

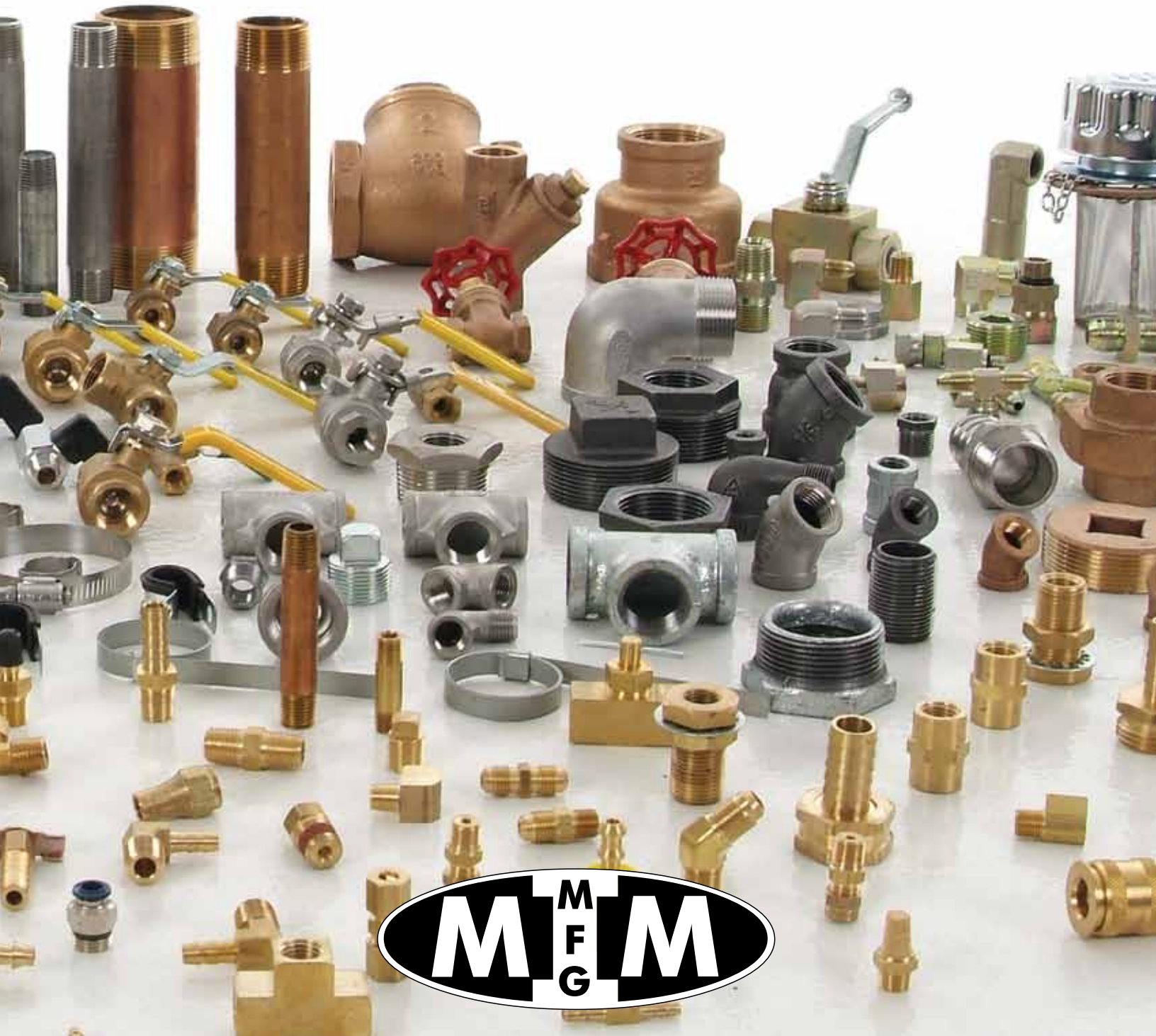
Effective January 1, 2010

MIDLAND METAL MFG

Fittings, Valves, Clamps & Accessories for Hose, Pipe and Tube



1980 - 2010



WWW.MIDLANDINDUSTRIAL.COM

ACCOUNT INFORMATION**ACCOUNT INFORMATION****Fax back to:**
888-877-5391**ACCOUNT INFORMATION**
REQUEST FORM**Fax back to:**
888-877-5391

ACCOUNT SUMMARY		
NAME	ACCOUNT #	MULTIPLIER
SALES REPRESENTATIVE		CONTACT
ACCOUNT MANAGER ACCESS		
CUSTOMER ID	AUTHORIZATION CODE	

SAVE
5%

----- FILL OUT THE FOLLOWING BEFORE FAXING -----

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Please select how you would like us to provide information about your orders

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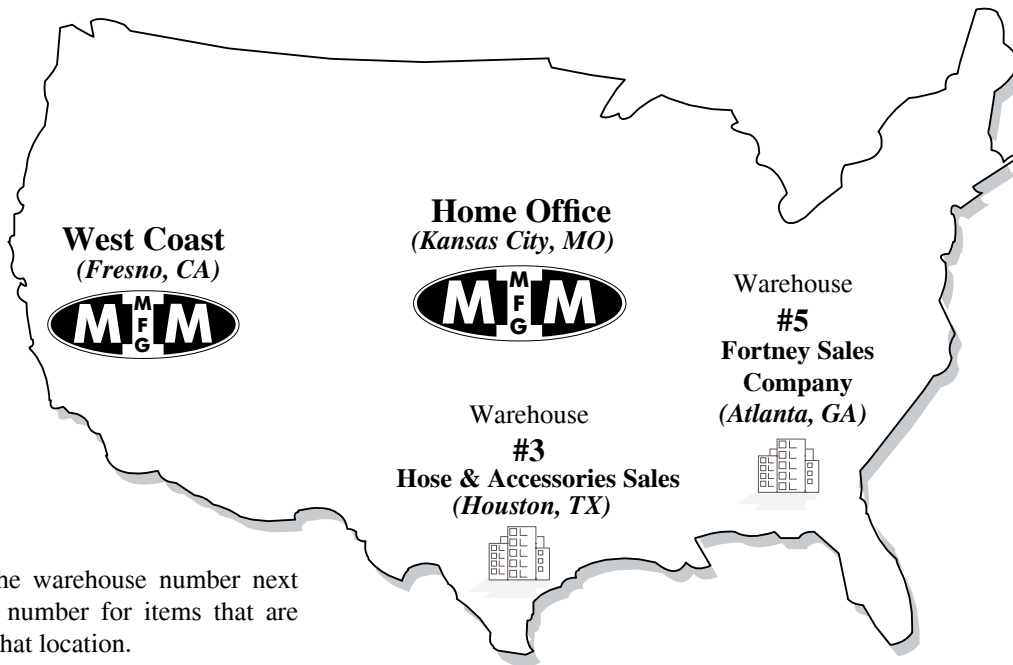
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Company Name: _____ **Contact Name:** _____**Address:** _____ **Phone #** _____**City:** _____ **State:** _____ **Zip:** _____**Special Notes:** _____

MORE LOCATIONS TO SERVE YOU!



Look for the warehouse number next to the part number for items that are stocked in that location.

Midland has added a complete warehouse to better serve the West Coast. We will also continue to build the product selection available from our current Atlanta and Houston stocking locations. This is consignment stock. Ordering through a remote warehouse is the same as ordering direct from Midland's home office in Kansas City, MO. All accounting will be handled in Kansas City.

Check stock and order direct from any warehouse!

At www.midlandindustrial.com you can choose to order directly from any of Midland's stocking locations. When you place an order with Atlanta, Houston or Fresno, you will be able to see exactly how many of a particular item is on hand in that warehouse .

Please tell us if there are any specific items you would like stocked in a particular warehouse

Each item currently stocked in each warehouse is noted in this catalog. Midland is constantly adding to each warehouse so call or visit the website to check stock! If it's not there, let us know and we will stock it in any location for you!

West Coast Distribution Center 1403 Industrial Way Kerman, CA 93630 Phone: (559) 846-9301 Fax: (559) 846-9302 FULLY STOCKED with faster delivery to the entire West coast.	Houston Warehouse Hose & Accessory Sales 5537 Armour Drive Houston, TX 77020 Phone: 800.856.8888 Fax: 713.675.6422 Ball Valves and Brass Fittings are currently stocked in this warehouse Look for "3" next to Part #'s	Atlanta Warehouse Fortney Sales Company 1580 Big Shanty Drive Kennesaw, GA 30144 Phone: 800.241.3123 Fax: 800.423.9249 Ball Valves, Brass Fittings and Hose clamps are currently stocked in this warehouse Look for "5" next to Part #'s

NEW AT MIDLAND

NEW PRODUCTS

STAINLESS STEEL GARDEN HOSE COUPLINGS



**FEMALE SWIVEL
ONLY**
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MALE END ONLY
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**GARDEN HOSE
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NICKEL PLATED METRIC PUSH-IN FITTINGS



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BEVERAGE FITTINGS



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HYDRAULIC HOSE FITTINGS



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SAFEGUARD SPIRALS

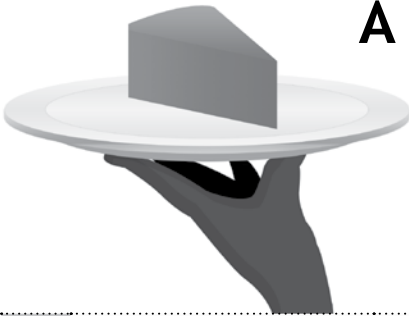


MAP is a premium e-commerce and marketing solution designed to help you promote and expand your business without breaking your budget. With MAP, Midland's whole warehouse becomes your warehouse. We provide you the materials to do that. We can help you market our full product line of 12,000 products to your customer base, through a variety of marketing materials. All of these are customizable with your company information. The best part is, these can be done in smaller runs at a reasonable price. Contact us for more details.

Developed with the customer in mind, MAP has been designed to easily integrate into many different business models and is extremely flexible. It doesn't matter if you're a small company with little or no web presence or a large multi-warehouse operation with a well established e-commerce solution, MAP will add value to your business.

“ *Midland's entire warehouse and fulfillment center instantly becomes YOUR warehouse.* ”

A LA CARTE SERVICES



 CUSTOM CATALOGS	 POST CARDS	 FLYERS	 POSTERS
 BUSINESS CARDS	 APPAREL	 FAXES	 SHOPPING CART
 WEBSITE	 EMAILS	 INTERNET MARKETING	

With Midland's MAP A La Carte services you pay for only the marketing services you want, nothing else. Choose the marketing service you are most comfortable with and let Midland do the rest. Whether you're trying to attract new customers or build your business with current customers Midland can help you find the best solution for your marketing needs. If there is a marketing option you'd like to see Midland offer, don't hesitate to let us know.

To find out more or to schedule an appointment with a MAP specialist visit
www.midlandindustrial.com/map

* Marketing, design and hosting services provided under contract with IMarkPromotions™ www.imarkpromotions.com

CUSTOM CATALOGS

Have you ever wanted your own printed catalogs without all the cost and effort involved? As part of Midland's expanded MAP program, you can enjoy custom catalogs at a reasonable price, with small quantities and short leadtimes. Work with our MAP specialists to design a catalog that best suits your needs, then we'll print it and deliver it to your door.

- - - Call customer service at **1-888-821-5725** for complete details. - - -

MAKE MIDLAND'S CATALOG YOUR CATALOG

- **Custom Cover:** Pick from one of Midland's templates or work with our designers to create a cover of your own.
- **Custom Information:** Catalog includes **your** contact information, phone, fax, email, website etc...
- **Custom Pricing:** Use Midland's list prices or have us modify the pricing to suit your needs.

See the back inside cover for more information.

Easy 3 step process

1

Choose a cover from one of Midland's templates or work with our designers to create a unique cover all your own.

2

Send us your contact information so we can personalize the catalog pages.

3

Approve the final layout and its off to the printers!



MIDLAND PROBIOTICS™

A HEALTHY ALTERNATIVE TO CHEMICALS

Midland Probiotics' line of products are a concentrated liquid packed full of Efficient Microbes (EM). EM's are a combination of bacteria that work in a manner opposite to that of anti-biotics. Anti-bacterial products attempt to kill off bad bacteria, while probiotics use beneficial and effective microorganisms to regenerate good bacteria.

MIDLAND PROBIOTIC PRODUCT LINE



A172

Net Price

1 Liter bottle \$12.⁵⁰

Sold in cases of 12



A182

Net Price

1 Liter bottle \$12.⁵⁰

Sold in cases of 12

Probiotics repopulate an area with healthy bacteria that dominate harmful, disease causing bacteria. This process creates a healthy, clean and vibrant environment. When used consistently, Probiotics control the reemergence of pathogenic or toxic bacteria.

Midland Probiotics is produced through a natural fermentation process using beneficial and effective microorganisms (EM technology). This process promotes the growth of natural-occurring beneficial microbes.

Enhanced levels of phototrophic bacteria are also known as purple non-sulfur bacteria (PNSB). PNSB have powerful detoxifying, anti-oxidative and anti-entropic properties that can reduce levels of certain toxins, toxic gases and odors.

FOR ADDITIONAL PRODUCTS AND INFORMATION VISIT

WWW.MIDLANDPROBIOTICS.COM

CUSTOMER QUOTE**SERVICES**

Phone: 888-821-5725

Fax: 888-877-5391

Customer Quote

Quote # _____ Attn: _____

Customer:

Account:

Cust Fax#:

Date Received:

Date Completed:

Customer Phone#:

Cust Quote:

Quote prepared by:

Quote Expires:

Quote # must be referenced on P.O. to receive special price.

Customer Part #	Midland Part #	Description	Qty	Unit Cost	Delivery

No additional discounts on special quoted items. Special quoted Purchase Orders are non-cancellable.

* Delivery is subject to change.

- Pricing applies only to quantities requested.
- Include quote # and price with purchase order.



PRIVATE LABELING

FREE

Take advantage of this SERVICE today
Send us your logo to get started!



Private labeling - just one more way Midland is committed to serving you.
Its easy! Send us your logo, we can personalize your packing slips and identification tags.

Identification Tags and Packing slips are printed with your company info.

Personalized Identification Tag

Identification tag for each product ordered is personalized.
We can also reference your part number.



Identification

Personalized Packing Slips

Packing Slip is personalized with your name and company logo.



Packing Slip

Blank Box

Order is shipped in a blank box. No reference to Midland anywhere on the box.

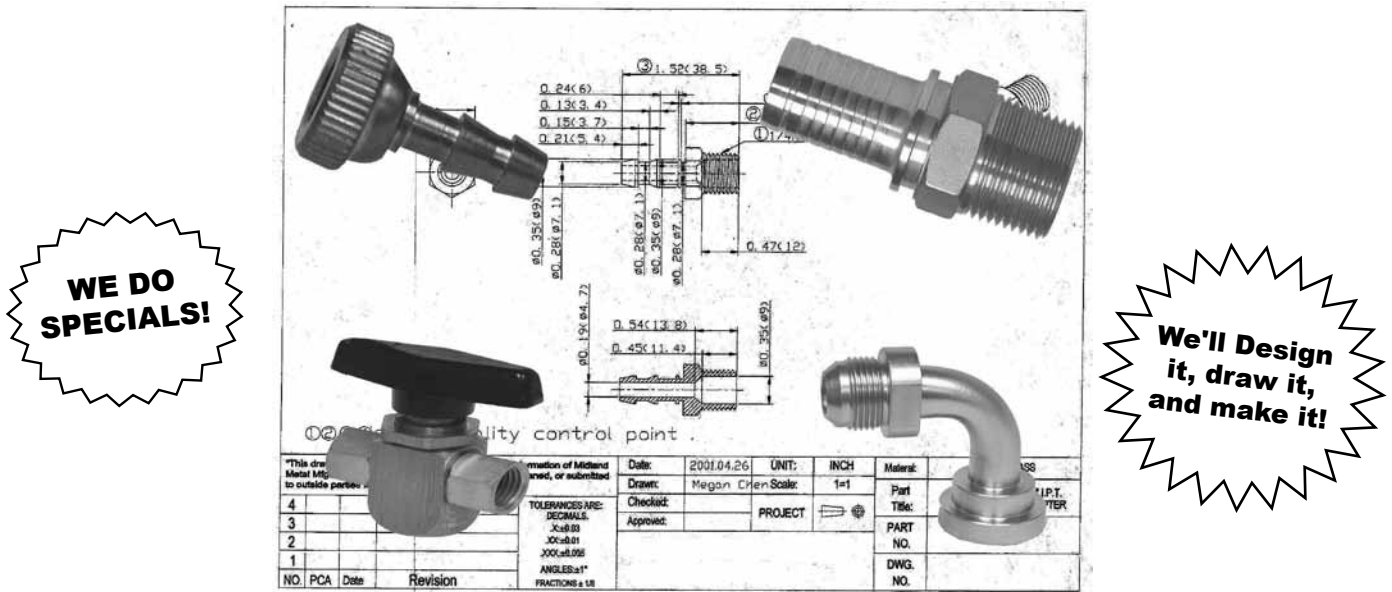


Box

Send us your logo today!

For more information visit midlandindustrial.com/labels or email your logo to us: logo@midlandindustrial.com

Send us all of your high volume quotes!



OEM SPECIFIED FITTINGS & VALVES AT GENERIC PRICES

We can produce fittings & valves made to your specifications! Just send a print and/or sample with your delivery requirements, and we will quote a custom price from one of our domestic or overseas factories on your fitting(s) and/or valve(s).

Any Material, Any Size, Any Shape, Any Volume... Just Ask!

Once you approve our price, we will then require a blanket purchase order based on sample approval. We will then stock these items under a separate part # for your access only. We guarantee delivery on time, everytime!

Here's what you get:

-Consistent, top quality products!

-Dedicated Inventory for your access only!

-Guaranteed on-time delivery everytime!

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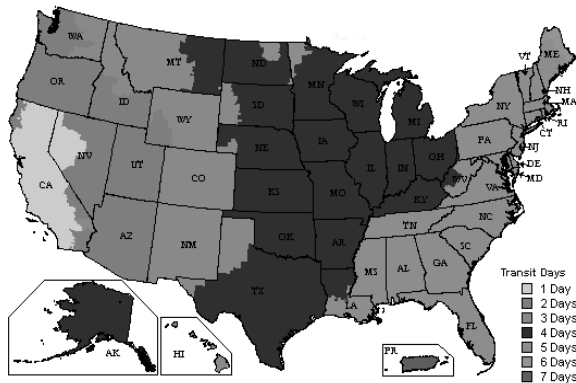
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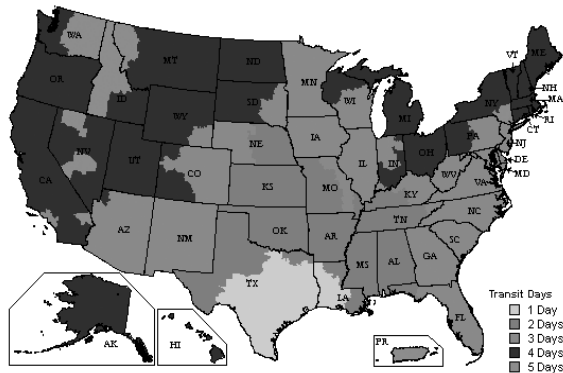
Kansas City, Missouri (64106)



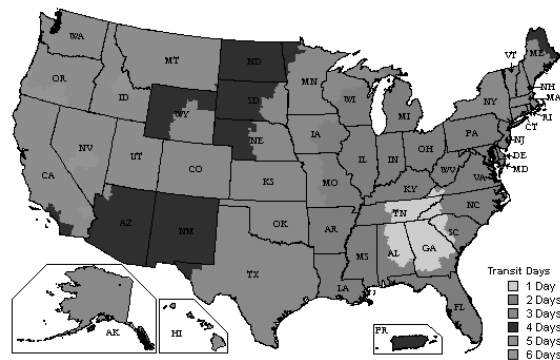
Westcoast Warehouse



Houston, TX (77020)



Atlanta, GA (30144)



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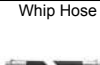
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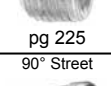
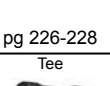
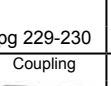
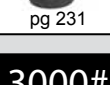
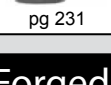
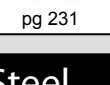
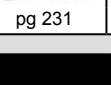
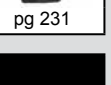
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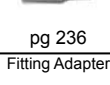
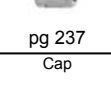
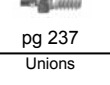
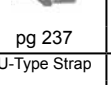
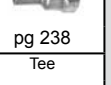
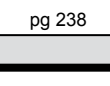
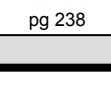
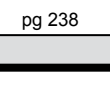
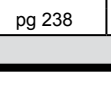
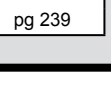
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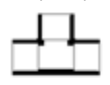
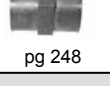
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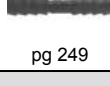
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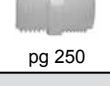
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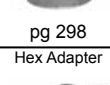
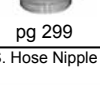
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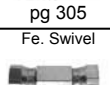
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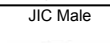
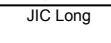
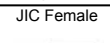
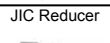
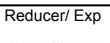
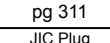
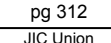
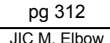
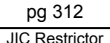
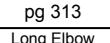
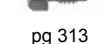
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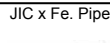
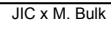
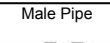
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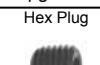
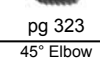
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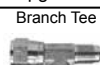
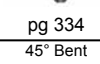
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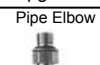
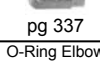
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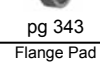
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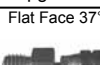
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Material used for Brass Fittings

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

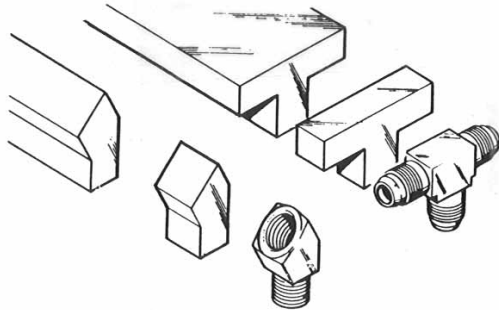
ASTM B16 - 92

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

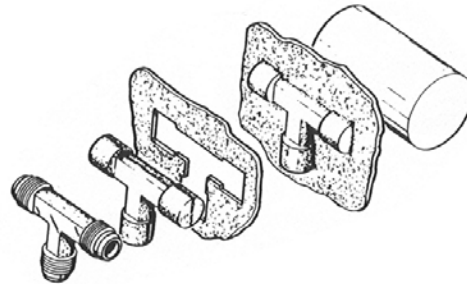
Elements	Nominal	Min	Max
Copper	59.5	58	61
Lead	2	1.5	2.5
Iron			.30
Zinc	38	Balance	



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.

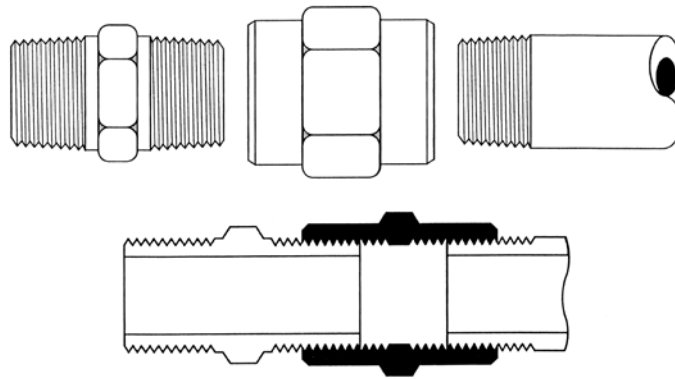


Forged Fittings

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.

Pipe



Pipe Size	1/16	1/8	1/4	3/8	1/2	3/4	1
Thread Size	1/16-27	1/8-27	1/4-18	3/8-18	1/2-14	3/4-14	1-11 1/2
Working Pressure	1200	1200	1200	1200	1200	1000	1000
Thread OD	1/4	3/8	1/2	5/8	3/4	1	1-1/4

•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.

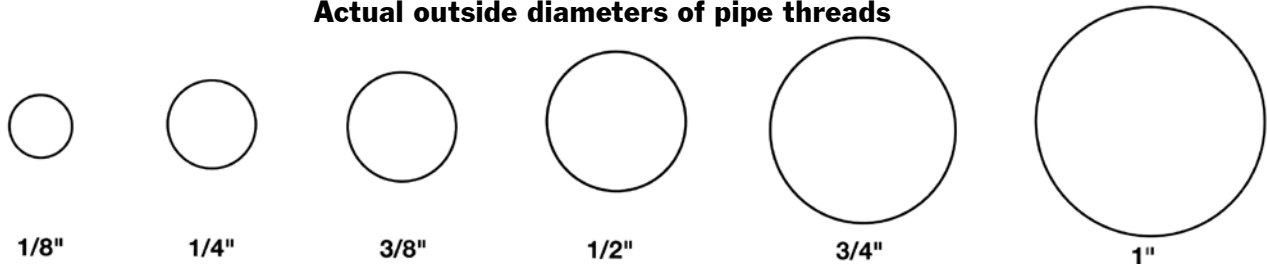
•Assembly Instructions

- 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.

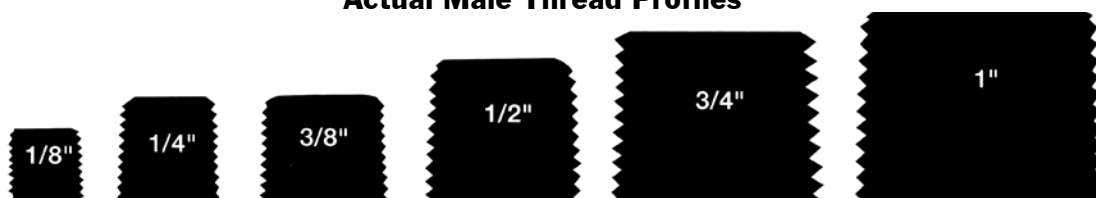
• for larger sizes see bronze fittings on page 190

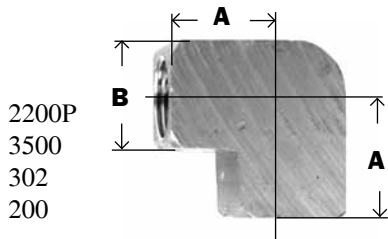
• see page 240 for plastic pipe fittings.

Actual outside diameters of pipe threads



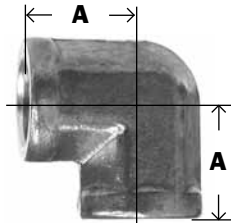
Actual Male Thread Profiles



90° FEMALE ELBOW
SAE# 130238


2200P
3500
302
200

Part #	Thread Size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-001 ^{3,5}	1/8"	0.55	0.56	0.09	2.51
28-002 ^{3,5}	1/4"	0.78	0.68	0.13	3.76
28-003 ^{3,5}	3/8"	0.84	0.81	0.16	4.57
28-004 ^{3,5}	1/2"	1.09	1.00	0.34	7.49
28-005 ^{3,5}	3/4"	1.16	1.25	0.60	14.22

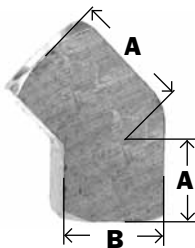
90° FORGED FEMALE ELBOW


1200P
E7
100AF
100B

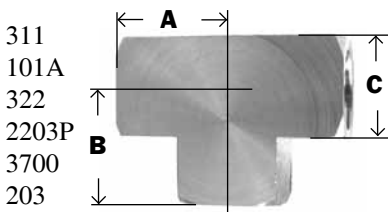
Part #	Thread size NPTF	A	Body Width	Approx. Wt. Lbs.	List Price
28-009 ⁵	1/8"	0.57	0.50	0.04	2.43
28-010 ⁵	1/4"	0.70	0.68	0.10	3.43
28-011	3/8"	0.81	0.81	0.12	5.28
28-012	1/2"	1.00	1.00	0.23	7.70
28-013	3/4"	1.13	1.25	0.42	18.97
28-014	1/4" x 1/8"	0.72	0.69	0.12	4.78
28-015 ⁵	3/8" x 1/4"	0.81	0.81	0.15	4.95
28-016	1/2" x 3/8"	1.00	1.00	0.28	12.73

45° FEMALE ELBOW

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

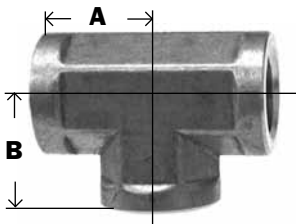


Part #	Thread size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-018	1/8"	0.45	0.56	0.06	4.15
28-019 ^{3,5}	1/4"	0.66	0.68	0.12	5.83

UNION TEE
SAE# 130438


311
101A
322
2203P
3700
203

Part #	Thread size NPTF	A	B	C	Approx. Wt. Lbs.	List Price
28-024 ^{3,5}	1/8"	0.55	0.55	0.56	0.08	2.76
28-025 ^{3,5}	1/4"	0.78	0.78	0.68	0.17	4.19
28-026 ^{3,5}	3/8"	0.84	0.84	0.81	0.22	6.82
28-027 ^{3,5}	1/2"	1.09	1.09	1.00	0.43	10.11
28-028 ^{3,5}	3/4"	1.16	1.16	1.25	0.64	18.54

UNION FORGED TEE


1203P
LT7
101AF
101B

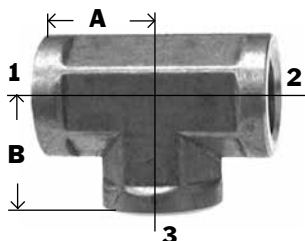
Part #	Thread size NPTF	A & B	Body Width	Approx. Wt. Lbs.	List Price
28-032	1/8"	0.56	0.50	0.06	2.89
28-033 ⁵	1/4"	0.71	0.68	0.13	4.05
28-034	3/8"	0.81	0.81	0.16	5.15
28-035 ⁵	1/2"	1.00	1.00	0.27	9.53
28-036 ⁵	3/4"	1.16	1.25	0.53	17.23

³ Also stocked in Houston

⁵ Also stocked in Atlanta

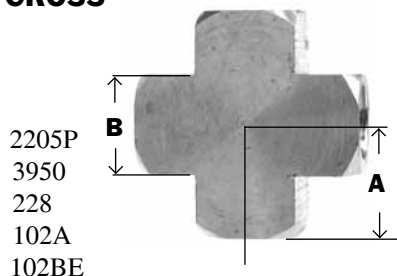
(See page Intro II for details)

REDUCING FORGED TEES



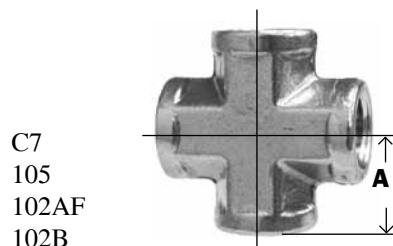
Part #	1 NPT	2 NPT	3 NPT	A & B	Body Width	Approx. Wt. Lbs.	List Price
28-029	1/8"	1/8"	1/4"	0.72	0.69	0.16	7.32
28-030 ⁵	1/4"	1/4"	1/8"	0.72	0.69	0.14	5.78
28-031	1/4"	1/4"	3/8"	0.81	0.81	0.21	11.56
28-037	3/8"	3/8"	1/8"	0.81	0.81	0.19	11.49
28-038	3/8"	1/4"	3/8"	0.81	0.81	0.18	10.62
28-039 ⁵	3/8"	3/8"	1/4"	0.81	0.81	0.18	10.62
28-046	1/2"	1/2"	3/8"	1.00	1.00	0.30	14.41
28-047	3/4"	1/2"	3/4"	1.16	1.25	0.56	27.78
28-048	3/4"	3/4"	1/2"	1.16	1.25	0.59	29.52

CROSS



Part #	Thread size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-041 ^{3,5}	1/8"	0.50	0.50	0.10	6.20
28-042 ^{3,5}	1/4"	0.78	0.68	0.21	6.13
28-043 ^{3,5}	3/8"	0.84	0.81	0.25	7.52
28-044 ³	1/2"	1.09	1.00	0.51	16.10
28-045 ⁵	3/4"	1.16	1.25	0.75	23.65

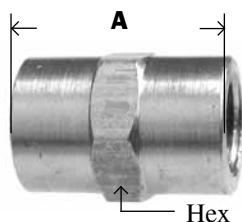
FORGED CROSS



Part #	Thread size NPTF	A	Body Width	Approx. Wt. Lbs.	List Price
28-049	1/8"	0.56	0.50	0.06	5.17
28-050 ⁵	1/4"	0.72	0.69	0.15	6.93
28-051	3/8"	0.81	0.81	0.18	10.49
28-052	1/2"	1.00	1.00	0.34	15.80

COUPLING

SAE# 130238



207P
371
3300
103AH
103B

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-058L ⁵	1/8"	0.75	0.50	0.02	0.74
28-058 ^{3,5}	1/8"	0.75	0.56	0.03	1.60
28-059L ^{3,5}	1/4"	0.88	0.63	0.03	1.09
28-059 ^{3,5}	1/4"	1.12	0.75	0.09	2.48
28-060L ^{3,5}	3/8"	1.00	0.81	0.06	1.87
28-060 ^{3,5}	3/8"	1.12	0.87	0.10	3.28
28-061L ^{3,5}	1/2"	1.19	0.93	0.09	3.16
28-061 ^{3,5}	1/2"	1.50	1.06	0.19	4.91
28-062L ^{3,5}	3/4"	1.19	1.25	0.18	5.08
28-062 ^{3,5}	3/4"	1.53	1.25	0.24	14.43

* For larger sizes, see bronze couplings on pg. 193

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

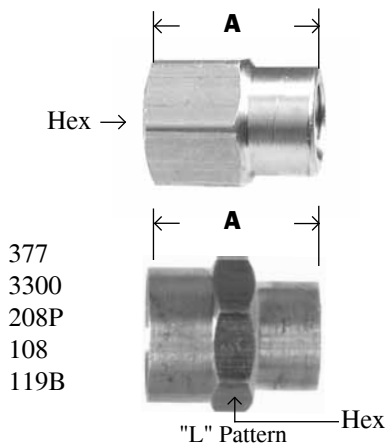
³ Also stocked in Houston
⁵ Also stocked in Atlanta
(See page Intro II for details)

PIPE

BRASS FITTINGS

REDUCING COUPLING

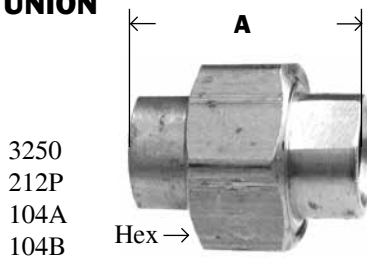
SAE# 130138



Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-181L ^{3,5}	1/4" x 1/8"	0.83	0.62	0.04	1.50
28-181 ^{3,5}	1/4" x 1/8"	0.97	0.75	0.08	2.58
28-182 ⁵	3/8" x 1/8"	0.94	0.87	0.10	3.75
28-183L ^{3,5}	3/8" x 1/4"	1.00	0.81	0.06	2.55
28-183 ^{3,5}	3/8" x 1/4"	1.16	0.87	0.12	3.60
28-180*	1/2" x 1/8"	1.19	0.93	0.15	6.79
28-184L ³	1/2" x 1/4"	1.11	1.00	0.10	4.80
28-184 ⁵	1/2" x 1/4"	1.28	1.06	0.20	6.35
28-185L ⁵	1/2" x 3/8"	1.19	0.93	0.10	4.71
28-185 ^{3,5}	1/2" x 3/8"	1.38	1.06	0.20	5.90
28-188* ⁵	3/4" x 3/8"	1.32	1.37	0.20	16.62
28-189* ^{3,5}	3/4" x 1/2"	1.19	1.18	0.14	7.91

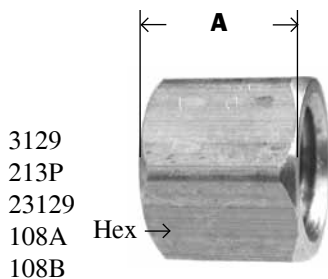
*Not to SAE specs

UNION



Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-067 ³	1/8"	1.19	0.94	0.13	19.39
28-068 ^{3,5}	1/4"	1.31	1.06	0.18	18.93
28-069 ^{3,5}	3/8"	1.75	1.25	0.33	38.31
28-070 ⁵	1/2"	1.79	1.56	0.50	24.19

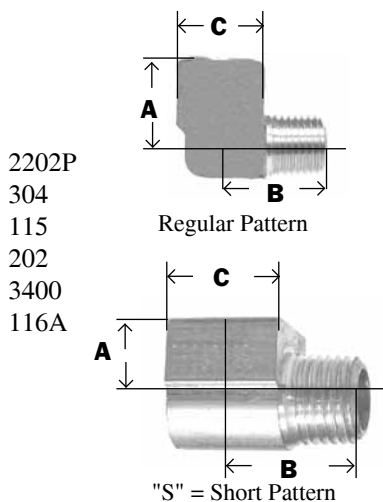
CAP



Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-075 ^{3,5}	1/8"	0.47	0.56	0.03	0.81
28-076 ^{3,5}	1/4"	0.60	0.68	0.04	1.55
28-077 ^{3,5}	3/8"	0.69	0.81	0.06	2.22
28-078 ^{3,5}	1/2"	0.78	0.93	0.08	3.31
28-079 ^{3,5}	3/4"	0.94	1.25	0.16	7.62

90° STREET ELBOW

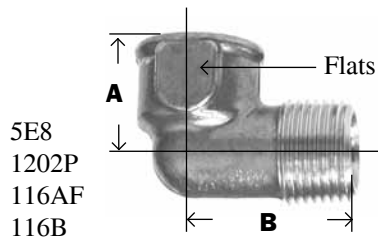
SAE# 130239



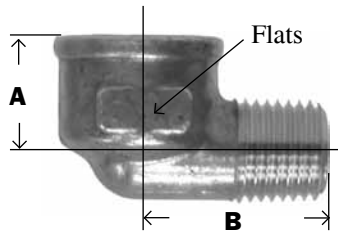
Part #	Thread size NPTF	A	B	C	Approx. Wt. Lbs.	List Price
28-156 ^{3,5}	1/8"	0.48	0.66	0.56	0.05	1.86
28-156S ^{3,5}	1/8" short	0.34	0.57	0.50	0.03	1.18
28-157 ^{3,5}	1/4"	0.72	0.91	0.68	0.09	2.63
28-157S ^{3,5}	1/4" short	0.45	0.78	0.68	0.07	2.29
28-158 ^{3,5}	3/8"	0.78	0.97	0.81	0.16	4.45
28-159 ^{3,5}	1/2"	1.03	1.25	1.00	0.33	7.59
28-160 ^{3,5}	3/4"	1.12	1.38	1.25	0.52	14.14

³ Also stocked in Houston⁵ Also stocked in Atlanta

(See page Intro II for details)

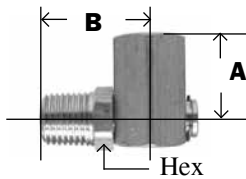
FORGED 90° STREET ELBOW


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	3.09
28-166 ⁵	1/4"	0.50	0.86	0.72	0.08	2.68
28-167 ⁵	3/8"	0.70	1.00	0.88	0.10	4.43
28-168	1/2"	0.96	1.43	1.00	0.20	5.97
28-169 ⁵	3/4"	0.90	1.40	1.25	0.25	10.12

FORGED REDUCING 90° STREET ELBOW


Part #	Thread size NPTF FxM	A	B	Wrench flats	Approx. Wt. Lbs.	List Price
28-260 ⁵	1/8" x 1/4"	0.50	0.87	0.71	0.08	4.45
28-261B*	1/4" x 1/8"	0.53	0.72	0.69	0.07	3.13
28-261	1/4" x 1/8"	0.50	0.81	0.72	0.06	3.89
28-262	1/4" x 3/8"	0.93	1.06	0.59	0.12	5.26
28-263 ⁵	3/8" x 1/4"	0.58	0.94	0.81	0.07	6.44
28-264	3/8" x 1/2"	0.97	1.36	1.00	0.28	10.36
28-265	1/2" x 3/8"	0.96	1.37	1.00	0.22	11.34

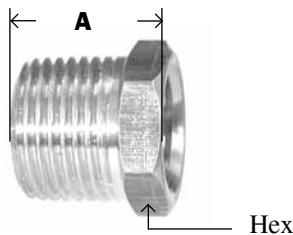
*Barstock

PIPE SWIVEL 90° STEET ELBOW


Part #	Thread size NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
28-430	1/4"	1.18	1.25	.625	0.22	29.50

HEX BUSHING

SAE# 130140



Part #	Thread size NPTF MxF	A	Hex	Approx. Wt. Lbs.	List Price
28-102L ^{3.5}	1/4" x 1/8"	0.62	0.56	0.02	0.60
28-102 ^{3.5}	1/4" x 1/8"	0.75	0.56	0.04	0.98
28-103 ^{3.5}	3/8" x 1/8"	0.75	0.68	0.05	1.55
28-104L ^{3.5}	3/8" x 1/4"	0.69	0.68	0.03	1.00
28-104 ^{3.5}	3/8" x 1/4"	0.75	0.75	0.05	1.60
28-105L ^{3.5}	1/2" x 1/8"	0.81	0.81	0.08	2.50
28-105 ^{3.5}	1/2" x 1/8"	1.00	0.87	0.10	2.29
28-106L ^{3.5}	1/2" x 1/4"	0.81	0.81	0.08	1.43
28-106 ^{3.5}	1/2" x 1/4"	1.00	0.87	0.11	2.72
28-107L ^{3.5}	1/2" x 3/8"	0.81	0.81	0.05	1.36
28-107 ^{3.5}	1/2" x 3/8"	1.00	0.87	0.10	2.03
28-108 ³	3/4" x 1/8"	0.94	1.06	0.20	5.65
28-109L ^{3.5}	3/4" x 1/4"	0.94	1.06	0.18	3.56
28-110L ^{3.5}	3/4" x 3/8"	0.94	1.06	0.15	4.30
28-111L ^{3.5}	3/4" x 1/2"	0.94	1.06	0.11	3.13
28-111 ^{3.5}	3/4" x 1/2"	1.00	1.12	0.14	4.19
28-112 ^{3.5}	1" x 1/4"	1.15	1.37	0.32	8.28
28-113	1" x 3/8"	1.12	1.37	0.30	8.18
28-114 ^{3.5}	1" x 1/2"	1.31	1.44	0.29	7.60
28-115 ^{3.5}	1" x 3/4"	1.31	1.37	0.20	6.28

373
3220
209P
110A
110B

PIPE

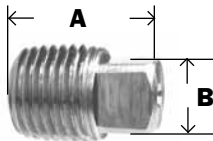
BRASS FITTINGS

FACE BUSHING



Part #	Thread size NPTF MxF	A	Approx. Wt. Lbs.	List Price
28-121	1/4" x 1/8"	0.45	0.01	1.45
28-122	3/8" x 1/8"	0.50	0.03	2.23
28-116	3/8" x 1/4"	0.50	0.02	1.74
28-090	1/2" x 1/8"	0.56	0.06	3.96
28-128	1/2" x 1/4"	0.56	0.05	2.77
28-117	1/2" x 3/8"	0.56	0.03	2.01
28-129	3/4" x 1/4"	0.62	0.11	5.96
28-130	3/4" x 3/8"	0.62	0.08	5.03
28-118	3/4" x 1/2"	0.64	0.03	4.51

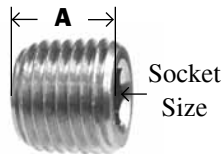
SQUARE HEAD PLUG



3151
211P
109A
109B

Part #	Thread size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-084 ^{3.5}	1/8"	0.58	0.27	0.02	0.59
28-085 ^{3.5}	1/4"	0.80	0.37	0.03	0.95
28-086 ^{3.5}	3/8"	0.80	0.43	0.06	1.61
28-087 ^{3.5}	1/2"	1.07	0.55	0.13	2.56
28-088	3/4"	1.11	0.61	0.20	4.22
28-089	1"	1.24	0.81	0.35	9.40

COUNTERSUNK HEX PLUG

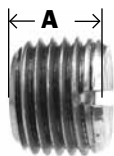


3155
219P
109CS
118

SAE J531

Part #	Thread size NPTF	A	Socket size	Approx. Wt. Lbs.	List Price
28-092 ^{3.5}	1/16"	0.30	0.12	0.01	0.89
28-093 ³	1/8"	0.30	0.18	0.01	0.66
28-094 ^{3.5}	1/4"	0.45	0.26	0.02	0.76
28-095 ^{3.5}	3/8"	0.45	0.31	0.03	1.03
28-096 ^{3.5}	1/2"	0.61	0.39	0.05	2.11
28-097 ^{3.5}	3/4"	0.62	0.56	0.10	3.76

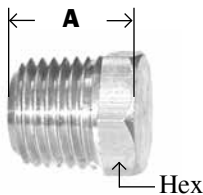
SLOTTED-HEAD PLUG



220P
3150
117A
117B

Part #	Thread size NPTF	A	Approx. Wt. Lbs.	List Price
28-174	1/8"	0.31	0.01	0.55
28-175	1/4"	0.42	0.02	1.09
28-176	3/8"	0.45	0.05	1.67

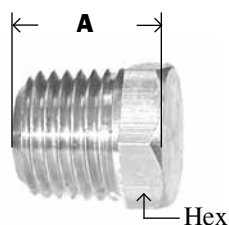
CORED HEX PLUGS



218P
3152
121A
103
121B
PPH
218P

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-201 ^{3.5}	1/8"	0.55	0.43	0.01	0.58
28-202 ^{3.5}	1/4"	0.62	0.56	0.02	0.92
28-203 ^{3.5}	3/8"	0.72	0.68	0.06	1.23
28-204 ^{3.5}	1/2"	0.81	0.87	0.09	2.28
28-205 ^{3.5}	3/4"	0.94	1.06	0.16	3.51
28-206 ^{3.5}	1"	1.16	1.37	0.28	12.23

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	1.29
28-202S ⁵	1/4"	0.62	0.56	0.05	1.36
28-203S	3/8"	0.66	0.68	0.07	2.68
28-204S ⁵	1/2"	0.81	0.87	0.12	2.98
28-205S ⁵	3/4"	0.92	1.06	0.24	5.42
28-206S	1"	1.00	1.31	0.38	17.19

LOCKNUT

- Jam Nuts
- Straight pipe thread

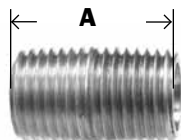
210P
21102
111A
111B



Part #	Thread size NPSM	Hex	Thickness	Approx. Wt. Lbs.	List Price
28-123	1/8"	0.68	0.19	0.02	0.88
28-124	1/4"	0.87	0.25	0.04	1.23
28-125	3/8"	1.00	0.31	0.04	1.46
28-126	1/2"	1.125	0.25	0.04	1.82

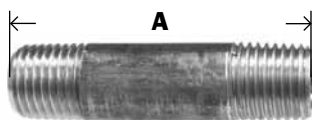
CLOSE NIPPLE

165
215PN
3326
112A
112B



Part #	Thread size NPTF	A	Approx. Wt. Lbs.	List Price
28-131 ^{3,5}	1/8"	0.75	0.01	0.46
28-132 ^{3,5}	1/4"	0.88	0.02	0.92
28-133 ^{3,5}	3/8"	1.00	0.05	1.61
28-134 ^{3,5}	1/2"	1.12	0.06	1.86
28-135 ^{3,5}	3/4"	1.31	0.11	3.57

LONG NIPPLE



113B
113A
166
3327
3331
215PNL

Part #	Thread size NPTF	A Length	Approx. Wt. Lbs.	List Price
28-140 ^{3,5}	1/8"	1.50	0.03	0.98
28-141 ^{3,5}	1/8"	2.00	0.04	1.39
28-142 ^{3,5}	1/8"	2.50	0.06	2.21
28-143 ⁵	1/8"	3.00	0.06	2.50
28-144 ^{3,5}	1/4"	1.50	0.03	1.60
28-145 ^{3,5}	1/4"	2.00	0.05	1.84
28-146 ^{3,5}	1/4"	2.50	0.08	2.91
28-147 ^{3,5}	1/4"	3.00	0.10	4.00
28-148 ^{3,5}	3/8"	1.50	0.06	2.15
28-149 ^{3,5}	3/8"	2.00	0.10	3.19
28-150 ⁵	3/8"	2.50	0.10	4.20
28-151 ^{3,5}	3/8"	3.00	0.13	4.47
28-152 ⁵	1/2"	1.50	0.08	2.30
28-153 ^{3,5}	1/2"	2.00	0.12	3.99
28-154 ⁵	1/2"	2.50	0.16	5.02
28-155 ^{3,5}	1/2"	3.00	0.20	6.51

• NOTE: For longer lengths and larger diameters, see our red brass nipples section, pg. 184-185

³ Also stocked in Houston

⁵ Also stocked in Atlanta

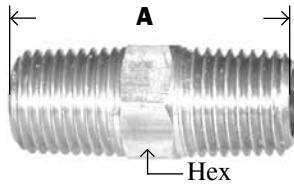
(See page Intro II for details)

PIPE

BRASS FITTINGS

HEX NIPPLE

SAE# 130137

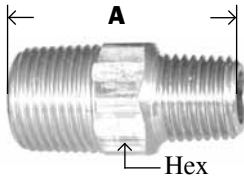


216P
3325
379
122AH
122B

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-211L ^{3,5}	1/8"	0.91	0.43	0.02	0.78
28-211 ^{3,5}	1/8"	0.97	0.43	0.03	0.94
28-212L ^{3,5}	1/4"	1.12	0.56	0.04	1.04
28-212 ⁵	1/4"	1.38	0.56	0.06	1.45
28-213L ^{3,5}	3/8"	1.25	0.68	0.07	1.62
28-213 ^{3,5}	3/8"	1.41	0.68	0.07	2.25
28-214L ^{3,5}	1/2"	1.50	0.87	0.11	2.95
28-214 ^{3,5}	1/2"	1.81	0.87	0.17	3.27
28-215 ^{3,5}	3/4"	1.96	1.13	0.23	6.39
28-216 ^{3,5}	1"	2.30	1.37	0.43	10.35

REDUCING HEX NIPPLE

SAE# 130137

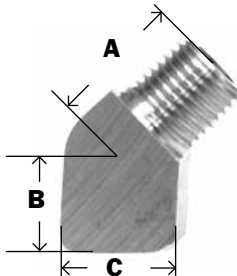


216P
3325
379
122AH
122B

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-220L ^{3,5}	1/4" x 1/8"	1.00	0.56	0.04	1.08
28-220 ^{3,5}	1/4" x 1/8"	1.19	0.56	0.04	1.39
28-221L	3/8" x 1/8"	1.11	0.68	0.06	2.40
28-221 ^{3,5}	3/8" x 1/8"	1.22	0.68	0.07	2.64
28-222L ^{3,5}	3/8" x 1/4"	1.19	0.68	0.06	1.50
28-222 ^{3,5}	3/8" x 1/4"	1.41	0.68	0.07	2.16
28-223L ^{3,5}	1/2" x 1/4"	1.34	0.87	0.09	2.74
28-223 ^{3,5}	1/2" x 1/4"	1.62	0.87	0.12	2.99
28-224L ^{3,5}	1/2" x 3/8"	1.41	0.87	0.11	2.88
28-224 ^{3,5}	1/2" x 3/8"	1.62	0.87	0.12	3.21
28-225 ^{3,5}	3/4" x 1/2"	1.50	1.06	0.15	4.92

45° STREET ELBOW

SAE# 130339

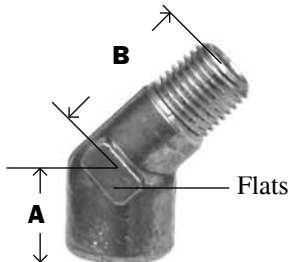


306
3350
2214P
224

Part #	Thread size NPTF	B	A	C	Approx. Wt. Lbs.	List Price
28-230 ^{3,5}	1/8"	0.38	0.50	0.56	0.03	2.15
28-231 ^{3,5}	1/4"	0.56	0.72	0.68	0.09	2.93
28-232 ^{3,5}	3/8"	0.56	0.78	0.81	0.12	4.54
28-233 ^{3,5}	1/2"	0.75	1.00	1.00	0.20	8.03
28-234 ^{3,5}	3/4"	0.75	1.06	1.25	0.34	24.64

45° FORGED STREET ELBOW

45E8
124B



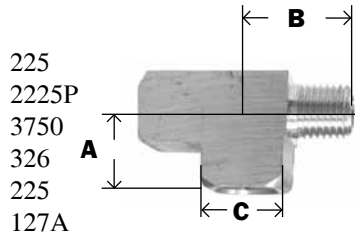
Part #	Thread size NPTF	A	B	Wrench flats	Approx. Wt. Lbs.	List Price
28-238	1/8"	0.63	0.81	0.56	0.05	4.52
28-239	1/4"	0.63	1.06	0.81	0.11	5.44
28-240	3/8"	0.72	1.06	0.93	0.17	7.38

³ Also stocked in Houston⁵ Also stocked in Atlanta

(See page Intro II for details)

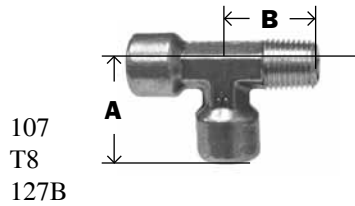
STREET TEE/ SERVICE TEE

SAE# 130424



Part #	Thread size NPTF	A	B	C	Approx. Wt. Lbs.	List Price
28-245 ⁵	1/8"	0.55	0.66	0.56	0.08	2.81
28-246 ^{3,5}	1/4"	0.78	0.91	0.68	0.17	5.14
28-247 ^{3,5}	3/8"	0.84	0.97	0.81	0.22	5.70
28-248 ^{3,5}	1/2"	1.09	1.25	1.00	0.40	10.04
28-249 ⁵	3/4"	1.16	1.39	1.25	0.60	18.44

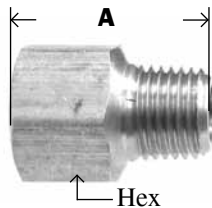
FORGED STREET TEE



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	4.12
28-254 ⁵	1/4"	1.03	0.11	0.46	0.13	4.38
28-255	3/8"	1.19	1.09	0.68	0.24	7.51
28-256	1/2"	1.52	1.40	0.88	0.45	17.09
28-257	3/4"	1.34	1.73	1.25	0.65	41.06

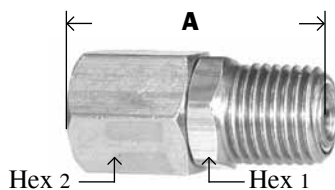
EXTENDER ADAPTER

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	1.41
28-190 ⁵	1/8" x 1/8"	0.88	0.56	0.04	1.14
28-191L ^{3,5}	1/4" x 1/8"	0.94	0.62	0.04	1.10
28-191 ^{3,5}	1/4" x 1/8"	1.06	0.75	0.07	2.50
28-192L ^{3,5}	1/4" x 1/4"	1.00	0.62	0.04	1.36
28-192 ^{3,5}	1/4" x 1/4"	1.25	0.75	0.07	2.35
28-198	3/8" x 1/8"	1.00	0.81	0.06	4.41
28-193L ^{3,5}	3/8" x 1/4"	1.12	0.81	0.08	1.93
28-193 ^{3,5}	3/8" x 1/4"	1.25	0.87	0.09	3.32
28-194L	3/8" x 3/8"	1.24	0.81	0.10	2.76
28-194 ³	3/8" x 3/8"	1.25	0.87	0.11	3.33
28-199 ^{3,5}	1/2" x 1/4"	1.46	1.06	0.08	3.90
28-195L ³	1/2" x 3/8"	1.19	0.93	0.09	4.03
28-195 ^{3,5}	1/2" x 3/8"	1.47	1.06	0.18	5.71
28-196 ^{3,5}	1/2" x 1/2"	1.66	1.06	0.12	4.22
28-207 ⁴	3/4" x 3/8"	1.59	1.25	0.26	22.56
28-208 ^{3,5}	3/4" x 1/2"	1.69	1.37	0.14	8.35
28-209 ^{3,5}	3/4" x 3/4"	1.69	1.37	0.34	17.33

PIPE SWIVEL ADAPTER



Part #	Thread size NPTF FxM	A	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
28-425	1/4"	1.34	0.56	0.62	0.06	11.17
28-426	3/8"	1.36	0.68	0.75	0.08	28.07

SWIVEL FITTING

- 360° Turning
- Swivels



Male NPT x Female NPT

Part #	Size	List Price
320-061	1/4	14.99

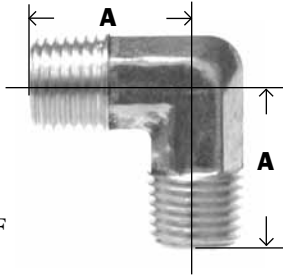
³ Also stocked in Houston
⁵ Also stocked in Atlanta
 (See page Intro II for details)

PIPE

BRASS FITTINGS

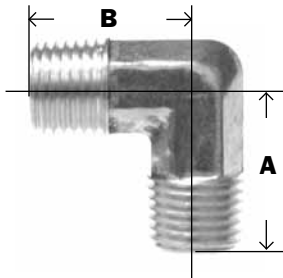
FORGED 90° MALE ELBOW

LE5
3455
116AMF



Part #	Thread size NPTF	A	Body Width	Approx. Wt. Lbs.	List Price
28-266 ^{3.5}	1/8"	0.79	0.38	0.04	2.56
28-267 ^{3.5}	1/4"	0.87	0.45	0.06	2.70
28-268 ^{3.5}	3/8"	1.00	0.59	0.12	5.41
28-269 ^{3.5}	1/2"	1.38	0.78	0.21	8.09

FORGED 90° MALE REDUCING ELBOW

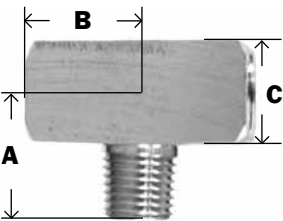


Part #	Thread size NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
28-274	1/4" x 1/8"	0.88	0.78	0.47	0.06	4.30
28-275	3/8" x 1/4"	0.90	0.90	0.46	0.06	4.38
28-276	1/2" x 3/8"	1.12	1.00	0.59	0.12	6.81

MALE BRANCH TEE

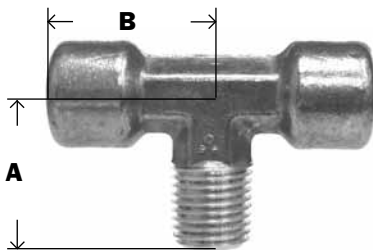
SAE# 130425

X106
23601
3600
2224P
226
329
128



Part #	Thread size NPTF	A	B	C	Approx. Wt. Lbs.	List Price
28-281 ^{3.5}	1/8"	0.66	0.55	0.56	0.08	2.76
28-282 ^{3.5}	1/4"	0.91	0.78	0.68	0.15	4.81
28-283 ³	3/8"	0.97	0.84	0.81	0.22	6.73
28-284 ^{3.5}	1/2"	1.25	1.09	1.00	0.40	13.55
28-285 ^{3.5}	3/4"	1.38	1.16	1.25	0.62	21.34

FORGED MALE BRANCH TEE



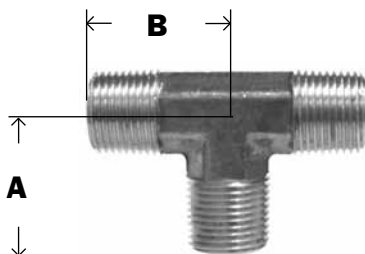
Part #	Thread size NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
28-281F	1/8"	0.75	0.56	0.50	0.06	3.83
28-282F	1/4"	1.00	1.03	0.46	0.12	6.26

T9

Logic will get you from A to B. Imagination will take you everywhere.

- Albert Einstein

FORGED ALL MALE TEE

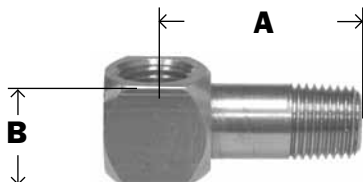


T12
M101

Part #	Thread size NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
28-290 ^{3,5}	1/8"	0.75	0.75	0.43	0.06	4.34
28-291 ^{3,5}	1/4"	0.86	0.86	0.43	0.08	4.39
28-292 ^{3,5}	3/8"	1.09	1.09	0.60	0.16	8.65
28-293 ^{3,5}	1/2"	1.22	1.22	0.68	0.22	8.61
28-294 ³	3/4"	1.43	1.43	0.87	0.38	25.75

LONG STREET ELLS

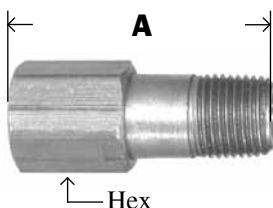
D.O.T. Approved



Part #	Thread size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-440	1/8"	1-3/16"	0.50	0.06	7.27
28-441	1/8"	1-7/16"	0.50	0.06	3.50
28-442	1/8"	1-11/16"	0.50	0.06	7.51
28-443	1/8"	1-7/8"	0.50	0.16	8.66
28-328	1/4"	1-3/16"	0.75	0.12	15.26
28-329	1/4"	1-7/16"	0.75	0.14	12.43
28-330	1/4"	1-11/16"	0.75	0.15	12.40
28-332	1/4"	2-1/4"	0.75	0.17	16.90
28-333	3/8"	1-3/4"	0.87	0.22	19.36

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	8.19
28-336	1/8"	1-3/4"	0.50	0.05	10.88
28-337	1/8"	3"	0.50	0.09	9.66
28-338	1/4"	1-9/16"	0.62	0.07	5.83
28-339	1/4"	1-13/16"	0.62	0.08	7.50
28-340	1/4"	2-1/16"	0.62	0.10	7.10

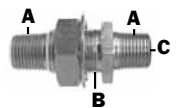
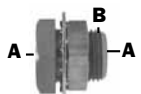
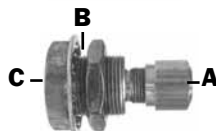
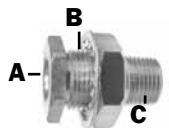
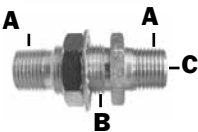
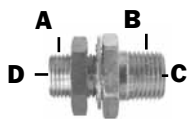
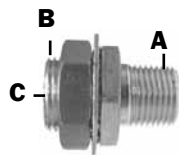
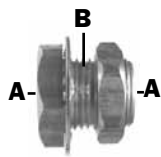
Dimension data can change without notice.
Please call us when dimensions are critical.

Save 5% by ordering online at
www.midlandindustrial.com

³ Also stocked in Houston

⁵ Also stocked in Atlanta

(See page Intro II for details)

BULKHEAD / ANCHOR / FRAME COUPLINGS

Part #	Terminal Bolts/ Frame				Length (in.)	List Price
	A	B	C	D		
28-300 ^{3,5}	1/8-27 NPTF	5/8-18 UNS	----	----	1-1/2	5.81
28-303 ^{3,5}	3/8-18 NPTF	1-14 UNS	----	----	1-5/16	8.67
28-301 ^{3,5}	1/4-18 NPTF	3/4-16 UNS	----	----	15/16	5.93
28-302 ^{3,5}	1/4-18 NPTF	3/4-16 UNS	----	----	1-1/2	6.54
28-315	1/4-18 NPTF	3/4-16 UNS	----	----	1-1/2	7.21
		*(same as 28-302 except with larger mounting nut)				
28-304 ^{3,5}	1/2-14 NPTF	1-1/8-14 UNS	----	----	1-1/2	10.15
28-317	1/2-14 NPTF	1-14 UNS	1/4-18 NPTF	----	2-1/8	24.00
28-318	1/2-14 NPTF	1-14 UNS	3/8-18 NPTF	----	1-11/16	11.78
28-319	1/2-14 NPTF	1-14 UNS	3/8-18 NPTF	----	1-29/32	7.87
28-325	1/2-14 NPTF	3/4 - 16 UNS	1/4-18 NPTF	1/4-18 NPTF	1-11/16	19.73
28-345*	1/2-14 NPTF	3/4 - 16 UNS	1/4-18 NPTF	----	2-5/32	16.16

* Steel

28-313	1/2-14 NPTF	1-14 UNS	1/4-18 NPTF	----	2-7/8	25.58
28-346	3/8-18 NPTF	1-14 UNS	1/2-14 NPTF	----	1-7/8	13.85
28-347	1/2-14 NPTF	1-14 UNS	1/2-14 NPTF	----	2-3/8	21.12

28-321	1/2-O.D. Tube	7/8-20 UNCF	3/8-18 NPTF	----	1-5/16	10.27
28-322	3/8-O.D. Tube	7/8-20 UNCF	3/8-18 NPTF	----	1-3/8	10.07

28-348	3/8-18 NPTF	7/8-20 UNCF	3/8-18 NPTF	----	2-5/16	18.75

STEEL BULKHEAD FITTINGS

28-306	1/4-18 NPTF	3/4 - 16 UNS		----	0.94	9.41
28-307	1/4-18 NPTF	3/4 - 16 UNS		----	1.50	10.10

28-309	1/2-14 NPTF	3/4 - UNS	1/4-18 NPTF	1/4-18 NPTF	2.16	15.94
28-310	1/2-14 NPTF	3/4 - UNS	1/4-18 NPTF	----	2.53	27.54

28-312	1/2-14 NPTF	1-14 UNS	1/4-18 NPTF	----	2.94	24.58

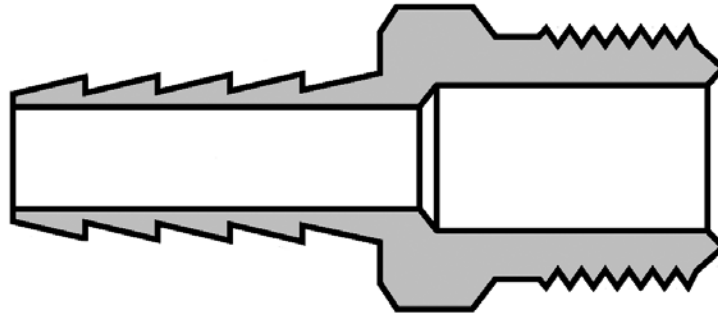
MARINE BULKHEAD FITTINGS

46-540	5/16 Hose ID	----	----	----	2.37	11.23
46-541	3/8 Hose ID	----	----	----	2.37	10.87

³ Also stocked in Houston⁵ Also stocked in Atlanta

(See page Intro II for details)

Hose Barb Fittings



•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.

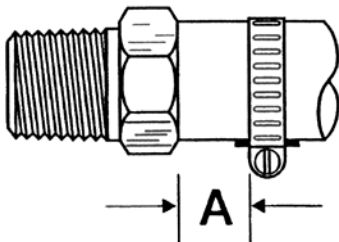
• Assembly Instructions

- 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 255-269 for hose clamps

See page 248-249 for plastic hose barb fittings

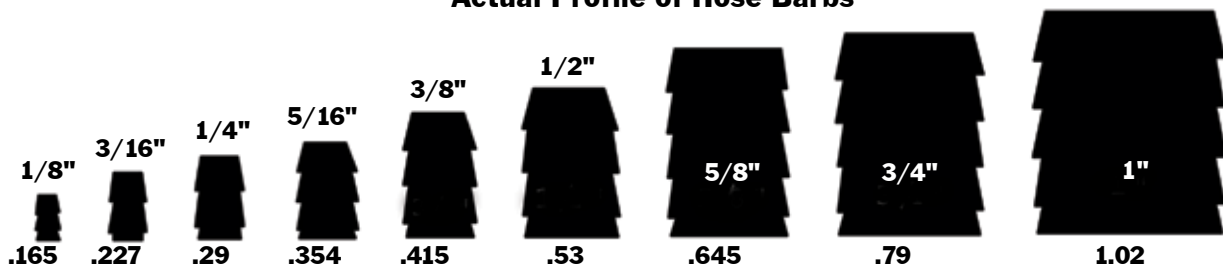
See page 26 for stainless steel hose barbs

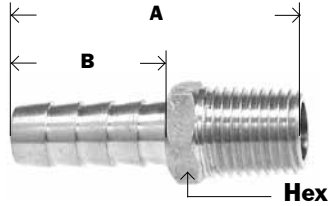


Stainless Steel hose barbs for beverage service available -
See beverage fitting section, pg. 301

Hose Size	A
3/16"	1/4"
1/4"	1/4"
5/16"	1/4"
3/8"	1/8"
1/2"	1/8"
5/8"	1/8"
3/4"	1/8"

Actual Profile of Hose Barbs



RIGID MALE ADAPTER


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
32-300	1/8" x 1/16"	1.13	0.60	0.31	0.02	10.86
32-001 ^{3.5}	1/8" x 1/8"	1.19	0.69	0.43	0.02	0.94
32-027 ^{3.5}	1/8" x 1/4"	1.16	0.46	0.56	0.02	1.22
32-002 ^{3.5}	3/16" x 1/8"	1.19	0.75	0.43	0.02	0.81
32-003 ^{3.5}	3/16" x 1/4"	1.37	0.69	0.56	0.04	1.33
32-301 ^{3.5}	1/4" x 1/16"	1.44	0.88	0.43	0.02	4.06
32-004 ^{3.5}	1/4" x 1/8"	1.47	0.97	0.43	0.02	1.03
32-005 ^{3.5}	1/4" x 1/4"	1.72	0.97	0.56	0.04	1.11
32-006 ^{3.5}	1/4" x 3/8"	1.72	0.97	0.68	0.05	1.77
32-007 ^{3.5}	1/4" x 1/2"	1.72	0.81	0.87	0.10	2.99
32-008 ^{3.5}	5/16" x 1/8"	1.47	0.97	0.43	0.02	0.90
32-009 ^{3.5}	5/16" x 1/4"	1.72	0.97	0.56	0.04	1.33
32-010 ^{3.5}	5/16" x 3/8"	1.76	0.97	0.68	0.06	1.68
32-390 ^{3.5}	5/16" x 1/2"	1.88	0.95	0.87	0.10	3.60
32-011 ^{3.5}	3/8" x 1/8"	1.53	0.97	0.56	0.03	1.21
32-012 ^{3.5}	3/8" x 1/4"	1.75	0.97	0.56	0.05	1.11
32-013 ^{3.5}	3/8" x 3/8"	1.72	0.96	0.68	0.06	1.60
32-014 ^{3.5}	3/8" x 1/2"	1.97	0.97	0.87	0.09	2.89
32-026 ^{3.5}	3/8" x 3/4"	1.97	0.97	1.06	0.16	3.97
32-333	7/16" x 1/4"	1.76	0.97	0.56	0.04	4.00
32-302 ^{3.5}	1/2" x 1/8"	1.57	0.95	0.56	0.06	3.25
32-015 ^{3.5}	1/2" x 1/4"	1.72	0.97	0.56	0.04	1.55
32-016 ^{3.5}	1/2" x 3/8"	1.76	0.97	0.68	0.07	1.78
32-017 ^{3.5}	1/2" x 1/2"	1.87	0.96	0.87	0.11	2.40
32-018 ^{3.5}	1/2" x 3/4"	1.94	0.97	1.06	0.16	3.78
32-303 ^{3.5}	1/2" x 1"	2.31	0.99	1.37	0.33	11.62
32-304 ^{3.5}	5/8" x 1/4"	1.67	0.92	0.68	0.06	3.97
32-019 ^{3.5}	5/8" x 3/8"	1.76	0.97	0.68	0.08	2.13
32-020 ^{3.5}	5/8" x 1/2"	1.87	0.96	0.87	0.11	2.74
32-021 ^{3.5}	5/8" x 3/4"	1.87	0.96	1.06	0.14	3.75
32-305 ^{3.5}	5/8" x 1"	2.31	0.96	1.37	0.36	14.65
32-306 ^{3.5}	3/4" x 3/8"	1.65	0.87	0.81	0.12	5.31
32-022 ^{3.5}	3/4" x 1/2"	1.87	0.96	0.87	0.14	3.08
32-023 ^{3.5}	3/4" x 3/4"	1.87	0.96	1.06	0.15	4.33
32-316 ^{3.5}	3/4" x 1"	2.55	1.15	1.37	0.38	10.57
32-307	1" x 1/2"	1.80	0.87	1.06	0.24	6.30
32-024 ^{3.5}	1" x 3/4"	2.19	1.19	1.06	0.32	4.66
32-025 ^{3.5}	1" x 1"	2.48	1.19	1.37	0.39	7.99
32-029	1-1/4" x 3/4"	2.37	1.19	1.37	0.35	18.81
32-028 ^{3.5}	1-1/4" x 1"	2.55	1.19	1.37	0.46	11.69

* See Bronze insert fittings on page 300 for larger sizes.

For Stainless Barb Fittings see pg. 26 or beverage section, pg. 301

For BSPT Barb Fittings see pg. 111

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

³ Also stocked in Houston
⁵ Also stocked in Atlanta
(See page Intro II for details)

Save 5% by ordering online at
www.midlandindustrial.com

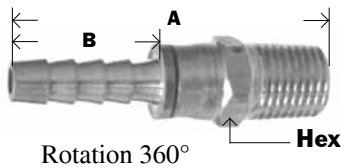
BRASS RIGID MALE BSPT BARB ADAPTER



NEW

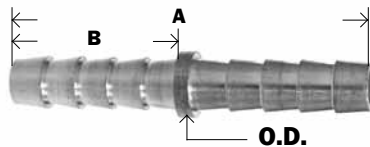
Part #	Hose I.D. x BSPT	List Price
32-450	1/4" x 1/8"	1.27
32-451	1/4" x 1/4"	1.73
32-452	3/8" x 1/4"	1.85
32-453	3/8" x 3/8"	2.36
32-454	3/8" x 1/2"	3.92
32-455	1/2" x 3/8"	2.54
32-456	1/2" x 1/2"	4.15
32-457	3/4" x 3/4"	6.46
32-458	1" x 1"	13.33

SWIVEL MALE ADAPTER

SMS
103

Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
32-200 ^{3,5}	1/4" x 1/4"	2.12	0.97	0.56	0.04	3.51
32-201 ^{3,5}	3/8" x 1/4"	2.12	0.97	0.56	0.07	3.71
32-202 ^{3,5}	3/8" x 3/8"	2.12	0.97	0.68	0.08	4.11
32-355 ^{3,5}	1/2" x 3/8"	2.12	0.97	0.68	0.10	5.88
32-356 ^{3,5}	1/2" x 1/2"	2.33	0.97	0.87	0.14	5.84
32-357 ^{3,5}	3/4" x 3/4"	2.33	0.97	1.06	0.20	7.98

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 ^{3,5}	1/8"	0.98	0.45	0.31	0.01	1.08
32-092 ^{3,5}	3/16"	1.62	0.77	0.36	0.02	1.44
32-093 ^{3,5}	1/4"	2.00	0.96	0.37	0.02	1.13
32-079	1/4" x 1/8"	1.55	0.97	0.56		2.94
32-094 ^{3,5}	5/16"	2.00	0.96	0.39	0.02	1.29
32-095 ^{3,5}	3/8"	2.00	0.94	0.51	0.04	1.17
32-080	3/8" x 1/4"	2.06	0.97	0.56		3.40
32-096 ^{3,5}	1/2"	2.00	0.96	0.62	0.06	1.81
32-087	1/2" x 3/8"	2.06	0.97	0.71		4.67
32-097	5/8"	2.05	0.96	0.75	0.08	2.47
32-088	5/8" x 3/8"	2.06	0.97	0.75		4.96
32-098	3/4"	2.50	1.15	0.87	0.10	3.71
32-089	3/4" x 1/2"	2.28	1.19	0.87		6.75
32-099	1"	3.00	1.44		0.23	10.21

See Bronze insert fittings on page 300 for larger sizes.

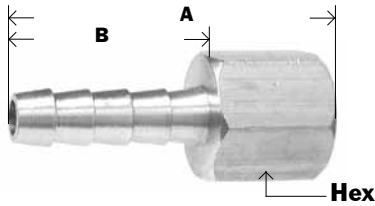
See Hose Clamps on page 255-269.

For Stainless Barb Fittings see pg. 26 or beverage section, pg. 301

³ Also stocked in Houston⁵ Also stocked in Atlanta

(See page Intro II for details)

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

RIGID FEMALE ADAPTER


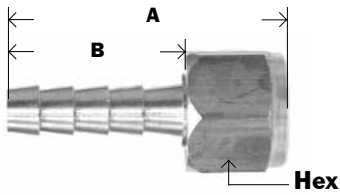
209A FPB
 128 105B-2
 29A KF-RS
 29F 104
 126HB
 126

Part #	Hose I.D. x Female NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
32-050 ^{3.5}	1/8" x 1/8"	0.96	0.46	0.50	0.02	1.35
32-317 ^{3.5}	1/8" x 1/4"	1.15	0.46	0.62	0.04	4.15
32-051 ^{3.5}	3/16" x 1/8"	1.10	0.68	0.50	0.02	1.31
32-062 ^{3.5}	3/16" x 1/4"	1.44	0.75	0.62	0.04	3.36
32-052 ^{3.5}	1/4" x 1/8"	1.35	0.93	0.50	0.02	1.48
32-053 ^{3.5}	1/4" x 1/4"	1.60	0.97	0.62	0.06	1.52
32-054 ^{3.5}	1/4" x 3/8"	1.65	1.03	0.75	0.04	2.14
32-441	1/4" x 1/2"	1.66	0.97	0.93		6.40
32-055	5/16" x 1/8"	1.47	0.97	0.56	0.04	3.12
32-056	5/16" x 1/4"	1.66	0.97	0.62	0.04	1.90
32-318	5/16" x 3/8"	1.66	0.97	0.75	0.06	4.15
32-320 ^{3.5}	5/16" x 1/2"	1.67	0.96	0.93	0.08	4.14
32-057 ^{3.5}	3/8" x 1/8"	1.47	0.97	0.56	0.04	1.98
32-058 ^{3.5}	3/8" x 1/4"	1.61	0.97	0.62	0.06	1.87
32-059 ^{3.5}	3/8" x 3/8"	1.63	1.00	0.81	0.08	1.87
32-063 ^{3.5}	3/8" x 1/2"	1.72	0.94	0.93	0.12	3.46
32-442	3/8" x 3/4"	1.97	0.97	1.18		11.54
32-064 ^{3.5}	1/2" x 1/4"	1.66	0.69	0.62	0.08	2.15
32-060 ^{3.5}	1/2" x 3/8"	1.66	0.97	0.75	0.08	3.87
32-061	1/2" x 1/2"	1.76	0.96	0.93	0.12	3.65
32-443	1/2" x 3/4"	1.97	0.97	1.18		11.54
32-444	5/8" x 3/8"	1.66	0.97	0.75		4.39
32-445	5/8" x 1/2"	1.66	0.97	0.93		6.40
32-446	5/8" x 3/4"	1.97	0.97	1.18		11.54
32-447	3/4" x 1/2"	1.88	1.19	0.93		7.04
32-065	3/4" x 3/4"	2.19	1.21	1.18	0.22	5.95
32-049	1" x 3/4"	2.19	1.19	1.18	0.26	15.27
32-321	1" x 1"	2.32	1.19	1.18	0.35	20.37
32-448	1-1/4" x 1"	2.32	1.19	1.43		18.46

Imagination is more important than knowledge. For knowledge is limited to all we now know and understand, while imagination embraces the entire world, and all there ever will be to know and understand.

- Albert Einstein

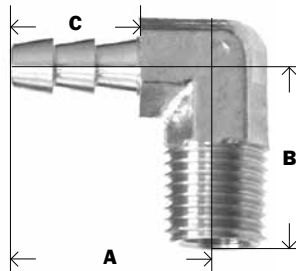
SWIVEL FEMALE ADAPTER - With Gasket



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	3.87
32-132	3/16" x 1/8"	1.19	0.75	0.50	0.03	3.52
32-133	3/16" x 1/4"	1.28	0.75	0.62	0.04	5.65
32-120	1/4" x 1/8"	1.41	0.97	0.50	0.02	6.54
32-121 ^{3,5}	1/4" x 1/4"	1.50	0.97	0.62	0.02	2.49
32-129 ^{3,5}	1/4" x 3/8"	1.63	0.97	0.75	0.04	5.78
32-130	5/16" x 1/4"	1.50	0.97	0.62	0.04	6.81
32-122	3/8" x 1/4"	1.54	1.00	0.62	0.06	4.50
32-123 ^{3,5}	3/8" x 3/8"	1.60	0.97	0.75	0.06	6.10
32-354	3/8" x 1/2"	1.66	0.97	0.93	0.10	8.29
32-124	1/2" x 3/8"	1.60	0.97	0.75	0.08	5.81
32-125 ^{3,5}	1/2" x 1/2"	1.66	0.97	0.93	0.12	6.10
32-117	1/2" x 3/4"	1.82	1.19	1.18	0.16	9.52
32-118	5/8" x 3/4"	1.82	1.19	1.18	0.18	10.13
32-119	3/4" x 3/4"	1.82	1.19	1.18	0.14	6.28

FORGED HOSE BARB 90° ELBOW



129
HBE1
KF-PS90
HE-1
29E
139



Part #	Hose I.D. x Male NPTF	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
32-308 ^{3,5}	3/16" x 1/8"	0.95	0.70	0.66	0.37	0.02	2.20
32-391	3/16" x 1/4"	1.00	0.84	0.63	0.46	0.10	3.20
32-038 ^{3,5}	1/4" x 1/8"	1.01	0.81	0.71	0.47	0.06	2.13
32-039 ^{3,5}	1/4" x 1/4"	1.01	0.87	0.63	0.47	0.06	2.92
32-309* ^{3,5}	1/4" x 3/8"	1.08	0.97	0.73	0.69	0.12	3.65
32-036 ^{3,5}	5/16" x 1/8"	1.01	0.81	0.63	0.47	0.04	2.61
32-040 ^{3,5}	5/16" x 1/4"	1.01	0.87	0.63	0.47	0.06	2.76
32-310 ^{3,5}	5/16" x 3/8"	1.06	0.94	0.63	0.50	0.06	5.30
32-046 ^{3,5}	3/8" x 1/8"	1.01	0.81	0.63	0.47	0.06	2.35
32-041 ^{3,5}	3/8" x 1/4"	1.02	0.88	0.65	0.47	0.06	2.81
32-042 ^{3,5}	3/8" x 3/8"	1.09	0.93	0.68	0.50	0.08	3.37
32-047 ^{3,5}	3/8" x 1/2"	1.11	1.09	0.63	0.59	0.10	3.62
32-048 ^{3,5}	1/2" x 1/4"	1.06	1.00	0.68	0.59	0.10	3.40
32-043 ^{3,5}	1/2" x 3/8"	1.06	1.09	0.69	0.59	0.10	4.13
32-311 ^{3,5}	1/2" x 1/2"	1.31	1.19	0.87	0.56	0.22	5.49
32-044** ^{3,5}	5/8" x 3/8"	1.12	1.06	0.61	0.56	0.12	5.32
32-045** ^{3,5}	5/8" x 1/2"	1.12	1.12	0.66	0.59	0.14	5.18
32-312 ^{3,5}	5/8" x 3/4"	1.46	1.26	0.93	1.06	0.32	8.90
32-313*** ^{3,5}	3/4" x 1/2"	1.31	1.28	0.87	0.85	0.22	7.41
32-314 ^{3,5}	3/4" x 3/4"	1.46	1.26	0.91	1.06	0.32	11.89
32-330***	3/4" x 1"	1.57	1.64	0.90	1.34	0.64	14.98
32-315 ^{3,5}	1" x 3/4"	1.60	1.40	0.95	1.06	0.32	10.93
32-319	1" x 1"	1.69		0.98		0.43	39.70

* Barstock
** Grooved End Barbs
*** Square Body

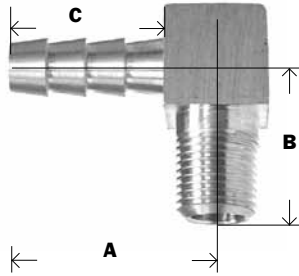
See Bronze insert fittings on page 300 for larger sizes.

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

Science is organized knowledge. Wisdom is organized life.

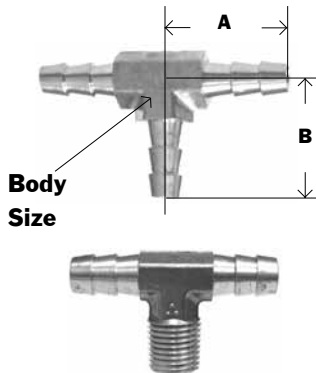
- Immanuel Kant

³ Also stocked in Houston
⁵ Also stocked in Atlanta
(See page Intro II for details)

HOSE BARB**BRASS FITTINGS****BARSTOCK HOSE BARB 90° ELBOW**

129HB

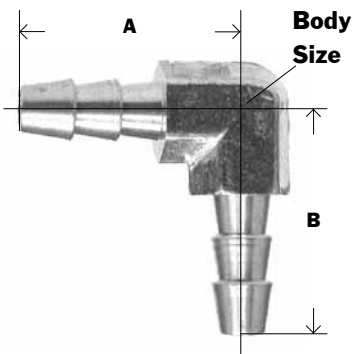
Part #	Hose I.D. x Male NPTF	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
32-308B	3/16" X 1/8"	0.97	0.72	0.75	0.43	0.04	5.70
32-038B	1/4" X 1/8"	1.00	0.75	0.75	0.50	0.02	4.66
32-039B	1/4" X 1/4"	1.02	0.91	0.74	0.56	0.04	5.23
32-041B	3/8" X 1/4"	1.32	0.89	0.97	0.58	0.08	6.73
32-042B	3/8" X 3/8"	1.50	1.06	0.97	0.75	0.14	13.53
32-043B	1/2" X 3/8"	1.53	1.07	0.97	0.72	0.16	11.34

HOSE BARB TEES

32-128

Part #	Hose Barb Size	A	B	Body Size	Approx. Wt. Lbs.	List Price
32-367 ^{3.5}	1/8"	0.84	0.83	0.25	0.02	3.23
32-368	3/16"	1.02	1.02		0.03	5.71
32-365 ^{3.5}	1/4"	1.00	1.00	0.44	0.06	2.89
32-366 ^{3.5}	5/16"	1.00	1.00	0.44	0.06	3.63
32-126 ^{3.5}	3/8"	1.01	1.01	0.43	0.06	3.58
32-400	1/2"	1.02	1.00	0.43	0.08	4.15
32-361	5/8"	1.26	1.26		0.16	15.81
32-363	3/4"	1.26	1.26		0.18	21.75
32-128	3/8"HB x 1/4" MIP	1.00	0.94	0.43	0.06	9.58

* See Bronze insert fittings on page 300 for larger sizes.

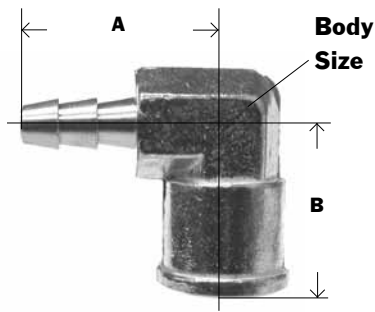
90° HOSE BARB ELBOW

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		5.65
32-433	3/16" x 3/16"	0.90	0.90	0.37		4.62
32-412	1/4" x 1/8"	1.02	1.02	0.44	0.04	2.56
32-413	1/4" x 1/4"	1.01	1.01	0.44	0.04	3.28
32-425	5/16" x 5/16"	1.15	1.15	0.48	0.05	7.27
32-414	3/8" x 1/8"	1.01	1.01	0.44	0.04	3.70
32-415	3/8" x 1/4"	1.00	1.00	0.44	0.04	3.59
32-416	3/8" x 3/8"	1.02	1.02	0.44	0.04	5.37
32-417	3/8" x 1/2"	1.24	1.10	0.50	0.06	4.34
32-418	1/2" x 1/4"	1.24	1.08	0.50	0.06	4.83
32-419	1/2" x 3/8"	1.22	1.09	0.50	0.06	4.34
32-420	1/2" x 1/2"	1.24	1.24	0.50	0.06	5.05
32-434	5/8" x 5/8"	1.20	1.20	0.75		14.43
32-435	3/4" x 1/2"			0.88		17.25
32-436	3/4" x 3/4"	1.28	1.28	0.88		20.37

³ Also stocked in Houston⁵ Also stocked in Atlanta

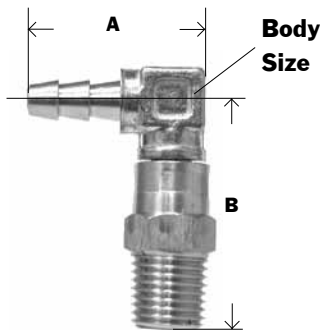
(See page Intro II for details)

90° FEMALE HOSE BARB ELBOW



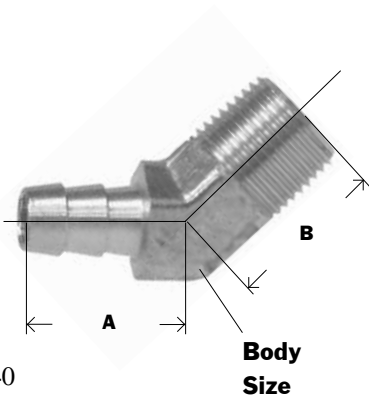
Part #	Hose I.D. x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
32-401	1/4" x 1/8"	1.01	0.82	0.47	0.06	4.00
32-402	1/4" x 1/4"	1.13	0.91	0.56	0.10	4.10
32-403	3/8" x 1/8"	1.01	0.82	0.47	0.06	4.00
32-404	3/8" x 1/4"	1.15	0.91	0.56	0.10	5.24
32-405	3/8" x 3/8"	1.15	1.11	0.68	0.14	6.28
32-406	3/8" x 1/2"	1.26	1.39	0.75	0.20	9.19
32-407	1/2" x 1/4"	1.26	0.91	0.56	0.10	5.88
32-410	1/2" x 3/8"	1.24	1.11	0.68	0.14	7.84
32-411	1/2" x 1/2"	1.37	1.39	0.75	0.20	8.71
32-409	3/4" x 3/4"			0.81		44.20

90° HOSE BARB x SWIVEL MALE PIPE



Part #	Hose I.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
32-421	1/4" x 1/8"	1.00	1.53	0.47	0.08	5.88
32-422	1/4" x 1/4"	1.00	1.54	0.56	0.08	5.88
32-423	3/8" x 1/8"	1.00	1.53	0.47	0.08	7.71
32-424	3/8" x 1/4"	1.00	1.54	0.56	0.08	7.71
32-426	3/8" x 3/8"	0.98	1.46	0.68	0.12	8.18
32-427	3/8" x 1/2"	1.01	1.79	0.87	0.18	8.56
32-428	1/2" x 1/4"	1.07	1.61	0.56	0.12	8.56
32-431	1/2" x 3/8"	1.07	1.53	0.68	0.14	8.89
32-432	1/2" x 1/2"	1.07	1.79	0.87	0.16	10.84

45° ELBOW



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	5.71
32-109* ^{3,5}	1/4" x 1/4"	1.00	0.62	0.57	0.06	10.71
32-111 ^{3,5}	3/8" x 1/8"	0.83	0.66	0.53	0.04	4.28
32-112 ^{3,5}	3/8" x 1/4"	0.82	0.84	0.53	0.06	3.83
32-113 ^{3,5}	3/8" x 3/8"	0.93	0.87	0.59	0.08	5.21
32-346 ^{3,5}	1/2" x 1/4"	1.00	0.84	0.59	0.08	7.58
32-114 ^{3,5}	1/2" x 3/8"	1.00	0.88	0.59	0.08	6.87
32-115 ^{3,5}	5/8" x 3/8"	0.97	0.88	0.59	0.10	6.65
32-345	3/4" x 1/2"			0.81		19.73

* Barstock

³ Also stocked in Houston⁵ Also stocked in Atlanta

(See page Intro II for details)

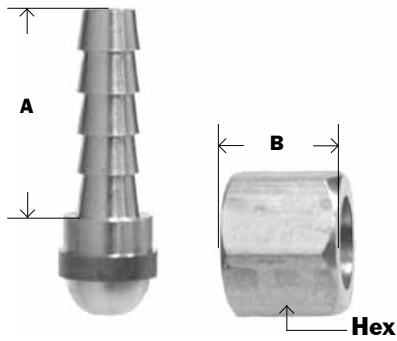
140
HE145
139HB
KF-PS45
139

If I have seen further it is by standing on the
shoulders of giants.

- Isaac Newton

HOSE BARB**BRASS FITTINGS****BALL END SWIVEL**

NPSM - Ball seat type

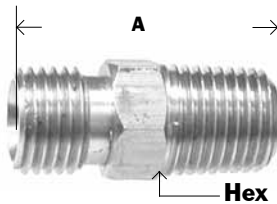


128HBLSV
29FS
209AS
124
131

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	3.51
32-067 ^{3.5}	3/16" x 1/8"	0.75	0.44	0.50	0.03	3.86
32-068 ^{3.5}	3/16" x 1/4"	0.75	0.52	0.62	0.04	2.81
32-069	1/4" x 1/8"	0.97	0.44	0.50	0.04	3.13
32-070 ^{3.5}	1/4" x 1/4"	0.97	0.53	0.62	0.06	2.14
32-078	1/4" x 3/8"	0.97	0.63	0.75	0.06	4.85
32-071 ^{3.5}	5/16" x 1/4"	0.97	0.52	0.62	0.05	2.83
32-072 ^{3.5}	3/8" x 1/4"	0.97	0.53	0.62	0.06	2.12
32-073 ^{3.5}	3/8" x 3/8"	0.97	0.59	0.75	0.08	2.51
32-074 ^{3.5}	3/8" x 1/2"	0.97	0.69	0.94	0.14	7.04
32-075 ^{3.5}	1/2" x 3/8"	0.97	0.59	0.75	0.08	2.61
32-076 ^{3.5}	1/2" x 1/2"	0.97	0.69	0.94	0.10	3.27
32-077 ^{3.5}	3/4" x 3/4"	0.97	0.70	1.12	0.14	5.99

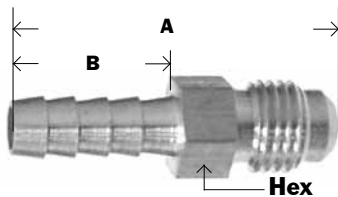
BALLSEAT MALE ADAPTER

Beveled seat



172
134
127HB
122AS

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	2.77
32-034	1/4" x 1/8"	1.06	0.56	0.04	2.48
32-030 ^{3.5}	1/4" x 1/4"	1.25	0.56	0.06	2.83
32-362	3/8" x 1/4"	1.28	0.68	0.08	5.29
32-031 ^{3.5}	3/8" x 3/8"	1.30	0.68	0.08	3.49
32-364	1/2" x 3/8"	1.35	0.87	0.10	6.01
32-032 ^{3.5}	1/2" x 1/2"	1.53	0.87	0.14	5.77
32-033	3/4" x 3/4"	1.53	1.06	0.20	8.72

45° FLARE ADAPTER

142
201BF
KF-MS

Part #	Hose I.D. x 45° Flare	A	B	Hex	Approx. Wt. Lbs.	List Price
32-322	3/16" x 1/4"	1.5	0.75	0.43	0.03	5.39
32-081 ^{3.5}	1/4" x 1/4"	1.72	0.97	0.43	0.03	2.54
32-082	1/4" x 3/8"	1.82	0.97	0.62	0.07	3.35
32-083	5/16" x 5/16"	1.75	0.97	0.50	0.08	3.96
32-084 ^{3.5}	3/8" x 3/8"	1.82	0.97	0.62	0.08	3.69
32-085	3/8" x 1/2"	1.97	0.97	0.75	0.10	5.14
32-086	1/2" x 1/2"	1.97	0.97	0.75	0.10	5.54

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

Some people make things happen, some
people watch things happen, and some ask
what happened.

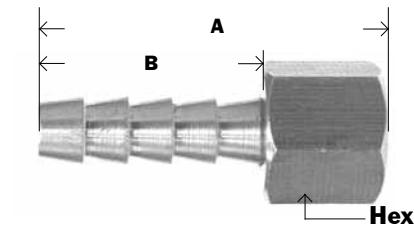
- Casey Stengel

³ Also stocked in Houston

⁵ Also stocked in Atlanta

(See page Intro II for details)

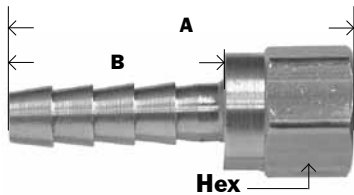
FEMALE 45° FLARE SWIVEL



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

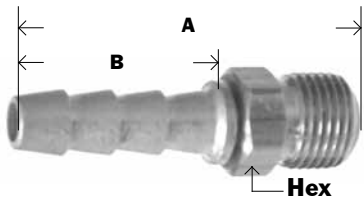
Part #	Hose I.D. x Female 45° Flare	A	B	Hex	Approx. Wt. Lbs.	List Price
32-326	3/16" x 3/16"	1.19	0.75	0.43	0.04	3.57
32-107	3/16" x 1/4"	1.34	0.75	0.56	0.04	2.86
32-101 ^{3,5}	1/4" x 1/4"	1.57	0.97	0.56	0.04	1.81
32-102	1/4" x 5/16"	1.53	0.97	0.62	0.06	2.49
32-103 ^{3,5}	1/4" x 3/8"	1.64	0.97	0.75	0.08	2.16
32-104	5/16" x 5/16"	1.58	0.97	0.62	0.05	4.00
32-327	5/16" x 3/8"	1.64	0.97	0.75	0.08	3.29
32-105 ^{3,5}	3/8" x 3/8"	1.64	0.97	0.75	0.08	2.74
32-106	3/8" x 1/2"	1.81	0.97	0.87	0.10	6.08
32-100 ^{3,5}	1/2" x 1/2"	1.68	0.97	0.87	0.12	3.37
32-328	3/4" x 3/4"	2.00	0.97	1.25	0.20	15.06

DUAL 45° / 37° FLARE SWIVEL



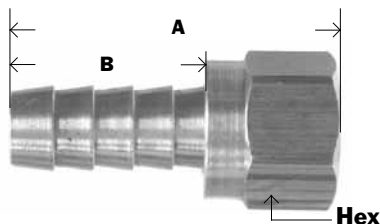
Part #	Hose I.D. x Dual Seat	A	B	Hex	Approx. Wt. Lbs.	List Price
32-337	1/4" x 1/4"	1.56	0.97	0.56	0.04	2.47
32-339	5/16" x 5/16"	1.60	0.97	0.62	0.06	2.78
32-340	3/8" x 1/2"	1.68	0.97	0.87	0.10	4.25
32-341	1/2" x 1/2"	1.68	0.97	0.87	0.10	3.73
32-342	1/2" x 5/8"	1.76	0.97	1.00	0.12	6.00

INVERTED FLARE SWIVEL



Part #	Hose I.D. x Inverted Flare	A	B	Hex	Approx. Wt. Lbs.	List Price
32-369	1/4" x 1/4"	1.56	0.95	0.43	0.04	8.82
32-371	3/8" x 3/8"	1.70	0.96	0.62	0.06	11.79
32-372	1/2" x 1/2"	1.80	0.96	0.75	0.08	9.07
32-373	5/8" x 5/8"	2.05	1.17	0.87	0.15	15.69

FEMALE 37° J.I.C. FLARE SWIVEL



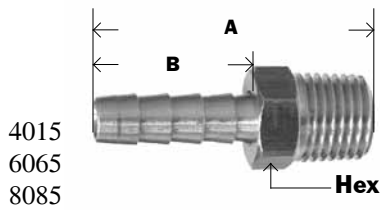
Part #	Hose I.D. x Female 37° JIC	A	B	Hex	Approx. Wt. Lbs.	List Price
32-334	1/4" x 3/8"	1.60	0.97	0.68	0.06	2.90
32-335	5/16" x 3/8"	1.60	0.97	0.68	0.06	3.00
32-336	3/8" x 3/8"	1.60	0.97	0.68	0.10	3.05
32-338	3/4" x 3/4"	2.00	0.97	1.25	0.20	15.06

³ Also stocked in Houston

⁵ Also stocked in Atlanta
 (See page Intro II for details)

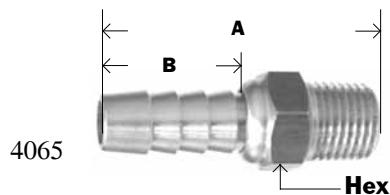
We learn something every day, and lots of times it's that
 what we learned the day before was wrong.

- Bill Vaughan

HOSE BARB**BRASS FITTINGS****MALE SWIVEL**

Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
32-765	1/4" x 1/4"	1.64	0.89	0.56	0.06	7.06
32-766	3/8" x 3/8"	1.77	1.00	0.68	0.08	8.44

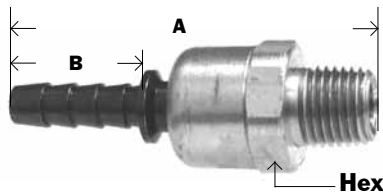
See page 15 for more male swivels.

HIGH PRESURE MALE SWIVEL

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	15.68

HOSE ID x MALE BALL SWIVEL

300 PSI. Max. Working Pressure



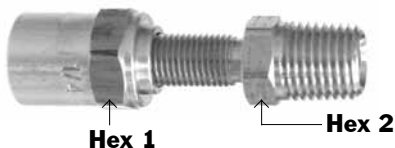
Part #	Hose I.D. x Male ball swivel	A	B	Hex	Approx. Wt. Lbs.	List Price
28-415	1/4" x 1/4"	1.30	0.94	0.81	0.14	29.89
28-417	3/8" x 1/4"	1.30	1.00	0.81	0.14	27.61

Many more sizes available.

1/4" MALE THREAD ID x OD

Reusable Hose Couplings

183

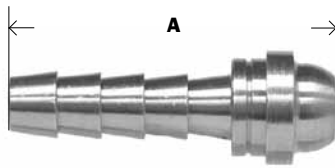


Part #	Size 1/4" Male Thread ID x OD	Length	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
32-725	3/8" x 3/4"(23/32)	1.97	0.87	0.56	0.14	7.30
32-726	1/4" x 5/8"	1.86	0.81	0.56	0.13	6.56
32-727	1/4" x 1/2"	1.86	0.69	0.56	0.11	5.94
32-728	1/4" x 9/16"	1.86	0.75	0.56	0.12	9.64
32-741	5/16" x 5/8"	1.97	0.81	0.56	0.13	6.92
32-742	3/8" x 5/8"	1.97	0.81	0.56	0.14	10.71

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

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

STEM ONLY - WELDING HOSE CONNECTOR

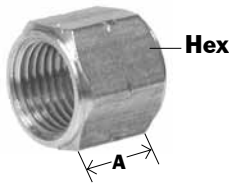


201RWA
WRS
WLS

Part #	Hose I.D.	A	Approx. Wt. Lbs.	List Price
30-410	3/16"	1.43	0.02	1.43
30-411	1/4"	1.43	0.02	1.25
30-412	5/16"	1.43	0.03	1.83
30-413	3/8"	1.43	0.04	1.76

Assemble with nuts below.

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

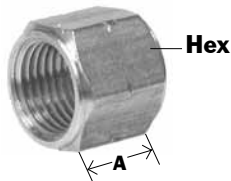


201RWA
WRS
KF-PE
152

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-420	R.H. Nut only	0.63	0.68	0.04	1.64

Assemble with stem above.

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

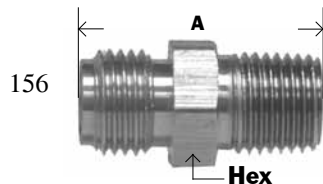


209LWA
WLS
154
KF-RE

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-421	L.H. Nut only	0.63	0.68	0.04	1.33

Assemble with stem above.

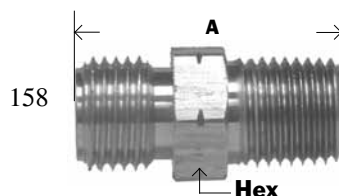
RIGHT HAND 9/16 - 18 #122RWA - WELDING HOSE CONNECTOR



156

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-401	1/4"-18	1.30	0.62	0.06	4.04

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



158

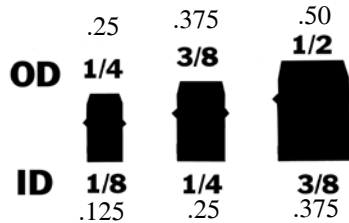
Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-406	1/4"-18	1.30	0.62	0.06	4.04

Only the mediocre are always at their best.

- Jean Giraudoux

HOSE BARB**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**1062
962

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)	2.71
21-007	3/8(1/4) x 1/4(1/8)	4.90
21-009	3/8(1/4) x 3/8(1/4)	2.19

MALE ADAPTER1068
968
688

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

Part #	Size	List Price
21-021	1/4(1/8) x 1/16	3.52
21-025 ⁴	1/4(1/8) x 1/4	4.31
21-027	3/8(1/4) x 1/8	3.46

FEMALE ADAPTER1066
966
26
668

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

Part #	Size	List Price
21-043	1/4(1/8) x 1/8	5.31
21-047	3/8(1/4) x 1/4	5.00

BULKHEAD UNION

1074

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

Part #	Size	List Price
21-083	3/8(1/4)	15.81

More sizes and styles available
...just ask!

UNION ELBOW1065
965

TUBE O.D. (I.D.)

Part #	Size	List Price
21-095	1/4(1/8)	4.27
21-097	3/8(1/4)	6.17
21-099	1/2(3/8)	7.21

MALE 90° ELBOW1069
969
229

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

Part #	Size	List Price
21-111	1/4(1/8) x 1/16	5.25
21-113	1/4(1/8) x 1/8	3.06
21-115	1/4(1/8) x 1/4	4.90
21-117	3/8(1/4) x 1/8	6.06
21-119	3/8(1/4) x 1/4	4.22
21-121	1/2(3/8) x 3/8	14.71

FEMALE 90° ELBOW1070
970
230

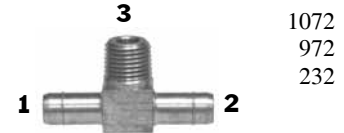
TUBE O.D. (I.D.) X FEMALE PIPE

Part #	Size	List Price
21-133	1/4(1/8) x 1/8	5.54

UNION TEE1064
964
224

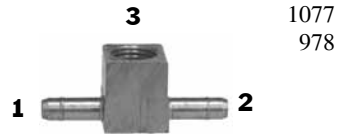
O.D. (I.D.) X O.D. (I.D.) X O.D. (I.D.)

Part #	Size	List Price
21-151	1/4(1/8)	5.42
21-153	3/8(1/4)X 3/8(1/4)X1/4(1/8)	5.89
21-155	3/8(1/4)	1.45
21-159	1/2(3/8)X1/2(3/8)X3/8(1/4)	36.81
21-161	1/2(3/8)	8.77

BRASS FITTINGS**MALE BRANCH TEE**1072
972
232

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	4.76
21-195	3/8(1/4) x 3/8(1/4) x 1/8	7.67
21-197	3/8(1/4) x 3/8(1/4) x 1/4	8.66

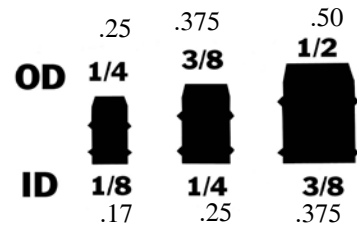
FEMALE BRANCH TEE1077
978

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	8.31

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	3.71
32-151	1/4(1/8) x 1/4	6.08
32-153	3/8(1/4) x 1/4	6.22

UNION TEE

Part #	Tube O.D. (I.D.)	List Price
32-159	1/4(1/8 ID)	5.26
32-160	3/8(1/4 ID)	9.41

90° ELBOW

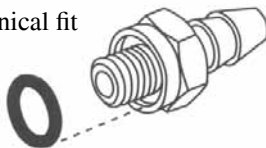
Part #	Tube O.D. (I.D.)	List Price
32-170	1/4(1/8 ID)	5.66
32-171	3/8(1/4 ID)	8.42

BRASS FITTINGS

MINIATURE FITTINGS

FEATURES: O-RING FITTINGS

- Reliability of a metal-to-metal mechanical fit
- Captured O-Ring for superior seal
- Precision machined barb design
- Electroless Nickel Plated Brass



it from view and providing a clean looking connection. The result is superior sealing power - the Buna-N O-ring is not pinched but rather compressed within the fitting skirt which ensures a leakproof fit even when mated with a less than perfect sealing surface. When torqued down the mechanical fit keeps the fittings tight and retains its position even under constant vibration. Our captured O-ring design also eases installation, there is no need to replace or reposition the seal - we have eliminated the need for replacement gaskets or washers.

This O-Ring fitting was designed with the superior static sealing qualities of an O-ring plus the reliability of a metal-to-metal mechanical fit.

When properly installed the skirt around the O-ring allows the fitting to mechanically seat on the rim of the female thread and hold the fitting tight. The high quality Buna-N O-ring is captured inside the skirt of the fitting, concealing

BRASS

STRAIGHT CONNECTORS

Sizes are for Polyurethane Tubing w/ these additional inclusions.

Note	Exception
A	7/64 ID Nylon Tubing
B	9/64 ID Nylon Tubing
C	.170 ID Polyethylene



Part #	Thread x Hose ID	List Price
99-250	10-32 x 1/16	2.17
99-251	10-32 x 1/16 w/ 1/4 Hex	2.17
99-252	10-32 x 1/16	2.17
99-253	10-32 x 5/64 A	2.17
99-254	10-32 x 5/64 w/ 1/4 A	2.17
99-255	10-32 x 1/8 B	2.17
99-256	10-32 x .160 C	2.17
99-257	10-32 x .160 w/ 1/4 Hex C	2.17

RUN TEES



Part #	Thread x Hose ID	List Price
99-258	10-32 x 1/16	9.58
99-259	10-32 x 5/64 A	9.58
99-260	10-32 x 1/8 B	10.41

BRANCH TEES



Part #	Thread x Hose ID	List Price
99-261	10-32 x 1/16	9.03
99-262	10-32 x 5/64 A	8.30
99-263	10-32 x 1/8 B	9.03

CROSSES

Note	Exception
A	7/64 ID Nylon Tubing
B	9/64 ID Nylon Tubing
C	.170 ID Polyethylene



Part #	Thread x Hose ID	List Price
99-264	10-32 x 1/16	11.11
99-265	10-32 x 5/64 A	10.22
99-266	10-32 x 1/8 B	11.11

ELBOWS



Part #	Thread x Hose ID	List Price
99-267	10-32 x 1/16	7.35
99-268	10-32 x 5/64 A	7.35
99-269	10-32 x 1/8 B	7.35

UNIONS



Part #	Hose ID x Hose ID	List Price
99-270	1/16 x 1/16	2.37
99-271	.160 x 1/16 C	2.86
99-272	.160 x .160 C	3.13

More miniature fittings available, just ask!

UNION ELBOWS

Note	Exception
A	7/64 ID Nylon Tubing
B	9/64 ID Nylon Tubing
C	.170 ID Polyethylene



Part #	Hose ID	List Price
99-273	.160 x .160 C	7.01

UNION CROSSES



Part #	Hose ID	List Price
99-274	.160 C	12.99

BARBED TEES



Part #	Hose ID	List Price
99-275	5/64 A	8.30
99-277	1/16	7.15
99-278	.160 x .160 x .160 C	8.37

• All sizes are for polyurethane tubing with additions noted.

Laughing at our mistakes can lengthen our own life. Laughing at someone else's can shorten it.

- Cullen Hightower

sales@midlandindustrial.com

Fax 1-888-877-5391



HOSE BARB**BRASS FITTINGS****STAINLESS STEEL HOSE BARBS**

• Cast

**304 STAINLESS STEEL
HOSE NIPPLES**

Part #	Hose I.D. x Male Pipe	List Price
73-951 ^{3.5}	1/4"	5.80
73-952 ^{3.5}	3/8"	9.04
73-953 ^{3.5}	1/2"	10.08
73-954 ^{3.5}	3/4"	11.38
73-955 ^{3.5}	1"	14.54
73-956 ^{3.5}	1-1/4"	25.21
73-957 ^{3.5}	1-1/2"	26.31
73-958 ^{3.5}	2"	40.28
73-959	2-1/2"	87.49
73-960	3"	108.40

**304 STAINLESS STEEL
REDUCING HOSE NIPPLES**

Part #	Hose I.D. x Male Pipe	List Price
73-970	1/4" X 1/8"	5.91
73-971 ^{3.5}	3/8" X 1/4"	6.83
73-972	1/2" X 3/8"	10.20
73-973	1/2" X 1/4"	10.54
73-974	3/4" X 1/2"	13.46
73-975 ^{3.5}	1" X 3/4"	15.20
73-976	1" X 1/2"	24.75
73-977	1-1/4" X 1"	24.48
73-979	1-1/2" X 1-1/4"	38.48
73-980	1-1/2" X 1"	29.52
73-981	2" X 1-1/2"	50.91
73-982	2" X 1-1/4"	40.71

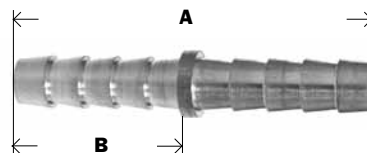
**316 STAINLESS STEEL
HOSE NIPPLES**

Part #	Hose I.D. x Male Pipe	List Price
973-951	1/4"	6.49
973-952	3/8"	8.33
973-953	1/2"	14.86
973-954	3/4"	15.62
973-955	1"	18.71
973-956	1-1/4"	25.42
973-957	1-1/2"	44.19
973-958	2"	47.08
973-959	2-1/2"	121.52
973-990	3"	149.72
973-991	4"	185.95

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

**316 STAINLESS STEEL MACHINED
RIGID MALE ADAPTER**

Part #	Hose I.D. x NPT	List Price
32-001SS	1/8" x 1/8"	6.24
32-002SS	3/16" x 1/8"	6.72
32-003SS	3/16" x 1/4"	8.94
32-004SS	1/4" x 1/8"	7.89
32-005SS	1/4" x 1/4"	9.42
32-006SS	1/4" x 3/8"	13.77
32-008SS	5/16" x 1/8"	8.01
32-009SS	5/16" x 1/4"	9.90
32-010SS	5/16" x 3/8"	13.77
32-011SS	3/8" x 1/8"	8.19
32-012SS	3/8" x 1/4"	9.42
32-013SS	3/8" x 3/8"	12.78
32-014SS	3/8" x 1/2"	17.58
32-015SS	1/2" x 1/4"	11.10
32-016SS	1/2" x 3/8"	13.77
32-017SS	1/2" x 1/2"	16.68
32-018SS	1/2" x 3/4"	23.88
32-019SS	5/8" x 3/8"	12.54
32-020SS	5/8" x 1/2"	17.34
32-021SS	5/8" x 3/4"	23.88
32-022SS	3/4" x 1/2"	18.30
32-023SS	3/4" x 3/4"	25.56
32-024SS	1" x 3/4"	25.56

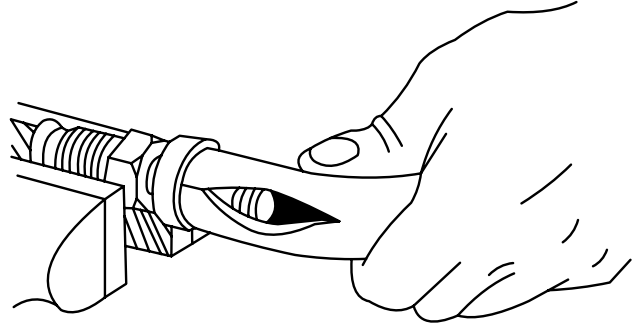
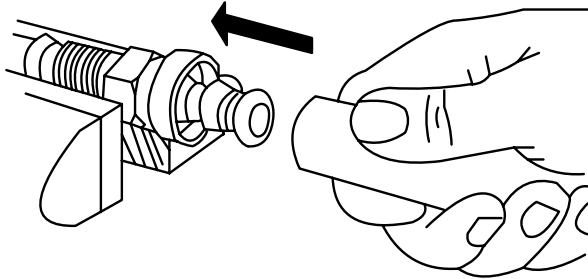
**316 STAINLESS STEEL
SPLICER**

Part #	Hose I.D. x Hose I.D.	A	B	List Price
32-093SS	1/4"	2.03	0.97	4.32
32-095SS	3/8"	2.06	0.97	6.00
32-096SS	1/2"	2.06	0.97	8.70
32-098SS	3/4"	2.50	1.19	12.85

• NOTE: See Stainless Steel Hose Barbs for beverage
on pg. 301

Push On Barb Fittings

BRASS



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

Material: CA360 Brass

Advantages: Easy assembly. No clamps needed!!

• **Assembly Instructions**

- 1- Lubricate insert.

³ Also stocked in Houston

⁵ Also stocked in Atlanta

(See page Intro II for details)

- 2- Hold hose at angle as shown & push on and up over first barb.

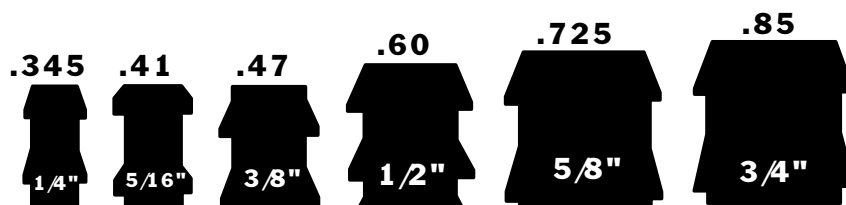
- 3- Continue to push straight on until hose is seated under protective plastic cap. Keep hands back from hose end area so that hose can expand.

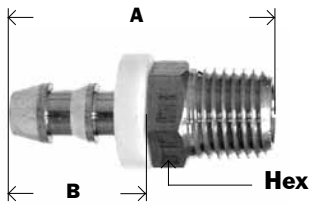
• **Disassembling Instructions**

- 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.

