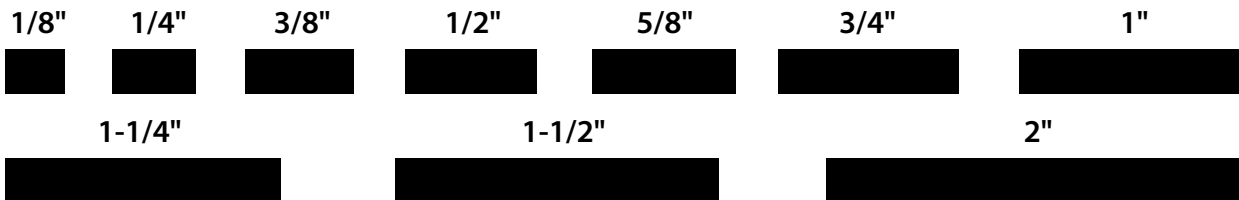
**NSF - 61 Certified Alloy C12200**

**Symbol of Joint Ends**

- C** Solder joint fitting end made to receive copper tube diameter
  - Ftg.** Solder joint fitting end made to copper tube diameter
  - F** Internal ANSI Standard Taper Pipe Thread-Female
  - M** External ANSI Standard Taper Pipe Thread-Male
- Threaded ends ANSI/ ASME B1. Solder ends ASTM B88

**The above conforms to ASTM B 88 & ASTM B 306, A 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.



**COPPER FITTINGS**

**WROT SOLDER JOINT**

**90° Ell C x C**



**WE-500-R  
607-R  
107-C**

\* See website for larger sizes

Part#	Nominal (ID)	OD	Approx Net Wt.	Ind #	List Price
77-100	1/8"	1/4"	0.01	W 02003	4.74
77-101	1/4"	3/8"	0.01	W 02009	4.99
77-102	3/8"	1/2"	0.03	W 02017	4.74
77-104	1/2"	5/8"	0.04	W 02022	1.58
77-107	5/8"	3/4"	0.07	W 02028	9.62
77-108	3/4"	7/8"	0.09	W 02034	3.56
77-110	1"	1-1/8"	0.17	W 02047	8.73
77-113	1-1/4"	1-3/8"	0.27	W 02077	13.18
77-114	1-1/2"	1-5/8"	0.41	W 02085	20.55
77-116	2"	2-1/8"	0.73	W 02086	37.46
77-118	2-1/2"	2-5/8"	1.16	W 02087	74.95
77-119	3"	3-1/8"	1.87	W 02088	100.18
77-120	4"	4-1/8"	3.79	W 02090	256.42
77-103	3/8" x 1/4"		0.03	W 02019	8.21
77-105	1/2"x3/8"		-	W 02023	13.25
77-109	3/4" x 1/2"		0.12	W 02036	9.20
77-112	1"x1/2"		0.23	W 02051	18.84
77-111	1"x3/4"		0.23	W 02049	16.86
77-117	2"x1 -1/2"		0.73	W 02078	76.05

**90° Street Ell  
Ftg. x C**



\* See website for larger sizes

77-124	1/4"		0.01	W 02312	8.75
77-125	3/8"		0.03	W 02321	6.04
77-126	1/2"		0.05	W 01652	2.42
77-127	5/8"		0.07	W 02330	9.94
77-128	3/4"		0.12	W 01654	5.13
77-129	1"		0.22	W 02344	13.26
77-130	1-1/4"		0.33	W 02384	20.10
77-131	1-1/2"		0.45	W 02385	26.33
77-132	2"		0.87	W 02386	57.35
77-134	3"		1.93	W 02388	145.96

**90° Long Turn Ell  
C x C**



**WE-500-L  
607-LT  
107-L**

\* See website for larger sizes

77-139	1/8"		0.01	W 02715	8.89
77-140	1/4"		0.02	W 02716	6.70
77-141	5/16"		0.03		8.31
77-142	3/8"		0.04	W 02717	8.44
77-143	1/2"		0.06	W 02722	7.20
77-144	5/8"		0.10	W 02728	7.30
77-145	3/4"		0.15	W 02734	9.32
77-146	1"				13.92
77-147	1-1/4"				22.21
77-148	1-1/2"				32.69
77-149	2"				85.86

**90° Long Turn Street Ell  
Ftg. x C**



**WE-503-L  
607-2LT**

\* See website for larger sizes

77-152	1/8"		0.01		9.97
77-153	1/4"		0.22	W 02809	7.93
77-154	3/8"		0.04	W 02817	15.50
77-155	1/2"		0.06	W 02822	10.84
77-156	5/8"				12.81
77-157	3/4"				12.95
77-158	1"				22.85
77-159	1-1/4"		0.11	W 02828	12.81
77-160	1-1/2"		0.15	W 02834	12.95

**45° ELL C x C**

**WE-504  
606  
106**



Part#	Nominal	Approx Net Wt.	Ind #	List Price
77-161	1/8"	0.01	W 03005	11.91
77-162	1/4"	0.01	W 03012	8.89
77-163	3/8"	0.02	W 03021	7.61
77-164	1/2"	0.04	W 03026	2.91
77-165	5/8"	0.06	W 03030	13.78
77-166	3/4"	0.10	W 03034	5.08
77-167	1"	0.19	W 03044	12.78
77-168	1-1/4"	0.27	W 03050	17.28
77-169	1-1/2"	0.39	W 03055	20.81
77-170	2"	0.75	W 03059	34.76
77-171	2-1/2"	1.23	W 03063	74.05

\* See website for larger sizes

**Street 45°  
Ftg. x C**

**WE-505  
606-2**

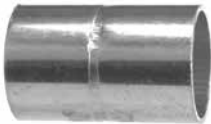


77-177	1/4"	0.01	W 03312	13.25
77-178	3/8"	0.02	W 03321	10.39
77-179	1/2"	0.06	W 03326	3.47
77-180	5/8"	0.06	W 03330	21.91
77-181	3/4"	0.10	W 03334	5.13
77-182	1"	0.18	W 03344	16.86
77-183	1-1/4"	0.27	W 03350	21.27
77-184	1-1/2"	0.38	W 03355	26.01
77-185	2"	0.75	W 03359	41.36

\* See website for larger sizes

**Coupling (Socket)  
w/Rolled Tube Stop  
C x C**

**WC-400  
100**

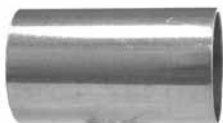


77-201	1/8"	0.01	W 01003	1.41
77-202	1/4"	0.01	W 01009	1.17
77-203	3/8"	0.02	W 01017	1.53
77-204	1/2"	0.03	W 01022	1.20
77-205	5/8"	0.04	W 01028	3.45
77-206	3/4"	0.06	W 01034	2.41
77-207	1"	0.10	W 01047	4.81
77-208	1-1/4"	0.15	W 01055	8.53
77-209	1-1/2"	0.22	W 01063	11.28
77-210	2"	0.39	W 01072	18.84
77-211	2-1/2"	0.71	W 01082	42.39
77-212	3"	0.98	W 01092	53.14
77-214	4"	2.01	W 10107	139.74

\* See website for larger sizes

**Coupling (Socket)  
Less Tube Stop  
C x C**

**WC-400NS  
601**



77-219	1/8"	0.01	W 01900	2.29
77-220	1/4"	0.01	W 01901	1.25
77-222	1/2"	0.03	W 01903	1.58
77-223	3/4"	0.06	W 01905	4.07
77-224	1"	0.10	W 01906	6.95
77-225	1-1/4"	0.15	W 01907	10.48
77-226	1-1/2"	0.22	W 01908	14.16
77-227	2"	0.39	W 01909	23.94

\* See website for larger sizes

Cast Fittings available upon request

## COPPER FITTINGS

## WROT SOLDER JOINT

**Coupling (Socket)  
w/Dimpled Tube Stop  
C x C**



**WC-400S**

Part#	Nominal	Approx Net Wt.	Ind #	List Price
77-238	1/2"	0.03		1.73
77-240	3/4"	0.06		3.68
77-241	1"	0.10		6.82
77-242	1-1/4"	0.15		12.72
77-244	2"	0.39		23.26
77-247	4"	2.01		126.12

**Reducer Coupling  
w/ Stop  
C x C**



**WC-400R  
600-R**

• 21 more sizes available -  
see website

77-252	1/4" x 1/8"	0.01	W 01011	8.10
77-254	3/8" x 1/8"			3.24
77-253	3/8" x 1/4"	0.02	W 01019	2.57
77-256	1/2" x 1/4"	0.03	W 01023	3.04
77-255	1/2" x 3/8"	0.03	W 01021	2.50
77-258	5/8" x 1/2"	0.04	W 01025	6.12
77-264	3/4" x 1/4"			4.98
77-263	3/4" x 3/8"	0.06	W 01036	5.40
77-262	3/4" x 1/2"	0.06	W 01029	4.27
77-267	1"x1/2"	0.10	W 01049	9.36
77-265	1"x3/4"	0.12	W 01038	7.92
77-270	1 -1/4" x 1/2"	0.14	W 01058	19.21
77-269	1 -1/4" x 3/4"	0.17	W 01056	11.11
77-268	1-1/4" x 1"	0.17	W 01051	11.11
77-274	1-1/2" x 1/2"	0.19	W 01067	19.54
77-273	1 -1/2" x 3/4"	0.25	W 01065	18.40
77-272	1-1/2" x1"	0.24	W 01064	18.40
77-271	1-1/2" x 1-1/4"	0.24	W 01060	18.40
77-277	2" x 1"	0.48	W 01074	30.00
77-276	2 x 1-1/4"	0.46	W 01073	28.45
77-275	2" x 1-1/2"	0.42	W 01069	28.45
77-280	2-1/2"x2"	0.79	W 01075	62.91
77-284	3" x 2-1/2"	1.15	W 01093	78.42

**Fitting Reducer**

**Ftg. x C**



**WC-403  
600-2**

• 16 more sizes available -  
see website

77-292	3/8" x 1/8"	0.01	W 01314	4.29
77-291	3/8" x 1/4"	0.02	W 01312	3.49
77-294	1/2" x 1/4"	0.03	W 01317	3.13
77-293	1/2" x 3/8"	0.03	W01315	2.55
77-295	5/8" X 1/2"	0.03	W 01320	6.80
77-299	3/4" x 1/4"			6.33
77-298	3/4" x 3/8"	0.05	W 01327	5.60
77-297	3/4" x 1/2"	0.06	W 01326	6.02
77-296	3/4" x 5/8"	0.08	W 01325	4.34
77-352	1" x 1/2"	0.10	W 01265	8.60
77-300	1"x3/4"	0.11	W 01337	6.60
77-356	1 -1/4" x 1/2"	0.14	W 01347	12.41
77-355	1 -1/4" x 3/4"	0.15	W 01345	12.41
77-354	1-1/4" x1"	0.17	W 01343	14.94
77-360	1 -1/2" x 1/2"	0.21	W 01355	15.80
77-359	1 -1/2" x 3/4"	0.21	W 01353	15.80
77-358	1-1/2"x1"	0.22	W 01351	22.00
77-357	1 -1/2" X 1-1/4"	0.21	W 01350	21.14
77-365	2" x 1/2"	0.44	W 01364	33.28
77-364	2" x 3/4"	0.39	W 01362	31.36
77-363	2" x 1"	0.40	W 01360	31.36
77-362	2" x 1 -1/4"	0.38	W 01359	29.75
77-361	2" x 1-1/2"	0.39	W 01358	29.75
77-370	3" x 2-1/2"	0.93	W 01376	76.05

# WROT SOLDER JOINT

# COPPER FITTINGS

## Flush Bushing Ftg. x C

WC-106  
618



Part#	Nominal	Approx Net Wt.	Ind #	List Price
77-382	3/4" x 1/2"	0.08	W 01726	6.12
77-383	3/4" x 5/8"	0.04	W 01725	6.39
77-385	1" x 3/4"	0.13	W 01737	9.38
77-387	1" x 1/2"	0.22	W 01739	10.55

## Male Adapter C x M

WC-401  
604



• 14 more reducing sizes available

\* See website for larger sizes

77-393	1/8"			22.00
77-394	1/4"			17.28
77-398	3/8"	0.06	W 01125	10.09
77-401	1/2"	0.08	WB01131	4.69
77-306	3/4"	0.14	WB01146	5.56
77-309	1"	0.24	WB01163	14.36
77-314	1-1/4"	0.41	W 01171	21.27
77-318	1-1/2"	0.50	W 01179	24.42
77-322	2"	0.87	W 01187	41.36
77-323	2-1/2"	0.87	W 01187	41.36
77-395	1/4" x 1/2"	0.09	W 01113	9.66
77-303	1/2" x 3/4"	0.16	W 01130	12.29
77-304	1/2" x 1"	0.16	W 01130	13.00
77-308	3/4" x 1/2"			9.03
77-307	3/4" x 1"	0.29	W 01145	21.27
77-312	1" x 3/4"	0.18	W 01164	21.27
77-320	1-1/2" x 1-1/4"	0.44	W 01180	49.46

## Fitting Male Adapters Ftg. x M

WC-404  
604-2



77-331	1/2"	0.09	W 01431	14.63
77-332	1/2" x 3/4"	0.15		33.82
77-333	3/4"	0.15	W 01446	18.84
77-334	1"	0.15	W 01463	16.39
77-335	1-1/4"	0.41	W 01471	73.99
77-336	1-1/2"	0.41	W 0147X9	77.59
77-337	2"	0.86	W 01487	144.90

## 125# Companion Flange



Part#	Nominal	List Price
77-925	1/2"	112.13
77-926	3/4"	112.13
77-927	1"	83.29
77-928	1-1/4"	90.74
77-847	1-1/2"	111.49
77-848	2"	238.68
77-849	2-1/2"	206.83
77-850	3"	214.06
77-851	4"	298.69
77-852	6"	584.37

## 150# Companion Flange



Part#	Nominal	List Price
77-931	1"	120.03
77-932	1-1/4"	106.49
77-840	1-1/2"	155.98
77-841	2"	200.58
77-842	2-1/2"	252.83
77-843	3"	239.55
77-845	4"	395.73
77-846	6"	1280.82
77-933	8"	3491.50

# COPPER FITTINGS

# WROT SOLDER JOINT

**Female Adapters  
C x F  
WC402  
603  
WC402R  
603R**



• More sizes available

Part#	Nominal	Approx Net Wt.	Ind #	List Price
77-340	3/8"	0.06	W 01225	13.86
77-343	1/2"	0.10	WB01231	6.88
77-349	3/4"	0.14	WB01246	12.83
77-402	1"	0.24	WB01263	16.69
77-406	1-1/4"	0.43	W 01271	24.42
77-410	1-1/2"	0.58	W 01279	38.21
77-413	2"	0.74	W 01287	51.89
77-416	3"	1.83	W 01297	286.49
77-341	3/8" x 1/2"	0.10	W 01224	10.75
77-347	1/2" x 1/4"	0.05	W 01233	8.19
77-346	1/2"x3/8"	0.70	W 01232	8.19
77-345	1/2" x 3/4"	0.15	WB01230	11.40
77-351	3/4" x 1/2"	0.11	W 01247	11.40
77-405	1"x 1/2"	0.29	W 01265	30.56
77-404	1"x3/4"	0.22	W 01264	24.42
77-411	1-1/4" x 1"	0.47	W01297	19.27
77-407	1-1/4" x 1-1/2"	0.52	W 01270	52.18

**Fitting Female Adapt.  
Ftg. x F**



**WC405  
603-2      WC405R  
603R**

77-419	3/8"	0.05	W 01525	14.42
77-420	1/2"	0.11	W 01531	10.48
77-423	3/4"	0.19	W 01546	13.55
77-424	1			24.20
77-425	1/4"	0.25	W 01563	38.83
77-426	1-1/2"	0.55	W 01579	51.34
77-427	2"	0.68	W 01587	68.22

**Cap  
WC-415  
617**



77-429	1/4"	0.01	W 07004	1.46
77-430	3/8"	0.01	W 07006	2.31
77-431	1/2"	0.02	WB07007	1.15
77-432	5/8"	0.03	W 07008	2.76
77-433	3/4"	0.04	WB07009	2.15
77-434	1"	0.08	WB07011	5.08
77-435	1-1/4"	0.11	W 07012	6.80
77-436	1-1/2"	0.18	W 07013	9.99
77-437	2"	0.30	W 07014	18.37
77-438	2-1/2"	0.78	W07015	52.81

**Unions C x C  
WC-407**



77-453	1/4"	0.11	W 08001	94.97
77-454	3/8"	0.11	W 08002	95.97
77-455LF	1/2"	0.17	W 08003	17.45
77-456LF	3/4"	0.37	W 08004	28.80
77-457LF	1"	0.51	W 08005	54.52
77-606LF	1-1/4"	0.98	W08006	81.01
77-607LF	1-1/2"	1.21	W08007	99.76
77-608LF	2"		W08008	173.30

**U-Type Strap  
WS-1100**

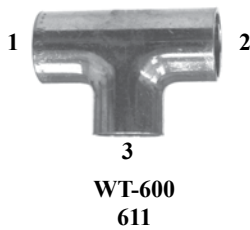


77-461	1/2"	0.03	A 02529	0.90
77-462	3/4"	0.03	A 02574	1.52
77-463	1"	0.04	A 02614	1.61
77-464	1-1/4"	0.04	A 02650	1.94
77-465	1-1/2"	0.05	A 02675	2.31
77-466	2	0.06	A 02708	2.58

Lead Free Cast Solder Fittings available- See our Website

Part#	Nominal 1 x 2 x 3	Approx Net Wt.	Ind #	List Price
77-467	1/8"	0.02	W 40306	9.45
77-468	1/4"	0.03	W 04000	9.97
77-470	3/8"	0.05	W 04001	8.00
77-473	1/2"	0.08	WB04006	2.71
77-481	5/8"	0.12	W 04017	17.40
77-483	3/4"	0.18	WB04031	6.52
77-490	1"	0.35	WB04048	20.15
77-504	1-1/4"	0.58	W 04068	27.53
77-519	1-1/2"	0.72	W 04084	42.46
77-543	2"	1.35	W 40102	66.21
77-563	2-1/2"	2.21	W 40123	133.59
77-589	3"	2.75	W 40152	133.59
77-474	1/2"x1/2"x1"	0.13	W 04067	26.75
77-489	3/4"x1/2"x1/2"	0.15	WB04043	7.69
77-488	3/4" x 1/2" x 3/4"	0.19	WB04041	7.69
77-486	3/4" x 3/4" x 1/2"	0.15	WB04033	6.27
77-485	3/4"x3/4"x1"	0.25	W 04065	21.91
77-502	1"x1/2"x3/4"	0.34	W 04062	25.32
77-501	1"x1/2"x1"	0.34	W 04061	24.00
77-500	1"x3/4"x1/2"	0.27	W 04058	24.00
77-499	1"x3/4"x3/4"	0.31	W 04056	24.04
77-498	1"x3/4"x1"	0.38	W 04055	24.09
77-496	1"x1"x1/2"	0.24	WB04051	20.23
77-493	1"x1"x3/4"	0.29	WB04049	20.23
77-492	1"x1"x 1-1/4"	0.64	W 04082	44.98
77-518	1 -1/4" x 1/2" x 1-1/4"	0.58	W 04083	39.10
77-516	1-1/4"x3/4"x3/4"	0.60	W 04080	38.21
77-514	1 -1/4" x 3/4" x 1-1/4"	0.63	W 04078	38.21
77-511	1-1/4" x 1"x1"	0.50	W 04074	38.21
77-510	1-1/4" x 1"x 1-1/4"	0.62	W 04073	39.10
77-509	1-1/4"x1-1/4"x1/2"	0.33	W 04071	29.76
77-508	1-1/4" x 1-1/4" x 3/4"	0.39	W 04070	29.76
77-507	1-1/4"x1-1/4"x1"	0.47	W 04069	29.76
77-506	1 -1/4" x1 -1/4" x 1-1/2"	0.79	W 40100	64.48
77-524	1 -1/2" x 1 -1/2" x 1/2"	0.46	W 04088	31.60
77-523	1 -1/2" x 1-1/2" x 3/4"	0.51	W 04087	31.60
77-522	1-1/2" x 1-1/2" x1"	0.60	W 04086	31.60
77-521	1-1/2"x1-1/2"x 1-1/4"	0.72	W 04085	30.55
77-560	2"x1"x1"	0.98	W 40247	86.08
77-559	2"x1"x2"	1.34	W 40245	86.08
77-556	2" x 1-1/4" x 1-1/4"	1.14	W 40117	93.37
77-554	2" x 1 -1/2" x 3/4"	1.40	W 40113	86.08
77-549	2"x2"x1/2"	0.77	W 40107	50.01
77-548	2" x 2" x 3/4"	0.90	W 40106	50.01
77-547	2"x2"x1"	0.99	W 40105	51.60
77-546	2" x 2" x 1-1/4"	1.01	W 40104	57.25
77-545	2" x 2" x 1-1/2"	1.17	W 40103	51.60
77-588	3"x3"x1"	2.14	W 04075	171.51
77-587	3" x 3" x 1-1/4"	2.18	W 04074	171.51
77-585	3"x 3" x 2"	2.53	W 40150	171.51

**Tee**  
**C x C x C**



• See our website for more sizes

Cast Fittings available upon request





**SCHEDULE 80 PVC NIPPLES**

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



- Dark Grey
- NSF-61 Cert.

**1/2" DIAMETER**

Part #	Length	List Price
55-060	X Close (1-1/8")	0.80
55-061	1-1/2"	0.84
55-062	2"	0.84
55-063	2-1/2"	0.90
55-064	3"	0.98
55-065	3-1/2"	1.01
55-066	4"	1.07
55-067	4-1/2"	1.21
55-068	5"	1.30
55-069	5-1/2"	1.32
55-070	6"	1.30
55-072	8"	1.50
55-074	10"	1.76
55-075	12"	1.91
55-076	12"	2.01
55-240	18"	3.40
55-241	24"	4.17
55-243	36"	6.87
55-244	48"	8.54
55-245	60"	10.02

**3/4" DIAMETER**

Part #	Length	List Price
55-080	x Close (1-3/8")	0.80
55-081	1-1/2"	0.80
55-082	2"	0.86
55-083	2-1/2"	0.94
55-084	3"	0.96
55-085	3-1/2"	1.09
55-086	4"	1.15
55-087	4-1/2"	1.33
55-088	5"	1.37
55-089	5-1/2"	1.46
55-090	6"	1.62
55-092	8"	1.97
55-093	10"	2.34
55-096	12"	2.66
55-097	18"	4.07
55-098	24"	5.19
55-099	36"	8.73
55-246	48"	11.69
55-247	60"	14.30

**1" DIAMETER**

Part #	Length	List Price
55-100	X Close (1-1/2")	1.21
55-101	2"	1.32
55-102	2-1/2"	1.44
55-103	3"	1.50
55-104	3-1/2"	1.62
55-105	4"	1.75
55-106	4-1/2"	1.97
55-107	5"	2.17
55-108	5-1/2"	2.32
55-109	6"	2.38
55-111	8"	2.82
55-115	12"	3.76
55-116	18"	6.18
55-117	36"	11.96
55-118	48"	15.29

**1-1/4" DIAMETER**

Part #	Length	List Price
55-120	X Close (1-5/8")	1.92
55-121	2"	2.03
55-122	2-1/2"	2.24
55-123	3"	2.46
55-124	3-1/2"	2.72
55-125	4"	2.90
55-126	4-1/2"	3.15
55-127	5"	3.41
55-128	5-1/2"	3.57
55-129	6"	3.74
55-131	8"	
55-132	12"	
55-133	18"	
55-134	36"	
55-135	48"	

**PLASTIC FITTINGS**



**PVC SCHEDULE 80 NIPPLES****PLASTIC FITTINGS****1-1/2" DIAMETER**

Part #	Length	List Price
55-140	X Close (1-5/8")	2.29
55-141	2"	2.36
55-142	2-1/2"	2.60
55-143	3"	2.85
55-144	3-1/2"	3.10
55-145	4"	3.30
55-146	4-1/2"	3.54
55-147	5"	3.82
55-148	5-1/2"	4.04
55-149	6"	4.35
55-150	8"	5.39
55-151	12"	6.69
55-152	18"	10.25
55-153	24"	13.11
55-154	36"	18.71
55-155	48"	22.94

**2" DIAMETER**

Part #	Length	List Price
55-160	X Close (2")	3.02
55-161	2-1/2"	3.30
55-162	3"	3.59
55-163	3-1/2"	3.89
55-164	4"	4.16
55-165	4-1/2"	4.64
55-166	5"	4.88
55-167	5-1/2"	5.17
55-168	6"	5.47
55-170	8"	6.96
55-174	12"	9.45
55-175	18"	13.50
55-176	24"	16.88
55-177	36"	24.75
55-178	48"	32.52
55-179	60"	40.13

**2-1/2" DIAMETER**

Part #	Length	Box/Case	List Price
55-180	x Close (2")	25	9.62
55-181	3"	30	10.88
55-182	4"	25	11.70
55-183	5"	25	12.53
55-184	6"	25	13.34
55-185	8"	16	14.15
55-186	10"	16	15.06
55-187	12"	16	15.83
55-190	18"	20	35.87
55-191	24"	10	44.24
55-192	36"	3	61.74
55-193	48"	3	79.26
55-194	60"		99.09

**3" DIAMETER**

Part #	Length	Box Qty	List Price
55-200	x Close	25	11.51
55-201	3"	20	12.53
55-203	4"	30	14.61
55-205	5"	20	16.73
55-207	6"	20	18.78
55-209	8"	10	22.95
55-211	10"	10	27.14
55-213	12"	10	31.31
55-214	18"		43.83
55-215	24"		56.36
55-216	36"		81.33
55-217	48"		106.38
55-218	60"		155.75

**4" DIAMETER**

Part #	Length	Box Qty	List Price
55-230	x Close	25	18.87
55-231	4"	18	19.58
55-232	5"	20	22.11
55-233	6"	20	24.59
55-234	8"	10	29.85
55-235	12"	10	40.89
55-236	18"		58.80
55-237	24"		77.16
55-238	36"		110.55
55-239	48"		143.93
55-242	60"		179.90

• NSF 61 certified for use with drinking (potable) water • Max Temperature: 140°F • Max Pressure: Not Rated  
Resistant to corrosion, strong and rigid - commonly used in low pressure plumbing applications. ASTM D1784 and D2466.

**SLIP TEES**



Part #	Size	List Price
55-710	1/2"	0.98
55-711	3/4"	1.00
55-712	3/4" x 3/4" x 1/2"	1.22
55-713	1"	1.74
55-714	1" x 1" x 1/2"	1.75
55-715	1" x 1" x 3/4"	1.92
55-716	1-1/4"	2.74
55-717	1-1/2"	3.49
55-718	2"	5.49
55-719	2-1/2"	16.99
55-484	3"	21.29
55-485	4"	38.51

**90° STREET ELBOW**



Part #	Size	Box Qty	List Price
55-850	1/2"	50	1.87
55-851	3/4"	50	2.31
55-852	1"	50	3.99
55-853	1-1/4'	25	4.77
55-854	1-1/2"	25	5.26
55-855	2"	10	10.14

**PLASTIC FITTINGS**

**SLIP COUPLING**



Part #	Size	List Price
55-736	1/2"	0.41
55-737	3/4"	0.60
55-738	1"	1.04
55-739	1-1/4"	1.54
55-740	1-1/2"	1.52
55-741	2"	2.33
55-742	2-1/2"	5.52
55-743	3"	7.70

**90° SLIP ELBOW**



Part #	Size	List Price
55-720	1/2"	0.65
55-721	3/4"	0.78
55-722	1"	1.48
55-723	1-1/4'	2.32
55-724	1-1/2"	3.13
55-725	2"	3.93
55-726	2-1/2"	11.36
55-727	3"	13.60

**THREADED COUPLING**



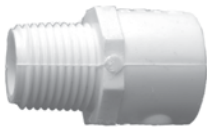
Part #	Size	List Price
55-950	1/2"	0.94
55-951	3/4"	1.62

**SLIP X FEMALE ADAPTER**



Part #	Size	List Price
55-744	1/2"	0.78
55-812	1/2" x 1/4"	1.25
55-813	1/2" x 3/8"	1.25
55-745	3/4"	1.00
55-746	1"	1.02
55-747	1-1/4"	1.60
55-748	1-1/2"	1.92
55-749	2"	2.57
55-807	2-1/2"	7.37
55-804	3"	8.33

**MIP X SLIP ADAPTER**



Part #	Size	List Price
55-750	1/2"	0.67
55-751	3/4"	0.68
55-752	1"	1.32
55-753	1-1/4"	1.62
55-754	1-1/2"	2.02
55-755	2"	2.65
55-808	2-1/2"	7.90
55-811	3"	10.35

**SLIP CAP**



Part #	Size	List Price
55-756	1/2"	0.63
55-757	3/4"	0.64
55-758	1"	1.13
55-759	1-1/4"	1.73
55-760	1-1/2"	1.77
55-761	2"	2.02
55-762	2-1/2"	7.67
55-801	3"	7.02

**THREADED PIPE CAP**



Part #	Size	List Price
55-763	1/2"	1.41
55-764	3/4"	1.64

**SLIP X FIP BUSHING**



Part #	Size	List Price
55-805	1/2" x 1/4"	1.44
55-806	1/2" x 3/8"	1.37
55-781	3/4" x 1/2"	1.29
55-782	1" x 1/2"	1.84
55-783	1" x 3/4"	1.83
55-784	1-1/4" x 1/2"	2.56
55-785	1-1/4" x 3/4"	2.56
55-786	1-1/4" x 1"	2.56
55-803	1-1/2" x 1/2"	2.95
55-787	1-1/2" x 3/4"	2.95
55-788	1-1/2" x 1"	2.95
55-809	1-1/2" x 1-1/4"	2.95
55-810	2" x 1/2"	4.37
55-789	2" x 3/4"	3.95
55-790	2" x 1"	3.95
55-791	2" x 1-1/4"	3.95
55-792	2" x 1-1/2"	4.70
55-798	2-1/2" x 1-1/2"	5.72
55-796	2-1/2" x 2"	5.72
55-816	3" x 2"	6.59
55-780	3" x 2-1/2"	6.59



**SLIP BUSHING**



Part #	Size	List Price
55-765	3/4" x 1/2"	0.76
55-766	1" x 1/2"	1.41
55-767	1" x 3/4"	1.24
55-768	1-1/4" x 1/2"	1.60
55-769	1-1/4" x 3/4"	1.90
55-770	1-1/4" x 1"	1.78
55-815	1-1/2" x 1/2"	1.69
55-771	1-1/2" x 3/4"	2.02
55-772	1-1/2" x 1"	1.78
55-773	1-1/2" x 1-1/4"	1.78
55-774	2" x 1/2"	2.79
55-775	2" x 3/4"	3.31
55-776	2" x 1"	2.93
55-777	2" x 1-1/4"	3.31
55-778	2" x 1-1/2"	3.08
55-814	2-1/2" x 1-1/2"	4.48
55-779	2-1/2" x 2"	4.48
55-797	3" x 2"	6.59
55-802	3" x 2-1/2"	6.59

**45° STREET ELBOW**



Part #	Size	Box Qty	List Price
55-408	1-1/4"	25	2.85
55-409	1-1/2"	10	3.58
55-410	2"	10	4.66

**45° SLIP ELBOW**



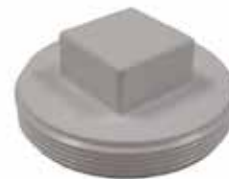
Part #	Size	Box Qty	List Price
55-728	1/2"	50	1.29
55-729	3/4"	50	1.77
55-730	1"	50	2.41
55-731	1-1/4"	25	3.20
55-732	1-1/2"	25	4.00
55-733	2"	25	4.59
55-734	2-1/2"	10	11.99
55-735	3"	10	17.66
55-400	4"	5	33.78
55-401	5"	5	67.03
55-402	6"	8	83.48
55-403	8"	3	200.76
55-404	10"	1	522.64
55-405	12"	1	774.49

**SLIP x SLIP UNION**



Part #	Size	Box Qty	List Price
55-491	1/2"	10	6.52
55-492	3/4"	10	7.41
55-493	1"	10	7.64
55-494	1-1/4"	5	24.61
55-495	1-1/2"	5	25.62
55-496	2"	5	34.58
55-497	3"	5	53.39
55-498	4"	4	89.18

**THREADED PLUG**



Part #	Size	Box Qty	List Price
55-510	1-1/2"	25	3.56
55-511	2"	10	4.59
55-512	3"	10	9.65
55-513	4"	10	21.79
55-514	6"	10	63.86

**PLASTIC FITTINGS**

## PVC SCHEDULE 80 FITTINGS

## PLASTIC FITTINGS

PVC Material is Type 1 according to the American Society for Testing Materials (ASTM) D-1784. Fittings conform to ASTM D-2464 & ASTM D-2467. Temperature rating is 140°F. PSI is based on water at 73°F. Derate 50% at 110°F and 78% at 140°F. Not recommended for use in compressed air or gas systems.



### SLIP X SLIP 90° ELBOW

Part #	Size	List Price
806-002	1/4"	4.15
806-003	3/8"	4.15
806-005	1/2"	4.61
806-007	3/4"	5.94
806-010	1"	9.01
806-012	1-1/4"	11.46
806-015	1-1/2"	13.59
806-020	2"	15.62
806-025	2-1/2"	34.71
806-030	3"	46.50
806-040	4"	62.45
806-060	6"	201.10



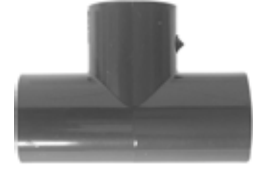
### FIP X FIP 90° ELBOW

Part #	Size	List Price
808-002	1/4"	11.43
808-003	3/8"	10.86
808-005	1/2"	10.14
808-007	3/4"	12.62
808-010	1"	15.09
808-012	1-1/4"	16.25
808-015	1-1/2"	24.27
808-020	2"	30.96
808-025	2-1/2"	101.09
808-030	3"	204.44
808-040	4"	341.74



### SLIP X SLIP 45° ELBOW

Part #	Size	List Price
817-002	1/4"	14.93
817-003	3/8"	15.71
817-005	1/2"	7.84
817-007	3/4"	12.60
817-010	1"	20.08
817-012	1-1/4"	24.05
817-015	1-1/2"	21.77
817-020	2"	36.84
817-025	2-1/2"	73.49
817-030	3"	89.44
817-040	4"	191.90
817-060	6"	202.85



### SLIP X SLIP TEE

Part #	Size	List Price
801-002	1/4"	11.72
801-003	3/8"	11.72
801-005	1/2"	11.72
801-007	3/4"	13.62
801-010	1"	16.18
801-012	1-1/4"	44.45
801-015	1-1/2"	46.79
801-020	2"	59.13
801-025	2-1/2"	57.40
801-030	3"	71.74
801-040	4"	87.55
801-060	6"	283.88



### FIP X FIP TEE

Part #	Size	List Price
805-002	1/4"	13.55
805-003	3/8"	13.55
805-005	1/2"	15.03
805-007	3/4"	16.72
805-010	1"	33.30
805-012	1-1/4"	35.30
805-015	1-1/2"	42.79
805-020	2"	48.44
805-025	2-1/2"	167.49
805-030	3"	174.92
805-040	4"	284.30



### SLIP X SLIP COUPLING

Part #	Size	List Price
829-002	1/4"	12.03
829-003	3/8"	12.03
829-005	1/2"	7.94
829-007	3/4"	12.01
829-010	1"	11.01
829-012	1-1/4"	15.95
829-015	1-1/2"	18.08
829-020	2"	19.42
829-025	2-1/2"	45.43
829-030	3"	54.90
829-040	4"	77.82
829-060	6"	176.28

PLASTIC FITTINGS



**FIP X FIP COUPLING**

Part #	Size	List Price
830-002	1/4"	9.50
830-003	3/8"	10.11
830-005	1/2"	9.33
830-007	3/4"	13.31
830-010	1"	13.57
830-012	1-1/4"	15.95
830-015	1-1/2"	37.35
830-020	2"	41.26
830-030	3"	104.24
830-040	4"	180.49



**SLIP X SLIP REDUCING COUPLING**

Part #	Size	List Price
829-101	3/4" x 1/2"	10.22
829-130	1" x 1/2"	15.15
829-131	1" x 3/4"	14.12
829-168	1-1/4" x 1"	28.68
829-211	1-1/2" x 1"	28.55
829-212	1-1/2" x 1-1/4"	35.26
829-251	2" x 1-1/2"	32.18
829-338	3" x 2"	94.17
829-422	4" x 3"	148.89
829-532	6" x 4"	303.69



**FIP X FIP REDUCING COUPLING**

Part #	Size	List Price
830-052	3/8" x 1/4"	13.20
830-073	1/2" x 3/8"	15.44
830-101	3/4" x 1/2"	11.19
830-130	1" x 1/2"	14.89
830-131	1" x 3/4"	14.18
830-167	1-1/4" x 3/4"	31.92
830-168	1-1/4" x 1"	28.57
830-211	1-1/2" x 1"	59.39
830-212	1-1/2" x 1-1/4"	50.66
830-251	2" x 1-1/2"	78.87



**MIP X SLIP ADAPTER**

Part #	Size	List Price
836002	1/4"	8.79
836003	3/8"	9.25
836005	1/2"	9.25
836007	3/4"	10.22
836010	1"	18.61
836012	1-1/4"	19.61
836015	1-1/2"	29.67
836020	2"	42.91
836025	2-1/2"	46.35
836030	3"	54.15
836040	4"	91.52



**MIP X FIP BUSHING**

Part #	Size	List Price
839041	1/4" x 1/8"	18.07
839050	3/8" x 1/8"	15.16
839052	3/8" x 1/4"	15.16
839072	1/2" x 1/4"	15.95
839073	1/2" x 3/8"	15.95
839099	3/4" x 3/8"	11.90
839101	3/4" x 1/2"	9.31
839130	1" x 1/2"	15.36
839131	1" x 3/4"	16.33
839166	1-1/4" x 1/2"	19.40
839167	1-1/4" x 3/4"	17.31
839168	1-1/4" x 1"	15.47
839209	1-1/2" x 1/2"	21.84
839210	1-1/2" x 3/4"	19.30
839211	1-1/2" x 1"	19.30
839212	1-1/2" x 1-1/4"	21.84
839247	2" x 1/2"	32.01
839248	2" x 3/4"	26.86
839249	2" x 1"	33.69
839250	2" x 1-1/4"	26.86
839251	2" x 1-1/2"	26.86
839338	3" x 2"	54.74
839420	4" x 2"	101.86
839422	4" x 3"	145.69

**PLASTIC FITTINGS**



**SLIP X SLIP UNION**

Part #	Size	List Price
897002	1/4"	28.45
897003	3/8"	29.95
897005	1/2"	17.02
897007	3/4"	20.37
897010	1"	23.31
897012	1-1/4"	48.62
897015	1-1/2"	52.29
897020	2"	70.94
897025	2-1/2"	107.13
897030	3"	131.99
897040	4"	173.45



**FIP X FIP THREADED UNION**

Part #	Size	List Price
898002	1/4"	36.54
898003	3/8"	30.66
898005	1/2"	18.60
898007	3/4"	29.12
898010	1"	36.45
898012	1-1/4"	62.77
898015	1-1/2"	92.57
898020	2"	132.49
898025	2-1/2"	160.13
898030	3"	303.36
898040	4"	354.79



**MIP THREADED PLUG**

Part #	Size	List Price
850002	1/4"	8.80
850003	3/8"	8.80
850005	1/2"	7.85
850007	3/4"	7.76
850010	1"	10.11
850012	1-1/4"	13.28
850015	1-1/2"	19.26
850020	2"	16.60
850025	2-1/2"	46.35
850030	3"	67.81
850040	4"	105.28



**SLIP CAP**

Part #	Size	List Price
847002	1/4"	10.07
847003	3/8"	10.70
847005	1/2"	7.76
847007	3/4"	8.18
847010	1"	15.28
847012	1-1/4"	16.64
847015	1-1/2"	16.64
847020	2"	32.84
847025	2-1/2"	67.06
847030	3"	78.45
847040	4"	132.31
847060	6"	329.16



**FIP THREADED CAP**

Part #	Size	List Price
848002	1/4"	9.21
848003	3/8"	9.21
848005	1/2"	9.21
848007	3/4"	12.28
848010	1"	15.48
848012	1-1/4"	15.47
848015	1-1/2"	17.67
848020	2"	38.45
848025	2-1/2"	69.42
848030	3"	97.37
848040	4"	171.44

**PLASTIC FITTINGS**

**BIN LABELS ON DEMAND**  
SEE **INTRO PAGE 4**





**AVAILABLE IN THREE TYPES OF PLASTIC**

**Add ( ) letter for type of plastic required**

**(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 Range:** -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 Range:** -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. Black Color

•NSF-approved materials

•FDA-approved materials

**Note: Do not use with compressed air or gas.**

• 10% Fiberglass fill for extra strength

**NEW ITEMS ARE BOLDED**

**MANY NEW SIZES**

**ELBOW**



Part #	Size	List Price	
		P	W
28-701	1/4"		7.07
28-702	3/8"	9.79	
28-703	1/2"		7.07
28-704	3/4"	7.83	7.76
28-705	1"		13.77
28-706	1-1/4"		16.08
28-707	1-1/2"		17.92
28-708	2"	23.23	24.97
28-709	3"	118.84	

**STREET ELBOW**



Part #	Size	List Price	
		P	W
28-819	1/8"	3.25	3.36
28-720	1/4"		5.31
28-721	3/8"		7.90
28-723	1/2"	5.57	5.20
28-724	3/4"		7.02
28-725	1"		15.11
28-726	1-1/4"		17.04
28-820	2"	16.58	18.95
28-821	3"	123.29	

**HEX BUSHING**



Part #	Size	List Price	
		P	W
28-659	1/4 x 1/8"	2.52	2.46
28-660	3/8 x 1/8"	2.57	1.68
28-661	3/8 x 1/4"	2.50	2.45
28-811	1/2" x 1/8"	2.21	
28-663	1/2 x 1/4"	2.47	1.98
28-664	1/2 x 3/8"	2.22	2.53
28-665	3/4 x 1/8"		3.06
28-666	3/4 x 1/4"	2.75	1.98
28-667	3/4 x 3/8"		2.69
28-668	3/4 x 1/2"	3.02	2.13
28-812	1" x 3/8"	2.73	3.30
28-671	1 x 1/2"	2.89	3.22
28-672	1 x 3/4"	3.69	2.42
28-813	1-1/4" x 1/2"	3.38	3.62
28-674	1-1/4 x 3/4"		4.78
28-675	1-1/4 x 1"		4.21
28-814	1-1/2" x 1/2"	6.70	6.93
28-678	1-1/2 x 3/4"	5.11	5.54
28-679	1-1/2 x 1"		6.09
28-680	1-1/2 x 1-1/4"	3.89	4.65
28-815	2" x 1/2"	10.64	11.17
28-682	2 x 3/4"		13.80
28-683	2 x 1"		11.90
28-816	2" x 1-1/4"	5.32	5.76
28-685	2 x 1-1/2"		5.94
28-817	3" x 1-1/2"	37.22	
28-818	3" x 2"	16.15	16.30

**TEE**



Part #	Size	List Price	
		P	W
28-741	1/4"	6.60	5.38
28-742	3/8"	10.80	
28-743	1/2"	6.74	8.32
28-744	3/4"	8.28	9.47
28-745	1"		18.70
28-746	1-1/4"		18.33
28-747	1-1/2"		28.05
28-748	2"	28.85	29.64
28-749	3"	139.05	

**HEX HEAD PLUGS**

• Cored



Part #	Size	List Price		
		B	P	W
28-601	1/8"	0.68	0.83	0.98
28-602	1/4"	0.68	0.73	0.98
28-603	3/8"	0.72	0.92	0.92
28-604	1/2"	0.83		2.07
28-605	3/4"	1.28		1.18
28-606	1"			1.86
28-607	1-1/4"			2.34
28-608	1-1/2"			3.63
28-609	2"			5.84
28-610	3"		38.86	

## PLASTIC PIPE

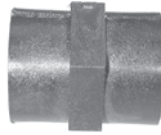
## PLASTIC FITTINGS

### HEX NIPPLES



Part #	Size	List Price		
		B	P	W
28-611	1/8"	0.80		0.83
28-612	1/4"	0.80	0.96	1.45
28-613	3/8"	0.78	1.01	0.78
28-614	1/2"	1.11	1.06	1.12
28-615	3/4"		1.56	1.36
28-616	1"			2.43
28-617	1 1/4"			5.19
28-618	1 1/2"			5.13
28-619	2"		6.21	6.94
28-800	3"		28.52	
28-801	4"		44.55	

### COUPLING



Part #	Size	List Price	
		P	W
28-761	1/4"	5.16	6.34
28-762	3/8"	5.39	6.98
28-763	1/2"	6.13	5.87
28-764	3/4"	6.12	6.03
28-765	1"		7.52
28-803	1-1/4"	5.23	6.30
28-767	1-1/2"		10.21
28-768	2"		12.37
28-804	3"	73.52	

### PLASTIC BULKHEAD FITTINGS

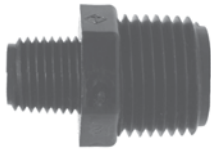


20% Glass Filled Polypropylene  
w/ Santropene Gasket

Part #	Fpt	Hole	List Price
28-693P	1/2"	1-3/8"	30.94
28-694P	3/4"	1-3/8"	30.94
28-695P	1"	1-3/4"	40.24
28-696P	1-1/4"	2"	43.71
28-697P	1-1/2"	3"	62.35
28-698P	2"	3"	58.18
28-699P	3"	4-1/2"	149.48

PLASTIC FITTINGS

### REDUCER NIPPLES



Part #	Size	List Price		
		B	P	W
28-620	1/4 x 1/8"			1.19
28-621	3/8 x 1/8"			1.01
28-622	3/8 x 1/4"			0.99
28-627	1/2" x 1/8"			
28-623	1/2 x 1/4"	0.92		1.17
28-624	1/2 x 3/8"	0.93		1.12
28-628	3/4 x 3/8"	1.15		1.00
28-625	3/4 x 1/2"	1.32		1.32
28-626	1" x 1/2"		6.69	
28-629	1 x 3/4"		7.73	
28-631	1-1/4 x 3/4"		7.26	
28-633	1-1/4" x 1"		5.95	3.93
28-802	1-1/2" x 1"		7.72	
28-632	1-1/2" x 1-1/4"		6.33	
28-634	2 x 1-1/4"		10.61	
28-630	2" x 1-1/2"		7.54	
28-635	3 x 2"		29.73	

### REDUCING COUPLINGS

Part #	Size	List Price	
		P	W
28-774	1/4" x 1/8"	4.58	4.73
28-775	3/8" x 1/4"	4.58	4.73
28-776	1/2" x 3/8"	4.58	4.73
28-777	3/4" x 3/8"	4.82	4.82
28-778	3/4" x 1/2"	4.82	4.82
28-779	1" x 3/4"	13.22	
28-805	1-1/2" x 1"	22.44	
28-806	1-1/2" x 1-1/4"	22.44	
28-807	2" x 1"	25.85	
28-808	2" x 1-1/4"	23.84	
28-809	2" x 1-1/2"	23.84	
28-810	3" x 2"	91.72	

### PIPE CAP



Part #	Size	List Price
		W
28-640	1/4"	0.85
28-641	3/8"	1.17
28-642	1/2"	1.17
28-643	3/4"	1.14

### AVAILABLE IN 3 TYPES OF PLASTIC

TO ORDER:

Add **W** at the end of the part number for White Nylon.

Add **B** for Black Polyethylene.

Add **P** for Polypropylene.

## PLASTIC FITTINGS

## PLASTIC BARBS

### MALE ADAPTERS



Hose ID x MIP

Part #	Size	List Price		
		B	P	W
33-002	3/16 x 1/8"	0.80		0.77
33-003	3/16 x 1/4"	0.59		0.92
33-004	1/4 x 1/8"	0.70		0.89
33-005	1/4 x 1/4"	0.76		0.82
33-006	1/4 x 3/8"	0.80		1.09
33-007	1/4 x 1/2"	0.87		1.13
33-380	1/4 x 3/4"			1.33
33-008	5/16 x 1/8"	0.71		0.90
33-009	5/16 x 1/4"	0.82		0.93
33-010	5/16 x 3/8"			0.97
33-011	3/8 X 1/8"			0.93
33-012	3/8 x 1/4"	0.74	0.99	1.39
33-013	3/8 x 3/8"	0.84		1.03
33-014	3/8 x 1/2"	0.87	1.22	1.13
33-026	3/8 x 3/4"	0.78		1.31
33-317	3/8" x 1"			1.79
33-015	1/2 x 1/4"	0.74	0.97	0.89
33-016	1/2 x 3/8"	0.84	1.02	0.97
33-017	1/2 x 1/2"	0.93	0.99	0.99
33-018	1/2 x 3/4"	1.15	1.28	1.53
33-303	1/2" x 1"		1.94	1.96
33-019	5/8 x 3/8"	1.01		0.85
33-020	5/8 x 1/2"	0.90	0.96	1.30
33-021	5/8 x 3/4"	1.09		1.48
33-306	3/4" x 3/8"		1.92	1.46
33-022	3/4 x 1/2"	0.96	1.14	1.41
33-023	3/4 x 3/4"	1.13	1.34	1.41
33-000	3/4 x 1"			1.84
33-318	3/4" x 1-1/4"		2.94	3.10
33-319	3/4" x 1-1/2"		4.53	5.45
33-307	1" x 1/2"		2.66	2.49
33-024	1 x 3/4"	3.29	1.76	1.80
33-025	1 x 1"	2.13	1.80	2.05
33-029	1 x 1-1/4"			3.99
33-320	1" x 1-1/2"		5.01	5.45
33-349	1-1/4" x 3/4"		4.53	4.01
33-028	1-1/4 x 1"			3.16
33-030	1-1/4 x 1-1/4"			3.60
33-032	1-1/4 x 1-1/2"			3.35
33-321	1-1/2" x 1-1/4"		5.14	3.89
33-033	1-1/2 x 1-1/2"			4.09
33-322	2" x 1-1/2"		12.11	15.95
33-035	2 x 2"			7.01
33-323	3" x 3"		32.34	
33-324	4" x 4"		62.59	

Available in 3 types of plastic

Add **W** at the end of the part number for White Nylon.

Add **B** for Black Polyethylene.

Add **P** for Polypropylene.

### ELBOWS



Hose ID x Male Pipe

Part #	Size	List Price		
		B	P	W
33-308	3/16 x 1/8	1.30		
33-381	3/16 x 1/4			1.90
33-038	1/4 x 1/8	1.34		1.49
33-039	1/4 x 1/4	1.28		1.12
33-309	1/4 x 3/8	0.97		1.87
33-351	1/4 x 1/2	1.24	1.28	1.46
33-352	1/4 x 3/4	1.46	1.48	1.62
33-036	5/16 x 1/8	1.11		1.44
33-040	5/16 x 1/4	1.12		1.85
33-310	5/16 x 3/8	1.62		2.23
33-046	3/8 x 1/8	1.28		1.72
33-041	3/8 x 1/4	1.53		1.56
33-042	3/8 x 3/8	2.48		1.34
33-047	3/8 x 1/2	1.70		1.74
33-384	3/8 x 3/4	2.47		2.40
33-048	1/2 x 1/4		1.63	1.70
33-043	1/2 x 3/8	1.61		1.66
33-311	1/2 x 1/2	1.44	1.70	1.65
33-385	1/2 x 3/4	3.28	2.54	2.21
33-327	1/2" x 1"		2.51	2.74
33-328	5/8 x 1/4		2.07	1.96
33-044	5/8 x 3/8	1.94		1.86
33-045	5/8 x 1/2	2.28		2.17
33-312	5/8 x 3/4	2.61		2.47
33-329	5/8" x 1"		2.79	2.33
33-313	3/4 x 1/2	2.34	1.97	2.26
33-314	3/4 x 3/4	2.43	2.35	2.18
33-315	3/4 x 1			2.40
33-330	3/4 x 1-1/4		5.10	5.45
33-331	3/4 x 1-1/2		5.10	5.65
33-332	1 x 1/2	2.42	2.71	2.66
33-386	1x3/4			3.04
33-316	1 x 1	3.38	2.84	2.73
33-460	1 x 1-1/4			4.84
33-333	1 x 1-1/2		5.21	6.02
33-334	1-1/4 x 1		6.41	
33-461	1-1/4 x 1-1/4		4.69	5.68
33-335	1-1/4 x 1-1/2		6.13	6.89
33-462	1-1/2 x 1-1/4		5.45	6.04
33-463	1-1/2 x 1-1/2		7.24	6.94
33-336	1-1/2 x 2		18.53	
33-464	2 x 2			8.23
33-337	3 x 3		99.42	

PLASTIC FITTINGS

## PLASTIC BARBS

## PLASTIC FITTINGS

### HOSE BARB X FE ADAPTERS



Hose ID x FIP

Part #	Size	List Price		
		B	P	W
33-052	1/4 x 1/8"		3.12	3.27
33-053	1/4 x 1/4"	3.69		5.71
33-054	1/4 x 3/8"		3.16	3.21
33-350	1/4 x 1/2"		3.45	3.41
33-325	1/4 x 3/4"		3.88	3.82
33-057	3/8 x 1/8"		3.12	3.12
33-058	3/8 x 1/4"	5.08		1.92
33-059	3/8 x 3/8"			4.36
33-060	3/8 x 1/2"			5.98
33-442	3/8 x 3/4"	3.68		3.90
33-066	1/2 x 1/4"	3.27		3.20
33-062	1/2 x 3/8"		4.76	
33-061	1/2 x 1/2"			3.79
33-067	1/2 x 3/4"	3.80		4.10
33-444	5/8 x 3/8"	3.16		3.16
33-068	5/8 x 1/2"	3.31		3.41
33-063	5/8 x 3/4"			6.04
33-326	3/4 x 3/8"	3.29		3.60
33-064	3/4 x 1/2"			4.89
33-065	3/4 x 3/4"			6.10
33-049	1 x 3/4"		7.44	

### HOSE BARB X FE ELBOW



Hose ID x Female Pipe

Part #	Size	List Price	
		P	W
33-338	1/4 x 1/8	3.41	3.36
33-467	1/4 x 1/4	3.41	3.62
33-339	1/4 x 3/8	3.40	3.56
33-340	1/4 x 1/2	3.78	3.77
33-341	3/8 x 1/8	3.41	3.36
33-468	3/8 x 1/4	3.55	3.40
33-469	3/8 x 3/8	3.53	3.56
33-342	3/8 x 1/2	3.64	3.84
33-402	1/2 x 3/8		5.63
33-343	1/2 x 1/2	2.80	2.43
33-403	1/2 x 3/4		4.60
33-470	5/8 x 1/2	3.71	4.07
33-344	5/8 x 3/4	3.17	3.36
33-345	3/4 x 1/2	3.78	4.32
33-471	3/4 x 3/4	3.17	6.22

### SPLICERS



Part #	Size	List Price		
		B	P	W
33-091	1/8	0.70		0.85
33-092	3/16	0.61		1.08
33-093	1/4	0.70		1.16
33-094	5/16			1.14
33-095	3/8	0.78	0.91	0.80
33-096	1/2	0.74	0.88	0.88
33-097	5/8	0.97		1.09
33-098	3/4	2.34	1.45	1.56
33-099	1		1.82	2.29
33-480	1-1/4			4.16
33-481	1-1/2			4.05
33-482	2			15.46

PLASTIC FITTINGS

### REDUCING SPLICERS

### UNION ELBOWS



Part #	Size	List Price		
		B	P	W
33-390	1/4	1.35		1.61
33-391	3/8	1.77		1.63
33-394	1/2	1.39		1.63
33-395	5/8	2.03	1.35	2.15
33-396	3/4	2.09	2.22	2.11
33-397	1			3.13
33-398	1-1/4			9.29
33-399	1-1/2			12.18
33-389	2			19.80

Part #	Size	List Price	
		B	W
33-079	1/4 x 1/8		0.68
33-347	1/4 x 3/16		0.72
33-406	3/8 x 1/4	0.76	0.93
33-348	3/8 x 5/16		0.78
33-407	1/2 x 1/4	0.79	0.85
33-408	1/2 x 3/8	0.77	0.96
33-409	5/8 x 3/8		1.09
33-410	5/8 x 1/2	0.78	1.04
33-089	3/4 x 1/2		1.96

**AVAILABLE IN 3 TYPES OF PLASTIC**

TO ORDER:

Add **W** at the end of the part number for White Nylon.

Add **B** for Black Polyethylene.

Add **P** for Polypropylene.

### REDUCING UNION ELBOWS

Part #	Size	List Price
		W
33-353	3/8 x 1/4	2.20
33-392	1/2 x 1/4	2.46
33-419	1/2 x 3/8	1.38
33-346	3/4 x 5/8	2.42

### ALL HOSE BARB "Y"



Part #	Size	List Price	
		P*	W
33-300*	1/4"	7.29	
33-301*	3/8"	4.28	3.52
33-302*	1/2"	8.25	

\*Natural Polypro

## PLASTIC FITTINGS

## PLASTIC BARBS/ GARDEN HOSE

### TEES BARBED ON ALL SIDES



Part #	Size	List Price		
		B	P	W
33-415	1/8	1.32		1.81
33-417	5/32			3.32
33-418*	3/16	1.22		2.54
33-420	3/16	1.13		1.45
33-422	1/4	1.29		1.80
33-426	5/16	2.83		1.58
33-429	3/8	1.35	1.93	1.53
33-433	1/2	1.40		1.77
33-436	5/8	1.76		1.80
33-437	3/4			2.42
33-438	1			3.51
33-439	1-1/4			5.71
33-440	1-1/2		5.22	6.31
33-441	2			21.10

\* single barb

### REDUCING TEES

Part #	Size 3 x 1 x 2	List Price	
		B	W
33-416*	1/8 x 5/32 x 5/32		1.52
33-423	1/4 x 3/8 x 3/8	1.55	
33-424	1/4 x 1/2 x 1/2	1.51	1.62
33-430	3/8 x 1/2 x 1/2	1.73	2.06
33-431	3/8 x 5/8 x 5/8		1.80
33-432	1/2 x 3/8 x 3/8	1.88	2.11
33-434	1/2 x 1/2 x 5/8	1.86	
33-435	1/2 x 3/4 x 3/4	1.91	2.55

\* single barb

### MALE BRANCH TEE



Part #	Size 1 & 2 x 3	List Price	
		B	W
33-448	1/4 x 1/4	1.53	1.79
33-450	3/8 x 1/4		2.04
33-451	3/8 x 3/8		2.85
33-453	1/2 x 1/4		2.71
33-454	1/2 x 3/8		1.87
33-455	1/2 x 1/2		1.71
33-456	3/4 x 3/4		2.52

More sizes available

### PLASTIC GARDEN HOSE FITTINGS

FITTINGS WITH GARDEN HOSE THREAD

#### GARDEN HOSE CAP

• Washer not included



• White Nylon

Part #	Size	List Price
30-103P	3/4"	1.22

#### GARDEN HOSE NUT



• White Nylon

Part #	Size	List Price
31-022	3/4"	1.04

#### GARDEN HOSE ADAPTER INSERTS

• for assembly with 31-022



• White Nylon

Part #	Size	List Price
31-030	1/4"	0.63
31-031	3/8"	0.33
31-032	1/2"	0.93
31-033	5/8"	0.94
31-034	3/4"	0.87
31-035	1/2" MPT	2.53

#### GARDEN HOSE THREAD ADAPTERS

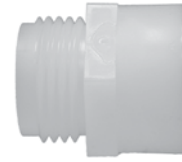
BARB X MALE GARDEN HOSE



• White Nylon

Part #	Barb Size	List Price
31-038	1/4"	1.25
31-039	3/8"	0.95
31-040	1/2"	1.90
31-041	5/8"	1.61
31-042	3/4"	1.15

### MALE GARDEN HOSE X FEMALE PIPE



• White Nylon

Part #	Size	List Price
31-067	MGH X 1/4	3.68
31-068	MGH X 1/2 FIP	4.02
31-069	MGH X 3/4	2.95

### FEMALE GARDEN HOSE X MALE PIPE



• White Nylon

Part #	Size	List Price
31-093	FGH X 3/4 MPT	4.28
31-095	FGH X 3/4 MGH	2.95

### FEMALE GARDEN HOSE X FEMALE PIPE



• White Nylon

Part #	Size	List Price
31-096	FGH X 1/2 FIP	4.00
31-097	FGH X 3/4 FIP	4.82

### ADAPTERS GARDEN TO PIPE THREAD



• White Nylon

Part #	Size	List Price
31-055	GHT X 3/8 MPT	0.91
31-058	GHT X 1/2 MPT	1.35
31-063	GHT X 3/4 MPT	1.58
31-064	GHT X 1	1.37

PLASTIC FITTINGS

# PLASTIC COMPRESSION

# PLASTIC FITTINGS

## PLASTIC COMPRESSION FITTINGS

Corrosion resistant thermoset resins 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

Standard nut and sleeves will be provided (sleeve is integral part of nut). Other sizes available upon request.

FDA and NSF Listed

## UNION & REDUCING UNION CONNECTORS



Part #	Size	List Price	
		P	N
17-064	1/4"	4.16	3.91
17-065	5/16"	4.03	3.99
17-078	5/16" x 1/4"		4.41
17-066	3/8"	7.00	5.79
17-079	3/8" x 1/4"	5.47	7.77
17-068	1/2"	6.86	9.62
17-081	1/2" x 3/8"	6.42	

## BULKHEAD UNIONS



Part #	Size	List Price
17-088N	1/4"	6.51
17-090N	3/8"	9.04
17-091N	1/2"	9.19

## UNION TEES



Part #	Size	List Price	
		P	N
17-103	1/4"		6.97
17-105	3/8"		13.65
17-106	1/2"		10.26

## UNION ELBOWS



Part #	Size	List Price	
		P	N
17-124	1/4"	4.70	5.20
17-126	3/8"	6.87	6.82
17-127	1/2"	8.97	

## FEMALE CONNECTORS



Part #	Tube x Female Pipe	List Price	
		P	N
17-145	1/4 x 1/8	3.45	
17-146	1/4 x 1/4		3.54
17-153	3/8 x 1/4	6.00	3.84
17-154	3/8 x 3/8	4.49	4.45
17-158	1/2 x 3/8	5.99	
17-159	1/2 x 1/2	4.93	

## MALE CONNECTORS



Part #	Tube x Male Pipe	List Price	
		P	N
17-176	1/8 x 1/8		2.13
17-179	1/4 x 1/8	2.51	2.79
17-180	1/4 x 1/4	3.06	2.91
17-181	1/4 x 3/8	2.87	2.87
17-184	5/16 x 1/4		3.04
17-187	3/8 x 1/8	2.95	3.10
17-188	3/8 x 1/4	4.04	4.67
17-189	3/8 x 3/8	3.83	4.13
17-190	3/8 x 1/2	5.29	5.57
17-193	1/2 x 1/4	8.41	5.57
17-194	1/2 x 3/8	6.06	4.86
17-195	1/2 x 1/2	8.37	5.91

## FEMALE ELBOWS



Part #	Tube x Female Pipe	List Price	
		P	N
17-254	1/4 x 1/4	6.38	
17-258	3/8 x 1/4	5.42	6.39
17-259	3/8 x 3/8	7.44	7.44
17-262	1/2 x 3/8	9.78	
17-263	1/2 x 1/2	10.10	

## MALE ELBOWS



Part #	Tube x Male Pipe	List Price	
		P	N
17-224	1/4 x 1/8	4.18	4.37
17-225	1/4 x 1/4	4.22	5.15
17-226	1/4 x 3/8		4.54
17-229	5/16 x 1/4		4.71
17-233	3/8 x 1/4	5.77	6.44
17-234	3/8 x 3/8	5.77	8.61
17-237	1/2 x 3/8	6.36	5.49
17-238	1/2 x 1/2	8.88	6.00

## MALE BRANCH TEES



Part #	Tube x Male Pipe	List Price	
		P	N
17-291	1/4 x 1/8	7.75	
17-292	1/4 x 1/4	6.41	
17-296	3/8 x 1/4	7.13	8.20
17-297	3/8 x 3/8	8.14	
17-299	1/2 x 3/8	11.93	

*Minimum QTYs may apply*

PLASTIC FITTINGS



**PLASTIC PUSH-IN TUBE FITTINGS**

**Fitting Working Specifications**

**Operating Temperature**  
33°F to 140°F ( 1°C to 60°C )

**Operating Pressure**  
Air: 0 - 150 lbs. psi.  
Liquid: 0 - 150 lbs. psi.  
Suitable for Vacuum

**Material Specifications**

- Bodies:** Food Grade, 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.

Also available in metric sizes. Call order desk for details

**MALE CONNECTOR**



Part #	Tube OD	Thread NPTF	List Price
20-050P	5/32"	1/8"	3.50
20-046P	5/32"	1/4"	3.39
20-052P	3/16"	1/8"	3.06
20-054P	1/4"	1/8"	3.50
20-055P	1/4"	1/4"	3.64
20-531P	5/16"	1/4"	4.58
20-056P	1/4"	3/8"	5.05
20-532P	5/16"	3/8"	5.77
20-057P	3/8"	1/8"	6.90
20-058P	3/8"	1/4"	5.06
20-059P	3/8"	3/8"	5.15
20-062P	3/8"	1/2"	9.78
20-061P	1/2"	3/8"	7.49
20-063P	1/2"	1/2"	8.76

*More sizes available upon request*

Save 5% by ordering online at [www.midlandmetal.com](http://www.midlandmetal.com)

**UNION CONNECTOR**



Part #	Tube OD	List Price
20-018P	5/32"	4.31
20-702P	3/16"	4.20
20-019P	1/4"	4.16
20-703P	5/16"	5.40
20-020P	3/8"	5.76
20-021P	1/2"	6.96

**CROSS**



Part #	Tube OD	List Price
20-143P	3/8"	16.99

**REDUCING UNION**



Part #	Tube OD	Tube OD	List Price
20-750P	1/4"	3/16"	7.86
20-751P	5/16"	5/32"	7.71
20-752P	5/16"	3/16"	9.46
20-753P	5/16"	1/4"	7.89
20-754P	3/8"	3/16"	11.55
20-755P	3/8"	1/4"	7.28
20-756P	3/8"	5/16"	9.83
20-757P	1/2"	5/16"	15.26
20-758P	1/2"	3/8"	8.81

**UNION ELBOW**



Part #	Tube OD	List Price
20-704P	3/16"	5.00
20-152P	1/4"	5.32
20-155P	5/16"	6.84
20-153P	3/8"	8.75
20-154P	1/2"	9.67

**PLASTIC FITTINGS**



## PLASTIC PUSH-IN

### REDUCING ELBOW



Part #	Tube OD	Tube OD	List Price
20-730P	5/16"	5/32"	12.66
20-731P	5/16"	3/16"	6.41
20-732P	5/16"	1/4"	8.31
20-733P	3/8"	3/16"	5.69
20-734P	3/8"	1/4"	8.68
20-735P	3/8"	5/16"	10.79
20-736P	1/2"	3/8"	12.42

### FIXED ELBOW



Part #	Tube OD	Thread NPTF	List Price
20-068P	1/4"	1/8"	5.02
20-069P	1/4"	1/4"	5.33
20-070P	1/4"	3/8"	6.05
20-072P	3/8"	1/4"	6.92
20-073P	3/8"	3/8"	9.39

### PLUG-IN ELBOW



Part #	Stem OD	Tube OD	List Price
20-740P	5/32"	5/32"	5.22
20-741P	3/16"	3/16"	6.54
20-742P	1/4"	1/4"	7.13
20-743P	5/16"	5/16"	8.49
20-744P	3/8"	3/16"	9.28
20-745P	3/8"	1/4"	8.33
20-746P	3/8"	5/16"	9.28
20-747P	3/8"	3/8"	10.21
20-748P	1/2"	1/2"	11.98

More sizes available upon request

## PLASTIC FITTINGS

### UNION TEE



Part #	Tube OD	List Price
20-026P	5/32"	6.90
20-027P	3/16"	10.07
20-028P	1/4"	6.36
20-031P	5/16"	6.57
20-029P	3/8"	7.38
20-030P	1/2"	9.11

### REDUCING BRANCH TEE



Part #	Tube OD Ends	Tube OD Branch	List Price
20-724P	1/2"	3/8"	15.60
20-725P	3/8"	1/4"	12.98

### BULKHEAD UNION



Part #	Tube OD	List Price
20-125P	5/32"	11.06
20-126P	3/16"	9.91
20-127P	1/4"	8.89
20-123P	5/16"	16.92
20-128P	3/8"	10.70
20-129P	1/2"	16.12

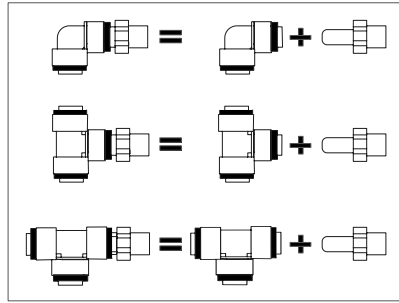
### FEMALE CONNECTOR



Part #	Tube OD	Thread NPTF	List Price
20-993P	1/4"	1/8"	8.07
20-035P	1/4"	1/4"	6.99
20-944P	3/8"	1/8"	9.22
20-036P	3/8"	1/4"	9.01

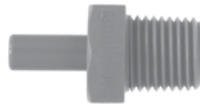
### Adaptability

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	List Price
20-522P	5/32"	1/8"	1.99
20-523P	5/32"	1/4"	1.90
20-700P	3/16"	1/8"	2.44
20-524P	1/4"	1/8"	1.87
20-526P	5/16"	1/8"	2.41
20-525P	1/4"	1/4"	1.87
20-527P	5/16"	1/4"	2.41
20-701P	5/16"	3/8"	3.91
20-528P	3/8"	1/4"	2.23
20-529P	3/8"	3/8"	2.82
20-530P	1/2"	3/8"	4.30
20-533P	1/2"	1/2"	4.98

### REDUCER



Part #	Stem OD	Tube OD	List Price
20-760P	5/16"	3/16"	5.76
20-761P	5/16"	1/4"	6.22
20-762P	3/8"	3/16"	7.10
20-512P	3/8"	1/4"	8.01
20-763P	3/8"	5/16"	7.21
20-764P	1/2"	5/16"	8.73
20-514P	1/2"	3/8"	11.86



## PLASTIC FITTINGS

## PLASTIC PUSH-IN

### 2-WAY DIVIDER



Part #	Tube OD	List Price
20-776P	5/16"	11.28
20-777P	3/8"	9.88

### TUBE TO HOSE STEM



Part #	Stem OD	Hose OD	List Price
20-853P	1/4"	3/16"	3.04
20-854P	1/4"	1/4"	3.22
20-855P	5/16"	5/16"	4.58
20-856P	1/4"	5/16"	3.68
20-857P	5/16"	3/16"	4.09
20-858P	5/16"	1/4"	4.43
20-859P	5/16"	3/8"	5.82
20-860P	3/8"	1/4"	4.62
20-861P	3/8"	5/16"	5.82
20-862P	3/8"	3/8"	5.68
20-863P	3/8"	1/2"	6.13
20-864P	1/2"	3/8"	6.91
20-865P	1/2"	1/2"	10.00

### PLUG



Part #	Stem OD	List Price
20-876P	5/32"	1.37
20-877P	3/16"	1.43
20-878P	1/4"	1.44
20-879P	5/16"	2.36
20-880P	3/8"	2.33
20-881P	1/2"	3.68

### TUBE SUPPORT



Part #	Tube OD	Tube ID	List Price
20-836P	5/16"	1/4"	0.68
20-837P	3/8"	5/16"	0.75
20-838P	1/2"	3/8"	0.75

### Propylene push-in shut off valves for potable water

#### Technical Specifications

- Operating Pressure: 0 to 150 psi ( 0 to 10 bar)
- Operating Temp. ( water ): 33° F to 150° F ( +1°C to 65°C)

#### Materials

- Body - Food grade Polypropylene
- Collet - Food grade Polypropylene with stainless steel teeth
- O-Ring - EPDM

#### Tube Tolerances

- Shut-off Valves are intended for use with potable water.
- The Valves are not for use with compressed air, explosive gases, petroleum spirits and other fuels or for heating systems.

### PL X PL



Part #	Tube OD	List Price
20-900P	1/4"	15.47
20-901P	3/8"	16.69

### PL X MALE NPTF



Part #	Tube OD	Thread NPTF	List Price
20-904P	1/4"	1/4"	13.77
20-905P	3/8"	3/8"	17.72

### TUBE END STOP



Part #	Tube OD	List Price
20-925P	1/4"	3.88
20-926P	5/16"	4.09
20-927P	3/8"	5.00
20-928P	1/2"	6.13

### CHECK VALVE

#### CHECK VALVE



Part #	Tube OD	List Price
20-779P	3/8"	55.78

### HAND VALVE



Part #	Tube OD	Thread NPTF	List Price
20-930P	1/4"	1/4"	22.56
20-931P	3/8"	3/8"	24.30
20-932P	3/8"	1/2"	25.03
20-933P	1/2"	3/8"	24.63
20-934P	1/2"	1/2"	27.37

PLASTIC FITTINGS

# BARB FITTINGS FOR PLASTIC PIPE

# HOSE ACCESSORIES

## BRONZE INSERT FITTINGS

150 PSI Genuine red brass  
- for plastic pipe

- Lead Free available

### HEX MALE ADAPTERS



( Barb x Male Pipe )

Part #	Barb x Male	List Price
973-927	1" x 1"	29.89
973-930	1" x 1-1/4"	25.13
973-928	1-1/4" x 1-1/4"	28.18
973-929	1-1/4" x 1"	27.89
973-948	1-1/2" x 1-1/2"	36.35
973-949	2" x 2"	52.37

### BRONZE TEES ALL BARB



Part #	Size	List Price
973-965	3/4"	20.61
973-966	1"	35.71
973-967	1-1/4"	62.84

### ELBOWS



( BARB X MALE PIPE )

Part #	Size	List Price
973-980	3/4" x 3/4"	18.09
973-981	1" x 3/4"	24.02
973-982	1" x 1"	29.61

### ELBOWS



( Barb x Barb )

Part #	Hose Size	List Price
973-975	3/4"	21.78
973-976	1"	24.14
973-977	1-1/4" x 1"	42.31
973-978	1-1/4"	48.17
973-979	1-1/2"	113.93

## STEEL INSERT FITTINGS FOR PLASTIC PIPE

### MALE ADAPTER

- Galvanized



( BARB X MALE PIPE )

Part #	Size	Box/Case	List Price
973-906	1/2"	25/100	3.66
973-907	3/4"	25/10	4.74
973-908	1"	16/48	5.05
973-909	1-1/4"	12/36	7.30
973-910	1-1/2"	6/36	10.62
973-911	2"	5/25	16.42
973-912	2-1/2"	1/3	52.03
973-913	3"	1/3	57.12
973-914	4"	1/3	65.05

## STEEL INSERT FITTINGS FOR PLASTIC PIPE CONT.

### REDUCING ADAPTER



( INSERT X NPT )

Part #	Size	List Price
974-264	3/4 x 1/2	6.30
974-265	1 x 3/4	5.65
974-266	1-1/4 x 1	22.01
974-267	1-1/2 x 1-1/4	26.64

### COUPLINGS



Part #	Size	Box/Case	List Price
973-900	1/2	30/120	3.00
973-901	3/4	20/100	4.35
973-902	1	20/100	5.07
973-903	1-1/4	16/64	7.38
973-904	1-1/2	12/48	10.43
973-905	2	5/25	14.57

IT IS NOT ENOUGH TO AIM,  
YOU MUST HIT.

– ITALIAN PROVERB

• For Lead Free bronze insert fittings - add LF at the end of the part# when ordering.



**STEEL HOSE NIPPLES**



• Black

( Barb x Male Pipe )

Part #	Hose Size	List Price
973-850	1/2"	8.84
973-851	3/4"	4.20
973-852	1"	7.50
973-853	1-1/4"	9.71
973-854	1-1/2"	10.86
973-855	2"	9.87
973-856	2-1/2"	29.81
973-857	3"	36.31
973-858	4"	72.04

**ZINC PLATED STEEL**



Part #	Size	List Price
973-870	1/2"	4.90
973-871	3/4"	5.68
973-872	1"	6.65
973-873	1-1/4"	8.84
973-874	1-1/2"	10.63
973-875	2"	11.88
973-876	2-1/2"	29.33
973-877	3"	57.12
973-878	4"	48.00
973-879	5"	165.53
973-880	6"	133.57
973-881	8"	385.94

**316 STAINLESS STEEL**



Part #	Size	List Price
973-700	1/2"	42.17
973-701	3/4"	41.36
973-702	1"	42.29
973-703	1-1/4"	53.00
973-704	1-1/2"	60.97
973-705	2"	89.79
973-706	2-1/2"	165.55
973-707	3"	241.36
973-708	4"	335.60

**BRASS**

• Lead Free



Part #	Size	List Price
973-600	1/2"	28.01
973-601	3/4"	44.23
973-602	1"	47.14
973-603	1-1/4"	60.03
973-604	1-1/2"	69.52
973-605	2"	99.39
973-606	2-1/2"	174.46
973-607	3"	238.43

**ALUMINUM**



Part #	Size	List Price
973-620	1/2"	26.02
973-621	3/4"	28.46
973-622	1"	24.68
973-623	1-1/4"	31.61
973-624	1-1/2"	29.61
973-625	2"	37.00
973-626	2-1/2"	82.26
973-627	3"	82.26
973-628	4"	131.58

EVERY STRIKE BRINGS ME  
CLOSER TO THE NEXT  
HOME RUN."

- BABE RUTH

**MENDERS**

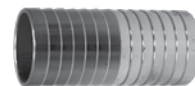
**STEEL HOSE MENDERS**



Part #	Hose Size	List Price
973-890	1/2"	12.61
973-891	3/4"	8.90
973-892	1"	10.48
973-893	1-1/4"	16.04
973-894	1-1/2"	15.71
973-895	2"	19.86

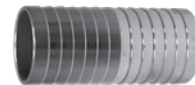
**PLATED STEEL MENDER**

• Zinc



Part #	Size	List Price
973-650	3/8"	13.98
973-651	1/2"	11.55
973-652	3/4"	10.37
973-653	1"	9.55
973-654	1-1/4"	9.50
973-655	1-1/2"	14.30
973-656	2"	19.00
973-657	2-1/2"	38.84
973-658	3"	38.37
973-659	4"	74.24

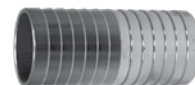
**316 STAINLESS STEEL HOSE MENDER**



Part #	Size	List Price
73-670	3/4"	107.33
73-671	1"	119.56
73-672	1-1/4"	128.79
73-673	1-1/2"	158.08
73-674	2"	160.26

**BRASS HOSE MENDER**

• Lead Free



Part #	Size	List Price
73-983	3/4"	26.93
73-984	1"	28.97
73-985	1-1/4"	46.92
73-986	1-1/2"	76.12
73-987	2"	82.59

**ALUMINUM**

SEE PAGES 336 AND 337 FOR JUMP SIZES IN ALUMINUM

**TYPE A**



Part#	Size	List Price
61-911	3/4"	7.15
61-912	1"	8.16
61-913	1-1/4"	11.23
61-914	1-1/2"	9.29
61-915	2"	10.93
61-916	2-1/2"	20.91
61-917	3"	20.10
61-918	4"	33.13
61-919	5"	80.96
61-920	6"	87.17
61-910	8"	368.14

**TYPE E**



Part#	Size	List Price
61-951	3/4"	7.92
61-952	1"	9.26
61-953	1-1/4"	13.11
61-954	1-1/2"	10.06
61-955	2"	13.15
61-956	2-1/2"	24.20
61-957	3"	26.85
61-958	4"	44.59
61-959	5"	144.95
61-905	6"	140.62

**TYPE B**



Part#	Size	List Price
61-921	3/4"	15.46
61-922	1"	18.43
61-923	1-1/4"	23.15
61-924	1-1/2"	21.76
61-925	2"	24.59
61-926	2-1/2"	41.34
61-927	3"	42.73
61-928	4"	53.75
61-929	5"	141.43
61-930	6"	174.20

**TYPE F**



Part#	Size	List Price
61-961	3/4"	8.85
61-962	1"	9.43
61-963	1-1/4"	15.49
61-964	1-1/2"	11.70
61-965	2"	13.84
61-966	2-1/2"	26.45
61-967	3"	28.95
61-968	4"	41.56
61-970	5"	106.24
61-969	6"	135.56
61-999	8"	515.31

**TYPE C**



Part#	Size	List Price
61-931	3/4"	13.54
61-932	1"	16.12
61-933	1-1/4"	23.98
61-934	1-1/2"	21.56
61-935	2"	25.27
61-936	2-1/2"	39.01
61-937	3"	45.10
61-938	4"	66.17
61-939	5"	151.49

**TYPE DC**



Part#	Size	List Price
61-971	3/4"	14.89
61-972	1"	15.70
61-973	1-1/4"	25.58
61-974	1-1/2"	19.56
61-975	2"	22.61
61-976	2-1/2"	33.60
61-977	3"	37.56
61-978	4"	47.42
61-980	5"	104.45
61-979	6"	155.49
61-998	8"	646.28

**TYPE D**



Part#	Size	List Price
61-941	3/4"	16.16
61-942	1"	18.43
61-943	1-1/4"	25.21
61-944	1-1/2"	22.91
61-945	2"	26.91
61-946	2-1/2"	46.19
61-947	3"	43.50
61-948	4"	62.61
61-950	5"	144.95
61-949	6"	187.61
61-904	8"	685.49

**TYPE DP**



Part#	Size	List Price
61-981	3/4"	7.39
61-982	1"	7.90
61-983	1-1/4"	9.23
61-984	1-1/2"	7.88
61-985	2"	9.23
61-986	2-1/2"	18.97
61-987	3"	17.94
61-988	4"	28.73
61-909	5"	68.41
61-908	6"	77.82

**HOSE ACCESSORIES**

**316 STAINLESS STEEL**

**TYPE A**



Part#	Size	List Price
63-911	3/4"	25.03
63-912	1"	30.87
63-913	1-1/4"	43.98
63-914	1-1/2"	52.93
63-915	2"	62.49
63-916	2-1/2"	111.91
63-917	3"	121.91
63-918	4"	203.63
63-919	5"	344.92
63-920	6"	420.86
63-910	8"	1080.82

**TYPE B**



Part#	Size	List Price
63-921	3/4"	40.35
63-922	1"	52.97
63-923	1-1/4"	75.26
63-924	1-1/2"	89.54
63-925	2"	106.31
63-926	2-1/2"	137.21
63-927	3"	199.84
63-928	4"	260.60
63-929	5"	417.93
63-930	6"	579.49

**TYPE C**



Part#	Size	List Price
63-931	3/4"	36.47
63-932	1"	47.38
63-933	1-1/4"	72.09
63-934	1-1/2"	75.81
63-935	2"	104.11
63-936	2-1/2"	155.59
63-937	3"	186.12
63-938	4"	297.53
63-939	5"	545.51
63-940	6"	641.01
63-970	8"	1777.63

**TYPE D**



Part#	Size	List Price
63-941	3/4"	40.35
63-942	1"	52.89
63-943	1-1/4"	76.57
63-944	1-1/2"	93.24
63-945	2"	115.75
63-946	2-1/2"	165.53
63-947	3"	209.01
63-948	4"	293.62
63-949	5"	493.70
63-950	6"	577.87

**TYPE E**



Part#	Size	List Price
63-951	3/4"	22.00
63-952	1"	35.78
63-953	1-1/4"	52.03
63-954	1-1/2"	59.30
63-955	2"	89.38
63-956	2-1/2"	135.55
63-957	3"	180.52
63-958	4"	274.88
63-959	5"	431.02
63-960	6"	573.34

**TYPE F**



Part#	Size	List Price
63-961	3/4"	27.56
63-962	1"	40.35
63-963	1-1/4"	59.28
63-964	1-1/2"	70.98
63-965	2"	94.33
63-966	2-1/2"	134.96
63-967	3"	181.21
63-968	4"	319.24
63-969	5"	439.90
63-999	6"	608.32

**TYPE DC**



Part#	Size	List Price
63-971	3/4"	36.19
63-972	1"	43.98
63-973	1-1/4"	59.86
63-974	1-1/2"	68.75
63-975	2"	83.24
63-976	2-1/2"	118.86
63-977	3"	158.66
63-978	4"	219.05
63-979	5"	375.86
63-980	6"	472.96

**TYPE DP**



Part#	Size	List Price
63-981	3/4"	16.43
63-982	1"	20.47
63-983	1-1/4"	34.81
63-984	1-1/2"	42.31
63-985	2"	63.16
63-986	2-1/2"	91.85
63-987	3"	106.07
63-988	4"	181.74
63-989	6"	379.10

**BRASS**

**TYPE A**



Part#	Size	List Price
44-911	3/4"	19.47
44-912	1"	24.30
44-913	1-1/4"	31.94
44-914	1-1/2"	31.69
44-915	2"	39.86
44-916	2-1/2"	135.97
44-917	3"	57.72
44-918	4"	181.86
44-919	5"	391.24
44-920	6"	522.49

**TYPE E**



Part#	Size	List Price
44-951	3/4"	24.39
44-952	1"	35.53
44-953	1-1/4"	35.83
44-954	1-1/2"	38.24
44-955	2"	55.81
44-956	2-1/2"	58.13
44-957	3"	85.18
44-958	4"	136.47
44-959	5"	562.44
44-960	6"	739.18

**TYPE B**



Part#	Size	List Price
44-921	3/4"	38.86
44-922	1"	54.40
44-923	1-1/4"	58.25
44-924	1-1/2"	54.30
44-925	2"	78.44
44-926	2-1/2"	82.11
44-927	3"	104.33
44-928	4"	247.58
44-929	5"	608.61
44-930	6"	717.35

**TYPE F**



Part#	Size	List Price
44-961	3/4"	24.52
44-962	1"	33.46
44-963	1-1/4"	33.61
44-964	1-1/2"	46.04
44-965	2"	67.97
44-966	2-1/2"	60.67
44-967	3"	103.30
44-968	4"	330.28
44-969	5"	477.16
44-970	6"	629.11

**TYPE C**



Part#	Size	List Price
44-931	3/4"	34.80
44-932	1"	43.58
44-933	1-1/4"	54.88
44-934	1-1/2"	44.62
44-935	2"	89.83
44-936	2-1/2"	78.54
44-937	3"	130.36
44-938	4"	261.67
44-939	5"	631.10
44-940	6"	831.79

**TYPE DC**



Part#	Size	List Price
44-971	3/4"	30.82
44-972	1"	32.52
44-973	1-1/4"	40.75
44-974	1-1/2"	42.83
44-975	2"	76.19
44-976	2-1/2"	149.95
44-977	3"	122.74
44-978	4"	123.37
44-979	5"	465.93
44-980	6"	534.88

**TYPE D**



Part#	Size	List Price
44-941	3/4"	33.08
44-942	1"	55.78
44-943	1-1/4"	67.36
44-944	1-1/2"	62.37
44-945	2"	91.09
44-946	2-1/2"	159.53
44-947	3"	102.43
44-948	4"	260.54
44-949	5"	555.29
44-950	6"	747.54

**TYPE DP**



Part#	Size	List Price
44-981	3/4"	17.12
44-982	1"	37.02
44-983	1-1/4"	21.20
44-984	1-1/2"	19.62
44-985	2"	41.48
44-986	2-1/2"	39.29
44-987	3"	117.92
44-988	4"	73.01
44-989	5"	322.52
44-990	6"	384.56

**POLYPROPYLENE**

**TYPE A**



Part#	Size	List Price
35-910	3/4"	6.89
35-911	1"	7.53
35-912	1-1/4"	7.91
35-913	1-1/2"	9.11
35-914	2"	9.56
35-915	2-1/2"	11.46
35-917	3"	37.79

**TYPE E**



Part#	Size	List Price
35-950	3/4"	8.38
35-951	1"	9.42
35-952	1-1/4"	11.21
35-953	1-1/2"	10.66
35-954	2"	11.01
35-955	2-1/2"	14.64
35-957	3"	35.56

**TYPE B**



Part#	Size	List Price
35-920	3/4"	19.85
35-921	1"	18.26
35-922	1-1/4"	27.13
35-923	1-1/2"	23.01
35-924	2"	26.74
35-925	2-1/2"	31.24
35-927	3"	75.85

**TYPE F**



Part#	Size	List Price
35-960	3/4"	8.38
35-961	1"	10.00
35-962	1-1/4"	9.65
35-963	1-1/2"	9.81
35-964	2"	9.66
35-965	2-1/2"	14.43
35-967	3"	36.81

**TYPE C**



Part#	Size	List Price
35-930	3/4"	19.17
35-931	1"	19.98
35-932	1-1/4"	21.72
35-933	1-1/2"	25.67
35-934	2"	22.67
35-935	2-1/2"	34.14
35-937	3"	75.51

**TYPE DC**



Part#	Size	List Price
35-970	3/4"	18.10
35-971	1"	19.01
35-972	1-1/4"	27.02
35-973	1-1/2"	22.36
35-974	2"	30.16
35-975	2-1/2"	31.18
35-977	3"	52.60

**TYPE D**



Part#	Size	List Price
35-940	3/4"	19.17
35-941	1"	20.90
35-942	1-1/4"	23.02
35-943	1-1/2"	29.40
35-944	2"	21.13
35-945	2-1/2"	32.28
35-947	3"	52.60

**TYPE DP**



Part#	Size	List Price
35-980	3/4"	8.19
35-981	1"	7.91
35-982	1-1/4"	8.00
35-983	1-1/2"	9.52
35-984	2"	9.85
35-985	2-1/2"	11.61
35-987	3"	35.32

**ALUMINUM  
SPOOL ADAPTER**



Part#	Size	List Price
61-872	1"	31.33
61-873	1-1/2"	36.36
61-874	2"	41.18
61-875	2" x 3"	58.13
61-876	2-1/2"	60.47
61-877	3"	77.93
61-878	3" x 4"	101.70
61-879	4"	103.40

**ALUMINUM  
TYPE DD**



Part#	Size	List Price
619-440	1-1/2"	108.44
619-450	2"	114.97
619-470	3"	161.16
619-480	4"	214.17

**ALUMINUM  
TYPE DA**



Part#	Size	List Price
619-001	1-1/2" x 1"	110.10
619-002	1-1/2" x 2"	112.85
619-003	2" x 1-1/2"	96.33
619-004	2" x 3"	91.52
619-005	2" x 4"	173.43
619-006	3" x 1-1/2"	134.38
619-007	3" x 2"	113.69
619-008	3" x 4"	146.92
619-009	4" x 2"	153.75
619-010	4" x 3"	143.50
619-011	4" x 6"	287.84
619-012	6" x 4"	318.26

**316 SS  
SPOOL ADAPTER**



Part#	Size	List Price
63-850	1"	161.81
63-851	1-1/2"	197.32
63-852	1-1/2" x 2"	235.22
63-853	2"	261.18
63-854	2" x 3"	337.35
63-855	3"	453.29
63-856	3" x 4"	553.72
63-857	4"	698.80

**316 SS  
TYPE DD**



Part#	Size	List Price
639-440	1-1/2"	256.38
639-450	2"	330.83
639-470	3"	512.12
639-480	4"	689.85

**316 SS  
TYPE DA**



Part#	Size	List Price
639-001	2" x 1-1/2"	301.82
639-002	3" x 2"	373.19
639-003	4" x 3"	555.11
639-004	6" x 4"	995.76

**BRASS  
SPOOL ADAPTER**



Part#	Size	List Price
44-212	1-1/2"	143.92
44-213	2"	181.44
44-214	2-1/2"	257.08
44-215	3"	308.93
44-216	4"	427.60

**BRASS  
TYPE DA**



Part#	Size	List Price
449-450	2" x 3"	354.35
449-470	3" x 2"	388.53
449-480	4" x 2"	542.36
449-481	4" x 3"	563.43
449-482	6" x 4"	864.09

**HOSE  
ACCESSORIES**



**ALUMINUM JUMP SIZES & ACCESSORIES**

**ALUMINUM JUMP SIZE A**



Part#	Size	List Price
61-851	2" x 3"	80.96
61-852	3" x 2"	79.82
61-853	3" x 4"	137.27
61-854	4" x 3"	125.13
61-855	4" x 6"	320.92
61-856	6" x 4"	320.92

**ALUMINUM JUMP SIZE B**



Part#	Size	List Price
61-857	1-1/2" x 1"	151.14
61-858	2" x 1-1/2"	102.85
61-859	3" x 2"	106.73
61-860	3" x 4"	201.88
61-861	4" x 3"	199.36

**ALUMINUM JUMP SIZE D**



Part#	Size	List Price
61-865	1-1/2" x 1"	108.45
61-866	2" x 1-1/2"	108.45
61-867	3" x 2"	125.65
61-868	4" x 3"	201.66

**ALUMINUM JUMP SIZE E**



Part#	Size	List Price
61-820	2" x 1-1/2"	31.53
61-821	2" x 2-1/2"	44.33
61-822	2" x 3"	47.15
61-823	3" x 2"	67.24
61-824	3" x 2-1/2"	69.09
61-825	3" x 4"	79.53
61-826	4" x 2"	73.62
61-827	4" x 3"	94.08

**ALUMINUM JUMP SIZE F**



Part#	Size	List Price
61-869	3" x 1-1/2"	100.92
61-870	3" x 2"	102.27
61-871	3" x 4"	148.05

**INVESTMENT CAST STAINLESS STEEL HANDLE, RING & PIN**



Part#	Size	List Price
61-447	3/4"	9.30
61-448	1"	9.30
61-449	1-1/4" - 2-1/2"	26.54
61-452	3" & 4"	33.87
61-454	6"	93.55
61-825	3" x 4"	79.53
61-826	4" x 2"	73.62
61-827	4" x 3"	94.08

**FORGED BRASS HANDLE - RING & PIN STEEL**



Part#	Size	List Price
61-455	3/4"	8.47
61-450	1"	12.47
61-451	1-1/4" - 2-1/2"	13.74
61-453	3" & 4"	18.62
61-457	6"	78.92
61-825	3" x 4"	79.53
61-826	4" x 2"	73.62
61-827	4" x 3"	94.08

**BUNA-N GASKET**



Part#	Size	List Price
BG-50	1/2"	1.58
BG-75	3/4"	1.58
BG-100	1"	1.58
BG-125	1-1/4"	1.75
BG-150	1-1/2"	1.75
BG-200	2"	1.75
BG-250	2-1/2"	2.07
BG-300	3"	2.23
BG-400	4"	3.13
BG-500	5"	7.85
BG-600	6"	8.45
BG-800	8"	39.34

**VITON GASKET**



Part#	Size	List Price
VG100	1"	12.79
VG150	1-1/2"	17.94
VG200	2"	19.03
VG250	2-1/2"	25.56
VG300	3"	30.35
VG400	4"	45.66

**HOSE ACCESSORIES**

## UNIVERSAL COUPLINGS

### MALE NPT ENDS

- Twist claw/ universal/ chicago



- Malleable iron
- ISO PSI

\* Safety clip included

Part #	Size	List Price
66005	3/8"	7.39
66006	1/2"	6.15
66007	3/4"	6.53
66008	1"	7.34

### WASHER



Part #	List Price
66000	0.60

### FEMALE NPT ENDS



\* Safety clip included

Part #	Size	List Price
66009	3/8"	7.39
66010	1/2"	6.15
66011	3/4"	6.53
66012	1"	8.21

## HOSE ACCESSORIES

### HOSE END



\* Safety clip included

Part #	Size	List Price
66001	3/8"	8.58
66002	1/2"	5.58
66003	3/4"	5.64
66004	1"	7.39

### TRIPLE CONNECTIONS



Part #	List Price
66013	19.24

That which doesn't kill us makes us stronger.

- Friedrich Nietzsche

For high pressure air and water service, steam, sanitary, high pressure spray, LPG and anhydrous ammonia service, petroleum products and chemicals: All parts plated malleable iron. Insert and spud may be either steel or malleable iron. NPT Male and Female spud. Female wing nut-to-spud connection is NPSM ground joint.

**HEAVY DUTY COUPLINGS - Ground Joint Type, Plated**

**Hose Stem with**

**Wing Nut & Female Spud**



Part #	Size	List Price
73-003	1/2"	40.25
73-004	3/4"	42.78
73-005	1"	43.30
73-006	1-1/4"	74.18
73-007	1-1/2"	74.18
73-008	2"	102.29
73-009	2-1/2"	277.21
73-010	3"	294.06
73-011	4"	580.92

**Hose Stem Only**



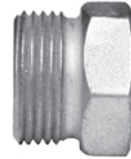
Part #	Size	List Price
73-023	1/2"	11.44
73-024	3/4"	13.92
73-025	1"	13.97
73-026	1-1/4"	23.75
73-027	1-1/2"	25.76
73-028	2"	33.24
73-029	2-1/2"	89.76
73-030	3"	414.00
73-031	4"	208.90

**Wing Nut Only**



Part #	Size	List Price
73-033	1/2"	13.00
73-035	1"	16.22
73-036	1-1/4"	27.49
73-037	1-1/2"	29.21
73-038	2"	37.84
73-039	2-1/2"	102.58
73-040	3"	108.73
73-041	4"	238.74

**Female Spud Only**



Part #	Size	List Price
73-063	1/2"	19.09
73-064	3/4"	23.12
73-065	1"	23.40
73-066	1-1/4"	40.19
73-067	1-1/2"	42.55
73-068	2"	55.32
73-069	2-1/2"	145.65
73-070	3"	159.10
73-071	4"	349.14

**Male Pipe Stem Only**

(NPT)



Part #	Size	List Price
73-043	1/2"	9.09
73-044	3/4"	14.20
73-045	1"	21.85
73-046	1-1/4"	19.90
73-047	1-1/2"	23.75
73-048	2"	38.87
73-049	2-1/2"	65.32
73-050	3"	81.31
73-051	4"	141.85

**2, 4, 6 Bolt Clamps**



Part #	Size	List Price
73-056	3/4"	9.60
73-057	1"	16.50
73-058	1-1/2"	31.57
73-059	2"	40.54
73-060	3"	91.94

**Danger:** Failure or improper selection or improper use of hose couplings or related accessories can cause death, personal injury and property damage. Possible consequences of failure or improper selection or improper use of hose couplings or related accessories include but are not limited to:

- Coupling or parts thrown off at high speed.
- High velocity fluid discharge.
- Explosion or burning of the conveyed fluid.
- Contact with suddenly moving or falling objects that are to be held in position or moved by the conveyor fluid.
- Dangerously whipping hose.
- Contact with conveyed fluids that may be hot, cold, toxic or otherwise injurious.
- Sparking or explosion while paint or flammable liquid spraying.

Before selecting or using any of our products, it is important to check with our offices for more detailed specifications regarding use.

# FIRE HOSE FITTINGS

# HOSE ACCESSORIES

## HYDRANT ADAPTERS - BRASS



### FEMALE X MALE

Part #	Description	List Price
444-011	1-1/2" NST x 3/4" GHT	49.31
444-000	2-1/2" NST x 3/4" GHT	49.31
444-001	2-1/2" NST x 3/4" NPT	49.31
444-003	2-1/2" NST x 1" NPSH	43.56
444-002	2-1/2" NST x 1" NPT	43.56
444-004	2-1/2" NST x 1-1/2" NPSH	51.52
444-005	2-1/2" NST x 1-1/2" NPT	50.08
444-007	2-1/2" NST x 2" NPSH	53.48
444-008	2-1/2" NST x 2" NPT	53.08
444-006	2-1/2" NST x 1-1/2" NST	50.08
444-009	3" NPSH x 2-1/2" NST	125.27
444-010	3" NST x 2-1/2" NST	105.65

## FEMALE TO MALE HEX ADAPTER - BRASS



### FEMALE X MALE

Part #	Description	List Price
444-021	1-1/2" NST x 1-1/2" NPSH	47.86
444-023	1-1/2" NPT x 1-1/2" NPSH	47.86
444-027	2-1/2" NST x 2-1/2" NPSH	90.89
444-028	2-1/2" NPT x 2-1/2" NPSH	90.89
444-024	1-1/2" NPSH x 1-1/2" NST	49.33
444-020	1-1/2" NST x 1-1/2" NPT	29.02
444-026	2-1/2" NST x 2-1/2" NPT	97.61

## DOUBLE MALE HEX NIPPLE - BRASS



Part #	Description	List Price
444-042	1-1/2" NPT x 1-1/2" NPSH	44.43
444-047	2-1/2" NPT x 2-1/2" NPSH	72.41
444-040	1-1/2" NPT x 1-1/2" NST	35.83
444-048	2" NPT x 2-1/2" NST	106.44
444-045	2-1/2" NPT x 2-1/2" NST	98.39
444-049	3" NPT x 2-1/2" NST	182.41

## DOUBLE FEMALE - BRASS



Part #	Description	List Price
444-100	1-1/2" NPT x 1-1/2" NPSH	261.80
444-101	1-1/2" NPT x 1-1/2" NST	261.80
444-102	2" NPT x 2-1/2" NST	218.17
444-103	2-1/2" NPT x 2-1/2" NPSH	441.60
444-104	2-1/2" NPT x 2-1/2" NST	266.57
444-105	3" NPT x 2-1/2" NST	266.57

## MALE SWIVEL ADAPTER - BRASS



Part #	Description Female x Male	List Price
444-110	1-1/2" NST x 1-1/2" NPT	180.90
444-111	2-1/2" NST x 2" NPT	272.63
444-112	2-1/2" NST x 2-1/2" NPT	210.34
444-113	2-1/2" NST x 3" NPT	348.77

## CAP - BRASS



Part #	Description	List Price
444-061	1-1/2" NPSH	45.19
444-060	1-1/2" NST	45.19
444-062	2-1/2" NST	68.61

**1/2" BAND CLAMPS**

57  
62  
HS  
H  
HF  
015  
100  
500



**Applications:** A general purpose clamp for automobiles, plumbing, home and garden general clamping applications, with anti-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

- No PSI Rating
- 50lb/ Inch Torque Rating Die Set Function

**611 Series**

- 5/16" Hex Slotted Carbon Steel Screw
- 1/2" Wide 201 Stainless Steel Band
- 301 Stainless Steel Housing

#	Dia. Range		Part #	List Price	Part #	List Price
	Min.	Max.				
6	3/8"	7/8"	600-006	1.57	611-006	1.58
8	7/16"	1"	600-008	1.56	611-008	1.67
10	9/16"	1-1/16"	600-010	1.47	611-010	1.43
12	9/16"	1-1/4"	600-012	1.55	611-012	1.69
16	11/16"	1-1/2"	600-016	1.46	611-016	1.86
20	3/4"	1-3/4"	600-020	1.47	611-020	1.83
24	1-1/16"	2"	600-024	1.56	611-024	1.58
28	1-5/16"	2-1/4"	600-028	1.72	611-028	2.41
32	1-9/16"	2-1/2"	600-032	1.52	611-032	2.41
36	1-13/16"	2-3/4"	600-036	1.53	611-036	1.53
40	2-1/16"	3"	600-040	1.75	611-040	1.74
44	2-5/16"	3-1/4"	600-044	2.41	611-044	2.88
48	2-9/16"	3-1/2"	600-048	2.05	611-048	1.97
52	2-13/16"	3-3/4"	600-052	3.41	611-052	2.16
56	3-1/16"	4"	600-056	3.04	611-056	2.51
60	3-5/16"	4-1/4"	600-060	2.24	611-060	2.24
64	2-1/2"	4-1/2"	600-064	2.33	611-064	2.46
72	3"	5"	600-072	2.40	611-072	3.15
80	3-1/2"	5-1/2"	600-080	2.44	611-080	3.67
88	4"	6"	600-088	3.06	611-088	3.22
96	4-1/2"	6-1/2"	600-096	3.34	611-096	3.22
104	5"	7"	600-104	3.62	611-104	2.94
116	5-3/4"	7-3/4"			611-116	4.90
128	6-1/2"	8-1/2"			611-128	4.18
152	2"	10"			611-152	4.80
164	1-3/4"	10-3/4"			611-164	6.07
176	9-1/4"	11-1/4"			611-176	4.58
188	2-1/16"	12-1/4"			611-188	5.28
200	11"	13"			611-200	5.75
212	11-3/4"	13-3/4"			611-212	7.46
224	12-1/2"	14-1/2"			611-224	5.46
248	10-3/4"	16"			611-248	5.71
270	15-3/8"	17-3/8"			611-270	8.31
312	18"	20"			611-312	8.47
332	19-1/8"	21-1/4"			611-332	6.22
390	22-7/8"	24-7/8"			611-390	9.34

**CLAMPS**

*Send Midland all your high volume quotes!*



67-5  
63  
HSS  
HF-SS  
035  
HAS-X  
300

**1/2" WIDE BAND CLAMPS (12.70mm)**

- 60mm Thickness
- Use for marine, underground and other high corrosive applications.



**620 Series**

- 5/16" Hex Slotted 305 Stainless Steel Screw
- 1/2" Wide 301 Stainless Steel Band
- 301 Stainless Steel Housing

**620SS Series**

- 5/16" Hex Slotted 316 Stainless Steel Screw
- 1/2" Wide 316 Stainless Steel Band
- 316 Stainless Steel Housing

**CLAMPS**

#	Part #	List Price	Dia. Range		All 316SS Part #	List Price
			Min.	Max.		
6	620-006	1.71	3/8"	7/8"	620-006SS	1.59
8	620-008	1.93	7/16"	1"	620-008SS	1.62
10	620-010	1.93	9/16"	1-1/16"	620-010SS	1.67
12	620-012	2.34	9/16"	1-1/4"	620-012SS	1.73
16	620-016	1.95	11/16"	1-1/2"	620-016SS	1.82
20	620-020	1.97	3/4"	1-3/4"	620-020SS	1.90
24	620-024	1.76	1-1/16"	2"	620-024SS	2.02
28	620-028	1.77	1-5/16"	2-1/4"	620-028SS	2.13
32	620-032	1.90	1-9/16"	2-1/2"	620-032SS	2.22
36	620-036	1.96	1-13/16"	2-3/4"	620-036SS	2.31
40	620-040	2.56	2-1/16"	3"	620-040SS	2.42
44	620-044	3.16	2-5/16"	3-1/4"	620-044SS	2.51
48	620-048	2.44	2-9/16"	3-1/2"	620-048SS	2.63
52	620-052	2.54	2-13/16"	3-3/4"	620-052SS	2.71
56	620-056	2.54	3-1/16"	4"	620-056SS	2.83
60	620-060	4.38	3-5/16"	4-1/4"	620-060SS	2.89
64	620-064	2.68	2-1/2"	4-1/2"	620-064SS	2.89
72	620-072	2.82	3"	5"	620-072SS	3.17
80	620-080	4.62	3-1/2"	5-1/2"		
88	620-088	3.21	4"	6"		
96	620-096	4.48	4-1/2"	6-1/2"		
104	620-104	3.50	5"	7"		
116	620-116	7.50	5-3/4"	7-3/4"		
128	620-128	4.85	6-1/2"	8-1/2"		
152	620-152	6.73	2"	10"		
164	620-164	12.06	1-3/4"	10-3/4"		
176	620-176	5.50	9-1/4"	11-1/4"		
188	620-188	7.39	2-1/16"	12-1/4"		
200	620-200	6.03	11"	13"		
212	620-212	7.80	11-3/4"	13-3/4"		
224	620-224	6.53	12-1/2"	14-1/2"		
248	620-248	7.81	10-3/4"	16"		
270	620-270	7.35	15-3/8"	17-3/8"		
312	620-312	7.55	18"	20"		
332	620-332	7.50	19-1/8"	21-1/4"		
390	620-390	13.26	22-7/8"	24-7/8"		



**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 without spot welding.

52

**300 Series**

- 1/4" Hex Slotted Carbon Steel Screw
- 5/16" Wide 301 Stainless Steel Band
- Carbon Steel Housing



Dia. Range		Part #	List Price
Min.	Max.		
7/32"	5/8"	300-004	1.36
7/16"	11/16"	300-005	1.19
5/16"	7/8"	300-006	1.15
7/16"	1"	300-008	1.31
1/2"	1-1/16"	300-010	1.47
9/16"	1-1/4"	300-012	1.25
11/16"	1-1/2"	300-016	1.53
7/8"	1-3/4"	300-020	1.63

62P 011  
MHX 21  
35  
MH  
MF

**325 Series**

- 1/4" Hex Slotted Carbon Steel Screw
- 5/16" Wide 301 Stainless Steel Band
- 301 Stainless Steel Housing



Dia. Range		Part #	List Price
Min.	Max.		
7/32"	5/8"	325-004	1.07
7/16"	11/16"	325-005	1.17
5/16"	7/8"	325-006	0.94
7/16"	1"	325-008	1.24
1/2"	1-1/16"	325-010	1.46
9/16"	1-1/4"	325-012	1.38
11/16"	1-1/2"	325-016	2.61
7/8"	1-3/4"	325-020	1.76

**350 Series**

- 1/4" Hex Slotted 410 Stainless Steel Screw
- 5/16" Wide 301 Stainless Steel Band
- 301 stainless Steel Housing
- 6mm thick



**350SS Series**

- 1/4" Hex Slotted 316 Stainless Steel Screw
- 316 Stainless Steel Band
- 8mm wide
- 60 mm thick
- 316 stainless Steel Housing

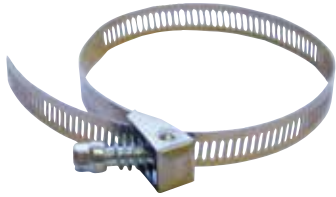
Part #	List Price	Dia. Range		Part #	List Price
		Min.	Max.		
350-004	0.96	7/32"	5/8"	350-004SS	0.72
350-005	1.72	7/16"	11/16"	350-005SS	0.75
350-006	0.96	5/16"	7/8"	350-006SS	0.78
350-008	1.08	7/16"	1"	350-008SS	0.84
350-010	1.36	1/2"	1-1/16"	350-010SS	0.84
350-012	1.36	9/16"	1-1/4"	350-012SS	0.89
350-016	2.07	11/16"	1-1/2"	350-016SS	0.95
350-020	1.85	7/8"	1-3/4"	350-020SS	1.01

**CLAMPS**

**QUICK RELEASE 500/550 SERIES**

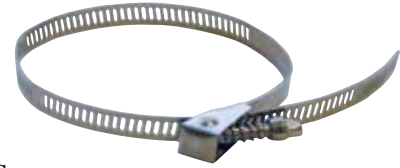
These clamps feature a unique quick release design between the one piece housing and band allowing for quick and easy installation in restricted or difficult areas.

**Applications:** Quick release action permits easy installation in applications where clamp must be opened to be applied. Quick release clamps are used extensively in the telecommunications industry on cable enclosures where open air application demands durability.



56  
LS

Open/Close design allows easy installation.



58  
LSS

- 500 Series**
- 5/16" Hex Slotted Carbon Steel Screw
  - 1/2" 301 Stainless Steel band
  - 301 Stainless Steel Housing
  - 410 Stainless Steel Bridge

- 550 Series**
- 5/16" Hex Slotted 410 Stainless Steel Screw
  - 1/2" 301 Stainless Steel band
  - 301 Stainless Steel Housing
  - 410 Stainless Steel Bridge

#	Dia. Range		Part #	List Price	Part #	List Price
	Min.	Max.				
12	1/2"	1-1/4"	500-012	2.41	550-012	3.26
20	3/4"	1-3/4"	500-020	2.45	550-020	2.59
28	1"	2-1/4"	500-028	2.51	550-028	2.78
36	1"	2-3/4"	500-036	1.90	550-036	2.88
48	1-1/2"	3-1/2"	500-048	3.20	550-048	3.41
56	1"	4"	500-056	3.65	550-056	4.95
72	2"	5"	500-072	3.08	550-072	5.70
88	2-1/16"	6"	500-088	4.58	550-088	5.91
104	1-3/4"	7"	500-104	4.82	550-104	6.95
128	1-3/4"	8-9/16"	500-128	4.28	550-128	6.13
152	2"	10"	500-152	4.53	550-152	6.66
188	2-1/16"	12-5/16"	500-188	5.04	550-188	8.49
216	10-3/16"	14"	500-216	5.43	550-216	10.23
248	10-3/4"	16"	500-248	5.61	550-248	9.45
280	14-1/4"	18"	500-280	6.79	550-280	9.08
312	14"	20"			550-312	10.78

CLAMPS

**HOSE CLAMP KITS**

Shipped without Clamps

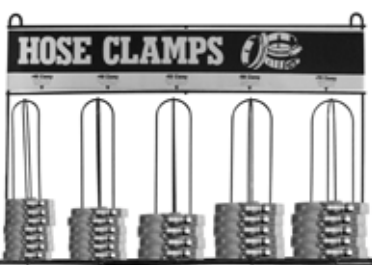
**DISPLAY RACK**

600-000 231.00



**DISPLAY RACK**

600-001 231.00



**KIT# LIST**  
600-100 563.45

Qty	Part#
60	300-0004
60	300-0006
30	600-008
30	600-010
90	600-012
40	600-016
40	600-020
20	600-028
20	600-032
10	600-036

**KIT# LIST**  
600-101 16.10

Qty	Part#
10	600-040
10	600-048
10	600-052
10	600-056
10	600-072

**KIT# LIST**  
611-100 548.91

Qty	Part#
60	325-004
60	325-006
30	611-006
30	611-010
90	611-012
40	611-016
40	611-020
20	611-028
20	611-032
10	311-036

**KIT# LIST**  
611-101 115.18

Qty	Part#
10	611-040
10	611-048
10	611-052
10	611-056
10	611-072

**KIT# LIST**  
620-100 662.57

Qty	Part#
60	350-004
60	350-006
30	620-006
30	620-010
90	620-012
40	620-016
40	620-020
20	620-028
20	620-032
10	620-036

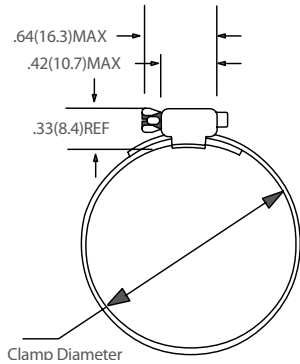
**KIT# LIST**  
620-101 125.65

Qty	Part#
10	620-040
10	620-048
10	620-052
10	620-056
10	620-072

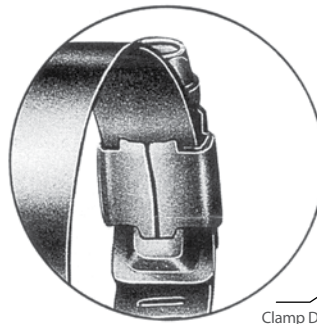
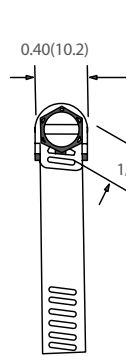
NOTE: Kits do not include display racks.



**WORM GEAR HOSE CLAMPS  
830 Series**

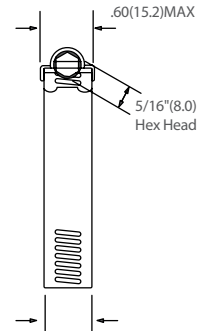
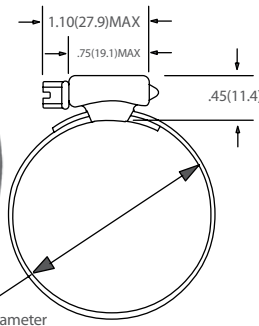


**MINI CLAMP**  
Screw: 1/4" hex-head  
Band: 5/16" wide



**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

**NEW DIMENSIONS**

No.	Diameter Range		Use for General Industrial Application			
	Inch	MM	All Galvanized Steel		400 Series Stainless Steel Band, Housing and Screw	
	Min-Max	Min-Max	Part #	List Price	Part #	List Price
<b>Mini Clamp with 8 mm wide Band (5/16")</b>						
4	7/32"-5/8"	6-16	830-185	0.75	830-185S	0.94
6	7/16"-3/4"	11-20	830-184	0.78	830-184S	0.92
8	1/2"-7/8"	13-23	830-183	0.70	830-183S	0.94
<b>Regular Clamp with 12.7 mm (1/2") wide Band</b>						
10	33/64"-1-1/16"	13-27	830-188	1.37	830-188S	1.45
12	33/64"-1-1/4"	13-32	830-189	0.97	830-189S	1.55
16	23/32"-1-1/2"	18-38	830-190	1.38	830-190S	1.38
20	3/4"-1-3/4"	19-44	830-192	1.03	830-192S	1.67
24	63/64"-2"	25-51	830-193	1.38	830-193S	1.81
28	1-17/64"-2-1/4"	32-57	830-194	1.12	830-194S	1.67
32	1-1/2"-2-1/2"	38-63	830-132	1.13	830-132S	1.74
36	1-47/64"-2 3/4"	44-70	830-195	1.11	830-195S	2.00
40	2-1/64"-3"	51-76	830-182	1.24	830-182S	1.65
44	2-1/4"-3-1/4"	57-82	830-196	1.15	830-196S	2.13
48	2-17/32"-3-3/4"	64-89	830-197	1.31	830-197S	1.66
52	2-49/64"-3-3/4"	70-95	830-152	1.31	830-152S	2.16
56	3"-4"	76-101	830-198	1.10	830-198S	1.69
60	3-9/32"-4-1/4"	83-108	830-060	1.52	830-060S	1.87
64	2-17/32"-4-1/2"	64-114	830-064	1.90	830-064S	2.74
72	3"-5"	76-127	830-072	1.84	830-072S	1.85
80	3-33/64"-5-1/2"	89-140	830-080	1.56	830-080S	2.75
88	4-4/32"-6"	102-152	830-288	1.48	830-288S	2.04
96	4-1/2"-6-1/2"	114-165	830-096	2.20	830-096S	2.85

Save 5% by ordering online at  
[www.midlandmetal.com](http://www.midlandmetal.com)



**T-Bolt Clamps**

- All designs meet SAE J1508 specifications.
- .025" Band Thickness
- 3/4" Wide Band
- Band Material: 301 Series Stainless Steel
- Bolt Material: 304 Series Stainless Steel
- Nut Material: 304 Series Stainless Steel
- Nuts are Self-locking
- Torque Rating 75 in/lb



Opens 1/16" above and tightens 1/8" smaller than nominal I.D. for a total of 3/16" range for clamps sizes 150 through 250. Opens 1/16" above and tightens 7/32" smaller than nominal I.D. for clamps sizes 256 through 750.

**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.

*Send Midland all your high volume quotes!*

30010

Nominal Size	O.D. Range		Part#	List Price
	From:	To:		
1-1/4	1-5/32"	1-15/32"	840-131	5.06
1-1/2	1-3/8"	1-9/16"	840-150	4.63
1-3/4	1-5/8"	1-13/16"	840-175	4.40
1-7/8	1-3/4"	1-15/16"	840-188	4.80
2	1-7/8"	2-1/16"	840-200	4.88
2-1/4	2-1/8"	2-5/16"	840-225	5.67
2-3/8	2-1/4"	2-7/16"	840-238	4.84
2-1/2	2-3/8"	2-9/16"	840-250	4.73
2-9/16	2-11/32"	2-5/8"	840-256	6.77
2-5/8	2-13/32"	2-11/16"	840-263	4.82
2-3/4	2-17/32"	2-13/16"	840-275	5.78
2-7/8	2-21/32"	2-15/16"	840-288	5.35
3	2-25/32"	3-1/16"	840-300	5.47
3-1/8	2-29/32"	3-3/16"	840-312	6.72
3-1/4	3-1/32"	3-5/16"	840-325	5.45
3-1/2	3-9/32"	3-9/16"	840-350	5.40
3-3/4	3-17/32"	3-13/16"	840-375	6.38
3-53/64	3-19/32"	3-7/8"	840-382	7.15
4	3-25/32"	4-1/16"	840-400	5.80
4-1/4	4-1/32"	4-5/16"	840-425	5.85
4-1/2	4-9/32"	4-9/16"	840-450	6.24
4-3/4	4-17/32"	4-13/16"	840-475	6.34
5	4-25/32"	5-1/16"	840-500	7.04
5-1/4	5-1/32"	5-5/16"	840-525	8.15
5-1/2	5-9/32"	5-9/16"	840-550	7.26
5-3/4	5-17/32"	5-13/16"	840-575	8.18
6	5-25/32"	6-1/16"	840-600	8.32
6-1/4	6-1/32"	6-5/16"	840-625	8.56
6-1/2	6-9/32"	6-9/16"	840-650	8.68
6-3/4	6-17/32"	6-13/16"	840-675	8.80
7	6-25/32"	7-1/16"	840-700	8.92
7-1/2	7-9/32"	7-9/16"	840-750	10.39
8	7-25/32"	8-1/16"	840-800	9.43
8-1/4	8-9/32"	8-9/16"	840-850	12.09
8-7/8	8-21/32"	8-15/16"	840-888	12.54

**Also Available:**

- Spring loaded T-bolt hose clamps
- Constant torque hose clamps
- Turbo V-Band hose clamps

**SEE OUR WEBSITE**

## 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		List Price
			Close	Open	
1050000	105	3/8"	0.350	0.414	0.48
1050001	113	7/16"	0.381	0.444	0.65
1050002	123	15/32"	0.394	0.486	0.51
1050003	133	1/2"	0.453	0.524	0.67
1050006	140	35/64"	0.472	0.551	0.90
1050007	145	9/16"	0.496	0.571	0.60
1050008	157	5/8"	0.543	0.618	0.71
1050009	170	11/16"	0.594	0.669	0.53
1050010	185	23/32"	0.618	0.728	0.58
1050011	198	3/4"	0.669	0.779	0.70
1050012	210	13/16"	0.716	0.827	0.58
1050013	226	7/8"	0.779	0.890	0.57
1050014	241	15/16"	0.839	0.949	0.70
1050015	256	1"	0.898	1.008	0.73
1050016	271	1-1/16"	0.945	1.067	0.81
1050017	286	1-1/8"	1.004	1.126	0.62
1050018	301	1-3/16"	1.063	1.185	0.69
1050020	331	1-5/16"	1.181	1.303	0.88
1050021	346	1-3/8"	1.240	1.362	0.75
1050023	376	1-15/32"	1.358	1.480	13.48
1050025	396	1-9/16"	1.437	1.559	0.78
1050026	410	1-5/8"	1.492	1.614	0.84
1050027	425	1-11/16"	1.551	1.673	0.83
1050028	440	1-23/32"	1.610	1.732	0.91
1050029	455	1-3/4"	1.669	1.791	1.37
1050030	470	1-16/16"	1.728	1.850	0.92
1050031	485	1-7/8"	1.787	1.909	0.97
1050032	500	1-15/16"	1.846	1.968	0.98
1050033	515	2"	1.905	2.028	1.02

*Minimum QTYs may apply*

## EAR CLAMPS

### 2-EAR CLAMPS

2-Ear Clamps are especially suited for industrial use and 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 #	Nominal Size	Inches		List Price
		Close	Open	
1010002	3/16"	0.134	0.197	1.27
1010008	5/16"	0.276	0.354	1.48
1010011	3/8"	0.319	0.433	1.12
1010016	1/2"	0.425	0.512	0.89
1010019	9/16"	0.492	0.591	1.32
1010022	19/32"	0.551	0.669	1.49
1010024	5/8"	0.591	0.709	1.03
1010027	3/4"	0.638	0.787	1.15

#### STAINLESS STEEL

Part #	Nominal Size	Inches		List Price
		Close	Open	
1510003	1/4"	0.197	0.276	1.41
1510004	5/16"	0.276	0.354	1.75
1510023	3/8"	0.319	0.433	0.97
1510006	1/2"	0.425	0.512	1.81
1510007	9/16"	0.492	0.591	2.09
1510008	19/32"	0.551	0.669	2.19
1510009	5/8"	0.591	0.709	0.99
1510010	3/4"	0.638	0.787	1.88
1510011	13/16"	0.709	0.866	2.83
1510012	7/8"	0.748	0.906	1.54
1510013	15/16"	0.827	0.984	2.53
1510014	1"	0.886	1.063	2.93
1510016	1-1/8"	1.035	1.221	2.76
1510019	1-9/16"	1.260	1.457	4.15
1510020	1-1/2"	1.378	1.575	3.43

*\*Minimum QTYs may apply\**

*Send Midland all your quotes!*

## HOSE CLAMPS

### GAPLESS EAR CLAMPS

#### Features

- Assured clamping seal
- For low durometer and/ or thin-walled hose/ tubing
- Perfect for silicon, vinyl, polyurethane or other high tech materials used in all industries.
- Once installed, smooth inner ban circumference prevents damage to the hose while the unique tongue-in-groove design provides a 360° seal
- There are no steps or gaps inside clamp



#### Material

- Stainless steel tubing UNS S30400 or DIN 1.4301

Part #	Nominal Size	Band Width	Inches		List Price
			Close	Open	
16700001	9/32"	5mm	0.228	0.276	1.25
16700004	3/8"	5mm	0.307	0.374	1.32
16700007	7/16"	5mm	0.378	0.445	1.72
16700010	1/2"	7mm	0.425	0.524	1.10
16700012	35/64"	7mm	0.453	0.551	1.45
16700013	9/16"	7mm	0.472	0.571	1.82
16700016	5/8"	7mm	0.520	0.618	1.66
16700017	11/16"	7mm	0.571	0.669	1.27
16700022	3/4"	7mm	0.654	0.780	1.58
16700024	13/16"	7mm	0.701	0.827	1.77

### PINCERS

#### Model 1098 I Standard Jaw Pincers



Part #  
1410118

List Price  
188.01

#### 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 Pincers.

Part #  
1410083

Model 1099 I

List Price  
184.21

## HOSE CLAMPS

## F & K CLAMPS

**TO ORDER** the correct size Fast Lok Clamps, measure the outside diameter of the hose or article and then select the next larger inside diameter clamp by catalog number.