Actual Profile of Push On Barbs

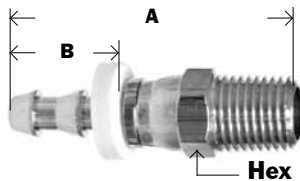


PUSH ON HOSE BARB**BRASS FITTINGS****MALE ADAPTER**

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

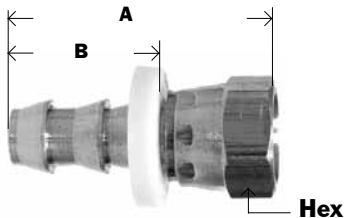
Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
30-200 ^{3,5}	1/4" x 1/8"	1.43	0.87	0.50	0.04	1.12
30-201 ^{3,5}	1/4" x 1/4"	1.66	0.87	0.56	0.06	1.56
30-211 ^{3,5}	1/4" x 3/8"	1.66	0.87	0.68	0.06	2.64
30-212 ^{3,5}	5/16" x 1/8"	1.42	0.77	0.43	0.04	3.68
30-213 ^{3,5}	5/16" x 1/4"	1.66	0.87	0.56	0.06	2.37
30-202 ^{3,5}	3/8" x 1/8"	1.53	0.97	0.50	0.04	1.70
30-203 ^{3,5}	3/8" x 1/4"	1.69	0.89	0.56	0.07	1.87
30-204 ^{3,5}	3/8" x 3/8"	1.76	0.97	0.68	0.08	2.17
30-205 ^{3,5}	3/8" x 1/2"	1.97	0.97	0.87	0.10	3.89
30-392	3/8" x 3/4"	1.97	0.92	1.06	0.16	10.44
30-216 ^{3,5}	1/2" x 1/4"	1.76	0.97	0.68	0.08	2.26
30-206 ^{3,5}	1/2" x 3/8"	1.76	0.97	0.68	0.09	2.38
30-207 ^{3,5}	1/2" x 1/2"	1.97	0.97	0.87	0.14	3.93
30-217 ^{3,5}	1/2" x 3/4"	1.97	0.97	1.06	0.16	5.86
30-219 ^{3,5}	5/8" x 3/8"	2.34	1.50	0.75	0.12	8.12
30-209 ^{3,5}	5/8" x 1/2"	2.45	1.45	0.87	0.16	5.59
30-214 ^{3,5}	5/8" x 3/4"	2.45	1.45	1.06	0.18	7.01
30-215 ^{3,5}	3/4" x 1/2"	2.45	1.45	0.87	0.21	5.60
30-210	3/4" x 3/4"	2.45	1.45	1.06	0.20	6.00
30-238	1" x 3/4"	2.93	1.50	1.25	0.43	20.71
30-239	1" x 1"	3.11	1.50	1.37	0.49	25.56

For STAINLESS PUSH ON FITTINGS see pg. 33

MALE SWIVEL

HMS
285

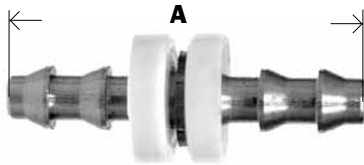
Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
30-385 ^{3,5}	1/4" x 1/4"	2.02	0.87	0.56	0.06	4.47
30-386 ^{3,5}	3/8" x 1/4"	2.12	0.97	0.56	0.08	5.53
30-387 ^{3,5}	3/8" x 3/8"	2.12	0.97	0.68	0.08	6.36
30-388 ^{3,5}	1/2" x 3/8"	2.12	0.97	0.68	0.10	6.28
30-389 ^{3,5}	1/2" x 1/2"	2.33	0.97	0.87	0.14	6.14
30-390 ^{3,5}	3/4" x 3/4"	2.80	1.45	1.06	0.24	10.29

FEMALE SWIVEL

Part #	Hose I.D. x Gasket Swivel	A	B	Hex	Approx. Wt. Lbs.	List Price
30-359	1/4" x 1/8"	1.39	0.77	0.50	0.03	7.67
30-358	1/4" x 1/4"	1.47	0.82	0.68	0.06	5.61
30-360	3/8" x 1/4"	1.61	1.00	0.68	0.06	5.98
30-361	3/8" x 3/8"	1.77	0.97	0.81	0.08	7.49
30-362	3/8" x 1/2"	1.80	0.92	0.93	0.09	8.08
30-365	5/8" x 3/4"	2.40	1.55	1.18	0.28	17.65
30-363	1/2" x 1/2"	1.88	1.02	0.93	0.11	11.02
30-366	3/4" x 3/4"	2.36	1.55	1.18	0.32	20.16

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

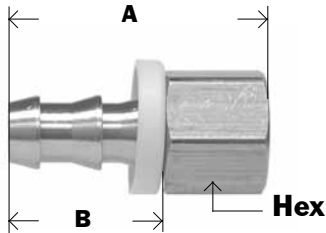
³ Also stocked in Houston
⁵ Also stocked in Atlanta
(See page Intro II for details)

BRASS FITTINGS**PUSH ON HOSE BARB****HOSE SPLICER**

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

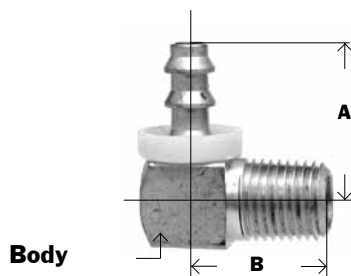
Part #	Hose I.D.	A	Approx. Wt. Lbs.	List Price
30-300 ^{3.5}	1/4"	1.87	0.04	1.42
30-305 ^{3.5}	5/16"	1.80	0.04	2.27
30-301 ^{3.5}	3/8"	2.00	0.06	1.71
30-302 ^{3.5}	1/2"	2.01	0.08	2.60
30-303 ^{3.5}	5/8"	3.03	0.14	5.76
30-304 ^{3.5}	3/4"	3.03	0.14	6.99
30-306	1"			16.96

For STAINLESS see pg. 33

RIGID FEMALE ADAPTER

29FPO 274
 HLF 726
 626

Part #	Hose I.D. x Female NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
30-220 ^{3.5}	1/4" x 1/8"	1.35	0.87	0.50	0.02	1.96
30-221 ^{3.5}	1/4" x 1/4"	1.51	0.87	0.62	0.06	1.73
30-384	1/4" x 3/8"	1.51	0.77	0.75	0.06	5.14
30-391	5/16" x 1/8"	1.32	0.77	0.50	0.03	3.58
30-222 ^{3.5}	5/16" x 1/4"	1.51	0.87	0.62	0.06	2.81
30-393	3/8" x 1/8"	1.47	0.92	0.56	0.06	3.87
30-224 ^{3.5}	3/8" x 1/4"	1.61	0.97	0.62	0.06	2.20
30-225 ^{3.5}	3/8" x 3/8"	1.63	0.97	0.75	0.06	2.98
30-394	3/8" x 1/2"	1.66	0.92	0.93	0.12	5.77
30-397	3/8" x 3/4"	1.97	0.97	1.18		12.46
30-223	1/2" x 1/4"	1.76	1.02	0.68	0.08	8.48
30-226	1/2" x 3/8"	1.63	0.97	0.75	0.08	3.67
30-227	1/2" x 1/2"	1.77	0.97	0.93	0.14	5.77
30-396	1/2" x 3/4"	2.07	1.02	1.18	0.20	13.10
30-398	5/8" x 3/8"	2.24	1.55	0.75		6.52
30-229	5/8" x 1/2"	2.24	1.48	0.93	0.11	6.81
30-399	3/4" x 1/2"					8.89
30-395	3/4" x 3/4"	2.55	1.50	1.18	0.24	12.12
30-400	1" x 3/4"	2.55	1.55	1.18		14.60
30-402	1" x 1"	2.68	1.55	1.43		23.89

MALE ELBOW

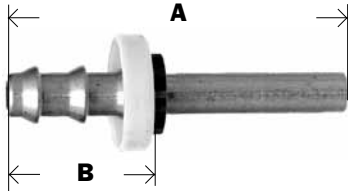
100-C
 29EPO

Part #	Hose I.D. x Male NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
30-372 ^{3.5}	1/4" x 1/8"	0.98	0.75	0.50	0.04	6.61
30-373 ^{3.5}	1/4" x 1/4"	1.04	0.95	0.56	0.06	6.33
30-374	5/16" x 1/8"	1.02	0.94	0.50	0.06	13.26
30-375	5/16" x 1/4"	1.09	0.94	0.56	0.08	15.00
30-370 ^{3.5}	3/8" x 1/8"	1.11	0.75	0.50	0.10	7.44
30-371 ^{3.5}	3/8" x 1/4"	1.13	0.90	0.56	0.10	4.78
30-376 ^{3.5}	3/8" x 3/8"	1.19	0.87	0.70	0.12	4.50
30-377	3/8" x 1/2"	1.30	1.19	0.87	0.22	17.15
30-382	1/2" x 3/8"	1.54			0.13	11.02
30-378	1/2" x 1/2"	1.50	1.19	0.87	0.22	10.17
30-379	5/8" x 1/2"	1.98	1.19	0.87	0.26	21.81
30-380 ^{3.5}	5/8" x 3/4"	2.07	1.28	1.06	0.32	25.80
30-383	3/4" x 1/2"	2.15			0.25	28.04
30-381	3/4" x 3/4"	2.07	1.28	1.06	0.34	14.81

³ Also stocked in Houston

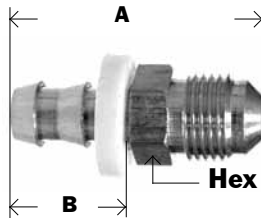
⁵ Also stocked in Atlanta

(See page Intro II for details)

PUSH ON HOSE BARB**BRASS FITTINGS****RIGID TUBE ADAPTER**

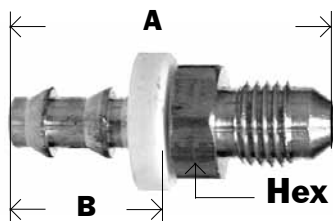
294 303
100B-X 732
KA-RL 694

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	4.03
30-291 ^{3,5}	1/4" x 1/4"	1.88	0.77	0.04	1.67
30-292	1/4" x 5/16"	1.88	0.77	0.04	4.62
30-293 ^{3,5}	5/16" x 5/16"	1.91	0.79	0.04	3.97
30-294 ^{3,5}	3/8" x 3/8"	2.03	0.92	0.06	3.00
30-297 ^{3,5}	1/2" x 1/2"	2.13	1.02	0.06	5.37
30-298	5/8" x 5/8"	2.61	1.50	0.10	8.14
30-299	3/4" x 3/4"	2.61	1.50	0.25	11.71

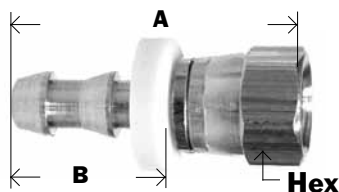
MALE SAE FLARE ADAPTER

100B-3 682
KA-MS 302
727 282

Part #	Hose I.D. x 45° Male Flare	A	B	Hex	Approx. Wt. Lbs.	List Price
30-240 ^{3,5}	1/4" x 1/4"	1.45	0.84	0.43	0.04	4.85
30-241	1/4" x 5/16"	1.59	0.84	0.50	0.04	3.57
30-249	5/16" x 5/16"	1.60	0.80	0.50	0.06	2.54
30-271 ^{3,5}	3/8" x 5/16"	1.64	0.86	0.50	0.08	3.76
30-243 ^{3,5}	3/8" x 3/8"	1.83	0.92	0.62	0.08	5.37
30-245 ^{3,5}	1/2" x 1/2"	2.04	1.05	0.75	0.10	9.07
30-246	5/8" x 5/8"	2.73	1.50	0.87	0.19	9.41
30-247	3/4" x 3/4"	2.98	1.50	1.06	0.32	13.85

MALE JIC FLARE ADAPTER

Part #	Hose I.D. x Male JIC	A	B	Hex	Approx. Wt. Lbs.	List Price
32-900	1/4" x 1/4"	1.57	0.84	0.50	0.04	4.07
32-901	1/4" x 5/16"	1.60	0.83	0.56	0.04	4.71
32-906	1/4" x 3/8"	1.63	0.77	0.62	0.05	4.44
32-902	3/8" x 3/8"	1.78	0.97	0.62	0.06	6.11
32-903	1/2" x 1/2"	1.97	0.97	0.75	0.10	8.37
32-907	5/8" x 5/8"	2.62	1.50	0.93	0.19	9.12
32-905	3/4" x 3/4"	2.79	1.50	1.12	0.29	16.73

SAE/JIC DUAL 45°/37° FEMALE SWIVEL

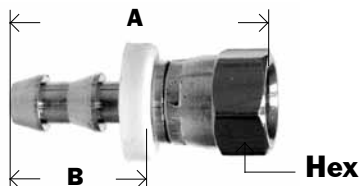
29FDS
287
HDF
309
735
690
P990-K
305

³ Also stocked in Houston
⁵ Also stocked in Atlanta
(See page Intro II for details)

Part #	Hose I.D. x Female 45°/37°	A	B	Hex	Approx. Wt. Lbs.	List Price
30-230 ^{3,5}	1/4" x 1/4"	1.53	0.87	0.56	0.06	1.97
30-231 ^{3,5}	1/4" x 5/16"	1.57	0.87	0.62	0.04	3.07
30-232 ^{3,5}	5/16" x 5/16"	1.56	0.87	0.62	0.04	3.01
30-233 ^{3,5}	3/8" x 1/2"	1.79	0.97	0.87	0.10	4.06
30-234 ^{3,5}	1/2" x 1/2"	1.77	0.97	0.87	0.10	3.80
30-235 ^{3,5}	1/2" x 5/8"	1.84	0.97	1.00	0.12	6.49
30-236 ^{3,5}	5/8" x 1/2"	2.27	1.45	0.87	0.18	6.87
30-237	5/8" x 5/8"	2.33	1.45	1.00	0.14	6.34

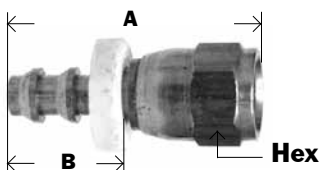
For STAINLESS see pg. 33 or Beverage section, pg. 301

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

45° SAE FLARE FEMALE SWIVEL


728 100S-4
P990-H KA-MB
29AEPO HSF
307 684
284

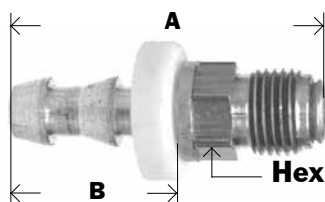
Part #	Hose I.D. x 45° Female Flare	A	B	Hex	Approx. Wt. Lbs.	List Price
30-250 ^{3.5}	1/4" x 1/4"	1.54	0.87	0.56	0.04	2.31
30-251	1/4" x 5/16"	1.57	0.87	0.62	0.04	3.06
30-253	1/4" x 3/8"	1.63	0.87	0.75	0.06	4.51
30-254	5/16" x 5/16"	1.58	0.87	0.68	0.06	9.00
30-260	5/16" x 3/8"	1.63	0.87	0.75	0.08	4.17
30-252 ^{3.5}	3/8" x 3/8"	1.73	0.97	0.75	0.10	3.01
30-257	3/8" x 1/2"	1.85	0.87	0.87	0.10	11.37
30-261	1/2" x 3/8"	1.92	1.05	0.75	0.10	10.33
30-255 ^{3.5}	1/2" x 1/2"	1.77	0.97	0.87	0.12	4.79
30-258	5/8" x 5/8"	2.35	1.45	1.00	0.14	8.80
30-259 ^{3.5}	3/4" x 3/4"	2.42	1.45	1.25	0.22	8.88

FEMALE 37° JIC FLARE SWIVEL


29J1CPO 288
HJF 100B-6
688 308
738 P990-F

Part #	Hose I.D. x Female JIC	A	B	Hex	Approx. Wt. Lbs.	List Price
30-265 ^{3.5}	1/4" x 1/4"	1.54	0.87	0.56	0.04	1.89
30-264 ^{3.5}	1/4" x 3/8"	1.60	0.87	0.68	0.06	3.28
30-270 ^{3.5}	5/16" x 3/8"	1.60	0.82	0.68	0.06	2.94
30-266 ^{3.5}	3/8" x 3/8"	1.70	0.97	0.68	0.08	2.94
30-267 ^{3.5}	1/2" x 1/2"	1.78	0.97	0.87	0.10	4.39
30-268 ^{3.5}	5/8" x 5/8"	2.33	1.45	1.00	0.14	6.65
30-269	3/4" x 3/4"	2.40	1.45	1.25	0.22	8.15

For STAINLESS see pg. 33

INVERTED FLARE MALE SWIVEL


290
100B-B
KA-MF
1MS

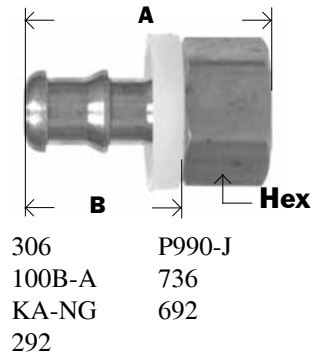
Part #	Hose I.D. x Male INV Flare	A	B	Hex	Approx. Wt. Lbs.	List Price
30-275	1/4" x 3/16"	1.52	0.87	0.37	0.04	5.54
30-276 ^{3.5}	1/4" x 1/4"	1.56	0.87	0.43	0.04	3.40
30-277	1/4" x 5/16"	1.62	0.87	0.50	0.04	3.67
30-278	5/16" x 1/4"	1.56	0.87	0.43	0.06	5.52
30-280	5/16" x 5/16"	1.62	0.87	0.50	0.06	4.78
30-283	5/16" x 3/8"	1.63	0.87	0.62	0.06	7.63
30-284	3/8" x 5/16"	1.72	0.97	0.50	0.06	4.45
30-279 ^{3.5}	3/8" x 3/8"	1.76	0.97	0.62	0.06	3.92
30-281	1/2" x 3/8"	1.86	1.06	0.62	0.08	13.63
30-282 ^{3.5}	1/2" x 1/2"	1.84	0.97	0.75	0.10	7.28
30-286	5/8" x 5/8"	2.50	1.57	0.87	0.14	13.45

³ Also stocked in Houston

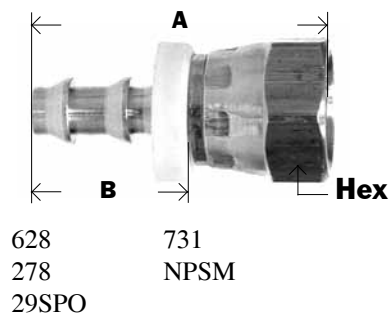
⁵ Also stocked in Atlanta

(See page Intro II for details)

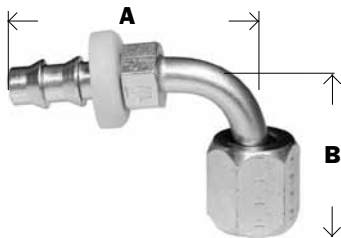
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www.midlandindustrial.com

PUSH ON HOSE BARB**BRASS FITTINGS****INVERTED FLARE FEMALE ADAPTER**

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	4.10
30-311	1/4" x 1/4"	1.14	0.84	0.56	0.02	4.44
30-312	1/4" x 5/16"	1.18	0.84	0.62	0.02	6.75
30-316	5/16" x 5/16"	1.25	0.81	0.62	0.04	9.39
30-313	3/8" x 5/16"	1.32	0.87	0.62	0.04	6.23
30-314	3/8" x 3/8"	1.35	0.95	0.75	0.06	6.04
30-315	1/2" x 1/2"	1.73	1.04	0.87	0.12	15.18

FEMALE BALLSEAT SWIVEL

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	7.25
30-341	1/4" X 1/4"	1.47	0.80	0.68	0.06	5.70
30-342	1/4" x 3/8"	1.40	0.77	0.68	0.09	7.67
30-343	3/8" X 1/4"	1.61	0.97	0.68	0.08	8.60
30-344	3/8" X 3/8"	1.75	0.95	0.81	0.10	8.15
30-346	1/2" X 1/2"	1.88	1.09	0.93	0.12	12.15
30-345	1/2" x 3/4"	2.36	1.02	1.18	0.18	11.66
30-349	3/4" X 3/4"	2.36	1.55	1.18	0.22	18.37

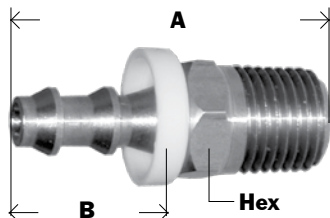
SAE/ JIC 37° / 45° FEMALE SWIVEL 90° ZINC PLATED STEEL

Part #	Hose I.D. x Female 37°/45°	A	B	Approx. Wt. Lbs.	List Price
30-480	1/4"	1.55	0.83	.064	25.80
30-482	3/8"	1.85	0.91	.095	23.80
30-483*	3/8"	1.98	0.85	.095	33.50
30-484	1/2"	2.33	1.09	.171	29.55
30-486	3/4"	3.26	1.81	.281	77.85

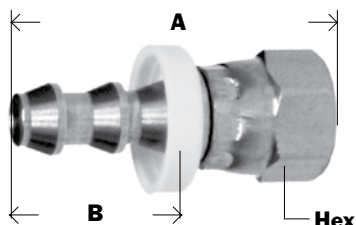
* SAE

Watch your thoughts; they become words.
 Watch your words; they become actions.
 Watch your actions; they become habits.
 Watch your habits; they become character.
 Watch your character; it becomes your destiny.

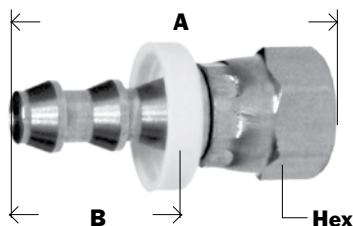
- Lao Tze

STAINLESS STEEL MALE ADAPTERS


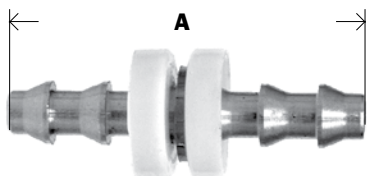
Part #	Hose I.D. x NPT	A	B	Hex	Approx. Wt. Lbs.	List Price
30-200SS	1/8" x 1/8"	1.42	0.77	0.44	0.027	15.49
30-201SS	1/4" x 1/4"	1.61	0.77	0.56	0.043	16.19
30-203SS	3/8" x 1/4"	1.76	0.92	0.56	0.053	19.89
30-204SS	3/8" x 3/8"	1.76	0.92	0.69	0.067	18.13
30-206SS	1/2" x 3/8"	1.86	1.02	0.69	0.071	21.87
30-207SS	1/2" x 1/2"	2.07	1.02	0.88	0.119	24.22
30-215SS	3/4" x 1/2"	2.55	1.50	0.88	0.20	46.73
30-210SS	3/4" x 3/4"	2.55	1.50	1.06	0.194	35.84

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	34.06
30-234SS	1/2" x 1/2"	2.06	0.97	0.88	0.04	50.53

STAINLESS STEEL FEMALE 37° JIC FLARE SWIVEL


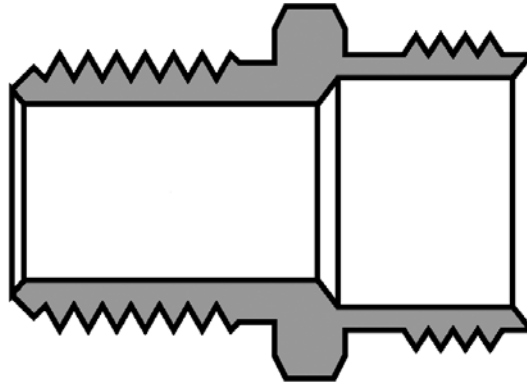
Part #	Hose I.D. x Female 37°	A	B	Hex	Approx. Wt. Lbs.	List Price
30-266SS	3/8"	1.75	.92	1.06	0.065	40.35
30-269SS	3/4"	2.53	1.50	1.25	0.259	85.42

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	38.55
30-301SS	3/8"	2.05	0.051	44.45
30-302SS	1/2"	2.25	0.073	46.75

• NOTE: See Stainless Steel beverage fittings on pg. 301

Garden Hose Fittings



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



See page 250 for
Plastic Garden Hose Fittings

•Temperature and Working Pressure Ranges

From +35°F to +100°F at 75 PSI maximum or the recommended working pressure of the garden hose. (Not to exceed 150 PSI.)

Note: All female connector ends should have a rubber washer inserted prior to usage.

FGH = Female Garden Hose threads

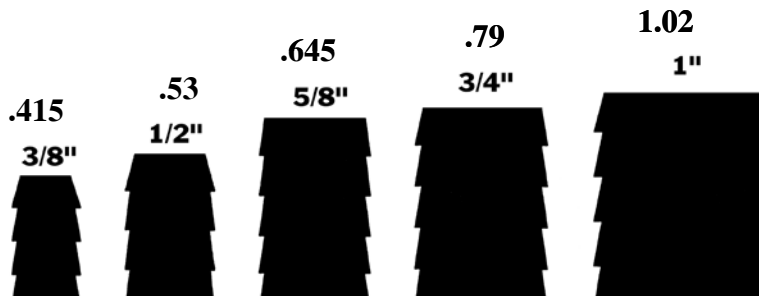
MGH = Male Garden Hose threads



Male Garden Hose Profile

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

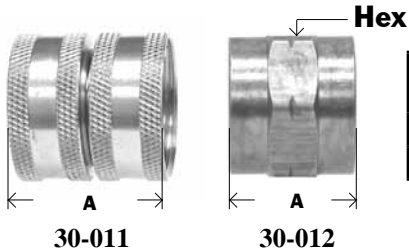
Actual Profile of Garden Hose Barbs



SWIVEL - MGH X FGH
•WASHER INCLUDED
Internal Hex


Part #	MGH X FGH	A	Hex	Approx. Wt. Lbs.	List Price
30-000 ^{3,5}	3/4" x 3/4"	1.03	0.50*	0.26	4.33

* Internal Hex

SWIVEL - FGH X FGH
•WASHER INCLUDED


Part #	FGH X FGH	A	Hex	Approx. Wt. Lbs.	List Price
30-011 ^{3,5}	3/4" x 3/4"	1.03	1.18 O.D.	0.24	4.11
30-012	No Swivel	1.08	1.19	0.24	5.58

HUS GSU
 91 101GHSV 506
 203W 22AS FS66

SWIVEL - FGH X FEMALE PIPE
•WASHER INCLUDED


Part #	FGH x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-001 ^{3,5}	3/4" x 1/2"	1.05	0.87	0.11	4.07
30-006 ^{3,5}	3/4" x 3/4"	1.11	1.12	0.11	4.38

HSU11 5AS
 91Z 21517
 197S 502
 98GHSV F565

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	4.72
30-017	3/4" x 1/4"	0.65	1.12	0.07	4.03
30-018	3/4" x 3/8"	1.19	1.18	0.11	7.56

³ Also stocked in Houston
⁵ Also stocked in Atlanta
 (See page Intro II for details)

I have never met a man so ignorant that I couldn't learn something from him.

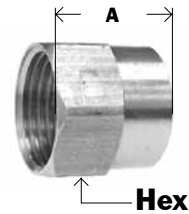
- Galileo Galilei

GARDEN HOSE

BRASS FITTINGS

RIGID - FGH X FEMALE PIPE

FS67
198
HU11
21507
502
99GH



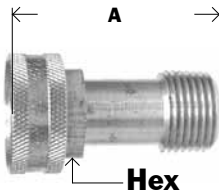
5A
H15PP

Part #	FGH x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-078 ^{3.5}	3/4" x 1/2"	1.06	1.18	0.10	3.78
30-083 ^{3.5}	3/4" x 3/4"	1.06	1.18	0.12	4.41

SWIVEL - FGH X MALE PIPE

•WASHER INCLUDED

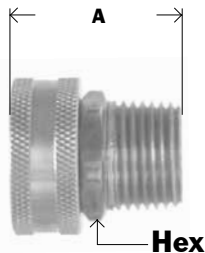
504
89GH
W1
62H4
88GH
W1



Part #	FGH x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-047 ^{3.5}	3/4" x 1/4"	2.04	0.75	0.13	4.65
30-048 ^{3.5}	3/4" x 3/8"	2.06	0.75	0.14	4.50
30-049 ^{3.5}	3/4" x 1/2"	2.06	0.87	0.18	5.24

SWIVEL - FGH X MALE PIPE

•WASHER INCLUDED



Part #	FGH x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-183 ^{3.5}	3/4" x 1/2"	1.32	0.81	0.11	6.20

RIGID - FGH X MALE PIPE

21505
503
83GH
20A
HU21
199
H7



Part #	FGH x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-088 ^{3.5}	3/4" x 1/2" (1/2" SWT)**	1.06	1.18	0.09	5.05
30-093 ^{3.5}	3/4" x 3/4"	1.06	1.18	0.11	3.55
30-094	3/4" x 3/4" (1/2" FIP)	1.17	1.18	0.11	4.76
30-093L*	3/4" x 3/4"	1.22	1.18	0.14	11.23

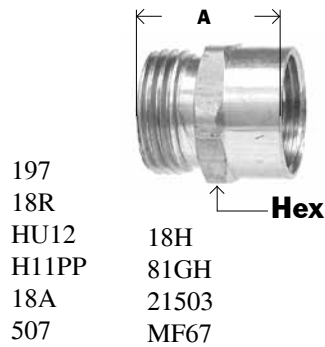
* Long pattern

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

³ Also stocked in Houston⁵ Also stocked in Atlanta

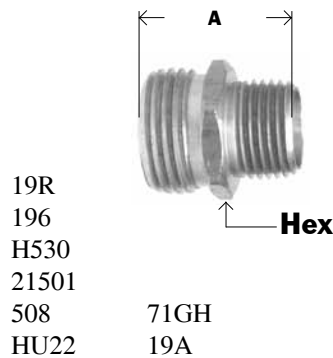
(See page Intro II for details)

RIGID - MGH X FEMALE PIPE



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	4.20
30-067	3/4" x 3/8"	1.09	1.06	0.12	4.95
30-068 ^{3,5}	3/4" x 1/2"	0.81	1.06	0.10	3.06
30-073 ^{3,5}	3/4" x 3/4"	1.12	1.18	0.10	3.48

RIGID - MGH X MALE PIPE



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	3.11
30-058* ^{3,5}	3/4" x 1/2"	1.31	1.06	0.12	3.17
30-063** ^{3,5}	3/4" x 3/4" x 1/2"	1.31	1.06	0.13	3.51
30-063BE***	3/4" x 3/4"	1.31	1.06	0.15	5.98
30-063L	Long Pattern	1.43	1.06	0.12	5.63
30-063S ^{3,5}	3/4" x 3/4" Short	1.10	1.06	0.10	3.17

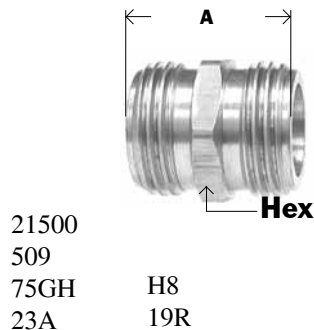
No Tap

* (1/2 Swt = 5/8 O.D.)

** (Tapped 1/2 FIP)

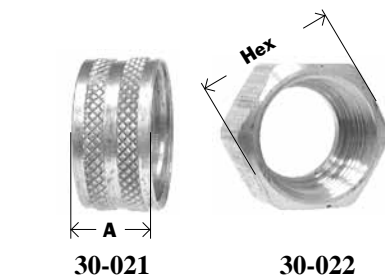
*** (Tapped 1/2 FIP Both ends)

RIGID - MGH X MGH



Part #	MGH X MGH	A	Hex	Approx. Wt. Lbs.	List Price
30-098 ^{3,5}	3/4" x 3/4" (1/2" FIP)	1.22	1.06	0.13	4.51

GARDEN HOSE NUT

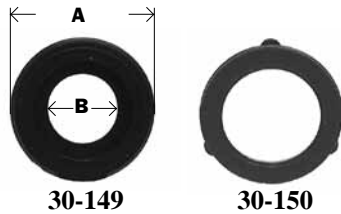


Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-021	Knurled	0.61	1.37 O.D.	0.08	2.59
30-022	Hex Nut	0.51	1.12	0.08	3.34

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

³ Also stocked in Houston⁵ Also stocked in Atlanta

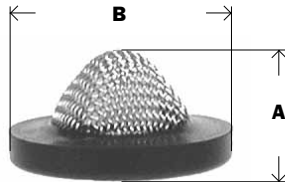
(See page Intro II for details)

GARDEN HOSE**BRASS FITTINGS****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	0.32
30-150 ^{3,5}	black*	0.98	0.68	0.13	0.01	0.18
30-150R	red	1.00	0.68	0.13	0.01	0.16

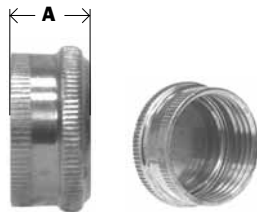
* plasticized rubber

GHW
901GH

GARDEN HOSE FILTER WASHER

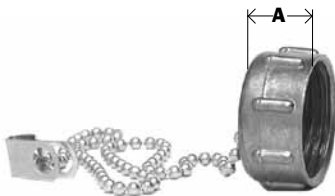
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-180	30 Mesh	0.52	1.00	0.02	0.81
30-180F	60 Mesh	0.52	1.00	0.02	0.95

LA662

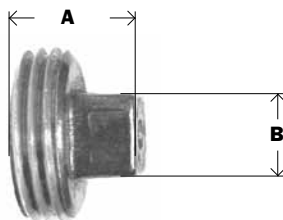
GARDEN HOSE CAP - Die Cast Brass

Part #	Size	A	Approx. Wt. Lbs.	List Price
30-103 ^{3,5}	3/4" Die Cast	0.58	0.04	1.20

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	6.89

GARDEN HOSE PLUG

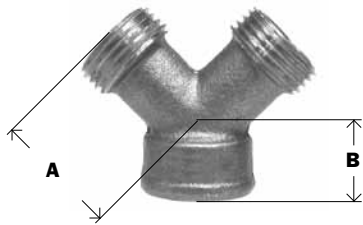
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-026	3/4"	0.69	0.61	0.12	7.52

³ Also stocked in Houston⁵ Also stocked in Atlanta

(See page Intro II for details)

CAST BRASS HOSE - "Y" CONNECTOR

•WASHER INCLUDED



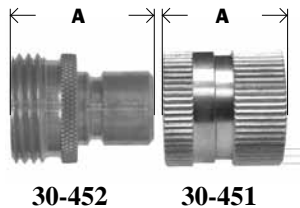
21A

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-140 ^{3.5}	3/4"	1.40	0.67	0.22	7.90

• See more Garden Hose "Y"'s on page 43

QUICK DISCONNECT GARDEN HOSE COUPLERS

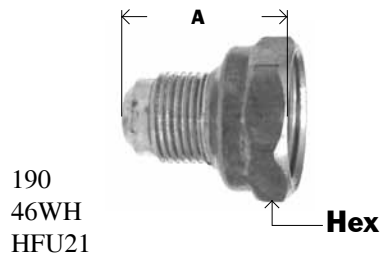
•WASHER INCLUDED



LA73C

Part #	Size	A	Approx. Wt. Lbs.	List Price
30-450 ^{3.5}	Complete	-----	0.24	11.32
30-451	Female end	1.14	0.12	5.94
30-452	Male end	1.26	0.12	3.28

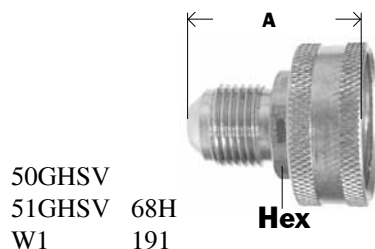
MALE FLARE X FEMALE HOSE RIGID

190
46WH
HFU21

Part #	Male Flare x Female Hose	A	Hex	Approx. Wt. Lbs.	List Price
30-123	3/8" x 3/4"	1.31	1.18	0.10	6.52
30-128	1/2" x 3/4"	1.38	1.18	0.12	6.70
30-133	5/8" x 3/4"	1.53	1.18	0.14	9.67

MALE FLARE x FEMALE HOSE SWIVEL

•WASHER INCLUDED

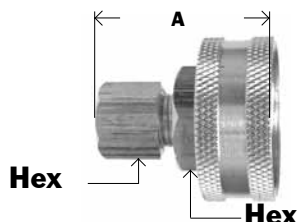
50GHSV
51GHSV 68H
W1 191

Part #	Male Flare x Female Hose	A	Hex	Approx. Wt. Lbs.	List Price
30-052	1/4" x 3/4"	1.24	0.75	0.10	3.83
30-138	3/8" x 3/4"	1.25	0.25*	0.12	10.43
30-139	1/2" x 3/4"	1.49	0.81	0.14	4.83

* 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	6.77
30-051	3/8" x 3/4"	1.04	0.62	0.75	0.12	6.59

³ Also stocked in Houston⁵ Also stocked in Atlanta

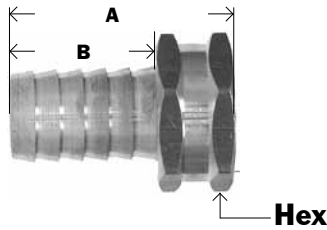
(See page Intro II for details)

BARSTOCK BRASS GARDEN HOSE COUPLINGS

BRASS

FEMALE SWIVEL ONLY

•WASHER INCLUDED



22RF KF-RY
591 HU126
GHF 195

NEW

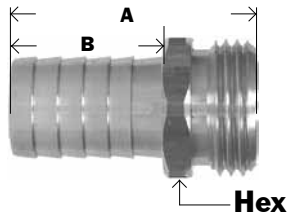
BRASS

Part #	Hose Barb x FGH	A	B	Hex	Approx. Wt. Lbs.	List Price
30-031 ^{3.5}	3/8" x 3/4"	1.82	1.19	1.18	0.11	3.94
30-032 ^{3.5}	1/2" x 3/4"	1.82	1.19	1.18	0.12	3.94
30-033 ^{3.5}	5/8" x 3/4"	1.82	1.19	1.18	0.13	3.94
30-034 ^{3.5}	3/4" x 3/4"	1.82	1.19	1.18	0.15	4.10
30-035 ^{3.5}	1" x 1"	2.28	1.47	1.50	0.18	12.45

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	27.41

MALE END ONLY



22RM
590 201GH
GHM 193
KF-PY HU125

NEW

BRASS

Part #	Hose Barb x MGH	A	B	Hex	Approx. Wt. Lbs.	List Price
30-039 ^{3.5}	3/8" x 3/4"	1.88	1.19	1.06	0.12	3.17
30-040 ^{3.5}	1/2" x 3/4"	1.88	1.19	1.06	0.12	3.33
30-041 ^{3.5}	5/8" x 3/4"	1.88	1.19	1.06	0.12	3.46
30-042 ^{3.5}	3/4" x 3/4"	1.88	1.19	1.06	0.13	3.46
30-043 ^{3.5}	1" x 1"	2.34	1.47	1.37	0.26	10.63

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	22.91

GARDEN HOSE COUPLING

•WASHER INCLUDED



GHS
92GH 22R
936H 592
202GHS

NEW

BRASS

Part #	Hose Barb	List Price
30-025 ^{3.5}	3/8"	7.45
30-027 ^{3.5}	1/2"	7.21
30-028 ^{3.5}	5/8"	8.70
30-029 ^{3.5}	3/4"	7.56
30-030 ^{3.5}	1"	24.25

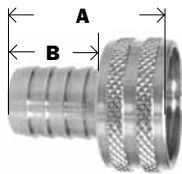
STAINLESS STEEL 316

30-027SS	1/2"	50.31
30-028SS	5/8"	50.31
30-029SS	3/4"	50.31

³ Also stocked in Houston
⁵ Also stocked in Atlanta
(See page Intro II for details)

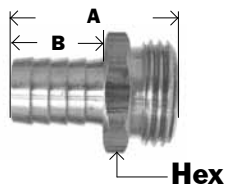
Dimension data can change without notice.
Please call us when dimensions are critical.

GARDEN HOSE COUPLING - 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	5.05
30-467	5/8" x 3/4"	1.50	0.88	0.09	2.99
30-468	3/4" x 3/4"	1.47	0.88	0.10	3.75

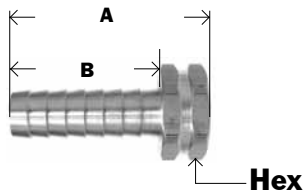
GARDEN HOSE COUPLING - Short Shank



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	4.94
30-472	5/8" x 3/4"	1.56	0.88	1.06	0.12	2.89
30-473	3/4" x 3/4"	1.56	0.88	1.06	0.13	4.16

ROD BRASS - 2" SHANK

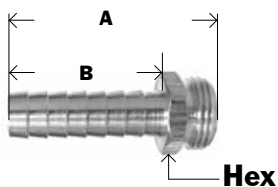
•WASHER INCLUDED



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	5.38
30-506	5/8" x 3/4"	2.56	2.04	1.18	0.16	5.38
30-507	3/4" x 3/4"	2.56	2.04	1.18	0.17	8.37

GHFL
594

ROD BRASS - 2" SHANK



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	5.82
30-511	5/8" x 3/4"	2.72	2.04	1.06	0.17	5.38
30-512	3/4" x 3/4"	2.72	2.04	1.06	0.20	5.38

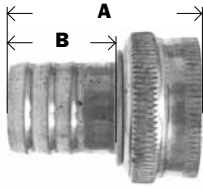
GHML
593

My friends tell me I have an intimacy problem. But they don't really know me.

- Garry Shandling

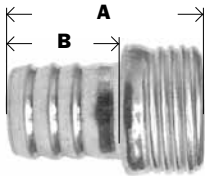
GARDEN HOSE**BRASS FITTINGS****WROUGHT BRASS****WROUGHT BRASS - Female end only**

•WASHER INCLUDED



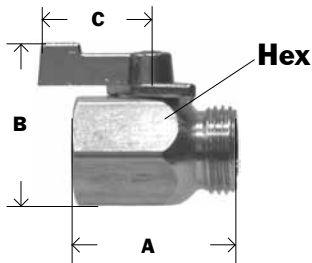
85L

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	3.98
30-527	3/4" x 3/4"	1.50	0.84	0.06	4.10

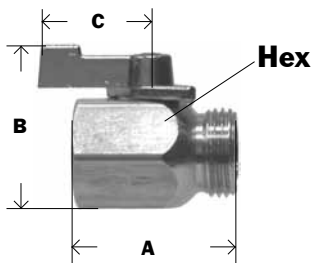
WROUGHT BRASS COUPLINGS - Male end only

85M

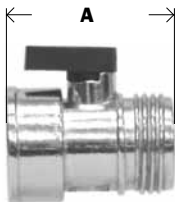
Part #	Hose Barb x MGH	A	B	Approx. Wt. Lbs.	List Price
30-530	1/2" x 3/4"	1.50	0.88	0.02	2.40
30-531	5/8" x 3/4"	1.50	0.88	0.02	2.40

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	43.81

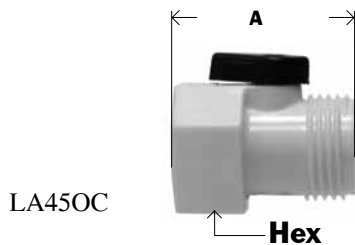
ONE WAY BRASS BALL VALVE - Female x 3/4 MGH Pipe

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	46.18

ZINC ALLOY HOSE SHUT-OFF W/ ONE LEVER

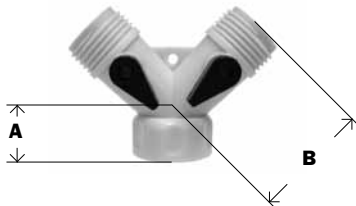
Part #	FGH x MGH	A	Approx. Wt. Lbs.	List Price
30-631	3/4" x 3/4"	1.67	0.08	3.95

Save 5% by ordering online at
www.midlandindustrial.com

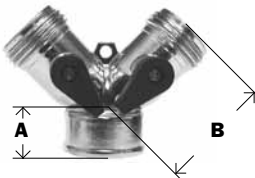
PLASTIC GARDEN HOSE VALVE • CYCOLAC BODY & BALL

LA450C

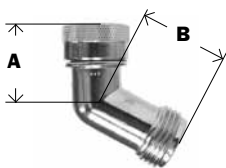
Part #	FGH x MGH	A	Hex	Approx. Wt. Lbs.	List Price
30-163	3/4" x 3/4"	1.75	1.25	0.04	3.99

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	3.30

"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	7.24

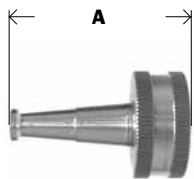
ZINC ALLOY SWIVEL HOSE CONNECTOR

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-629	3/4"	1.31	1.50	0.08	4.10

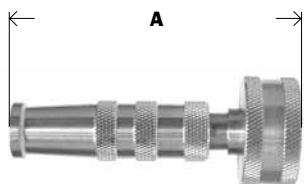
"Y" SHAPE BRASS CONNECTOR W/ 2-WAY SHUT OFF

Part #	Size	Description	Approx. Wt. Lbs.	List Price
30-627	3/4"	3/4 Double Y valve, swivel inlet	0.56	45.93

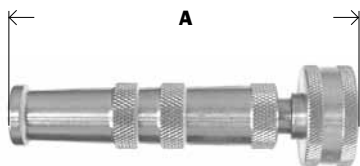
Dimension data can change without notice.
Please call us when dimensions are critical.

GARDEN HOSE**BRASS FITTINGS****BRASS NOZZLE**

Part #	Size	A	Approx. Wt. Lbs.	List Price
30-637	3/4"	1.87	0.14	5.38

3" CROSSED PATTERN BRASS NOZZLE

Part #	Size	A	Approx. Wt. Lbs.	List Price
30-640	3/4"	2.89	0.25	8.37

4" CROSSED PATTERN BRASS NOZZLE

Part #	Size	A	Approx. Wt. Lbs.	List Price
30-638	3/4"	3.80	0.50	11.22



Lead Free

Part #	Size	Zinc Alloy spray nozzle with insulated handle soft grip and front thread protector	List Price
30-600	5-1/2"		14.22



Lead Free

Part #	Size	Zinc Alloy spray nozzle	List Price
30-620	4-1/4"		6.15



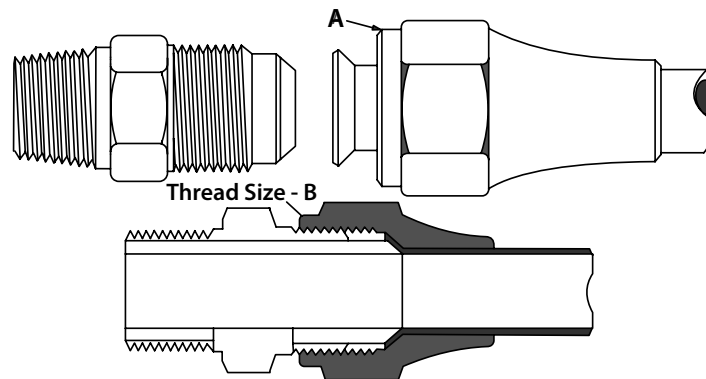
Lead Free

Part #	Size	Zinc Alloy spray nozzle with easily adjustable brass head and plastic grip	List Price
30-609	5-1/4"		13.39



Part #	Size	Plastic spray nozzle	List Price
30-630	4-1/2"		2.81

SAE 45° Flare



BRASS

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).

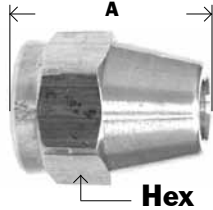
Assembly Instructions

- 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.

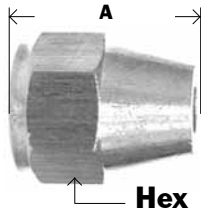
Actual O.D. of Flare Fittings



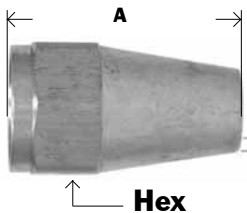
SAE 45° FLARE**BRASS FITTINGS****SHORT ROD NUT****SAE# 010110**

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

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-013	1/8"	0.50	0.37	0.01	1.34
10-014	3/16"	0.62	0.43	0.02	0.90
10-015	1/4"	0.75	0.56	0.03	1.15
10-015L	1/4"	0.75	0.50	0.03	0.83
10-016	5/16"	0.88	0.62	0.04	1.79
10-017L	3/8"	0.88	0.75	0.05	1.20
10-017	3/8"	1.00	0.75	0.04	1.80
10-018	7/16"	1.06	0.81	0.06	8.25
10-019L	1/2"	0.93	0.87	0.06	2.75
10-019	1/2"	1.12	0.87	0.09	2.50
10-020L	5/8"	1.08	1.00	0.10	3.29
10-020	5/8"	1.31	1.06	0.15	6.62
10-021	3/4"	1.50	1.25	0.24	6.05
10-022	7/8"	1.62	1.50	0.36	13.01
10-026	1"	1.81	1.62	0.44	17.29

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	6.15
10-024	1/2" x 3/8"	0.86	0.94	0.10	9.48
10-025	5/8" x 1/2"	0.99	1.06	0.12	14.48

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	4.44
10-002	3/16"	0.81	0.43	0.02	1.60
10-003	1/4"	0.94	0.56	0.03	1.62
10-004	5/16"	1.12	0.62	0.04	2.48
10-005	3/8"	1.31	0.75	0.06	3.22
10-006	1/2"	1.62	0.87	0.12	5.88
10-007	5/8"	1.88	1.06	0.20	7.00
10-008	3/4"	2.19	1.25	0.34	15.89

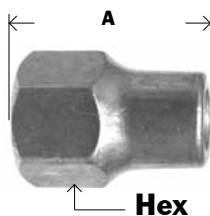
**"L" means light pattern.**

-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.

LONG FORGED NUT

SAE# 010167

41FF
39
N4
14FL
641

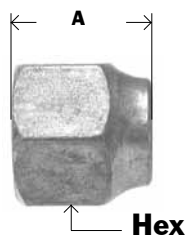


Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-028	1/4"	0.94	0.62	0.05	3.32
10-030	3/8"	1.06	0.81	0.08	5.04
10-031	1/2"	1.19	0.94	0.12	5.27
10-032	5/8"	1.44	1.06	0.26	9.44
10-033	3/4"	1.75	1.31	0.35	11.27

SHORT FORGED NUT

SAE# 010166

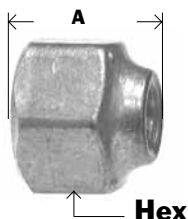
14FS
41FFS
40
641-S
1116
NS4



Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-038	3/16"	0.56	0.50	0.02	4.19
10-039	1/4"	0.60	0.62	0.04	1.25
10-040	5/16"	0.66	0.69	0.04	2.57
10-041	3/8"	0.70	0.81	0.06	1.72
10-042	1/2"	0.82	0.94	0.08	2.45
10-043	5/8"	0.95	1.06	0.12	3.95
10-044	3/4"	1.16	1.31	0.22	8.51
10-045	7/8"	1.18	1.38	0.30	10.41

EXTRA HEAVY SHORT FORGED NUT

NSA



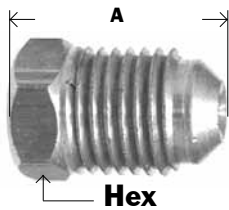
Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-046	1/4"	0.63	0.75	0.04	2.55
10-047	3/8"	0.72	0.88	0.06	2.89
10-048	1/2"	0.88	1.00	0.08	3.33
10-049	5/8"	0.98	1.12	0.12	5.37

FORGED REDUCING NUT

NSR4
14FS
41FRS
40R
662-S

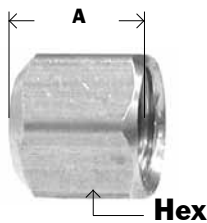


Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-051	5/16" x 1/4"	0.66	0.75	0.06	9.85
10-052	3/8" x 1/4"	0.72	0.81	0.06	3.95
10-053	3/8" x 5/16"	0.72	0.81	0.08	3.74
10-054	1/2" x 3/8"	0.81	0.94	0.08	3.33
10-055	5/8" x 3/8"	0.96	1.12	0.15	9.65
10-056	5/8" x 1/2"	0.97	1.06	0.12	5.55
10-058	3/4" x 5/8"	1.17	1.31	0.30	13.23

SAE 45° FLARE**BRASS FITTINGS****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	4.40
10-064	1/4"	0.69	0.43	0.02	1.49
10-065	5/16"	0.78	0.50	0.04	3.30
10-066 ³	3/8"	0.88	0.62	0.06	1.64
10-067	1/2"	1.06	0.75	0.10	3.04
10-068	5/8"	1.19	0.87	0.14	3.53

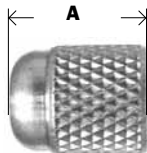
FLARED CAP

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	2.97
10-075	1/4"	0.48	0.50	0.02	0.61
10-076	5/16"	0.62	0.62	0.04	2.38
10-077 ³	3/8"	0.58	0.75	0.03	1.50
10-078	1/2"	0.69	0.81	0.14	1.48
10-079	5/8"	0.81	0.94	0.20	2.62
10-080	3/4"	1.17	1.37	0.30	11.71

FINGER TIGHTENING CAP

• O-Ring Included

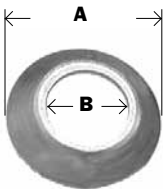


NFT5

Part #	Thread Size UNF	A	Approx. Wt. Lbs.	List Price
10-081	1/4"	0.62	0.02	1.30

COPPER GASKET

SAE# 010113



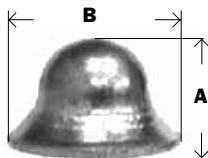
B2
2GF
6251
FG
157
59
463

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
10-084	3/16"	0.31	0.12	0.01	0.89
10-085	1/4"	0.36	0.19	0.01	0.46
10-086	5/16"	0.42	0.22	0.01	0.76
10-087	3/8"	0.55	0.28	0.01	0.56
10-088	1/2"	0.66	0.41	0.01	0.76
10-089	5/8"	0.77	0.50	0.01	0.97
10-090	3/4"	0.95	0.62	0.01	1.18

³ Also stocked in Houston
(See page Intro II for details)

COPPER BONNET

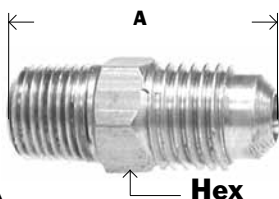
SAE# 010114



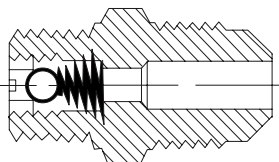
B1 156
3GF FB
64C 695
57 464

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
10-094	3/16"	0.16	0.31	0.01	1.92
10-095	1/4"	0.22	0.36	0.01	1.54
10-097	3/8"	0.34	0.55	0.01	1.36
10-098	1/2"	0.41	0.66	0.01	2.22
10-099	5/8"	0.44	0.77	0.01	2.14
10-100	3/4"	0.56	0.95	0.01	5.16

MALE BALL CHECK CONNECTOR



43A

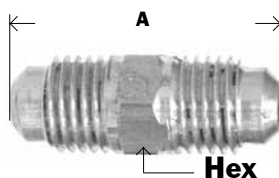


Part #	Male UNF x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
10-131	1/4" x 1/8"	1.06	0.43	0.04	12.00
10-133	3/8" x 1/4"	1.31	0.62	0.08	17.60

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

UNION

SAE# 010101



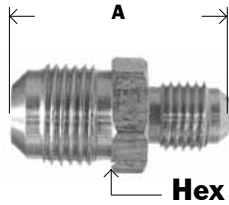
42F
U2

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-104	1/8"	0.91	0.31	0.02	3.80
10-105	3/16"	1.06	0.37	0.02	3.85
10-106L	1/4"	1.19	0.43	0.03	0.95
10-106	1/4"	1.19	0.43	0.03	2.02
10-107	5/16"	1.34	0.50	0.05	2.76
10-108L	3/8"	1.50	0.62	0.09	2.17
10-108	3/8"	1.50	0.62	0.09	2.42
10-109L	1/2"	1.67	0.75	0.12	4.18
10-109	1/2"	1.81	0.75	0.14	4.86
10-110L	5/8"	2.00	0.87	0.20	5.41
10-110	5/8"	2.12	0.87	0.20	9.44
10-111	3/4"	2.44	1.06	0.35	15.58
10-112	7/8"	2.72	1.25	0.52	21.24



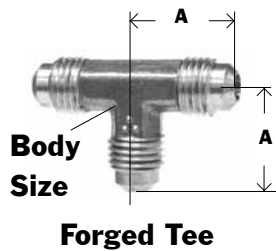
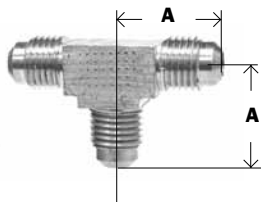
"L" means light pattern.

-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.

SAE 45° FLARE**BRASS FITTINGS****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	3.87
10-118	3/8" x 1/4"	1.38	0.62	0.06	2.83
10-119	3/8" x 5/16"	1.44	0.62	0.08	5.48
10-120	1/2" x 1/4"	1.53	0.75	0.10	4.90
10-121	1/2" x 3/8"	1.69	0.75	0.10	4.23
10-122	5/8" x 3/8"	1.88	0.87	0.17	8.94
10-123	5/8" x 1/2"	1.75	0.87	0.14	4.55

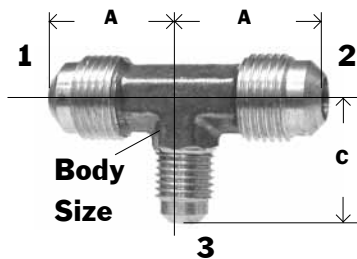
UNION TEE**Forged Tee****Barstock Tee**

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	6.08
10-158	3/16"	0.75	0.36	0.06	3.74
10-159	1/4"	0.78	0.36	0.06	3.83
10-159B*	1/4"	0.88	0.50	0.08	5.48
10-160	5/16"	0.91	0.44	0.10	5.21
10-161	3/8"	1.00	0.44	0.12	5.44
10-162	1/2"	1.16	0.59	0.19	5.68
10-163	5/8"	1.41	0.69	0.30	10.16
10-164 ³	3/4"	1.64	0.88	0.53	21.59
10-165	7/8"	1.75	1.25	0.93	43.09

* Barstock

REDUCING TEE 1 x 2 x 3

144F
TR2
659F
684F
44R

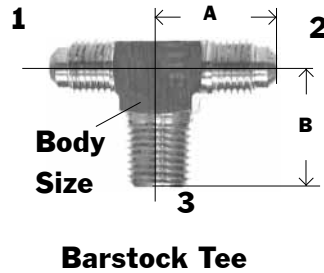
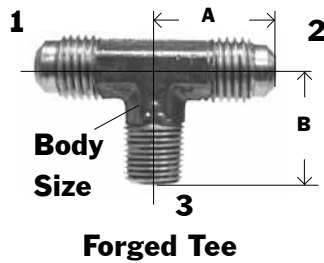
Part #	Thread Size UNF 1x2x3	A	C	Body Size	Approx. Wt. Lbs.	List Price
10-170	1/4" x 1/4" x 3/8"	0.91	1.00	0.44	0.10	5.74
10-171	5/16" x 5/16" x 1/4"	0.94	0.94	0.44	0.12	8.59
10-172	3/8" x 1/4" x 1/4"	0.91	1.00	0.44	0.10	6.86
10-173	3/8" x 1/4" x 3/8"	1.00	0.91	0.44	0.12	8.55
10-174	3/8" x 3/8" x 1/4"	1.00	0.88	0.44	0.11	6.16
10-175	3/8" x 3/8" x 1/2"	1.00	1.19	0.59	0.14	8.59
10-176	3/8" x 3/8" x 5/8"	1.16	1.44	0.69	0.16	16.57
10-178	1/2" x 3/8" x 3/8"	1.16	1.12	0.59	0.18	7.10
10-179	1/2" x 3/8" x 1/2"	1.16	1.09	0.59	0.18	7.95
10-180	1/2" x 1/2" x 1/4"	1.16	0.97	0.59	0.18	11.01
10-181	1/2" x 1/2" x 3/8"	1.16	1.12	0.59	0.19	7.57
10-182	1/2" x 1/2" x 5/8"	1.28	1.41	0.69	0.28	10.49
10-187	5/8" x 1/2" x 5/8"	1.44	1.33	0.69	0.27	16.26
10-188	5/8" x 5/8" x 3/8"	1.38	1.16	0.69	0.30	14.16
10-189	5/8" x 5/8" x 1/2"	1.38	1.28	0.69	0.28	21.90
10-197	3/4" x 3/4" x 5/8"	1.66	1.50	0.88	0.36	35.31

³ Also stocked in Houston
(See page Intro II for details)

Save 5% by ordering online at
www.midlandindustrial.com

MALE BRANCH TEE

SAE# 010425



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	4.14
10-204	1/4" x 1/8"	0.78	0.75	0.36	0.05	4.14
10-204B*	1/4" x 1/8"	0.82	0.81	0.47	0.08	7.56
10-205	1/4" x 1/4"	0.88	0.88	0.44	0.08	4.39
10-205B*	1/4" x 1/4"	0.91	0.94	0.56	0.10	8.60
10-206	1/4" x 3/8"	0.92	1.00	0.47	0.10	7.10
10-207	5/16" x 1/8"	0.89	0.78	0.44	0.08	5.06
10-208	5/16" x 1/4"	0.94	0.94	0.44	0.08	5.92
10-209	3/8" x 1/8"	1.00	0.91	0.44	0.14	8.45
10-210	3/8" x 1/4"	1.00	0.94	0.44	0.12	5.58
10-211	3/8" x 3/8"	1.00	1.00	0.47	0.13	6.75
10-212	3/8" x 1/2"	1.12	1.22	0.69	0.22	10.09
10-213	1/2" x 1/4"	1.16	1.00	0.59	0.20	14.87
10-214	1/2" x 3/8"	1.16	1.14	0.59	0.19	10.51
10-215	1/2" x 1/2"	1.22	1.22	0.69	0.24	10.40
10-216	1/2" x 3/4"	1.38	1.41	0.88	0.22	19.82
10-217	5/8" x 3/8"	1.38	1.25	0.69	0.24	16.89
10-218	5/8" x 1/2"	1.41	1.31	0.69	0.29	13.23
10-219	5/8" x 3/4"	1.41	1.41	0.88	0.36	19.94
10-220	3/4" x 1/2"	1.63	1.59	0.88	0.49	26.66
10-221	3/4" x 3/4"	1.63	1.44	0.88	0.48	25.71

* Barstock

For having lived long, I have experienced many instances of being obliged, by better information or fuller consideration, to change opinions, even on important subjects, which I once thought right but found to be otherwise.

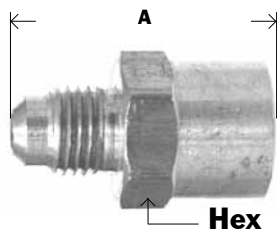
- Benjamin Franklin

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

Fax 1-888-877-5391



sales@midlandindustrial.com

FEMALE ADAPTER
SAE# 010103
BRASS

 46
U3

Part #	Male Flare x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
10-226	1/8" x 1/8"	0.91	0.56	0.03	3.86
10-227	3/16" x 1/8"	0.97	0.56	0.03	3.01
10-228L	1/4" x 1/8"	1.03	0.56	0.03	1.14
10-228	1/4" x 1/8"	1.03	0.56	0.04	2.42
10-229L	1/4" x 1/4"	1.06	0.68	0.06	2.80
10-229	1/4" x 1/4"	1.23	0.68	0.07	3.52
10-230	1/4" x 3/8"	1.18	0.75	0.08	4.67
10-231	1/4" x 1/2"	1.31	0.94	0.06	7.13
10-232	5/16" x 1/8"	1.06	0.56	0.05	4.26
10-233	5/16" x 1/4"	1.28	0.68	0.08	4.62
10-224	5/16" x 3/8"	1.34	0.81	0.09	6.08
10-234	3/8" x 1/8"	1.09	0.62	0.08	2.83
10-235L	3/8" x 1/4"	1.25	0.68	0.08	2.36
10-235	3/8" x 1/4"	1.31	0.81	0.08	3.64
10-236L	3/8" x 3/8"	1.25	0.81	0.08	3.00
10-236	3/8" x 3/8"	1.25	0.81	0.10	8.83
10-237L	3/8" x 1/2"	1.31	0.94	0.08	2.85
10-237	3/8" x 1/2"	1.60	1.00	0.16	8.15
10-238	3/8" x 3/4"	1.41	1.18	0.11	4.91
10-239	1/2" x 1/4"	1.37	0.75	0.10	2.69
10-240L	1/2" x 3/8"	1.38	0.81	0.12	3.23
10-240	1/2" x 3/8"	1.50	0.81	0.14	6.56
10-241L	1/2" x 1/2"	1.42	0.87	0.10	5.19
10-241	1/2" x 1/2"	1.75	1.00	0.12	8.80
10-242	1/2" x 3/4"	1.60	1.12	0.16	5.00
10-243	5/8" x 3/8"	1.24	0.87	0.12	6.49
10-244	5/8" x 1/2"	1.62	0.94	0.12	4.67
10-245	5/8" x 3/4"	1.65	1.12	0.17	6.62
10-246	3/4" x 1/2"	1.74	1.18	0.32	16.83
10-247	3/4" x 3/4"	1.75	1.18	0.22	16.23
10-248	7/8" x 3/4"	1.94	1.31	0.26	15.95


"L" means light pattern.

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

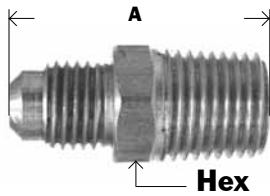
-These fittings are completely interchangeable with full pattern fittings, but have been modified in some way. This modification is usually in the length of the pipe threads. Used in plumbing and light industrial applications.

You know you're getting old when you stop to tie your shoelaces and wonder what else you could do while you're down there.

- George Burns

MALE ADAPTER

SAE# 010102

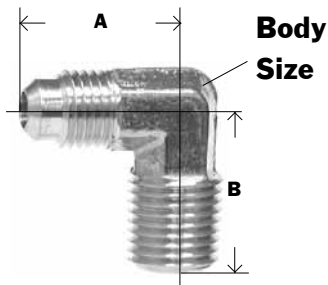
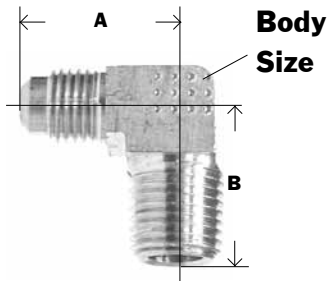
U1
48

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	3.12
10-254	3/16" x 1/8"	1.00	0.43	0.03	1.43
10-255L	1/4" x 1/8"	1.06	0.43	0.03	1.10
10-255 ³	1/4" x 1/8"	1.06	0.43	0.04	1.01
10-256L ³	1/4" x 1/4"	1.15	0.56	0.03	1.31
10-256 ³	1/4" x 1/4"	1.25	0.56	0.04	1.33
10-257	1/4" x 3/8"	1.31	0.68	0.06	2.08
10-258	1/4" x 1/2"	1.44	0.87	0.11	4.18
10-259L	5/16" x 1/8"	1.15	0.50	0.04	1.94
10-259	5/16" x 1/8"	1.16	0.50	0.04	1.75
10-260L	5/16" x 1/4"	1.31	0.56	0.06	2.28
10-260	5/16" x 1/4"	1.34	0.56	0.06	2.06
10-261	5/16" x 3/8"	1.38	0.68	0.08	3.90
10-262	3/8" x 1/8"	1.25	0.62	0.07	1.86
10-263L	3/8" x 1/4"	1.31	0.62	0.06	1.97
10-263 ³	3/8" x 1/4"	1.44	0.62	0.08	1.94
10-264L	3/8" x 3/8"	1.37	0.68	0.09	2.25
10-264	3/8" x 3/8"	1.44	0.68	0.09	2.17
10-265L	3/8" x 1/2"	1.49	0.89	0.12	2.52
10-265	3/8" x 1/2"	1.69	0.87	0.14	4.58
10-266	3/8" x 3/4"	1.81	1.06	0.18	5.06
10-267	1/2" x 1/4"	1.60	0.75	0.11	2.83
10-268L	1/2" x 3/8"	1.46	0.75	0.10	2.74
10-268	1/2" x 3/8"	1.62	0.75	0.12	3.10
10-269L	1/2" x 1/2"	1.62	0.87	0.13	2.90
10-269 ³	1/2" x 1/2"	1.79	0.87	0.15	4.07
10-270	1/2" x 3/4"	1.75	1.06	0.22	4.25
10-271	5/8" x 1/4"	1.81	0.87	0.14	8.18
10-272L	5/8" x 3/8"	1.67	0.87	0.14	3.62
10-272	5/8" x 3/8"	1.81	0.87	0.18	6.55
10-273L	5/8" x 1/2"	1.80	0.87	0.11	4.19
10-273	5/8" x 1/2"	2.00	0.87	0.20	6.59
10-274	5/8" x 3/4"	1.85	1.06	0.21	4.03
10-275	3/4" x 1/2"	2.19	1.06	0.28	11.06
10-276	3/4" x 3/4"	2.08	1.06	0.28	7.53
10-277	7/8" x 1/2"	2.22	1.25	0.52	26.78
10-278	7/8" x 3/4"	2.35	1.25	0.41	17.85
10-279	1" x 3/4"	2.44	1.43	0.53	21.18
10-280	1" x 1"	2.44	1.43	0.53	26.27

**"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.

³ Also stocked in Houston
(See page Intro II for details)

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	6.06
10-283B*	1/8" x 1/8"	0.62	0.69	0.43	0.04	6.29
10-284	3/16" x 1/8"	0.75	0.75	0.44	0.04	6.16
10-284B*	3/16" x 1/8"	0.75	0.75	0.43	0.06	3.00
10-285	3/16" x 1/4"	0.81	0.88	0.44	0.08	4.87
10-286	1/4" x 1/8"	0.84	0.78	0.38	0.04	2.44
10-286B* ³	1/4" x 1/8"	0.81	0.78	0.47	0.05	1.96
10-287 ³	1/4" x 1/4"	0.81	0.88	0.44	0.05	2.53
10-287B* ³	1/4" x 1/4"	0.91	0.93	0.59	0.08	3.16
10-288	1/4" x 3/8"	0.91	0.91	0.47	0.08	4.18
10-289	1/4" x 1/2"	1.03	1.09	0.59	0.10	5.24
10-290	5/16" x 1/8"	0.91	0.88	0.44	0.06	4.18
10-290B*	5/16" x 1/8"	0.91	0.78	0.52	0.06	3.35
10-291	5/16" x 1/4"	0.98	0.96	0.44	0.08	4.26
10-291B*	5/16" x 1/4"	0.95	0.92	0.62	0.08	4.73
10-292	5/16" x 3/8"	1.06	1.09	0.59	0.08	4.86
10-293	3/8" x 1/8"	1.00	0.91	0.53	0.08	4.82
10-293B*	3/8" x 1/8"	1.03	0.91	0.65	0.08	7.38
10-294 ³	3/8" x 1/4"	1.01	0.89	0.48	0.08	2.90
10-294B* ³	3/8" x 1/4"	0.97	1.04	0.68	0.11	4.20
10-295	3/8" x 3/8"	1.00	0.88	0.47	0.10	2.92
10-295B*	3/8" x 3/8"	1.06	1.09	0.69	0.12	5.85
10-296	3/8" x 1/2"	1.10	1.09	0.59	0.12	4.16
10-297	3/8" x 3/4"	1.25	1.31	0.81	0.12	10.61
10-298	1/2" x 1/4"	1.19	1.00	0.59	0.12	4.50
10-298B*	1/2" x 1/4"	1.22	1.19	0.81	0.12	9.75
10-299	1/2" x 3/8"	1.10	1.00	0.59	0.13	4.22
10-299B* ³	1/2" x 3/8"	1.22	1.12	0.77	0.18	6.14
10-300	1/2" x 1/2"	1.16	1.13	0.59	0.14	4.61
10-300B*	1/2" x 1/2"	1.26	1.36	0.94	0.26	9.35
10-301	1/2" x 3/4"	1.42	1.25	0.81	0.24	7.64
10-311	5/8" x 1/4"	1.34	1.13	0.72	0.28	8.73
10-302	5/8" x 3/8"	1.35	1.22	0.72	0.20	8.06
10-302B*	5/8" x 3/8"	1.41	1.25	0.94	0.20	18.64
10-303	5/8" x 1/2"	1.35	1.22	0.72	0.20	6.21
10-303B*	5/8" x 1/2"	1.41	1.38	0.94	0.20	11.48
10-304	5/8" x 3/4"	1.44	1.31	0.81	0.25	10.48
10-305	3/4" x 1/2"	1.67	1.50	0.88	0.34	12.93
10-306	3/4" x 3/4"	1.67	1.63	0.88	0.30	11.74
10-306B*	3/4" x 3/4"	1.60	1.62	0.91	0.32	21.00
10-307	7/8" x 3/4"	1.75	1.68	1.00	0.44	34.35
10-308	1" x 3/4"	1.94	1.69	1.31	0.75	39.76
10-309	1" x 1"	1.94	1.75	1.25	0.78	35.35

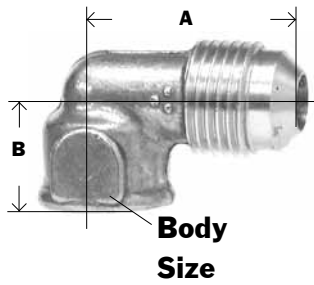
* Barstock

³ Also stocked in Houston
(See page Intro II for details)

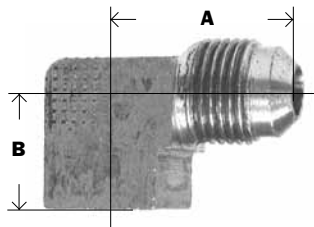
Dimension data can change without notice.
Please call us when dimensions are critical.

90° FEMALE ELBOW

SAE# 010203



Forged Elbow



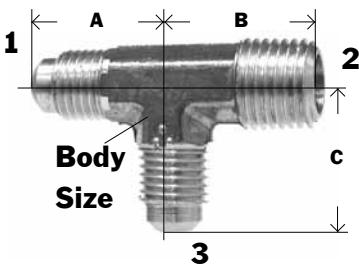
Barstock Elbow

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	5.41
10-313	1/4" x 1/8"	0.90	0.46	0.56	0.06	3.26
10-313B*	1/4" x 1/8"	0.88	0.47	0.56	0.06	3.64
10-314	1/4" x 1/4"	0.97	0.59	0.75	0.08	4.62
10-315	1/4" x 3/8"	1.03	0.57	0.81	0.09	6.44
10-333	1/4" x 1/2"	1.08	0.66	1.00	0.12	8.26
10-316	5/16" x 1/8"	0.94	0.88	0.45	0.08	5.69
10-317	5/16" x 1/4"	1.03	0.58	0.75	0.06	9.25
10-318	3/8" x 1/8"	1.00	0.88	0.47	0.10	6.02
10-319	3/8" x 1/4"	1.06	0.59	0.75	0.09	3.14
10-319B*	3/8" x 1/4"	1.09	0.69	0.75	0.10	9.46
10-320	3/8" x 3/8"	1.06	0.57	0.81	0.10	4.32
10-321	3/8" x 1/2"	1.16	0.66	1.00	0.14	5.66
10-322	3/8" x 3/4"	1.28	0.72	1.25	0.12	9.21
10-323	1/2" x 1/4"	1.25	0.70	0.88	0.13	8.03
10-324	1/2" x 3/8"	1.25	0.70	0.88	0.12	5.96
10-324B*	1/2" x 3/8"	1.28	0.75	0.81	0.19	16.79
10-325	1/2" x 1/2"	1.29	0.72	1.00	0.18	6.28
10-326	1/2" x 3/4"	1.41	0.72	1.25	0.20	8.57
10-327	5/8" x 3/8"	1.35	1.22	0.72	0.22	10.70
10-328	5/8" x 1/2"	1.38	0.75	1.00	0.20	9.37
10-329	5/8" x 3/4"	1.50	0.76	1.25	0.28	9.47
10-330	3/4" x 1/2"	1.63	1.06	1.06	0.42	19.09
10-331	3/4" x 3/4"	1.88	1.06	1.31	0.40	28.57

* Barstock

FORGED MALE RUN TEE



T3
151F
51

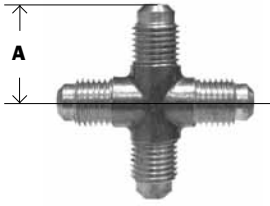
Part #	Male Flare x Male NPTF (1&3) x 2	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
10-361	3/16" x 5/16" x 1/8"	0.87	0.78	0.97	0.44	0.08	4.73
10-343	3/16" x 1/8"	0.75	0.75	0.75	0.37	0.05	5.34
10-344	1/4" x 1/8"	0.78	0.75	0.78	0.37	0.06	4.68
10-345	1/4" x 1/4"	0.88	0.88	0.88	0.44	0.08	5.64
10-347	5/16" x 1/8"	0.88	0.80	0.88	0.44	0.08	4.92
10-348	5/16" x 1/4"	0.94	0.94	0.94	0.44	0.08	7.21
10-350	3/8" x 1/4"	1.00	0.94	1.00	0.44	0.12	7.21
10-351	3/8" x 3/8"	1.00	1.00	1.00	0.47	0.10	9.99
10-340	3/8" x 1/2" x 3/8"	1.09	1.09	1.16	0.59	0.18	9.26
10-352	3/8" x 1/2"	1.12	1.22	1.12	0.69	0.12	14.03
10-353	1/2" x 3/8" x 1/2"	1.22	1.22	1.15	0.69	0.22	10.98
10-354	1/2" x 3/8"	1.16	1.09	1.16	0.59	0.18	12.13
10-355	1/2" x 1/2"	1.22	1.22	1.22	0.69	0.22	12.09
10-357	5/8" x 1/2"	1.41	1.31	1.41	0.69	0.28	15.05
10-359	3/4" x 1/2"	1.63	1.59	1.63	0.88	0.48	29.63
10-360	3/4" x 3/4"	1.62	1.44	1.62	0.88	0.48	26.16

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

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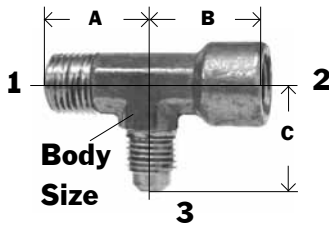
SAE 45° FLARE**BRASS FITTINGS****FORGED FLARE CROSS**

SAE# 010501



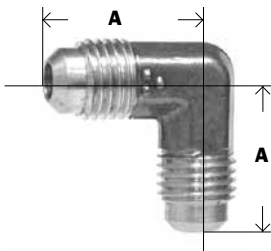
455
C1
147F
52

Part #	Thread Size UNF	A	Body Size	Approx. Wt. Lbs.	List Price
10-373	1/4"	0.88	0.44	0.10	10.84
10-374	5/16"	0.92	0.44	0.10	10.62
10-375	3/8"	1.00	0.44	0.16	10.13
10-376	1/2"	1.16	0.59	0.24	11.93

FORGED ADAPTER TEE / SERVICE TEE

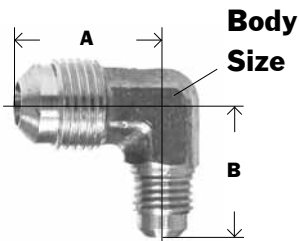
T17
53

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	5.58
10-383	1/4" x 1/4" x 1/4"	0.88	1.00	0.91	0.47	0.11	7.06

FORGED 90° FLARE ELBOW

E2
155F

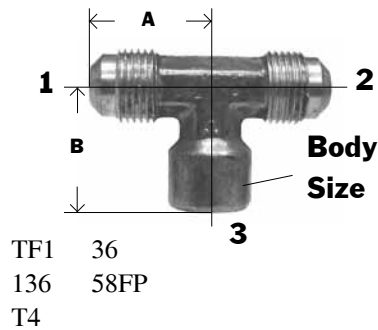
Part #	Thread Size UNF	A	Approx. Wt. Lbs.	List Price
10-404	1/8"	0.64	0.04	8.57
10-405	3/16"	0.75	0.06	7.96
10-406	1/4"	0.81	0.08	3.14
10-407	5/16"	0.91	0.10	4.74
10-408	3/8"	1.00	0.10	4.24
10-409	1/2"	1.16	0.14	6.02
10-410	5/8"	1.41	0.22	9.77
10-411	3/4"	1.66	0.68	19.60
10-412	7/8"	1.81	0.82	35.89

FORGED REDUCING ELBOW

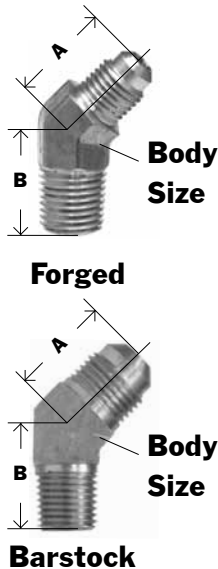
ER2
657F
55R

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	4.82
10-417	3/8" x 5/16"	1.00	0.94	0.44	0.08	6.30
10-419	1/2" x 3/8"	1.19	1.02	0.59	0.14	6.12
10-421	5/8" x 1/2"	1.34	1.23	0.72	0.21	9.79

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FORGED FEMALE BRANCH TEE


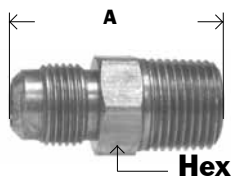
Part #	Male Flare x Female NPTF (1&2) x 3	A	B	Body Size	Approx. Wt. Lbs.	List Price
10-429	1/4" x 1/4"	0.97	0.75	0.69	0.12	8.25
10-430	3/8" x 1/4"	1.00	1.03	0.47	0.14	7.70
10-431	3/8" x 3/8"	1.17	0.69	1.05	0.22	11.92
10-432	3/8" x 1/2"	1.16	0.69	1.05	0.19	10.71
10-434	1/2" x 1/2"	1.31	0.69	1.06	0.22	17.90
10-435	5/8" x 1/2"	1.38	0.76	1.06	0.24	17.85

45° ELBOW
SAE# 010302


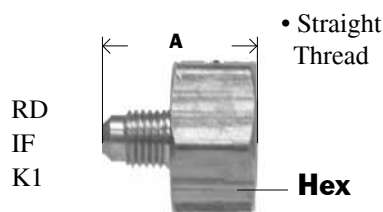
Part #	Male Flare x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
10-448 ³	1/4" x 1/8"	0.67	0.64	0.41	0.04	2.45
10-448B*	1/4" x 1/8"	0.67	0.64	0.44	0.04	6.81
10-449	1/4" x 1/4"	0.75	0.86	0.53	0.07	5.05
10-450	5/16" x 1/8"	0.78	0.64	0.53	0.06	5.25
10-451	5/16" x 1/4"	0.81	0.86	0.53	0.07	5.31
10-452	3/8" x 1/4"	0.91	0.86	0.53	0.09	3.92
10-452B*	3/8" x 1/4"	0.89	0.86	0.64	0.12	10.23
10-453	3/8" x 3/8"	0.93	0.94	0.59	0.11	4.90
10-454	3/8" x 1/2"	0.99	1.17	0.75	0.19	7.02
10-455 ³	1/2" x 3/8"	1.07	0.88	0.59	0.12	5.57
10-455B*	1/2" x 3/8"	1.06	0.94	0.76	0.18	12.29
10-456 ³	1/2" x 1/2"	1.12	1.18	0.75	0.20	8.09
10-460	5/8" x 3/8"	1.13	0.95	0.81	0.22	11.37
10-457	5/8" x 1/2"	1.12	1.17	0.78	0.18	8.81
10-458	3/4" x 1/2"	1.28	1.16	0.88	0.26	14.08
10-459	3/4" x 3/4"	1.41	1.20	0.88	0.31	14.44

* Barstock

 E145 654F 47
54 59FF 4945
159F 254

BRASS GAS RANGE FITTINGS
BRASS MALE ADAPTERS


Part #	Male Flare x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
35-132	1/2" x 1/2" (3/8" FIP TAP)	1.88	0.87	0.16	4.94
35-134	15/16" x 1/2"	1.90	0.94	0.14	5.64

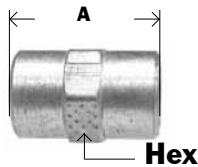
DRUM ADAPTERS
SAE# 010165


Part #	Male Flare x FIP	A	Hex	Approx. Wt. Lbs.	List Price
50-011	1/4" x 1/2"	1.12	1.12	0.12	20.43
50-001	1/4" x 3/4"	1.16	1.25	0.14	10.92

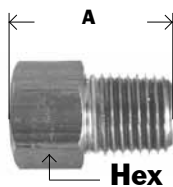
³ Also stocked in Houston
(See page Intro II for details)

SAE 45° FLARE**BRASS FITTINGS****FEMALE 45° FLARE FITTINGS**

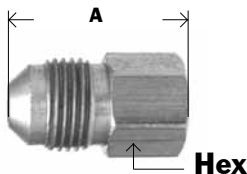
• Use with Copper Gasket

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	8.31
10-136	3/8"	1.25	0.81	0.14	13.40
10-137	1/2"	1.43	0.94	0.18	12.20

FEMALE FLARE ADAPTER**SAE# 010106**U5
664FHD
33
48-FF

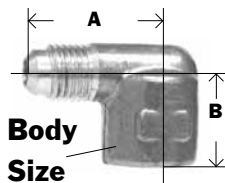
Part #	Female Flare x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
10-440	1/4" x 1/8"	0.91	0.62	0.05	5.11
10-441	1/4" x 1/4"	1.01	0.62	0.06	5.62
10-442	3/8" x 1/4"	1.28	0.81	0.10	7.04
10-443	1/2" x 3/8"	1.36	0.94	0.14	9.73
10-444	1/2" x 1/2"	1.46	0.94	0.14	9.25

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	5.42
10-461	1/4" x 1/2"	1.36	0.94	0.14	14.14
10-463	3/8" x 1/4"	1.12	0.62	0.06	5.48
10-464	3/8" x 1/2"	1.44	0.94	0.14	5.66
10-473	3/8" x 5/8"	1.63	1.12	0.16	13.47
10-467	1/2" x 3/8"	1.41	0.81	0.13	5.14
10-468	1/2" x 5/8"	1.68	1.06	0.20	17.54
10-469	5/8" x 1/2"	1.63	1.00	0.17	15.83
10-470	5/8" x 3/4"	1.97	1.31	0.31	17.24
10-471	3/4" x 5/8"	1.75	1.18	0.32	17.96

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	6.46
10-495	1/2" x 1/2"	1.41	1.12	0.81	0.72	11.34

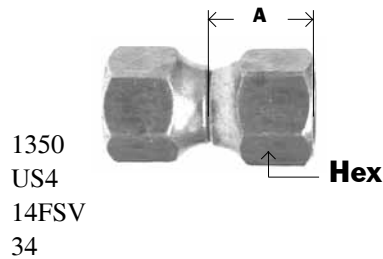
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Dimension data can change without notice.
 Please call us when dimensions are critical.

BRASS FLARE SWIVEL FITTINGS

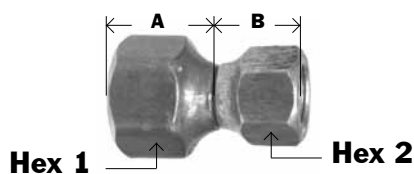
FORGED SWIVEL

SAE# 010108



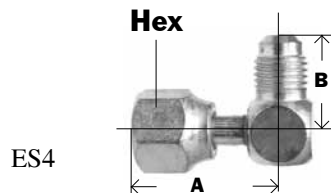
Part #	Female Flare UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-481	1/4"	0.59	0.62	0.04	4.78
10-482	5/16"	0.62	0.68	0.06	6.98
10-483	3/8"	0.69	0.81	0.10	5.20
10-484	1/2"	0.81	0.94	0.16	7.13
10-485	5/8"	0.94	1.06	0.24	8.16
10-486	3/4"	1.12	1.31	0.34	28.75

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	11.16
10-488	1/2" x 3/8"	0.84	0.70	0.94	0.81	0.12	12.97
10-489	5/8" x 1/2"	0.98	0.82	1.03	0.94	0.22	16.16

FORGED SWIVEL ELBOWS



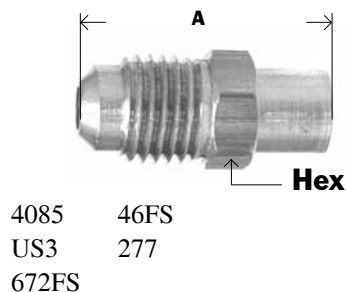
Part #	Male Flare x Female Flare	A	B	Hex	Approx. Wt. Lbs.	List Price
10-493	1/4"	0.81	1.15	0.62	0.12	9.08
10-494*	3/8"	1.09	1.00	0.75	0.36	23.04

* Steel

BRASS SOLDER FITTINGS

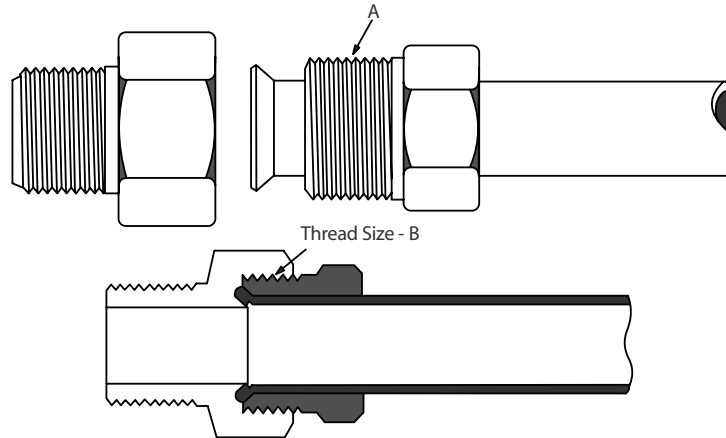
FLARE TO SWT UNION

SAE# 010104



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	3.19
10-611	1/2" x 5/8"	1.56	0.75	0.12	17.76
10-615	3/4" x 3/4"	2.06	1.06	0.32	14.57

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 Size-B	5/16-28	3/8-24	7/16-24	1/2-20	5/8-18	1 1/16-18	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.

Actual O.D. of male inverted flare threads

5/16"-28 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

1/8"

3/16"

1/4"

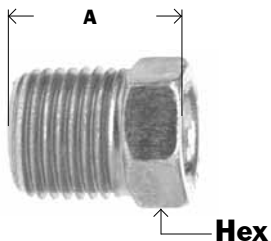
5/16"

3/8"

1/2"

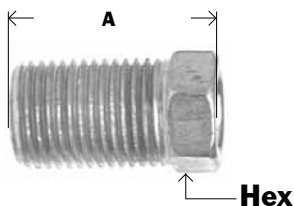
5/8"

3/4"

BRASS FITTINGS**INVERTED FLARE****ZINC CHROMATE STEEL NUT****SAE# 040110**

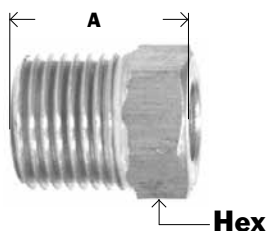
2105
411FS
105
41W

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-001	1/8"	0.52	0.31	0.01	1.06
12-002	3/16"	0.56	0.37	0.02	0.35
12-003	1/4"	0.56	0.43	0.02	0.40
12-004	5/16"	0.62	0.50	0.02	0.46
12-005	3/8"	0.66	0.62	0.03	0.75
12-000	7/16"	0.68	0.68	0.04	1.85
12-011	3/8"(11/16-18)	0.66	0.68	0.05	4.96
12-006	1/2"	0.74	0.75	0.08	1.10
12-007	5/8"	0.80	0.87	0.10	2.68
12-008	3/4"	0.88	1.06	0.10	4.56

LONG STEEL NUT

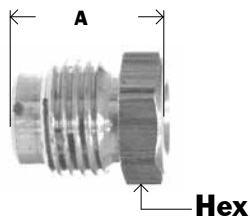
7896

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-009	3/16"	0.84	0.37	0.02	1.06
12-010	1/4"	0.81	0.43	0.02	1.26

INVERTED FLARE BRASS NUT**SAE# 040110**

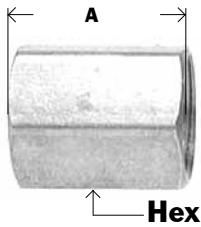
2100
411F
100
411B

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-012	1/8"	0.52	0.31	0.01	2.30
12-013	3/16"	0.56	0.37	0.01	0.99
12-014	1/4"	0.56	0.43	0.02	0.92
12-015	5/16"	0.62	0.50	0.03	0.98
12-016	3/8"	0.66	0.62	0.04	1.48
12-017	1/2"	0.74	0.75	0.05	3.44

SPECIAL FORD NUT

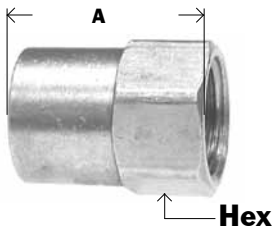
431F

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-020	1/4"	0.82	0.50	0.02	5.14

INVERTED FLARE**BRASS FITTINGS****UNION INTERNAL****SAE# 040101**

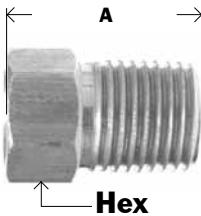
2300
42IFHD

Part #	Inv. Flare X Inv. Flare	A	Hex	Approx. Wt. Lbs.	List Price
12-022	1/8"	0.59	0.40	0.02	3.92
12-023	3/16"	0.62	0.47	0.02	1.10
12-024	1/4"	0.62	0.50	0.03	1.71
12-025	5/16"	0.70	0.56	0.04	3.19
12-026	3/8"	0.80	0.75	0.08	3.58
12-027	1/2"	0.91	0.90	0.10	6.00

FEMALE ADAPTER**SAE# 040103**

46IFHD
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	2.48
12-033	1/4" x 1/8"	0.75	0.53	0.02	2.54
12-034	5/16" x 1/8"	0.78	0.59	0.04	5.08
12-035	3/8" x 1/4"	1.03	0.75	0.08	5.05
12-036	1/2" x 3/8"	1.10	0.90	0.12	9.46

MALE ADAPTER**SAE# 040102**

2200
48IFHD
202
48W

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	2.94
12-042	3/16" x 1/8"	0.70	0.43	0.02	1.89
12-043	1/4" x 1/8"	0.74	0.50	0.03	1.98
12-044	1/4" x 1/4"	0.89	0.56	0.04	1.85
12-045	5/16" x 1/8"	0.79	0.56	0.03	2.19
12-046	5/16" x 1/4"	0.98	0.56	0.05	2.87
12-047	3/8" x 1/8"	0.88	0.72	0.05	3.52
12-048	3/8" x 1/4"	1.02	0.75	0.06	2.94
12-049	3/8" x 3/8"	1.02	0.75	0.08	3.52
12-038	1/2" x 1/4"	0.97	0.87	0.10	7.41
12-050	1/2" x 3/8"	1.06	0.87	0.08	4.87
12-051	1/2" x 1/2"	1.06	0.87	0.11	7.76
12-052	5/8" x 1/2"	1.32	1.06	0.15	4.54
12-040	3/4" x 3/4"	1.39	1.25	0.24	14.25

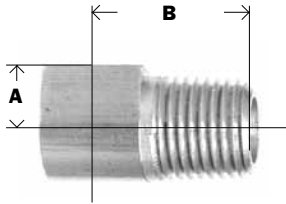
Dimension data can change without notice.
Please call us when dimensions are critical.

The nice part about being a pessimist is that
you are constantly being either proven right or
pleasantly surprised.

- George F. Will

ELBOW

SAE# 040202



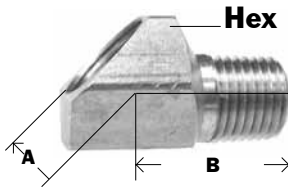
400
2400
249IFHD 249IF
402 49W

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	3.29
12-058	3/16" x 1/8"	0.26	0.61	0.03	2.02
12-059	1/4" x 1/8"	0.33	0.65	0.04	2.13
12-054*	1/4" x 1/8"	0.33	0.65	0.04	13.33
12-060	1/4" x 1/4"	0.28	0.82	0.06	2.89
12-061	5/16" x 1/8"	0.47	0.68	0.05	2.66
12-062	5/16" x 1/4"	0.45	0.85	0.08	4.46
12-063	3/8" x 1/8"	0.54	0.76	0.14	5.25
12-064	3/8" x 1/4"	0.53	0.92	0.14	5.14
12-065	3/8" x 3/8"	0.50	0.94	0.12	6.74
12-066	1/2" x 3/8"	0.59	1.03	0.16	7.27
12-067	1/2" x 1/2"	0.66	1.22	0.25	11.89
12-056	5/8" x 3/8"	0.67	1.09	0.20	13.79
12-068	5/8" x 1/2"	0.67	1.29	0.18	12.52
12-069	3/4" x 1/2"	0.80	1.39	0.42	35.95
12-080	7/8" x 3/4"	0.94	1.43	0.48	45.93
12-081	1" x 1"	1.02	1.69	0.60	56.55

* Restricted pipe end .062

45° ELBOW

SAE# 040302

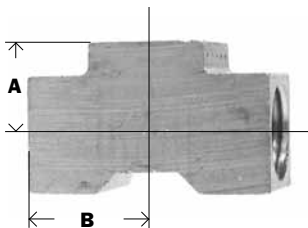


154
2352
259IFHD
352 94W

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	3.69
12-073	1/4" x 1/8"	0.27	0.58	0.56	0.04	3.81
12-074	5/16" x 1/8"	0.36	0.56	0.62	0.06	5.47
12-075	5/16" x 1/4"	0.23	0.83	0.62	0.06	9.06
12-076	3/8" x 1/4"	0.51	0.84	0.78	0.09	7.50
12-077	1/2" x 3/8"	0.38	0.91	0.84	0.11	10.85
12-079	5/8" x 1/2"	0.44	1.00	1.06	0.21	18.35

UNION TEE

SAE# 040401

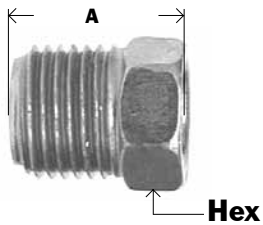


244IFHD
702
44I

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
12-085	1/8"	0.33	0.47	0.04	6.81
12-086	3/16"	0.39	0.55	0.04	3.36
12-087	1/4"	0.42	0.56	0.08	4.99
12-088	5/16"	0.45	0.63	0.09	5.39
12-089	3/8"	0.56	0.74	0.17	10.73
12-090	1/2"	0.67	0.88	0.24	20.60

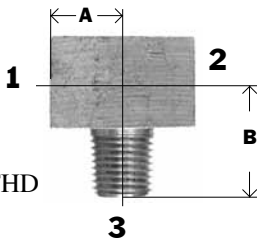
INVERTED FLARE**BRASS FITTINGS****STEEL PLUG**

• cored

SAE# 040109

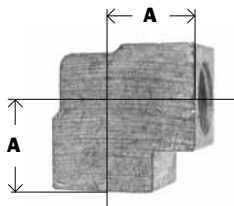
Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-091	3/16"	0.53	0.37	0.01	0.58
12-092	1/4"	0.54	0.43	0.02	0.92
12-093	5/16"	0.59	0.50	0.03	0.87
12-094	3/8"	0.66	0.62	0.04	2.54

106
411P
131
2131

MALE BRANCH TEE**SAE# 040427**

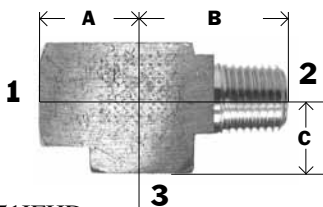
Part #	Inv. Flare x Male NPTF (1&2)x3	A	B	Approx. Wt. Lbs.	List Price
12-100	3/16" x 1/8"	0.41	0.60	0.04	5.42
12-101	1/4" x 1/8"	0.42	0.64	0.06	4.90
12-102	5/16" x 1/8"	0.47	0.68	0.07	7.21
12-103	3/8" x 1/4"	0.58	0.93	0.15	10.62

145
245IFHD
602
2600
600

FEMALE ELBOW**SAE# 040203**

Part #	Inv. Flare x Female NPTF	A	Approx. Wt. Lbs.	List Price
12-110	1/4" x 1/8"	0.55	0.07	5.02
12-111	5/16" x 1/8"	0.51	0.08	6.17
12-112	3/8" x 1/4"	0.68	0.10	8.37

450

MALE RUN TEE**SAE# 040424**

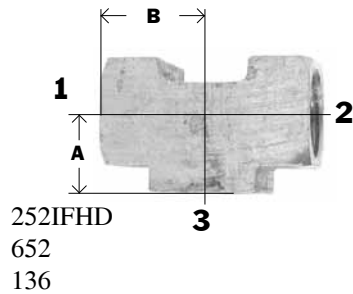
Part #	Inv. Flare x Male NPTF (1&3)x2	A	B	C	Approx. Wt. Lbs.	List Price
12-118	3/16" x 1/8"	0.53	0.72	0.39	0.06	10.69
12-119	1/4" x 1/8"	0.56	0.75	0.42	0.08	8.02
12-120	5/16" x 1/8"	0.62	0.85	0.45	0.10	10.15
12-121	3/8" x 1/4"	0.75	1.08	0.56	0.14	13.50

251IFHD
752
550
151

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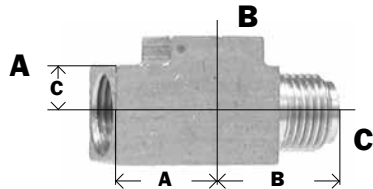
FEMALE BRANCH TEE

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	15.12
12-129	5/16" x 1/8"	0.45	0.63	0.12	9.65
12-130	3/8" x 1/4"	0.56	0.74	0.17	10.96

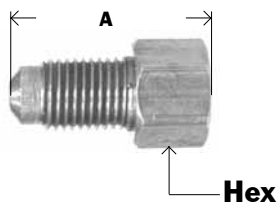
TOWED TRAILER BRAKE TEE



Part #	A	B	C	Reference #	Approx. Wt. Lbs.	List Price
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	10.44
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	10.33
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	8.31
12-147	3/16" 0.57	3/16" 0.76	3/16" 0.42	7900	0.08	8.14
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	10.56
12-150	1/4" 0.56	3/16" 0.77	1/4" 0.43	7901	0.10	8.14
12-151	1/4" 0.56	1/4" 0.77	1/4" 0.43	7898	0.12	10.96

INVERTED FLARE AUTO FITTINGS

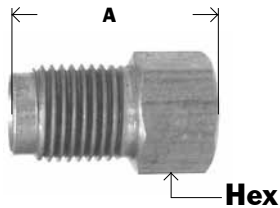
DUAL MASTER CYLINDER ADAPTER



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	2.71
12-202	5/16" x 3/16"	0.96	0.68	7897	0.07	4.67

Think like a man of action, act like a man of thought.

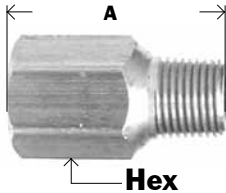
- Henri Bergson

INVERTED FLARE**BRASS FITTINGS****DUAL MASTER CYLINDER ADAPTER**

Part #	Male Inv. x Female Inv.	A	Hex	Reference #	Approx. Wt. Lbs.	List Price
12-210	3/16" x 1/4"	0.84	0.56	7828	0.03	3.16
12-212	1/4" x 3/16"	0.84	0.50	7818	0.04	3.23
12-214*	7/16-20 x 1/4"	0.87	0.68	7732	0.06	5.54
12-216	5/16" x 3/16"	0.94	0.50	7909	0.04	3.23
12-218*	5/16" x 1/4"	0.93	0.62	7727	0.06	4.56
12-220	5/16" x 1/4"	0.95	0.68	7829	0.07	3.64
12-222*	5/16" x 5/16"	0.95	0.68	1074	0.06	5.71
12-224	3/8" MPT x 5/16"	0.87	0.75	7771	0.08	8.25

* Seals on hex face

47W

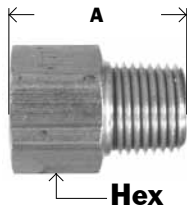
CARBURETOR TO FUEL LINE ADAPTER - FORD

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-230	1/4"(1/2-20) x 1/8"MPT	1.06	0.56	0.04	10.73

1513

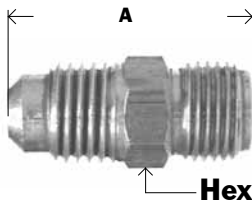
RESTRICTION PIPE ADAPTER

(.0625 ORIFICE)



Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-310	1/8"	0.75	0.50	0.02	4.59

1510

SAE FLARE X INVERTED FLARE

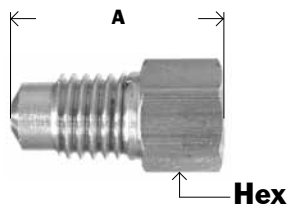
Part #	SAE Flare x Inv. Flare	A	Hex	Approx. Wt. Lbs.	List Price
12-250	1/4" x 3/16"	1.03	0.43	0.02	11.38
12-252	1/4" x 1/4"	1.03	0.43	0.03	5.02
12-254	3/8" x 5/16"	1.34	0.63	0.08	16.73
12-256	3/8" x 3/8"	1.37	0.63	0.09	14.66
12-257	3/8" x 7/16"	1.40	0.68	0.10	11.94

4205

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

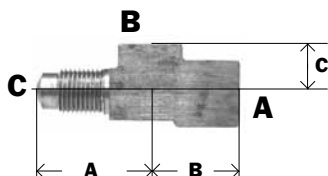
METRIC HYDRAULIC BRAKE FITTINGS

METRIC ADAPTER



Part #	Male	O.D.	A	Hex	Approx. Wt. Lbs.	List Price
12-335	M10x1.0	3/16"(3/8-24)	1.02	0.50	0.02	2.54
12-326	M11x1.5	3/16"(M10x1.0)	1.06	0.50	0.02	11.71
12-327	M12x1.0	3/16"(M10x1.0)	1.02	0.53	0.04	11.71
12-328	M16x1.5	3/16"(M10x1.0)	1.02	0.56	0.06	11.71

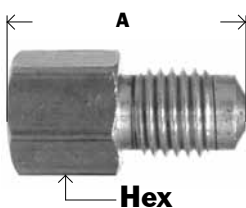
METRIC TOWED TRAILER BRAKE TEE



Part #	A	B	C	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	0.16	24.87

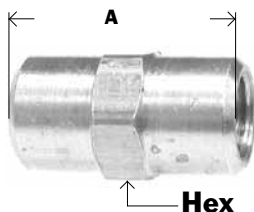
* Bubble flare type

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	9.64
12-339	3/16" (3/8-24)	13x1.5	1.03	0.56	7972	0.04	12.23
12-341	3/16" (3/8-24)	12x1.0	1.02	0.53	7974	0.04	11.83

METRIC UNION



Part #	Size	A	Hex	Reference #	Approx. Wt. Lbs.	List Price
12-343	3/16"(10.0MM)	1.04	0.56	7975	0.04	11.54

Save 5% by ordering online at
www.midlandindustrial.com

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

Part #	JIC Thread	Pipe Size	List Price
28-701	7/16-20	1/8	2.51
28-702	7/16-20	1/4	3.74
28-703	7/16-20	3/8	5.09
28-704	1/2-20	1/8	18.70
28-705	1/2-20	1/4	19.01
28-706	9/16-18	1/8	6.07
28-707	9/16-18	1/4	2.93
28-708	9/16-18	3/8	4.00
28-709	9/16-18	1/2	7.60
28-710	3/4-16	1/4	11.23
28-711	3/4-16	3/8	7.29
28-712	3/4-16	1/2	6.84
28-713	3/4-16	3/4	19.66
28-714	7/8-14	3/8	19.80
28-715	7/8-14	1/2	13.97
28-716	7/8-14	3/4	20.25
28-717	1-1/16-12	3/4	12.18
28-718	1-5/16-12	1	36.87

45° FORGED ELBOW

Part #	JIC Thread	Pipe Size	List Price
28-722F	7/16-20	1/8	7.37
28-724F	7/16-20	1/4	9.88
28-728F	1/2-20	1/4	4.23
28-729F ¹	9/16-18	1/8	20.70
28-731F	9/16-18	1/4	7.65
28-733F	9/16-18	3/8	7.28
28-734F	9/16-18	1/2	14.92
28-736F	3/4-16	3/8	10.35
28-738F	3/4-16	1/2	33.68
28-740F	7/8-14	1/2	16.91
28-742F	1-1/16-12	3/4	58.65

BULKHEAD TUBE UNION

Part #	JIC Thread	List Price
28-797	9/16-18	51.45
28-955	1-1/16-12	54.84

90° FORGED ELBOW

Part #	JIC Thread	Pipe Size	List Price
28-760F	7/16-20	1/8	7.04
28-762F	7/16-20	1/4	4.72
28-766F	1/2-20	1/4	9.19
28-768F	9/16-18	1/8	20.70
28-770F	9/16-18	1/4	6.45
28-772F	9/16-18	3/8	11.42
28-773F	9/16-18	1/2	21.00
28-774F	3/4-16	3/8	16.21
28-777F	3/4-16	1/2	10.61
28-778F	3/4-16	3/4	31.21
28-780F	7/8-14	1/2	25.59
28-781F	1-1/16-12	1/2	38.05
28-783F	1-1/16-12	3/4	18.92
28-784F	1-5/16-12	3/4	39.80
28-786F	1-5/16-12	1	41.98

Have Midland quote all of
your fitting needs.

BRASS FITTINGS**STRAIGHT SWIVEL ADAPTER**

Part #	JIC Thread	Pipe Size	List Price
28-753	9/16-18	1/4	7.83
28-754	9/16-18	3/8	14.38
28-756	3/4-16	1/2	18.48

FEMALE STRAIGHT ADAPTER

Part #	JIC Thread	Pipe Size	List Price
28-957	7/16-20	1/8	7.31
28-958	7/16-20	1/4	9.26
28-959	9/16-18	1/4	10.93
28-960	9/16-18	3/8	12.97
28-961	3/4-16	3/8	8.14
28-962	3/4-16	1/2	21.87
28-963	7/8-14	1/2	16.92
28-964	1-1/16-12	3/4	27.46

STRAIGHT TUBE UNION

Part #	JIC Thread	List Price
28-966	7/16-20	7.04
28-969	9/16-18	7.44
28-970	3/4-16	11.68
28-971	1-1/16-12	26.02
28-972	1-5/16-12	41.88

TUBE TEE

Part #	JIC Thread	List Price
28-981	7/16-20	56.30
28-982	9/16-18	63.63

FEMALE ELBOW (FORGED BODY)

Part #	JIC Thread	Pipe Size	List Price
28-973	7/16-20	1/8	7.77
28-974	7/16-20	1/4	14.27
28-975	9/16-18	1/4	18.04

BRASS FITTINGS**POL (BOTTLE GAS)****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	23.82

TAILPIECE WITH FLATS

1001AUL
21605



POL-LPT
POL-LTPH
M-2001-A

Part #	Length	List Price
34-011	2.34 w/ wrench Flats	13.27
34-012	2.13 w/ Hex	5.89

STANDARD NUT

7/8" Hex



1001BUL
POL-N
21601
M-2001-B

Part #	Pipe Size	List Price
34-016	.880-14 LH	3.80

TAILPIECE & NUT ASSEMBLY

2002AB

Part #	Pipe Size	List Price
34-022	1/4	11.42

POL CAP

POL-N5
2004
1004A
M-2004

Part #	Pipe Size	List Price
34-031	.880-14LH	10.31

POL PLUG

1014A
POL-P2
2014
M-2014

Part #	Pipe Size	List Price
34-036	.880-14LH	15.30

ADAPTERS

POL 2005
POL 2006
POL 2007



21607
POL-U2
1015

Part #	Pipe Size	List Price
34-041	3/8 Flare x .880-14LH	10.52
34-046	1/2 Flare x .880-14LH	10.88
34-051	5/8 Flare x .880-14LH	11.93

POL X 1/4 FPT

2008
POL-U3B

Part #	Pipe Size	List Price
34-056	.880-14LH POL x 1/4 FPT	19.75

TAILPIECE & NUT ASSEMBLY

Part #	Size	List Price
34-025	POL x 1/4 Barb	16.27

CAP ORIFICE

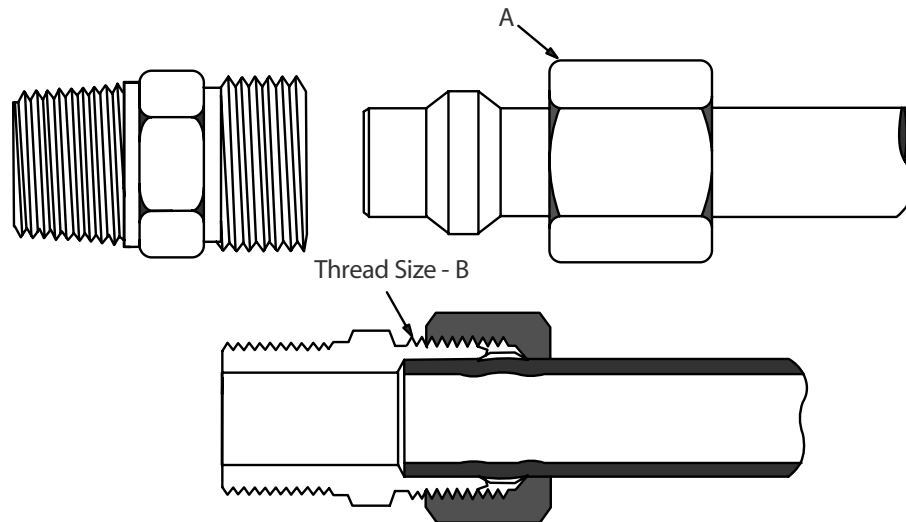
GF6
OH

Part #	Size	List Price
34-032	72	1.77

BRASS

Save 5% by ordering online at
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Compression Fittings



Tube O.D.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1
Thread Size-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	1-1/4-18

•Typical Application

Instrumentation, hydraulic and pneumatic systems.

•Pressure

Working pressure up to 2000 PSI with a 4:1 safety factor depending on tube size. When using plastic tubing, use the working pressure for type used.

•Vibration

Fair resistance - use long nut when greater vibration resistance is needed.

•Temperature Range

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

•Material

CA360 Brass for barstock 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.

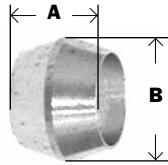
Actual Profile of Compression Threads

5/16"-24	3/8"-24	7/16"-24	1/2"-24	9/16"-24	11/16"-20	13/16"-18	1"-18	1-1/8"-18
1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"

BRASS SLEEVE

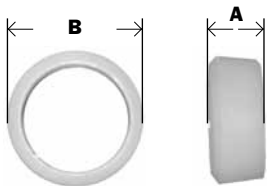
• FERRULES

SAE# 060115

60
260

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
18-001	1/8"	0.19	0.19	0.01	0.21
18-002	3/16"	0.22	0.27	0.01	0.15
18-003 ³	1/4"	0.25	0.34	0.01	0.15
18-004	5/16"	0.25	0.41	0.01	0.16
18-005 ³	3/8"	0.25	0.47	0.02	0.17
18-006	7/16"	0.31	0.53	0.02	0.49
18-007 ³	1/2"	0.38	0.59	0.02	0.47
18-008	5/8"	0.38	0.71	0.03	0.47
18-009	3/4"	0.44	0.87	0.03	1.38
18-010	7/8"	0.41	0.99	0.03	0.86

DELTRIN SLEEVE

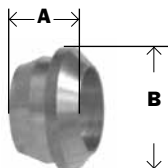


60-P

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	0.76
18-017	3/8"	0.19	0.50	0.02	0.25
18-018	1/2"	0.25	0.63	0.02	0.30
18-019	5/8"	0.22	0.74	0.02	0.32
18-020	3/4"	0.25	0.93	0.03	2.25

SELF-ALIGN SLEEVE

601



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
27-001	1/8"	0.19	0.25	0.01	0.26
27-002	3/16"	0.20	0.31	0.01	0.81
27-003	1/4"	0.21	0.37	0.02	0.31
27-005	3/8"	0.23	0.50	0.03	0.50
27-006	1/2"	0.35	0.62	0.03	1.39

* 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.

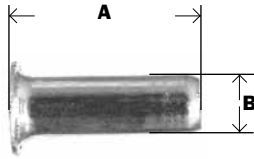
Dream as if you'll live forever. Live as if you'll die today.

- James Dean

³ Also stocked in Houston
(See page Intro II for details)

BRASS INSERT

• SLEEVE

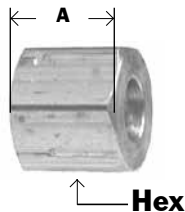


63-BI
60AE
2030
63PT

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
22-008	1/8"	0.46	0.080	0.01	0.50
22-009	3/16"	0.45	0.135	0.01	0.50
22-009A	3/16"	0.52	0.095	0.01	0.57
22-010	1/4"	0.50	0.163	0.02	0.31
22-010A	1/4"	0.59	0.125	0.02	0.75
22-010B	1/4"	0.53	0.172	0.02	1.15
22-011A	5/16"	0.50	0.232	0.02	1.31
22-011	5/16"	0.53	0.187	0.02	0.56
22-012	3/8"	0.56	0.250	0.03	0.46
22-013	1/2"	0.72	0.372	0.03	0.60
22-014	5/8"	0.72	0.483	0.03	1.31
22-015	3/4"	1.03	0.563	0.03	2.94

BRASS NUT

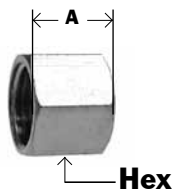
SAE# 060110



61
261

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-033	1/8"	0.38	0.37	0.01	0.58
18-034	3/16"	0.41	0.43	0.01	0.42
18-035L	1/4"	0.44	0.50	0.02	0.47
18-035 ³	1/4"	0.44	0.50	0.02	0.65
18-036	5/16"	0.44	0.56	0.02	0.71
18-037L	3/8"	0.47	0.62	0.04	0.74
18-037	3/8"	0.47	0.62	0.04	0.74
18-038	7/16"	0.50	0.68	0.04	2.62
18-039L ³	1/2"	0.56	0.75	0.04	1.48
18-039	1/2"	0.62	0.81	0.04	1.84
18-040L	5/8"	0.56	0.87	0.06	1.39
18-040	5/8"	0.62	0.94	0.06	2.54
18-041	3/4"	0.68	1.12	0.08	3.07
18-042	7/8"	0.62	1.25	0.10	3.69

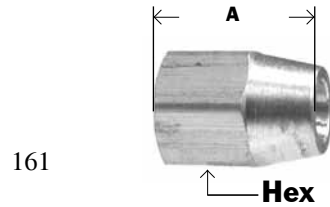
NICKEL PLATED NUT



Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-054	1/4"	0.44	0.50	0.02	0.65
18-055	3/8"	0.45	0.62	0.02	0.59
18-056	1/2"	0.56	0.75	0.04	1.58
18-057	5/8"	0.56	0.94	0.04	1.59

³ Also stocked in Houston
(See page Intro II for details)

LONG NUT COMPRESSION

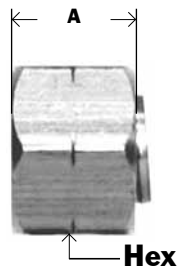


161

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
24-003	1/4"	0.75	0.50	0.02	1.50
24-004	5/16"	0.84	0.56	0.02	1.16
24-005	3/8"	0.97	0.62	0.04	2.28
24-006	1/2"	1.06	0.81	0.06	3.29

* 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.

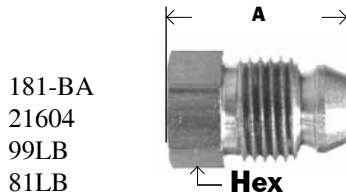
CAPTIVE SLEEVE NUT



Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
26-001	1/8"	0.38	0.37	0.02	1.95
26-002	3/16"	0.40	0.43	0.02	1.73
26-003	1/4"	0.40	0.50	0.04	1.27
26-004	5/16"	0.44	0.56	0.04	1.79
26-005	3/8"	0.46	0.62	0.06	1.66
26-007	1/2"	0.50	0.75	0.08	2.12
26-008	5/8"	0.51	0.87	0.10	6.36

* 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

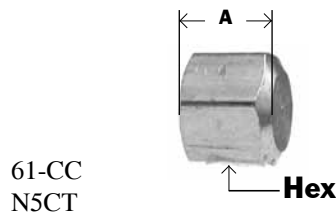


181-BA
21604
99LB
81LB

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
16-090	3/16"	0.57	0.37	0.02	4.21
16-010	1/4"	0.62	0.43	0.02	1.67

* Threaded sleeve fittings on page 83.