- Minimum Qty may apply



Preformed Clamps are double wrapped and formed to a given diameter. Used primarily where one end of the hose or article is free to allow the clamps to be slid over the hose end before the fitting is inserted. All clamps may be pulled down to a smaller diameter but cannot be adjusted to a larger diameter.

### PREFORMED CLAMPS (3/8" AND 5/8" (NOMINAL) WIDTH)

Catalog Number	Band Width & Thickness	List Price	Clamp I.D. Inches	Catalog Number	Band Width & Thickness	List Price
F-3	3/8 x .025	1.39	13/16	FS-3	3/8 x .020	2.08
F-311	3/8 x .025	1.72	1 3/8	FS-311	3/8 x .020	2.19
F-4	5/8 x .025	1.23	1	FS-4	5/8 x .022	2.74
F-5	5/8 x .025	1.42	1 1/4	FS-5	5/8 x .022	3.05
HEAVY DUTY BANDS						
F-6	5/8 x .031	1.79	1 1/2	FS-6	5/8 x .022	3.01
F-7	5/8 x .031	1.44	1 3/4	FS-7	5/8 x .022	3.73
F-8	5/8 x .031	1.52	2	FS-8	5/8 x .022	3.44
F-9	5/8 x .031	1.70	2 1/4	FS-9	5/8 x .022	3.83

F-10	5/8 x .031	1.88	2 1/2	FS-10	5/8 x .022	3.93
F-11	5/8 x .031	2.18	2 3/4	FS-11	5/8 x .022	4.75
F-12	5/8 x .031	2.28	3	FS-12	5/8 x .022	4.01
F-14	5/8 x .031	2.11	3 1/2	FS-14	5/8 x .022	4.71
F-16	5/8 x .031	2.62	4	FS-16	5/8 x .022	5.23
F-18	5/8 x .031	2.89	4 1/2	FS-18	5/8 x .022	5.75
F-20	5/8 x .031	2.92	5	FS-20	5/8 x .022	6.42
F-24	5/8 x .031	3.50	6	FS-24	5/8 x .022	7.20
F-28	5/8 x .031	4.05	7	FS-28	5/8 x .022	7.42
F-32	5/8 x .031	7.32	8	FS-32	5/8 x .022	10.84

Double-wrapped, Triple Punched, Holds Permanently



Galvanized Preformed Clamps 2 1/2 inch I.D. and above, and 5/8" wide open end clamps have a stainless steel lock for greater strength and rigidity.

### APPLICATION TOOLS

For 3/8", 5/8" .....F-38, F-40, F-100  
See page 316 for these tools.

## K-CLAMP PREFORMED HOSE CLAMPS

Each clamp is a double wrapped metal band formed to a given diameter. The clamp is designed to be slid over the hose end before the fitting is inserted. A punch-type or fold-up tool is then used to apply the clamp.

Punch Indentation for ease of center punching

Heavy Duty Lock for greater strength and rigidity



Heavy Duty Clamp

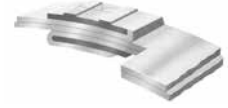
**K-Clamps may be secured by either a punch or fold-up method.**  
(See cross sectioned views)

- Minimum Qty may apply

### Center Punched

Less tension loss. Patented hole in inner band gives better internal mechanical locking after punching

### Fold-up



### PREFORMED CLAMPS (3/8" AND 5/8" (NOMINAL) WIDTH)

#### GALVANIZED STEEL

#### STAINLESS STEEL TYPE 301

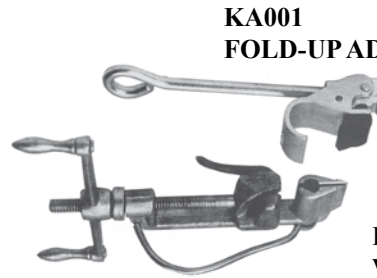
Catalog Number	List Price	Clamp I.D. Inches	Band Width & Thickness	Catalog Number	List Price
K-3	1.38	13/16"	3/8" x .025	KS-3	2.09
K-311	1.37	1-3/8"	3/8" x .025	KS-311	2.12
K-4	1.76	1"	5/8" x .030	KS-4	3.43
K-5	2.05	1-1/4"	5/8" x .030	KS-5	3.35
K-6	1.97	1-1/2"	5/8" x .030	KS-6	3.50
K-7	2.19	1-3/4"	5/8" x .030	KS-7	3.45
K-8	2.11	2"	5/8" x .030	KS-8	4.08
K-9	2.43	2-1/4"	5/8" x .030	KS-9	4.10
K-10	2.35	2-1/2"	5/8" x .030	KS-10	4.84
K-11	2.40	2-3/4"	5/8" x .030	KS-11	4.87
K-12	2.83	3"	5/8" x .030	KS-12	5.66
K-14	2.99	3-1/2"	5/8" x .030	KS-14	6.74
K-16	2.93	4"	5/8" x .030	KS-16	6.35
K-18	3.09	4-1/2"	5/8" x .030	KS-18	7.33
K-20	3.26	5"	5/8" x .030	KS-20	7.76
K-24	3.69	6"	5/8" x .030	KS-24	8.14
K-28	4.85	7"	5/8" x .030	KS-28	11.13
K-32	5.54	8"	5/8" x .030	KS-32	12.22

**TO ORDER** the correct size Fast Lok Clamps, measure the outside diameter of the hose or article and then select the next larger inside diameter clamp by catalog number.

- Minimum Qty may apply

**FLJ-Clamp  
PREFORMED HOSE CLAMPS**

J-Clamps are available in 3/8", 5/8" and 3/4" widths, from 13/16" to 8" I.D. These non punch type clamps are to be secured by the foldup method, using the Wind-Up tool, our part no. KS001 and adapter KA001.



**KA001  
FOLD-UP ADAPTER**

**List Price  
A001**

**KS001  
WIND-UP TOOL**

**List Price:  
360.13**

**STAINLESS STEEL TYPE 301**

**3/8" ( NOMINAL WIDTH)**

Catalog Number	Clamp I.D. Inches	Band Width & Thickness	List Price
FLJ-301	13/16"	3/8" x .025	1.57
FLJ-343	1"	3/8" x .025	1.58
FLJ-302	1-3/8"	3/8" x .025	1.65
FLJ-345	2"	3/8" x .025	1.73
FLJ-346	3"	3/8" x .025	2.29
<b>5/8" ( NOMINAL WIDTH )</b>			
FLJ-303	1"	5/8" x 0.30	2.89
FLJ-304	1-1/4"	5/8" x 0.30	2.78
FLJ-305	1-1/2"	5/8" x 0.30	3.29
FLJ-306	1-3/4"	5/8" x 0.30	3.05
FLJ-307	2"	5/8" x 0.30	4.74
FLJ-308	2-1/4"	5/8" x 0.30	3.10
FLJ-309	2-1/2"	5/8" x 0.30	3.31
<b>3/4" ( NOMINAL WIDTH )</b>			
FLJ-327	2"	3/4" x 0.30	3.95
FLJ-310	2-3/4"	3/4" x 0.30	4.40
FLJ-311	3"	3/4" x 0.30	4.56
FLJ-312	3-1/2"	3/4" x 0.30	5.40
FLJ-313	4"	3/4" x 0.30	5.24
FLJ-314	4-1/2"	3/4" x 0.30	5.45
FLJ-315	5"	3/4" x 0.30	5.93
FLJ-316	6"	3/4" x 0.30	6.76
FLJ-318	7"	3/4" x 0.30	7.58
FLJ-319	8"	3/4" x 0.30	8.13

*Send Midland all your quotes!*



**TO ORDER** the correct size Fast Lok Clamps, measure the outside diameter of the hose or article and then select the next larger inside diameter clamp by catalog number.

**FLJS-Clamp  
SMOOTH I.D. CLAMPS**

• Minimum Qty may apply

**FLJS** - Clamps are double wrapped clamps with a more smooth inside diameter, intended for your thermo-plastic and other thinner wall hose clamping applications. The JS series clamps slide on the hose prior to inserting the fitting.

**Preformed JS** - Clamps are available in 5/8" and 3/4" widths, 1" I.D. to 8" I.D. in 1/4" increments.

**The FLJS** - Clamp is intended to be applied with a KS001 tool or other comparable fold-up locking tool.



**KA001  
FOLD-UP ADAPTER**

**List Price  
A001**

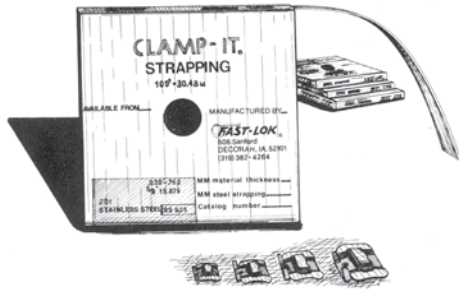
**KS001  
WIND-UP TOOL**

**List Price:  
360.13**

**STAINLESS  
STEEL**

Catalog Number	5/8" (NOMINAL WIDTH)		List Price
	Clamp I.D. Inches	Band Width & Thickness	
FLJS-203	1"	5/8" x .030	3.61
FLJS-204	1-1/4"	5/8" x .030	4.19
FLJS-205	1-1/2"	5/8" x .030	3.87
FLJS-206	1-3/4"	5/8" x .030	5.28
FLJS-207	2"	5/8" x .030	4.42
FLJS-208	2-1/4"	5/8" x .030	5.07
FLJS-209	2-1/2"	5/8" x .030	4.94
3/4" (NOMINAL WIDTH)			
FLJS-227	2"	3/4" x .030	6.07
FLJS-210	2-3/4"	3/4" x .030	7.00
FLJS-211	3"	3/4" x .030	6.94
FLJS-212	3-1/2"	3/4" x .030	8.09
FLJS-213	4"	3/4" x .030	8.85
FLJS-214	4-1/2"	3/4" x .030	11.14
FLJS-215	5"	3/4" x .030	10.13
FLJS-216	6"	3/4" x .030	11.99
FLJS-218	7"	3/4" x .030	14.04
FLJS-219	8"	3/4" x .030	15.33

# CLAMP-IT



## CLAMP-IT

The multi-sized clamps all rolled up in one..for your unknown requirements for 1 inch to 30 feet, be they round or otherwise. Clamp-It products will fill your needs. This Strapping in widths of 3/8", 1/2", 5/8", and 3/4" stainless or galvanized steel, as are the clamps (buckles).

### 100' CLAMP-IT STRAPPING

Catalog Number	Width	Thickness	Material 100'/CTN.	List Price/CNT
SS-3751	3/8"	.025	301 Stainless	128.09
SS-5001	1/2"	.030	301 Stainless	194.08
SS-6251	5/8"	.030	301 Stainless	226.27
SS-7501	3/4"	.030	301 Stainless	275.10
SG-3750	3/8"	.025	Galvanized	86.39
SG-5000	1/2"	.030	Galvanized	86.09
SG-6250	5/8"	.030	Galvanized	111.38
SG-7500	3/4"	.030	Galvanized	122.32

### CLAMPS (BUCKLES)

Catalog Number	Width	Material 100'/CTN.	List Price Each pc.
CS-3751	3/8"	301 Stainless	1.04
CS-5001	1/2"	301 Stainless	1.07
CS-6251	5/8"	301 Stainless	1.60
CS-7501	3/4"	301 Stainless	2.04
CG-3750	3/8"	Galvanized	0.47
CG-5000	1/2"	Galvanized	0.68
CG-6250	5/8"	Galvanized	0.81
CG-7500	3/4"	Galvanized	1.09

CLAMPS

# HOSE CLAMPS

## F-38 Loking Tool



**List Price:**  
\$127.84

Portable hand tool used to apply punch Type 3/8 & 5/8 Clamps

## F-40 Loking Tool



**List Price:**  
\$216.02

Used to apply Punch Type 3/8 & 5/8 clamps.  
Order mallet separately

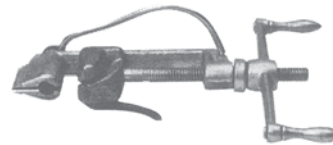
## F-100 Loking Tool



**List Price:**  
\$505.98

Used to apply Punch Type 3/8 & 5/8 clamps.  
Order mallet separately

## KS001 Wind-up Tool



**List Price:**  
\$360.13

Used to apply fold-up clamps and continuous strapping up to 3/4" width



- All designs exceed SAE J1508 specifications
- Smooth inside surface
- Even tightening torque for 360° seal
- Rolled-up band edge
- \* **Non-perforated band prevents hose damage \***



**GENERAL PURPOSE EMBOSSED WORM-GEAR HOSE CLAMPS**

Features unique one-piece housing, rolled-up band edges and a non-perforated (embossed) band that protects the hose. For added corrosion resistance, the band in the 12mm Standard is made of Aluzinc which gives three times the protection offered by conventional galvanized steel.

- Features high clamping force and high durability torque.
- Stainless: All parts in AISI 304 Stainless Steel.

A non-perforated band with rolled up edges eliminates hose damage while increasing clamping force.

Per SAE standard J1508 Type "FEO"

Part #	List Price	SAE Size	Clamping Range		Part# 304 SS	List Price
			Inches	mm		
88-024	3.14	8	5/8-1	15-24	89-024	6.29
88-028	3.54	10	3/4-1-1/8	19-28	89-028	7.58
88-032	4.17	12	7/8-1-1/4	22-32	89-032	8.58
88-038	3.57	16	1-1/16-1-1/2	26-38	89-038	6.73
		20	1-1/4-1-3/4	32-44	89-044	7.56
88-050	4.05	24	1-1/2-2	38-50	89-050	8.29
		28	1-3/4-2-1/4	44-56	89-056	7.98
88-065	5.79	32	2-2-9/16	50-65	89-065	9.21
88-075	5.78	40	2-5/16-3	58-75	89-075	10.63
88-085	5.48	44	2-11/16-3-3/8	68-85	89-085	11.81
		52	3-3-3/4	77-95	89-095	13.65
88-112	7.49	64	3-7/16-4-7/16	87-112	89-112	12.99
		80	4-1/8-5-7/16	104-138	89-138	18.15

- Minimum Qty may apply

- Precision thread pitch for high vibration applications
- Design allows reuse
- Provides a strong seal
- Tolerates corrosive environments
- Minimum qty may apply



• marine

**ULTRA**

The overwhelmingly preferred 316 SS embossed design clamp for the marine market.

Made of al AISI 316 high tensile strength stainless steel, the ULTRA has one of the highest clamping force ratings of all worm-gear style clamps due to the final thread pitch and riveted housing.

ULTRA Stainless Steel: All parts are made of AISI 316 Stainless steel. 12 mm bandwidth unless other wise indicated.

A non-perforated band with rolled up edges eliminates hose damage while increasing clamping force.

Per SAE standard J1508 Type "FEO"

Part #	SAE Size	Clamping Range		List Price
		Inches	mm	
90-014	3	5/16-9/16	8-14	6.89
90-017	4	7/16-11/16	11-17	7.77
90-020	6	1/2-13/16	13-20	8.23
90-024	8	5/8-1	15-24	8.01
90-028	10	3/4-1-1/8	19-28	8.44
90-032	12	7/8-1-1/4	22-32	8.61
90-038	16	1-1/16-1-1/2	26-38	8.45
90-044	20	1-1/4-1-3/4	32-44	10.68
90-050	24	1-1/2-2	38-50	9.06
90-056	28	1-1/4-2-1/4	35-57	10.83
90-065	32	1-1/2-2-1/2	38-64	9.61
90-075	40	2-3	51-76	11.44
90-085	44	2-1/4-3-1/4	57-83	10.39
90-095	52	2-3/4-3-3/4	70-95	13.18
90-112	64	3-1/2-4-1/2	89-114	20.85
90-138	80	4-5-1/2	102-140	13.77
90-165	96	5-6-1/2	127-165	12.03
90-180	104	5-1/2-7	140-178	12.87
90-205	120	6-1/2-8	165-203	13.87
90-231	138	7-5/8-9-1/8	194-232	14.58
90-256	154	8-5/8-10-1/8	219-257	16.29
90-282	170	9-5/8-11-1/8	244-283	16.63
90-307	186	10-5/8-12-1/8	270-308	17.50

**CLAMPS**



**MINI CLAMPS**



Sure seal for small, thin walled hoses. The nut is secured to the clamp, making installation easier and the hexagonal head can be tightened with a socket wrench or screw driver.  
Bandwidth is 9mm.

**PAINTED ALUZINC STANDARD MINI CLAMPS**

Part # Aluzinc	Clamping Range		List Price
	Inches	mm	
92-007	.26-.30	6.5-7.5	0.97
92-008	.28-.34	7-8.5	1.68
92-009	.32-.37	8-9.5	1.41
92-010	.36-.41	9-10.5	1.32
92-011	.37-.45	9.5-11.5	1.22
92-012	.41-.49	10.5-12.5	1.59
92-013	.45-.53	11.5-13.5	1.53
92-014	.49-.57	12.5-14.5	1.26
92-015	.53-.61	13.5-15.5	1.76
92-016	.55-.65	14-16.5	1.57
92-017	.59-.69	15-17.5	1.35

**304 SS MINI CLAMPS**

Part # 304 SS	Clamping Range		List Price
	Inches	mm	
93-008	.30-.34	7.5-8.5	3.49
93-009	.34-.37	8.5-9.5	4.11
93-010	.37-.43	9.5-11	3.06
93-011	.41-.47	10.5-12	4.24
93-012	.45-.51	11.5-13	4.19
93-013	.49-.55	12.5-14	4.36
93-014	.53-.59	13.5-15	3.59
93-015	.57-.63	14.5-16	2.95
93-016	.59-.67	15-17	4.52
93-017	.63-.71	16-18	3.68



**RUBBER LINED CLAMPS**

Multiple uses for holding cable, wire, pipe and hose. The rubber cushion absorbs vibration, provides protection against scratching and is made of black EPDM type rubber.

Rubber cushion clamps are used in a variety of industries and applications including automotive, truck, hydraulics and pneumatics, ship building, refrigeration, large equipment packaging etc.

Bandwidths and mounting hose sizes vary by diameter and material.

- Aluzinc clamps have a .26 hole diameter
- Stainless Steel .20 diameter

Part # Aluzinc	List Price	Clamping Range		Part# 304 SS	List Price
		Inches	mm		
95-300	1.33	1/8	3		
95-301	1.50	3/16	5	96-301	2.41
95-302	1.31	1/4	6	96-302	2.34
95-303	1.39	5/16	8	96-303	2.31
95-304	1.25	3/8	10	96-304	2.66
95-305	1.28	7/16	11	96-305	2.51
95-306	1.52	1/2	13	96-306	2.62
95-307	1.61	9/16	14	96-307	3.17
95-308	1.47	5/8	16	96-308	3.16
95-309	1.70	11/16	18		
95-310	1.59	3/4	19	96-310	3.20
95-311	2.03	13/16	21		
95-312	2.08	7/8	22	96-312	3.27
95-313	2.23	15/16	24		
95-314	1.87	1	25	96-314	4.08
95-315	2.53	1-1/16	27		
95-316	2.31	1-1/8	29	96-316	5.47
95-317	3.21	1-3/16	30		
95-318	3.56	1-1/4	32	96-318	5.78
95-319	3.87	1-5/16	33		
95-320	3.87	1-3/8	35	96-320	7.24
95-321	3.69	1-7/16	36		
95-322	4.11	1-1/2	38	96-322	7.10
95-326	6.45	1-5/8	41		
95-323	4.96	1-3/4	45	96-323	7.71
95-328	6.57	1-7/8	47		
95-324	5.11	2	51		
95-325	5.57	2-1/8	54		
95-329	6.74	2-3/8	60		
95-327	6.37	2-1/2	65		
95-330	6.63	2-15/16	74		
95-331	10.66	4-5/16	110		

**CLAMPS**

**SMOOTH BRASS HOSE FERRULES**

Brass Hose Ferrules offer an alternative to hose clamps. After crimping, the ferrule will provide a permanent clamping force on both the hose and fitting.



- ASTMB36 Alloy 268
- 12 New sizes!

Part #	Ferrule #	I.D.	Length	Pierce	Gauge	List Price
32-500	6231	0.330	0.49	0.250	0.020	0.38
32-501	833	0.358	0.500	0.265	0.020	0.39
32-503	833B	0.375	0.718	0.265	0.025	0.42
32-502	622	0.380	0.500	0.265	0.020	0.36
32-550	619	0.400	0.47	0.27	0.020	0.45
32-504	620	0.410	0.500	0.265	0.020	0.39
32-551	769R	0.450	0.562	0.343	0.020	0.50
32-552 *	4750	0.478	0.687	0.328	0.025	0.45
32-553	624R	0.500	0.500	0.343	0.020	0.43
32-506	7322A	0.500	1.000	0.343	0.025	0.61
32-554	7322	0.500	1.000	0.328	0.025	0.59
32-555	625	0.525	0.47	0.36	0.020	0.43
32-517	625A	0.525	0.56	0.360	0.020	0.42
32-556	7323	0.525	1.000	0.375	0.025	0.81
32-521	9974	0.525	1.000	0.437	0.025	0.79
32-557 *	7324	0.531	1.000	0.375	0.025	0.70
32-558	626	0.550	0.484	0.375	0.020	0.53
32-507	3588	0.56	0.75	0.375	0.020	0.51
32-559 *	7325	0.56	1.000	0.437	0.025	0.77
32-561 *	7326	0.593	1.000	0.437	0.025	0.65
32-562	JJ	0.600	0.484	0.437	0.016	0.80
32-563	JJ	0.600	0.500	0.500	0.020	0.52
32-526	II	0.625	0.500	0.500	0.020	0.71
32-564 *	7327	0.625	1.000	0.437	0.025	0.69
32-565	HH	0.650	0.500	0.500	0.020	0.63
32-566 *	7328	0.656	1.000	0.437	0.025	0.80
32-567	GG	0.675	0.515	0.500	0.020	0.75
32-568 *	7329	0.69	1.000	0.500	0.025	0.82

Part #	Ferrule #	I.D.	Length	Pierce	Gauge	List Price
32-570 *	7330	0.718	1.000	0.500	0.025	0.79
32-508	7330A	0.718	1.000	0.625	0.025	0.85
32-571	EE	0.725	0.530	0.500	0.020	0.65
32-572	DD	0.750	0.531	0.500	0.020	0.64
32-510	7331B	0.75	1.00	0.500	0.025	0.89
32-573 *	7331	0.750	1.000	0.625	0.025	1.25
32-574	CC	0.775	0.531	0.500	0.020	0.74
32-533	7332B	0.781	1.000	0.500	0.025	1.20
32-575 *	7332	0.781	1.000	0.625	0.025	0.88
32-576	BB	0.800	0.546	0.562	0.020	0.76
32-577 *	7333	0.812	1.000	0.625	0.025	0.92
32-578	AA	0.825	0.546	0.562	0.020	0.76
32-535		0.85	0.968	0.687	0.025	0.86
32-579	7244	0.875	0.843	0.687	0.025	1.07
32-539	5029A	0.900	0.875	0.687	0.025	1.07
32-580	7113	0.925	0.968	0.750	0.025	1.14
32-543	5028A	0.975	0.843	0.687	0.025	1.29
32-545	5235A	1.000	0.843	0.687	0.025	1.20
32-549	7145A	1.050	0.843	0.687	0.025	1.51
32-584	5027	1.100	0.843	0.812	0.025	1.33
32-586	7104A	1.15	0.843	0.875	0.025	1.05
32-588 *	7088	1.175	0.875	0.875	0.025	1.56
32-590	875L	1.200	0.843	0.875	0.025	1.75
32-591	7291	1.225	0.968	0.875	0.025	2.09
32-592	7255	1.25	0.968	1.000	0.04	2.40
32-596	8000	1.425	0.875	1.062	0.025	1.98
32-597	1500	1.50	0.875	1.125	0.025	1.63

**CLAMPS**

**HOSE CRIMPER**

- 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**

Die Sizes = 5/8", 37/64", 12/32", 31/64", 11/16"

Part #		List Price
308-070	Hose Crimper	244.44

**HOSE RULE CRIMPING TOOL**

Tool is equipped with mounting holes for permanent installation or may be used as a portable tool assembly in the field.

**IMPORTANT! BEFORE USING THIS TOOL**

Make sure the crimping arm is in the closed (down) position and then set the adjusting screw so it touches the end stop.

**OPERATION:**

- FERRULE** - The proper ferrule should fit easily over the hose. It is better to use a slightly oversized ferrule as an undersized ferrule may make inserting the barbed fitting difficult.
- BARBED FITTING** - Dip the ferrule end of the hose into soapy water. Insert the chosen barbed fitting into the hose with a fair amount of force. A barbed fitting that slides into a hose too easily will not crimp properly.
- CRIMPING DIE** - To find the proper crimping die find the smallest die opening which the hose will just pass through freely. Use the next smallest die and depress the crimping arm fully, keep fingers free from the crimper. Open the crimper and rotate the hose one quarter turn and repeat to finish the crimp.

**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

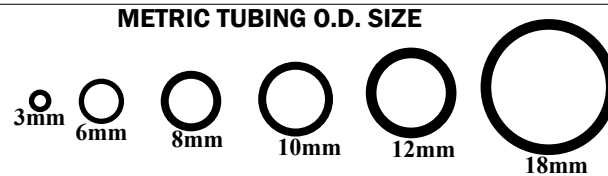
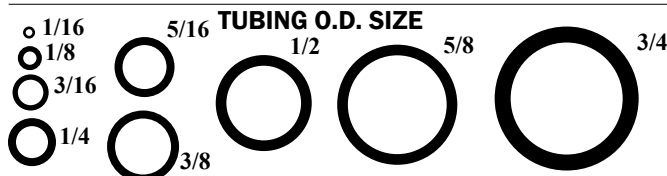
<b>FUELS:</b>	<b>F</b>	<b>U</b>	<b>E</b>	<b>N</b>	<b>P</b>	<b>D</b>	<b>T</b>	<b>U</b>
Butane (1).....	G	G	L	G	L	G	G	N
Diesel Fuel.....	L	G	L	G	L	P	N	G
Gasoline (regular).....	L	G	P	G	L	N	G	G
Kerosene.....	L	G	P	G	G	P	G	G
Methane (nat. gas)(1).....	G	G	L	G	G	N	N	N
Propane (1).....	G	G	L	G	L	N	N	N
<b>OTHERS:</b>								
Acetylene.....	N	G	G	G	G	N	N	N
Ammonia gas.....	P	G	G	G	G	G	N	N
Ammonium salts.....	G	G	G	G	G	G	N	N
Amyl acetate.....	P	P	L	G	P	P	G	N
Aniline.....	P	P	L	L	G	P	G	N
Animal oils.....	G	G	P	G	G	N	G	G
Bleach, 7%.....	G	P	G	L	L	N	N	G
Bromine.....	L	G	P	P	P	P	G	N
Butandiol.....	G	G	G	G	G	N	N	N
Calcium salts incl. Chloride....	G	G	G	G	G	N	G	G
Chlorine gas, dry.....	G	G	P	P	P	P	N	N
Dibutyl phthalate.....	N	P	L	G	L	P	N	G
Glucose.....	G	G	G	G	G	G	G	G
Glycerine.....	G	G	G	G	G	G	N	G
Hydrogen peroxide 10%.....	G	G	G	G	G	G	G	G
Hydrogen peroxide 25%.....	L	G	G	P	G	G	G	G
Hydrogen sulfide.....	G	P	G	L	G	N	G	N
Isocyanates.....	N	G	G	G	N	P	N	N
Lead salts (3).....	G	G	G	G	G	N	N	N
Magnesium salts.....	G	G	G	G	G	N	G	N
Mercury.....	G	G	G	G	G	G	N	N
Milk.....	G	G	G	G	G	G	N	G
Mineral Oil.....	G	G	L	G	L	P	G	G
Nitrous Oxide (1).....	G	G	L	G	G	N	N	N
Oxygen (1).....	G	G	G	G	G	G	G	G
Ozone, ambient.....	G	G	L	G	L	N	N	G
Paint, oil base.....	L	G	L	G	G	N	N	G
Polyglycols.....	G	G	G	G	G	N	N	N
Potassium salts.....	G	G	G	G	G	N	G	N
Pydraul.....	P	P	P	G	N	N	N	N
Pyridine.....	P	L	G	L	G	N	G	N
Salt Water.....	G	G	G	G	G	G	G	G
Silver Nitrate.....	G	G	G	G	G	G	G	N
Skydrol.....	P	P	P	G	N	N	N	N
Soap solution (conc.).....	G	G	L	G	G	N	G	G
Sodium salts.....	G	G	G	G	G	N	G	G
Sodium thiosulphate.....	G	G	G	G	G	N	G	G
Styrene.....	P	G	P	G	N	N	N	G
Trisodium phosphate.....	G	G	N	G	G	G	N	G
Ucon oil.....	G	G	G	G	N	N	N	N
Urea.....	G	G	G	G	G	N	G	G
Vegetable oils (1).....	G	G	G	G	G	P	N	G
Water at 730F.....	G	G	G	G	G	G	G	G
Water at 1400F.....	L	G	G	G	G	G	G	G
Water at 1700F.....	P	L	N	L	G	P	N	G
Whiskey, wine (1).....	N	G	G	G	G	G	N	G
Zinc Chloride.....	G	G	G	G	G	G	G	N

<b>ACIDS &amp; BASES</b>	<b>F</b>	<b>U</b>	<b>E</b>	<b>N</b>	<b>P</b>	<b>D</b>	<b>T</b>
Acetic, 50%.....	G	P	P	L	G	P	G
Boric.....	G	G	G	G	G	G	G
Carbolic (phenol).....	P	P	G	P	G	P	N
Fatty.....	G	G	P	G	G	N	G
Formic, 90%.....	G	P	G	P	G	G	G
Hydrochloric, 10%.....	G	G	G	L	G	G	G
Hydrochloric, 25%.....	G	L	G	P	G	L	G
Hydrochloric, 50%.....	G	L	G	P	G	L	G
Hydrocyanic, 50%.....	L	P	G	P	G	G	G
Maleic.....	G	P	G	G	G	N	N
Nitric, 10%.....	G	P	G	L	G	L	G
Nitric, 30%.....	G	P	G	P	L	L	G
Oleic.....	L	G	L	G	G	P	N
Phosphoric, 25%.....	G	L	G	G	G	G	N
Sulfuric, 30%.....	G	L	G	L	G	L	G
Sulfuric, 70%.....	L	P	P	P	G	P	G
Sulfuric, 98%.....	P	P	P	P	G	P	G
Sulfurous, 30%.....	G	P	G	L	G	N	G
Tannic.....	G	P	G	G	G	N	G
Ammonium hydroxide, 25%.....	P	G	L	G	G	G	N
Potassium hydroxide, 25%.....	L	G	G	G	G	G	G
Sodium hydroxide, 50%.....	G	G	G	G	G	L	G

<b>SOLVENTS:</b>	<b>F</b>	<b>U</b>	<b>E</b>	<b>N</b>	<b>P</b>	<b>D</b>	<b>T</b>
Acetone.....	P	P	G	G	L	P	G
Benzene.....	P	L	P	G	P	P	G
Carbon tetrachloride.....	P	L	L	L	P	P	G
Chloroform.....	P	P	P	L	P	P	G
Cyclohexanone.....	P	P	P	G	L	P	G
Dimethylformamide.....	P	P	L	N	G	N	N
Dioxane.....	N	N	P	G	L	N	N
Ethyl acetate.....	P	L	G	G	L	P	G
Ethyl alcohol (1).....	L	G	G	L	G	G	G
Ethyl ether.....	L	L	G	G	L	P	N
Ethylene glycol.....	G	G	G	G	G	G	N
Formaldehyde.....	G	G	G	G	L	N	N
Freon - 12'.....	L	L	G	G	L	N	G
Methyl alcohol.....	L	G	G	L	G	N	N
Methylene chloride.....	P	P	L	G	L	P	N
Methyl ethyl ketone.....	P	P	G	G	L	P	N
Naphthas (2).....	P	G	P	G	L	P	G
Tolulene.....	P	G	P	G	L	P	N
Triclorethylene.....	P	P	P	L	P	P	G
Turpentine.....	G	G	P	G	L	P	G
Xylene.....	P	G	P	G	L	P	N

<b>HYDRAULIC FLUIDS:</b>	<b>F</b>	<b>U</b>	<b>E</b>	<b>N</b>	<b>P</b>	<b>D</b>	<b>T</b>
Diester base grease.....	N	G	P	G	L	P	N
Petroleum base grease.....	G	G	L	G	L	P	N
Phosphate ester.....	L	P	P	G	G	N	N
Polyol ester.....	P	N	P	G	G	N	N
Water-glycol.....	G	G	G	G	G	N	N
SAE motor oils.....	G	G	G	G	G	N	N
Machine oil.....	G	G	L	G	L	N	N
MIL-L-7808 H.....	G	G	L	G	G	N	N
Brake Fluid.....	N	N	N	N	N	N	N

**TUBING**



**LINEAR LOW DENSITY POLYETHYLENE TUBING (LLDPE)**



Polyethylene is made from 100% non-toxic ingredients. It's inert nature and FDA compliant status makes it perfect for food, water and beverage piping. It is ideal for use in pneumatic, drain piping, lab use and chemical transfer applications which require an inexpensive tubing

Polyethylene is highly-resistant to stress cracking from chemicals, aging and ultraviolet exposure. For use with barb-type, push-to-connect or compression-style fittings.

**Features**

- Chemically Inert
- Chemical Resistant
- Lightweight & Flexible
- Good Dielectric Properties
- Impermeable to Gases
- Meets FDA Requirements
- Multiple Colors Available

**Specifications**

Temperature Range: -50°F to +140°F  
 Hardness: Shore A 93A  
 Shore D 45D

**Applications**

Food & Beverage      Process Control  
 Pneumatic Tools      Laboratories  
 Pneumatic Piping  
 Electrical Jacketing  
 Drain Lines  
 Instrumentation  
 Chemical Transfer

**Colors Available: Black=B ,Blue = U, Green = G, Red = R, Yellow = Y, Orange = O.**

*To order colors, delete the 9 prefix and add color suffix. For longer lengths, add length suffix.*

- Burst PSI is 3x working pressure

**ID = Tube O.D. Wall Thickness x2**

**100' LENGTH**

Part #	Tube O.D.	Tube Wall	Working Pressure	List Price
973-200	1/8"	0.020	400	23.54
973-201	5/32"	0.025	400	24.40
973-202	3/16"	0.030	400	26.77
973-203	1/4"	0.040	400	22.81
973-204	1/4"	0.062	600	30.50
973-205	5/16"	0.062	800	43.25
973-206	3/8"	0.062	400	49.87
973-207	1/2"	0.062	300	62.78
973-208	5/8"	0.062	250	78.99
973-211	3/4"	0.062	150	115.52
973-209	3/4"	0.094	200	143.59
973-210	1"	0.125	300	228.26

**500' LENGTH**

Part #	Tube O.D.	Tube Wall	Working Pressure	List Price
73-200N5	1/8"	0.020	400	103.17
73-203N5	1/4"	0.040	400	137.47
73-204N5	1/4"	0.062	800	148.45
73-206N5	3/8"	0.062	400	244.62
73-207N5	1/2"	0.062	300	308.89

**1000' LENGTH**

Part #	Tube O.D.	Tube Wall	Working Pressure	List Price
73-203N1	1/4"	0.040	400	218.11
73-204N1	1/4"	0.062	800	262.83
73-206N1	3/8"	0.062	400	428.64



**LINEAR LOW DENSITY POLYETHYLENE TUBING (LLDPE)**



Polyethylene is made from 100% non-toxic ingredients. It's inert nature and FDA compliant status makes it perfect for food, water and beverage piping. It is ideal for use in pneumatic, drain piping, lab use and chemical transfer applications which require an inexpensive tubing

Polyethylene is highly-resistant to stress cracking from chemicals, aging and ultraviolet exposure. For use with barb-type, push-to-connect or compression-style fittings.

**Features**

- Chemically Inert
- Chemical Resistant
- Lightweight & Flexible
- Good Dielectric Properties
- Impermeable to Gases
- Meets FDA Requirements
- Multiple Colors Available

**Specifications**

Temperature Range: -50°F to +140°F  
 Hardness: Shore A 93A  
 Shore D 45D

**Applications**

- Food & Beverage
- Pneumatic Tools
- Pneumatic Piping
- Electrical Jacketing
- Drain Lines
- Instrumentation
- Chemical Transfer
- Process Control Laboratories

**Colors Available: Black=B ,Blue = U, Green = G, Red = R, Yellow = Y, Orange = O.**

*To order colors, delete the 9 prefix and add color suffix. For longer lengths, add length suffix.*

- Burst PSI is 3x working pressure

**ID = Tube O.D. Wall Thickness x2**

Part #	Color	Length	Nominal O.D.	List Price
73-200B	Black	100'	1/8"	23.54
73-201B	Black	100'	5/32"	26.87
73-202B	Black	100'	3/16"	26.77
73-203B	Black	100'	1/4"	27.81
73-204B	Black	100'	1/4"	28.50
73-205B	Black	100'	5/16"	43.25
73-206B	Black	100'	3/8"	47.54
73-207B	Black	100'	1/2"	64.45
73-208B	Black	100'	5/8"	78.99
73-200U	Blue	100'	1/8"	23.54
73-201U	Blue	100'	5/32"	26.87
73-202U	Blue	100'	3/16"	28.09
73-203U	Blue	100'	1/4"	27.81
73-204U	Blue	100'	1/4"	28.50
73-205U	Blue	100'	5/16"	43.25
73-206U	Blue	100'	3/8"	49.95
73-207U	Blue	100'	1/2"	64.45
73-201G	Green	100'	5/32"	26.87
73-203G	Green	100'	1/4"	28.35
73-204G	Green	100'	1/4"	28.50
73-205G	Green	100'	5/16"	43.25
73-206G	Green	100'	3/8"	47.54
73-207G	Green	100'	1/2"	64.45
73-203R	Red	100'	1/4"	27.81

73-205R	Red	100'	5/16"	43.25
73-206R	Red	100'	3/8"	47.54
73-203W	White	100'	1/4"	27.81
73-206W	White	100'	3/8"	47.54
73-207W	White	100'	1/2"	64.45
73-203Y	Yellow	100'	1/4"	27.81
73-204Y	Yellow	100'	1/4"	28.50
73-205Y	Yellow	100'	5/16"	43.25
73-206Y	Yellow	100'	3/8"	47.54
73-203O	Orange	100'	1/4"	27.01
73-206A	Gray	100'	3/8"	47.54
73-203B5	Black	500'	1/4"	131.51
73-205B5	Black	500'	5/16"	187.98
73-206B5	Black	500'	3/8"	225.35
73-207B5	Black	500'	1/2"	308.89
73-203U5	Blue	500'	1/4"	111.96
73-206U5	Blue	500'	3/8"	225.35
73-203G5	Green	500'	1/4"	111.96
73-203R5	Red	500'	1/4"	123.87
73-206R5	Red	500'	3/8"	225.35
73-207W5	White	500'	1/2"	308.89
73-206B1	Black	1000'	3/8"	428.64
73-203U1	Blue	1000'	1/4"	218.11
73-203G1	Green	1000'	1/4"	218.11
73-203R1	Red	1000'	1/4"	218.11



**NYLON 12 TUBING**



Nylon 12 tubing is recognized as an industry standard for applications which require higher working pressures and higher heat and/or chemical resistance. It is ideal for outdoor use applications because of its superior stress crack resistance. Nylon 12 is strong, lightweight and has a very low moisture absorption rate compared to other nylons. By not absorbing moisture, Nylon 12 remains more flexible, which in turn extends its service life. Nylon 12 tubing can be used with standard push-to-connect fittings and compression fittings for simple installation.

Because of its semi-rigid properties, a thinner tube wall provides higher flow rates and working pressure.

**Features**

- Strong
- Lightweight
- Flexible
- Abrasion Resistant
- Heat Resistant
- Chemical Resistant
- Heat/ Light Stabilized
- Black - UV Rated

**Specifications**

Temperature Range: -60°F to +200°F  
 Hardness: Rockwell 78 R  
 Shore D 70  
 Vacuum Rating: To 28" Hg  
 Higher Flow Rates & Working Pressure  
 Tolerances: 1/8"-1/4" +/- .004  
 3/4"-1/2" +/- .006

**Applications**

Pneumatic Tools      Chemical Transfer  
 Pneumatic Piping      Vacuum  
 Instrumentation      Process Control  
 Lube Lines      Fuel Lines  
 Coolants      Paint Supply Lines  
 Refrigeration      Laboratories

**Part #'s shown are for natural. 500' and 1000' reels available on request.**

**100' LENGTH**

Part #	Tube O.D.	Tube Wall	Working Pressure	List Price
973-230	1/8"	.017	400	29.93
973-231	5/32"	.025	400	42.24
973-229	3/16"	.024	400	57.73
973-232	1/4"	.035	400	106.51
973-238	1/4"	.050	800	131.58
973-226	5/16"	.040	250	144.89
973-233	3/8"	.050	240	177.89
973-234	1/2"	.062	150	400.33

**BLACK TUBING & MISC.**

Part #	O.D.	Wall	Working Pressure	List Price
73-231B	5/32	0.025	400	45.50
73-232B	1/4	0.035	400	106.51
73-233B	3/8	0.05	300	240.00
73-232N5*	1/4	0.035	400	479.30
73-238U**	1/4	0.04	800	110.19

• 500' Natural    \*\*Blue

**METRIC LENGTH - 100 ft. coils**

Part #	MM O.D.	MM I.D.	MM Wall	Working Pressure	List Price
973-323	4	2.3	0.85	1800	51.65
973-325	6	4	1	1200	93.00
973-327	8	6	1	800	106.70
973-329	10	8	1	600	234.62
973-332	12	10	1	480	312.55
973-334	14	12	1	950	273.02

\* Metric Sizes Natural color only\*



**ENDURE™ AIR BRAKE TUBING**



**Applications**

- Truck, Bus & Commercial vehicle air brake systems.
- Trailer air brake systems.
- Auxiliary air systems.

**Features**

- Flexible - Retains its flexibility longer.
- Leading impact strength & vibration cracking resistance
- Exceeds Industry Performance Standards.

**Service Temp. Range:**

-85°F (-65°C) to + 200°F (+93°C)

**Compliances:**

- Meets DOT FMVSS 106.
- Meets requirements of SAE J844 Type B.

**Construction**

- Uses DuPont™ Hytrel®
  - Tube: Polyester elastomer
  - Reinforcement: Poly. yarn
  - Cover: Poly. elastomer (colored)
- Available in Black, Blue, Green, Orange, Red & Yellow.

**Add suffix 'B' = Black, 'U' = Blue, 'G' = Green, 'O' = Orange, 'R' = Red, 'Y' = Yellow**

Part #	Nominal O.D.	Nominal I.D.	Nominal Wall	Minimum Burst Pressure (PSI @ 70°F)	Standard Lengths		Standard Lengths		List Price CTN	List Price Spool
					Ctn/Spool	Ctn/Coil	Ctn/Spool	Ctn/Coil		
38604	3/8	0.251	0.062	1,400	500 ft.	100 ft.	17.0 lbs.	3.2 lbs.	233.60	1168.00
38605	1/2	0.376	0.062	950	500 ft.	100 ft.	23.0 lbs.	4.4 lbs.	312.32	1561.58
38606	5/8	0.441	0.094	900	250 ft.	100 ft.	22.0 lbs.	8.0 lbs.	605.71	1443.49
38607	3/4	0.566	0.094	850	250 ft.	100 ft.	27.0 lbs.	10.0 lbs.	802.16	2005.39

**Add a '5' to the end of the part # for 500 ft. & 250 spools**

**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.
- More colors available.



- Reinforced
- Available in black, blue, green, red, yellow

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.

**TYPE A NON-REINFORCED**

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

**TYPE B REINFORCED**

Part #	Type B	Color	Length	List Price
38-960	3/8"	Black	100'	POR
38-960U	3/8"	Blue	100'	POR
38-960B5	3/8"	Black	500'	POR
38-965	1/2"	Black	100'	POR
38-965R	1/2"	Red	100'	POR
38-965B5	1/2"	Black	500'	POR
38-970	5/8"	Black	100'	POR
38-975	3/4"	Black	100'	POR

**See page 143 for all sizes, color and lengths!**







**PVC POLYVINYLCHLORIDE TUBING**

PVC is suited for general, low-pressure, industrial applications for the conveyance of liquids and solids of suitable granular size. Made from a PVC compound that complies with FDA regulations. Although it is primarily intended for applications where pressure is not essential, it will withstand the pressures shown.

The clear PVC Tubing provides good chemical resistance, is lightweight, flexible and economically priced.

**Features**

- Lightweight
- Flexible
- Food Grade
- Clear Color

**Specifications**

Temperature Range: +25°F to +150°F  
 Hardness: Shore A 75 PVC  
 Meets FDA requirements  
 NSF 51 Certified to 100°F(38°C)  
 USP Class VI rated materials

**Applications**

- Beverage Dispensing
- Drain Tubing
- Potable Water
- Laboratory Tubing
- Wine Transfer
- Low Pressure Air Line
- Distilled Water Transfer
- Light Vacuum
- Wire Harness

**Colors Available: Clear**

**Package Lengths: 100'**

**100' LENGTH**

Part #	Tube I.D.	Tube O.D.	Tube Wall	Min. Burst	List Price
973-222	1/8	3/16	1/32	200	37.50
973-224	1/8	1/4	1/16	400	39.90
973-223	3/16	5/16	1/16	250	41.14
973-215	1/4	3/8	1/16	200	56.56
973-252	5/16	7/16	1/16	150	68.79
973-253	5/16	1/2	3/32	250	93.23
973-216	3/8	1/2	1/16	125	72.85
973-255	3/8"	5/8"	1/8"	250	169.53
973-262	3/8	9/16	3/32	200	147.88
973-217	1/2	5/8	1/16	100	139.64
973-219	3/4	1	1/8	120	248.89
973-221	1	1-1/4	1/8	100	373.97

**TUBING ACCESSORIES**

**MINI-TUBING CUTTER**

- Great for tight places



**TUBING CUTTER**



**PLASTIC TUBE CUTTER**

Range: 1/8" - 3/8" I.D. (3mm-10mm)



Part #	Size	List Price
990-571	3mm-22mm (1/8"-7/8")	6.38

Part #	Size	List Price
990-570	1/8"-1-1/8"	12.04

Part #	Description	List Price
91-707	Cutter w/Blade	9.20



- Route and secure multiple tubing lines
- Mounting versatility
  - Racks can be easily hand separated down to single holders.
  - Thru holes provided (all sizes)
- Standard color is BLACK.  
Other colors available on special request.

Part #	Tubing OD	Description	Channels	List Price
28-988	1/4	non-adhesive	10	3.20
28-989	1/4	adhesive	10	4.33
28-990	3/8	non-adhesive	7	13.99
28-991	1/2	non-adhesive	5	16.60

**NOTE: MOUNTING SCREWS NOT PROVIDED**

**ALUMINUM TUBING - EASY BEND**

Alloy  
3003-0  
ASTM  
B-483



Material  
to ASTM  
B-483

900 PSI max  
3700 Burst PSI

Bend this tubing into the shape you need without special tools or elbow fittings. It is also known as Alloy 3003. Tubing has seamless construction, which provides a smooth interior and allows it to be flared without splitting. Use with water, air, alcohol and oil. Tubing meets ASTM B483 and has a soft (annealed) temper. OD tolerance is  $\pm 0.004$ "

**ALUMINUM VERSATUBE 50' COILS**

Part #	O.D.	Wall Thick	ID	Max PSI @ 100°F	50' Coils
972-190	1/8	.025	.075"	2,300	POR
972-191	3/16	.028	.132"	1,600	POR
972-192	1/4	.032	.186"	1,400	POR
972-193	5/16	.035	.243"	1,200	POR
972-194	3/8	.035	.305"	1,000	POR
972-195	1/2	.035	.43"	740	POR

**COPPER TUBING - REFRIGERATION TUBING**

ASTMB280



- Temp range: 32° to 400°F
- Bend with a bending tool
- Use with copper solder-connect fittings

This copper Alloy 122 tube comes cleaned and capped to prevent moisture and dirt from contaminating the inside. It's often called refrigeration and air conditioning tubing. Use with water, natural gas, oil and R22 refrigerant. Tubing meets ASTM B280. It has seamless construction, which provides a smooth interior. Tubing has a soft (annealed) temper.

**REFRIGERATION COPPER TUBE 50' COILS**

Part #	Tube Size	OD	Wall	ID	Max PSI @ 100°F	Weight per 50' Coil	50' Coils
972-180	-	1/8	.030	.065"	3,000	1.74	97.70
972-181	-	3/16	.030	.128"	1,900	2.88	99.73
972-182	1/8	1/4	.030	.19"	1,400	4.02	131.30
972-183	-	5/16	.032	.248"	1,100	5.45	176.41
972-184	1/4	3/8	.032	.311"	980	6.70	159.91
972-185	3/8	1/2	.032	.436"	720	9.10	264.16
972-186	1/2	5/8	.035	.555"	610	12.55	304.40
972-187	5/8	3/4	.035	.68"	510	15.25	355.70

**COPPER TUBING - DRINKING WATER**

For residential water lines



- Temp range: 32° to 180°F
- Bend with a bending tool
- Use with copper solder-connect fittings

NSF 61 certified for drinking (potable) water, this copper Alloy 122 tubing is also called type L. Tubing meets ASTM B88. It has seamless construction, which provides a smooth interior. Coils - Have a soft (annealed) temper.

**TYPE L SOFT COPPER TUBING 60' COILS**

Part #	TUBE SIZE	OD	WALL	ID	Max PSI @ 100°F	Weight per 60' Coil	60' Coils
972-171	1/4	3/8"	.03"	.315"	910	7.56	241.38
972-172	3/8	1/2	.035"	.43"	770	11.88	509.64
972-173	1/2	5/8"	.04"	.545"	720	17.10	552.80



**1/4" BASIC SIZE**

**UNIVERSAL SERIES COUPLERS**

**1/4" BASIC SIZE**

**For ARO, TRU-FLATE, INDUSTRIAL INTERCHANGE**

**1/4" BASIC SIZE**

- Automatic Coupler
- Brass body, NBR Seal, Stainless Steel spring, Steel locking balls.
- Good for low pressure fluid lines.

**Working range:**

Maximum operating Pressure  
To 220 psi

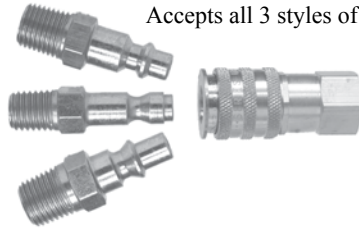
**Temperature:** -4° to +176°F

Industrial

Accepts all 3 styles of plugs!

Parker

ARO



**MALE COUPLER**



**BRASS**

Part #	Size	List Price
28-579	1/4" NPTF	10.61
28-589	3/8" NPTF	10.16

**FEMALE COUPLER**



**BRASS**

Part #	Size	List Price
28-560	1/4" NPTF	13.54

**HOSE BARB COUPLER**



**BRASS**

Part #	Hose I.D. Size	List Price
28-690	1/4"	12.25
28-691	3/8"	11.52

**1/4" BASIC SIZE**

**INDUSTRIAL INTERCHANGE**

**1/4" BASIC SIZE**

**Specifications**

Body Size (in.)	1/4
Rated Pressure (PSI)	250
Temperature Range	-4° to +176°

- Sleeve type couplings are widely used to connect compressed air and low pressure fluid lines.

Their compact and economical design uses a ball locking mechanism consisting of captive steel balls that engage the locking groove on the mating nipple. The sliding spring loaded sleeve on the coupler must be manually retracted in order to connect or disconnect the nipple. It is easy to do, but two hands are normally required.

**Common applications include:** compressed air, water, grease, paint, limited vacuum and limited gases.

- The standard is a brass coupler and valve with steel locking balls, NBR seat, and stainless steel springs.

**MALE PIPE COUPLER**

**BRASS**



Part #	NPT Size	List Price
28-552	1/4"	7.16
28-553	3/8"	7.69

**STEEL**

28552S	1/4"	5.46
28553S	3/8"	5.78

**MALE PLUG**

**STEEL**



Part #	NPT Size	List Price
28-545	1/8	1.79
28-546	1/4	1.49
28-547	3/8	2.51

**360° TURNING SWIVEL PLUG**

1/4" Basic size

Industrial Interchange Plug

•360° Turning

•Swivels



Part #	Size	List Price
320-065	1/4"	11.04

**FEMALE PIPE COUPLER**

**BRASS**



Part #	NPT Size	List Price
28-540	1/4"	7.23
28-541	3/8"	7.80

**STEEL**

28540S	1/4"	5.34
28541S	3/8"	6.01

**FEMALE PLUG**

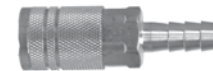
**STEEL**



Part #	NPT Size	List Price
28-533	1/8"	1.48
28-534	1/4"	1.33
28-535	3/8"	2.54

**HOSE ID COUPLER**

**BRASS**



Part #	Hose ID	List Price
28-562	1/4"	9.36
28-564	3/8"	9.42
28-565	1/4(Push on)	10.51
28-566	3/8(Push on)	11.40

**STEEL**

28-562S	1/4"	5.51
28-564S	3/8"	6.04
28-565S	1/4(Push on)	6.01
28-566S	3/8(Push on)	6.55

**HOSE ID PLUG**

**STEEL**



Part #	Hose ID	List Price
28-557	1/4"	1.43
28-559	3/8"	1.83
28-558	1/4(Push on)	1.87
28-561	3/8(Push on)	2.06

*Send Midland all your quotes*



**3/8" BASIC SIZE**

**INDUSTRIAL INTERCHANGE**

**3/8" BASIC SIZE**

**Specifications**

Body Size (in.)	3/8
Rated Pressure (PSI)	250
Temperature Range	-4° to +176°

• Sleeve type couplings are widely used to connect compressed air and low pressure fluid lines.

Their compact and economical design uses a ball locking mechanism consisting of captive steel balls that engage the locking groove on the mating nipple. The sliding spring loaded sleeve on the coupler must be manually retracted in order to connect or disconnect the nipple. It is easy to do, but two hands are normally required.

**Common applications include:** compressed air, water, grease, paint, limited vacuum and limited gases.

- The standard is a Steel coupler with a Steel valve, NBR seat, and stainless steel springs. Brass coupler avail. on request.
- 3/8" Basic size.

**MALE COUPLER**

**STEEL**



Part #	NPT Size	List Price
98-823	1/4"	10.82
98-824	3/8"	12.88
98-825	1/2"	16.17

**FEMALE COUPLER**

**STEEL**



Part #	NPT Size	List Price
98-810	1/4"	12.01
98-811	3/8"	11.47
98-812	1/2"	13.41

**HOSE ID COUPLER**

**STEEL**



Part #	Hose ID	List Price
98-840	1/4"	15.17
98-841	3/8"	15.36
98-842	3/8" ( Push on )	15.66

**MALE PLUG**

**STEEL**



Part #	NPT Size	List Price
98-814	1/4"	2.79
98-815	3/8"	3.11

**FEMALE PLUG**

**STEEL**



Part #	NPT Size	List Price
98-801	1/4"	2.01
98-802	3/8"	2.61

**HOSE ID PLUG**

**STEEL**



Part #	Hose I.D. Size	List Price
98-828	3/8"	4.15
98-830	3/8" ( Push on )	4.37

**1/2" BASIC SIZE**

**INDUSTRIAL INTERCHANGE**

**1/2" BASIC SIZE**

**Specifications**

Body Size (in.)	1/2
Rated Pressure (PSI)	250
Temperature Range	-4° to +176°

• Sleeve type couplings are widely used to connect compressed air and low pressure fluid lines.

Their compact and economical design uses a ball locking mechanism consisting of 8 captive steel balls that engage the locking groove on the mating nipple. The sliding spring loaded sleeve on the coupler must be manually retracted in order to connect or disconnect the nipple. It is easy to do, but two hands are normally required.

**Common applications include:** compressed air, water, grease, paint, limited vacuum and limited gases.

**MALE PIPE COUPLER**

**STEEL**



Part #	NPT Size	List Price
99-825	1/2"	15.84
99-826	3/4"	22.92

**FEMALE PIPE COUPLER**

**STEEL**



Part #	NPT Size	List Price
99-812	1/2"	16.68
99-813	3/4"	21.71

**HOSE ID COUPLER**

**STEEL**



Part #	Hose ID	List Price
99-841	3/8"	21.63
99-843	1/2"	18.90

**MALE PLUG**

**STEEL**



Part #	NPT Size	List Price
99-816	1/2"	4.26
99-817	3/4"	7.83

**FEMALE PLUG**

**STEEL**



Part #	NPT Size	List Price
99-803	1/2"	5.31
99-804	3/4"	9.36

**HOSE ID PLUG**

**STEEL**



Part #	Hose ID	List Price
99-828	3/8"	5.55
99-830	1/2"	5.10

**1/4" BASIC SIZE**

**ARO 210 INTERCHANGE**

**1/4" BASIC SIZE**

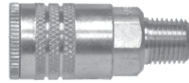
**Specifications**

Body Size (in.)	1/4
Rated Pressure (PSI)	250
Temperature Range	-4° to +176°

- Brass bodies and valves, steel locking balls, NBR seat, and stainless steel springs.
- Couplings have a full opening tubular valve for maximum flow and a built-in sleeve guard to minimize accidental disconnect.
- Marval connect and disconnect.

**MALE PIPE COUPLER**

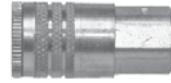
**BRASS**



Part #	NPT Size	List Price
28-592	1/8"	21.39
28-593	1/4"	9.89
28-594	3/8"	14.32

**FEMALE PIPE COUPLER**

**BRASS**



Part #	NPT Size	List Price
28-583	1/8"	19.46
28-584	1/4"	9.00
28-585	3/8"	26.02

**HOSE ID COUPLER**

**BRASS**



Part #	Hose ID	List Price
28-601	1/4"	10.01
28-603	3/8"	14.13

**MALE PLUG**

**STEEL**



Part #	NPT Size	List Price
28-586	1/8"	4.07
28-587	1/4"	1.83

**FEMALE PLUG**

**STEEL**



Part #	NPT Size	List Price
28-578	1/4"	2.14

**HOSE ID PLUG**

**STEEL**



Part #	Hose ID	List Price
28-595	1/4"	4.39
28-597	3/8"	7.83

**ST SERIES...HIGH FLOW**

**Specifications**

Brass - Coupler & Steel Plug		
Temperature Range	-40° to 250°	
Rated Pressure	4650	2350

**MALE PIPE COUPLER**

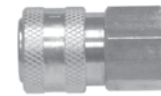
**BRASS**



Part #	Body & Thread Size	List Price
28-667	1/8"	20.63
28-665	1/4"	16.12
28-666	3/8"	16.91
28-668	1/2"	20.47
28-669	3/4"	50.80
28-670	1"	79.14

**FEMALE PIPE COUPLER**

**BRASS**



Part #	Body & Thread Size	List Price
28-671	1/8"	13.33
28-651	1/4"	14.68
28-652	3/8"	15.87
28-672	1/2"	24.16
28-673	3/4"	44.90

**MALE PLUG**

**STEEL**



Part #	Size	List Price
28-675	1/8"	8.88
28-639	1/4"	6.88
28-640	3/8"	5.24
28-676	1/2"	5.97
28-677	3/4"	18.26

**FEMALE PLUG**

**STEEL**



Part #	Size	List Price
28-688	1/8"	5.71
28-619	1/4"	6.93
28-620	3/8"	5.84
28-679	1/2"	9.00
28-680	3/4"	17.32
28-681	1"	46.18

- Non-valved couplings for applications where maximum flow is required. Ideal for applications such as high pressure water and steam washers, carpet cleaners and mold coolant lines. They are often used in food processing, on fluid and dye transfer lines.

- Standard seals are Buna-N (Nitrile).

PNEUMATICS

**1/4" BASIC SIZE**

**PARKER INTERCHANGE (TRU-FLATE)**

**1/4" BASIC SIZE**

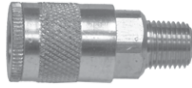
**Specifications**

Body Size (in.)	1/4
Rated Pressure (PSI)	250
Temperature Range	-4° to +176°

- The standard is a brass coupler and valve with steel locking balls, NBR seat, and stainless steel springs.
- Unique design has been field proven as a long lasting, high performance coupling especially when used with pneumatic tools.
- Marval connect and disconnect.

**MALE PIPE COUPLER**

**BRASS**



Part #	NPT Size	List Price
28-515	1/8"	20.71
28-516	1/4"	7.83
28-517	3/8"	18.10

**FEMALE PIPE COUPLER**

**BRASS**



Part #	NPT Size	List Price
28-507	1/4"	7.88
28-508	3/8"	17.54

**MALE PLUG**

**STEEL**



Part #	NPT Size	List Price
28-509	1/8"	1.93
28-510	1/4"	1.43
28-511	3/8"	2.74

**FEMALE PLUG**

**STEEL**



Part #	NPT Size	List Price
28-500	1/8"	4.78
28-501	1/4"	1.61
28-502	3/8"	2.65

**HOSE ID COUPLER**

**BRASS**



Part #	Hose ID	List Price
28-528	1/4"	23.34
28-530	3/8"	23.32
28-531	1/4"(Push on)	22.21
28-532	3/8"(Push on)	23.33

**HOSE ID PLUG**

**STEEL**



Part #	Hose ID	List Price
28-518	1/4"	2.46
28-520	3/8"	7.21
28-521	1/4"(Push on)	12.63
28-522	3/8"(Push on)	13.43

The pessimist sees difficulty in every opportunity. The optimist sees the opportunity in every difficulty.

- Winston Churchill

Be more concerned with your character than with your reputation. Your character is what you really are while your reputation is merely what others think you are.

- John Wooden

**MINI TYPE QUICK DISCONNECTS**

Working Range: 0-145 psi  
Material: Chrome Plated Brass

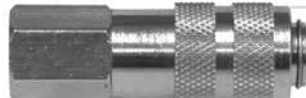
*Send Midland all your quotes!*

**MALE COUPLER**



Part #	Size	List Price
28-605	1/8"	7.55

**FEMALE COUPLER**



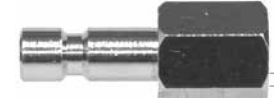
Part #	Size	List Price
28-606	1/8"	7.55

**MALE PLUG**



Part #	Size	List Price
28-607	1/8"	2.53

**FEMALE PLUG**



Part #	Size	List Price
28-608	1/8"	2.02

**LINCOLN INTERCHANGE**

- 1/4" Basic Size

**Specifications**

Body Size (in.)	1/4
Rated Pressure (PSI)	250
Temperature Range	-40° to +250°

- Brass body with steel sleeve and backnut. Valve material is Acetal and seal is Nitrile.

**MALE PIPE COUPLER**



Part #	Size	List Price
28-683	1/4"	23.50

**FEMALE PIPE COUPLER**



Part #	Size	List Price
28-684	1/4"	31.71

**MALE PLUG**

Steel



Part #	Size	List Price
28-685	1/8"	5.97
28-686	1/4"	5.62

**FEMALE PLUG**

Steel



Part #	Size	List Price
28-687	1/4"	5.27

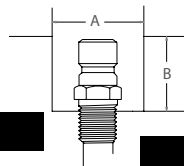
**MOLD COOLANT-LINE QUICK COUPLERS**

**OPERATING PRESSURE:**  
200 PSIG (14.06 Kg/sq. cm)  
**Standard Seal:**  
**SILICONE:** -90°F to 400°F (-68°C to +205°C)

- MIDLAND coolant couplers are engineered for optimum speed and performance in connecting coolant lines to molds used for thermoplastic, thermosetting, blow molding, diecasting and on other types of tooling and equipment utilizing a constant fluid flow pumped through cooling channels.



**BRASS**



**STEEL**

**MALE PLUG (BRASS)**

**1/4" BASIC SIZE**

Part #	Size	A	B	List Price
29-900	1/8"	0.69	0.69	3.16
29-901	1/4"	0.84	0.94	3.78
29-902	3/8"	1.00	0.97	3.35

**3/8" BASIC SIZE**

Part #	Size	A	B	List Price
29-906	1/4"	1.00	0.94	5.07
29-907	3/8"	1.00	1.13	4.92
29-908	1/2"	1.81	1.25	8.36

**1/2" BASIC SIZE**

Part #	Size	A	B	List Price
29-911	1/2"	1.25	1.50	9.89
29-912	3/4"	1.50	1.56	15.21

**FEMALE PLUG (STEEL)**

**1/4" BASIC SIZE**

Part #	Size	List Price
29-903	1/8"	3.26
29-904	1/4"	3.41
29-905	3/8"	5.12

**3/8" BASIC SIZE**

Part #	Size	List Price
29-909	1/4"	4.25
29-910	3/8"	5.74

**1/2" BASIC SIZE**

Part #	Size	List Price
29-913	1/2"	13.72
29-914	3/4"	25.40

# QUICK DISCONNECTS

# HYDRAULIC COUPLINGS



## THREAD TO CONNECT, DRYBREAK NO-SPILL QUICK CONNECT

- Brass Body
- Steel Wing Nut
- Buna-Seal ( -40° to +250°F)

Aeroquip 5100  
Parker 6100  
Snaptite B78



- Bonded Face Seal
- External ORing Alleviates Full Connection

Part #	Body Size	Female NPT	Max PSI	List Price
61-150	3/4	1/2	3000	56.45
61-152	3/4	3/4	3000	56.45
61-153	1	1	3000	71.16
61-154	1-1/4	1-1/4	2750	98.74
61-155	1-1/2	1-1/2	2500	151.28

Part #	Body Size	Female NPT	Max PSI	List Price
61-050	3/4	1/2	3000	56.45
61-052	3/4	3/4	3000	56.45
61-053	1	1	3000	67.61
61-054	1-1/4	1-1/4	2750	98.74
61-055	1-1/2	1-1/2	2500	151.28

### FEATURES - ISO A and ISO B

- Poppet valves to prevent uncoupled leakage
- Critical parts are induction hardened for durability
- Dependable ball-locking mechanism holds the mating halves together
- Socket and plug are precision machined from solid barstock
- Standard nitrile seals temp range -40°F to +250°F



ISO 7241-1 ISO-A Interchange ( Connected )				
Body Size	Steel Coupler/ Plug			
	Maximum Working		Burst	
	PSI	Bar	PSI	Bar
1/4"	5,000	345	18,270	1,200
3/8"	4,000	275	18,270	1,200
1/2"	4,000	275	16,500	1,100
3/4"	4,000	275	14,800	1,000
1"	4,000	275	12,400	850

### ISO-A FEMALE PIPE PLUG



Part #	Body Size	NPT	List Price
ANV-14-M	1/4"	1/4"	4.53
ANV-38-M	3/8"	3/8"	6.38
ANV-12-M	1/2"	1/2"	7.34
ANV-34-M	3/4"	3/4"	10.95
ANV-1-M	1"	1"	18.65

### INTERCHANGE DATA:

- Parker 6600, Aeroquip/ Eaton FD56, Dixon 'K' Series.
- Hansen HA 15000, Safeway S56

### ISO-B FEMALE PIPE COUPLER



Part #	Body Size	NPT	List Price
HNV-14-F	1/4"	1/4"	11.46
HNV-14-F-B	1/4"	1/4"	19.05
HNV-38-F	3/8"	3/8"	12.00
HNV-38-F-B	3/8"	3/8"	26.00
HNV-12-F	1/2"	1/2"	17.39
HNV-12-F-B	1/2"	1/2"	34.77
HNV-34-F	3/4"	3/4"	28.00
HNV-34-F-B	3/4"	3/4"	62.00
HNV-1-F	1"	1"	44.73
HNV-1-F-B	1"	1"	93.25

ISO 7241-1 Series B ISO-B Interchange ( Connected )								
Body Size	Steel Coupler/ Plug				Brass Coupler/ Plug			
	Max. Working		Burst		Max. Working		Burst	
	PSI	Bar	PSI	Bar	PSI	Bar	PSI	Bar
1/4"	5,000	345	22,500	1,550	3,000	200	15,000	1,000
3/8"	4,000	275	16,500	1,150	2,500	175	12,000	800
1/2"	4,000	275	16,000	1,100	2,500	175	11,500	750
3/4"	4,000	275	16,500	1,150	2,000	150	12,000	800
1"	4,000	275	16,000	1,100	1,500	100	8,500	800

### INTERCHANGE DATA:

- Parker 60 Series, Snap-tite 72 series, Dixon 'H' series
- Hansen HK - series, Aeroquip/ Eaton FDH5

Suffix 'B' = Brass Material

### ISO-B FEMALE PIPE PLUG



Part #	Body Size	NPT	List Price
HNV-14-M	1/4"	1/4"	5.27
HNV-14-M-B	1/4"	1/4"	9.01
HNV-38-M	3/8"	3/8"	6.64
HNV-38-M-B	3/8"	3/8"	13.33
HNV-12-M	1/2"	1/2"	7.81
HNV-12-M-B	1/2"	1/2"	22.61
HNV-34-M	3/4"	3/4"	13.75
HNV-34-M-B	3/4"	3/4"	27.05
HNV-1-M	1"	1"	23.63
HNV-1-M-B	1"	1"	40.95



**FEATURES**

- Steel construction, zinc plated trivalent finish. Hardened Nipples and sleeves and solid barstock construction for maximum resistance to damage from hydraulic and mechanical shock.
- This Anti-Blowout Nitrile/ PTFE bonded seal is designed to prevent blow out or damage during severe service conditions.
- Durable ball-locking mechanism assures reliable connection everytime.
- Temp Range -65° to +250°

**ISO 16028**

Body Size	<b>FLUSH FACE</b>			
	Steel Coupler/ Plug Coupled			
	Maximum Working		Burst	
	PSI	Bar	PSI	Bar
1/4"	5,000	345	18,270	1,200
3/8"	4,000	275	18,270	1,200
1/2"	4,000	275	16,500	1,100
5/8"	4,000	275	14,800	1,000
3/4"	4,000	275	12,400	850
1"	3,000	200	12,600	850

FF Series  
HTMC  
74C



FF Series  
HTMN  
74N



**FEMALE PIPE COUPLER**

Part #	Body Size	NPT	List Price
FF-14-F	1/4"	1/4"	34.15
FF-38-F	3/8"	3/8"	45.53
FF-12-F	3/8"	1/2"	49.41
FF-34-F	1/2"	3/4"	60.63
FF-1-F	3/4"	1"	78.86

**FEMALE PIPE PLUG**

Part #	Body Size	NPT	List Price
FF-14-M	1/4"	1/4"	20.31
FF-38-M	3/8"	3/8"	22.97
FF-12-M	3/8"	1/2"	25.00
FF-34-M	1/2"	3/4"	30.27
FF-1-M	3/4"	1"	41.50

**AG - Series Agricultural Interchange ( Connected )**

Nominal Size	<b>Steel Coupler/ Plug</b>			
	Maximum Working		Burst	
	PSI	Bar	PSI	Bar
1/4"	4,000	275	21,000	1,500
3/8"	4,000	275	23,100	1,600
1/2"	4,000	275	16,500	1,100
3/4"	3,000	200	10,300	700
1"	3,000	200	13,000	900

**Snap-Tite 60 Series**



**FEMALE PIPE COUPLER**

Part #	Body Size	NPT	List Price
NV-14-F	1/4"	1/4"	10.43
NV-38-F	3/8"	3/8"	11.75
NV-12-F	1/2"	1/2"	32.14
NV-34-F	3/4"	3/4"	53.57
NV-1-F	1"	1"	72.07

**FEMALE PIPE PLUG**

Part #	Body Size	NPT	List Price
NV-14-M	1/4"	1/4"	3.76
NV-38-M	3/8"	3/8"	9.75
NV-12-M	1/2"	1/2"	14.62
NV-34-M	3/4"	3/4"	27.10
NV-1-M	1"	1"	40.13

**FEATURES**

- Heavy duty heat treated poppet: valves are standard with rugged, specially-designed seals made of nitrite for leak-free performance in the toughest application.
- High-strength steel valve guides designed for high flow rates and made extra tough for agricultural service.
- Dependable hardened chrome alloy steel locking balls. Heat treated plugs and sleeves.
- Standard seals temp range -40°F to +250°F

# PNEUMATICS

# PNEUMATIC ACCESSORIES

## BRASS MUFFLERS

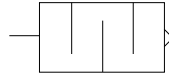


**Materials:**  
**Body: Brass**  
**Element: Sintered Bronze**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 300°F**

Part #	Size	List Price
300-020	10/32"	2.31
300-021	1/8"	2.54
300-022	1/4"	4.02
300-023	3/8"	5.39
300-024	1/2"	7.83
300-026	3/4"	15.95
300-028	1"	43.95

40 Micron element

## STAINLESS MUFFLERS



**Materials:**  
**Body: 303 Grade Stainless Steel**  
**Element: 316 Grade Stainless Steel**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 392°F**

Part #	Size	List Price
300-032	1/8"	18.15
300-033	1/4"	18.45
300-034	3/8"	22.04
300-035	1/2"	31.16
300-036	3/4"	91.67

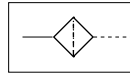
## BRASS BREATHER VENT



**Materials:**  
**Body: Brass**  
**Element: Sintered Bronze**  
**Max Operating Pressure: 150PSI**  
**Temperature: 35° to 300°F**  
 40 Micron element

Part #	Size	List Price
300-000	10-32"	3.37
300-001	1/8"	2.41
300-002	1/4"	3.55
300-003	3/8"	4.38
300-004	1/2"	5.87
300-006	3/4"	16.36
300-008	1"	28.48

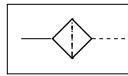
## STAINLESS BREATHER VENT



**Materials:**  
**Body: 303 Grade Stainless Steel**  
**Element: 316 Grade Stainless Steel**  
**Max Operating Pressure: 150PSI**  
**Temperature: 35° to 390°F**

Part #	Size	List Price
300-014	1/8"	11.13
300-015	1/4"	15.65
300-017	3/8"	23.59
300-018	1/2"	29.72
300-019	3/4"	72.01
300-007	1"	92.63

## PRESSURE SNUBBER



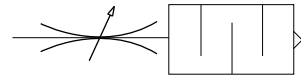
**Materials:**  
**Body: Brass**  
**Element: Sintered Bronze**  
**Max Operating Pressure: 9000PSI**  
**Temperature: 35° to 300°F**

Part #	Size	Porosity	List Price
28-354	1/4"	40 um	17.26
28-353	1/4"	30 um	16.24
28-352	1/4"	25 um	14.95
28-351	1/4"	20 um	16.24
28-350	1/4"	10 um	14.62

Part #	Size	Porosity	List Price
28-359	3/8"	40 um	16.24
28-358	3/8"	30 um	15.69
28-357	3/8"	25 um	14.94
28-356	3/8"	20 um	16.24
28-355	3/8"	10 um	16.24

Recommended Element Porosity Rating		
Porosity Rating	Color Code	Recommended Application
40 um	None	Viscous Fluids (over 500 ssu)
30 um	Black	Med. Type Oils (225 to 500 ssu)
25 um	Brown	Water & L.T. Oils (30 to 25 ssu)
20 um	Green	Low Viscosity Fluids (under 30 ssu)
10 um	Red	Air and Other Gases
5 um	Purple	

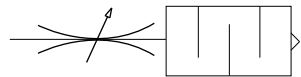
## SPEED CONTROL VALVE



**Materials:**  
**Body: Brass**  
**Element: 40 Micron Sintered Bronze**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 300°F**

Part #	Size	List Price
940-800	1/8"	9.04
940-801	1/4"	10.63
940-803	3/8"	15.05
940-804	1/2"	19.38
940-805	3/4"	35.77
940-806	1"	58.11

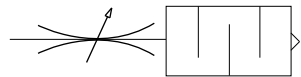
## STAINLESS SPEED CONTROL VALVE



**Materials:**  
**Body: 303 Grade Stainless Steel**  
**Element: 316 Grade Stainless Steel**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 392°F**

Part #	Size	List Price
940-810	1/8"	48.32
940-811	1/4"	58.99
940-812	3/8"	58.06
940-813	1/2"	76.01
940-814	3/4"	109.05
940-815	1"	148.39

## MUFFLER W/ FLOW ADJUSTMENT



**Materials:**  
**Body: Brass**  
**Element: Sintered Bronze**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 300°F**

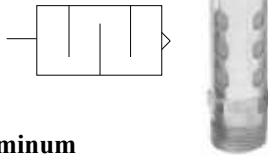
Part #	Size	List Price
28-379	1/8"	7.62
28-380	1/4"	9.09
28-381	3/8"	14.74
28-382	1/2"	14.16

PNEUMATICS



**HIGH FLOW ALUMINUM MUFFLER**

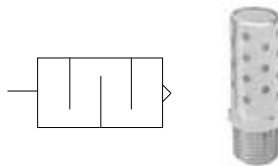
• hole pattern



**Materials:**  
**Body: Aluminum**  
**Element: 50 Mesh Stainless Steel**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 160°F**

Part #	Size	List Price
940-822	1/8"	13.64
940-823	1/4"	6.29
940-824	3/8"	8.51
940-825	1/2"	9.98
940-826	3/4"	17.29
940-827	1"	20.36

**HIGH FLOW STEEL MUFFLER**

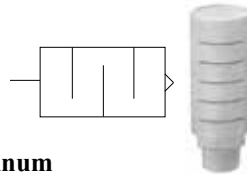


**Materials:**  
**Body: Steel**  
**Element: 50 Mesh Stainless Steel**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 160°F**

Part #	Size	List Price
28-373	1/8"	7.44
28-374	1/4"	7.50
28-375	3/8"	10.27
28-376	1/2"	12.19
28-377	3/4"	21.37
28-378	1"	23.72

**ALUMINUM HIGH FLOW MUFFLER**

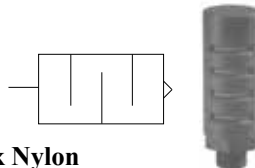
• slit pattern



**Materials:**  
**Body: Aluminum**  
**Element: 50 Mesh Stainless Steel**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 160°F**

Part #	Size	List Price
28-367	1/8"	20.42
28-368	1/4"	18.57
28-369	3/8"	26.46
28-370	1/2"	24.32
28-371	3/4"	50.13
28-372	1"	51.84

**PLASTIC HIGH FLOW MUFFLER**



**Materials:**  
**Body: Black Nylon**  
**Element: 50 Mesh Stainless Steel**  
**Max Operating Pressure: 150PSI**  
**Temperature: 35° to 120°F**

Part #	Size	List Price
28-363	1/8"	7.23
28-364	1/4"	7.22
28-365	3/8"	15.03
28-366	1/2"	15.03

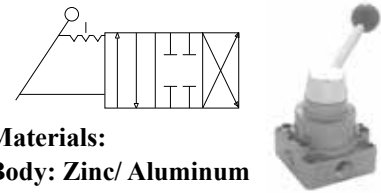
**NIPPLE INLINE FILTER**



**Materials:**  
**Body: Brass**  
**Element: 40 Micron Sintered Bronze**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 300°F**

Part #	Size	List Price
940-845	1/8"	14.17
940-846	1/4"	13.54
940-847	3/8"	21.18
940-848	1/2"	20.38

**SLIDING HAND VALVES**



**Materials:**  
**Body: Zinc/ Aluminum**  
**Cover: Zinc**  
**Rotary Disk: Teflon**  
**Pressure Range: 0 to 140PSI**  
**Proof Pressure: 213 PSI**  
**Temperature: 41°F to 140°F**  
**Media: Air**  
**Valve Function: 4-Way, 3 Position**  
**Operation Method: Manually operated 90°, Rotary Disk, Direct-Acting type**

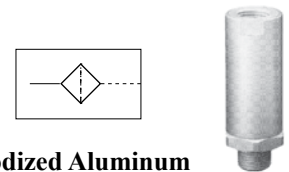
**Body: Zinc**

Part #	Size	List Price
28-360	1/4"	167.62

**Body: Aluminum**

28-361	3/8"	158.37
28-362	1/2"	182.16

**REPAIRABLE AIR/ OIL INLINE FILTER**



**Materials:**  
**Body: Anodized Aluminum**  
**Element: 40 Micron Sintered Bronze**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 200°F**

Part #	Size	List Price
940-840	1/8"	21.95
940-841	1/4"	19.96
940-842	3/8"	29.34
940-843	1/2"	68.57
940-844	3/4"	68.57



**CUSTOM CATALOGS**  
 SEE INSIDE BACK COVER

# MANIFOLDS

# PNEUMATIC ACCESSORIES

## Materials:

Aluminum with black anodizing for corrosion resistance.

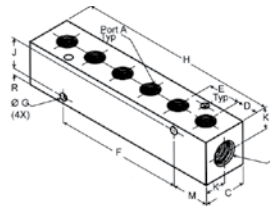
## Specifications:

Max Operating Pressure: 1000PSI

Temperature: -10° to 200°F

Media: Air and liquids compatible with materials of construction.

• Ports column = # of ports in top of manifold



## THREADED PORTS

Part #	Ports	List Price	A - out NPT	B - in NPT	C	D	E	F	G	H	J	K	M	R
28-448	2	57.48	1/8"	1/4"	1.00	0.50	0.75	N/A	0.17	1.75	0.70	0.50	0.88	0.15
28-449	3	44.99						0.75						
28-450	4	19.27						1.5						
28-451	5	52.94						2.25						
28-452	6	75.04						3.00						
28-453	7	59.13						3.75						
28-454	8	62.18						4.50						
28-455	9	64.47						5.25						
28-456	10	25.96						6.00						
28-457	2	17.57						N/A		3/8"				
28-458	3	19.13	0.88											
28-459	4	20.52	1.75											
28-460	5	22.08	2.63											
28-461	6	23.49	3.50											
28-462	7	73.73	4.38											
28-463	8	93.67	5.25											
28-464	9	27.37	6.13											
28-465	10	28.29	7.00											
28-466	2	67.39	N/A	3/8"	1.25	1.00	1.13	0.20	3.13		0.89	0.63	1.56	0.18
28-467	3	28.92	1.13											
28-468	4	30.48	2.25											
28-469	5	31.87	3.38											
28-470	6	65.00	4.50											
28-471	7	102.25	5.63											
28-472	8	173.31	6.75											
28-473	9	222.14	7.88											
28-474	10	133.08	9.00											
										N/A				

### 3 IN 1 ALUMINUM AIR MANIFOLD

No need to connect and disconnect every time you want to change tools. Supply 3 air tools from one outlet. These manifolds have one inlet with three 1/4 outlets.



S685-4	D3406
S685-6	D3408
S685-8	3104
D3404	3106

Part #	Size	List Price
320-120	1/4" Inlet	10.94
320-121	3/8" Inlet	28.00
320-122	1/2" Inlet	42.90
three 1/4" Outlets		

### SAFETY BLOW GUN

- N/P steel handle with plastic sleeve
- Brass Valve
- Zinc body

90 PSI



•Aluminum nozzle	20430AD
5114	S148
51-124	D204-30
401	6475

1/8" Outlet

Part #	Size	List Price
320-050	1/4" Inlet	9.29

### PISTOL GRIP BLOW-GUN

#### Material

- Body: POM (engineering plastic)
- Nozzle: nickel plated carbon steel
- Blue Handle Color

#### Features

- Simple construction, economic
- Global thread connection
- Durable and versatile applications
- 4 inch nozzle

150 PSI



Part #	Size	List Price
320-035	1/4"	8.92

### RUBBER TIPPED NOZZLE



51-521
2058
D201RT
411R

Makes positive seal between gun and fuel line or other openings. Use only on air line regulated to 30 PSI or less

Part #	Thread Size	List Price
320-070	1/8 - 27	9.42

### HIGH FLOW SAFETY NOZZLE



51-338
SST10
411BT
2056

Meets OSHA regulations of 30 PSI maximum outlet pressure when line pressure is 150 PSI or less. Has an air pressure bypass which prevent build up of tip pressure even if nozzle is blocked. Adapts to any blow gun with a 1/8" NPT nozzle port

Part #	List Price
320-075	2.98

PNEUMATICS



**MULTI-PURPOSE AIR VENT**



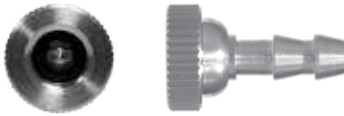
705

Part #	Size	List Price
46-048	1/8"	3.56

**BRASS BICYCLE PUMP FITTING**

Screw on swivel chuck for most hand operated tire pumps.

Buna-N-Seal • Deflator



Part #	Size	List Price
32-782	3/16"	3.62

**INFLATOR**



Part #	Size	List Price
32-783	3/16"	3.49

**360° Turning Swivel Fitting**

1/4" Basic size •360° Turning  
Industrial Interchange Plug •Swivels  
Flexible Bend



Part #	Size	List Price
320-065	1/4"	11.04

Save 5% by ordering online at [www.midlandmetal.com](http://www.midlandmetal.com)

**SWIVEL FITTING**

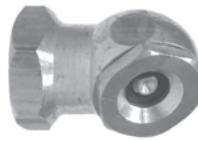
Flexible Bend •360° Turning  
•Swivels  
**Male NPT x Female NPT**



Part #	Size	List Price
320-061	1/4"	10.99

**AIR CHUCKS**

**HEX BALL FOOT CHUCK**



Part #	Size	List Price
46-600	1/4 FPT Live Air	3.51

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



Part #	Size	List Price
46-607	1/4 ID Live Air	3.50

**DUAL FOOT CHUCKS**

6999	DTC-02	99941
693		50-065
108		6569



Part #	List Price
320-000	32.13

**ANGLE CHUCK**



690  
6172

Part #	List Price
320-005	10.48

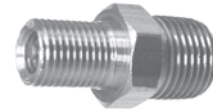
**TANK & VENT VALVES**

Three standard styles of valve bodies, complete with short core, for air lifts, water pumps, vacuum, pressurized containers, air jacks, and other pneumatic devices.

**REGULAR:** 300 PSI and cracking pressure 80 PSI

**1/8" NPT, .9" LONG  
SPRING CORE**

Thread - .302 x 32 w/ Black cap



7/16" Hex

Part #	Size	List Price
46-620	REGULAR	7.51

**1/8" NPT 1.207" LONG  
SPRING CORE**

7/16" Hex w/ Black cap



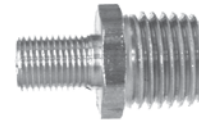
Part #	Size	List Price
46-621	REGULAR	5.84

**1/4" NPT 1" LONG  
SPRING CORE**

1.46 Long

w/ Black cap

9/16" Hex



Part #	Size	List Price
46-622	REGULAR	7.85

**TANK VALVE ACCESSORIES**

**BLACK PLASTIC CAP**

No Gasket



Part #	List Price
46-630	0.22

**SHORT NICKEL PLATED  
DOME CAP**



Dome skirted type

Part #	List Price
46-631	1.14

## GAUGES

### DUAL ANGLE-FOOT TRUCK PENCIL GAUGE



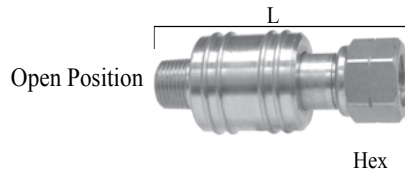
High pressure 20-120 PSI, in 2lb unit

Part #	List Price
320-023	30.12

## PNEUMATIC SLIDE VALVES

- Max Operating Pressure: 200 psig
- Temperatures: -20°F to +200°F

Manually operated slide valves provide simple on/off airflow control. They can be mounted horizontally, vertically or at any angle.



### MALE X FEMALE

Part #	Size	L	Hex	List Price
20-780	1/8"	2.15	9/16"	9.27

## PNEUMATICS ACCESSORIES

### TEFLON TAPE

**Chemical Properties:** Min. of 99% Polytrafluoroethylene

**Thickness:** .0035", +0.001 or -0.0005"

**Elongation:** Min. of 50% (most times it far exceeds)

**Width:** Nominal width +0.02, -0.02

**Length:** Nominal length + 20", -0"

**Density:** -0.35 to 0.40

**Incompatibility:** Avoid using on Moten Alkali, certain Halogen products & Flourine 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	List Price
982-107	1/2" x 260"	1.34
982-108	1/2" x 520"	1.50
982-109	3/4" x 260"	2.50
982-110	3/4" x 520"	2.50

### POP OUT COVERED SPOOL

### 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	List Price
990-540	3/8"	4.26
990-541	1/2"	4.40
990-542	3/4"	6.06
990-543	1"	5.24

## 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 #	PSI	List Price
980-100	30 Scrubs™/container	30.93
980-101	72 Scrubs™/container	60.35



**STANDARD DRY GAUGES**

**STEEL CASE**



• Plastic lens (window)

All the gauges supplied by Midland Metal Mfg. are designed for long, reliable service under rugged conditions. Typical applications include compressors, filter regulators, water pumps, beverage dispensing equipment, hydraulic and pneumatic systems, and other applications, where the media does not corrode brass

**1-1/2" FACE  
1/8" NPT LOWER MOUNT**

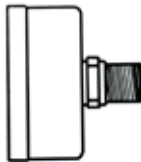
Part #	PSI	List Price
80-501	0-15	9.40
80-502	0-30	9.40
80-503	0-60	9.40
80-504	0-100	9.40
80-505	0-160	9.40
80-506	0-200	9.40

**2" FACE  
1/4" LOWER MOUNT**

Part #	PSI	List Price
80-001	0-15	10.45
80-002	0-30	9.50
80-003	0-60	10.45
80-004	0-100	10.45
80-005	0-160	10.45
80-006	0-200	10.45
80-007	0-300	9.50
80-020	30-0 Vacuum	16.00

**2-1/2" FACE  
1/4" LOWER MOUNT**

Part #	PSI	List Price
80-031	0-15	13.48
80-032	0-30	13.48
80-033	0-60	13.48
80-034	0-100	13.48
80-035	0-160	13.48
80-036	0-200	13.48



**CENTER BACK MOUNT**

**1-1/2" FACE  
1/8" NPT CENTER BACK MOUNT**

Part #	PSI	List Price
80-511	0-15	9.45
80-512	0-30	9.45
80-513	0-60	9.45
80-514	0-100	9.45
80-515	0-160	9.45
80-516	0-200	9.45

**2" FACE  
1/4" CENTER BACK MOUNT**

Part #	PSI	List Price
80-301	0-15	10.85
80-302	0-30	10.85
80-303	0-60	10.85
80-304	0-100	10.85
80-305	0-160	10.85
80-306	0-200	10.85
80-307	0-300	10.85

**2-1/2" FACE  
1/4" CENTER BACK MOUNT**

Part #	PSI	List Price
80-331	0-15	12.15
80-332	0-30	12.15
80-333	0-60	12.15
80-334	0-100	12.15
80-335	0-160	12.15
80-336	0-200	12.15

MISC



**LIQUID FILLED GAUGES**

**STAINLESS CASE**



- Liquid Filled Gauges with a stainless case are used for protection in harsh environments.
- Stainless Steel Case
- Copper Alloy Wetted parts
- Polycarbonate window
- ± 1.5% of span accuracy
- Temp. Range -104°F to 158°F

Liquid filled gauges enhance the reliability and integrity of the measuring system for long periods. The glycerine filling helps dampen the effects of vibration and pulsation. It also lubricates the movement which extends the life of the gauge.

**1-1/2" FACE  
1/8" LOWER MOUNT**

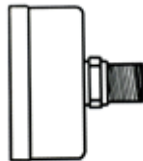
Part #	PSI	List Price
80-601	0-15	24.95
80-602	0-30	24.95
80-603	0-60	24.95
80-604	0-100	24.95
80-605	0-160	24.95
80-606	0-200	24.95

**2-1/2" FACE  
1/4" LOWER MOUNT**

Part #	PSI	List Price
80-061	0-15	28.05
80-062	0-30	28.05
80-063	0-60	28.05
80-064	0-100	28.05
80-065	0-160	28.05
80-066	0-200	28.05
80-067	0-300	28.05
80-068	0-400	28.05
80-069	0-600	28.05
80-100	0-1000	28.05
80-101	0-1500	28.05
80-102	0-2000	28.05
80-103	0-3000	28.05
80-104	0-5000	28.05
80-105	0-10000	28.05
80-080	30-0 Vacuum	28.05
80-081	-30 to +30	28.05

**4" FACE  
1/4" LOWER MOUNT**

Part #	PSI	List Price
80-463	0-100	75.35



**CENTER BACK MOUNT**

**1-1/2" FACE  
1/8" CENTER BACK MOUNT**

Part #	PSI	List Price
80-611	0-15	25.05
80-612	0-30	25.05
80-613	0-60	25.05
80-614	0-160	25.05
80-615	0-100	25.05
80-616	0-200	25.05

**2-1/2" FACE  
1/4" CENTER BACK MOUNT**

Part #	PSI	List Price
80-201	0-15	29.43
80-202	0-30	29.43
80-204	0-60	29.43
80-203	0-160	29.43
80-205	0-100	29.43
80-206	0-200	29.43
80-207	0-300	29.43
80-208	0-400	29.43
80-209	0-600	29.43



**Water Test Gauge**

**0-300 PSI DIAL  
3/4" FEMALE HOSE  
CONNECTION**



Part #	Face Size	List Price
991-249	2"	24.04
991-250	2-1/2"	24.04

**Water Test Gauge  
w/Lazy Hand (Maximum pointer)**

**2-1/2" GAUGE  
0-300 PSI DIAL  
3/4" FEMALE HOSE  
CONNECTION**



Regular pressure hand pushes LAZY hand to peak operating or surge pressure point where it remains until you manually reset it. Excellent to determine if P/T valve is leaking from failure or if leaking is caused by surge of excessive pressures. (Attach gauge to Boiler Drain Valve overnight.) LAZY hand operates over entire gauge range of 0-300psi

Part #	List Price
991-251	27.77



Part #	Face Size	List Price
991-259	3/4" FIP x 1/4" TAP	10.73



Part #	Face Size	List Price
GT15	0-15	21.94
GT30	0-30	21.94
GT60	0-60	16.22

**SYPHON**

**BRASS**



Part #	Size	List Price
995-210	1/4" 90°	41.98
995-211	1/4" 180°	46.40
995-212	1/4" 270°	63.22
995-213	1/4" 360°	67.78

**STEEL**



Part #	Size	List Price
995-214	1/4" 90°	16.04
995-215	1/4" 180°	17.32
995-216	1/4" 270°	19.67
995-217	1/4" 360°	20.88

MISC

**SPECIFICATIONS**

• Our stainless steel fittings are made from a combination of 303 and 304 materials. Type 303 is certified to either ASTM A581/A582 or AMS 5640. Type 304 is certified to AMS 5639 or ASTM A479. In cases where tubing is used, it is 304 stainless steel certified to ASTM A269.

• All stainless steel fittings are passivated to meet the standards of major food and beverage companies.

• All fittings are made of stainless steel except the swivel nuts which are nickel plated brass.

• All male threads are rolled rather than cut. No exceptions.

**SWIVEL NUT (NICKEL PLATED BRASS)**



Part #	Size	List Price
34-500	1/4"	1.22
34-512	3/8"	2.05
34-513	1/2"	2.87

**SWIVEL HOSE STEM**



Part #	Size	List Price
34-503	1/4"	2.47
34-515	3/8"	3.00
34-516	1/2"	5.33

1/4 stem for 1/4 nut  
 3/8 stem for 3/8 nut  
 1/2 stem for 1/2 nut

**SWIVEL ELBOWS**

**90° SWIVEL ELBOW**



**HOSE ID x FEMALE 45° FLARE**

Part #	Size	List Price
34-525	1/4" x 1/4"	5.44
34-529	3/8" x 3/8"	11.64

**BARB SPLICERS**

**HOSE SPLICER (STRAIGHT)**



**ID HOSE**

Part #	Size	List Price
34-533	1/4"	3.84
34-535	3/8"	4.67
34-543	3/8" x 1/4"	4.67

**90° BARB SPLICER**



Part #	Size	List Price
34-551	1/4"	4.60
34-552	3/8"	7.35

**TEES**

**BARB HOSE TEES**



Part #	Size	List Price
34-562	1/4"	12.59
34-563	3/8"	14.38

MISC

## STAINLESS STEEL

## BEVERAGE FITTINGS

### ADAPTERS

#### MALE FLARE TO BARB ADAPTER



#### HOSE ID x 45° FLARE

Part #	Size	List Price
34-579	1/4" x 1/4"	5.38
34-583	3/8" x 1/4"	8.17
34-584	1/4" x 3/8"	5.63
34-585	3/8" x 3/8"	7.92

#### NPT TO BARB ADAPTER



#### HOSE ID x MALE NPT

Part #	Size	List Price
34-587	1/4" x 1/8"	7.28
34-588	1/4" x 1/4"	6.78
34-589	1/4" x 3/8"	9.15
34-590	3/8" x 1/8"	9.19
34-591	3/8" x 1/4"	7.42
34-592	3/8" x 3/8"	9.34
34-595	3/8" x 1/2"	14.76
34-597	1/2" x 3/4"	21.48

### SWIVEL ELBOWS

#### SWIVEL TO BARB ELBOW

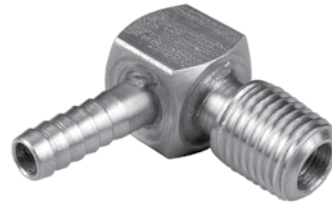


#### HOSE ID x FEMALE 45° FLARE

Part #	Size	List Price
34-600	1/4" x 1/4"	11.83

### ADAPTERS

#### NPT ELBOWS



#### HOSE ID x MALE NPTF

Part #	Size	List Price
34-610	1/4" x 1/8"	14.41
34-611	3/8" x 1/4"	14.73
34-612	3/8" x 3/8"	16.05
34-613	1/2" x 1/2"	33.74

**PLEASE CALL US FOR  
ANY STAINLESS STEEL  
BEVERAGE FITTINGS**

*If you don't see what you  
need, ask us!*



MISC

## HYDRAULIC FITTINGS & ACCESSORIES



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DEFEAT IS NOT BITTER UNLESS YOU SWALLOW IT.

— JOE CLARK

## WORKING PRESSURE

The tables on the following pages list the recommended working pressure for a variety of hydraulic fittings made in accordance with certain industry standards. Many factors such as impulse, vibration, mechanical shock, and improper assembly may affect the integrity of the fitting connection.

Midland Metal Mfg. recommends sufficient testing be conducted to ensure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. Working pressure ratings are capable of a 4 to 1 minimum burst. All steel fittings meet or exceed the minimum SAE pressure ratings. Always consider application and maximum pressure requirements when selecting fittings.

## METHODS FOR INSTALLING FITTINGS

There are three methods for installing a fitting:

- Torque wrench
- Flats From Wrench Resistance
- Turns From Finger Tight

For Flare and NPSM Fittings, Midland recommends the flats from wrench resistance method be used whenever possible.

The differences in material, plating, and surface finish impacts the coefficient of friction when installing or connecting fittings. To minimize these variances, Midland recommends that fitting connections are lubricated when installed. Connections that are lubricated provide a more accurate installation torque, which results in fewer leaks.

## USING A TORQUE WRENCH

The torque values given in the tables on the following pages are for reference purposes only based on industry standard practice and for low carbon steel mating with steel/iron components. Actual torque values may need to be adjusted due to variances described above.

SAE recommends always making a wet (lubricated) installation or connection to reduce friction on moving parts, O-rings, and variances in material and plating. The torque values in these tables are based off SAE values using a .17 coefficient of friction as per SAE J2593. Many hydraulic leaks are a result of over-torque, which causes excessive deformation of material or exceeds the yield strength of the material, which may reduce the load or clamping force between seal contacts.

If more than one value or range is given, use the lower value first and increase only if required. Over-torquing can damage a fitting or mating component.

EDUCATION COSTS MONEY. BUT THEN SO DOES IGNORANCE.

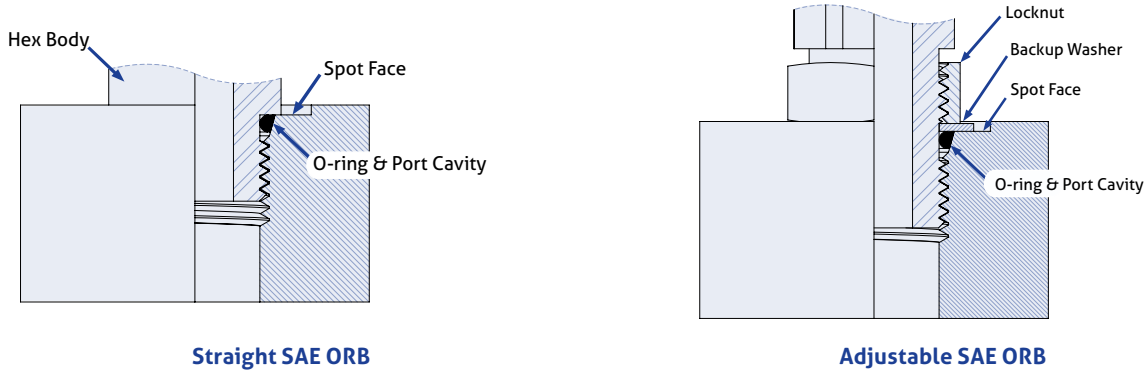
– SIR CLAUS MOSER

**SAE O-Ring Boss Port Specifications**

O-ring Boss ports (ORB) provide a seal by trapping the fitting's O-ring inside a port cavity. When a fitting is installed into the port, the O-ring is trapped between the fitting body hex or washer and port cavity.

Straight fittings include a hex, and sometimes an additional cylindrical shoulder below the hex and above the threads, to trap the O-ring in the port cavity.

Elbow and Tee fittings require a backup washer and a locknut above the O-ring on the threaded stud to permit a 360° orientation of the fitting around the port.



**Straight SAE ORB**

**Adjustable SAE ORB**

The following table lists the specifications for SAE O-Ring Boss Ports.

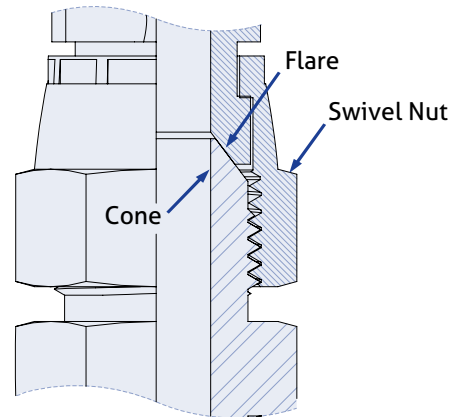
SAE O-Ring Boss Specifications									
Dash Size	Tube Size	Thread	SAE-ORB to JIC and Pipe Fittings*			SAE-ORB to ORFS Fittings**			
			Torque		Working Pressure		Torque		Working Pressure
			Adjustable & Non-Adjustable	Adjustable	Non-Adjustable	Adjustable & Non-Adjustable	Adjustable	Non-Adjustable	
			(ft-lbs) +25% -0%	(psi)	(psi)	(ft-lbs) +25% -0%	(psi)	(psi)	
02	1/8	5/16-24	6	4500	4500	-	-	-	
03	3/16	3/8-24	7	4500	4500	7	5800	9100	
04	1/4	7/16-20	13	4500	4500	15	5800	9100	
05	5/16	1/2-20	18	4500	4500	18	5800	9100	
06	3/8	9/16-18	22	3600	4500	26	5800	9100	
08	1/2	3/4-16	37	3600	4500	52	5800	9100	
10	5/8	7/8-14	44	2900	3600	74	5800	9100	
12	3/4	1-1/16-12	70	2900	3600	125	5800	5800	
14	7/8	1-3/16-12	92	2300	2900	158	5800	5800	
16	1	1-5/16-12	111	2300	2900	199	4500	5800	
20	1 1/4	1-5/8-12	147	1800	2300	210	3600	3600	
24	1 1/2	1-7/8-12	155	1800	2300	273	2900	3600	
32	2	2-1/2-12	221	1450	1800	-	-	-	

\* = Light duty studs included on JIC, NPTF and NPSM fittings per SAE J1926/3 & J514  
 \*\* = Heavy duty studs included on ORFS fittings per SAE J1926/2 & J1453  
 Note: Torque values are for wet torque and are allowed up to 25% the listed value according to SAE J2593.

**JIC Adapter Specifications**

Male flared fittings include a conical nose with external threads for clamping.

A flared fitting or tube assembly is tightened against the cone with a swivel nut. By forcing the flare against the cone during the torquing process, the nose cone is slightly deformed and meshes to create a metal to metal seal between the flare and the cone.



The following table lists the specifications for JIC adapters.

JIC Specifications							
Dash Size	Tube Size	Thread	Working Pressure		Torque		
			Male (psi)	Female Swivel Nut (psi)	JIC Rigid (FFWR)	JIC Swivel (FFWR)	Bulkhead Locknut (ft-lbs) +25% -0%
02	1/8	5/16-24	5000	5000	1/4 - 1/2	2	4
03	3/16	3/8-24	5000	5000	1/4 - 1/2	2	6
04	1/4	7/16-20	5000	4500	1/4 - 1/2	2	10
05	5/16	1/2-20	5000	4000	1/4 - 1/2	2	13
06	3/8	9/16-18	5000	4000	1/4 - 1/2	2	16
08	1/2	3/4-16	4500	4000	1/4 - 1/2	2	27
10	5/8	7/8-14	3500	3000	1/4 - 1/2	1 1/2	32
12	3/4	1-1/16-12	3500	3000	1/4 - 1/2	1 1/2	52
14	7/8	1-3/16-12	3000	2500	1/4 - 1/2	1 1/2	66
16	1	1-5/16-12	3000	2500	1/4 - 1/2	1 1/2	85
20	1 1/4	1-5/8-12	2500	2000	1/4 - 1/2	1	111
24	1 1/2	1-7/8-12	2000	1500	1/4 - 1/2	1	114
32	2	2-1/2-12	1500	1125	1/4 - 1/2	1	162

Values are per SAE J514

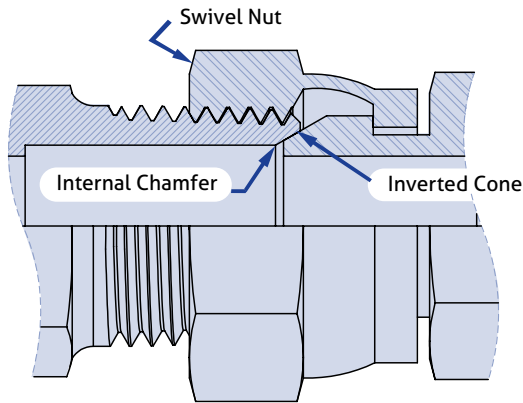
THE BEST REVENGE IS MASSIVE SUCCESS.

– FRANK SINATRA

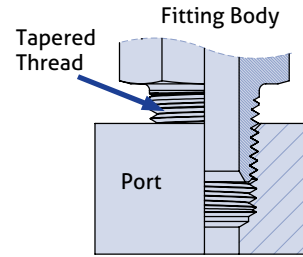
**Pipe & Pipe Swivel Adapter Specifications**

NPSM fittings include an inverted 60° cone inside an internally threaded swivel union nut. Male NPTF fittings that have a 30° internal chamfer that make a 60° inverted cone, will mate with NPSM swivel unions.

**NOTE: THE MATING MALE THREADS MUST INCLUDE AN INSIDE CHAMFER ON THE END OF THE FITTING THAT MATES WITH THE INVERTED CONE. THREADS ARE FOR CLAMPING FORCE ONLY AND THE SEALING OCCURS ON A SMALL RADIAL SECTION BETWEEN THE MALE FITTING INTERNAL CHAMFER AND THE SWIVEL UNION INVERTED CONE.**



**NPTF & NPSM Union**



**NPT & NPTF Assembly**

NPT and NPTF pipe threads seal by wedging the tapered threads through deformation into each other. Both of these threads require thread sealants to complete a seal.

The following table lists the specifications for NPT, NPTF, and NPSM Pipe adapters.

NPT, NPTF, and NPSM Pipe Specifications						
Dash Size	Thread Size	Major OD* (inch)	Working Pressure		Torque	
			NPT, NPTF Male and Female	NPSM Female Swivel Nut	NPT, NPTF	NPSM Swivel Union
			(psi)	(psi)	(TFFT)	(FFWR)
02	1/8-27	.405	5000	5000	2-3	2
04	1/4-18	.540	4000	5000	2-3	2
06	3/8-18	.675	3000	4000	2-3	2
08	1/2-14	.84	3000	3500	2-3	2
12	3/4-14	1.050	2500	2250	2-3	2
16	1-11 1/2	1.315	2000	2000	1 1/2 - 2 1/2	1 1/2
20	1 1/4-11 1/2	1.660	1150	1625	1 1/2 - 2 1/2	1 1/2
24	1 1/2-11 1/2	1.900	1000	1250	1 1/2 - 2 1/2	1 1/2
32	2-11 1/2	2.375	1000	1125	1 1/2 - 2 1/2	1 1/2

Values are per SAE J514 & J2593

**NPT, NPTF, and NPSM Pipe Specifications**

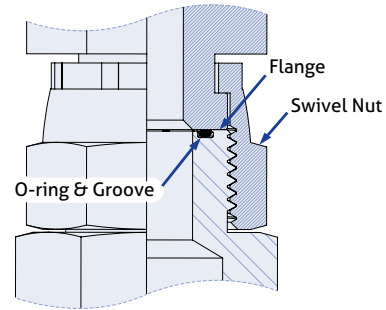


**O-ring Face Seal Adapter Specifications**

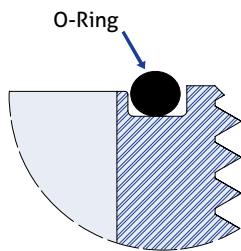
O-ring face seal fittings include a precision groove in the face of the male fitting. Sealing occurs when an O-ring is trapped in the groove by a smooth flat flange that is clamped against the face with a nut or nut and sleeve. The flat flange may be formed or brazed onto the end of a tube, or is machined on a fitting.

There are two SAE groove types:

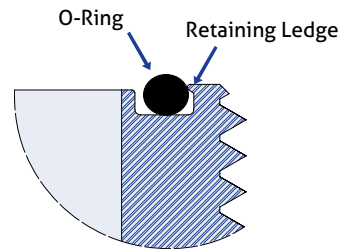
- Type A: The original style A O-ring has no retaining ledge.
- Type B: The Type B groove has a retaining ledge (half dovetail) that improves O-ring retention. The Type B style is more commonly found and is a design improvement over the Type A.



**ORFS Fitting Assembly**



**Detail View of Cross Section of Groove Type A**



**View of Groove Type B**

The following table lists the specifications for O-ring Face Seal adapters.

ORFS Specifications								
Dash Size	Tube Size	Thread Size	Working Pressure		Torque			
			Male	Female Swivel Nut	Male & Female	Bulkhead Locknut	Tube Nuts	Swivel Nuts
			(psi)	(psi)	(ft-lbs) +25% -0%	(ft-lbs) +25% -0%		
04	1/4	9/16-18	6000	6000	18	16	1/4-1/2	1/2-3/4
06	3/8	11/16-16	6000	6000	29	22	1/4-1/2	1/2-3/4
08	1/2	13/16-16	6000	6000	41	29	1/4-1/2	1/2-3/4
10	5/8	1-14	6000	6000	44	44	1/4-1/2	1/2-3/4
12	3/4	1-3/16-12	6000	6000	66	66	1/4-1/2	1/3-1/2
16	1	1-7/16-12	6000	5000	92	92	1/4-1/2	1/3-1/2
20	1 1/4	1-11/16-12	4000	4000	125	111	1/4-1/2	1/3-1/2
24	1 1/2	2-12	4000	3000	147	125	1/4-1/2	1/3-1/2

Note: Values are per SAE J2593 & J1453

Torque values are for wet installation of steel components. Reduce torque values for softer material components.

**ORFS Specifications**

**HYDRAULIC**



**BSPT, BSPP and Metric Adapter Specifications**

BSPT and Metric tapered threads install and work in the same manner as NPT and NPTF.

Male BSPP fittings include an inverted 60° cone inside an internally threaded swivel union nut. Male BSPP fittings that have a 30° internal chamfer that make a 60° inverted cone, will mate with Female BSPP swivel unions.

**NOTE: THE MATING MALE THREADS MUST INCLUDE AN INSIDE CHAMFER ON THE END OF THE FITTING THAT MATES WITH THE INVERTED CONE. THREADS ARE FOR CLAMPING FORCE ONLY AND THE SEALING OCCURS ON A SMALL RADIAL SECTION BETWEEN THE MALE FITTING INTERNAL CHAMFER AND THE SWIVEL UNION INVERTED CONE.**

DIN swivel unions have a 24° inverted cone and may be installed into DIN bite-ring compression fittings. To provide enhanced performance, an O-ring is sometimes included in the cone of some DIN swivel unions.

British Standard Pipe Parallel (BSPP) and Metric Parallel threaded ports do not include a port cavity like the O-ring Boss or ISO 6149 port. Instead, an O-ring sits on top of the spot face or external surface and is surrounded by a metal retaining ring or other retaining component to trap the O-ring between the fitting hex, body, and spot face.

Elbow and Tee fittings have a locknut, backup washer, O-ring and retaining washer to permit 360° orientation around the axis of the port.

The following table lists the specifications for **BSPP & BSPT Adapters**

BSPP & BSPT Specifications				
Dash Size	BSPT & BSPP		Torque	
	THREAD SIZE	MAJOR OD* (inch)	BSPP Swivel Union	BSPT
02	1/8-28	0.383	2	2-3
04	1/4-19	0.518	2	2-3
06	3/8-19	0.656	2	2-3
08	1/2-14	0.825	2	2-3
10	5/8-14	0.929	2	2-3
12	3/4-14	1.041	2	2-3
16	1-11	1.309	1 1/2	1 1/2 - 2 1/2
20	1 1/4-11	1.650	1 1/2	1 1/2 - 2 1/2
24	1 1/2-11	1.882	1 1/2	1 1/2 - 2 1/2
32	2-11	2.347	1 1/2	1 1/2 - 2 1/2

The following table lists the specifications for **Metric Adapters**

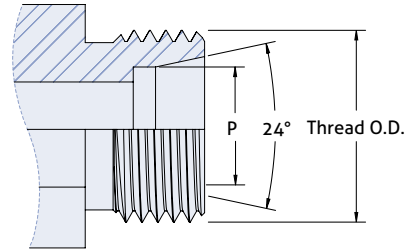
Metric DIN 3852-1 Threads	
Dash Size	THREAD SIZE (mm)
08	8 x 1.0
10	10 x 1.0
12	12 x 1.5
14	14 x 1.5
16	16 x 1.5
18	18 x 1.5
20	20 x 1.5
22	22 x 1.5
24	24 x 1.5
26	26 x 1.5
27	27 x 2.0
30	30 x 2.0
33	33 x 2.0
39	39 x 2.0
42	42 x 2.0
48	48 x 2.0
60	60 x 2.0

Values are from DIN 3852-1

**Metric Compression Tube Adapter Specifications (DIN L, & S)**

You can use a metric compression tube adapter with different types of fitting connections that use a metric tube size. The DIN figure to the right shows the cross sectional cut of a DIN connection. The Tube size dimension is P. The thread size is the Thread O.D.

**DIN Standard 2353**



**DIN Identification**

The following table lists the specifications for DIN **L** adapters

The following table lists the specifications for DIN **S** adapters

DIN S			
Metric Tube O.D. Size	Thread O.D.	Tube (P)ilot	Pressure
(mm)	(mm)	(mm)	(psi)
6	14 x 1.5	6	9000
8	16 x 1.5	8	9000
10	18 x 1.5	10	9000
12	20 x 1.5	12	9000
14	22 x 1.5	14	5800
16	24 x 1.5	16	5800
20	30 x 2.0	20	5800
25	36 x 2.0	25	5800
30	42 x 2.0	30	3600
38	52 x 2.0	38	3600

\*Meets standard ISO 8434-1

DIN L			
Metric Tube O.D. Size	Thread O.D.	Tube (P)ilot	Pressure
(mm)	(mm)	(mm)	(psi)
6	12 x 1.5	6	3600
8	14 x 1.5	8	3600
10	16 x 1.5	10	3600
12	18 x 1.5	12	3600
15	22 x 1.5	15	3600
18	26 x 1.5	18	2300
22	30 x 2.0	22	2300
28	36 x 2.0	28	1500
35	45 x 2.0	35	1500
42	52 x 2.0	42	1500

\*Meets standard ISO 8434-1

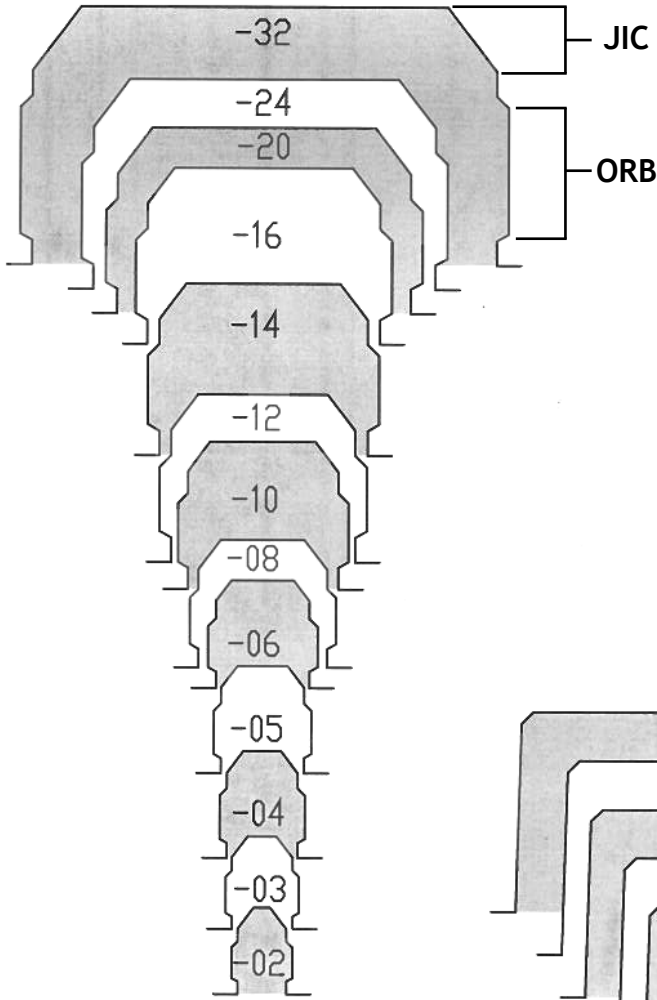
AN OBSTACLE IS OFTEN A STEPPING STONE.