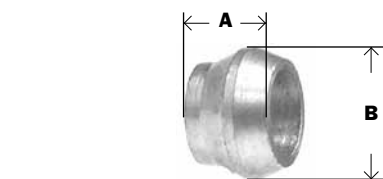
CAP



61-CC
N5CT

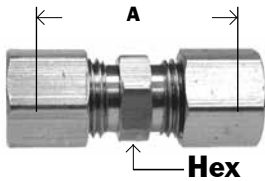
Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-047	1/4"	0.44	0.50	0.02	1.05
18-048	3/8"	0.40	0.62	0.04	1.20
18-049	1/2"	0.48	0.75	0.06	2.27
18-050	5/8"	0.56	0.94	0.10	3.45

COMPRESSION PLUG



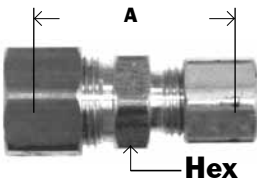
CSP

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
18-029	3/8"	0.31	0.47	0.04	1.11
18-030	1/2"	0.34	0.59	0.06	1.73

COMPRESSION**BRASS FITTINGS****UNION****SAE# 060101BA**

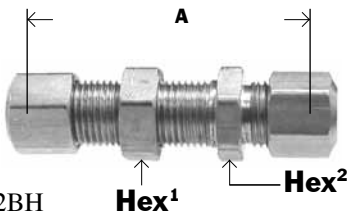
M-62

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-062	1/8"	0.64	0.31	0.03	2.34
18-063	3/16"	0.75	0.37	0.04	1.85
18-064L ³	1/4"	0.79	0.43	0.06	1.95
18-064	1/4"	0.81	0.43	0.06	2.24
18-065	5/16"	0.88	0.50	0.06	2.88
18-066L	3/8"	0.96	0.56	0.09	2.85
18-066	3/8"	0.98	0.56	0.10	2.74
18-067	7/16"	1.02	0.62	0.12	13.04
18-068L ³	1/2"	1.06	0.68	0.16	5.69
18-068	1/2"	1.25	0.68	0.16	7.09
18-069L	5/8"	1.43	0.81	0.24	5.82
18-069	5/8"	1.25	0.81	0.26	8.13
18-070	3/4"	1.41	1.00	0.35	15.41
18-071L	7/8"	1.03	1.12	0.34	12.40
18-071	7/8"	1.00	1.12	0.36	12.27

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	3.17
18-077	1/4" x 3/16"	0.78	0.44	0.06	4.70
18-078	5/16" x 1/4"	0.81	0.50	0.06	3.44
18-079	3/8" x 1/4"	0.90	0.56	0.10	5.85
18-080	3/8" x 5/16"	0.94	0.56	0.10	5.11
18-081	1/2" x 3/8"	1.03	0.68	0.12	5.95
18-082	5/8" x 3/8"	1.03	0.81	0.15	5.91
18-083	5/8" x 1/2"	1.10	0.81	0.15	6.91
18-084	7/8" x 5/8"	1.23	1.18	0.20	25.48

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	6.43
18-090	3/8"	1.76	0.68	0.68	0.14	15.80

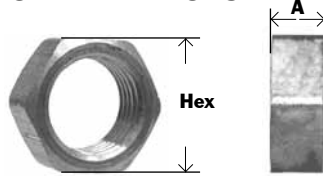
In mathematics you don't understand things. You just get used to them.

- Johann von Neumann

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

³ Also stocked in Houston
(See page Intro II for details)

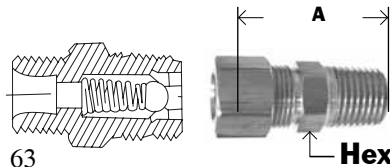
BULKHEAD NUTS



20102

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-097	1/4"	0.25	0.56	0.02	2.42
18-099	3/8"	0.25	0.68	0.04	3.64
18-100	1/2"	0.38	0.94	0.06	4.73

BALL CHECK VALVE - Min. Working pressure 3 psi.

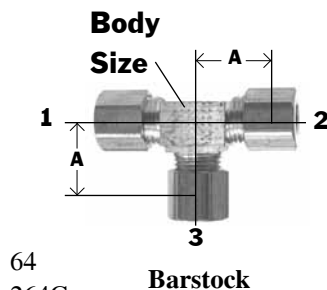
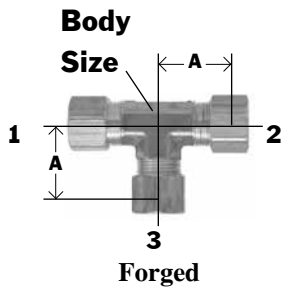


63
263
63A

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	9.45
18-094	1/4" x 1/8"	0.88	0.44	0.04	9.17
18-096	3/8" x 1/4"	1.16	0.56	0.08	12.90

TEE

SAE# 060401

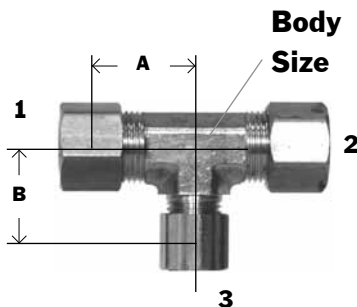


64
264C

Part #	Size	A	Body Size	Approx. Wt. Lbs.	List Price
18-101	1/8"	0.61	0.37	0.04	9.54
18-101B*	1/8"	0.62	0.33	0.04	8.44
18-102	3/16"	0.59	0.36	0.08	4.71
18-102B*	3/16"	0.60	0.38	0.08	6.34
18-103 ³	1/4"	0.63	0.36	0.10	4.35
18-103B*	1/4"	0.62	0.49	0.10	7.81
18-104	5/16"	0.72	0.50	0.13	6.90
18-104B*	5/16"	0.60	0.50	0.14	9.50
18-105	3/8"	0.75	0.50	0.16	5.09
18-105B*	3/8"	0.73	0.59	0.16	8.81
18-106	1/2"	0.94	0.59	0.22	10.78
18-106B*	1/2"	0.94	0.69	0.24	20.03
18-107	5/8"	1.06	0.69	0.28	10.98
18-108	3/4"	1.22	0.88	0.32	38.42
18-109	7/8"	1.25	0.94	0.34	29.40

* Barstock

FORGED REDUCING TEE



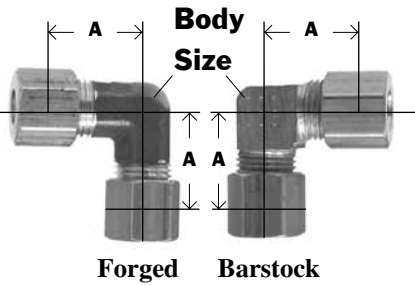
64-R

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	5.75
18-110	1/4" x 1/4" x 3/8"	0.69	0.75	0.50	0.14	12.73
18-111	3/8" x 1/4" x 1/4"	0.75	0.69	0.50	0.12	7.83
18-115	3/8" x 3/8" x 1/4"	0.75	0.69	0.50	0.14	5.91
18-116	1/2" x 1/2" x 1/4"	0.94	0.81	0.59	0.16	11.17
18-117	1/2" x 1/2" x 3/8"	0.94	0.81	0.59	0.24	11.69
18-118	5/8" x 5/8" x 3/8"	1.06	0.94	0.69	0.28	13.98
18-119	5/8" x 5/8" x 1/2"	1.06	1.06	0.69	0.30	16.36

³ Also stocked in Houston
(See page Intro II for details)

UNION ELBOW

SAE# 060201

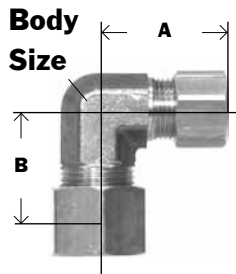


65
BSE2
165C
265C

Part #	Size	A	Body Size	Approx. Wt. Lbs.	List Price
18-122B*	1/8"	0.62	0.35	0.04	5.89
18-123	3/16"	0.61	0.37	0.06	5.10
18-123B*	3/16"	0.62	0.41	0.06	5.20
18-124	1/4"	0.66	0.38	0.08	3.70
18-124B*	1/4"	0.60	0.48	0.08	5.45
18-125	5/16"	0.69	0.47	0.09	5.93
18-125B*	5/16"	0.62	0.52	0.09	7.38
18-126	3/8"	0.72	0.43	0.12	4.32
18-127	1/2"	0.94	0.59	0.19	7.62
18-127B*	1/2"	0.94	0.71	0.19	15.04
18-128	5/8"	1.06	0.72	0.26	7.44
18-129	3/4"	1.19	0.94	0.48	19.51
18-130	7/8"	1.25	0.94	0.44	22.30

* Barstock

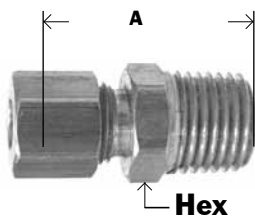
REDUCING ELBOW - Forged



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	7.92
18-136	1/2" x 3/8"	0.88	0.94	0.59	0.15	8.71
18-137	5/8" x 3/8"	0.88	0.97	0.56	0.18	12.06

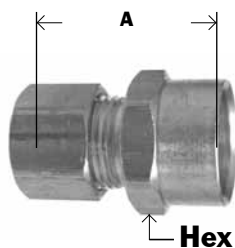
TANK ADAPTER DRILLED THRU (NO STOP)



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	2.14
18-209	1/4" x 1/4"	0.99	0.56	0.05	1.84
18-210	3/8" x 1/4"	1.16	0.56	0.05	2.79
18-211	3/8" x 3/8"	1.09	0.68	0.08	2.76
18-212	3/8" x 1/2"	1.19	0.87	0.10	3.88
18-213	1/2" x 3/8"	1.22	0.68	0.12	5.43
18-214	1/2" x 1/2"	1.09	0.81	0.14	4.30
18-215	5/8" x 1/2"	1.12	0.81	0.18	5.35

COMP X SWEAT ADAPTER

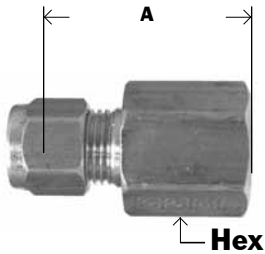


66-S

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	5.43

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	2.56
18-143	3/16" x 1/8"	0.78	0.56	0.04	2.23
18-144	3/16" x 1/4"	0.96	0.68	0.04	7.22
18-145L	1/4" x 1/8"	0.84	0.50	0.05	1.51
18-145	1/4" x 1/8"	0.78	0.56	0.05	2.17
18-146L	1/4" x 1/4"	0.88	0.62	0.09	2.92
18-146	1/4" x 1/4"	1.03	0.68	0.09	4.17
18-147	1/4" x 3/8"	1.00	0.81	0.10	3.66
18-148	1/4" x 1/2"	1.02	0.87	0.12	4.03
18-149	5/16" x 1/8"	0.81	0.56	0.05	2.54
18-150	5/16" x 1/4"	0.91	0.62	0.06	3.80
18-152	3/8" x 1/8"	0.88	0.56	0.06	2.71
18-153L	3/8" x 1/4"	0.97	0.62	0.08	3.50
18-153	3/8" x 1/4"	1.06	0.68	0.08	3.77
18-154L	3/8" x 3/8"	1.03	0.75	0.08	2.49
18-154	3/8" x 3/8"	1.06	0.81	0.10	5.29
18-155	3/8" x 1/2"	1.12	1.00	0.08	3.79
18-156	3/8" x 3/4"	1.19	1.16	0.14	12.65
18-157	1/2" x 1/4"	1.09	0.68	0.10	7.17
18-158L	1/2" x 3/8"	0.94	0.81	0.12	3.83
18-158	1/2" x 3/8"	1.12	0.81	0.12	5.37
18-159L	1/2" x 1/2"	1.19	1.00	0.12	4.68
18-159	1/2" x 1/2"	1.31	1.00	0.12	9.82
18-160	1/2" x 3/4"	1.25	1.16	0.18	12.01
18-161	5/8" x 3/8"	1.03	0.81	0.12	8.34
18-162L	5/8" x 1/2"	1.20	0.94	0.18	5.36
18-162	5/8" x 1/2"	1.38	1.00	0.18	7.66
18-163	5/8" x 3/4"	1.20	1.12	0.22	7.93
18-164	3/4" x 1/2"	1.25	1.06	0.26	13.95
18-165	3/4" x 3/4"	1.28	1.19	0.28	21.28
18-167	7/8" x 1/2"	1.28	1.19	0.32	14.29
18-166	7/8" x 3/4"	1.31	1.12	0.34	9.03

BRASS

The fight is won or lost far away from witnesses - behind the lines, in the gym, and out there on the road, long before I dance under those lights.

- Muhammad Ali

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

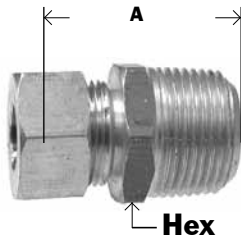
Fax 1-888-877-5391



sales@midlandindustrial.com

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	5.73
18-176	1/8" x 1/8"	0.78	0.43	0.04	1.73
18-177	3/16" x 1/8"	0.84	0.43	0.04	1.65
18-178	3/16" x 1/4"	0.94	0.56	0.06	3.44
18-179L	1/4" x 1/8"	0.88	0.56	0.04	1.59
18-179 ³	1/4" x 1/8"	0.88	0.43	0.04	1.55
18-180L	1/4" x 1/4"	0.94	0.56	0.05	1.33
18-180 ³	1/4" x 1/4"	1.06	0.56	0.06	2.52
18-181 ³	1/4" x 3/8"	1.03	0.68	0.08	2.27
18-182	1/4" x 1/2"	1.09	0.81	0.10	3.44
18-183	5/16" x 1/8"	0.91	0.50	0.05	2.11
18-184L	5/16" x 1/4"	1.01	0.56	0.06	2.47
18-184 ³	5/16" x 1/4"	1.09	0.56	0.06	2.52
18-185	5/16" x 3/8"	1.06	0.68	0.07	4.09
18-186	5/16" x 1/2"	1.14	0.87	0.10	6.97
18-187L	3/8" x 1/8"	0.94	0.56	0.06	2.34
18-187	3/8" x 1/8"	0.97	0.56	0.06	2.64
18-188L	3/8" x 1/4"	1.03	0.56	0.06	2.29
18-188 ³	3/8" x 1/4"	1.16	0.56	0.07	2.80
18-189L	3/8" x 3/8"	1.09	0.68	0.08	2.43
18-189 ³	3/8" x 3/8"	1.14	0.69	0.08	3.28
18-190L	3/8" x 1/2"	1.19	0.88	0.12	3.95
18-190	3/8" x 1/2"	1.34	0.87	0.13	4.64
18-191	3/8" x 3/4"	1.29	1.06	0.16	7.43
18-192	7/16" x 1/4"	1.06	0.62	0.10	7.48
18-204	7/16" x 3/8"	1.10	0.68	0.12	5.67
18-193L	1/2" x 1/4"	1.09	0.69	0.11	4.55
18-193	1/2" x 1/4"	1.22	0.68	0.11	4.97
18-194L	1/2" x 3/8"	1.16	0.68	0.12	4.39
18-194	1/2" x 3/8"	1.16	0.69	0.12	4.51
18-195L	1/2" x 1/2"	1.09	0.81	0.12	4.39
18-195	1/2" x 1/2"	1.41	0.87	0.19	6.22
18-196	1/2" x 3/4"	1.38	1.06	0.22	6.23
18-197	5/8" x 3/8"	1.22	0.81	0.24	4.75
18-198 ³	5/8" x 1/2"	1.12	0.81	0.24	5.32
18-199	5/8" x 3/4"	1.31	1.06	0.26	5.54
18-200	3/4" x 1/2"	1.44	1.00	0.26	8.42
18-201 ³	3/4" x 3/4"	1.50	1.06	0.26	9.23
18-202	7/8" x 1/2"	1.18	1.12	0.26	14.13
18-203	7/8" x 3/4"	1.22	1.12	0.28	8.09
18-205	7/8" x 1"	1.67	1.37	0.32	20.00

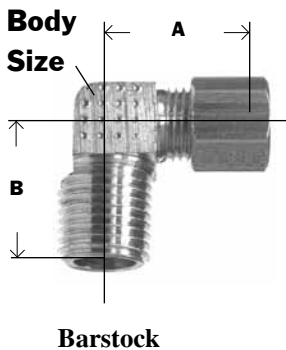
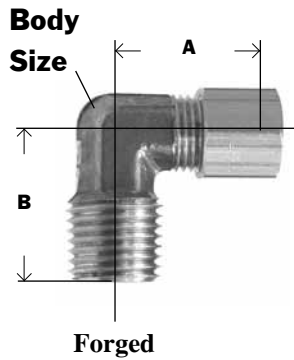
Always be a first-rate version of yourself, instead of a second-rate version of someone else.

³ Also stocked in Houston
(See page Intro II for details)

- Judy Garland

MALE ELBOW

SAE# 060202



69
269C
BSE1
169C

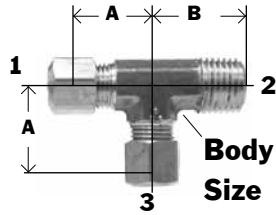
Part #	Comp. X Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-220	1/8" x 1/8"	0.59	0.75	0.34	0.02	3.70
18-220B*	1/8" x 1/8"	0.60	0.67	0.43	0.04	2.78
18-221	3/16" x 1/8"	0.63	0.72	0.34	0.04	3.48
18-221B*	3/16" x 1/8"	0.62	0.69	0.43	0.06	2.35
18-223	3/16" x 1/4"	0.60	0.81	0.39	0.05	3.89
18-224 ³	1/4" x 1/8"	0.60	0.75	0.37	0.06	2.78
18-224B* ³	1/4" x 1/8"	0.62	0.75	0.43	0.06	2.33
18-225 ³	1/4" x 1/4"	0.65	0.94	0.36	0.08	3.13
18-225B* ³	1/4" x 1/4"	0.61	0.81	0.56	0.08	2.77
18-226	1/4" x 3/8"	0.75	0.91	0.47	0.08	3.71
18-227	1/4" x 1/2"	0.81	1.13	0.56	0.12	6.00
18-228	5/16" x 1/8"	0.66	0.75	0.47	0.06	3.62
18-228B*	5/16" x 1/8"	0.62	0.75	0.42	0.06	2.97
18-229 ³	5/16" x 1/4"	0.66	0.81	0.47	0.07	3.78
18-229B* ³	5/16" x 1/4"	0.69	0.84	0.57	0.08	4.09
18-230	5/16" x 3/8"	0.75	0.91	0.47	0.10	4.59
18-231	5/16" x 1/2"	0.84	1.12	0.56	0.12	6.64
18-232	3/8" x 1/8"	0.72	0.66	0.39	0.06	3.15
18-232B*	3/8" x 1/8"	0.69	0.69	0.57	0.06	4.59
18-233 ³	3/8" x 1/4"	0.75	0.82	0.46	0.08	3.86
18-233B*	3/8" x 1/4"	0.75	0.94	0.57	0.08	3.59
18-234 ³	3/8" x 3/8"	0.81	0.94	0.46	0.10	4.34
18-234B*	3/8" x 3/8"	0.71	0.83	0.69	0.10	7.35
18-235	3/8" x 1/2"	0.87	1.12	0.56	0.14	8.94
18-235B*	3/8" x 1/2"	0.88	1.16	0.94	0.14	13.55
18-248	3/8" x 3/4"	1.03	1.19	0.81	0.18	9.09
18-247	7/16" x 1/4"	0.84	1.00	0.56	0.14	6.93
18-236	1/2" x 1/4"	0.88	0.97	0.56	0.14	6.39
18-237	1/2" x 3/8"	0.88	1.03	0.56	0.19	5.66
18-237B*	1/2" x 3/8"	0.94	1.12	0.70	0.19	7.12
18-238 ³	1/2" x 1/2"	0.94	1.13	0.59	0.17	6.10
18-238B*	1/2" x 1/2"	0.94	1.31	0.86	0.17	12.80
18-239	1/2" x 3/4"	1.16	1.25	0.81	0.18	11.03
18-240	5/8" x 3/8"	1.06	1.12	0.68	0.18	6.92
18-241	5/8" x 1/2"	1.06	1.16	0.68	0.20	7.39
18-241B*	5/8" x 1/2"	1.06	1.31	0.86	0.20	9.09
18-242	5/8" x 3/4"	1.16	1.31	0.81	0.24	11.62
18-243	3/4" x 1/2"	1.19	1.31	0.94	0.26	11.99
18-245	3/4" x 3/4"	1.19	1.38	0.94	0.30	14.37
18-246	7/8" x 3/4"	1.25	1.38	0.94	0.35	20.31

* Barstock

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

³ Also stocked in Houston
(See page Intro II for details)

FORGED MALE RUN TEE

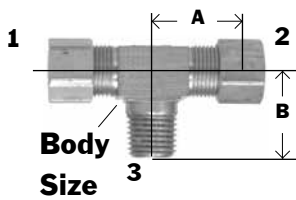
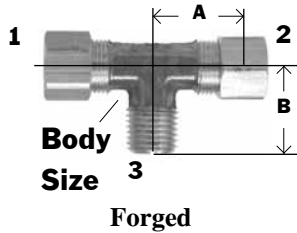


71
171C
BST3

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	4.56
18-273	3/16" x 1/8"	0.63	0.69	0.36	0.07	4.98
18-274	1/4" x 1/8"	0.63	0.75	0.36	0.08	4.29
18-275	1/4" x 1/4"	0.69	0.88	0.44	0.10	5.22
18-276	5/16" x 1/8"	0.72	0.75	0.50	0.10	6.64
18-277	5/16" x 1/4"	0.75	0.88	0.44	0.10	6.18
18-278	3/8" x 1/8"	0.75	0.75	0.50	0.14	6.70
18-279	3/8" x 1/4"	0.79	0.87	0.44	0.18	5.93
18-280	3/8" x 3/8"	0.88	1.00	0.47	0.20	7.38
18-281	1/2" x 3/8"	0.94	1.09	0.59	0.24	10.16
18-282	1/2" x 1/2"	0.97	1.19	0.69	0.26	13.05
18-283	5/8" x 1/2"	1.06	1.31	0.69	0.28	13.69
18-284	3/4" x 1/2"	1.22	1.34	0.88	0.30	30.16

MALE BRANCH TEE

SAE# 060203



72
BST1
172C

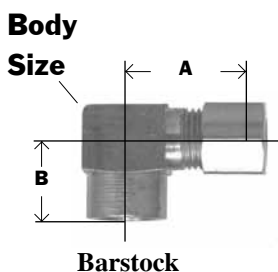
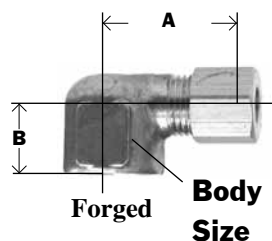
Part #	Comp. X Male NPTF (1&2) X 3	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-290	3/16" x 1/8"	0.63	0.69	0.36	0.08	6.49
18-291	1/4" x 1/8"	0.62	0.75	0.36	0.10	4.78
18-291B*	1/4" x 1/8"	0.64	0.73	0.45	0.10	7.00
18-292	1/4" x 1/4"	0.69	0.86	0.44	0.10	5.53
18-293	5/16" x 1/8"	0.72	0.75	0.50	0.11	5.53
18-294	5/16" x 1/4"	0.75	0.88	0.44	0.12	6.19
18-295	3/8" x 1/8"	0.75	0.75	0.50	0.14	6.89
18-296	3/8" x 1/4"	0.78	0.88	0.44	0.16	5.50
18-296B*	3/8" x 1/4"	0.78	0.91	0.62	0.16	8.22
18-297	3/8" x 3/8"	0.78	0.97	0.47	0.18	8.30
18-298	3/8" x 1/2"	0.88	1.22	0.69	0.20	12.44
18-304	1/2" x 1/4"	0.94	0.97	0.59	0.22	10.37
18-299B*	1/2" x 3/8"	0.96	1.09	0.70	0.24	17.90
18-299	1/2" x 3/8"	0.94	1.12	0.59	0.24	10.10
18-300	1/2" x 1/2"	0.97	1.19	0.69	0.30	13.09
18-301	5/8" x 1/2"	1.06	1.31	0.69	0.32	14.56
18-302	3/4" x 1/2"	1.22	1.34	0.88	0.50	33.26
18-303	3/4" x 3/4"	1.25	1.50	0.88	0.54	33.27

* Barstock

Save 5% by ordering online at
www.midlandindustrial.com

FEMALE ELBOW

SAE# 060203

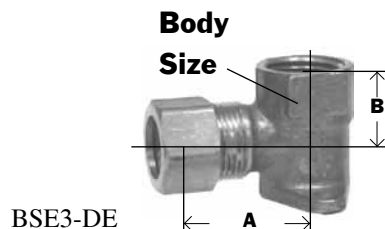


70
270C
BSE3
170C

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	5.88
18-252	3/16" x 1/8"	0.69	0.47	0.56	0.04	3.75
18-253	1/4" x 1/8"	0.69	0.47	0.56	0.06	3.71
18-253B*	1/4" x 1/8"	0.69	0.56	0.56	0.06	3.97
18-254 ³	1/4" x 1/4"	0.75	0.50	0.72	0.08	4.35
18-267	1/4" x 3/8"	0.81	0.58	0.81	0.08	5.98
18-268	1/4" x 1/2"	0.89	0.66	1.00	0.10	7.92
18-255	5/16" x 1/8"	0.72	0.84	0.47	0.08	6.90
18-256	5/16" x 1/4"	0.78	0.50	0.72	0.09	5.38
18-257	3/8" x 1/8"	0.75	0.84	0.47	0.10	4.27
18-258	3/8" x 1/4"	0.84	0.59	0.75	0.10	4.42
18-259	3/8" x 3/8"	0.88	0.58	0.81	0.12	4.98
18-260	3/8" x 1/2"	0.97	0.66	1.00	0.14	6.18
18-250	3/8" x 3/4"	1.09	0.72	1.25	0.18	10.03
18-261	1/2" x 1/4"	1.06	0.70	0.88	0.18	8.61
18-262	1/2" x 3/8"	1.00	0.70	0.88	0.16	7.11
18-263	1/2" x 1/2"	1.03	0.72	1.00	0.20	7.51
18-270	1/2" x 3/4"	1.16	0.72	1.25	0.23	10.81
18-269	5/8" x 3/8"	1.09	0.77	1.00	0.20	10.99
18-264	5/8" x 1/2"	1.09	0.77	1.00	0.22	8.84
18-265	5/8" x 3/4"	1.22	0.77	1.25	0.24	11.80
18-266	3/4" x 1/2"	1.25	1.25	0.94	0.28	19.33

* Barstock

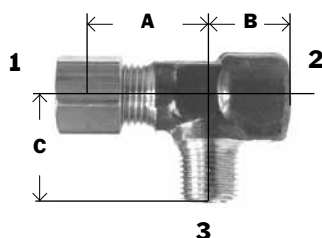
FORGED DROP-EAR ELBOW



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	16.03

FORGED TEE

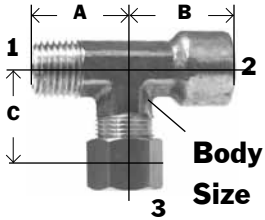


71
171C
BST3

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	5.95

³ Also stocked in Houston
(See page Intro II for details)

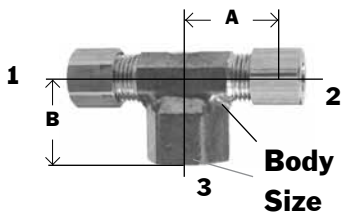
ADAPTER TEE



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	6.59
18-316	3/8" x 1/4"	0.84	0.97	0.81	0.47	0.10	7.41

76
176C

FORGED TEE

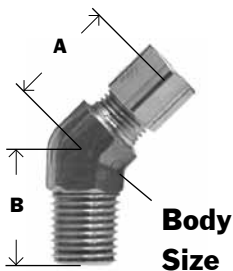


Part #	Comp. X Female NPTF (1&2)x3	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-321	1/4" x 1/8"	0.78	0.75	0.45	0.10	5.53
18-328	1/4" x 1/4"	0.78	0.75	0.44	0.12	8.63
18-325	3/8" x 1/8"	0.75	0.63	0.50	0.12	6.39
18-322	3/8" x 1/4"	0.81	0.97	0.47	0.14	8.42
18-323	3/8" x 3/8"	0.97	0.69	1.05	0.16	12.98
18-326	1/2" x 1/8"	0.94	0.75	0.59	0.20	12.17
18-324	1/2" x 3/8"	1.00	0.72	0.88	0.22	17.57
18-327	5/8" x 1/8"	1.06	0.81	0.69	0.26	15.42

78 2908
BST4
77
177C

45° ELBOW

SAE# 060302



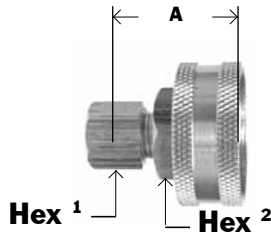
Part #	Comp. X Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-329	3/16" x 1/8"	0.40	0.63	0.41	0.04	4.40
18-330	1/4" x 1/8"	0.40	0.61	0.41	0.04	4.06
18-336	1/4" x 1/4"	0.59	0.84	0.53	0.06	5.78
18-331	5/16" x 1/8"	0.59	0.65	0.53	0.06	6.30
18-332	5/16" x 1/4"	0.59	0.83	0.53	0.08	6.65
18-333	3/8" x 1/4"	0.62	0.83	0.53	0.08	5.31
18-338	3/8" x 3/8"	0.75	0.95	0.59	0.10	10.96
18-334	1/2" x 3/8"	0.75	0.88	0.59	0.14	6.39
18-339	1/2" x 1/2"	0.94	1.14	0.75	0.14	12.09
18-335	5/8" x 1/2"	0.78	1.14	0.78	0.14	13.18

6945 273
45BSE1 77
74
179C

Dimension data can change without notice.
Please call us 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	6.77
30-051	3/8" x 3/4"	1.04	0.62	0.75	0.12	6.59

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 73.

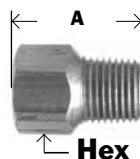
NUT



181
6100
11

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
16-001	1/8"	0.50	0.37	0.02	0.80
16-002	3/16"	0.53	0.43	0.02	1.27
16-003	1/4"	0.56	0.50	0.04	1.67
16-004	5/16"	0.61	0.56	0.04	1.38
16-005	3/8"	0.61	0.62	0.04	2.55

MALE ADAPTER

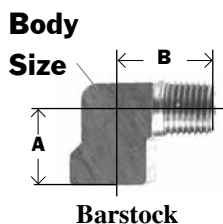


188
6200
12

Part #	THRD Sleeve x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
16-117	1/8" x *	0.62	0.43	0.02	2.77
16-118	1/8" x 1/8"	0.62	0.43	0.02	1.67
16-119	3/16" x 1/8"	0.69	0.43	0.02	1.85
16-121	1/4" x 1/8"	0.75	0.50	0.04	1.90
16-122	5/16" x 1/8"	0.89	0.56	0.04	3.71
16-123	3/8" x 1/4"	0.84	0.62	0.06	4.13

* 1/4 - 28 Male Thread Tapered.

90° ELBOW



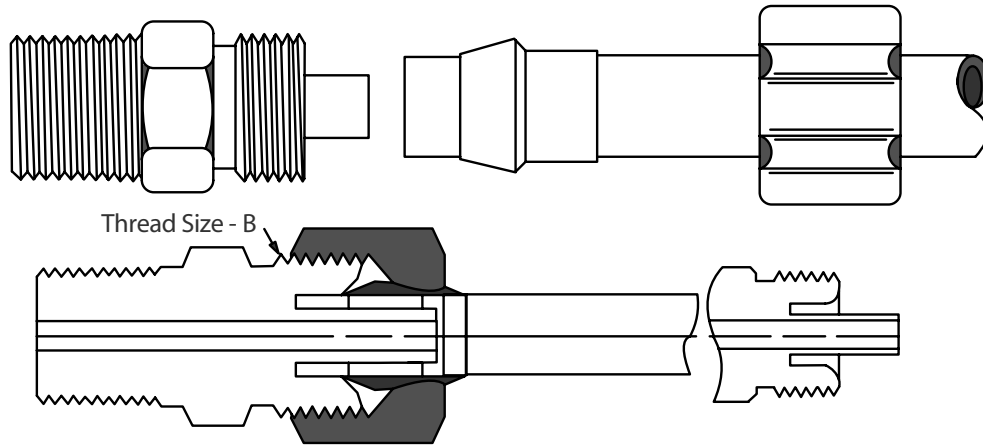
Part #	THRD Sleeve x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
16-127	1/8" x *	0.50	0.52	0.41	0.02	6.52
16-128	1/8" x 1/8"	0.50	0.66	0.43	0.02	8.02
16-129	3/16" x 1/8"	0.56	0.62	0.44	0.02	8.96
16-130	1/4" x 1/8"	0.52	0.62	0.50	0.04	7.56

* 1/4 - 28 Male Thread Tapered

189
6400
15

Flareless

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



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

•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.

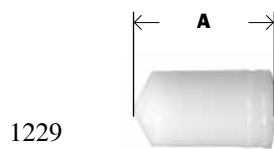
•Assembly Instructions

- 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.

Those who believe in telekinetics, raise my hand.

- Kurt Vonnegut

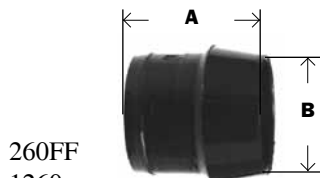
PLASTIC CAP



1229
59P
259P

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-201	1/4"	0.50	0.01	1.83
20-203	3/8"	0.56	0.01	1.39
20-204	1/2"	0.59	0.01	1.97

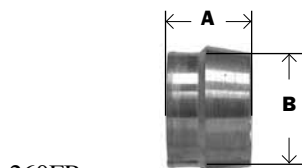
PLASTIC SLEEVE



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	0.24
20-206	5/16"	0.39	0.32	0.01	0.36
20-207	3/8"	0.41	0.38	0.01	0.45
20-208	1/2"	0.44	0.51	0.01	0.30

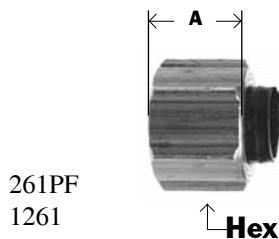
BRASS SLEEVE



260FB

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
20-380	1/8"	0.19	0.12	0.01	1.88
20-381	3/16"	0.30	0.19	0.01	1.79
20-382	1/4"	0.32	0.25	0.01	0.85
20-384	3/8"	0.37	0.38	0.02	1.73

NUT AND PLASTIC SLEEVE ASSEMBLY



261PF
1261
61PN
261U

Part #	Tube O.D.	A	Hex (Dia.)	Approx. Wt. Lbs.	List Price
20-211	1/4"	0.43	0.43	0.02	1.10
20-212	5/16"	0.45	0.50	0.02	2.07
20-213	3/8"	0.49	0.56	0.04	1.49
20-214	1/2"	0.42	0.81	0.04	2.71

A journey of a thousand miles begins with a single step.

- Lao Tzu

FLARELESS**BRASS FITTINGS****NUT**

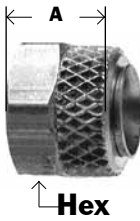
61PN
1261
261FPN



Part #	Tube O.D.	A	Hex (Dia.)	Thread	Approx. Wt. Lbs.	List Price
20-218	1/8"	0.37	0.37	5/16-24	0.01	1.09
20-219	3/16"	0.41	0.44	3/8-24	0.01	1.09
20-220	1/4"	0.34	0.44	3/8-24	0.02	1.07
20-221	5/16"	0.34	0.50	7/16-24	0.02	1.09
20-222	3/8"	0.38	0.56	1/2-24	0.04	1.29
20-223	1/2"	0.42	0.81	11/16-20	0.06	2.15

UNIVERSAL NUT AND BRASS SLEEVE ASSEMBLY

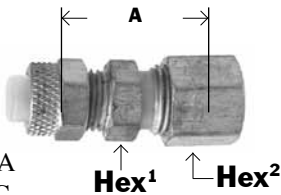
261PFB
1261B
61PB
261UB



Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-227	1/8"	0.37	0.37	0.02	1.70
20-228	3/16"	0.41	0.44	0.02	1.43
20-229	1/4"	0.34	0.43	0.02	1.91
20-230	5/16"	0.34	0.50	0.02	1.79
20-231	3/8"	0.37	0.56	0.04	2.44
20-232	1/2"	0.42	0.81	0.04	3.49

UNION TUBE #M62C

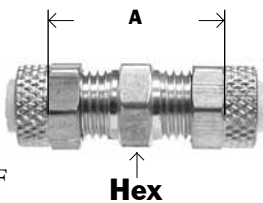
262S
62PCA
262PC



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	7.15
20-237	3/8"	0.84	0.62	0.62	0.08	8.68

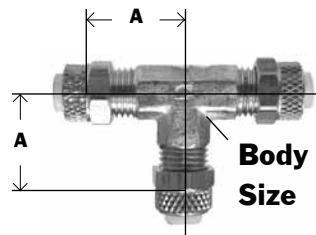
UNION

262PF
1262
62P
262P



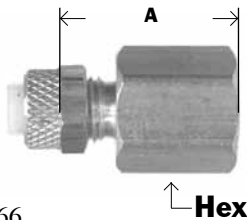
Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-240	1/8"	0.66	0.31	0.02	6.89
20-241	3/16"	0.75	0.37	0.04	7.87
20-242	1/4"	0.69	0.37	0.04	3.19
20-243	5/16"	0.69	0.44	0.04	7.69
20-244	3/8"	0.72	0.50	0.10	8.05
20-200	3/8" x 1/4"	0.72	0.50	0.08	8.03
20-245	1/2"	0.84	0.69	0.14	11.10

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

UNION TEE


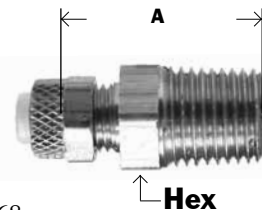
1264
164P
264P

Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
20-248	1/8"	0.62	0.31	0.02	11.18
20-249	3/16"	0.62	0.31	0.04	11.54
20-250	1/4"	0.73	0.44	0.06	9.52
20-251	5/16"	0.62	0.37	0.08	10.35
20-252	3/8"	0.86	0.56	0.08	10.25
20-330	3/8" x 1/4"	0.72	0.44	0.08	18.80
20-253	1/2"	0.81	0.62	0.24	23.44

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	6.35
20-257	3/16" x 1/8"	0.78	0.56	0.05	6.44
20-258	3/16" x 1/4"	0.97	0.69	0.05	13.02
20-259	1/4" x 1/8"	0.76	0.50	0.04	7.68
20-260	1/4" x 1/4"	1.08	0.62	0.05	6.21
20-261	5/16" x 1/8"	0.75	0.50	0.03	6.59
20-264	5/16" x 1/4"	0.90	0.62	0.04	7.39
20-265	3/8" x 1/8"	0.77	0.56	0.05	13.73
20-262	3/8" x 1/4"	0.94	0.62	0.05	6.89
20-263	1/2" x 3/8"	1.00	0.81	0.12	9.48

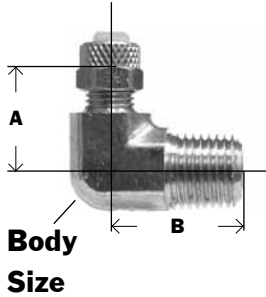
MALE CONNECTOR


1268
68P
268P

Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-266	1/8" x 1/16"	0.78	0.34	0.02	10.64
20-267	1/8" x 10-32*	0.59	0.37	0.02	6.77
20-268	1/8" x 1/8"	0.80	0.34	0.04	3.58
20-269	3/16" x 1/8"	0.86	0.44	0.04	3.31
20-280	1/4" x 1/16"	0.81	0.43	0.03	10.62
20-270	1/4" x 10-32*	0.75	0.37	0.02	7.22
20-271	1/4" x 1/8"	0.82	0.44	0.03	3.07
20-272	1/4" x 1/4"	1.00	0.56	0.05	3.57
20-273	1/4" x 3/8"	1.03	0.69	0.08	6.65
20-274	5/16" x 1/8"	0.81	0.44	0.04	3.83
20-275	5/16" x 1/4"	1.00	0.56	0.05	4.65
20-276	3/8" x 1/8"	0.84	0.50	0.06	4.63
20-277	3/8" x 1/4"	1.03	0.56	0.08	4.92
20-278	3/8" x 3/8"	1.03	0.69	0.10	5.90
20-279	1/2" x 3/8"	1.09	0.69	0.16	6.90
20-282	1/2" x 1/2"	1.33	0.88	0.18	11.68

* Furnished with gasket.

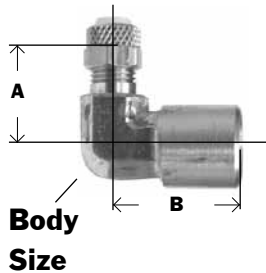
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MALE ELBOW


1269
169P
269P

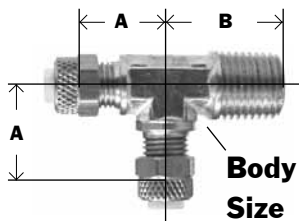
Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-287	1/8" x 1/8"	0.62	0.69	0.31	0.02	4.56
20-288	3/16" x 1/8"	0.62	0.69	0.37	0.04	4.83
20-289*	1/4" x 1/8"	0.53	0.73	0.50	0.04	3.46
20-290	1/4" x 1/4"	0.66	0.94	0.37	0.06	6.08
20-291	1/4" x 3/8"	0.75	1.03	0.50	0.10	10.11
20-292	5/16" x 1/8"	0.62	0.75	0.41	0.04	5.11
20-293	3/8" x 1/8"	0.91	0.81	0.56	0.08	5.43
20-294	3/8" x 1/4"	0.72	0.94	0.44	0.10	6.80
20-295	3/8" x 3/8"	0.78	1.03	0.50	0.14	9.21
20-296	1/2" x 3/8"	1.09	1.10	0.73	0.16	7.50

* Barstock

FEMALE ELBOW


1270
170P
270P

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	7.60
20-301	3/16" x 1/8"	0.72	0.55	0.56	0.02	7.91
20-302	1/4" x 1/8"	0.62	0.75	0.37	0.08	7.60
20-303	1/4" x 1/4"	0.72	0.88	0.50	0.10	8.14
20-304	3/8" x 1/4"	0.72	0.88	0.50	0.12	7.78
20-305	1/2" x 3/8"	0.91	0.94	0.63	0.16	12.26

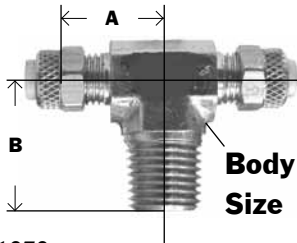
MALE RUN TEE


1271
171P
271P

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	9.93
20-309	3/16" x 1/8"	0.62	0.69	0.31	0.04	10.20
20-310	1/4" x 1/8"	0.62	0.75	0.37	0.08	8.25
20-311	1/4" x 1/4"	0.66	0.94	0.37	0.10	12.17
20-312	5/16" x 1/8"	0.62	0.75	0.37	0.08	10.11
20-313	3/8" x 1/4"	0.66	0.94	0.44	0.10	11.14
20-314	1/2" x 3/8"	0.81	1.06	0.63	0.16	17.44

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

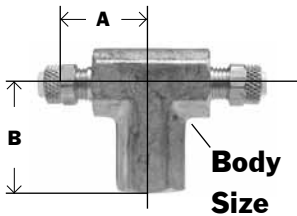
MALE BRANCH TEE



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	14.58
20-318	3/16" x 1/8"	0.63	0.69	0.31	0.04	10.29
20-319	1/4" x 1/8"	0.63	0.75	0.37	0.07	8.23
20-320	1/4" x 1/4"	0.66	0.94	0.37	0.09	10.71
20-321	5/16" x 1/8"	0.63	0.75	0.37	0.10	10.29
20-322	3/8" x 1/8"	0.63	0.75	0.44	0.08	14.27
20-323	3/8" x 1/4"	0.66	0.94	0.44	0.11	11.54
20-324	1/2" x 3/8"	0.81	1.06	0.63	0.21	26.66

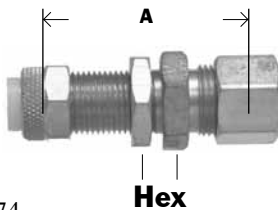
FEMALE BRANCH TEE



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	18.46
20-328	1/4" x 1/4"	0.84	1.16	0.56	0.16	15.60

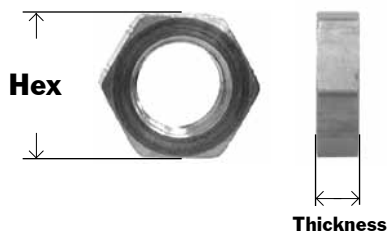
BULKHEAD UNION - FLARELESS X COMPRESSION



1274

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-333	1/4"	1.31	0.56	0.07	9.21
20-334	3/8"	1.44	0.69	0.12	14.13

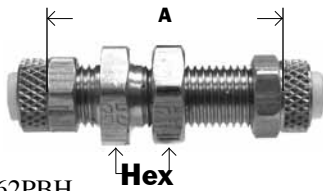
BULKHEAD NUT



Part #	Tube O.D.	Hex	Thickness	Approx. Wt. Lbs.	List Price
20-370	1/8"	0.31	0.25	0.01	1.79
20-372	5/16"	0.62	0.19	0.02	2.71

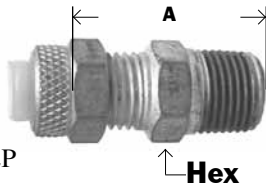
Dimension data can change without notice.
Please call us when dimensions are critical.

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FLARELESS**BRASS FITTINGS****BULKHEAD UNION**

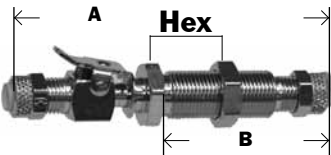
62PBH
329P
282P

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-337	1/4"	1.25	0.56	0.06	9.90
20-338	5/16"	1.25	0.62	0.08	12.82
20-339	3/8"	1.31	0.69	0.10	13.67

QUICK DISCONNECT FITTING

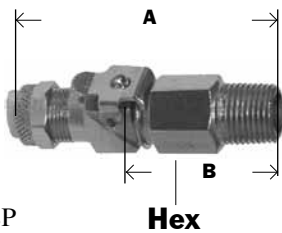
292P

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	27.64

QUICK DISCONNECT COUPLERS**TUBE X TUBE**

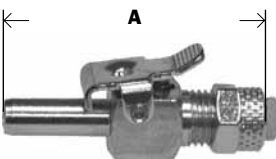
349P

Part #	Tube O.D.	A	B	Hex	Approx. Wt. Lbs.	List Price
20-401	1/4"	3.00	1.72	0.62	0.06	75.96
20-403	3/8"	3.56	1.92	0.81	0.10	77.01

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

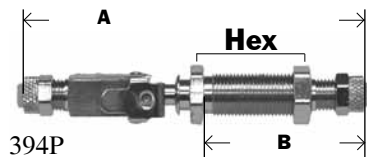
398P
391P + 393P

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	54.24
20-411	1/4" x 1/4"	2.31	1.28	0.56	0.14	64.44
20-413	3/8" x 1/4"	2.63	1.42	0.62	0.18	77.98

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

393P

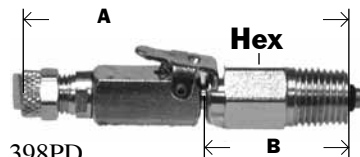
Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-417	1/4"	1.69	0.04	26.48
20-419	3/8"	1.93	0.06	31.28

BRASS FITTINGS**FLARELESS****TUBE TO TUBE - Double end Shut-Off Type.**

394P

392P + 393PD

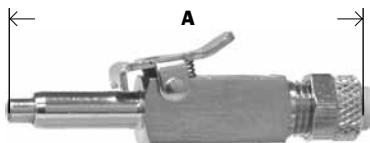
Part #	Tube O.D.	A	B	Hex	Approx. Wt. Lbs.	List Price
20-425	1/4"	3.67	1.79	0.62	0.18	90.26
20-427	3/8"	3.82	1.97	0.81	0.26	100.14

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	73.47
20-437	1/4" x 1/4"	2.91	1.27	0.56	0.18	88.17
20-439	3/8" x 1/4"	3.02	1.40	0.62	0.24	84.88

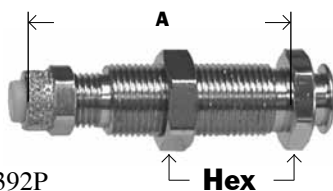
INSERT ONLY - Double End Shut-Off

393PD

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-445	1/4"	2.40	0.08	45.68

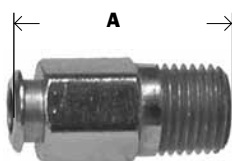
CHROME PLATED NUT AND PLASTIC SLEEVE

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-451	1/4"	0.34	0.43	0.01	1.84
20-453	3/8"	0.38	0.56	0.01	2.42

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	48.72
20-457	3/8"	1.97	0.81	0.16	61.95

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	32.17
20-463	1/4" x 1/4"	1.27	0.56	0.08	40.31
20-465	3/8" x 1/4"	1.40	0.62	0.08	46.69

BRASS PUSH - IN FITTINGS**BRASS FITTINGS****BRASS PUSH-IN FITTINGS****PAGES 93-98****ENGINEERING AND DESIGN**

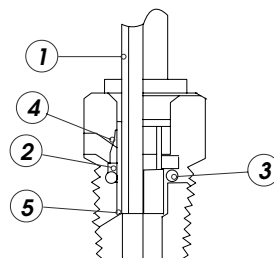
- **QUICK CONNECT**, simply push tubing in, no tools. Saves up to 75% of assembly time of standard compression fittings.
- **QUICK DISCONNECT**, hold two fingers on insert and pull tubing out, no tools required.
- **REUSEABLE**, connect and disconnect numerous times.
- **FULL FLOW DESIGN**, provides 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. For soft copper tube, a maximum working pressure of 750 PSI is recommended. Also suitable for vacuum service.

- **WORKING TEMPERATURE**:

-10°F to 200°F (other ranges available on request).

- **PIPE THREAD**: NPTF with Teflon® based sealant pre-applied.

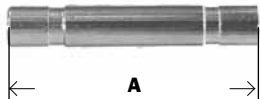


When tubing (1) is inserted into the fitting, it first passes through the gripping teeth (2). Just beyond the gripping teeth is the o-ring (3) which provides the leak proof seal against the OD of the tube. The gripping teeth grab the tube, which

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	5.02
20-005	5/32"	1.28	0.01	10.04
20-006	1/4"	1.40	0.02	5.48
20-007	5/16"	1.59	0.02	6.17
20-008	3/8"	1.81	0.02	7.27
20-000	1/2"	1.89	0.03	12.29

(For polyurethane or other soft plastic tubing)

PLASTIC PLUG

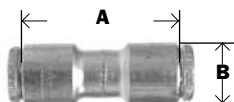
284PP 6900
AQ59 639PL
209-OF 12-004
1129 50-526

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-009	5/32"	1.16	0.01	1.29
20-010	1/4"	1.40	0.01	1.67
20-011	3/8"	1.40	0.02	2.95
20-013	1/2"	1.50	0.02	3.96

BRASS FITTINGS

BRASS PUSH - IN FITTINGS

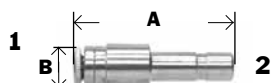
UNION CONNECTOR



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 ⁵	1/8"	1.07	0.38	0.03	6.35
20-018	5/32"	1.07	0.38	0.03	6.50
20-019 ⁵	1/4"	1.50	0.44	0.05	6.39
20-022	3/8" x 1/4"	1.46	0.56	0.05	8.23
20-020 ⁵	3/8"	1.44	0.56	0.06	8.87
20-021 ⁵	1/2"	1.63	0.81	0.18	12.99

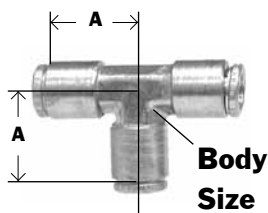
REDUCER - NICKEL PLATED



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	10.85
20-511	5/32" x 1/4"	1.33	0.35	0.02	10.04
20-512	1/4" x 3/8"	1.50	0.51	0.04	13.56

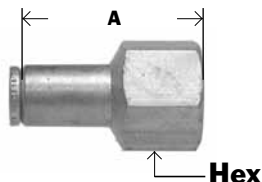
UNION TEE



KQT
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	9.10
20-026	5/32"	0.67	0.31	0.04	8.84
20-027	3/16"	0.75	0.37	0.06	11.10
20-028	1/4"	0.92	0.37	0.09	8.84
20-031	5/16"	0.89	0.49	0.10	15.81
20-029 ⁵	3/8"	0.98	0.50	0.13	12.38
20-030	1/2"	1.16	0.62	0.24	18.50

FEMALE CONNECTOR

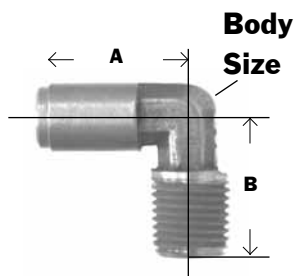


266PP
AQ66 12-426
6463 50-566
3114 266-OF
66PL 1166

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	9.44
20-038	1/8" x 1/4"	1.04	0.67	0.04	17.89
20-034	1/4" x 1/8"	1.23	0.56	0.06	9.19
20-035 ⁵	1/4" x 1/4"	1.42	0.75	0.09	13.23
20-036 ⁵	3/8" x 1/4"	1.32	0.75	0.09	14.92
20-037	3/8" x 3/8"	1.31	0.87	0.12	19.03

⁵ Also stocked in Atlanta
(See page Intro II for details)

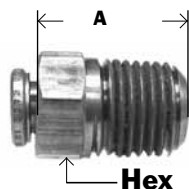
FIXED MALE ELBOW



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	6.53
20-066	5/32" x 1/8"	0.68	0.68	0.31	0.03	10.54
20-067	3/16" x 1/8"	0.75	0.71	0.37	0.04	5.96
20-068 ⁵	1/4" x 1/8"	0.89	0.75	0.37	0.06	5.53
20-069 ⁵	1/4" x 1/4"	0.95	0.96	0.37	0.08	5.30
20-070 ⁵	1/4" x 3/8"	1.00	0.98	0.50	0.10	10.20
20-071 ⁵	3/8" x 1/8"	0.99	0.80	0.50	0.06	8.19
20-072 ⁵	3/8" x 1/4"	0.98	0.98	0.50	0.09	7.15
20-073 ⁵	3/8" x 3/8"	0.97	0.98	0.50	0.12	9.96
20-074	1/2" x 1/4"	1.15	1.05	0.62	0.15	11.40
20-075	1/2" x 3/8"	1.18	1.05	0.62	0.22	10.61
20-064	1/2" x 1/2"	1.16	1.66	0.62	0.20	13.08

MALE CONNECTOR



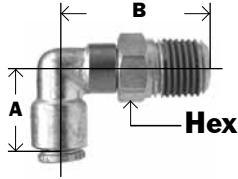
268PP KQH
AQ68 12-425
6510 50-568
3115 268-OF
68PL 1168

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	5.68
20-048 ⁵	1/8" x 1/8"	0.61	0.43	0.02	3.94
20-023	1/8" x 1/4"	0.98	0.56	0.04	4.91
20-049	5/32" x 10-32"*	0.67	0.37	0.02	4.08
20-050	5/32" x 1/8"	0.67	0.43	0.03	4.08
20-046	5/32" x 1/4"	0.85	0.56	0.05	6.04
20-051	3/16" x 10-32"*	0.80	0.37	0.02	7.94
20-052	3/16" x 1/8"	0.93	0.43	0.03	5.07
20-053	1/4" x 10-32"*	0.87	0.43	0.03	7.33
20-054 ⁵	1/4" x 1/8"	0.93	0.43	0.06	4.11
20-055 ⁵	1/4" x 1/4"	0.93	0.56	0.10	4.43
20-056	1/4" x 3/8"	0.94	0.68	0.08	6.68
20-530	5/16" x 1/8"	1.07	0.56	0.05	14.41
20-531 ⁵	5/16" x 1/4"	0.98	0.56	0.10	15.13
20-532	5/16" x 3/8"	1.06	0.75	0.08	14.08
20-057 ⁵	3/8" x 1/8"	1.10	0.56	0.06	6.73
20-058 ⁵	3/8" x 1/4"	1.11	0.56	0.05	5.99
20-059	3/8" x 3/8"	1.02	0.68	0.08	6.42
20-062	3/8" x 1/2"	1.02	0.87	0.08	11.36
20-060 ⁵	1/2" x 1/4"	1.36	0.81	0.11	8.47
20-061	1/2" x 3/8"	1.30	0.81	0.12	10.30
20-063 ⁵	1/2" x 1/2"	1.23	0.87	0.14	12.23

* Furnished with gaskets

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

⁵ Also stocked in Atlanta
(See page Intro II for details)

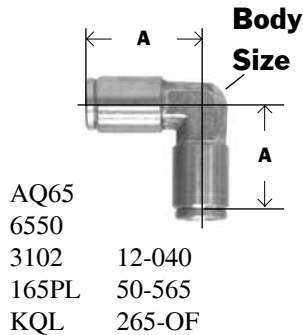
SWIVEL MALE ELBOW


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

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
20-079 ⁵	1/8" x 1/8"	0.69	0.98	0.43	0.07	6.81
20-535*	1/8" x 1/4"	0.76	0.87	0.56	0.06	14.14
20-080	5/32" x 1/8"	0.68	0.89	0.43	0.05	7.25
20-076	5/32" x 10-32"*	0.67	0.71	0.37	0.04	12.00
20-077	5/32" x 1/4"	0.68	1.08	0.56	0.07	10.41
20-081 ⁵	1/4" x 1/8"	0.90	0.93	0.37	0.08	6.35
20-078	1/4" x 10-32"*	0.86	0.79	0.31	0.05	10.05
20-082 ⁵	1/4" x 1/4"	0.90	0.99	0.56	0.10	7.49
20-086	1/4" x 3/8"	0.98	1.14	0.68	0.09	13.61
20-538*	5/16" x 1/4"	0.91	0.85	0.56	0.07	17.25
20-539*	5/16" x 3/8"	0.91	0.87	0.75	0.08	23.08
20-087 ⁵	3/8" x 1/8"	0.94	1.08	0.50	0.09	11.41
20-083 ⁵	3/8" x 1/4"	0.99	1.15	0.56	0.10	9.26
20-084 ⁵	3/8" x 3/8"	1.00	1.24	0.68	0.20	10.12
20-088	3/8" x 1/2"	1.00	1.54	0.87	0.19	16.47
20-085 ⁵	1/2" x 3/8"	1.16	1.34	0.62	0.18	12.73
20-092	1/2" x 1/2"	1.16	1.61	0.62	0.24	15.36

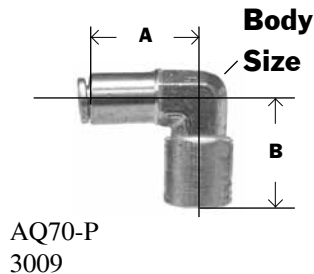
* Nickel Plated

* Furnished with gaskets

UNION ELBOW


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

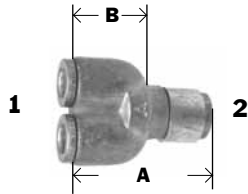
Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
20-150	1/8"	0.65	0.31	0.02	8.32
20-151	5/32"	0.67	0.31	0.04	9.07
20-152 ⁵	1/4"	0.87	0.37	0.06	7.56
20-155	5/16"	0.91	0.47	0.08	21.06
20-153 ⁵	3/8"	0.97	0.50	0.09	11.93
20-154	1/2"	1.15	0.62	0.18	16.83

FEMALE ELBOW


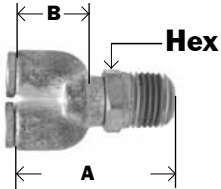
AQ70-P
3009

Part #	Tube O.D. x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-094	5/32" x 1/8"	0.68	0.82	0.37	0.02	8.46
20-089	1/4" x 1/8"	0.91	0.75	0.37	0.06	9.20
20-090	1/4" x 1/4"	1.03	1.03	0.50	0.11	11.73
20-091	3/8" x 1/4"	0.98	0.95	0.50	0.16	13.98

⁵ Also stocked in Atlanta
(See page Intro II for details)

UNION "Y"


Part #	Tube O.D. 1 x 2	A	B	Approx. Wt. Lbs.	List Price
20-552	1/4" x 1/8"	1.61	1.06	0.12	32.54
20-553	1/4" x 1/4"	1.81	1.06	0.14	22.10

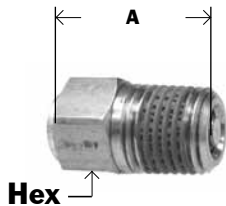
MALE "Y"


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	28.27

12-445
50-569
1169

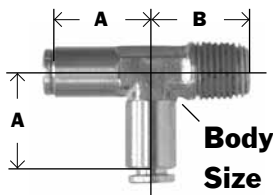
QUICK DISCONNECT

When tube is disconnected, flow shuts off automatically.



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	18.35
20-134	1/4" x 1/4"	0.92	0.56	0.12	17.15

AQ92-P
6500
169PLNS

FIXED MALE RUN TEE


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	9.39
20-097	3/16" x 1/8"	0.75	0.73	0.37	0.06	13.62
20-098	1/4" x 1/8"	0.92	0.74	0.37	0.08	9.44
20-093	1/4" x 1/4"	0.92	0.92	0.43	0.10	10.20
20-099	3/8" x 1/8"	0.94	0.82	0.50	0.14	14.32
20-100	3/8" x 1/4"	0.98	0.98	0.50	0.12	16.28
20-101	3/8" x 3/8"	1.05	1.05	0.62	0.10	16.37
20-102	1/2" x 3/8"	1.14	1.05	0.62	0.18	24.69

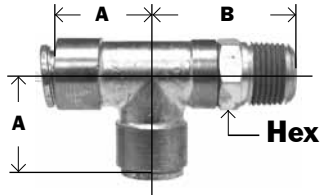
AQ71-P

⁵ Also stocked in Atlanta
(See page Intro II for details)

BRASS FITTINGS

BRASS PUSH - IN FITTINGS

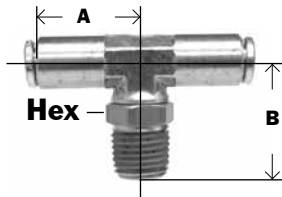
SWIVEL MALE RUN TEE



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
20-162	1/4" x 1/8"	0.92	1.04	0.44	0.09	11.42
20-163	1/4" x 1/4"	0.92	1.13	0.56	0.11	12.39
20-165	3/8" x 3/8"	0.96	1.24	0.50	0.12	19.86
20-174	1/2" x 1/4"	1.12	1.18	0.51	0.16	39.06
20-166	1/2" x 3/8"	1.14	1.31	0.68	0.14	25.14

SWIVEL MALE BRANCH TEE

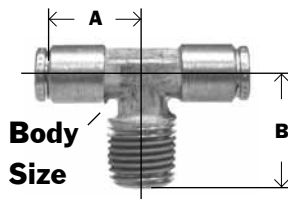


KQT AQ64
12-060 6540
50-564 3140
264OF 64PL

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	14.42
20-104	5/32" x 10-32"*	0.65	0.71	0.31	0.04	14.42
20-109	5/32" x 1/8"	0.67	0.94	0.37	0.06	14.13
20-105	1/4" x 1/8"	0.92	0.97	0.37	0.08	12.20
20-106	1/4" x 1/4"	0.92	1.09	0.37	0.10	10.46
20-107 ⁵	3/8" x 1/4"	0.96	1.14	0.56	0.18	13.14
20-108	3/8" x 3/8"	0.96	1.23	0.69	0.16	17.37
20-110	1/2" x 3/8"	1.16	1.34	0.69	0.24	23.56
20-111	1/2" x 1/2"	1.16	1.64	0.87	0.28	26.81

* Furnished with gaskets

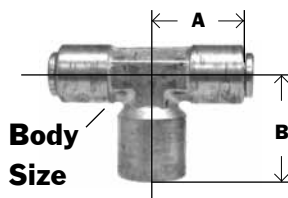
FIXED MALE BRANCH TEE



AQ72-P

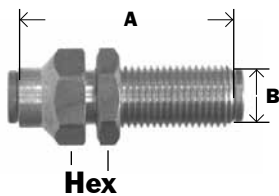
Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-112	1/8" x 1/8"	0.69	0.72	0.31	0.04	10.47
20-113	5/32" x 1/8"	0.69	0.65	0.31	0.04	10.20
20-115	1/4" x 1/8"	0.92	0.74	0.37	0.12	10.35
20-116	1/4" x 1/4"	0.91	0.93	0.37	0.10	11.31
20-117	3/8" x 1/8"	0.98	0.80	0.50	0.08	14.22
20-118	3/8" x 1/4"	0.98	0.97	0.50	0.12	14.44
20-119	3/8" x 3/8"	0.98	0.97	0.50	0.14	15.94
20-120	1/2" x 3/8"	1.16	1.05	0.62	0.18	22.19

FEMALE BRANCH TEE



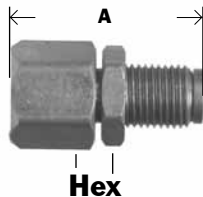
AQ77-P
3008
177PL

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	16.61
20-132	3/8" x 1/4"	0.96	0.98	0.50	0.12	15.83

BRASS PUSH - IN FITTINGS**BRASS FITTINGS****BULKHEAD UNION**

Part #	Tube O.D.	A	B	Hex	Approx. Wt. Lbs.	List Price
20-126	3/16"	1.27	0.50	0.68	0.04	20.95
20-127	1/4"	1.69	0.50	0.68	0.06	15.20
20-128	3/8"	1.69	0.62	0.81	0.13	16.02
20-129	1/2"	1.85	0.75	1.12	0.16	22.46

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

FEMALE BULKHEAD UNION

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	13.84
20-171	1/4" x 1/4"	1.36	0.75	0.10	16.91
20-172	3/8" x 1/4"	1.71	0.75	0.14	18.06

AQ86-P

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

NICKEL PLATED PUSH-IN FITTINGS

PAGES 99-106

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



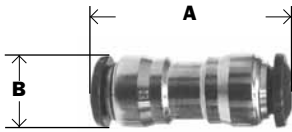
Look for this

Logo

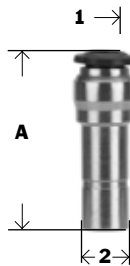
“Global Thread” fittings can be assembled with female threads produced to the following standards: **Tapered NPTF**

Parallel (BSPP, BSP, ISO 7)

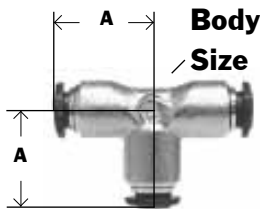
Tapered (BSPT, PT, ISO 7, ISO 228)

BRASS FITTINGS**NICKEL PLATED PUSH - IN FITTINGS****NICKEL PLATED PUSH-IN FITTINGS****UNION CONNECTOR****NEW****NEW****NEW**

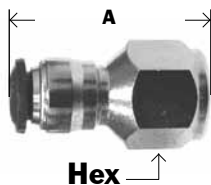
Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
20-017N	1/8"	1.06	0.34	0.03	6.85
20-018N	5/32"	1.20	0.41	0.03	6.93
20-016N	5/32" x 1/4"	1.20	0.40	0.04	7.39
20-019N	1/4"	1.38	0.49	0.05	6.65
20-020N	3/8"	1.69	0.69	0.06	9.91
20-022N	3/8" x 1/4"	1.69	0.68	0.06	9.98
20-021N	1/2"	1.93	0.81	0.18	13.72
20-024N	1/2" x 3/8"	1.84	0.80	0.17	11.83

REDUCER

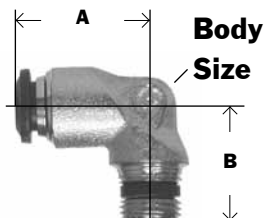
Part #	Tube O.D. 2	Tube O.D. 1	A	List Price
20-510N	1/4"	1/8"	1.142	4.90
20-511N	1/4"	5/32"	1.181	5.12
20-512N	3/8"	1/4"	1.496	6.64
20-513N	1/2"	1/4"	1.693	6.64
20-514N	1/2"	3/8"	1.693	8.42

UNION TEE

Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
20-025N	1/8"	0.67	0.35	0.04	10.09
20-026N	5/32"	0.67	0.35	0.04	19.33
20-028N	1/4"	0.83	0.43	0.09	10.70
20-031N	5/16"	0.87	0.51	0.10	14.74
20-029N	3/8"	1.04	0.63	0.13	14.74
20-030N	1/2"	1.20	0.74	0.24	20.42

FEMALE CONNECTOR

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	11.29
20-038N	1/8" x 1/4"	1.14	0.63	0.04	10.25
20-034N	1/4" x 1/8"	1.06	0.51	0.06	9.03
20-035N	1/4" x 1/4"	1.26	0.63	0.09	9.89
20-036N	3/8" x 1/4"	1.38	0.71	0.09	16.08
20-037N	3/8" x 3/8"	1.38	0.79	0.12	16.58

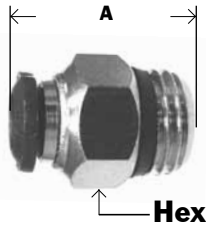
FIXED MALE ELBOW

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	5.73
20-069N	1/4" x 1/4"	0.83	0.91	0.43	0.08	6.26
20-072N	3/8" x 1/4"	1.04	1.04	0.63	0.09	9.89
20-073N	3/8" x 3/8"	1.04	1.00	0.63	0.12	10.70

NICKEL PLATED PUSH - IN FITTINGS

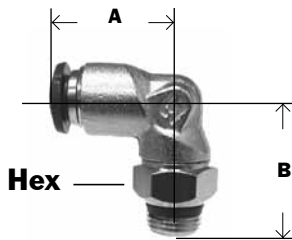
BRASS FITTINGS

MALE CONNECTOR



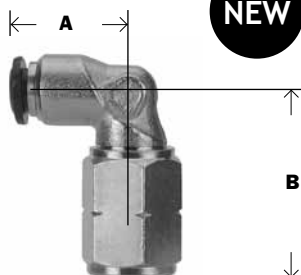
Part #	Tube O.D. x Male Global Thread	A	Hex	Approx. Wt. Lbs.	List Price
20-047N	1/8" x 10-32"	0.75	0.31	0.02	5.47
20-048N	1/8" x 1/8"	0.77	0.43	0.02	4.78
20-023N	1/8" x 1/4"	0.97	0.55	0.04	4.86
20-049N	5/32" x 10-32"	0.83	0.39	0.02	5.37
20-050N	5/32" x 1/8"	0.83	0.43	0.03	4.16
20-046N	5/32" x 1/4"	0.98	0.55	0.05	6.49
20-053N	1/4" x 10-32"	0.97	0.51	0.03	6.12
20-054N	1/4" x 1/8"	0.98	0.51	0.06	4.28
20-055N	1/4" x 1/4"	0.98	0.55	0.10	4.90
20-056N	1/4" x 3/8"	0.98	0.71	0.08	6.26
20-530N	5/16" x 1/8"	0.98	0.55	0.05	6.77
20-531N	5/16" x 1/4"	1.08	0.55	0.10	7.11
20-532N	5/16" x 3/8"	1.08	0.71	0.08	8.31
20-057N	3/8" x 1/8"	1.38	0.67	0.06	7.11
20-058N	3/8" x 1/4"	1.32	0.67	0.05	6.62
20-059N	3/8" x 3/8"	1.32	0.71	0.08	7.37
20-062N	3/8" x 1/2"	1.32	0.87	0.08	12.59
20-060N	1/2" x 1/4"	1.54	0.79	0.11	9.56
20-061N	1/2" x 3/8"	1.42	0.79	0.12	11.11
20-063N	1/2" x 1/2"	1.58	0.87	0.14	14.26

SWIVEL MALE ELBOW



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	7.22
20-535N	1/8" x 1/4"	0.67	0.95	0.59	0.06	9.13
20-080N	5/32" x 1/8"	0.67	0.79	0.51	0.05	7.72
20-076N	5/32" x 10-32"	0.67	0.95	0.59	0.04	8.34
20-081N	1/4" x 1/8"	0.83	0.87	0.51	0.08	7.10
20-082N	1/4" x 1/4"	0.83	0.98	0.59	0.10	7.92
20-086N	1/4" x 3/8"	0.83	1.10	0.67	0.09	12.50
20-538N	5/16" x 1/4"	0.89	1.02	0.59	0.07	10.25
20-539N	5/16" x 3/8"	0.87	1.10	0.67	0.08	12.41
20-087N	3/8" x 1/8"	1.04	1.02	0.51	0.09	12.16
20-083N	3/8" x 1/4"	1.04	1.10	0.59	0.10	10.28
20-084N	3/8" x 3/8"	1.04	1.18	0.67	0.20	12.78
20-088N	3/8" x 1/2"	1.04	1.30	0.83	0.19	17.37
20-085N	1/2" x 3/8"	1.20	1.24	0.59	0.18	16.13
20-092N	1/2" x 1/2"	1.20	1.42	0.83	0.24	18.15

FEMALE ELBOW

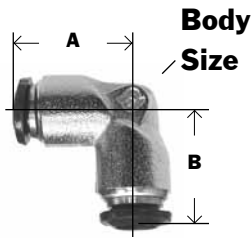


Part #	Tube O.D. x Female NPTF	A	B	Body Size	List Price
20-094N	5/32" x 1/8"	0.669	0.994	0.354	9.06
20-761N	5/32" x 1/4"	0.669	1.161	0.354	9.69
20-089N	1/4" x 1/8"	0.826	1.023	0.433	10.73
20-090N	1/4" x 1/4"	0.826	1.200	0.433	10.56
20-762N	3/8" x 1/8"	0.885	1.082	0.511	11.54
20-091N	3/8" x 1/4"	0.885	1.240	0.511	12.23

BRASS FITTINGS

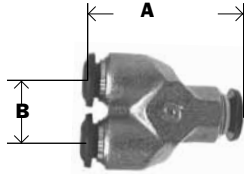
NICKEL PLATED PUSH - IN FITTINGS

UNION ELBOW



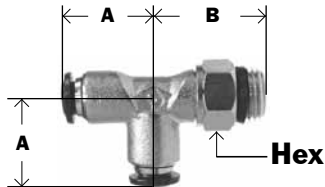
Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
20-150N	1/8"	0.67	0.35	0.02	9.32
20-151N	5/32"	0.67	0.35	0.04	7.74
20-152N	1/4"	0.83	0.43	0.06	7.99
20-155N	5/16"	0.87	0.51	0.08	9.82
20-153N	3/8"	1.04	0.63	0.09	11.90
20-154N	1/2"	1.20	0.75	0.18	17.19

UNION "Y"



Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
20-553N	1/4" x 1/4"	1.44	0.53	0.14	22.67

SWIVEL MALE RUN TEE

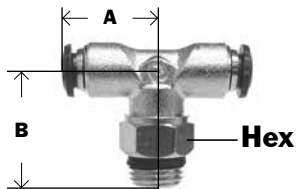


NEW



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	11.81
20-163N	1/4" x 1/4"	0.83	0.98	0.59	0.11	12.59
20-164N	1/4" x 3/8"	0.83	1.10	0.59	0.11	13.67
20-165N	3/8" x 3/8"	1.04	1.18	0.67	0.12	20.49
20-174N	1/2" x 1/4"	1.20	1.24	0.59	0.16	25.92
20-166N	1/2" x 3/8"	1.20	1.30	0.67	0.14	24.62

SWIVEL MALE BRANCH TEE

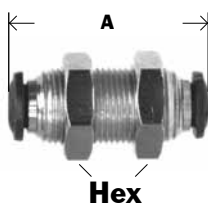


NEW



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	10.78
20-104N	5/32" x 10-32"	0.67	0.79	0.31	0.04	11.49
20-109N	5/32" x 1/8"	0.67	0.78	0.51	0.06	12.95
20-105N	1/4" x 1/8"	0.83	0.87	0.51	0.08	11.81
20-106N	1/4" x 1/4"	0.83	0.98	0.59	0.10	11.81
20-156N	1/4" x 3/8"	1.043	1.10	0.59	0.18	13.67
20-107N	3/8" x 1/4"	1.04	1.10	0.59	0.18	16.25
20-108N	3/8" x 3/8"	1.04	1.18	0.67	0.16	18.41
20-110N	1/2" x 3/8"	1.20	1.30	0.67	0.24	24.62
20-111N	1/2" x 1/2"	1.20	1.42	0.82	0.28	25.85

BULKHEAD UNION



Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-127N	1/4"	1.38	0.67	0.06	12.25
20-123N	5/16"	1.45	0.74	0.08	15.55
20-128N	3/8"	1.69	0.94	0.13	17.53

COMPOSITE BODY PUSH - IN FITTINGS**BRASS FITTINGS****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"	30.42
28-401	1/4"	34.67
28-402	3/8"	38.07

**BALL VALVE MALE NPTF
PUSH-FIT CONNECTIONS**

Part #	NPTF	Tube	List Price
28-403	1/8"	5/32"	23.33
28-404	1/4"	1/4"	24.61
28-405	3/8"	3/8"	27.77

Save 5% by ordering online at
www.midlandindustrial.com

Security is mostly a superstition. It does not exist in nature, nor do the children of men as a whole experience it. Avoiding danger is no safer in the long run than outright exposure. Life is either a daring adventure, or nothing.

- Helen Keller

Men of age object too much, consult too long, adventure too little, repent too soon, and seldom drive business home to the full period, but content themselves with a mediocrity of success.

- Dale Carnegie

Don't worry about your heart, it will last you as long as you live.

- W. C. Fields

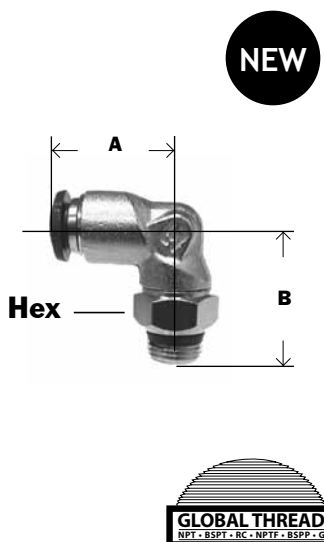
NICKEL PLATED METRIC PUSH-IN FITTINGS

METRIC TUBE STRAIGHT MALE

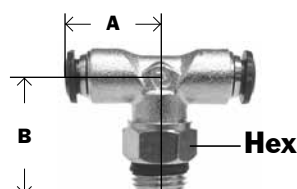


Part #	Tube O.D. (mm)	Global Thread	A	Hex	List Price
20-630N	4	1/8"	0.702	0.429	4.10
20-631N	4	1/4"	0.760	0.546	5.08
20-700N	5	1/8"	0.78	0.429	4.79
20-701N	5	1/4"	0.78	0.546	5.14
20-632N	6	1/8"	0.78	0.546	4.79
20-633N	6	1/4"	0.819	0.546	5.14
20-702N	8	1/8"	0.955	0.546	5.31
20-634N	8	1/4"	0.858	0.546	5.37
20-635N	8	3/8"	0.897	0.663	5.94
20-703N	8	1/2"	0.897	0.663	7.15
20-636N	10	1/4"	1.092	0.663	6.98
20-637N	10	3/8"	1.092	0.663	7.15
20-704N	10	1/2"	1.014	0.663	8.14
20-801N	12	1/4"	1.267	0.78	8.37
20-638N	12	3/8"	1.267	0.78	8.83
20-705N	12	1/2"	1.209	0.78	9.17
20-706N	14	3/8"	1.287	0.858	10.67
20-707N	14	1/2"	1.248	0.858	11.54

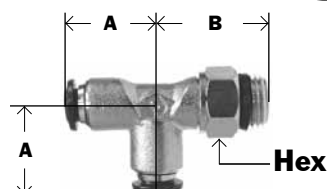
METRIC TUBE SWIVEL MALE ELBOW



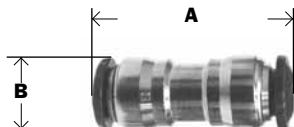
Part #	Tube O.D. (mm)	Global Thread	A	B	Hex	List Price
20-708N	4	1/8"	0.663	0.780	0.507	8.31
20-709N	4	1/4"	0.663	0.936	0.585	9.06
20-710N	5	1/8"	0.780	0.858	0.507	8.37
20-642N	6	1/8"	0.819	0.858	0.507	7.73
20-803N	6	1/4"	0.819	0.975	0.585	9.06
20-711N	8	1/8"	0.878	0.917	0.507	9.69
20-805N	8	1/4"	0.878	1.014	0.585	10.10
20-655N	8	3/8"	0.878	1.092	0.663	13.16
20-712N	8	1/2"	0.878	1.404	0.819	14.25
20-656N	10	1/4"	1.034	1.092	0.585	12.75
20-657N	10	3/8"	1.034	1.170	0.663	14.25
20-713N	10	1/2"	1.034	1.287	0.819	16.56
20-658N	12	3/8"	1.190	1.287	0.663	16.44
20-659N	12	1/2"	1.190	1.404	0.819	18.75
20-714N	14	3/8"	1.268	1.404	0.663	19.79
20-715N	14	1/2"	1.268	1.443	0.819	21.00

METRIC TUBE SWIVEL MALE BRANCH TEE
BRASS
NEW


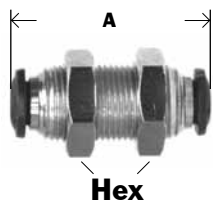
Part #	Tube O.D. (mm)	Global Thread	A	B	Hex	List Price
20-680N	4	1/8"	0.663	0.780	0.507	11.60
20-716N	4	1/4"	0.663	0.936	0.585	12.64
20-717N	5	1/8"	0.78	0.858	0.507	11.60
20-682N	6	1/8"	0.819	0.858	0.507	11.60
20-683N	6	1/4"	0.819	0.975	0.585	12.64
20-809N	8	1/8"	0.877	0.917	0.507	14.08
20-684N	8	1/4"	0.877	1.014	0.585	14.37
20-686N	10	1/4"	1.033	1.092	0.585	18.69
20-687N	10	3/8"	1.033	1.170	0.663	19.79
20-810N	10	1/2"	1.033	1.287	0.819	21.00
20-688N	12	3/8"	1.189	1.287	0.663	21.93
20-689N	12	1/2"	1.189	1.404	0.819	23.71
20-718N	14	3/8"	1.267	1.404	0.663	27.41
20-719N	14	1/2"	1.267	1.443	0.819	29.54

METRIC TUBE SWIVEL MALE RUN TEE
NEW


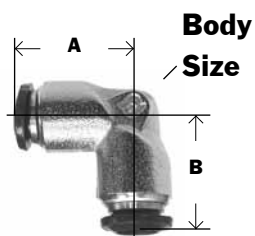
Part #	Tube O.D. (mm)	Global Thread	A	B	Hex	List Price
20-670N	4	1/8"	0.663	0.780	0.507	11.60
20-720N	4	1/4"	0.663	0.936	0.585	12.64
20-721N	5	1/8"	0.780	0.858	0.507	11.60
20-672N	6	1/8"	0.819	0.858	0.507	11.60
20-673N	6	1/4"	0.819	0.975	0.585	12.64
20-811N	8	1/8"	0.819	0.917	0.507	14.08
20-674N	8	1/4"	0.878	1.014	0.585	14.37
20-676N	10	1/4"	0.878	1.092	0.585	18.69
20-677N	10	3/8"	1.034	1.170	0.663	19.79
20-722N	10	1/2"	1.034	1.287	0.819	21.00
20-678N	12	3/8"	1.190	1.287	0.663	21.93
20-679N	12	1/2"	1.190	1.404	0.819	23.71

BRASS FITTINGS**NICKEL PLATED METRIC PUSH-IN FITTINGS****UNION****NEW**

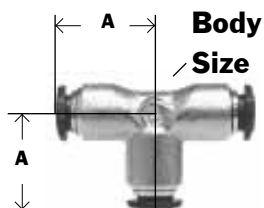
Part #	Tube O.D. (mm)	Tube O.D. (mm)	A	B	List Price
20-723N	3		1.014	0.332	10.79
20-600N	4		1.190	0.410	7.56
20-724N	5		1.287	0.449	7.85
20-725N	6	4	1.248	0.488	7.85
20-601N	6		1.326	0.488	7.85
20-726N	8	6	1.365	0.566	8.60
20-727N	8		1.404	0.566	8.60
20-728N	10	8	1.638	0.683	10.79
20-603N	10		1.638	0.683	10.79
20-729N	12	10	1.833	0.800	12.75
20-604N	12		1.833	0.800	12.75
20-730N	14		1.911	0.839	19.10

BULKHEAD**NEW**

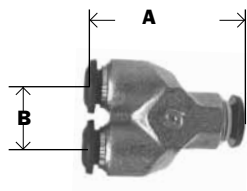
Part #	Tube O.D. (mm)	M	A	Hex	List Price
20-731N	3	M10x1	1.014	0.546	17.54
20-732N	4	M12x1	1.229	0.663	11.60
20-733N	5	M14x1	1.287	0.663	12.87
20-734N	6	M14x1	1.365	0.663	12.87
20-735N	8	M16x1	1.443	0.741	14.08
20-736N	10	M20x1	1.677	0.936	18.64
20-737N	12	M22x1	1.872	1.014	22.33

UNION ELBOW**NEW**

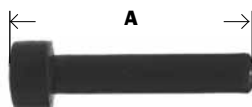
Part #	Tube O.D. (mm)	A	Body Size	List Price
20-738N	3	0.663	0.51	10.79
20-206N	4	0.663	0.351	8.37
20-739N	5	0.780	0.429	8.48
20-660N	6	0.780	0.429	8.48
20-661N	8	0.878	0.507	9.98
20-807N	10	1.034	0.624	12.29
20-808N	12	1.190	0.741	16.16
20-740N	14	1.268	0.741	19.91

UNION TEE
BRASS
NEW


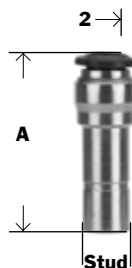
Part #	Tube O.D. (mm)	A	B	Body Size	List Price
20-741N	3	1.326	0.663	0.351	15.00
20-610N	4	1.326	0.663	0.351	11.54
20-742N	5	1.560	0.780	0.429	12.17
20-611N	6	1.638	0.819	0.429	12.17
20-612N	8	1.755	0.878	0.507	14.08
20-613N	10	2.067	1.034	0.624	18.29
20-614N	12	2.379	1.190	0.741	22.68
20-743N	14	2.379	2.535	0.741	27.70

UNION Y
NEW


Part #	Tube O.D. (mm)	B	A	List Price
20-744N	3	0.390	1.131	21.23
20-813N	4	0.429	1.248	15.93
20-745N	5	0.527	1.365	16.85
20-814N	6	0.527	1.424	16.85
20-815N	8	0.605	1.599	19.10
20-746N	10	0.728	1.890	26.95

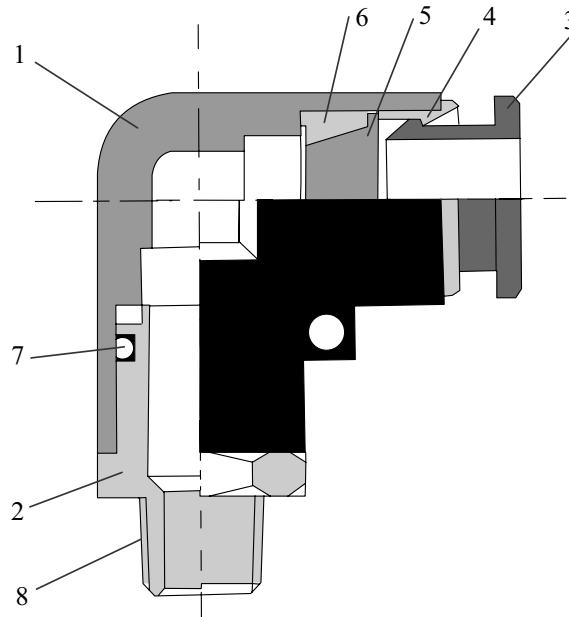
PLUG
NEW


Part #	Tube O.D. (mm)	A	List Price
20-748N	4	0.917	1.04
20-749N	5	0.956	1.04
20-750N	6	0.956	1.04
20-751N	8	1.014	1.27
20-752N	10	1.112	1.29
20-753N	12	1.190	1.30

REDUCER
NEW


Part #	Stud	Tube O.D. 2	A	List Price
20-754N	4	3	1.053	9.17
20-755N	5	4	1.131	4.79
20-756N	6	4	1.170	4.79
20-757N	6	5	1.248	4.79
20-758N	8	6	1.326	5.08
20-759N	10	8	1.482	5.37
20-760N	12	8	1.521	5.77

Composite Body Push-In Fittings



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

The third-rate mind is only happy when it is thinking with the majority. The second-rate mind is only happy when it is thinking with the minority. The first-rate mind is only happy when it is thinking.

- A.A. Milne

COMPOSITE BODY PUSH - IN FITTINGS**BRASS FITTINGS****UNION**

PQ62P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-019C	1/4"	0.01	3.13
20-020C	3/8"	0.02	4.07

UNION TEE

PQ64P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-028C	1/4"	0.02	4.14
20-029C	3/8"	0.02	5.05

FEMALE CONNECTOR

PQ66P

Part #	Tube O.D. x Female NPT	Approx. Wt. Lbs.	List Price
20-034C	1/4" x 1/8"	0.02	4.70
20-035C	1/4" x 1/4"	0.04	2.88
20-036C	3/8" x 1/4"	0.04	3.71
20-037C	3/8" x 3/8"	0.06	3.71

MALE CONNECTOR

PQ68P

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-054C	1/4" x 1/8"	0.02	2.36
20-055C	1/4" x 1/4"	0.02	2.02
20-056C	1/4" x 3/8"	0.04	3.00
20-058C	3/8" x 1/4"	0.06	3.05
20-059C	3/8" x 3/8"	0.06	3.06
20-062C	3/8" x 1/2"	0.08	4.67
20-060C	1/2" x 1/4"	0.06	4.72
20-061C	1/2" x 3/8"	0.08	4.46
20-063C	1/2" x 1/2"	0.10	4.97

SWIVEL MALE ELBOW

- Swivels for installation only.
- Not Free Swiveling



PQ69PS

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-081C	1/4" x 1/8"	0.02	3.28
20-082C	1/4" x 1/4"	0.04	3.35
20-086C	1/4" x 3/8"	0.06	3.27
20-087C	3/8" x 1/8"	0.04	4.40
20-083C	3/8" x 1/4"	0.08	4.38
20-084C	3/8" x 3/8"	0.10	4.31
20-088C	3/8" x 1/2"	0.12	8.31

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

- Swivels for installation only.
- Not Free Swiveling



PQ72PS

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-105C	1/4" x 1/8"	0.04	4.56
20-106C	1/4" x 1/4"	0.06	7.81
20-121C	1/4" x 3/8"	0.08	5.30
20-107C	3/8" x 1/4"	0.10	7.41
20-108C	3/8" x 3/8"	0.12	5.57

BULKHEAD UNION

PQ82P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-127C	1/4"	0.04	6.91
20-128C	3/8"	0.06	6.11

90° UNION ELBOW

PQ65P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-152C	1/4"	0.02	3.11
20-153C	3/8"	0.02	4.17

SWIVEL MALE RUN TEE

- Swivels for installation only.
- Not Free Swiveling



PQ71PS

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-162C	1/4" x 1/8"	0.04	7.84
20-163C	1/4" x 1/4"	0.04	4.56
20-099C	3/8" x 1/8"	0.06	5.49
20-100C	3/8" x 1/4"	0.08	5.05
20-165C	3/8" x 3/8"	0.10	6.06

UNION "Y" CONNECTOR

PQ89P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-553C	1/4"	0.02	5.24
20-555C	3/8"	0.02	6.46

SWIVEL "Y" CONNECTOR • Swivels for installation only. • Not Free Swiveling

PQ88PS

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-557C	1/4" x 1/4"	0.02	5.16

IN-LINE NEEDLE VALVE

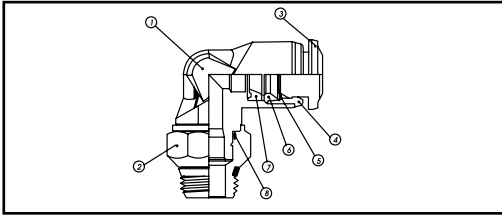
PQ310C

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-487C	1/4"	0.04	18.90

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	16.45

METRIC PUSH - INS**BRASS FITTINGS****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

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**Nickel Plated**

Part #	Tube OD (mm)	BSPT Thread	List Price
20-630	4	1/8"	4.05
20-631	4	1/4"	4.74
20-632	6	1/8"	5.06
20-633	6	1/4"	4.67
20-634	8	1/4"	5.26
20-635	8	3/8"	5.77
20-636	10	1/4"	6.71
20-637	10	3/8"	6.71
20-801	12	1/4"	7.97
20-638	12	3/8"	8.53

UNION

Part #	Tube O.D. (mm)	List Price
20-600	4	7.17
20-601	6	6.99
20-602	8	7.61
20-603	10	10.27
20-604	12	11.85

SWIVEL MALE 90° ELBOW

Part #	Tube OD (mm)	BSPT Thread	List Price
20-642	6	1/8"	6.44
20-803	6	1/4"	8.23
20-805	8	1/4"	9.87
20-655	8	3/8"	12.79
20-656	10	1/4"	11.93
20-657	10	3/8"	13.06
20-658	12	3/8"	15.18
20-659	12	1/2"	16.68

UNION 90° ELBOW

Part #	Tube O.D. (mm)	List Price
20-806	4	8.21
20-660	6	8.23
20-661	8	9.86
20-807	10	11.62
20-808	12	15.40

SWIVEL MALE BRANCH TEE

Part #	Tube OD (mm)	BSPT Thread	List Price
20-680	4	1/8"	11.16
20-682	6	1/8"	10.37
20-683	6	1/4"	12.12
20-809	8	1/8"	12.61
20-684	8	1/4"	14.09
20-685	8	3/8"	21.02
20-686	10	1/4"	17.67
20-687	10	3/8"	19.99
20-810	10	1/2"	19.96
20-688	12	3/8"	19.40
20-689	12	1/2"	22.54

UNION TEE

Part #	Tube O.D. (mm)	List Price
20-610	4	11.20
20-611	6	11.54
20-612	8	13.28
20-613	10	17.36
20-614	12	22.14

SWIVEL MALE RUN TEE

Part #	Tube OD (mm)	BSPT Thread	List Price
20-670	4	1/8"	11.05
20-672	6	1/8"	11.96
20-673	6	1/4"	10.87
20-811	8	1/8"	12.97
20-674	8	1/4"	13.14
20-675	8	3/8"	14.42
20-676	10	1/4"	18.78
20-677	10	3/8"	19.96
20-678	12	3/8"	20.70
20-679	12	1/2"	22.54

UNION Y CONNECTOR

Part #	Tube OD (mm)	List Price
20-813	4	14.82
20-814	6	15.21
20-815	8	17.71

BRASS FITTINGS

BSPT/BSPP FITTINGS

BRASS

MALE BSPP NIPPLE



Part #	Size	List Price
28-800	1/8 X 1/8	10.44
28-801	1/4 X 1/8	11.50
28-802	1/4 X 1/4	14.60
28-803	3/8 X 1/8	12.64
28-804	3/8 X 1/4	11.83
28-805	3/8 X 3/8	14.17
28-806	1/2 X 1/4	26.31
28-807	1/2 X 3/8	26.31
28-808	1/2 X 1/2	26.31
28-810	3/4 X 1/2	38.97
28-811	3/4 X 3/4	49.07

MALE NIPPLE



BSPT X MALE NPT

Part #	Size	List Price
28-815*	1/8 X 1/8	15.89
28-816*	1/4 X 1/4	23.83
28-817*	3/8 X 3/8	28.37
28-818*	1/2 X 1/2	42.93
28-819*	3/4 X 3/4	89.24

MALE BSPT NIPPLE



Part #	Size	List Price
28-820	1/8 X 1/8	9.06
28-821	1/4 X 1/8	9.21
28-822	1/4 X 1/4	8.59
28-823	3/8 X 1/8	12.88
28-824	3/8 X 1/4	12.13
28-825	3/8 X 3/8	11.89
28-826	1/2 X 1/8	34.13
28-827	1/2 X 1/4	21.26
28-828	1/2 X 3/8	26.08
28-829	1/2 X 1/2	18.98
28-830	3/4 X 1/4	62.74
28-832	3/4 X 1/2	29.34
28-833	3/4 X 3/4	32.66

BSPP COUNTERSUNK SEALED PLUG



Part #	Size	List Price
28-835	1/8	9.75
28-836	1/4	13.56
28-837	3/8	10.73
28-838	1/2	23.13

BSPT HEX COUNTERSUNK PLUG



Part #	Size	List Price
28-840*	1/8	3.92
28-841*	1/4	6.75
28-842*	3/8	13.03
28-843*	1/2	24.99
28-844*	3/4	48.91

FEMALE BSPP CAP



Part #	Size	List Price
28-855	1/8	7.43
28-856	1/4	9.66
28-857	3/8	15.11
28-858	1/2	26.99

Good judgment comes from experience, and experience comes from bad judgment.

- Barry LePatner

BSPT MALE X FEMALE NPT



Part #	Size	List Price
28-860*	1/8 X 1/8	10.35
28-861*	1/4 X 1/4	20.77
28-862*	3/8 X 3/8	33.18
28-863*	1/2 X 1/2	80.96
28-864*	3/4 X 3/4	88.46

NPT MALE X FEMALE BSPP



Part #	Size	List Price
28-867*	1/8 X 1/8	13.58
28-868*	1/4 X 1/4	20.66
28-869*	3/8 X 3/8	42.71
28-870*	1/2 X 1/2	68.20
28-871*	3/4 X 3/4	92.61

BUSHING

BSPT MALE X BSPP FEMALE



Part #	Size	List Price
28-873	1/4 X 1/8	7.77
28-874	3/8 X 1/8	8.82
28-875	3/8 X 1/4	13.56
28-876	1/2 X 1/4	16.56
28-877	1/2 X 3/8	15.49
28-878	3/4 X 1/2	23.66

All Fittings are Nickel Plated

except (*) which are Yellow Brass

BRASS RIGID MALE BARB

ADAPTER

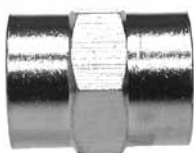


NEW

Part #	Hose I.D. x BSPT	List Price
32-450*	1/4" x 1/8"	1.27
32-451*	1/4" x 1/4"	1.73
32-452*	3/8" x 1/4"	1.85
32-453*	3/8" x 3/8"	2.36
32-454*	3/8" x 1/2"	3.92
32-455*	1/2" x 3/8"	2.54
32-456*	1/2" x 1/2"	4.15
32-457*	3/4" x 3/4"	6.46
32-458*	1" x 1"	13.33

BSPT/BSPP FITTINGS**BRASS FITTINGS****MALE BSPP
X FEMALE BSPP ADAPTER**

Part #	Size	List Price
28-880	1/8 X 1/8	11.48
28-881	1/8 X 1/4	10.21
28-882	1/4 X 1/8	8.79
28-883	1/4 X 1/4	15.29
28-884	1/4 X 3/8	15.88
28-885	3/8 X 1/8	12.13
28-886	3/8 X 1/4	11.08
28-887	3/8 X 3/8	27.60
28-888	3/8 X 1/2	27.67
28-889	1/2 X 1/4	23.13
28-890	1/2 X 3/8	21.26
28-891	1/2 X 1/2	38.84

FEMALE BSPP COUPLING

Part #	Size	List Price
28-894	1/8 X 1/8	12.87
28-895	1/4 X 1/8	17.55
28-896	1/4 X 1/4	12.08
28-897	3/8 X 1/8	26.79
28-898	3/8 X 1/4	23.46
28-899	3/8 X 3/8	18.89
28-900	1/2 X 1/4	30.08
28-901	1/2 X 3/8	30.46
28-902	1/2 X 1/2	38.59

All Fittings are Nickel Plated

I don't know the key to success,
but the key to failure is trying to
please everybody.

- Bill Cosby

90° BSPT MALE ELBOW

Part #	Size	List Price
28-905	1/8 X 1/8	13.68
28-906	1/4 X 1/4	21.86
28-907	3/8 X 3/8	39.58
28-908	1/2 X 1/2	49.00

**MALE BSPT X FEMALE BSPP 90°
ELBOW**

Part #	Size	List Price
28-911	1/8 X 1/8	15.41
28-912	1/4 X 1/4	22.16
28-913	3/8 X 3/8	29.68
28-914	1/2 X 1/2	44.88

BSPP FEMALE 90° ELBOW

Part #	Size	List Price
28-917	1/8 X 1/8	15.41
28-918	1/4 X 1/4	26.00
28-919	3/8 X 3/8	33.73
28-920	1/2 X 1/2	59.00

MALE BSPT TEE

Part #	Size	List Price
28-924	1/8	18.86
28-925	1/4	33.40
28-926	3/8	40.74

BSPP FEMALE TEE

Part #	Size	List Price
28-930	1/8	26.08
28-931	1/4	29.01
28-932	3/8	68.47
28-933	1/2	66.77

**BSPP FEMALE X BSPT MALE
BRANCH TEE**

Part #	Size	List Price
28-940	1/8	19.25
28-941	1/4	29.01
28-942	3/8	43.85
28-943	1/2	63.41

**BSPP MALE
RUN TEE**

Part #	Size	List Price
28-947	1/8	21.62
28-948	1/4	29.01
28-949	3/8	47.66
28-950	1/2	72.68

FEMALE BSPP CROSS

Part #	Size	List Price
28-952	1/8	37.40
28-953	1/4	53.54
28-954	3/8	72.26

BRASS FITTINGS

STEEL GREASE FITTINGS

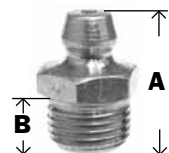
Meets SAE #J-534C

Many types available on special order.

PIPE THREAD

BALL CHECK

#610
1610
2800
1720

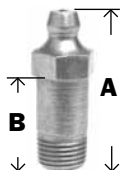


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-110	1/8" -27 NPT	0.68	0.29	0.43	0.01	0.70
36-111	Thread Forming	0.62	0.23	0.43	0.01	0.95

PIPE THREAD

BALL CHECK

#607
1607
2800
1669

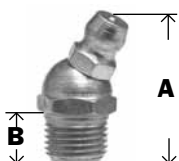


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-112	1/8" -27 NPT	1.25	0.78	0.43	0.02	1.99
36-113	1/8" -27 NPT	1.75	1.26	0.43	0.02	2.17

PIPE THREAD

30° ANGLE BALL CHECK

#611
1611
2830

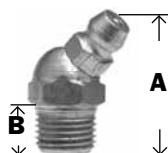


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-114	1/8" -27 NPT	0.90	0.29	0.43	0.01	1.16

PIPE THREAD

45° ANGLE BALL CHECK

#688
1688
2845



Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-116	1/8" -27 NPT	0.89	0.29	0.43	0.01	1.27

PIPE THREAD

65° ANGLE BALL CHECK

#612
1612
2865



Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-118	1/8" -27 NPT	0.84	0.29	0.43	0.01	1.15

PIPE THREAD

90° ANGLE BALL CHECK

#613
1613
2890

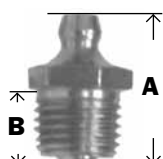


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-120	1/8" -27 NPT	0.84	0.29	0.43	0.01	1.13
36-121	1/8" -27 NPT	1.81	1.25	0.43	0.01	3.61

PIPE THREAD

BALL CHECK

#627
1627
2900K



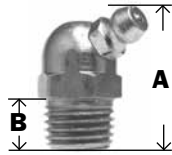
Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-130	1/4" -18 NPT	0.87	0.42	0.56	0.02	1.23

STEEL GREASE FITTINGS

BRASS FITTINGS

PIPE THREAD

#629
1629
2965

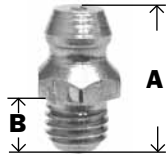


65° ANGLE BALL CHECK

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-132	1/4"-18 NPT	0.96	0.34	0.56	0.02	1.76

1/4-28 TAPER THREAD

#641
1641
2400
3038

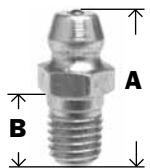


SHORT BALL CHECK

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-140	1/4"-28 NPT	0.54	0.18	0.31	0.01	0.40
36-141	Thread Forming	0.57	0.20	0.31	0.01	0.43

1/4-28 TAPER THREAD

#652
1652
2400

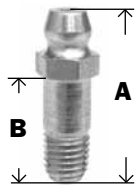


LONG BALL CHECK

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-142	1/4"-28 Taper Thread	0.90	0.29	0.43	0.01	0.51

1/4-28 TAPER THREAD

#680
1680
2400

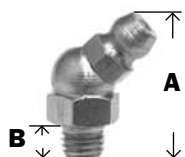


EXTRA LONG BALL CHECK

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-144	1/4"-28 Taper Thread	0.96	0.62	0.31	0.02	0.77

1/4-28 TAPER THREAD

#637
1637
2445
1665
2465
3010

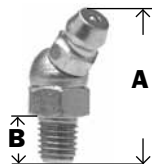


SHORT 45° BALL CHECK

Part #	Size	Angle	A	B	Hex	Approx. Wt. Lbs.	List Price
36-146	1/4"-28 Taper Thread	45°	0.81	0.20	0.37	0.02	1.01
36-147	1/4"-28 Taper Thread	65°	0.78	0.20	0.37	0.02	1.14

1/4-28 TAPER THREAD

#636
1630
2445

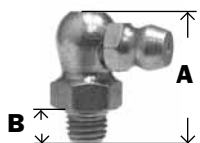


LONG 45° BALL CHECK

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-148	1/4"-28 Taper Thread	0.90	0.29	0.37	0.02	1.41

1/4-28 TAPER THREAD

#911
1911
2490
3054



90° ANGLE BALL CHECK

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-150	1/4"-28 Taper Thread	0.75	0.20	0.37	0.02	0.85
36-152	Thread Forming	0.75	0.20	0.37	0.02	1.62

BRASS FITTINGS

STEEL GREASE FITTINGS

BRASS

DRIVE TYPE

BALL CHECK

#608
1608

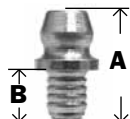


Part #	Size	A	B	Approx. Wt. Lbs.	List Price
36-160	5/16"	0.54	0.25	0.01	0.58

DRIVE TYPE

BALL CHECK

#728
1728
2316



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
36-164	3/16"	0.51	0.25	0.01	0.57

DRIVE TYPE

BALL CHECK

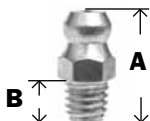
#743
1743
214



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
36-166	1/4"	0.55	0.23	0.01	0.47

METRIC

#711
6000
2106
2M6



Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-168	6MM x 1	16	6	7	0.01	0.74

METRIC

45° ANGLE

#712
6045
2107

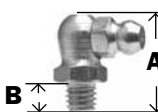


Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-170	6MM x 1	21	5.5	9	0.02	1.00

METRIC

90° ANGLE

#713
6090
2108
ZM906



Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-172	6MM x 1	18	5.5	9	0.02	1.05

METRIC

#811
8000
2103
ZM58

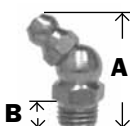


Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-174	8MM x 1	17	6	9	0.02	0.63

METRIC

45° ANGLE

#812
8045
2104
ZM458



Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-176	8MM x 1	21	5.5	9	0.02	1.05

METRIC

90° ANGLE

#813
8090
2105
ZM908



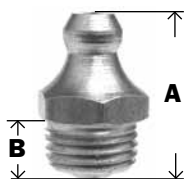
Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-178	8MM x 1	18	5.5	9	0.02	1.08

STEEL GREASE FITTINGS

BRASS FITTINGS

METRIC

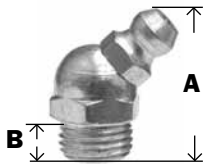
#911
9000
2109
ZM510



Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-180	10MM x 1	18	6	11	0.02	0.94

METRIC

#912
9045
2110
ZM4510

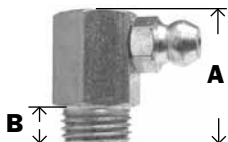


45° ANGLE

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-182	10MM x 1	21	5.5	11	0.02	1.38

METRIC

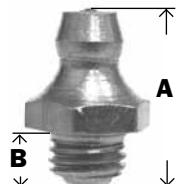
#913
9090
2111
ZM9010



90° ANGLE

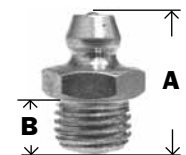
Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-184	10MM x 1	18	5.5	11	0.02	1.22

#711-B
1711
2500



Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-186	5/16"-24	0.65	0.25	0.37	0.02	0.74

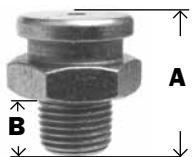
#710-B
1710
2600



Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-188	3/8"-24	0.65	0.25	0.43	0.01	1.25

BUTTON HEAD

1184
1186



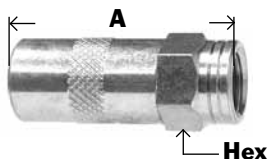
Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-200	1/8"-27 PTF	0.75	0.34	0.62	0.03	2.79
36-205	1/4"-18 NPT	0.82	0.42	0.62	0.03	3.12

WHIP HOSE



Part #	Length	List Price
36-210	12" RUBBER	26.06
36-212	18" RUBBER	18.17
36-214	24" RUBBER	22.23
36-216	36" RUBBER	25.43

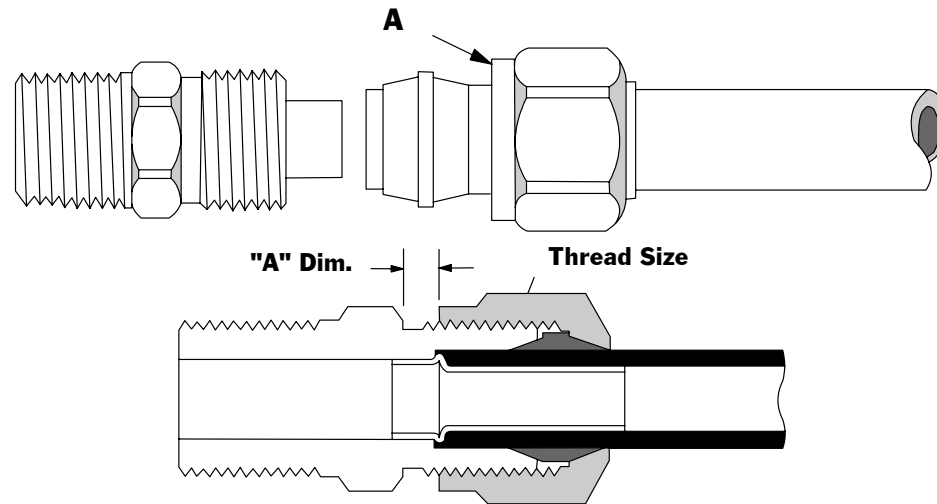
4 JAW GREASE GUN COUPLER



Part #	A	Hex	Approx. Wt. Lbs.	List Price
36-220	1.50	0.56	0.05	8.28

D.O.T. Air Brake - Nylon Tubing

BRASS



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. 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.

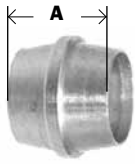
Disassembling: Remove nut and pull tubing out of fitting body. Insert will remain in tubing.

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

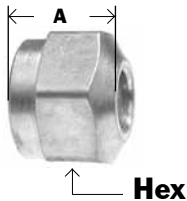
You don't get anything clean without getting something else dirty.

- Cecil Baxter

D.O.T. AIR BRAKE - NYLON TUBING**BRASS FITTINGS****SLEEVE****SAE# 100115**

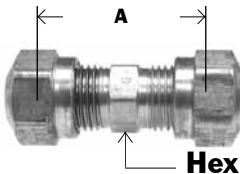
60NAB
60NTA
1460

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-001 ⁵	1/4"	0.30	0.01	0.35
38-002 ⁵	3/8"	0.39	0.02	0.46
38-003 ⁵	1/2"	0.43	0.02	0.64
38-004 ⁵	5/8"	0.48	0.03	1.06
38-005 ⁵	3/4"	0.53	0.04	1.91

NUT**SAE# 100110**

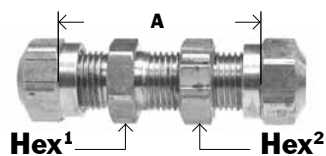
61NAB
61NTA
1461

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
38-010	1/4"	0.45	0.56	0.02	0.75
38-011	3/8"	0.63	0.62	0.02	0.95
38-012 ⁵	1/2"	0.72	0.81	0.04	2.33
38-013	5/8"	0.77	0.94	0.04	2.47
38-014 ⁵	3/4"	0.81	1.12	0.06	4.16

UNION**SAE# 100101BA**

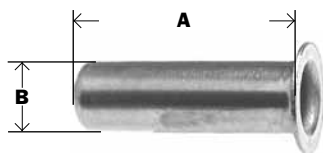
62NAB
62NTA
1462

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
38-019 ⁵	1/4"	0.85	0.43	0.08	5.02
38-020 ⁵	3/8"	1.10	0.56	0.18	5.94
38-021 ⁵	1/2"	1.31	0.68	0.20	9.64
38-022 ⁵	5/8"	1.43	0.81	0.26	19.85
38-023	3/4"	1.60	1.00	0.48	27.72

BULKHEAD UNION

62NBH
1474
475

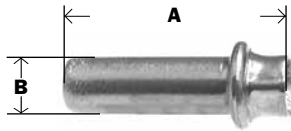
Part #	Tube O.D.	A	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
38-028	1/4"	1.38	0.56	0.56	0.11	11.71
38-029	3/8"	1.61	0.69	0.75	0.16	16.44
38-030	1/2"	1.88	0.81	0.87	0.26	26.65

STAINLESS STEEL INSERT**• For SAE# J844 TUBING**

59A
63NTA

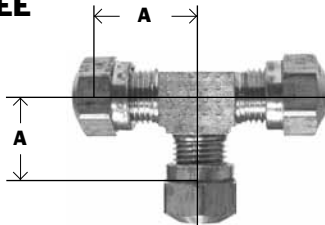
Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
38-035	1/4"	0.53	0.16	0.01	0.65
38-036	3/8"	0.64	0.24	0.02	0.69
38-037	1/2"	0.81	0.37	0.02	1.15
38-038	5/8"	0.86	0.43	0.03	2.79
38-039	3/4"	1.04	0.56	0.03	3.31

⁵ Also stocked in Atlanta
(See page Intro II for details)

BRASS FITTINGS**D.O.T. AIR BRAKE - NYLON TUBING****BRASS INSERT**

1484
463

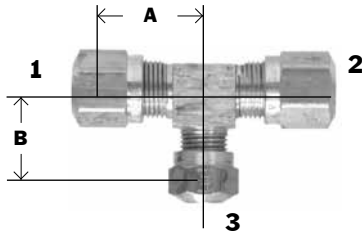
Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
38-040 ⁵	1/4"	0.64	0.16	0.01	0.63
38-041 ⁵	3/8"	0.76	0.24	0.02	0.63
38-042	1/2"	0.94	0.37	0.02	1.28
38-043 ⁵	5/8"	1.06	0.43	0.02	1.13
38-048	3/4"	1.21	0.56	0.04	2.42

TEE

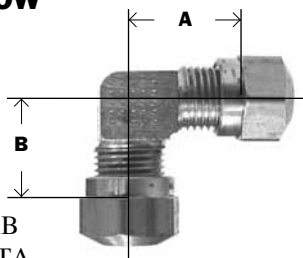
64NAB
264NTA
1464

SAE# 100401BA

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-044	1/4"	0.61	0.14	9.81
38-045	3/8"	0.78	0.18	10.45
38-046	1/2"	0.92	0.36	16.08
38-047	5/8"	1.09	0.46	35.73

REDUCING TEE

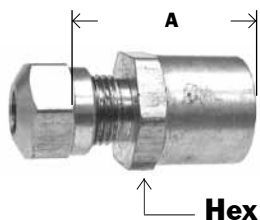
Part #	Tube O.D. (1&2) x 3	A	B	Approx. Wt. Lbs.	List Price
38-049	3/8" x 1/4"	0.72	0.69	0.24	33.59
38-057	1/2" x 3/8"	0.92	0.85	0.30	19.07

ELBOW

65NAB
265NTA
1465

SAE# 100201BA

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-052	1/4"	0.61	0.10	10.66
38-053	3/8"	0.78	0.12	7.88
38-054	1/2"	0.92	0.26	20.90
38-055	5/8"	1.09	0.34	24.49

FEMALE ADAPTER

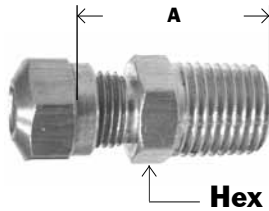
66NAB
66NTA
1466
66NBH

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	3.78
38-061	1/4" x 1/4"	1.06	0.68	0.08	5.85
38-062	3/8" x 1/8"	1.00	0.56	0.10	5.65
38-063	3/8" x 1/4"	1.18	0.68	0.10	6.87
38-064	3/8" x 3/8"	1.18	0.87	0.12	7.69
38-065	1/2" x 3/8"	1.27	0.87	0.16	10.98
38-066	1/2" x 1/2"	1.43	1.06	0.26	11.71
38-067	5/8" x 3/8"	1.31	0.87	0.28	17.56
38-068	5/8" x 1/2"	1.50	1.06	0.28	20.71

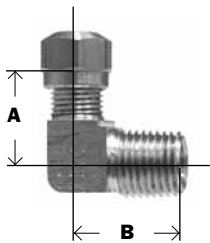
Dimension data can change without notice.
Please call us when dimensions are critical.