– PRESCOTT

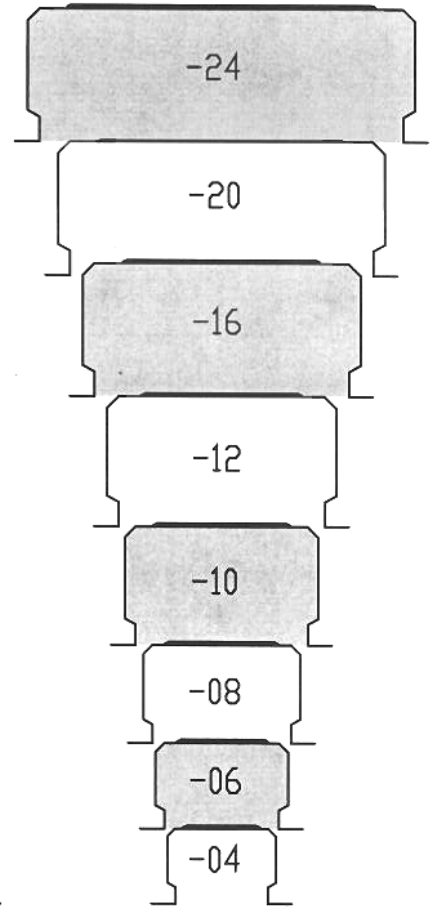
# PROFILE SIZE CHART

# HYDRAULIC ADAPTER

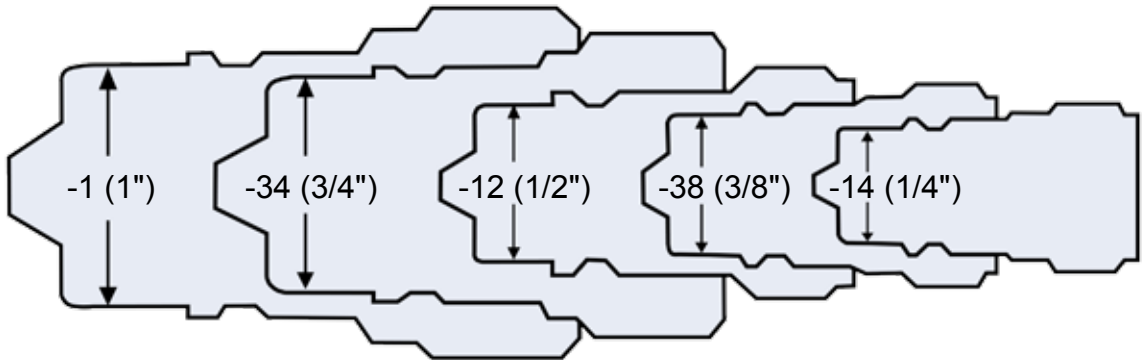
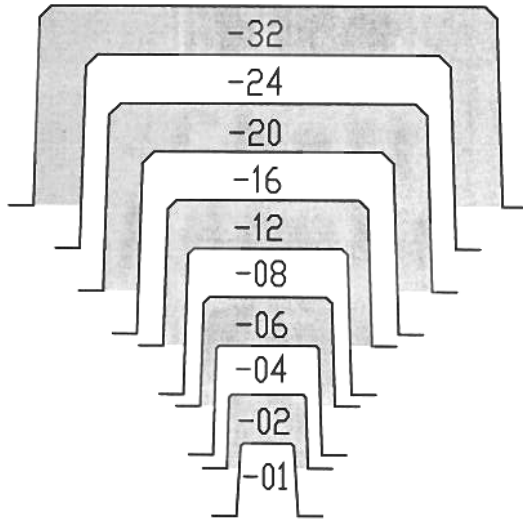
## MALE JIC/ MALE O-RING BOSS



## O-RING FACE SEAL



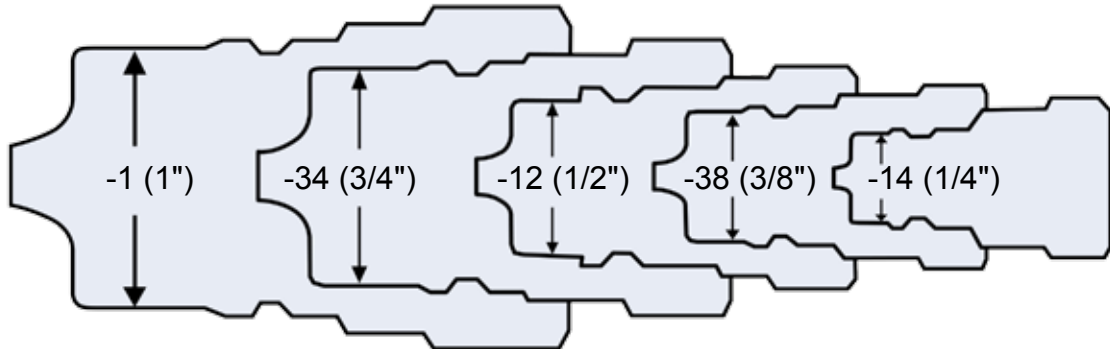
## MALE PIPE



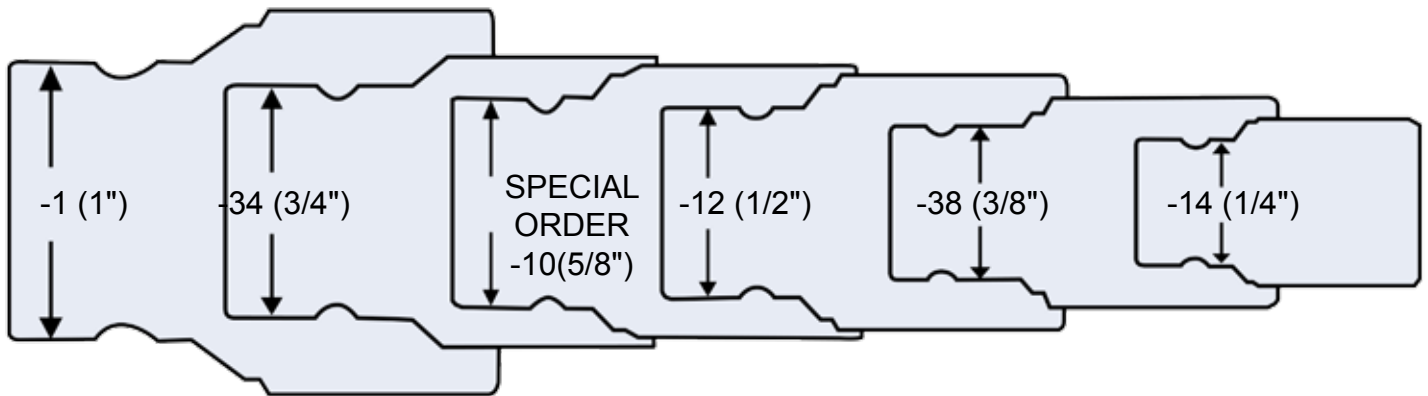
AG INTERCHANGE - NV SERIES

HYDRAULIC

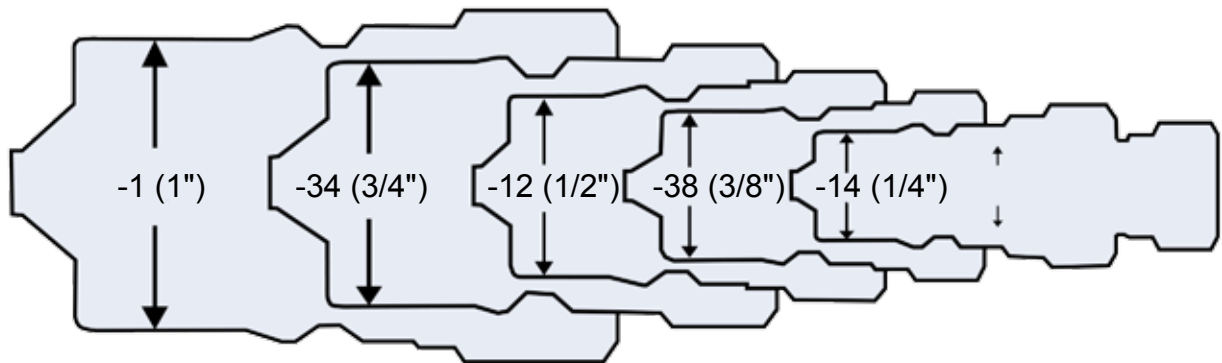




**ISO 7241 - 1 - ANV SERIES**



**ISO 16028 - FF SERIES**



**ISO 7241 - 1 ISO B - HNV SERIES**

**HYDRAULIC**

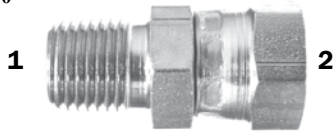
## SMALL PIPE SWIVELS NPSM

## HYDRAULIC ADAPTERS

### STEEL PIPE SWIVEL ADAPTERS

#### MALE PIPE SWIVEL ADAPTER

SAE 140130

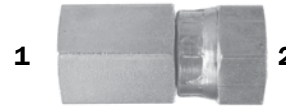


1404  
2045R  
1210  
9205R  
0107

Part #	Male Pipe 1	Female NPSM 2	List Price
1404-2-2	1/8	1/8	1.68
1404-2-4	1/8	1/4	2.76
1404-4-2	1/4	1/8	3.69
1404-4-4	1/4	1/4	1.87
1404-4-6	1/4	3/8	3.57
1404-4-8	1/4	1/2	3.58
1404-6-4	3/8	1/4	3.33
1404-6-6	3/8	3/8	3.55
1404-6-8	3/8	1/2	3.49
1404-8-4	1/2	1/4	4.29
1404-8-6	1/2	3/8	5.03
1404-8-8	1/2	1/2	3.42
1404-12-8	3/4	1/2	5.53
1404-12-12	3/4	3/4	4.72
1404-12-16	3/4	1	11.83
1404-16-12	1	3/4	11.36
1404-16-16	1	1	8.38
1404-16-20	1	1-1/4	21.06
1404-20-16	1-1/4	1	18.92
1404-20-20	1-1/4	1-1/4	15.35
1404-24-24	1-1/2	1-1/2	22.29
1404-32-32	2	2	49.67

#### FEMALE PIPE SWIVEL ADAPTER

SAE 140131



1405  
2046R  
1212  
9255  
C207

Part #	Female Pipe 1	Female NPSM 2	List Price
1405-2-2	1/8	1/8	3.00
1405-2-4	1/8	1/4	3.33
1405-4-2	1/4	1/8	3.24
1405-4-4	1/4	1/4	2.45
1405-4-6	1/4	3/8	4.53
1405-6-4	3/8	1/4	2.90
1405-6-6	3/8	3/8	2.81
1405-6-8	3/8	1/2	3.72
1405-8-4	1/2	1/4	5.06
1405-8-6	1/2	3/8	3.72
1405-8-8	1/2	1/2	3.58
1405-12-12	3/4	3/4	5.11
1405-16-12	1	3/4	13.10
1405-16-16	1	1	7.53
1405-20-20	1-1/4	1-1/4	18.99
1405-24-24	1-1/2	1-1/2	26.38
1405-32-32	2	2	41.52

# HYDRAULIC ADAPTERS

# SMALL PIPE SWIVELS NPSM

## MALE PIPE ELBOW SWIVEL ADAPTER

SAE 140230

1



2

1501  
2047R  
1218  
9405  
2107

Part #	Male Pipe 1	Female NPSM 2	List Price
1501-2-2	1/8	1/8	2.69
1501-2-4	1/8	1/4	5.53
1501-4-2	1/4	1/8	2.79
1501-4-4	1/4	1/4	2.26
1501-4-6	1/4	3/8	4.85
1501-6-4	3/8	1/4	6.56
1501-6-6	3/8	3/8	3.45
1501-8-4	1/2	1/4	4.54
1501-8-6	1/2	3/8	4.10
1501-8-8	1/2	1/2	4.67
1501-12-8	3/4	1/2	8.39
1501-12-12	3/4	3/4	7.20
1501-12-16	3/4	1	18.21
1501-16-12	1	3/4	17.20
1501-16-16	1	1	11.96
1501-20-16	1-1/4	1	41.61
1501-20-20	1-1/4	1-1/4	26.64
1501-20-24	1-1/4	1-1/2	60.92
1501-24-20	1-1/2	1-1/4	57.45
1501-24-24	1-1/2	1-1/2	42.19
1501-32-32	2	2	77.49

-4, -6, -8 Available in a Restrictor

## FEMALE UNION ELBOW SWIVEL ADAPTER

SAE 140231

1



2

1502  
2207  
1216  
94SSR

Part #	Female Pipe 1	Female NPSM 2	List Price
1502-2-2	1/8	1/8	3.60
1502-2-4	1/8	1/4	6.95
1502-4-4	1/4	1/4	3.80
1502-4-6	1/4	3/8	7.88
1502-6-4	3/8	1/4	6.14
1502-6-6	3/8	3/8	5.81
1502-6-8	3/8	1/2	13.15
1502-8-4	1/2	1/4	13.84
1502-8-6	1/2	3/8	5.47
1502-8-8	1/2	1/2	6.00
1502-12-12	3/4	3/4	9.26
1502-16-12	1	3/4	29.33
1502-16-16	1	1	26.45
1502-20-20	1-1/4	1-1/4	28.66
1502-24-24	1-1/2	1-1/2	57.61

## MALE 45° PIPE ELBOW SWIVEL ADAPTER

SAE 140330

1



2

1503  
2049R  
3107  
1214  
9355R

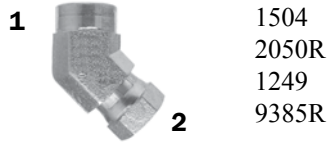
Part #	Male Pipe 1	Female NPSM 2	List Price
1503-2-2	1/8	1/8	4.10
1503-4-4	1/4	1/4	3.48
1503-4-6	1/4	3/8	8.43
1503-6-4	3/8	1/4	3.78
1503-6-6	3/8	3/8	3.76
1503-6-8	3/8	1/2	7.27
1503-8-6	1/2	3/8	5.24
1503-8-8	1/2	1/2	4.82
1503-12-8	3/4	1/2	10.42
1503-12-12	3/4	3/4	6.63
1503-16-12	1	3/4	13.11
1503-16-16	1	1	13.21
1503-16-20	1	1-1/4	42.04
1503-20-16	1-1/4	1	29.81
1503-20-20	1-1/4	1-1/4	22.81
1503-24-24	1-1/2	1-1/2	41.50
1503-32-32	2	2	110.53

HYDRAULIC

## SMALL PIPE SWIVELS NPSM

### FEMALE 45° UNION ELBOW SWIVEL ADAPTER

SAE 140331



1504  
2050R  
1249  
9385R

Part #	Female Pipe 1	Female NPSM 2	List Price
1504-2-2	1/8	1/8	6.81
1504-4-4	1/4	1/4	5.09
1504-6-4	3/8	1/4	9.89
1504-6-6	3/8	3/8	5.56
1504-8-8	1/2	1/2	8.01
1504-12-12	3/4	3/4	10.67
1504-16-16	1	1	15.98
1504-20-20	1-1/4	1-1/4	43.05
1504-24-24	1-1/2	1-1/2	65.69

### MALE SWIVEL BRANCH TEE

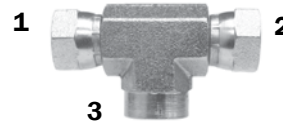


1601  
2254R  
1258  
9406R

Part #	Female NPSM 1 & 2	Male Pipe 3	List Price
1601-2-2	1/8	1/8	8.24
1601-4-4	1/4	1/4	6.83
1601-6-6	3/8	3/8	10.35
1601-8-4	1/4	1/2	15.29
1601-8-8	1/2	1/2	12.33
1601-12-12	3/4	3/4	26.91
1601-16-16	1	1	49.99
1601-20-20	1-1/4	1-1/4	66.62
1601-24-24	1-1/2	1-1/2	87.48

## HYDRAULIC ADAPTERS

### FEMALE SWIVEL TEE



1602  
2253R  
1259  
9456R

Part #	Female NPSM 1 & 2	Female Pipe 3	List Price
1602-4-4	1/4	1/4	5.63
1602-6-4	1/4	3/8	15.24
1602-6-6	3/8	3/8	9.41
1602-8-6	3/8	1/2	13.78
1602-8-8	1/2	1/2	10.67
1602-12-8	1/2	3/4	22.10
1602-12-12	3/4	3/4	19.37
1602-16-16	1	1	39.10
1602-20-20	1-1/4	1-1/4	77.67

*Send Midland all your  
high volume quotes!*

### FEMALE SWIVEL UNION TEE



1603  
2255  
1223  
9705R

Part #	Female NPSM 1,2 & 3	List Price
1603-4-4	1/4	8.95
1603-6-6	3/8	14.46
1603-8-8	1/2	14.00
1603-12-12	3/4	19.29
1603-16-16	1	57.10
1603-20-20	1-1/4	95.53



DROP SHIP  
PROGRAM

SEE  
**INTRO PAGE 5**

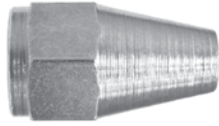


## HYDRAULIC ADAPTERS

## STRAIGHTS STEEL JIC FLARE 37°

### LONG JIC TUBE NUT

SAE 070111



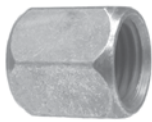
304  
221000  
0304

Part #	Tube O.D	JIC Thread Size	List Price
0304-4	1/4	7/16-20	1.09
0304-5	5/16	1/2-20	1.49
0304-6	3/8	9/16-18	2.22
0304-8	1/2	3/4-16	2.99
0304-10	5/8	7/8-14	4.14
0304-12	3/4	1-1/16-12	2.57
0304-16	1	1-5/16-12	14.16

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### JIC CAP

SAE 070112  
MS 51532

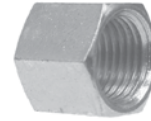


820  
304  
210292  
FNTX  
1329  
C5129

Part #	Tube O.D.	JIC Thread Size	List Price
0304-C-2	1/8	5/16-24	1.48
0304-C-3	3/16	3/8-24	1.15
0304-C-4	1/4	7/16-20	0.78
0304-C-5	5/16	1/2-20	0.75
0304-C-6	3/8	9/16-18	0.97
0304-C-8	1/2	3/4-16	0.85
0304-C-10	5/8	7/8-14	1.53
0304-C-12	3/4	1-1/16-12	1.69
0304-C-14	7/8	1-3/16-12	3.33
0304-C-16	1	1-5/16-12	2.96
0304-C-20	1-1/4	1-5/8-12	6.03
0304-C-24	1-1/2	1-7/8-12	10.66
0304-C-32	2	2-1/2-12	20.83

### JIC TUBE NUT (SLEEVE REQUIRED)

SAE 070110  
MS 51531



318  
1290  
BTX  
1311  
C5105

Part #	Tube O.D	JIC Thread Size	List Price
0318-2	1/8	5/16-24	0.64
0318-3	3/16	3/8-24	0.64
0318-4	1/4	7/16-20	0.44
0318-5	5/16	1/2-20	0.65
0318-6	3/8	9/16-18	0.74
0318-8	1/2	3/4-16	1.06
0318-10	5/8	7/8-14	1.39
0318-12	3/4	1-1/16-12	2.40
0318-14	7/8	1-3/16-12	3.05
0318-16	1	1-5/16-12	3.38
0318-20	1-1/4	1-5/8-12	6.99
0318-24	1-1/2	1-7/8-12	10.46
0318-32	2	2-1/2-12	29.06

### JIC TUBE SLEEVE

SAE 070115  
MS 51533



319  
900605  
TX  
1253  
C5165

Part #	Tube O.D	List Price
0319-2	1/8	0.51
0319-3	3/16	0.51
0319-4	1/4	0.42
0319-5	5/16	0.42
0319-6	3/8	0.46
0319-8	1/2	0.60
0319-10	5/8	0.72
0319-12	3/4	0.95
0319-14	7/8	1.80
0319-16	1	1.94
0319-20	1-1/4	2.86
0319-24	1-1/2	5.59
0319-32	2	9.63

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# STRAIGHTS STEEL JIC FLARE 37°

# HYDRAULIC ADAPTERS

## JIC TUBE UNION

SAE 070101  
MS 51501



2403  
2027  
HTX  
1204  
C5305

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2403-2-2	5/16-24	5/16-24	2.06
2403-3-3	3/8-24	3/8-24	1.34
2403-4-4	7/16-20	7/16-20	1.02
2403-5-5	1/2-20	1/2-20	1.91
2403-6-6	9/16-18	9/16-18	1.99
2403-6-4	9/16-18	7/16-20	1.97
2403-8-8	3/4-16	3/4-16	1.80
2403-8-4	3/4-16	7/16-20	4.14
2403-8-6	3/4-16	9/16-18	2.00
2403-10-10	7/8-14	7/8-14	3.23
2403-10-6	7/8-14	9/16-18	5.55
2403-10-8	7/8-14	3/4-16	2.50
2403-12-12	1-1/16-12	1-1/16-12	3.48
2403-12-6	1-1/16-12	9/16-18	5.15
2403-12-8	1-1/16-12	3/4-16	4.27
2403-12-10	1-1/16-12	7/8-14	4.98
2403-14-14	1-3/16-12	1-3/16-12	8.16
2403-16-16	1-5/16-12	1-5/16-12	5.43
2403-16-12	1-5/16-12	1-1/16-12	10.48
2403-20-20	1-5/8-12	1-5/8-12	10.61
2403-20-16	1-5/8-12	1-5/16-12	10.53
2403-24	1-7/8-12	1-7/8-12	14.35
2403-24-20	1-7/8-12	1-5/8-12	19.54
2403-32	2-1/2-12	2-1/2-12	46.62

## JIC MALE CONNECTOR

SAE 070102  
MS 51500



2404  
2021R  
FTX  
1202R  
C5205  
816

Part #	JIC Thread Size 1	Male Pipe Thread 2	List Price
2404-2-2	5/16-24	1/8	2.16
2404-2-4	5/16-24	1/4	1.68
2404-4-2	7/16-20	1/8	0.90
2404-4-4	7/16-20	1/4	1.38
2404-4-6	7/16-20	3/8	1.53
2404-4-8	7/16-20	1/2	3.00
2404-6-2	9/16-18	1/8	1.65
2404-6-4	9/16-18	1/4	1.64
2404-6-6	9/16-18	3/8	1.57
2404-6-8	9/16-18	1/2	3.70
2404-6-12	9/16-18	3/4	4.22
2404-8-4	3/4-16	1/4	2.48
2404-8-6	3/4-16	3/8	2.10
2404-8-8	3/4-16	1/2	1.55
2404-8-12	3/4-16	3/4	2.95
2404-8-16	3/4-16	1	6.10
2404-10-4	7/8-14	1/4	3.92
2404-10-8	7/8-14	1/2	2.66
2404-10-12	7/8-14	3/4	3.93
2404-10-16	7/8-14	1	7.01
2404-12-6	1-1/16-12	3/8	3.97
2404-12-8	1-1/16-12	1/2	2.86
2404-12-12	1-1/16-12	3/4	3.71
2404-12-16	1-1/16-12	1	5.66
2404-12-20	1-1/16-12	1-1/4	7.96
2404-14-12	1-3/16-12	3/4	7.30
2404-16-12	1-5/16-12	3/4	6.91
2404-16-16	1-5/16-12	1	5.38
2404-20-12	1-5/8-12	3/4	21.18
2404-20-16	1-5/8-12	1	7.02
2404-20-20	1-5/8-12	1-1/4	6.23
2404-20-24	1-5/8-12	1-1/2	23.59
2404-24-16	1-7/8-12	1	45.80
2404-24-20	1-7/8-12	1-1/4	15.76
2404-24-24	1-7/8-12	1-1/2	11.00
2404-24-32	1-7/8-12	2	41.09
2404-32-20	2-1/2-12	1-1/4	62.35
2404-32-24	2-1/2-12	1-1/2	60.68
2404-32-32	2-1/2-12	2	33.11

HYDRAULIC



## HYDRAULIC ADAPTERS

## STRAIGHTS STEEL JIC FLARE 37°

### JIC FEMALE CONNECTOR

SAE 070103  
MS 51503



2405  
2022R  
GTX  
1230R  
C5255

Part #	JIC Thread Size 1	Female Pipe Size 2	List Price
2405-2-2	5/16-24	1/8	1.77
2405-3-2	3/8-24	1/8	1.95
2405-4-2	7/16-20	1/8	1.48
2405-4-4	7/16-20	1/4	1.81
2405-5-2	1/2-20	1/8	4.00
2405-5-4	1/2-20	1/4	3.23
2405-6-2	9/16-18	1/8	4.39
2405-6-4	9/16-18	1/4	1.81
2405-6-6	9/16-18	3/8	2.32
2405-6-8	9/16-18	1/2	6.13
2405-8-4	3/4-16	1/4	4.80
2405-8-6	3/4-16	3/8	4.60
2405-8-8	3/4-16	1/2	3.79
2405-8-12	3/4-16	3/4	11.16
2405-10-6	7/8-14	3/8	4.99
2405-10-8	7/8-14	1/2	5.40
2405-10-12	7/8-14	3/4	28.44
2405-12-8	1-1/16-12	1/2	6.05
2405-12-12	1-1/16-12	3/4	6.53
2405-12-16	1-1/16-12	1	14.04
2405-14-12	1-3/16-12	3/4	9.94
2405-16-12	1-5/16-12	3/4	18.50
2405-16-16	1-5/16-12	1	7.78
2405-16-20	1-5/16-12	1-1/4	22.03
2405-20-20	1-5/8-12	1-1/4	11.95
2405-24-24	1-7/8-12	1-1/2	27.97
2405-32-32	2-1/2-12	2	72.19

### JIC REDUCER/ EXPANDER



2406  
C5015  
2215  
TRTX  
1246

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2406-6-4	9/16-18	7/16-20	2.36
2406-6-8	9/16-18	3/4-16	2.93
2406-8-4	3/4-16	7/16-20	2.84
2406-8-6	3/4-16	9/16-18	2.86
2406-8-12*	3/4-16	1-1/16-12	6812
2406-10-4	7/8-14	7/16-20	5.15
2406-10-6	7/8-14	9/16-18	4.48
2406-10-8	7/8-14	3/4-16	4.43
2406-12-4	1-1/16-12	7/16-20	6.00
2406-12-6	1-1/16-12	9/16-18	5.46
2406-12-8	1-1/16-12	3/4-16	4.91
2406-12-10	1-1/16-12	7/8-14	5.93
2406-14-8	1-3/16-12	3/4-16	8.84
2406-14-10	1-3/16-12	7/8-14	12.59
2406-14-12	1-3/16-12	1-1/16-12	7.38
2406-16-4	1-5/16-12	7/16-20	9.95
2406-16-6	1-5/16-12	9/16-18	10.80
2406-16-8	1-5/16-12	3/4-16	8.95
2406-16-12	1-5/16-12	1-1/16-12	8.55
2406-16-20*	1-5/16-12	1-5/8-12	12.24
2406-20-8	1-5/8-12	3/4-16	56.98
2406-20-12	1-5/8-12	1-1/16-12	15.66
2406-20-16	1-5/8-12	1-5/16-12	15.67
2406-24-16	1-7/8-12	1-5/16-12	44.19
2406-24-20	1-7/8-12	1-5/8-12	25.24
2406-32-24	2-1/2-12	1-7/8-12	66.95

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# STRAIGHTS STEEL JIC FLARE 37°

SAE 070109  
MS 51518



**PLUG**

2408  
430549  
PNTX  
1254  
C5229

Part #	Tube O.D.	JIC Thread Size	List Price
2408-2	1/8	5/16-24	2.32
2408-3	3/16	3/8-24	1.01
2408-4	1/4	7/16-20	1.06
2408-5	5/16	1/2-20	0.95
2408-6	3/8	9/16-18	0.93
2408-8	1/2	3/4-16	1.20
2408-10	5/8	7/8-14	1.58
2408-12	3/4	1-1/16-12	2.50
2408-14	7/8	1-3/16-12	4.90
2408-16	1	1-5/16-12	3.56
2408-20	1-1/4	1-5/8-12	7.82
2408-24	1-1/2	1-7/8-12	11.81
2408-32	2	2-1/2-12	25.32

*Some available in Stainless Steel*

SAE 070201  
MS 51505

**JIC UNION ELBOW**



2500  
2039  
1234  
C5505  
821

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2500-2-2	5/16-24	5/16-24	4.73
2500-4-4	7/16-20	7/16-20	1.81
2500-5-5	1/2-20	1/2-20	3.15
2500-6-6	9/16-18	9/16-18	2.23
2500-6-4	9/16-18	7/16-20	3.43
2500-8-8	3/4-16	3/4-16	3.47
2500-8-6	3/4-16	9/16-18	3.68
2500-10-10	7/8-14	7/8-14	6.33
2500-10-8	7/8-14	3/4-16	5.48
2500-12-12	1-1/16-12	1-1/16-12	6.71
2500-12-8	1-1/16-12	3/4-16	8.15
2500-14-14	1-3/16-12	1-3/16-12	10.83
2500-16-16	1-5/16-12	1-5/16-12	15.86
2500-16-12	1-5/16-12	1-1/16-12	21.10
2500-20-20	1-5/8-12	1-5/8-12	22.96
2500-24-24	1-7/8-12	1-7/8-12	45.68
2500-32-32	2-1/2-12	2-1/2-12	78.13

*Some available in Stainless Steel  
More sizes available*

# HYDRAULIC ADAPTERS

## STEEL 37° JIC FLARE SHAPES

SAE 070202  
MS 51504

**JIC MALE ELBOW**



1208R  
C5405  
2501  
2024R  
CTX  
822

Part #	JIC Thread Size 1	Male Pipe Size 2	List Price
2501-2-2	5/16-24	1/8	4.90
2501-4-2	7/16-20	1/8	1.82
2501-4-4	7/16-20	1/4	1.95
2501-4-6	7/16-20	3/8	5.16
2501-4-8	7/16-20	1/2	5.05
2501-6-2	9/16-18	1/8	2.77
2501-6-4	9/16-18	1/4	2.14
2501-6-6	9/16-18	3/8	2.90
2501-6-8	9/16-18	1/2	3.84
2501-8-4	3/4-16	1/4	3.53
2501-8-6	3/4-16	3/8	3.32
2501-8-8	3/4-16	1/2	3.08
2501-8-12	3/4-16	3/4	6.16
2501-10-6	7/8-14	3/8	4.61
2501-10-8	7/8-14	1/2	3.81
2501-10-12	7/8-14	3/4	7.06
2501-12-6	1-1/16-12	3/8	9.57
2501-12-8	1-1/16-12	1/2	7.15
2501-12-12	1-1/16-12	3/4	5.02
2501-12-16	1-1/16-12	1	8.64
2501-16-12	1-5/16-12	3/4	9.74
2501-16-16	1-5/16-12	1	8.76
2501-16-20	1-5/16-12	1-1/4	19.21
2501-20-16	1-5/8-12	1	29.70
2501-20-20	1-5/8-12	1-1/4	16.86
2501-20-24	1-5/8-12	1-1/2	32.20
2501-24-20	1-7/8-12	1-1/4	31.91
2501-24-24	1-7/8-12	1-1/2	26.06
2501-32-24	2-1/2-12	1-1/2	77.73
2501-32-32	2-1/2-12	2	77.47

*Some sizes available in Stainless Steel*



**CUSTOM CATALOGS**  
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HYDRAULIC



# HYDRAULIC ADAPTERS

# SHAPES STEEL JIC FLARE 37°

## JIC FEMALE ELBOW

SAE 070203  
MS 51506



2502  
2025R  
DTX  
1240R  
C5455

Part #	JIC Thread Size 1	Female Pipe Size 2	List Price
2502-4-2	7/16-20	1/8	3.63
2502-4-4	7/16-20	1/4	2.80
2502-4-6	7/16-20	3/8	6.06
2502-5-2	1/2-20	1/8	3.83
2502-6-2	9/16-18	1/8	5.16
2502-6-4	9/16-18	1/4	3.12
2502-6-6	9/16-18	3/8	3.78
2502-6-8	9/16-18	1/2	6.62
2502-8-4	3/4-16	1/4	6.33
2502-8-6	3/4-16	3/8	6.10
2502-8-8	3/4-16	1/2	4.47
2502-8-12	3/4-16	3/4	9.77
2502-10-6	7/8-14	3/8	18.00
2502-10-8	7/8-14	1/2	7.17
2502-12-8	1-1/16-12	1/2	9.21
2502-12-12	1-1/16-12	3/4	8.43
2502-14-12	1-3/16-12	3/4	26.29
2502-16-12	1-5/16-12	3/4	16.94
2502-16-16	1-5/16-12	1	14.60
2502-20-20	1-5/8-12	1-1/4	34.62
2502-24-24	1-7/8-12	1-1/2	60.89
2502-32-32	2-1/2-12	2	143.61

## JIC MALE 45° ELBOW

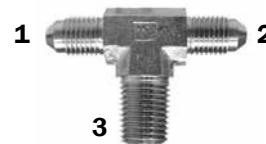
SAE 070302  
MS 51508



2503  
2023R  
VTX  
1206R  
C5355  
823

Part #	JIC Thread Size 1	Male Pipe Size 2	List Price
2503-2-2	5/16-24	1/8	5.43
2503-3-2	3/8-24	1/8	3.06
2503-4-2	7/16-20	1/8	2.34
2503-4-4	7/16-20	1/4	2.64
2503-6-2	9/16-18	1/8	4.30
2503-6-4	9/16-18	1/4	2.70
2503-6-6	9/16-18	3/8	3.34
2503-6-8	9/16-18	1/2	3.99
2503-6-12	9/16-18	3/4	11.11
2503-8-4	3/4-16	1/4	9.05
2503-8-6	3/4-16	3/8	3.43
2503-8-8	3/4-16	1/2	4.59
2503-8-12	3/4-16	3/4	7.94
2503-10-6	7/8-14	3/8	5.29
2503-10-8	7/8-14	1/2	6.20
2503-10-12	7/8-14	3/4	7.64
2503-12-8	1-1/16-12	1/2	6.62
2503-12-12	1-1/16-12	3/4	6.44
2503-12-16	1-1/16-12	1	11.14
2503-14-12	1-3/16-12	3/4	14.87
2503-16-12	1-5/16-12	3/4	13.11
2503-16-16	1-5/16-12	1	8.60
2503-16-20	1-5/16-12	1-1/4	24.91
2503-20-16	1-5/8-12	1	30.79
2503-20-20	1-5/8-12	1-1/4	23.80
2503-24-24	1-7/8-12	1-1/2	38.31
2503-32-32	2-1/2-12	2	59.29

## JIC MALE BRANCH TEE



2601  
2030R  
STX  
1221R  
C5605

Part #	JIC Thread Size 1&2	Pipe Thread Size 3	List Price
2601-3-2	3/8-24	1/8	6.09
2601-4-2	7/16-20	1/8	3.81
2601-4-4	7/16-20	1/4	3.78
2601-6-4	9/16-18	1/4	4.62
2601-6-6	9/16-18	3/8	6.29
2601-8-6	3/4-16	3/8	7.05
2601-8-8	3/4-16	1/2	5.54
2601-12-8	1-1/16-12	1/2	15.43
2601-12-12	1-1/16-12	3/4	11.15
2601-16-12	1-5/16-12	3/4	26.29
2601-16-16	1-5/16-12	1	18.52
2601-20-20	1-5/8-12	1-1/4	45.62
2601-24-24	1-7/8-12	1-1/2	75.91

# SHAPES STEEL JIC FLARE 37°

# HYDRAULIC ADAPTERS

## JIC FEMALE BRANCH TEE

SAE 070427  
MS 51513

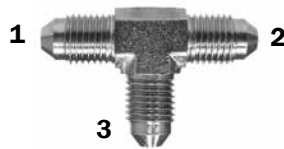


2602  
2031R  
OTX  
1228R  
C6566

Part #	JIC Thread Size 1 & 2	Female Pipe Size 3	List Price
2602-4-2	7/16-20	1/8	4.04
2602-4-4	7/16-20	1/4	5.61
2602-6-4	9/16-18	1/4	7.78
2602-6-6	9/16-18	3/8	5.94
2602-8-8	3/4-16	1/2	8.21
2602-12-12	1-1/16-12	3/4	12.13
2602-16-16	1-5/16-12	1	25.79
2602-20-20	1-5/8-12	1-1/4	38.70
2602-24-24	1-7/8-12	1-1/2	86.16

## JIC UNION TEE

SAE 070401  
MS 51510



2603  
2033  
JTX  
1220  
C5705

Part #	JIC Thread Size 1 & 2	JIC Thread Size 3	List Price
2603-2-2	5/16-24	5/16-24	3.97
2603-3-3	3/8-24	3/8-24	6.77
2603-4-4	7/16-20	7/16-20	3.24
2603-5-5	1/2-20	1/2-20	4.28
2603-6-6	9/16-18	9/16-18	3.21
2603-8-8	3/4-16	3/4-16	4.23
2603-10-10	7/8-14	7/8-14	6.67
2603-12-12	1-1/16-12	1-1/16-12	9.57
2603-16-16	1-5/16-12	1-5/16-12	11.57
2603-20-20	1-5/8-12	1-5/8-12	40.32
2603-24-24	1-7/8-12	1-7/8-12	42.69
2603-32-32	2-1/2-12	2-1/2-12	94.07

## STEEL BULKHEAD FITTINGS

SAE 070118  
MS 51860



1306  
894  
210212  
WLN  
1332  
C5624

\* Lock Nut no longer included on fittings

Part #	Thread Size	List Price
0306-2	5/16-24	0.46
0306-4	7/16-20	0.65
0306-5	1/2-20	0.81
0306-6	9/16-18	0.56
0306-8	3/4-16	1.05
0306-10	7/8-14	1.02
0306-12	1-1/16-12	2.14
0306-14	1-3/16-12	3.18
0306-16	1-5/16-12	2.35
0306-20	1-5/8-12	2.78
0306-24	1-7/8-12	5.24
0306-32	2-1/2-12	7.08

## JIC BULKHEAD UNION

SAE 070601  
MS 51520



2700  
2041R  
WTX  
1260  
C5325

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2700-2-2	5/16-24	5/16-24	2.95
2700-4-4	7/16-20	7/16-20	2.54
2700-5-5	1/2-20	1/2-20	3.32
2700-6-6	9/16-18	9/16-18	2.67
2700-8	3/4-16	3/4-16	4.28
2700-10	7/8-14	7/8-14	4.70
2700-12	1-1/16-12	1-1/16-12	5.29
2700-14	1-3/16-12	1-3/16-12	38.42
2700-16	1-5/16-12	1-5/16-12	10.88
2700-20	1-5/8-12	1-5/8-12	22.14
2700-24	1-7/8-12	1-7/8-12	24.20
2700-32	2-1/2-12	2-1/2-12	92.39

\* Lock Nuts sold separately

## JIC BULKHEAD UNION ELBOW

SAE 070701  
MS 51507



2701  
2043R  
WETX  
1262  
C5525

Part #	JIC Thread Size 1	JIC Bulkhead Thread 2	List Price
2701-4	7/16-20	7/16-20	2.95
2701-5	1/2-20	1/2-20	5.49
2701-6	9/16-18	9/16-18	4.89
2701-8	3/4-16	3/4-16	5.58
2701-10	7/8-14	7/8-14	8.95
2701-12	1-1/16-12	1-1/16-12	14.60
2701-16	1-5/16-12	1-5/16-12	16.29
2701-20	1-5/8-12	1-5/8-12	38.53
2701-24	1-7/8-12	1-7/8-12	53.21

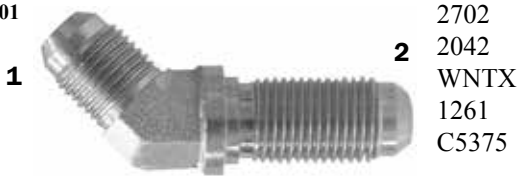
\* Lock Nuts sold separately

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## HYDRAULIC ADAPTERS

### JIC BULKHEAD UNION 45° ELBOW

SAE 070801  
MS 51509



2702  
2042  
WNTX  
1261  
C5375

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2702-4	7/16-20	7/16-20	3.30
2702-6	9/16-18	9/16-18	5.90
2702-8	3/4-16	3/4-16	4.97
2702-10	7/8-14	7/8-14	8.57
2702-12	1-1/16-12	1-1/16-12	12.48
2702-16	1-5/16-12	1-5/16-12	16.86
2702-20	1-5/8-12	1-5/8-12	34.58

### JIC BULKHEAD BRANCH TEE

SAE 070959  
MS 51515



2703  
203002  
WJT  
1283  
C5725

Part #	JIC Thread Size 1&2	JIC Thread Size 3	List Price
2703-4	7/16-20	7/16-20	5.95
2703-6	9/16-18	9/16-18	6.52
2703-8	3/4-16	3/4-16	11.46
2703-10	7/8-14	7/8-14	12.76
2703-12	1-1/16-12	1-1/16-12	18.48
2703-16	1-5/16-12	1-5/16-12	33.05
2703-20	1-5/8-12	1-5/8-12	169.19

### JIC BULKHEAD RUN TEE

SAE 070958  
MS 51516



2704  
203008  
WJTT  
1284  
C5726

Part #	JIC Thread Size 1&3	JIC Thread Size 2	List Price
2704-4	7/16-20	7/16-20	6.62
2704-6	9/16-18	9/16-18	5.15
2704-8	3/4-16	3/4-16	12.19
2704-10	7/8-14	7/8-14	18.14
2704-12	1-1/16-12	1-1/16-12	20.70
2704-16	1-5/16-12	1-5/16-12	25.72

## STEEL BULKHEAD FITTINGS

### JIC TO FEMALE PIPE BULKHEAD



2705  
2239  
WGTX  
C5275

Part #	JIC Thread Size 1	Female Pipe Size 2	List Price
2705-4-2	7/16-20	1/8	3.95
2705-4-4	7/16-20	1/4	3.43
2705-6-6	9/16-18	3/8	5.02
2705-8-6	3/4-16	3/8	6.22
2705-8-8	3/4-16	1/2	6.73
2705-10-8	7/8-14	1/2	19.41
2705-12-12	1-1/16-12	3/4	7.95
2705-16-16	1-5/16-12	1	18.52
2705-20-20	1-5/8-12	1-1/4	28.45
2705-24-24	1-7/8-12	1-1/2	44.32

### JIC TO MALE PIPE BULKHEAD



2706  
2240

Part #	JIC Thread Size 1	Pipe Thread Size 2	List Price
2706-4-2	7/16-20	1/8	3.90
2706-4-4	7/16-20	1/4	2.98
2706-6-6	9/16-18	3/8	4.50
2706-8-6	3/4-16	3/8	9.67
2706-8-8	3/4-16	1/2	5.84
2706-12-12	1-1/16-12	3/4	11.25
2706-16-16	1-5/16-12	1	19.47
2706-20-20	1-5/8-12	1-1/4	55.45
2706-24-24	1-7/8-12	1-1/2	38.42

**\* Lock Nuts sold separately - pg. 398**

Many JIC Fittings are available in Stainless Steel.  
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for pricing

## STEEL PIPE FITTINGS

SAE 140138

### PIPE COUPLING

5000 910  
2096  
GG  
1273  
C3309



Part #	Female Pipe 1	Female Pipe 2	List Price
5000-2	1/8	1/8	1.81
5000-4-2	1/4	1/8	3.28
5000-4	1/4	1/4	1.66
5000-6-4	3/8	1/4	2.45
5000-6-6	3/8	3/8	2.11
5000-8-4	1/2	1/4	4.45
5000-8-6	1/2	3/8	3.16
5000-8	1/2	1/2	3.30
5000-12-6	3/4	3/8	9.14
5000-12-8	3/4	1/2	8.75
5000-12-12	3/4	3/4	3.90
5000-16-12	1	3/4	13.45
5000-16	1	1	6.25
5000-20-16	1-1/4	1	24.64
5000-20-20	1-1/4	1-1/4	15.48
5000-24	1-1/2	1-1/2	29.61
5000-32	2	2	43.45

SAE 140137

### HEX PIPE NIPPLES

5404 C3069  
2083 911  
FF  
1252

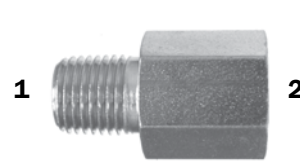


Part #	Male Pipe 1	Male Pipe 2	List Price
5404-2	1/8	1/8	0.93
5404-4-2	1/4	1/8	1.30
5404-4	1/4	1/4	1.34
5404-6-2	3/8	1/8	2.20
5404-6-4	3/8	1/4	1.69
5404-6	3/8	3/8	1.56
5404-8-4	1/2	1/4	2.43
5404-8-6	1/2	3/8	2.22
5404-8	1/2	1/2	2.14
5404-12-6	3/4	3/8	4.88
5404-12-8	3/4	1/2	3.14
5404-12	3/4	3/4	3.76
5404-16-12	1	3/4	10.90
5404-16	1	1	5.79
5404-20-16	1-1/4	1	11.60
5404-20	1-1/4	1-1/4	10.33
5404-24-20	1-1/2	1-1/4	27.22
5404-24	1-1/2	1-1/2	16.96
5404-32-24	2	1-1/2	52.56
5404-32	2	2	38.69

## HYDRAULIC ADAPTERS

### EXPANDING PIPE ADAPTER

SAE 140139



920  
5405  
2040  
FG-(R)  
1274  
C3209(R)

Part #	Male Pipe 1	Female Pipe 2	List Price
5405-2-2	1/8	1/8	6.38
5405-2-4	1/8	1/4	1.65
5405-4-2	1/4	1/8	2.39
5405-4-4	1/4	1/4	1.71
5405-6-4	3/8	1/4	3.61
5405-6-6	3/8	3/8	4.13
5405-6-8	3/8	1/2	4.13
5405-8-8	1/2	1/2	5.59
5405-8-12	1/2	3/4	5.73
5405-12-12	3/4	3/4	13.87
5405-16-16	1	1	15.96
5405-16-20	1	1-1/4	17.05
5405-20-20	1-1/4	1-1/4	24.03
5405-20-24	1-1/4	1-1/2	26.58
5405-24-24	1-1/2	1-1/2	34.05
5405-32-32	2	2	62.79

HYDRAULIC



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## HYDRAULIC ADAPTERS

### HEX REDUCER BUSHING

SAEF1  
140140



5406  
2081  
PTR  
1250  
C3109  
912

Part #	Male Pipe	Female Pipe	List Price
5406-4-2	1/4	1/8	0.92
5406-6-2	3/8	1/8	1.83
5406-6-4	3/8	1/4	2.25
5406-8-2	1/2	1/8	2.10
5406-8-4	1/2	1/4	1.40
5406-8-6	1/2	3/8	2.52
5406-12-2	3/4	1/8	3.02
5406-12-4	3/4	1/4	4.36
5406-12-6	3/4	3/8	3.95
5406-12-8	3/4	1/2	3.99
5406-16-4	1	1/4	6.00
5406-16-6	1	3/8	10.98
5406-16-8	1	1/2	5.89
5406-16-12	1	3/4	6.18
5406-20-4	1-1/4	1/4	9.47
5406-20-6	1-1/4	3/8	12.15
5406-20-8	1-1/4	1/2	15.87
5406-20-12	1-1/4	3/4	12.01
5406-20-16	1-1/4	1	10.87
5406-24-6	1-1/2	3/8	19.64
5406-24-8	1-1/2	1/2	17.40
5406-24-16	1-1/2	1	18.71
5406-24-20	1-1/2	1-1/4	17.90
5406-32-12	2	3/4	38.51
5406-32-16	2	1	40.23
5406-32-20	2	1-1/4	27.25
5406-32-24	2	1-1/2	22.75

SAE 130109E

### HEX HEAD PLUG



933  
5406P  
2082  
HP  
1251  
C3159

Part #	Male Pipe	List Price
5406-P-2	1/8	0.64
5406-P-4	1/4	0.96
5406-P-6	3/8	0.93
5406-P-8	1/2	1.53
5406-P-12	3/4	3.00
5406-P-16	1	4.44
5406-P-20	1-1/4	8.75
5406-P-24	1-1/2	15.03
5406-P-32	2	24.61

## STEEL PIPE FITTINGS

### HOLLOW HEX PLUG

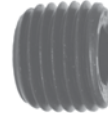
SAE 130109



C3169  
2222

Part #	Male Pipe	List Price
5406-HHP-2	1/8	0.41
5406-HHP-4	1/4	0.32
5406-HHP-6	3/8	0.43
5406-HHP-8	1/2	0.74
5406-HHP-12	3/4	1.27
5406-HHP-16	1	3.24
5406-HHP-20	1-1/4	7.20
5406-HHP-24	1-1/2	18.47

### FLUSH HOLLOW HEX PLUG W/ 7/8 TAPER



Part #	Male Pipe	List Price
5406-FLP-2	1/8	0.42
5406-FLP-4	1/4	0.65
5406-FLP-6	3/8	0.98
5406-FLP-8	1/2	1.27
5406-FLP-12	3/4	3.54

### SQUARE HEAD PLUG

SAE 130109A



C3179

Part #	Male Pipe	List Price
5406-SHP-2	1/8	0.50
5406-SHP-4	1/4	0.52
5406-SHP-6	3/8	0.81
5406-SHP-8	1/2	1.32
5406-SHP-12	3/4	1.41
5406-SHP-16	1	5.63
5406-SHP-20	1-1/4	24.19
5406-SHP-24	1-1/2	24.98
5406-SHP-32	2	31.79

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# STEEL PIPE FITTINGS

## PIPE CAP

HPC



Part #	Female Pipe	List Price
5406-C-2	1/8	1.51
5406-C-4	1/4	1.16
5406-C-6	3/8	1.99
5406-C-8	1/2	2.56
5406-C-12	3/4	5.71
5406-C-16	1	9.31

## MALE ELBOW

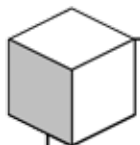
919

SAE 140237



5500  
2085  
CR  
1275  
C3529

Part #	Male Pipe 1	Male Pipe 2	List Price
5500-2	1/8	1/8	2.73
5500-4	1/4	1/4	2.45
5500-6	3/8	3/8	3.19
5500-8-4	1/2	1/4	7.65
5500-8-6	1/2	3/8	6.25
5500-8	1/2	1/2	4.37
5500-12-8	3/4	1/2	9.65
5500-12-12	3/4	3/4	7.15
5500-16	1	1	10.60
5500-16-12	1	3/4	14.78
5500-20-20	1-1/4	1-1/4	21.70
5500-24	1-1/2	1-1/2	33.98
5500-32	2	2	67.83



**DROP SHIP  
PROGRAM**

SEE

**INTRO PAGE 5**

# HYDRAULIC ADAPTERS

## 45° MALE ELBOW

5501  
2247



Part #	Male Pipe 1	Male Pipe 2	List Price
5501-2-2	1/8	1/8	4.73
5501-4-4	1/4	1/4	3.39
5501-6-6	3/8	3/8	4.65
5501-8-8	1/2	1/2	4.60
5501-12-12	3/4	3/4	8.98
5501-16-16	1	1	25.09

## 90° STREET ELBOW

5502  
2089  
CD  
1234R  
C3409  
914

SAE 140239



Part #	Male Pipe 1	Female Pipe 2	List Price
5502-2	1/8	1/8	2.12
5502-4	1/4	1/4	2.75
5502-4-6	1/4	3/8	4.72
5502-6-2	3/8	1/8	6.27
5502-6-4	3/8	1/4	3.72
5502-6	3/8	3/8	3.84
5502-6-8	3/8	1/2	6.25
5502-8-4	1/2	1/4	7.50
5502-8-6	1/2	3/8	6.00
5502-8-8	1/2	1/2	5.74
5502-12-8	3/4	1/2	10.43
5502-12	3/4	3/4	6.63
5502-12-16	3/4	1	18.73
5502-16-12	1	3/4	11.77
5502-16-16	1	1	13.76
5502-16-20	1	1-1/4	29.15
5502-20-16	1-1/4	1	37.46
5502-20	1-1/4	1-1/4	25.55
5502-24	1-1/2	1-1/2	73.55
5502-32	2	2	110.32

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## HYDRAULIC ADAPTERS

## STEEL PIPE FITTINGS

### 45° STREET ELBOW

SAE 140339



5503  
CD45  
1244

Part #	Male Pipe 1	Female Pipe 2	List Price
5503-2	1/8	1/8	2.62
5503-4	1/4	1/4	2.65
5503-6	3/8	3/8	4.18
5503-8	1/2	1/2	5.42
5503-12-12	3/4	3/4	6.54
5503-16	1	1	16.57
5503-20	1-1/4	1-1/4	33.49
5503-24	1-1/2	1-1/2	46.48

### FEMALE ELBOW

SAE 140238



5504  
2087  
DD  
1245  
C3509  
916

Part #	Female Pipe 1	Female Pipe 2	List Price
5504-2	1/8	1/8	2.59
5504-4-2	1/4	1/8	3.83
5504-4	1/4	1/4	3.18
5504-6-4	3/8	1/4	4.28
5504-6	3/8	3/8	3.93
5504-8-6	1/2	3/8	6.26
5504-8	1/2	1/2	6.41
5504-12-8	3/4	1/2	10.60
5504-12	3/4	3/4	8.17
5504-16-12	1	3/4	16.93
5504-16	1	1	13.14
5504-20	1-1/4	1-1/4	30.59
5504-24	1-1/2	1-1/2	69.76
5504-32	2	2	104.86

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### 45° FEMALE ELBOW

SAE 140338



5505  
DD45  
1241  
C3559

Part #	Female Pipe 1	Female Pipe 2	List Price
5505-4	1/4	1/4	4.31
5505-6	3/8	3/8	6.06
5505-8	1/2	1/2	9.23
5505-12	3/4	3/4	10.94
5505-16	1	1	17.53
5505-20	1-1/4	1-1/4	25.34

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# STEEL PIPE FITTINGS

# HYDRAULIC ADAPTERS

SAE 140437

**MALE PIPE TEE**



5600  
2257  
RRS

Part #	Male Pipe 1 & 2	Male Pipe 3	List Price
5600-2-2	1/8	1/8	4.54
5600-4-4	1/4	1/4	4.47
5600-6-6	3/8	3/8	6.54
5600-8-8	1/2	1/2	12.38
5600-12	3/4	3/4	14.78
5600-16	1	1	24.23
5600-20	1-1/4	1-1/4	57.84
5600-24	1-1/2	1-1/2	115.95

SAE 1404276

**FEMALE RUN PIPE TEE**




5603  
2093  
MMO  
1277

Part #	Male Pipe 1 & 3	Female Pipe 2	List Price
5603-2-2	1/8	1/8	5.82
5603-4-4	1/4	1/4	5.11
5603-6-6	3/8	3/8	6.05
5603-8-8	1/2	1/2	9.12
5603-12	3/4	3/4	16.73
5603-16	1	1	21.65
5603-20	1-1/4	1-1/4	88.86
5603-24	1-1/2	1-1/2	79.17

SAE 140427

**FEMALE BRANCH PIPE TEE**



901  
5601  
2256

Part #	Male Pipe 1 & 2	Female Pipe 3	List Price
5601-2-2	1/8	1/8	5.24
5601-4-4	1/4	1/4	5.70
5601-6-6	3/8	3/8	6.62
5601-8	1/2	1/2	10.19
5601-12	3/4	3/4	15.62
5601-16	1	1	26.15
5601-20	1-1/4	1-1/4	82.00
5601-24	1-1/2	1-1/2	125.56

904  
5604  
2091  
MMS  
1278  
C3609

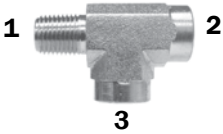
**MALE BRANCH PIPE TEE**



Part #	Female Pipe 1 & 2	Male Pipe 3	List Price
5604-2-2	1/8	1/8	4.54
5604-4-4	1/4	1/4	6.51
5604-6-6	3/8	3/8	7.52
5604-8-8	1/2	1/2	9.47
5604-12	3/4	3/4	12.91
5604-16	1	1	24.39
5604-20	1-1/4	1-1/4	48.34
5604-24	1-1/2	1-1/2	75.45

SAE 140424

**STREET PIPE TEE**



902  
5602  
2092  
MRO  
1276  
C3759

Part #	Male Pipe 1	Female Pipe 2 & 3	List Price
5602-2-2	1/8	1/8	3.61
5602-4-4	1/4	1/4	3.92
5602-6-6	3/8	3/8	6.02
5602-8-8	1/2	1/2	8.62
5602-12	3/4	3/4	12.30
5602-16	1	1	22.55
5602-20	1-1/4	1-1/4	36.12
5602-24	1-1/2	1-1/2	108.52

SAE 140438

**FEMALE PIPE TEE**



917  
5605  
2090  
1225  
C3709

Part #	Female Pipe	List Price
5605-2-2	1/8	7.71
5605-4-4	1/4	5.24
5605-6-6	3/8	6.02
5605-8	1/2	6.83
5605-12	3/4	11.09
5605-16	1	23.28
5605-20	1-1/4	41.44
5605-24	1-1/2	113.83
5605-32	2	96.42

More sizes available

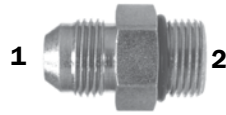
HYDRAULIC



## HYDRAULIC ADAPTERS

### JIC TO O-RING CONNECTOR

SAE 070120  
MS 51525



6400  
202702R  
F50X  
1231  
C5315

Part #	JIC Thread Size 1	O-Ring Thread 2	List Price
6400-2	5/16-24	5/16-24	4.59
6400-3	3/8-24	3/8-24	4.41
6400-4	7/16-20	7/16-20	
6400-4-2	7/16-20	5/16-24	1.83
6400-4-3	7/16-20	3/8-24	1.89
6400-4-5	7/16-20	1/2-20	2.18
6400-4-6	7/16-20	9/16-18	1.38
6400-4-8	7/16-20	3/4-16	3.31
6400-5	1/2-20	1/2-20	1.74
6400-5-4	1/2-20	7/16-20	2.17
6400-5-6	1/2-20	9/16-18	2.96
6400-6	9/16-18	9/16-18	1.43
6400-6-4	9/16-18	7/16-20	1.51
6400-6-5	9/16-18	1/2-20	1.90
6400-6-8	9/16-18	3/4-16	1.76
6400-6-10	9/16-18	7/8-14	2.98
6400-6-12	9/16-18	1-1/16-12	4.62
6400-6-16	9/16-18	1-5/16-12	6.85
6400-8	3/4-16	3/4-16	1.57
6400-8-4	3/4-16	7/16-20	3.30
6400-8-6	3/4-16	9/16-18	1.76
6400-8-10	3/4-16	7/8-14	2.25
6400-8-12	3/4-16	1-1/16-12	3.06
6400-8-16	3/4-16	1-5/16-12	
6400-10	7/8-14	7/8-14	2.48
6400-10-6	7/8-14	9/16-18	3.45
6400-10-8	7/8-14	3/4-16	3.19
6400-10-12	7/8-14	1-1/16-12	3.80
6400-10-16	7/8-14	1-5/16-12	5.89
6400-12	1-1/16-12	1-1/16-12	3.08
6400-12-6	1-1/16-12	3/8	4.39
6400-12-8	1-1/16-12	3/4-16	5.12
6400-12-10	1-1/16-12	7/8-14	4.14
6400-12-14	1-1/16-12	1-3/16-12	5.86
6400-12-16	1-1/16-12	1-5/16-12	5.32
6400-14	1-3/16-12	1-3/16-12	9.00
6400-16	1-5/16-12	1-5/16-12	4.67
6400-16-8	1-5/16-12	3/4-16	6.16
6400-16-10	1-5/16-12	7/8-14	5.93
6400-16-12	1-5/16-12	1-1/16-12	11.07
6400-16-14	1-5/16-12	1-3/16-12	18.96
6400-16-20	1-5/16-12	1-5/8-12	10.28
6400-16-24	1-5/16-12	1-7/8-12	17.31
6400-20	1-5/8-12	1-5/8-12	10.62
6400-20-12	1-5/8-12	1-1/16-12	20.33
6400-20-16	1-5/8-12	1-5/16-12	13.05
6400-20-24	1-5/8-12	1-7/8-12	20.38
6400-24	1-7/8-12	1-7/8-12	17.18
6400-24-20	1-7/8-12	1-5/8-12	18.85
6400-24-32	1-7/8-12	2-1/2-12	74.91
6400-32	2-1/2-12	2-1/2-12	39.91

Some Restrictors available on a special order basis.

## STEEL O-RING ADAPTERS

### O-RING TO PIPE ADAPTER



6401  
F5X  
1264R  
C3249

Part #	O-Ring Thread 1	Male Pipe Thread 2	List Price
6401-4-2	7/16-20	1/8	1.59
6401-4-4	7/16-20	1/4	1.56
6401-4-6	7/16-20	3/8	2.56
6401-5-2	1/2-20	1/8	5.03
6401-5-4	1/2-20	1/4	2.95
6401-6-4	9/16-18	1/4	2.00
6401-6-6	9/16-18	3/8	1.94
6401-6-8	9/16-18	1/2	2.78
6401-8-6	3/4-16	3/8	2.75
6401-8-8	3/4-16	1/2	2.69
6401-10-6	7/8-14	3/8	5.00
6401-10-8	7/8-14	1/2	2.96
6401-12-6	1-1/16-12	3/8	7.06
6401-12-8	1-1/16-12	1/2	4.10
6401-12-12	1-1/16-12	3/4	4.90
6401-16-12	1-5/16-12	3/4	12.73
6401-16-16	1-5/16-12	1	8.41
6401-20-20	1-5/8-12	1-1/4	16.13
6401-24-24	1-7/8-12	1-1/2	24.00
6401-32-32	2-1/2-12	2	49.49

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## STEEL O-RING ADAPTERS

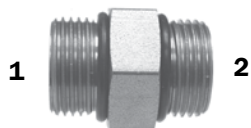
### O-RING TO 37° JIC SWIVEL ADAPTER



6402  
2266  
F65X  
1213  
9316

Part #	O-Ring Thread 1	JIC Thread Size 2	List Price
6402-O-4-4	7/16-20	7/16-20	3.31
6402-O-6-6	9/16-18	9/16-18	2.77
6402-O-6-8	9/16-18	3/4-16	6.86
6402-O-8-8	3/4-16	3/4-16	3.88
6402-O-8-6	3/4-16	9/16-18	4.17
6402-O-10-10	7/8-14	7/8-14	7.82
6402-O-12-12	1-1/16-12	1-1/16-12	7.05
6402-O-16-12	1-5/16-12	1-1/16-12	17.30
6402-O-16-16	1-5/16-12	1-5/16-12	10.33
6402-O-20-20	1-5/8-12	1-5/8-12	25.48
6402-O-24-24	1-7/8-12	1-7/8-12	38.83

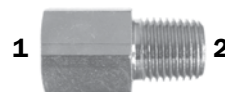
### O-RING HEX NIPPLE UNION



Part #	O-Ring Thread 1	O-Ring Thread 2	List Price
6403-O-6	9/16-18	9/16-18	5.12
6403-O-8	3/4-16	3/4-16	4.87
6403-O-10	7/8-14	7/8-14	7.62
6403-O-12	1-1/16-12	1-1/16-12	8.49
6403-O-16	1-5/16-12	1-5/16-12	18.19

## HYDRAULIC ADAPTERS

### FEMALE O-RING TO MALE PIPE ADAPTER



6404  
2246R  
1267R  
C3239  
FHG5

Part #	O-Ring Thread 1	Male Pipe Thread 2	List Price
6404-4-2	7/16-20	1/8	6.41
6404-4-4	7/16-20	1/4	3.35
6404-6-4	9/16-18	1/4	6.64
6404-6-6	9/16-18	3/8	2.95
6404-6-8	9/16-18	1/2	3.92
6404-8-6	3/4-16	3/8	4.45
6404-8-8	3/4-16	1/2	3.81
6404-10-6	7/8-14	3/8	6.61
6404-10-8	7/8-14	1/2	5.46
6404-12-12	1-1/16-12	3/4	7.13
6404-16-16	1-5/16-12	1	21.73
6404-20-20	1-5/8-12	1-1/4	17.96
6404-24-24	1-7/8-12	1-1/2	40.74

## HYDRAULIC ADAPTERS

### O-RING TO FEMALE PIPE ADAPTER



6405  
2216R  
F50G  
1268R  
C3269

Part #	O-Ring Thread 1	Female Pipe Thread 2	List Price
6405-O-2-2	5/16-24	1/8	39.43
6405-O-4-2	7/16-20	1/8	1.86
6405-O-4-4	7/16-20	1/4	2.67
6405-O-4-6	7/16-20	3/8	2.22
6405-O-6-2	9/16-18	1/8	6.63
6405-O-6-4	9/16-18	1/4	2.60
6405-O-6-6	9/16-18	3/8	2.68
6405-O-8-4	3/4-16	1/4	4.33
6405-O-8-6	3/4-16	3/8	2.59
6405-O-8-8	3/4-16	1/2	4.46
6405-O-10-4	7/8-14	1/4	3.43
6405-O-10-6	7/8-14	3/8	3.81
6405-O-10-8	7/8-14	1/2	5.69
6405-O-12-6	1-1/16-12	3/8	12.63
6405-O-12-8	1-1/16-12	1/2	7.97
6405-O-12-12	1-1/16-12	3/4	6.37
6405-O-14-12	1-3/16-12	3/4	10.21
6405-O-16-8	1-5/16-12	1/2	10.43
6405-O-16-12	1-5/16-12	3/4	8.41
6405-O-16-16	1-5/16-12	1	12.05
6405-O-20-20	1-5/8-12	1-1/4	15.66
6405-O-20-24	1-5/8-12	1-1/2	46.10
6405-O-24-16	1-7/8-12	1	35.41
6405-O-24-20	1-7/8-12	1-1/4	26.39
6405-O-24-24	1-7/8-12	1-1/2	30.31
6405-O-32-32	2-1/2-12	2	43.21

## STEEL O-RING ADAPTERS

### O-RING HEX HEAD PLUG

SAE 090109A



6408  
900598  
P50N  
1265  
7237

Part #	O-Ring Thread	List Price
6408-O-2	5/16-24	0.78
6408-O-4	7/16-20	0.74
6408-O-5	1/2-20	0.81
6408-O-6	9/16-18	0.88
6408-O-8	3/4-16	1.10
6408-O-10	7/8-14	2.49
6408-O-12	1-1/16-12	2.39
6408-O-14	1-3/16-20	4.40
6408-O-16	1-5/16-12	3.27
6408-O-20	1-5/8-12	6.67
6408-O-24	1-7/8-12	9.39
6408-O-32	2-1/2-12	39.26

### O-RING HOLLOW HEX HEAD PLUG

SAE 090109B



6408HHP  
FF2138  
HP50N  
1256  
7238  
6409

Part #	O-Ring Thread	List Price
6408-H-O-2	5/16-24	1.10
6408-H-O-4	7/16-20	0.70
6408-H-O-5	1/2-20	1.01
6408-H-O-6	9/16-18	0.74
6408-H-O-8	3/4-16	1.28
6408-H-O-10	7/8-14	2.09
6408-H-O-12	1-1/16-12	3.94
6408-H-O-14	1-3/16-20	5.81
6408-H-O-16	1-5/16-12	3.95
6408-H-O-20	1-5/8-12	8.64
6408-H-O-24	1-7/8-12	10.55
6408-H-O-32	2-1/2-12	30.92

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## STEEL O-RING ADAPTERS/SWIVELS

### O-RING PORT REDUCER/EXPANDER



6410  
FF1010  
F50G5  
1270  
7033

Part #	O-Ring Thread 1	O-Ring Thread 2	List Price
6410-O-4-4	7/16-20	7/16-20	6.89
6410-O-4-6	7/16-20	9/16-18	3.58
6410-O-6-4	9/16-18	7/16-20	3.82
6410-O-6-8	9/16-18	3/4-16	9.14
6410-O-8-4	3/4-16	7/16-20	2.75
6410-O-8-6	3/4-16	9/16-18	4.11
6410-O-8-8	3/4-16	3/4-16	3.84
6410-O-10-4	7/8-14	7/16-20	6.02
6410-O-10-6	7/8-14	9/16-18	3.00
6410-O-10-8	7/8-14	3/4-16	3.66
6410-O-12-4	1-1/16-12	7/16-20	2.27
6410-O-12-6	1-1/16-12	9/16-18	10.44
6410-O-12-8	1-1/16-12	3/4-16	5.89
6410-O-12-10	1-1/16-12	7/8-14	9.04
6410-O-12-12	1-1/16-12	1-1/16-12	8.84
6410-O-16-6	1-5/16-12	9/16-18	30.91
6410-O-16-8	1-5/16-12	3/4-16	10.48
6410-O-16-10	1-5/16-12	7/8-14	11.81
6410-O-16-12	1-5/16-12	1-1/16-12	7.91
6410-O-20-12	1-5/8-12	1-1/16-12	9.95
6410-O-20-16	1-5/8-12	1-5/16-12	10.27
6410-O-24-12	1-7/8-12	1-1/16-12	27.99
6410-O-24-16	1-7/8-12	1-5/16-12	15.35
6410-O-24-20	1-7/8-12	1-5/8-12	38.55



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## HYDRAULIC ADAPTERS

### FEMALE SWIVELS JIC

#### JIC SWIVEL NUT ELBOW

SAE 070221  
MS 51521



6500  
2071R  
C6X  
1236  
G5506

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
6500-4	7/16-20	7/16-20	2.67
6500-5	1/2-20	1/2-20	4.56
6500-6	9/16-18	9/16-18	3.56
6500-6-8	9/16-18	3/4-16	6.39
6500-8	3/4-16	3/4-16	4.30
6500-8-6	3/4-16	9/16-18	5.55
6500-10	7/8-14	7/8-14	7.34
6500-10-8	7/8-14	3/4-16	11.42
6500-12	1-1/16-12	1-1/16-12	7.59
6500-12-8	1-1/16-12	3/4-16	13.39
6500-14	1-3/16-12	1-3/16-12	14.81
6500-16	1-5/16-12	1-5/16-12	14.82
6500-20	1-5/8-12	1-5/8-12	29.30
6500-24	1-7/8-12	1-7/8-12	50.75
6500-32	2-1/2-12	2-1/2-12	100.43

#### JIC SWIVEL TO MALE PIPE ELBOW



6501  
2250  
1247R  
TF5406

Part #	JIC Thread Size 1	Male Pipe Thread 2	List Price
6501-4-2	7/16-20	1/8	4.24
6501-4-4	7/16-20	1/4	3.96
6501-6-4	9/16-18	1/4	4.76
6501-6-6	9/16-18	3/8	5.84
6501-8-6	3/4-16	3/8	5.39
6501-8-8	3/4-16	1/2	7.23
6501-10-8	7/8-14	1/2	7.57
6501-12-12	1-1/16-12	3/4	8.99
6501-16-16	1-5/16-12	1	12.91
6501-20-20	1-5/8-12	1-1/4	38.57
6501-24-24	1-7/8-12	1-1/2	59.41



## HYDRAULIC ADAPTERS

### JIC SWIVEL 45° ELBOW

SAE 070321  
MS 51522



6502  
2070R  
V6X  
1237  
C5356

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
6502-4	7/16-20	7/16-20	3.10
6502-6	9/16-18	9/16-18	4.26
6502-8	3/4-16	3/4-16	5.01
6502-10	7/8-14	7/8-14	5.93
6502-12	1-1/16-12	1-1/16-12	6.91
6502-16	1-5/16-12	1-5/16-12	14.40
6502-20	1-5/8-12	1-5/8-12	27.19
6502-24	1-7/8-12	1-7/8-12	43.61
6502-32	2-1/2-12	2-1/2-12	112.33

### JIC SWIVEL TO FEMALE PIPE ELBOW



Part #	JIC Thread Size 1	Female Pipe Thread 2	List Price
6503-4-4	7/16-20	1/4	11.00
6503-6-4	9/16-18	1/4	12.25
6503-6-6	9/16-18	3/8	10.56
6503-8-8	3/4-16	1/2	11.86
6503-12-12	1-1/16-12	3/4	22.68

### JIC SWIVEL CONNECTOR



6504  
1205

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
6504-4-4	7/16-20	7/16-20	3.81
6504-6-4	9/16-18	7/16-20	3.70
6504-6-6	9/16-18	9/16-18	3.81
6504-8-6	3/4-16	9/16-18	31.12
6504-8-8	3/4-16	3/4-16	4.59
6504-10-10	7/8-14	7/8-14	5.69
6504-12-12	1-1/16-12	1-1/16-12	6.98
6504-16-16	1-5/16-12	1-5/16-12	10.27
6504-20-20	1-5/8-12	1-5/8-12	29.05
6504-24-24	1-7/8-12	1-7/8-12	40.22

## FEMALE SWIVELS

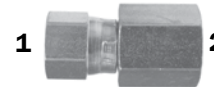
### JIC SWIVEL TO MALE PIPE ADAPTER



6505  
2018  
F6X  
1211  
9100R

Part #	JIC Thread Size 1	Male Pipe Thread 2	List Price
6505-2-4	5/16-24	1/4	1.77
6505-4-2	7/16-20	1/8	3.71
6505-4-4	7/16-20	1/4	2.32
6505-5-4	1/2-20	1/4	8.58
6505-6-4	9/16-18	1/4	2.70
6505-6-6	9/16-18	3/8	3.32
6505-8-6	3/4-16	3/8	4.91
6505-8-8	3/4-16	1/2	4.26
6505-10-8	7/8-14	1/2	4.51
6505-12-8	1-1/16-12	1/2	6.93
6505-12-12	1-1/16-12	3/4	6.45
6505-16-16	1-5/16-12	1	10.61
6505-20-20	1-5/8-12	1-1/4	32.18
6505-24-24	1-7/8-12	1-1/2	60.11
6505-32-32	2-1/2-12	2	73.19

### JIC SWIVEL TO FEMALE PIPE ADAPTER



6506  
2242  
1215

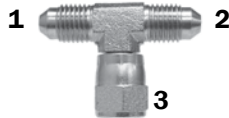
Part #	JIC Thread Size 1	Female Pipe Thread 2	List Price
6506-4-2	7/16-20	1/8	4.81
6506-4-4	7/16-20	1/4	3.89
6506-4-6	7/16-20	3/8	4.56
6506-6-4	9/16-18	1/4	4.22
6506-6-6	9/16-18	3/8	4.40
6506-6-8	9/16-18	1/2	7.44
6506-8-6	3/4-16	3/8	4.94
6506-8-8	3/4-16	1/2	4.53
6506-10-6	7/8-14	3/8	7.21
6506-10-8	7/8-14	1/2	5.97
6506-12-12	1-1/16-12	3/4	9.67
6506-16-16	1-5/16-12	1	12.93
6506-20-20	1-5/8-12	1-1/4	25.31
6506-24-24	1-7/8-12	1-1/2	62.17
6506-32-32	2-1/2-12	2	217.84

# STEEL O-RING ADAPTERS/ SWIVELS

# HYDRAULIC ADAPTERS

## JIC SWIVEL BRANCH TEE

SAE 070433  
MS 51524



6600  
203101R  
65X  
1227  
C5707

Part #	JIC Thread Size 1 & 2	JIC Female Thread 3	List Price
6600-4-4	7/16-20	7/16-20	3.78
6600-5-5	1/2-20	1/2-20	8.41
6600-6-6	9/16-18	9/16-18	5.86
6600-8-8	3/4-16	3/4-16	5.11
6600-10	7/8-14	7/8-14	9.69
6600-12	1-1/16-12	1-1/16-12	12.48
6600-16	1-5/16-12	1-5/16-12	27.18
6600-20	1-5/8-12	1-5/8-12	35.17
6600-24	1-7/8-12	1-7/8-12	54.71

## JIC SWIVEL RUN TEE

SAE 070432  
MS 51523



6602  
203102R  
R6X  
1248  
C5706

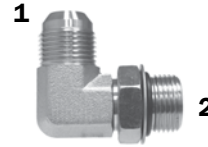
Part #	JIC Thread Size 1 & 3	JIC Female Thread 2	List Price
6602-4	7/16-20	7/16-20	3.46
6602-5	1/2-20	1/2-20	5.01
6602-6	9/16-18	9/16-18	4.00
6602-8	3/4-16	3/4-16	5.81
6602-10	7/8-14	7/8-14	10.69
6602-12	1-1/16-12	1-1/16-12	13.07
6602-14	1-3/16-12	1-3/16-12	30.29
6602-16	1-5/16-12	1-5/16-12	21.34
6602-20	1-5/8-12	1-5/8-12	36.44
6602-24	1-7/8-12	1-7/8-12	54.52

NWO = Nut, Washer & O-Ring

## STEEL SAE O-RING FITTINGS

### JIC TO O-RING ELBOW CONNECTOR

SAE 070220  
MS 51527



6801  
2062R  
C50X  
1238L  
C5515

Part #	JIC Thread Size 1	O-Ring Thread Size 2	List Price
6801-NWO-2	5/16-24	5/16-24	12.24
6801-NWO-4	7/16-20	7/16-20	2.35
6801-NWO-4-6	7/16-20	9/16-18	3.33
6801-NWO-4-8	7/16-20	3/4-16	4.44
6801-NWO-5	1/2-20	1/2-20	3.40
6801-NWO-6	9/16-18	9/16-18	2.19
6801-NWO-6-4	9/16-18	7/16-20	3.56
6801-NWO-6-5	9/16-18	1/2-20	3.81
6801-NWO-6-8	9/16-18	3/4-16	4.56
6801-NWO-6-10	9/16-18	7/8-14	7.54
6801-NWO-8	3/4-16	3/4-16	4.15
6801-NWO-8-4	3/4-16	7/16-20	6.06
6801-NWO-8-6	3/4-16	9/16-18	3.70
6801-NWO-8-10	3/4-16	7/8-14	6.53
6801-NWO-8-12	3/4-16	1-1/16-12	9.66
6801-NWO-10	7/8-14	7/8-14	6.13
6801-NWO-10-6	7/8-14	9/16-18	6.16
6801-NWO-10-8	7/8-14	3/4-16	5.34
6801-NWO-10-12	7/8-14	1-1/16-12	7.42
6801-NWO-12	1-1/16-12	1-1/16-12	7.37
6801-NWO-12-8	1-1/16-12	3/4-16	9.40
6801-NWO-12-10	1-1/16-12	7/8-14	8.22
6801-NWO-12-14	1-1/16-12	1-3/16-12	41.48
6801-NWO-12-16	1-1/16-12	1-5/16-12	12.31
6801-NWO-14	1-3/16-12	1-3/16-12	17.78
6801-NWO-16	1-5/16-12	1-5/16-12	12.98
6801-NWO-16-12	1-5/16-12	1-1/16-12	11.69
6801-NWO-16-14	1-5/16-12	1-3/16-12	12.55
6801-NWO-16-20	1-5/16-12	1-5/8-12	29.58
6801-NWO-20	1-5/8-12	1-5/8-12	22.82
6801-NWO-20-12	1-5/8-12	1-1/16-12	28.86
6801-NWO-20-16	1-5/8-12	1-5/16-12	28.78
6801-NWO-20-24	1-5/8-12	1-7/8-12	43.35
6801-NWO-24	1-7/8-12	1-7/8-12	40.30
6801-NWO-24-20	1-7/8-12	1-5/8-12	37.36
6801-NWO-32	2-1/2-12	2-1/2-12	93.15

HYDRAULIC



## HYDRAULIC ADAPTERS

## STEEL SAE O-RING

### JIC TO O-RING 45° ELBOW

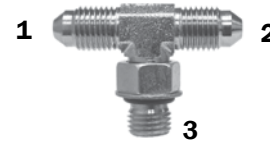
SAE 070320  
MS 51528



6802  
2061  
V50X  
1240R  
C5365

### JIC TO O-RING BRANCH TEE

SAE 070429  
MS 51529



6803  
203003X  
S50X  
1265R  
C5715

Part #	JIC Thread Size 1	O-Ring Thread Size 2	List Price
6802-NWO-2	5/16-24	5/16-24	5.45
6802-NWO-4	7/16-20	7/16-20	3.33
6802-NWO-4-6	7/16-20	9/16-18	5.95
6802-NWO-4-8	7/16-20	3/4-16	18.00
6802-NWO-5	1/2-20	1/2-20	5.04
6802-NWO-6	9/16-18	9/16-18	3.41
6802-NWO-6-4	9/16-18	7/16-20	4.61
6802-NWO-6-8	9/16-18	3/4-16	4.85
6802-NWO-8	3/4-16	3/4-16	4.74
6802-NWO-8-6	3/4-16	9/16-18	5.16
6802-NWO-8-10	3/4-16	7/8-14	6.78
6802-NWO-8-12	3/4-16	1-1/16-12	8.53
6802-NWO-10	7/8-14	7/8-14	7.07
6802-NWO-10-8	7/8-14	3/4-16	6.82
6802-NWO-10-12	7/8-14	1-1/16-12	12.96
6802-NWO-12	1-1/16-12	1-1/16-12	12.83
6802-NWO-12-16	1-1/16-12	1-5/16-12	15.77
6802-NWO-16	1-5/16-12	1-5/16-12	16.14
6802-NWO-16-12	1-5/16-12	1-1/16-12	20.09
6802-NWO-16-20	1-5/16-12	1-5/8-12	33.22
6802-NWO-20	1-5/8-12	1-5/8-12	30.16
6802-NWO-20-16	1-5/8-12	1-5/16-12	41.59
6802-NWO-24	1-7/8-12	1-7/8-12	38.23
6802-NWO-32	2-1/2-12	2-1/2-12	106.86

Part #	JIC Thread Size 1 & 2	O-Ring Thread Size 3	List Price
6803-NWO-4	7/16-20	7/16-20	5.30
6803-NWO-5	1/2-20	1/2-20	7.93
6803-NWO-6	9/16-18	9/16-18	5.64
6803-NWO-6-8	9/16-18	3/4-16	16.08
6803-NWO-8	3/4-16	3/4-16	7.35
6803-NWO-10	7/8-14	7/8-14	10.57
6803-NWO-12	1-1/16-12	1-1/16-12	12.61
6803-NWO-16	1-5/16-12	1-5/16-12	22.68
6803-NWO-16-12	1-5/16-12	1-1/16-12	32.15
6803-NWO-20	1-5/8-12	1-5/8-12	33.73
6803-NWO-24	1-7/8-12	1-7/8-12	106.37

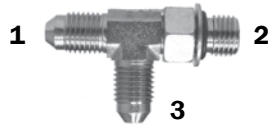
IT IS TIME FOR US ALL TO STAND AND CHEER FOR THE DOER, THE ACHIEVER –  
THE ONE WHO RECOGNIZES THE CHALLENGES AND DOES SOMETHING ABOUT IT.

– VINCE LOMBARDI

## STEEL O-RING

SAE 070428  
MS 51530

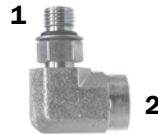
### JIC TO O-RING RUN TEE



6804  
203005R  
R50X  
1266R  
C5716

Part #	JIC Thread Size 1 & 3	O-Ring Thread Size 2	List Price
6804-NWO-4	7/16-20	7/16-20	5.17
6804-NWO-5	1/2-20	1/2-20	6.80
6804-NWO-6	9/16-18	9/16-18	7.00
6804-NWO-6-8	9/16-18	3/4-16	6.63
6804-NWO-8	3/4-16	3/4-16	8.29
6804-NWO-10	7/8-14	7/8-14	14.64
6804-NWO-12	1-1/16-12	1-1/16-12	25.89
6804-NWO-16	1-5/16-12	1-5/16-12	23.81
6804-NWO-16-12	1-5/16-12	1-1/16-12	30.00
6804-NWO-20	1-5/8-12	1-5/8-12	39.86
6804-NWO-24	1-7/8-12	1-7/8-12	70.52
6804-NWO-32	2-1/2-12	2-1/2-12	164.31

### O-RING TO FEMALE PIPE ELBOW



6805  
206801R  
AE0G  
1264  
C3459

Part #	O-Ring Thread Size 1	Pipe Thread Size 2	List Price
6805-NWO-4-2	7/16-20	1/8	4.29
6805-NWO-4-4	7/16-20	1/4	4.62
6805-NWO-5-2	1/2-20	1/8	7.80
6805-NWO-6-4	9/16-18	1/4	5.57
6805-NWO-6-6	9/16-18	3/8	5.63
6805-NWO-8-6	3/4-16	3/8	8.18
6805-NWO-8-8	3/4-16	1/2	8.55
6805-NWO-10-6	7/8-14	3/8	16.50
6805-NWO-10-8	7/8-14	1/2	8.63
6805-NWO-12-8	1-1/16-12	1/2	17.37
6805-NWO-12-12	1-1/16-12	3/4	28.38
6805-NWO-14-12	1-3/16-12	3/4	36.84
6805-NWO-16-16	1-5/16-12	1	21.59
6805-NWO-20-20	1-5/8-12	1-1/4	42.42
6805-NWO-24-24	1-7/8-12	1-1/2	75.97

## HYDRAULIC ADAPTERS

### O-RING TO MALE PIPE ELBOW



6806  
1263  
TF3569

Part #	O-Ring Thread Size 1	Pipe Thread Size 2	List Price
6806-NWO-4-2	7/16-20	1/8	5.09
6806-NWO-4-4	7/16-20	1/4	3.59
6806-NWO-6-4	9/16-18	1/4	3.78
6806-NWO-6-6	9/16-18	3/8	6.90
6806-NWO-8-8	3/4-16	1/2	5.47
6806-NWO-10-8	7/8-14	1/2	8.19
6806-NWO-12-12	1-1/16-12	3/4	13.48
6806-NWO-16-16	1-5/16-12	1	23.28
6806-NWO-20-20	1-5/8-12	1-1/4	41.81
6806-NWO-24-24	1-7/8-12	1-1/2	64.91
6806-NWO-32-32	2-1/2-12	2	87.31

### 37° JIC SWIVEL NUT TO O-RING ELBOW



Part #	O-Ring Thread Size 1	JIC Thread Size 2	List Price
6809-NWO-4-4	7/16-20	7/16-20	4.46
6809-NWO-6-6	9/16-18	9/16-18	5.79
6809-NWO-8-8	3/4-16	3/4-16	8.92
6809-NWO-10-10	7/8-14	7/8-14	10.09
6809-NWO-12-12	1-1/16-12	1-1/16-12	13.22
6809-NWO-16-16	1-5/16-12	1-5/16-12	21.55
6809-NWO-20-20	1-5/8-12	1-5/8-12	51.53
6809-NWO-24-24	1-7/8-12	1-7/8-12	76.77

### FEMALE O-RING TO MALE O-RING ELBOW



Part #	O-Ring Thread Size 1	O-Ring Thread Size 2	List Price
6815-NWO-4-4	7/16-20	7/16-20	4.77
6815-NWO-6-6	9/16-18	9/16-18	5.42
6815-NWO-6-8	9/16-18	3/4-16	11.62
6815-NWO-8-8	3/4-16	3/4-16	10.00
6815-NWO-10-10	7/8-14	7/8-14	22.20
6815-NWO-12-12	1-1/16-12	1-1/16-12	15.56

*Send Midland all your  
high volume quotes!*



# HYDRAULIC ADAPTERS

# STEEL SAE O-RING

## MALE O-RING SWIVEL ADAPTER

SAE 140157



6900  
2066R  
1235  
9315

Part #	O-Ring Thread Size 1	Female NPSM Size 2	List Price
6900-O-4-2	7/16-20	1/8	5.08
6900-O-4-4	7/16-20	1/4	1.98
6900-O-4-6	7/16-20	3/8	7.08
6900-O-6-4	9/16-18	1/4	2.18
6900-O-6-6	9/16-18	3/8	2.60
6900-O-6-8	9/16-18	1/2	4.16
6900-O-8-4	3/4-16	1/4	4.39
6900-O-8-6	3/4-16	3/8	3.04
6900-O-8-8	3/4-16	1/2	2.84
6900-O-8-12	3/4-16	3/4	5.52
6900-O-10-6	7/8-14	3/8	5.28
6900-O-10-8	7/8-14	1/2	4.22
6900-O-10-12	7/8-14	3/4	8.40
6900-O-12-8	1-1/16-12	1/2	6.11
6900-O-12-12	1-1/16-12	3/4	5.49
6900-O-14-12	1-3/16-12	3/4	12.53
6900-O-16-12	1-5/16-12	3/4	13.19
6900-O-16-16	1-5/16-12	1	13.07
6900-O-16-20	1-5/16-12	1-1/4	32.37
6900-O-20-16	1-5/8-12	1	15.56
6900-O-20-20	1-5/8-12	1-1/4	22.06
6900-O-24-20	1-7/8-12	1-1/4	22.05
6900-O-24-24	1-7/8-12	1-1/2	17.33
6900-O-32-32	2-1/2-12	2	62.92

## 90° O-RING SWIVEL ADAPTER

SAE 140257



6401  
2068R  
1271  
9515

Part #	O-Ring Thread Size 1	Female NPSM Size 2	List Price
6901-NWO-4-2	7/16-20	1/8	9.32
6901-NWO-4-4	7/16-20	1/4	3.49
6901-NWO-6-4	9/16-18	1/4	3.66
6901-NWO-6-6	9/16-18	3/8	4.87
6901-NWO-6-8	9/16-18	1/2	7.53
6901-NWO-8-4	3/4-16	1/4	7.14
6901-NWO-8-6	3/4-16	3/8	4.71
6901-NWO-8-8	3/4-16	1/2	5.90
6901-NWO-8-12	3/4-16	3/4	11.31
6901-NWO-10-4	7/8-14	1/4	17.01
6901-NWO-10-6	7/8-14	3/8	6.34
6901-NWO-10-8	7/8-14	1/2	7.08
6901-NWO-12-6	1-1/16-12	3/8	12.22
6901-NWO-12-8	1-1/16-12	1/2	14.14
6901-NWO-12-12	1-1/16-12	3/4	13.38
6901-NWO-12-16	1-1/16-12	1	17.62
6901-NWO-14-12	1-3/16-12	3/4	19.40
6901-NWO-16-12	1-5/16-12	3/4	19.44
6901-NWO-16-16	1-5/16-12	1	20.63
6901-NWO-16-20	1-5/16-12	1-1/4	37.14
6901-NWO-20-12	1-5/8-12	3/4	50.69
6901-NWO-20-16	1-5/8-12	1	29.80
6901-NWO-20-20	1-5/8-12	1-1/4	29.56
6901-NWO-24-24	1-7/8-12	1-1/2	111.33
6901-NWO-32-32	2-1/2-12	2	93.06

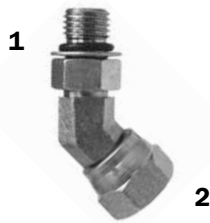
PRESS ON – NOTHING CAN TAKE THE PLACE OF PERSISTENCE. TALENT WILL NOT; NOTHING IS MORE COMMON THAN UNSUCCESSFUL MEN WITH TALENT. GENIUS WILL NOT; UNREWARDED GENIUS IS ALMOST A PROVERB. EDUCATION WILL NOT; THE WORLD IS FULL OF EDUCATED DERELICTS. PERSEVERANCE AND DETERMINATION ALONE ARE OMNIPOTENT.”

– CALVIN COOLIDGE

# STEEL SAE O-RING

## 45° O-RING SWIVEL ADAPTER

SAE 140357



6902  
2067R  
1272  
9365

Part #	O-Ring Thread Size 1	Female NPSM Size 2	List Price
6902-NWO-4-4	7/16-20	1/4	8.03
6902-NWO-4-6	7/16-20	3/8	17.32
6902-NWO-6-4	9/16-18	1/4	7.48
6902-NWO-6-6	9/16-18	3/8	6.37
6902-NWO-8-6	3/4-16	3/8	8.36
6902-NWO-8-8	3/4-16	1/2	7.13
6902-NWO-8-12	3/4-16	3/4	15.83
6902-NWO-10-6	7/8-14	3/8	23.05
6902-NWO-10-8	7/8-14	1/2	12.17
6902-NWO-10-12	7/8-14	3/4	19.00
6902-NWO-12-8	1-1/16-12	1/2	14.20
6902-NWO-12-12	1-1/16-12	3/4	15.00
6902-NWO-16-12	1-5/16-12	3/4	17.35
6902-NWO-16-16	1-5/16-12	1	20.00
6902-NWO-20-20	1-5/8-12	1-1/4	30.14

# O-RINGS

## VITON 75 SAE BOSS O-RING

Fluorocarbon



Part #	O-Ring Thread	List Price
4001-2-2	5/16-24	0.78
4001-3-3	3/8-24	0.59
4001-4-4	7/16-20	0.87
4001-5-5	1/2-20	0.88
4001-6-6	9/16-18	0.89
4001-8-8	3/4-16	1.17
4001-10	7/8-14	1.41
4001-12	1-1/16-12	1.86
4001-16	1-5/16-12	2.15
4001-20	1-5/8-12	3.86
4001-24	1-7/8-12	9.89
4001-32	2-1/2-12	13.65

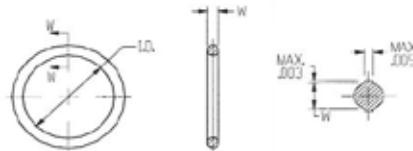
# HYDRAULIC ADAPTERS

## NITRILE 90 SAE BOSS O-RING



Part #	O-Ring Thread	List Price
4000-2-2	5/16-24	0.26
4000-3-3	3/8-24	0.24
4000-4-4	7/16-20	0.27
4000-5-5	1/2-20	0.34
4000-6-6	9/16-18	0.34
4000-8-8	3/4-16	0.34
4000-10	7/8-14	0.42
4000-12	1-1/16-12	1.54
4000-14	1-3/16-12	0.57
4000-16	1-5/16-12	0.77
4000-20	1-5/8-12	1.04
4000-24	1-7/8-12	1.08
4000-32	2-1/2-12	1.47

## O-RINGS FOR SAE J-1926/2/3 INCH STUD ENDS



\*Dimensions for both 4001(Viton) and 4000 (Buna)

Tube Fitting Size	Tube O.D.	SAE AS568A Ref. #	I.D.	W
-2	1/8	902	.239 ± .005	.064 ± .003
-3	3/16	903	.301 ± .005	.064 ± .003
-4	1/4	904	.351 ± .005	.072 ± .003
-5	5/16	905	.414 ± .005	.072 ± .003
-6	3/8	906	.468 ± .005	.078 ± .003
-8	1/2	908	.644 ± .009	.087 ± .003
-10	5/8	910	.755 ± .009	.097 ± .003
-12	3/4	912	.924 ± .009	.116 ± .004
-16	1	916	1.171 ± .010	.116 ± .004
-20	1-1/4	920	1.475 ± .014	.118 ± .004
-24	1-1/2	924	1.720 ± .014	.118 ± .004
-32	2	932	2.337 ± .018	.118 ± .004

## Specification

## SAE/ASTM

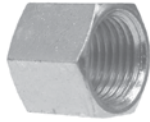
<b>Usage</b>	<b>Nitrile Elastomer, 90 Durometer Hardness for petroleum based fluid</b>
<b>General Service</b>	<b>High pressure applications of pneumatics, water based hydraulic fluids, lubricating oils, hydraulic oils and gasoline</b>
<b>Temperature</b>	<b>-35°C to 125°C (-30°F to 250°F)</b>
<b>Shore Hardness</b>	<b>90 pts ± 5pts</b>
<b>Elongation</b>	<b>100% min</b>
<b>Tensile</b>	<b>10 MP a min</b>
<b>Compound</b>	<b>Nitrile (Buna-N) to ASTM D 2000 or SAE J200</b>
<b>Lubrication</b>	<b>When assembling O-Ring with O-Ring style fittings, the O-Ring shall be coated with the fluid used or petrolatum before assembly to ease installation.</b>

## HYDRAULIC ADAPTERS

## O-RING FACE SEAL ADAPTERS

### BRAZE TUBE NUT (SLEEVE REQUIRED)

SAE 520110



FF318  
FF1311

Part #	Tube O.D.	Braze Tube O.D.	List Price
FSO318-4	1/4	.25	0.83
FSO318-6	3/8	.38	1.45
FSO318-8	1/2	.50	1.28
FSO318-10	5/8	.62	3.25
FSO318-12	3/4	.72	4.56
FSO318-16	1	1.00	5.62
FSO318-20	1 1/4	1.25	5.98
FSO318-24	1 1/2	1.50	9.37

### BRAZE TUBE SLEEVE

SAE 520115



FF319  
FF3019

Part #	Tube O.D.	List Price
FSO319-4	1/4	0.68
FSO319-6	3/8	0.83
FSO319-8	1/2	1.00
FSO319-10	5/8	1.82
FSO319-12	3/4	1.68
FSO319-16	1	2.54
FSO319-20	1-1/4	3.76
FSO319-24	1-1/2	4.58

See Page 393 for JIC Nut and Sleeve

### BRAZE TUBE UNION

SAE 520104



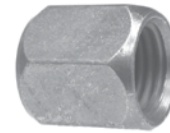
FF403

Part #	Braze Port	Flat Face Thread	List Price
FSO403-4-4	1/4	9/16-18	4.84
FSO403-6-6	3/8	11/16-16	10.67
FSO403-8-8	1/2	13/16-16	8.55
FSO403-10-10	5/8	1-14	10.98
FSO403-12-12	3/4	1-3/8-12	7.94
FSO403-16-16	1	1-7/16-12	11.56
FSO403-20-20	1-1/4	1-11/16-12	28.72
FSO403-24-24	1-1/2	2-12	34.88

More sizes available

### CAP

SAE 520112



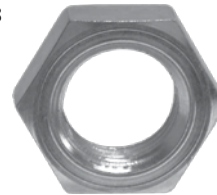
FF304C

• Two Piece  
Nut/ Insert Construction

Part #	Tube O.D.	Flat Face Thread	List Price
FSO304-C-4	1/4	9/16-18	1.87
FSO304-C-6	3/8	11/16-16	2.04
FSO304-C-8	1/2	13/16-16	3.52
FSO304-C-10	5/8	1-14	3.80
FSO304-C-12	3/4	1-3/16-12	4.63
FSO304-C-16	1	1-7/16-12	7.16
FSO304-C-20	1-1/4	1-11/16-12	15.52
FSO304-C-24	1-1/2	2-12	13.43

### BULKHEAD LOCKNUT

SAE 520118



Part #	Thread Size	List Price
FSO306-4	9/16-18	0.78
FSO306-6	11/16-16	0.78
FSO306-8	13/16-16	1.23
FSO306-10	1-14	1.34
FSO306-12	1-3/16-12	2.23
FSO306-16	1-7/16-12	3.67
FSO306-20	1-11/16-12	4.39
FSO306-24	2-12	6.17

### MALE UNION CONNECTOR

SAE 520102



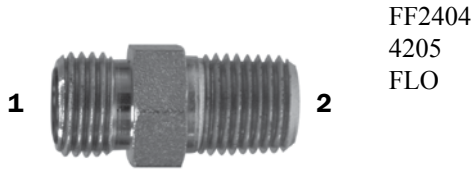
FF2403  
FF1203

Part #	Tube O.D.	Flat Face Thread 1&2	List Price
FSO2403-4-4	1/4	9/16-18	2.71
FSO2403-6-6	3/8	11/16-16	3.67
FSO2403-8-8	1/2	13/16-16	4.13
FSO2403-12-12	3/4	1-3/16-12	6.95
FSO2403-16-16	1	1-7/16-12	11.96
FSO2403-20-20	1-1/4	1-11/16-12	15.56
FSO2403-24-24	1-1/2	2-12	26.45

# O-RING FACE SEAL ADAPTERS

# HYDRAULIC ADAPTERS

## MALE O-RING FACE SEAL ADAPTER



FF2404  
4205  
FLO

Part #	Flat Face Thread 1	Male Pipe Size 2	List Price
FSO2404-4-2	9/16-18	1/8-27	1.90
FSO2404-4-4	9/16-18	1/4-18	1.81
FSO2404-4-6	9/16-18	3/8-18	2.81
FSO2404-4-8	9/16-18	1/2-14	3.71
FSO2404-6-2	11/16-16	1/8-27	2.33
FSO2404-6-4	11/16-16	1/4-18	2.52
FSO2404-6-6	11/16-16	3/8-18	2.94
FSO2404-6-8	11/16-16	1/2-14	2.57
FSO2404-8-4	13/16-16	1/4-18	3.38
FSO2404-8-8	13/16-16	1/2-14	3.78
FSO2404-8-12	13/16-16	3/4-14	4.81
FSO2404-10-8	1-14	1/2-14	7.76
FSO2404-10-12	1-14	3/4-14	6.61
FSO2404-12-8	1-3/16-12	1/2-14	5.99
FSO2404-12-12	1-3/16-12	3/4-14	5.91
FSO2404-12-16	1-3/16-12	1-11-1/2	7.39
FSO2404-16-12	1-7/16-12	3/4-14	6.10
FSO2404-16-16	1-7/16-12	1-11-1/2	8.09
FSO2404-16-20	1-7/16-12	1-1/4-11-1/2	13.24
FSO2404-20-16	1-11/16-12	1-11-1/2	14.00
FSO2404-20-20	1-11/16-12	1-1/4-11-1/2	10.38

## FEMALE ORFS TO MALE ORFS REDUCER

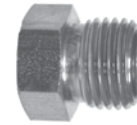


FF2406  
TRLON

Part #	Flat Face Size 1	Flat Face Thread 2	List Price
FSO2406-6-4	11/16-16	9/16-18	4.29
FSO2406-8-4	13/16-16	9/16-18	5.95
FSO2406-10-6	1-14	11/16-16	5.48
FSO2406-10-8	1-14	13/16-16	5.48
FSO2406-12-6	1-3/16-12	11/16-16	8.33
FSO2406-12-8	1-3/16-12	13/16-16	8.33
FSO2406-16-12	1-7/16-12	1-3/16-12	12.86
FSO2406-20-12	1-11/16-12	1-3/16-12	21.00
FSO2406-20-16	1-11/16-12	1-7/16-12	23.33
FSO2406-24-20	2-12	1-11/16-12	32.01

## SAE 520109

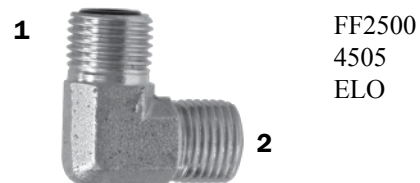
## PLUG



FF2408  
FF1254  
4229  
PNLO

Part #	Tube O.D.	Flat Face Thread	List Price
FSO2408-4	1/4	9/16-18	1.88
FSO2408-6	3/8	11/16-16	1.59
FSO2408-8	1/2	13/16-16	1.67
FSO2408-10	5/8	1-14	2.46
FSO2408-12	3/4	1-3/8-12	3.49
FSO2408-16	1	1-7/16-12	5.90
FSO2408-20	1-1/4	1-11/16-12	9.07
FSO2408-24	1-1/2	2-12	9.63

## ORFS UNION ELBOW 90°



FF2500  
4505  
ELO

Part #	Flat Face Thread 1	Flat Face Thread 2	List Price
FS2500-4-4	9/16-18	9/16-18	3.34
FS2500-6-6	11/16-16	11/16-16	4.24
FS2500-10-10	1-14	1-14	6.86
FS2500-12-12	1-3/16-12	1-3/16-12	10.00
FS2500-16-16	1-7/16-12	1-7/16-12	13.00
FS2500-20-20	1-11/16-12	1-11/16-12	25.29
FS2500-24-24	2-12	2-12	62.75

## ORFS TO MALE ELBOW

### SAE 520202



FF2501  
FF1208  
4405  
CLO

Part #	Flat Face Thread 1	Male Pipe Thread 2	List Price
FS2501-4-4	9/16-18	1/4	4.07
FS2501-6-4	11/16-16	1/4	5.95
FS2501-6-6	11/16-16	3/8	4.21
FS2501-8-6	13/16-16	3/8	5.14
FS2501-8-8	13/16-16	1/2	5.58
FS2501-8-12	13/16-16	3/4	8.26
FS2501-10-8	1-14	1/2	7.09
FS2501-10-12	1-14	3/4	12.75
FS2501-12-8	1-3/8-12	1/2	8.84
FS2501-12-12	1-3/8-12	3/4	10.39
FS2501-12-16	1-3/8-12	1	15.24
FS2501-16-12	1-7/16-12	3/4	12.41
FS2501-16-16	1-7/16-12	1	14.26
FS2501-20-20	1-11/16-12	1-1/4	25.83
FS2501-24-24	2-12	1-1/2	35.97

More sizes available



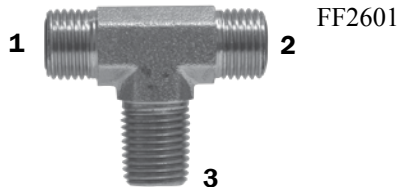
## HYDRAULIC ADAPTERS

### ORFS TO PIPE ELBOW 45°



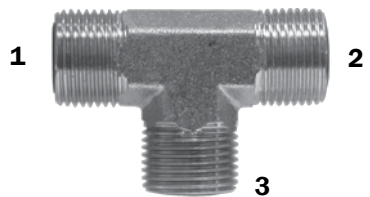
Part #	Flat Face Thread 1	Male Pipe Thread 2	List Price
FS2503-4-2	9/16-18	1/8	3.76
FS2503-4-4	9/16-18	1/4	4.87
FS2503-6-4	11/16-16	1/4	3.71
FS2503-6-6	11/16-16	3/8	6.94
FS2503-8-6	13/16-16	3/8	5.38
FS2503-8-8	13/16-16	1/2	5.05
FS2503-10-8	1-14	1/2	6.98
FS2503-12-12	1-3/16-12	3/4	8.84
FS2503-16-16	1-7/16-12	1	12.98

### ORFS TO PIPE BRANCH TEE



Part #	Flat Face Thread 1+2	Male Pipe 3	List Price
FS2601-4-4	9/16-18	1/4-18	6.86
FS2601-6-6	11/16-16	3/8-18	7.33
FS2601-8-8	13/16-16	1/2-14	7.95
FS2601-12-12	1-3/16-12	3/4-14	15.00
FS2601-16-16	1-7/16-12	1-11-1/2	29.19

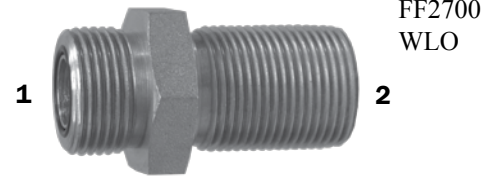
### ORFS UNION TEE



Part #	Flat Face Thread 1+2+3	List Price
FS2603-4-4	9/16-18	5.14
FS2603-6-6	11/16-16	7.05
FS2603-8-8	13/16-16	7.43
FS2603-10-10	1-14	13.49
FS2603-12-12	1-3/16-12	16.14
FS2603-16-16	1-7/16-12	21.14
FS2603-20-20	1-11/16-12	32.29
FS2603-24-24	2-12	70.45

## O-RING FACE SEAL ADAPTERS

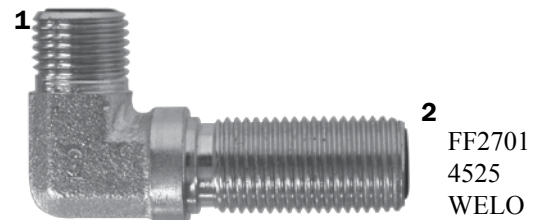
### ORFS BULKHEAD UNION



• Locknut not included on Bulkhead fittings

Part #	Flat Face Thread 1+2	List Price
FS2700-4-4	9/16-18	2.68
FS2700-6-6	11/16-16	3.29
FS2700-8-8	13/16-16	6.43
FS2700-10-10	1-14	7.57
FS2700-12-12	1-3/16-12	8.81
FS2700-16-16	1-7/16-12	16.75
FS2700-20-20	1-11/16-12	18.90
FS2700-24-24	2-12	28.10

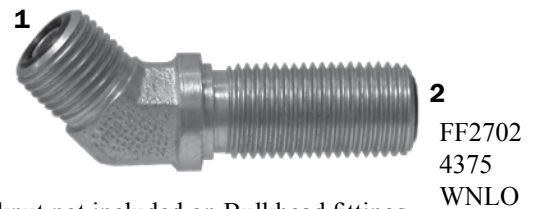
### ORFS BULKHEAD UNION 90°



• Locknut not included on Bulkhead fittings

Part #	Flat Face Thread 1+2	List Price
FS2701-4-4	9/16-18	4.71
FS2701-6-6	11/16-16	5.24
FS2701-8-8	13/16-16	6.29
FS2701-10-10	1-14	7.62
FS2701-12-12	1-3/16-12	12.14
FS2701-16-16	1-7/16-12	14.76
FS2701-20-20	1-11/16-12	28.05
FS2701-24-24	2-12	45.29

### ORFS BULKHEAD UNION 45°

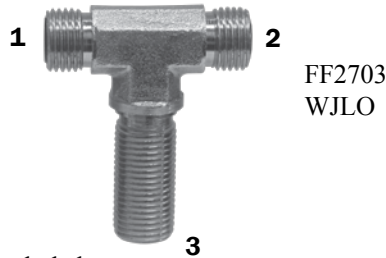


• Locknut not included on Bulkhead fittings

Part #	Flat Face Thread 1+2	List Price
FS2702-4-4	9/16-18	4.19
FS2702-6-6	11/16-16	5.48
FS2702-10-10	1-14	14.09
FS2702-16-16	1-7/16-12	17.96
FS2702-20-20	1-11/16-12	28.05

## O-RING FACE SEAL ADAPTERS

### ORFS BULKHEAD UNION BRANCH TEE

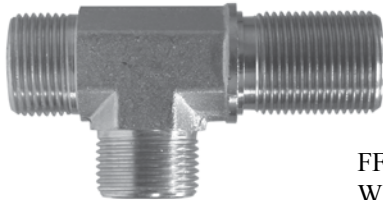


FF2703  
WJLO

• Locknut not included

Part #	Flat Face Thread 1+2+3	List Price
FS2703-4	9/16-18	6.38
FS2703-6	11/16-16	8.48
FS2703-8	13/16-16	10.86
FS2703-10	1-14	15.86
FS2703-12	1-3/16-12	19.95
FS2703-16	1-7/16-12	26.57
FS2703-20	1-11/16-12	44.95

### ORFS BULKHEAD UNION RUN TEE

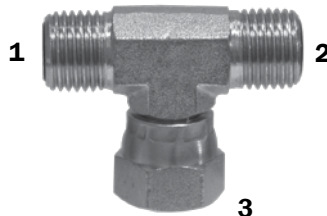


FF2704  
WJLO

• Locknut not included

Part #	Flat Face Thread 1+2+3	List Price
FS2704-4-4	9/16-18	6.38
FS2704-6-6	11/16-16	9.43
FS2704-8-8	13/16-16	10.86
FS2704-10-10	1-14	15.86
FS2704-12-12	1-3/16-12	20.14
FS2704-16-16	1-7/16-12	27.95
FS2704-20-20	1-11/16-12	44.95

### ORFS TO FEMALE SWIVEL BRANCH TEE

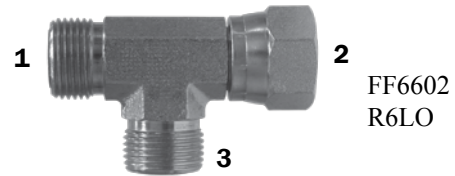


FF6600  
S6LO

Part #	Flat Face Thread 1+2	Female JIC 3	List Price
FS6600-4-4	9/16-18	9/16-18	7.05
FS6600-6-6	11/16-16	11/16-16	8.38
FS6600-8-8	13/16-16	13/16-16	25.17
FS6600-10-10	1-14	1-14	16.10
FS6600-12-12	1-3/16-12	1-3/16-12	21.38
FS6600-16-16	1-7/16-12	1-7/16-12	30.67
FS6600-20-20	1-11/16-12	1-11/16-12	47.57
FS6600-24-24	2-12	2-12	66.81

## HYDRAULIC ADAPTERS

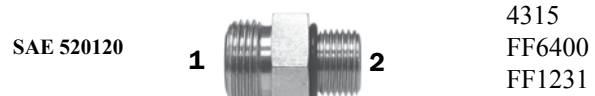
### ORFS TO JIC SWIVEL RUN TEE



FF6602  
R6LO

Part #	Flat Face Thread 1+3	Female Flat Face 2	List Price
FS6602-4-4	9/16-18	9/16-18	6.81
FS6602-6-6	11/16-16	11/16-16	10.11
FS6602-8-8	13/16-16	13/16-16	10.10
FS6602-10-10	1-14	1-14	15.86
FS6602-12-12	1-3/16-12	1-3/16-12	21.33
FS6602-16-16	1-7/16-12	1-7/16-12	31.05
FS6602-20-20	1-11/16-12	1-11/16-12	44.90
FS6602-24-24	2-12	2-12	75.81

### STRAIGHT THREAD CONNECTOR

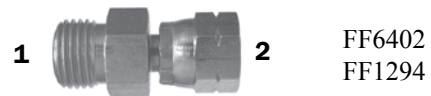


SAE 520120

4315  
FF6400  
FF1231

Part #	Flat Face Thread 1	O-Ring Thread 2	List Price
FS6400-O-4-4	9/16-18	7/16-20	1.93
FS6400-O-4-6	9/16-18	9/16-18	1.99
FS6400-O-6-4	11/16-16	7/16-20	4.03
FS6400-O-6-6	11/16-16	9/16-18	1.72
FS6400-O-6-8	11/16-16	3/4-16	2.95
FS6400-O-8-6	13/16-16	9/16-18	2.36
FS6400-O-8-8	13/16-16	3/4-16	3.41
FS6400-O-8-10	13/16-16	7/8-14	4.02
FS6400-O-10-8	1-14	3/4-16	3.60
FS6400-O-10-10	1-14	7/8-14	5.76
FS6400-O-10-12	1-14	1-1/16-12	5.98
FS6400-O-12-8	1-3/16-12	3/4-16	5.05
FS6400-O-12-10	1-3/16-12	7/8-14	5.61
FS6400-O-12-12	1-3/16-12	1-1/16-12	4.35
FS6400-O-12-16	1-3/16-12	1-5/16-12	8.71
FS6400-O-16-12	1-7/16-12	1-1/16-12	8.97
FS6400-O-16-16	1-7/16-12	1-5/16-12	8.19
FS6400-O-16-20	1-7/16-12	1-5/8-12	23.40
FS6400-O-20-20	1-11/16-12	1-5/8-12	15.35
FS6400-O-20-24	1-11/16-12	1-7/8-12	25.52
FS6400-O-24-20	2-12	1-5/8-12	95.79
FS6400-O-24-24	2-12	1-7/8-12	20.74

### MALE FLAT FACE TO FEMALE 37 ° SWIVEL



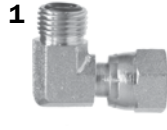
FF6402  
FF1294

Part #	Flat Face Thread 1	JIC Thread 2	List Price
FS6402-4-4	9/16-18	7/16-20	3.81
FS6402-6-6	11/16-16	9/16-18	7.05
FS6402-8-8	13/16-16	3/4-16	5.61
FS6402-10-10	1-14	7/8-14	7.10
FS6402-12-12	1-3/16-12	1-1/16-12	49.52
FS6402-16-16	1-7/16-12	1-5/16-12	29.58

More sizes available

# HYDRAULIC ADAPTERS

## SWIVEL NUT ELBOW



FF6500  
FF1236

Part #	Flat Face Thread 1	Flat Face Thread 2	List Price
FS6500-4-4	9/16-18	9/16-18	4.97
FS6500-6-6	11/16-16	11/16-16	6.24
FS6500-8-8	13/16-16	13/16-16	9.48
FS6500-10-10	1-14	1-14	10.03
FS6500-12-12	1-3/16-12	1-3/16-12	16.53
FS6500-16-16	1-7/16-12	1-7/16-12	24.23
FS6500-20-20	1-11/16-12	1-11/16-12	34.66
FS6500-24-24	2-12	2-12	50.22

## MALE JIC 37° FLARE TO FEMALE FLAT FACE SWIVEL



FF6504  
FF1296

Part #	JIC Thread Size 1	Flat Face Thread 2	List Price
FS6504-4-4	7/16-20	9/16-18	6.60
FS6504-6-6	9/16-18	11/16-16	6.69
FS6504-8-8	3/4-16	13/16-16	6.66
FS6504-10-10	7/8-14	1-14	30.70
FS6504-12-12	1-1/16-12	1-3/16-12	11.07
FS6504-16-16	1-5/16-12	1-7/16-12	53.74

## O-RING ELBOW CONNECTOR



FF6801  
FF1238  
4515

Part #	Flat Face Thread 1	O-Ring Thread 2	List Price
FS6801-4-4	9/16-18	7/16-20	4.23
FS6801-4-6	9/16-18	9/16-18	6.15
FS6801-6-4	11/16-16	7/16-20	4.86
FS6801-6-6	11/16-16	9/16-18	5.44
FS6801-6-8	11/16-16	3/4-16	6.46
FS6801-8-6	13/16-16	9/16-18	5.37
FS6801-8-8	13/16-16	3/4-16	5.58
FS6801-8-10	13/16-16	7/8-14	9.44
FS6801-10-8	1-14	3/4-16	9.00
FS6801-10-10	1-14	7/8-14	10.21
FS6801-10-12	1-14	1-1/16-12	15.47
FS6801-12-10	1-3/16-12	7/8-14	10.83
FS6801-12-12	1-3/16-12	1-1/16-12	12.77
FS6801-12-16	1-3/16-12	1-5/16-12	28.62
FS6801-16-12	1-7/16-12	1-1/16-12	19.47
FS6801-16-16	1-7/16-12	1-5/16-12	20.95
FS6801-16-20	1-7/16-12	1-5/8-12	31.67
FS6801-20-16	1-11/16-12	1-5/16-12	27.62
FS6801-20-20	1-11/16-12	1-5/8-12	24.51
FS6801-24-24	2-12	1-7/8-12	34.58

More sizes available

# O-RING FACE SEAL ADAPTERS

## ORFS TO O-RING ELBOW 45°



FF6802  
4365  
VSOLO

Part #	Flat Face Thread 1	O-Ring Size 2	List Price
FS6802-4-4	9/16-18	7/16-20	4.18
FS6802-4-6	9/16-18	9/16-18	4.52
FS6802-6-4	11/16-16	7/16-20	4.76
FS6802-6-6	11/16-16	9/16-18	4.76
FS6802-6-8	11/16-16	3/4-16	5.48
FS6802-8-6	13/16-16	9/16-18	5.48
FS6802-8-8	13/16-16	3/4-16	6.58
FS6802-8-10	13/16-16	7/8-14	9.10
FS6802-10-8	1-14	3/4-16	11.71
FS6802-10-10	1-14	7/8-14	9.14
FS6802-10-12	1-14	1-1/16-12	12.67
FS6802-12-8	1-3/16-12	3/4-16	11.90
FS6802-12-10	1-3/16-12	7/8-14	11.90
FS6802-12-12	1-3/16-12	1-1/16-12	13.34
FS6802-12-16	1-3/16-12	1-5/16-12	16.38
FS6802-16-12	1-7/16-12	1-1/16-12	16.33
FS6802-16-16	1-7/16-12	1-5/16-12	18.00
FS6802-16-20	1-7/16-12	1-5/8-12	24.29
FS6802-20-20	1-11/16-12	1-5/8-12	23.76
FS6802-24-24	2-12	1-7/8-12	38.76

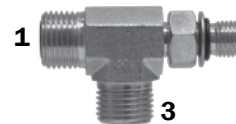
## ORFS TO O-RING BRANCH TEE



FF6803  
4715  
SJOLO

Part #	Face Seal Thread 1 + 2	O-Ring Size 3	List Price
FS6803-4-4	9/16-18	7/16-20	6.62
FS6803-6-6	11/16-16	9/16-18	8.10
FS6803-8-8	13/16-16	3/4-16	9.24
FS6803-10-10	1-14	7/8-14	12.43
FS6803-12-12	1-3/16-12	1-1/16-12	20.13
FS6803-16-16	1-7/16-12	1-5/16-12	28.52
FS6803-20-20	1-11/16-12	1-5/8-12	46.52
FS6803-24-24	2-12	1-7/8-12	70.48

## ORFS TO O-RING RUN TEE

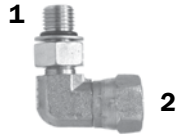


FF6804  
4716  
KJOLO

Part #	Face Seal Thread 1	O-Ring Size 2	Thread Size 3	List Price
FS6804-4-4	9/16-18	7/16-20	9/16-18	6.62
FS6804-6-6	11/16-16	9/16-18	11/16-16	8.10
FS6804-8-8	13/16-16	3/4-16	13/16-16	9.24
FS6804-10-10	1-14	7/8-14	1-14	13.33
FS6804-12-12	1-3/16-12	1-1/16-12	1-3/16-12	21.05
FS6804-16-16	1-7/16-12	1-5/16-12	1-7/16-12	28.52
FS6804-20-20	1-11/16-12	1-5/8-12	1-11/16-12	46.52
FS6804-24-24	2-12	1-7/8-12	2-12	70.40

## STEEL BSPT ADAPTERS

### STRAIGHT THREAD SWIVEL NUT ELBOW



FF6809  
FF1239  
4535  
AOELC

Part #	O-Ring Thread 1	Flat Face Thread 2	List Price
FS6809-4-4	7/16-20	9/16-18	7.25
FS6809-6-6	9/16-18	11/16-16	8.24
FS6809-8-8	3/4-16	13/16-16	9.72
FS6809-10-10	7/8-14	1-14	18.60
FS6809-12-12	1-1/16-12	1-3/16-12	22.52
FS6809-16-16	1-5/16-12	1-7/16-12	25.13

## STEEL BSPT ADAPTERS

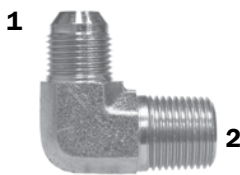
### JIC MALE CONNECTOR BSPT



3404  
305

Part #	JIC Thread Size 1	Male BSPT 2	List Price
7000-4-2	7/16-20	1/8-28	7.86
7000-4-4	7/16-20	1/4-19	8.09
7000-6-4	9/16-18	1/4-19	12.26
7000-6-6	9/16-18	3/8-19	9.55
7000-6-8	9/16-18	1/2-14	22.55
7000-8-6	3/4-16	3/8-19	9.67
7000-8-8	3/4-16	1/2-14	10.33
7000-8-12	3/4-16	3/4-14	24.60
7000-10-8	7/8-14	1/2-14	18.10
7000-10-12	7/8-14	3/4-14	21.77
7000-12-8	1-1/16-12	1/2-14	31.96
7000-12-12	1-1/16-12	3/4-14	15.63
7000-16-16	1-5/16-12	1-11	45.75
7000-20-20	1-5/8-12	1-1/4-11	150.48

### JIC MALE ELBOW BSPT



3501  
315

Part #	JIC Thread Size 1	Male BSPT 2	List Price
7200-4-2	7/16-20	1/8-28	20.35
7200-4-4	7/16-20	1/4-19	14.54
7200-6-4	9/16-18	1/4-19	18.52
7200-6-6	9/16-18	3/8-19	22.76
7200-6-8	9/16-18	1/2-14	41.73
7200-8-6	3/4-16	3/8-19	28.53
7200-8-8	3/4-16	1/2-14	20.37
7200-12-12	1-1/16-12	3/4-14	28.00
7200-16-16	1-5/16-12	1-11	80.86

## HYDRAULIC ADAPTERS

### BSPT HEX NIPPLE



3520  
MBT

Part #	Male BSPT 1	Male BSPT 2	List Price
7520-2-2	1/8-28	1/8-28	17.08
7520-4-4	1/4-19	1/4-19	4.80
7520-6-6	3/8-19	3/8-19	13.74
7520-8-8	1/2-14	1/2-14	15.24
7520-10-10	5/8-14	5/8-14	39.46
7520-12-12	3/4-14	3/4-14	23.74

### BSPT PLUG



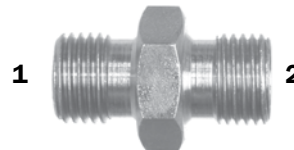
100B-Y  
KA-RM  
MHL  
296

Part #	BSPT	List Price
9508-2	1/8-28	8.26
9508-4	1/4-19	5.95
9508-6	3/8-19	6.37
9508-8	1/2-14	11.11
9508-12	3/4-14	24.18
9508-16	1-11	27.33

• More BSPT Available

## STEEL BSPP ADAPTERS

### BSPP HEX NIPPLE

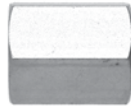


3420  
MB  
9022

Part #	Male BSPP 1	Male BSPP 2	List Price
7420-2-2	1/8-28	1/8-28	14.64
7420-4-2	1/4-19	1/8-28	11.43
7420-6-4	3/8-19	1/4-19	10.88
7420-6-6	3/8-19	3/8-19	14.22
7420-8-6	1/2-14	3/8-19	14.29
7420-8-8	1/2-14	1/2-14	18.19
7420-10-8	5/8-14	1/2-14	24.49
7420-12-8	3/4-14	1/2-14	24.04
7420-12-12	3/4-14	3/4-14	31.42
7420-16-12	1-11	3/4-14	36.04
7420-16-16	1-11	1-11	53.56

## HYDRAULIC ADAPTERS

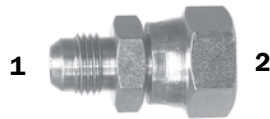
### BSPP COUPLING



3425  
FB

Part #	BSPP	List Price
7425-2	1/8-28	21.77
7425-4	1/4-19	13.29
7425-8	1/2-14	16.19
7425-10	5/8-14	27.21
7425-12	3/4-14	38.55
7425-16	1-11	64.63

### JIC TO FEMALE BSPP STRAIGHT SWIVEL



3240  
MJFBS

Part #	JIC Thread Size 1	Female BSPP Swivel 2	List Price
7240-4	7/16-20	1/4-19	21.54
7240-6	9/16-18	3/8-19	19.47
7240-8	3/4-16	1/2-14	26.53
7240-10	7/8-14	5/8-14	38.55
7240-12	1-1/16-12	3/4-14	40.59
7240-16	1-5/16-12	1-11	54.42

### JIC TO BSPP MALE ELBOW



3801  
315

Part #	JIC Thread Size 1	Male BSPP 2	List Price
7202-NWO-4-2	7/16-20	1/8-28	40.67
7202-NWO-4-4	7/16-20	1/4-19	31.93
7202-NWO-6-4	9/16-18	1/4-19	16.17
7202-NWO-6-6	9/16-18	3/8-19	24.10
7202-NWO-6-8	9/16-18	1/2-14	32.25
7202-NWO-8-6	3/4-16	3/8-19	24.79
7202-NWO-8-8	3/4-16	1/2-14	24.60
7202-NWO-8-12	3/4-16	3/4-14	47.60
7202-NWO-10-8	7/8-14	1/2-14	40.04
7202-NWO-12-12	1-1/16-12	3/4-14	31.07
7202-NWO-12-16	1-1/16-12	1-11	91.43
7202-NWO-16-16	1-5/16-12	1-11	56.92

## STEEL BSPP ADAPTERS

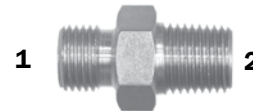
### JIC TO BSPP 45° ELBOW



3802  
35J

Part #	JIC Thread Size 1	Male BSPP 2	List Price
7802-4	7/16-20	1/4-19	36.12
7802-6	9/16-18	3/8-19	55.56
7802-8	3/4-16	1/2-14	73.70
7802-12	1-1/16-12	3/4-14	99.77
7802-16	1-5/16-12	1-11	103.40

### BSPP TO MALE PIPE NIPPLE



MBMP  
3825

Part #	Male BSPP Size 1	Male Pipe Thread Size 2	List Price
7825-2	1/8-28	1/8	10.15
7825-4	1/4-19	1/4	5.66
7825-6	3/8-19	3/8	11.02
7825-8	1/2-14	1/2	12.67
7825-12	3/4-14	3/4	11.70
7825-16	1-11	1	21.83

### JIC TO BSPP MALE CONNECTOR

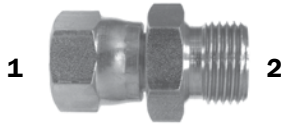


30J  
3800

Part #	JIC Thread Size 1	Male BSPP 2	List Price
7002-4-2	7/16-20	1/8-28	7.14
7002-4-4	7/16-20	1/4-19	8.33
7002-4-6	7/16-20	3/8-19	8.08
7002-4-8	7/16-20	1/2-14	25.62
7002-6-4	9/16-18	1/4-19	6.00
7002-6-6	9/16-18	3/8-19	9.50
7002-6-8	9/16-18	1/2-14	7.86
7002-8-6	3/4-16	3/8-19	7.47
7002-8-8	3/4-16	1/2-14	10.10
7002-8-12	3/4-16	3/4-14	21.37
7002-10-8	7/8-14	1/2-14	19.11
7002-12-12	1-1/16-12	3/4-14	11.57
7002-12-16	1-1/16-12	1-11	31.84
7002-16-16	1-5/16-12	1-11	30.10

## STEEL BSPP ADAPTERS

### JIC TO BSPP STRAIGHT SWIVEL



3402  
3055

Part #	JIC Thread Size 1	Male BSPP 2	List Price
7022-4-2	7/16-20	1/8-28	20.41
7022-4-4	7/16-20	1/4-19	13.61
7022-6-4	9/16-18	1/4-19	24.27
7022-6-6	9/16-18	3/8-19	17.67
7022-8-6	3/4-16	3/8-19	21.70
7022-8-8	3/4-16	1/2-14	17.91
7022-10-8	7/8-14	1/2-14	20.18
7022-12-12	1-1/16-12	3/4-14	50.15
7022-16-16	1-5/16-12	1-11	89.94

### HEX HEAD PLUG BSPP



3408

Part #	Male BSPP	List Price
9522-P-2	1/8-28	4.23
9522-P-4	1/4-19	3.60
9522-P-6	3/8-19	5.24
9522-P-8	1/2-14	6.17
9522-P-12	3/4-14	9.80
9522-P-16	1-11	20.39

### HOLLOW HEX PLUG BSPP



3408 HHP

Part #	Male BSPP	List Price
9522-H-2	1/8-28	4.07
9522-H-4	1/4-19	4.57
9522-H-6	3/8-19	7.30
9522-H-8	1/2-14	11.17
9522-H-12	3/4-14	16.77
9522-H-16	1-11	43.58

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## HYDRAULIC ADAPTERS

### FEMALE ADAPTER BSPP



3455  
MMFP

Part #	Female Pipe 1	Male BSPP 2	List Price
7042-2-2	1/8	1/8-28	7.87
7042-4-2	1/4	1/8-28	20.95
7042-4-4	1/4	1/4-19	8.94
7042-6-6	3/8	3/8-19	16.43
7042-8-8	1/2	1/2-14	28.57
7042-12-12	3/4	3/4-14	31.43
7042-16-16	1	1-11	38.94

## STEEL METRIC ADAPTERS

### MALE CONNECTOR



7400  
30J (R)  
7011

Port-seal crush washer  
and O-ring included

Part #	JIC Thread Size 1	Metric Thread 2	List Price
7005-4-10	7/16-20	10x1.0	7.14
7005-4-12	7/16-20	12x1.5	8.23
7005-4-14	7/16-20	14x1.5	8.47
7005-4-18	7/16-20	18x1.5	8.47
7005-5-12	1/2-20	12x1.5	12.38
7005-5-14	1/2-20	14x1.5	65.76
7005-6-14	9/16-18	14x1.5	7.30
7005-6-16	9/16-18	16x1.5	10.27
7005-6-18	9/16-18	18x1.5	13.07
7005-8-16	3/4-16	16x1.5	8.44
7005-8-18	3/4-16	18x1.5	10.27
7005-8-22	3/4-16	22x1.5	13.77
7005-10-18	7/8-14	18x1.5	13.54
7005-10-20	7/8-14	20x1.5	15.40
7005-10-22	7/8-14	22x1.5	17.61
7005-12-22	1-1/16-12	22x1.5	30.77
7005-12-27	1-1/16-12	27x1.5	47.00

# HYDRAULIC ADAPTERS

## MALE ELBOW

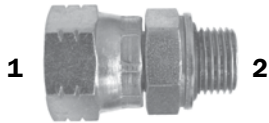


7801  
315 (R)

Port-seal crush washer  
and O-ring included

Part #	JIC Thread Size 1	Metric Thread 2	List Price
7205-NWO-4-10	7/16-20	10x1.0	29.93
7205-NWO-4-12	7/16-20	12x1.5	36.38
7205-NWO-4-14	7/16-20	14x1.5	23.13
7205NWO-5-12	1/2-20	12x1.5	59.81
7205-NWO-6-14	9/16-18	14x1.5	44.76
7205-NWO-6-16	9/16-18	16x1.5	33.91
7205-NWO-8-16	3/4-16	16x1.5	39.69
7205-NWO-8-18	3/4-16	18x1.5	13.10
7205-NWO-8-22	3/4-16	22x1.5	24.00
7205-NWO-10-18	7/8-14	18x1.5	20.80

## STRAIGHT SWIVEL



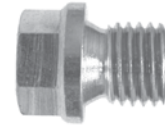
7402  
30JS (R)

Part #	JIC Thread Size 1	Metric Thread 2	List Price
7025-4-10	7/16-20	10x1.0	24.94
7025-4-12	7/16-20	12x1.5	24.40
7025-5-12	1/2-20	12x1.5	29.75
7025-6-14	9/16-18	14x1.5	29.36
7025-6-16	9/16-18	16x1.5	27.21
7025-8-16	3/4-16	16x1.5	27.30
7025-10-22	7/8-14	22x1.5	61.22
7025-12-27	1-1/16-12	27x2.0	42.36
7025-16-33	1-5/16-12	33x2.0	52.24

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# STEEL METRIC ADAPTERS

## HEX HEAD PLUG METRIC PARALLEL



7408

Part #	Metric Thread	List Price
8555-P-10	10x1.0	1.93
8555-P-12	12x1.5	8.69
8555-P-14	14x1.5	12.11
8555-P-16	16x1.5	2.46
8555-P-18	18x1.5	20.64
8555-P-20	20x1.5	4.00
8555-P-22	22x1.5	4.66
8555-P-26	26x1.5	20.72
8555-P-30	30x1.5	56.01

## HOLLOW HEX HEAD PLUG METRIC PARALLEL



7408 HHP

Part #	Metric Thread	List Price
8555-H-10	10x1.0	4.23
8555-H-12	12x1.5	3.50
8555-H-14	14x1.5	6.41
8555-H-16	16x1.5	10.60
8555-H-18	18x1.5	12.23
8555-H-20	20x1.5	17.95
8555-H-22	22x1.5	10.56
8555-H-26	26x1.5	55.65
8555-H-30	30x1.5	35.78

## FEMALE ADAPTER

MMFP (R)



Part #	Female Pipe Thread 1	Metric Thread 2	List Price
7045-2-10	1/8	10x1.0	9.23
7045-4-12	1/4	12x1.5	19.89
7045-4-14	1/4	14x1.5	21.77
7045-6-12	3/8	12x1.5	33.06
7045-6-16	3/8	16x1.5	27.21
7045-6-18	3/8	18x1.5	18.74
7045-8-16	1/2	16x1.5	52.96
7045-8-18	1/2	18x1.5	27.65
7045-8-22	1/2	22x1.5	20.77
7045-12-27	3/4	27x2.0	51.88
7045-16-33	1	33x2.0	76.98

HYDRAULIC

## STEEL BEADED HOSE INSERTS

## HYDRAULIC ADAPTERS

### STEEL BEADED HOSE INSERTS

#### MALE PIPE HOSE INSERT

SAE 430160



Part #	Hose I.D. 1	Pipe Thread 2	List Price
4404-4-2	1/4	1/8	3.95
4404-4-4	1/4	1/4	2.65
4404-5-2	5/16	1/8	11.34
4404-6-4	3/8	1/4	3.86
4404-6-6	3/8	3/8	3.44
4404-8-6	1/2	3/8	5.13
4404-8-8	1/2	1/2	3.14
4404-10-8	5/8	1/2	6.72
4404-12-12	3/4	3/4	6.72
4404-16-12	1	3/4	9.77
4404-16-16	1	1	10.26
4404-20-16	1-1/4	1	20.19
4404-20-20	1-1/4	1-1/4	18.83
4404-24-24	1-1/2	1-1/2	26.67

More sizes available

#### 90° PIPE HOSE INSERT

SAE 430260



Part #	Hose I.D. 1	Pipe Thread 2	List Price
4501-4-4	1/4	1/4	5.24
4501-6-6	3/8	3/8	4.76
4501-8-6	1/2	3/8	5.02
4501-8-8	1/2	1/2	7.04
4501-10-8	5/8	1/2	6.25
4501-12-12	3/4	3/4	6.33
4501-16-12	1	3/4	11.26
4501-16-16	1	1	9.11
4501-20-16	1-1/4	1	20.68
4501-20-20	1-1/4	1-1/4	24.88
4501-24-24	1-1/2	1-1/2	40.59
4501-32-32	2	2	366.24

More sizes available

#### 45° PIPE HOSE INSERT

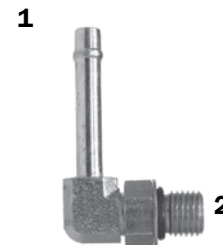
SAE 430360



Part #	Hose I.D. 1	Pipe Thread 2	List Price
4503-8-6	1/2	3/8	8.20
4503-10-8	5/8	1/2	17.73
4503-12-12	3/4	3/4	9.07
4503-16-16	1	1	18.49
4503-20-20	1-1/4	1-1/4	35.79

More sizes available

#### 90° O-RING HOSE INSERT



Part #	Hose I.D. 1	O-Ring Thread 2	List Price
4601-NWO-4	1/4	7/16-20	4.00
4601-NWO-5	5/16	1/2-20	8.05
4601-NWO-6	3/8	9/16-18	5.59
4601-NWO-8	1/2	3/4-16	6.57
4601-NWO-10	5/8	7/8-14	11.93
4601-NWO-10-8	5/8	3/4-16	11.62
4601-NWO-12	3/4	1-1/16-12	10.83
4601-NWO-16	1	1-5/16-12	14.76
4601-NWO-16-12	1	1-1/16-12	15.91
4601-NWO-20	1-1/4	1-5/8-12	26.92
4601-NWO-24	1-1/2	1-7/8-12	48.47

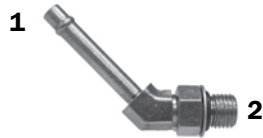
More sizes available



## HYDRAULIC ADAPTERS

## STEEL BEADED HOSE INSERTS

### 45° O-RING HOSE INSERT



Part #	Hose I.D. 1	O-Ring Thread 2	List Price
4603-NWO-4	1/4	7/16-20	6.43
4603-NWO-6	3/8	9/16-18	6.39
4603-NWO-8	1/2	3/4-16	7.19
4603-NWO-10	5/8	7/8-14	9.55
4603-NWO-12	3/4	1-1/12-12	9.49
4603-NWO-16	1	1-5/16-12	15.25
4603-NWO-20	1-1/4	1-5/8-12	32.14
4603-NWO-24	1-1/2	1-7/8-12	39.21

### O-RING HOSE INSERT



Part #	Hose I.D. 1	O-Ring Thread 2	List Price
4604-O-4	1/4	7/16-20	3.92
4604-O-6	3/8	9/16-18	4.39
4604-O-8	1/2	3/4-16	4.62
4604-O-10	5/8	7/8-14	5.81
4604-O-10-8	5/8	3/4-16	7.11
4604-O-12	3/4	1-1/16-12	12.70
4604-O-16	1	1-5/16-12	7.61
4604-O-16-12	1	1-1/16-12	7.74
4604-O-20	1-1/4	1-5/8-12	19.38
4604-O-20-16	1-1/4	1-5/16-12	20.42
4604-O-24	1-1/2	1-7/8-12	38.52
4604-O-24-20	1-1/2	1-5/8-12	32.16

CHARACTER CANNOT BE DEVELOPED IN EASE AND QUIET. ONLY THROUGH EXPERIENCE OF TRIAL AND SUFFERING CAN THE SOUL BE STRENGTHENED, AMBITION INSPIRED, AND SUCCESS ACHIEVED.