⁵ Also stocked in Atlanta
(See page Intro II for details)

D.O.T. AIR BRAKE - NYLON TUBING**BRASS FITTINGS****MALE ADAPTER****SAE# 100102BA**

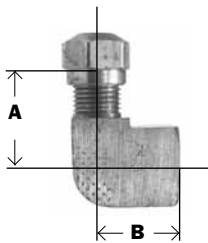
68NAB
68NTA
1468

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	9.01
38-073 ⁵	1/4" x 1/8"	0.88	0.43	0.05	3.38
38-074	1/4" x 1/4"	1.09	0.56	0.07	3.66
38-075	1/4" x 3/8"	1.13	0.68	0.09	7.09
38-076	3/8" x 1/8"	1.03	0.56	0.08	3.85
38-077 ⁵	3/8" x 1/4"	1.20	0.56	0.10	4.07
38-078 ⁵	3/8" x 3/8"	1.24	0.68	0.10	4.55
38-079	3/8" x 1/2"	1.43	0.87	0.16	6.62
38-080	1/2" x 1/4"	1.32	0.68	0.13	6.73
38-081 ⁵	1/2" x 3/8"	1.32	0.68	0.14	5.81
38-082	1/2" x 1/2"	1.51	0.87	0.21	7.51
38-087	1/2" x 3/4"	1.57	1.06	0.23	21.46
38-083	5/8" x 3/8"	1.39	0.81	0.17	12.07
38-084	5/8" x 1/2"	1.57	0.87	0.20	12.17
38-088	5/8" x 3/4"	1.71	1.06	0.25	16.83
38-085	3/4" x 1/2"	1.68	1.00	0.28	16.89
38-086	3/4" x 3/4"	1.71	1.06	0.33	19.79

MALE ELBOW**SAE# 100202BA**

1469

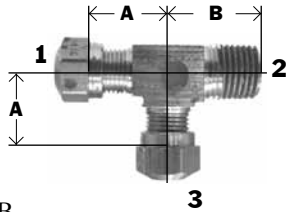
Part #	Tube O.D. x Male NPTF	A	B	Approx. Wt. Lbs.	List Price
38-091 ⁵	1/4" x 1/8"	0.61	0.65	0.06	4.25
38-092 ⁵	1/4" x 1/4"	0.67	0.86	0.09	4.86
38-093	1/4" x 3/8"	0.72	0.85	0.12	5.73
38-094 ⁵	3/8" x 1/8"	0.72	0.73	0.09	6.02
38-095 ⁵	3/8" x 1/4"	0.80	0.93	0.11	5.37
38-090	3/8" x 1/4" LONG	0.80	1.44	0.14	14.83
38-101 ⁵	3/8" x 3/8"	0.83	0.90	0.14	6.26
38-102	3/8" x 1/2"	0.93	1.09	0.21	8.61
38-103 ⁵	1/2" x 1/4"	0.85	0.98	0.18	7.71
38-104	1/2" x 3/8"	0.92	0.98	0.19	9.12
38-109	1/2" x 3/8" LONG	0.94	1.38	0.26	20.95
38-105	1/2" x 1/2"	1.02	1.17	0.28	9.52
38-106	5/8" x 3/8"	1.00	1.05	0.24	16.31
38-107	5/8" x 1/2"	1.10	1.25	0.28	14.19
38-110	5/8" x 3/4"	1.09	1.24	0.38	24.46
38-108	3/4" x 1/2"	1.19	1.33	0.41	21.36

FEMALE ELBOW**SAE# 100203BA**

70NAB
1470
270NTA

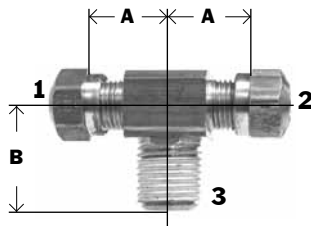
Part #	Tube O.D. x Female NPTF	A	B	Approx. Wt. Lbs.	List Price
38-113	1/4" x 1/8"	0.68	0.52	0.08	5.98
38-114	1/4" x 1/4"	0.77	0.70	0.12	12.98
38-115	3/8" x 1/8"	0.82	0.58	0.14	10.28
38-116	3/8" x 1/4"	0.88	0.76	0.10	8.43
38-117	3/8" x 3/8"	0.93	0.76	0.12	9.57
38-118	1/2" x 3/8"	1.02	0.81	0.23	16.44
38-119	1/2" x 1/2"	1.13	1.01	0.36	17.78
38-120	5/8" x 1/2"	1.19	1.07	0.38	17.58

⁵ Also stocked in Atlanta
(See page Intro II for details)

BRASS FITTINGS**D.O.T. AIR BRAKE - NYLON TUBING****MALE RUN TEE****SAE# 100424BA**

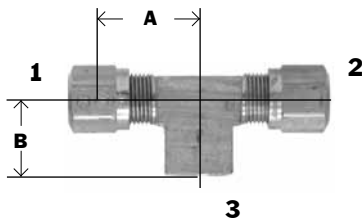
71NAB
271NTA
1471

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	10.06
38-126	1/4" x 1/4" x 1/4"	0.68	0.86	0.14	8.63
38-124	3/8" x 1/4" x 1/4"	0.72	0.69	0.14	21.87
38-127	3/8" x 1/4" x 3/8"	0.78	0.91	0.16	9.84
38-128	3/8" x 3/8" x 3/8"	0.83	0.90	0.20	8.55
38-129	1/2" x 3/8" x 1/2"	0.92	0.98	0.30	11.60

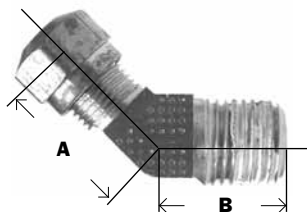
MALE BRANCH TEE**SAE# 100425BA**

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	8.53
38-137	1/4" x 1/4" x 1/4"	0.67	0.86	0.13	13.41
38-138	3/8" x 3/8" x 1/8"	0.71	0.73	0.14	14.32
38-132	3/8" x 1/4" x 1/4"	0.80	0.93	0.15	25.79
38-139	3/8" x 3/8" x 1/4"	0.78	0.91	0.16	8.97
38-133	1/2" x 1/2" x 1/4"	0.87	1.00	0.26	22.54
38-140	3/8" x 3/8" x 3/8"	0.83	0.90	0.20	9.12
38-134	1/2" x 3/8" x 3/8"	0.94	1.00	0.26	25.68
38-141 ⁵	1/2" x 1/2" x 3/8"	0.92	0.98	0.30	13.12
38-142	1/2" x 1/2" x 1/2"	1.02	1.17	0.38	16.10
38-143	5/8" x 5/8" x 1/2"	1.09	1.24	0.44	46.67

SPECIAL TEES

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	28.97
38-146	5/8" x 5/8" x 1/4"	1.04	0.89	0.48	44.14

45° ELBOW**SAE# 100302BA**

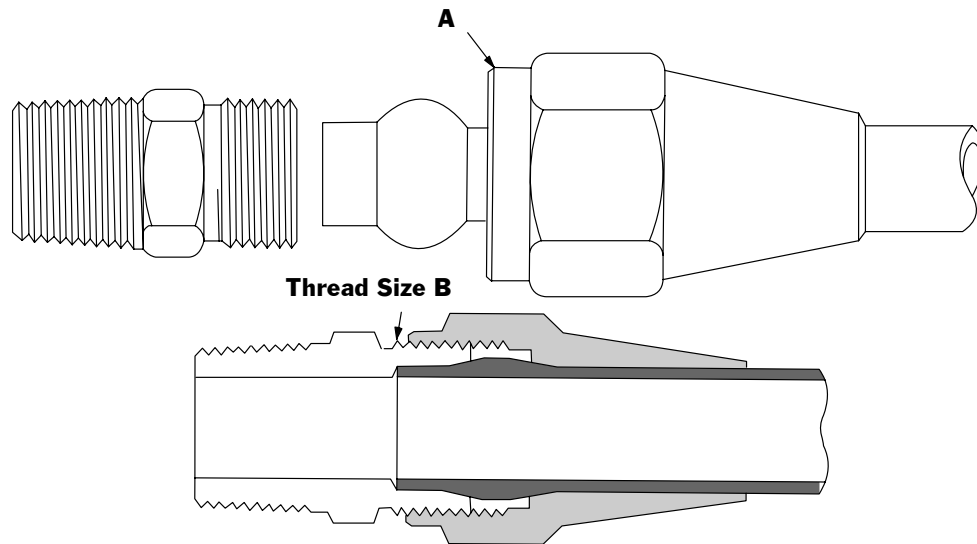
6945NAB
279NTA
1480

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	8.97
38-149	1/4" x 1/4"	0.60	0.85	0.08	9.99
38-150	3/8" x 1/8"	0.71	0.67	0.10	19.96
38-151	3/8" x 1/4"	0.72	0.86	0.10	7.28
38-152	3/8" x 3/8"	0.76	0.95	0.14	10.30
38-153	3/8" x 1/2"	0.78	1.20	0.24	15.38
38-157	1/2" x 1/4"	0.85	0.95	0.20	18.93
38-154	1/2" x 3/8"	0.84	0.94	0.20	11.54
38-155	1/2" x 1/2"	0.87	1.16	0.24	13.80
38-156	5/8" x 1/2"	1.00	1.20	0.28	16.01
38-158	3/4" x 1/2"	1.10	1.18	0.38	37.86

Save 5% by ordering online at
www.midlandindustrial.com

⁵ Also stocked in Atlanta
(See page Intro II for details)

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.

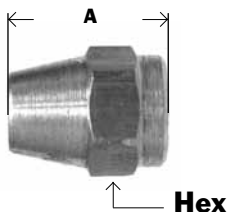
•Assembly Instructions

- 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:

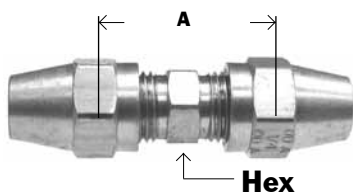
Tube Size	Additional Number of Turns from Hand Tight
1/4, 3/8	1-3/4
1/2, 5/8, 3/4	3-1/4

BRASS FITTINGS**D.O.T. AIR BRAKE - COPPER TUBING****SLEEVE****SAE# 120115BA**60AB
1360

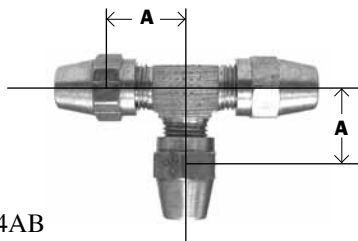
Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-161	1/4"	0.25	0.01	0.24
38-162	3/8"	0.31	0.02	0.52
38-163	1/2"	0.38	0.02	0.63
38-164	5/8"	0.44	0.02	1.18
38-165	3/4"	0.50	0.04	2.42

NUT**SAE# 120111BA**20961
61AB
1361

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
38-170	1/4"	0.75	0.56	0.02	1.15
38-171	3/8"	1.13	0.62	0.04	1.73
38-172	1/2"	1.25	0.81	0.08	3.14
38-173	5/8"	1.38	0.94	0.12	4.18
38-174	3/4"	1.56	1.12	0.18	8.92

UNION**SAE# 120101BA**62AB
1362

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
38-179	1/4"	0.81	0.44	0.08	5.14
38-180	3/8"	1.10	0.56	0.14	6.77
38-181	1/2"	1.07	0.69	0.24	12.52
38-182	5/8"	1.41	0.81	0.34	18.09
38-183	3/4"	1.59	1.00	0.54	36.82

TEE**SAE# 120401BA**264AB
1364

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-188	1/4"	0.62	0.16	11.14
38-189	3/8"	0.82	0.24	13.50
38-190	1/2"	0.94	0.48	23.02
38-191	5/8"	1.09	0.60	34.45

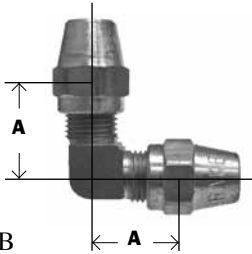
Do not condemn the judgement of another because it differs from your own. You may both be wrong.

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

- Dandemis

ELBOW

SAE# 120201BA



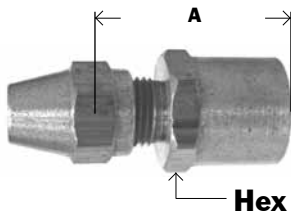
265AB
1365

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-196	1/4"	0.62	0.10	14.25
38-197*	3/8"	0.78	0.16	10.32
38-198	1/2"	0.92	0.28	13.98
38-199	5/8"	1.10	0.42	22.90

* Forged

FEMALE ADAPTER

SAE# 120103BA

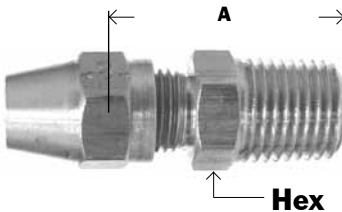


66AB
1366

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	5.06
38-205	1/4" x 1/4"	1.07	0.68	0.10	8.44
38-206	3/8" x 1/8"	1.00	0.56	0.10	6.98
38-207	3/8" x 1/4"	1.19	0.68	0.12	6.50
38-208	3/8" x 3/8"	1.18	0.87	0.16	6.85
38-209	1/2" x 3/8"	1.27	0.87	0.18	14.71
38-210	1/2" x 1/2"	1.44	1.06	0.20	15.46
38-211	5/8" x 3/8"	1.31	0.87	0.24	13.96
38-212	5/8" x 1/2"	1.50	1.06	0.26	21.86

MALE ADAPTER

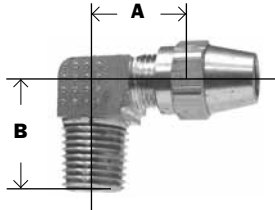
SAE# 120102BA



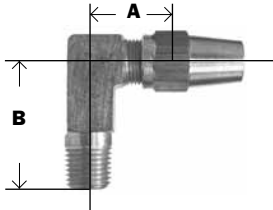
68AB
1368

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	3.27
38-218	1/4" x 1/4"	0.97	0.56	0.08	4.44
38-219	1/4" x 3/8"	1.14	0.68	0.10	5.65
38-220	3/8" x 1/8"	1.02	0.56	0.08	5.65
38-221	3/8" x 1/4"	1.09	0.56	0.10	4.73
38-222	3/8" x 3/8"	1.19	0.69	0.12	5.08
38-223	3/8" x 1/2"	1.45	0.87	0.18	5.93
38-224	1/2" x 1/4"	1.32	0.69	0.16	8.71
38-225	1/2" x 3/8"	1.35	0.69	0.18	6.89
38-226	1/2" x 1/2"	1.51	0.87	0.24	10.56
38-227	5/8" x 3/8"	1.39	0.81	0.22	14.29
38-228	5/8" x 1/2"	1.57	0.87	0.24	12.69
38-229	3/4" x 1/2"	1.67	1.00	0.34	17.64
38-230	3/4" x 3/4"	1.71	1.06	0.40	25.02

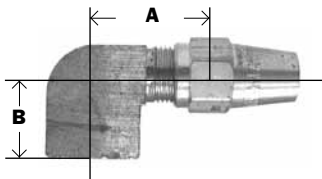
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90° MALE ELBOW
SAE# 120202BA

 269AB
1369

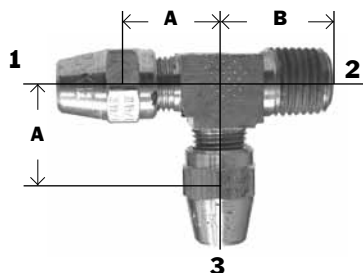
Part #	Tube O.D. x Male NPTF	A	B	Approx. Wt. Lbs.	List Price
38-235	1/4" x 1/8"	0.64	0.76	0.08	5.14
38-236	1/4" x 1/4"	0.69	0.88	0.10	5.89
38-237	1/4" x 3/8"	0.73	0.86	0.14	8.91
38-238	3/8" x 1/8"	0.73	0.75	0.12	6.81
38-239	3/8" x 1/4"	0.80	0.93	0.12	6.58
38-240	3/8" x 3/8"	0.83	0.90	0.16	8.46
38-241	3/8" x 1/2"	0.95	1.11	0.24	9.35
38-242	1/2" x 1/4"	0.85	0.98	0.24	10.15
38-243	1/2" x 3/8"	0.92	0.98	0.22	11.08
38-244	1/2" x 1/2"	1.04	1.19	0.30	13.27
38-245	5/8" x 3/8"	1.01	1.06	0.34	16.18
38-246	5/8" x 1/2"	1.10	1.25	0.36	17.08
38-247	3/4" x 1/2"	1.19	1.32	0.44	25.73

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	13.79

90° FEMALE ELBOW
SAE# 120203BA

 270AB
1370

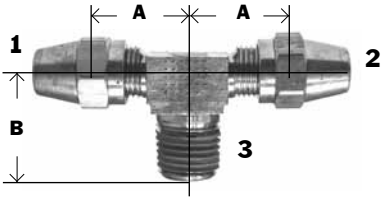
Part #	Tube O.D. x Female NPTF	A	B	Approx. Wt. Lbs.	List Price
38-252	1/4" x 1/8"	0.69	0.52	0.10	7.96
38-253	1/4" x 1/4"	0.78	0.71	0.14	12.58
38-255	3/8" x 1/4"	0.84	0.78	0.16	6.05
38-256	3/8" x 3/8"	0.93	0.77	0.18	8.34
38-257	1/2" x 3/8"	1.03	0.82	0.26	20.14
38-259	5/8" x 1/2"	1.19	1.07	0.44	27.75

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	17.96
38-265	1/4" x 1/4"	0.68	0.87	0.16	16.91
38-266	3/8" x 1/4"	0.79	0.92	0.20	15.82
38-267	3/8" x 3/8"	0.83	0.90	0.24	13.67
38-269	1/2" x 1/2"	1.03	1.18	0.42	18.11

MALE BRANCH TEE

SAE# 120425BA

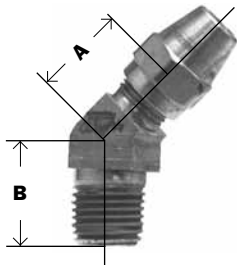


Part #	Tube O.D. x Male NPTF (1&2)x3	A	B	Approx. Wt. Lbs.	List Price
38-278	3/8" x 1/4"	0.78	0.91	0.18	14.97
38-279	3/8" x 3/8"	0.85	0.92	0.24	10.75
38-280	1/2" x 3/8"	0.91	0.98	0.36	11.25
38-281	1/2" x 1/2"	1.03	1.18	0.42	32.43

272AB
1372

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	6.98
38-288	1/4" x 1/4"	0.60	0.85	0.10	13.76
38-290	3/8" x 1/4"	0.72	0.86	0.18	6.73
38-291	3/8" x 3/8"	0.75	0.94	0.20	11.94
38-292	3/8" x 1/2"	0.78	1.16	0.22	21.30
38-293*	1/2" x 3/8"	0.82	0.94	0.18	14.43
38-294	1/2" x 1/2"	0.87	1.16	0.24	14.36

* Forged

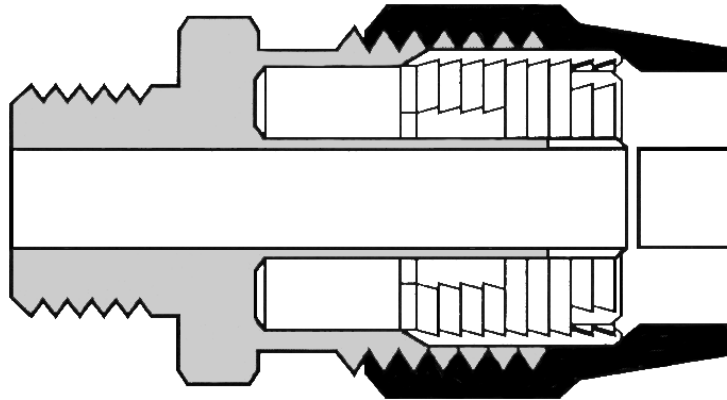
279AB
1380

Life is based on perception,
Perception is based on opinion,
Opinion is based on thought,
Thought comes from the mind.
Change your mind , change your life.

- Author Unknown

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.

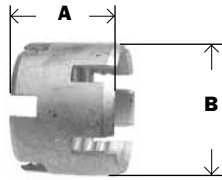
•Assembly Instructions

- 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.

D.O.T. AIR BRAKE - HOSES/ENDS**BRASS FITTINGS****SLEEVE**

#60HC
3380-A
0903610
367



Part #	Hose I.D. Size	A	B	Approx. Wt. Lbs.	List Price
38-300	3/8"	0.69	0.90	0.02	1.69
38-301	1/2"	0.64	1.03	0.02	3.16

NUT

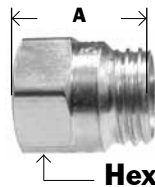
#61HC
369
3380-B
0903624



Part #	Hose I.D. Size	A	Hex	Approx. Wt. Lbs.	List Price
38-306	3/8"	1.26	1.03	0.04	3.87
38-307	1/2"	1.20	1.25	0.06	4.84

NUT

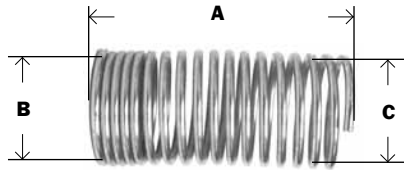
#61HCS
0903613
3380-D
31RBSG



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	3.89
38-313	1/2"	1-3/32-20	1.20	1.25	0.06	5.09

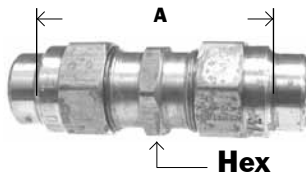
We should be taught not to wait for inspiration to start a thing. Action always generates inspiration. Inspiration seldom generates action.

- Frank Tibolt

BRASS FITTINGS**D.O.T. AIR BRAKE - HOSES/ENDS****BRASS****SPRING**

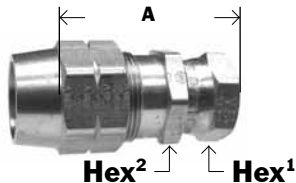
#60SG 3380-C
0901045 377

Part #	Hose I.D.	A	B	C	Approx. Wt. Lbs.	List Price
38-351	3/8"	2.75	0.84	0.78	0.20	1.27
38-352	1/2"	2.75	1.10	1.10	0.22	2.45

UNION

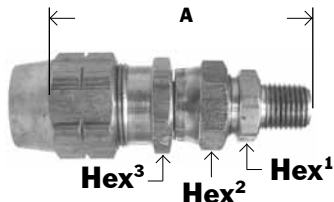
#62HC 362
3380B-Y0

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	23.77
38-319	1/2"	1-1/8-20	2.55	1.12	0.48	39.61

FEMALE CONNECTOR HOSE

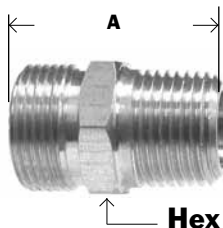
#66ABS 3380B-Y7
66RBSV 386

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	24.52
38-358	1/2" x 7/8-20	2.1	1.06	1.12	0.38	29.33

MALE CONNECTOR

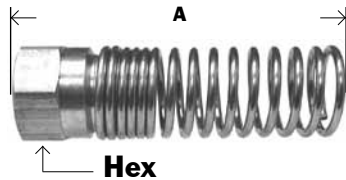
#68ABS 3380B-Y8
09155 387

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	25.27
38-364	1/2" x 3/8"	2.96	0.87	1.06	1.12	0.46	48.41

ADAPTER

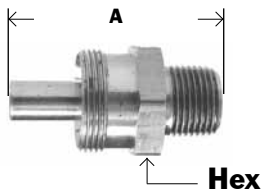
#68ABS 76RB
1390 388

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	3.08
38-368	3/8" x 3/8"	3/4-20	1.14	0.75	0.08	2.74
38-372	3/8" x 1/2"	3/4-20	1.37	0.87	0.12	4.63
38-370	1/2" x 3/8"	7/8-20	1.18	0.87	0.10	4.16
38-371	1/2" x 1/2"	7/8-20	1.38	0.87	0.12	9.06

NUT AND SPRING ASSEMBLY

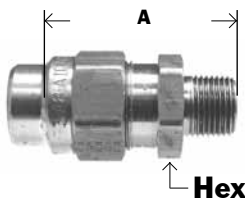
Part #	Hose I.D. Size	A	Hex	Approx. Wt. Lbs.	List Price
38-015	3/8"	3.55	1.03	0.18	3.92
38-016	1/2"	3.50	1.25	0.24	7.23

379
67RBSG
0999999

ADAPTER BODY

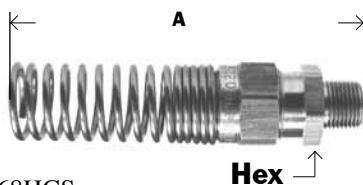
#68B
W1391Z

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	4.56
38-325	3/8" x 3/8"	1.92	0.97	0.14	4.79
38-326	3/8" x 1/2"	2.02	1.00	0.20	5.12
38-327	1/2" x 3/8"	2.07	1.12	0.18	13.74
38-328	1/2" x 1/2"	2.06	1.12	0.20	7.90

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	9.58
38-334	3/8" x 3/8"	1.94	0.97	0.24	10.84
38-335	3/8" x 1/2"	2.12	0.97	0.26	12.29
38-336	1/2" x 3/8"	2.07	1.12	0.33	14.60
38-337	1/2" x 1/2"	2.07	1.12	0.36	15.89

MALE ADAPTER

#68HCS
3380B-Y3
68RBGS
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	11.27
38-343	3/8" x 3/8"	4.96	1.00	0.34	11.46
38-344	3/8" x 1/2"	5.53	1.00	0.38	12.70
38-345	1/2" x 3/8"	4.75	1.12	0.48	16.08
38-346	1/2" x 1/2"	4.88	1.12	0.52	18.12

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.

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-

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**

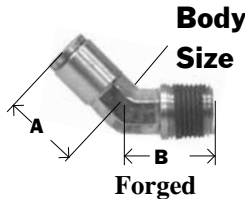
Vacuum to 150 PSI
-40°F to 200°F (-40°C to +93°C)

• **Ordering Options**

The following options are **available only by customer request** and may be subject to minimum run quantities for ordering.

- Viton "O" Ring seals
- Metric DQ DOT "One-Push" tube fittings with BSPT threads.
- Manifolds with DQ DOT One Push Cartridges.

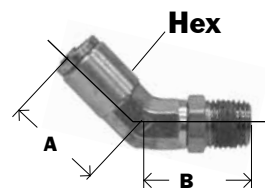
MALE 45° ELBOW



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"	0.83	0.89	0.37	0.06	10.53
540404	1/4" x 1/4"	0.91	0.89	0.37	0.06	11.93
540602	3/8" x 1/8"	0.75	0.89	0.51	0.08	11.54
540604	3/8" x 1/4"	0.95	0.98	0.49	0.10	13.34
540606	3/8" x 3/8"	0.89	0.98	0.50	0.10	15.12
540608	3/8" x 1/2"	1.14	1.30	0.87	0.15	12.46
540804	1/2" x 1/4"	1.00	1.24	0.82	0.13	18.45
540806	1/2" x 3/8"	1.05	1.10	0.62	0.16	16.57
540808	1/2" x 1/2"	1.20	1.10	0.62	0.18	19.03
541006	5/8" x 3/8"	1.46	1.02	1.06	0.22	39.24
541008 ⁵	5/8" x 1/2"	0.98	0.98	0.72	0.21	24.93
541208	3/4" x 1/2"	1.36	1.08	0.93	0.28	32.00
541212	3/4" x 3/4"	1.36	1.08	0.94	0.32	37.94

MALE 45° SWIVEL ELBOW

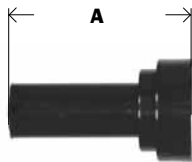


AQ54DOTS
179PMT
1880
DQ54DOTS

⁵ Also stocked in Atlanta
(See page Intro II for details)

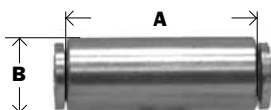
Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
540402S	1/4" x 1/8"	0.60	0.72	0.43	0.06	15.82
540404S	1/4" x 1/4"	1.10	0.89	0.56	0.09	16.09
540602S	3/8" x 1/8"	1.07	0.98	0.43	0.10	14.81
540604S	3/8" x 1/4"	1.07	0.98	0.56	0.11	14.87
540606S	3/8" x 3/8"	1.23	0.97	0.68	0.14	15.61
540804S	1/2" x 1/4"	1.22	1.12	0.56	0.14	28.21
540806S	1/2" x 3/8"	1.32	1.10	0.68	0.16	24.89
540808S	1/2" x 1/2"	1.61	1.10	0.88	0.18	21.92
541008S	5/8" x 1/2"	1.69	1.23	0.87	0.24	33.32

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

D.O.T. PUSH-IN**BRASS FITTINGS****PLUG**

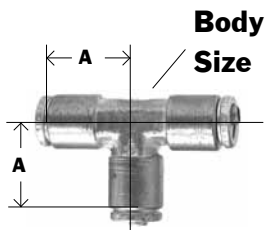
1829
DQ59DOT
639PMT

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
595320	5/32"	1.16	0.01	1.06
590400	1/4"	0.81	0.02	1.98
590600	3/8"	0.99	0.02	1.76
590800	1/2"	0.99	0.04	2.10

UNION

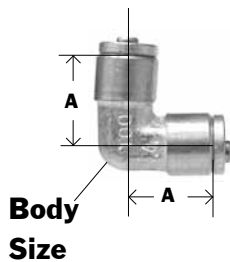
AQ62DOT
62PMT
1862
DQ62DOT

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
620532	5/32"	1.18	.37	0.06	7.42
620400	1/4"	1.40	.51	0.08	9.40
620600	3/8"	1.54	.67	0.14	8.95
620800	1/2"	1.81	.81	0.19	8.86
621000	5/8"	1.84	.94	0.30	20.60
621200	3/4"	2.38	1.18	0.44	37.37

UNION TEE

AQ64DOT
164 PMT
1864
DQ64DOT

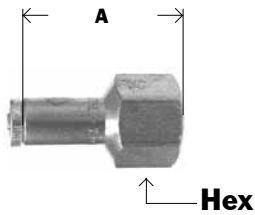
Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
640400	1/4"	0.73	0.37	0.11	13.74
640600	3/8"	0.97	0.52	0.22	16.85
640800	1/2"	1.16	0.62	0.25	22.73
641200	3/4"	1.34	0.94	0.50	74.92

UNION ELBOW

AQ65DOT
165 PMT
1865
DQ65DOT

Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
655320	5/32"	0.59	0.29	0.03	20.54
650400	1/4"	0.83	0.37	0.06	10.25
650600	3/8"	0.98	0.50	0.10	14.32
650800	1/2"	1.26	0.62	0.18	17.61

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"	1.23	0.56	0.06	9.21
660404	1/4" x 1/4"	1.42	0.75	0.10	12.17
660602	3/8" x 1/8"	1.37	0.68	0.09	25.57
660604	3/8" x 1/4"	1.30	0.75	0.11	11.26
660606	3/8" x 3/8"	1.41	0.87	0.14	13.95
660804	1/2" x 1/4"	1.56	0.81	0.14	20.54
660806	1/2" x 3/8"	1.51	0.87	0.16	24.71
660808	1/2" x 1/2"	2.01	0.68	0.25	28.01

MALE CONNECTOR

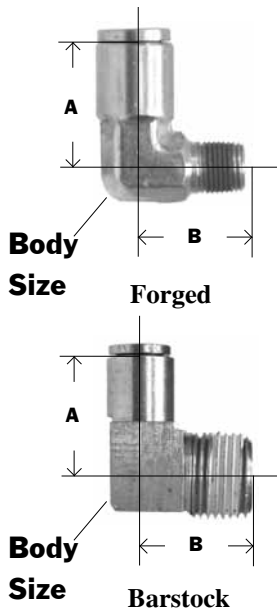


AQ68DOT
68PM
1868
DQ68DOT
68PMT

Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
685320	5/32" x 10/32"	0.69	0.37	0.02	10.56
685321	5/32" x 1/16"	0.67	0.37	0.02	5.31
685322	5/32" x 1/8"	0.67	0.43	0.02	5.10
680302	3/16" x 1/8"	1.82	0.50	0.02	8.63
680402	1/4" x 1/8"	0.94	0.50	0.04	4.21
680404	1/4" x 1/4"	1.08	0.56	0.05	4.85
680406	1/4" x 3/8"	1.10	0.68	0.08	7.98
680602	3/8" x 1/8"	1.22	0.68	0.04	6.43
680604	3/8" x 1/4"	1.38	0.68	0.08	5.79
680606	3/8" x 3/8"	1.32	0.68	0.08	6.90
680608	3/8" x 1/2"	1.02	0.87	0.14	11.10
680804	1/2" x 1/4"	1.36	0.81	0.11	14.87
680806	1/2" x 3/8"	1.54	0.87	0.12	8.82
680808	1/2" x 1/2"	1.62	0.87	0.14	9.14
681006	5/8" x 3/8"	1.34	.94	0.18	15.35
681008	5/8" x 1/2"	1.50	.94	0.18	16.63
681208	3/4" x 1/2"	1.28	1.06	0.20	20.40
681212	3/4" x 3/4"	1.93	1.18	0.20	21.10

Those are my principles. If you don't like them I have others.

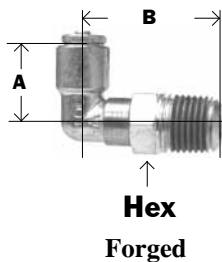
- Groucho Marx

MALE ELBOW

AQ69DOT
169 PMTNS
1869
DQ69DOT

Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
695302*	5/32" x 1/16"	0.65	0.59	0.32	0.03	11.55
695322*	5/32" x 1/8"	0.65	0.59	0.32	0.03	8.83
690302	3/16" x 1/8"	0.71	0.75	0.47	0.03	14.84
690402	1/4" x 1/8"	0.91	0.75	0.37	0.05	7.78
690404	1/4" x 1/4"	0.77	1.02	0.71	0.06	7.44
690406	1/4" x 3/8"	1.00	0.98	0.50	0.11	10.33
690602	3/8" x 1/8"	0.97	0.80	0.49	0.14	11.21
690604	3/8" x 1/4"	0.96	1.02	0.71	0.14	8.84
690606	3/8" x 3/8"	1.04	1.10	0.87	0.15	9.75
690608	3/8" x 1/2"	1.04	1.19	0.62	0.20	17.99
690804	1/2" x 1/4"	1.15	1.05	0.62	0.22	15.39
690806	1/2" x 3/8"	1.15	1.05	0.62	0.22	15.30
690808	1/2" x 1/2"	1.16	1.12	0.87	0.24	18.50
691006	5/8" x 3/8"	1.34	1.10	0.95	0.30	21.27
691008	5/8" x 1/2"	1.44	1.42	1.18	0.32	23.02
691208	3/4" x 1/2"	1.42	1.48	0.94	0.32	28.16
691212	3/4" x 3/4"	1.22	1.40	0.93	0.34	37.36

* Barstock

MALE SWIVEL ELBOW

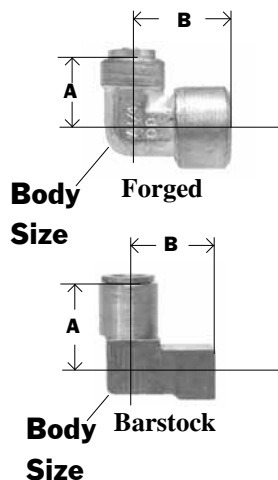
AQ69DOTS
169PMT
1869
DQ69DOTS

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
690402S	1/4" x 1/8"	0.89	0.88	0.43	0.07	9.95
690404S	1/4" x 1/4"	0.73	1.12	0.56	0.10	14.11
690406S	1/4" x 3/8"	0.75	1.25	0.75	0.10	12.59
690602S	3/8" x 1/8"	0.98	1.08	0.43	0.10	11.21
690604S	3/8" x 1/4"	0.98	1.14	0.56	0.10	12.83
690606S	3/8" x 3/8"	0.98	1.19	0.68	0.14	12.43
690608S	3/8" x 1/2"	0.98	1.52	0.87	0.19	19.55
690804S	1/2" x 1/4"	1.16	1.26	0.56	0.16	35.03
690806S	1/2" x 3/8"	1.16	1.34	0.68	0.18	16.55
690808S	1/2" x 1/2"	1.16	1.61	0.62	0.26	21.48
691006S	5/8" x 3/8"	1.23	1.41	0.68	0.28	21.65
691008S	5/8" x 1/2"	1.23	1.71	0.87	0.30	25.81
691208S	3/4" x 1/2"	1.42	1.77	0.87	0.50	43.97
691212S	3/4" x 3/4"	1.22	2.30	1.06	0.56	46.27

Laziness is nothing more than the habit of resting before you get tired.

- Jules Renard

FEMALE ELBOW

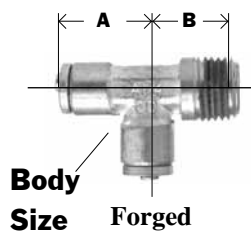


Part #	Tube O.D. x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
700402	1/4" x 1/8"	0.92	0.83	0.37	0.06	8.94
700404	1/4" x 1/4"	1.02	1.02	0.50	0.10	11.14
700406	1/4" x 3/8"	1.11	0.98	0.62	0.16	14.10
700602	3/8" x 1/8"	0.96	0.67	0.71	0.15	18.99
700604	3/8" x 1/4"	0.96	0.94	0.48	0.12	11.18
700606	3/8" x 3/8"	0.98	0.91	0.68	0.17	15.55
700804*	1/2" x 1/4"	1.15	1.11	0.82	0.22	11.98
700806*	1/2" x 3/8"	1.12	1.11	0.82	0.26	20.95
700808	1/2" x 1/2"	1.05	1.22	1.06	0.30	16.77

* Barstock

AQ70DOTS
1870
DQ70DOTS
170PMTNS

MALE RUN TEE

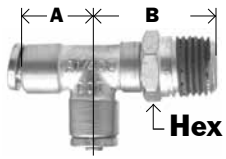
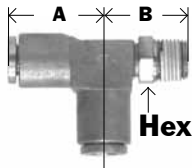


Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
710402	1/4" x 1/8"	0.74	0.92	0.37	0.06	12.43
710404	1/4" x 1/4"	0.92	1.24	0.37	0.08	13.24
710604	3/8" x 1/4"	1.00	1.14	0.50	0.20	16.55
710606	3/8" x 3/8"	0.98	0.98	0.49	0.12	15.83
710608	3/8" x 1/2"	1.12	1.42	0.94	0.14	26.66
710806	1/2" x 3/8"	1.14	1.05	0.62	0.28	23.89

AQ71DOT
171PMTNS
1871
DQ71DOT

Originality is the fine art of remembering what you hear but forgetting where you heard it.

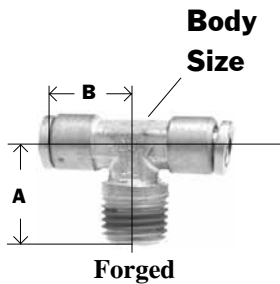
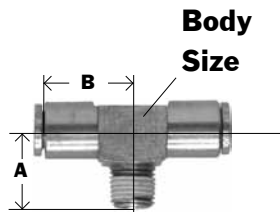
- Laurence J. Peter

MALE SWIVEL RUN TEE**Forged****Barstock**

AQ71DOTS
171PMT
1871
DQ71DOTS

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
710402S	1/4" x 1/8"	0.92	0.82	0.43	0.10	13.96
710404S	1/4" x 1/4"	0.92	1.24	0.56	0.11	15.72
710604S	3/8" x 1/4"	1.00	1.14	0.56	0.15	18.92
710606S	3/8" x 3/8"	0.98	1.18	0.68	0.14	19.82
710804S*	1/2" x 1/4"	1.18	1.22	0.56	0.24	26.19
710806S	1/2" x 3/8"	1.14	1.31	0.68	0.24	26.12
710808S	1/2" x 1/2"	1.14	1.61	0.62	0.30	28.98

* Barstock

MALE BRANCH TEE**Forged****Barstock**

Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
720302*	3/16" x 1/8"	0.64	0.75	0.41	0.07	11.98
720402	1/4" x 1/8"	0.74	0.92	0.37	0.10	12.71
720404	1/4" x 1/4"	0.92	0.92	0.43	0.10	13.24
720604	3/8" x 1/4"	1.00	0.99	0.50	0.20	15.75
720606	3/8" x 3/8"	0.98	0.99	0.50	0.10	23.37
720804	1/2" x 1/4"	1.14	1.12	0.87	0.20	27.80
720806	1/2" x 3/8"	1.05	1.16	0.62	0.24	24.35
720808	1/2" x 1/2"	1.42	1.24	0.94	0.32	31.98

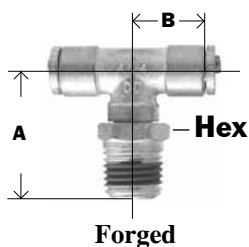
* Barstock

AQ72DOT
172PMTNS
1872
DQ72DOT

Most conversations are simply monologues delivered in the presence of witnesses.

- Margaret Millar

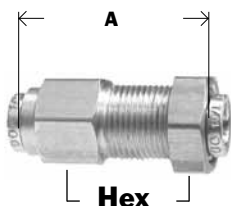
MALE SWIVEL BRANCH TEE



Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
720402S	1/4" x 1/8"	1.04	0.92	0.43	0.12	13.95
720404S	1/4" x 1/4"	1.16	0.92	0.56	0.14	15.07
720602S	3/8" x 1/8"	1.06	0.96	0.43	0.19	16.16
720604S	3/8" x 1/4"	1.16	0.99	0.56	0.20	20.13
720606S	3/8" x 3/8"	1.21	0.98	0.68	0.18	19.88
720804S	1/2" x 1/4"	1.26	1.16	0.56	0.30	25.14
720806S	1/2" x 3/8"	1.34	1.16	0.68	0.34	26.30
720808S	1/2" x 1/2"	1.64	1.16	0.87	0.22	27.91

AQ72DOTS
172PMT
1872
DQ72DOTS

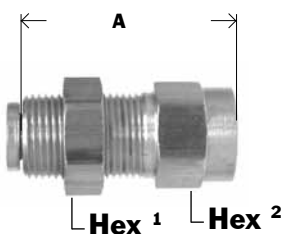
BULKHEAD UNION



Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
820400	1/4"	1.69	0.62	0.16	15.03
820600	3/8"	1.55	1.06	0.21	20.82
820800	1/2"	1.82	1.18	0.14	22.79
821000	5/8"	1.85	1.25	0.30	42.39

AQ82DOT
62PMTBH
1874
DQ82DOT

FEMALE BULKHEAD UNION



Part #	Tube O.D. x Female NPTF	A	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
860402	1/4" x 1/8"	1.30	0.68	0.68	0.08	12.08
860404	1/4" x 1/4"	1.53	0.68	0.75	0.10	12.26
860604	3/8" x 1/4"	2.10	1.12	0.94	0.14	13.60
860606	3/8" x 3/8"	1.84	0.81	0.87	0.16	18.87
860808	1/2" x 1/2"	2.54	1.31	1.06	0.32	21.29

AQ86DOT
1873
DQ86DOT
66PMTBH

AIR BRAKE - ACCESSORIES**BRASS SPLIT SLEEVE D.O.T.
FITTINGS (5/32 O.D.)****COLLET**

Part #	Tube O.D.	List Price
38-711	5/32"	1.32

NUT

Part #	Tube O.D.	List Price
38-732	5/32"	1.65

DOUBLE END UNION

Part #	Tube O.D.	List Price
38-761	5/32"	11.77

CONNECTOR

Part #	Tube O.D.	Pipe Thread	List Price
38-769	5/32"	1/16	7.99
38-770	5/32"	1/8	7.76

ELBOW

Part #	Tube	Pipe Thread	List Price
38-718	5/32"	1/8	7.39

BRASS FITTINGS**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.



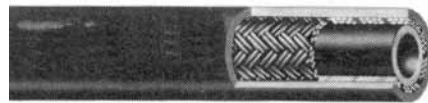
Part #	Type A	Color	Length	List Price
38-950	1/8"	Black	100'	52.46
38-952	1/4"	Black	100'	104.37
38-952R	1/4"	Red	100'	106.38
38-952U	1/4"	Blue	100'	106.38
38-952-2	1/4"	Black	500'	420.18

AIR BRAKE TUBING

Part #	Type B	Color	Length	List Price
38-960	3/8"	Black	100'	162.98
38-960U	3/8"	Blue	100'	324.30
38-960Y	3/8"	Yellow	100'	324.30
38-960B5	3/8"	Black	500'	1031.31
38-965	1/2"	Black	100'	228.24
38-965R	1/2"	Red	100'	441.60
38-965B5	1/2"	Black	500'	1080.04
38-970	5/8"	Black	100'	432.72
38-975	3/4"	Black	100'	499.00

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.

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'	118.29
38-926	5/16	9/16	25'	139.92
38-923	1/4	1/2	25'	124.06
38-927	3/8	5/8	50'	181.76


STEEL BRAKE LINES FOR DOMESTIC VEHICLES

Length	Catalog Number 3/16" O.D.	List Price	Catalog Number 1/4" O.D.	List Price	Catalog Number 5/16" O.D.	List Price	Catalog Number 3/8" O.D.	List Price
6"	38-930	4.90						
8"	38-931	5.25						
10"	38-932	5.54						
12"	38-933	4.68					38-985	6.67
20"	38-934	6.11					38-986	7.60
30"	38-935	6.98	38-943	8.01				
40"	38-936	8.13	38-944	9.53			38-988	13.10
51"	38-937	9.52	38-945	12.16	38-984	13.44	38-989	16.62
60"	38-938	12.98	38-946	12.79			38-990	18.40
72"	38-939	13.56						

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

**AIR BRAKE ACCESSORIES
GLADHAND COUPLINGS**

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



SERVICE (Signal) Blue
connects only to service

Part #	List Price
38-712	13.80

EMERGENCY (Supply Line) Red

Part #	connects only to emergency	List Price
38-714		13.80

UNIVERSAL - Gold

Part #	connects to both styles	List Price
38-716		12.74

GLADHAND SEAL


Part #	Full Face	List Price
38-720		1.50

HEX BALL FOOT CHUCK


Part #	List Price
46-600 1/4" Female Pipe	3.07

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


Part #	List Price
46-607 1/4" I.D. Hex	3.14

DUAL 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	25.30

ANGLE CHUCK


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	9.53

AIR BRAKE - ACCESSORIES**AIR BRAKE HOSES****AIR BRAKE HOSE**

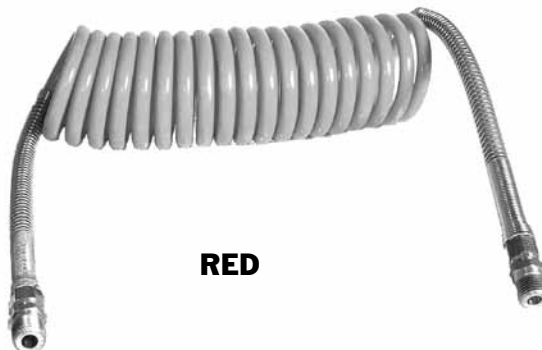
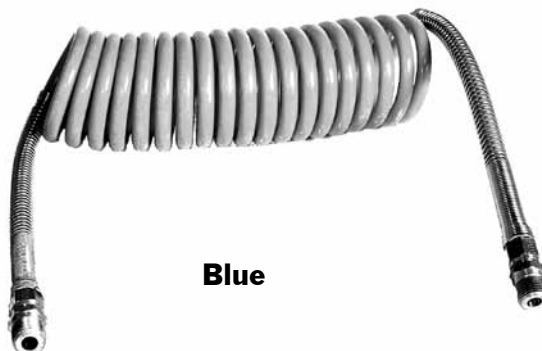
- Spiral synthetic cord reinforcement with neoprene cover.
- 40° F to +200° F temperature range.
- Max operating pressure 255 psi
- Max burst pressure 900 psi
- Meets SAE J1402

Part #	ID	OD	Length	List Price
38-910	3/8	3/4	50'	101.29
38-915	1/2	7/8	50'	130.73

REMOTE CONTROL DRAIN VALVES**REMOTE CONTROL DRAIN VALVES**

- Brass Body and stainless steel spring.
- Steel cable, nylon coated, certified to 200lbs pull test.
- Low profile to minimize accidental hits and damages.
- Pipe thread 1/4" NPTF.

Part #	Length	List Price
46-492	Standard 48"	25.04
46-493	Standard 60"	25.63

BRASS FITTINGS**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"	136.72
38-705	12'	12"	192.54
38-710	15'	12"	170.26

You don't stop laughing because you grow old.
You grow old because you stop laughing.

- Michael Pritchard

BRASS 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.

MALE CONNECTOR



HOSE BARB X MALE PIPE

Part #	Hose ID	Size	Ind #	List Price
38-800	3/16	1/8	1541	1.78
38-802	1/4	1/8	1537	1.83
32-377	1/4	1/4	1581	1.60
38-806	5/16	1/8	1551	2.02
38-808	5/16	1/4	1555	2.27
38-810	3/8	1/8	1565	2.08
32-381	3/8	1/4	1564	2.02
32-382	3/8	3/8	1566	3.66
32-383	1/2	3/8		2.62
32-384	1/2	1/2		3.99
32-182	5/8	3/8	1411	4.90
32-385	5/8	1/2	1431	4.22
32-387 ⁵	3/4	1/2	1430	4.43
32-388	3/4	3/4		5.71
32-185	1	3/4		12.84

INVERTED FLARE MALE CONNECTOR



HOSE BARB X INVERTED FLARE

Part #	Hose ID	Inv. Flare	Ind #	List Price
38-828	5/16	1/4	1598	2.87
38-830	5/16	5/16	1560	2.29
38-832	5/16	3/8	1561	3.71
38-834	3/8	5/16	1568	3.47
38-836	3/8	3/8	1570	5.14

See Hose Clamps starting on page 237

AIR BRAKE - HOSES/ ENDS

90° MALE ELBOW



HOSE BARB X MALE PIPE

Part #	Hose ID	Size	Ind #	List Price
38-860	1/4	1/8	1582	4.26
38-862	5/16	1/8	1556	4.02
38-864	5/16	1/4	1557	4.38
38-866	3/8	1/8	1572	4.95
38-868 ⁵	3/8	1/4	1571	4.32
32-186	3/8	3/8		8.57
32-187	1/2	3/8		11.94
32-191	1/2	1/2		15.93
32-188	5/8	3/8		9.24
32-189	5/8	1/2		10.66
32-190	3/4	1/2		13.74

INVERTED FLARE MALE SWIVEL 90° ELBOW



HOSE BARB X TUBE O.D.

Part #	Hose ID	Tube	Ind #	List Price
38-873	5/16	5/16	1405	14.30
38-874	3/8	3/8	1407	8.33

LONG STREET ELLS



Part #	Size	Length	List Price
28-440	1/8	1-3/16"	7.27
28-441	1/8	1-7/16"	3.50
28-442	1/8	1-11/16"	7.51
28-443	1/8	1-7/8"	8.66
28-328	1/4	1-3/16"	15.26
28-329	1/4	1-7/16"	12.43
28-330	1/4	1-11/16"	12.40
28-332	1/4	2-1/4"	16.90
28-333	3/8	1-3/4"	19.36

EXTENSION ADAPTERS D.O.T.

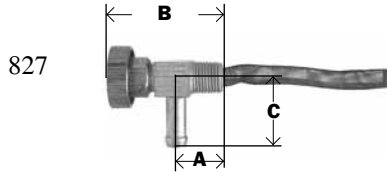


Part #	Size	Length	List Price
28-335	1/8	1-1/4"	8.19
28-336	1/8	1-3/4"	10.88
28-338	1/4	1-9/16"	5.83
28-339	1/4	1-13/16"	7.50
28-340	1/4	2-1/16"	7.10

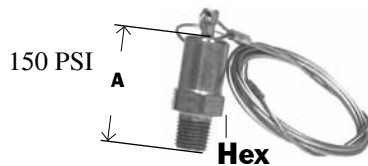
⁵ Also stocked in Atlanta
(See page Intro II for details)

DRAIN COCKS**BRASS FITTINGS****DRAIN COCKS**

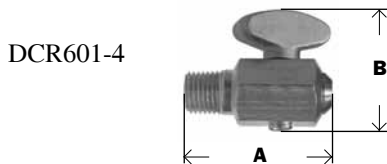
- For use with low pressure air, water and fluids.
- Designed for a working pressure of 150 PSI.
- Hand-tightening provides a metal-to-metal seal.
- Not intended for natural gas, LPG, nuclear or aircraft applications.

GASOLINE SHUT OFF w/ SCREEN FILTER

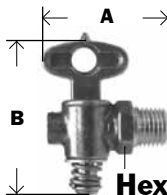
Part #	Barb X Male Pipe	A	B	C	Approx. Wt. Lbs.	List Price
46-064	1/4" x 1/8"	0.55	1.34	0.66	0.06	37.62

AIR TANK DRAIN VALVE - Self Sealing w/ 5ft. remote cable

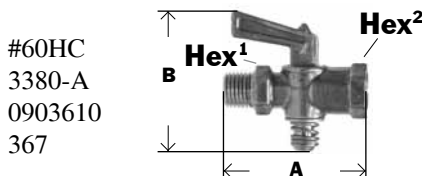
Part #	Male Pipe	A	Hex	Approx. Wt. Lbs.	List Price
46-065	1/4"	1.74	0.75	0.16	38.89

DRAIN COCK 150 PSI - Trunk Air Tank

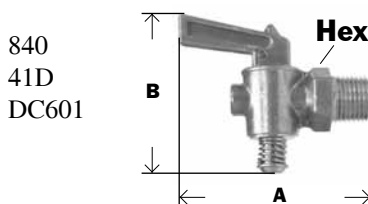
Part #	Male Pipe	A	B	Approx. Wt. Lbs.	List Price
46-066	1/4"	1.73	1.41	0.22	20.35

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	15.34
46-068	1/4"	W15310	1.53	1.95	0.62	0.18	15.35

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	26.02

LEVER HANDLE

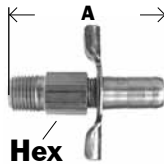
Part #	Male Pipe	Industry Number	A	B	Hex	Approx. Wt. Lbs.	List Price
46-070	1/8"	M-41-P	1.99	1.80	0.62	0.04	13.44
46-071	1/4"	M-42-P	2.06	1.81	0.62	0.06	13.44
46-072	3/8"	M-43-P	2.30	2.29	0.81	0.08	16.44
46-073	1/2"	M-44-P	3.00	2.50	0.87	0.16	38.19

BRASS FITTINGS

DRAIN COCKS

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	11.20

INTERNAL SEAT

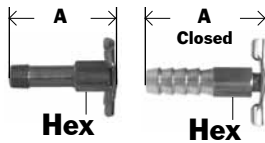
HB - 5/16
803
305A



Part #	Male Pipe	Industry Number	A	Hex	Approx. Wt. Lbs.	List Price
46-074	1/8"	130	0.92	0.40	0.04	5.06
46-075	1/4"	140	0.94	0.56	0.06	5.49
46-077	3/8"	230	1.34	0.68	0.08	9.52

LONG INTERNAL SEAT

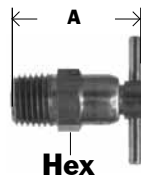
809



Part #	Size	Ind #	A	Hex	Approx. Wt. Lbs.	List Price
46-078	1/8" MIP	185	1.72	0.43	0.02	16.85
46-076	3/8" Hose I.D.		1.65	0.43	0.02	10.28

TEE HANDLE - Internal Seat

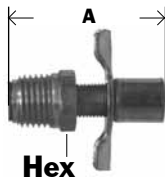
DC603
802



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	12.00
46-081	1/4"	M-201-P	1.31	0.56	0.06	9.56
46-082	3/8"	M-202-P	1.69	0.68	0.12	15.75

EXTERNAL SEAT w/ SPOUT

200A
239
DC606
807

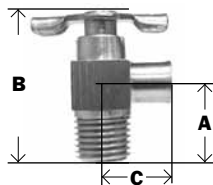


Part #	Male Pipe	Industry Number	A	Hex	Approx. Wt. Lbs.	List Price
46-084*	1/4"	6788	1.56	0.56	0.02	3.23

* Replaces GM # 511771 & Chrysler #836015

BIBB NEEDLE VALVE - .38 Hose ID

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	9.35
46-089	1/4"	120	0.82	1.76	0.66	0.06	8.04
46-089A	1/4"	6660	0.55	1.34	0.66	0.06	6.99

RADIATOR TYPE - External Seat

320D
240
DC604
801

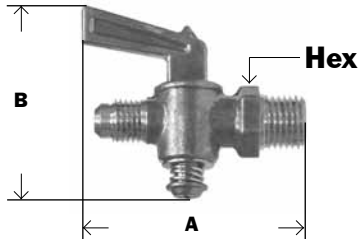


Part #	Male Pipe	Industry Number	A	Hex	Approx. Wt. Lbs.	List Price
46-085	1/8"	M-320-P	0.90	0.43	0.02	3.00
46-086	1/4"	M-321-P	1.00	0.56	0.04	2.31
46-087	3/8"	M-322-P	1.25	0.68	0.08	9.57
46-083	1/2"		1.52	0.87	0.12	24.01

SHUT-OFF COCKS**BRASS FITTINGS**

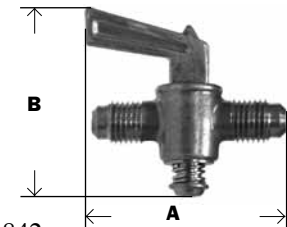
• Designed for automotive or industrial use. **AGA** approved shut-off cocks approved for **LPG** and natural gas applications. Lubricant may wash out at higher pressures or with some exotic fluids.

- Designed for working pressure of 30 PSI.
- Forged brass bodies and brass handles.
- Instantaneous off-on operation with 360° rotation.

FLARE X MALE PIPE

V402F
848

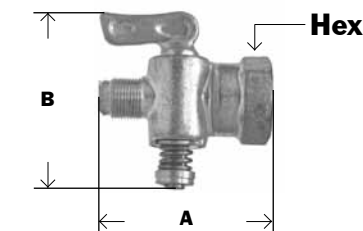
Part #	Male Flare X Male Pipe	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-100	1/4" x 1/8"	27SAE	2.16	1.88	0.50	0.14	14.40
46-101	1/4" x 1/4"	227SAE	2.19	1.84	0.62	0.16	17.54
46-102	5/16" x 1/8"	29SAE	2.06	1.88	0.50	0.14	14.40
46-103	5/16" x 1/4"	229SAE	2.12	1.82	0.69	0.16	17.54
46-104	3/8" x 1/4"	57SAE	2.27	1.84	0.62	0.17	17.54
46-107	1/2" x 3/8"	67SAE	2.36	2.27	0.82	0.20	21.82

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	14.94
46-116	5/16"	30SAE	2.00	1.90	0.16	42.35
46-117	3/8"	58SAE	2.20	1.83	0.18	17.19
46-118	1/2"	68SAE	2.50	2.31	0.50	24.53
46-119	5/8"	1010SAE	3.05	2.59	0.70	24.66

* 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	35.08
46-125	3/8" x 1/2"	161SAE	2.45	2.31	1.03	0.32	31.39
46-126*	3/8" x 1/2"	161SAE	2.26	2.32	1.03	0.28	33.64
46-128	1/2" x 1/2"	164SAE	2.52	2.19	1.03	0.34	36.03
46-123	5/8" x 1/2"	164SAE	2.61	2.12	1.25	0.54	50.70

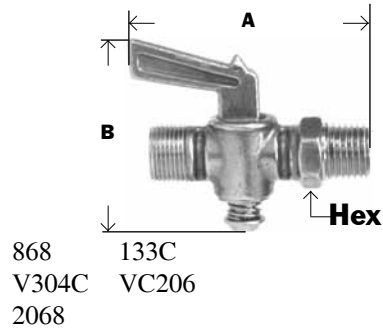
* Heater Valve

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

Save 5% by ordering online at
www.midlandindustrial.com

COMPRESSION X MALE PIPE

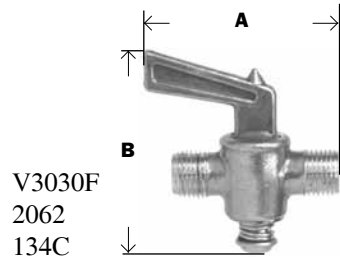
* See pg. 71 & 72 to order nut and sleeve separately.



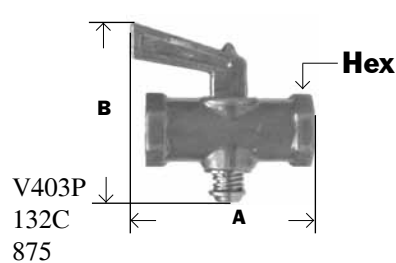
Part #	Comp X Male Pipe	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-130	1/4" x 1/8"	27-C	1.87	1.81	0.51	0.14	15.80
46-131	1/4" x 1/4"	227-C	2.05	1.86	0.62	0.15	18.06
46-132	5/16" x 1/8"	29-C	2.05	1.90	0.50	0.16	18.81
46-134	3/8" x 1/4"	57-C	2.05	1.83	0.62	0.15	16.73

COMPRESSION X COMPRESSION

* See pg. 71 & 72 to order nut and sleeve separately.

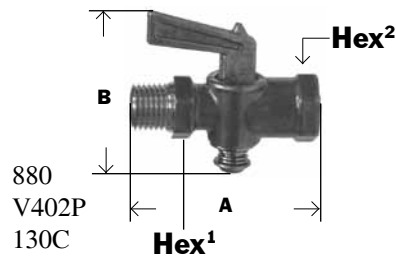


Part #	Comp X Comp	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-140	1/4"	28-C	1.82	1.84	0.12	16.21
46-141	5/16"	30-C	1.84	1.88	0.14	17.01
46-142	3/8"	58-C	1.87	1.80	0.14	16.73
46-143	1/2"	68-C	2.21	2.32	0.22	25.33

FEMALE X FEMALE PIPE


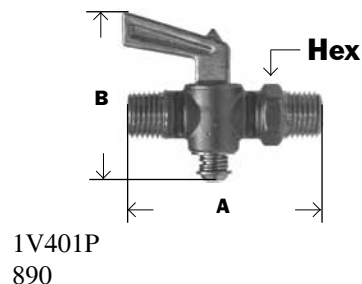
Part #	Female Pipe X Female Pipe	A	B	Hex	Approx. Wt. Lbs.	List Price
46-151	1/8"	1.77	1.79	0.56	0.12	14.02
46-152 ⁵	1/4"	2.28	1.82	0.69	0.20	14.59
46-152T*	1/4"	2.28	2.00	0.68	0.20	20.13
46-153	3/8"	2.44	2.28	0.81	0.30	23.54

* 150 PSI

MALE PIPE X FEMALE


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	14.19
46-161 ⁵	1/4"	49-P	2.26	1.84	0.69	0.69	0.18	14.59
46-161T*	1/4"		2.26	1.98	0.69	0.69	0.20	20.13
46-162	3/8"	50-P	2.33	2.28	0.82	0.82	0.28	23.54

* 150 PSI

MALE PIPE X MALE PIPE


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	14.77
46-166	1/4"	77-P	2.22	1.84	0.70	0.17	15.92
46-166T*	1/4"		2.23	2.00	0.68	0.18	20.77
46-167	3/8"	78-P	2.43	2.24	0.82	0.22	25.42

* 150 PSI

⁵ Also stocked in Atlanta
(See page Intro II for details)

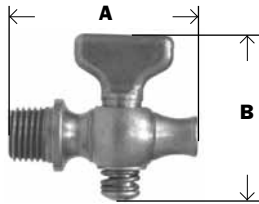
BRASS AIR COCKS

BRASS FITTINGS

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

MIP X BIBB

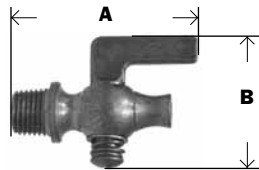
- tee handle
- no hex



Part #	MIP x BIBB	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-300	1/8"	6	1.53	1.55	0.12	16.12
46-301	1/4"	7	1.61	1.54	0.14	19.92

MIP X BIBB

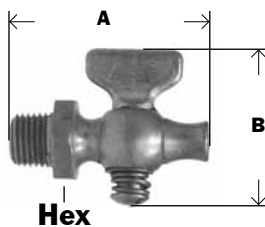
- lever handle
- no hex



Part #	MIP x BIBB	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-305	1/8"	12	2.01	1.71	0.14	17.95
46-306	1/4"	13	2.09	1.66	0.14	21.21

MIP X BIBB

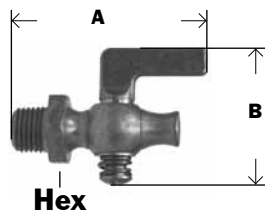
- tee handle
- hex



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	19.39
46-311	1/4"	64	1.69	1.54	0.62	0.14	19.04
46-312	3/8"	8	1.75	1.48	0.75	0.17	19.55

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	20.50
46-316	1/4"	66	2.16	1.71	0.62	0.16	22.10
46-317	3/8"	14	2.26	1.71	0.75	0.18	21.65
46-318	1/2"	15	2.32	1.46	0.87	0.26	24.33

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www.midlandindustrial.com

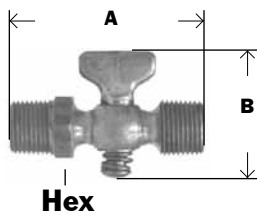
Dimension data can change without notice.
 Please call us when dimensions are critical.

BRASS FITTINGS

BRASS AIR COCKS

MIP X MIP

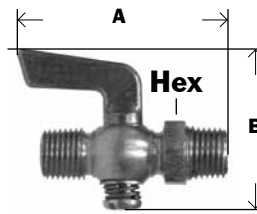
- tee handle
- hex



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	21.07
46-321	1/4"	19	1.92	1.55	0.62	0.16	26.59
46-322	3/8"	20	2.34	1.55	0.75	0.19	22.68
46-323	1/2"	21	2.18	1.50	0.87	0.26	26.86

MIP X MIP

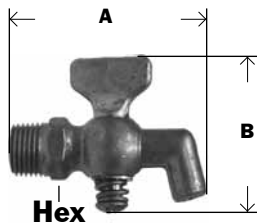
- lever handle
- hex



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	22.25
46-325	1/4"	23	2.18	1.69	0.62	0.16	23.32
46-326	3/8"	24	2.26	1.72	0.75	0.20	23.70
46-327	1/2"	25	2.57	1.81	0.91	0.36	30.15

MIP X BIBB NOSE

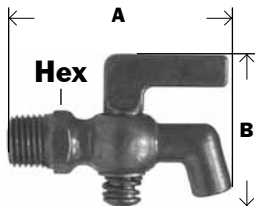
- tee handle
- hex



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	27.15
46-331	1/4"	27	2.11	1.57	0.56	0.16	28.15

MIP X BIBB NOSE

- lever handle
- hex



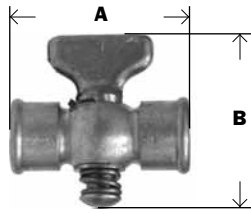
Part #	MIP X BIBB NOSE	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-335	1/8"	29	2.25	1.68	0.56	0.14	28.58
46-336	1/4"	30	2.20	1.67	0.56	0.17	28.13
46-337	3/8"	31	2.25	1.72	0.87	0.20	25.62
46-338	1/2"	32	2.31	1.71	0.87	0.22	45.49

What the world needs is more geniuses with humility, there are so few of us left.

- Oscar Levant

BRASS AIR COCKS**BRASS FITTINGS****FIP X FIP**

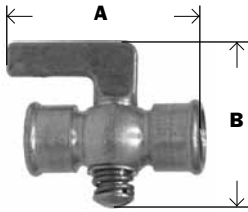
- tee handle
- no hex



Part #	FIP X FIP	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-340	1/8"	37	1.62	1.50	0.14	19.17
46-341	1/4"	38	1.93	1.56	0.16	20.19
46-342	3/8"	39	2.00	1.55	0.20	23.20

FIP X FIP

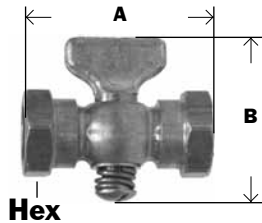
- lever handle
- no hex



Part #	FIP X FIP	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-345	1/8"	43	1.94	1.68	0.14	22.10
46-346	1/4"	44	2.10	1.71	0.16	22.17
46-347	3/8"	45	2.14	1.69	0.20	26.00

FIP X FIP

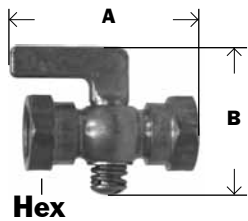
- tee handle
- hex



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	23.20
46-351	1/4"	56	1.94	1.55	0.75	0.18	23.00
46-352	3/8"	57	1.99	1.58	0.81	0.20	27.11

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	24.02
46-356	1/4"	59	2.10	1.71	0.75	0.18	24.08
46-357	3/8"	60	2.10	1.69	0.81	0.20	27.80
46-358	1/2"	60A	2.50	2.02	1.00	0.36	34.82

Wise men talk because they have something to say; fools, because they have to say something.

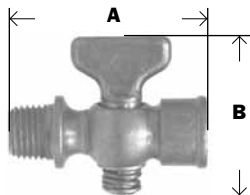
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BRASS FITTINGS

BRASS AIR COCKS

MIP X FIP

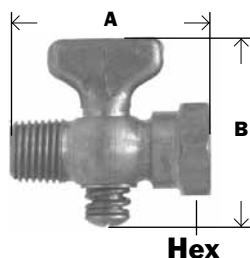
- tee handle
- no hex



Part #	MIP X FIP	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-360	1/8"	40	1.70	1.55	0.14	19.67
46-361	1/4"	41	1.94	1.55	0.16	24.91
46-362	3/8"	42	2.06	1.50	0.20	24.70

MIP X FIP

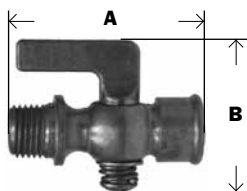
- tee handle
- hex



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	26.59
46-371	1/4"	50	2.06	1.55	0.75	0.20	24.73
46-372	3/8"	51	2.12	1.53	0.81	0.22	27.47
46-373	1/2"	51A	2.13	1.62	1.00	0.30	34.88

MIP X FIP

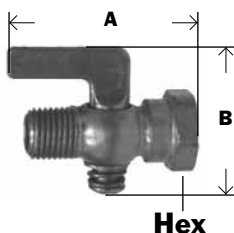
- lever handle
- no hex



Part #	MIP X FIP	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-365	1/8"	46	1.94	1.72	0.14	21.28
46-366	1/4"	47	2.10	1.65	0.16	24.68
46-367	3/8"	48	2.20	1.81	0.24	27.29
46-368	1/2"	48A	2.50	1.95	0.42	34.25

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	24.08
46-376	1/4"	53	2.06	1.76	0.75	0.20	25.55
46-377	3/8"	54	2.13	1.71	0.81	0.22	29.77
46-378	1/2"	54A	2.65	1.96	1.00	0.28	35.65

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

NEEDLE VALVES

BRASS FITTINGS

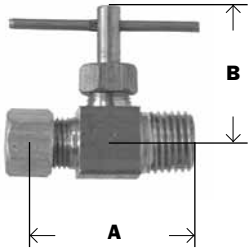
NEEDLE VALVES

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

- Used on instrumentation, hydraulic, and pneumatic systems.
- Designed for a maximum working pressure of 150 PSI.

- Provided with steel handles and metal-to-metal seats with fine-thread screwdown.
- Not designed for natural gas, LPG, nuclear or aircraft applications.
- Always install with pressure against the seat.

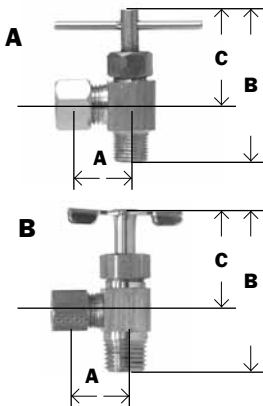
COMP X MALE PIPE



NV106C 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	24.33
46-002	1/4" x 1/8"	M-101-C	1.29	1.12	0.07	14.94
46-002X	Heavy Pattern	M-101-C	1.19	0.88	0.09	15.00
46-003	1/4" x 1/4"	M-101-C	1.27	1.14	0.10	7.03
46-004	5/16" x 1/8"	M-102-C	1.50	1.25	0.14	16.68
46-005	3/8" x 1/4"	M-143-C	1.53	1.22	0.18	12.46

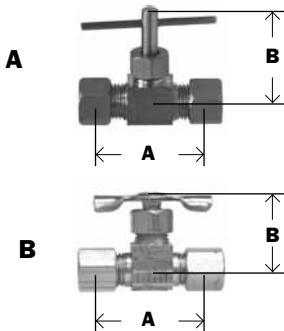
COMP X MALE PIPE-ANGLE



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	19.73
46-011	1/4" x 1/8"	A	M-103-C	0.56	1.48	0.93	0.08	5.28
46-011X	Heavy Pattern	B	M-103-C	0.53	1.53	0.83	0.08	12.22
46-012	1/4" x 1/4"	B	M-104-C	0.62	1.67	0.90	0.13	14.00
46-013	5/16" x 1/8"	B	M-104-C	0.63	1.63	0.95	0.10	17.00
46-014	5/16" x 1/4"	B	M-104-C	0.69	1.73	0.92	0.14	39.64
46-016	3/8" x 1/4"	A	M-303-C	0.69	1.81	0.92	0.16	8.36

COMP X COMP



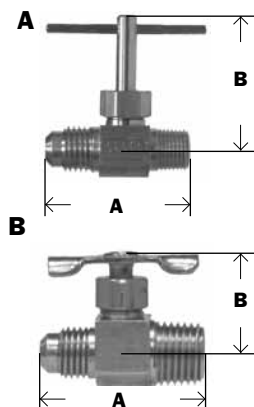
NV105C 2201
3062 822

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	22.56
46-021	1/4"	A	M-106-C	1.17	1.12	0.10	5.69
46-022	5/16"	A	M-107-C	1.22	1.08	0.12	13.21
46-023	3/8"	A	M-113-C	1.31	1.15	0.13	8.73

One of the keys to happiness is a bad memory.

- Rita Mae Brown

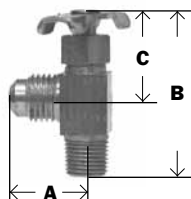
FLARE X MALE PIPE



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	12.44
46-029	1/4" x 1/4"	B	M-1040-SAE	1.38	0.88	0.09	13.15
46-031	3/8" x 1/4"	B	M-108-SAE	1.73	1.22	0.18	20.25

NV103F
2405
823
3048

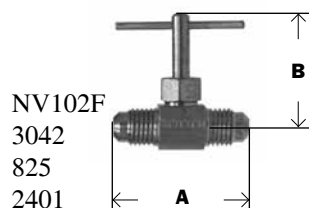
FLARE X MALE PIPE



NV101F 824
2403 3049

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	10.28
46-038	5/16" x 1/8"	M-203-SAE	0.88	1.59	0.94	0.11	17.48
46-039	5/16" x 1/4"	M-204-SAE	0.90	1.94	1.00	0.14	14.94
46-040	3/8" x 1/4"	M-303-SAE	0.97	1.84	0.90	0.17	20.71

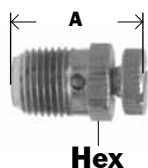
FLARE X FLARE



NV102F
3042
825
2401

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	4.67
46-046	3/8"	M-115-SAE	1.79	1.19	0.20	13.56

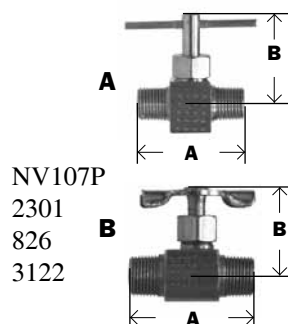
MULTI-PURPOSE AIR VENT



705

Part #	Male Pipe	A	Hex	Approx. Wt. Lbs.	List Price
46-048	1/8"	0.78	0.43	0.02	2.63

MALE PIPE TO MALE PIPE



NV107P
2301
826
3122

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	18.49
46-050X	1/8"	B	M-108-P	1.38	0.66	0.08	13.64
46-051	1/4"	A	M-110-P	1.69	1.00	0.16	12.17

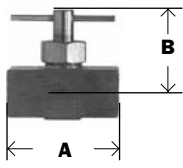
Nobody believes the official spokesman... but everybody trusts an unidentified source.

- Ron Nesen

NEEDLE VALVES

BRASS FITTINGS

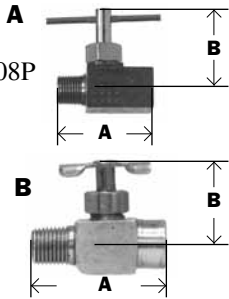
NV109P
2304
817
3103



Part #	Female Pipe X Female Pipe	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-055	1/8"	M-304-P	1.12	0.88	0.18	13.27
46-056	1/4"	M-3044-P	1.60	1.24	0.21	8.17
46-056P	1/4" Heavy	M-3044-P	1.60	1.12	0.20	13.12

MALE X FEMALE PIPE

NV108P
2305
818
3120

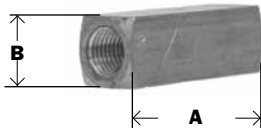


Part #	Male Pipe X Female Pipe	Handle	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-060	1/8"	A	M-305-P	1.18	1.09	0.10	5.62
46-061	1/4"	A	M-3055-P	1.60	1.14	0.18	8.23
46-061L	1/4" Light Pattern	B	M-3055-P	1.88	1.09	0.21	18.23

FLOW CONTROL NEEDLE & CHECK VALVES

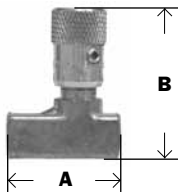
- Precision calibrated dial to determine and allow a return to required flow settings.
- Safe positive stop for needle travel.
- Positive no-leak stem seal.
- 2PSI cracking pressure.
- 1000 PSI maximum operating pressure.
- One piece forged housing.
- Nickel Plated available.
- Suitable for natural gas.

CHECK VALVE



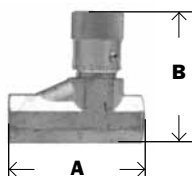
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
20-473	1/4"	1.94	0.68	0.20	72.78

FLOW CONTROL



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
20-485	1/8"	1.47	1.48	0.18	83.94
20-487	1/4"	1.94	1.92	0.27	101.35

NEEDLE VALVE



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
20-501	1/8"	1.47	1.80	0.18	53.48
20-503	1/4"	1.94	2.00	0.28	90.39

BRASS FITTINGS

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	46.16
46-769	1/8 Male x 1/8 Female	Panel	0.141	61.76
46-770	1/4 Male x 1/4 Female	Regular	0.188	44.29
46-771	1/4 Male x 1/4 Female	Panel	0.188	57.96

MIP X MIP STRAIGHT

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-774	1/8 Male x 1/8 Male	Regular	0.141	42.47
46-775	1/8 Male x 1/8 Male	Panel	0.141	61.76
46-776	1/4 Male x 1/4 Male	Regular	0.188	40.35
46-777	1/4 Male x 1/4 Male	Panel	0.188	57.96

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	42.47
46-781	1/8 Female x 1/8 Female	Panel	0.172	56.82
46-782	1/4 Female x 1/4 Female	Regular	0.188	46.39
46-783	1/4 Female x 1/4 Female	Panel	0.188	57.96

NEEDLE VALVES



MIP X FIP ANGLE

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-786	1/8 Male x 1/8 Female	Regular	0.188	44.60
46-787	1/8 Male x 1/8 Female	Panel	0.188	60.00
46-788	1/4 Male x 1/4 Female	Regular	0.281	44.77

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	44.60
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	42.01
46-795	1/4 Male x 1/4 Male	Panel	0.281	61.16

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	41.03
46-799	1/8 Female x 1/8 Female	Panel	0.188	55.20
46-800	1/4 Female x 1/8 Female	Regular	0.281	42.01
46-801	1/4 Female x 1/4 Female	Panel	0.281	56.27

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	5.17

SPECIAL VERSIONS

Many special versions of these valves have been produced for other services. If your application is not described here or covered by our recommendations, please contact us. It is quite possible that one of these valve types can be economically adapted to your requirements.

MICRO-METERING VALVES**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	50.84
46-742	1/8 Male x 1/8 Female	Panel	0.102	64.71
46-743	1/4 Male x 1/4 Female	Regular	0.172	56.27
46-744	1/4 Male x 1/4 Female	Panel	0.175	61.76

MIP X MIP STRAIGHT

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-745	1/8 Male x 1/8 Male	Regular	0.102	55.24
46-746	1/8 Male x 1/8 Male	Panel	0.102	70.34
46-747	1/4 Male x 1/4 Male	Regular	0.172	56.27
46-748	1/4 Male x 1/4 Male	Panel	0.172	65.87

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	47.66
46-753	1/8 Female x 1/8 Female	Panel	0.141	64.71
46-754	1/4 Female x 1/4 Female	Regular	0.172	52.76
46-755	1/4 Female x 1/4 Female	Panel	0.172	61.76

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

BRASS FITTINGS**MIP X FIP ANGLE**

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-756	1/8 Male x 1/8 Female	Regular	0.182	49.13
46-757	1/8 Male x 1/8 Female	Panel	0.182	63.02
46-758	1/4 Male x 1/4 Female	Regular	0.182	54.76

MIP X MIP ANGLE

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-760	1/8 Male x 1/8 Male	Regular	0.182	53.60
46-761	1/8 Male x 1/8 Male	Panel	0.182	68.50
46-762	1/4 Male x 1/4 Male	Regular	0.182	50.38
46-763	1/4 Male x 1/4 Male	Panel	0.182	64.18

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	68.50
46-766	1/4 Female x 1/4 Female	Regular	0.182	50.38
46-767	1/4 Female x 1/4 Female	Panel	0.182	62.26

COMPRESSION AND FLARE ENDS CAN BE SUBSTITUTED FOR PIPE ENDS IN MOST CASES

Some valves only available on made-to-order basis.

We don't see the things the way they are. We see things the way WE are.

- Talmund

Save 5% by ordering online at
www.midlandindustrial.com

TOGGLE VALVES

TOGGLE SHUT OFF VALVES are constructed to INSTANTANEOUSLY OPEN and CLOSE the flow of fluids and gases. It is ideally suited for use in gas sampling and analysis systems as well as test equipment.

This valve is O-RING SEALED to eliminate leakage and maintenance. The O-ring is positioned between the operating mechanism and the seat, and seals the closely fitted cylinder to give the lowest possible internal volume and protect the mechanism from contamination.

The standard construction is forged brass body, brass cylinder, cap and lever, Viton seat, BUNA "N" 'O' RING seal, steel spring, and stainless steel lever pin.

This valve is rated for 200 p.s.i.g. service from -40° to 250° F and is available in the angle and straight pattern, both of which are available for panel or bracket mounting.



MIP X FIP STRAIGHT

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-804	1/8 Male x 1/8 Female	Regular	0.102	45.63
46-805	1/8 Male x 1/8 Female	Panel	0.102	61.76

MIP X MIP STRAIGHT

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-809	1/8 Male x 1/8 Male	Panel	0.102	56.82
46-810	1/4 Male x 1/4 Male	Regular	0.172	43.48
46-811	1/4 Male x 1/4 Male	Panel	0.172	57.96

FIP X FIP STRAIGHT

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-812	1/8 Female x 1/8 Female	Regular	0.141	46.16
46-813	1/8 Female x 1/8 Female	Panel	0.141	57.50
46-814	1/4 Female x 1/4 Female	Regular	0.172	47.53
46-815	1/4 Female x 1/4 Female	Panel	0.172	54.35



MIP X FIP ANGLE

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-816	1/8 Male x 1/8 Female	Regular	0.182	44.60
46-817	1/8 Male x 1/8 Female	Panel	0.182	60.00
46-818	1/4 Male x 1/4 Female	Regular	0.182	43.70
46-819	1/4 Male x 1/4 Female	Panel	0.182	61.16

MIP X MIP ANGLE

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-820	1/8 Male x 1/8 Male	Regular	0.182	44.60
46-822	1/4 Male x 1/4 Male	Regular	0.182	45.66
46-823	1/4 Male x 1/4 Male	Panel	0.182	61.16

FIP X FIP ANGLE

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-824	1/8 Female x 1/8 Female	Regular	0.182	40.96
46-825	1/8 Female x 1/8 Female	Panel	0.182	55.20
46-826	1/4 Female x 1/4 Female	Regular	0.182	45.66

COMPRESSION AND FLARE ENDS CAN BE SUBSTITUTED FOR PIPE ENDS IN MOST CASES

Some valves only available on made-to-order basis

If you don't know where you're going, you don't know when you're lost.

- Unknown Author

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	70.30
46-832	1/4 x 1/4	74.76
46-833	3/8 x 3/8	168.57
46-834	1/2 x 1/2	191.71

FEMALE X MALE

Part #	Size	List Price
46-835	1/8 x 1/8	83.69
46-838	1/4 x 1/4	83.84
46-840	1/2 x 1/2	208.38

MALE X MALE

Part #	Size	List Price
46-841	1/8 x 1/8	95.33
46-843	1/4 x 1/4	88.48
46-845	3/8 x 3/8	177.36
46-846	1/2 x 1/2	217.95

HOSE BARB X MALE PIPE THREAD

Part # Size List

Part #	Size	List Price
46-849	1/4 x 1/4	112.54
46-850	3/8 x 1/4	112.99

INDUSTRIAL
INSTRUMENTATION
ANGLE BALL VALVES

FEMALE X FEMALE

Part #	Size	List Price
46-875	1/8 x 1/8	78.40
46-876	1/8 x 1/4	85.55
46-877	1/4 x 1/8	85.74
46-878	1/4 x 1/4	73.96

FEMALE X MALE (Bottom)

Part #	Size	List Price
46-880	1/8 x 1/8	89.55
46-881	1/8 x 1/4	89.90
46-882	1/4 x 1/8	89.90
46-883	1/4 x 1/4	82.89
46-884	1/4 x 3/8	103.45
46-885	3/8 x 1/2	110.15

MALE X MALE PIPE THREADS

Part #	Size	List Price
46-886	1/8 x 1/8	86.39
46-887	1/8 x 1/4	94.35
46-888	1/4 x 1/8	94.35
46-889	1/4 x 1/4	86.39
46-891	3/8 x 1/4	95.65

HOSE BIB X MALE PIPE THREAD

Part # Size List

Part #	Size	List Price
46-893	1/4 x 1/8	94.40
46-894	1/4 x 1/4	94.81
46-895	3/8 x 1/8	95.37
46-896	3/8 x 1/4	93.99

INDUSTRIAL
INSTRUMENTATION
3-WAY BALL VALVES

Part #	Size	List Price
46-951	1/8 FPT	75.77
46-956	1/4 FPT	73.76
46-959	3/8 FPT	182.21
46-960	1/2 FPT	188.81

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

Research is what I'm doing when I don't know what I'm doing.

- Wernher von Braun

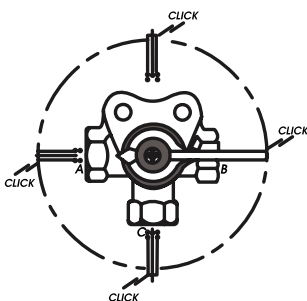
BRASS FITTINGS

SPECIALTY VALVES BRASS FITTINGS

THREE AND FOUR-WAY SELECTOR VALVES

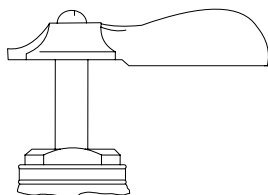
NON-LUBRICATED PLUG VALVES are designed to operate in systems where INSTANTANEOUS PORT SELECTION is desired. Since LUBRICANTS ARE NOT USED, relubrication is not required. There is no lubricant to freeze and lock the valve or to contaminate fine fluids. The O-RING SEALED CAP and STEM eliminate leakage 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 GAS-OIL, 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).



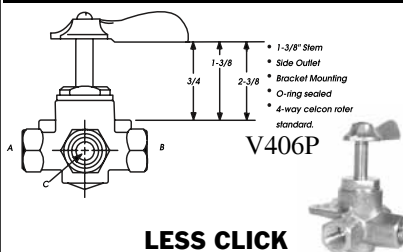
Type 1 (Standard)

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



PANEL MOUNTING AVAILABLE

THREE-WAY VALVES (Side Outlet)



LESS CLICK

Part #	A-B-C Female Pipe Thread	Length of Stem	List Price
46-247	1/4	1-3/8"	34.01
46-248	3/8	1-3/8"	38.25

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"	35.42
46-251	1/4	1-3/8"	34.62
46-252	3/8	1-3/8"	40.74

Openings:

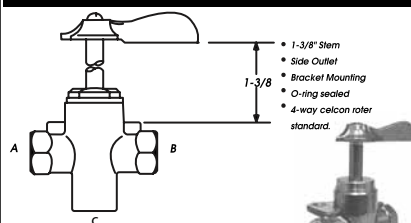
Handle Pointer over A.....Valve Open A-C

Handle Pointer over C.....Valve Open B-C

Handle Pointer over B.....Valve "OFF"

Handle Pointer over Bracket.....Valve "OFF"

THREE-WAY VALVES (Bottom Outlet)



LESS CLICK

Part #	A-B-C Female Pipe Thread	Length of Stem	List Price
46-241	1/4	1-3/8"	35.48

WITH CLICK 360°

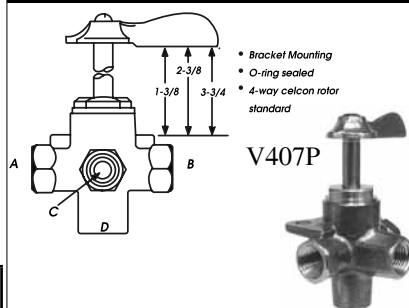
Part #	A-B-C Female Pipe Thread	Length of Stem	List Price
46-243	1/8	1-3/8"	39.41
46-244	1/4	1-3/8"	37.10

Openings:

Handle Pointer over A.....Valve
Open A-C

Handle Pointer over C.....Valve
Open B-C

FOUR-WAY VALVES



LESS CLICK

Part #	A-B-C-D Female Pipe Thread	Length of Stem	List Price
46-257	1/4	1-3/8"	35.57

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"	37.62
46-256	3/8	1-3/8"	41.19

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"	36.59

Direction of Flow on four way valves
pointer at:

a) A, D open

b) C, D open

c) B, D open

bracket open

Openings:

Handle Pointer over A.....Valve Open A-D

Handle Pointer over C.....Valve Open C-D

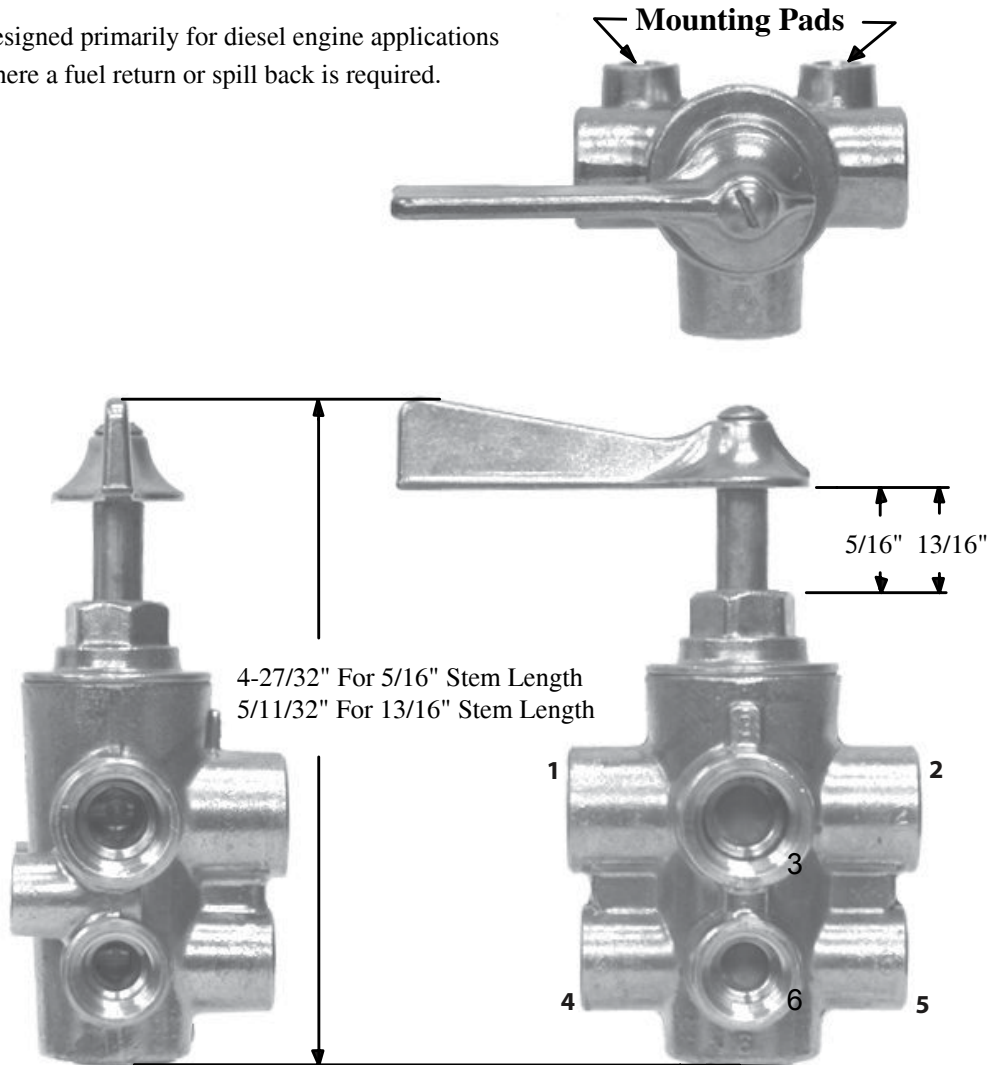
Handle Pointer over B.....Valve Open B-D

Handle Pointer over Bracket.....Valve "OFF"

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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	636.17

More sizes available...just ask!

BRASS FITTINGS

SPECIALTY VALVES

BRASS TRUCK VALVES



404V

HOSE TO MALE PIPE

Part #	Size	List Price
46-450	3/8 x 3/8	16.28
46-451	5/8 x 3/8	16.27



404V

HOSE TO MALE PIPE

Part #	Size	List Price
46-455	5/8 x 1/2	33.14
46-457	3/4 x 3/8	37.01
46-456 ⁵	3/4 x 1/2	34.89



405V

FEMALE TO MALE PIPE

Part #	Size	List Price
46-465	3/8 x 3/8	20.42
46-466	3/8 x 1/2	34.97
46-467	1/2 x 1/2	27.75



409V

FLARE TO MALE PIPE

Part #	Size	List Price
46-475	1/2 x 1/2	42.41
46-476	5/8 x 1/2	27.81



412V

MALE PIPE TO FLARE

Part #	Size	List Price
46-485	1/2 x 5/8	30.23

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	25.50
46-401	1/4	25.50
46-402	3/8	28.04



8875

#M-72-SBV

FIP x FIP

Part #	Size	List Price
46-411	1/4	30.20



#M-75-SBV

MIP x FLARE

Part #	Size	List Price
46-429	1/4 x 3/8	27.86

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	41.41
46-401M	1/4 x 1/4	34.67
46-402M	3/8 x 3/8	41.14



8990

PIPE

MALE x MALE

Part #	Size	List Price
46-406M	1/4 x 1/4	39.30



8975

PIPE

FEMALE X FEMALE

Part #	Size	List Price
46-411M	1/4 x 1/4	41.70



8948

MALE PIPE X FLARE

Part #	Size	List Price
46-429M	1/4 x 3/8	39.05
46-430M	3/8 x 3/8	55.59

⁵ Also stocked in Atlanta
(See page Intro II for details)

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.



MALE X FEMALE

Part #	Size	List Price
46-900	1/8 x 1/8	21.17
46-903	1/4 x 1/4	21.17



MALE X MALE

Part #	Size	List Price
46-910	1/8 x 1/8	21.32
46-912	1/4 x 1/4	22.91



MALE PIPE X HOSE BARB

Part #	Size	List Price
47-042	1/8 x 1/4	28.51
46-980	1/4 x 1/4	23.05
46-981	1/4 x 3/8	21.98

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	21.70
46-921	1/8 x 1/4	24.43
46-922	1/4 x 1/4	21.06
46-922A	1/4 x 1/4	15.01
46-923	3/8 x 3/8	24.74
46-924	1/2 x 1/2	39.81
46-925	3/4 x 3/4	49.05

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	23.78



**U.L. TWO WAY VALVES
MNPT X FNPT**

Part #	Size	List Price
46-443	1/4 x 1/4	23.78

BRASS FITTINGS

MINI BALL VALVES

- See p. 166 for specifications



FEMALE X FEMALE

Part #	Size	List Price
46-920 I	1/8	12.31
46-922 I	1/4	12.31
46-923 I ⁵	3/8	12.31
46-924 I ^{3,5}	1/2	14.22

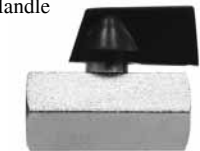


MALE X FEMALE

Part #	Size	List Price
46-900 I ⁵	1/8	12.68
46-903 I	1/4	12.68
46-904 I ⁵	3/8	11.62
46-905 I ³	1/2	13.35

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	List Price
46-935	1/4	6.87
46-936	3/8	7.52



MALE X FEMALE

Part #	Size	List Price
46-931	1/4	6.87
46-932	3/8	6.46

See more mini valves on page 170

³ Also stocked in Houston

⁵ Also stocked in Atlanta

(See page Intro II for details)

BRASS FITTINGS

CHECK VALVES/ MARINE FITTINGS

BRASS CHECK VALVES

MAX. 2500 PSI

Cracking Pressure 1/3-3 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	20.87

MAX. 2500 PSI

- Opening diameter .187
- 180° max operating temp.



•SS ball and spring

MNPT X FNPT

Part #	Size	Opening Dia.	List Price
46-505	1/4 x 1/4	0.187	20.87

MAX. 1200 PSI

- O-Ring poppet seal Bubble tight operation
- 180°F max operating temp.



FNPT X FNPT

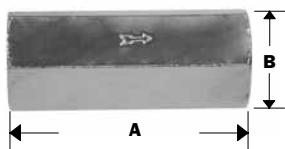
Part #	Size	Opening Dia.	List Price
46-510	1/4 x 1/4	0.25	24.32
46-511	3/8 x 3/8	0.375	29.31
46-512 ⁵	1/2 x 1/2	0.437	38.43

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	15.63
46-201	3/8	1.97	0.83	14.71
46-202	1/2	2.48	0.98	35.17

HIGH PRESSURE CHECK VALVES

- Operates in any position, and is available in mixed or matched end combinations.
- Standard cracking pressure 1 p.s.i (optional 3 or 7 p.s.i. available) 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
- Water G.P.M. @ 10 p.s.i. is 4.0



FEMALE X FEMALE

Part #	Size	List Price
46-513	1/4	43.24
46-517	3/8	48.98



FEMALE X MALE

Part #	Size	List Price
46-514	1/4	43.24
46-518	3/8	48.98



MALE X FEMALE

Part #	Size	List Price
46-516	1/4	43.62
46-539	3/8	48.98



MALE X MALE

Part #	Size	List Price
46-515	1/4	43.24
46-519	3/8	48.98

MARINE FITTINGS

- Calibrated to support 30" column of gasoline.



ANTI-SIPHON VALVES

NPT X NPT

Part #	Size	List Price
46-520	1/4 x 1/4	16.87
46-521	3/8 x 3/8	27.32



ANTI-SIPHON VALVES

BARB X NPT

Part #	Size	List Price
46-530	5/16 x 1/4	16.30
46-531	3/8 x 1/4	14.88
46-532	3/8 x 3/8	27.32
46-533	1/2 x 3/8	27.32



BULKHEAD FITTINGS

Part #	Size	List Price
46-540	5/16	11.23
46-541	3/8	10.87

If you're not failing every now and again, it's a sign you're not doing anything very innovative.

- Woody Allen

⁵ Also stocked in Atlanta
(See page Intro II for details)

BALL VALVE PRIVATE LABEL PROGRAM
BRASS


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!

***For Italian valves only.**

Midland will change the handles out for you if ordered through our Kansas City warehouse. Please request this service if needed.

TEE HANDLES

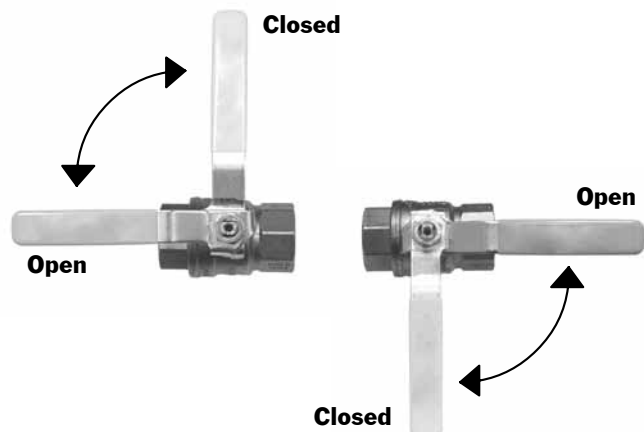

Part #	Valve Size	List Price
43-200T	1/4" - 3/4"	2.07
43-204T	1"	3.54

LOCKING HANDLES


Part #	Valve Size	List Price
43-200L	1/4" - 3/4"	13.96
43-204L	1" - 1 1/4"	25.00
43-206L	1 1/2" - 2"	42.01

Reversible Handles:

All regular ball valve handles are now reversible. You can take the handle off and "reverse" it, so it turns and opens over the opposite end of the valve in the opposite direction. Please let us know if this is a requirement when you order as some older stock may not have this feature.



FULL PORT 600WOG FORGED BRASS BALL VALVE

1/2" - 2" Sizes Gas Approved



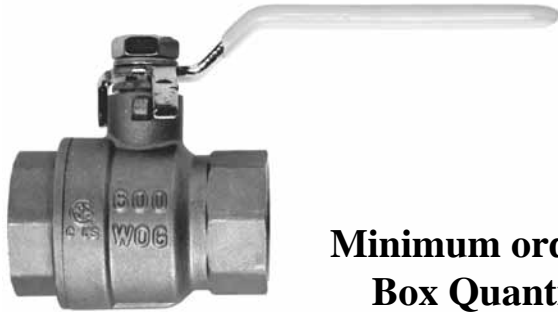
ISO 9002 Manufacturer FEATURES

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

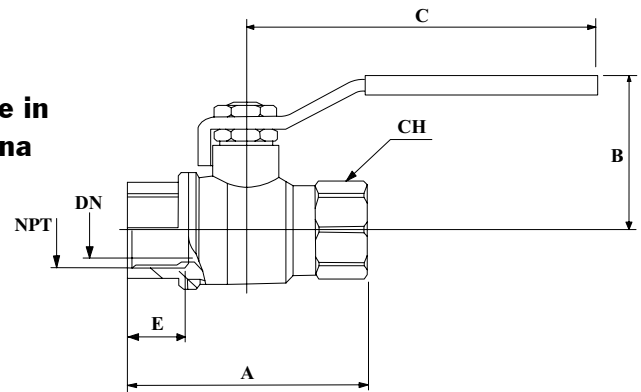
- Suitable for full range of liquids and gases
- Minimal pressure drop due to large full size ports
- Bottom loaded, pressure retaining stem
- Pressure rated for 1/4"-2" at 600psi (42 bars) and 2-1/2"-4" at 400 psi WOG (non-shock) and 150 WSP (10.34 bars) saturated steam. Virgin PTFE stem packing seal, thrust washer and seats
- Yellow vinyl insulator on heavy duty plated carbon steel handles
- Fast 1/4 turn open or close operation

- 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



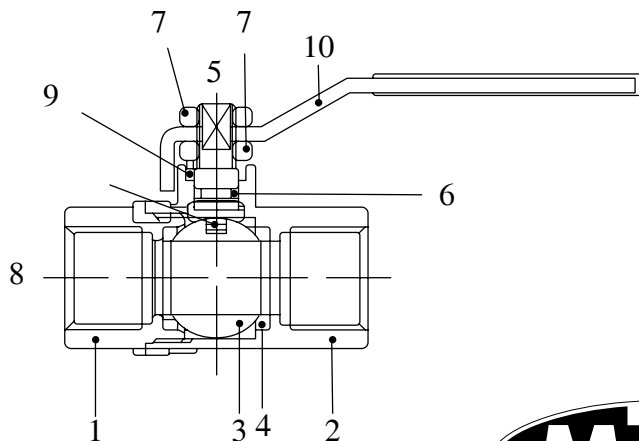
Made in China

Minimum order is Box Quantity



Part#	Size	Dimension Inches							Min. Order		List Price
		NPT	DN	A	B	C	E	CH	Box	Case	
940-171	^{3.5} 1/4"		0.39	1.75	1.27	3.54	0.46	0.78	70	140	7.50
940-172	^{3.5} 3/8"		0.41	1.75	1.27	3.54	0.46	0.78	70	140	7.50
940-173	^{3.5} 1/2"		0.58	2.05	1.92	3.54	0.52	0.98	50	100	9.00
940-174	^{3.5} 3/4"		0.75	2.36	2.08	3.78	0.56	1.20	30	60	13.18
940-175	^{3.5} 1"		0.94	2.75	2.56	4.52	0.66	1.50	20	40	20.51
940-176	^{3.5} 1-1/4"		1.26	3.30	2.95	4.52	0.70	1.82	12	24	30.19
940-177	^{3.5} 1-1/2"		1.57	3.66	3.34	5.51	0.72	2.09	9	18	44.76
940-178	^{3.5} 2"		1.97	4.18	3.68	5.51	0.74	2.62	6	12	70.02
940-179	2-1/2"		2.52	5.38	4.76	8.66	1.01	3.36	4	8	176.21
940-180	3"		2.95	6.04	5.08	8.66	1.11	3.86	2	4	206.06
940-181	4"		3.89	7.38	5.86	9.00	1.22	4.89	1	2	389.71

• Minimum order quantity is Box Quantity



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

³ Also stocked in Houston

⁵ Also stocked in Atlanta

(See page Intro II for details)

FULL PORT 600WOG FORGED BRASS BALL VALVE



5 PSIG
US



UL842, UL258, UL125, FM



ISO 9002 Manufacturer FEATURES

600 PSI non-shock cold water, gas, oil
- 150 PSI saturated steam

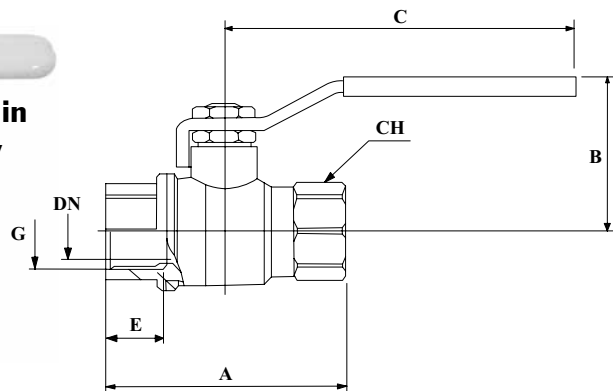
CSA AGA 3.88 5 PSIG IAMPO IGC 157 - 2004b

- **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.
- 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

- 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



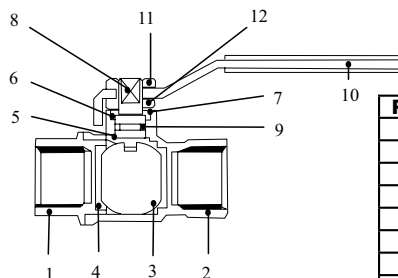
Female x Female



Part#	Size	Dimension Inches						Box	Case	List Price
	G	DN	A	B	C	E	CH			
943-200 ^{3,5}	1/4"	.31	1.96	1.57	3.43	.43	.74	24	96	13.29
943-201 ^{3,5}	3/8"	.39	1.96	1.57	3.43	.43	.86	24	96	13.20
943-202 ^{3,5}	1/2"	.59	2.28	1.77	3.35	.61	.94	20	80	14.85
943-203 ^{3,5}	3/4"	.78	2.44	1.89	3.35	.64	1.22	14	56	22.70
943-204 ^{3,5}	1"	.98	3.03	2.20	4.61	.75	1.50	6	24	36.59
943-205 ^{3,5}	1-1/4"	1.26	3.46	2.36	4.61	.77	1.89	4	16	59.57
943-206 ^{3,5}	1-1/2"	1.57	3.94	3.15	6.30	.77	2.12	2	8	92.82
943-207 ^{3,5}	2"	1.97	4.45	3.15	6.30	.79	2.63	1	4	134.64
942-208 ^{3,5}	2-1/2"	2.48	5.94	4.17	7.48	1.06	3.30	---	5	264.13
942-209 ^{3,5}	3"	2.99	6.85	5.47	9.84	1.14	3.89	---	3	372.31
942-210 ^{3,5}	4"	3.54	7.67	5.88	9.84	1.50	4.80	---	2	670.75

See additional handle options on page 162.

- Nickel plated body available upon special request.
- Optional stainless steel parts available upon special request.



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

³ Also stocked in Houston

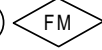
⁵ Also stocked in Atlanta

(See page Intro II for details)

NSF 61 FULL PORT 600WOG FORGED BRASS BALL VALVE

ISO 9002 Manufacturer
FEATURES

1/4" - 2" Gas Approved

5 PSIG
US

UL842, UL258, UL125, FM

NSF 61 CSA AGA 3.88 5 PSIG

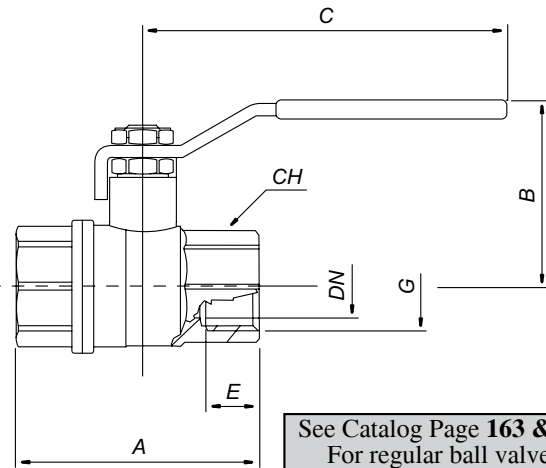
• NSF approved for
drinking water applications

- 600 PSI non-shock cold water, gas, oil 150 PSI saturated steam
- Suitable for full range of liquids and gases.
- Virgin TFE stem packing seal, thrust washer and seats
- Blue vinyl handle cover

- Solid chrome plated brass ball
- Adjustable stem packing gland
- Threaded ends to ANSI B1.20.1
- Bottom entry, blow-out proof stem

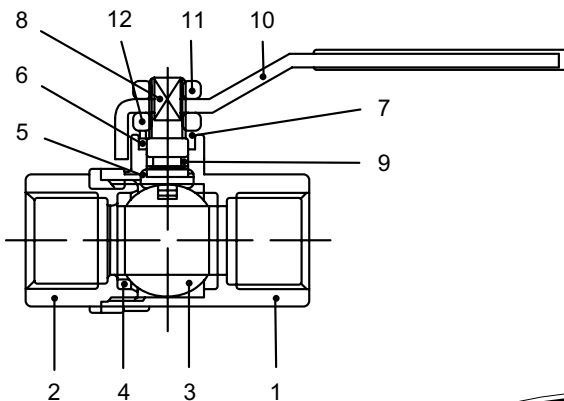


Female x Female

Made in
ItalySee Catalog Page 163 & 164
For regular ball valves!

NSF 61 Approved Part#	Size	Dimension Inches						Box	Case	NSF 61 List Price
	G	DN	A	B	C	E	CH			
943-220	1/4"	.31	1.96	1.57	3.43	.43	.74	24	96	15.50
943-221	3/8"	.39	1.96	1.57	3.43	.43	.86	24	96	16.44
943-222	1/2"	.59	2.40	1.77	3.43	.59	1.06	20	80	17.71
943-223	3/4"	.78	2.72	1.77	3.43	.64	1.26	14	56	25.39
943-224	1"	.98	3.28	2.20	4.72	.75	1.59	6	24	42.87
943-225	1-1/4"	1.25	3.86	2.36	4.72	.84	1.96	4	16	65.25
943-226	1-1/2"	1.57	4.25	3.12	6.33	.84	2.16	2	8	106.51
943-227	2"	1.96	5.03	3.12	6.33	1.01	2.76	1	4	162.82

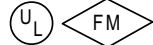
See additional handle options on page 162



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

Gas Approved

FULL PORT 600WOG FORGED BRASS BALL VALVE



UL842, UL258, UL125, FM

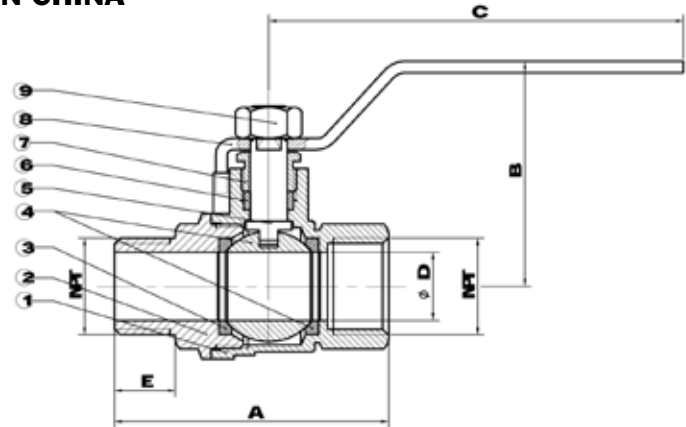
CSA AGA 3.88 5 PSIG

- 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.

- 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

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	8.05
948-171	3/8	3/8 - 18	2.094	1.732	3.543	0.394	0.457	70	140	8.27
948-172	1/2	1/2 - 14	2.343	1.941	3.543	0.583	0.520	50	100	10.05
948-173	3/4	3/4 - 14	2.618	2.106	3.780	0.748	0.563	30	60	14.98
948-174	1	1 - 11.5	3.000	2.579	4.528	0.945	0.630	20	40	22.15
948-175	1-1/4	1-1/4 - 11.5	3.563	2.953	4.528	1.260	0.709	12	24	32.43
948-176	1-1/2	1-1/2 - 11.5	3.965	3.346	5.512	1.575	0.717	9	18	48.24
948-177	2	2 - 11.5	4.496	3.681	5.512	1.969	0.748	6	12	69.87

ITALIAN M X F - *CLOSE-OUT ONCE STOCK IS GONE*

Part#	Size	DN	A	B	C	E	E1	CH1	CH2	Box	Case	List Price
948-101	1/4	.31	2.28	1.49	3.35	.46	.51	.55	.74	24	96	13.23
948-102	3/8	.39	2.37	1.57	3.35	.46	.51	.71	.86	24	96	14.39
948-103	1/2	.59	2.28	1.49	3.35	.61	.59	.85	.96	14	56	17.52
948-104	3/4	.78	2.87	1.57	3.35	.66	.63	1.10	1.22	12	48	27.65
948-105	1	.98	3.42	1.93	5.20	.77	.75	1.36	1.50	6	24	40.59
948-106	1-1/4	1.26	3.94	2.36	4.72	.79	.76	1.69	1.89	4	16	71.06
948-107	1-1/2	1.57	4.25	3.00	6.34	.81	.76	2.12	2.12	2	8	98.34
948-108	2	1.97	4.96	2.95	6.34	.84	.76	2.40	2.63	1	4	148.72

FULL PORT 600WOG FORGED BRASS BALL VALVE

- 600 PSI non-shock cold water, gas, oil
- 150 PSI saturated steam (WSP)

ISO 9002 Manufacturer FEATURES

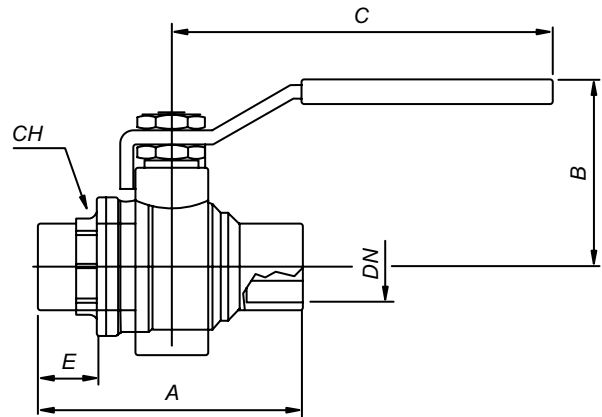


- Minimal pressure drop due to large full size ports.
- Bottom loaded, pressure retaining stem.
- Pressure rated at 600psi (42 bars) WOG (non-shock) and 150psi (10.34 bars) saturated steam. Virgin TFE stem packing seal, thrust washer and seats.
- Vinyl insulator on heavy duty plated carbon steel handles.
- Fast 1/4 turn open or close operation
- Low operating torque
- Adjustable stem packing gland.

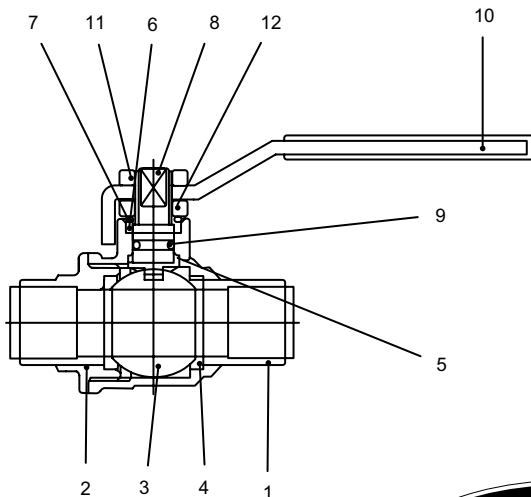
- Maximum operating temperature: 248°F (120° C) at 600 psi.
- Minimum operating temperature: -20°F (-40°C)
- Each valve individually tested.
- Forged Brass - for more strength.
- Tube ends to ANSI B16.22.
- Hard chromium plated solid ball.
- Bottom entry, blow-out proof stem.
- Use with ASTM B88 copper water tubing.



SWT x SWT



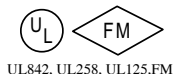
Part#	Size	Dimension Inches						Box	Case	List Price
	SWT	DN	A	B	C	E	CH			
940-212	1/2	0.58	2.04	1.84	3.54	0.43	0.80	50	100	15.98
940-213	3/4	0.74	2.74	1.99	3.78	0.63	1.05	30	60	20.20
940-214	1	0.94	3.22	2.44	4.52	0.75	1.33	20	40	29.05
940-215	1-1/4	1.26	3.81	2.85	4.52	0.83	1.60	12	24	45.35
940-216	1-1/2	1.57	4.42	3.16	5.51	0.90	1.90	9	18	74.65
940-217	2	1.97	5.31	3.44	5.51	1.30	2.37	6	12	109.35



POS	Components	Materials	N
1	Body	Forged Brass	1
2	End Connection	Forged Brass	1
3	Ball	CP Brass	1
4	Ball Seats	P.T.F.E.	2
5	Stem	Brass	1
6	O-Ring	NBR 80	1
7	Brass Ring	Brass	1
8	Nut	UNI 5771 Steel	1
9	Stem Seat	P.T.F.E.	1
10	Handle	Steel	1
11	Stem Seat	P.T.F.E.	1
12	Nut	Brass	1

FORGED BRASS BALL VALVE - STANDARD PORT

1/2" Gas Approved



CSA AGA 3.88 5 PSIG

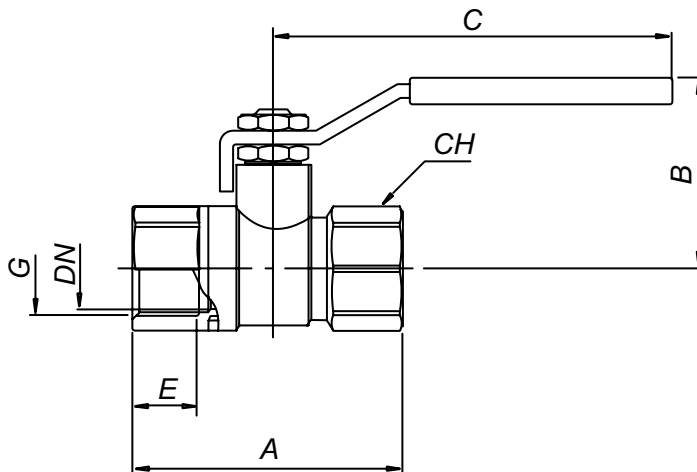
ISO 9002 Manufacturer FEATURES

- 400 PSI non-shock cold water, gas, oil
- 150 PSI saturated steam (WSP)
- Solid chrome plated brass ball
- Threaded ends to ANSI B1.20.1
- Each valve individually tested
- Hard chromium plated solid ball
- Bottom entry, blow-out proof stem
- Double stem packing, Teflon seats.

Yellow Handle



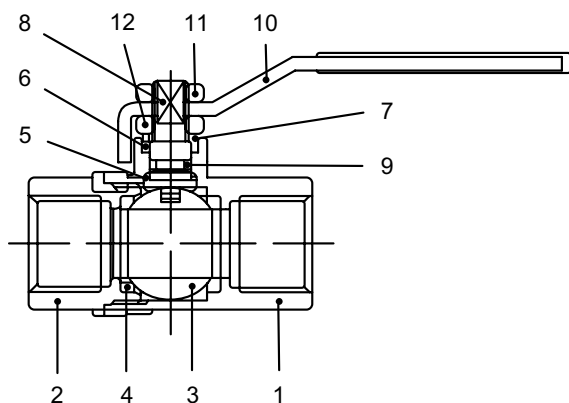
FIP x FIP



FORGED BRASS BALL VALVE IPS SCREWED ENDS

Part#	Size	Dimension Inches						Box	Case	List Price
		G	DN	A	B	C	E			
940-241 ^s	1/2	0.47	2.26	1.51	3.27	0.61	0.98	20	80	14.68
940-242 ^s	3/4	0.59	2.50	1.59	3.27	0.63	1.22	14	56	20.63
940-243 ^s	1	0.78	2.87	1.88	3.74	0.75	1.49	10	40	30.86
940-244 ^s	1-1/4	0.98	3.46	2.08	4.61	0.77	1.89	4	16	53.03
940-245 ^s	1-1/2	1.26	3.52	2.45	4.61	0.77	2.13	4	16	73.68
940-246 ^s	2	1.57	4.05	2.65	4.61	0.79	2.64	1	4	106.97

See additional handle options on page 158



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

^s Also stocked in Atlanta
(See page Intro II for details)

GAS BALL VALVES

ISO 9002 Manufacturer
FEATURES
 5 PSIG
C US
CSA AGA 3.88 5 PSIG

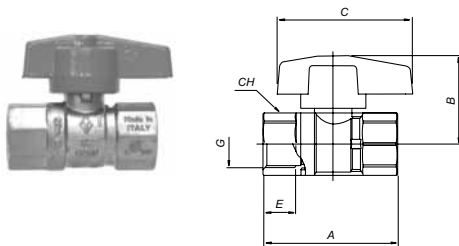
 LISTED
Threaded NPT
UL 842, UL 258, UL 125

Manual Valve

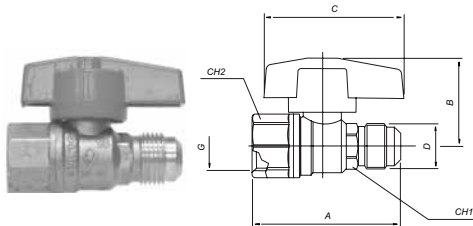
Made in Italy

- 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.
- 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.
- Red Reversible handle.
- May be used with water 400 WOG.

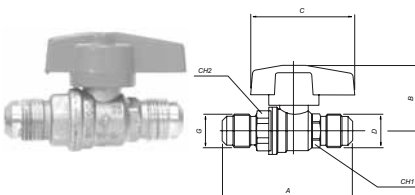
GAS BALL VALVES
FEMALE x FEMALE

Part#	Size	Dimension Inches									List
	G	DN	A	B	C	E	CH	PN in psi	Box	Case	Price
943-212	1/2"	.31	1.96	1.57	3.43	.43	.98	600	20	80	11.22
943-213	3/4"	.39	1.96	1.57	3.43	.43	1.22	600	14	56	15.85

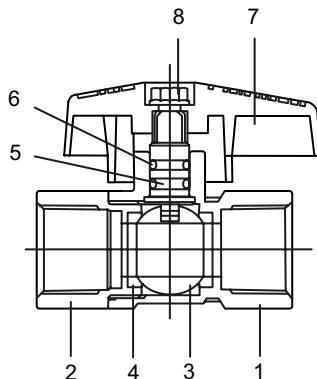
APPLIANCE CONNECTOR VALVES
FEMALE X FLARE

Part#	Size	Dimension Inches								List
	G	DN	A	B	C	CH1	CH2	Box	Case	Price
935-122	1/2 x 3/8	0.27	2.41	1.45	2.28	0.67	0.98	20	80	14.10
935-123	1/2 x 1/2	0.39	2.44	1.45	2.28	0.67	0.98	20	80	16.40
935-124	3/4 x 5/8	0.47	2.50	1.48	2.28	-	1.22	20	80	18.30

FLARE x FLARE



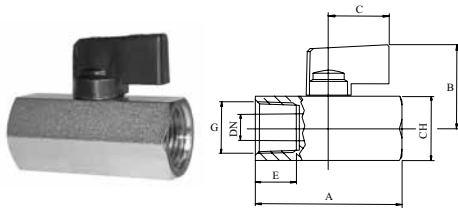
Part#	Size	Dimension Inches						PN in psi	Box	Case	List Price
	G	DN	A	B	C	CH1	CH2				
935-129	3/8 x 3/8	0.27	2.79	1.45	2.28	0.67	0.83	363	20	80	18.98
935-130	1/2 x 1/2	0.39	2.87	1.45	2.28	0.67	0.83	363	20	80	16.40



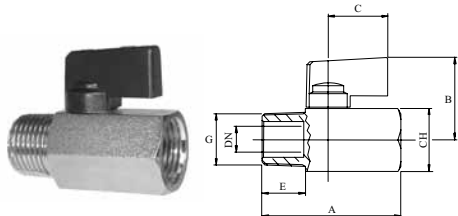
	Components	Materials
1	Body	Forged Brass
2	End Connection	Forged Brass
3	Ball	Forged Brass
4	Ball Seats	P.T.F.E.
5	Stem	Brass
6	O-Ring	NBR
7	Butterfly	Steel
8	Screw	UNI 5771 Steel

CHROME PLATED BRASS MINI BALL VALVES**BRASS VALVES****CHROME PLATED BRASS MINI BALL VALVE****Made in Italy****ISO 9002 Manufacturer****FEATURES**

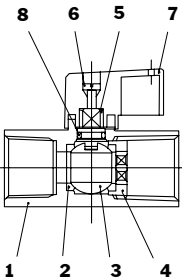
- Solid chrome plated brass ball
- Max working pressure 235 psi will handle 300psi@75° F
- Longer body style for longer, deeper thread connections
- One piece drawn sand blasted chrome plated body.
- Each valve is seal tested for maximum safety.
- Double seal system allows valve to be operated in both 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!

Female x Female

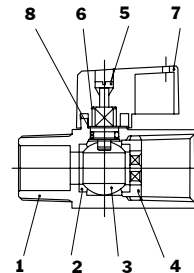
Part#	Size		Dimension Inches							
	G	DN	A	B	C	E	CH	BOX	CASE	List Price
46-920 I 3,5	1/8"	0.24	1.51	1.2	0.9	0.31	0.83	50	200	12.31
46-922 I 3,5	1/4"	0.31	1.88	1.2	0.9	0.51	0.83	50	200	12.31
46-923 I 3,5	3/8"	0.31	1.88	1.2	0.9	0.51	0.83	50	200	12.31
46-924 I 3,5	1/2"	0.39	2.18	1.28	0.9	0.61	0.96	40	160	14.22

Made in Italy**Male x Female**

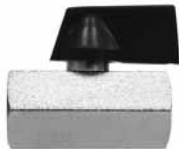
Part#	Size		Dimension Inches							
	G	DN	A	B	C	E	CH	BOX	CASE	List Price
46-900 I 3,5	1/8"	0.24	1.5	1.2	0.9	0.34	0.83	50	200	12.68
46-903 I 3,5	1/4"	0.31	1.77	1.2	0.9	0.48	0.83	50	200	12.68
46-904 I 3,5	3/8"	0.31	1.81	1.2	0.9	0.49	0.83	50	200	11.62
46-905 I 3	1/2"	0.39	2.15	1.28	0.9	0.65	0.96	40	160	13.35



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**

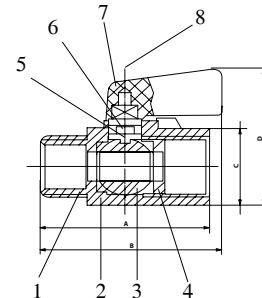
- Max Working Pressure: 450psi
- Maximum Temperatures: 356°F at 142 psi
212°F at 355 psi
- 1/4 Turn Handle

FEMALE X FEMALE

Part #	Size	Dimensions (In)				List Price
		A	B	C	D	
46-935	1/4	1.57	1.69	0.78	1.46	6.87
46-936	3/8	1.57	1.69	0.78	1.46	7.52

MALE X FEMALE

Part #	Size	Dimensions (In)				List Price
		A	B	C	D	
46-931	1/4	1.57	1.69	0.78	1.46	6.87
46-932	3/8	1.57	1.69	0.78	1.46	6.46

Send us your volume quotes!

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	Stern	Brass	1
6	O-Ring	NBR 80	1
7	Handle	ABS	1
8	Screw	Steel	1

³ Also stocked in Houston⁵ Also stocked in Atlanta

(See page Intro II for details)

BRASS VALVES

Forged brass Mini-Ball Valves

- 180° operational handle, blow out proof stem. Stem with double "O" Rings - * 90° Operational handle.
- 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

FEMALE X FEMALE



Part #	Size	List Price
* 944-116	1/4X1/4	9.83
944-118	1/4X1/2	9.20

* 90° Operational handle.

MALE X FEMALE



Part #	Size	List Price
944-106	1/8X1/8	9.20
944-100	1/8X1/4	7.98
944-101	1/4X1/4	9.68
944-102	1/4X3/8	9.20

MALE X MALE



Part #	Size	List Price
944-108	1/8X1/4	6.92
944-111	1/4X1/2	9.20
944-112	1/2X1/2	11.70

Private label handle available on volume purchases.

MINI BALL VALVE

HOSE BARB X MALE



Part #	Size	List Price
944-126	3/8X1/8	6.93
* 944-138	1/4X1/4	7.30
944-128	3/8X1/4	6.83

* 90° Operational handle.

HOSE BARB X HOSE BARB



Part #	Size	List Price
* 944-142	1/4X1/4	9.07
* 944-134	3/8X3/8	9.42

* 90° Operational handle.

FEMALE X HOSE BARB



Part #	Size	List Price
944-135	1/8X1/8	9.36
944-121	1/4X5/16	9.36
944-136	1/4X1/4	8.79

Everyone is entitled to be stupid, but some abuse the privilege.

- Unknown Author

VALVES

3 WAY BALL VALVES

3 WAY BALL VALVES

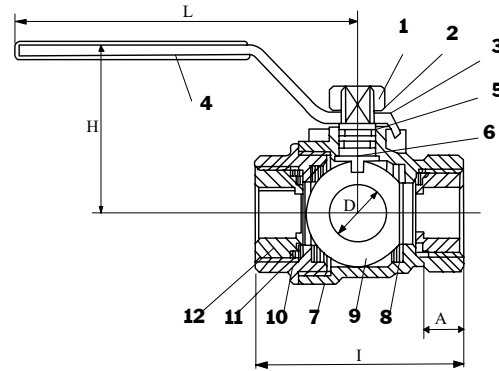
SIDE OUTLET 3 WAY BALL VALVE

VALVES

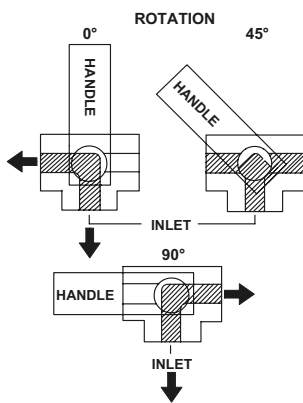


- Forged Brass
- 200 WOG
- 125 WSP

• Side outlet



- Full Port
- Blow-out proof stem
- double o-ring stem packing
- PTFE Seal



Nomenclature & Materials

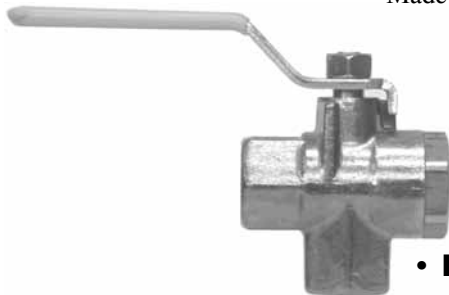
NO	Part Name	Material	Qty
1	Nut	Steel	1
2	Spring Washer	Steel	1
3	Handle	Steel	1
4	Cover	PVC	1
5	O-Ring	NBR	2
6	Stem	Brass	1
7	Body	Forged Brass	1
8	Seat	Teflon	2
9	Ball Disc	Brass	1
10	End Plug	Brass	1
11	O-Ring	NBR	3
12	Socket	Brass	3

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	35.08
940-465	3/8"	1.89	1.73	0.39	3.35	0.47	25	100	36.81
940-461	1/2"	2.11	1.80	0.50	3.35	0.51	30	60	31.10
940-462	3/4"	2.56	2.16	0.74	4.41	0.55	20	40	47.25

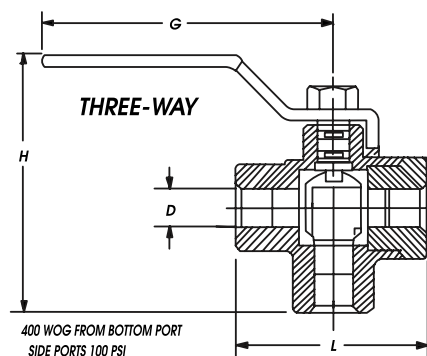
BOTTOM OUTLET 3 WAY BALL VALVE

- Forged Brass
- Bottom Port is inlet 400 psi
- Side Ports are inlet 100 psi

- Double O-Ring Seal
- Blow out proof stem
- Made in USA



• Bottom outlet



Part#	Size	D	G	H	L	Cv	List Price
940-121	1/4"	.44	3.50	3.12	2.25	5.2	53.14
940-122	3/8"	.50	3.50	3.12	2.25	5.5	44.72
940-123	1/2"	.50	3.50	3.12	2.25	5.5	55.78

MISC. VALVES

STAINLESS TRIM BALL VALVES

Full Port 600 WOG Forged Brass Ball Valves

- Nickel plated body.
- Stainless steel tee handle and nut.



CSA AGA 3.88 5 PSIG



Also with lever handle option

FEMALE X FEMALE

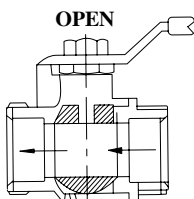
Part #	Size	List Price
948-154ST	3/4	15.46
948-154STL	3/4 Lever Handle	15.88
948-155STL	1 Lever Handle	25.18

More options available ... just ask!

Ask us about OSHA Valves

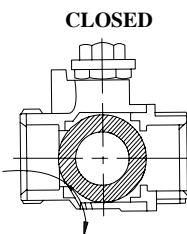
FULL PORT

AUTOMATIC DRAIN & LATCH LOCK HANDLE



Valve - open position.
Drain vent shut off.

200 PSI



Valve - closed and draining occurs. Upstream seat prevents air flow.
Downstream system is vented to atmosphere.

Part#	Size	List Price
948-131	1/4"	40.76
948-132	3/8"	40.76
948-133	1/2"	46.79
948-134	3/4"	64.16
948-135	1"	72.45

MISC. VALVES

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	9.34

HOSE BIBBS 3/4" Hose Thread Outlet



IPS

Part #	Size	Box	List Price
942-170	1/2 (1/2"C)	12	11.50
942-171	3/4	12	13.19

DRUM & BARREL FAUCET VALVE

- Die cast body w/ nylon seat and steel spring.
- For use with all petroleum products except trichlorethylene.
- Lockable handle.

G261N



Not suitable for potable water.

SELF-CLOSING DRUM & BARREL FAUCET

Part #	Size	List Price
46-270	3/4	11.70

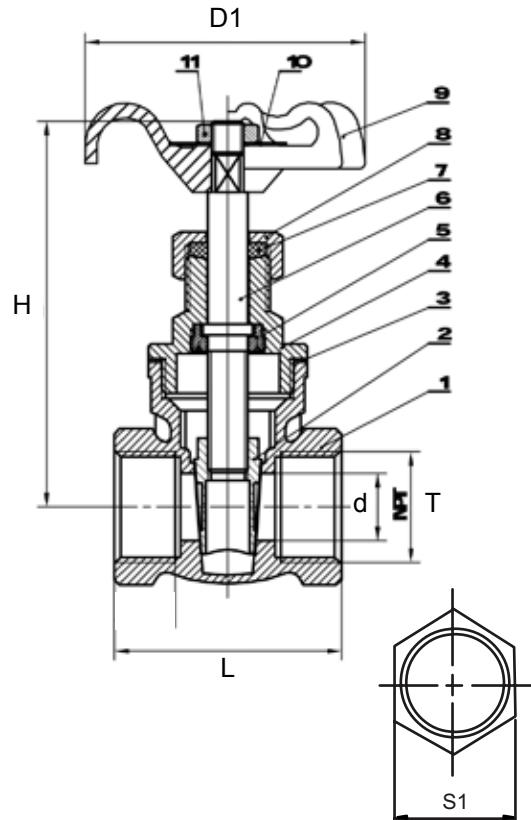
FULL PORT BRASS GATE VALVE

- 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.

VALVES



"New dimensions for 1/2 thru 4"



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

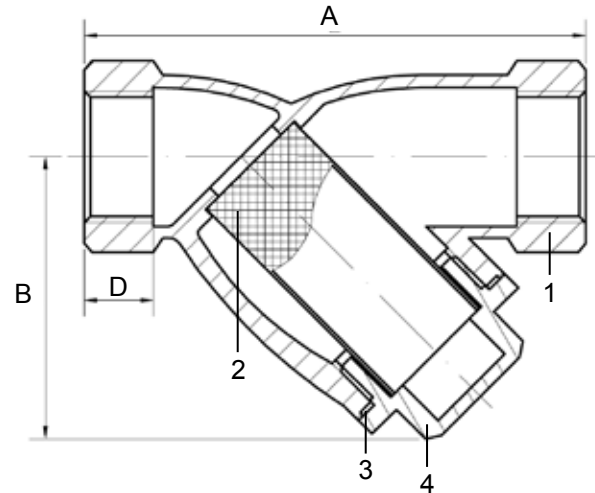
BRASS GATE VALVES IPS

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	15.98
940-131	3/8	1.61	2.91	2.09	.39	3/8-18 NPT	.85	10	120	16.67
940-132	1/2	1.575	2.874	2.087	0.50	1/2-14 NPT	1.03	10	100	10.62
940-133	3/4	1.752	3.228	2.087	0.748	3/4-14 NPT	1.26	5	60	14.26
940-134	1	1.984	3.661	2.283	0.984	1-11.5 NPT	1.51	5	40	19.54
940-135	1-1/4	2.165	4.567	2.835	1.22	1-1/4-11.5 NPT	1.89	5	30	35.14
940-136	1-1/2	2.283	4.98	3.11	2.496	1-1/2-11.5 NPT	2.17	4	24	45.34
940-137	2	2.677	5.846	3.819	1.85	2-11.5 NPT	2.60	2	16	59.66
940-138	2-1/2	3.661	7.638	4.252	2.48	2-1/2-8 NPT	3.27	2	8	105.10
940-139	3	3.819	8.839	4.961	2.835	3-8 NPT	3.86	1	6	157.03
940-140	4	4.567	10.189	4.961	3.661	4-8 NPT	4.88	1	3	249.25

CLASS 150 BRONZE Y-PATTERN STRAINER

- Casting bronze body, size 1/2"-3".
- Pressure rating: 300 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.



REPLACEMENT SCREENS

304 S.S. #20 Mesh

Part #	Size	OAL	List Price
940-521S	1/4	1.5	3.68
940-522S	3/8	1.5	3.68
940-523S	1/2	1.57	3.45
940-524S	3/4	1.97	3.69
940-525S	1	2.44	5.55
940-526S	1-1/4	2.76	6.70
940-527S	1-1/2	3.31	9.00
940-528S	2	4.06	19.96
940-529S	2-1/2	5.25	49.15
940-530S	3	5.90	62.70

NO	Description	Material
1	Body	C84400
2	Filter	304
3	Gasket	PTFE
4	Cap	C84400

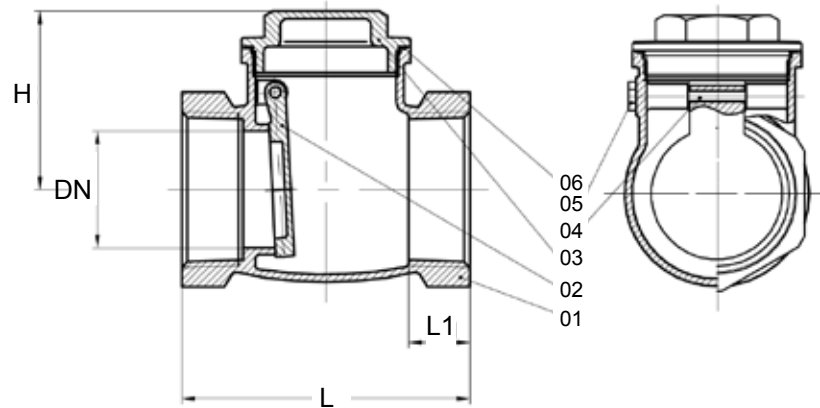
"New dimensions for 1/2 thru 2"

Part#	Size	A	B	D	Box	Case	List Price
940-521	1/4"	2.60	1.89	0.41	10	80	27.98
940-522	3/8"	2.60	1.89	0.41	10	80	29.51
940-523	1/2"	2.992	1.811	0.498	10	100	22.03
940-524	3/4"	3.583	2.205	0.531	10	60	31.94
940-525	1"	4.252	2.677	0.63	5	40	55.44
940-526	1-1/4"	4.882	3.15	0.669	4	24	76.02
940-527	1-1/2"	5.669	3.583	0.709	4	16	100.57
940-528	2"	6.772	4.37	0.827	2	8	165.76
940-529	2-1/2"	8.39	5.83	0.93	1	6	396.63
940-530	3"	9.06	6.69	1.12	1	4	448.95

SWING CHECK VALVES**BRASS VALVES****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.

"New dimensions for 1/2 thru 4"



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 ⁵	1/2	2.071	1.299	0.531	0.512	10	120	12.96
940-353	3/4	2.382	1.417	0.579	0.728	10	80	14.59
940-354	1	2.835	1.614	0.748	0.925	5	60	20.89
940-355	1-1/4	3.228	1.969	0.748	1.201	4	36	32.97
940-356	1-1/2	3.740	2.244	0.846	1.417	4	24	45.49
940-357	2	4.212	2.638	0.886	1.772	4	16	68.30
940-358	2-1/2	5.591	3.346	1.063	2.224	2	8	129.18
940-359	3	6.024	3.504	1.102	2.579	1	6	181.70
940-360	4	7.008	4.212	1.102	3.602	1	4	299.48

⁵ Also stocked in Atlanta
(See page Intro II for details)

BRASS CHECK VALVES

S.S. SPRING LOADED BRONZE POPPET

For positive sealing & self-cleaning.

Insures against leakage.

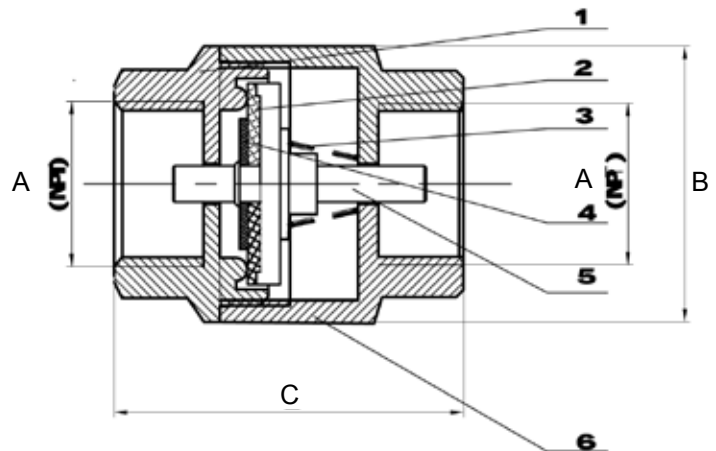
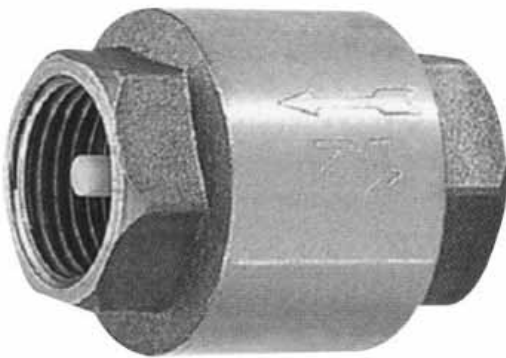
- Inline Lift Type - Resilient Discs - Spring Actuated - Threaded.
- Pressure rating: 200 WOG (water, oil, gas)
125 WSP (Saturated Steam)
- Spring in stainless steel AISI 304.
- Resilient washer hold/ disc in brass.
- Forged Brass Body for 1/2"-2"
- Corrosion resistant material.
- Can be used vertically or horizontally.
- Opens & Closes with flow of media.
- No cracking pressure.

Temp Range

-10°C - 110°C

-4°F - 248°F

"New dimensions for 1/2 thru 2"



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	14.77
944-429	3/8"	-	3/8"	1.50	2.28	21	168	14.94
944-430	1/2"	1-1/4"	1/2"	1.299	1.89	10	100	12.50
944-431	3/4"	1-1/4"	3/4"	1.594	2.126	10	100	18.67
944-432	1"	2"	1"	1.85	2.303	10	60	24.91
944-433	1-1/4"	2-1/2"	1-1/4"	2.205	2.52	10	40	35.97
944-434	1-1/2"	3"	1-1/2"	2.618	2.717	5	30	44.85
944-435	2"	3-1/2"	2"	3.091	3.071	2	20	70.16

See more Check Valves on page 161

NO	Part	Material
1	Cap	C37700
2	Gasket	PTFE
3	Spring	Stainless Steel
4	Positioning Seat	ABS
5	Screw	ABS
6	Body	C37700

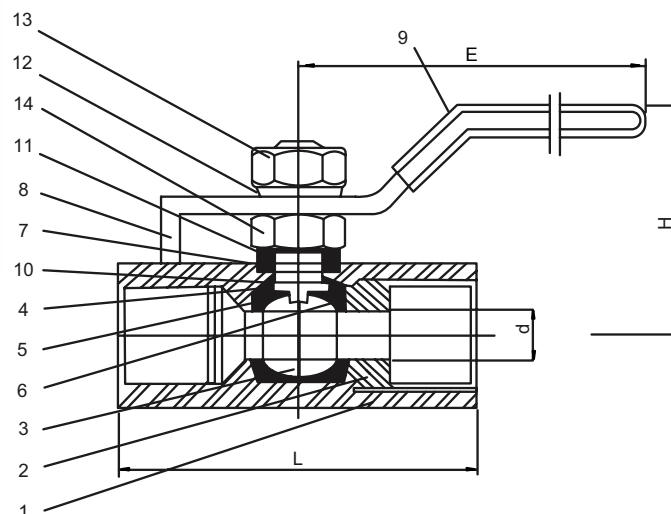
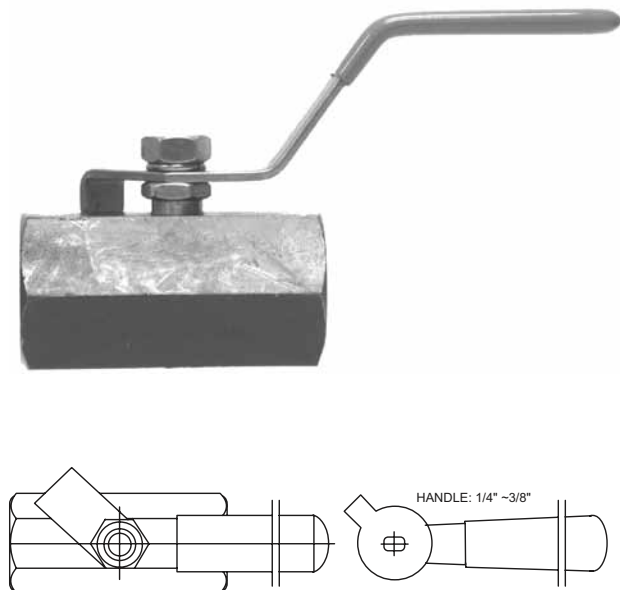
STANDARD PORT CARBON STEEL BALL VALVE

- For chemical and industrial applications.
- Blow-out proof stem design.
- 100% air tested under water, at 100 psi, open and closed positions.

SPECIFICATIONS

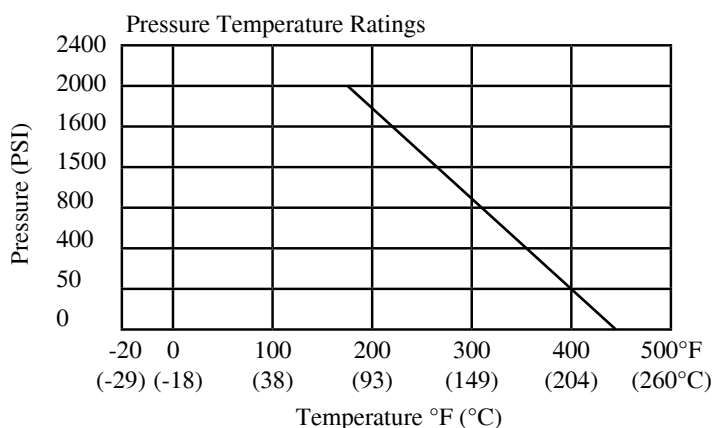
- Working Pressure: 1/4" ~ 1" 2000 psi WOG,
1-1/4" ~ 2" 1500 psi WOG,
- Temperature Range: -60° to 450°F
- End types: Threaded
- 1 piece ball valve reducing bore
- Reinforced PTFE seat

VALVES



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	59.28
949-122	3/8	.28	1.38	3.55	1.87	10	100	55.28
949-123	1/2	.36	2.60	4.08	2.20	5	75	53.31
949-124	3/4	.49	2.72	4.21	2.58	5	60	59.78
949-125	1	.59	2.95	4.65	3.19	6	36	77.10
949-126	1-1/4	.78	3.07	5.83	3.62	4	20	119.46
949-127	1-1/2	1.02	3.39	5.83	3.78	3	15	143.75
949-128	2	1.26	3.86	5.90	4.49	3	12	205.79



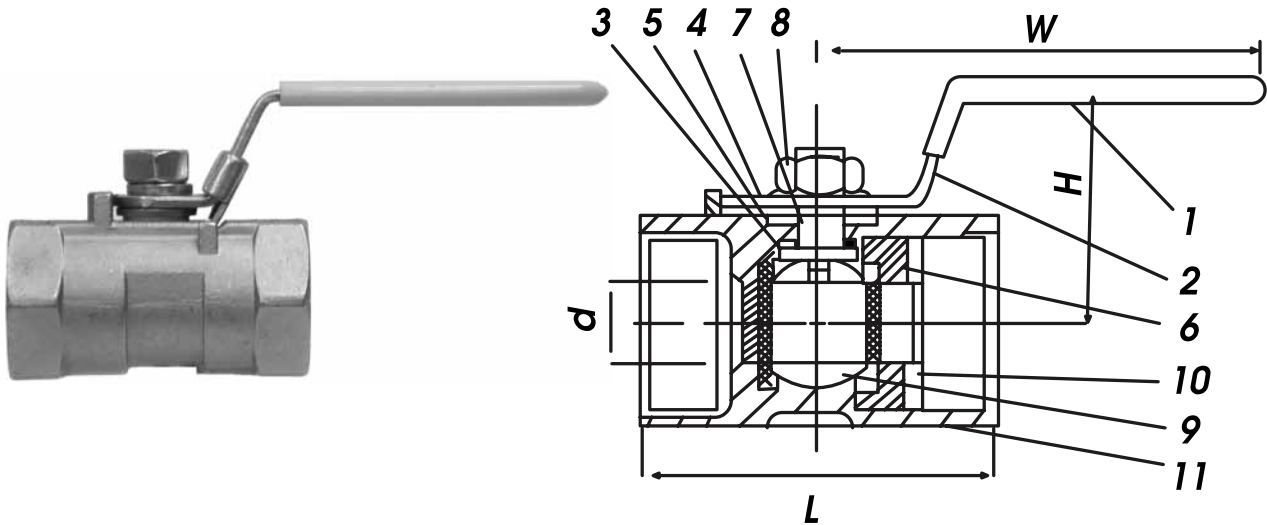
Item	Parts	Material
1	Body	ASTM A108 CL. 1018 or AISI 1021 C.S.
2	Unscrewed Seat Retainer	
3	Ball	SS304
4	Stem	SS316
5	Ball Seat	RPTFE
6	Cap Seal	PTFE
7	Packing	PTFE
8	Handle	SS304
9	Handle Sleeve	Vinyl Grip
10	Thrust Washer	PTFE
11	Gland	SS304
12	Washer	SS304
13	Handle Nut	SS304
14	Stem Nut	SS304

ONE PIECE STANDARD PORT BALL VALVE

316 Stainless Steel

1000 PSI

Yellow locking handle now standard



Valves will accept a pad-lock on the handle.

dimensions (inches)

Part#	Size	D	L	H	W	List Price
949-101 ^{3,5}	1/4"	.18	2.24	1.54	3.15	28.67
949-102 ^{3,5}	3/8"	.27	2.24	1.73	3.15	29.08
949-103 ^{3,5}	1/2"	.36	2.48	2.20	3.62	32.30
949-104 ^{3,5}	3/4"	.49	2.95	2.32	3.62	37.81
949-105 ^{3,5}	1"	.59	3.50	2.80	4.13	48.43
949-106 ^{3,5}	1-1/4"	.79	4.13	3.07	4.13	84.63
949-107 ^{3,5}	1-1/2"	.98	4.65	3.27	5.08	86.22
949-108 ^{3,5}	2"	1.26	5.35	3.94	5.08	122.73

Larger sizes available on special order basis

Dimensions may change. Please contact Midland if dimensions are critical.

Private Label handles available.

See Page 162 for details

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

³ Also stocked in Houston

⁵ Also stocked in Atlanta

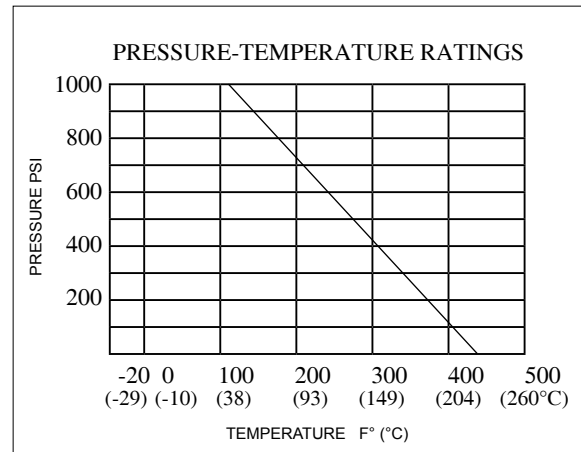
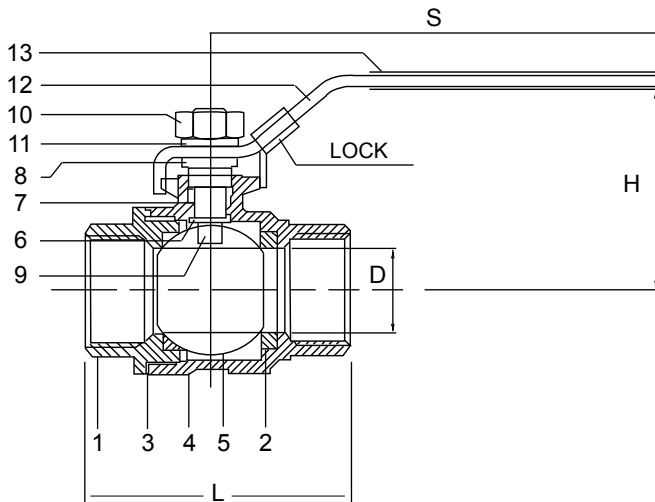
(See page Intro II for details)

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/ yellow generic sleeve



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	33.17
949-182	3/8"	0.46	1.91	1.89	4.06	0.55	33.73
949-183	1/2"	0.59	2.28	1.89	4.06	0.66	36.66
949-184	3/4"	0.79	2.56	2.05	4.84	0.77	43.64
949-185	1"	0.98	3.03	2.45	4.84	1.43	65.11

The true measure of a man is how he treats someone who can do him absolutely no good.

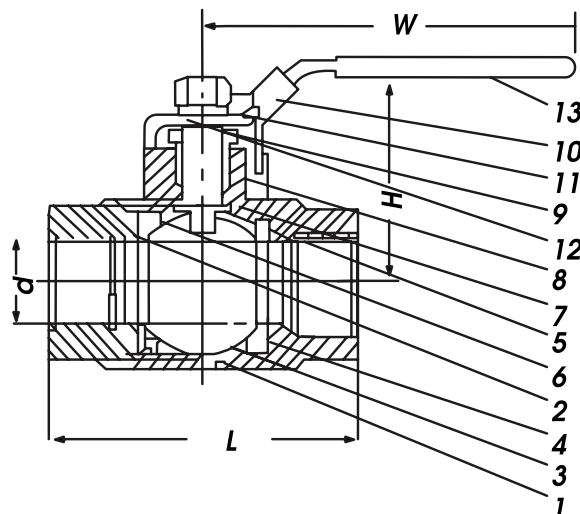
- Samuel Johnson

TWO PIECE FULL PORT BALL VALVE

316 Stainless Steel

1000 PSI

Yellow locking handle now standard!



VALVES

Valves will accept a pad-lock on the handle.

dimensions (inches)

Part#	Size	D	L	H	W	List Price
949-161 ^{3.5}	1/4"	.46	2.24	1.93	4.13	50.03
949-162 ^{3.5}	3/8"	.50	2.24	1.93	4.13	42.04
949-163 ^{3.5}	1/2"	.59	2.48	2.01	4.13	56.76
949-164 ^{3.5}	3/4"	.78	2.95	2.28	5.12	60.23
949-165 ^{3.5}	1"	.98	3.50	2.76	5.71	76.19
949-166 ^{3.5}	1-1/4"	1.26	4.13	2.87	5.71	117.45
949-167 ^{3.5}	1-1/2"	1.50	4.65	3.29	7.48	154.75
949-168 ^{3.5}	2"	2	5.35	3.62	7.48	198.50

Larger sizes available on special order basis

Dimensions may change without notice. Please contact Midland if they are critical.

Private Label handles available.

See Page 162 for details

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

³ Also stocked in Houston

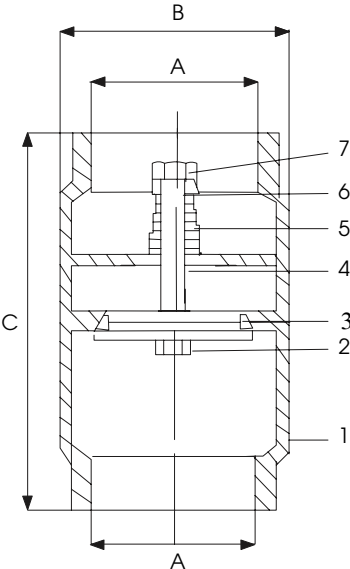
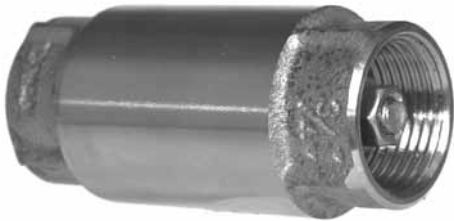
⁵ Also stocked in Atlanta

(See page Intro II for details)

SS CHECK VALVES
STAINLESS STEEL VALVES

STAINLESS STEEL
Check Valve

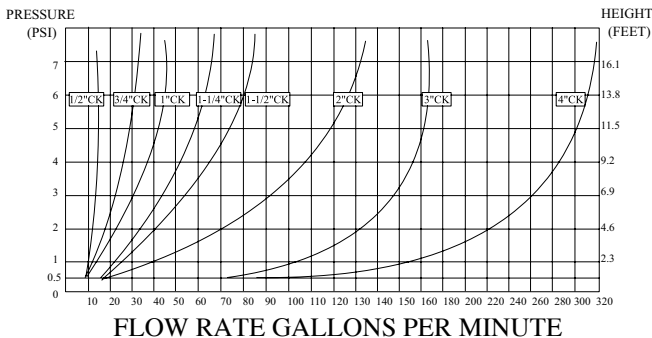
- No Lead.
- Water wells need a check valve installed above the pumps between lengths of drop pipes.
- Opens & Closes with flow of media.
- No cracking pressure.
- Working pressure unavailable.



Dimensions (Inches)

Part#	Size	A NPT	B	C	Box	Case	List Price
949-430	1/2"	1/2"	1.26	2.43	10	100	31.15
949-431	3/4"	3/4"	1.50	2.72	10	80	45.13
949-432	1"	1"	1.77	3.23	10	60	54.24

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

See more Check Valves on page 162

Save 5% by ordering online at
www.midlandindustrial.com



PVC VALVES

WHITE PVC BALL VALVES

- Quarter turn
- 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	100	3.78
940-285	3/4	5	60	5.51
940-286	1	5	40	7.83
940-287	1-1/4	5	30	11.98
940-288	1-1/2	4	24	14.69
940-289	2	4	16	23.73
940-291	3	3	12	100.63
940-292	4	2	8	167.39

WHITE SOCKET SLIP X SLIP



Part #	Size	Box	Case	List Price
940-294	1/2	10	100	4.15
940-295	3/4	5	60	5.19
940-296	1	5	40	7.92
940-297	1-1/4	5	30	11.98
940-298	1-1/2	4	24	16.13
940-299	2	4	16	23.88

Grey also available in some sizes. Just change prefix to 941 instead of 940. Same Price.

PVC VALVES

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.

SPECIFICATION DATA

- Body made of high-density polyethylene for greater strength and more positive thread engagement. Stem made of low density for more positive seal.
- Not affected by most acids, caustics or oils. Will eliminate chemical reaction and contamination of products in drums.
- Lightweight yet strong and rugged two-piece construction. Eliminates mechanical difficulty.

"FLO-RITE" DRUM FAUCET

Part #	Size	List Price
46-277	3/4	10.65



The FLO-KING faucet made of virgin polyethylene easily handles viscous materials. The faucet shoulder and gasket - made of EPDM material - provide a leakproof seal.

SPECIFICATION DATA

- Constructed of highest quality virgin polyethylene.
- Molded of attractive metallic gold plastic.
- Not affected by most acids, caustics or petroleum products.

"FLO-KING" DRUM FAUCET

Part #	Size	List Price
46-278	2	83.59

CAUTION: Never use this product in temperatures exceeding 140° F or with a heated container. Failure to follow these instructions can lead to a hazardous condition.

BRASS NIPPLES

BRASS NIPPLES

We hereby certify that to the best of our knowledge and belief the CDA 230 alloy Red Brass Pipe from which our nipples are produced meet the requirements of ASTM Specifications B43-91 and is free of mercury contamination. The chemical analysis is 85% copper, 15% Zinc and conforms to federal Specifications WVN-35LA.

Our brass nipples meet ASTM B687-88 and MS51846 for standard brass and copper nipples, and MS51872 for extra heavy brass nipples and extra heavy copper nipples.

Threads: Nipples are threaded with American Standard taper pipe threads (NPT) in accordance with screw-thread standard for Federal Services Handbook H-28.

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					

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

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 410

BRASS NIPPLES

BRASS NIPPLES

1/8" Diameter



Part #	Size	List Price
40-001	Close (3/4")	2.79
40-002	x 1-1/2"	3.15
40-003	x 2"	3.38
40-004	x 2-1/2"	3.83
40-005	x 3"	4.14
40-006	x 3-1/2"	4.47
40-007	x 4"	5.02
40-008	x 4-1/2"	5.67
40-009	x 5"	6.14
40-010	x 5-1/2"	6.63
40-011	x 6"	7.11
40-012	x 7"	8.45
40-013	x 8"	9.31
40-014	x 9"	11.45
40-015	x 10"	12.53
40-016	x 11"	13.59
40-017	x 12"	14.47

3/8" Diameter



Part #	Size	List Price
40-040	Close (1")	3.38
40-041	x 1-1/2"	4.00
40-042	x 2"	4.85
40-043	x 2-1/2"	5.26
40-044	x 3"	6.44
40-045	x 3-1/2"	6.94
40-046	x 4"	8.26
40-047	x 4-1/2"	8.80
40-048	x 5"	9.65
40-049	x 5-1/2"	10.49
40-050	x 6"	11.35
40-051	x 7"	13.78
40-052	x 8"	15.44
40-053	x 9"	18.27
40-054	x 10"	18.40
40-055	x 11"	20.09
40-056	x 12"	21.79

1/4" Diameter



Part #	Size	List Price
40-020	Close (7/8")	3.26
40-021	x 1-1/2"	3.77
40-022 ⁵	x 2"	4.27
40-023	x 2-1/2"	4.62
40-024	x 3"	5.43
40-025	x 3-1/2"	5.91
40-026 ⁵	x 4"	6.94
40-027	x 4-1/2"	7.54
40-028 ⁵	x 5"	8.22
40-029	x 5-1/2"	8.91
40-030	x 6"	10.02
40-031	x 7"	11.42
40-032	x 8"	12.51
40-033	x 9"	13.90
40-034	x 10"	15.27
40-035	x 11"	16.66
40-036	x 12"	18.03

1/2" Diameter



Part #	Size	List Price
40-060 ⁵	Close (1-1/8")	4.50
40-061	x 1-1/2"	5.21
40-062 ⁵	x 2"	6.12
40-063	x 2-1/2"	7.28
40-064 ⁵	x 3"	8.55
40-065	x 3-1/2"	9.76
40-066 ⁵	x 4"	11.18
40-067	x 4-1/2"	12.14
40-068	x 5"	13.37
40-069	x 5-1/2"	14.69
40-070 ⁵	x 6"	16.28
40-071	x 7"	18.86
40-072	x 8"	21.13
40-073	x 9"	23.45
40-074	x 10"	25.94
40-075	x 11"	28.38
40-076	x 12"	30.86

⁵ Also stocked in Atlanta
(See page Intro II for details)

Extra Heavy Schedule 80 Red Brass Nipples page 188
Chrome Plated Brass Nipples Available upon request

Save 5% by ordering online at
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BRASS NIPPLES

3/4" Diameter



Part #	Length	List Price
40-080	Close (1- 3/8")	6.49
40-081	x 1-1/2"	6.92
40-082 ⁵	x 2"	8.17
40-083	x 2-1/2"	9.48
40-084 ⁵	x 3"	10.93
40-085	x 3-1/2"	12.27
40-086	x 4"	14.26
40-087	x 4-1/2"	15.51
40-088	x 5"	17.12
40-089	x 5-1/2"	18.71
40-090	x 6"	20.83
40-091	x 7"	24.41
40-092	x 8"	27.49
40-093	x 9"	30.44
40-094	x 10"	33.55
40-095	x 11"	36.61
40-096	x 12"	39.92

1" Diameter



Part #	Length	List Price
40-100 ⁵	Close (1-1/2")	9.57
40-101	x 2"	11.81
40-102	x 2-1/2"	13.78
40-103	x 3"	15.86
40-104	x 3-1/2"	18.36
40-105	x 4"	20.66
40-106	x 4-1/2"	23.04
40-107	x 5"	25.47
40-108	x 5-1/2"	27.90
40-109	x 6"	30.42
40-110	x 7"	35.53
40-111	x 8"	40.56
40-112	x 9"	45.26
40-113	x 10"	50.20
40-114	x 11"	54.16
40-115	x 12"	59.86

BRASS NIPPLES

1-1/4" Diameter



Part #	Length	List Price
40-120	Close (1-5/8")	14.44
40-121	x 2"	16.49
40-122	x 2-1/2"	18.65
40-123	x 3"	22.07
40-124	x 3-1/2"	25.83
40-125	x 4"	29.07
40-126	x 4-1/2"	32.19
40-127	x 5"	35.50
40-128	x 5-1/2"	38.83
40-129	x 6"	42.41
40-130	x 7"	50.03
40-131	x 8"	56.67
40-132	x 9"	67.21
40-133	x 10"	70.08
40-134	x 11"	80.23
40-135	x 12"	83.83

1-1/2" Diameter



Part #	Length	List Price
40-140	Close (1-3/4")	18.78
40-141	x 2"	20.20
40-142	x 2-1/2"	24.20
40-143	x 3"	27.81
40-144	x 3-1/2"	31.94
40-145	x 4"	36.23
40-146	x 4-1/2"	40.71
40-147	x 5"	45.04
40-148	x 5-1/2"	49.28
40-149	x 6"	53.53
40-150	x 7"	62.56
40-151	x 8"	71.07
40-152	x 9"	79.56
40-153	x 10"	88.05
40-154	x 11"	96.55
40-155	x 12"	105.03

*Extra Heavy Schedule 80 Red Brass Nipples page 188
Chrome Plated Brass Nipples Available upon request*

Send Midland all your high volume quotes!

⁵ Also stocked in Atlanta
(See page Intro II for details)

BRASS NIPPLES**BRASS NIPPLES****2" Diameter**

Part #	Length	List Price
40-160	Close (2")	28.59
40-161	x 2-1/2"	30.87
40-162	x 3"	35.63
40-163	x 3-1/2"	41.01
40-164	x 4"	46.61
40-165	x 4-1/2"	51.97
40-166	x 5"	57.62
40-167	x 5-1/2"	63.21
40-168 ⁵	x 6"	68.81
40-169	x 7"	80.49
40-170	x 8"	91.79
40-171	x 9"	102.36
40-172	x 10"	113.69
40-173	x 11"	122.85
40-174	x 12"	135.60

2-1/2" Diameter

Part #	Length	List Price
40-180	Close (2-1/2")	75.47
40-181	x 3"	78.90
40-182	x 3-1/2"	89.39
40-183	x 4"	99.37
40-184	x 4-1/2"	106.61
40-185	x 5"	117.28
40-186	x 5-1/2"	126.31
40-187	x 6"	138.29
40-188	x 7"	157.54
40-189	x 8"	180.93
40-190	x 9"	200.83
40-191	x 10"	221.91
40-192	x 11"	239.11
40-193	x 12"	262.34

⁵ Also stocked in Atlanta
(See page Intro II for details)

3" Diameter

Part #	Length	List Price
40-200	Close (2-5/8")	102.62
40-201	x 3"	106.64
40-202	x 3-1/2"	120.64
40-203	x 4"	135.88
40-204	x 4-1/2"	149.37
40-205	x 5"	164.34
40-206	x 5-1/2"	178.57
40-207	x 6"	194.11
40-208	x 7"	226.50
40-209	x 8"	258.04
40-210	x 9"	282.57
40-211	x 10"	313.47
40-212	x 11"	340.88
40-213	x 12"	375.47

4" Diameter

Part #	Length	List Price
40-220	Close (2-7/8")	154.40
40-221	x 3"	156.82
40-222	x 3-1/2"	176.08
40-223	x 4"	200.81
40-224	x 4-1/2"	216.91
40-225	x 5"	239.57
40-226	x 5-1/2"	255.47
40-234	x 6"	282.09
40-229	x 8"	367.34
40-233	x 12"	536.02

Extra Heavy Schedule 80 Red Brass Nipples page 188
Chrome Plated Brass Nipples Available upon request

Eighty percent of success is showing up.

- Woody Allen

**NIPPLES &
FITTINGS**

EXTRA HEAVY RED BRASS NIPPLES**BRASS NIPPLES****1/8" Diameter**

Part #	Length	List Price
42-001	Close (3/4")	6.49
42-002	1-1/2"	7.32
42-003	2"	7.87
42-004	2-1/2"	8.91
42-005	3"	9.63
42-006	3-1/2"	10.40
42-007	4"	11.69
42-008	4-1/2"	13.21
42-009	5"	14.30
42-010	5-1/2"	15.44

1/4" Diameter

Part #	Length	List Price
42-020	Close (7/8")	7.59
42-021	1-1/2"	8.78
42-022	2"	9.94
42-023	2-1/2"	10.77
42-024	3"	12.64
42-025	3-1/2"	13.75
42-026	4"	16.17
42-027	4-1/2"	17.55
42-028	5"	19.13
42-029	5-1/2"	20.74
42-030	6"	23.32

3/8" Diameter

Part #	Length	List Price
42-040	Close (1")	7.86
42-041	1-1/2"	9.30
42-042	2"	11.30
42-043	2-1/2"	12.25
42-044	3"	14.99
42-045	3-1/2"	16.17
42-046	4"	19.24
42-047	4-1/2"	20.49
42-048	5"	22.47
42-049	5-1/2"	24.43
42-050	6"	26.42

1/2" Diameter

Part #	Length	List Price
42-060	Close (1-1/8")	10.49
42-061	1-1/2"	12.14
42-062	2"	14.26
42-063	2-1/2"	16.96
42-064	3"	8.55
42-065	3-1/2"	22.72
42-066	4"	26.04
42-067	4-1/2"	28.26
42-068	5"	31.14
42-069	5-1/2"	34.20
42-070	6"	37.91

3/4" Diameter

Part #	Length	List Price
42-080	Close (1-3/8")	15.11
42-082	2"	19.04
42-083	2-1/2"	22.07
42-084	3"	10.93
42-085	3-1/2"	28.57
42-086	4"	33.21
42-087	4-1/2"	36.13
42-088	5"	39.87
42-089	5-1/2"	43.57
42-090	6"	48.51

1" Diameter

Part #	Length	List Price
42-100	Close (1-1/2")	22.29
42-101	2"	27.49
42-102	2-1/2"	32.08
42-103	3"	36.94
42-104	3-1/2"	42.76
42-105	4"	48.10
42-106	4-1/2"	53.64
42-107	5"	59.32
42-108	5-1/2"	64.97
42-109	6"	70.83

BRASS NIPPLES**EXTRA HEAVY RED BRASS NIPPLES****1-1/4" Diameter**

Part #	Length	List Price
42-120	Close (1-5/8")	33.63
42-121	2"	38.40
42-122	2-1/2"	43.43
42-123	3"	51.40
42-124	3-1/2"	60.14
42-125	4"	67.69
42-126	4-1/2"	74.96
42-127	5"	82.66
42-128	5-1/2"	90.42
42-129	6"	98.76

1-1/2" Diameter

Part #	Length	List Price
42-140	Close (1-3/4")	43.72
42-141	2"	47.05
42-142	2-1/2"	56.37
42-143	3"	64.77
42-144	3-1/2"	74.38
42-145	4"	84.38
42-146	4-1/2"	94.81
42-147	5"	104.90
42-148	5-1/2"	114.77
42-149	6"	124.65

2" Diameter

Part #	Length	List Price
42-160	Close (2")	66.58
42-161	2-1/2"	71.90
42-162	3"	82.97
42-163	3-1/2"	95.51
42-164	4"	108.55
42-165	4-1/2"	121.02
42-166	5"	134.19
42-167	5-1/2"	147.19
42-168	6"	160.26

2-1/2" Diameter

Part #	Length	List Price
42-180	Close (2-1/2")	175.76
42-181	3"	183.74
42-182	3-1/2"	208.18
42-183	4"	231.42
42-184	4-1/2"	248.28
42-185	5"	273.12
42-186	5-1/2"	294.14
42-187	6"	322.06

3" Diameter

Part #	Length	List Price
42-200	Close (2-5/8")	238.99
42-201	3"	248.35
42-202	3-1/2"	280.95
42-203	4"	316.43
42-204	4-1/2"	347.85
42-205	5"	382.73
42-206	5-1/2"	415.86
42-207	6"	398.59

4" Diameter

Part #	Length	List Price
42-220	Close (2-3/4")	359.57
42-221	3"	365.21
42-222	3-1/2"	410.07
42-223	4"	467.66
42-224	4-1/2"	505.14
42-225	5"	557.92
42-226	5-1/2"	594.95
42-227	6"	656.93

Never judge a book by its movie.

- J. W. Eagan

**NIPPLES &
FITTINGS**

Class 125 (150) For steam, water, gas, oil and air service

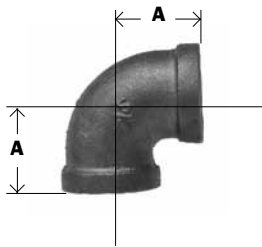
Standard specifications

Materials - ASTM B62-82 (85,5,5,5) C83600

Dimensions - ANSI B 16.15

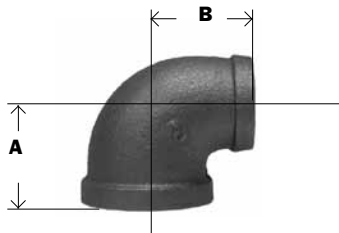
Threads - ANSI B2.1 or BA 21 and Fed. WW-P-460

Bronze threaded fittings are manufactured from smooth-cored castings, designed to provide full flow with minimum restriction. All threads are accurately machined and gauged to ensure a perfect fit with the pipe. All fittings are individually tested under water to ensure quality.

90° ELBOWS


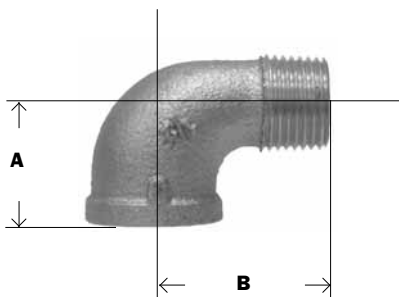
X101

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-100	1/8"	0.55	0.08	4.57
44-101	1/4"	0.72	0.10	4.57
44-102	3/8"	0.83	0.17	4.57
44-103	1/2"	1.03	0.24	6.96
44-104	3/4"	1.19	0.35	9.36
44-105 ⁵	1"	1.43	0.59	14.45
44-106	1-1/4"	1.71	0.96	22.98
44-107	1-1/2"	1.87	1.33	28.69
44-108	2"	2.14	2.34	46.72
44-109	2-1/2"	2.74	3.79	91.64
44-110	3"	3.10	5.21	140.57
44-112	4"	3.80	8.59	339.01

90° REDUCING ELBOWS


X101

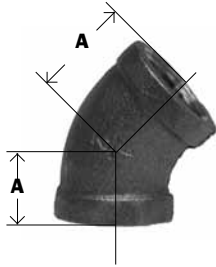
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
44-120	1/4" x 1/8"	0.67	0.60	0.10	7.08
44-124	1/2" x 3/8"	0.93	0.90	0.22	7.52
44-127	3/4" x 1/2"	1.08	1.11	0.31	10.25
44-131	1" x 3/4"	1.30	1.31	0.56	17.99
44-134	1-1/4" x 1"	1.52	1.60	0.81	28.09
44-137	1-1/2" x 1"	1.56	1.72	1.02	35.50
44-140	2" x 1"	1.72	2.02	1.30	65.50
44-142	2"x1-1/2"	1.89	2.07	1.65	65.50

90° STREET ELLS


X103

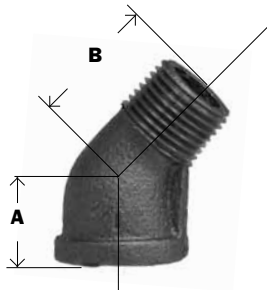
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
44-160	1/8"	0.55	0.92	0.07	6.96
44-161	1/4"	0.72	1.11	0.11	6.96
44-162	3/8"	0.83	1.24	0.16	6.96
44-163	1/2"	1.03	1.51	0.21	8.64
44-164	3/4"	1.19	1.66	0.34	12.20
44-165	1"	1.43	1.98	0.65	20.18
44-166	1-1/4"	1.71	2.26	1.11	30.90
44-167 ⁵	1-1/2"	1.87	2.46	1.16	40.25
44-168	2"	2.14	2.98	2.09	68.24
44-169	2-1/2"	2.74	3.92	3.79	107.89
44-170	3"	3.10	4.45	6.38	161.81

⁵ Also stocked in Atlanta
(See page Intro II for details)

45° ELBOWS


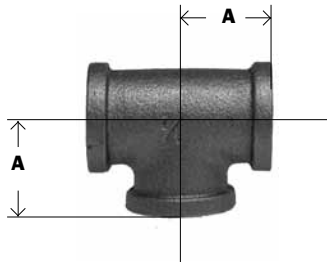
X102

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-180	1/8"	0.43	0.05	5.02
44-181	1/4"	0.55	0.08	5.02
44-182	3/8"	0.63	0.12	5.02
44-183	1/2"	0.79	0.22	6.36
44-184	3/4"	0.91	0.34	9.36
44-185	1"	1.07	0.57	15.82
44-186	1-1/4"	1.23	0.90	25.30
44-187	1-1/2"	1.31	1.08	31.69
44-188	2"	1.47	1.54	51.38

45° STREET ELBOWS


X103A

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
44-200	1/8"	0.26	0.43	0.06	7.08
44-201	1/4"	0.35	0.56	0.11	7.08
44-202	3/8"	0.37	0.63	0.13	7.08
44-203	1/2"	0.45	0.79	0.18	8.64
44-204	3/4"	0.52	0.91	0.28	17.01
44-205	1"	0.60	1.07	0.52	20.18
44-206	1-1/4"	0.67	1.23	0.77	30.90
44-207 ⁵	1-1/2"	0.70	1.31	0.97	41.50
44-208	2"	0.76	1.47	2.04	70.33

TEES


X106

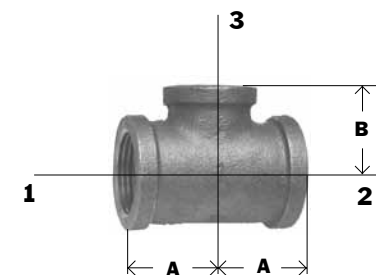
Part #	Size	A	Approx. Wt. Lbs.	List Price
44-250	1/8"	0.55	0.09	6.36
44-251	1/4"	0.72	0.16	6.36
44-252	3/8"	0.83	0.25	6.36
44-253	1/2"	1.03	0.31	8.00
44-254	3/4"	1.19	0.48	11.51
44-255 ⁵	1"	1.43	0.84	20.46
44-256	1-1/4"	1.71	1.18	28.69
44-257	1-1/2"	1.87	1.69	39.48
44-258	2"	2.14	2.69	64.68
44-259	2-1/2"	2.74	4.70	125.77
44-260	3"	3.10	6.69	192.34

Tomorrow is often the busiest day of the week.

- Spanish Proverb

⁵ Also stocked in Atlanta
(See page Intro II for details)

REDUCING TEES

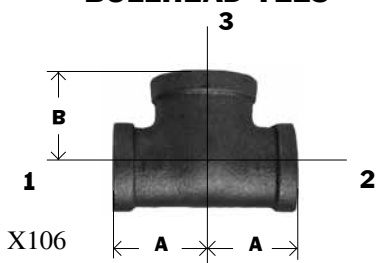


X106

REDUCING ON THE BRANCH

Part #	Size (1 & 2) x 3	A	B	Approx. Wt. Lbs.	List Price
44-276	1/2" x 1/4"	0.87	0.87	0.28	9.71
44-279	1/2" x 3/8"	0.93	0.90	0.40	11.11
44-282	3/4" x 1/4"	1.05	1.08	0.38	13.79
44-283	3/4" x 3/8"	1.00	1.00	0.46	13.79
44-286	3/4" x 1/2"	1.08	1.11	0.40	13.79
44-291	1" x 1/2"	1.20	1.24	0.73	25.21
44-298	1" x 3/4"	1.30	1.31	0.71	25.21
44-301	1-1/4" x 1/2"	1.34	1.53	1.18	35.50
44-303	1-1/4" x 3/4"	1.30	1.31	1.08	35.50
44-306	1-1/4" x 1"	1.58	1.67	1.23	35.50

BULLHEAD TEES



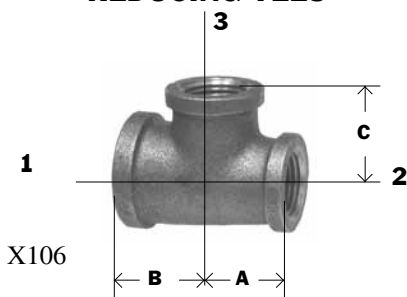
X106

LARGER BRANCH

Part #	Size 1x2x3	A	B	Approx. Wt. Lbs.	List Price
44-280	1/2" x 1/2" x 3/4"	1.22	1.20	0.48	15.17

* Many sizes available...just ask!

REDUCING TEES



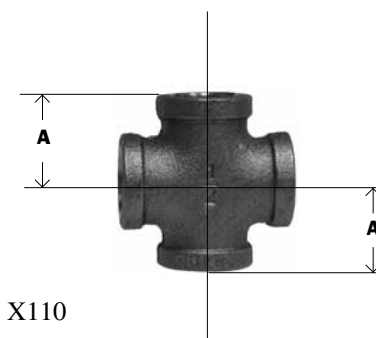
X106

REDUCING ON THE RUN

Part #	Size 1x2x3	A	B	C	Approx. Wt. Lbs.	List Price
44-287	3/4" x 1/2" x 1/2"	1.12	1.20	1.22	0.37	15.17
44-296	1" x 3/4" x 3/4"	1.31	1.37	1.45	0.71	27.46

* Many sizes available...just ask!

CROSSES



X110

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-391	1/4"	0.72	0.20	10.63
44-392	3/8"	0.83	0.29	10.63
44-393	1/2"	1.03	0.43	12.92
44-394	3/4"	1.19	0.59	18.66
44-395	1"	1.19	1.15	29.59
44-396	1-1/4"	1.71	1.70	46.32
44-397	1-1/2"	1.87	1.97	59.18
44-398	2"	2.14	2.52	123.34

I never apologize. I'm sorry, but that's just the way I am.

- Homer Simpson

COUPLINGS



X111

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-410	1/8"	0.80	0.06	4.57
44-411	1/4"	0.80	0.08	4.57
44-412	3/8"	1.05	0.14	4.57
44-413	1/2"	1.29	0.21	5.75
44-414	3/4"	1.43	0.29	7.58
44-415	1"	1.68	0.45	11.51
44-416	1-1/4"	1.86	0.80	17.99
44-417	1-1/2"	1.92	0.98	24.46
44-418	2"	2.20	1.56	40.25
44-420	3"	3.18	3.63	92.46

REDUCING COUPLINGS



X112

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-430	1/4" x 1/8"	0.88	0.08	4.91
44-431	3/8" x 1/8"	0.92	0.10	4.91
44-432	3/8" x 1/4"	0.92	0.12	4.91
44-433	1/2" x 1/8"	1.17	0.14	7.08
44-434	1/2" x 1/4"	1.17	0.17	6.12
44-435	1/2" x 3/8"	1.17	0.17	6.12
44-436	3/4" x 1/4"	1.35	0.24	10.12
44-437	3/4" x 3/8"	1.35	0.24	9.11
44-438	3/4" x 1/2"	1.35	0.27	9.11
44-440	1" x 3/8"	1.56	0.40	17.08
44-441	1" x 1/2"	1.56	0.36	15.16
44-442	1" x 3/4"	1.56	0.45	15.16
44-444	1-1/4" x 1/2"	1.77	0.60	29.03
44-445	1-1/4" x 3/4"	1.77	0.67	24.46
44-446	1-1/4" x 1"	1.77	0.65	24.46
44-447	1-1/2" x 1/2"	1.80	0.77	34.79
44-448	1-1/2" x 3/4"	1.80	0.70	34.79
44-449	1-1/2" x 1"	1.80	0.74	30.90
44-450	1-1/2" x 1-1/4"	1.80	0.83	30.90
44-458	2" x 1/2"	2.03	1.07	51.74
44-451	2" x 3/4"	2.03	1.25	51.74
44-452	2" x 1"	2.03	1.32	51.74
44-453	2" x 1-1/4"	2.03	1.37	45.92
44-454	2" x 1-1/2"	2.03	1.74	45.92
44-461	2-1/2" x 1-1/2"	3.15	1.94	81.34
44-462	2-1/2" x 2"	3.15	2.37	81.34
44-456	3" x 2"	3.69	2.40	107.81
44-463	3" x 2-1/2"	3.69	3.82	107.81

Time you enjoy wasting is not wasted.

- John Lennon

CAPS



X116

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-470	1/8"	0.53	0.03	3.43
44-471	1/4"	0.58	0.06	3.43
44-472	3/8"	0.66	0.09	3.43
44-473	1/2"	0.75	0.13	4.57
44-474	3/4"	0.87	0.20	6.05
44-475	1"	1.03	0.29	9.47
44-476	1-1/4"	1.10	0.47	14.41
44-477	1-1/2"	1.12	0.61	19.45
44-478	2"	1.35	1.10	33.01
44-480	3"	1.83	2.64	100.24

UNIONS



X187

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-600	1/8"	1.18	0.13	16.22
44-601	1/4"	1.26	0.22	16.22
44-602	3/8"	1.50	0.39	16.22
44-603	1/2"	1.57	0.47	17.64
44-604	3/4"	1.89	0.69	24.46
44-605	1"	2.13	1.01	32.39
44-606	1-1/4"	2.36	1.48	47.44
44-607	1-1/2"	2.68	1.92	55.99
44-608	2"	2.99	3.04	86.18
44-609	2-1/2"	3.35	4.80	169.58
44-610	3"	3.74	6.49	262.00

I hope that while so many people are out smelling the flowers, someone is taking the time to plant some.

- Herbert Rappaport

HEX BUSHINGS



X114

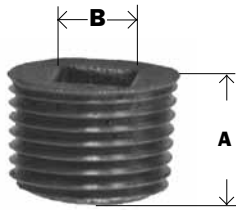
Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
44-500	1/4" x 1/8"	0.58	0.66	0.03	3.09
44-501	3/8" x 1/8"	0.64	0.72	0.06	3.09
44-502	3/8" x 1/4"	0.64	0.75	0.06	3.09
44-503	1/2" x 1/8"	0.75	0.92	0.11	4.33
44-504	1/2" x 1/4"	0.75	0.93	0.10	3.64
44-505	1/2" x 3/8"	0.75	0.92	0.09	3.64
44-506	3/4" x 1/8"	0.87	1.15	0.17	6.05
44-507	3/4" x 1/4"	0.85	1.14	0.17	6.05
44-508	3/4" x 3/8"	0.85	1.14	0.16	5.02
44-509	3/4" x 1/2"	0.85	1.15	0.14	5.02
44-510	1" x 1/4"	1.05	1.43	0.30	9.20
44-511	1" x 3/8"	1.05	1.50	0.26	9.20
44-512	1" x 1/2"	1.00	1.40	0.27	7.58
44-513	1" x 3/4"	1.00	1.43	0.22	7.58
44-514	1-1/4" x 1/4"	1.22	1.10	0.34	15.59
44-515	1-1/4" x 3/8"	1.19	1.84	0.29	16.24
44-516	1-1/4" x 1/2"	1.14	1.33	0.47	15.59
44-517 ⁵	1-1/4" x 3/4"	1.08	1.75	0.46	12.92
44-518	1-1/4" x 1"	1.08	1.76	0.33	12.92
44-519	1-1/2" x 1/4"	1.09	2.12	0.29	20.18
44-520	1-1/2" x 3/8"	1.35	2.16	0.44	20.18
44-521	1-1/2" x 1/2"	1.20	2.10	0.51	20.18
44-522 ⁵	1-1/2" x 3/4"	1.20	2.12	0.51	20.18
44-523	1-1/2" x 1"	1.14	2.08	0.61	16.50
44-524	1-1/2" x 1-1/4"	1.14	2.12	0.40	16.50
44-527	2" x 1/2"	1.27	1.32	1.10	29.46
44-528 ⁵	2" x 3/4"	1.27	1.62	0.77	29.46
44-529	2" x 1"	1.29	1.95	0.88	29.46
44-530	2" x 1-1/4"	1.22	2.47	0.97	24.46
44-531 ⁵	2" x 1-1/2"	1.22	2.50	0.77	24.46
44-532	2-1/2" x 1"	1.53	1.94	1.19	60.66
44-534	2-1/2" x 1-1/2"	1.50	2.38	1.15	48.90
44-535	2-1/2" x 2"	1.43	2.97	1.12	48.90
44-537	3" x 1-1/2"	1.61	2.68	2.44	96.13
44-538	3" x 2"	1.61	3.70	1.82	73.94
44-539	3" x 2-1/2"	1.53	3.70	2.11	73.94

A man is but the product of his thoughts; what he thinks, he becomes.

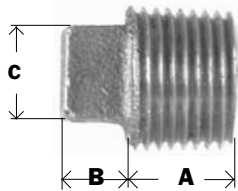
- Gandhi

⁵ Also stocked in Atlanta
(See page Intro II for details)

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www.midlandindustrial.com

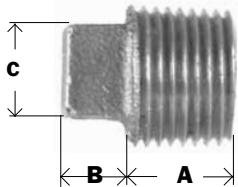
BRONZE COUNTERSUNK PLUGS


Part #	Size	A	Socket Size	Approx. Wt. Lbs.	List Price
44-633	1/2"	0.57	0.43	0.06	3.74
44-634	3/4"	0.58	0.47	0.11	4.29
44-635	1"	0.75	0.59	0.22	8.02
44-636	1-1/4"	0.74	0.72	0.33	13.35
44-637	1-1/2"	0.79	0.72	0.50	20.05
44-638	2"	0.80	0.85	0.88	32.63
44-639	2-1/2"	1.06	1.12	1.56	66.74

CORED SQUARE HEAD PLUGS


X117

Part #	Size	A	B	C	Approx. Wt. Lbs.	List Price
44-650	1/8"	0.27	0.24	0.28	0.02	3.43
44-651	1/4"	0.41	0.28	0.37	0.04	3.43
44-652	3/8"	0.41	0.31	0.43	0.07	3.43
44-653	1/2"	0.54	0.38	0.56	0.11	4.79
44-654	3/4"	0.55	0.44	0.62	0.17	5.48
44-655	1"	0.69	0.50	0.81	0.25	7.22
44-656	1-1/4"	0.71	0.56	0.93	0.39	10.75
44-657	1-1/2"	0.73	0.62	1.12	0.51	13.70
44-658	2"	0.76	0.68	1.31	0.83	21.64
44-659	2-1/2"	1.07	0.74	1.50	1.26	37.02
44-660	3"	1.13	0.80	1.68	1.49	59.18
44-662	4"	1.22	0.92	2.25	3.20	115.60

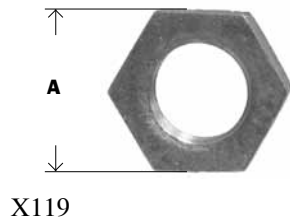
SOLID SQUARE HEAD PLUGS


X117A

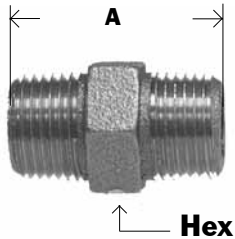
Part #	Size	A	B	C	Approx. Wt. Lbs.	List Price
44-670	1/8"	0.27	0.24	0.28	0.04	3.64
44-671	1/4"	0.41	0.28	0.37	0.05	3.64
44-672	3/8"	0.41	0.31	0.43	0.08	3.04
44-673	1/2"	0.54	0.38	0.56	0.12	5.75
44-674	3/4"	0.55	0.44	0.62	0.18	7.50
44-675	1"	0.69	0.50	0.81	0.28	12.78
44-676	1-1/4"	0.71	0.56	0.93	0.40	23.03
44-677	1-1/2"	0.73	0.62	1.12	0.56	29.93
44-678	2"	0.76	0.68	1.31	0.90	47.44

The secret of life is honesty and fair dealing. If you can fake that, you've got it made.

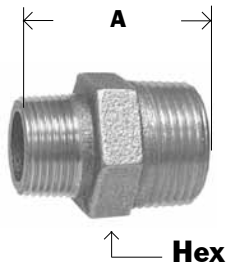
- Groucho Marx

HEX LOCKNUTS


Part #	Size	A	Thickness	Approx. Wt. Lbs.	List Price
44-700	1/8"	0.50	0.19	0.02	2.27
44-701	1/4"	0.66	0.25	0.03	2.27
44-702	3/8"	0.77	0.28	0.04	2.27
44-703	1/2"	0.97	0.31	0.10	3.64
44-704	3/4"	1.23	0.34	0.13	4.33
44-705	1"	1.50	0.38	0.20	6.46
44-706	1-1/4"	1.86	0.42	0.28	10.51
44-707	1-1/2"	2.12	0.47	0.52	13.63
44-708	2"	2.63	0.53	0.64	21.65

HEX NIPPLES


Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
44-720	1/8"	1.25	0.50	0.05	5.33
44-721	1/4"	1.25	0.61	0.06	8.83
44-723	1/2"	1.65	1.03	0.18	9.08
44-724	3/4"	1.77	1.21	0.24	9.54
44-725	1"	2.06	1.46	0.36	10.29
44-726	1-1/4"	2.12	1.81	0.47	21.36
44-727	1-1/2"	2.25	2.07	0.76	32.63
44-728	2"	2.50	2.41	1.50	39.48
44-729	2-1/2"	2.80	3.10	2.10	40.68

REDUCING NIPPLES


Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
44-740	1/4" x 1/8"	1.22	0.68	0.06	9.13
44-742	1/2" x 3/8"	1.49	0.97	0.20	11.40
44-743	3/4" x 1/2"	1.65	1.18	0.26	14.94
44-744	1" x 1/2"	1.87	1.41	0.32	19.45
44-745	1" x 3/4"	1.95	1.50	0.37	19.45
44-748	1-1/4" x 1"	2.48	1.75	0.69	32.64
44-750	1-1/2" x 1"	2.28	2.10	0.70	37.34
44-753	1-1/2" x 1-1/4"	2.47	1.96	1.10	39.92
44-760	2" x 1-1/2"	2.83	2.43	1.36	46.40

Floor Flanges and Companion Flanges available upon request.

SCH 40 STAINLESS STEEL NIPPLES

STAINLESS STEEL

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.



1/8" Diameter

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-001	1.90	X Close (3/4")	49-001	2.36
48-002	2.49	x 1-1/2"	49-002	3.31
48-003	2.97	x 2"	49-003	4.03
48-004	3.44	x 2-1/2"	49-004	4.74
48-005	3.91	x 3"	49-005	5.46
48-006	4.39	x 3-1/2"	49-006	6.18
48-007	4.88	x 4"	49-007	6.91
48-008	5.35	x 4-1/2"	49-008	7.63
48-009	5.83	x 5"	49-009	8.36
48-010	6.32	x 5-1/2"	49-010	9.08
48-011	6.79	x 6"	49-011	9.81
48-015	10.76	x 10"		



1/4" Diameter

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-020	2.15	X Close (7/8")	49-020	2.65
48-021	2.66	x 1-1/2"	49-021	3.40
48-022	3.20	x 2"	49-022	4.14
48-023	3.79	x 2-1/2"	49-023	4.94
48-024	4.38	x 3"	49-024	5.74
48-025	4.97	x 3-1/2"	49-025	6.54
48-026	5.60	x 4"	49-026	7.40
48-027	6.20	x 4-1/2"	49-027	8.19
48-028	6.79	x 5"	49-028	9.00
48-029	7.38	x 5-1/2"	49-029	9.80
48-030	7.97	x 6"	49-030	10.60
48-032	10.48	x 8"		
48-034	12.84	x 10"		
48-036	15.20	x 12"		



3/8" Diameter

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-040	2.58	X Close (1")	49-040	3.27
48-041	3.13	x 1-1/2"	49-041	4.09
48-042	3.79	x 2"	49-042	5.02
48-043	4.51	x 2-1/2"	49-043	6.02
48-044	5.23	x 3"	49-044	7.03
48-045	5.96	x 3-1/2"	49-045	8.03
48-046	6.68	x 4"	49-046	9.03
48-047	7.40	x 4-1/2"	49-047	10.03
48-048	8.12	x 5"	49-048	11.04
48-049	8.84	x 5-1/2"	49-049	12.03
48-050	9.57	x 6"	49-050	13.04
48-052	12.68	x 8"		
48-054	15.57	x 10"		



1/2" Diameter

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-060	3.33	X Close (1")	49-060	4.36
48-061	4.01	x 1-1/2"	49-061	5.36
48-062	4.81	x 2"	49-062	6.56
48-063	5.76	x 2-1/2"	49-063	7.94
48-064	6.71	x 3"	49-064	9.31
48-065	7.67	x 3-1/2"	49-065	10.68
48-066	8.65	x 4"	49-066	12.09
48-067	9.60	x 4-1/2"	49-067	13.46
48-068	10.55	x 5"	49-068	14.68
48-069	11.50	x 5-1/2"	49-069	16.21
48-070	12.46	x 6"	49-070	17.58
48-071	14.53	x 7"		
48-072	16.44	x 8"		
48-073	18.34	x 9"		
48-074	20.25	10"		
48-075	22.15	x 11"		
48-076	24.05	x 12"		

* Stainless Steel Nipples available in SCH80
seamless beginning on page 201

STAINLESS STEEL**SCH 40 STAINLESS STEEL NIPPLES****3/4" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-080	4.49	X Close (1-3/8")	49-080	5.69
48-081	4.78	x 1-1/2"	49-081	6.07
48-082	5.73	x 2"	49-082	7.42
48-083	6.88	x 2-1/2"	49-083	8.97
48-084	8.03	x 3"	49-084	10.52
48-085	9.18	x 3-1/2"	49-085	12.08
48-086	10.33	x 4"	49-086	13.63
48-087	11.48	x 4-1/2"	49-087	15.19
48-088	12.64	x 5"	49-088	16.74
48-089	13.79	x 5-1/2"	49-089	18.30
48-090	14.94	x 6"	49-090	19.86
48-091	17.36	x 7"		
48-092	19.67	x 8"		
48-094	24.28	x 10"	49-094	32.42
48-096	28.89	x 12"		

**1" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-100	5.90	X Close (1-1/2")	49-100	7.89
48-101	7.39	x 2"	49-101	10.01
48-102	8.77	x 2-1/2"	49-102	12.01
48-103	10.26	x 3"	49-103	14.13
48-104	11.74	x 3-1/2"	49-104	16.24
48-105	13.22	x 4"	49-105	18.36
48-106	14.71	x 4-1/2"	49-106	20.47
48-107	16.19	x 5"	49-107	22.58
48-108	17.68	x 5-1/2"	49-108	24.70
48-109	19.16	x 6"	49-109	26.81
48-110	22.44	x 7"		
48-111	25.41	x 8"		
48-113	31.35	x 10"		

* Stainless Steel Nipples available in SCH80
seamless beginning on page 201

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**1-1/4" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-120	7.93	X Close (1-5/8")	49-120	10.80
48-121	9.34	x 2"	49-121	12.85
48-122	11.06	x 2-1/2"	49-122	15.40
48-123	12.95	x 3"	49-123	18.13
48-124	14.83	x 3-1/2"	49-124	20.85
48-125	16.71	x 4"	49-125	23.58
48-126	18.59	x 4-1/2"	49-126	26.30
48-127	20.47	x 5"	49-127	29.03
48-128	22.35	x 5-1/2"	49-128	31.75
48-129	24.23	x 6"	49-129	34.48
48-131	31.86	x 8"		
48-135	46.90	x 12"		

**1-1/2" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-140	9.71	x 1-3/4"	49-140	13.34
48-141	10.64	x 2"	49-141	14.76
48-142	12.86	x 2-1/2"	49-142	17.98
48-143	15.08	x 3"	49-143	21.20
48-144	17.31	x 3-1/2"	49-144	24.42
48-145	19.53	x 4"	49-145	27.64
48-146	21.75	x 4-1/2"	49-146	30.86
48-147	23.97	x 5"	49-147	34.07
48-148	26.19	x 5-1/2"	49-148	37.29
48-149	28.41	x 6"	49-149	40.51
48-151	37.54	x 8"		
48-152	41.98	x 9"		

Other Stainless Steel Nipples Available

- Schedule 40 & 80 seamless

Laughter is the shortest distance between two
people.

- Victor Borge

SCH 40 STAINLESS STEEL NIPPLES**STAINLESS STEEL****2" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-160	15.07	X Close (2")	49-160	20.72
48-161	16.79	x 2-1/2"	49-161	23.70
48-162	19.43	x 3"	49-162	27.68
48-163	22.33	x 3-1/2"	49-163	31.92
48-164	25.22	x 4"	49-164	36.17
48-165	28.11	x 4-1/2"	49-165	40.41
48-166	31.01	x 5"	49-166	44.66
48-167	33.90	x 5-1/2"	49-167	48.90
48-168	36.80	x 6"	49-168	53.14
48-169	43.14	x 7"	49-169	62.23
48-170	48.93	x 8"		
48-171	54.72	x 9"		
48-172	60.50	x 10"		

**2-1/2" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-180	30.56	X Close (2-1/2")		
48-193	117.34	x 12"		
		x 5-1/2"	49-186	75.97

**3" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-200	43.00	X Close (2-5/8")		
48-201	47.48	x 3"		
48-203	59.44	x 4"	49-203	78.52
48-205	68.08	x 5"		
48-207	80.04	x 6"		
		x 7"	49-208	128.60
48-209	107.76	x 8"		
48-213	155.59	x 12"		

**4" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-220	54.95	X Close (2-7/8")		
		x 5"	49-225	122.12
48-227	102.73	x 6"		

* Stainless Steel Nipples available in SCH80
seamless beginning on page 201

I can picture in my mind a world without war, a world without hate. And I can picture us attacking that world, because they'd never expect it.

- Jack Handey

STAINLESS STEEL**SCH 80 SEAMLESS SS NIPPLES****1/8" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-001	5.83	X Close (3/4")	52-001	7.22
51-002	7.63	X 1-1/2"	52-002	10.13
51-003	8.96	X 2"	52-003	12.35
51-004	10.54	X 2-1/2"	52-004	14.51
51-005	11.99	X 3"	52-005	16.73
51-006	13.47	X 3-1/2"	52-006	18.95
51-007	14.94	X 4"	52-007	21.17
51-008	16.40	X 4-1/2"	52-008	23.39
51-009	17.88	X 5"	52-009	25.61
51-010	19.36	X 5-1/2"	52-010	27.83
51-011	20.82	X 6"	52-011	30.06

1/4" Diameter

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-020	6.32	X Close (7/8")	52-020	8.11
51-021	7.84	X 1-1/2"	52-021	10.41
51-022	9.42	X 2"	52-022	12.68
51-023	11.16	X 2-1/2"	52-023	15.12
51-024	12.90	X 3"	52-024	17.58
51-025	14.63	X 3-1/2"	52-025	20.04
51-026	16.52	X 4"	52-026	22.67
51-027	18.26	X 4-1/2"	52-027	25.11
51-028	20.00	X 5"	52-028	27.58
51-029	21.74	X 5-1/2"	52-029	30.02
51-030	23.48	X 6"	52-030	32.47

3/8" Diameter

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-040	7.91	X CLOSE (1")	52-040	10.04
51-041	9.60	X 1-1/2"	52-041	12.53
51-042	11.61	X 2"	52-042	15.39
51-043	13.83	X 2-1/2"	52-043	18.46
51-044	16.03	X 3"	52-044	21.53
51-045	18.26	X 3-1/2"	52-045	24.60
51-046	20.45	X 4"	52-046	27.66
51-047	22.68	X 4-1/2"	52-047	30.74
51-048	24.87	X 5"	52-048	33.82
51-049	27.09	X 5-1/2"	52-049	36.87
51-050	29.31	X 6"	52-050	39.95

**1/2" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-060	9.81	X Close (1-1/8")	52-060	13.35
51-061	11.83	X 1-1/2"	52-061	16.42
51-062	14.17	X 2"	52-062	20.11
51-063	16.98	X 2-1/2"	52-063	24.33
51-064	19.78	X 3"	52-064	28.52
51-065	22.59	X 3-1/2"	52-065	32.74
51-066	25.48	X 4"	52-066	37.06
51-067	28.30	X 4-1/2"	52-067	41.25
51-068	31.10	X 5"	52-068	44.99
51-069	33.90	X 5-1/2"	52-069	49.68
51-070	36.71	X 6"	52-070	53.88

3/4" Diameter

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-080	13.75	X Close (1-3/8")	52-080	17.43
51-081	14.64	X 1-1/2"	52-081	18.62
51-082	17.55	X 2"	52-082	22.73
51-083	21.07	X 2-1/2"	52-083	27.49
51-084	24.60	X 3"	52-084	32.25
51-085	28.14	X 3-1/2"	52-085	37.01
51-086	31.67	X 4"	52-086	41.78
51-087	35.18	X 4-1/2"	52-087	46.55
51-088	38.72	X 5"	52-088	51.31
51-089	42.25	X 5-1/2"	52-089	56.08
51-090	45.78	X 6"	52-090	60.85

1" Diameter

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-100	17.39	X Close (1-1/2")	52-100	24.19
51-101	21.78	X 2"	52-101	30.67
51-102	25.85	X 2-1/2"	52-102	36.82
51-103	30.23	X 3"	52-103	43.29
51-104	34.60	X 3-1/2"	52-104	49.76
51-105	38.97	X 4"	52-105	56.25
51-106	43.34	X 4-1/2"	52-106	62.71
51-107	47.72	X 5"	52-107	69.20
51-108	52.11	X 5-1/2"	52-108	75.68
51-109	56.47	X 6"	52-109	82.16

SCH 80 SEAMLESS SS NIPPLES**STAINLESS STEEL****1-1/4" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-120	24.30	X Close (1-5/8")	52-120	33.10
51-121	28.62	X 2"	52-121	39.36
51-122	33.90	X 2-1/2"	52-122	47.19
51-123	39.67	X 3"	52-123	55.56
51-124	45.44	X 3-1/2"	52-124	63.90
51-125	51.20	X 4"	52-125	72.25
51-126	56.96	X 4-1/2"	52-126	80.61
51-127	62.72	X 5"	52-127	88.96
51-128	68.48	X 5-1/2"	52-128	97.29
51-129	74.25	X 6"	52-129	105.65

1-1/2" Diameter

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-140	28.61	X Close (1-3/4")	52-140	40.87
51-141	31.36	X 2"	52-141	45.23
51-142	37.90	X 2-1/2"	52-142	55.10
51-143	44.44	X 3"	52-143	64.96
51-144	51.01	X 3-1/2"	52-144	74.83
51-145	57.54	X 4"	52-145	84.69
51-146	64.09	X 4-1/2"	52-146	94.55
51-147	70.63	X 5"	52-147	104.42
51-148	77.17	X 5-1/2"	52-148	114.28
51-149	83.72	X 6"	52-150	103.45

2" Diameter

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-160	46.18	X Close (2")	52-160	63.49
51-161	51.44	X 2-1/2"	52-161	72.64
51-162	59.54	X 3"	52-162	84.83
51-163	68.42	X 3-1/2"	52-163	97.81
51-164	77.28	X 4"	52-164	110.83
51-165	86.14	X 4-1/2"	52-165	123.84
51-166	95.01	X 5"	52-166	136.85
51-167	103.88	X 5-1/2"	52-167	149.84
51-168	112.76	X 6"	52-168	162.84

**2-1/2" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-180	90.06	X Close (2-1/2")	52-180	120.73
51-181	103.45	X 3"	52-181	139.73
51-182	116.85	X 3-1/2"	52-182	158.73
51-183	130.22	X 4"	52-183	177.72
51-184	141.89	X 4-1/2"	52-184	194.89
51-185	155.29	X 5"	52-185	213.78
51-186	168.67	X 5-1/2"	52-186	232.79
51-187	182.07	X 6"	52-187	251.77

3" Diameter

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-200	131.75	X Close (2-5/8")	52-200	171.00
51-201	145.50	X 3"	52-201	190.00
51-202	163.82	X 3-1/2"	52-202	215.30
51-203	182.15	X 4"	52-203	240.61
51-204	190.31	X 4-1/2"	52-204	255.04
51-205	208.63	X 5"	52-205	280.34
51-206	226.95	X 5-1/2"	52-206	305.66
51-207	245.27	X 6"	52-207	330.96

4" Diameter

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-220	161.94	X Close (2-7/8")	52-220	230.94
51-223	213.35	X 4"	52-223	307.99
51-224	234.15	X 4-1/2"	52-224	339.97
51-225	257.02	X 5"	52-225	374.21
51-226	279.88	X 5-1/2"	52-226	408.46
51-227	302.71	X 6"	52-227	442.71

STAINLESS STEEL**304 AND 316 150# STAINLESS STEEL FITTINGS**

- Stainless Casting conform to ASTM A351
- NPT Threads conform to ASME B1.20.1

90° ELBOWS

Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-100	5.09	1/8"	63-100	6.53
62-101	5.09	1/4"	63-101	6.53
62-102	6.32	3/8"	63-102	7.92
62-103	6.73	1/2"	63-103	8.75
62-104	9.66	3/4"	63-104	12.69
62-105	13.69	1"	63-105	15.93
62-106	24.02	1-1/4"	63-106	27.31
62-107	31.97	1-1/2"	63-107	36.43
62-108	40.54	2"	63-108	46.05
62-109	92.35	2-1/2"		
62-110	117.67	3"		
62-112	229.64	4"	63-112	255.77

90° STREET ELLS

Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-160	7.27	1/8"	63-160	8.74
62-161	7.27	1/4"	63-161	8.91
62-162	8.75	3/8"	63-162	10.95
62-163	10.30	1/2"	63-163	12.88
62-164	14.29	3/4"	63-164	16.98
62-165	24.73	1"	63-165	27.11
62-166	35.91	1-1/4"	63-166	40.51
62-167	42.48	1-1/2"	63-167	45.13
62-168	57.54	2"	63-168	64.45

45° ELBOWS

Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-180	6.44	1/8"	63-180	7.77
62-181	6.44	1/4"	63-181	7.77
62-182	7.56	3/8"	63-182	9.49
62-183	8.31	1/2"	63-183	10.42
62-184	12.13	3/4"	63-184	13.68
62-185	14.81	1"	63-185	17.14
62-186	23.72	1-1/4"	63-186	26.96
62-187	28.22	1-1/2"	63-187	32.06
62-188	39.70	2"	63-188	44.83

TEES

Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-250	6.83	1/8"	63-250	8.11
62-251	6.83	1/4"	63-251	8.11
62-252	8.70	3/8"	63-252	10.75
62-253	9.13	1/2"	63-253	11.34
62-254	14.53	3/4"	63-254	16.72
62-255	18.50	1"	63-255	21.00
62-256	36.80	1-1/4"	63-256	41.79
62-257	45.74	1-1/2"	63-257	50.70
62-258	58.75	2"	63-258	65.32
62-260	181.61	3"		

CROSSES

Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
		1/8"	63-390	14.67
62-391	11.88	1/4"	63-391	14.67
62-392	14.16	3/8"	63-392	17.26
62-393	17.44	1/2"	63-393	21.42
62-394	29.84	3/4"	63-394	37.43
62-395	44.16	1"	63-395	45.18
62-396	52.44	1-1/4"	63-396	65.32
62-397	64.97	1-1/2"	63-397	81.52
62-398	93.00	2"	63-398	112.31

STAINLESS STEEL OD MACHINED COUPLINGS

Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-410B	4.26	1/8"	63-410B	4.95
62-411B	4.14	1/4"	63-411B	4.95
62-412B	5.31	3/8"	63-412B	5.40
62-413B	5.72	1/2"	63-413B	7.57
62-414B	7.91	3/4"	63-414B	10.64
62-415B	15.55	1"	63-415B	17.28
62-416B	20.32	1-1/4"	63-416B	24.24
62-417B	27.10	1-1/2"	63-417B	30.30
62-418B	39.31	2"	63-418B	45.43

* 3000 LB Forged Stainless Steel Fittings available

COUPLINGS


Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-413	5.44	1/2"	63-413	6.29
62-414	7.85	3/4"	63-414	9.09
62-415	11.93	1"	63-415	13.55
62-416	44.19	1-1/4"	63-416	21.54
62-417	22.51	1-1/2"	63-417	25.60
62-418	31.73	2"	63-418	36.04
62-419	69.64	2-1/2"	63-419	84.66
62-420	90.03	3"	63-420	109.36
62-421	139.95	4"	63-421	168.89

REDUCING COUPLINGS


Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-430	5.32	1/4" x 1/8"	63-430	6.06
62-431	5.91	3/8" x 1/8"		
62-432	5.91	3/8" x 1/4"	63-432	6.73
62-433	5.64	1/2" x 1/8"		
62-434	5.64	1/2" x 1/4"	63-434	8.07
62-435	5.64	1/2" x 3/8"	63-435	8.07
62-455	8.49	3/4" x 1/8"		
62-436	8.49	3/4" x 1/4"	63-436	10.35
62-437	8.49	3/4" x 3/8"	63-437	10.35
62-438	8.49	3/4" x 1/2"	63-438	10.35
62-440	11.61	1" x 3/8"		
62-441	11.61	1" x 1/2"	63-441	17.08
62-442	11.61	1" x 3/4"	63-442	17.08
62-445	16.93	1-1/4" x 3/4"	63-445	22.30
62-446	16.93	1-1/4" x 1"	63-446	22.30
62-447	24.41	1-1/2" x 1/2"	63-447	29.78
62-448	24.41	1-1/2" x 3/4"	63-448	29.78
62-449	24.41	1-1/2" x 1"	63-449	29.78
62-450	24.41	1-1/2" x 1-1/4"	63-450	29.78
62-452	40.77	2" x 1"	63-452	50.23
62-453	40.77	2" x 1-1/4"	63-453	50.23
62-454	40.77	2" x 1-1/2"	63-454	50.23

CAPS


Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-470	2.56	1/8"	63-470	3.11
62-471	3.67	1/4"	63-471	4.18
62-472	4.32	3/8"	63-472	4.93
62-473	4.48	1/2"	63-473	5.71
62-474	5.61	3/4"	63-474	6.55
62-475	8.43	1"	63-475	10.04
62-476	15.26	1-1/4"	63-476	19.72
62-477	20.02	1-1/2"	63-477	25.29
62-478	25.53	2"	63-478	32.37
62-480	63.65	3"		

HEX CAPS


Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-075	1.55	1/8"	63-075	2.78
62-076	1.55	1/4"	63-076	2.78
62-077	1.55	3/8"	63-077	2.78
62-078	2.09	1/2"	63-078	3.33
62-079	3.08	3/4"	63-079	4.31
62-080	4.01	1"	63-080	5.24
62-081	6.16	1-1/4"	63-081	7.27
62-082	8.01	1-1/2"	63-082	8.81
62-083	12.32	2"		12.32

* 3000 LB Forged Stainless Steel Fittings available

HEX SOCKET PLUGS


Part # 316 S.S.	Size	List Price
63-759	1/16"	3.05
63-760	1/8 "	2.74
63-761	1/4 "	3.90
63-762	3/8 "	5.49
63-763	1/2 "	9.15
63-764	3/4 "	21.93

STAINLESS STEEL**304 AND 316 150# STAINLESS STEEL FITTINGS****HEX BUSHINGS**

Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-500	3.32	1/4" x 1/8"	63-500	3.74
		3/8" x 1/8"	63-501	4.27
62-502	3.63	3/8" x 1/4"	63-502	4.27
62-503	4.59	1/2" x 1/8"		
62-504	4.59	1/2" x 1/4"	63-504	5.02
62-505	4.59	1/2" x 3/8"	63-505	5.02
		3/4" x 1/4"	63-507	7.46
62-508	6.71	3/4" x 3/8"	63-508	8.44
62-509	6.71	3/4" x 1/2"	63-509	7.46
62-512	9.33	1" x 1/2"	63-512	10.65
62-513	9.33	1" x 3/4"	63-513	10.65
		1-1/4" x 1/2"	63-516	20.82
62-517	16.69	1-1/4" x 3/4"	63-517	20.82
62-518	16.69	1-1/4" x 1"	63-518	20.82
62-521	19.97	1-1/2" x 1/2"	63-521	24.62
62-522	19.97	1-1/2" x 3/4"	63-522	24.62
62-532	24.42	1-1/2" x 1"	63-523	24.62
62-524	19.97	1-1/2" x 1-1/4"	63-524	24.62
62-527	30.46	2" x 1/2"		
62-528	30.46	2" x 3/4"	63-528	34.96
62-529	30.46	2" x 1"	63-529	34.96
62-530	30.46	2" x 1-1/4"	63-530	34.96
62-531	30.46	2" x 1-1/2"	63-531	34.96
62-534	52.21	2-1/2" x 1-1/2"	63-534	59.40
62-535	52.21	2-1/2" x 2"	63-535	59.40
62-538	80.00	3" x 2"	63-538	91.34
62-539	80.00	3" x 2-1/2"		
62-543	145.57	4" x 3"		

UNIONS

Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-600	17.19	1/8"	63-600	19.50
62-601	17.19	1/4"	63-601	19.50
62-602	17.52	3/8"	63-602	19.84
62-603	18.96	1/2"	63-603	21.54
62-604	24.02	3/4"	63-604	27.32
62-605	36.24	1"	63-605	41.24
62-606	62.85	1-1/4"	63-606	71.30
62-607	71.09	1-1/2"	63-607	80.93
62-608	85.11	2"	63-608	96.51
62-610	290.29	3"	63-610	344.86

HEX HEAD PLUGS

Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-630	2.44	1/8"	63-630	3.02
62-631	2.44	1/4"	63-631	3.02
62-632	3.01	3/8"	63-632	3.41
62-633	4.75	1/2"	63-633	5.71
62-634	5.97	3/4"	63-634	7.20
62-635	10.30	1"	63-635	11.47
62-636	16.53	1-1/4"	63-636	19.81
62-637	18.09	1-1/2"	63-637	23.45
62-638	24.97	2"	63-638	33.84

SOLID HEX HEAD PLUGS

Part # 316 S.S.	Size	List Price
63-660	1/8"	5.64
63-661	1/4"	7.10
63-662	3/8"	10.39
63-663	1/2"	18.46

HEX NIPPLES

Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-720	4.96	1/8"	63-720	5.56
62-721	4.66	1/4"	63-721	5.56
62-722	5.51	3/8"	63-722	6.17
62-723	6.54	1/2"	63-723	7.31
62-724	8.04	3/4"	63-724	9.55
62-725	11.76	1"	63-725	13.15
62-726	18.02	1-1/4"	63-726	21.48
62-727	22.77	1-1/2"	63-727	25.49
62-728	51.96	2"	63-728	36.57

* 3000 LB Forged Stainless Steel Fittings available

SQUARE HEAD PLUGS


Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-670	2.20	1/8"	63-670	2.37
62-671	2.60	1/4"	63-671	3.01
62-672	3.48	3/8"	63-672	3.97
62-653	4.97	1/2"	63-653	5.61
62-654	6.06	3/4"	63-654	6.86
62-655	7.66	1"	63-655	8.57
62-656	15.26	1-1/4"	63-656	20.27
62-657	18.19	1-1/2"	63-657	22.40
62-658	21.53	2"	63-658	30.91
62-660	51.56	3"		

SOLID SQUARE HEAD PLUGS


Part # 316 S.S.	Size	List Price
63-680	1/8"	5.17
63-681	1/4"	6.89
63-682	3/8"	8.08
63-683	1/2"	12.12
63-684	3/4"	23.08

HEX LOCKNUTS


Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-701	10.46	1/4"	63-701	11.41
62-702	10.46	3/8"	63-702	11.41
62-703	10.46	1/2"	63-703	11.41
62-704	12.76	3/4"	63-704	14.32
62-705	14.47	1"	63-705	16.09
62-706	29.94	1-1/4"	63-706	32.59
62-707	29.97	1-1/2"	63-707	32.59
62-708	32.96	2"	63-708	35.76

Can't find it here? Ask us for price & availability.

STAINLESS STEEL HALF COUPLINGS


Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-771	2.21	1/4"	63-771	2.33
62-772	2.39	3/8"	63-772	2.72
62-773	3.32	1/2"	63-773	3.96
62-774	4.44	3/4"	63-774	5.04
62-775	5.69	1"	63-775	7.66
62-776	9.29	1-1/4"	63-776	11.62
62-777	11.91	1-1/2"	63-777	15.46
62-778	16.33	2"	63-778	20.23

HOSE NIPPLES


Part # 304 S.S.	List Price	Hose I.D. x Male Pipe	Part # 316 S.S.	List Price
73-951	5.80	1/4"	973-951	6.49
73-952	9.04	3/8"	973-952	8.33
73-953	10.08	1/2"	973-953	14.86
73-954	11.38	3/4"	973-954	15.62
73-955	14.54	1"	973-955	18.71
73-956	25.21	1-1/4"	973-956	25.42
73-957	26.31	1-1/2"	973-957	44.19
73-958	40.28	2"	973-958	47.08
73-959	87.49	2-1/2"	973-959	121.52
73-960	108.40	3"	973-990	149.72
73-961	343.46	4"	973-991	185.95

REDUCING HOSE NIPPLES - 304 S.S.


Part # 304 S.S.	Hose I.D. x Male Pipe	List Price
73-970	1/4" x 1/8"	5.91
73-971	3/8" x 1/4"	6.83
73-972	1/2" x 3/8"	10.20
73-973	1/2" x 1/4"	10.54
73-974	3/4" x 1/2"	13.46
73-975	1" x 3/4"	15.20
73-976	1" x 1/2"	24.75
73-977	1-1/4" x 1"	24.48
73-979	1-1/2" x 1-1/4"	38.48
73-980	1-1/2" x 1"	29.52
73-981	2" x 1-1/2"	50.91
73-982	2" x 1-1/4"	40.71

* 3000 LB Forged Stainless Steel Fittings available.

See our website.

Black and Galvanized Steel Nipples

Product Specifications

Welded steel pipe nipples both galvanized and black in diameters ranging from 1/8" up to 4" in lengths from close to 12" and cut-pipe up to 120".

Technical Specifications

Standards: Product complies with ASTM A-53, 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.

Galvanized: Zinc coating applied by hot dipped. Galvanized complying with ASTM A-123.

Black: Protected against oxidation with varnish coating.

Cutting Procedure:

All pipe is roller cut. A visual inspection of seams, excessive galvanizing, mid-welds, poor galvanizing, bends, roundness, under and over weight of the pipe is made at the time it is cut. This is done for every length of pipe. Pipe lengths are cut to a tolerance of + or - 1/16" of the actual length.

Threading Procedure:

All pipe is chaser thread cut to American Standard Tapered Pipe Thread standards. This is 3/4" taper per foot. Pipe is visually inspected for roundness of threads and other visual faults as it is removed from the threading machine.

Steel and Wrought Iron Welded

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

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

Pounds per 100 pcs. approximate

Diam	Length close/RC	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"	6"	7"	8"	9"	10"	11"	12"
1/8"	1.3	2.4	3.5	4.4	5.4	6.8	7.4	8.5	9.5	11.2	11.4	13.4	15.4	17.4	19.1	20.8	23.1
1/4"	2.4	4.3	6.1	8.3	9.0	11.8	13.5	16.1	16.8	19.1	19.9	24.7	28.7	32.0	35.1	38.1	41.4
3/8"	3.6	6.0	7.8	9.9	13.4	15.4	17.8	20.3	22.7	24.9	28.4	32.6	36.6	40.8	44.8	48.7	52.9
1/2"	6.1	8.7	12.7	15.9	19.3	24.2	26.0	31.6	34.5	39.2	43.1	50.0	58.0	66.1	74.5	82.3	89.0
3/4"	11.0	12.2	21.8	23.1	26.1	31.6	37.0	41.6	47.1	52.6	55.9	65.4	79.1	79.6	94.9	111.9	116.9
1"	15.3		22.0	28.4	37.0	44.2	52.1	59.4	66.6	76.5	79.7	94.8	111.6	124.5	136.3	153.6	175.0
1-1/4"	22.7		32.0	41.9	51.3	61.9	68.1	81.9	90.7	98.2	115.1	133.4	149.3	174.8	199.2	219.3	236.6
1-1/2"	29.9		37.9	46.8	80.6	72.6	85.8	99.1	112.7	120.3	134.5	162.1	184.9	208.5	219.4	247.5	277.8
2"	51.8			63.1	82.1	97.1	110.0	128.4	142.0	165.0	166.9	208.5	246.7	276.9	303.2	334.4	369.2
2-1/2"	82.6				109.0	133.5	156.2	172.9	209.9	232.8	253.4	318.9	337.3	408.1	457.6	514.2	554.4
3"	116.5				147.2	181.6	210.4	247.7	274.1	213.6	338.0	389.2	469.4	555.1	599.2	649.4	747.1
4"	172.7						265.3	326.2	344.4	405.7	451.7	547.3	632.2	721.8	832.7	927.1	1057.0
6"																	

Available Upon Request

1/8" DIAMETER



Part # Galv	List Price	Length	Part # Black	List Price
56-001	1.35	X Close (3/4")	57-001	0.96
56-002	1.40	x 1-1/2"	57-002	1.08
56-003	1.57	x 2"	57-003	1.16
56-004	1.70	x 2-1/2"	57-004	1.29
56-005	1.93	x 3	57-005	1.43
56-006	2.06	x 3-1/2"	57-006	1.57
56-007	2.28	x 4"	57-007	1.82
56-008	2.93	x 4-1/2"	57-008	2.36
56-009	3.85	x 5"	57-009	2.72
56-010	4.14	x 5-1/2"	57-010	2.98
56-011	4.32	x 6"	57-011	3.31
56-012	5.40	x 7"	57-012	3.93
56-013	5.69	x 8"	57-013	4.14
56-014	5.98	x 9"	57-014	4.31
56-015	6.49	x 10"	57-015	4.58
56-016	7.33	x 11"	57-016	4.81
56-017	7.27	x 12"	57-017	4.84

1/4" Diameter



Part # Galv	List Price	Length	Part # Black	List Price
56-020	1.41	X Close (7/8")	57-020	1.15
56-021	1.51	x 1-1/2"	57-021	1.23
56-022	1.76	x 2"	57-022	1.37
56-023	2.03	x 2-1/2"	57-023	1.55
56-024	2.30	x 3	57-024	1.70
56-025	2.47	x 3-1/2"	57-025	1.88
56-026	2.58	x 4"	57-026	2.08
56-027	3.09	x 4-1/2"	57-027	2.52
56-028	3.65	x 5"	57-028	2.98
56-029	4.23	x 5-1/2"	57-029	3.29
56-030	4.42	x 6"	57-030	3.67
56-031	5.32	x 7"	57-031	4.30
56-032	5.42	x 8"	57-032	4.38
56-033	5.69	x 9"	57-033	4.76
56-034	6.42	x 10"	57-034	5.16
56-035	8.18	x 11"	57-035	5.40
56-036	8.33	x 12"	57-036	5.72
56-038	21.59	x 18"		
56-037	25.86	x 24"		

More sizes available

3/8" DIAMETER



Part # Galv	List Price	Length	Part # Black	List Price
56-040	1.65	X Close (1")	57-040	1.27
56-041	1.91	x 1-1/2"	57-041	1.35
56-042	1.97	x 2"	57-042	1.68
56-043	2.21	x 2-1/2"	57-043	1.65
56-044	2.48	x 3"	57-044	1.96
56-045	3.20	x 3-1/2"	57-045	2.08
56-046	3.20	x 4"	57-046	2.31
56-047	3.37	x 4-1/2"	57-047	2.52
56-048	4.37	x 5"	57-048	3.37
56-049	4.72	x 5-1/2"	57-049	3.57
56-050	4.96	x 6"	57-050	3.78
56-051	5.26	x 7"	57-051	4.53
56-052	5.49	x 8"	57-052	4.96
56-053	6.64	x 9"	57-053	5.29
56-054	6.83	x 10"	57-054	5.61
56-055	6.96	x 11"	57-055	5.93
56-056	7.29	x 12"	57-056	6.10
56-430	17.79	x 18"	57-430	22.62
56-431	17.79	x 24"	57-431	16.61
56-432	19.88	x 30"	57-432	15.71
56-433	21.74	x 36"	57-433	21.47
56-234	42.94	x 42"	57-234	27.58
56-235	43.95	x 48"	57-235	30.29
56-236	47.08	x 60"	57-236	37.98
56-237	56.33	x 72"	57-237	47.93

Black Steel Nipples available in Schedule 40 Seamless beginning on page 213.

Black Steel Nipples available in Schedule 80 beginning on page 226.

Other Steel Nipples available upon request:

- Toe Nipples
- L&R Nipples
- Di-electric Nipples
- Nipple Assortments
- Nipples cut to any lengths

STEEL NIPPLES**BLACK AND GALVANIZED SCHEDULE 40****1/2" DIAMETER**

Part # Galv	List Price	Length	Part # Black	List Price
56-060	1.00	X Close (1-1/8")	57-060	0.89
56-061	1.13	x 1-1/2"	57-061	0.96
56-062	1.24	x 2"	57-062	1.02
56-063	1.31	x 2-1/2"	57-063	1.08
56-064	1.41	x 3"	57-064	1.22
56-065	1.57	x 3-1/2"	57-065	1.33
56-066	1.73	x 4"	57-066	1.51
56-067	1.93	x 4-1/2"	57-067	1.63
56-068	2.09	x 5"	57-068	1.79
56-069	2.22	x 5-1/2"	57-069	2.01
56-070	2.36	x 6"	57-070	2.14
56-071	3.78	x 7"	57-071	3.25
56-072	4.13	x 8"	57-072	3.50
56-073	4.81	x 9"	57-073	3.95
56-074	4.92	x 10"	57-074	4.20
56-075	5.31	x 11"	57-075	4.69
56-076	5.60	x 12"	57-076	6.84
56-240	9.61	x 18"	57-240	11.19
56-241	15.07	x 24"	57-241	13.69
56-242	16.24	x 30"	57-242	16.85
56-243	21.08	x 36"	57-243	18.20
56-244	46.45	x 42"	57-244	38.68
56-245	24.25	x 48"	57-245	21.94
56-246	30.89	x 60"	57-246	25.48
56-247	35.48	x 72"	57-247	32.46

3/4" DIAMETER

Part # Galv	List Price	Length	Part # Black	List Price
56-080 ³	1.33	X Close (1-3/8")	57-080	1.22
56-081	1.41	x 1-1/2"	57-081	1.28
56-082	1.51	x 2"	57-082	1.34
56-083	1.64	x 2-1/2"	57-083	1.49
56-084	1.80	x 3"	57-084	1.63
56-085	1.99	x 3-1/2"	57-085	1.81
56-086	2.18	x 4"	57-086	1.98
56-087	2.38	x 4-1/2"	57-087	2.17
56-088	2.76	x 5"	57-088	2.40
56-089	3.14	x 5-1/2"	57-089	2.59
56-090	3.06	x 6"	57-090	2.78
56-091	5.18	x 7"	57-091	3.97
56-092	5.37	x 8"	57-092	4.41
56-093	5.86	x 9"	57-093	5.30
56-094	5.88	x 10"	57-094	5.55
56-095	6.84	x 11"	57-095	5.68
56-096	6.59	x 12"	57-096	5.88
56-250	10.74	x 18"	57-250	9.50
56-251	13.80	x 24"	57-251	11.25
56-252	16.47	x 30"	57-252	14.73
56-253	19.39	x 36"	57-253	17.04
56-254	49.85	x 42"	57-254	43.10
56-255	26.87	x 48"	57-255	21.65
56-256	32.92	x 60"	57-256	27.83
56-257	39.14	x 72"	57-257	31.91

**NIPPLES &
FITTINGS**

If you have built castles in the air, your work need not be lost; that is where they should be. Now put foundations under them.

- Henry David Thoreau

³ Also stocked in Houston
(See page Intro II for details)

1" DIAMETER


Part # Galv	List Price	Length	Part # Black	List Price
56-100	1.96	X Close (1-1/2")	57-100	1.78
56-101	2.06	x 2"	57-101	1.98
56-102	2.25	x 2-1/2"	57-102	1.98
56-103	2.48	x 3"	57-103	2.21
56-104	2.98	x 3-1/2"	57-104	2.44
56-105	3.40	x 4"	57-105	2.70
56-106	3.39	x 4-1/2"	57-106	2.90
56-107	3.55	x 5"	57-107	3.13
56-108	3.96	x 5-1/2"	57-108	3.37
56-109	4.07	x 6"	57-109	3.67
56-110	6.10	x 7"	57-110	4.98
56-111	6.66	x 8"	57-111	5.46
56-112	12.46	x 9"	57-112	6.04
56-113	12.85	x 10"	57-113	6.48
56-114	15.70	x 11"	57-114	8.80
56-115	15.70	x 12"	57-115	7.56
56-260	19.54	x 18"	57-260	16.61
56-261	23.64	x 24"	57-261	19.23
56-262	39.55	x 30"	57-262	29.17
56-263	34.52	x 36"	57-263	27.34
56-264	63.54	x 42"	57-264	57.17
56-265	50.24	x 48"	57-265	48.83
56-266	60.28	x 60"	57-266	53.37
56-267	66.97	x 72"	57-267	75.00

1-1/4" DIAMETER


Part # Galv	List Price	Length	Part # Black	List Price
56-120	2.64	X Close (1-5/8")	57-120	2.35
56-121	2.75	x 2"	57-121	2.52
56-122	2.99	x 2-1/2"	57-122	2.71
56-123	3.27	x 3"	57-123	2.97
56-124	3.76	x 3-1/2"	57-124	3.25
56-125	4.32	x 4"	57-125	3.60
56-126	4.80	x 4-1/2"	57-126	3.88
56-127	4.62	x 5"	57-127	4.27
56-128	5.10	x 5-1/2"	57-128	4.41
56-129	5.23	x 6"	57-129	4.72
56-130	9.53	x 7"	57-130	6.55
56-131	8.79	x 8"	57-131	7.26
56-132	13.71	x 9"	57-132	7.82
56-133	14.13	x 10"	57-133	8.37
56-134	14.29	x 11"	57-134	9.98
56-135	17.79	x 12"	57-135	15.24
56-270	23.44	x 18"	57-270	18.07
56-271	30.51	x 24"	57-271	23.44
56-272	35.59	x 30"	57-272	36.44
56-273	45.86	x 36"	57-273	45.84
56-274	53.91	x 42"	57-274	54.26
56-275	61.14	x 48"	57-275	58.34
56-276	75.03	x 60"	57-276	58.60
56-277	124.76	x 72"	57-277	83.34

Golf Quotes - Part One...