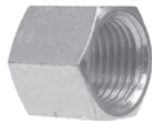
– HELLEN KELLER

# FLARELESS BITE-TYPE STEEL

# HYDRAULIC ADAPTERS

## TUBE NUT

SAE 080110



7105  
BU-S

Part #	Tube O.D	JIC Thread Size	List Price
C318-2	1/8	5/16-24	2.45
C318-4	1/4	7/16-20	4.20
C318-6	3/8	9/16-18	1.52
C318-8	1/2	3/4-16	2.28
C318-12	3/4	1-1/16-12	5.72
C318-16	1	1-5/16-12	11.80

## TUBE SLEEVE

SAE 08011SA



TU-S  
7165

Part #	Tube O.D	List Price
C319-2	1/8	3.19
C319-4	1/4	3.92
C319-6	3/8	2.81
C319-8	1/2	3.08
C319-12	3/4	21.63
C319-16	1	8.40

## UNION

SAE 080101



7305  
HBU-S

Part #	Tube Size	List Price
C2403-2-2	1/8	58.74
C2403-4-4	1/4	13.15
C2403-6-6	3/8	29.89
C2403-8-8	1/2	19.18
C2403-12-12	3/4	24.34
C2403-16-16	1	52.90

• Fittings are single ferrule

## MALE CONNECTOR

SAE 080102



FBU-S  
7205

Part #	Tube Size 1	Male Pipe Thread 2	List Price
C2404-2-2	1/8	1/8	9.22
C2404-4-4	1/4	1/4	4.93
C2404-6-4	3/8	1/4	10.43
C2404-6-6	3/8	3/8	5.00
C2404-8-6	1/2	3/8	12.56
C2404-8-8	1/2	1/2	7.50
C2404-12-12	3/4	3/4	28.92
C2404-16-16	1	1	40.63

## UNION ELBOW

SAE 080201

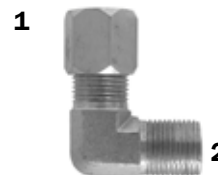


7505  
EBU-S

Part #	Tube Size	List Price
C2500-2-2	1/8	26.48
C2500-4-4	1/4	12.95
C2500-6-6	3/8	18.57
C2500-8-8	1/2	20.07
C2500-12-12	3/4	49.31
C2500-16-16	1	65.96

## MALE ELBOW

SAE 080202  
ms 51504



7405  
CBU-S

Part #	Tube Size 1	Male Pipe Size 2	List Price
C2501-4-2	1/4	1/8	10.31
C2501-4-4	1/4	1/4	12.73
C2501-6-2	3/8	1/8	16.75
C2501-6-4	3/8	1/4	11.27
C2501-6-6	3/8	3/8	15.75
C2501-6-8	3/8	1/2	23.39
C2501-8-4	1/2	1/4	17.27
C2501-8-6	1/2	3/8	19.70
C2501-8-8	1/2	1/2	23.59
C2501-12-12	3/4	3/4	38.61
C2501-16-16	1	1	48.42

# HYDRAULIC ADAPTERS

# FLARELESS BITE-TYPE STEEL

## FEMALE ELBOW

SAE 080203



7455  
DBU-S

Part #	Tube Size 1	Female Pipe Size 2	List Price
C2502-4-4	1/4	1/4	18.90
C2502-6-4	3/8	1/4	18.57
C2502-6-6	3/8	3/8	21.60
C2502-8-8	1/2	1/2	27.30
C2502-12-12	3/4	3/4	41.83
C2502-16-16	1	1	77.88

## MALE BRANCH TEE

SAE 080425



SBU-S  
7605

Part #	Tube Size 1&2	Pipe Thread Size 3	List Price
C2601-2-2	1/8	1/8	33.78
C2601-4-2	1/4	1/8	18.16
C2601-4-4	1/4	1/4	27.48
C2601-6-4	3/8	1/4	42.77
C2601-6-6	3/8	3/8	52.55
C2601-8-8	1/2	1/2	31.80
C2601-12-12	3/4	3/4	55.93
C2601-16-16	1	1	133.53

## FEMALE BRANCH TEE

SAE 080427



7655  
OBU-S

Part #	Tube Size 1+2	Female Pipe Size 3	List Price
C2602-4-4	1/4	1/4	28.25
C2602-6-4	3/8	1/4	30.21
C2602-6-6	3/8	3/8	47.48
C2602-8-8	1/2	1/2	35.00
C2602-12-12	3/4	3/4	60.73
C2602-16-16	1	1	200.25

• Fittings are single ferrule

## UNION TEE

SAE 080401



7705  
JBU-S

Part #	Tube Size	List Price
C2603-2-2	1/8	55.65
C2603-4-4	1/4	21.86
C2603-6-6	3/8	28.47
C2603-8-8	1/2	34.18
C2603-12-12	3/4	61.78
C2603-16-16	1	119.19

## MALE O-RING CONNECTOR

SAE 080120



7315  
F5B-J

Part #	Tube Size	O-Ring Thread 2	List Price
C6400-4-4	1/4	7/16-20	8.82
C6400-6-6	3/8	9/16-18	11.22
C6400-8-8	1/2	3/4-16	19.96
C6400-8-10	1/2	7/8-14	16.10
C6400-12-12	3/4	1-1/16-12	28.18
C6400-16-16	1	1-5/16-12	54.08

## O-RING ELBOW CONNECTOR

SAE 080220



7515  
C5BU-S

Part #	Tube Size 1	O-Ring Thread Size 2	List Price
C6801-2-2	1/8	5/16-24	10.50
C6801-4-4	1/4	7/16-20	15.34
C6801-6-6	3/8	9/16-18	20.59
C6801-8-8	1/2	3/4-16	20.84
C6801-12-12	3/4	1-1/16-12	34.05
C6801-16-16	1	1-5/16-12	45.80

## MALE O-RING BRANCH TEE

SAE 080429



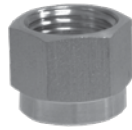
7715  
S5BU-S

Part #	Tube Size Size 1 & 2	O-Ring Thread Size 3	List Price
C6803-4-4	1/4	7/16-20	33.48
C6803-6-6	3/8	9/16-18	26.43
C6803-8-8	1/2	3/4-16	41.83
C6803-12-12	3/4	1-1/16-12	86.44
C6803-16-16	1	1-5/16-12	95.81

# STAINLESS STEEL FLARELESS BITE-TYPE

- Double Ferule bite-type
- Material 316SS
- Metal to Metal

## TUBE NUT



**STAINLESS STEEL**

Part #	Tube O.D	Thread Size	List Price
SSC318-2	1/8	5/16-24	6.56
SSC318-4	1/4	7/16-20	4.83
SSC318-6	3/8	9/16-18	6.67
SSC318-8	1/2	3/4-16	12.97
SSC318-12	3/4	1-1/16-12	18.15
SSC318-16	1	1-5/16-12	34.61

## SLEEVE SET



**STAINLESS STEEL**

- Front and Back sold as a set

Part #	Tube O.D	List Price
SSC320-2	1/8	9.37
SSC320-4	1/4	4.44
SSC320-6	3/8	5.98
SSC320-8	1/2	6.98
SSC320-12	3/4	14.68
SSC320-16	1	29.33

## TUBE UNION



**STAINLESS STEEL**

Part #	Tube Size	List Price
SSC2403-4-4	1/4	31.60
SSC2403-6-6	3/8	42.72
SSC2403-8-8	1/2	92.13
SSC2403-12-12	3/4	102.77
SSC2403-16-16	1	143.95

- Reducers available upon request

**SS = Stainless Steel (316)**

# HYDRAULIC ADAPTERS

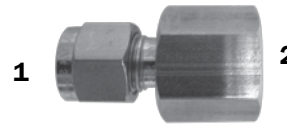
## MALE CONNECTOR



**STAINLESS STEEL**

Part #	Tube Size 1	Male Pipe Thread 2	List Price
SSC2404-4-2	1/4	1/8	14.97
SSC2404-4-4	1/4	1/4	19.20
SSC2404-4-8	1/4	1/2	31.55
SSC2404-6-4	3/8	1/4	33.40
SSC2404-6-6	3/8	3/8	48.84
SSC2404-6-8	3/8	1/2	49.48
SSC2404-8-8	1/2	1/2	38.01
SSC2404-12-12	3/4	3/4	54.38
SSC2404-16-16	1	1	95.56

## FEMALE CONNECTOR



**STAINLESS STEEL**

Part #	Tube O.D. 1	Thread Size 2	List Price
SSC2405-4-2	1/4	1/8	23.59
SSC2405-4-4	1/4	1/4	25.22
SSC2405-6-2	3/8	1/8	31.25
SSC2405-6-6	3/8	3/8	49.50
SSC2405-6-8	3/8	1/2	53.06
SSC2405-8-4	1/2	1/4	83.99
SSC2405-8-6	1/2	3/8	82.18
SSC2405-8-8	1/2	1/2	124.23
SSC2405-12-12	3/4	3/4	207.27
SSC2405-16-16	1	1	170.12

## UNION ELBOW



**STAINLESS STEEL**

Part #	Tube Size	List Price
SSC2500-2-2	1/8	32.70
SSC2500-4-4	1/4	69.10
SSC2500-6-6	3/8	42.91
SSC2500-8-8	1/2	157.39
SSC2500-12-12	3/4	154.15
SSC2500-16-16	1	237.74

# HYDRAULIC ADAPTERS

# STAINLESS STEEL BITE-TYPE

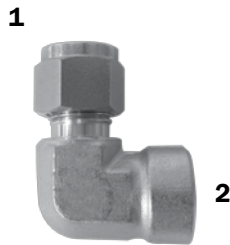
## MALE ELBOW



STAINLESS STEEL

Part #	Tube Size 1	Male Pipe Size 2	List Price
SSC2501-4-2	1/4	1/8	37.84
SSC2501-4-4	1/4	1/4	38.62
SSC2501-6-2	3/8	1/8	37.92
SSC2501-6-4	3/8	1/4	36.92
SSC2501-6-6	3/8	3/8	54.65
SSC2501-6-8	3/8	1/2	56.88
SSC2501-8-4	1/2	1/4	52.16
SSC2501-8-6	1/2	3/8	52.16
SSC2501-8-8	1/2	1/2	75.60
SSC2501-12-12	3/4	3/4	79.14
SSC2501-16-16	1	1	154.15

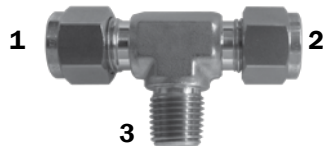
## FEMALE ELBOW



STAINLESS STEEL

Part #	Tube Size 1	Female Pipe Size 2	List Price
SSC2502-4-4	1/4	1/4	45.19
SSC2502-6-4	3/8	1/4	42.91
SSC2502-6-6	3/8	3/8	42.18
SSC2502-8-8	1/2	1/2	78.33
SSC2502-12-12	3/4	3/4	136.97
SSC2502-16-16	1	1	154.63

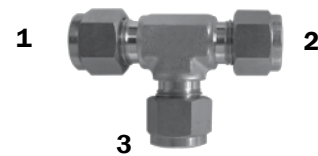
## MALE BRANCH TEE



STAINLESS STEEL

Part #	Tube Size 1&2	Pipe Thread Size 3	List Price
SSC2601-2-2	1/8	1/8	52.88
SSC2601-4-4	1/4	1/4	60.86
SSC2601-6-4	3/8	1/4	64.36
SSC2601-6-6	3/8	3/8	69.12
SSC2601-8-8	1/2	1/2	104.54

## UNION TEE



STAINLESS STEEL

Part #	Tube Size	List Price
SSC2603-2-2	1/8	52.88
SSC2603-4-4	1/4	105.06
SSC2603-6-6	3/8	64.36
SSC2603-8-8	1/2	224.42
SSC2603-12-12	3/4	146.44
SSC2603-16-16	1	313.79

## O-RING ELBOW CONNECTOR

SAE 080220

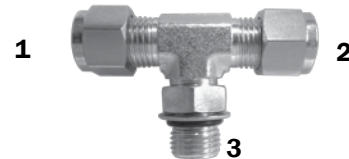
C5BU-SS



STAINLESS STEEL

Part #	Tube Size 1	O-Ring Thread Size 2	List Price
SSC6801-4-4	1/4	7/16-20	145.91
SSC6801-6-6	3/8	9/16-18	63.86
SSC6801-8-8	1/2	3/4-16	130.11
SSC6801-12-12	3/4	1-1/16-12	166.90
SSC6801-16-16	1	1-5/16-12	287.59

## MALE O-RING BRANCH TEE



STAINLESS STEEL

Part #	Tube Size Size 1 & 2	O-Ring Thread Size 3	List Price
SSC6803-6-6	3/8	9/16-18	95.50

# QUICK DISCONNECT

# HYDRAULIC ADAPTERS



## THREAD TO CONNECT, DRYBREAK NO-SPILL QUICK CONNECT

- Brass Body
- Steel Wing Nut
- Buna-Seal ( -40° to +250°F)

Aeroquip 5100  
Parker 6100  
Snaptite B78



- Bonded Face Seal
- External ORing Alleviates Full Connection

Part #	Body Size	Female NPT	Max PSI	List Price
61-150	3/4	1/2	3000	56.45
61-152	3/4	3/4	3000	56.45
61-153	1	1	3000	71.16
61-154	1-1/4	1-1/4	2750	98.74
61-155	1-1/2	1-1/2	2500	151.28

Part #	Body Size	Female NPT	Max PSI	List Price
61-050	3/4	1/2	3000	56.45
61-052	3/4	3/4	3000	56.45
61-053	1	1	3000	67.61
61-054	1-1/4	1-1/4	2750	98.74
61-055	1-1/2	1-1/2	2500	151.28

### FEATURES - ISO A and ISO B

- Poppet valves to prevent uncoupled leakage
- Critical parts are induction hardened for durability
- Dependable ball-locking mechanism holds the mating halves together
- Socket and plug are precision machined from solid barstock
- Standard nitrile seals temp range -40°F to +250°F



### ISO-A FEMALE PIPE COUPLER

Part #	Body Size	NPT	List Price
ANV-14-F	1/4"	1/4"	10.43
ANV-38-F	3/8"	3/8"	11.75
ANV-12-F	1/2"	1/2"	15.81
ANV-34-F	3/4"	3/4"	33.06
ANV-1-F	1"	1"	42.86

ISO 7241-1 ISO-A Interchange ( Connected )				
Body Size	Steel Coupler/ Plug			
	Maximum Working		Burst	
	PSI	Bar	PSI	Bar
1/4"	5,000	345	18,270	1,200
3/8"	4,000	275	18,270	1,200
1/2"	4,000	275	16,500	1,100
3/4"	4,000	275	14,800	1,000
1"	4,000	275	12,400	850



### ISO-A FEMALE PIPE PLUG

Part #	Body Size	NPT	List Price
ANV-14-M	1/4"	1/4"	4.53
ANV-38-M	3/8"	3/8"	6.38
ANV-12-M	1/2"	1/2"	7.34
ANV-34-M	3/4"	3/4"	10.95
ANV-1-M	1"	1"	18.65

### INTERCHANGE DATA:

- Parker 6600, Aeroquip/ Eaton FD56, Dixon 'K' Series.
- Hansen HA 15000, Safeway S56



### ISO-B FEMALE PIPE COUPLER

Part #	Body Size	NPT	List Price
HNV-14-F	1/4"	1/4"	11.46
HNV-14-F-B	1/4"	1/4"	19.05
HNV-38-F	3/8"	3/8"	12.00
HNV-38-F-B	3/8"	3/8"	26.00
HNV-12-F	1/2"	1/2"	17.39
HNV-12-F-B	1/2"	1/2"	34.77
HNV-34-F	3/4"	3/4"	28.00
HNV-34-F-B	3/4"	3/4"	62.00
HNV-1-F	1"	1"	44.73
HNV-1-F-B	1"	1"	93.25

ISO 7241-1 Series B ISO-B Interchange ( Connected )									
Body Size	Steel Coupler/ Plug				Brass Coupler/ Plug				
	Max. Working		Burst		Max. Working		Burst		
	PSI	Bar	PSI	Bar	PSI	Bar	PSI	Bar	
1/4"	5,000	345	22,500	1,550	3,000	200	15,000	1,000	
3/8"	4,000	275	16,500	1,150	2,500	175	12,000	800	
1/2"	4,000	275	16,000	1,100	2,500	175	11,500	750	
3/4"	4,000	275	16,500	1,150	2,000	150	12,000	800	
1"	4,000	275	16,000	1,100	1,500	100	8,500	800	

### INTERCHANGE DATA:

- Parker 60 Series, Snap-tite 72 series, Dixon 'H' series
- Hansen HK - series, Aeroquip/ Eaton FDH5



### ISO-B FEMALE PIPE PLUG

Part #	Body Size	NPT	List Price
HNV-14-M	1/4"	1/4"	5.27
HNV-14-M-B	1/4"	1/4"	9.01
HNV-38-M	3/8"	3/8"	6.64
HNV-38-M-B	3/8"	3/8"	13.33
HNV-12-M	1/2"	1/2"	7.81
HNV-12-M-B	1/2"	1/2"	22.61
HNV-34-M	3/4"	3/4"	13.75
HNV-34-M-B	3/4"	3/4"	27.05
HNV-1-M	1"	1"	23.63
HNV-1-M-B	1"	1"	40.95

Suffix 'B' = Brass Material

### FEATURES

- Steel construction, zinc plated trivalent finish. Hardened Nipples and sleeves and solid barstock construction for maximum resistance to damage from hydraulic and mechanical shock.
- This Anti-Blowout Nitrile/ PTFE bonded seal is designed to prevent blow out or damage during severe service conditions.
- Durable ball-locking mechanism assures reliable connection everytime.
- Temp Range -65° to +250°

### ISO 16028

Body Size	FLUSH FACE			
	Steel Coupler/ Plug Coupled			
	Maximum Working		Burst	
	PSI	Bar	PSI	Bar
1/4"	5,000	345	18,270	1,200
3/8"	4,000	275	18,270	1,200
1/2"	4,000	275	16,500	1,100
5/8"	4,000	275	14,800	1,000
3/4"	4,000	275	12,400	850
1"	3,000	200	12,600	850

FF Series  
HTMC  
74C



FF Series  
HTMN  
74N



### FEMALE PIPE COUPLER

Part #	Body Size	NPT	List Price
FF-14-F	1/4"	1/4"	34.15
FF-38-F	3/8"	3/8"	45.53
FF-12-F	3/8"	1/2"	49.41
FF-34-F	1/2"	3/4"	60.63
FF-1-F	3/4"	1"	78.86

### FEMALE PIPE PLUG

Part #	Body Size	NPT	List Price
FF-14-M	1/4"	1/4"	20.31
FF-38-M	3/8"	3/8"	22.97
FF-12-M	3/8"	1/2"	25.00
FF-34-M	1/2"	3/4"	30.27
FF-1-M	3/4"	1"	41.50

## FLAT FACE THREAD LOCK - VEP QUICK COUPLING

### APPLICATIONS

- Widely used in public equipment
- Portable construction equipment.
- Hydraulic tools
- Vehicles

### SPECIFICATIONS

Body Size (in)	1/2(12)	3/4(34)	1(1)	1-1/2(24)
Rated Pressure (PSI)	7000	7000	6000	5000
Rated Flow (GPM)	12	50	88	152
Temperature Range	-20°C +120°C			
Standard seal material is <b>NBR</b>				
Test Fluid-Oil = 200 SUS				

### FEATURES

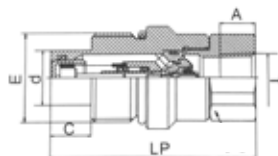
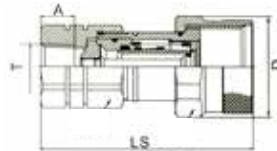
- New valve design provides better resistance from high flow and the pressure of impulse, thus providing advanced performance.
- Special nipple design for connecting under pressure, allows connection and disconnection with high residual pressures.
- The LSQ-VEP series employs a threaded sleeve locking mechanism, mates with matching male threads on the coupler.
- New plating treatment provides advanced anti-rust performance.
- LSQ-VEP series couplings employ flush valving when connecting or disconnecting, therefore only a small amount of fluid can be lost during disconnecting or air inclusion during reconnection.
- The Anti-Blowout bonded seal is designed to prevent blow-out or damage during severe service conditions.
- Machined from solid steel barstock for durability. Compatible with most other VEP series.
- O-Ring SAE Boss Thread available with import lead time (same list price)

### FEMALE COUPLER

Part #	LS	D	A	NPT	List Price
LSQ-VEP-12-SF	4.09	1.13	0.67	1/2	168.37
LSQ-VEP-34-SF	4.49	2.13	0.79	3/4	218.97
LSQ-VEP-1-SF	5.28	2.33	0.83	1	277.48
LSQ-VEP-20-SF	5.71	2.72	0.83	1-1/4	320.85
LSQ-VEP-24-SF	7.41	3.63	0.83	1-1/2	682.91

### FEMALE PLUG

Part #	LS	D	A	NPT	List Price
LSQ-VEP-12-PF	4.09	1.13	0.67	1/2	168.37
LSQ-VEP-34-PF	4.49	2.13	0.79	3/4	197.30
LSQ-VEP-1-PF	5.28	2.33	0.83	1	227.63
LSQ-VEP-20-PF	5.71	2.72	0.83	1-1/4	320.85
LSQ-VEP-24-PF	7.41	3.63	0.83	1-1/2	652.73



# QUICK DISCONNECT

# HYDRAULIC ADAPTERS

Snap-Tite 60 Series

## AG - Series Agricultural Interchange ( Connected )

Nominal Size	Steel Coupler/ Plug			
	Maximum Working		Burst	
	PSI	Bar	PSI	Bar
1/4"	4,000	275	21,000	1,500
3/8"	4,000	275	23,100	1,600
1/2"	4,000	275	16,500	1,100
3/4"	3,000	200	10,300	700
1"	3,000	200	13,000	900



### FEMALE PIPE COUPLER

Part #	Body Size	NPT	List Price
NV-14-F	1/4"	1/4"	10.43
NV-38-F	3/8"	3/8"	11.75
NV-12-F	1/2"	1/2"	32.14
NV-34-F	3/4"	3/4"	53.57
NV-1-F	1"	1"	72.07

### FEMALE PIPE PLUG

Part #	Body Size	NPT	List Price
NV-14-M	1/4"	1/4"	3.76
NV-38-M	3/8"	3/8"	9.75
NV-12-M	1/2"	1/2"	14.62
NV-34-M	3/4"	3/4"	27.10
NV-1-M	1"	1"	40.13

### FEATURES

- Heavy duty heat treated poppet: valves are standard with rugged, specially-designed seals made of nitrite for leak-free performance in the toughest application.
- High-strength steel valve guides designed for high flow rates and made extra tough for agricultural service.
- Dependable hardened chrome alloy steel locking balls. Heat treated plugs and sleeves.
- Standard seals temp range -40°F to +250°F

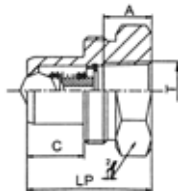
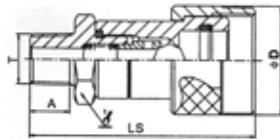
## THREAD LOCK HYDRAULIC JACK COUPLING

### SPECIFICATIONS

Body Size	1/4(14)	3/8(38)
Rated Pressure	10,000	
Rated Flow (GPM)	3	6
Temperature Range	-20°C +120°C	
Standard seal material is NBR		

### APPLICATIONS

- Thread lock couplings with their threaded union locking system and precision ball-type check valves are designed for extreme high pressure applications such as portable hydraulic jacks.
- **Ball Type.**



### MALE COUPLER

Part #	LS	D	Hex	A	NPT	List Price
KZE-B-14-SM	2.40	1.14	0.87	0.55	1/4	22.60
KZE-B-38-SM	2.91	1.38	0.98	0.57	3/8	23.74

### FEMALE COUPLER

Part #	LS	D	Hex	A	NPT	List Price
KZE-B-14-PF	1.30	0.44	0.75	0.51	1/4	10.74
KZE-B-38-PF	1.38	0.63	1.26	0.55	3/8	11.34



# HYDRAULIC ADAPTERS

# DIN 2353 METRIC

## TUBE PLUG

NEW



Part #	Tube 1 - MM	Size 2	List Price
8003-L06	6	M12 X 1.5	4.70
8003-L08	8	M14 X 1.5	7.66
8003-L10	10	M16 X 1.5	5.40
8003-L12	12	M18 X 1.5	5.67
8003-L15	15	M22 X 1.5	8.91
8003-L18	18	M26 X 1.5	16.68
8003-L22	22	M30 X 2.0	21.12
8003-L28	28	M36 X 2.0	27.46
8003-L35	35	M45 X 2.0	54.43
8003-L42	42	M52 X 2.0	70.84
8003-S06	6	M14 X 1.5	4.67
8003-S08	8	M16 X 1.5	5.67
8003-S10	10	M18 X 1.5	7.22
8003-S12	12	M22 X 1.5	7.93
8008-S16	16	M26 X 1.5	5.53
8003-S20	20	M30 X 2.0	18.92
8003-S25	25	M36 X 2.0	29.38
8003-S30	30	M45 X 2.0	48.90
8003-S38	38	M52 X 2.0	80.29

## TUBE CAP

NEW

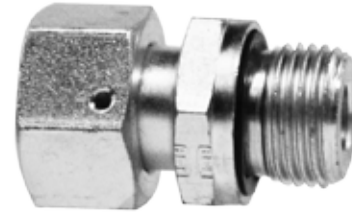


Part #	Tube 1 - MM	Size 2	List Price
8004-L08	8	M14 X 1.5	9.60
8004-L10	10	M16 X 1.5	10.60
8004-L12	12	M18 X 1.5	10.55
8004-L15	15	M22 X 1.5	18.40
8004-L18	18	M26 X 1.5	25.72
8004-L22	22	M30 X 2.0	34.64
8004-L28	28	M36 X 2.0	52.91
8004-S06	6	M14 X 1.5	10.04
8004-S08	8	M16 X 1.5	11.32
8004-S10	10	M18 X 1.5	13.16
8004-S12	12	M22 X 1.5	16.18
8004-S16	16	M26 X 1.5	24.16
8004-S20	20	M30 X 2.0	31.08

## PARALLELL MALE STUD COUPLING

NEW

1



2

Part #	Tube 1 - MM	Size 2	List Price
8031-L06-10	6	M10 X 1.0	7.30
8031-L08-12	8	M12 X 1.5	7.43
8031-L10-14	10	M14 X 1.5	8.68
8031-L12-16	12	M16 X 1.5	10.32
8031-L15-18	15	M18 X 1.5	13.98
8031-L18-22	18	M22 X 1.5	18.40
8031-L22-26	22	M26 X 1.5	25.43
8031-L28-33	28	M33 X 2.0	44.65
8031-L35-42	35	M42 X 2.0	83.25
8031-L42-48	42	M48 X 2.0	120.33
8031-S06-12	6	M12 X 1.5	8.12
8031-S08-14	8	M14 X 1.5	8.55
8031-S10-16	10	M16 X 1.5	12.88
8031-S12-18	12	M18 X 1.5	12.15
8031-S16-22	16	M22 X 1.5	18.64
8031-S20-27	20	M27 X 2.0	25.43
8031-S25-33	25	M33 X 2.0	52.01
8031-S30-42	30	M42 X 2.0	100.49
8031-S38-48	38	M48 X 2.0	91.07

## DIN MALE STUD BSPP

NEW

1



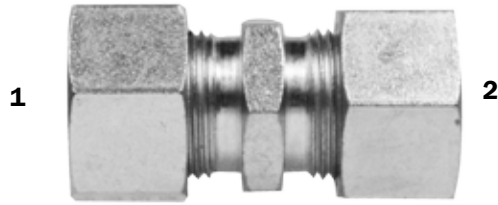
2

Part #	Tube 1 - MM	Size 2 BSPP (6)	List Price
8046-L08-04	8	1/4	8.17
8046-L10-04	10	1/4	8.94
8046-L12-06	12	3/8	9.45
8046-L15-08	15	1/2	14.61
8046-L22-12	22	3/4	42.59
8046-L28-16	28	1-1/8	57.81
8046-L35-20	35	1-1/4	118.53
8046-L42-24	42	1-1/2	147.23
8046-S10-06	10	1/4	11.27
8046-S12-06	12	3/8	12.15
8046-S16-08	16	1/2	20.74
8046-S20-12	20	3/4	36.09

L = LIGHT PATTERN S = HEAVY PATTERN

**UNION COUPLING**

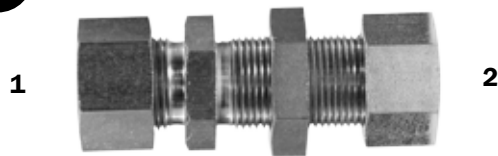
**NEW**



Part #	Tube 1 - MM	Tube 2 - MM	List Price
8060-L08-08	8	8	7.78
8060-L10-10	10	10	9.33
8060-L12-12	12	12	10.82
8060-L15-15	15	15	16.54
8060-L18-18	18	18	22.94
8060-L22-22	22	22	31.99
8060-L28-28	28	28	45.97
8060-L35-35	35	35	71.15
8060-L42-42	42	42	97.06
8060-S06-06	6	6	10.23
8060-S08-08	8	8	9.92
8060-S10-10	10	10	11.84
8060-S12-12	12	12	13.84
8060-S16-16	16	16	25.72
8060-S20-20	20	20	36.56
8060-S25-25	25	25	56.72
8060-S30-30	30	30	80.02

**BULKHEAD STRAIGHT COUPLING**

**NEW**



Part #	Tube 1 - MM	Tube 2 - MM	List Price
8061-LN-L08-08	8	8	11.48
8061-LN-L10-10	10	10	13.70
8061-LN-L12-12	12	12	17.36
8061-LN-L15-15	15	15	23.89
8061-LN-L18-18	18	18	36.87
8061-LN-L22-22	22	22	81.84
8061-LN-L28-28	28	28	110.11
8061-LN-L35-35	35	35	153.08
8061-LN-L42-42	42	42	214.68
8061-LN-S06-06	6	6	25.95
8061-LN-S08-08	8	8	29.70
8061-LN-S10-10	10	10	17.23
8061-LN-S12-12	12	12	21.62
8061-LN-S16-16	16	16	35.78
8061-LN-S20-20	20	20	88.61
8061-LN-S25-25	25	25	112.36
8061-LN-S30-30	30	30	165.09
8061-LN-S38-38	38	38	216.68

**UNION ELBOW**

**1**

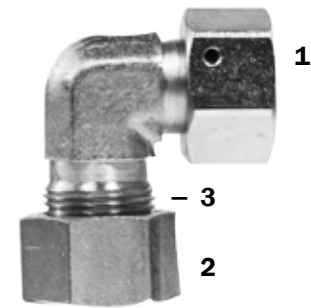
**NEW**



Part #	Tube 1 - MM	Tube 2 - MM	List Price
8260-L08-08	8	8	15.36
8260-L10-10	10	10	17.50
8260-L12-12	12	12	20.34
8260-L15-15	15	15	26.54
8260-L18-18	18	18	52.73
8260-L22-22	22	22	50.46
8260-L28-28	28	28	74.12
8260-L35-35	35	35	111.68
8260-L42-42	42	42	151.95
8260-S06-06	6	6	16.14
8260-S08-08	8	8	17.83
8260-S10-10	10	10	19.92
8260-S12-12	12	12	23.30
8260-S16-16	16	16	37.01
8260-S20-20	20	20	54.14
8260-S25-25	25	25	78.42
8260-S30-30	30	30	113.24
8260-S38-38	38	38	161.25

**DIN SWIVEL NUT ELBOW**

**NEW**



Part #	Tube 1 - MM	Tube 2 - MM	DIN 3	List Price
8263-L08-08	8	8	M14 X 1.5	29.79
8263-L12-12	12	12	M18 X 1.5	36.82
8263-L15-15	15	15	M22 X 1.5	44.58
8263-L22-22	22	22	M30 X 2.0	44.38
8263-L28-28	28	28	M36 X 2.0	118.71
8263-L35-35	35	35	M45 X 2.0	98.11
8263-S08-08	8	8	M16 X 1.5	36.82
8263-S12-12	12	12	M20 X 1.5	40.32
8263-S16-16	16	16	M24 X 1.5	58.35
8263-S20-20	20	20	M30 X 2.0	85.40
8263-S25-25	25	25	M36 X 2.0	132.23
8263-S30-30	30	30	M42 X 2.0	104.19
8263-S38-38	38	38	M52 X 2.0	167.50

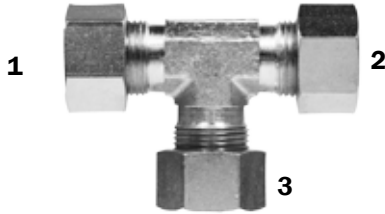
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# HYDRAULIC ADAPTERS

# DIN 2353 METRIC

## UNION TEE

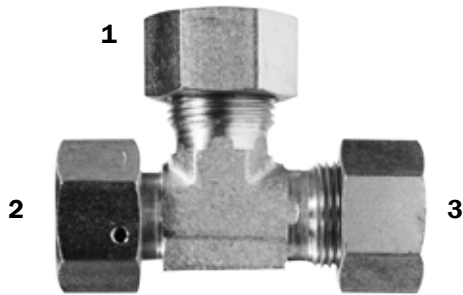
NEW



Part #	Tube 1 - MM	Tube 2 - MM	Tube 3 - MM	List Price
8360-L06-06-06	6	6	6	19.65
8360-L08-08-08	8	8	8	20.34
8360-L10-10-10	10	10	10	23.03
8360-L12-12-12	12	12	12	27.14
8360-L15-15-15	15	15	15	37.46
8360-L18-18-18	18	18	18	49.30
8360-L22-22-22	22	22	22	66.30
8360-L28-28-28	28	28	28	104.60
8360-L35-35-35	35	35	35	153.73
8360-L42-42-42	42	42	42	210.74
8360-S06-06-06	6	6	6	21.35
8360-S08-08-08	8	8	8	25.00
8360-S10-10-10	10	10	10	26.73
8360-S12-12-12	12	12	12	41.00
8360-S16-16-16	16	16	16	53.10
8360-S20-20-20	20	20	20	74.22
8360-S25-25-25	25	25	25	111.41
8360-S30-30-30	30	30	30	155.60
8360-S38-38-38	38	38	38	224.32

## DIN SWIVEL NUT BRANCH TEE

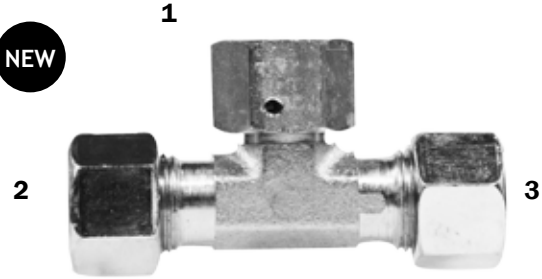
NEW



Part #	Tube 1, 2, 3 - THREAD	DIN - 3	List Price
8563-L08-08-08	8	M14 X 1.5	22.48
8563-L10-10-10	10	M16 X 1.5	23.62
8563-L12-12-12	12	M18 X 1.5	28.29
8563-L15-15-15	15	M22 X 1.5	35.32
8563-L18-18-18	18	M26 X 1.5	48.86
8563-L22-22-22	22	M30 X 2.0	65.87
8563-L28-28-28	28	M36 X 2.0	101.63
8563-L35-35-35	35	M45 X 2.0	171.92
8563-S08-08-08	8	M16 X 1.5	23.89
8563-S10-10-10	10	M18 X 1.5	29.67
8563-S12-12-12	12	M20 X 1.5	35.05
8563-S16-16-16	16	M24 X 1.5	47.99
8563-S25-25-25	25	M36 X 2.0	110.58
8563-S30-30-30	30	M42 X 2.0	152.90
8563-S38-38-38	38	M52 X 2.0	323.37

## DIN SWIVEL NUT RUN TEE

NEW



Part #	Tube 1, 2, 3 - MM	DIN THREAD	List Price
8469-L08-08-08	8	M14 X 1.5	37.01
8469-L10-10-10	10	M16 X 1.5	40.86
8469-L12-12-12	12	M18 X 1.5	29.98
8469-L15-15-15	15	M22 X 1.5	50.46
8469-L18-18-18	18	M26 X 1.5	54.14
8469-L22-22-22	22	M30 X 2.0	77.09
8469-L28-28-28	28	M36 X 2.0	122.23
8469-L35-35-35	35	M45 X 2.0	177.05
8469-L42-42-42	42	M52 X 2.0	283.19
8469-S08-08-08	8	M16 X 1.5	43.09
8469-S10-10-10	10	M18 X 1.5	44.83
8469-S12-12-12	12	M20 X 1.5	50.03
8469-S16-16-16	16	M24 X 1.5	55.06
8469-S20-20-20	20	M30 X 2.0	87.92
8469-S25-25-25	25	M36 X 2.0	134.44
8469-S30-30-30	30	M42 X 2.0	177.52
8469-S38-38-38	38	M52 X 2.0	300.36

L = LIGHT PATTERN S = HEAVY PATTERN

MORE CONFIGURATIONS AVAILABLE

## FULL PORT Two-Way



BKH

Part Number	Thread	Working Pressure	List Price
GE2-14-NPT	1/4" NPT	7250 PSI	53.81
GE2-38-NPT	3/8" NPT	7250 PSI	52.65
GE2-12-NPT	1/2" NPT	7250 PSI	66.95
GE2-34-NPT	3/4" NPT	5800 PSI	128.15
GE2-1-NPT	1" NPT	5075 PSI	160.20
GE2-114T-NPT*	1-1/4" NPT	5000 PSI	188.10
GE2-112T-NPT*	1-1/2" NPT	5000 PSI	250.00
GE2-2T-NPT	2" NPT	5000 PSI	428.57

Part Number	Thread	Working Pressure	List Price
GE2-04-SAE	7/16-20 UNF	7250 PSI	53.80
GE2-06-SAE	9/16-18 UNF	7250 PSI	54.82
GE2-08-SAE	3/4-16 UNF	7250 PSI	75.53
GE2-12-SAE	1-1/16-12 UNF	5800 PSI	115.52
GE2-16-SAE	1-5/16-12 UNF	5000 PSI	145.31
GB2-20T-SAE	1-5/8-12 UNF	5000 PSI	251.32
GB2-24T-SAE	1-7/8-12 UNF	5000 PSI	309.52
GB2-32T-SAE	2-1/2-12 UNF	5000 PSI	575.20

\* Reduced Port

**Construction:** Steel Body, Ball, Stem  
Zinc Chromate Plate  
Buna "O" Rings (Viton on request)  
Delrin Ball Seats

Temp Rating = -22° - 212°F

## FULL PORT Three-Way



BK3

Part Number	Thread	Working Pressure	List Price
GE3L-14-NPT	1/4" NPT	5880 PSI	142.86
GE3L-38-NPT	3/8" NPT	5880 PSI	108.84
GE3L-12-NPT	1/2" NPT	5145 PSI	116.10
GE3L-34-NPT	3/4" NPT	5145 PSI	167.62
GE3L-1-NPT	1" NPT	5145 PSI	203.17
GE3L-114T-NPT	1 1/4" NPT	4500 PSI	1073.92
GE3L-112T-NPT	1 1/2" NPT	4500 PSI	1362.36
GE3L-2T-NPT	2" NPT	4500 PSI	1456.69

Part Number	Thread	Working Pressure	List Price
GE3L-04-SAE	7/16-20 UNF	5880 PSI	177.72
GE3L-06-SAE	9/16-18 UNF	5880 PSI	185.79
GE3L-08-SAE	3/4-16 UNF	5145 PSI	222.15
GE3L-12-SAE	1-1/16-12 UNF	5145 PSI	179.95
GE3L-16-SAE	1-5/16-12 UNF	5145 PSI	214.06
GB3L-20T-SAE	1-5/8-12 UNF	4500 PSI	1654.09
GB3L-24T-SAE	1-7/8-12 UNF	4500 PSI	1630.00
GB3L-32T-SAE	2-1/2-12 UNF	4500 PSI	2054.00

**Construction:** Steel Body, Ball, Stem  
Zinc Chromate Plate  
Buna "O" Rings (Viton on request)  
Delrin Ball Seats

Temp Rating = -22° - 212°F

Also Available in Stainless Steel



# HYDRAULIC MOTOR

# ACCESSORIES

(Charlynn 101 / Danfoss DH / White HS / Parker ME-MB-TE-TJ / -RR-USA HP)

The MMPH series gear set, shaft distribution flow, hydraulic motor is a compact, high efficient, low speed high torque design which can be used in either parallel or series systems.



Part #		MMPH50	MMPH80	MMPH100	MMPH125	MMPH160	MMPH200	MMPH250	MMPH315	MMPH400
List Price		348.39	350.48	362.99	376.55	386.98	395.33	405.76	415.15	449.57
Displacement cm <sup>3</sup> /rev(cu.in/rev)		51.7 (3.15)	77.7 (4.75)	96.2 (5.9)	118 (7.2)	156 (9.5)	190 (11.6)	231 (14.1)	312 (19)	387 (23.6)
Max Speed rpm	Cont.	880	740	590	475	370	295	240	190	150
	Int.	975	825	675	595	465	370	295	235	185
Max Torque NW (in.lbs)	Cont.	81 (717)	129(1140)	161(1425)	202(1790)	245(2170)	286(2530)	360(3185)	406(3575)	435(3850)
	Int.	108(956)	171(1514)	213(1885)	268(2372)	342(3026)	390(3450)	456(4035)	505(4470)	533(4717)
Max performance KW/ (HP)	Cont.	7(9.4)	9.1(12.2)	9(12.1)	9.1(12.2)	8.7(11.65)	8.1(10.85)	8.2(11)	7.2(9.7)	6.1(8.2)
	Int.	8.9(12)	11.8(15.8)	11.9(15.95)	11.8(15.8)	11.9(15.95)	10.9(14.7)	10.1(13.5)	8.6(11.5)	7.2(9.65)
Max Differential Mpa/ (PSI)	Cont.	12.5(1840)	12.5(1840)	12.5(1840)	12.5(1840)	12.5(1840)	11(1625)	11(1625)	11(1625)	10(1450)
	Int.	16.5(2425)	16.5(2425)	16.5(2425)	16.5(2425)	16.5(2425)	16.5(2425)	14(2060)	12.5(1840)	10.5(1540)
Max flow L/min. / (gpm)	Cont.	45(11.85)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)
	Int.	50(13.15)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)
Weight	lb.	5.6	5.7	5.9	6	6.2	6.4	6.6	6.9	7.4

## ORDERING INFORMATION

### MMPH

### 50

### H2

### K

### P

#### MODEL SERIES

MMPH (GEROTOR)

MMRS (GEROTOR)

#### FRAME SIZE

(cu.in/rev)

MMPH

MMRS

50 (3.15)	50 (3.13)
80 (4.74)	80 (4.92)
100 (5.87)	100 (6.15)
125 (7.19)	125 (7.62)
160 (9.49)	160 (9.59)
200 (11.59)	200 (12.15)
250 (15.25)	250 (15.38)
315 (19.02)	315 (19.2)
400 (23.57)	375 (22.58)

#### MOUNTING FLANGE TYPE

H4 - 4 Bolt  
H2 - SAE "A" 2 Bolt  
H6 - Magneto

#### DRIVE SHAFT

K - 1 Inch Woodruff Key  
S - SAE - 6B Spline  
H - 1 Inch parallel  
0.40 dia. crosshole  
H1 - 1 Inch parallel  
0.31 dia. crosshole

#### PORT SIZE

P - 1/2 NPTF  
S - 7/8-14 SAE "O" Ring  
F - Manifold

(Charlynn 103 & 158 / Danfoss DS / Parker ME-MB-TE-TJ / RR-USA HR)

The MMRS series advanced gear set, shaft distribution flow, hydraulic motor is a compact, low noise, highly efficient torque low speed design. The gear set also affords a reliable smooth start-up at low pressure. The special design of the drive linkage and high pressure capability of the shaft seal provides a long life and these motors can be used in either series or parallel operation.



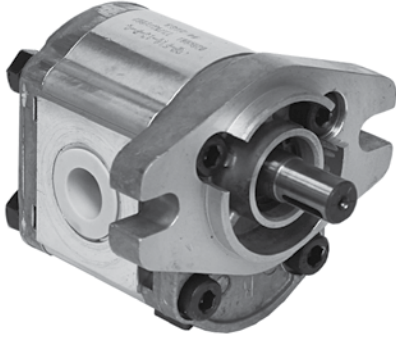
Part #		MMRS50	MMRS80	MMRS100	MMRS125	MMRS160	MMRS200	MMRS250	MMRS315	MMRS375
List Price		438.10	455.83	460.00	476.69	492.34	499.64	524.67	528.84	559.09
Displacement cm <sup>3</sup> /rev(cu.in/rev)		51.3 (3.13)	80.6 (4.92)	100.8 (6.15)	124.9 (7.62)	157.2 (9.59)	199.2 (12.15)	252 (15.38)	314.5 (19.2)	370 (22.58)
Max Speed rpm	Rated	755	750	600	475	375	300	240	190	160
	Cont.	970	940	750	600	470	375	300	240	200
Max Torque NW (in.lbs)	Cont.	100(885)	190(1682)	240(2124)	292(2584)	363(3273)	358(3168)	352(3115)	360(3186)	420(3717)
	Int.	126(1115)	220(1947)	280(2478)	340(3010)	430(3806)	448(3965)	470(4159)	470(4159)	548(4850)
Max performance KW/ (HP)	Cont.	7.7(10.3)	15(20.10)	15(20.10)	14(18.75)	14(18.75)	11(14.75)	9(12.10)	7.2(9.7)	6.1(8.2)
	Int.	9.7(13)	17(22.8)	17(22.8)	16(21.45)	16(21.45)	14(18.75)	12(16.10)	9(12.10)	12(16.10)
Max Differential Mpa/ (PSI)	Cont.	14(2061)	17.5(2576)	17.5(2576)	17.5(2576)	16.5(2429)	13(1914)	11(1619)	8.5(1251)	8.5(1251)
	Int.	17.5(2576)	20(2944)	20(2944)	20(2944)	20(2944)	17.5(2576)	14(2061)	11.5(1693)	11.5(1693)
Max flow L/min. / (gpm)	Cont.	40(10.5)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)
	Int.	50(13.1)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)
Weight	lb.	6.7	6.9	6.9	7.2	7.5	8.0	8.5	9.0	9.3

**MODEL # MGP-F10**

- All Aluminium construction.
- 7 Displacement sizes from 0.07 to 0.37 cu. in/rev.
- Mounting flange is SAE AA-2 bolt.
- Ports are SAE-8 inlet and SAE-6 outlet.
- Drive shaft is a 1/2 inch straight shaft with 1/8 key.

**Recommended working conditions:**

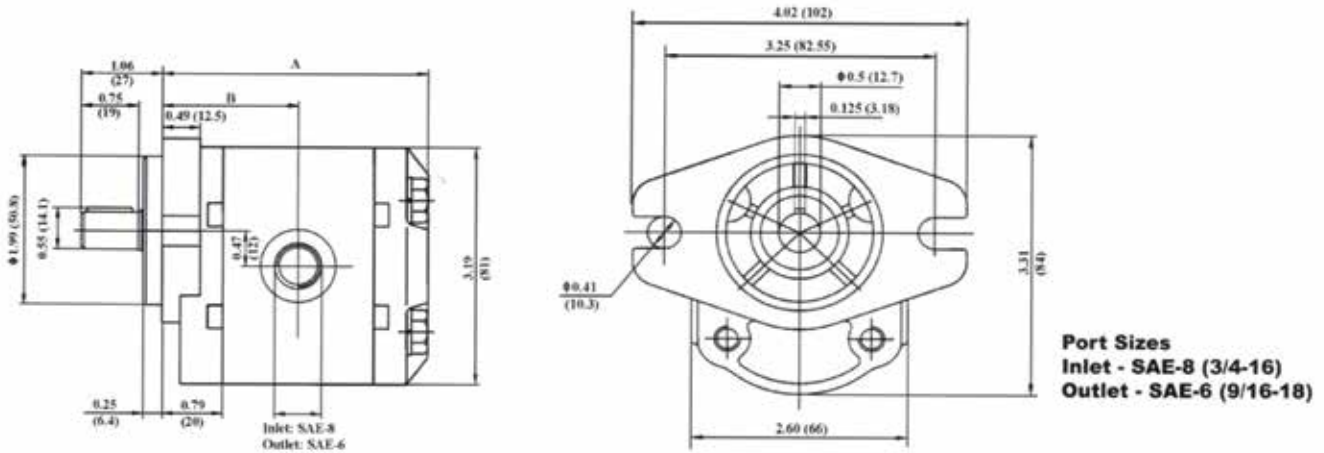
- Filtration 25 micron or better.
- Oil Viscosity 6 to 200 cSt.
- Inlet pressure 12 to 32 psi abs.
- Oil Temperature -25 to 55 degrees C (-12 to 175 F°).
- Ambient -22 to 55 C° (-8 to 130 F°).



Part #	Displacement cu.in/rev	PSI	Speed RPM		Weight Lbs	List Price
			Rated	Max		
MGP-F10-13	0.07	3625	2000	5000	2.02	223.30
MGP-F10-20	0.12	3625	2000	5000	2.31	232.86
MGP-F10-27	0.16	3625	2000	5000	2.68	232.86
MGP-F10-34	0.20	3625	2000	5000	2.99	232.86
MGP-F10-41	0.25	3625	2000	4000	3.34	291.08
MGP-F10-51	0.31	3625	2000	4000	3.78	291.08
MGP-F10-61	0.37	3625	2000	4000	4.18	291.08

- Displacement (cu.in/ rev) x speed (RPM)/ 231 Volumetric efficiency % $\geq$ 93
- GPM X 231/ RPM = CU.IN

**INSTALLATION DATA**



Part #	A		B	
	Millimeters	Inches	Millimeters	Inches
MGP-F10-13	82	3.23	42	1.65
MGP-F10-20	84	3.3	43	1.69
MGP-F10-27	86	3.39	44	1.73
MGP-F10-34	88	3.46	45	1.77

Part #	A		B	
	Millimeters	Inches	Millimeters	Inches
MGP-F10-41	90	3.54	46	1.81
MGP-F10-51	93	3.66	47.5	1.87
MGP-F10-61	96	3.78	49	1.93

**ORDERING INFORMATION**

**MGP**

Aluminum  
Gear Pump

**F10**

High  
Pressure  
Series

**16**

Displacement  
cm<sup>3</sup>/rev  
(see chart)  
13/20/27/34  
41/51/61

**P**

Drive  
Shaft  
P-1/2 Dia

**C**

Rotation  
Direction  
C-Clockwise  
A-Counter Clockwise  
(viewed from drive shaft  
end)



**MODEL # MGP-F20**

- Aluminium construction.
- 8 Displacement sizes from 0.36 to 1.52 cu. in/rev.
- Mounting flange is SAE A-2 bolt.
- Ports are SAE-12 inlet and SAE-10 outlet.
- Drive shaft is a 5/8 inch diameter straight with 5/32 straight key.

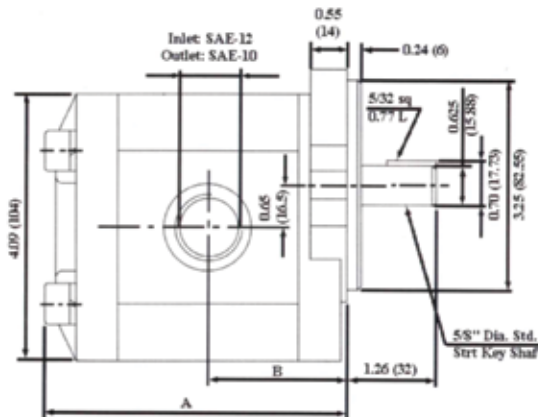
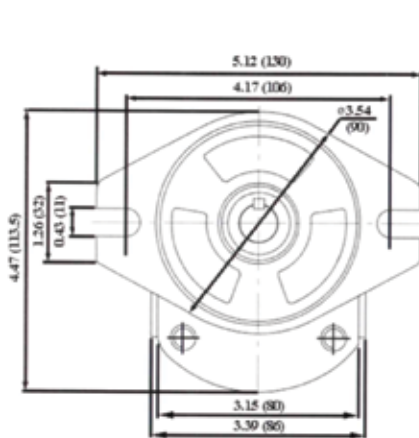
**Recommended working conditions:**

- Filtration 25 micron or better.
- Oil Viscosity 6 to 200 cSt.
- Inlet pressure 12 to 32 psi abs.
- Oil Temperature -25 to 55 degrees C (-12 to 175 F°).
- Ambient -22 to 55 C° (-8 to 130 F°).



Part #	Displacement cu.in/rev	PSI	Speed RPM		Weight Lbs	List Price
			Rated	Max		
MGP-F20-06	0.36	3650	2000	3000	5.35	291.60
MGP-F20-08	0.48	3650	2000	3600	5.61	291.60
MGP-F20-10	0.61	3650	2000	3600	5.72	291.60
MGP-F20-12	0.73	3650	2000	3600	5.91	291.60
MGP-F20-14	0.85	3650	2000	3600	6.00	308.34
MGP-F20-16	0.97	2900	2000	3600	6.27	308.34
MGP-F20-20	1.22	2900	2000	3600	6.73	308.34
MGP-F20-25	1.52	2900	2000	3600	7.19	277.50

**INSTALLATION DATA**



**Port Sizes**  
**Inlet - SAE-12 (1 1/16-12)**  
**Outlet - SAE-10 (7/8-14)**

Part #	A		B	
	Millimeters	Inches	Millimeters	Inches
MGP-F20-06	98	3.87	45	1.77
MGP-F20-08	100	3.95	47	1.85
MGP-F20-10	104	4.12	48	1.89
MGP-F20-12	108	4.25	50	1.97

Part #	A		B	
	Millimeters	Inches	Millimeters	Inches
MGP-F20-14	110	4.35	51	2
MGP-F20-16	114	4.50	52.5	2.07
MGP-F20-20	120	4.72	56	2.2
MGP-F20-25	128	5.05	60	2.36

**ORDERING INFORMATION**

**MGP**

Aluminum  
Gear Pump

**F20**

High  
Pressure  
Series

**16**

Displacement  
cm3/rev  
(see chart)  
06/08/10/12/14/16  
20/25

**P**

Drive  
Shaft  
P-5/8 Dia  
Straight  
P1-3/4 Dia  
Straight  
S9-Spline 9 tooth

**C**

Rotation  
Direction  
C-Clockwise  
A-Counter Clockwise  
(viewed from drive shaft  
end)



**MM-FC SERIES FLOW CONTROL VALVES**

**FEATURES:**

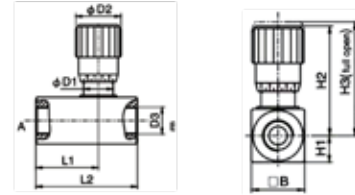
- Micrometer adjustment knob for accurate valve setting.
- Rugged construction.