These greens are so fast I have to hold my putter over the ball and hit it with the shadow.

- Sam Snead

I was three over. One over a house, one over a patio, and one over a swimming pool.

- George Brett

Actually, the only time I ever took out a one-iron was to kill a tarantula. And I took a 7 to do that.

- Jim Murray

STEEL NIPPLES**BLACK AND GALVANIZED SCHEDULE 40****1-1/2" DIAMETER**

Part # Galv	List Price	Length	Part # Black	List Price
56-140	3.31	X Close (1-3/4")	57-140	2.83
56-141	3.48	x 2"	57-141	2.92
56-142	3.65	x 2-1/2"	57-142	3.23
56-143	3.99	x 3"	57-143	3.65
56-144	4.36	x 3-1/2"	57-144	4.13
56-145	4.76	x 4"	57-145	4.39
56-146	5.35	x 4-1/2"	57-146	4.84
56-147	5.52	x 5"	57-147	4.92
56-148	6.17	x 5-1/2"	57-148	5.21
56-149	6.27	x 6"	57-149	5.46
56-150	9.43	x 7"	57-150	7.59
56-151	10.33	x 8"	57-151	8.31
56-152	13.51	x 9"	57-152	9.29
56-153	12.88	x 10"	57-153	9.82
56-154	16.75	x 11"	57-154	16.33
56-155	16.62	x 12"	57-155	11.46
56-280	25.12	x 18"	57-280	23.75
56-281	36.26	x 24"	57-281	33.21
56-282	55.95	x 30"	57-282	42.61
56-283	58.60	x 36"	57-283	51.68
56-284	101.20	x 42"	57-284	68.89
56-285	67.42	x 48"	57-285	79.69
56-286	98.36	x 60"	57-286	89.03
56-287	125.57	x 72"	57-287	111.94

2" DIAMETER

Part # Galv	List Price	Length	Part # Black	List Price
56-160	4.50	X Close (2")	57-160	3.75
56-161	5.20	x 2-1/2"	57-161	4.50
56-162	5.39	x 3"	57-162	4.72
56-163	6.08	x 3-1/2"	57-163	5.55
56-164	7.04	x 4"	57-164	5.49
56-165	7.29	x 4-1/2"	57-165	6.19
56-166	8.37	x 5"	57-166	6.56
56-167	8.02	x 5-1/2"	57-167	7.13
56-168	8.82	x 6"	57-168	7.40
56-169	13.39	x 7"	57-169	10.15
56-170	13.73	x 8"	57-170	11.74
56-171	23.60	x 9"	57-171	12.97
56-172	16.09	x 10"	57-172	14.60
56-173	18.41	x 11"	57-173	16.05
56-174	20.61	x 12"	57-174	19.18
56-290	29.79	x 18"	57-290	31.56
56-291	38.79	x 24"	57-291	43.92
56-292	59.95	x 30"	57-292	49.18
56-293	63.06	x 36"	57-293	56.09
56-294	109.56	x 42"	57-294	91.40
56-295	83.36	x 48"	57-295	95.12
56-296	106.80	x 60"	57-296	110.42
56-297	137.35	x 72"	57-297	135.44

**NIPPLES &
FITTINGS**
Golf Quotes - Part Two...

The only sure rule in golf is - he who has the fastest cart never has to play the bad lie.

- Mickey Mantle

Sex and golf are the two things you can enjoy even if you're not good at them.

- Kevin Costner

I don't fear death, but I sure don't like those three-footers for par.

- Chi Chi Rodriguez

2-1/2" DIAMETER


Part # Galv	List Price	Length	Part # Black	List Price
56-180	13.17	X Close (2-1/2")	57-180	12.19
56-181	13.56	x 3"	57-181	12.72
56-182	17.11	x 3-1/2"	57-182	13.42
56-183	14.93	x 4"	57-183 ³	13.83
56-184	16.83	x 4-1/2"	57-184	14.68
56-185	16.62	x 5"	57-185	15.45
56-186	18.59	x 5-1/2"	57-186	16.82
56-187	18.26	x 6"	57-187	16.92
56-188	23.17	x 7"	57-188	27.89
56-189	29.15	x 8"	57-189	23.36
56-190	27.84	x 9"	57-190	30.18
56-191	28.64	x 10"	57-191	23.40
56-192	30.24	x 11"	57-192	29.81
56-193	30.35	x 12"	57-193	28.28


4" DIAMETER

Part # Galv	List Price	Length	Part # Black	List Price
56-220	22.99	X Close (2-7/8")	57-220	22.29
56-223	25.29	x 4"	57-223	24.21
56-224	30.12	x 4-1/2"	57-224	25.68
56-225	31.80	x 5"	57-225	27.29
56-226	42.38	x 5-1/2"	57-226	28.95
56-227	34.30	x 6"	57-227	29.64
56-330	58.60	x 7"	57-330	52.04
56-229	56.90	x 8"	57-229	52.74
56-331	58.87	x 9"	57-331	60.76
56-332	69.06	x 10"	57-332	59.71
56-228	68.67	x 12"		

3" DIAMETER


Part # Galv	List Price	Length	Part # Black	List Price
56-200	16.08	X Close (2-5/8")	57-200	15.34
56-201	16.95	x 3"	57-201	16.14
56-202	18.66	x 3-1/2"	57-202	16.94
56-203	19.06	x 4"	57-203	17.93
56-204	22.97	x 4-1/2"	57-204	19.78
56-205	23.56	x 5"	57-205	20.24
56-206	25.63	x 5-1/2"	57-206	20.87
56-207	24.81	x 6"	57-207	22.17
56-208	30.46	x 7"	57-208	28.28
56-209	30.77	x 8"	57-209	29.30
56-210	34.56	x 9"	57-210	33.33
56-211	37.03	x 10"	57-211	34.26
56-212	37.56	x 11"	57-212	40.87
56-213	49.26	x 12"	57-213	43.40
		x 24"	57-311	123.03


6" DIAMETER

Part # Galv	List Price	6" Dia.	Part # Black	List Price
56-300	92.15	Close (3-1/8")	57-300	86.04

TOE - Threaded one end.

Nipples - ask for our price list!

What shapes our lives are the questions we ask,
refuse to ask, or never think to ask.

- Sam Keen

STEEL NIPPLES**BLACK SCHEDULE 40 SEAMLESS****SCHEDULE 40 SEAMLESS NIPPLES
1/8" DIAMETER**

Part #	Length	List Price
71-001	X Close (3/4")	7.11
71-002	x 1-1/2"	7.53
71-003	x 2"	8.09
71-004	x 2-1/2"	8.84
71-005	x 3"	9.73
71-006	x 3-1/2"	10.70
71-007	x 4"	11.87
71-008	x 4-1/2"	12.86
71-009	x 5"	17.71
71-010	x 5-1/2"	18.90
71-011	x 6"	20.29

**SCHEDULE 40 SEAMLESS NIPPLES
1/4" DIAMETER**

Part #	Length	List Price
71-020	X Close (7/8")	8.38
71-021	x 1-1/2"	8.58
71-022	x 2"	9.46
71-023	x 2-1/2"	10.27
71-024	x 3"	11.50
71-025	x 3-1/2"	12.70
71-026	x 4"	14.09
71-027	x 4-1/2"	15.33
71-028	x 5"	21.68
71-029	x 5-1/2"	22.94

**SCHEDULE 40 SEAMLESS NIPPLES
3/8" DIAMETER**

Part #	Length	List Price
71-040	X Close (1")	9.03
71-041	x 1-1/2"	9.40
71-042	x 2"	10.27
71-043	x 2-1/2"	11.54
71-044	x 3"	13.01
71-045	x 3-1/2"	14.30
71-046	x 4"	15.53
71-047	x 4-1/2"	17.10
71-048	x 5"	22.89
71-049	x 5-1/2"	24.38
71-050	x 6"	25.95

**SCHEDULE 40 SEAMLESS NIPPLES
1/2" DIAMETER**

Part #	Length	List Price
71-060	X Close (1-1/8")	4.69
71-061	x 1-1/2"	5.01
71-062	x 2"	5.51
71-063	x 2-1/2"	6.09
71-064	x 3"	6.70
71-065	x 3-1/2"	7.64
71-066	x 4"	8.35
71-067	x 4-1/2"	9.20
71-068	x 5"	10.59
71-069	x 5-1/2"	11.53
71-070	x 6"	12.45

**SCHEDULE 40 SEAMLESS NIPPLES
3/4" DIAMETER**

Part #	Length	List Price
71-080	X Close (1-3/8")	5.30
71-081	x 1-1/2"	5.70
71-082	x 2"	5.95
71-083	x 2-1/2"	6.72
71-084	x 3"	7.51
71-085	x 3-1/2"	8.53
71-086	x 4"	9.37
71-087	x 4-1/2"	10.23
71-088	x 5"	11.67
71-089	x 5-1/2"	12.59
71-090	x 6"	13.48

**SCHEDULE 40 SEAMLESS NIPPLES
1" DIAMETER**

Part #	Length	List Price
71-100	X Close (1-1/2")	7.51
71-101	x 2"	7.95
71-102	x 2-1/2"	8.54
71-103	x 3"	9.98
71-104	x 3-1/2"	11.08
71-105	x 4"	11.88
71-106	x 4-1/2"	13.45
71-107	x 5"	15.54
71-108	x 5-1/2"	16.67
71-109	x 6"	17.77

**NIPPLES &
FITTINGS**

**SCHEDULE 40 SEAMLESS NIPPLES
1-1/4" DIAMETER**


Part #	Length	List Price
71-120	X Close (1-5/8")	9.42
71-121	x 2"	9.80
71-122	x 2-1/2"	10.79
71-123	x 3"	12.54
71-124	x 3-1/2"	13.70
71-125	x 4"	15.33
71-126	x 4-1/2"	16.67
71-127	x 5"	19.34
71-128	x 5-1/2"	20.80
71-129	x 6"	22.23

**SCHEDULE 40 SEAMLESS NIPPLES
1-1/2" DIAMETER**


Part #	Length	List Price
71-140	X Close (1-3/4")	11.54
71-141	x 2"	12.01
71-142	x 2-1/2"	13.07
71-143	x 3"	15.02
71-144	x 3-1/2"	16.39
71-145	x 4"	18.35
71-146	x 4-1/2"	20.06
71-147	x 5"	23.21
71-148	x 5-1/2"	24.65
71-149	x 6"	27.29

**SCHEDULE 40 SEAMLESS NIPPLES
2" DIAMETER**

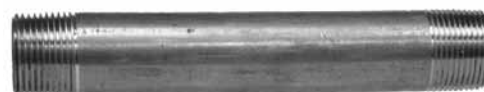

Part #	Length	List Price
71-160	X Close (2")	11.31
71-161	x 2-1/2"	12.73
71-162	x 3"	14.79
71-163	x 3-1/2"	15.93
71-164	x 4"	17.79
71-165	x 4-1/2"	19.23
71-166	x 5"	22.47
71-167	x 5-1/2"	24.24
71-168	x 6"	25.64

**SCHEDULE 40 SEAMLESS NIPPLES
2-1/2" DIAMETER**


Part #	Length	List Price
71-180	X Close (2-1/2")	37.66
71-181	x 3"	39.52
71-182	x 3-1/2"	42.50
71-183	x 4"	44.09
71-184	x 4-1/2"	46.46
71-185	x 5"	49.64
71-186	x 5-1/2"	52.12
71-187	x 6"	54.39

**SCHEDULE 40 SEAMLESS NIPPLES
3" DIAMETER**


Part #	Length	List Price
71-200	X Close (2-5/8")	47.52
71-201	x 3"	50.26
71-202	x 3-1/2"	53.72
71-203	x 4"	56.87
71-204	x 4-1/2"	60.00
71-205	x 5"	64.19
71-206	x 5-1/2"	67.41
71-207	x 6"	70.56

**SCHEDULE 40 SEAMLESS NIPPLES
4" DIAMETER**


Part #	Length	List Price
71-220	X Close (2-7/8")	67.75
71-223	x 4"	76.67
71-224	x 4-1/2"	81.15
71-225	x 5"	88.02
71-226	x 5-1/2"	91.47
71-227	x 6"	95.89

STEEL COUPLINGS**BLACK AND GALVANIZED MERCHANT COUPLINGS****Product Specifications**

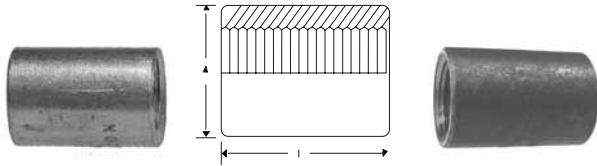
Welded steel couplings both galvanized and black in diameters from 1/8" up to 4".

Technical Specifications

Standards: Product complies with ASTM A-53, A-733 and ANSI B1.20.1 for threading, dimensions and pipe specifications.

Pipe: Complies with ASTM A-53 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

Part # Galv	List Price	Size	Part # Black	List Price
64-770	2.53	1/8"	65-770	1.58
64-771	3.26	1/4"	65-771	2.43
64-772	2.98	3/8"	65-772	1.88
64-773	2.61	1/2"	65-773	1.82
64-774	3.71	3/4"	65-774	2.68
64-775	5.95	1"	65-775	4.22
64-776	6.43	1-1/4"	65-776	5.82
64-777	9.03	1-1/2"	65-777	6.24
64-778	14.79	2"	65-778	8.88
64-779	29.07	2-1/2"	65-779	27.04
64-780	63.07	3"	65-780	52.21
64-781	84.12	4"	65-781	66.96

HALF MERCHANT COUPLINGS

Part # Galv	List Price	Size	Part # Black	List Price
		1/4"	65-771H	2.82
		3/8"	65-772H	3.26
64-773H	2.22	1/2"	65-773H	2.18
64-774H	3.02	3/4"	65-774H	2.89
64-775H	6.10	1"	65-775H	4.21
64-776H	5.40	1-1/4"	65-776H	5.45
64-777H	7.69	1-1/2"	65-777H	6.29
64-778H	13.51	2"	65-778H	8.54
		2-1/2"	65-779H	27.69
		3"	65-780H	39.89
		4"	65-781H	54.06

Also available:
API Line Couplings
L&R Merchant Coupling

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

Standard Specifications

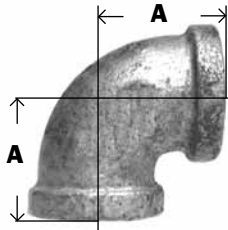
Material: ASTM A 197 Cupola Malleable Iron. ASTM A 153 Zinc Coating. ANSI B16.3 Malleable Iron Fittings

Dimension: ANSI B 16.14 Ferrous Pipe, Plugs, Bushings, Etc. ANSI B 16.39 Malleable Iron Threaded Pipe Unions

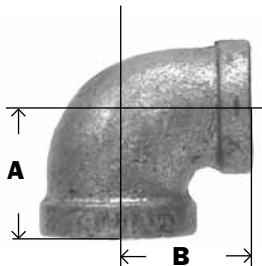
Thread: ANSI B 2.1 or BS 21

Operating Temp. -20°F - +150°F

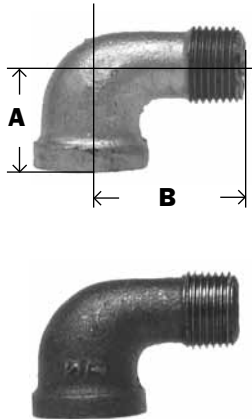
ISO 9002 Manufacturer

ELBOWS 90°


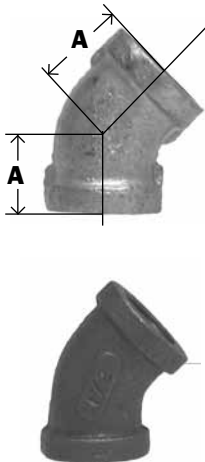
Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-100	2.66	1/8"	0.69	50/600	0.06	65-100	1.79
64-101	2.53	1/4"	0.81	35/420	0.11	65-101	1.63
64-102	2.39	3/8"	0.95	90/360	0.16	65-102	1.63
64-103	1.54	1/2"	1.12	50/200	0.24	65-103	1.30
64-104	2.06	3/4"	1.31	35/105	0.37	65-104	1.77
64-105	3.44	1"	1.50	20/60	0.59	65-105	2.83
64-106	5.79	1-1/4"	1.75	20/40	0.94	65-106	4.26
64-107	7.64	1-1/2"	1.94	15/30	1.15	65-107	5.66
64-108	11.59	2"	2.25	8/16	1.76	65-108	9.06
64-109	31.73	2-1/2"	2.70	12	2.90	65-109	20.74
64-110	53.26	3"	3.08	8	5.41	65-110	29.32
64-112	89.26	4"	3.79	2	9.07	65-112	65.76
64-114	315.36	6"	5.13	1	18.92	65-114	211.93

REDUCING ELBOWS 90°


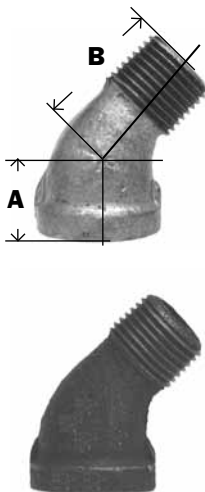
Part # Galvanized	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-121	5.37	3/8" x 1/8"	0.81	0.85	105/420	0.13	65-121	4.36
64-122	3.77	3/8" x 1/4"	0.88	0.90	90/360	0.14	65-122	2.59
64-123	3.12	1/2" x 1/4"	0.97	0.98	60/240	0.18	65-123	2.68
64-124	2.93	1/2" x 3/8"	1.04	1.03	60/240	0.21	65-124	2.36
64-126	4.21	3/4" x 3/8"	1.12	1.13	40/160	0.28	65-126	3.37
64-127	3.38	3/4" x 1/2"	1.20	1.22	40/160	0.32	65-127	2.56
64-130	4.33	1" x 1/2"	1.26	1.40	25/100	0.44	65-130	3.46
64-131	4.38	1" x 3/4"	1.37	1.45	50/100	0.52	65-131	3.27
64-133	9.28	1-1/4" x 3/4"	1.45	1.62	15/60	0.70	65-133	6.05
64-134	7.26	1-1/4" x 1"	1.58	1.67	10/40	0.81	65-134	5.65
64-136	10.52	1-1/2" x 3/4"	1.52	1.75	10/40	0.74	65-136	8.72
64-137	11.16	1-1/2" x 1"	1.65	1.80	10/40	0.66	65-137	7.62
64-138	11.91	1-1/2" x 1-1/4"	1.82	1.88	15/30	1.27	65-138	7.63
64-139	16.88	2" x 3/4"	1.60	1.97	9/36	1.21	65-139	12.80
64-140	16.56	2" x 1"	1.73	2.02	14/28	1.22	65-140	13.40
64-141	15.52	2" x 1-1/4"	1.90	2.10	10/20	1.43	65-141	13.40
64-142	13.57	2" x 1-1/2"	2.02	2.16	10/20	1.38	65-142	11.05
64-145	64.88	2-1/2" x 1-1/2"	2.16	2.51	6/12	2.20	65-145	30.88
64-146	47.16	2-1/2" x 2"	2.39	2.60	6/12	2.70	65-146	30.30
64-148	74.47	3" x 1-1/2"	2.28	2.83	6/18	4.50	65-148	52.22
		3" x 2-1/2"	2.83	2.99	8/16	5.00	65-151	52.22
		4" x 2"	2.72	3.43	1/12	8.00	65-152	135.62
		4" x 2-1/2"	3.03	3.50	1/8	8.00	65-153	135.62
		4" x 3"	3.27	3.58	1/9	9.00	65-154	127.14

90° STREET ELBOWS


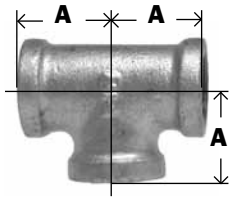
Part # Galvanized	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-160	3.26	1/8"	0.69	1.00	60/720	0.06	65-160	2.59
64-161	3.32	1/4"	0.80	1.17	35/420	0.10	65-161	2.48
64-162	3.44	3/8"	0.95	1.48	40/260	0.17	65-162	2.48
64-163	3.37	1/2"	1.10	1.59	60/180	0.25	65-163	2.54
64-164	3.25	3/4"	1.28	1.85	35/105	0.42	65-164	2.44
64-165	4.43	1"	1.47	2.10	45/90	0.57	65-165	3.58
64-166	7.93	1-1/4"	1.75	2.57	25/50	1.01	65-166	5.46
64-167	9.78	1-1/2"	1.90	2.63	9/27	1.32	65-167	6.96
64-168	15.44	2"	2.21	3.19	8/16	2.22	65-168	11.81
64-169	45.94	2-1/2"	2.65	3.78	5/10	2.83	65-169	30.11
64-170	69.35	3"	3.02	4.42	8	5.71	65-170	44.45
64-171	114.46	4"	3.72	5.57	4	10.47	65-171	72.41

ELBOWS 45°


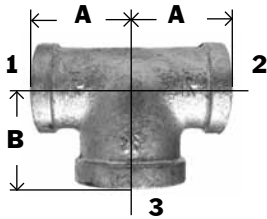
Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-180	3.80	1/8"	0.63	50/600	0.07	65-180	2.74
64-181	3.38	1/4"	0.73	30/360	0.11	65-181	2.78
64-182	3.38	3/8"	0.80	75/300	0.16	65-182	2.52
64-183	2.59	1/2"	0.88	50/200	0.24	65-183	2.18
64-184	3.62	3/4"	0.98	40/120	0.56	65-184	2.68
64-185	4.17	1"	1.12	20/60	0.35	65-185	3.43
64-186	7.59	1-1/4"	1.29	20/40	0.85	65-186	5.97
64-187	9.07	1-1/2"	1.43	10/30	1.11	65-187	7.40
64-188	13.51	2"	1.68	12/24	1.80	65-188	10.77
64-189	45.78	2-1/2"	1.95	12	2.68	65-189	31.43
64-190	66.56	3"	2.17	10	4.33	65-190	39.48
64-191	111.56	4"	2.61	4	7.54	65-191	79.25
64-192	394.22	6"	3.46	1	12.76	65-192	313.57

45° STREET ELBOWS


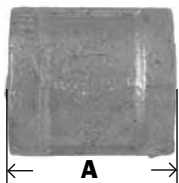
Part # Galvanized	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-200	4.96	1/8"	0.63	0.83	70/840	0.05	65-200	4.22
64-201	4.22	1/4"	0.73	0.94	40/480	0.13	65-201	2.98
64-202	4.86	3/8"	0.80	1.03	100/400	0.13	65-202	3.57
64-203	3.76	1/2"	0.86	1.30	75/225	0.23	65-203	2.87
64-204	6.05	3/4"	0.96	1.48	40/120	0.33	65-204	4.16
64-205	7.48	1"	1.10	1.69	25/75	0.55	65-205	5.13
64-206	11.22	1-1/4"	1.26	1.87	10/40	0.76	65-206	8.59
64-207	13.60	1-1/2"	1.40	2.05	10/30	1.13	65-207	10.92
64-208	23.36	2"	1.65	2.38	12/24	1.76	65-208	19.35
64-209	54.96	2-1/2"	1.95	2.72	12/24	2.57	65-209	41.09
64-210	88.90	3"	2.17	3.16	3/6	3.52	65-210	60.56
64-211	184.71	4"	2.61	3.90	4	8.29	65-211	112.44

TEES


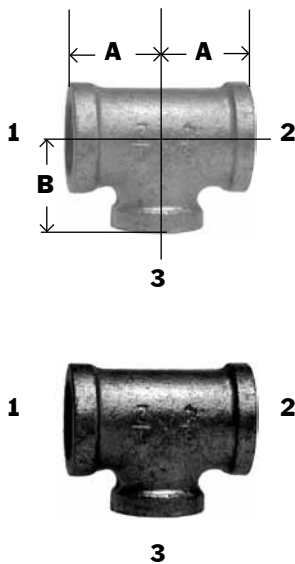
Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-250	3.57	1/8"	0.69	120/480	0.09	65-250	2.77
64-251	3.11	1/4"	0.81	75/300	0.16	65-251	2.47
64-252	3.29	3/8"	0.95	45/180	0.24	65-252	2.47
64-253	1.95	1/2"	1.12	40/120	0.35	65-253	1.57
64-254	3.42	3/4"	1.31	35/70	0.55	65-254	2.33
64-255	5.07	1"	1.50	20/40	0.84	65-255	4.00
64-256	8.79	1-1/4"	1.75	14/28	1.37	65-256	6.49
64-257	10.96	1-1/2"	1.94	12/24	1.74	65-257	8.07
64-258	18.31	2"	2.26	8/16	2.54	65-258	13.73
64-259	49.17	2-1/2"	2.70	4/8	3.76	65-259	31.04
64-260	57.68	3"	3.08	6	6.36	65-260	42.42
64-261	136.36	4"	3.79	1/2	11.69	65-261	109.41
64-262	420.51	6"	5.13	1	24.55	65-262	313.57

BULLHEAD TEES


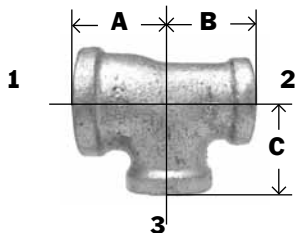
Part # Galvanized	List Price	Size (1&2) x 3	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-280	5.37	1/2" x 3/4"	1.22	1.20	30/120	0.43	65-280	4.38
64-733	8.10	1/2" x 1"	1.36	1.26	40/160	0.48	65-733	10.03
64-289	7.93	3/4" x 1"	1.45	1.37	40/80	0.67	65-289	5.56
64-299	12.63	1" x 1-1/4"	1.67	1.58	11/44	0.91	65-299	10.35
64-300	21.47	1" x 1-1/2"	1.80	1.65	9/36	1.16	65-300	16.47
64-317	18.20	1-1/4" x 1-1/2"	1.88	1.82	12/24	1.45	65-317	12.93
64-319	25.14	1-1/2" x 2"	2.12	1.98	16	1.98	65-319	24.29

COUPLINGS


Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-410	3.16	1/8"	0.96	70/840	0.06	65-410	2.57
64-411	2.93	1/4"	1.06	40/480	0.09	65-411	2.42
64-412	2.93	3/8"	1.16	40/480	0.06	65-412	2.64
64-413	2.33	1/2"	1.34	60/240	0.19	65-413	2.64
64-414	2.72	3/4"	1.52	50/150	0.30	65-414	2.15
64-415	4.47	1"	1.67	25/100	0.45	65-415	3.27
64-416	6.15	1-1/4"	1.93	16/64	0.65	65-416	4.18
64-417	7.03	1-1/2"	2.15	18/36	0.90	65-417	5.60
64-418	10.23	2"	2.54	12/24	1.39	65-418	7.64
64-419	31.29	2-1/2"	2.88	8/16	2.42	65-419	22.14
64-420	41.82	3"	3.18	12	3.40	65-420	29.92
64-421	88.83	4"	3.69	3/6	6.23	65-421	59.70
64-422	232.03	6"	4.23	2	11.22	65-422	160.21

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	5.17	3/8" x 1/4"	0.81	0.90	25	0.20	65-273	4.94
64-276	3.93	1/2" x 1/4"	0.97	0.98	40/160	0.26	65-276	2.97
64-279	4.58	1/2" x 3/8"	1.04	1.03	40/160	0.29	65-279	3.73
64-282	4.87	3/4" x 1/4"	1.05	1.08	125	0.35	65-282	5.36
64-283	5.19	3/4" x 3/8"	1.12	1.13	55/110	0.40	65-283	4.77
64-286	5.50	3/4" x 1/2"	1.20	1.18	50/100	0.47	65-286	3.59
64-268	9.27	1" x 1/4"	1.11	1.22	20/80	0.52	65-268	5.35
64-269	8.09	1" x 3/8"	1.18	1.27	15/60	0.60	65-269	6.91
64-291	6.60	1" x 1/2"	1.26	1.40	15/60	0.70	65-291	4.90
64-298	6.60	1" x 3/4"	1.37	1.45	12/48	0.77	65-298	4.90
64-301	15.44	1-1/4" x 1/2"	1.34	1.45	20/40	0.97	65-301	8.88
64-303	10.19	1-1/4" x 3/4"	1.45	1.62	20/40	1.00	65-303	7.79
64-306	10.19	1-1/4" x 1"	1.58	1.66	20/40	1.10	65-306	8.44
64-316	12.63	1-1/2" x 3/4"	1.41	1.75	15/30	1.25	65-316	9.83
64-318	13.46	1-1/2" x 1"	1.65	1.88	10/30	1.41	65-318	9.83
64-322	16.20	1-1/2" x 1-1/4"	1.65	1.88	12/24	1.58	65-322	12.71
		2" x 1/2"	1.49	1.88	10/20	1.61	65-327	15.41
64-328	18.36	2" x 3/4"	1.60	1.97	10/20	1.77	65-328	15.41
64-330	18.36	2" x 1"	1.73	2.02	10/20	1.97	65-330	15.41
64-334	23.08	2" x 1-1/4"	1.86	2.06	8/16	1.92	65-334	16.28
64-336	23.08	2" x 1-1/2"	1.98	2.12	8/16	2.08	65-336	16.28
64-343	62.61	2-1/2" x 1-1/2"	2.16	2.51	5/10	3.38	65-343	40.36
64-351	79.66	3" x 2"	2.52	2.89	3/6	4.54	65-351	53.90

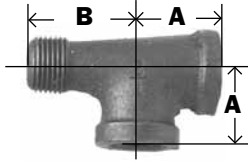
REDUCING TEES
(REDUCING ON RUN)


Part # Galvanized	List Price	Size 1 x 2 x 3	A	B	C	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-287	8.29	3/4" x 1/2" x 1/2"	1.18	1.18	1.20	30/180	0.45	65-287	3.98
64-288	5.71	3/4" x 1/2" x 3/4"	1.28	1.20	1.28	20/80	0.52	65-288	4.38
		1" x 1/2" x 1/2"	1.31	1.22	1.31	20/120	0.60	65-292	6.62
		1" x 3/4" x 3/4"	1.34	1.28	1.42	15/60	0.66	65-296	5.16
		1-1/4" x 1" x 1"	1.55	1.47	1.63	18/72	0.98	65-309	11.31

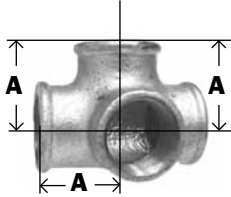
LOCKNUTS


Part # Galvanized	Size	Hex	Thickness	Box/ Case	Approx. Wt. Lbs.	List Price
64-703	1/2"	1.18	0.32	150/600	0.08	2.00
64-704	3/4"	1.43	0.35	90/360	0.13	2.28
64-705	1"	1.75	0.39	60/240	0.19	4.32
64-706	1-1/4"	2.10	0.43	45/180	0.27	4.20
64-707	1-1/2"	2.35	0.48	45/135	0.47	5.95
64-708	2"	2.88	0.54	25/75	0.56	9.08

* Black locknuts available on special order basis.

BLACK & GALVANIZED MALLEABLE IRON 150#**MALLEABLE FITTINGS****MALLEABLE SERVICE TEE (STREET TEE)**

Part # Galvanized	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-363	6.46	1/2"	1.12	1.62	40/120	0.31	65-363	4.50
64-364	7.08	3/4"	1.31	1.89	25/75	0.55	65-364	5.97

SIDE OUTLET TEES

Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-383	10.07	1/2"	1.12	25/100	0.38	65-383	7.78
64-384	12.71	3/4"	1.31	15/60	0.58	65-384	9.92
64-385	20.60	1"	1.50	20/40	0.89	65-385	15.91
64-386	34.29	1-1/4"	1.75	12/24	1.39	65-386	24.90

REDUCING COUPLINGS

Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-430	2.72	1/4" x 1/8"	1.00	50/600	0.08	65-430	2.00
64-431	2.76	3/8" x 1/8"	1.13	35/420	0.10	65-431	2.18
64-432	2.76	3/8" x 1/4"	1.13	30/360	0.12	65-432	2.00
64-433	3.08	1/2" x 1/8"	1.25	75/300	0.17	65-433	2.17
64-434	2.50	1/2" x 1/4"	1.25	75/300	0.15	65-434	2.00
64-435	2.33	1/2" x 3/8"	1.25	60/240	0.16	65-435	1.82
64-439	3.38	3/4" x 1/8"	1.44	70/210	0.20	65-439	2.52
64-436	3.12	3/4" x 1/4"	1.44	45/180	0.21	65-436	2.48
64-437	3.12	3/4" x 3/8"	1.44	45/180	0.22	65-437	2.48
64-438	2.76	3/4" x 1/2"	1.44	60/180	0.29	65-438	1.97
64-459	5.51	1" x 1/4"	1.69	45/135	0.32	65-459	3.83
64-440	5.64	1" x 3/8"	1.69	30/120	0.35	65-440	3.89
64-441	4.32	1" x 1/2"	1.69	30/120	0.37	65-441	3.33
64-442	4.22	1" x 3/4"	1.69	25/100	0.40	65-442	3.25
64-460	11.50	1-1/4" x 3/8"	2.06	25/75	0.49	65-460	8.82
64-444	7.20	1-1/4" x 1/2"	2.06	25/75	0.55	65-444	4.81
64-445	5.82	1-1/4" x 3/4"	2.06	25/75	0.60	65-445	4.18
64-446	5.82	1-1/4" x 1"	2.06	15/60	0.66	65-446	4.58
64-443	13.51	1-1/2" x 3/8"	2.31	15/120	0.61	65-443	7.80
64-447	8.49	1-1/2" x 1/2"	2.31	20/60	0.77	65-447	6.12
64-448	7.50	1-1/2" x 3/4"	2.31	15/60	0.77	65-448	6.90
64-449	7.50	1-1/2" x 1"	2.31	25/50	0.84	65-449	6.12
64-450	7.10	1-1/2" x 1-1/4"	2.31	12/48	0.86	65-450	5.29
64-458	19.57	2" x 1/2"	2.81	12/36	1.12	65-458	9.96
64-451	12.26	2" x 3/4"	2.81	12/36	1.11	65-451	8.78
64-452	10.23	2" x 1"	2.81	12/36	1.28	65-452	8.28
64-453	10.82	2" x 1-1/4"	2.81	9/27	1.30	65-453	8.78
64-454	10.23	2" x 1-1/2"	2.81	9/27	1.41	65-454	7.65
64-461	32.28	2-1/2" x 1-1/2"	3.25	7/14	1.74	65-461	22.82
64-462	31.68	2-1/2" x 2"	3.25	7/14	1.79	65-462	19.57
64-486	46.76	3" x 1-1/2"	3.69	16/32	2.18	65-486	30.52
64-456	40.92	3" x 2"	3.69	6/12	2.26	65-456	23.06
64-463	42.11	3" x 2-1/2"	3.69	5/10	3.52	65-463	30.52
64-464	91.10	4" x 2"	4.38	3/6	4.96	65-464	61.17
		4" x 2-1/2"	4.38	3/6	4.00	65-465	61.17
64-457	91.10	4" x 3"	4.38	3/6	4.07	65-457	57.58
		6" x 4"	4.24	1/8	9.84	65-491	231.99

MALLEABLE FITTINGS

BLACK & GALVANIZED MALLEABLE IRON 150#

HEX BUSHING

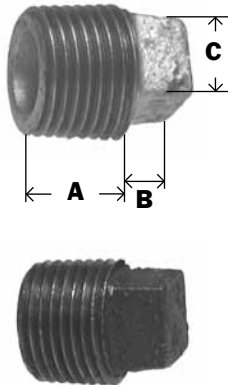


Part # Galvanized	List Price	Size M x F	A	Hex	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
		*1/4" x 1/8"	} Use steel fittings for smaller sizes - See page 224					
		*3/8" x 1/8"						
		*3/8" x 1/4"						
64-503	3.77	1/2" x 1/8"	0.84	1.03	150/600	0.10	65-503	2.49
		*1/2" x 1/4"						
64-505	3.77	1/2" x 3/8"	0.75	1.03	150/600	0.07	65-505	2.33
64-506	4.02	3/4" x 1/8"	0.85	1.15	75/300	0.17	65-506	2.44
64-507	3.89	3/4" x 1/4"	0.85	1.15	75/300	0.16	65-507	2.40
64-508	4.10	3/4" x 3/8"	0.85	1.15	75/300	0.14	65-508	2.44
64-509	3.51	3/4" x 1/2"	0.93	1.15	75/300	0.10	65-509	2.07
64-510	4.21	1" x 1/4"	1.13	1.12	50/200	0.19	65-510	2.87
64-511	6.60	1" x 3/8"	1.13	1.12	50/200	0.24	65-511	2.94
64-512	3.80	1" x 1/2"	1.10	1.42	50/200	0.21	65-512	2.02
64-513	3.38	1" x 3/4"	1.10	1.42	50/200	0.17	65-513	2.02
64-514	6.10	1-1/4" x 1/4"	1.24	1.12	30/120	0.31	65-514	3.69
64-515	6.10	1-1/4" x 3/8"	1.24	1.12	30/120	0.43	65-515	3.29
64-516	5.34	1-1/4" x 1/2"	1.24	1.24	30/120	0.29	65-516	3.17
64-517	4.87	1-1/4" x 3/4"	1.08	1.76	30/120	0.35	65-517	2.83
64-518	4.87	1-1/4" x 1"	1.08	1.76	30/120	0.29	65-518	2.83
64-519	12.36	1-1/2" x 1/4"	1.30	1.12	25/75	0.64	65-519	4.37
64-520	12.36	1-1/2" x 3/8"	1.30	1.12	25/75	0.64	65-520	4.37
64-521	7.08	1-1/2" x 1/2"	1.30	1.34	25/75	0.40	65-521	3.48
64-522	7.08	1-1/2" x 3/4"	1.30	1.44	25/75	0.39	65-522	3.48
64-523	6.36	1-1/2" x 1"	1.23	2.00	25/75	0.46	65-523	3.33
64-524	5.88	1-1/2" x 1-1/4"	1.23	2.00	25/75	0.32	65-524	3.33
64-525	9.39	2" x 3/8"	1.28	1.12	20/60	0.95	65-525	5.45
64-527	8.81	2" x 1/2"	1.39	1.34	20/60	0.84	65-527	5.45
64-528	8.22	2" x 3/4"	1.39	1.63	20/60	0.63	65-528	4.61
64-529	7.78	2" x 1"	1.39	1.77	20/60	0.67	65-529	4.61
64-530	7.78	2" x 1-1/4"	1.50	2.48	20/60	0.73	65-530	4.61
64-531	6.61	2" x 1-1/2"	1.50	2.48	20/60	0.70	65-531	4.61
64-546	19.36	2-1/2" x 1/2"	1.51	1.34	15/30	1.57	65-546	7.80
64-547	12.79	2-1/2" x 3/4"	1.51	1.63	15/30	1.54	65-547	7.80
64-532	18.30	2-1/2" x 1"	1.51	1.95	15/30	1.51	65-532	7.80
64-533	13.63	2-1/2" x 1-1/4"	1.51	2.39	15/30	1.41	65-533	7.80
64-534	12.52	2-1/2" x 1-1/2"	1.51	2.98	15/30	1.37	65-534	7.80
64-535	11.15	2-1/2" x 2"	1.54	2.98	15/30	1.11	65-535	7.80
64-550	16.86	3" x 1"	1.61	1.95	12/24	1.46	65-550	11.35
64-549	19.79	3" x 1-1/4"	1.61	2.39	12/24	2.22	65-549	11.35
64-537	15.02	3" x 1-1/2"	1.61	2.68	12/24	1.96	65-537	11.35
64-538	15.87	3" x 2"	1.61	3.86	12/24	1.91	65-538	11.35
64-539	30.21	3" x 2-1/2"	1.61	3.86	12/24	1.50	65-539	10.66
64-551	57.99	4" x 3/4"	2.15	4.90	5/10	4.50	65-551	27.07
64-553	37.74	4" x 1"	2.00	4.75	5/10	4.00	65-553	23.36
64-540	41.98	4" x 1-1/2"	1.82	2.68	5/10	3.91	65-540	22.73
64-541	31.19	4" x 2"	1.82	3.31	5/10	2.89	65-541	22.26
64-542	35.37	4" x 2-1/2"	2.06	3.87	5/10	2.77	65-542	21.24
64-543	31.98	4" x 3"	2.17	4.96	5/10	3.03	65-543	21.24
64-545	67.92	6" x 4"	2.33	5.79	2/4	5.69	65-545	59.48

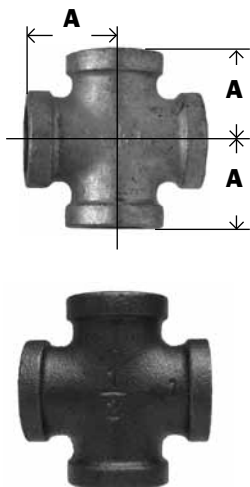
NIPPLES &
FITTINGS

UNIONS


Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-600	11.72	1/8"	1.26	60/240	0.19	65-600	9.75
64-601	11.35	1/4"	1.44	20/240	0.20	65-601	8.97
64-602	7.56	3/8"	1.61	40/160	0.35	65-602	7.25
64-603	7.20	1/2"	1.72	50/100	0.43	65-603	5.45
64-604	7.90	3/4"	1.94	35/70	0.63	65-604	7.08
64-605	9.87	1"	2.06	20/40	0.91	65-605	8.50
64-606	15.29	1-1/4"	2.26	15/30	1.35	65-606	11.35
64-607	18.88	1-1/2"	2.41	10/20	1.75	65-607	14.87
64-608	24.47	2"	2.75	6/12	2.62	65-608	21.04
64-609	73.97	2-1/2"	3.22	4/8	4.40	65-609	54.06
64-610	103.53	3"	3.50	4/8	5.63	65-610	62.65
64-611	224.28	4"	3.85	2/4	10.31	65-611	164.61

SQUARE HEAD PLUGS


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 - see p. 224						
		*1/4"							
		*3/8"							
64-653	1.69	1/2"	0.58	0.38	0.56	50/600	0.09	65-653	1.01
64-654	2.63	3/4"	0.65	0.44	0.63	30/360	0.13	65-654	1.12
64-655	2.40	1"	0.75	0.50	0.82	20/240	0.22	65-655	1.57
64-656	4.03	1-1/4"	0.82	0.56	0.94	40/120	0.40	65-656	2.40
64-657	5.46	1-1/2"	0.85	0.62	1.13	30/90	0.46	65-657	2.91
64-658	6.76	2"	0.91	0.68	1.31	20/60	0.74	65-658	3.72
64-659	13.34	2-1/2"	1.26	0.74	1.50	16/32	1.24	65-659	8.78
64-660	18.35	3"	1.16	0.80	1.69	16/32	1.69	65-660	12.45
64-661	23.66	4"	1.22	1.00	2.28	6/12	2.70	65-661	25.93

CROSSES


Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-390	11.24	1/8"	0.65	---	0.12	65-390	8.86
64-391	11.24	1/4"	0.80	60/240	0.18	65-391	7.58
64-392	11.24	3/8"	0.95	50/150	0.27	65-392	7.58
64-393	11.24	1/2"	1.12	30/90	0.45	65-393	7.58
64-394	12.51	3/4"	1.31	20/60	0.69	65-394	8.65
64-395	14.14	1"	1.50	15/30	1.06	65-395	9.61
64-396	20.48	1-1/4"	1.75	10/20	1.56	65-396	15.62
64-397	24.85	1-1/2"	1.94	8/16	1.91	65-397	19.33
64-398	47.41	2"	2.25	5/10	3.24	65-398	32.01
64-399	118.48	2-1/2"	2.71	3/6	5.55	65-399	71.96
64-400	159.60	3"	3.06	1/8	8.00	65-400	114.71

Don't see what your looking for? Hex Nipples, Wyees, etc... Just call us for availability.

MALLEABLE FITTINGS

BLACK & GALVANIZED STEEL FITTINGS

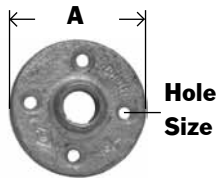
CAPS



Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
		1/4"	0.62	80/960	0.05	65-471	1.12
64-472	2.37	3/8"	0.74	60/720	0.08	65-472	1.39
64-473	1.81	1/2"	0.87	75/300	0.13	65-473	1.44
64-474	2.60	3/4"	0.97	40/160	0.22	65-474	1.90
64-475	2.88	1"	1.16	25/100	0.37	65-475	2.10
64-476	4.19	1-1/4"	1.28	20/80	0.49	65-476	2.87
64-477	5.34	1-1/2"	1.33	18/54	0.64	65-477	4.07
64-478	6.75	2"	1.45	12/36	1.00	65-478	4.82
64-479	21.46	2-1/2"	1.70	20/40	1.45	65-479	12.49
64-480	25.99	3"	1.80	24	2.20	65-480	19.72
64-481	51.61	4"	2.08	6/12	3.75	65-481	30.79
64-482	187.85	6"	2.55	2/4	8.86	65-482	123.90

* Use steel fittings for smaller sizes. See page 224 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	11.06	1/2"	3.50	0.50	0.25	25/50	0.63	65-692	5.10
64-693	12.35	3/4"	3.50	0.63	0.25	15/45	0.75	65-693	5.29
64-694	13.58	1"	4.00	0.69	0.25	15/30	1.06	65-694	7.63
64-695	15.48	1-1/4"	4.00	0.75	0.25	10/30	1.08	65-695	8.50
64-696	19.32	1-1/2"	4.50	0.87	0.31	8/24	1.43	65-696	9.33
64-697	25.44	2"	5.50	1.00	0.31	8/16	2.23	65-697	12.05

STEEL MAGNETIC PLUGS

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.

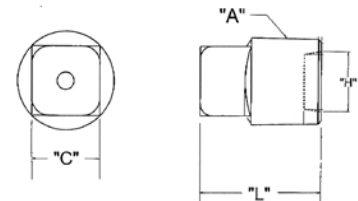


Magnetic Drain Plugs prevent excessive wear to the system's components.

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

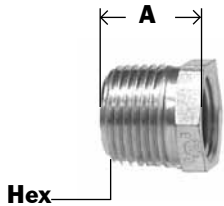
Part	Size "A"	Head Width "C"	Recess Dia. "H"	O/L Length "L"	List Price
28-996	3/8 - 18	.428 - .440	.435 - .445	.805 - .860	2.65
28-997	1/2 - 14	.553 - .565	.560 - .570	.970 - 1.04	3.17
28-998	3/4 - 14	.615 - .627	.725 - .735	1.120 - 1.170	4.01
28-999	1-11 1/2	.803 - .815	.895 - .905	1.25 - 1.33	5.81



BLACK & GALVANIZED STEEL FITTINGS

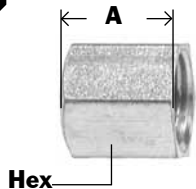
STEEL FITTINGS

HEX BUSHINGS



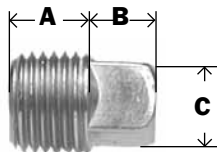
Part # Galvanized	List Price	Size M x F	A	Hex	Approx. Wt. Lbs.	Part # Black	List Price
66-500	1.13	1/4" x 1/8"	0.63	0.62	0.02	67-500	1.38
66-501	1.33	3/8" x 1/8"	0.66	0.68	0.04	67-501	1.78
66-502	1.33	3/8" x 1/4"	0.66	0.68	0.02	67-502	1.78
66-503	2.05	1/2" x 1/8"	0.80	0.87	0.10	67-503	1.94
66-504	2.05	1/2" x 1/4"	0.80	0.87	0.08	67-504	1.94
66-505	2.05	1/2" x 3/8"	0.80	0.87	0.06	67-505	1.94
66-506	3.28	3/4" x 1/8"	0.94	1.06	0.18	67-506	2.97
66-507	3.28	3/4" x 1/4"	0.94	1.06	0.14	67-507	2.97
66-508	3.28	3/4" x 3/8"	0.94	1.06	0.14	67-508	2.97
66-509	3.28	3/4" x 1/2"	0.94	1.06	0.10	67-509	2.97
66-510	6.16	1" x 1/4"	1.00	1.31	0.16	67-510	5.23
66-511	6.16	1" x 3/8"	1.00	1.31	0.26	67-511	5.23
66-512	6.16	1" x 1/2"	1.00	1.31	0.22	67-512	5.23
66-513	6.16	1" x 3/4"	1.00	1.31	0.14	67-513	5.23

CAPS



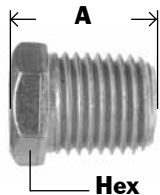
Part # Galvanized	List Price	Size	A	Hex	Approx. Wt. Lbs.	Part # Black	List Price
66-470	1.04	1/8"	0.53	0.56	0.02	67-470	0.92
66-471	1.11	1/4"	0.63	0.62	0.04	67-471	1.12
66-472	1.86	3/8"	0.69	0.81	0.06	67-472	1.75
66-473	3.10	1/2"	0.87	1.00	0.12	67-473	2.68
66-474	4.42	3/4"	0.97	1.18	0.16	67-474	3.91
66-475	6.37	1"	1.16	1.50	0.30	67-475	5.42
66-476	28.75	1-1/4"	1.28	2.00	0.68	67-476	26.03
66-477	39.05	1-1/2"	1.35	2.25	0.83	67-477	35.80
66-478	46.81	2"	1.45	2.625	1.36		

SQUARE HEAD PLUGS



Part # Galvanized	List Price	Size	A	B	C	Approx. Wt. Lbs.	Part # Black	List Price
		1/16"	0.33	0.18	0.22	0.01	67-669	0.42
66-670	0.46	1/8"	0.33	0.24	0.28	0.01	67-670	0.42
66-671	0.51	1/4"	0.45	0.28	0.37	0.02	67-671	0.40
66-672	0.80	3/8"	0.50	0.31	0.43	0.04	67-672	0.64
66-653	1.24	1/2"	0.59	0.38	0.55	0.12	67-653	1.12
66-654	1.80	3/4"	0.63	0.44	0.62	0.18	67-654	1.64
66-655	6.65	1"	0.75	0.5	0.81	0.34	67-655	5.89
66-656	11.88	1-1/4"	0.80	0.56	0.93	0.62	67-656	10.06
66-657	17.37	1-1/2"	0.83	0.62	1.12	0.82	67-657	15.23
66-658	23.77	2"	0.88	0.68	1.31	1.36	67-658	20.72

HEX HEAD PLUGS



Part # Galvanized	List Price	Size	A	Hex	Approx. Wt. Lbs.	Part # Black	List Price
66-770	0.42	1/8"	0.55	0.43	0.01	67-770	0.32
66-771	0.68	1/4"	0.74	0.56	0.04	67-771	0.62
66-772	1.23	3/8"	0.67	0.68	0.06	67-772	1.12
66-773	2.06	1/2"	0.80	0.70	0.12	67-773	1.86
66-774	3.19	3/4"	0.94	1.06	0.18	67-774	2.97
66-775	6.79	1"	1.00	1.31	0.22	67-775	5.23
66-776	9.75	1-1/4"	1.17	1.75	0.7	67-776	8.89
66-777	23.59	1-1/2"	1.51	2.00	1.2	67-777	18.71
66-778	40.41	2"	1.65	2.50	2.06	67-778	34.44

COUNTERSUNK PLUG - Square Socket


Galvanized						Black	
Part #	List Price	Size	A	Socket Size	Approx. Wt. Lbs.	Part #	List Price
66-630	0.32	1/8"	0.29	0.19	0.01	67-630	0.31
66-631	0.45	1/4"	0.45	0.25	0.02	67-631	0.42
66-632	0.62	3/8"	0.45	0.31	0.04	67-632	0.54
66-633	0.95	1/2"	0.59	0.38	0.08	67-633	0.82
66-634	1.46	3/4"	0.60	0.50	0.12	67-634	1.33
66-635	3.57	1"	0.75	0.50	0.16	67-635	2.98
66-636	5.81	1-1/4"	0.80	0.75	0.32	67-636	5.56
66-637	13.21	1-1/2"	0.83	0.75	0.45	67-637	11.56
66-638	23.98	2"	0.88	0.875	2.06	67-638	20.36

COUNTERSUNK PLUG - Hex Socket


Galvanized						Black	
Part #	List Price	Size	A	Socket Size	Approx. Wt. Lbs.	Part #	List Price
66-760	0.45	1/16"	0.29	0.15	0.01	67-760	0.42
66-761	0.32	1/8"	0.29	0.18	0.01	67-761	0.42
66-762	0.42	1/4"	0.44	0.25	0.02	67-762	0.42
66-763	0.54	3/8"	0.44	0.31	0.04	67-763	0.54
66-764	0.84	1/2"	0.59	0.37	0.08	67-764	0.82
66-765	1.46	3/4"	0.60	0.56	0.14	67-765	1.32
66-766	3.70	1"	0.75	0.625	0.22	67-766	2.61
66-767	5.81	1-1/4"	0.80	0.75	0.37	67-767	4.54
66-768	13.21	1-1/2"	0.83	1.0	0.45	67-768	11.56
66-769	23.98	2"	0.88	1.0	0.86	67-769	20.36

FACE BUSHING


Galvanized					Black	
Part #	List Price	Size M x F	A	Approx. Wt. Lbs.	Part #	List Price
66-700	1.12	1/4" x 1/8"	0.44	0.01	67-700	1.04
66-701	1.38	3/8" x 1/8"	0.48	0.02	67-701	1.23
66-702	2.08	3/8" x 1/4"	0.48	0.02	67-702	1.23
		1/2" x 1/8"	0.56	0.04	67-703	1.86
66-704	1.94	1/2" x 1/4"	0.56	0.04	67-704	1.86
66-705	2.08	1/2" x 3/8"	0.56	0.04	67-705	1.86
		3/4" x 1/4"	0.62	0.12	67-707	2.45
66-708	3.01	3/4" x 3/8"	0.62	0.10	67-708	2.45
66-709	3.01	3/4" x 1/2"	0.62	0.10	67-709	2.52
		1" x 3/8"	0.75	0.18	67-711	4.52
66-712	5.14	1" x 1/2"	0.75	0.16	67-712	4.52
66-713	5.37	1" x 3/4"	0.75	0.16	67-713	4.52

**SCHEDULE 80 EXTRA HEAVY NIPPLES
1/8" DIAMETER**


Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-001	4.75	Close (3/4")	59-001	2.98
58-002	5.68	1-1/2"	59-002	3.45
58-003	5.68	2"	59-003	3.38
58-004	6.74	2-1/2"	59-004	3.77
58-005	6.99	3"	59-005	4.01
58-006	8.24	3-1/2"	59-006	5.15
58-007	8.51	4"	59-007	5.67
58-008	12.31	4-1/2"	59-008	10.38
58-009	15.84	5"	59-009	9.24
58-010	15.19	5-1/2"	59-010	10.37
58-011	17.06	6"	59-011	10.08
58-012	22.65	7"	59-012	13.39
58-013	22.81	8"	59-013	14.25
58-014	23.87	9"	59-014	15.07
58-015	26.42	10"	59-015	15.91
58-016	27.09	11"	59-016	16.75
58-017	26.64	12"	59-017	17.38

**SCHEDULE 80 EXTRA HEAVY NIPPLES
3/8" DIAMETER**


Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-040	5.51	Close (1")	59-040	3.24
58-041	6.50	1-1/2"	59-041	4.05
58-042	6.84	2"	59-042	4.08
58-043	8.49	2-1/2"	59-043	4.75
58-044	8.23	3"	59-044	4.86
58-045	10.66	3-1/2"	59-045	6.00
58-046	11.00	4"	59-046	5.80
58-047	13.08	4-1/2"	59-047	7.85
58-048	13.82	5"	59-048	8.33
58-049	14.83	5-1/2"	59-049	9.83
58-050	15.08	6"	59-050	9.32
58-051	24.54	7"	59-051	17.57
58-052	25.98	8"	59-052	18.63
58-053	31.09	9"	59-053	19.66
58-054	32.59	10"	59-054	20.29
58-055	34.60	11"	59-055	20.92
58-056	35.71	12"	59-056	21.43

**SCHEDULE 80 EXTRA HEAVY NIPPLES
1/4" DIAMETER**


Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-020	5.12	Close (3/4")	59-020	2.89
58-021	5.90	1-1/2"	59-021	3.62
58-022	5.90	2"	59-022	3.66
58-023	7.68	2-1/2"	59-023	4.71
58-024	7.72	3"	59-024	4.86
58-025	6.29	3-1/2"	59-025	5.02
58-026	8.94	4"	59-026	5.18
58-027	10.49	4-1/2"	59-027	8.33
58-028	13.05	5"	59-028	8.21
58-029	14.70	5-1/2"	59-029	8.76
58-030	14.30	6"	59-030	9.31
58-031	23.35	7"	59-031	14.91
58-032	25.31	8"	59-032	16.75
58-033	27.37	9"	59-033	17.57
58-034	28.48	10"	59-034	17.79
58-035	31.09	11"	59-035	18.84
58-036	31.65	12"	59-036	19.66

**SCHEDULE 80 EXTRA HEAVY NIPPLES
1/2" DIAMETER**


Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-060	5.04	Close (1-1/8")	59-060	2.96
58-061	5.62	1-1/2"	59-061	3.06
58-062	5.51	2"	59-062	3.23
58-063	6.07	2-1/2"	59-063	3.53
58-064	6.61	3"	59-064	3.83
58-065	7.49	3-1/2"	59-065	4.23
58-066	7.80	4"	59-066	4.63
58-067	8.94	4-1/2"	59-067	5.10
58-068	9.59	5"	59-068	5.31
58-069	10.23	5-1/2"	59-069	5.63
58-070	10.21	6"	59-070	5.96
58-071	17.57	7"	59-071	10.20
58-072	17.24	8"	59-072	11.73
58-073	20.79	9"	59-073	12.56
58-074	22.03	10"	59-074	13.39
58-075	23.45	11"	59-075	14.64
58-076	25.12	12"	59-076	14.41

STEEL NIPPLES**BLACK & GALVANIZED SCHEDULE 80****SCHEDULE 80 EXTRA HEAVY NIPPLES
3/4" DIAMETER**

Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-080	5.50	Close (1-3/8")	59-080	3.30
58-081	5.60	1-1/2"	59-081	3.46
58-082	6.05	2"	59-082	3.62
58-083	7.40	2-1/2"	59-083	3.89
58-084	7.17	3"	59-084	4.24
58-085	8.79	3-1/2"	59-085	4.71
58-086	8.57	4"	59-086	5.09
58-087	10.66	4-1/2"	59-087	5.94
58-088	11.69	5"	59-088	6.24
58-089	12.22	5-1/2"	59-089	7.42
58-090	12.00	6"	59-090	7.45
58-091	21.36	7"	59-091	11.94
58-092	21.30	8"	59-092	13.72
58-093	24.63	9"	59-093	15.51
58-094	26.96	10"	59-094	15.41
58-095	28.78	11"	59-095	17.69
58-096	28.24	12"	59-096	19.22

**SCHEDULE 80 EXTRA HEAVY NIPPLES
1" DIAMETER**

Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-100	8.22	Close (1-1/2")	59-100	4.88
58-101	8.65	2"	59-101	5.12
58-102	9.46	2-1/2"	59-102	5.57
58-103	9.81	3"	59-103	6.02
58-104	11.64	3-1/2"	59-104	6.77
58-105	11.73	4"	59-105	7.30
58-106	14.22	4-1/2"	59-106	8.50
58-107	14.71	5"	59-107	8.68
58-108	16.71	5-1/2"	59-108	9.71
58-109	16.93	6"	59-109	10.23
58-110	29.32	7"	59-110	17.69
58-111	29.49	8"	59-111	18.45
58-112	33.29	9"	59-112	21.05
58-113	36.63	10"	59-113	19.93
58-114	39.44	11"	59-114	24.01
58-115	40.84	12"	59-115	24.07

**SCHEDULE 80 EXTRA HEAVY NIPPLES
1-1/4" DIAMETER**

Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-120	10.27	Close (1-5/8")	59-120	6.02
58-121	10.47	2"	59-121	6.22
58-122	12.10	2-1/2"	59-122	7.55
58-123	12.95	3"	59-123	8.07
58-124	13.85	3-1/2"	59-124	9.31
58-125	14.40	4"	59-125	9.47
58-126	18.23	4-1/2"	59-126	11.73
58-127	20.25	5"	59-127	11.65
58-128	21.89	5-1/2"	59-128	13.24
58-129	25.09	6"	59-129	13.09
58-130	35.97	7"	59-130	20.66
58-131	38.79	8"	59-131	21.82
58-132	42.38	9"	59-132	25.27
58-133	27.86	10"	59-133	26.89
58-134	50.77	11"	59-134	29.89
58-135	53.21	12"	59-135	29.00

**SCHEDULE 80 EXTRA HEAVY NIPPLES
1-1/2" DIAMETER**

Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-140	12.31	Close (1-3/4")	59-140	7.53
58-141	15.31	2"	59-141	7.88
58-142	15.44	2-1/2"	59-142	8.65
58-143	14.63	3"	59-143	9.40
58-144	17.82	3-1/2"	59-144	11.24
58-145	19.48	4"	59-145	11.28
58-146	20.55	4-1/2"	59-146	13.24
58-147	30.58	5"	59-147	13.17
58-148	23.98	5-1/2"	59-148	15.25
58-149	25.82	6"	59-149	15.04
58-150	39.97	7"	59-150	25.27
58-151	44.87	8"	59-151	26.45
58-152	49.47	9"	59-152	29.47
58-153	54.36	10"	59-153	32.42
58-154	57.51	11"	59-154	36.22
58-155	56.57	12"	59-155	39.16

**NIPPLES &
FITTINGS**

**SCHEDULE 80 EXTRA HEAVY NIPPLES
2" DIAMETER**


Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-160	21.33	Close (2")	59-160	10.35
58-161	19.20	2-1/2"	59-161	11.83
58-162	20.27	3"	59-162	12.42
58-163	22.61	3-1/2"	59-163	13.36
58-164	24.39	4"	59-164	14.29
58-165	27.61	4-1/2"	59-165	23.19
58-166	30.58	5"	59-166	24.35
58-167	34.83	5-1/2"	59-167	26.32
58-168	35.61	6"	59-168	30.08
58-169	54.78	7"	59-169	46.14
58-170	65.81	8"	59-170	50.12
58-171	71.23	9"	59-171	54.15
58-172	74.89	10"	59-172	61.08
58-173	82.64	11"	59-173	69.49
58-174	90.33	12"	59-174	75.82

**SCHEDULE 80 EXTRA HEAVY NIPPLES
3" DIAMETER**


Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-200	66.67	Close (2-5/8")	59-200	38.56
58-201	79.79	3"	59-201	45.74
58-202	89.62	3-1/2"	59-202	52.33
58-203	90.94	4"	59-203	50.47
58-204	99.47	4-1/2"	59-204	57.15
58-205	106.45	5"	59-205	58.84
58-206	110.97	5-1/2"	59-206	66.70
58-207	109.32	6"	59-207	60.09
58-208	143.88	7"	59-208	91.39
58-209	151.43	8"	59-209	87.45
58-210	164.36	9"	59-210	104.64
58-211	167.96	10"	59-211	105.95
58-212	177.10	11"	59-212	108.41
58-213	187.14	12"	59-213	115.45

**SCHEDULE 80 EXTRA HEAVY NIPPLES
2-1/2" DIAMETER**


Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-180	57.72	Close (2-1/2")	59-180	31.74
58-181	62.00	3"	59-181	35.20
58-182	79.49	3-1/2"	59-182	42.25
58-183	81.27	4"	59-183	40.99
58-184	89.44	4-1/2"	59-184	50.34
58-185	88.35	5"	59-185	48.96
58-186	93.80	5-1/2"	59-186	57.15
58-187	95.92	6"	59-187	54.15
58-188	111.16	7"	59-188	68.88
58-189	114.66	8"	59-189	65.39
58-190	102.67	9"	59-190	78.47
58-191	127.71	10"	59-191	77.51
58-192	139.44	11"	59-192	86.34
58-193	131.31	12"	59-193	91.24

**SCHEDULE 80 EXTRA HEAVY NIPPLES
4" DIAMETER**


Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-220	98.67	Close (2-7/8")	59-220	63.73
58-221	135.18	4"	59-221	74.22
58-222	147.27	4-1/2"	59-222	87.64
58-223	148.78	5"	59-223	88.88
58-224	163.20	5-1/2"	59-224	89.46
58-225	165.25	6"	59-225	92.06
58-226	185.00	7"	59-226	115.11
58-227	191.49	8"	59-227	108.30
58-228	212.98	9"	59-228	131.67
58-229	222.04	10"	59-229	124.74
58-230	242.91	11"	59-230	147.80
58-231	245.08	12"	59-231	145.30

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STEEL NIPPLES**BLACK EXTRA HEAVY SCH80 SEAMLESS****SCHEDULE 80 SEAMLESS NIPPLES
1/8" DIAMETER**

Part #	Length	List Price
72-001	X Close (3/4")	7.26
72-002	x 1-1/2"	7.69
72-003	x 2"	8.30
72-004	x 2-1/2"	9.00
72-005	x 3"	9.99
72-006	x 3-1/2"	10.91
72-007	x 4"	12.11
72-008	x 4-1/2"	13.14
72-009	x 5"	18.06
72-010	x 5-1/2"	19.34
72-011	x 6"	20.77

**SCHEDULE 80 SEAMLESS NIPPLES
1/4" DIAMETER**

Part #	Length	List Price
72-020	X Close (7/8")	8.54
72-021	x 1-1/2"	8.74
72-022	x 2"	9.66
72-023	x 2-1/2"	10.52
72-024	x 3"	11.71
72-025	x 3-1/2"	13.01
72-026	x 4"	14.40
72-027	x 4-1/2"	15.67
72-028	x 5"	22.23
72-029	x 5-1/2"	23.46
72-030	x 6"	25.04

**SCHEDULE 80 SEAMLESS NIPPLES
3/8" DIAMETER**

Part #	Length	List Price
72-040	X Close (1")	9.24
72-041	x 1-1/2"	9.63
72-042	x 2"	10.52
72-043	x 2-1/2"	11.83
72-044	x 3"	13.29
72-045	x 3-1/2"	14.62
72-046	x 4"	15.93
72-047	x 4-1/2"	17.50
72-048	x 5"	23.34
72-049	x 5-1/2"	24.93
72-050	x 6"	26.55

**SCHEDULE 80 SEAMLESS NIPPLES
1/2" DIAMETER**

Part #	Length	List Price
72-060	X Close (1-1/8")	4.71
72-061	x 1-1/2"	5.01
72-062	x 2"	5.51
72-063	x 2-1/2"	6.09
72-064	x 3"	6.70
72-065	x 3-1/2"	7.60
72-066	x 4"	8.35
72-067	x 4-1/2"	9.19
72-068	x 5"	10.59
72-069	x 5-1/2"	11.53
72-070	x 6"	12.47

**SCHEDULE 80 SEAMLESS NIPPLES
3/4" DIAMETER**

Part #	Length	List Price
72-080	X Close (1-3/8")	5.31
72-081	x 1-1/2"	5.67
72-082	x 2"	5.95
72-083	x 2-1/2"	6.72
72-084	x 3"	7.48
72-085	x 3-1/2"	8.53
72-086	x 4"	9.37
72-087	x 4-1/2"	10.23
72-088	x 5"	11.67
72-089	x 5-1/2"	12.53
72-090	x 6"	13.48

**SCHEDULE 80 SEAMLESS NIPPLES
1" DIAMETER**

Part #	Length	List Price
72-100	X Close (1-1/2")	7.51
72-101	x 2"	7.98
72-102	x 2-1/2"	8.53
72-103	x 3"	9.98
72-104	x 3-1/2"	11.06
72-105	x 4"	12.36
72-106	x 4-1/2"	13.45
72-107	x 5"	15.57
72-108	x 5-1/2"	16.65
72-109	x 6"	17.77

**NIPPLES &
FITTINGS**

**SCHEDULE 80 SEAMLESS NIPPLES
1-1/4" DIAMETER**


Part #	Length	List Price
72-120	X Close (1-5/8")	9.43
72-121	x 2"	9.80
72-122	x 2-1/2"	10.79
72-123	x 3"	12.54
72-124	x 3-1/2"	13.70
72-125	x 4"	15.33
72-126	x 4-1/2"	16.67
72-127	x 5"	19.34
72-128	x 5-1/2"	20.80
72-129	x 6"	22.23

**SCHEDULE 80 SEAMLESS NIPPLES
1-1/2" DIAMETER**


Part #	Length	List Price
72-140	X Close (1-3/4")	11.35
72-141	x 2"	12.01
72-142	x 2-1/2"	13.04
72-143	x 3"	15.02
72-144	x 3-1/2"	16.39
72-145	x 4"	18.35
72-146	x 4-1/2"	20.06
72-147	x 5"	23.21
72-148	x 5-1/2"	24.67
72-149	x 6"	26.09

**SCHEDULE 80 SEAMLESS NIPPLES
2" DIAMETER**


Part #	Length	List Price
72-160	X Close (2")	13.48
72-161	x 2-1/2"	15.12
72-162	x 3"	17.59
72-163	x 3-1/2"	18.92
72-164	x 4"	21.12
72-165	x 4-1/2"	22.79
72-166	x 5"	26.68
72-167	x 5-1/2"	28.81
72-168	x 6"	30.48

**SCHEDULE 80 SEAMLESS NIPPLES
2-1/2" DIAMETER**


Part #	Length	List Price
72-180	X Close (2-1/2")	44.78
72-181	x 3"	46.90
72-182	x 3-1/2"	50.50
72-183	x 4"	52.37
72-184	x 4-1/2"	55.21
72-185	x 5"	58.95
72-186	x 5-1/2"	61.91
72-187	x 6"	64.56

**SCHEDULE 80 SEAMLESS NIPPLES
3" DIAMETER**


Part #	Length	List Price
72-200	X Close (2-5/8")	56.48
72-201	x 3"	59.73
72-202	x 3-1/2"	63.80
72-203	x 4"	67.55
72-204	x 4-1/2"	71.29
72-205	x 5"	76.26
72-206	x 5-1/2"	80.12
72-207	x 6"	83.82

**SCHEDULE 80 SEAMLESS NIPPLES
4" DIAMETER**


Part #	Length	List Price
72-220	X Close (2-7/8")	80.45
72-223	x 4"	91.09
72-224	x 4-1/2"	96.38
72-225	x 5"	104.52
72-226	x 5-1/2"	108.68
72-227	x 6"	113.86

MALLEABLE FITTINGS**EXTRA HEAVY 300# MALLEABLE IRON**300 LB Fittings ASTM: A197 ANSI: B16.3, B16.4
90° ELBOWS**Galvanized****Black**

Part #	List Price	Size	Part #	List Price
68-101	26.31	1/4"	69-101	14.57
68-102	26.84	3/8"	69-102	12.94
68-103	29.95	1/2"	69-103	17.79
68-104	33.63	3/4"	69-104	19.36
68-105	45.99	1"	69-105	24.77
68-106	72.26	1-1/4"	69-106	35.36
68-107	78.31	1-1/2"	69-107	41.66
68-108	159.81	2"	69-108	61.28

45° ELBOWS**Galvanized****Black**

Part #	List Price	Size	Part #	List Price
68-181	43.11	1/4"	69-181	22.77
68-182	43.11	3/8"	69-182	24.53
68-183	49.87	1/2"	69-183	24.15
68-184	54.86	3/4"	69-184	26.84
68-185	62.96	1"	69-185	31.74
68-186	97.74	1-1/4"	69-186	47.60
68-187	120.37	1-1/2"	69-187	62.07
68-188	175.07	2"	69-188	93.74

90° STREET ELBOWS**Galvanized****Black**

Part #	List Price	Size	Part #	List Price
68-161	36.41	1/4"	69-161	17.28
68-162	32.16	3/8"	69-162	20.70
68-163	54.23	1/2"	69-163	22.52
68-164	69.87	3/4"	69-164	32.02
68-165	75.33	1"	69-165	37.56
68-166	107.41	1-1/4"	69-166	51.63
68-167	126.44	1-1/2"	69-167	63.86
68-168	221.78	2"	69-168	99.33

**TEES****Galvanized****Black**

Part #	List Price	Size	Part #	List Price
68-252	38.12	3/8"	69-252	19.43
68-253	47.73	1/2"	69-253	24.73
68-254	52.60	3/4"	69-254	26.71
68-255	60.75	1"	69-255	32.12
68-256	112.21	1-1/4"	69-256	60.52
68-257	96.17	1-1/2"	69-257	64.72
68-258	167.91	2"	69-258	79.26

300 LB Fittings ASTM: A197 ANSI: B16.3, B16.4
COUPLINGS**Galvanized****Black**

Part #	List Price	Size	Part #	List Price
68-411	21.30	1/4"	69-411	13.16
68-412	30.14	3/8"	69-412	13.16
68-413	31.95	1/2"	69-413	14.68
68-414	28.78	3/4"	69-414	16.86
68-415	38.06	1"	69-415	19.28
68-416	49.60	1-1/4"	69-416	22.32
68-417	83.88	1-1/2"	69-417	34.36
68-418	83.46	2"	69-418	52.77

REDUCING COUPLING**Galvanized****Black**

Part #	List Price	Size	Part #	List Price
68-432	44.41	3/8 x 1/4"	69-432	19.86
68-434	37.80	1/2 x 1/4"	69-434	21.97
68-435	36.00	1/2 x 3/8"	69-435	20.92
68-438	43.69	3/4 x 1/2"	69-438	21.38
68-441	52.38	1 x 1/2"	69-441	28.24
68-442	52.17	1 x 3/4"	69-442	31.07

**CAPS****Galvanized****Black**

Part #	List Price	Size	Part #	List Price
68-471	23.20	1/4"	69-471	13.46
68-472	23.18	3/8"	69-472	16.35
68-473	28.19	1/2"	69-473	15.29
68-474	28.93	3/4"	69-474	16.86
68-475	39.70	1"	69-475	22.14
68-476	59.99	1-1/4"	69-476	24.52
68-477	80.12	1-1/2"	69-477	35.84
68-478	97.24	2"	69-478	49.76

**UNIONS****Galvanized****Black**

Part #	List Price	Size	Part #	List Price
68-600	65.52	1/8"	69-600	39.01
68-601	74.20	1/4"	69-601	39.01
68-602	65.52	3/8"	69-602	41.60
68-603	71.75	1/2"	69-603	39.01
68-604	74.87	3/4"	69-604	40.13
68-605	76.43	1"	69-605	41.89
68-606	78.02	1-1/4"	69-606	65.73
68-607	103.95	1-1/2"	69-607	89.47
68-608	115.12	2"	69-608	79.16

More sizes available...just ask!

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NIPPLES & FITTINGS

3000 LB FORGED STEEL THREADED FITTINGS
ASTM: A105 ANSI: B16.11
90° ELBOWS


Part #	Size	List Price
101-103	1/2"	12.83
101-104	3/4"	16.12
101-105	1"	23.97
101-106	1-1/4"	45.54
101-107	1-1/2"	58.75
101-108	2"	71.35

STREET ELBOWS


Part #	Size	List Price
101-163	1/2"	24.19
101-164	3/4"	30.57
101-165	1"	40.79
101-166	1-1/4"	73.89
101-167	1-1/2"	89.31
101-168	2"	128.82

45° ELBOWS


Part #	Size	List Price
101-183	1/2"	20.99
101-184	3/4"	24.25
101-185	1"	33.02
101-186	1-1/4"	45.64
101-187	1-1/2"	65.53
101-188	2"	90.42

TEES


Part #	Size	List Price
101-253	1/2"	18.34
101-254	3/4"	24.77
101-255	1"	32.63
101-256	1-1/4"	63.32
101-257	1-1/2"	73.86
101-258	2"	95.53

CROSS


Part #	Size	List Price
101-393	1/2"	51.84
101-394	3/4"	68.41
101-395	1"	96.26
101-396	1-1/4"	127.53
101-397	1-1/2"	169.92
101-398	2"	229.06

HALF COUPLINGS


Part #	Size	List Price
101-773	1/2"	3.20
101-774	3/4"	4.59
101-775	1"	6.29
101-776	1-1/4"	11.38
101-777	1-1/2"	15.14
101-778	2"	20.35

CAPS


Part #	Size	List Price
101-473	1/2"	5.99
101-474	3/4"	8.35
101-475	1"	12.81
101-476	1-1/4"	20.63
101-477	1-1/2"	24.65
101-478	2"	35.48

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COUPLINGS


Part #	Size	List Price
101-413	1/2"	5.25
101-414	3/4"	6.83
101-415	1"	11.89
101-416	1-1/4"	19.81
101-417	1-1/2"	25.63
101-418	2"	31.98

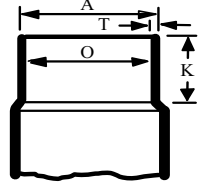
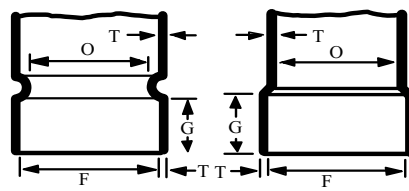
REDUCING COUPLINGS

Part #	Size	List Price
101-435	1/2" x 3/8"	10.45
101-434	1/2" x 1/4"	10.45
101-438	3/4" x 1/2"	12.40
101-437	3/4" x 3/8"	12.40
101-442	1" x 3/4"	16.15
101-441	1" x 1/2"	16.15
101-440	1" x 3/8"	16.15
101-446	1-1/4" x 1"	28.28
101-445	1-1/4" x 3/4"	28.28
101-444	1-1/4" x 1/2"	28.28
101-443	1-1/4" x 3/8"	28.28
101-450	1-1/2" x 1-1/4"	30.71
101-449	1-1/2" x 1"	30.71
101-447	1-1/2" x 1/2"	30.71
101-454	2" x 1-1/2"	44.54
101-453	2" x 1-1/4"	44.54
101-452	2" x 1"	44.54
101-451	2" x 3/4"	44.54
101-458	2" x 1/2"	44.54

UNIONS


Part #	Size	List Price
101-603	1/2"	22.09
101-604	3/4"	27.27
101-605	1"	35.64
101-606	1-1/4"	56.53
101-607	1-1/2"	67.42
101-608	2"	91.41

More sizes available...just ask!

											
MALE (FITTING)						FEMALE (COPPER)					

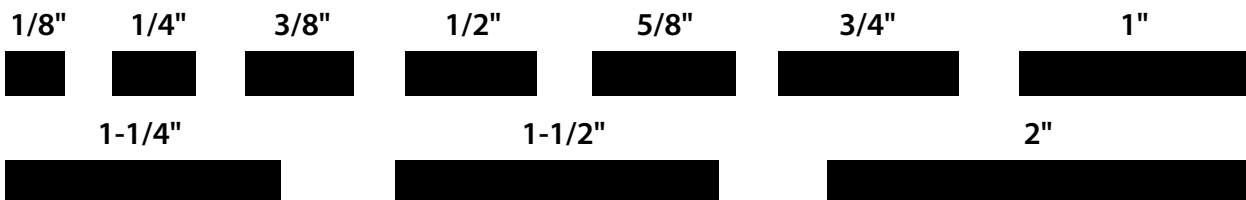
Nominal Size	Joint Ends										Metal Thickness T (in)	Inside Diameter O (in)
	Male End					Female End						
	Outside Diameter (A) in	Average Tolerance (mm)	Actual MIN in	O.D. MAX in	Length (Min) H (in)	Inside Diameter F (in)	Average Tolerance (mm)	Actual MIN in	O.D. MAX in	Length (Min) G (in)		
1/8	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	0	2/8
3/8	4/8		4/8	4/8	3/8	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	3/8	0	4/8
5/8	6/8		6/8	6/8	5/8	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	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	0.35	8-1/8	8-1/8	4-1/8	8-1/8	0.35	8-1/8	8-1/8	3-7/8	1/8	7-4/8
10	10-1/8		10-1/8	10-1/8	4-4/8	10-2/8		10-1/8	10-2/8	4-3/8	2/8	9-2/8

Symbol of Joint Ends

C	Solder joint fitting end made to receive copper tube diameter
Ft.g.	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

The above conforms to ASTM B 88 & ASTM B 306

Warranty: Seller warrants that all fittings will be free from defects in materials and construction that will impair their usefulness, provided they are used as recommended. Any fitting that proves to be defective will be replaced or a credit issued but no incidental labor charges, expenses or damages will be allowed.



WROT SOLDER JOINT**COPPER FITTINGS****90° Ell C x C**

WE-500-R
607-R
107-C

Part#	Nominal	Approx Net Wt.	List Price
77-100	1/8"	0.01	5.17
77-101	1/4"	0.01	5.59
77-102	3/8"	0.03	5.62
77-103	3/8" x 1/4"	0.03	8.96
77-104	1/2"	0.04	1.65
77-105	1/2" x 3/8"	-	19.14
77-107	5/8"	0.07	10.51
77-108	3/4"	0.09	3.68
77-109	3/4" x 1/2"	0.12	9.54
77-110	1"	0.17	9.03
77-111	1" x 3/4"	0.23	18.43
77-112	1" x 1/2"	0.23	20.54
77-113	1-1/4"	0.27	10.20
77-114	1-1/2"	0.41	21.28
77-116	2"	0.73	38.78
77-117	2" x 1-1/2"	0.73	83.07
77-118	2-1/2"	1.16	81.81
77-119	3"	1.87	107.10
77-120	4"	3.79	156.21

**90° Street Ell
Ftg. x C**

77-124	1/4"	0.01	7.90
77-125	3/8"	0.03	5.45
77-126	1/2"	0.05	2.43
77-127	5/8"	0.07	8.53
77-128	3/4"	0.12	8.25
77-129	1"	0.22	13.82
77-130	1-1/4"	0.33	18.13
77-131	1-1/2"	0.45	28.74
77-132	2"	0.87	51.79
77-134	3"	1.93	131.74

**90° Long Turn Ell
C x C**

WE-500-L
607-LT
107-L

77-139	1/8"	0.01	9.46
77-140	1/4"	0.02	8.11
77-141	5/16"	0.03	8.03
77-142	3/8"	0.04	9.73
77-143	1/2"	0.06	7.23
77-144	5/8"	0.10	8.84
77-145	3/4"	0.15	9.31

**90° Long Turn
Street Ell
Ftg. x C**

WE-503-L
607-2LT

77-152	1/8"	0.01	7.33
77-153	1/4"	0.22	44.38
77-154	3/8"	0.04	15.74
77-155	1/2"	0.06	11.38
77-156	5/8"	0.11	12.43
77-157	3/4"	0.15	12.54

See copper fitting brushes on page 294.

COPPER FITTINGS

WROT SOLDER JOINT

45° ELL C x C

WE-504
606
106



Part#	Nominal	Approx Net Wt.	List Price
77-161	1/8"	0.01	10.74
77-162	1/4"	0.01	8.59
77-163	3/8"	0.02	9.94
77-164	1/2"	0.04	2.53
77-165	5/8"	0.06	13.59
77-166	3/4"	0.10	5.28
77-167	1"	0.19	13.54
77-168	1-1/4"	0.27	15.61
77-169	1-1/2"	0.39	18.79
77-170	2"	0.75	37.93
77-171	2-1/2"	1.23	54.20

Street 45° Ftg. x C

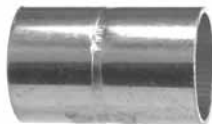
WE-505
606-2



77-177	1/4"	0.01	11.93
77-178	3/8"	0.02	9.37
77-179	1/2"	0.06	3.43
77-180	5/8"	0.06	19.80
77-181	3/4"	0.10	4.75
77-182	1"	0.18	18.43
77-183	1-1/4"	0.27	19.20
77-184	1-1/2"	0.38	23.93
77-185	2"	0.75	37.30

Coupling (Socket) w/Rolled Tube Stop C x C

WC-400
100



77-201	1/8"	0.01	1.48
77-202	1/4"	0.01	1.21
77-203	3/8"	0.02	1.66
77-204	1/2"	0.03	1.25
77-205	5/8"	0.04	3.91
77-206	3/4"	0.06	2.43
77-207	1"	0.10	4.47
77-208	1-1/4"	0.15	9.51
77-209	1-1/2"	0.22	12.29
77-210	2"	0.39	20.54
77-211	2-1/2"	0.71	38.27
77-212	3"	0.98	67.02
77-214	4"	2.01	92.19

Coupling (Socket) Less Tube Stop C x C

WC-400NS
601



77-219	1/8"	0.01	1.54
77-220	1/4"	0.01	1.04
77-222	1/2"	0.03	1.65
77-223	3/4"	0.06	2.97
77-224	1"	0.10	7.99
77-225	1-1/4"	0.15	11.70
77-226	1-1/2"	0.22	15.84
77-227	2"	0.39	26.11

NIPPLES &
FITTINGS

Send Midland all your high volume quotes!

WROT SOLDER JOINT

COPPER FITTINGS

**Coupling (Socket)
w/Dimpled Tube Stop
C x C**



WC-400S

Part#	Nominal	Approx Net Wt.	List Price
77-238	1/2"	0.03	1.26
77-240	3/4"	0.06	2.69
77-241	1"	0.10	4.98
77-242	1-1/4"	0.15	9.30
77-244	2"	0.39	17.00
77-247	4"	2.01	92.19

**Reducer Coupling
w/ Stop
C x C**



WC-400R
600-R

77-252	1/4" x 1/8"	0.01	8.55
77-253	3/8" x 1/4"	0.02	2.87
77-255	1/2" x 3/8"	0.03	2.25
77-256	1/2" x 1/4"	0.03	3.33
77-258	5/8" x 1/2"	0.04	5.98
77-262	3/4" x 1/2"	0.06	4.41
77-263	3/4" x 3/8"	0.06	4.88
77-264	3/4" x 1/4"	0.06	4.82
77-265	1"x3/4"	0.12	8.60
77-267	1"x1/2"	0.10	9.13
77-268	1-1/4" x 1"	0.17	11.58
77-269	1 -1/4" x 3/4"	0.17	11.58
77-270	1 -1/4" x 1/2"	0.14	10.41
77-271	1-1/2" x 1-1/4"	0.24	20.07
77-272	1-1/2" x1"	0.24	16.93
77-273	1 -1/2" x 3/4"	0.25	20.07
77-274	1-1/2" x 1/2"	0.19	18.63
77-275	2" x 1-1/2"	0.42	31.03
77-276	2 x 1-1/4"	0.46	25.68
77-277	2" x 1"	0.48	27.05
77-280	2-1/2"x2"	0.79	41.52
77-284	3" x 2-1/2"	1.15	54.58

Fitting Reducer

Ftg. x C



WC-403
600-2

77-291	3/8" x 1/4"	0.02	3.15
77-292	3/8" x 1/8"	0.01	4.64
77-294	1/2" x 1/4"	0.03	2.82
77-295	5/8" X 1/2"	0.03	6.15
77-296	3/4" x 5/8"	0.08	4.54
77-297	3/4" x 1/2"	0.06	4.40
77-298	3/4" x 3/8"	0.05	5.06
77-299	3/4" X 1/4"	0.05	5.45
77-300	1"x3/4"	0.11	7.21
77-352	1" x 1/2"	0.10	9.57
77-354	1-1/4" x1"	0.17	10.92
77-355	1 -1/4" x 3/4"	0.15	11.46
77-356	1 -1/4" x 1/2"	0.14	11.46
77-357	1 -1/2" X 1-1/4"	0.21	15.46
77-358	1-1/2"x1"	0.22	14.55
77-359	1 -1/2" x 3/4"	0.21	15.46
77-360	1 -1/2" x 1/2"	0.21	17.73
77-361	2" x 1-1/2"	0.39	27.37
77-362	2" x 1 -1/4"	0.38	26.86
77-363	2" x 1"	0.40	28.30
77-364	2" x 3/4"	0.39	28.30
77-365	2" x 1/2"	0.44	30.03
77-370	3" x 2-1/2"	0.93	50.18

COPPER FITTINGS**WROT SOLDER JOINT**

Flush Bushing
Ftg. x C
WC-106
618



Part#	Nominal	Approx Net Wt.	List Price
77-382	3/4" x 1/2"	0.08	5.52
77-383	3/4" x 5/8"	0.04	5.77
77-385	1" x 3/4"	0.13	8.61
77-387	1" x 1/2"	0.22	9.52
77-389	1-1/4" x 3/4"	0.30	9.57
77-391	1-1/2" x 1-1/4"	0.22	13.81
77-392	2" x 1-1/2"	0.68	39.57

Male Adapter
C x M
WC-401
604



77-393	1/8"	0.02	18.93
77-394	1/4"	0.03	17.19
77-395	1/4" x 1/2"	0.09	12.79
77-396	1/4"x3/8"	0.06	17.80
77-397	1/4" x 1/8"	0.02	12.79
77-398	3/8"	0.06	7.38
77-401	1/2"	0.08	3.43
77-303	1/2"x3/4"	0.16	8.98
77-306	3/4"	0.14	5.76
77-307	3/4" x 1"	0.29	22.17
77-309	1"	0.24	14.87
77-312	1"x3/4"	0.18	19.20
77-314	1-1/4"	0.41	23.22
77-318	1-1/2"	0.50	26.65
77-320	1-1/2" x 1-1/4"	0.44	44.63
77-322	2"	0.87	37.31

Fitting Male Adapters
Ftg. x M

WC-404
604-2



77-331	1/2"	0.09	27.25
77-332	1/2" x 3/4"	0.15	31.12
77-333	3/4"	0.15	17.00
77-335	1-1/4"	0.41	66.78
77-337	2"	0.86	130.78

Send Midland all your quotes!

Can't find it here? Ask us for price & availability.

The way to succeed is to double your error rate.

- Thomas J. Watson

WROT SOLDER JOINT**COPPER FITTINGS****Female Adapters****C x F****WC402****603****WC402R****603R****NIPPLES & FITTINGS**

Part#	Nominal	Approx Net Wt.	List Price
77-338	1/8"	0.03	13.95
77-339	1/4"	0.04	10.51
77-340	3/8"	0.06	10.13
77-341	3/8" x 1/2"	0.10	9.89
77-343	1/2"	0.10	5.46
77-345	1/2" x 3/4"	0.15	11.15
77-346	1/2"x3/8"	0.70	8.92
77-347	1/2" x 1/4"	0.05	8.92
77-349	3/4"	0.14	9.38
77-351	3/4" x 1/2"	0.11	12.44
77-402	1"	0.24	18.19
77-404	1"x3/4"	0.22	26.65
77-405	1"x 1/2"	0.29	27.55
77-406	1-1/4"	0.43	26.65
77-407	1-1/4" x 1-1/2"	0.52	47.08
77-409	1 -1/4" x 3/4"	0.26	36.59
77-410	1-1/2"	0.58	41.70
77-413	2"	0.74	56.64
77-416	3"	1.83	258.59

Fitting Female Adapt.**Ftg. x F****WC405**
603-2**WC405R**
603R

77-419	3/8"	0.05	13.02
77-420	1/2"	0.11	9.64
77-423	3/4"	0.19	14.78
77-424	1"	0.25	21.83
77-426	1-1/2"	0.55	46.34
77-427	2"	0.68	62.13

Cap**WC-415****617**

77-428	1/8"	0.003	2.41
77-429	1/4"	0.01	1.36
77-430	3/8"	0.01	2.12
77-431	1/2"	0.02	1.18
77-432	5/8"	0.03	3.07
77-433	3/4"	0.04	2.14
77-434	1"	0.08	4.98
77-435	1-1/4"	0.11	8.22
77-436	1-1/2"	0.18	10.87
77-437	2"	0.30	20.50

Unions C x C**WC-407**

77-452	1/8"	0.13	19.78
77-453	1/4"	0.11	31.17
77-454	3/8"	0.11	32.76
77-455	1/2"	0.17	15.56
77-456	3/4"	0.37	23.67
77-457	1"	0.51	39.85

U-Type Strap**WS-1100**

77-458	1/8"	0.01	0.77
77-459	1/4"	0.02	1.08
77-460	3/8"	0.02	2.01
77-461	1/2"	0.03	1.67
77-462	3/4"	0.03	2.27
77-463	1"	0.04	4.24
77-464	1-1/4"	0.04	1.74
77-465	1-1/2"	0.05	2.05
77-466	2	0.06	2.31

Tee
C x C x C



WT-600
611

Part#	Nominal	Approx Net Wt.	List Price
77-467	1/8"	0.02	11.06
77-468	1/4"	0.03	10.25
77-470	3/8"	0.05	8.99
77-473	1/2"	0.08	2.78
77-474	1/2"x1/2"x1"	-	24.16
77-481	5/8"	-	17.02
77-483	3/4"	0.18	6.74
77-485	3/4"x3/4"x1"	0.25	19.80
77-486	3/4" x 3/4" x 1/2"	0.15	5.65
77-488	3/4" x 1/2" x 3/4"	0.19	8.20
77-489	3/4"x1/2"x1/2"	0.15	22.86
77-490	1"	0.35	20.91
77-492	1"x1"x 1-1/4"	0.64	40.60
77-493	1"x1"x3/4"	0.29	26.36
77-496	1"x1"x1/2"	0.24	22.06
77-498	1"x3/4"x1"	0.38	26.24
77-499	1"x3/4"x3/4"	0.31	25.08
77-500	1"x3/4"x1/2"	0.27	21.71
77-501	1"x1/2"x1"	0.34	21.71
77-502	1"x1/2"x3/4"	0.34	22.86
77-504	1-1/4"	0.58	30.69
77-506	1 -1/4" x1 -1/4" x 1-1/2"	0.79	58.19
77-507	1-1/4"x1-1/4"x1"	0.47	26.86
77-508	1-1/4" x 1-1/4" x 3/4"	0.39	30.12
77-509	1-1/4"x1-1/4"x1/2"	0.33	26.86
77-510	1-1/4" x 1"x 1-1/4"	-	35.29
77-511	1-1/4" x 1"x1"	0.50	34.48
77-514	1 -1/4" x 3/4" x 1-1/4"	0.63	34.48
77-516	1-1/4"x3/4"x3/4"	-	34.48
77-518	1 -1/4"x 1/2" x 1-1/4"	-	27.56
77-519	1-1/2"	-	46.33
77-521	1-1/2"x1-1/2"x 1-1/4"	-	22.33
77-522	1-1/2" x 1-1/2" x1"	-	21.26
77-523	1 -1/2" x 1-1/2" x 3/4"	0.51	21.26
77-524	1 -1/2" x 1 -1/2" x 1/2"	0.46	34.49
77-543	2"	1.35	59.76
77-545	2" x 2" x 1-1/2"	1.17	46.53
77-546	2" x 2" x 1-1/4"	1.01	51.68
77-547	2"x2"x1"	0.99	46.53
77-548	2" x 2" x 3/4"	0.90	46.24
77-549	2"x2"x1/2"	0.77	46.24
77-554	2" x 1 -1/2" x 3/4"	1.40	56.82
77-556	2" x 1-1/4" x 1-1/4"	1.14	61.63
77-559	2"x1"x2"	1.34	56.82
77-560	2"x1"x1"	0.98	56.82
77-563	2-1/2"	2.21	120.58
77-585	3"x 3" x 2"	2.53	154.83
77-587	3" x 3" x 1-1/4"	2.18	113.17
77-588	3"x3"x1"	2.14	113.17

Send Midland all your quotes!

Machined Schedule 80 PVC nipples comply fully with ASTM D2464, threads conform to ASTM F1498, and the pipe is extruded from PVC 1120-1220 meeting ASTM D1784 and meets ASTM D1785, products standard 21-70



1/2" DIAMETER

Part #	Length	List Price
55-060	X Close (1-1/8")	0.60
55-061	1-1/2"	0.71
55-062	2"	0.63
55-063	2-1/2"	0.78
55-064	3"	0.68
55-065	3-1/2"	0.80
55-066	4"	1.01
55-067	4-1/2"	1.01
55-068	5"	1.01
55-069	5-1/2"	1.11
55-070	6"	1.05
55-072	8"	1.38
55-076	12"	1.54
55-241	24"	3.14
55-243	36"	5.18

3/4" DIAMETER

Part #	Length	List Price
55-080	X Close (1-3/8")	0.64
55-081	1-1/2"	0.70
55-082	2"	0.73
55-083	2-1/2"	0.66
55-084	3"	0.72
55-085	3-1/2"	0.87
55-086	4"	0.95
55-087	4-1/2"	1.18
55-088	5"	1.04
55-089	5-1/2"	1.23
55-090	6"	1.41
55-253	36"	8.16

1" DIAMETER

Part #	Length	List Price
55-100	X Close (1-1/2")	0.99
55-101	2"	1.17
55-102	2-1/2"	1.18
55-103	3"	1.66
55-104	3-1/2"	1.23
55-105	4"	1.32
55-106	4-1/2"	1.54
55-107	5"	1.64
55-108	5-1/2"	1.71
55-109	6"	2.08
55-111	8"	2.58
55-115	12"	2.88

1-1/4" DIAMETER

Part #	Length	List Price
55-120	X Close (1-5/8")	1.67
55-121	2"	1.50
55-122	2-1/2"	1.67
55-123	3"	2.27
55-124	3-1/2"	2.08
55-125	4"	2.50
55-126	4-1/2"	2.38
55-127	5"	2.40
55-128	5-1/2"	2.95
55-129	6"	2.98

1-1/2" DIAMETER

Part #	Length	List Price
55-140	X Close (1-5/8")	1.82
55-141	2"	1.74
55-142	2-1/2"	3.51
55-143	3"	2.14
55-144	3-1/2"	2.51
55-145	4"	2.47
55-146	4-1/2"	2.79
55-147	5"	2.99
55-148	5-1/2"	3.16
55-149	6"	3.44

2" DIAMETER

Part #	Length	List Price
55-160	X Close (2")	2.64
55-161	2-1/2"	2.39
55-162	3"	3.09
55-163	3-1/2"	3.11
55-164	4"	3.23
55-165	4-1/2"	3.63
55-166	5"	3.87
55-167	5-1/2"	4.21
55-168	6"	4.14
55-174	12"	7.15

More sizes available...just ask!

Action is the foundational key to all success.

- Pablo Picasso

PLASTIC FITTINGS**PVC SCHEDULE 40 FITTINGS****SLIP TEES**

Part #	Size	List Price
55-710	1/2"	0.66
55-711	3/4"	0.76
55-712	3/4" x 3/4" x 1/2"	0.87
55-713	1"	1.41
55-714	1" x 1" x 1/2"	1.49
55-715	1" x 1" x 3/4"	1.63
55-716	1-1/4"	2.22
55-717	1-1/2"	2.69
55-718	2"	3.91
55-719	2-1/2"	12.91

SLIP COUPLING

Part #	Size	List Price
55-736	1/2"	0.35
55-737	3/4"	0.48
55-738	1"	0.84
55-739	1-1/4"	1.16
55-740	1-1/2"	1.23
55-741	2"	1.89
55-742	2-1/2"	4.19
55-743	3"	6.55

THREADED COUPLING

Part #	Size	List Price
55-950	1/2"	0.67
55-951	3/4"	1.23

History is the version of past events that people have decided to agree upon.

- Napoleon Bonaparte

SLIP X FEMALE ADAPTER

Part #	Size	List Price
55-744	1/2"	0.59
55-812	1/2" x 1/4"	1.07
55-813	1/2" x 3/8"	1.07
55-745	3/4"	0.76
55-746	1"	0.87
55-747	1-1/4"	1.36
55-748	1-1/2"	1.55
55-749	2"	2.08
55-807	2-1/2"	5.27
55-804	3"	7.08

MIP X ADAPTER

Part #	Size	List Price
55-750	1/2"	0.48
55-751	3/4"	0.53
55-752	1"	0.95
55-753	1-1/4"	1.16
55-754	1-1/2"	1.55
55-755	2"	2.04
55-808	2-1/2"	6.00
55-811	3"	8.79

90° SLIP ELBOW

Part #	Size	List Price
55-720	1/2"	0.53
55-721	3/4"	0.59
55-722	1"	1.07
55-723	1-1/4"	1.88
55-725	2"	3.17
55-726	2-1/2"	9.65
55-727	3"	11.56

PLASTIC
FITTINGS

PVC SCHEDULE 40 FITTINGS

PLASTIC FITTINGS

SLIP CAP



Part #	Size	List Price
55-756	1/2"	0.48
55-757	3/4"	0.55
55-758	1"	0.87
55-759	1-1/4"	1.23
55-760	1-1/2"	1.36
55-761	2"	1.63
55-762	2-1/2"	5.19
55-801	3"	5.68

THREADED PIPE CAP



Part #	Size	List Price
55-763	1/2"	1.00
55-764	3/4"	1.16

SLIP X FIP BUSHING



Part #	Size	List Price
55-805	1/2" x 1/4"	1.16
55-806	1/2" x 3/8"	1.16
55-781	3/4" x 1/2"	0.87
55-782	1" x 1/2"	1.41
55-783	1" x 3/4"	1.41
55-784	1-1/4" x 1/2"	2.18
55-785	1-1/4" x 3/4"	2.18
55-786	1-1/4" x 1"	2.18
55-803	1-1/2" x 1/2"	2.51
55-787	1-1/2" x 3/4"	2.51
55-788	1-1/2" x 1"	2.51
55-809	1-1/2" x 1-1/4"	2.51
55-810	2" x 1/2"	3.36
55-789	2" x 3/4"	3.36
55-790	2" x 1"	3.36
55-791	2" x 1-1/4"	3.36
55-792	2" x 1-1/2"	3.36
55-798	2-1/2" x 1-1/2"	4.86
55-796	2-1/2" x 2"	4.86
55-816	3" x 2"	5.60
55-780	3" x 2-1/2"	5.60

45° SLIP ELBOW



Part #	Size	List Price
55-728	1/2"	0.87
55-729	3/4"	1.36
55-730	1"	1.63
55-731	1-1/4"	2.27
55-732	1-1/2"	2.63
55-733	2"	3.71
55-734	2-1/2"	9.67
55-735	3"	15.01

SLIP BUSHING



Part #	Size	List Price
55-765	3/4" x 1/2"	0.55
55-766	1" x 1/2"	1.00
55-767	1" x 3/4"	1.00
55-768	1-1/4" x 1/2"	1.36
55-769	1-1/4" x 3/4"	1.36
55-770	1-1/4" x 1"	1.36
55-815	1-1/2" x 1/2"	1.43
55-771	1-1/2" x 3/4"	1.43
55-772	1-1/2" x 1"	1.43
55-773	1-1/2" x 1-1/4"	1.43
55-774	2" x 1/2"	2.37
55-775	2" x 3/4"	2.37
55-776	2" x 1"	2.37
55-777	2" x 1-1/4"	2.37
55-778	2" x 1-1/2"	2.37
55-814	2-1/2" x 1-1/2"	3.81
55-779	2-1/2" x 2"	3.81
55-797	3" x 2"	5.60
55-802	3" x 2-1/2"	5.60

Never put off until tomorrow, what you can put off until the day after tomorrow.

- Mark Twain


SLIP X SLIP 90° ELBOW

Part #	Size	List Price
806-002	1/4"	3.56
806-003	3/8"	3.56
806-005	1/2"	3.56
806-007	3/4"	4.56
806-010	1"	7.34
806-012	1-1/4"	9.83
806-015	1-1/2"	10.52
806-020	2"	12.73
806-025	2-1/2"	29.76
806-030	3"	33.47
806-040	4"	50.86
806-060	6"	144.77


FIP X FIP 90° ELBOW

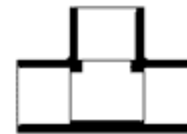
Part #	Size	List Price
808-002	1/4"	8.84
808-003	3/8"	8.84
808-005	1/2"	8.25
808-007	3/4"	10.28
808-010	1"	12.94
808-012	1-1/4"	13.93
808-015	1-1/2"	19.76
808-020	2"	22.26
808-025	2-1/2"	86.70
808-030	3"	139.82
808-040	4"	246.02


SLIP X SLIP 45° ELBOW

Part #	Size	List Price
817-002	1/4"	12.80
817-003	3/8"	12.80
817-005	1/2"	6.73
817-007	3/4"	10.25
817-010	1"	15.38
817-012	1-1/4"	19.59
817-015	1-1/2"	7.44
817-020	2"	30.02
817-025	2-1/2"	63.03
817-030	3"	76.71
817-040	4"	138.15
817-060	6"	173.97


FIP X FIP 45° ELBOW

Part #	Size	List Price
819-002	1/4"	14.52
819-003	3/8"	14.52
819-005	1/2"	13.25
819-007	3/4"	15.13
819-010	1"	17.86
819-012	1-1/4"	27.26
819-015	1-1/2"	34.26
819-020	2"	50.81
819-030	3"	161.65
819-040	4"	231.95


SLIP X SLIP TEE

Part #	Size	List Price
801-002	1/4"	10.05
801-003	3/8"	10.05
801-005	1/2"	10.05
801-007	3/4"	10.54
801-010	1"	13.18
801-012	1-1/4"	36.21
801-015	1-1/2"	36.21
801-020	2"	45.29
801-025	2-1/2"	49.23
801-030	3"	61.53
801-040	4"	71.30
801-060	6"	243.46

It is more important to know where you are going than to get there quickly.

- Mabel Newcomber



FIP X FIP TEE

Part #	Size	List Price
805-002	1/4"	11.62
805-003	3/8"	11.62
805-005	1/2"	11.62
805-007	3/4"	12.94
805-010	1"	28.56
805-012	1-1/4"	30.27
805-015	1-1/2"	36.70
805-020	2"	39.46
805-025	2-1/2"	143.64
805-030	3"	150.02
805-040	4"	243.82



SLIP X SLIP COUPLING

Part #	Size	List Price
829-002	1/4"	10.32
829-003	3/8"	10.32
829-005	1/2"	6.46
829-007	3/4"	8.74
829-010	1"	8.97
829-012	1-1/4"	13.68
829-015	1-1/2"	14.74
829-020	2"	15.82
829-025	2-1/2"	38.96
829-030	3"	44.74
829-040	4"	56.02
829-060	6"	120.56

A complex system that does not work is invariably found to have evolved from a simpler system that worked just fine.

- Murphy's Law of Computing



FIP X FIP COUPLING

Part #	Size	List Price
830-002	1/4"	7.74
830-003	3/8"	7.74
830-005	1/2"	7.22
830-007	3/4"	10.30
830-010	1"	11.06
830-012	1-1/4"	13.68
830-015	1-1/2"	30.42
830-020	2"	31.93
830-030	3"	89.40
830-040	4"	154.79



SLIP X SLIP REDUCING COUPLING

Part #	Size	List Price
829-101	3/4" x 1/2"	7.90
829-130	1" x 1/2"	11.03
829-131	1" x 3/4"	11.51
829-168	1-1/4" x 1"	23.37
829-211	1-1/2" x 1"	24.48
829-212	1-1/2" x 1-1/4"	30.24
829-251	2" x 1-1/2"	27.59
829-338	3" x 2"	67.79
829-422	4" x 3"	127.69
829-532	6" x 4"	260.45



FIP X FIP REDUCING COUPLING

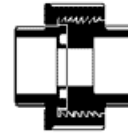
Part #	Size	List Price
830-052	3/8" x 1/4"	11.32
830-073	1/2" x 3/8"	11.82
830-101	3/4" x 1/2"	8.58
830-130	1" x 1/2"	12.13
830-131	1" x 3/4"	12.74
830-167	1-1/4" x 3/4"	27.38
830-168	1-1/4" x 1"	19.55
830-211	1-1/2" x 1"	40.61
830-212	1-1/2" x 1-1/4"	43.44
830-251	2" x 1-1/2"	53.94


MIP X SLIP ADAPTER

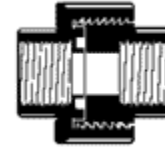
Part #	Size	List Price
836002	1/4"	7.54
836003	3/8"	7.54
836005	1/2"	7.54
836007	3/4"	8.32
836010	1"	14.40
836012	1-1/4"	16.82
836015	1-1/2"	24.17
836020	2"	34.95
836025	2-1/2"	39.75
836030	3"	44.12
836040	4"	78.49


MIP X FIP BUSHING

Part #	Size	List Price
839041	1/4" x 1/8"	13.00
839050	3/8" x 1/8"	13.00
839052	3/8" x 1/4"	13.00
839072	1/2" x 1/4"	13.00
839073	1/2" x 3/8"	13.00
839099	3/4" x 3/8"	9.69
839101	3/4" x 1/2"	7.98
839130	1" x 1/2"	12.51
839131	1" x 3/4"	12.51
839166	1-1/4" x 1/2"	13.26
839167	1-1/4" x 3/4"	13.26
839168	1-1/4" x 1"	13.26
839209	1-1/2" x 1/2"	15.72
839210	1-1/2" x 3/4"	15.72
839211	1-1/2" x 1"	15.72
839212	1-1/2" x 1-1/4"	15.72
839247	2" x 1/2"	23.04
839248	2" x 3/4"	23.04
839249	2" x 1"	23.04
839250	2" x 1-1/4"	23.04
839251	2" x 1-1/2"	23.04
839338	3" x 2"	42.38
839420	4" x 2"	87.36
839422	4" x 3"	111.58


SLIP X SLIP UNION

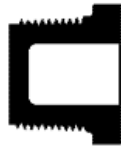
Part #	Size	List Price
897002	1/4"	24.40
897003	3/8"	24.40
897005	1/2"	13.04
897007	3/4"	16.59
897010	1"	18.99
897012	1-1/4"	37.64
897015	1-1/2"	42.60
897020	2"	57.79
897025	2-1/2"	91.88
897030	3"	107.54
897040	4"	148.75


FIP X FIP THREADED UNION

Part #	Size	List Price
898002	1/4"	26.29
898003	3/8"	26.29
898005	1/2"	15.15
898007	3/4"	21.19
898010	1"	28.21
898012	1-1/4"	53.83
898015	1-1/2"	66.64
898020	2"	102.56
898025	2-1/2"	137.33
898030	3"	260.17
898040	4"	304.28


SLIP PLUG

Part #	Size	List Price
849005	1/2"	5.91
849007	3/4"	6.57
849010	1"	7.41
849012	1-1/4"	9.45
849015	1-1/2"	10.36
849020	2"	13.72
849025	2-1/2"	40.73
849030	3"	44.87
849040	4"	48.27



MIP THREADED PLUG

Part #	Size	List Price
850002	1/4"	6.81
850003	3/8"	6.81
850005	1/2"	6.08
850007	3/4"	6.32
850010	1"	7.74
850012	1-1/4"	11.39
850015	1-1/2"	13.87
850020	2"	14.24
850025	2-1/2"	39.75
850030	3"	46.38
850040	4"	90.29



SLIP CAP

Part #	Size	List Price
847002	1/4"	8.20
847003	3/8"	8.20
847005	1/2"	6.32
847007	3/4"	6.66
847010	1"	11.82
847012	1-1/4"	14.27
847015	1-1/2"	14.27
847020	2"	28.16
847025	2-1/2"	57.51
847030	3"	67.28
847040	4"	113.47
847060	6"	282.30



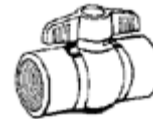
FIP THREADED CAP

Part #	Size	List Price
848002	1/4"	7.90
848003	3/8"	7.90
848005	1/2"	7.90
848007	3/4"	8.84
848010	1"	11.14
848012	1-1/4"	13.26
848015	1-1/2"	15.15
848020	2"	29.76
848025	2-1/2"	59.54
848030	3"	70.10
848040	4"	123.42



FIP X FIP THREADED BALL VALVE

Part #	Size	List Price
899000	1/2"	10.52
899001	3/4"	12.21
899002	1"	17.67
899003	1-1/4"	21.47
899004	1-1/2"	38.03
899005	2"	48.91
899006	2-1/2"	206.91
899007	3"	272.02
899008	4"	517.97



SLIP X SLIP BALL VALVE

Part #	Size	List Price
899050	1/2"	10.52
899051	3/4"	12.21
899052	1"	17.67
899053	1-1/4"	21.47
899054	1-1/2"	38.03
899055	2"	48.91
899056	2-1/2"	206.91
899057	3"	272.02
899058	4"	517.97

I like work: it fascinates me. I can sit and look at it for hours.

- Jerome K. Jerome

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.

•NSF-approved materials

•FDA-approved materials

Note: Do not use with compressed air or gas.

HEX HEAD PLUGS



Part #	Size	List Price		
		B	P	W
28-601	1/8"	0.53	0.66	0.73
28-602	1/4"	0.48	0.66	0.73
28-603	3/8"	0.56	0.81	0.66
28-604	1/2"	0.66		1.66
28-605	3/4"	1.16		0.99
28-606	1"			1.60
28-607	1-1/4"			2.05
28-608	1-1/2"			2.96
28-609	2"			4.39

PIPE CAP



Part #	Size	List Price	
		W	
28-640	1/4"	0.74	
28-641	3/8"	0.87	
28-642	1/2"	0.95	
28-643	3/4"	0.89	

Every generation laughs at the old fashions, but follows religiously the new.

-Henry David Thoreau

HEX NIPPLES



Part #	Size	List Price		
		B	P	W
28-611	1/8"	0.58		0.71
28-612	1/4"	0.64	0.78	1.17
28-613	3/8"	0.64	0.81	0.71
28-614	1/2"	0.82	0.88	0.92
28-615	3/4"		1.25	1.12
28-616	1"			1.93
28-617	1 1/4"			3.86

REDUCER NIPPLES



Part #	Size	List Price		
		B	P	W
28-620	1/4 x 1/8"			1.08
28-621	3/8 x 1/8"			0.81
28-622	3/8 x 1/4"			0.77
28-623	1/2 x 1/4"	0.76		0.93
28-624	1/2 x 3/8"	0.77		0.91
28-628	3/4 x 3/8"	0.89		0.91
28-625	3/4 x 1/2"	1.20		1.00
28-629	1 x 3/4"		6.16	
28-631	1-1/4 x 3/4"		6.60	
28-634	2 x 1-1/4"		8.80	
28-635	3 x 2"		27.03	

More shapes and sizes available

HEX BUSHING



Part #	Size	List Price	
		P	W
28-659	1/4 x 1/8"	2.10	1.96
28-660	3/8 x 1/8"	2.06	1.53
28-661	3/8 x 1/4"	1.99	1.94
28-663	1/2 x 1/4"	2.02	1.60
28-664	1/2 x 3/8"	1.76	2.02
28-665	3/4 x 1/8"		2.78
28-666	3/4 x 1/4"	2.29	1.76
28-667	3/4 x 3/8"		2.12
28-668	3/4 x 1/2"	2.38	1.73
28-671	1 x 1/2"	2.35	2.57
28-672	1 x 3/4"	2.79	2.02
28-674	1-1/4 x 3/4"		3.76
28-675	1-1/4 x 1"		3.30
28-678	1-1/2 x 3/4"	4.01	4.36
28-679	1-1/2 x 1"		4.83
28-680	1-1/2 x 1-1/4"	3.08	3.67
28-682	2 x 3/4"		11.80
28-683	2 x 1"		9.65

ALL HOSE BARB "Y"



Part #	Size	List Price	
		P*	W
33-300*	1/4"	5.75	
33-301*	3/8"	2.68	2.81
33-302*	1/2"	6.59	

*Natural Polypro

PLASTIC PIPE

ELBOW



		List Price	
Part #	Size	P	W
28-701	1/4"		5.28
28-702	3/8"	7.80	
28-703	1/2"		5.62
28-704	3/4"	6.24	6.17
28-705	1"		11.29
28-706	1-1/4"		13.18

STREET ELBOW



		List Price	
Part #	Size	P	W
28-720	1/4"		4.73
28-721	3/8"		5.84
28-723	1/2"	4.00	4.16
28-724	3/4"		5.60
28-725	1"		12.66
28-726	1-1/4"		13.98

TEE



		List Price	
Part #	Size	P	W
28-741	1/4"	5.04	4.05
28-742	3/8"	8.95	
28-743	1/2"	5.35	6.16
28-744	3/4"	7.29	6.87
28-745	1"		15.36
28-746	1-1/4"		16.66
28-747	1-1/2"		23.02

More shapes and sizes available

COUPLING



		List Price	
Part #	Size	P	W
28-760	1/8"	4.71	4.21
28-761	1/4"	4.69	4.80
28-762	3/8"	4.21	5.28
28-763	1/2"	4.84	4.63
28-764	3/4"	4.97	4.75
28-765	1"		5.99
28-767	1-1/2"		7.56
28-768	2"		9.36

PLASTIC FITTINGS

HOSE BARB X FEMALE ADAPTERS



Hose ID x FIP

		List Price		
Part #	Size	B	P	W
33-053	1/4 x 1/4"	2.66		5.19
33-058	3/8 x 1/4"	3.95		1.55
33-059	3/8 x 3/8"			3.46
33-060	3/8 x 1/2"			4.43
33-062	1/2 x 3/8"		3.78	
33-061	1/2 x 1/2"			1.53
33-063	5/8 x 3/4"			4.83
33-064	3/4 x 1/2"			3.88

MALE ADAPTERS



Hose ID x MIP

		List Price		
Part #	Size	B	P	W
33-002	3/16 x 1/8"	0.51		0.68
33-003	3/16 x 1/4"			0.76
33-004	1/4 x 1/8"	0.51		0.68
33-005	1/4 x 1/4"	0.62		0.65
33-006	1/4 x 3/8"	0.64		0.87
33-007	1/4 x 1/2"	0.70		0.92
33-380	1/4 x 3/4"			0.97
33-008	5/16 x 1/8"	0.55		0.71
33-009	5/16 x 1/4"	0.62		0.77
33-010	5/16 x 3/8"			0.66
33-011	3/8 X 1/8"			0.75
33-012	3/8 x 1/4"	0.55	0.70	1.02
33-013	3/8 x 3/8"	0.67		0.84
33-014	3/8 x 1/2"	0.70	0.95	0.90
33-026	3/8 x 3/4"	0.63		1.12
33-015	1/2 x 1/4"	0.58	0.76	0.77
33-016	1/2 x 3/8"	0.67	0.79	0.77
33-017	1/2 x 1/2"	0.75	0.79	0.87
33-018	1/2 x 3/4"	0.84	1.16	1.18
33-019	5/8 x 3/8"	0.72		0.77
33-020	5/8 x 1/2"	0.71	0.84	1.04
33-021	5/8 x 3/4"	0.85		1.17
33-022	3/4 x 1/2"	0.78	0.93	1.21
33-023	3/4 x 3/4"	0.90	1.02	1.14
33-000	3/4 x 1"			1.45
33-024	1 x 3/4"	2.02	1.43	1.38
33-025	1 x 1"	1.94	1.42	1.77
33-029	1 x 1-1/4"			3.23
33-028	1-1/4 x 1"			2.54
33-030	1-1/4 x 1-1/4"			3.04
33-032	1-1/4 x 1-1/2"			2.66
33-033	1-1/2 x 1-1/2"			3.38
33-035	2 x 2"			5.71

PLASTIC FITTINGS

PLASTIC PIPE

HOSE BARB ADAPTERS -CONTINUED-

ELBOWS



Hose ID x Male Pipe

Part #	Size	List Price		
		B	P	W
33-308	3/16 x 1/8	0.97		
33-381	3/16 x 1/4			1.41
33-038	1/4 x 1/8	1.07		1.35
33-039	1/4 x 1/4	1.02		1.02
33-309	1/4 x 3/8			1.36
33-040	5/16 x 1/4	1.02		1.45
33-310	5/16 x 3/8	1.13		1.62
33-046	3/8 x 1/8	1.02		1.38
33-041	3/8 x 1/4	1.22		1.24
33-042	3/8 x 3/8	1.86		1.25
33-047	3/8 x 1/2	1.48		1.38
33-384	3/8 x 3/4	1.94		1.90
33-048	1/2 x 1/4		1.33	1.33
33-043	1/2 x 3/8	1.18		1.31
33-311	1/2 x 1/2	1.16	1.39	1.55
33-385	1/2 x 3/4	2.16	1.73	1.76
33-044	5/8 x 3/8			1.48
33-045	5/8 x 1/2	1.68		1.72
33-312	5/8 x 3/4	2.05		1.98
33-313	3/4 x 1/2	1.89	1.59	1.80
33-314	3/4 x 3/4	2.21	1.93	1.84
33-315	3/4 x 1			1.99
33-386	1 x 3/4			2.45
33-316	1 x 1	3.07	2.30	2.30
33-460	1 x 1-1/4			3.66
33-461	1-1/4 x 1-1/4		3.70	4.28
33-463	1-1/2 x 1-1/2		5.47	5.49
33-464	2 x 2			6.43

HOSE BARB X FEMALE ELBOW



Hose ID x Female Pipe

Part #	Size	List Price	
		B	W
33-402	1/2 x 3/8		4.22
33-403	1/2 x 3/4		3.50
33-471	3/4 x 3/4		4.63

UNION ELBOWS



Part #	Size	List Price		
		B	P	W
33-390	1/4	1.12		1.21
33-391	3/8	1.01		1.27
33-394	1/2	1.02		1.30
33-395	5/8	1.49	1.23	1.45
33-396	3/4	1.67	1.86	1.67
33-397	1			2.89
33-398	1-1/4			7.63
33-399	1-1/2			10.02
33-389	2			15.46

REDUCING UNION ELBOWS

Part #	Size	List Price
		W
33-392	1/2 X 1/4	1.59

SPLICERS



Part #	Size	List Price		
		B	P	W
33-091	1/8	0.56		0.67
33-092	3/16	0.55		0.66
33-093	1/4	0.56		0.73
33-094	5/16			0.71
33-095	3/8	0.61	0.71	0.71
33-096	1/2	0.58	0.80	0.71
33-097	5/8	0.87		0.88
33-098	3/4	1.35	1.16	1.23
33-099	1		1.45	1.82
33-480	1-1/4			3.31
33-481	1-1/2			3.49
33-482	2			12.31

REDUCER CONNECTORS

Part #	Size	List Price	
		B	W
33-406	3/8 x 1/4	0.61	0.75
33-407	1/2 x 1/4		0.70
33-408	1/2 x 3/8	0.56	0.78
33-409	5/8 x 3/8		0.76
33-410	5/8 x 1/2	0.64	0.85

TEES BARBED ON ALL SIDES



Part #	Size	List Price		
		B	P	W
33-415	1/8	0.97		1.33
33-417	5/32			3.02
33-418*	3/16	0.95		2.31
33-420*	3/16	1.00		1.32
33-422	1/4	1.03		1.41
33-426	5/16	1.66		1.36
33-429	3/8	1.08	1.67	1.36
33-433	1/2	1.13		1.55
33-436	5/8	1.40		1.53
33-437	3/4	1.49		1.82
33-438	1	1.83		2.08
33-439	1-1/4			4.50
33-440	1-1/2		4.08	4.99
33-441	2			15.96

* 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		1.38
33-423	1/4 x 3/8 x 3/8	1.06	
33-424	1/4 x 1/2 x 1/2	1.27	1.47
33-430	3/8 x 1/2 x 1/2	1.30	1.52
33-431	3/8 x 5/8 x 5/8		1.58
33-432	1/2 x 3/8 x 3/8	1.24	1.70
33-435	1/2 x 3/4 x 3/4	1.52	1.87

* single barb

TEES



Part #	Size 1 & 2 x 3	List Price	
		B	W
33-448	1/4 x 1/4	1.13	1.33
33-450	3/8 x 1/4		1.60
33-451	3/8 x 3/8		1.47
33-453	1/2 x 1/4		2.46
33-454	1/2 x 3/8		1.48
33-456	3/4 x 3/4		2.12

More sizes available...just ask!

PLASTIC GARDEN HOSE & COMPRESSION

PLASTIC FITTINGS

PLASTIC GARDEN HOSE FITTINGS

FITTINGS WITH GARDEN HOSE THREAD

GARDEN HOSE CAP



• White
Nylon

Part #	Size	List Price
30-103P	3/4"	1.07

GARDEN HOSE NUT



• White
Nylon

Part #	Size	List Price
31-022	3/4"	0.85

GARDEN HOSE ADAPTER INSERTS



• White
Nylon

Part #	Size	List Price
31-031	3/8"	0.34
31-032	1/2"	0.70
31-033	5/8"	0.70
31-034	3/4"	0.70

GARDEN HOSE THREAD ADAPTERS



• White
Nylon

Part #	Size	List Price
31-040	1/2"	1.42
31-041	5/8"	1.18

More sizes available

MALE GARDEN HOSE X FEMALE PIPE



• White
Nylon

Part #	Size	List Price
31-068	MGH X 1/2 FIP	3.23

FEMALE GARDEN HOSE X MALE PIPE



• White
Nylon

Part #	Size	List Price
31-093	FGH X 3/4 MPT	3.43

FEMALE GARDEN HOSE X FEMALE PIPE



• White
Nylon

Part #	Size	List Price
31-096	FGH X 1/2 FIP	2.96

ADAPTERS GARDEN TO PIPE THREAD



• White
Nylon

Part #	Size	List Price
31-058	GHT X 1/2 MPT	1.07
31-063	GHT X 3/4 MPT	1.27

PLASTIC COMPRESSION FITTINGS

Corrosion resistant thermoresins designed to resist vibration, provide good electrical insulation, low flow resistance, and resistance to scale buildup.

Add letter to the end of part no. to denote the type you prefer.

N = Nylon

P = Polypropylene

Standard nut and sleeves will be provided (sleeve is integral part of nut). Other sizes available upon request.

UNION & REDUCING UNION CONNECTORS



Part #	Size	List Price	
		P	N
17-064	1/4"	3.53	3.49
17-065	5/16"	3.77	3.53
17-078	5/16" x 1/4"		4.12
17-066	3/8"	6.54	5.41
17-079	3/8" x 1/4"	5.11	7.26
17-068	1/2"	6.41	8.06
17-081	1/2" x 3/8"	6.00	

BULKHEAD UNIONS



Part #	Size	List Price
17-088N	1/4"	5.52
17-090N	3/8"	6.58
17-091N	1/2"	8.59

UNION TEES



Part #	Size	List Price	
		P	N
17-103	1/4"	8.75	6.51
17-105	3/8"	11.16	8.38
17-106	1/2"	10.11	9.59

UNION ELBOWS



Part #	Size	List Price	
		P	N
17-124	1/4"	4.39	4.39
17-126	3/8"	6.42	6.37
17-127	1/2"	8.38	

PLASTIC FITTINGS

PLASTIC COMPRESSION

FEMALE CONNECTORS



Part #	Tube x Female Pipe	List Price	
		P	N
17-145	1/4 x 1/8	3.22	
17-146	1/4 x 1/4		3.31
17-153	3/8 x 1/4	3.63	3.59
17-154	3/8 x 3/8	4.20	4.16
17-158	1/2 x 3/8	5.40	
17-159	1/2 x 1/2	4.61	

MALE CONNECTORS



Part #	Tube x Male Pipe	List Price	
		P	N
17-176	1/8 x 1/8		1.99
17-179	1/4 x 1/8	2.35	2.35
17-180	1/4 x 1/4	2.86	2.60
17-181	1/4 x 3/8	2.68	2.68
17-184	5/16 x 1/4		2.72
17-187	3/8 x 1/8	2.76	2.90
17-188	3/8 x 1/4	3.58	3.13
17-189	3/8 x 3/8	3.58	3.50
17-190	3/8 x 1/2	4.70	4.27
17-193	1/2 x 1/4	5.16	5.21
17-194	1/2 x 3/8	5.66	4.54
17-195	1/2 x 1/2	5.66	5.23

MALE ELBOWS



Part #	Tube x Male Pipe	List Price	
		P	N
17-224	1/4 x 1/8	3.31	3.73
17-225	1/4 x 1/4	3.63	3.63
17-226	1/4 x 3/8		4.24
17-229	5/16 x 1/4		4.40
17-233	3/8 x 1/4	4.68	5.47
17-234	3/8 x 3/8	4.90	8.05
17-237	1/2 x 3/8	5.94	5.13
17-238	1/2 x 1/2	5.70	5.39

FEMALE ELBOWS



Part #	Tube x Female Pipe	List Price	
		P	N
17-254	1/4 x 1/4	5.80	
17-258	3/8 x 1/4	4.93	5.81
17-259	3/8 x 3/8	6.76	6.76
17-262	1/2 x 3/8	8.89	
17-263	1/2 x 1/2	9.18	

MALE RUN TEES



Part #	Tube x Male Pipe	List Price	
		P	N
17-279	3/8 x 1/4		7.25
17-282	1/2 x 1/2		9.66

MALE BRANCH TEES



Part #	Tube x Male Pipe	List Price	
		P	N
17-291	1/4 x 1/8	4.75	
17-292	1/4 x 1/4	5.83	6.35
17-296	3/8 x 1/4	9.12	7.45
17-297	3/8 x 3/8	7.40	
17-299	1/2 x 3/8	9.05	

People often say that motivation doesn't last. Well, neither does bathing - that's why we recommend it daily.

- Zig Ziglar

1. DON'T SWEAT THE PETTY THINGS AND DON'T PET THE SWEATY THINGS.
2. ONE TEQUILA, TWO TEQUILA, THREE TEQUILA, FLOOR.
3. ATHEISM IS A NON-PROPHET ORGANIZATION.
4. IF MAN EVOLVED FROM MONKEYS AND APES, WHY DO WE STILL HAVE MONKEYS AND APES?
5. THE MAIN REASON THAT SANTA IS SO JOLLY IS BECAUSE HE KNOWS WHERE ALL THE BAD GIRLS LIVE.
6. I WENT TO A BOOKSTORE AND ASKED THE SALESWOMAN, "WHERE'S THE SELF- HELP SECTION?" SHE SAID IF SHE TOLD ME, IT WOULD DEFEAT THE PURPOSE.
7. WHAT IF THERE WERE NO HYPOTHETICAL QUESTIONS?
8. IF A DEAF CHILD SIGNS SWEAR WORDS, DOES HIS MOTHER WASH HIS HANDS WITH SOAP?
9. IF SOMEONE WITH MULTIPLE PERSONALITIES THREATENS TO KILL HIMSELF, IS IT CONSIDERED A HOSTAGE SITUATION?
10. IS THERE ANOTHER WORD FOR SYNONYM?
11. WHERE DO FOREST RANGERS GO TO "GET AWAY FROM IT ALL?"
12. WHAT DO YOU DO WHEN YOU SEE AN ENDANGERED ANIMAL EATING AN ENDANGERED PLANT?
13. IF A PARSLEY FARMER IS SUED, CAN THEY GARNISH HIS WAGES?
14. WOULD A FLY WITHOUT WINGS BE CALLED A WALK?
15. WHY DO THEY LOCK PETROL STATION BATHROOMS? ARE THEY AFRAID SOMEONE WILL CLEAN THEM?
16. IF A TURTLE DOESN'T HAVE A SHELL, IS HE HOMELESS OR NAKED?

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,
Acetal Copolymer or
Polypropylene
O'Rings: Food Grade
Nitrile Rubber or EPDM
Collet: Food Grade Acetal
Copolymer, stainless
steel teeth



Fitting Tube Types

Plastic Tube:

Polyethylene, nylon, polyurethane (for soft tubing or thin wall tube, tube supports are recommended).

Braided Tube:

For Braided Tube, the use of Tube to Hose Stems and Elbows is required. To retain braided tube on barbs, the use of clamps is also recommended.

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"	2.90
20-046P	5/32"	1/4"	2.71
20-052P	3/16"	1/8"	2.78
20-054P	1/4"	1/8"	2.99
20-055P	1/4"	1/4"	3.11
20-531P	5/16"	1/4"	4.16
20-056P	1/4"	3/8"	4.66
20-532P	5/16"	3/8"	5.23
20-057P	3/8"	1/8"	6.36
20-058P	3/8"	1/4"	4.11
20-059P	3/8"	3/8"	4.73
20-062P	3/8"	1/2"	9.14
20-061P	1/2"	3/8"	7.00
20-063P	1/2"	1/2"	7.96

More sizes available upon request

Save 5% by ordering online at
www.midlandindustrial.com

I have never met a man so ignorant that I couldn't learn something from him.

- Galileo Galilei

UNION CONNECTOR



Part #	Tube OD	List Price
20-018P	5/32"	3.94
20-702P	3/16"	3.50
20-019P	1/4"	3.72
20-703P	5/16"	4.16
20-020P	3/8"	5.03
20-021P	1/2"	6.04

CROSS



Part #	Tube OD	List Price
20-143P	3/8"	15.42

REDUCING UNION



Part #	Tube OD	Tube OD	List Price
20-750P	1/4"	3/16"	7.09
20-751P	5/16"	5/32"	7.00
20-752P	5/16"	3/16"	8.58
20-753P	5/16"	1/4"	7.09
20-754P	3/8"	3/16"	10.48
20-755P	3/8"	1/4"	6.43
20-756P	3/8"	5/16"	8.92
20-757P	1/2"	5/16"	13.84
20-758P	1/2"	3/8"	7.99

UNION ELBOW



Part #	Tube OD	List Price
20-151P	5/32"	4.86
20-704P	3/16"	4.53
20-152P	1/4"	4.90
20-155P	5/16"	6.39
20-153P	3/8"	8.18
20-154P	1/2"	8.78

PLASTIC FITTINGS

PLASTIC PUSH-IN

REDUCING ELBOW



Part #	Tube OD	Tube OD	List Price
20-730P	5/16"	5/32"	11.49
20-731P	5/16"	3/16"	5.82
20-732P	5/16"	1/4"	7.54
20-733P	3/8"	3/16"	15.25
20-734P	3/8"	1/4"	7.87
20-735P	3/8"	5/16"	9.79
20-736P	1/2"	3/8"	11.27

FIXED ELBOW



Part #	Tube OD	Thread NPTF	List Price
20-068P	1/4"	1/8"	4.32
20-069P	1/4"	1/4"	4.69
20-070P	1/4"	3/8"	5.49
20-072P	3/8"	1/4"	6.38
20-073P	3/8"	3/8"	8.66

PLUG-IN ELBOW



Part #	Stem OD	Tube OD	List Price
20-740P	5/32"	5/32"	4.74
20-741P	3/16"	3/16"	5.93
20-742P	1/4"	1/4"	15.54
20-743P	5/16"	5/16"	7.70
20-744P	3/8"	3/16"	8.42
20-745P	3/8"	1/4"	7.44
20-746P	3/8"	5/16"	8.42
20-747P	3/8"	3/8"	9.42
20-748P	1/2"	1/2"	10.87

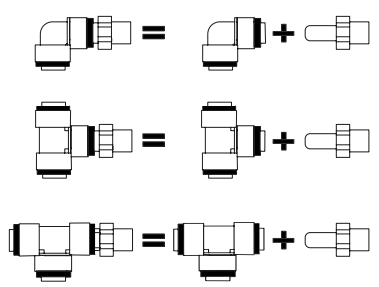
More sizes available upon request

The trouble with being punctual is that nobody's there to appreciate it.

- Franklin P. Jones

Adaptability

Products can be coupled together to form new, integral fittings.



Use to get reducing swivel sizes you need!

STEM ADAPTER



Part #	Stem OD	Thread NPTF	List Price
20-522P	5/32"	1/8"	1.76
20-523P	5/32"	1/4"	1.73
20-700P	3/16"	1/8"	2.16
20-524P	1/4"	1/8"	1.70
20-526P	5/16"	1/8"	2.18
20-525P	1/4"	1/4"	1.70
20-527P	5/16"	1/4"	2.18
20-701P	5/16"	3/8"	3.54
20-528P	3/8"	1/4"	1.99
20-529P	3/8"	3/8"	2.48
20-530P	1/2"	3/8"	3.83
20-533P	1/2"	1/2"	4.51

REDUCER



Part #	Stem OD	Tube OD	List Price
20-760P	5/16"	3/16"	5.22
20-761P	5/16"	1/4"	5.64
20-762P	3/8"	3/16"	6.45
20-512P	3/8"	1/4"	6.49
20-763P	3/8"	5/16"	6.54
20-764P	1/2"	5/16"	7.92
20-514P	1/2"	3/8"	10.76

UNION TEE



Part #	Tube OD	List Price
20-026P	5/32"	6.26
20-027P	3/16"	9.14
20-028P	1/4"	5.77
20-031P	5/16"	5.96
20-029P	3/8"	6.90
20-030P	1/2"	8.51

REDUCING BRANCH TEE



Part #	Tube OD Ends	Tube OD Branch	List Price
20-724P	1/2"	3/8"	14.01
20-725P	3/8"	1/4"	11.63

BULKHEAD UNION



Part #	Tube OD	List Price
20-125P	5/32"	10.04
20-126P	3/16"	8.99
20-127P	1/4"	8.18
20-123P	5/16"	14.40
20-128P	3/8"	9.98
20-129P	1/2"	14.63

FEMALE CONNECTOR



Part #	Tube OD	Thread NPTF	List Price
20-993P	1/4"	1/8"	7.54
20-035P	1/4"	1/4"	6.44
20-944P	3/8"	1/8"	8.37
20-036P	3/8"	1/4"	8.42

PLASTIC FITTINGS

PLASTIC PUSH-IN

2-WAY DIVIDER



Part #	Tube OD	List Price
20-776P	5/16"	10.23
20-777P	3/8"	8.78

TUBE TO HOSE STEM



Part #	Stem OD	Hose OD	List Price
20-853P	1/4"	3/16"	2.76
20-854P	1/4"	1/4"	2.92
20-855P	5/16"	5/16"	4.16
20-856P	1/4"	5/16"	3.34
20-857P	5/16"	3/16"	3.71
20-858P	5/16"	1/4"	4.02
20-859P	5/16"	3/8"	5.28
20-860P	3/8"	1/4"	4.26
20-861P	3/8"	5/16"	5.28
20-862P	3/8"	3/8"	5.16
20-863P	3/8"	1/2"	5.56
20-864P	1/2"	3/8"	6.27
20-865P	1/2"	1/2"	7.26

PLUG



Part #	Stem OD	List Price
20-876P	5/32"	1.24
20-877P	3/16"	1.30
20-878P	1/4"	1.31
20-879P	5/16"	2.15
20-880P	3/8"	2.09
20-881P	1/2"	3.34

TUBE SUPPORT



Part #	Tube OD	Tube ID	List Price
20-836P	5/16"	1/4"	0.62
20-837P	3/8"	5/16"	0.67
20-838P	1/2"	3/8"	0.67

PLASTIC FITTINGS

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"	13.52
20-901P	3/8"	13.33

CHECK VALVE



Part #	Tube OD	List Price
20-779P	3/8"	51.00

PL X MALE NPTF



Part #	Tube OD	Thread NPTF	List Price
20-904P	1/4"	1/4"	12.29
20-905P	3/8"	3/8"	15.07

Save 5% by ordering online at
www.midlandindustrial.com

17. CAN VEGETARIANS EAT ANIMAL CRACKERS?
18. IF THE POLICE ARREST A MIME, DO THEY TELL HIM HE HAS THE RIGHT TO REMAIN SILENT?
19. WHY DO THEY PUT BRAILLE ON THE DRIVE-THROUGH BANK MACHINES?
20. HOW DO THEY GET DEER TO CROSS THE ROAD ONLY AT THOSE YELLOW ROAD SIGNS?
21. WHAT WAS THE BEST THING BEFORE SLICED BREAD?
22. ONE NICE THING ABOUT EGOTISTS: THEY DON'T TALK ABOUT OTHER PEOPLE.
23. DOES THE LITTLE MERMAID WEAR AN ALGEBRA?
24. DO INFANTS ENJOY INFANCY AS MUCH AS ADULTS ENJOY ADULTERY?
25. HOW IS IT POSSIBLE TO HAVE A CIVIL WAR?

1/2" BAND CLAMPS



600 Series

- 5/16" Hex Slotted Carbon Steel Screw
- 1/2" Wide 201 Stainless Steel Band
- Carbon Steel Housing



611 Series

- 5/16" Hex Slotted Carbon Steel Screw
- 1/2" Wide 201 Stainless Steel Band
- 301 Stainless Steel Housing

#	Dia. Range		Part #	List Price	Part #	List Price
	Min.	Max.				
6	3/8"	7/8"	600-006 ^s	1.32	611-006 ^s	1.44
8	7/16"	1"	600-008 ^s	1.32	611-008 ^s	1.52
10	9/16"	1-1/16"	600-010 ^s	1.34	611-010 ^s	1.30
12	9/16"	1-1/4"	600-012 ^s	1.41	611-012 ^s	1.54
16	11/16"	1-1/2"	600-016 ^s	1.33	611-016 ^s	1.54
20	3/4"	1-3/4"	600-020 ^s	1.34	611-020 ^s	1.56
24	1-1/16"	2"	600-024 ^s	1.34	611-024 ^s	1.35
28	1-5/16"	2-1/4"	600-028 ^s	1.56	611-028 ^s	2.19
32	1-9/16"	2-1/2"	600-032 ^s	1.38	611-032 ^s	2.19
36	1-13/16"	2-3/4"	600-036 ^s	1.39	611-036 ^s	1.39
40	2-1/16"	3"	600-040 ^s	1.59	611-040 ^s	1.58
44	2-5/16"	3-1/4"	600-044 ^s	2.19	611-044 ^s	2.62
48	2-9/16"	3-1/2"	600-048 ^s	1.86	611-048 ^s	1.79
52	2-13/16"	3-3/4"	600-052 ^s	1.94	611-052 ^s	1.96
56	3-1/16"	4"	600-056 ^s	2.76	611-056 ^s	2.28
60	3-5/16"	4-1/4"	600-060 ^s	2.04	611-060 ^s	2.04
64	2-1/2"	4-1/2"	600-064 ^s	2.12	611-064 ^s	2.24
72	3"	5"	600-072 ^s	2.18	611-072 ^s	2.86
80	3-1/2"	5-1/2"	600-080 ^s	2.22	611-080 ^s	3.34
88	4"	6"	600-088 ^s	2.78	611-088 ^s	2.93
96	4-1/2"	6-1/2"	600-096 ^s	3.04	611-096 ^s	2.93
104	5"	7"	600-104 ^s	3.29	611-104 ^s	2.67
116	5-3/4"	7-3/4"			611-116 ^s	4.45
128	6-1/2"	8-1/2"			611-128 ^s	3.80
152	2"	10"			611-152 ^s	4.36
164	1-3/4"	10-3/4"			611-164 ^s	5.52
176	9-1/4"	11-1/4"			611-176 ^s	4.16
188	2-1/16"	12-1/4"			611-188 ^s	4.80
200	11"	13"			611-200 ^s	5.23
212	11-3/4"	13-3/4"			611-212 ^s	6.78
224	12-1/2"	14-1/2"			611-224 ^s	4.96
248	10-3/4"	16"			611-248 ^s	5.19
270	15-3/8"	17-3/8"			611-270 ^s	7.55
312	18"	20"			611-312 ^s	7.70
332	19-1/8"	21-1/4"			611-332 ^s	5.65
390	22-7/8"	24-7/8"			611-390 ^s	8.49

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^s Also stocked in Atlanta
(See page Intro II for details)

1/2" BAND CLAMPS

- 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



#	Dia. Range		Part #	List Price
	Min.	Max.		
6	3/8"	7/8"	620-006 ^s	1.55
8	7/16"	1"	620-008 ^s	1.75
10	9/16"	1-1/16"	620-010 ^s	1.75
12	9/16"	1-1/4"	620-012 ^s	1.95
16	11/16"	1-1/2"	620-016 ^s	1.77
20	3/4"	1-3/4"	620-020 ^s	1.79
24	1-1/16"	2"	620-024 ^s	1.60
28	1-5/16"	2-1/4"	620-028 ^s	1.61
32	1-9/16"	2-1/2"	620-032 ^s	1.61
36	1-13/16"	2-3/4"	620-036 ^s	1.66
40	2-1/16"	3"	620-040 ^s	2.12
44	2-5/16"	3-1/4"	620-044 ^s	2.87
48	2-9/16"	3-1/2"	620-048 ^s	2.12
52	2-13/16"	3-3/4"	620-052 ^s	2.31
56	3-1/16"	4"	620-056 ^s	2.31
60	3-5/16"	4-1/4"	620-060 ^s	3.66
64	2-1/2"	4-1/2"	620-064 ^s	2.44
72	3"	5"	620-072 ^s	2.56
80	3-1/2"	5-1/2"	620-080 ^s	2.69
88	4"	6"	620-088 ^s	2.92
96	4-1/2"	6-1/2"	620-096 ^s	4.07
104	5"	7"	620-104 ^s	3.18
116	5-3/4"	7-3/4"	620-116 ^s	6.82
128	6-1/2"	8-1/2"	620-128 ^s	4.41
152	2"	10"	620-152 ^s	6.12
164	1-3/4"	10-3/4"	620-164 ^s	6.67
176	9-1/4"	11-1/4"	620-176 ^s	5.00
188	2-1/16"	12-1/4"	620-188 ^s	6.72
200	11"	13"	620-200 ^s	5.48
212	11-3/4"	13-3/4"	620-212 ^s	7.09
224	12-1/2"	14-1/2"	620-224 ^s	5.94
248	10-3/4"	16"	620-248 ^s	7.10
270	15-3/8"	17-3/8"	620-270 ^s	6.68
312	18"	20"	620-312 ^s	6.86
332	19-1/8"	21-1/4"	620-332 ^s	6.82
390	22-7/8"	24-7/8"	620-390 ^s	7.14

^s Also stocked in Atlanta
(See page Intro II for details)

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.

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"	300-0004 ^s	1.08
7/16"	11/16"	300-005 ^s	1.08
5/16"	7/8"	300-0006 ^s	1.02
7/16"	1"	300-0008 ^s	1.12
1/2"	1-1/16"	300-010 ^s	1.19
9/16"	1-1/4"	300-012 ^s	0.98
11/16"	1-1/2"	300-016 ^s	1.01
7/8"	1-3/4"	300-0020 ^s	1.48

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	0.86
7/16"	11/16"	325-005	1.06
5/16"	7/8"	325-006	0.85
7/16"	1"	325-008	1.13
1/2"	1-1/16"	325-010	1.33
9/16"	1-1/4"	325-012	1.25
11/16"	1-1/2"	325-016	1.38
7/8"	1-3/4"	325-020	1.60

350 Series

- 1/4" Hex Slotted 410 Stainless Steel Screw
- 5/16" Wide 301 Stainless Steel Band
- 301 stainless Steel Housing



Dia. Range		Part #	List Price
Min.	Max.		
7/32"	5/8"	350-004 ^s	0.87
7/16"	11/16"	350-005 ^s	1.42
5/16"	7/8"	350-006 ^s	0.87
7/16"	1"	350-008 ^s	0.98
1/2"	1-1/16"	350-010 ^s	1.14
9/16"	1-1/4"	350-012 ^s	1.14
11/16"	1-1/2"	350-016 ^s	1.61
7/8"	1-3/4"	350-020 ^s	1.68

^s Also stocked in Atlanta
(See page Intro II for details)

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.



Open/Close design allows easy installation.



Send Midland all your high volume quotes!

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 ^s	2.19	550-012 ^s	2.96
20	3/4"	1-3/4"	500-020 ^s	2.23	550-020 ^s	2.35
28	1"	2-1/4"	500-028 ^s	2.28	550-028 ^s	2.53
36	1"	2-3/4"	500-036 ^s	1.73	550-036 ^s	2.62
48	1-1/2"	3-1/2"	500-048 ^s	2.91	550-048 ^s	3.10
56	1"	4"	500-056 ^s	3.32	550-056 ^s	4.50
72	2"	5"	500-072 ^s	2.80	550-072 ^s	5.18
88	2-1/16"	6"	500-088 ^s	4.16	550-088 ^s	4.95
104	1-3/4"	7"	500-104 ^s	4.38	550-104 ^s	6.32
128	1-3/4"	8-9/16"	500-128 ^s	3.89	550-128 ^s	5.57
152	2"	10"	500-152 ^s	4.12	550-152 ^s	6.05
188	2-1/16"	12-5/16"	500-188 ^s	4.58	550-188 ^s	7.72
216	10-3/16"	14"	500-216 ^s	4.94	550-216 ^s	9.30
248	10-3/4"	16"	500-248 ^s	5.20	550-248 ^s	8.59
280	14-1/4"	18"	500-280 ^s	6.17	550-280 ^s	8.25
312	14"	20"			550-312 ^s	9.80

The tragedy of life doesn't lie in not reaching your goal. The tragedy lies in having no goals to reach.

- Benjamin Mays

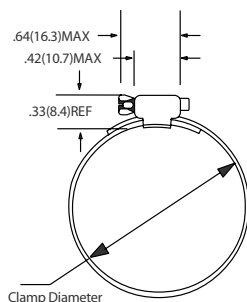
^s Also stocked in Atlanta
(See page Intro II for details)

HOSE CLAMPS

ECONOMY WORM GEAR CLAMPS

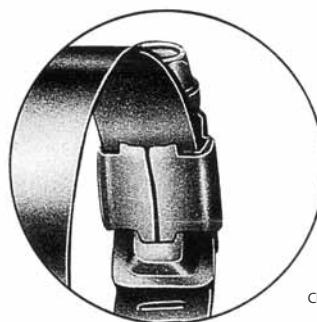
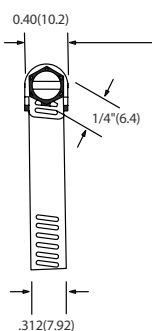
WORM GEAR HOSE CLAMPS

830 Series



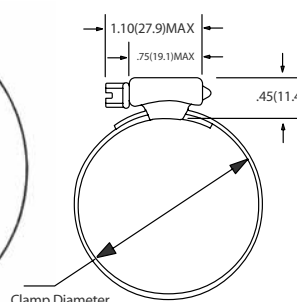
MINI CLAMP

Screw: 1/4" hex-head
Band: 5/16" wide



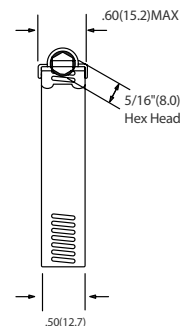
Interlock Construction

No welds, no bumps, which strengthens under tension to ensure maximum torque application.



REGULAR CLAMP

Screw: 5/16" hex-head
Band: 1/2" wide



No.	Diameter Range		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
Mini Clamp with 8 mm wide Band (5/16")						
4	7/32"-5/8"	6-16	830-185	0.60	830-185S	0.72
6	7/16"-3/4"	11-20	830-184	0.37	830-184S	0.73
8	1/2"-7/8"	13-23	830-183	0.42	830-183S	0.73
Regular Clamp with 12.7 mm (1/2") wide Band						
10	9/16"-1-1/16"	14-27	830-188	0.59	830-188S	1.09
12	11/16"-1-1/4"	18-32	830-189	0.58	830-189S	1.09
16	13/16"-1-1/2"	21-38	830-190	0.64	830-190S	1.02
20	13/16"-1-3/4"	21-44	830-192	0.79	830-192S	1.17
24	1-1/16"-2"	27-51	830-193	0.81	830-193S	1.27
28	15/16"-2-1/4"	33-57	830-194	0.72	830-194S	1.17
32	19/16"-2-1/2"	40-63	830-132	0.87	830-132S	1.30
36	1-13/16"-2 3/4"	46-70	830-195	0.85	830-195S	1.20
40	2-1/16"-3"	52-76	830-182	1.02	830-182S	1.29
44	2-5/16"-3-1/4"	59-82	830-196	0.83	830-196S	1.37
48	2-9/16"-3-3/4"	65-89	830-197	0.89	830-197S	1.44
52	2-13/16"-3-3/4"	72-95	830-152	1.09	830-152S	1.44
56	3-1/16"-4"	78-101	830-198	0.90	830-198S	1.47
60	3-5/16"-4-1/4"	84-108	830-060	1.26	830-060S	1.62
64	3-9/16"-4-1/2"	91-114	830-064	0.95	830-064S	2.37
72	4-1/8"-5"	105-127	830-072	0.98	830-072S	1.60
80	4-5/8"-5-1/2"	118-140	830-080	1.29	830-080S	1.67
88	5-1/8"-6"	130-152	830-288	1.22	830-288S	1.76
96	5-5/8"-6-1/2"	143-165	830-096	1.33	830-096S	2.05

Save 5% by ordering online at
www.midlandindustrial.com

T-Bolt Clamps

- All designs meet SAE J1508 specifications.
- .025" Band Thickness
- 3/4" Wide Band
- Band Material: 300 Series Stainless Steel
- Bolt Material: 300 Series Stainless Steel
- Nut Material: 300 Series Stainless Steel
- Nuts are Self-locking
- Torque Rating 75 in/lb

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

Send Midland all your high volume quotes!

Nominal Size	O.D. Range		Part#	List Price
	From:	To:		
1-1/4	1-5/32"	1-15/32"	840-131	4.60
1-1/2	1-3/8"	1-9/16"	840-150	4.21
1-3/4	1-5/8"	1-13/16"	840-175	4.00
1-7/8	1-3/4"	1-15/16"	840-188	4.36
2	1-7/8"	2-1/16"	840-200	4.44
2-1/4	2-1/8"	2-5/16"	840-225	5.15
2-3/8	2-1/4"	2-7/16"	840-238	4.40
2-1/2	2-3/8"	2-9/16"	840-250	4.30
2-9/16	2-11/32"	2-5/8"	840-256	6.15
2-5/8	2-13/32"	2-11/16"	840-263	4.38
2-3/4	2-17/32"	2-13/16"	840-275	5.25
2-7/8	2-21/32"	2-15/16"	840-288	4.86
3	2-25/32"	3-1/16"	840-300	4.97
3-1/8	2-29/32"	3-3/16"	840-312	6.11
3-1/4	3-1/32"	3-5/16"	840-325	4.95
3-1/2	3-9/32"	3-9/16"	840-350	4.91
3-3/4	3-17/32"	3-13/16"	840-375	5.80
3-53/64	3-19/32"	3-7/8"	840-382	6.50
4	3-25/32"	4-1/16"	840-400	5.27
4-1/4	4-1/32"	4-5/16"	840-425	5.32
4-1/2	4-9/32"	4-9/16"	840-450	5.67
4-3/4	4-17/32"	4-13/16"	840-475	5.76
5	4-25/32"	5-1/16"	840-500	6.40
5-1/4	5-1/32"	5-5/16"	840-525	6.50
5-1/2	5-9/32"	5-9/16"	840-550	6.60
5-3/4	5-17/32"	5-13/16"	840-575	7.44
6	5-25/32"	6-1/16"	840-600	7.56
6-1/4	6-1/32"	6-5/16"	840-625	7.78
6-1/2	6-9/32"	6-9/16"	840-650	7.89
6-3/4	6-17/32"	6-13/16"	840-675	8.00
7	6-25/32"	7-1/16"	840-700	8.11
7-1/2	7-9/32"	7-9/16"	840-750	8.22
8	7-25/32"	8-1/16"	840-800	7.70
8-1/4	8-9/32"	8-9/16"	840-850	8.89
8-7/8	8-21/32"	8-15/16"	840-888	9.33

1 EAR CLAMPS

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	0.44
1050001	113	7/16"	0.381	0.444	0.46
1050002	123	15/32"	0.394	0.486	0.46
1050003	133	1/2"	0.453	0.524	0.46
1050006	140	35/64"	0.472	0.551	0.50
1050007	145	9/16"	0.496	0.571	0.54
1050008	157	5/8"	0.543	0.618	0.51
1050009	170	11/16"	0.594	0.669	0.48
1050010	185	23/32"	0.618	0.728	0.51
1050011	198	3/4"	0.669	0.779	0.48
1050012	210	13/16"	0.716	0.827	0.53
1050013	226	7/8"	0.779	0.890	0.48
1050014	241	15/16"	0.839	0.949	0.51
1050015	256	1"	0.898	1.008	0.51
1050016	271	1-1/16"	0.945	1.067	0.57
1050017	286	1-1/8"	1.004	1.126	0.56
1050018	301	1-3/16"	1.063	1.185	0.63
1050020	331	1-5/16"	1.181	1.303	0.63
1050021	346	1-3/8"	1.240	1.362	0.68
1050023	376	1-15/32"	1.358	1.480	0.73
1050025	396	1-9/16"	1.437	1.559	0.71
1050026	410	1-5/8"	1.492	1.614	0.76
1050027	425	1-11/16"	1.551	1.673	0.75
1050028	440	1-23/32"	1.610	1.732	0.83
1050029	455	1-3/4"	1.669	1.791	0.83
1050030	470	1-16/16"	1.728	1.850	0.84
1050031	485	1-7/8"	1.787	1.909	0.88
1050032	500	1-15/16"	1.846	1.968	0.89
1050033	515	2"	1.905	2.028	0.93

ONE PIECE 1-EAR CLAMPS

- Smooth inner band surface protects hose other material when subjected to pulsation, expansion, or contraction.
- One piece design offers quick and easy installation.
- Used in places where clamping a second ear is impractical.
- For air and fluid media lines.

HOSE CLAMPS



Material:

- Zinc plated-steel SAE 1008/1010 or DIN 1.0338
- Stainless steel UNS S30400 or DIN 1.4301

ZINC PLATED CARBON STEEL

Part #	Nominal Size	Inches		Band Width	List Price
		Close	Open		
10300053	9/64"	0.118	0.138	0.118	0.93
10300054	5/32"	0.130	0.161	0.157	0.93
10300055	3/16"	0.161	0.201	0.157	0.89
10300056	15/64"	0.201	0.240	0.157	0.93
10300057	1/4"	0.220	0.260	0.157	0.63
10300008	9/32"	0.240	0.276	0.197	0.98
10300010	5/16"	0.268	0.315	0.197	0.93
10300012	11/32"	0.295	0.343	0.236	0.98
10300061	3/8"	0.311	0.374	0.276	1.13
10300016	25/64"	0.335	0.394	0.236	1.01
10300062	13/32"	0.351	0.413	0.256	1.01
10300063	27/64"	0.370	0.433	0.256	0.70
10300019	7/16"	0.376	0.445	0.236	1.01
10300064	29/64"	0.398	0.465	0.236	0.98
10300021	15/32"	0.398	0.472	0.276	1.01
10300022	31/64"	0.406	0.484	0.236	1.01
10300065	1/2"	0.425	0.504	0.236	1.02
10300066	33/64"	0.448	0.524	0.276	0.74
10300026	35/64"	0.476	0.551	0.276	1.07
10300068	9/16"	0.492	0.571	0.236	0.89
10300071	5/8"	0.555	0.630	0.295	0.89
10300073	11/16"	0.602	0.689	0.236	1.58

STAINLESS STEEL

Part #	Nominal Size	Inches		Band Width	List Price
		Close	Open		
15300000	1/8"	0.114	0.130	0.118	1.05
15300001	9/64"	0.118	0.138	0.118	1.15
15300002	5/32"	0.130	0.161	0.157	1.17
15300003	3/16"	0.161	0.201	0.157	1.28
15300004	15/64"	0.201	0.240	0.157	1.15
15300005	1/4"	0.221	0.260	0.157	0.70
15300006	9/32"	0.240	0.276	0.197	1.06
15300008	5/16"	0.268	0.315	0.197	1.11
15300010	11/32"	0.295	0.343	0.236	1.15
15300012	3/8"	0.319	0.374	0.276	1.19
15300013	25/64"	0.335	0.394	0.236	1.13
15300014	13/32"	0.369	0.413	0.256	0.77
15300015	27/64"	0.370	0.433	0.256	1.23
15300016	7/16"	0.376	0.445	0.236	1.13
15300017	29/64"	0.398	0.465	0.236	1.23
15300018	15/32"	0.398	0.472	0.276	1.23
15300019	31/64"	0.406	0.484	0.236	1.23
15300020	1/2"	0.425	0.504	0.236	1.29
15300021	33/64"	0.448	0.524	0.276	0.88
15300023	35/64"	0.476	0.551	0.276	1.23
15300024	9/16"	0.492	0.571	0.236	1.23
15300027	5/8"	0.543	0.630	0.295	1.43
15300030	11/16"	0.602	0.689	0.236	1.09

Send Midland all your quotes!

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	0.93
1010004	1/4"	0.197	0.276	0.69
1010008	5/16"	0.276	0.354	1.05
1010011	3/8"	0.319	0.433	0.70
1010016	1/2"	0.425	0.512	0.64
1010019	9/16"	0.492	0.591	0.94
1010022	19/32"	0.551	0.669	1.06
1010024	5/8"	0.591	0.709	0.74
1010027	3/4"	0.638	0.787	0.82

STAINLESS STEEL

Part #	Nominal Size	Inches		List Price
		Close	Open	
1510003	1/4"	0.197	0.276	0.70
1510004	5/16"	0.276	0.354	1.59
1510023	3/8"	0.319	0.433	0.70
1510006	1/2"	0.425	0.512	0.84
1510007	9/16"	0.492	0.591	1.54
1510008	19/32"	0.551	0.669	1.52
1510009	5/8"	0.591	0.709	0.90
1510010	3/4"	0.638	0.787	1.02
1510011	13/16"	0.709	0.866	1.96
1510012	7/8"	0.748	0.906	1.13
1510013	15/16"	0.827	0.984	2.18
1510014	1"	0.886	1.063	2.09
1510016	1-1/8"	1.035	1.221	2.51
1510019	1-9/16"	1.260	1.457	2.87
1510020	1-1/2"	1.378	1.575	3.12

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	0.84
16700004	3/8"	5mm	0.307	0.374	0.92
16700007	7/16"	5mm	0.378	0.445	1.17
16700010	1/2"	7mm	0.425	0.524	0.72
16700012	35/64"	7mm	0.453	0.551	0.72
16700013	9/16"	7mm	0.472	0.571	1.29
16700016	5/8"	7mm	0.520	0.618	1.21
16700017	11/16"	7mm	0.571	0.669	0.91
16700022	3/4"	7mm	0.654	0.780	0.74
16700024	13/16"	7mm	0.701	0.827	0.74

PINCERS

Model 1098 I Standard Jaw Pincers



Part #
1410118

List Price
142.50

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
139.33

Send Midland all your quotes!

HOSE CLAMPS



Open End Clamps are of the same general construction as the preformed clamps with this exception, the double wrapping of the band around the hose or article is part of the application. The open end clamps are used when one end or both, of the article to be clamped is not free, or an obstruction prevents slipping a preformed clamp over the end.

OPEN END 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
FO-3	3/8 x .022	4.07	13/16	FOS-3	3/8 x .020	4.52
FO-311	3/8 x .022	4.24	1 3/8	FOS-311	3/8 x .020	4.81
FO-316	3/8 x .022	4.36	2	FOS-316	3/8 x .020	5.06
FO-325	3/8 x .022	4.42	3 1/8	FOS-325	3/8 x .020	5.69
WITH STAINLESS STEEL LOK						
FO-8	5/8 x .025	3.52	2	FOS-8	5/8 x .022	5.24
FO-10	5/8 x .025	3.60	2 1/2	FOS-10	5/8 x .022	5.54
HEAVY DUTY BANDS						
FO-12	5/8 x .031	3.89	3	FOS-12	5/8 x .022	6.95
FO-14	5/8 x .031	3.86	3 1/2	FOS-14	5/8 x .022	6.73
FO-16	5/8 x .031	4.13	4	FOS-16	5/8 x .022	7.14
FO-18	5/8 x .031	4.04	4 1/2	FOS-18	5/8 x .022	7.58
FO-20	5/8 x .031	4.34	5	FOS-20	5/8 x .022	8.15
FO-24	5/8 x .031	4.75	6	FOS-24	5/8 x .022	9.06
FO-28	5/8 x .031	5.00	7	FOS-28	5/8 x .022	10.63
FO-32	5/8 x .031	5.39	8	FOS-32	5/8 x .022	11.88
FO-36	5/8 x .031	5.36	9	FOS-36	5/8 x .022	12.33
FO-40	5/8 x .031	6.19	10	FOS-40	5/8 x .022	13.66
FO-48	5/8 x .031	7.14	12	FOS-48	5/8 x .022	15.77
FO-56	5/8 x .031	9.12	14	FOS-56	5/8 x .022	17.00
FO-64	5/8 x .031	9.61	16			
FO-80	5/8 x .031	10.02	20			
FO-96	5/8 x .031	11.17	24			
FO-144	5/8 x .031	13.87	36			
FO-168	5/8 x .031	17.93	42			

APPLICATION TOOLS

For 3/8", 5/8" F-38, F-40, F-100
See page 267 for these tools.

F-CLAMPS



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	1.18	13/16	FS-3	3/8 x .020	1.87
F-311	3/8 x .025	1.35	1 3/8	FS-311	3/8 x .020	1.92
F-4	5/8 x .025	1.11	1	FS-4	5/8 x .022	2.42
F-5	5/8 x .025	1.23	1 1/4	FS-5	5/8 x .022	2.61
HEAVY DUTY BANDS						
F-6	5/8 x .031	1.24	1 1/2	FS-6	5/8 x .022	2.59
F-7	5/8 x .031	1.30	1 3/4	FS-7	5/8 x .022	2.94
F-8	5/8 x .031	1.30	2	FS-8	5/8 x .022	3.01
F-9	5/8 x .031	1.49	2 1/4	FS-9	5/8 x .022	3.31

F-10	5/8 x .031	1.61	2 1/2	FS-10	5/8 x .022	3.37
F-11	5/8 x .031	1.74	2 3/4	FS-11	5/8 x .022	3.74
F-12	5/8 x .031	1.77	3	FS-12	5/8 x .022	3.60
F-14	5/8 x .031	1.85	3 1/2	FS-14	5/8 x .022	4.12
F-16	5/8 x .031	2.24	4	FS-16	5/8 x .022	4.58
F-18	5/8 x .031	2.53	4 1/2	FS-18	5/8 x .022	5.03
F-20	5/8 x .031	2.50	5	FS-20	5/8 x .022	5.32
F-24	5/8 x .031	3.06	6	FS-24	5/8 x .022	6.49
F-28	5/8 x .031	3.54	7	FS-28	5/8 x .022	6.49
F-32	5/8 x .031	4.02	8	FS-32	5/8 x .022	8.50

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.

Send Midland all your quotes!

K-CLAMP PREFORMED HOSE CLAMPS

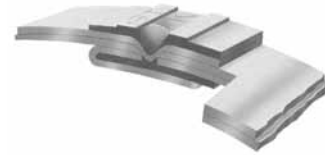
Each clamp is a double wrapped metal band formed to a given diameter. The clamp is designed to be slid over the hose end before the fitting is inserted. A punch-type or fold-up tool is then used to apply the clamp.

Punch Indentation for ease of center punching

Heavy Duty Lock for greater strength and rigidity

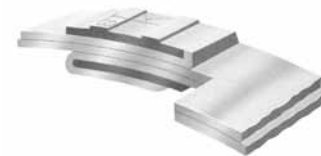


Center Punched



Less tension loss. Patented hole in inner band gives better internal mechanical locking after punching

Fold-up



Heavy Duty Clamp

K-Clamps may be secured by either a punch or fold-up method.
(See cross sectioned views)

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	1.17	13/16"	3/8" x .025	KS-3	1.83
K-311	1.16	1-3/8"	3/8" x .025	KS-311	1.85
K-4	1.55	1"	5/8" x .030	KS-4	2.92
K-5	1.76	1-1/4"	5/8" x .030	KS-5	2.85
K-6	1.74	1-1/2"	5/8" x .030	KS-6	3.06
K-7	1.97	1-3/4"	5/8" x .030	KS-7	3.11
K-8	1.85	2"	5/8" x .030	KS-8	3.68
K-9	2.09	2-1/4"	5/8" x .030	KS-9	3.69
K-10	2.02	2-1/2"	5/8" x .030	KS-10	4.14
K-11	2.10	2-3/4"	5/8" x .030	KS-11	4.31
K-12	2.48	3"	5/8" x .030	KS-12	4.86
K-14	2.62	3-1/2"	5/8" x .030	KS-14	5.90
K-16	2.51	4"	5/8" x .030	KS-16	5.61
K-18	2.70	4-1/2"	5/8" x .030	KS-18	6.41
K-20	2.94	5"	5/8" x .030	KS-20	6.79
K-24	3.32	6"	5/8" x .030	KS-24	7.33
K-28	4.37	7"	5/8" x .030	KS-28	9.45
K-32	4.99	8"	5/8" x .030	KS-32	10.37

PREFORMED CLAMPS

(3/4" (NOMINAL) WIDTH)

GALVANIZED STEEL

STAINLESS STEEL TYPE 301

Catalog Number	List Price	Clamp I.D. Inches	Band Width & Thickness	Catalog Number	List Price
K-87500	3.05	2"	3/4" x .030	KS-87501	5.06
K-97500	3.12	2-1/4"	3/4" x .030	KS-97501	5.44
K-107500	3.25	2-1/2"	3/4" x .030	KS-107501	5.57
K-117500	3.31	2-3/4"	3/4" x .030	KS-117501	6.07
K-127500	3.39	3"	3/4" x .030	KS-127501	6.20
K-147500	5.16	3-1/2"	3/4" x .030	KS-147501	6.73
K-167500	3.91	4"	3/4" x .030	KS-167501	7.39
K-187500	4.23	4-1/2"	3/4" x .030	KS-187501	8.49
K-207500	4.63	5"	3/4" x .030	KS-207501	9.12
K-247500	5.19	6"	3/4" x .030	KS-247501	10.48
K-287500	5.99	7"	3/4" x .030	KS-287501	12.12
K-327500	6.37	8"	3/4" x .030	KS-327501	13.27

316 Stainless available upon request

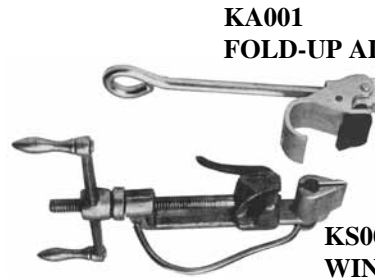
For 3/8" and 5/8" widths F-40, F-100
For 3/4" width F-175(special order item)
For all widths KS001 (with KA001 aapter)

See page 267 for these tools.

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:
237.92

**KS001
WIND-UP TOOL**

List Price:
327.39

GALVANIZED STEEL

3/8" (NOMINAL WIDTH)

STAINLESS STEEL TYPE 301

Catalog Number	List Price	Clamp I.D. Inches	Band Width & Thickness	Catalog Number	List Price
FLJ-301	1.31	13/16"	3/8" x .025	FLJ-201	1.95
FLJ-343	1.42	1"	3/8" x .025	FLJ-243	1.80
FLJ-302	1.49	1-3/8"	3/8" x .025	FLJ-202	1.80
FLJ-345	1.56	2"	3/8" x .025	FLJ-245	2.11
FLJ-346	2.06	3"	3/8" x .025	FLJ-246	2.95
N/A		3-1/4"	3/8" x .025	FLJ-255	3.56
5/8" (NOMINAL WIDTH)					
FLJ-303	2.52	1"	5/8" x 0.30	FLJ-203	3.62
FLJ-304	2.50	1-1/4"	5/8" x 0.30	FLJ-204	3.36
FLJ-305	2.67	1-1/2"	5/8" x 0.30	FLJ-205	3.65
FLJ-306	2.75	1-3/4"	5/8" x 0.30	FLJ-206	4.08
FLJ-307	2.77	2"	5/8" x 0.30	FLJ-207	4.17
FLJ-308	2.79	2-1/4"	5/8" x 0.30	FLJ-208	4.24
FLJ-309	2.98	2-1/2"	5/8" x 0.30	FLJ-209	4.32
3/4" (NOMINAL WIDTH)					
FLJ-327	3.56	2"	3/4" x 0.30	FLJ-227	5.76
FLJ-310	3.96	2-3/4"	3/4" x 0.30	FLJ-210	6.31
FLJ-311	3.99	3"	3/4" x 0.30	FLJ-211	6.73
FLJ-312	4.14	3-1/2"	3/4" x 0.30	FLJ-212	6.92
FLJ-313	4.72	4"	3/4" x 0.30	FLJ-213	8.75
FLJ-314	4.91	4-1/2"	3/4" x 0.30	FLJ-214	9.11
FLJ-315	5.34	5"	3/4" x 0.30	FLJ-215	9.74
FLJ-316	6.09	6"	3/4" x 0.30	FLJ-216	11.09
FLJ-318	6.83	7"	3/4" x 0.30	FLJ-218	12.94
FLJ-319	7.32	8"	3/4" x 0.30	FLJ-219	14.11

Send Midland all your quotes!

FLJS-Clamp SMOOTH I.D. CLAMPS

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**

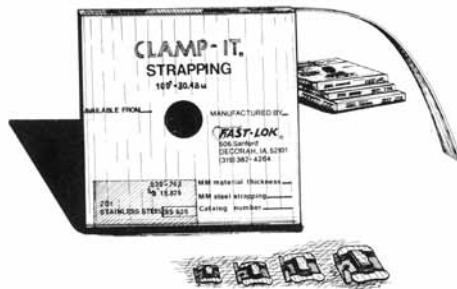
List Price:
237.92

**KS001
WIND-UP TOOL**

List Price:
327.39

STAINLESS STEEL

Catalog Number	5/8" (NOMINAL WIDTH)		List Price
	Clamp I.D. Inches	Band Width & Thickness	
FLJS-203	1"	5/8" x .030	3.16
FLJS-204	1-1/4"	5/8" x .030	3.57
FLJS-205	1-1/2"	5/8" x .030	3.39
FLJS-206	1-3/4"	5/8" x .030	4.61
FLJS-207	2"	5/8" x .030	3.98
FLJS-208	2-1/4"	5/8" x .030	4.43
FLJS-209	2-1/2"	5/8" x .030	4.45
3/4" (NOMINAL WIDTH)			
FLJS-227	2"	3/4" x .030	5.47
FLJS-210	2-3/4"	3/4" x .030	6.31
FLJS-211	3"	3/4" x .030	6.07
FLJS-212	3-1/2"	3/4" x .030	7.29
FLJS-213	4"	3/4" x .030	7.97
FLJS-214	4-1/2"	3/4" x .030	8.81
FLJS-215	5"	3/4" x .030	9.13
FLJS-216	6"	3/4" x .030	10.80
FLJS-218	7"	3/4" x .030	12.65
FLJS-219	8"	3/4" x .030	13.81



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

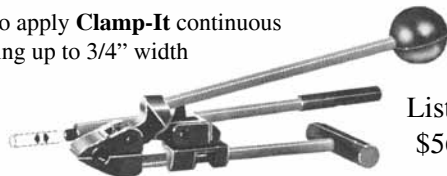
Catalog Number	Width	Thickness	Material 100'/CTN.	List Price/CNT
SS-3751	3/8"	.025	301 Stainless	112.04
SS-5001	1/2"	.030	301 Stainless	169.73
SS-6251	5/8"	.030	301 Stainless	197.88
SS-7501	3/4"	.030	301 Stainless	240.61
SG-3750	3/8"	.025	Galvanized	67.51
SG-5000	1/2"	.030	Galvanized	75.30
SG-6250	5/8"	.030	Galvanized	98.35
SG-7500	3/4"	.030	Galvanized	110.20

CLAMPS (BUCKLES)

Catalog Number	Width	Material 100'/CTN.	List Price Each pc.
CS-3751	3/8"	301 Stainless	0.86
CS-5001	1/2"	301 Stainless	0.96
CS-6251	5/8"	301 Stainless	1.31
CS-7501	3/4"	301 Stainless	1.75
CG-3750	3/8"	Galvanized	0.42
CG-5000	1/2"	Galvanized	0.54
CG-6250	5/8"	Galvanized	0.67
CG-7500	3/4"	Galvanized	0.89

C-2 Orbitor (Loking Tool)

Used to apply **Clamp-It** continuous strapping up to 3/4" width



List Price
\$562.65

ORBITOR

A tool of endless travel... this lightweight, side entry, jack-type tool is the most rapid cinch-up application tool in its field. The **Orbitor C-2** Loking Tool will handle **Clamp-It** strapping widths to 3/4" and always reached desired tension without fear of losing travel capacity of the tool. The **Clamp-It Strapping**, **Clamp-It Clamps**, and the unique **Clamp-It tool** add up to a superior system for you.

F-38 Loking Tool



List Price:
\$110.68

Portable hand tool used to apply punch Type 3/8 & 5/8 Clamps

F-40 Loking Tool



List Price:
\$187.04

Used to apply Punch Type 3/8 & 5/8 clamps.
Order mallet separately

F-100 Loking Tool



List Price:
\$450.96

Used to apply Punch Type 3/8 & 5/8 clamps.
Order mallet separately

F-225 Mallet



List Price:
\$111.39

Used for punching of all punch type clamps.

F-550 Clamp Cutter



List Price:
\$207.45

Used to remove clamps with minimum effort

KS001 Wind-up Tool



List Price:
\$327.39

Used to apply fold-up clamps and continuous strapping up to 3/4" width

NON PERFORATED (LINED) BAND

HOSE CLAMPS

HOSE CLAMPS

- All designs exceed SAE J1508 specifications
- Smooth inside surface
- Even tightening torque for 3600 seal
- Rolled-up band edge

* Non-perforated band prevents hose damage *

- Precision thread pitch for high vibration applications
- Design allows reuse
- Provides a strong seal
- Tolerates corrosive environments

ALUZINC MINI-F



Band and Housing • Aluzinc/ Painted
Band Width • (9mm) 3/8" wide band
Screw • Zinc Plated / Chromed
Corrosion Factor • 100
Sure seal of small thin-walled hoses.

Part #	Size	List Price
92-008	15/64-21/64	1.19
92-009	9/32-3/8	1.17
92-010	5/16-13/32	1.03
92-011	23/64-29/64	1.01
92-012	25/64-31/64	1.09
92-013	7/16-17/32	1.28
92-014	15/32-9/16	1.10
92-015	33/64-29/64	1.22
92-016	35/64-41/64	1.30
92-017	19/32-11/16	1.06

304 S.S. MINI-F



Band and Housing • SS2333/ AISI 304
Band Width • (9mm) 3/8" wide band
Screw • Zinc Plated / Chromed
Corrosion Factor • 1000 Industrial

Part #	Size	List Price
93-008	15/64-21/64	2.78
93-009	9/32-3/8	2.78
93-010	5/16-13/32	2.53
93-011	23/64-29/64	2.87
93-012	25/64-31/64	3.01
93-013	7/16-17/32	2.68
93-014	15/32-9/16	2.68
93-015	33/64-29/64	2.68
93-016	35/64-41/64	2.78
93-017	19/32-11/16	2.78

Band and Housing • Aluzinc/ Painted
Band Width • (12.2mm) 3/8" wide band
Screw • Zinc Plated / Chromed
Corrosion Factor • 100

ALUZINC



Part #	SAE	Size	List Price
88-024	8	5/8-15/16	2.38
88-028	10	3/4-1-1/8	2.44
88-032	12	7/8-1-1/4	2.95
88-038	16	1-1/16-1-1/2	2.78
88-044	20	1-1/4-1-3/4	2.78
88-050	24	1-1/2-2	3.15
88-056	28	1-3/4-2-1/4	3.31
88-065	32	2-2-9/16	4.38
88-075	40	2-5/16-3	4.37
88-085	44	2-11/16-3-3/8	3.88
88-095	52	3-3-3/4	4.13
88-112	64	3-7/16-4-7/16	5.31
88-138	80	4-1/8-5-7/16	6.83
88-165	96	5-1/8-7-1/8	8.46
88-180	104	5-7/8-7-1/8	8.62
88-205	122	6-7/8-8-1/8	9.37
88-231	138	7-7/8-9-1/8	9.71
88-256	154	8-7/8-10-1/16	11.44
88-282	170	9-7/8-11-1/8	12.21
88-307	186	10-7/8-12-1/8	13.76

Band and Housing • SS2333/ AISI 304
Band Width • (12.2mm) 1/2" wide band
Screw • SS2333/ AISI 304
Corrosion Factor • 1000 Industrial

All 304 S.S.



Part #	SAE	Size	List Price
89-024	8	5/8-15/16	4.75
89-028	10	3/4-1-1/8	5.49
89-032	12	7/8-1-1/4	5.82
89-038	16	1-1/16-1-1/2	5.52
89-044	20	1-1/4-1-3/4	6.02
89-050	24	1-1/2-2	6.18
89-056	28	1-3/4-2-1/4	5.95
89-065	32	2-2-9/16	7.33
89-075	40	2-5/16-3	7.70
89-085	44	2-11/16-3-3/8	8.55
89-095	52	3-3-3/4	9.88
89-112	64	3-7/16-4-7/16	9.41
89-138	80	4-1/8-5-7/16	12.31
89-165	96	5-1/8-7-1/8	13.63
89-180	104	5-7/8-7-1/8	14.82
89-205	122	6-7/8-8-1/8	17.69
89-231	138	7-7/8-9-1/8	17.40
89-256	154	8-7/8-10-1/16	20.71
89-282	170	9-7/8-11-1/8	19.69
89-307	186	10-7/8-12-1/8	18.91

Band and Housing • Aluzinc/ Painted
Band Width • (9mm) 3/8" wide band
Screw • Zinc Plated / Chromed

Corrosion Factor • 100

ALUZINC NOVA



Part #	SAE	Size	List Price
91-015	3	5/16-9/16	1.96
91-017	4	7/16-11/16	1.73
91-022	6	1/2-13/16	1.84
91-025	8	5/8-15/16	2.49
91-028	10	3/4-1-1/8	2.53
91-032	12	7/8-1-1/4	2.66
91-040	16	1-1/16-1-1/2	2.62
91-045	20	1-1/4-1-3/4	2.53
91-051	24	1-1/2-2	2.79
91-056	28	1-3/4-2-1/4	2.87
91-065	32	2-2-9/16	2.94
91-075	40	2-5/16-3	3.26
91-085	44	2-11/16-3-3/8	3.54

Send Midland your
clamp quotes!



HOSE CLAMPS

NON PERFORATED (LINED) BAND

HOSE CLAMPS

Band and Housing • SS2333/ AISI 316
Band Width • (12.2mm) 1/2" wide band
Screw • SS2333/ AISI 304
Corrosion Factor • 1000 Industrial

304 S.S. RUBBER CLIP



Eliminates hose and cable wear due to vibrations

ALL 316 ACID RESISTANT



Part #	SAE	Size	List Price
90-014	3	5/16-9/16	4.99
90-017	4	7/16-11/16	5.62
90-020	6	1/2-13/16	6.25
90-024	8	5/8-15/16	5.80
90-028	10	3/4-1-1/8	6.11
90-032	12	7/8-1-1/4	6.86
90-038	16	1-1/16-1-1/2	6.68
90-044	20	1-1/4-1-3/4	7.74
90-050	24	1-1/2-2	6.56
90-056	28	1-3/4-2-1/4	7.34
90-065	32	2-2-9/16	7.60
90-075	40	2-5/16-3	8.28
90-085	44	2-11/16-3-3/8	8.28
90-095	52	3-3-3/4	8.94
90-112	64	3-7/16-4-7/16	20.46
90-138	80	4-1/8-5-7/16	10.62
90-165	96	5-1/8-7-1/8	11.41
90-180	104	5-7/8-7-1/8	11.70
90-205	122	6-7/8-8-1/8	12.61
90-231	138	7-7/8-9-1/8	13.25
90-256	154	8-7/8-10-1/16	14.81
90-282	170	9-7/8-11-1/8	15.12
90-307	186	10-7/8-12-1/8	15.91

ALUZINC EXHAUST CLAMP

Uniform tightening force around the exhaust tubes for a good seal.



Part #	Size	List Price
94-030	1.06-1.18	5.68
94-033	1.18-1.30	6.36
94-036	1.30-1.42	6.66
94-038	1.38-1.50	6.66
94-039	1.44-1.56	6.89
94-042	1.54-1.65	7.01
94-043	1.59-1.71	7.44
94-045	1.65-1.77	6.99
94-046	1.69-1.81	6.25
94-047	1.73-1.85	6.64
94-048	1.77-1.89	7.72
94-051	1.89-2.01	7.71
94-052	1.93-2.05	8.37
94-054	2.00-2.13	8.68
94-055	2.05-2.17	9.09
94-056	2.09-2.20	9.09
94-058	2.17-2.28	10.63
94-061	2.28-2.40	10.45
94-064	2.40-2.52	10.52
94-071	2.68-2.80	39.35
94-074	2.80-2.91	21.08

ALUZINC ROBUST



Band and Housing Aluzinc/ Painted
Screw • Zinc Plated/ Chromed
Corrosion Factor • 100

Part #	Size	Hole Dia.	List Price
96-301	3/16	.20	1.91
96-302	1/4	.20	2.04
96-303	5/16	.20	1.91
96-304	3/8	.20	2.10
96-305	7/16	.20	1.99
96-306	1/2	.20	2.18
96-307	9/16	.20	2.64
96-308	5/8	.20	2.66
96-310	3/4	.20	2.79
96-312	7/8	.20	2.59
96-314	1	.20	3.21
96-316	1-1/8	.20	3.31
96-318	1-1/4	.25	3.59
96-320	1-3/8	.20	4.97
96-322	1-1/2	.20	4.87
96-323	1-3/4	.25	4.92



Eliminates hose and cable wear due to vibrations

ALUZINC RUBBER CLIP

Part #	Size	Hole Dia.	List Price
95-300	1/8	.26	0.78
95-301	3/16	.26	0.86
95-302	1/4	.26	0.98
95-303	5/16	.26	1.02
95-304	3/8	.26	0.94
95-305	7/16	.26	1.06
95-306	1/2	.26	1.27
95-307	9/16	.26	1.32
95-308	5/8	.26	1.22
95-309	11/16	.26	1.35
95-310	3/4	.26	1.38
95-311	13/16	.26	1.54
95-312	7/8	.26	1.66
95-313	15/16	.26	1.76
95-314	1	.26	1.64
95-315	1-1/6	.26	2.01
95-316	1-1/8	.26	2.01
95-317	1-3/16	.26	2.62
95-318	1-1/4	.26	2.82
95-319	1-5/16	.26	2.86
95-320	1-3/8	.26	3.08
95-321	1-7/16	.26	3.01
95-322	1-1/2	.26	3.43
95-326	1-5/8	.26	4.19
95-323	1-3/4	.26	3.94
95-328	1-7/8	.26	4.18
95-324	2	.26	4.46
95-325	2-1/8	.26	4.20
95-329	2-3/8	.26	5.20
95-327	2-1/2	.26	5.04
95-330	2-15/16	.26	5.79
95-331	4-5/16	.26	8.45

Part #	Size (mm)	Band Width (mm)	List Price
97-031	29-31	18	6.47
97-035	31-34	18	5.70
97-039	37-40	18	6.55
97-043	40-43	18	6.17
97-047	43-47	20	8.55
97-051	47-51	20	8.77
97-055	51-55	20	8.70
97-059	55-59	20	11.29
97-063	59-63	20	8.94
97-067	63-68	20	9.01
97-073	68-73	25	9.56
97-079	73-79	25	9.34
97-085	79-85	25	9.42
97-091	85-91	25	9.58
97-097	91-97	25	10.31
97-103	97-104	25	9.81
97-112	104-112	25	10.21
97-121	112-121	25	10.53
97-130	121-130	25	11.72
97-139	130-140	30	12.75
97-148	140-150	30	12.86
97-161	150-162	30	13.49
97-174	162-174	30	13.20
97-187	174-187	30	21.56
97-200	187-200	30	22.11
97-213	200-213	30	22.18
97-226	213-226	30	22.55
97-239	226-239	30	22.92
97-252	239-252	30	23.39

A single question can be more influential than a thousand statements.

- Bo Bennett

HOSE FERRULES

SMOOTH BRASS HOSE FERRULES



Part #	Ferrule #	I.D.	Length	Pierce	Gauge	List Price
32-500	6231	0.330	0.49	0.250	0.020	0.32
32-501	833	0.358	0.500	0.265	0.020	0.32
32-502	622	0.380	0.500	0.265	0.020	0.32
32-550	619	0.400	0.47	0.27	0.020	0.38
32-504	620	0.410	0.500	0.265	0.020	0.36
32-551	769R	0.450	0.562	0.343	0.020	0.37
32-552	4750	0.478	0.687	0.328	0.025	0.42
32-553	624R	0.500	0.500	0.343	0.020	0.39
32-554	7322	0.500	1.000	0.328	0.025	0.49
32-555	625	0.525	0.47	0.36	0.020	0.39
32-517	625A	0.525	0.56	0.360	0.020	0.37
32-556	7323	0.525	1.000	0.375	0.025	0.68
32-521	9974	0.525	1.000	0.437	0.025	0.63
32-557	7324	0.531	1.000	0.375	0.025	0.59
32-558	626	0.550	0.484	0.375	0.020	0.48
32-559	7325	0.56	1.000	0.437	0.025	0.73
32-561	7326	0.593	1.000	0.437	0.025	0.66
32-562	JJ	0.600	0.484	0.437	0.016	0.73
32-563	JJ	0.600	0.500	0.500	0.020	0.45
32-526	II	0.625	0.500	0.500	0.020	0.39
32-564	7327	0.625	1.000	0.437	0.025	0.66
32-565	HH	0.650	0.500	0.500	0.020	0.43
32-566	7328	0.656	1.000	0.437	0.025	0.67
32-567	GG	0.675	0.515	0.500	0.020	0.59
32-568	7329	0.69	1.000	0.500	0.025	0.70
32-570	7330	0.718	1.000	0.500	0.025	0.66
32-571	EE	0.725	0.530	0.500	0.020	0.55
32-572	DD	0.750	0.531	0.500	0.020	0.49
32-573	7331	0.750	1.000	0.625	0.025	1.05
32-574	CC	0.775	0.531	0.500	0.020	0.67
32-533	7332B	0.781	1.000	0.500	0.025	0.81
32-575	7332	0.781	1.000	0.625	0.025	0.82
32-576	BB	0.800	0.546	0.562	0.020	0.63
32-577	7333	0.812	1.000	0.625	0.025	0.85
32-578	AA	0.825	0.546	0.562	0.020	0.56
32-579	7244	0.875	0.843	0.687	0.025	0.89
32-580	7113	0.925	0.968	0.750	0.025	0.93
32-545	5235A	1.000	0.843	0.687	0.025	1.07
32-549	7145A	1.050	0.843	0.687	0.025	1.06
32-584	5027	1.100	0.843	0.812	0.025	1.11
32-588	7088	1.175	0.875	0.875	0.025	1.15
32-590	875L	1.200	0.843	0.875	0.025	1.32
32-591	7291	1.225	0.968	0.875	0.025	1.33

Also available in steel. Call for a quote!

More sizes available

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www.midlandindustrial.com

HOSE ACCESSORIES

HOSE CRIMPER

HOSE CRIMPERS

• Provides production capability and "big tool" crimping advantages at just a fraction of the cost of other tools offering comparable results.



HOSE CRIMPER COMES WITH 5 DIES

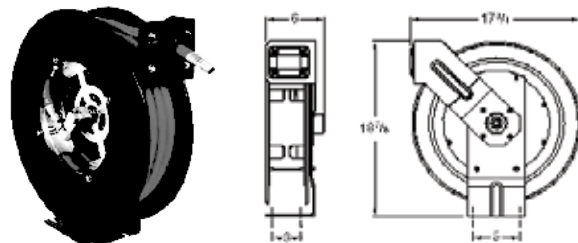
308-071 THRU # 308-075

Part #		List Price
308-070	Hose Crimper	312.59

REPLACEMENT DIES

Part #	Size	List Price
308-071	5/8"	56.22
308-072	37/64"	56.22
308-073	17/32"	59.03
308-074	31/64"	56.22
308-075	11/16"	56.22
308-076	7/16"	55.34
308-077	3/4"	56.22
308-078	13/16"	59.03
308-079	3/8"	52.70

HOSE REEL



LOW PRESSURE

Reels are ideally suited for plant maintenance or many other industrial functions where hose storage is a problem. Standard hose for air, water and oxygen/ acetylene application.

- Made in the USA .
- All metal reel.
- Unitized multi-functional hub arbor.
- 8 Position guide arm.
- Minimal size envelope permits installation where space is a factor.
- Simple design incorporates fewer parts.
- Single set screw to access latch area and spring case.
- Heavy gauge base with no welds.

Part #	Operating Pressure	Capacity Hose ID		Shipping Weight	List Price
		I.D.	Length		
940-350	300	3/8	50	41	586.69
940-250	300	1/4	50	44	896.89

940350 - Air/ Water

940250 - Oxygen/ Acetylene

CORROSION RESISTANCE VALUES for Plastic Tubing

Ratings based on tests at 70°F and should not be exposed to higher temperature without testing

F-5000 Poly Vinyl Chloride

U-2000 Polyurethane

E-1000 Low Density Polyethylene

N-6000 Nylon

P-1100 Polypropylene

D-4000 EVA

T-7000 Teflon

U-8000 Special Plasticizers PVC

G-Good

L-Limited

P-Poor

N-Not Tested

FUELS:	F	U	E	N	P	D	T	U
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
OTHERS:								
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	N	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	N	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

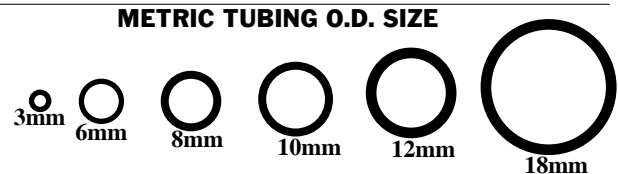
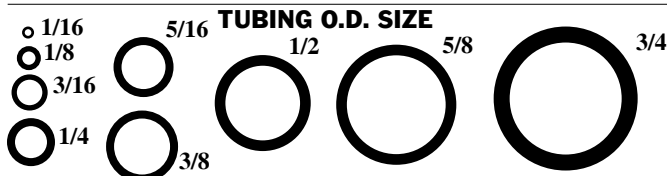
ACIDS & BASES	F	U	E	N	P	D	T
Acetic, 50%.....	G	P	P	L	G	P	G
Boric.....	G	G	G	G	G	G	G
Carbolic (phenol).....	P	P	G	P	G	P	N
Fatty.....	G	G	P	G	G	N	G
Formic, 90%.....	G	P	G	P	G	G	G
Hydrochloric, 10%.....	G	G	G	L	G	G	G
Hydrochloric, 25%.....	G	L	G	P	G	L	G
Hydrochloric, 50%.....	G	L	G	P	G	L	G
Hydrocyanic, 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

SOLVENTS:

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	G	L	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

HYDRAULIC FLUIDS:

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



PLASTIC TUBING

POLYETHYLENE TUBING

- Economical
- Flexible
- Low Pressure & Temperature



- Low density polyethylene tubing has a wide range of uses including water lines, beverage tubing, air lines, instrumentation, plus uses in industrial, agricultural, and chemical applications.
- Has good resistance to alkalies, dilute acid, ammonia gas, ammonium hydroxide, brine water, and most aqueous solutions of metallic salts.
- Food Grade
- temperature: -40°F to 135°F
- Natural - ASTM D-1248-8f - Type 1 - Class A - Category 4, Colors are class B.
- 100' coils in Boxes.
- Working pressure 1/4 of Burst PSI @75°F

100' POLYETHYLENE TUBING

Part #	Tube O.D.	Tube Wall	Burst PSI	List Price
973-200	1/8"	0.020	400	21.40
973-201	5/32"	0.025	400	24.43
973-202	3/16"	0.030	400	24.34
973-203	1/4"	0.040	400	24.55
973-204	1/4"	0.062	800	25.91
973-205	5/16"	0.062	600	39.32
973-206	3/8"	0.062	400	43.22
973-207	1/2"	0.062	300	58.59
973-208	5/8"	0.062	250	71.81
973-211	3/4"	0.062	150	105.02
973-209	3/4"	0.094	200	130.54
973-210	1"	0.125	300	207.51

500' NATURAL POLYETHYLENE

Part #	O.D.	List Price
73-200N5	1/8"	93.79
73-203N5	1/4"	111.81
73-204N5	1/4"	134.95
73-206N5	3/8"	204.86
73-207N5	1/2"	280.81

More colors and lengths available... just ask!

1000' NATURAL POLYETHYLENE

Part #	O.D.	List Price
73-203N1	1/4"	146.19
73-204N1	1/4"	238.94
73-206N1	3/8"	389.67

100' BLACK POLYETHYLENE TUBING

Part #	O.D.	List Price
73-200B	1/8"	21.40
73-201B	5/32"	24.43
73-202B	3/16"	24.34
73-203B	1/4"	24.55
73-204B	1/4"	25.91
73-205B	5/16"	39.32
73-206B	3/8"	43.22
73-207B	1/2"	58.59
73-208B	5/8"	71.81

500' BLACK REEL

Part #	O.D.	List Price
73-203B5	1/4"	110.46
73-205B5	5/16"	170.89
73-206B5	3/8"	204.86
73-207B5	1/2"	280.81

1000' BLACK REEL

Part #	O.D.	List Price
73-206B1	3/8"	389.67

100' BLUE POLYETHYLENE TUBING

Part #	O.D.	List Price
73-200U	1/8"	24.34
73-201U	5/32"	24.43
73-202U	3/16"	24.34
73-203U	1/4"	24.55
73-204U	1/4"	25.91
73-205U	5/16"	39.32
73-206U	3/8"	43.22
73-207U	1/2"	58.59

500' BLUE REEL

Part #	O.D.	List Price
73-203U5	1/4"	111.81
73-206U5	3/8"	204.86

TUBING

1000' BLUE REEL

Part #	O.D.	List Price
73-203U1	1/4"	198.28

100' GREEN POLYETHYLENE TUBING

Part #	O.D.	List Price
73-201G	5/32"	24.43
73-203G	1/4"	24.55
73-204G	1/4"	25.91
73-205G	5/16"	39.32
73-206G	3/8"	43.22
73-207G	1/2"	58.59

500' GREEN REEL

Part #	O.D.	List Price
73-203G5	1/4"	112.61

1000' GREEN REEL

Part #	O.D.	List Price
73-203G1	1/4"	185.31

100' RED POLYETHYLENE TUBING

Part #	O.D.	List Price
73-203R	1/4"	24.55
73-205R	5/16"	39.32
73-206R	3/8"	43.22

500' RED REEL

Part #	O.D.	List Price
73-203R5	1/4"	112.61

1000' RED REEL

Part #	O.D.	List Price
73-203R1	1/4"	198.28

100' WHITE POLYETHYLENE TUBING

Part #	O.D.	List Price
73-203W	1/4"	24.55
73-206W	3/8"	43.22
73-207W	1/2"	58.59

PLASTIC TUBE CUTTER

Range: 1/8" - 3/8" I.D. (3mm-10mm)



Part #	Description	List Price
91-707	Cutter w/Blade	8.17

TUBING

100' YELLOW POLYETHYLENE TUBING

Part #	O.D.	List Price
73-203Y	1/4"	24.55
73-205Y	5/16"	39.32
73-206Y	3/8"	43.22

100' ORANGE POLYETHYLENE TUBING

Part #	O.D.	List Price
73-203O	1/4"	24.55

100' GRAY POLYETHYLENE TUBING

Part #	O.D.	List Price
73-206A	3/8"	43.22

POLYETHYLENE METRIC TUBING



Part #	MM O.D.	MM I.D.	Length meters	List Price
73-200M1	4	2.5	150	103.07
73-201M2	6	4	25	31.63
73-201M1	6	4	150	150.58
73-202M2	8	6	25	51.85
73-202M1	8	6	150	277.58
73-203M2	10	8	25	67.93
73-203M1	10	8	150	421.02

*More sizes and colors available...
just ask!*

Do not look where you fell, but
where you slipped.

- African proverb

FLEXIBLE NYLON 11 TUBING

- High Burst
- Resilient
- Corrosion Resistance



- Lubrication systems, instrumentation lines, fuel lines, refrigerant lines, Vacuum applications, food processing.
- Low moisture absorbtion, Good mechanical properties, and excellent electrical properties.
- Temperature range -10°F to 225 F°
- Has excellent resistance to a wide range of chemicals including oils, gasoline, hydraulic fluids, salt solutions, and bases.
- 1000lb min. burst P.S.I.
- For DOT tubing see air brake section
- 100' Boxed
- Working Pressure is 1/4 minimum burst

Part #	Tube O.D.	Tube Wall	List Price
973-230	1/8"	.017	31.09
973-231	5/32"	.025	44.76
973-229	3/16"	.024	49.97
973-232	1/4"	.035	78.88
973-238	1/4"	.040	98.15
973-239	1/4"	.062	132.25
973-226	5/16"	.040	125.41
973-233	3/8"	.050	166.64
973-234	1/2"	.062	280.98
973-235	5/8"	.062	405.24

100' BLACK NYLON TUBING

Part #	Tube O.D.	List Price
73-230B	1/8"	28.92
73-231B	5/32"	45.50
73-232B	1/4"	86.61
73-238B	1/4"	101.32
73-233B	3/8"	184.58
73-234B	1/2"	308.56

500' BLACK NYLON TUBING NATURAL

Part #	Tube O.D.	List Price
73-232N5	1/4"	366.18

PLASTIC TUBING

1000' BLACK NYLON

Part #	Tube O.D.	List Price
73-230B1	1/8"	249.94

NYLON 12 METRIC TUBING

- Same propeties as nylon tubing



100' LENGTHS

Part #	MM O.D.	MM I.D.	MM Wall	Min PSI	List Price
973-323	4	2.3	0.85	1800	48.41
973-324	5	3	1	1600	68.72
973-325	6	4	1	1200	91.66
973-326	6	3.5	1.25	1700	111.49
973-327	8	6	1	800	125.41
973-328	8	5.5	1.25	1100	155.36
973-329	10	8	1	600	156.11
973-332	12	10	1	480	167.97
973-333	12	9	1.5	800	286.72
973-334	14	12	1	950	427.13

PLASTIC TUBE CUTTER

MINI-TUBING CUTTER

- Great for tight places



Part #	Size	List Price
990-571	3mm-22mm (1/8"-7/8")	5.54

TUBING CUTTER



Part #	Size	List Price
990-570	1/8"-1-1/8"	9.69

TUBING

PLASTIC/ ALUMINUM/ COPPER TUBING

TUBING

POLYVINYL CHLORIDE (PVC) TUBING

FDA recipe
NSF approved
Grade A



- Clear, flexible PVC tubing is suitable for use in low pressure applications including drain lines, laboratory tubing, industrial, chemical, agricultural, and food and beverage applications.
- Has good chemical resistance to alkalies, ammonium compounds, brine, and some acids and alcohols.
- Sanctioned by the FDA for food packaging applications.
- Temperature Range: -5°F to 125°F
- 100 Foot coils in Boxes.

Part #	Tube I.D.	Tube O.D.	Tube Wall	Min Burst	List Price
973-222	1/8	3/16	1/32	200	28.36
973-224	1/8	1/4	1/16	400	30.22
973-223	3/16	5/16	1/16	250	31.18
973-215	1/4	3/8	1/16	200	42.86
973-252	5/16	7/16	1/16	150	52.09
973-253	5/16	1/2	3/32	250	77.05
973-216	3/8	1/2	1/16	125	55.19
973-255	3/8"	5/8"	1/8"	250	128.50
973-262	3/8	9/16	3/32	200	102.82
973-217	1/2	5/8	1/16	100	105.83
973-219	3/4	1	1/8	120	188.65
973-221	1	1-1/4	1/8	100	283.51

BLUE POLYURETHANE TUB-

Part #	Tube O.D.	List Price
73-343U	1/4	129.77

BLACK POLYURETHANE TUB-

Part #	Tube O.D.	List Price
73-343B	1/4	136.26

Part #	Tube O.D.	List Price
73-343G	1/4	138.43

YELLOW POLYURETHANE

Part #	Tube O.D.	List Price
73-343Y	1/4	145.35

POLYURETHANE METRIC



Part #	Tube O.D.	Tube I.D.	25 Meters
973-350	4	2.5	45.03
973-352	6	4	178.29
973-353	8	6	129.81

More sizes and colors available

ALUMINUM TUBING

Alloy 3003-0
ASTM B-483

Material to ASTM B-483



ALUMINUM VERSATUBE 50' Coils

Part #	O.D.	Wall Thick	50' Coils
972-190	1/8	.025	45.11
972-191	3/16	.028	57.93
972-192	1/4	.032	53.39
972-193	5/16	.035	75.14
972-194	3/8	.035	81.54
972-195	1/2	.035	121.70

COPPER TUBING

REFRIGERATION

COPPER TUBE (50' Coils)



Part #	O.D Actual	Wt. 50' Coil	Wall Thick.	List Price
972-180	1/8	1.74	.030	59.99
972-181	3/16	2.88	.030	86.79
972-182	1/4	4.02	.030	78.99
972-183	5/16	5.45	.032	173.51
972-184	3/8	6.7	.032	128.88
972-185	1/2	9.1	.032	116.66
972-186	5/8	12.55	.035	342.63
972-187	3/4	15.25	.035	193.29

TYPE L SOFT COPPER TUBING (60' Coils)



For residential water lines

Part #	O.D Nom	Wt. 50' Coil	Wall Thick.	List Price
972-171	1/4	.126	.030	259.72
972-172	3/8	.198	.035	321.48
972-173	1/2	.285	.040	552.80

* Add 1/8" to Nom OD to get the Actual OD

POR = Price on request

POLYURETHANE TUBING

100' COILS



Part #	Tube O.D.	Tube I.D.	List Price
973-340	1/8	1/16	40.62
973-341	5/32	3/32	57.65
973-342	3/16	1/8	67.47
973-343	1/4	1/8	116.81
973-345	3/8	1/4	207.66
973-346	1/2	3/8	276.26

TUBING ACCESSORIES

Features:

- 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.

Note: Mounting screws not provided



Part #	Tubing OD	Description	Channels	List Price
28-988	1/4	non-adhesive	10	2.86
28-989	1/4	adhesive	10	2.73
28-990	3/8	non-adhesive	7	9.26
28-991	1/2	non-adhesive	5	8.82

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	9.15
28-589	3/8" NPTF	8.80

FEMALE COUPLER



BRASS

Part #	Size	List Price
28-560 ⁵	1/4" NPTF	10.94

HOSE BARB COUPLER



BRASS

Part #	Hose I.D. Size	List Price
28-690	1/4"	9.97
28-691	3/8"	9.97

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.

MALE PIPE COUPLER

BRASS



Part #	NPT Size	List Price
28-552 ³	1/4"	5.90
28-553	3/8"	6.45

STEEL

28552S	1/4"	4.73
28553S	3/8"	4.78

MALE PLUG

STEEL



Part #	NPT Size	List Price
28-545	1/8"	1.50
28-546 ^{3,5}	1/4"	1.29
28-547 ⁵	3/8"	2.08

360° TURNING SWIVEL PLUG

1/4" Basic size

Industrial Interchange Plug

- 360° Turning
- Swivels



Part #	Size	List Price
320-065	1/4"	13.00

FEMALE PIPE COUPLER

BRASS



Part #	NPT Size	List Price
28-540 ^{3,5}	1/4"	6.25
28-541 ⁵	3/8"	6.74

STEEL

28540S	1/4"	4.85
28541S	3/8"	4.95

FEMALE PLUG

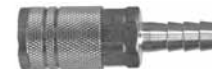
STEEL



Part #	NPT Size	List Price
28-533	1/8"	1.28
28-534 ^{3,5}	1/4"	1.15
28-535	3/8"	2.20

HOSE ID COUPLER

BRASS



Part #	Hose ID	List Price
28-562	1/4"	7.50
28-564	3/8"	8.13
28-565	1/4(Push on)	9.10
28-566	3/8(Push on)	9.87

STEEL

28-562S	1/4"	5.00
28-564S	3/8"	5.23
28-565S	1/4(Push on)	4.95
28-566S	3/8(Push on)	5.40

HOSE ID PLUG

STEEL



Part #	NPT Size	List Price
28-557 ⁵	1/4"	1.24
28-559	3/8"	1.50
28-558	1/4(Push on)	1.54
28-561	3/8(Push on)	1.78

³ Also stocked in Houston

⁵ Also stocked in Atlanta

(See page Intro II for details)

Send Midland all your quotes



QUICK DISCONNECTS

PNEUMATIC ACCESSORIES

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"	9.36
98-824	3/8"	11.15
98-825	1/2"	14.00

FEMALE COUPLER STEEL



Part #	NPT Size	List Price
98-810	1/4"	10.40
98-811	3/8"	10.40
98-812	1/2"	11.61

HOSE ID COUPLER STEEL



Part #	NPT Size	List Price
98-840	1/4"	13.14
98-841	3/8"	13.30
98-842	3/8" (Push on)	13.55

MALE PLUG STEEL



Part #	NPT Size	List Price
98-814	1/4"	2.42
98-815	3/8"	2.69

FEMALE PLUG STEEL



Part #	NPT Size	List Price
98-801	1/4"	1.74
98-802	3/8"	2.37

HOSE ID PLUG STEEL



Part #	Hose I.D. Size	List Price
98-828	3/8"	3.59
98-830	3/8" (Push on)	3.78

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"	15.52
28-516	1/4"	7.10
28-517	3/8"	15.67

FEMALE PIPE COUPLER

BRASS



Part #	NPT Size	List Price
28-506	1/8"	16.79
28-507	1/4"	6.61
28-508	3/8"	15.18

HOSE ID COUPLER

BRASS



Part #	Size	List Price
28-528	1/4"	16.40
28-530	3/8"	15.32
28-531	1/4" (Push on)	15.89
28-532	3/8" (Push on)	16.10

MALE PLUG

STEEL



Part #	NPT Size	List Price
28-509	1/8"	1.67
28-510	1/4"	1.24
28-511	3/8"	2.37

FEMALE PLUG

STEEL



Part #	NPT Size	List Price
28-500	1/8"	4.10
28-501	1/4"	1.39
28-502	3/8"	2.29

HOSE ID PLUG

STEEL



Part #	Size	List Price
28-518	1/4"	1.68
28-520	3/8"	6.17
28-521	1/4" (Push on)	11.46
28-522	3/8" (Push on)	12.18

PNEUMATIC ACCESSORIES

QUICK DISCONNECTS

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"	18.52
28-593	1/4"	8.15
28-594	3/8"	11.81

FEMALE PIPE COUPLER

BRASS



Part #	NPT Size	List Price
28-583	1/8"	14.46
28-584	1/4"	7.42
28-585	3/8"	21.46

HOSE ID COUPLER

BRASS



Part #	Size	List Price
28-601	1/4"	9.10
28-603	3/8"	11.62

MALE PLUG

STEEL



Part #	NPT Size	List Price
28-586	1/8"	3.36
28-587	1/4"	1.50

FEMALE PLUG

STEEL



Part #	NPT Size	List Price
28-577	1/8"	4.34
28-578	1/4"	1.68

HOSE ID PLUG

STEEL



Part #	Size	List Price
28-595	1/4"	3.36
28-597	3/8"	6.46

ST SERIES...HIGH FLOW

Specifications

Brass - Coupler & Steel Plug		
Temperature Range	-40° to 250°	
Rated Pressure	4650	2350

- 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).

MALE PIPE COUPLER

BRASS



Part #	Body & Thread Size	List Price
28-667	1/8"	11.54
28-665	1/4"	12.95
28-666	3/8"	14.92
28-668	1/2"	17.54
28-669	3/4"	41.89
28-670	1"	65.26

MALE PLUG

STEEL



Part #	Size	List Price
28-675	1/8"	6.12
28-639	1/4"	5.67
28-640	3/8"	4.35
28-676	1/2"	4.92
28-677	3/4"	15.06
28-678	1"	32.25

FEMALE PIPE COUPLER

BRASS



Part #	Body & Thread Size	List Price
28-671	1/8"	11.54
28-651	1/4"	12.10
28-652	3/8"	13.96
28-672	1/2"	21.96
28-673	3/4"	35.64
28-674	1"	52.34

FEMALE PLUG

STEEL



Part #	Size	List Price
28-688	1/8"	4.90
28-619	1/4"	5.99
28-620	3/8"	4.80
28-679	1/2"	5.60
28-680	3/4"	15.58
28-681	1"	38.08

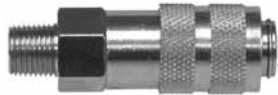
QUICK
DISCONNECT

MINI TYPE QUICK DISCONNECTS

Working Range: 0-145 psi
Material: Chrome Plated Brass

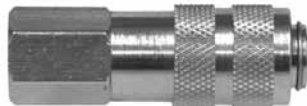
Send Midland all your quotes!

MALE COUPLER



Part #	Size	List Price
28-605	1/8"	6.86

FEMALE COUPLER



Part #	Size	List Price
28-606	1/8"	6.86

MALE PLUG



Part #	Size	List Price
28-607	1/8"	2.30

FEMALE PLUG



Part #	Size	List Price
28-608	1/8"	1.89

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
28-682	1/8"	24.13
28-683	1/4"	21.36

FEMALE PIPE COUPLER



Part #	Size	List Price
28-684	1/4"	24.87

MALE PLUG

Steel



Part #	Size	List Price
28-685	1/8"	6.23
28-686	1/4"	4.34

FEMALE PLUG

Steel



Part #	Size	List Price
28-687	1/4"	4.34

MOLD COOLANT-LINE QUICK COUPLERS

OPERATING PRESSURE:

200 PSIG (14.06 Kg/sq. cm)

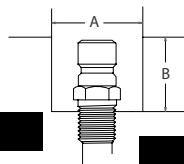
Standard Seal:

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, thermo-setting, 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	1.82
29-901	1/4"	0.84	0.94	2.48
29-902	3/8"	1.00	0.97	2.76

3/8" BASIC SIZE

Part #	Size	A	B	List Price
29-906	1/4"	1.00	0.94	2.83
29-907	3/8"	1.00	1.13	3.06
29-908	1/2"	1.81	1.25	5.50

1/2" BASIC SIZE

Part #	Size	A	B	List Price
29-911	1/2"	1.25	1.50	7.78
29-912	3/4"	1.50	1.56	11.97

FEMALE PLUG (STEEL)

1/4" BASIC SIZE

Part #	Size	List Price
29-903	1/8"	2.52
29-904	1/4"	2.67
29-905	3/8"	4.04

3/8" BASIC SIZE

Part #	Size	List Price
29-909	1/4"	3.34
29-910	3/8"	4.51

1/2" BASIC SIZE

Part #	Size	List Price
29-913	1/2"	11.20
29-914	3/4"	19.99

MOLD COOLANT-LINE QUICK COUPLERS
D-M-E, PARKER and FOSTER INTERCHANGE
Straight Stem

90° Stem

45° Stem

Body Only


Send Midland your volume quotes on QD's

1/4" BASIC SIZE, BRASS
STRAIGHT THROUGH (Non-Valved)

Hose ID Size	Straight Stem		90° Stem		45° Stem		Body Only	
	Part #	List Price	Part #	List Price	Part #	List Price	Part #	List Price
1/4"	98-915	13.05	98-920	19.10	98-925	18.45	98-930	11.54
1/4" (Push On)	98-916	13.34	98-921	19.99	98-926	19.99	(1/8" Female Pipe)	
5/16"	98-917	13.05	98-922	19.10	98-927	19.10		
3/8"	98-918	12.25	98-923	17.54	98-928	18.45		
3/8" (Push On)	98-919	15.89	98-924	20.23	98-929	20.23		

1/4" BASIC SIZE, BRASS
VALVED

Hose ID Size	Straight Stem		90° Stem		45° Stem		Body Only	
	Part #	List Price	Part #	List Price	Part #	List Price	Part #	List Price
1/4"	98-931	19.49	98-936	25.13	98-941	25.39	98-946	18.93
1/4" (Push On)	98-932	22.06	98-937	25.95	98-942	26.04	(1/8" Female Pipe)	
5/16"	98-933	20.78	98-938	25.13	98-943	25.39		
3/8"	98-934	21.51	98-939	25.13	98-944	25.39		
3/8" (Push On)	98-935	22.73	98-940	26.35	98-945	26.35		

3/8" BASIC SIZE, BRASS
STRAIGHT THROUGH (Non-Valved)

Hose ID Size	Straight Stem		90° Stem		45° Stem		Body Only	
	Part #	List Price	Part #	List Price	Part #	List Price	Part #	List Price
3/8"	98-947	23.35	98-952	24.99	98-957	24.99	98-962	16.79
3/8" (Push On)	98-948	17.79	98-953	24.53	98-958	27.46	(1/4" Female Pipe)	
1/2"	98-949	18.13	98-954	22.39	98-959	24.99	98-986	16.36
1/2"	98-950	19.34	98-955	26.66	98-960	27.46	(3/8" Female Pipe)	
1/2" (Push On)	98-951	21.51	98-956	21.51	98-961	27.46		

3/8" BASIC SIZE, BRASS
VALVED

Hose ID Size	Straight Stem		90° Stem		45° Stem		Body Only	
	Part #	List Price	Part #	List Price	Part #	List Price	Part #	List Price
3/8"	98-963	29.49	98-967	33.72	98-971	37.54	98-975	25.39
3/8" (Push On)	98-964	29.49	98-968	38.50	98-972	39.33	(1/4" Female Pipe)	
1/2"	98-965	25.28	98-969	37.23	98-973	37.54		
1/2"	98-966	32.23	98-970	38.90	98-974	39.08		

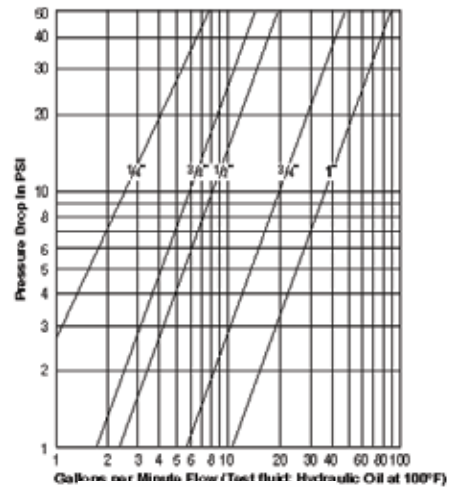
1/2" BASIC SIZE, BRASS
STRAIGHT THROUGH (Non-Valved)

Hose ID Size	Straight Stem		90° Stem		45° Stem		Body Only	
	Part #	List Price	Part #	List Price	Part #	List Price	Part #	List Price
1/2"	98-976	45.76	98-979	58.29	98-982	66.38	98-985	41.16
1/2" (Push On)	98-977	45.99	98-980	59.93	98-983	68.15	(1/2" Female Pipe)	
3/4"	98-978	43.50	98-981	60.10	98-984	68.55		

Send Midland all your quotes!

ISO-A Interchange

Nominal Size	Material	Rated Flow	Minimum Burst-Coupler	Minimum Burst-Plug	Minimum Burst Connected
1/4"	Steel	2.5 GPM	27,260 PSI	20,155 PSI	18,850 PSI
3/8"	Steel	6.6 GPM	22,185 PSI	18,125 PSI	17,400 PSI
1/2"	Steel	11.3 GPM	18,850 PSI	15,370 PSI	16,820 PSI
3/4"	Steel	24.5 GPM	18,705 PSI	17,400 PSI	15,080 PSI
1"	Steel	29.7 GPM	16,820 PSI	14,500 PSI	14,500 PSI



FEMALE PIPE COUPLER

Part #	Body Size	NPT	Working PSI	List Price
ANV-14-F	1/4"	1/4"	5075	12.56
ANV-38-F	3/8"	3/8"	4550	13.42
ANV-12-F	1/2"	1/2"	4500	15.65
ANV-34-F	3/4"	3/4"	3625	48.05
ANV-1-F	1"	1"	3335	75.70

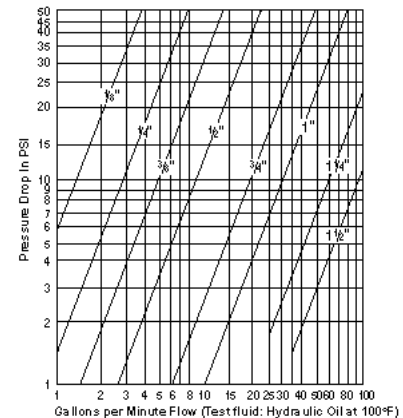


PLUG

Part #	Body Size	NPT	Working PSI	List Price
ANV-14-M	1/4"	1/4"	5075	6.80
ANV-38-M	3/8"	3/8"	4550	7.30
ANV-12-M	1/2"	1/2"	4500	8.39
ANV-34-M	3/4"	3/4"	3625	26.11
ANV-1-M	1"	1"	3335	50.70

ISO-B Interchange

Nominal Size	Material	Rated Flow	Minimum Burst-Coupler	Minimum Burst-Plug	Minimum Burst Connected
1/8"	Steel	2.0 GPM	25,300 PSI	23,200 PSI	23,200 PSI
1/4"	Steel	4.2 GPM	27,260 PSI	21,460 PSI	20,880 PSI
3/8"	Steel	8.0 GPM	27,550 PSI	18,850 PSI	19,430 PSI
1/2"	Steel	11.0 GPM	23,780 PSI	15,370 PSI	15,370 PSI
3/4"	Steel	24.0 GPM	19,720 PSI	15,950 PSI	15,660 PSI
1"	Steel	25.0 GPM	19,720 PSI	15,950 PSI	15,660 PSI



FEMALE PIPE COUPLER

Part #	Body Size	NPT	Working PSI	List Price
HNV-14-F	1/4"	1/4"	5075	24.25
HNV-38-F	3/8"	3/8"	4350	35.50
HNV-12-F	1/2"	1/2"	4060	32.00
HNV-34-F	3/4"	3/4"	2610	60.20
HNV-1-F	1"	1"	2175	154.41



PLUG

Part #	Body Size	NPT	Working PSI	List Price
HNV-14-M	1/4"	1/4"	5075	12.00
HNV-38-M	3/8"	3/8"	4350	7.30
HNV-12-M	1/2"	1/2"	4060	18.85
HNV-34-M	3/4"	3/4"	2610	31.10
HNV-1-M	1"	1"	2175	47.66

HYDRAULIC COUPLINGS

QUICK DISCONNECT

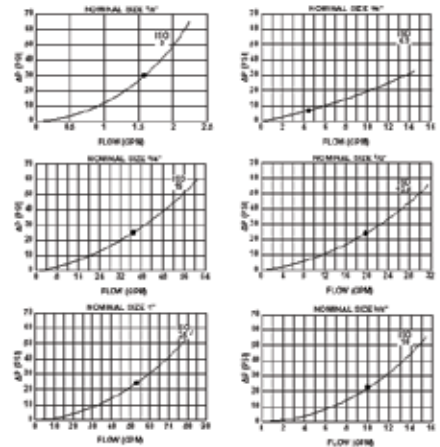
FLUSH FACE

Nominal Size	ISO Size	Maximum Working Pressure	Rated Flow	Minimum Burst-Plug	Minimum Burst-Coupler	Minimum Burst-Connected
1/8"	5	7250 PSI	1.6 GPM	43,500 PSI	29,000 PSI	43,500 PSI
1/4"	6.3	5000 PSI	4.8 GPM	28,275 PSI	23,925 PSI	33,350 PSI
3/8"	10	5000 PSI	10.0 GPM	29,200 PSI	21,025 PSI	20,590 PSI
1/2"	12.5	5000 PSI	19.8 GPM	25,375 PSI	21,750 PSI	23,295 PSI
5/8"	16	5000 PSI	26.4 GPM	24,255 PSI	21,750 PSI	23,200 PSI
3/4"	19	5000 PSI	37.0 GPM	20,580 PSI	20,580 PSI	20,300 PSI
1"	25	5000 PSI	52.8 GPM	20,580 PSI	20,580 PSI	21,750 PSI
1-1/2"	40	3625 PSI	89.5 GPM	14,500 PSI	14,500 PSI	14,500 PSI



FEMALE PIPE COUPLER

Part #	Body Size	NPT	Working PSI	List Price
FF-14-F	1/4"	1/4"	4400	80.59
FF-38-12-F	3/8"	1/2"	4350	64.91
FF-38-F	3/8"	3/8"	4350	80.59
FF-12-F	1/2"	1/2"	3650	80.59
FF-34-12-SAE-F	1/2"	3/4"	3675	163.31
FF-34-F	3/4"	3/4"	3650	125.94
FF-1-F	1"	1"	3675	163.27



PLUG

Part #	Body Size	NPT	Working PSI	List Price
FF-14-M	1/4"	1/4"	4400	31.29
FF-38-12-M	3/8"	1/2"	4350	34.01
FF-38-M	3/8"	3/8"	4350	34.74
FF-12-M	1/2"	1/2"	3650	34.74
FF-34-12-SAE-M	1/2"	3/4"	3675	87.57
FF-34-M	3/4"	3/4"	3650	54.15
FF-1-M	1"	1"	3675	116.64

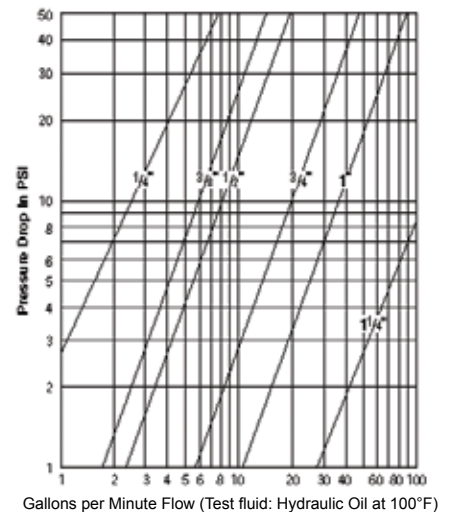
AG INTERCHANGE

Nominal Size	Rated Flow	Minimum Burst-Coupler	Minimum Burst-Plug	Minimum Burst-Connected
1/4"	6.08 GPM	27,550 PSI	21,170 PSI	22,040 PSI
3/8"	9.5 GPM	26,970 PSI	18,125 PSI	23,200 PSI
1/2"	11.3 GPM	18,850 PSI	15,370 PSI	16,820 PSI
3/4"	24.5 GPM	17,400 PSI	17,400 PSI	15,370 PSI
1"	27.5 GPM	16,820 PSI	14,500 PSI	14,790 PSI



FEMALE PIPE COUPLER

Part #	Body Size	NPT	Working PSI	List Price
NV-14-F	1/4"	1/4"	5075	24.08
NV-38-F	3/8"	3/8"	4550	35.69
NV-12-F	1/2"	1/2"	3625	30.10
NV-34-F	3/4"	3/4"	3625	71.29
NV-1-F	1"	1"	3335	107.35



PLUG

Part #	Body Size	NPT	Working PSI	List Price
NV-14-M	1/4"	1/4"	5075	11.61
NV-38-M	3/8"	3/8"	4550	19.92
NV-12-M	1/2"	1/2"	3625	13.64
NV-34-M	3/4"	3/4"	3625	36.64
NV-1-M	1"	1"	3335	36.64

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"	1.54
300-021	1/8"	2.31
300-022	1/4"	3.65
300-023	3/8"	4.90
300-024	1/2"	7.36
300-026	3/4"	14.70
300-028	1"	39.95

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
300-031	10-32 NF	16.50
300-032	1/8"	16.50
300-033	1/4"	16.77
300-034	3/8"	20.84
300-035	1/2"	26.68
300-036	3/4"	83.34
300-037	1"	110.02

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"	2.75
300-001	1/8"	2.19
300-002	1/4"	3.23
300-003	3/8"	3.98
300-004	1/2"	5.34
300-006	3/4"	14.87
300-008	1"	17.38

STAINLESS BREATHER VENT

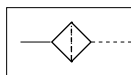
Materials:

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"	9.11
300-015	1/4"	14.23
300-017	3/8"	19.30
300-018	1/2"	27.02
300-019	3/4"	65.46
300-007	1"	84.21

PRESSURE SNUBBER

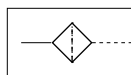
Materials:

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	14.26
28-353	1/4"	30 um	14.76
28-352	1/4"	25 um	13.59
28-351	1/4"	20 um	14.76
28-350	1/4"	10 um	13.29

Part #	Size	Porosity	List Price
28-359	3/8"	40 um	14.76
28-358	3/8"	30 um	14.26
28-357	3/8"	25 um	13.58
28-356	3/8"	20 um	14.76
28-355	3/8"	10 um	14.76

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"	8.22
940-801	1/4"	9.66
940-803	3/8"	12.44
940-804	1/2"	17.62
940-805	3/4"	32.52
940-806	1"	52.83

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"	43.93
940-811	1/4"	48.26
940-812	3/8"	52.78
940-813	1/2"	69.10
940-814	3/4"	99.14
940-815	1"	134.90

MUFFLER W/ FLOW ADJUSTMENT

Materials:

Body: Brass

Element: Sintered Bronze

Max Operating Pressure: 300PSI

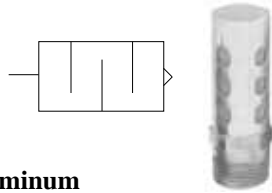
Temperature: 35° to 300°F



Part #	Size	List Price
28-379	1/8"	6.49
28-380	1/4"	8.53
28-381	3/8"	11.31
28-382	1/2"	13.27

PNEUMATICS

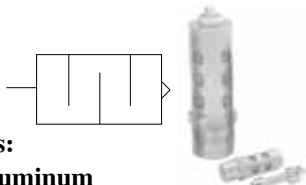
HIGH FLOW ALUMINUM MUFFLER



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"	12.40
940-823	1/4"	5.77
940-824	3/8"	7.83
940-825	1/2"	9.15
940-826	3/4"	16.47
940-827	1"	19.39

SPEED CONTROL ALUMINUM MUFFLER



Materials:
Body: Aluminum
Element: 50 Mesh Stainless Steel
Max Operating Pressure: 300PSI
Temperature: 35° to 160°F

Part #	Size	List Price
940-816	1/8"	7.88
940-817	1/4"	91.11
940-818	3/8"	11.80
940-819	1/2"	19.10
940-820	3/4"	27.26
940-821	1"	30.55

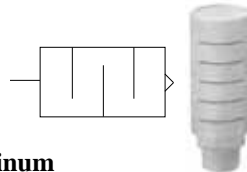
HIGH FLOW STEEL MUFFLER



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"	5.55
28-374	1/4"	6.00
28-375	3/8"	8.40
28-376	1/2"	11.38
28-377	3/4"	18.38
28-378	1"	21.57

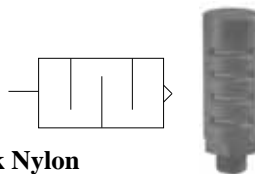
ALUMINUM HIGH FLOW MUFFLER



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"	15.82
28-368	1/4"	15.82
28-369	3/8"	23.16
28-370	1/2"	23.16
28-371	3/4"	47.13
28-372	1"	47.13

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"	6.89
28-364	1/4"	6.56
28-365	3/8"	13.66
28-366	1/2"	13.66

NIPPLE INLINE FILTER

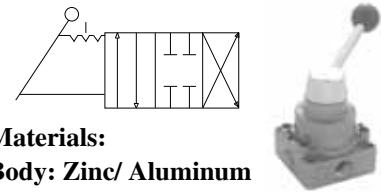


Materials:
Body: Brass
Element: 40 Micron Sintered Bronze
Max Operating Pressure: 300PSI
Temperature: 35° to 300°F

Part #	Size	List Price
940-845	1/8"	12.88
940-846	1/4"	12.31
940-847	3/8"	19.25
940-848	1/2"	18.53

PNEUMATICS

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

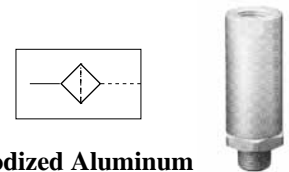
Body: Zinc

Part #	Size	List Price
28-360	1/4"	138.48

Body: Aluminum

28-361	3/8"	130.87
28-362	1/2"	150.53

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"	16.85
940-841	1/4"	16.85
940-842	3/8"	26.67
940-843	1/2"	62.34
940-844	3/4"	62.34

If the lessons of history teach us anything it is that nobody learns the lessons that history teaches us.

- Anon.

MANIFOLDS

PNEUMATIC ACCESSORIES

Materials:

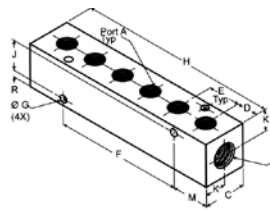
Aluminum with black anodizing for corrosion resistance.

Specifications:

Max Operating Pressure: 1000PSI

Temperature: -10° to 200°F

Media: Air and liquids compatible with materials of construction.



RIGHT ANGLE MANIFOLD

THREADED PORTS

Part #	Ports	List Price	A NPT	B NPT	C	D	E	F	G	H	J	K	M	R	Part #	List Price
28-448	2	36.46	1/8"	1/4"	1.00	0.50	0.75	N/A	0.17	1.75	0.70	0.50	0.88	0.15	28-448R	36.46
28-449	3	40.90						0.75		2.50					28-449R	40.90
28-450	4	17.52						1.5		3.25					28-450R	61.66
28-451	5	48.13						2.25		4.00					28-451R	48.13
28-452	6	46.95						3.00		4.75					28-452R	45.21
28-453	7	53.75						3.75		5.50					28-453R	65.28
28-454	8	56.53						4.50		6.25					28-454R	45.21
28-455	9	58.61						5.25		7.00					28-455R	48.61
28-456	10	23.60						6.00		7.75					28-456R	67.51
28-457	2	15.97	1/4"	3/8"	1.25	0.63	0.88	N/A	0.20	2.13	0.89	0.63	1.06	0.18	28-457R	46.20
28-458	3	17.39						0.88		3.00					28-458R	49.66
28-459	4	18.65						1.75		3.88					28-459R	70.13
28-460	5	20.07						2.63		4.75					28-460R	45.08
28-461	6	21.35						3.50		5.63					28-461R	52.86
28-462	7	22.61						4.38		6.50					28-462R	75.08
28-463	8	23.88						5.25		7.38					28-463R	51.60
28-464	9	24.88						6.13		8.25					28-464R	55.93
28-465	10	25.72						7.00		9.13					28-465R	84.34
28-466	2	61.26	3/8"	3/8"	1.25	1.00	1.13	N/A	0.20	3.13	0.89	0.63	1.56	0.18	28-466R	54.26
28-467	3	26.29						1.13		4.25					28-467R	60.29
28-468	4	27.71						2.25		5.38					28-468R	103.24
28-469	5	28.97						3.38		6.50					28-469R	57.45
28-470	6	30.53						4.50		7.63					28-470R	62.61
28-471	7	92.95						5.63		8.75					28-471R	105.55
28-472	8	101.14						6.75		9.88					28-472R	58.14
28-473	9	103.40						7.88		N/A					28-473R	63.53
28-474	10	120.98						9.00		N/A					28-474R	107.93

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	8.93
320-121	3/8" Inlet	25.45
320-122	1/2" Inlet	38.22
three 1/4" Outlets		

SAFETY BLOW GUN

- N/P steel handle with plastic sleeve
 - Brass Valve
 - Zinc body
 - Aluminum nozzle
- 20430AD S148
5114 D204-30
51-124 6475
401



1/8" Outlet

Part #	Size	List Price
320-050	1/4" Inlet	7.67

PISTOL GRIP BLO-GUN

Material

- Body: POM (engineering plastic)
- Nozzle: nickel plated carbon steel

Features

- Simple construction, economic
- Global thread connection
- Durable and versatile applications
- 4 inch nozzle

150 PSI



Part #	Size	List Price
320-035	1/4"	16.21

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	10.56

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	4.88

PNEUMATIC ACCESSORIES

PNEUMATICS

MULTI-PURPOSE AIR VENT



705

Part #	Size	List Price
46-048	1/8"	2.63

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"	2.88

INFLATOR



Part #	Size	List Price
32-783	3/16"	3.17

360° Turning Swivel Fitting

1/4" Basic size
Industrial Interchange Plug

•360° Turning
•Swivels



Part #	Size	List Price
320-065	1/4"	13.00

SWIVEL FITTING

•360° Turning
•Swivels

Male NPT x Female NPT



Part #	Size	List Price
320-061	1/4"	14.99

AIR CHUCKS

HEX BALL FOOT CHUCK



Part #	Size	List Price
46-600	1/4 FPT Live	3.07

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



Part #	Size	List Price
46-607	1/4 ID Live Air	3.14

DUAL FOOT CHUCKS

6999	DTC-02	99941
693		50-065
108		6569



Part #	List Price
320-000	25.30

ANGLE CHUCK



Part #	List Price
320-005	9.53

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 CORD

Thread -
.302 x 32



7/16" Hex

Part #	Size	List Price
46-620	REGULAR	5.83

1/8" NPT 1.207" LONG SPRING CORD

7/16" Hex



Part #	Size	List Price
46-621	REGULAR	5.24

1/4" NPT 1" LONG SPRING CORD

9/16" Hex



Part #	Size	List Price
46-622	REGULAR	7.45

TANK VALVE ACCESSORIES

BLACK PLASTIC CAP

No Gasket



Part #	List Price
46-630	0.16

SHORT NICKEL PLATED DOME CAP



Dome skirted
type

Part #	List Price
46-631	1.04

FILTERS

- Quick release bayonet bowl.
- Optional service life indicator turns from green to red when the filter element needs to be replaced.

TECHNICAL DATA

Fluid:

Compressed Air

Operating Pressure:

Transparent bowl: 150 psig

Metal bowl: 250 psig

Automatic drain: 150 psig

Operating temperature*:

Transparent bowl: -30° to 150°F

Metal bowl: -30° to 150°F

*Air supply must be dry enough to avoid ice formation at temperatures below 35°F.

MATERIALS

F72G

Body: zinc

Transparent Bowl: polycarbonate

Element: sintered polypropylene

Elastomers: neoprene and nitrile

F73G & F74G

Body: aluminum

Metal bowl: aluminum

Metal bowl liquid level indicator lens:
transparent nylon

Element: sintered polypropylene

Manual Drain Available



Part #	Size	Description	List Price
F72G	1/4"	General purpose filter	126.64
F73G	3/8"	General purpose filter	205.60
F74G	1/2"	General purpose filter	253.55

REGULATORS

- Full flow gauge ports.
- Balanced valve design minimizes effect of variation in the inlet pressure on the outlet pressure.
- Standard relieving models allow reduction of downstream pressure when the system is dead-ended.

TECHNICAL DATA

Fluid:

Compressed Air

Maximum Pressure:

300 psig (20 bar)

Operating temperature*:

-30° to 175°F (-34 to 80°C)

*Air supply must be dry enough to avoid ice formation at temperatures below 35°F.

Typical flow with 150 psig (10 bar) inlet pressure, 90 psig (6.3 bar) set pressure and 15 psig (1 bar) droop from set: 144 scfm (68 dm³/s).

MATERIALS

R72G

Body: zinc

Bonnet: acetal

Valve: brass

Elastomers: nitrile

Bottom plug: acetal

R73G & R74G

Body: aluminum

Bonnet: aluminum or zinc

Elastomers: nitrile

Bottom plug: acetal



These products allow inlet pressure to pass directly through the body. The outlet port is at right angles to the inlet. This then allows units to be clamped together in a bank, meaning numerous regulated pressures can be obtained from a single supply. R72M pressure regulators are ideal for control cabinet installations where neat, compact assemblies are required.