**TECHNICAL DATA:**

• Materials

Body: Carbon steel w/ black oxide plating  
 Handle: Zinc Alloy  
 Set Screw: Steel  
 Packing: Buna O-Ring/ PTFE stem packing

Maximum Pressure: 5000PSI  
 Temperature Ratings: -4°F to 176°F (-20°C to 80°C)  
 Flow Rate: 0-42 GPM



Part#	B	D1	D2	D3	H1	H2	H3	L1	L2	WEIGHT (lbs)	List Price
MMFC4NPT	1.10	0.76	1.18	1/4 NPT	0.55	2.41	2.67	1.54	2.52	0.90	65.09
MMFC6NPT	1.10	0.76	1.18	3/8 NPT	0.55	2.41	2.67	1.69	2.75	0.90	61.90
MMFC8NPT	1.50	0.95	1.46	1/2 NPT	0.75	3.07	3.41	2.05	3.27	2.00	65.99
MMFC12NPT	1.50	0.95	1.46	3/4 NPT	0.75	3.08	3.41	2.19	3.50	2.00	76.19
MMFC16NPT	1.89	1.38	1.89	1 NPT	0.94	4.03	4.50	2.79	4.60	4.20	143.52
MMFC20NPT	2.38	1.96	2.28	1-1/4 NPT	1.18	5.25	5.88	3.39	6.07	9.55	249.44

**MM-NV SERIES NEEDLE VALVES**

**FEATURES:**

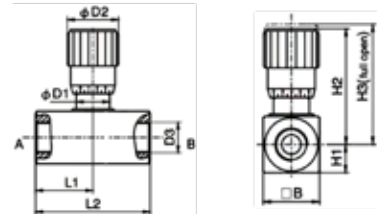
- Micrometer adjustment knob for accurate valve setting.
- Rugged construction.

**TECHNICAL DATA:**

• Materials

Body: Carbon steel w/ black oxide plating  
 Handle: Zinc Alloy  
 Set Screw: Steel  
 Packing: Buna O-Ring/ PTFE stem packing

Maximum Pressure: 5000PSI  
 Temperature Ratings: -4°F to 176°F (-20°C to 80°C)  
 Flow Rate: 0-42 GPM



Part#	B	D1	D2	D3	H1	H2	H3	L1	L2	WEIGHT (lbs)	List Price
MMNV4NPT	1.10	0.76	1.18	1/4 NPT	0.55	2.41	2.67	1.07	2.13	0.90	54.88
MMNV6NPT	1.10	0.76	1.18	3/8 NPT	0.55	2.41	2.67	1.07	2.13	0.90	72.22
MMNV8NPT	1.50	0.95	1.46	1/2 NPT	0.75	3.07	3.41	1.34	2.38	2.00	83.06
MMNV12NPT	1.50	0.95	1.46	3/4 NPT	0.75	3.08	3.41	1.54	3.09	2.00	73.70
MMNV16NPT	1.89	1.38	1.89	1 NPT	0.94	4.03	4.50	1.81	3.62	4.20	117.24

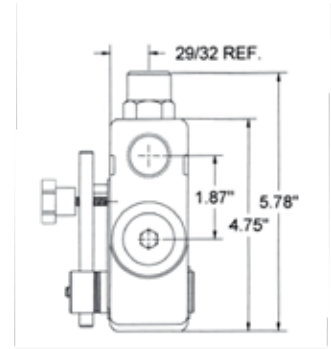
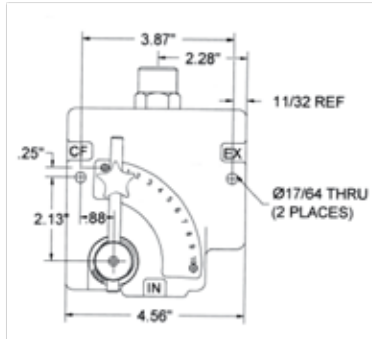
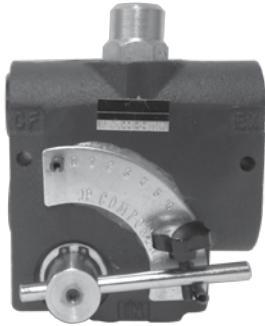


**PRESSURE COMPENSATING VARIABLE FLOW CONTROL**

**FEATURES:**

MFC-51 model is a full range pressure compensating variable flow control. It is designed so that the orifice area varies as the lever is rotated. The outlet flow is smooth and constant regardless of the pressure on the control flow or excess flow ports. An adjustable ball spring relief allows for pressure compensated flow up to the pressure setting on the relief. Relief valves are preset at 1500 PSI and field adjustable from 750 to 3000 PSI.

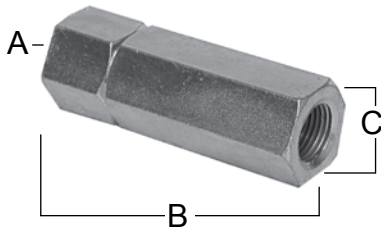
- Materials: Cast Iron Body, Heat Treated Compensator Spool, Stainless Steel Rotary Spool, Buna N "O" Rings (Standard)
- **ALL ARE STANDARD FLOW CONTROL**
- **ALL HAVE ADJUSTABLE BALL SPRING RELIEF**
- **SAE PORT AVAILABLE. MINIMUM ORDER REQUIRED**



Part#	Size	Flow	List Price
MFC-38-N	3/8" - NPT	0-8 gpm	194.11
MFC-12-N	1/2" - NPT	0-16 gpm	194.11
MFC-34-N	3/4" - NPT	0-30 gpm	194.11

**HARD SEAT CARBON STEEL CONSTRUCTION - 5lb or 65lb Cracking Pressure Available**

- Available w/ NPT or SAE threads



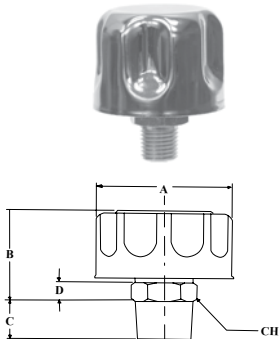
A ( NPT Female both ends )

- Soft Seat available by special quote

Part #	A Size	B Inches	C Inches	Rated Flow gpm	List Price
1000-2-5 or 65	1/4 NPT	2.44	.87	6	38.52
1000-3-5 or 65	3/8 NPT	2.87	1.00	10	44.85
1000-4-5 or 65	1/2 NPT	3.76	1.26	18	60.35
1000-6-5 or 65	3/4 NPT	4.30	1.50	30	77.14
1000-8-5 or 65	1 NPT	5.12	1.69	36	118.92
1000-10-5 or 65	1-1/4 NPT	5.56	2.40	50	281.14
1000-12-5 or 65	1-1/2 NPT	5.56	2.56	60	138.86
1001-4-5 or 65	7/16-20 SAE	2.56	.87	6	32.00
1001-6-5 or 65	9/16-18 SAE	2.91	.94	10	45.45
1001-8-5 or 65	3/4-16 SAE	3.74	1.18	18	55.16
1001-12-5 or 65	1-1/6-12 SAE	4.29	1.50	30	103.84
1001-16-5 or 65	1-5/16-12 SAE	5.00	1.81	36	113.09
1001-20-5 or 65	1-5/8-12 SAE	5.20	2.41	50	235.83
1001-24-5 or 65	1-7/8-12 SAE	5.20	2.56	60	161.96

Rated Pressure: Sizes 2 thru 8 - 5000 psi / Sizes 10 thru 24 - 3000 psi

**SCREW-ON TYPE AIR BREATHERS**



- Chrome Plated Steel
- 1/4 To 1 Inch NPT
- 40 Micron Breather

Part Number	Flow cfm	NPT	A	B	C	D	CH	Micron	List Price
MB40-04	10	1/4	1.85	1.60	.50	.30	.63	40	16.96
MB40-06	10	3/8	1.85	1.70	.50	.30	.75	40	22.68
MB40-08	10	1/2	2.54	1.88	.68	.29	.95	40	23.78
MB40-12	25	3/4	3.13	2.00	.82	.35	1.12	40	27.77
MB40-16	25	1	3.13	2.11	.90	.42	1.35	40	36.11

# PNEUMATIC

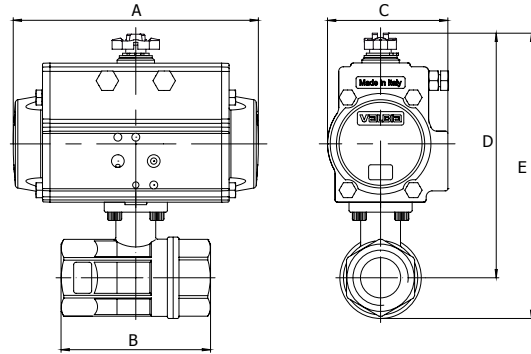
# ACTUATORS

**8P0080** - Direct Mount, 2-way Brass, Full Port Ball Valve with **Double Acting** "DA" Pneumatic Actuator

**8P0135** - Direct Mount, 2-way Brass, Full Port Ball Valve with **S.S. Ball & Stem** and "DA" Pneumatic Actuator



**Pressure Ratings**  
600PSI WOG - 1/4" to 4"



Part #	List Price	Size NPT	A	B	C	D	E	Act	Wt Lbs	List Price	Part #
8P0080-4	72.95	1/4"	4.33	2.64	1.77	3.86	4.53	32	1.9	131.79	8P0135-4
8P0080-6	72.95	3/8"	4.33	2.64	1.77	3.86	4.53	32	1.9	131.79	8P0135-6
8P0080-8	73.33	1/2"	4.33	2.64	1.77	3.86	4.53	32	1.8	132.59	8P0135-8
8P0080-12	84.30	3/4"	4.33	2.99	1.77	3.94	4.72	32	2.1	148.83	8P0135-12
8P0080-16	125.80	1"	4.33	3.35	1.77	4.37	5.31	32	2.7	196.60	8P0135-16
8P0080-20	192.01	1-1/4"	4.33	3.66	1.77	4.49	5.67	32	3.3	274.55	8P0135-20
8P0080-24	273.57	1-1/2"	5.51	4.13	2.80	6.54	7.99	52	6.1	390.05	8P0135-24
8P0080-32	422.57	2"	5.51	4.80	2.80	6.89	8.70	52	7.9	614.55	8P0135-32
8P0080-40	723.16	2-1/2"	6.46	6.10	3.17	7.95	10.20	63	12.2		
8P0080-48	1027.28	3"	6.46	6.89	3.17	8.31	10.98	63	16.7		
8P0080-64	1726.47	4"	9.47	8.03	4.17	10.31	13.58	85	29.2		

DIMENSIONS (in) \* **S.S. Ball & Stem Available in 1/4" to 2" Sizes Only**

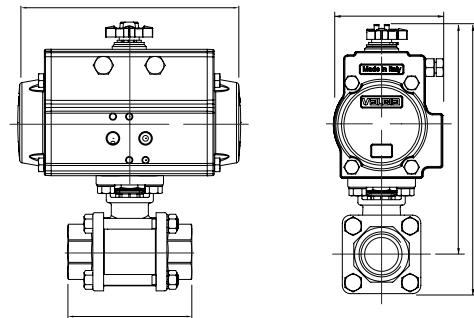
• **Spring Return** available upon request • **Lead-Free** available upon request

**8P0620/8P0622** - 2-Way 3-Piece 1000 psi Carbon Steel Valve with Pneumatic Actuator



• **DIRECT MOUNT**

**Pressure Ratings**  
1000PSI WOG - 1/4" to 2"  
800PSI WOG - 2 1/4" to 4"



**8P0620 (NPT)** - NPT Threaded Ends valve with Double Acting Actuator

**8P0622 (SW)** - Socket Weld Ends valve with Double Acting Actuator

Part #	List Price	Part #	List Price	Size	A	B	C	D	E	Act	Wt Lbs
8P0620-4	129.82			1/4"	4.33	2.51	1.77	3.43	5.14	32	2.5
8P0620-6	129.82			3/8"	4.33	2.51	1.77	3.43	5.14	32	2.5
8P0620-8	136.11	8P0622-8	136.11	1/2"	4.33	2.59	1.77	3.43	5.14	32	2.7
8P0620-12	155.48	8P0622-12	155.48	3/4"	4.33	3.00	1.77	3.66	5.45	32	2.9
8P0620-16	220.91	8P0622-16	220.91	1"	5.55	3.39	2.80	6.23	7.34	52	5.3
8P0620-20	302.04	8P0622-20	302.04	1-1/4"	5.55	4.05	2.80	6.34	7.70	52	8.3
8P0620-24	433.96	8P0622-24	433.96	1-1/2"	6.46	4.70	3.17	7.50	9.05	63	9.8
8P0620-32	578.96	8P0622-32	578.96	2"	8.27	5.17	3.72	7.80	10.37	75	15.3
8P0620-40	1190.37	8P0622-40	1190.37	2-1/2"	8.27	6.46	3.72	9.44	11.74	75	26.5
8P0620-48	1480.89	8P0622-48	1480.89	3"	9.47	7.19	4.17	10.34	13.06	85	35.4
8P0620-64	2544.06	8P0622-64	2544.06	4"	10.83	9.28	4.84	11.43	15.19	100	58.9

DIMENSIONS (in)

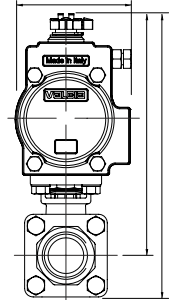
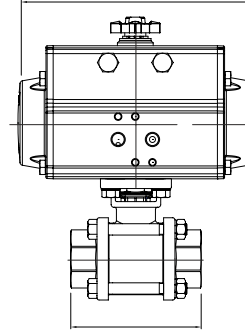
• **Spring Return** available upon request • **Butt Weld** Available

**8P0720/8P0722 - 2-Way 3-Piece 1000 psi Stainless Steel Valve with Pneumatic Actuator**



- STAINLESS STEEL
- DIRECT MOUNT

**Pressure Ratings**  
 1000PSI WOG - 1/4" to 2"  
 800PSI WOG - 2 1/4" to 4"



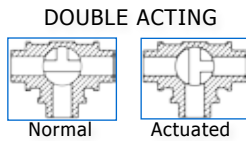
**8P0720 (NPT) - Threaded Ends valve with Double Acting Actuator**

**8P0722 (SW) - Socket Weld Ends valve with Double Acting Actuator**

Part #	List Price	Part #	List Price	Size	A	B	C	D	E	Act	Wt Lbs
8P0720-4	174.84			1/4"	4.33	2.51	1.77	3.43	5.14	32	2.5
8P0720-6	174.84			3/8"	4.33	2.51	1.77	3.43	5.14	32	2.5
8P0720-8	174.84	8P0722-8	174.84	1/2"	4.33	2.59	1.77	3.43	5.14	32	2.7
8P0720-12	184.26	8P0722-12	184.26	3/4"	4.33	3.00	1.77	3.66	5.45	32	2.9
8P0720-16	244.46	8P0722-16	244.46	1"	5.55	3.39	2.80	6.23	7.34	52	5.3
8P0720-20	344.44	8P0722-20	344.44	1-1/4"	5.55	4.05	2.80	6.34	7.70	52	8.3
8P0720-24	484.92	8P0722-24	488.92	1-1/2"	6.46	4.70	3.17	7.50	9.05	63	9.8
8P0720-32	686.79	8P0722-32	686.79	2"	8.27	5.17	3.72	7.80	10.37	75	15.3
8P0720-40	1279.88	8P0722-40	1279.88	2-1/2"	8.27	6.46	3.72	9.44	11.74	75	26.5
8P0720-48	1687.14	8P0722-48	1687.44	3"	9.47	7.19	4.17	10.34	13.06	85	35.4
8P0720-64	2815.22	8P0722-64	2815.22	4"	10.83	9.28	4.84	11.43	15.19	100	58.9

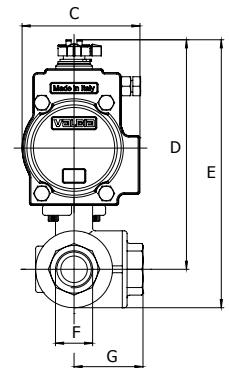
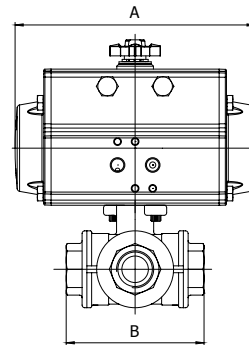
DIMENSIONS (in) • **Spring Return** available upon request • **Butt Weld** available upon request

**8P0129/8P0130 - 3-Way Direct Mount Brass Standard Port Pneumatic Actuator T & L Port**



Alternative Flow Patterns Available

**Pressure Ratings**  
 400PSI WOG - 1/4" to 3"

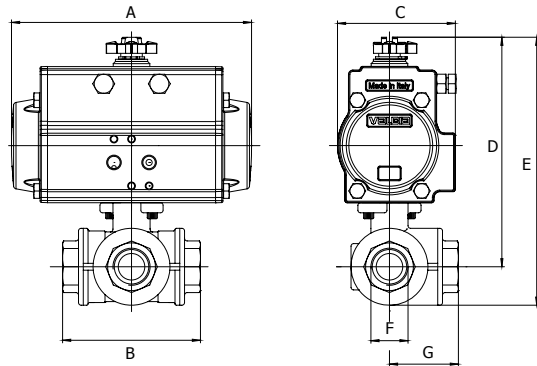
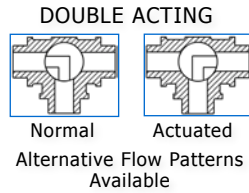


Part # T - Port	Part # L - Port	Size	A	B	C	D	E	F	G	Act	Wt Lbs	List Price
8P0129-4	8P0130-4	1/4"	4.33	2.64	1.77	3.76	4.43	0.39	1.32	32	2.4	104.21
8P0129-6	8P0130-6	3/8"	4.33	2.64	1.77	3.76	4.43	0.43	1.32	32	2.3	104.21
8P0129-8	8P0130-8	1/2"	4.33	2.87	1.77	3.76	4.43	0.43	1.44	32	2.4	104.21
8P0129-12	8P0130-12	3/4"	4.33	3.19	1.77	3.85	4.62	0.59	1.60	32	2.6	121.74
8P0129-16	8P0130-16	1"	5.55	3.74	2.80	5.63	6.58	0.79	1.87	52	5.1	179.57
8P0129-20	8P0130-20	1-1/4"	5.55	4.39	2.80	5.85	7.03	0.98	2.20	52	6.6	278.42
8P0129-24	8P0130-24	1-1/2"	5.55	4.86	2.80	6.34	7.76	1.26	2.43	52	8.5	435.19
8P0129-32	8P0130-32	2"	6.46	5.73	3.17	7.35	9.04	1.57	2.87	63	12.5	706.29
8P0129-40	8P0130-40	2-1/2"	6.46	6.93	3.17	7.80	10.00	1.95	3.47	63	19.7	1256.20
8P0129-48	8P0130-48	3"	6.46	7.08	3.17	7.80	10.02	1.95	3.54	63	22.9	1255.57

DIMENSIONS (in) • **Spring Return** available upon request

**8P0143** - Direct Mount, 3-Way Stainless Steel, "T" Full Port Valve with **Double Acting** "DA" Pneumatic Actuator

**8P0144** - Direct Mount, 3-Way Stainless Steel, "L" Full Port Valve with **Double Acting** "DA" Pneumatic Actuator



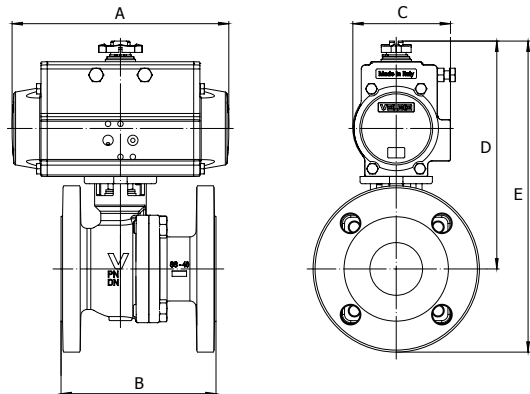
**Pressure Ratings**  
1000PSI WOG - 1/4" to 4"  
800PSI WOG - 1-1/4" to 2"

Part # T Port	Part # L Port	Size	A	B	C	D	E	F	G	Act DA	Wt Lbs	List Price
8P0143-4	8P0144-4	1/4"	5.55	2.83	2.80	5.45	6.23	0.43	1.41	52	3.7	302.57
8P0143-6	8P0144-6	3/8"	5.55	2.83	2.80	5.45	6.23	0.47	1.41	52	3.7	302.57
8P0143-8	8P0144-8	1/2"	5.55	3.26	2.80	5.65	6.56	0.59	1.63	52	4.2	302.57
8P0143-12	8P0144-12	3/4"	6.46	3.89	3.17	6.10	7.20	0.78	1.94	63	6.5	407.26
8P0143-16	8P0144-16	1"	6.46	4.40	3.17	6.63	7.96	0.98	2.20	63	8.1	523.47
8P0143-20	8P0144-20	1-1/4"	8.27	4.92	3.72	7.64	9.17	1.25	2.46	75	12.8	740.19
8P0143-24	8P0144-24	1-1/2"	9.47	5.86	4.17	8.59	10.47	1.49	2.93	85	18.9	988.83
8P0143-32	8P0144-32	2"	10.83	6.85	4.84	9.84	12.20	1.96	3.42	100	31.9	1642.65

DIMENSIONS (in)

• **Spring Return** available upon request

**8P766001** - 2-Way **Carbon Steel**, Full Port **ANSI 150** Direct Mount Flanged Ball valve with Stainless Steel Ball + Stem and "DA" Pneumatic Actuator

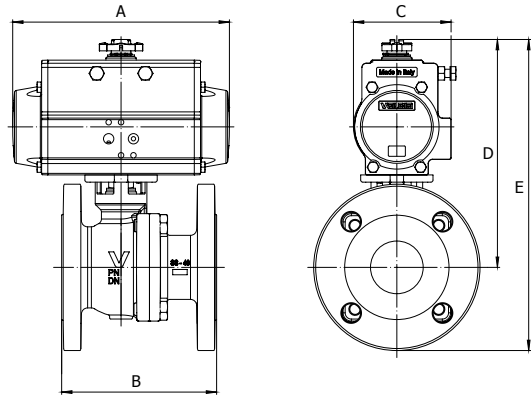


Part #	Size	A	B	C	D	E	Act	Wt Lbs	List Price
8P766001-16	1"	5.55	5.00	2.80	6.29	8.46	52	10.9	475.50
8P766001-24	1-1/2"	6.46	6.50	3.17	7.59	10.15	63	19.1	690.12
8P766001-32	2"	8.27	7.01	3.72	8.70	11.65	75	27.4	878.34
8P766001-48	3"	9.47	7.99	4.17	10.43	14.17	85	48.1	1596.52
8P766001-64	4"	10.83	9.02	4.84	11.49	16.02	100	65.8	2230.50

DIMENSIONS (in)

• **Spring Return** available upon request

**8P766000 - 2-Way Stainless Steel, Full Port ANSI 150 Direct Mount Flanged Ball Valve with Stainless Steel Ball + Stem and "DA" Pneumatic Actuator**



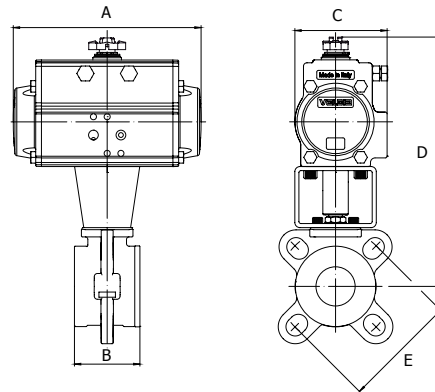
Part #	Size	A	B	C	D	E	Act	Wt Lbs	List Price
8P766000-16	1"	5.55	4.50	2.80	6.29	8.46	52	10.9	642.23
8P766000-24	1-1/2"	6.46	6.49	3.17	7.59	10.15	63	19.1	939.42
8P766000-32	2"	8.27	7.00	3.72	8.70	11.65	75	27.4	1287.78
8P766000-48	3"	9.47	7.99	4.17	10.43	14.17	85	48.1	2451.74
8P766000-64	4"	10.83	9.01	4.84	11.49	16.02	100	65.8	3477.03

DIMENSIONS (in) • Spring Return available upon request

**8P725002 - Stainless Steel Wafer Steam Valve, Full Port ANSI 150 with "DA" Pneumatic Actuator**



Steam Valve with High Temp Actuator



Part #	Size	A	B	C	D	E	Act	Wt Lbs	List Price
8P725002-16	1"	7.87	1.81	2.79	7.87	150	52	7.4	1164.22
8P725002-20	1-1/4"	8.03	2.12	2.79	8.03	150	52	8.1	1285.62
8P725002-24	1-1/2"	9.09	2.50	3.18	9.09	150	63	10.4	1329.61
8P725002-32	2"	10.11	3.23	3.74	10.11	150	75	16.4	1712.79
8P725002-40	2-1/2"	11.57	4.05	4.17	11.57	150	85	28.8	1819.59
8P725002-48	3"	11.92	4.80	4.17	11.92	150	85	33.3	2533.56
8P725002-64	4"	12.95	5.60	4.84	12.95	150	100	49.5	3544.94

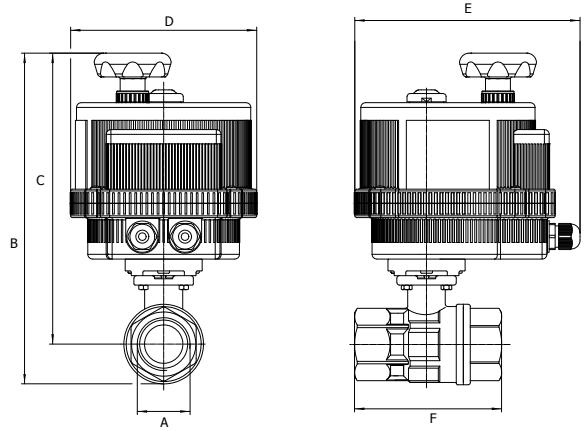
DIMENSIONS (in) • Spring Return available upon request

**8E064 - Direct Mount, 2 -Way Brass Full Port Ball Valve with Electric Actuator**



**ORDERING INFORMATION EXAMPLE**

<b>8E054</b>	<b>4</b>	<b>001</b>
Series	Dash-Size	Voltage
	Thread	001 = 12v
	-4 - -64	002 = 24v
	1/4" - 4"	003 = 100-200v



Size/ Dash	- 4	- 6	- 8	- 12	- 16	- 20	- 24	- 32	- 40	- 48	- 64
12v/100-240v	701.33	701.33	701.33	711.04	757.64	806.76	1358.86	1662.95	1941.48	2215.05	2957.86
24v	623.71	623.71	623.71	634.29	678.76	729.33	1217.86	1461.57	1740.00	2013.67	2753.14
A	.250	.375	.500	.750	1.00	1.25	1.50	2.00	2.50	3.00	4.00
B	7.51	7.51	7.51	7.72	8.33	8.63	11.3	12.0	14.2	14.9	16.9
C	6.85	6.85	6.85	6.93	7.36	7.50	9.92	10.2	11.9	12.3	13.7
D	4.84	4.84	4.84	4.84	4.84	4.84	6.18	6.18	7.28	7.28	8.31
E	6.41	6.41	6.41	6.41	6.41	6.41	7.50	7.50	8.43	8.43	9.33
F	2.64	2.64	2.64	3.00	3.35	3.66	4.15	4.80	6.10	6.89	8.03
ACT	VB015	VB015	VB015	VB015	VB015	VB015	VB030	VB030	VB060	VB060	VB110

**DIMENSIONS (in)**

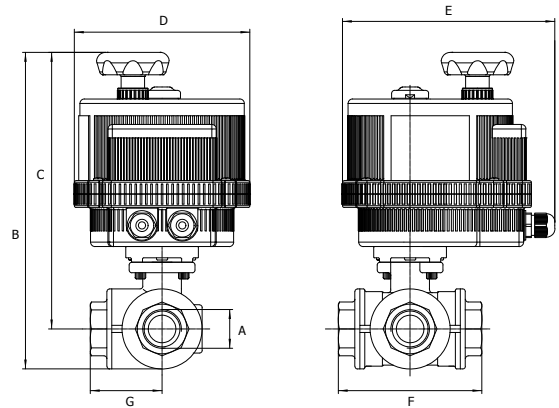
• Fail safe battery backup Actuator available • 0-10 VDC 4-20mA positioning Actuator available

**8E065 - Direct Mount, 3 -Way Brass, "T" Port Ball Valve with Electric Actuator**



**ORDERING INFORMATION EXAMPLE**

<b>8E054</b>	<b>4</b>	<b>001</b>
Series	Dash-Size	Voltage
	Thread	001 = 12v
	-4 - -64	002 = 24v
	1/4" - 4"	003 = 100-200v



Size/ Dash	- 4	- 6	- 8	- 12	- 16	- 20	- 24	- 32	- 48	- 64
12v/100-240v	749.14	749.14	749.14	767.19	1302.43	1402.38	1580.67	2057.05	2647.48	2661.00
24v	671.95	671.95	671.95	690.05	1161.43	1261.38	1439.67	1855.67	2446.10	2459.62
A	0.39	0.43	0.43	0.59	0.79	0.98	1.26	1.57	1.95	1.95
B	7.44	7.44	7.44	7.63	9.98	10.4	11.1	13.0	13.3	13.3
C	6.77	6.77	6.77	6.86	9.03	9.25	9.74	11.3	11.9	11.9
D	4.84	4.84	4.84	4.84	6.18	6.18	6.18	7.28	7.28	7.28
E	6.41	6.41	6.41	6.41	7.50	7.50	7.50	8.43	8.43	8.43
F	2.64	2.64	2.87	3.19	3.74	4.39	4.86	5.73	6.93	7.08
G	1.32	1.32	1.44	1.60	1.87	2.20	2.43	2.87	3.47	3.54
ACT.	VB015	VB015	VB015	VB015	VB030	VB030	VB030	VB060	VB060	VB060

**DIMENSIONS (in)**

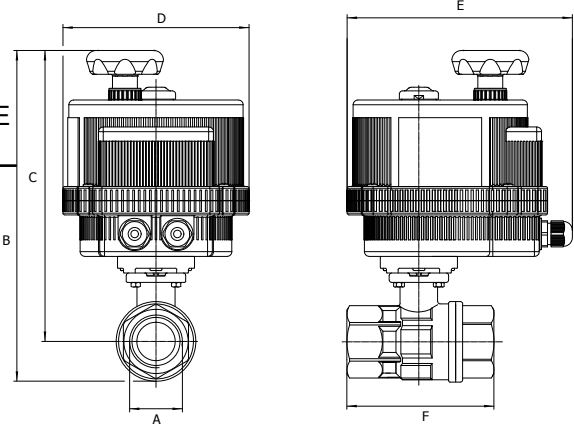
• Fail safe battery backup Actuator available • 0-10 VDC 4-20mA positioning Actuator available

**8E068** - Direct Mount, 2 -Way Brass Full Port Ball Valve with S.S. Ball + Stem and Electric Actuator



**ORDERING INFORMATION EXAMPLE**

<b>8E054</b>	<b>4</b>	<b>001</b>
Series	Dash-Size	Voltage
	Thread	001 = 12v
	-4 - -64	002 = 24v
	1/4" - 4"	003 = 100-200v



Size/ Dash	- 4	- 6	- 8	- 12	- 16	- 20	- 24	- 32
12v/100-240v	837.99	837.99	837.99	848.58	901.39	941.87	1623.47	2019.63
24v	752.23	752.23	752.23	762.78	814.09	879.03	880.10	1833.98
A	.250	.375	.500	.750	1.00	1.25	1.50	2.00
B	7.51	7.51	7.51	7.72	8.33	8.63	11.3	12.0
C	6.85	6.85	6.85	6.93	7.36	7.50	9.92	10.2
D	4.84	4.84	4.84	4.84	4.84	4.84	6.18	6.18
E	6.41	6.41	6.41	6.41	6.41	6.41	7.50	7.50
F	2.64	2.64	2.64	3.00	3.35	3.66	4.15	4.80
ACT	VB015	VB015	VB015	VB015	VB015	VB015	VB030	VB030

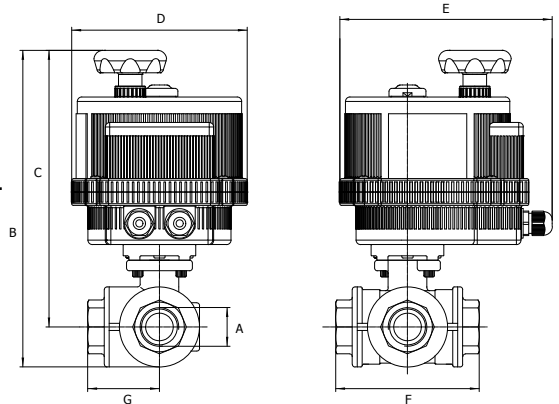
**DIMENSIONS (in)**

**8E066** - Direct Mount, 3 -Way Brass, "L" Port Ball Valve with Electric Actuator



**ORDERING INFORMATION EXAMPLE**

<b>8E054</b>	<b>4</b>	<b>001</b>
Series	Dash-Size	Voltage
	Thread	001 = 12v
	-4 - -64	002 = 24v
	1/4" - 4"	003 = 100-200v



Size/ Dash	- 4	- 6	- 8	- 12	- 16	- 20	- 24	- 32	- 48	- 64
12v/100-240v	832.40	832.40	832.40	852.45	1447.10	1558.16	1756.27	2285.59	2941.64	2956.64
24v	746.64	746.64	746.64	766.70	1290.46	1401.52	4599.64	2061.82	2717.87	2732.87
A	0.39	0.43	0.43	0.59	0.79	0.98	1.26	1.57	1.95	1.95
B	7.44	7.44	7.44	7.63	9.98	10.4	11.1	13.0	13.3	13.3
C	6.77	6.77	6.77	6.86	9.03	9.25	9.74	11.3	11.9	11.9
D	4.84	4.84	4.84	4.84	6.18	6.18	6.18	7.28	7.28	7.28
E	6.41	6.41	6.41	6.41	7.50	7.50	7.50	8.43	8.43	8.43
F	2.64	2.64	2.87	3.19	3.74	4.39	4.86	5.73	6.93	7.08
G	1.32	1.32	1.44	1.60	1.87	2.20	2.43	2.87	3.47	3.54
ACT.	VB015	VB015	VB015	VB015	VB030	VB030	VB030	VB060	VB060	VB060

**DIMENSIONS (in)**

• Fail safe battery backup Actuator available • 0-10 VDL OL 4-20mA positioning Actuator available

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**HYDRAULIC**

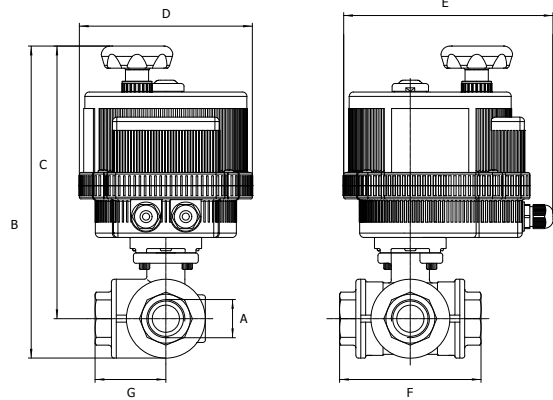
**8E071** - Direct Mount, 3-way ASTM-CF8M 316 Stainless Steel, "T" Full Port Ball Valve with Electric Actuator

**8E072** - Direct Mount, 3-way ASTM-CF8M 316 Stainless Steel "L" Full Port Ball Valve with Electric Actuator



**ORDERING INFORMATION EXAMPLE**

<b>8E054</b>	<b>4</b>	<b>001</b>
Series	Dash-Size	Voltage
	Thread	001 = 12v
	-4 - -64	002 = 24v
	1/4" - 4"	003 = 100-200v



Size/ Dash	- 4	- 6	- 8	- 12	- 16	- 20	- 24	- 32
12v/100-240v	1059.05	1059.05	1595.06	1712.69	2048.63	2291.72	2851.33	3751.33
24v	971.65	971.65	1436.18	1553.07	1820.59	1820.59	2063.68	2575.68
A	.250	.500	.500	.750	1.00	1.25	1.50	2.00
B	8.40	8.40	10.3	10.3	11.8	12.4	13.9	15.1
C	7.70	7.70	9.10	9.10	10.7	11.0	12.1	12.9
D	4.84	4.84	6.18	6.18	7.28	7.28	8.19	8.19
E	6.41	6.41	7.50	7.50	8.43	8.43	9.33	9.33
F	2.83	2.83	3.26	3.89	4.40	4.92	5.86	6.85
G	1.41	1.41	1.63	1.94	2.20	2.46	2.93	3.42
ACT	VB015	VB015	VB030	VB030	VB060	VB060	VB110	VB190

DIMENSIONS (in)



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0304-C-3	393	100-183	302	10-094	51	101-392	304	10-173	52	10-258	55
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0304-C-6	393	100-187	302	10-099	51	101-396	304	101-770	304	10-260	55
0304-C-8	393	100-188	302	10-100	51	101-397	304	101-771	304	10-260L	55
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0319-5	393	100-395	302	101-111	303	101-453	305	10-218	53	10-283	56
0319-6	393	100-396	302	10-112	51	101-454	305	10-219	53	10-283B	56
0319-8	393	100-397	302	101-161	303	101-458	305	10-220	53	10-284	56
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10-002	48	10-041LF	171	101-165	303	101-462	305	10-228L	54	10-286B	56
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10-322	57	10-354	57	10-485	61	105-443	257	107-012	295	107-671	300
10-323	57	10-355	57	10-485LF	171	105-444	257	107-013	295	107-672	300
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12-059	66	12-275	64	1502-16-12	391	16-122	85	18-017	172	18-102B	77
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FSO403-10-10.....	415	K-24.....	349	MMNV16NPT.....	440	SSC2501-4-2.....	429				
FSO403-12-12.....	415	K-28.....	349	MMNV4NPT.....	440	SSC2501-4-4.....	429				
FSO403-16-16.....	415	K-3.....	349	MMNV6NPT.....	440	SSC2501-6-2.....	429				
FSO403-20-20.....	415	K-311.....	349	MMNV8NPT.....	440	SSC2501-6-4.....	429				
FSO403-24-24.....	415	K-32.....	349	MMPH100.....	437	SSC2501-6-6.....	429				
FSO403-4-4.....	415	K-4.....	349	MMPH125.....	437	SSC2501-6-8.....	429				
FSO403-6-6.....	415	K-5.....	349	MMPH160.....	437	SSC2501-8-4.....	429				
FSO403-8-8.....	415	K-6.....	349	MMPH200.....	437	SSC2501-8-6.....	429				
GB2-20T-SAE.....	436	K-7.....	349	MMPH250.....	437	SSC2501-8-8.....	429				
GB2-24T-SAE.....	436	K-8.....	349	MMPH315.....	437	SSC2502-12-12.....	429				
GB2-32T-SAE.....	436	K-9.....	349	MMPH400.....	437	SSC2502-16-16.....	429				
GB3L-20T-SAE.....	436	KS001.....	352	MMPH50.....	437	SSC2502-4-4.....	429				
GB3L-24T-SAE.....	436	KS-10.....	349	MMPH80.....	437	SSC2502-6-4.....	429				
GB3L-32T-SAE.....	436	KS-11.....	349	MMRS100.....	437	SSC2502-6-6.....	429				
GE2-04-SAE.....	436	KS-12.....	349	MMRS125.....	437	SSC2502-8-8.....	429				
GE2-06-SAE.....	436	KS-14.....	349	MMRS160.....	437	SSC2601-2-2.....	429				
GE2-08-SAE.....	436	KS-14.....	349	MMRS200.....	437	SSC2601-4-2.....	429				
GE2-112T-NPT.....	436	KS-16.....	349	MMRS250.....	437	SSC2601-4-4.....	429				
GE2-114T-NPT.....	436	KS-18.....	349	MMRS315.....	437	SSC2601-6-4.....	429				
GE2-12-NPT.....	436	KS-20.....	349	MMRS375.....	437	SSC2601-6-6.....	429				
GE2-12-SAE.....	436	KS-24.....	349	MMRS50.....	437	SSC2601-8-8.....	429				
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GE2-16-SAE.....	436	KS-3.....	349	NV-12-F.....	369	SSC2603-16-16.....	429				
GE2-1-NPT.....	436	KS-311.....	349	NV-12-F.....	432	SSC2603-2-2.....	429				
GE2-2T-NPT.....	436	KS-32.....	349	NV-12-M.....	369	SSC2603-4-4.....	429				
GE2-34-NPT.....	436	KS-4.....	349	NV-12-M.....	432	SSC2603-6-6.....	429				
GE2-38-NPT.....	436	KS-5.....	349	NV-14-F.....	369	SSC2603-8-8.....	429				
GE3L-04-SAE.....	436	KS-6.....	349	NV-14-F.....	432	SSC318-12.....	428				
GE3L-06-SAE.....	436	KS-7.....	349	NV-14-M.....	369	SSC318-16.....	428				
GE3L-08-SAE.....	436	KS-8.....	349	NV-14-M.....	432	SSC318-2.....	428				
GE3L-112T-NPT.....	436	KS-9.....	349	NV-1-F.....	369	SSC318-4.....	428				
GE3L-114T-NPT.....	436	KZE-B-14-PF.....	432	NV-1-F.....	432	SSC318-6.....	428				
GE3L-12-NPT.....	436	KZE-B-14-SM.....	432	NV-1-M.....	369	SSC318-8.....	428				
GE3L-12-SAE.....	436	KZE-B-38-PF.....	432	NV-1-M.....	432	SSC320-12.....	428				
GE3L-14-NPT.....	436	KZE-B-38-SM.....	432	NV-34-F.....	369	SSC320-16.....	428				
GE3L-16-SAE.....	436	LSQ-VEP-12-PF.....	431	NV-34-F.....	432	SSC320-2.....	428				
GE3L-1-NPT.....	436	LSQ-VEP-12-SF.....	431	NV-34-M.....	369	SSC320-4.....	428				
GE3L-2T-NPT.....	436	LSQ-VEP-1-PF.....	431	NV-34-M.....	432	SSC320-6.....	428				
GE3L-34-NPT.....	436	LSQ-VEP-1-SF.....	431	NV-38-F.....	369	SSC320-8.....	428				
GE3L-38-NPT.....	436	LSQ-VEP-20-PF.....	431	NV-38-F.....	432	SSC6801-12-12.....	429				
GT15.....	377	LSQ-VEP-20-SF.....	431	NV-38-M.....	369	SSC6801-16-16.....	429				
GT30.....	377	LSQ-VEP-24-PF.....	431	NV-38-M.....	432	SSC6801-4-4.....	429				
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HNV-12-F.....	368	LSQ-VEP-34-PF.....	431	SG-5000.....	352	SSC6801-8-8.....	429				
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		MB40-06.....	441	SS-3751.....	352	VG150.....	337				

## GENERAL INFO

### Minimum Order

There is no minimum order. However, all orders under \$50 are subject to a \$5 handling fee. Payment terms are 2% 10 days/ net 30 days. A 2% service charge per month will be collected on all past due balances. All Backorders under \$10 will be canceled. Online orders have no minimum

### Uh...Oh Catalog Errors

We strive to provide a completely error free catalog, but if errors are discovered, they are corrected in our computer immediately. **Please note that current computer pricing supercedes printed catalog errors.**

### Damage/ Shortage Claims

Please be sure to count the cartons you sign for and note any damage on the bill of Lading. Open your order immediately to check for any concealed damage. If damaged, the original carton should be kept for possible carrier inspection. Shortage or damage claims must be reported within **5 days** of delivery. To process a claim, we need your invoice number or customer number. Once we ship an order it's consigned to the carrier. Please note: THEY are responsible for any shortage or damage incurred - until you sign a clear bill of receipt. Usually, carriers will not honor a claim if they have a signed receipt from you.

### Be Smart

These products are intended for use by qualified, experienced professionals, and the selection of appropriate products for the intended use must be made by persons knowledgeable in this field.

### Limited Warranty:

All of our goods are guaranteed only to extent of replacing, requiring or repairing any part that proves defective in workmanship or material, provided it is reported to us no later than 30 days after receipt of the part. No responsibility will be assumed for deterioration, wear or injury of parts which results from age, accident or abuse. Except as expressly provided herein, Midland Metal Mfg. does not make any warranty or representation, express or implied, with respect to its products, including without limitation any implied or expressed warranty of merchantability or fitness for a particular purpose. In addition, under no circumstances shall Midland Metal Mfg. be liable for lost profits, lost savings or other consequential, incidental, special or indirect damages, or for acts of negligence that are not intentional or reckless in nature regardless of whether it has been advised of the possibility of such damages.

### Special Order Items

Orders for special products or blanket purchase orders cannot be canceled without our authorization, and only upon terms that will indemnify us against loss.

### Dimension Disclaimer

Dimensions may change without notice. Please contact Midland if they are critical.

### Copyright Protection

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### Return Policy

Unused NON-DEFECTIVE items in Midland packages with part numbers clearly identified and in resaleable condition are subject to a 25% restocking charge and **must be returned within six months from invoice date.** Custom made or blanket ordered, special items are not returnable.

DEFECTIVE items, may be returned at Midland's discretion for credit or replacement. No cash refunds will be given. For a Return Authorization (RA) number before shipping product, please call Customer Service at 1-800-821-5725. NO returns of any type will be accepted without lot traceability and an RA number.

**Returns must be received within 30 days of the issuance of the 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.

**Returns must be received within 30 days of the issuance of the RA number.**

### California Customers:

Midland Metal does not guarantee that all products meet California environmental laws or Proposition 65. It is the sole responsibility and liability of the Midland distributor to order products for use in California that comply with California laws.

**Midland Metal Manufacturing Company**  
 phone **800-821-5725** fax **800-877-5391**  
 P.O. Box 415040  
 Kansas City, MO 64141-5040

**CREDIT APPLICATION**  
 (Please type or print legibly)

( ) New Account

( ) Updated Information

Date: \_\_\_\_\_

Legal Business Name					
DBA:			Resale No. (Attach Certificate)		
Mailing Address			Street Address		
City	State	Zip	City	State	Zip
Phone	Fax		Email		
Do you except backorders?	YES	NO	UPS Collect # (If Preferred)		
Accounting Contact Informaiton	FAX		EMAIL		

How did you hear about Midland:  Referral  Postcard  Email  Web  Magazine

Other \_\_\_\_\_

Please place a check mark where appropriate:

( ) Corporation

( ) Partnership

( ) Proprietorship

**Business premises:**

( ) Owned Value \$ \_\_\_\_\_ Mortgage \$ \_\_\_\_\_

( ) Rented Lessor: \_\_\_\_\_

Founded \_\_\_\_/\_\_\_\_/\_\_\_\_ Fed ID# \_\_\_\_\_ EIN \_\_\_\_\_ Annual sales \$ \_\_\_\_\_

Name of Principal	Name of Principal	Name of Principal
Residence Address	Residence Address	Residence Address
City	City	City
State & Zip	State & Zip	State & Zip
Title & S/S No.	Title S/S No.	Title & S/S No.



References:

- 1. Vendor: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_
- 2. Vendor: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_
- 3. Vendor: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_
- 4. Bank: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_
- 5. Bank Contact: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

**Credit, if extended, depends upon the degree of confidence this Credit Application affords.**

In consideration for the extension of credit by **Midland Metal Manufacturing Company**, Applicant agrees to pay invoices within terms. Invoices not timely paid will be subject to service charges of 18 percent per annum. Should an account be referred to third parties for collection, Applicant agrees to pay all cost of collecting, including attorneys' fees.

\_\_\_\_\_

Applicant's Signature Date

By: \_\_\_\_\_, \_\_\_\_\_

**FOR PROPRIETORSHIP ONLY**  
**\* Please Sign Personal Guaranty**

In consideration for the extension of credit to above Applicant by **Midland Metal Manufacturing Company** the undersigned, jointly and severally, personally and unconditionally, guaranty performance in accordance with this Credit Application. This is a continuing guaranty, subject to cancellation only by registered mail directed to **Midland Metal Manufacturing Company**, P.O. Box 415040, Kansas City, MO 64141-5040.

EXECUTED at \_\_\_\_\_, \_\_\_\_\_, on the date above stated.  
City State

\_\_\_\_\_  
 Guarantor (Sign and Print Name) Social Security Number

\_\_\_\_\_  
 Guarantor (Sign and Print Name) Social Security Number

Midland Also Accepts:



	Midland	Parker	Tomco	Amflo	Breco	Milton	Dixon	Hansen	Foster
<b>Industrial Interchange 1/4</b>	28560	UC304F-4	UC2-16	C60		745			
	28579	UC304M-4	UC2-15	C61		746			
	28589	UC304M-6	UC2-20	C61-03					
	28551	B22A	M180	C20-01	B2CM1-B		DC2101	900	2903
	28552	B22	M181	C21	B2CM2-B	716M	DC21	1100	3103
	28553	B22E	M182	C21-03	B2CM3-B	719M	DC2103	1300	3303
	28539	B23A	M183	C20-21	B2CF1-B		DC2021	800	2803
	28540	B23	M184	C20	B2CF2-B	715M	DC20	1000	3003
	28541	B23E	M185	C20-23	B2CF3-B	718M	DC2023	1200	3203
	28562	B20-3B	M186	C20-42	B2CS2-B	717M	DC2042		
	28564	B20-5B	M187		B2CS3-B	717-6M	DC2044	1700	3703
	28565	B20-3BP	M189	C20-42L	B2CPS2-B	1717-4M	DC2042L	1600P	1513
	28566	B20-5BP	M190	C20-44L	B2CPS3-B	1717-6M	DC2044L	1700P	1713
	28545	H0C	1802	CP21-01	BB2M1-S	726	DCP2101	12	12-3
	28546	H2C	1804	CP21	BB2M2-S	727	DCP21	10	10-3
	28547	H2C-E	1806	CP21-03	BB2M3-S	733	DCP2103	14	14-3
	28533	H1C	1803	CP20-21	BB2F1-S	729	DCP2021	13	13-3
	28534	H3C	1805	CP20	BB2F2-S	728	DCP20	11	11-3
	28535	H3C-E	1807	CP20-23	BB2F3-S	732	DCP2023	15	15-3
	28557	H8C	1824	CP21-42	BB2S2-S	736	DCP2142	16	16-3
	28559	H9C	1826	CP21-44	BB2S3-S	736-6	DCP2144	17	17-3
	28558	H8CP	1850	CP21-42L	BB2PS2-S	1736-4	DCP2142L		51-3
	28561	H9CP	1860	CP21-44L	BB2PS3-S	1736-6	DCP2144L		71-3
	28515	B12A	A2180	C1-01	B2JM1-B		DC101	B21QS-12M	TF2903
	28516	B12	A2181	C1	B2JM2-B	786	DC1	B21QS-25M	TF3103
	28517	B12E	A2182	C1-03	B2JM3-B	789	DC103	B21QS-37M	TF3303
	28506	B13A	A2183	C2-21	B2JF1-B		DC221	B21QS-12F	TF2803
	28507	B13	A2184	C2	B2JF2-B	785	DC2	B21QS-25F	TF3003
28508	B13E	A2185	C2-23	B2JF3-B	788	DC223	B21QS-37F	TF3203	
28528	B10-3B	A2186	C2-42	B2JS2-B	786-4	DC242	B21QS-25H	TF3603	
28530	B10-5B	A2188	C2-44	B2JS3-B	786-6	DC244	B21QS-37H	TF3703	
28531	B10-3BP	A2189	C2-42L	B2JPS2-B	1786-4	DC242L	B21QS-25HP	TF1513	
28532	B10-5BP	A2190	C2-44L	B2JPS3-B	1786-6	DC244L	B21QS-37HP	TF1713	
28509	0C	2152	CP1-01	BJ2M1-S		DCP101		TF12	
28510	2C	2154	CP1	BJ2M2-S	783	DCP1	21AP-25M	TF10	
28511	2C-E	2156	CP1-03	BJ2M3-S		DCP103	21AP-37M	TF14	
28500	1C	2153	CP2-21	BJ2F1-S		DCP221		TF13	
28501	3C	2155	CP2	BJ2F2-S	784	DCP2	21AP-25F	TF11	
28502	3C-E		CP2-23	BJ2F3-S		DCP223	21AP-37F	TF15	
28518	8C	2164	CP1-42	BJ2S2-S	783-4	DCP142	21AP-25H	TF16	
28520	9C	2166	CP1-44	BJ2S3-S	783-6	DCP144	21AP-37H	TF17	
28521	8CP	2150	CP1-42L	BJ2PS2-S	1783-4	DCP142L		TF51	
28522	9CP	2160	CP1-44L	BJ2PS3-S	1783-6	DCP144L		TF71	
28592		A102		B20M1-B					
28593	B52	A101	C45	B20M2-B	776	DC37	20AS-25M	210-3103	
28594	B52E	A107		B20M3-B		DC3703	20AS-37M	210-3303	
28583		A103		B20F1-B					
28584	B53	A100	C38B	B20F2-B	775	DC38	20AS25F	210-3003	
28585	B53E	A106		B20F3-B		DC3823	20AS37F	210-3203	
28601		A104		B20S2-B	776-4	DC3842			
28603		A105		B20S3-B	776-6	DC3844			
28586		202		B02M1-S				210-12	
28587	A2C	200	CP37	B02M2-S	777	DCP37	20AP-25M	210-10	
28577		302		B02F1-S					
28578	A3C	300	CP38	B02F2-S	778	DCP38		210-11	
28595	A8C	400	CP37-42	B02S2-S	777-7	DCP3742			
28597		500		B02S3-S	777-6	DCP3744			
28667	BST-1M	ST1M	CST1B	1STM1-B				12MS	
28665	BST-2M	ST2M	CST3B	2STM2-B	1762	STMC2	2-S15	25MS	
28666	BST-3M	ST3M	CST5B	3STM3-B		STMC3	3-S20	38MS	
28668	BST-4M	ST4M	CST7B	4STM4-B		STMC4	4-S25	50MS	
28669	BST-6M	ST6M				STMC6	6-S30	75MS	
28670	BST-8M	ST8M				STMC8	8-S35	100MS	
28671	BST-1	ST1	CST2B	1STF1-B				12FS	
28651	BST-2	ST2	CST4B	2STF2-B	1761	STFC2	2-S16	25FS	
28652	BST-3	ST3	CST6B	3STF3-B		STFC3	3-S21	38FS	
28672	BST-4	ST4	CST8B	4STF4-B		STFC4	4-S26	50FS	
28673	BST-6	ST6				STFC6	6-S31	75FS	
28674	BST-8	ST8				STFC8	8-S36	100FS	
28675	ST-N1M	SP1M-S	CPST1	ST1M1-S				12MP	
28639	ST-N2M	SP2M-S	CPST3	ST2M2-S	1763	STMP2	2-T15	25MP	
28640	ST-N3M	SP3M-S	CPST5	ST3M3-S		STMP3	3-T20	38MP	
28676	ST-N4M	SP4M-S	CPST7	ST4M4-S		STMP4	4-T25	50MP	
28677	ST-N6M	SP6M-S				STMP6	6-T30	75MP	
28678	ST-N8M	SP8M-S				STMP8	8-T35	100MP	
28688	ST-N1	SP1-S	CPST2	ST1F1-S					
28619	ST-N2	SP2-S	CPST4	ST2F2-S	1764	STFP2	2-T16	25FP	
28620	ST-N3	SP3-S	CPST6	ST3F3-S		STFP3	3-T21	38FP	
28679	ST-N4	SP4-S	CPST8	ST4F4-S		STFP4	4-T26	50FP	
28680	ST-N6	SP5-S				STFP6	6-T31	75FP	
28681	ST-N8	SP6-S				STFP8	8-T3	100FP	
28682		1102							
28683	B72	1101	C27	B-2LM2-B	794	DC27		LM3103	
28684	B73	1100	C28	B2LF2-B	790	DC28		LM3003	
28685		1106							
28686	L2C	1109	CP27	B-L2M2-S	791	DCP27		LM10	
28687	L3C	1110	CP28	B-L2F2-S	792	DCP28		LM11	
98823	24C	T410	C25-02	B-3CM2-S	1834	DC2502	410	4104	
98824	24	T430	C25	B-3CM3-S	1836	DC25	430	4304	
98810	25C	T400	C26-22	B-3CF2-S	1833	DC2622	400	4004	
98811	25	T420	C26	B-3CF3-S	1835	DC26	420	4204	
98814	H0E	T40	CP25-02	B-B3M2-S	1839	DCP2502	40	40-4	
98815	H2E	T42	CP25	B-B3M3-S	1837	DCP25	42	42-4	
98801	H1E	T41	CP26-22	B-B3F2-S	1840	DCP2622	41	41-4	
98802	H3E	T43	CP26	B-B3F3-S	1838	DCP26	43	43-4	
<b>Lincoln Interchange 1/4</b>									
<b>Industrial Interchange 3/8</b>									



**THREAD INFORMATION**

**THREAD INFORMATION**

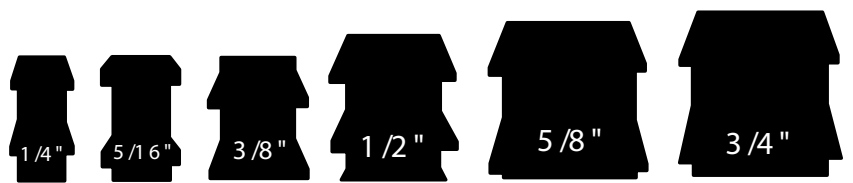
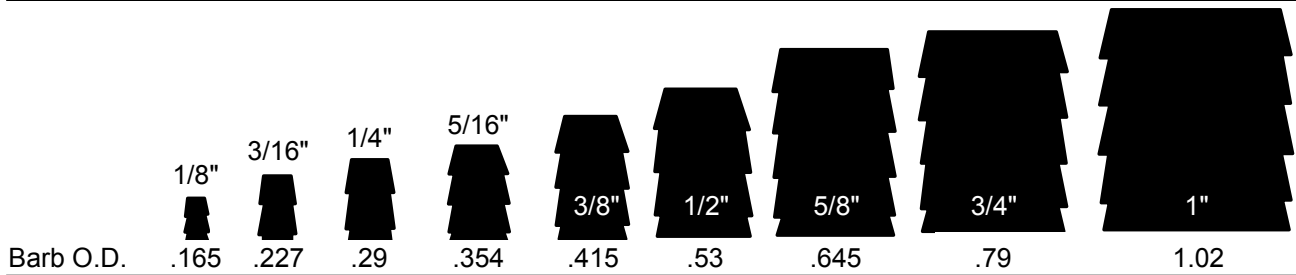
**Thread Chart**

DASH SIZE	2	3	4	5	6	7	8	10	12	14	16	20	24	32	40	48	
O.D. TUBING SIZE	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		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		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		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	5/16-24	5/16-24	7/16-24	1/2-24	9/16-24	5/8-24	11/16-20	13/16-18	1-18	1 1/8-18							
FLARELESS																	
COMPRESSION (PLASTIC TUBE)	5/16-24		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		7/16-24	1/2-20	9/16-20		11/16-16										
STEEL																	
COMPRESSION (HIGH PRESSURE)	5/16-24		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		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																	
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		14	16	18	20	22	24	26	27	30	33	36	42	48		
CODE 61 FLANGE HEAD O.D	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	
FLANGE HEAD O.D							1.19	1.335	1.50		1.75	2.00	2.38	2.81	3.31	4.00	
FLANGE HEAD O.D							1.25		1.62		1.88	2.12	2.50	3.12			

# THREAD PROFILES

# THREAD PROFILES

## Pipe Threads

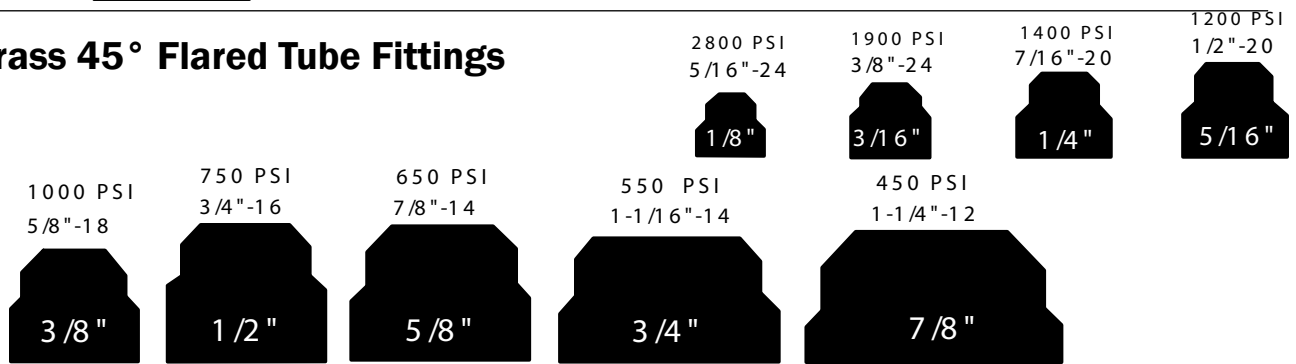


## Garden Hose Fittings

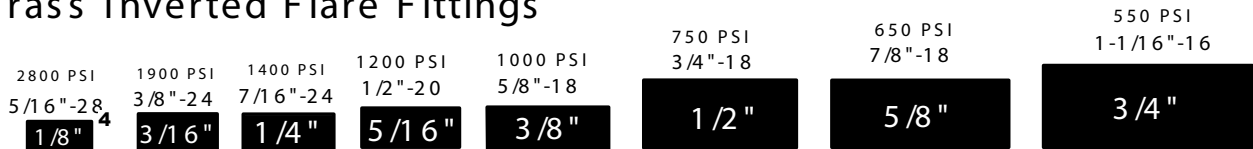
Male Garden Hose Threads are 3/4" with O.D. of 1.0625 and 11-1/2 threads per inch



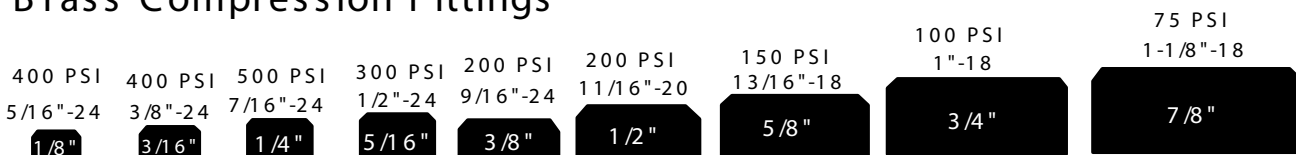
## Brass 45° Flared Tube Fittings



## Brass Inverted Flare Fittings



## Brass Compression Fittings



## Tubing O.D. Size