Part #	Size	Description	List Price
R72G	1/4"	Regulator	92.49
R73G	3/8"	Regulator	130.19
R74G	1/2"	Regulator	180.70

LUBRICATORS

- Quick release bayonet bowl.
- Flow sensor provides a nearly constant oil/air ratio over a wide range of flows.
- Highly visible, prismatic liquid level indicator lens on metal bowls.
- All round (360°) visibility of sight-feed dome for ease of drip rate setting.
- Micro-fog.

TECHNICAL DATA

Fluid:

Compressed Air

Maximum Pressure:

300 psig (20 bar)

Operating temperature*:

-30° to 175°F (-34 to 80°C)

*Air supply must be dry enough to avoid ice formation at temperatures below 35°F.

Typical flow with 150 psig (10 bar) inlet pressure, 90 psig (6.3 bar) set pressure and 15 psig (1 bar) droop from set: 144 scfm (68 dm³/s).



MATERIALS

L72M

Body: zinc

Bonnet: acetal

Valve: brass

Elastomers: nitrile

Bottom plug: acetal

L72M

Body: zinc

Transparent bowl: polycarbonate

Sight-feeding dome: transparent nylon

Elastomers: neoprene, nitrile & Geolast.

L73M & L74M

Body: aluminum

Metal bowl: aluminum

Liquid level indicator lens metal bowl: transparent nylon

Sight-feed dome: transparent nylon

Elastomers: neoprene & nitrile.

Part #	Size	Description	List Price
L72M	1/4"	Lubricator	96.15
L73M	3/8"	Lubricator	157.20
L74M	1/2"	Lubricator	197.61

FILTER/REGULATOR COMBOS

- High efficiency water and particle removal.
- Quick release bayonet bowl.
- Push to lock adjusting knob with tamper resistant accessory.

TECHNICAL DATA

Fluid:

Compressed Air

Maximum Pressure:

Metal bowl: 250 psig (17 bar)

B72G with metal bowl & auto drain: 150 psig (10 bar)

Operating temperature*:

Metal bowl: -30° to 175°F (-34 to 80°C)

*Air supply must be dry enough to avoid ice formation at temperatures below 35°F.



MATERIALS

B72G

Body: zinc

Bonnet: acetal

Valve: brass

Metal bowl: zinc

Liquid level indicator lens (metal bowl) : transparent nylon

Element: sintered polypropylene

Elastomers: neoprene & nitrile

B73G & B74G

Body & bonnet: aluminum

Metal bowl: aluminum

Liquid level indicator lens: transparent nylon

Element: sintered polypropylene

Elastomers: neoprene & nitrile

Part #	Size	Description	List Price
B72G	1/4"	Filter/ Regulator Combo	215.75
B73G	3/8"	Filter/ Regulator Combo	319.15
B74G	1/2"	Filter/ Regulator Combo	368.25

WATER PRESSURE REGULATOR

- Non-relieving models.
- Brass body, corrosion resistant construction.
- Balanced valve minimizes effects of inlet pressure variations on outlet pressure.
- T-bar adjustment standard.
- Full flow gauge ports can be used as auxiliary outlets.
- Panel mounting nut standard.
- Can be disassembled without the use of tools or removal from the air or water line.

MATERIALS

Body: Brass

Bonnet: Aluminum

Valve: brass

Bottom plug: brass

Elastomers: nitrile



Part #	Size	Description	List Price
R433	3/8"	Water Regulator w/o gauge	237.05
R434	1/2"	Water Regulator with gauge	316.26

Miniatures

Miniature Series 07 General Purpose Filter - 1/8"

- Compact design.
- Protects air operated devices by removing liquid and solid contaminants.
- Screw-on bowl reduces maintenance time
- Can be disassembled without the use of tools or removal from the air line.

TECHNICAL DATA

Fluid: Compressed Air

Maximum Pressure: Transparent bowl: 150 psig (10 bar)

Operating temperature: Transparent bowl: -30° to 125°F (-34 to 50°C)

Particle removal: 5 µm or 40 µm filter element

Air quality: Within ISO 8573-1, Class 3 and Class 5 (particulates)

MATERIALS

Body: zinc

Transparent bowl: polycarbonate

Element: polycarbonate

Elastomers: neoprene & nitrile



Miniature General Purpose Regulators - R07

- Full flow gauge ports.
- Snap action knob locks pressure setting when pushed in.
- Standard relieving models allow reduction of outlet pressure even when the system is dead-ended.

TECHNICAL DATA

Fluid: Compressed Air

Maximum Pressure: 300 psig (20 bar)

Operating temperature*: -34° to 150°F (-35 to 65°C)

*Air supply must be dry enough to avoid ice formation at temperatures below 35°F.

MATERIALS

Body: zinc

Bonnet: acetal

Valve seat: acetal

Elastomers: nitrile



Ported Micro-Fog Lubricators - L07 Lubricators

- All around (360°) visibility of the sight-feed dome simplifies installation and adjustment.
- Screw-on bowl reduces maintenance time.
- Can be disassembled without the use of tools or removal from the air line.

TECHNICAL DATA

Fluid: Compressed Air

Maximum Pressure: Transparent bowl: 150 psig (10 bar)

Operating temperature: Transparent bowl: -0° to 125°F (-20 to 50°C)

Start point (ie minimum flow required for lubricator operation):

0.5 scfm (0.24 dm³/s) at 90 psig (6.3 bar) inlet pressure.

Nominal bowl size: 1 fluid ounce (31 mil).

Drain connection: Will fit 1/8-27 and 1/8-28 pipe thread.

MATERIALS

Body: zinc

Transparent bowl: polycarbonate

Sight-feed dome: Transparent nylon

Elastomers: neoprene & nitrile



Ported Filter/ Regulators - B07

- Full flow gauge ports.
- High efficiency oil and particle removal.
- Excellent flow and regulation characteristics.

TECHNICAL DATA

Fluid: Compressed Air

Maximum Pressure: Transparent bowl: 150 psig (10 bar)

Operating temperature*: Transparent bowl: -30° to 125°F (-34 to 50°C)

*Air supply must be dry enough to avoid ice formation at temperatures below 35°F.

MATERIALS

Body: zinc

Bonnet: acetal

Valve seat: acetal

Transparent bowl: polycarbonate

Element: sintered polycarbonate

Elastomers: nitrile



Part #	Size	Description	List Price
F07	1/8"	Mini Filter	74.00
R07	1/8"	Mini Regulator	81.58
B07	1/8"	Mini Filter/ Regulator combo	147.30
L07	1/8"	Mini Lubricator	96.80



INTEGRAL FILTER REGULATOR

- Combines air filter and pressure regulator into one compact unit.
- Non-rising, push-lock pressure adjustment knob provides easy hand adjustment at any pressure.
- Adjustment knob can be removed to provide tamper-resistance.
- Aluminum bowl guard standard.
- 20 micron sintered bronze filter.
- Pressure gauge and auto-drain are included.
- Convenient see-through bowl guard.
- Auto-drain will automatically dispense contaminants collected by the filter, prevents overflow. Because manual draining of filters is often overlooked in the normal industrial environment.
- Float type auto-drain has built-in filter screen to prevent clogging Internal float-type auto-drain.

TECHNICAL DATA

Model Number		I280	I380	I480
Port Size	NPTF	1/4"	3/8"	1/2"
Max. Air supply		210.0 PSI (15 kgf/cm ²)		
Max. Operating pressure		140 PSI (9.9 kgf/cm ²)		
Regulating range		7.0~120.0 PSI (0.5~8.5 kgf/cm ²)		
Pressure guage port size	NPTF	1/8"	1/4"	
Auto-drain port size	NPT	1/8"M	1/8"F	
Nominal filtration rating		20UM		
Construction		Relieving Type		
Operating temperature range		41°~140° F(5~60°C)		
Material	Body	Aluminum		
	Bonnet	Poly Aceta	Diecast Aluminum	
	Filter Element	Sintered Bronze		
	Bowl	Polycarbonate		
	Bowl Guard	Aluminum		
Weight	LBS	1.5	3	3
Included accessory (standard)		Auto drain, Pressure gauge, Mounting bracket		



Part #	Size	Description	List Price
I280	1/4"	Integral Filter Regulator	152.15
I380	3/8"	Integral Filter Regulator	165.15
I480	1/2"	Integral Filter Regulator	165.15

PARTS & ACCESSORIES

Part #	Description	List Price
MB280	Mounting Bracket (I280)	6.30
MB380	Mounting Bracket (I280/480)	6.30
RN280	Retaining Nut (I280)	5.50
RN380	Retaining Nut (I280/480)	5.50
G280	Pressure Gauge (I280)	15.00
G380	Pressure Gauge (I280/480)	15.75
RF280	Replacement Filter Element (I280)	21.65
RF380	Replacement Filter Element (I280/480)	21.65

Part #	Description	List Price
B280	Replacement Bowl (I280)	16.80
B380	Replacement Bowl (I380)	16.80
B480	Replacement Bowl (I480)	21.00
BG280	Replacement Bowl & Guard (I280)	25.55
BG380	Replacement Bowl & Guard (I380)	25.55
BG480	Replacement Bowl & Guard (I480)	29.75
BGA280	Replacement Bowl, Guard, Auto Drain (I280)	77.00
BGA380	Replacement Bowl, Guard, Auto Drain (I380)	77.00
BGA480	Replacement Bowl, Guard, Auto Drain (I480)	82.25

ACCESSORIES

2/2-way Solenoid Valves

Indirectly actuated Diaphragm design

- Normally Closed
- Pressure Range: See table
- Temperature: Fluid max. 194°F (+90 °C)
Ambient max. 122 °F (+50 °C)
- Material: Body BRASS
Seat Seal NBR (Standard)

NEW

Part #	Port Size NPT	Operating Pressure		List Price
		psi	bar	
83-001	1/4	1.45 - 232	0.1 - 16	219.40
83-002	1/2	1.45 - 232	0.1 - 16	225.90
83-003	3/4	1.45 - 232	0.1 - 16	381.90
83-004	1	1.45 - 232	0.1 - 16	398.15
83-005	1-1/2	1.45 - 145	0.1 - 10	624.00
83-006	2	1.45 - 145	0.1 - 10	754.00



2/2-way Solenoid Valves

with forced lifting Diaphragm design

- Normally Closed
- High flow rate
- Clear design
- Compact solenoid with integrated core tube
- Pressure Range: 0 - 145psi (10 bar)
- Temperature: Fluid max. 194°F (+90 °C)
Ambient max. 122 °F (+50 °C)
- Material: Body BRASS
Seat Seal NBR (Standard)

Part #	Port Size NPT	Length (End to End)		List Price
		in.	mm	
83-100	1/2	2.36	60	222.65



2/2-way Solenoid Valves

with forced lifting Diaphragm design

- Normally Closed
- Pressure Range: 0 - 145 psi (10 bar)
- Temperature: Fluid max. 194°F (+90 °C)
Ambient max. 122 °F (+50 °C)
- Material: Body BRASS
Seat Seal NBR (Standard)

Part #	Port Size NPT	List Price
83-201	1/4	307.15
83-202	1/2	316.90
83-203	3/4	451.75
83-204	1	474.50
83-205	1-1/2	1158.65
83-206	2	1353.65



**DUAL ANGLE-FOOT TRUCK
PENCIL GAUGE**



High pressure 20-120 PSI, in 2lb unit

Part #	List Price
320-023	24.38

**DUAL STRAIGHT-FOOT
PENCIL GAUGE**



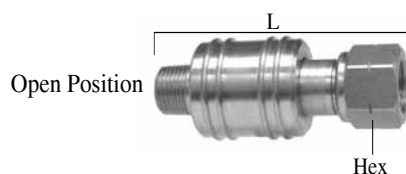
Identical to above except has straight chuck with 30° reverse angle chuck.

Part #	List Price
320-027	63.12

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"	8.43

STANDARD DRY GAUGES

STEEL CASE



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

**2" FACE
1/4" LOWER MOUNT**

Part #	PSI	List Price
80-001	0-15	15.97
80-002	0-30	12.78
80-003	0-60	12.78
80-004	0-100	12.78
80-005	0-160	12.78
80-006	0-200	12.78
80-007	0-300	12.78



**2-1/2" FACE
1/4" LOWER MOUNT**

Part #	PSI	List Price
80-031	0-15	23.26
80-032	0-30	16.78
80-033	0-60	16.78
80-034	0-100	17.31
80-035	0-160	17.89
80-036	0-200	16.78

Save 5% by ordering online at
www.midlandindustrial.com

LIQUID FILLED GAUGES

STAINLESS CASE

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.



- 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

**2-1/2" FACE
1/4" LOWER MOUNT**

Part #	PSI	List Price
80-061	0-15	47.92
80-062	0-30	47.92
80-063	0-60	47.92
80-064	0-100	47.92
80-065	0-160	47.92
80-066	0-200	47.92
80-067	0-300	47.92
80-068	0-400	47.92
80-069	0-600	47.92
80-100	0-1000	47.92
80-101	0-1500	55.90
80-102	0-2000	55.90
80-103	0-3000	55.90
80-104	0-5000	63.89
80-080	30-0 Vacuum	55.90

**2-1/2" FACE
1/4" CENTER BACK MOUNT**

Part #	PSI	List Price
80-201	0-15	51.11
80-202	0-30	47.92

1-1/2" & 2" ABS also available

**4" FACE
1/4" LOWER MOUNT**

Part #	PSI	List Price
80-463	0-100	127.78

Other Gauges available upon request...Just Ask!

ACCESSORIES

TEFLON TAPE

Chemical Properties: Min. of 99% Poly-tetrafluoroethylene

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"	0.79
982-108	1/2" x 520"	0.95
982-109	3/4" x 260"	1.52
982-110	3/4" x 520"	1.92

POP OUT COVERED SPOOL

PREMIUM GRADE DUCT TAPE

200 MPH Tape

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

PREMIUM GRADE DUCT TAPE



Part #	List Price
990-128	18.41

PRINTED CAUTION TAPE

PRINTED CAUTION TAPE



Part #	Size	List Price
990-143	3" x 300 ft long	19.98

ELECTRICAL TAPE

- 7 mil vinyl
- UL approved

ELECTRICAL TAPE



Part #	Size	List Price
990-157	3/4" x 60 ft long	3.00

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	26.47
980-101	72 Scrubs™/container	51.32

ACCESSORIES

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"	4.00
990-541	1/2"	4.00
990-542	3/4"	4.00
990-543	1"	4.76

If you don't make mistakes, you're not working on hard enough problems. And that's a big mistake.

- Frank Wilczek

The bad news is time flies. The good news is you're the pilot.

- Michael Althsuler

You can tell whether a man is clever by his answers. You can tell whether a man is wise by his questions.

- Naguib Mahfouz

CAM & GROOVE

CAM & GROOVE



TYPE A

TYPE B

TYPE C

TYPE D

TYPE E

TYPE F

TYPE DC

TYPE DP

Aluminum

Type	A		B		C		D		E		F		DC		DP		Type
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Size
3/4"	61-911	7.92	61-921	21.37	61-931	16.96	61-941	18.36	61-951	9.95	61-961	8.90	61-971	16.63	61-981	8.07	3/4"
1"	61-912	8.70	61-922	21.62	61-932	18.00	61-942	22.21	61-952	8.78	61-962	11.08	61-972	18.62	61-982	8.85	1"
1-1/4"	61-913	10.90	61-923	22.85	61-933	23.18	61-943	23.55	61-953	12.52	61-963	14.19	61-973	19.17	61-983	10.42	1-1/4"
1-1/2"	61-914	10.30	61-924	23.34	61-934	20.53	61-944	22.59	61-954	9.80	61-964	11.51	61-974	19.93	61-984	8.73	1-1/2"
2"	61-915	10.15	61-925	31.91	61-935	24.26	61-945	25.67	61-955	14.01	61-965	12.93	61-975	22.62	61-985	10.38	2"
2-1/2"	61-916	18.47	61-926	41.63	61-936	36.50	61-946	36.70	61-956	25.28	61-966	27.42	61-976	28.25	61-986	19.06	2-1/2"
3"	61-917	21.75	61-927	59.63	61-937	41.14	61-947	39.69	61-957	27.21	61-967	31.54	61-977	33.69	61-987	18.94	3"
4"	61-918	33.96	61-928	143.68	61-938	57.50	61-948	60.23	61-958	51.58	61-968	39.52	61-978	42.75	61-988	26.28	4"

316 Stainless Steel

Type	A		B		C		D		E		F		DC		DP		Type
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Size
3/4"	63-911	26.57	63-921	41.33	63-931	37.63	63-941	43.36	63-951	23.34	63-961	29.01	63-971	34.31	63-981	18.30	3/4"
1"	63-912	32.97	63-922	58.41	63-932	52.60	63-942	60.94	63-952	33.21	63-962	40.51	63-972	44.34	63-982	28.26	1"
1-1/4"	63-913	46.11	63-923	79.33	63-933	67.16	63-943	74.10	63-953	49.41	63-963	62.73	63-973	59.68	63-983	36.75	1-1/4"
1-1/2"	63-914	50.50	63-924	89.60	63-934	81.38	63-944	73.38	63-954	66.25	63-964	77.98	63-974	66.02	63-984	39.24	1-1/2"
2"	63-915	56.51	63-925	92.49	63-935	100.91	63-945	95.29	63-955	77.29	63-965	117.48	63-975	82.07	63-985	50.03	2"
2-1/2"	63-916	96.82	63-926	139.41	63-936	148.68	63-946	141.59	63-956	106.21	63-966	163.60	63-976	111.95	63-986	74.29	2-1/2"
3"	63-917	116.46	63-927	170.07	63-937	181.87	63-947	193.96	63-957	160.92	63-967	174.50	63-977	145.61	63-987	86.36	3"
4"	63-918	173.02	63-928	251.17	63-938	305.25	63-948	271.65	63-958	248.47	63-968	254.74	63-978	182.05	63-988	131.57	4"

Brass

Type	A		B		C		D		E		F		DC		DP		Type
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Size
3/4"	44-911	17.10	44-921	34.16	44-931	32.52	44-941	30.92	44-951	16.12	44-961	15.95	44-971	28.80	44-981	16.00	3/4"
1"	44-912	21.22	44-922	41.34	44-932	40.73	44-942	42.16	44-952	26.86	44-962	27.32	44-972	30.39	44-982	17.05	1"
1-1/4"	44-913	21.68	44-923	38.48	44-933	51.29	44-943	38.48	44-953	33.49	44-963	31.41	44-973	38.08	44-983	19.81	1-1/4"
1-1/2"	44-914	27.85	44-924	50.75	44-934	41.70	44-944	58.29	44-954	35.74	44-964	43.03	44-974	40.03	44-984	18.34	1-1/2"
2"	44-915	34.82	44-925	51.08	44-935	61.71	44-945	74.36	44-955	52.16	44-965	58.64	44-975	42.44	44-985	27.06	2"
2-1/2"	44-916	48.24	44-926	76.74	44-936	73.40	44-946	61.50	44-956	54.33	44-966	56.70	44-976	57.50	44-986	36.72	2-1/2"
3"	44-917	53.94	44-927	97.50	44-937	121.83	44-947	95.73	44-957	79.61	44-967	96.54	44-977	71.27	44-987	43.27	3"
4"	44-918	95.35	44-928	132.69	44-938	148.40	44-948	150.28	44-958	127.54	44-968	119.85	44-978	115.30	44-988	68.23	4"

Polypropylene

Type	A		B		C		D		E		F		DC		DP		Type
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price	Size
1/2"	35-910	6.44	35-920	18.55	35-930	17.92	35-940	17.92	35-950	7.83	35-960	7.83	35-970	16.92	35-980	7.65	1/2"
3/4"	35-911	7.04	35-921	17.07	35-931	17.07	35-941	19.53	35-951	7.83	35-961	8.56	35-971	17.77	35-981	7.39	3/4"
1"	35-912	7.39	35-922	19.27	35-932	18.07	35-942	18.97	35-952	9.63	35-962	8.60	35-972	20.19	35-982	7.48	1"
1-1/4"	35-913	8.51	35-923	21.50	35-933	20.77	35-943	20.77	35-953	9.96	35-963	9.17	35-973	20.90	35-983	8.90	1-1/4"
1-1/2"	35-914	8.04	35-924	23.08	35-934	20.61	35-944	19.75	35-954	9.83	35-964	8.79	35-974	23.31	35-984	9.21	1-1/2"
2"	35-915	9.63	35-925	27.61	35-935	27.61	35-945	27.61	35-955	11.80	35-965	12.22	35-975	25.96	35-985	10.85	2"
3"	35-917	26.55	35-927	50.89	35-937	49.16	35-947	49.16	35-957	33.23	35-967	34.40	35-977	49.16	35-987	27.49	3"

HOSE ACCESSORIES

UNIVERSAL COUPLINGS

MALE NPT ENDS



* Safety clip included

Part #	Size	List Price
66005	3/8"	6.43
66006	1/2"	5.35
66007	3/4"	5.68
66008	1"	6.38

HOSE END



* Safety clip included

Part #	Size	List Price
66001	3/8"	7.46
66002	1/2"	4.85
66003	3/4"	4.90
66004	1"	6.43

WASHER



Part #	List Price
66000	0.52

FEMALE NPT ENDS



* Safety clip included

Part #	Size	List Price
66009	3/8"	6.43
66010	1/2"	5.35
66011	3/4"	5.68
66012	1"	6.38

TRIPLE CONNECTIONS



Part #	List Price
66013	16.73

The best car safety device is a rear-view mirror with a cop in it.

- Dudley Moore

HOSE ACCESSORIES

GROUND JOINT COUPLING

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"	35.00
73-004	3/4"	37.20
73-005	1"	37.65
73-006	1-1/4"	64.50
73-007	1-1/2"	64.50
73-008	2"	88.95
73-009	2-1/2"	241.05
73-010	3"	255.70
73-011	4"	505.15

Hose Stem Only



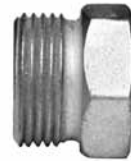
Part #	Size	List Price
73-023	1/2"	9.95
73-024	3/4"	12.10
73-025	1"	12.15
73-026	1-1/4"	20.65
73-027	1-1/2"	22.40
73-028	2"	28.90
73-029	2-1/2"	78.05
73-030	3"	24.52
73-031	4"	181.65

Wing Nut Only



Part #	Size	List Price
73-033	1/2"	11.30
73-035	1"	14.10
73-036	1-1/4"	23.90
73-037	1-1/2"	25.40
73-038	2"	32.90
73-039	2-1/2"	89.20
73-040	3"	94.55
73-041	4"	207.60

Female Spud Only



Part #	Size	List Price
73-063	1/2"	16.60
73-064	3/4"	20.10
73-065	1"	20.35
73-066	1-1/4"	34.95
73-067	1-1/2"	37.00
73-068	2"	48.10
73-069	2-1/2"	126.65
73-070	3"	138.35
73-071	4"	303.60

Male Pipe Stem Only (NPT)



Part #	Size	List Price
73-043	1/2"	7.90
73-044	3/4"	12.35
73-045	1"	19.00
73-046	1-1/4"	17.30
73-047	1-1/2"	20.65
73-048	2"	33.80
73-049	2-1/2"	56.80
73-050	3"	70.70
73-051	4"	123.35

2, 4, 6 Bolt Clamps



Part #	Size	List Price
73-056	3/4"	8.35
73-057	1"	14.35
73-058	1-1/2"	27.45
73-059	2"	35.25
73-060	3"	79.95

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.

HYDRANT ADAPTERS - BRASS


Part #	Description	List Price
444-011	1-1/2" NST x 3/4" GHT	44.83
444-000	2-1/2" NST x 3/4" GHT	44.83
444-001	2-1/2" NST x 3/4" NPT	44.83
444-003	2-1/2" NST x 1" NPSH	44.83
444-002	2-1/2" NST x 1" NPT	44.83
444-004	2-1/2" NST x 1-1/2" NPSH	44.83
444-005	2-1/2" NST x 1-1/2" NPT	44.83
444-007	2-1/2" NST x 2" NPSH	51.76
444-008	2-1/2" NST x 2" NPT	51.76
444-006	2-1/2" NST x 1-1/2" NST	44.83
444-009	3" NPSH x 2-1/2" NST	159.71
444-010	3" NST x 2-1/2" NST	159.71

FEMALE TO MALE HEX ADAPTER - BRASS


Part #	Description	List Price
444-021	1-1/2" NST x 1-1/2" NPSH	43.51
444-023	1-1/2" NPT x 1-1/2" NPSH	43.51
444-027	2-1/2" NST x 2-1/2" NPSH	82.63
444-028	2-1/2" NPT x 2-1/2" NPSH	82.63
444-024	1-1/2" NPSH x 1-1/2" NST	44.83
444-020	1-1/2" NST x 1-1/2" NPT	40.39
444-026	2-1/2" NST x 2-1/2" NPT	88.74

DOUBLE MALE HEX NIPPLE - BRASS


Part #	Description	List Price
444-042	1-1/2" NPT x 1-1/2" NPSH	40.39
444-047	2-1/2" NPT x 2-1/2" NPSH	84.65
444-040	1-1/2" NPT x 1-1/2" NST	40.39
444-048	2" NPT x 2-1/2" NST	96.76
444-045	2-1/2" NPT x 2-1/2" NST	78.88
444-049	3" NPT x 2-1/2" NST	165.83

DOUBLE FEMALE SWIVEL - BRASS


Part #	Description	List Price
444-100	1-1/2" NPT x 1-1/2" NPSH	144.37
444-101	2-1/2" NPT x 2-1/2" NPSH	283.48
444-102	1-1/2" NPT x 1-1/2" NST	144.37
444-103	2" NPT x 2-1/2" NST	283.48
444-104	2-1/2" NPT x 2-1/2" NST	144.37
444-105	3" NPT x 2-1/2" NST	283.48

MALE SWIVEL ADAPTER - BRASS


Part #	Description Female x Male	List Price
444-110	1-1/2" NST x 1-1/2" NPT	164.45
444-111	2-1/2" NST x 2" NPT	252.44
444-112	2-1/2" NST x 2-1/2" NPT	191.22
444-113	2-1/2" NST x 3" NPT	317.06

FEMALE SWIVEL ADAPTER - BRASS


Part #	Description	List Price
444-120	2-1/2" NST x 2-1/2" NPT	206.45
444-121	2-1/2" NST x 3" NPT	247.13

DOUBLE MALE - BRASS


Part #	Description	List Price
444-130	1-1/2" NPSH x 1-1/2" NPSH	72.24
444-131	2-1/2" NPSH x 2-1/2" NPSH	134.27
444-132	1-1/2" NST x 1-1/2" NST	72.24
444-133	2-1/2" NST x 2-1/2" NST	134.27

CAP - BRASS


Part #	Description	List Price
444-061	1-1/2" NPSH	41.08
444-060	1-1/2" NST	41.08
444-062	2-1/2" NST	59.49

PLUG AND CHAIN - BRASS


Part #	Description	List Price
444-071	1-1/2" NST	67.51
444-072	2-1/2" NST	96.07

HOSE FITTINGS FOR PLASTIC PIPE

BRONZE INSERT FITTINGS

150 PSI Genuine red brass
- for plastic pipe
HEX MALE ADAPTERS



(Barb x Male Pipe)

Part #	Hose Size	List Price
973-927	1" x 1"	26.68
973-930	1" x 1-1/4"	23.32
973-928	1-1/4" x 1-1/4"	25.10
973-929	1-1/4" x 1"	26.22
973-948	1-1/2" x 1-1/2"	33.10
973-949	2" x 2"	49.09

BRONZE TEES ALL BARB



Part #	Size	List Price
973-965	3/4"	28.44
973-966	1"	32.21
973-967	1-1/4"	44.43

ELBOWS



(BARB X MALE PIPE)

Part #	Size	List Price
973-980	3/4" x 3/4"	18.80
973-981	1" x 3/4"	22.22
973-982	1" x 1"	26.21

ELBOWS



(Barb x Barb)

Part #	Hose Size	List Price
973-975	3/4"	15.58
973-976	1"	21.61
973-977	1-1/4" x 1"	42.41
973-978	1-1/4"	46.45
973-979	1-1/2"	74.77

STEEL INSERT FITTINGS FOR PLASTIC PIPE

MALE ADAPTER



(BARB X MALE PIPE)

Part #	Size	Box/Case	List Price
973-906	1/2"	25/100	3.01
973-907	3/4"	25/10	4.28
973-908	1"	16/48	5.05
973-909	1-1/4"	12/36	8.07
973-910	1-1/2"	6/36	10.60
973-911	2"	5/25	17.33
973-912	2-1/2"	1/3	27.49
973-977	3"	1/3	34.79
973-914	4"	1/3	59.14

REDUCING ADAPTER



(INSERT X NPT)

Part #	Size	List Price
974-264	3/4 x 1/2	10.88
974-265	1 x 3/4	11.10
974-266	1-1/4 x 1	16.01
974-267	1-1/2 x 1-1/4	19.38

COUPLINGS



Part #	Size	Box/Case	List Price
973-900	1/2	30/120	3.40
973-901	3/4	20/100	3.82
973-902	1	20/100	5.21
973-903	1-1/4	16/64	9.14
973-904	1-1/2	12/48	9.71
973-905	2	5/25	13.59

HOSE NIPPLES

STEEL HOSE NIPPLES



(Barb x Male Pipe)

Part #	Hose Size	List Price
973-850	1/2"	5.86
973-851	3/4"	6.84
973-852	1"	7.14
973-853	1-1/4"	9.24
973-854	1-1/2"	10.34
973-855	2"	13.46
973-856	2-1/2"	28.39
973-857	3"	34.58
973-858	4"	51.11

HOSE ACCESSORIES

STEEL HOSE NIPPLES

PLATED STEEL



(Barb x Male Pipe)

Part #	Hose Size	List Price
973-870	1/2"	6.66
973-871	3/4"	7.50
973-872	1"	8.32
973-873	1-1/4"	9.84
973-874	1-1/2"	11.63
973-875	2"	16.24
973-876	2-1/2"	31.11
973-878	4"	59.14

STEEL HOSE MENDER



Part #	Hose Size	List Price
973-890	1/2"	7.39
973-891	3/4"	7.67
973-892	1"	7.25
973-893	1-1/4"	12.00
973-894	1-1/2"	11.03
973-895	2"	15.50

More sizes available...just ask!

The cure for boredom is curiosity.
There is no cure for curiosity.

- Ellen Parr

STAINLESS FITTINGS

1/4"

SWIVEL NUT (NICKEL PLATED BRASS)



Part #	List Price
34-500	1.05

SWIVEL HOSE STEM FOR 1/4" SWIVEL NUT



Part #	List Price
34-503	1.34

3/8"

SWIVEL NUT (NICKEL PLATED BRASS)



Part #	List Price
34-512	1.86

SWIVEL HOSE STEM FOR 3/8" SWIVEL NUT



Part #	List Price
34-515	2.73

NEW

BEVERAGE FITTINGS

SWIVEL ELBOWS

90° SWIVEL ELBOW



HOSE ID x FEMALE 45° FLARE

Part #	Size	List Price
34-525	1/4" x 1/4"	4.83
34-529	3/8" x 3/8"	10.05

BARB SPLICERS

HOSE SPLICER (STRAIGHT)



ID HOSE

Part #	Size	List Price
34-533	1/4"	3.37
34-535	3/8"	4.13
34-543	3/8" x 1/4"	4.13

90° BARB SPLICER



ID HOSE

Part #	Size	List Price
34-551	1/4"	4.01
34-552	3/8"	6.39

TEES & CROSSES

BARB HOSE TEES



ID HOSE

Part #	Size	List Price
34-562	1/4"	11.10
34-563	3/8"	12.49

BEVERAGE FITTINGS

ADAPTERS

MALE FLARE TO BARB ADAPTER



NEW

HOSE ID x 45° FLARE

Part #	Size	List Price
34-579	1/4" x 1/4"	4.65
34-583	1/4" x 3/8"	7.03
34-584	3/8" x 1/4"	5.12
34-585	3/8" x 3/8"	7.20

NPT TO BARB ADAPTER



HOSE ID x MALE NPTF

Part #	Size	List Price
34-587	1/4" x 1/8"	6.33
34-588	1/4" x 1/4"	5.99
34-589	1/4" x 3/8"	8.08
34-590	3/8" x 1/8"	8.12
34-591	3/8" x 1/4"	6.57
34-592	3/8" x 3/8"	8.08
34-595	3/8" x 1/2"	12.72
34-597	1/2" x 3/4"	18.54

SWIVEL ELBOWS

SWIVEL TO BARB ELBOW



HOSE ID x FEMALE 45° FLARE

Part #	Size	List Price
34-600	1/4" x 1/4"	10.75

STAINLESS FITTINGS

ADAPTERS

NPT ELBOWS & TEES



HOSE ID x MALE NPTF

Part #	Size	List Price
34-610	1/4" x 1/8"	12.69
34-611	3/8" x 1/4"	12.69
34-612	3/8" x 3/8"	14.18
34-613	1/2" x 1/2"	29.22

**PLEASE CALL US FOR
ANY STAINLESS STEEL
BEVERAGE FITTINGS**

*If you don't see what you
need, ask us!*



CONFORMANCE

- SAE J514
- 30-Degree Chamfers - Most NPSM pipe swivel union fittings have 30-degree chamfers on NPTF male end of fittings. This chamfer is optional per SAE J514. If chamfer is mandatory, consult with our customer service department to verify chamfer exists on items you are requesting.
- Temperature Range: -65°F to +400°F

MATERIALS

- Steel - Carbon steel trivalent chrome plating per ASTM B633-98 (Type II SC-2).

Torque Values: The torque values provide benchmarks that we believe give optimum results for leak free connections. Actual torque values should be based on individual applications.

Caution: NPSM pipe swivel unions are not designed to provide structural support for other components

WORKING PRESSURES

The following table lists the recommended working pressures for steel NPSM pipe swivel union hydraulic fittings made in accordance with SAE standard J514. Many factors such as impulsing, vibration, mechanical shock and overtightening may affect the integrity of the fitting and swivel union connection. For these reasons, the recommended working pressures are actually lower than the capacity of the fittings. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using fittings with different size or thread type, use the lower pressure rating of the two threads.

SAE J514 NPSM PRESSURE RATINGS

Dash Size	NPSM Thread Size	4 TO 1 Minimum Burst PSI
-2	1/8-27	5000
-4	1/4-18	5000
-6	3/8-18	4000
-8	1/2-14	3500
-12	3/4-14	2250
-16	1-11 1/2	2000
-20	1 1/4-11 1/2	1625
-24	1 1/2-11 1/2	1250
-32	2-11 1/2	1125

STEEL PIPE SWIVEL ASSEMBLY INSTRUCTIONS

RECOMMENDED

- Step 1.** Inspect male pipe fitting connecting to swivel and confirm that it has an internal 30-degree chamfer. Do not install into union if chamfer is missing.
- Step 2.** Lubricate the threads and the entire chamfered area of male fitting with hydraulic fluid or other light weight lubricant.
- Step 3.** Install lubricated pipe fitting into swivel nut and turn nut until finger tight.
- Step 4.** Place wrench on hex of male fitting to prevent male fitting from turning, and torque swivel nut to the values in the following table.

Caution: When torquing swivel nut on straight swivel union fittings, it may be necessary to also place a wrench on the fitting wrench pad to prevent the fitting from backing out of its port while torquing the swivel nut.

Dash Size	NPSM Thread Size	Torque Foot/LBS
-2	1/8-27	13
-4	1/4-18	20
-6	3/8-18	25
-8	1/2-14	47
-12	3/4-14	84
-16	1-11 1/2	129
-20	1 1/4-11 1/2	152
-24	1 1/2-11 1/2	152
-32	2-11 1/2	300

ALTERNATE ASSEMBLY METHOD

- Step 1.** If torque method not possible, follow steps 1-3 above, then proceed to the steps below.
- Step 2.** Place wrench on hex of male pipe fitting and consider this wrench in the 12 o'clock position.
- Step 3.** Lightly wrench tighten the swivel union nut so that the wrench is as near the 3 o'clock position as possible.
- Step 5.** Rotate wrench in 3 o'clock position counterclockwise to no less than the 1 o'clock position, but no more than the 12 o'clock position.

WHY WET TORQUE?

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Overtightening causes threads to yield, deform and lose their ability to maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. Overtightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.

STEEL PIPE SWIVELS NPSM

HYDRAULIC ADAPTERS

STEEL PIPE SWIVEL ADAPTERS

MALE PIPE SWIVEL ADAPTER

SAE 140130

1



2

1404
2045R
1210
9205R
0107

Part #	Male Pipe 1	Female NPSM 2	List Price
1404-2-2	1/8	1/8	1.74
1404-2-4	1/8	1/4	2.00
1404-4-2	1/4	1/8	4.29
1404-4-4	1/4	1/4	1.93
1404-4-6	1/4	3/8	2.95
1404-4-8	1/4	1/2	3.58
1404-6-4	3/8	1/4	2.95
1404-6-6	3/8	3/8	3.00
1404-6-8	3/8	1/2	3.49
1404-8-4	1/2	1/4	4.26
1404-8-6	1/2	3/8	3.49
1404-8-8	1/2	1/2	3.44
1404-8-12	1/2	3/4	5.62
1404-12-6	3/4	3/8	12.20
1404-12-8	3/4	1/2	5.63
1404-12-12	3/4	3/4	5.22
1404-12-16	3/4	1	10.29
1404-16-8	1	1/2	29.61
1404-16-12	1	3/4	9.48
1404-16-16	1	1	8.96
1404-16-20	1	1-1/4	17.69
1404-20-16	1-1/4	1	22.26
1404-20-20	1-1/4	1-1/4	15.00
1404-20-24	1-1/4	1-1/2	38.82
1404-24-20	1-1/2	1-1/4	38.82
1404-24-24	1-1/2	1-1/2	20.44
1404-32-32	2	2	42.86

Also available in Stainless Steel

More sizes available

-Available in a Restrictor-

FEMALE PIPE SWIVEL ADAPTER

SAE 140131

1



2

1405
2046R
1212
9255R
C207

Part #	Female Pipe 1	Female NPSM 2	List Price
1405-2-2	1/8	1/8	2.00
1405-2-4	1/8	1/4	6.76
1405-4-2	1/4	1/8	24.75
1405-4-4	1/4	1/4	2.43
1405-4-6	1/4	3/8	3.85
1405-6-4	3/8	1/4	2.90
1405-6-6	3/8	3/8	3.00
1405-6-8	3/8	1/2	3.72
1405-8-4	1/2	1/4	31.47
1405-8-6	1/2	3/8	3.72
1405-8-8	1/2	1/2	3.96
1405-8-12	1/2	3/4	7.17
1405-12-8	3/4	1/2	5.44
1405-12-12	3/4	3/4	5.78
1405-12-16	3/4	1	16.33
1405-16-12	1	3/4	10.43
1405-16-16	1	1	8.93
1405-20-20	1-1/4	1-1/4	14.19
1405-24-24	1-1/2	1-1/2	25.54
1405-32-32	2	2	38.74

Also available in Stainless Steel

More sizes available...just ask!

FEMALE SWIVEL UNION

1406
1222

1



2

Part #	Female NPSM 1	Female NPSM 2	List Price
1406-4-4	1/4	1/4	14.29
1406-6-6	3/8	3/8	15.83
1406-8-8	1/2	1/2	22.63
1406-12-12	3/4	3/4	32.74
1406-16-16	1	1	82.04

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HYDRAULIC ADAPTERS

MALE PIPE ELBOW SWIVEL ADAPTER

SAE 140230



1501
2047R
1218
9405R
2107

Part #	Male Pipe 1	Female NPSM 2	List Price
1501-2-2	1/8	1/8	2.74
1501-2-4	1/8	1/4	3.81
1501-4-2	1/4	1/8	3.25
1501-4-4	1/4	1/4	2.63
1501-4-6	1/4	3/8	3.76
1501-4-8	1/4	1/2	13.38
1501-6-4	3/8	1/4	4.00
1501-6-6	3/8	3/8	3.52
1501-6-8	3/8	1/2	4.81
1501-6-12	3/8	3/4	42.63
1501-8-4	1/2	1/4	5.30
1501-8-6	1/2	3/8	4.78
1501-8-8	1/2	1/2	4.74
1501-8-12	1/2	3/4	9.43
1501-12-6	3/4	3/8	8.56
1501-12-8	3/4	1/2	7.76
1501-12-12	3/4	3/4	9.61
1501-12-16	3/4	1	17.60
1501-16-8	1	1/2	30.19
1501-16-12	1	3/4	16.78
1501-16-16	1	1	12.85
1501-16-20	1	1-1/4	26.19
1501-20-12	1-1/4	3/4	51.84
1501-20-16	1-1/4	1	38.19
1501-20-20	1-1/4	1-1/4	31.07
1501-20-24	1-1/4	1-1/2	129.57
1501-24-20	1-1/2	1-1/4	53.38
1501-24-24	1-1/2	1-1/2	41.22
1501-32-32	2	2	90.41

Also available in Stainless Steel

More sizes available

-Available in a Restrictor-

EXTRA LONG MALE PIPE ELBOW



Part #	Male Pipe 1	Female NPSM 2	List Price
1501-LL-4-4	1/4	1/4	11.16
1501-LL-6-6	3/8	3/8	15.74
1501-LL-8-8	1/2	1/2	16.69
1501-LL-12-12	3/4	3/4	31.88
1501-LL-16-16	1	1	64.54

STEEL PIPE SWIVELS NPSM

FEMALE UNION ELBOW SWIVEL ADAPTER

SAE 140231



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	15.42
1502-4-2	1/4	1/8	11.56
1502-4-4	1/4	1/4	3.15
1502-4-6	1/4	3/8	5.26
1502-6-4	3/8	1/4	6.80
1502-6-6	3/8	3/8	5.10
1502-6-8	3/8	1/2	13.15
1502-8-4	1/2	1/4	13.29
1502-8-6	1/2	3/8	6.38
1502-8-8	1/2	1/2	5.41
1502-8-12	1/2	3/4	11.52
1502-12-8	3/4	1/2	11.52
1502-12-12	3/4	3/4	10.20
1502-12-16	3/4	1	42.77
1502-16-12	1	3/4	25.85
1502-16-16	1	1	15.22
1502-20-20	1-1/4	1-1/4	28.66
1502-24-24	1-1/2	1-1/2	57.61
1502-32-32	2	2	192.80

Also available in Stainless Steel

More sizes available

Before enlightenment, chop wood, carry water. After enlightenment, chop wood, carry water.

- Zen proverb

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STEEL PIPE SWIVELS NPSM

MALE 45° PIPE ELBOW SWIVEL ADAPTER

SAE 140330



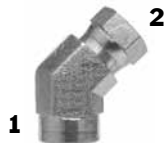
1503
2049R
3107
1214
9355R

Part #	Male Pipe 1	Female NPSM 2	List Price
1503-2-2	1/8	1/8	2.78
1503-2-4	1/8	1/4	10.02
1503-4-2	1/4	1/8	4.40
1503-4-4	1/4	1/4	2.89
1503-4-6	1/4	3/8	7.35
1503-6-4	3/8	1/4	4.41
1503-6-6	3/8	3/8	4.19
1503-6-8	3/8	1/2	7.22
1503-8-4	1/2	1/4	11.38
1503-8-6	1/2	3/8	5.48
1503-8-8	1/2	1/2	5.59
1503-8-12	1/2	3/4	15.46
1503-12-6	3/4	3/8	22.68
1503-12-8	3/4	1/2	8.93
1503-12-12	3/4	3/4	7.74
1503-12-16	3/4	1	21.45
1503-16-12	1	3/4	15.30
1503-16-16	1	1	13.67
1503-16-20	1	1-1/4	38.91
1503-20-16	1-1/4	1	24.63
1503-20-20	1-1/4	1-1/4	24.07
1503-24-24	1-1/2	1-1/2	49.66
1503-32-32	2	2	92.37

*Also available in Stainless Steel
More sizes available*

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	6.85
1504-4-4	1/4	1/4	5.37
1504-6-4	3/8	1/4	8.98
1504-6-6	3/8	3/8	6.48
1504-8-6	1/2	3/8	25.71
1504-8-8	1/2	1/2	7.93
1504-12-12	3/4	3/4	11.11
1504-16-16	1	1	18.63
1504-20-20	1-1/4	1-1/4	35.48
1504-24-24	1-1/2	1-1/2	61.45

*Also available in Stainless Steel
More sizes available*

HYDRAULIC ADAPTERS

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	6.89
1601-4-4	1/4	1/4	6.74
1601-6-4	1/4	3/8	9.96
1601-6-6	3/8	3/8	8.89
1601-6-8	1/2	3/8	28.39
1601-8-4	1/4	1/2	12.78
1601-8-6	3/8	1/2	10.07
1601-8-8	1/2	1/2	10.52
1601-12-8	1/2	3/4	20.09
1601-12-12	3/4	3/4	16.37
1601-16-12	3/4	1	80.00
1601-16-16	1	1	38.55
1601-20-20	1-1/4	1-1/4	50.64
1601-24-24	1-1/2	1-1/2	87.48

FEMALE SWIVEL TEE

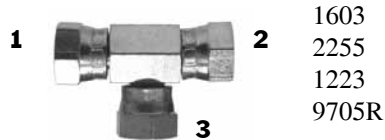


1602
2253R
1259
9456R

Part #	Female NPSM 1 & 2	Female Pipe 3	List Price
1602-2-2	1/8	1/8	7.78
1602-4-4	1/4	1/4	7.00
1602-6-4	1/4	3/8	13.42
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	18.96
1602-12-12	3/4	3/4	19.37
1602-16-12	3/4	1	44.85
1602-16-16	1	1	32.44
1602-20-20	1-1/4	1-1/4	64.89
1602-24-24	1-1/2	1-1/2	132.56

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FEMALE SWIVEL UNION TEE



Part #	Female NPSM 1,2 & 3	List Price
1603-2-2	1/8	8.37
1603-4-4	1/4	7.16
1603-6-6	3/8	9.33
1603-8-8	1/2	11.81
1603-12-12	3/4	18.30
1603-16-16	1	43.41
1603-20-20	1-1/4	88.44

TOOL DESCRIPTIONS

DRILL PRESS - A tall upright machine useful for suddenly snatching flat metal bar stock out of your hands so that it smacks you in the chest and flings your beer across the room, denting the freshly-painted project which you had carefully set in the corner where nothing could get to it.

WIRE WHEEL - Cleans paint off bolts and then throws them somewhere under the workbench with the speed of light. Also removes fingerprints and hard-earned calluses from fingers in about the time it takes you to say, 'Oh sh --'

SKILL SAW - A portable cutting tool used to make studs too short.

PLIERS - Used to round off bolt heads. Also used in the creation of blood-blisters.

BELT SANDER - An electric sanding tool commonly used to convert minor touch-up jobs into major refinishing jobs.

HACKSAW - One of a family of cutting tools built on the Ouija board principle. It transforms human energy into a crooked, unpredictable motion, and the more you attempt to influence its course, the more dismal your future becomes.

WISE-GRIPS - Generally used after pliers to completely round off bolt heads. If nothing else is available, they can also be used to transfer intense welding heat to the palm of your hand.

OXYACETYLENE TORCH - Used almost entirely for lighting various flammable objects in your shop on fire. Also handy for igniting the grease inside the wheel hub out of which you want to remove a bearing race..

TABLE SAW - A large stationary power tool commonly used to launch wood projectiles for testing wall integrity.

PHILLIPS SCREWDRIVER - Normally used to stab the vacuum seals under lids or for opening old-style paper-and-tin oil cans and splashing oil on your shirt; but can also be used, as the name implies, to strip out Phillips screw heads.

STRAIGHT SCREWDRIVER - A tool for opening paint cans. Sometimes used to convert common slotted screws into non-removable screws and butchering your palms.

PRY BAR - A tool used to crumple the metal surrounding that clip or bracket you needed to remove in order to replace a 50 cent part.

HOSE CUTTER - A tool used to make hoses too short.

HAMMER - Originally employed as a weapon of war, the hammer nowadays is used as a kind of divining rod to locate the most expensive parts adjacent the object we are trying to hit.

UTILITY KNIFE - Used to open and slice through the contents of cardboard cartons delivered to your front door; works particularly well on contents such as seats, vinyl records, liquids in plastic bottles, collector magazines, refund checks, and rubber or plastic parts. Especially useful for slicing work clothes, but only while in use.

37° JIC ADAPTERS

Straights Pg. 283-285
 Shapes Pg. 285-290
 Bulkheads Pg. 290-291
 Female Swivels Pg. 304-306
 O-Ring Fittings Pg. 307-312

CONFORMANCE

- SAE J514
- MS51500-MS51534
- Temperature Range: -65°F to +400°F

MATERIALS

- Carbon Steel trivalent chrome plating

WORKING PRESSURES

The following table lists the recommended working pressures for steel 37° flare hydraulic tube fittings manufactured in accordance with SAE standard J514. Many factors such as impulsing, vibration, mechanical shock, and overtightening may affect the integrity of the fitting connection. For these reasons, the recommended working pressures are actually lower than the capacity of the fittings. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using fittings with different size or thread type, use the lower pressure rating of the two threads.

Caution: 37-Degree flared fittings are not designed to provide structural support for other components.

SAE J514 37-DEGREE FLARED FITTINGS PRESSURE RATING

Dash Size	Flared Thread Size	4 TO 1 Minimum Burst PSI
-2	5/16-24	5000
-3	3/8-24	5000
-4	7/16-20	5000
-5	1/2-20	5000
-6	9/16-18	5000
-8	3/4-16	4500
-10	7/8-14	3500
-12	1-1/16-12	3500
-14	1-3/16-12	3000
-16	1-5/16-12	3000
-20	1-5/8-12	2500
-24	1-7/8-12	2000
-32	2-1/2-12	1500

37° FLARED FITTING ASSEMBLY INSTRUCTIONS

RECOMMENDED

- Step 1.** Inspect for possible contamination or damage from shipping or handling. Sealing surface should be smooth. Annular tool marks of (100uin) concentric with thread permissible.
- Step 2.** Lubricate the threads and the entire surface of the cone with hydraulic fluid or a light lubricant.
- Step 3.** Align mating components for hand connection and turn flare nut until sealing surfaces make full contact.
- Step 4.** Torque nut to the values shown on the following table. If a wrench pad is provided next to nut, place a second wrench on pad to prevent flare from rotating while being torqued.
- Step 5.** When torquing nut onto a straight flared fitting, it may be necessary to also place a wrench on the flared fitting wrench pad to prevent it from turning during assembly.

ALTERNATE ASSEMBLY METHOD

- Step 1.** If torque method not possible, follow steps 1-3 above, then proceed to the steps below.
- Step 2.** Lightly wrench tighten the nut until there is firm resistance.
- Step 3.** Place a wrench on wrench pad next to nut as near the 6 o'clock position as possible.
- Step 4.** Place second wrench on nut as near the 3 o'clock position as possible.
- Step 5.** Turn nut clockwise to no less than the 4 o'clock position and no more than the 6 o'clock position. Required rotation generally decreases as size increases.

Dash Size	Flared Thread Size	Torque Foot/Lbs.
-2	5/16-24	6-7
-3	3/8-24	6-9
-4	7/16-20	9-12
-5	1/2-20	14-15
-6	9/16-18	18-20
-8	3/4-16	27-39
-10	7/8-14	36-63
-12	1-1/16-12	65-88
-14	1-3/16-12	75-103
-16	1-5/16-12	85-113
-20	1-5/8-12	115-133
-24	1-7/8-12	125-167
-32	2-1/2-12	190-258

WHY WET TORQUE?

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Overtightening causes threads to yield, deform and lose their ability to maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. Overtightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.

HYDRAULIC ADAPTERS**STRAIGHTS STEEL 37° JIC FLARE****STEEL 37° JIC FLARE
TUBE FITTINGS****JIC SHORT TUBE NUT**

303
302
1326

Part #	Tube O.D	JIC Thread Size	List Price
0302-4	1/4	7/16-20	1.37
0302-6	3/8	9/16-18	1.48
0302-8	1/2	3/4-16	1.37
0302-10	5/8	7/8-14	1.41
0302-12	3/4	1-1/16-12	3.78
0302-16	1	1-5/16-12	7.53
0302-20	1-1/4	1-5/8-12	14.48
0302-24	1-1/2	1-7/8-12	72.78

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	1.93
0304-5	5/16	1/2-20	1.22
0304-6	3/8	9/16-18	1.93
0304-8	1/2	3/4-16	1.92
0304-10	5/8	7/8-14	3.41
0304-12	3/4	1-1/16-12	5.52
0304-14	7/8	1-3/16-12	8.44
0304-16	1	1-5/16-12	11.63
0304-20	1-1/4	1-5/8-12	12.89
0304-24	1-1/2	1-7/8-12	27.63
0304-32	2	2-1/2-12	119.00

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JIC CAP

SAE 070112
MS 51532



304
210292
FNTX
1329
C5129

Part #	Tube O.D.	JIC Thread Size	List Price
0304-C-2	1/8	5/16-24	2.65
0304-C-3	3/16	3/8-24	2.36
0304-C-4	1/4	7/16-20	0.59
0304-C-5	5/16	1/2-20	0.75
0304-C-6	3/8	9/16-18	0.86
0304-C-8	1/2	3/4-16	1.04
0304-C-10	5/8	7/8-14	1.41
0304-C-12	3/4	1-1/16-12	2.07
0304-C-14	7/8	1-3/16-12	3.36
0304-C-16	1	1-5/16-12	3.67
0304-C-20	1-1/4	1-5/8-12	6.56
0304-C-24	1-1/2	1-7/8-12	9.15
0304-C-32	2	2-1/2-12	21.67

Also available in Stainless Steel

It is better to know some of the questions than all of the answers.

- James Thurber

*Send Midland all your
high volume quotes!*

STRAIGHTS STEEL 37° JIC FLARE

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	1.33
0318-3	3/16	3/8-24	0.64
0318-4	1/4	7/16-20	0.59
0318-5	5/16	1/2-20	0.68
0318-6	3/8	9/16-18	0.59
0318-8	1/2	3/4-16	1.09
0318-10	5/8	7/8-14	1.63
0318-12	3/4	1-1/16-12	2.13
0318-14	7/8	1-3/16-12	2.90
0318-16	1	1-5/16-12	3.22
0318-20	1-1/4	1-5/8-12	6.44
0318-24	1-1/2	1-7/8-12	9.43
0318-32	2	2-1/2-12	31.66

Also available in Stainless Steel

JIC TUBE SLEEVE

SAE 070115
MS 51532



319
900605
TX
1253
C5165

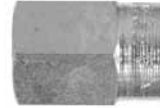
Part #	Tube O.D	List Price
0319-2	1/8	0.98
0319-3	3/16	0.54
0319-4	1/4	0.41
0319-5	5/16	0.67
0319-6	3/8	0.32
0319-8	1/2	0.54
0319-10	5/8	0.91
0319-12	3/4	1.13
0319-14	7/8	1.63
0319-16	1	1.68
0319-20	1-1/4	3.17
0319-24	1-1/2	6.58
0319-32	2	19.62

Also available in Stainless Steel

*Send Midland all your
high volume quotes!*

HYDRAULIC ADAPTERS

JIC FLARELESS TUBE NUT (SLEEVE REQUIRED)



418

Part #	Tube O.D	JIC Thread Size	List Price
V0318-3	3/16	3/8-24	58.32
V0318-4	1/4	7/16-20	3.67
V0318-5	5/16	1/2-20	5.76
V0318-6	3/8	9/16-18	5.90
V0318-8	1/2	3/4-16	7.56
V0318-10	5/8	7/8-14	7.99
V0318-12	3/4	1-1/16-12	9.02
V0318-16	1	1-5/16-12	18.59
V0318-20	1-1/4	1-5/8-12	36.69
V0318-24	1-1/2	1-7/8-12	127.17
V0318-32	2	2-1/2-12	346.53

JIC FLARELESS TUBE SLEEVE



419

Part #	Tube O.D	List Price
V0319-3	3/16	19.64
V0319-4	1/4	3.57
V0319-5	5/16	5.49
V0319-6	3/8	5.69
V0319-8	1/2	7.24
V0319-10	5/8	7.43
V0319-12	3/4	5.76
V0319-16	1	16.51
V0319-20	1-1/4	24.44
V0319-24	1-1/2	106.62
V0319-32	2	126.03

JIC BRAZE TUBE UNION



403
73014
1403

Part #	Braze Port 1	JIC Thread Size 2	List Price
0403-4	1/4	7/16-20	1.27
0403-6	3/8	9/16-18	1.36
0403-8	1/2	3/4-16	1.95
0403-10	5/8	7/8-14	2.54
0403-12	3/4	1-1/16-12	4.63
0403-14	7/8	1-3/16-12	10.66
0403-16	1	1-5/16-12	5.76
0403-20	1-1/4	1-5/8-12	9.86
0403-24	1-1/2	1-7/8-12	23.95
0403-32	2	2-1/2-12	77.05

HYDRAULIC

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	5/16-24	5/16-24	9.87
2403-3	3/8-24	3/8-24	2.59
2403-4	7/16-20	7/16-20	0.90
2403-5	1/2-20	1/2-20	1.63
2403-6	9/16-18	9/16-18	1.48
2403-6-4	9/16-18	7/16-20	2.09
2403-6-5	9/16-18	1/2-20	5.35
2403-8	3/4-16	3/4-16	1.67
2403-8-4	3/4-16	7/16-20	4.81
2403-8-6	3/4-16	9/16-18	2.49
2403-10	7/8-14	7/8-14	2.59
2403-10-4	7/8-14	7/16-20	23.05
2403-10-6	7/8-14	9/16-18	6.94
2403-10-8	7/8-14	3/4-16	2.70
2403-12	1-1/16-12	1-1/16-12	3.19
2403-12-6	1-1/16-12	9/16-18	4.40
2403-12-8	1-1/16-12	3/4-16	4.00
2403-12-10	1-1/16-12	7/8-14	4.85
2403-14	1-3/16-12	1-3/16-12	6.41
2403-16	1-5/16-12	1-5/16-12	4.74
2403-16-10	1-5/16-12	7/8-14	27.07
2403-16-12	1-5/16-12	1-1/16-12	9.50
2403-20	1-5/8-12	1-5/8-12	8.49
2403-20-12	1-5/8-12	1-1/16-12	41.59
2403-20-16	1-5/8-12	1-5/16-12	12.28
2403-24	1-7/8-12	1-7/8-12	24.49
2403-24-20	1-7/8-12	1-5/8-12	34.73
2403-32	2-1/2-12	2-1/2-12	60.14

*Some sizes available in Stainless Steel
More jump sizes available*

JIC LARGE HEX TUBE UNION



2403-LH
202712
LHTX
1204-LH
C5306

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2403-LH-4	7/16-20	7/16-20	4.15
2403-LH-6	9/16-18	9/16-18	4.00
2403-LH-8	3/4-16	3/4-16	5.16
2403-LH-10	7/8-14	7/8-14	7.93
2403-LH-12	1-1/16-12	1-1/16-12	10.48
2403-LH-16	1-5/16-12	1-5/16-12	16.64
2403-LH-20	1-5/8-12	1-5/8-12	45.44

Also available in Stainless Steel

STRAIGHTS STEEL 37° JIC FLARE

JIC MALE CONNECTOR

SAE 070102
MS 51500



2404
2021R
FTX
1202R
C5205

Part #	JIC Thread Size 1	Male Pipe Thread 2	List Price
2404-2-2	5/16-24	1/8	2.52
2404-2-4	5/16-24	1/4	18.59
2404-3-2	3/8-24	1/8	1.04
2404-3-4	3/8-24	1/4	38.55
2404-4-2	7/16-20	1/8	1.06
2404-4-4	7/16-20	1/4	1.02
2404-4-6	7/16-20	3/8	1.30
2404-4-8	7/16-20	1/2	6.77
2404-5-2	1/2-20	1/8	1.59
2404-5-4	1/2-20	1/4	1.27
2404-5-6	1/2-20	3/8	1.54
2404-6-2	9/16-18	1/8	1.72
2404-6-4	9/16-18	1/4	1.18
2404-6-6	9/16-18	3/8	1.29
2404-6-8	9/16-18	1/2	1.78
2404-6-12	9/16-18	3/4	4.22
2404-8-4	3/4-16	1/4	2.00
2404-8-6	3/4-16	3/8	1.50
2404-8-8	3/4-16	1/2	1.70
2404-8-12	3/4-16	3/4	2.68
2404-8-16	3/4-16	1	14.97
2404-10-4	7/8-14	1/4	15.10
2404-10-6	7/8-14	3/8	2.86
2404-10-8	7/8-14	1/2	2.14
2404-10-12	7/8-14	3/4	3.30
2404-10-16	7/8-14	1	11.75
2404-12-6	1-1/16-12	3/8	3.40
2404-12-8	1-1/16-12	1/2	4.13
2404-12-12	1-1/16-12	3/4	3.04
2404-12-16	1-1/16-12	1	4.83
2404-12-20	1-1/16-12	1-1/4	16.78
2404-14-12	1-3/16-12	3/4	6.17
2404-14-16	1-3/16-12	1	29.34
2404-16-12	1-5/16-12	3/4	4.63
2404-16-16	1-5/16-12	1	3.96
2404-16-20	1-5/16-12	1-1/4	8.04
2404-16-24	1-5/16-12	1-1/2	51.84
2404-20-12	1-5/8-12	3/4	19.59
2404-20-16	1-5/8-12	1	8.64
2404-20-20	1-5/8-12	1-1/4	6.56
2404-20-24	1-5/8-12	1-1/2	53.56
2404-24-16	1-7/8-12	1	45.80
2404-24-20	1-7/8-12	1-1/4	24.85
2404-24-24	1-7/8-12	1-1/2	12.78
2404-24-32	1-7/8-12	2	68.66
2404-32-16	2-1/2-12	1	117.05
2404-32-20	2-1/2-12	1-1/4	68.28
2404-32-24	2-1/2-12	1-1/2	60.68
2404-32-32	2-1/2-12	2	35.74
2404-40-40	3-12	2-1/2	343.72

Some sizes available in Stainless Steel

-Available in a Restrictor-

STRAIGHTS STEEL 37° JIC FLARE

JIC LONG MALE CONNECTOR

SAE 070102
MS 51500

1



2

2404L
202113R
1202L0R

Part #	JIC Thread Size 1	Male Pipe Size 2	Length	List Price
2404-L-4-2	7/16-20	1/8"	1.81"	16.50
2404-L-4-4	7/16-20	1/4"	2.35"	21.77
2404-L-6-4	9/16-18	1/4"	2.35"	23.40
2404-L-6-6	9/16-18	3/8"	2.50"	16.46
2404-L-8-6	3/4-16	3/8"	2.75"	21.45
2404-L-8-8	3/4-16	1/2"	3.13"	29.48
2404-L-10-8	7/8-14	1/2"	3.13"	32.97
2404-L-12-12	1-1/16-12	3/4"	3.50"	27.48
2404-L-16-16	1-5/16-12	1"	4"	46.98

Also available in extra long lengths

More Golf Quotes

After all these years, it's still embarrassing for me to play on the American golf tour. Like the time I asked my caddie for a sand wedge and he came back ten minutes later with a ham on rye.

- Chi Chi Rodriguez

The ball retriever is not long enough to get my putter out of the tree.

- Brian Weis

Swing hard in case you hit it.

- Dan Marino

My favorite shots are the practice swing and the conceded putt. The rest can never be mastered.

- Lord Robertson

HYDRAULIC ADAPTERS

JIC FEMALE CONNECTOR

SAE 070103
MS 51503

1



2

2405
2022R
GTX
1230R
C5255

Part #	JIC Thread Size 1	Female Pipe Size 2	List Price
2405-2-2	5/16-24	1/8	6.21
2405-3-2	3/8-24	1/8	1.72
2405-3-4	3/8-24	1/4	25.90
2405-4-2	7/16-20	1/8	1.77
2405-4-4	7/16-20	1/4	2.29
2405-4-6	7/16-20	3/8	12.37
2405-5-2	1/2-20	1/8	4.00
2405-5-4	1/2-20	1/4	4.16
2405-6-2	9/16-18	1/8	4.66
2405-6-4	9/16-18	1/4	1.63
2405-6-6	9/16-18	3/8	3.13
2405-6-8	9/16-18	1/2	5.59
2405-8-4	3/4-16	1/4	15.48
2405-8-6	3/4-16	3/8	2.19
2405-8-8	3/4-16	1/2	3.40
2405-8-12	3/4-16	3/4	10.34
2405-10-6	7/8-14	3/8	4.63
2405-10-8	7/8-14	1/2	5.17
2405-10-12	7/8-14	3/4	26.35
2405-12-8	1-1/16-12	1/2	6.85
2405-12-12	1-1/16-12	3/4	4.96
2405-12-16	1-1/16-12	1	17.19
2405-14-12	1-3/16-12	3/4	9.21
2405-16-12	1-5/16-12	3/4	17.14
2405-16-16	1-5/16-12	1	9.07
2405-16-20	1-5/16-12	1-1/4	25.69
2405-20-20	1-5/8-12	1-1/4	27.48
2405-24-24	1-7/8-12	1-1/2	26.20
2405-32-32	2-1/2-12	2	72.19

Some sizes available in Stainless Steel

JIC TWO PIECE TUBE REDUCER

1



2

Part #	JIC Female Tube O.D 1	JIC Male Thread 2	List Price
2407-6-4	3/8	7/16-20	4.40
2407-8-4	1/2	7/16-20	8.39
2407-8-6	1/2	9/16-18	7.56
2407-12-6	3/4	9/16-18	13.51
2407-12-8	3/4	3/4-16	10.20
2407-16-12	1	1-1/16-12	12.65
2407-20-16	1-1/4	1-5/16-12	7.44
2407-24-20	1-1/2	1-5/8-12	57.64

Also available in Stainless Steel

More sizes available

HYDRAULIC ADAPTERS

STRAIGHTS STEEL 37° JIC FLARE

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	1.67
2406-6-5	9/16-18	1/2-20	14.74
2406-8-4	3/4-16	7/16-20	2.71
2406-8-6	3/4-16	9/16-18	2.22
2406-8-12*	3/4-16	1-1/16-12	5.08
2406-10-4	7/8-14	7/16-20	5.15
2406-10-6	7/8-14	9/16-18	5.23
2406-10-8	7/8-14	3/4-16	3.38
2406-12-4	1-1/16-12	7/16-20	6.33
2406-12-6	1-1/16-12	9/16-18	6.37
2406-12-8	1-1/16-12	3/4-16	4.05
2406-12-10	1-1/16-12	7/8-14	4.58
2406-12-16*	1-1/16-12	1-5/16-12	8.39
2406-14-6	1-3/16-12	9/16-18	22.63
2406-14-8	1-3/16-12	3/4-16	15.95
2406-14-10	1-3/16-12	7/8-14	12.59
2406-14-12	1-3/16-12	1-1/16-12	7.98
2406-16-4	1-5/16-12	7/16-20	14.96
2406-16-6	1-5/16-12	9/16-18	21.43
2406-16-8	1-5/16-12	3/4-16	9.85
2406-16-10	1-5/16-12	7/8-14	9.58
2406-16-12	1-5/16-12	1-1/16-12	7.08
2406-16-14	1-5/16-12	1-3/16-12	20.19
2406-16-20*	1-5/16-12	1-5/8-12	16.55
2406-20-8	1-5/8-12	3/4-16	36.10
2406-20-12	1-5/8-12	1-1/16-12	15.09
2406-20-16	1-5/8-12	1-5/16-12	12.51
2406-24-16	1-7/8-12	1-5/16-12	44.19
2406-24-20	1-7/8-12	1-5/8-12	28.79
2406-32-24	2-1/2-12	1-7/8-12	61.98

*Tube Expander

More expanding sizes available

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PLUG

SAE 070109
MS 51518



2408
430549
PNTX
1254
C5229

Part #	Tube O.D.	JIC Thread Size	List Price
2408-2	1/8	5/16-24	3.63
2408-3	3/16	3/8-24	3.29
2408-4	1/4	7/16-20	0.71
2408-5	5/16	1/2-20	1.25
2408-6	3/8	9/16-18	0.86
2408-8	1/2	3/4-16	1.19
2408-10	5/8	7/8-14	1.52
2408-12	3/4	1-1/16-12	2.38
2408-14	7/8	1-3/16-12	4.24
2408-16	1	1-5/16-12	3.41
2408-20	1-1/4	1-5/8-12	6.48
2408-24	1-1/2	1-7/8-12	13.78
2408-32	2	2-1/2-12	38.25

Some available in Stainless Steel

JIC UNION ELBOW

SAE 070201
MS 51505



2500
2039
1234
C5505

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2500-2-2	5/16-24	5/16-24	4.73
2500-3-3	3/8-24	3/8-24	3.40
2500-4-4	7/16-20	7/16-20	2.11
2500-5-5	1/2-20	1/2-20	3.04
2500-6	9/16-18	9/16-18	2.58
2500-6-4	9/16-18	7/16-20	3.81
2500-8-8	3/4-16	3/4-16	3.71
2500-8-4	3/4-16	7/16-20	24.62
2500-8-6	3/4-16	9/16-18	4.29
2500-10	7/8-14	7/8-14	4.73
2500-10-8	7/8-14	3/4-16	5.48
2500-12	1-1/16-12	1-1/16-12	6.41
2500-12-8	1-1/16-12	3/4-16	9.50
2500-14	1-3/16-12	1-3/16-12	15.64
2500-16	1-5/16-12	1-5/16-12	11.85
2500-16-12	1-5/16-12	1-1/16-12	16.04
2500-20	1-5/8-12	1-5/8-12	22.96
2500-24	1-7/8-12	1-7/8-12	42.09
2500-32	2-1/2-12	2-1/2-12	78.13

Some available in Stainless Steel
More sizes available

SHAPES STEEL 37° JIC FLARE

STEEL 37° JIC FLARE SHAPES

SAE 070202
MS 51504

JIC MALE ELBOW



1208R
C5405
2501
2024R
CTX

Part #	JIC Size 1	Male Pipe Size 2	List Price
2501-2-2	5/16-24	1/8	3.88
2501-2-4	5/16-24	1/4	48.71
2501-3-2	3/8-24	1/8	3.58
2501-3-4	3/8-24	1/4	36.79
2501-4-2	7/16-20	1/8	2.07
2501-4-4	7/16-20	1/4	2.28
2501-4-6	7/16-20	3/8	3.36
2501-4-8	7/16-20	1/2	4.81
2501-5-2	1/2-20	1/8	2.89
2501-5-4	1/2-20	1/4	3.04
2501-5-6	1/2-20	3/8	4.90
2501-6-2	9/16-18	1/8	2.70
2501-6-4	9/16-18	1/4	2.37
2501-6-6	9/16-18	3/8	2.95
2501-6-8	9/16-18	1/2	3.22
2501-6-12	9/16-18	3/4	6.96
2501-8-4	3/4-16	1/4	4.11
2501-8-6	3/4-16	3/8	3.63
2501-8-8	3/4-16	1/2	3.59
2501-8-12	3/4-16	3/4	5.93
2501-8-16	3/4-16	1	13.77
2501-10-6	7/8-14	3/8	4.85
2501-10-8	7/8-14	1/2	3.89
2501-10-12	7/8-14	3/4	6.34
2501-10-16	7/8-14	1	13.33
2501-12-6	1-1/16-12	3/8	7.00
2501-12-8	1-1/16-12	1/2	6.78
2501-12-12	1-1/16-12	3/4	5.85
2501-12-16	1-1/16-12	1	7.79
2501-12-20	1-1/16-12	1-1/4	61.75
2501-14-12	1-3/16-12	3/4	12.02
2501-14-16	1-3/16-12	1	15.87
2501-16-12	1-5/16-12	3/4	9.43
2501-16-16	1-5/16-12	1	8.48
2501-16-20	1-5/16-12	1-1/4	22.41
2501-20-16	1-5/8-12	1	20.81
2501-20-20	1-5/8-12	1-1/4	19.67
2501-20-24	1-5/8-12	1-1/2	43.45
2501-24-20	1-7/8-12	1-1/4	32.74
2501-24-24	1-7/8-12	1-1/2	30.41
2501-24-32	1-7/8-12	2	256.83
2501-32-24	2-1/2-12	1-1/2	71.96
2501-32-32	2-1/2-12	2	104.99
2501-40-40	3-12	2-1/2	375.78

HYDRAULIC ADAPTERS

JIC ELBOW RESTRICTOR



Part #	JIC Size 1	Male Pipe Size 2	Restriction	List Price
2501-RS-4-4	7/16-20	1/4	.062	17.47
2501-RS-6-6	9/16-18	3/8	.062	11.20
2501-RS-6-8	9/16-18	1/2	.062	11.70

LONG MALE ELBOW

SAE 071502



25012
202411R
CCTX
1208-LR
C5425

Part #	JIC Size 1	Male Pipe Size 2	Length*	List Price
2501-L-4-2	7/16-20	1/8	1.17"	3.63
2501-L-4-4	7/16-20	1/4	1.58"	4.22
2501-L-5-2	1/2-20	1/8	1.22"	5.44
2501-L-5-4	1/2-20	1/4	1.55"	6.30
2501-L-6-2	9/16-18	1/8	1.58"	15.92
2501-L-6-4	9/16-18	1/4	1.58"	4.67
2501-L-6-6	9/16-18	3/8	1.83"	5.67
2501-L-8-4	3/4-16	1/4	1.83"	13.83
2501-L-8-6	3/4-16	3/8	1.83"	6.17
2501-L-8-8	3/4-16	1/2	2.17"	5.90
2501-L-10-8	7/8-14	1/2	2.17"	15.01
2501-L-12-8	1-1/16-12	1/2	2.24"	23.99
2501-L-12-12	1-1/16-12	3/4	2.44"	10.84
2501-L-14-12	1-3/16-12	3/4	2.66"	18.87
2501-L-16-16	1-5/16-12	1	3.02"	20.27
2501-L-20-20	1-5/8-12	1-1/4	3.69"	39.27
2501-L-24-24	1-7/8-12	1-1/2	4.11"	112.65

* Length = mid-JIC to end of threads
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HYDRAULIC ADAPTERS

JIC EXTRA-LONG MALE ELBOW

SAE 071602



2501LL
202413R
CCCTX
1208-LLR
C5435

Part #	JIC Size 1	Male Pipe Size 2	Length*	List Price
2501-LL-4-2	7/16-20	1/8	1.56"	4.63
2501-LL-4-4	7/16-20	1/4	2.11"	4.67
2501-LL-5-4	1/2-20	1/4	2.04"	6.76
2501-LL-6-2	9/16-18	1/8	2.04"	56.73
2501-LL-6-4	9/16-18	1/4	2.08"	4.67
2501-LL-6-6	9/16-18	3/8	2.44"	5.03
2501-LL-8-4	3/4-16	1/4	2.42"	17.69
2501-LL-8-6	3/4-16	3/8	2.42"	6.80
2501-LL-8-8	3/4-16	1/2	2.88"	7.35
2501-LL-10-8	7/8-14	1/2	2.88"	9.52
2501-LL-12-8	1-1/16-12	1/2	3.25"	20.95
2501-LL-12-12	1-1/16-12	3/4	3.28"	14.74
2501-LL-14-12	1-3/16-12	3/4	3.63"	18.46
2501-LL-16-16	1-5/16-12	1	4.05"	22.27
2501-LL-20-20	1-5/8-12	1-1/4	5.00"	97.96
2501-LL-24-24	1-7/8-12	1-1/2	5.50"	270.39

JIC EXTRA EXTRA LONG MALE ELBOW

2501LLL
202414R



Part #	JIC Size 1	Male Pipe Size 2	Length*	List Price
2501-LLL-4-2	7/16-20	1/8	2.31"	9.52
2501-LLL-4-4	7/16-20	1/4	3.00"	12.74
2501-LLL-6-4	9/16-18	1/4	3.06"	21.32
2501-LLL-6-6	9/16-18	3/8	3.06"	18.14
2501-LLL-8-6	3/4-16	3/8	3.75"	19.09
2501-LLL-8-8	3/4-16	1/2	3.75"	24.49
2501-LLL-10-8	7/8-14	1/2	4.50"	26.44
2501-LLL-12-12	1-1/16-12	3/4	5.03"	33.92
2501-LLL-16-16	1-5/16-12	1	6.34"	46.67

* Length = mid-JIC to end of threads

SHAPES STEEL 37° JIC FLARE

JIC MALE ELBOW SWIVEL



• swivel for installation only

Part #	JIC Thread Size 1	Male Pipe Size 2	List Price
2501-S-4-4	7/16-20	1/4	17.32
2501-S-6-4	9/16-18	1/4	21.13
2501-S-6-6	9/16-18	3/8	33.02
2501-S-8-6	3/4-16	3/8	24.58
2501-S-8-8	3/4-16	1/2	40.77
2501-S-10-8	7/8-14	1/2	66.98
2501-S-12-12	1-1/16-12	3/4	21.09

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	3.26
2502-4-4	7/16-20	1/4	3.74
2502-4-6	7/16-20	3/8	6.10
2502-5-2	1/2-20	1/8	3.83
2502-5-4	1/2-20	1/4	5.94
2502-6-2	9/16-18	1/8	5.62
2502-6-4	9/16-18	1/4	3.63
2502-6-6	9/16-18	3/8	4.41
2502-6-8	9/16-18	1/2	6.48
2502-8-4	3/4-16	1/4	8.07
2502-8-6	3/4-16	3/8	4.52
2502-8-8	3/4-16	1/2	6.67
2502-8-12	3/4-16	3/4	15.09
2502-10-6	7/8-14	3/8	18.71
2502-10-8	7/8-14	1/2	7.00
2502-12-8	1-1/16-12	1/2	8.52
2502-12-12	1-1/16-12	3/4	9.33
2502-14-12	1-3/16-12	3/4	22.04
2502-16-12	1-5/16-12	3/4	29.57
2502-16-16	1-5/16-12	1	13.93
2502-20-20	1-5/8-12	1-1/4	22.37
2502-24-24	1-7/8-12	1-1/2	71.04
2502-32-32	2-1/2-12	2	132.97

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SHAPES STEEL 37° JIC FLARE

SAE 070302
MS 51508

JIC MALE 45° ELBOW



2503
2023R
VTX
1206R
C5355

Part #	JIC Thread Size 1	Male Pipe Size 2	List Price
2503-2-2	5/16-24	1/8	2.58
2503-3-2	3/8-24	1/8	2.87
2503-4-2	7/16-20	1/8	2.61
2503-4-4	7/16-20	1/4	2.56
2503-4-6	7/16-20	3/8	3.56
2503-5-2	1/2-20	1/8	3.21
2503-5-4	1/2-20	1/4	3.29
2503-6-2	9/16-18	1/8	5.53
2503-6-4	9/16-18	1/4	3.15
2503-6-6	9/16-18	3/8	3.55
2503-6-8	9/16-18	1/2	4.66
2503-6-12	9/16-18	3/4	10.29
2503-8-4	3/4-16	1/4	3.81
2503-8-6	3/4-16	3/8	4.00
2503-8-8	3/4-16	1/2	4.89
2503-8-12	3/4-16	3/4	7.94
2503-10-6	7/8-14	3/8	6.41
2503-10-8	7/8-14	1/2	5.57
2503-10-12	7/8-14	3/4	6.67
2503-12-6	1-1/16-12	3/8	68.03
2503-12-8	1-1/16-12	1/2	6.59
2503-12-12	1-1/16-12	3/4	10.95
2503-12-16	1-1/16-12	1	12.99
2503-14-12	1-3/16-12	3/4	12.20
2503-16-12	1-5/16-12	3/4	9.89
2503-16-16	1-5/16-12	1	10.04
2503-16-20	1-5/16-12	1-1/4	29.06
2503-20-16	1-5/8-12	1	23.55
2503-20-20	1-5/8-12	1-1/4	21.07
2503-24-24	1-7/8-12	1-1/2	34.48
2503-32-32	2-1/2-12	2	68.44
2503-40-40	3-12	2-1/2	1142.86

Some sizes available in Stainless Steel

JIC 45° UNION ELBOW



2504

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2504-6	9/16-18	9/16-18	8.84
2504-8	3/4-16	3/4-16	7.48
2504-10	7/8-14	7/8-14	10.34
2504-12	1-1/16-12	1-1/16-12	11.79
2504-16	1-5/16-12	1-5/16-12	12.24
2504-20	1-5/8-12	1-5/8-12	79.64

HYDRAULIC ADAPTERS

JIC 45° FEMALE ELBOW



2505
2044-R

Part #	JIC Thread Size 1	Female Pipe Size 2	List Price
2505-6-4	9/16-18	1/4	18.00
2505-8-6	3/4-16	3/8	14.06
2505-10-8	7/8-14	1/2	29.84
2505-12-12	1-1/16-12	3/4	31.25

More sizes available

JIC MALE BRANCH TEE



2601
2030R
STX
1221R
C5605

Part #	JIC Thread Size 1&2	Pipe Thread Size 3	List Price
2601-2-2	5/16-24	1/8	67.94
2601-3-2	3/8-24	1/8	10.29
2601-4-2	7/16-20	1/8	3.48
2601-4-4	7/16-20	1/4	4.22
2601-5-2	1/2-20	1/8	5.41
2601-5-4	1/2-20	1/4	5.67
2601-6-4	9/16-18	1/4	4.15
2601-6-6	9/16-18	3/8	5.55
2601-8-4	3/4-16	1/4	26.22
2601-8-6	3/4-16	3/8	5.22
2601-8-8	3/4-16	1/2	6.45
2601-10-6	7/8-14	3/8	23.81
2601-10-8	7/8-14	1/2	7.11
2601-12-8	1-1/16-12	1/2	13.93
2601-12-12	1-1/16-12	3/4	10.11
2601-14-12	1-3/16-12	3/4	21.72
2601-16-12	1-5/16-12	3/4	22.04
2601-16-16	1-5/16-12	1	21.86
2601-20-20	1-5/8-12	1-1/4	47.98
2601-24-24	1-7/8-12	1-1/2	89.30
2601-32-32	2-1/2-12	2	119.91

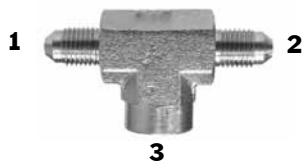
Also available in Stainless Steel

HYDRAULIC

HYDRAULIC ADAPTERS

JIC FEMALE BRANCH TEE

SAE 070427
MS 51513

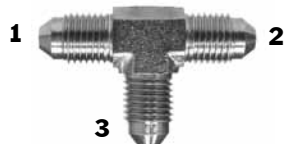


2602
2031R
OTX
1228R
C6566

Part #	JIC Thread Size 1 & 2	Female Pipe Size 3	List Price
2602-3-2	3/8-24	1/8	40.80
2602-4-2	7/16-20	1/8	5.94
2602-4-4	7/16-20	1/4	5.93
2602-5-2	1/2-20	1/8	8.88
2602-6-4	9/16-18	1/4	6.19
2602-6-6	9/16-18	3/8	6.93
2602-8-8	3/4-16	1/2	11.93
2602-12-8	1-1/16-12	1/2	36.33
2602-12-12	1-1/16-12	3/4	14.27
2602-16-16	1-5/16-12	1	24.87
2602-20-20	1-5/8-12	1-1/4	37.35
2602-24-24	1-7/8-12	1-1/2	70.96
2602-32-32	2-1/2-12	2	352.74

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	4.07
2603-3-3	3/8-24	3/8-24	7.90
2603-4-4	7/16-20	7/16-20	3.40
2603-5-5	1/2-20	1/2-20	4.46
2603-6	9/16-18	9/16-18	3.36
2603-8	3/4-16	3/4-16	4.44
2603-10	7/8-14	7/8-14	6.92
2603-12	1-1/16-12	1-1/16-12	8.34
2603-14	1-3/16-12	1-3/16-12	21.67
2603-16	1-5/16-12	1-5/16-12	13.49
2603-20	1-5/8-12	1-5/8-12	34.45
2603-24	1-7/8-12	1-7/8-12	45.99
2603-32	2-1/2-12	2-1/2-12	340.77

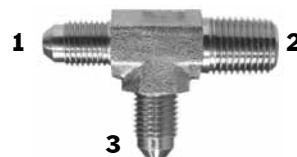
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SHAPES STEEL 37° JIC FLARE

JIC MALE RUN TEE

SAE 070424
MS 51511

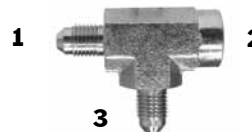


26C5
2028R
RTX
1224R
C5755

Part #	JIC Thread Size 1 & 3	Male Pipe Size 2	List Price
2605-2-2	5/16-24	1/8	43.08
2605-3-2	3/8-24	1/8	7.74
2605-4-2	7/16-20	1/8	3.63
2605-4-4	7/16-20	1/4	4.76
2605-5-2	1/2-20	1/8	6.11
2605-5-4*	1/2-20	1/4	11.59
2605-6-4	9/16-18	1/4	4.37
2605-6-6	9/16-18	3/8	6.26
2605-8-4	3/4-16	1/4	18.23
2605-8-6	3/4-16	3/8	5.52
2605-8-8	3/4-16	1/2	5.98
2605-10-8	7/8-14	1/2	7.47
2605-12-8	1-1/16-12	1/2	22.90
2605-12-12	1-1/16-12	3/4	13.56
2605-14-12	1-3/16-12	3/4	21.67
2605-16-12*	1-5/16-12	3/4	56.69
2605-16-16	1-5/16-12	1	16.74
2605-20-20	1-5/8-12	1-1/4	40.32
2605-24-24	1-7/8-12	1-1/2	48.92
2605-32-32	2-1/2-12	2	148.93

**Braze-on Style
More sizes available*

JIC FEMALE RUN TEE



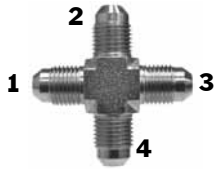
2606
2029R
MTX
1226R
C5805

Part #	JIC Thread Size 1 & 3	Female Pipe Size 2	List Price
2606-3-2	3/8-24	1/8	29.39
2606-4-2	7/16-20	1/8	17.82
2606-4-4	7/16-20	1/4	7.85
2606-5-4	1/2-20	1/4	38.28
2606-6-4	9/16-18	1/4	9.52
2606-6-6	9/16-18	3/8	10.20
2606-8-6	3/4-16	3/8	11.34
2606-8-8	3/4-16	1/2	15.56
2606-10-8	7/8-14	1/2	16.33
2606-12-8	1-1/16-12	1/2	96.69
2606-12-12	1-1/16-12	3/4	19.00
2606-14-12	1-3/16-12	3/4	44.08
2606-16-16	1-5/16-12	1	41.26
2606-20-20	1-5/8-12	1-1/4	55.65
2606-24-24	1-7/8-12	1-1/2	143.54
2606-32-32	2-1/2-12	2	226.76

HYDRAULIC

SHAPES STEEL 37° JIC FLARE

JIC UNION CROSS



Part #	JIC Thread Size 1&2	JIC Thread Size 3 & 4	List Price
2650-4	7/16-20	7/16-20	8.57
2650-5	1/2-20	1/2-20	11.34
2650-6	9/16-18	9/16-18	7.81
2650-8	3/4-16	3/4-16	11.25
2650-10	7/8-14	7/8-14	15.22
2650-12	1-1/16-12	1-1/16-12	22.18
2650-16	1-5/16-12	1-5/16-12	33.02
2650-20	1-5/8-12	1-5/8-12	55.34
2650-24	1-7/8-12	1-7/8-12	107.76

More sizes available

JIC TO PIPE RUN TEE



2611
203103R

Part #	JIC Thread Size 1	Pipe Thread Size 2 & 3	List Price
2611-6-6-6	9/16-18	3/8	25.85
2611-8-6-6	3/4-16	3/8	20.05
2611-8-8-8	3/4-16	1/2	23.81
2611-12-12-12	1-1/16-12	3/4	63.04
2611-16-16-16	1-5/16-12	1	88.44
2611-20-20-20	1-5/8-12	1-1/4	102.18

More sizes available

STEEL BULKHEAD FITTINGS

BULKHEAD LOCK NUT

SAE 070118
MS 51860



1306
894
210212
WLN
1332
C5624

Part #	Thread Size	List Price
0306-4	7/16-20	0.41
0306-5	1/2-20	0.50
0306-6	9/16-18	0.68
0306-8	3/4-16	0.68
0306-10	7/8-14	0.91
0306-12	1-1/16-12	1.68
0306-14	1-3/16-12	2.00
0306-16	1-5/16-12	2.49
0306-20	1-5/8-12	3.04
0306-24	1-7/8-12	4.99
0306-32	2-1/2-12	17.91

HYDRAULIC ADAPTERS

JIC BULKHEAD UNION

SAE 070601
MS 51520



2700
2041R
WTX
1260
C5325

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2700-4-4	7/16-20	7/16-20	3.36
2700-5-5	1/2-20	1/2-20	5.73
2700-6-6	9/16-18	9/16-18	3.87
2700-8	3/4-16	3/4-16	3.91
2700-10	7/8-14	7/8-14	6.67
2700-12	1-1/16-12	1-1/16-12	6.47
2700-14	1-3/16-12	1-3/16-12	19.55
2700-16	1-5/16-12	1-5/16-12	11.38
2700-20	1-5/8-12	1-5/8-12	17.19
2700-24	1-7/8-12	1-7/8-12	39.09
2700-32	2-1/2-12	2-1/2-12	129.06

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	3.25
2701-5	1/2-20	1/2-20	4.34
2701-6	9/16-18	9/16-18	3.91
2701-8	3/4-16	3/4-16	5.87
2701-10	7/8-14	7/8-14	8.53
2701-12	1-1/16-12	1-1/16-12	11.03
2701-14	1-3/16-12	1-3/16-12	101.18
2701-16	1-5/16-12	1-5/16-12	19.75
2701-20	1-5/8-12	1-5/8-12	31.64
2701-24	1-7/8-12	1-7/8-12	109.19

HYDRAULIC ADAPTERS

BULKHEAD FITTINGS STEEL 37° JIC FLARE

JIC BULKHEAD UNION 45° ELBOW

SAE 070801
MS 51509



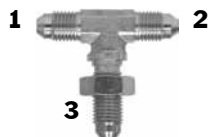
2702
2042
WNTX
1261
C5375

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2702-4	7/16-20	7/16-20	3.22
2702-5	1/2-20	1/2-20	4.41
2702-6	9/16-18	9/16-18	5.35
2702-8	3/4-16	3/4-16	5.67
2702-10	7/8-14	7/8-14	7.52
2702-12	1-1/16-12	1-1/16-12	10.15
2702-16	1-5/16-12	1-5/16-12	14.00
2702-20	1-5/8-12	1-5/8-12	28.41
2702-24	1-7/8-12	1-7/8-12	189.48

Also available in Stainless Steel

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	5.08
2703-5	1/2-20	1/2-20	31.43
2703-6	9/16-18	9/16-18	6.56
2703-8	3/4-16	3/4-16	12.06
2703-10	7/8-14	7/8-14	15.22
2703-12	1-1/16-12	1-1/16-12	24.44
2703-16	1-5/16-12	1-5/16-12	48.98
2703-20	1-5/8-12	1-5/8-12	62.81
2703-24	1-7/8-12	1-7/8-12	95.74

Also available in Stainless Steel

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	5.04
2704-6	9/16-18	9/16-18	8.27
2704-8	3/4-16	3/4-16	9.27
2704-10	7/8-14	7/8-14	13.81
2704-12	1-1/16-12	1-1/16-12	29.48
2704-16	1-5/16-12	1-5/16-12	29.84

More sizes available

Also available in Stainless Steel

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	4.97
2705-4-4	7/16-20	1/4	7.35
2705-5-2	1/2-20	1/8	13.26
2705-6-4	9/16-18	1/4	6.26
2705-6-6	9/16-18	3/8	10.68
2705-8-6	3/4-16	3/8	7.31
2705-8-8	3/4-16	1/2	10.52
2705-10-8	7/8-14	1/2	19.41
2705-12-12	1-1/16-12	3/4	14.27
2705-14-12	1-3/16-12	3/4	34.01
2705-16-16	1-5/16-12	1	19.05
2705-20-20	1-5/8-12	1-1/4	84.63
2705-24-24	1-7/8-12	1-1/2	181.54
2705-32-32	2-1/2-12	2	342.63

Also available in Stainless Steel

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	8.21
2706-4-4	7/16-20	1/4	8.21
2706-6-4	9/16-18	1/4	5.87
2706-6-6	9/16-18	3/8	5.98
2706-8-6	3/4-16	3/8	7.35
2706-8-8	3/4-16	1/2	10.10
2706-10-8	7/8-14	1/2	9.39
2706-12-12	1-1/16-12	3/4	13.78
2706-16-16	1-5/16-12	1	17.22
2706-20-20	1-5/8-12	1-1/4	26.19
2706-24-24	1-7/8-12	1-1/2	115.17
2706-32-32	2-1/2-12	2	275.33

HYDRAULIC

STEEL PIPE ADAPTERS

CONFORMANCE

- SAE J514 for hex nipples, expanders, elbows, tees and crosses.
- SAE J514, J530 and J531 for bushings and plugs.
- Temperature Range: -65°F to +400°F

MATERIALS

- Steel- SAE 12L14 carbon steel trivalent chrome plated or bright silver finish.

STYLES

- Barstock
- Forged
- Chamfered - male ends have an internal 30-degree chamfer to mate with NPSM female swivel union connections. Many pipe fittings do not have this chamfer, as it is not required per SAE J514 standard.

Caution: Although most pipe fittings have sufficient structural integrity to support the weight of many components, consult our technical support department for guidance in selection of parts for this purpose

WORKING PRESSURES

The following table lists the recommended working pressures for steel NPTF hydraulic pipe fittings manufactured in accordance with SAE standard J514. Many factors such as number of threads engaged, impulsing, vibration, mechanical shock, removal and reassembly, thermal expansion and contraction may affect the integrity of the fitting or fitting connection. For these reasons, the recommended working pressures are actually lower than the capacity of the fittings. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions.

SAE J514 NPTF PIPE WORKING PRESSURES

Dash Size	NPTF Thread Size	4 TO 1 Minimum Burst PSI
-1	1/16-27	5000
-2	1/8-27	5000
-4	1/4-18	5000
-6	3/8-18	4000
-8	1/2-14	3000
-12	3/4-14	2500
-16	1-11 1/2	2000
-20	1-1/4-11-1/2	1150
-24	1-1/2-11-1/2	1000
-32	2-11-1/2	750

NPTF DRY SEAL PIPE ASSEMBLY INSTRUCTIONS

- Step 1.** Inspect port and fitting to ensure that both are free of contaminants and excessive burrs and nicks.
- Step 2.** Apply a stripe of an anaerobic liquid pipe sealant around the male threads leaving the first two threads uncovered. If no liquid sealant is available, wrap Teflon tape 1 1/2 to 2 turns in a clockwise direction, viewed from the pipe end, leaving the first two threads uncovered. **Caution: Teflon tape and some pipe sealants are destructive to hydraulic components. Always use extreme caution and follow manufacturers recommendations for proper application of any sealant in order to prevent contamination**
- Step 3.** Screw finger tight into the port.
- Step 4.** Wrench tighten the fitting to the correct turns past finger tight position. (See following table) When installing elbows or tees, consider final orientation position as to not exceed the recommended TPFT
- Caution: Never back off an installed pipe fitting to achieve proper alignment. Loosening installed pipe fittings will corrupt the seal and contribute to leakage and failure.**

Dash Size	NPTF Thread Size	Turns Past Finger Tight
-1	1/16-27	2.0 - 3.0
-2	1/8-27	2.0 - 3.0
-4	1/4-18	2.0 - 3.0
-6	3/8-18	2.0 - 3.0
-8	1/2-14	2.0 - 3.0
-12	3/4-14	2.0 - 3.0
-16	1-11 1/2	1.5 - 2.5
-20	1-1/4-11-1/2	1.5 - 2.5
-24	1-1/2-11-1/2	1.5 - 2.5
-32	2-11-1/2	1.5 - 2.5

Torque installation of pipe fittings is not a recommended practice. Thread taper and quality, different port and fitting materials, plating thickness and types, varying threads sealants, orientation, and other factors reduce the reliability of a torqued connection. If torque installation is required, refer to the following table for suggested torque values.

Dash Size	NPTF Thread Size	Torque Foot/LBS
-2	1/8-27	12
-4	1/4-18	25
-6	3/8-18	40
-8	1/2-14	54
-12	3/4-14	78
-16	1-11-1/2	112
-20	1-1/4-11-1/2	154
-24	1-1/2-11-1/2	211
-32	2-11-1/2	300

See STRAIGHT THREAD O-RING FITTING SECTION for assembly instructions and torque values for

HYDRAULIC ADAPTERS

STEEL PIPE FITTINGS

PIPE COUPLING

SAE 140138



5000
2096
GG
1273
C3309

Part #	Female Pipe 1	Female Pipe 2	List Price
5000-2	1/8	1/8	1.91
5000-4-2	1/4	1/8	2.51
5000-4	1/4	1/4	1.74
5000-6-2	3/8	1/8	5.16
5000-6-4	3/8	1/4	2.58
5000-6-6	3/8	3/8	2.04
5000-8-4	1/2	1/4	3.56
5000-8-6	1/2	3/8	3.69
5000-8	1/2	1/2	4.06
5000-12-6	3/4	3/8	8.45
5000-12-8	3/4	1/2	5.55
5000-12-12	3/4	3/4	4.49
5000-16-8	1	1/2	20.92
5000-16-12	1	3/4	11.34
5000-16	1	1	9.43
5000-20-12	1-1/4	3/4	163.76
5000-20-16	1-1/4	1	28.74
5000-20-20	1-1/4	1-1/4	17.01
5000-24	1-1/2	1-1/2	25.07
5000-32	2	2	70.29

CLOSE NIPPLE



3,000 PSI

Part #	Male Pipe 1&2	Length (Inches)	List Price
5400CL-2	1/8	3/4	3.85
5400CL-4	1/4	7/8	2.90
5400CL-6	3/8	1	3.13
5400CL-8	1/2	1-1/8	2.68
5400CL-12	3/4	1-3/8	7.66
5400CL-16	1	1-1/2	10.84
5400CL-20	1-1/4	1-5/8	13.61

LONG PIPE NIPPLE



3,000 PSI

Part #	Male Pipe 1 & 2	Length (Inches)	List Price
5400-2-1.5	1/8	1-1/2	12.11
5400-2-2	1/8	2	3.04
5400-2-2.5	1/8	2-1/2	8.20
5400-2-3	1/8	3	8.39
5400-4-2	1/4	2	8.57
5400-4-2.5	1/4	2-1/2	9.84
5400-4-3	1/4	3	9.57
5400-4-4	1/4	4	11.70
5400-4-6	1/4	6	23.45
5400-6-2	3/8	2	10.93
5400-6-2.5	3/8	2-1/2	19.65
5400-6-3	3/8	3	11.25
5400-6-4	3/8	4	13.38

Give me golf clubs, fresh air and a beautiful partner, and you can keep the clubs and the fresh air.

- Jack Benny

There is no similarity between golf and putting; they are two different games, one played in the air, and the other on the ground..

- Ben Hogan

Professional golf is the only sport where, if you win 20% of the time, you're the best

- Jack Nicklaus

Send Midland all your high volume quotes!

STEEL PIPE FITTINGS

STEEL PIPE FITTINGS

HEX PIPE NIPPLE

SAE 140137



5404
2083
FF
1252
C3069

Part #	Male Pipe 1	Male Pipe 2	List Price
5404-2	1/8	1/8	0.93
5404-4-2	1/4	1/8	1.34
5404-4	1/4	1/4	1.04
5404-6-2	3/8	1/8	3.62
5404-6-4	3/8	1/4	1.74
5404-6	3/8	3/8	1.81
5404-8-4	1/2	1/4	2.53
5404-8-6	1/2	3/8	1.96
5404-8	1/2	1/2	1.90
5404-12-6	3/4	3/8	5.69
5404-12-8	3/4	1/2	3.38
5404-12	3/4	3/4	2.95
5404-16-6	1	3/8	38.87
5404-16-8	1	1/2	10.52
5404-16-12	1	3/4	6.74
5404-16	1	1	8.25
5404-20-8	1-1/4	1/2	48.21
5404-20-12	1-1/4	3/4	16.62
5404-20-16	1-1/4	1	13.53
5404-20	1-1/4	1-1/4	10.33
5404-24-12	1-1/2	3/4	47.26
5404-24-16	1-1/2	1	46.85
5404-24-20	1-1/2	1-1/4	27.22
5404-24	1-1/2	1-1/2	16.56
5404-32-20	2	1-1/4	108.98
5404-32-24	2	1-1/2	37.12
5404-32	2	2	45.13

*More sizes & lengths available
Also available in Stainless Steel*

What we think, or what we know, or what we believe is, in the end, of little consequence. The only consequence is what we do.

- John Ruskin

HYDRAULIC ADAPTERS

EXPANDING PIPE ADAPTER

SAE 140139



5405
2040
FG-(R)
1274
C3209(R)

Part #	Male Pipe 1	Female Pipe 2	List Price
5405-1-2	1/16	1/8	5.03
5405-2-2	1/8	1/8	3.31
5405-2-4	1/8	1/4	1.88
5405-2-6	1/8	3/8	5.63
5405-2-8	1/8	1/2	11.56
5405-4-4	1/4	1/4	1.93
5405-4-6	1/4	3/8	2.00
5405-4-8	1/4	1/2	5.04
5405-4-12	1/4	3/4	23.40
5405-6-6	3/8	3/8	2.70
5405-6-8	3/8	1/2	3.19
5405-6-12	3/8	3/4	9.41
5405-8-8	1/2	1/2	5.67
5405-8-12	1/2	3/4	5.75
5405-8-16	1/2	1	15.80
5405-12-12	3/4	3/4	9.15
5405-12-16	3/4	1	12.63
5405-12-20	3/4	1-1/4	35.90
5405-16-16	1	1	15.11
5405-16-20	1	1-1/4	28.98
5405-16-24	1	1-1/2	91.07
5405-20-20	1-1/4	1-1/4	26.56
5405-20-24	1-1/4	1-1/2	31.02
5405-24-24	1-1/2	1-1/2	39.59
5405-24-32	1-1/2	2	62.00

*Also available in Stainless Steel
More sizes available*

I always wanted to be somebody, but now I realize I should have been more specific.

- Lily Tomlin

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HYDRAULIC ADAPTERS

HEX REDUCER BUSHING



5406
2081
PTR
1250
C3109

Part #	Male Pipe	Female Pipe	List Price
5406-4-2	1/4	1/8	0.85
5406-6-2	3/8	1/8	1.19
5406-6-4	3/8	1/4	1.19
5406-8-2	1/2	1/8	2.63
5406-8-4	1/2	1/4	1.63
5406-8-6	1/2	3/8	1.63
5406-12-2	3/4	1/8	4.26
5406-12-4	3/4	1/4	3.30
5406-12-6	3/4	3/8	3.30
5406-12-8	3/4	1/2	3.30
5406-16-4	1	1/4	5.88
5406-16-6	1	3/8	7.00
5406-16-8	1	1/2	3.96
5406-16-12	1	3/4	4.26
5406-20-4	1-1/4	1/4	11.14
5406-20-6	1-1/4	3/8	10.44
5406-20-8	1-1/4	1/2	8.17
5406-20-12	1-1/4	3/4	11.33
5406-20-16	1-1/4	1	7.44
5406-24-6	1-1/2	3/8	22.92
5406-24-8	1-1/2	1/2	20.30
5406-24-12	1-1/2	3/4	20.23
5406-24-16	1-1/2	1	16.28
5406-24-20	1-1/2	1-1/4	14.71
5406-32-8	2	1/2	46.76
5406-32-12	2	3/4	33.52
5406-32-16	2	1	32.66
5406-32-20	2	1-1/4	21.82
5406-32-24	2	1-1/2	32.16
5406-40-32	2-1/2	2	181.41
5406-48-32	3	2	239.05

*Some sizes available in Stainless Steel
Also available in short pattern*

SAE 130109E

HEX HEAD PLUG



5406P
2082
HP
1251
C3154

Part #	Male Pipe	List Price
5406-P-2	1/8	0.33
5406-P-4	1/4	0.87
5406-P-6	3/8	0.93
5406-P-8	1/2	1.37
5406-P-12	3/4	2.58
5406-P-16	1	3.81
5406-P-20	1-1/4	7.70
5406-P-24	1-1/2	16.54
5406-P-32	2	34.56

Also available in Stainless Steel

STEEL PIPE FITTINGS

HOLLOW HEX PLUG

SAE 130109



Part #	Male Pipe	List Price
5406-HHP-1	1/16	0.63
5406-HHP-2	1/8	0.18
5406-HHP-4	1/4	0.27
5406-HHP-6	3/8	0.36
5406-HHP-8	1/2	0.54
5406-HHP-12	3/4	0.95
5406-HHP-16	1	2.45
5406-HHP-20	1-1/4	6.05
5406-HHP-24	1-1/2	20.91
5406-HHP-32	2	20.54

FLUSH HOLLOW HEX PLUG W/ 7/8 TAPER



Part #	Male Pipe	List Price
5406-FLP-1	1/16	0.59
5406-FLP-2	1/8	0.32
5406-FLP-4	1/4	0.41
5406-FLP-6	3/8	0.91
5406-FLP-8	1/2	1.04
5406-FLP-12	3/4	3.31

SQUARE HEAD PLUG

SAE 130109A



Part #	Male Pipe	List Price
5406-SHP-2	1/8	0.36
5406-SHP-4	1/4	0.36
5406-SHP-6	3/8	0.50
5406-SHP-8	1/2	0.82
5406-SHP-12	3/4	1.32
5406-SHP-16	1	5.22
5406-SHP-20	1-1/4	15.24
5406-SHP-24	1-1/2	21.43
5406-SHP-32	2	31.79

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STEEL PIPE FITTINGS

PIPE CAP



Part #	Female Pipe	List Price
5406-C-2	1/8	0.85
5406-C-4	1/4	1.04
5406-C-6	3/8	1.44
5406-C-8	1/2	2.67
5406-C-12	3/4	3.70
5406-C-16	1	7.48

Also available in Stainless Steel

MALE ELBOW

SAE 140237



5500
2085
CR
1275
C3529

Part #	Male Pipe 1	Male Pipe 2	List Price
5500-2	1/8	1/8	2.85
5500-4-2	1/4	1/8	2.89
5500-4	1/4	1/4	2.89
5500-6-4	3/8	1/4	3.26
5500-6	3/8	3/8	3.26
5500-8-4	1/2	1/4	7.53
5500-8-6	1/2	3/8	6.26
5500-8	1/2	1/2	4.67
5500-12-6	3/4	3/8	20.05
5500-12-8	3/4	1/2	7.39
5500-12-12	3/4	3/4	7.15
5500-16-12	1	3/4	17.60
5500-16	1	1	10.19
5500-20-16	1-1/4	1	56.51
5500-20-20	1-1/4	1-1/4	20.59
5500-24	1-1/2	1-1/2	34.74
5500-32	2	2	152.52

Also available in Stainless Steel

More sizes available

MALE ELBOW SWIVEL



• swivels for
installation
purpose only

Part #	Male Pipe 1	Male Pipe 2	List Price
5700-S-4-4	1/4	1/4	6.89
5700-S-6-6	3/8	3/8	26.62
5700-S-8-8	1/2	1/2	27.89
5700-S-12-12	3/4	3/4	53.24

HYDRAULIC ADAPTERS

45° MALE ELBOW

5501
2247



Part #	Male Pipe 1	Male Pipe 2	List Price
5501-2-2	1/8	1/8	3.54
5501-4-4	1/4	1/4	3.45
5501-6-6	3/8	3/8	4.49
5501-8	1/2	1/2	3.95
5501-12-12	3/4	3/4	7.62
5501-16-16	1	1	22.54
5501-20-20	1-1/4	1-1/4	20.09
5501-24-24	1-1/2	1-1/2	87.53

90° STREET ELBOW

5502
2089
CD
1234R
C3409

SAE 140239



Part #	Male Pipe 1	Female Pipe 2	List Price
5502-2	1/8	1/8	2.47
5502-2-4-4	1/8	1/4	3.90
5502-2-6	1/8	3/8	36.28
5502-4-2	1/4	1/8	2.89
5502-4	1/4	1/4	2.89
5502-4-6	1/4	3/8	4.48
5502-4-8-8	1/4	1/2	30.25
5502-6-2	3/8	1/8	29.84
5502-6-4	3/8	1/4	4.33
5502-6	3/8	3/8	4.48
5502-6-8	3/8	1/2	6.10
5502-8-4	1/2	1/4	7.37
5502-8-6	1/2	3/8	5.28
5502-8-8	1/2	1/2	5.26
5502-8-12	1/2	3/4	9.49
5502-12-8	3/4	1/2	9.27
5502-12	3/4	3/4	7.63
5502-12-16	3/4	1	22.22
5502-16-12	1	3/4	27.94
5502-16-16	1	1	12.44
5502-16-20	1	1-1/4	88.17
5502-20-16	1-1/4	1	23.04
5502-20	1-1/4	1-1/4	22.07
5502-24	1-1/2	1-1/2	51.94
5502-32	2	2	149.25

Also available in Stainless Steel

More sizes available

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HYDRAULIC

HYDRAULIC ADAPTERS

STREET ELBOW SWIVEL



•Swivels for installation only

Part #	Male Pipe 1	Female Pipe 2	List Price
5702-4-4	1/4	1/4	25.67
5702-6-6	3/8	3/8	23.85
5702-8-8	1/2	1/2	31.61
5702-12-12	3/4	3/4	83.45

SHORT BODY STREET ELBOW



Part #	Male Pipe 1	Female Pipe 2	List Price
5502-X-4	1/4	1/4	8.89
5502-X-6	3/8	3/8	11.84
5502-X-8	1/2	1/2	19.05

45° STREET ELBOW

SAE 140339



5503
CD45
1244

Part #	Male Pipe 1	Female Pipe 2	List Price
5503-2	1/8	1/8	3.05
5503-4	1/4	1/4	3.07
5503-6	3/8	3/8	4.87
5503-8	1/2	1/2	5.93
5503-12-12	3/4	3/4	7.63
5503-16	1	1	11.65
5503-20	1-1/4	1-1/4	46.58
5503-24	1-1/2	1-1/2	106.17
5503-32	2	2	204.08

*More sizes available
Also available in Stainless Steel*

STEEL PIPE FITTINGS

FEMALE ELBOW

SAE 140238



5504
2087
DD
1245
C3509

Part #	Female Pipe 1	Female Pipe 2	List Price
5504-2	1/8	1/8	2.42
5504-4-2	1/4	1/8	4.58
5504-4	1/4	1/4	2.95
5504-6-4	3/8	1/4	4.50
5504-6	3/8	3/8	4.48
5504-8-4	1/2	1/4	6.71
5504-8-6	1/2	3/8	5.79
5504-8	1/2	1/2	5.25
5504-12-6	3/4	3/8	38.37
5504-12-8	3/4	1/2	11.75
5504-12	3/4	3/4	8.33
5504-16-12	1	3/4	17.32
5504-16	1	1	18.82
5504-20-16	1-1/4	1	26.35
5504-20	1-1/4	1-1/4	25.62
5504-24	1-1/2	1-1/2	50.04
5504-32	2	2	162.67

*More sizes available
Also available in Stainless Steel*

45° FEMALE ELBOW

SAE 140338



5505
DD45
1241
C3559

Part #	Female Pipe 1	Female Pipe 2	List Price
5505-2	1/8	1/8	5.62
5505-4	1/4	1/4	4.52
5505-6	3/8	3/8	9.30
5505-8	1/2	1/2	10.80
5505-12	3/4	3/4	10.16
5505-16	1	1	18.41
5505-20	1-1/4	1-1/4	29.56

More sizes available

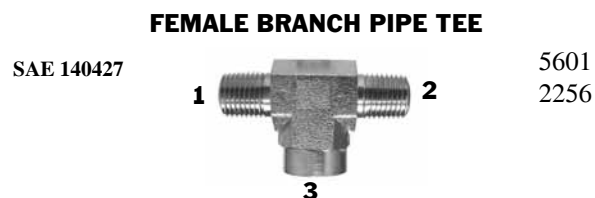
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STEEL PIPE FITTINGS



Part #	Male Pipe 1 & 2	Male Pipe 3	List Price
5600-2-2	1/8	1/8	5.87
5600-4-4	1/4	1/4	6.26
5600-6-6	3/8	3/8	7.63
5600-8-8	1/2	1/2	9.39
5600-12	3/4	3/4	12.32
5600-16	1	1	25.23
5600-20	1-1/4	1-1/4	145.71

Also available in Stainless Steel



Part #	Male Pipe 1 & 2	Female Pipe 3	List Price
5601-2-2	1/8	1/8	5.71
5601-4-4	1/4	1/4	6.65
5601-6-6	3/8	3/8	7.78
5601-8	1/2	1/2	11.89
5601-12	3/4	3/4	22.09
5601-16	1	1	30.50
5601-20	1-1/4	1-1/4	62.34
5601-24	1-1/2	1-1/2	190.88

Some sizes available in Stainless Steel



Part #	Male Pipe 1	Female Pipe 2 & 3	List Price
5602-2-2	1/8	1/8	3.52
5602-4-4	1/4	1/4	3.96
5602-6-6	3/8	3/8	5.41
5602-8-8	1/2	1/2	8.44
5602-12	3/4	3/4	15.49
5602-16	1	1	22.89
5602-20	1-1/4	1-1/4	37.74
5602-24	1-1/2	1-1/2	97.47
5602-32	2	2	264.93

Also available in Stainless Steel

HYDRAULIC ADAPTERS



Part #	Male Pipe 1 & 3	Female Pipe 2	List Price
5603-2-2	1/8	1/8	4.41
5603-4-4	1/4	1/4	5.80
5603-6-6	3/8	3/8	6.78
5603-8-8	1/2	1/2	9.66
5603-12	3/4	3/4	14.43
5603-16	1	1	25.26
5603-20	1-1/4	1-1/4	67.58
5603-24	1-1/2	1-1/2	128.93
5603-32	2	2	402.27

Some sizes available in Stainless Steel



Part #	Female Pipe 1 & 2	Male Pipe 3	List Price
5604-2-2	1/8	1/8	4.44
5604-4-4	1/4	1/4	5.07
5604-6-6	3/8	3/8	6.41
5604-8-8	1/2	1/2	10.57
5604-12	3/4	3/4	14.73
5604-16	1	1	21.86
5604-20	1-1/4	1-1/4	42.44
5604-24	1-1/2	1-1/2	75.92
5604-32	2	2	185.08

Some sizes available in Stainless Steel



Part #	Female Pipe	List Price
5605-2-2	1/8	3.89
5605-4-4	1/4	4.95
5605-6-6	3/8	5.30
5605-8	1/2	7.78
5605-12	3/4	11.67
5605-16	1	25.92
5605-20	1-1/4	45.60
5605-24	1-1/2	105.38
5605-32	2	254.17

More sizes available

All sizes available in Stainless Steel

HYDRAULIC ADAPTERS

STEEL PIPE FITTINGS

SAE 140538

FEMALE CROSS

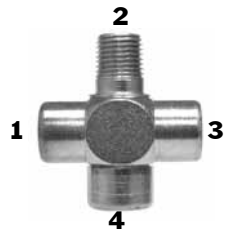


5652
2080
1279
C3959

Part #	Female Pipe 1,2,3 & 4	List Price
5652-2	1/8	10.11
5652-4	1/4	6.80
5652-6	3/8	7.89
5652-8	1/2	17.01
5652-12	3/4	12.88
5652-16	1	42.09
5652-20	1-1/4	85.71
5652-24	1-1/2	156.73
5652-32	2	489.80

Also available in Stainless Steel

MALE BRANCH CROSS



5655
208007

Part #	Pipe Size 1, 2, 3 & 4	List Price
5655-4-4-4-4	1/4	22.53
5655-6-6-6-6	3/8	23.22
5655-8-8-8-8	1/2	29.21
5655-12-12-12-12	3/4	83.27

The uglier a man's legs are, the better he plays golf. It's almost a law.

- H G Wells

I never pray on a golf course. Actually, the Lord answers my prayers everywhere except on the course.

- Billy Graham

If you watch a game, it's fun. If you play at it, it's recreation. If you work at it, it's golf.

- Bob Hope

While playing golf today I hit two good balls. I stepped on a rake.

- Henny Youngman

If you think it's hard to meet new people, try picking up the wrong golf ball.

- Jack Lemmon

You can make a lot of money in this game. Just ask my ex-wives. Both of them are so rich that neither of their husbands work.

- Lee Trevino

I'm not saying my golf game went bad, but if I grew tomatoes, they'd come up sliced.

- Lee Trevino

Straights Pg. 283-285
Shapes Pg. 285-290
Bulkheads Pg. 290-291
Female Swivels Pg. 304-306
O-Ring Fittings Pg. 307-312

STEEL STRAIGHT THREAD O-RING ADAPTERS

CONFORMANCE

- SAE J514
- SAE J1926/1, SAE J1926/3
- ISO 11926-1, ISO 11926-3

MATERIALS

- Steel- SAE 12L14 Carbon steel trivalent chrome plated or bright silver finish.

WORKING PRESSURES

The following table lists the recommended working pressures for steel O-ring Straight Thread Fittings made in accordance with SAE standard J514. Many factors such as surging, vibration, mechanical shock and over tightening may affect the integrity of the fitting connections. SAE recommends sufficient testing be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using the fittings with different size or thread type, use the lower pressure rating of the two threads.

Caution: Although most O-ring Straight Thread Fittings have sufficient structural integrity to support the weight of many components, consult with our technical support department for guidance in selection of parts for this purpose.

SAE J514 O-RING STRAIGHT THREAD FITTING PRESSURE RATINGS FOR STRAIGHT AND ADJUSTABLE THREAD PORT STUDS

Dash Size	Straight Thread	4 to 1 Minimum Burst PSI Straight O-ring	4 to 1 Minimum Burst PSI Adjustable O-ring
-2	5/16-24	5000	5000
-3	3/8-24	5000	5000
-4	7/16-20	5000	4500
-5	1/2-20	5000	4000
-6	9/16-16	5000	4000
-8	3/4-16	4500	4000
-10	7/8-14	3500	3000
-12	1-1/16-12	3500	3000
-14	1-3/16-12	3000	2500
-16	1-5/16-12	3000	2500
-20	1-5/8-12	2500	2000
-24	1-7/8-12	2000	1500
-32	2-1/2-12	1500	1125

STEEL STRAIGHT THREAD O-RING RECOMMENDED ASSEMBLY INSTRUCTIONS

NON-ADJUSTABLE STUD

- Step 1.** Inspect port area to be free of any contaminant.
Step 2. Lubricate o-ring and threads on fitting.
Step 3. Turn fitting into port finger tight, then torque to the value shown in the following tables.

J514 & J1926/3 TORQUE VALUES

Dash Size	Straight Thread	Straight Stud Torque	Adjustable Stud Torque
-2	5/16-24	6	6
-3	3/8-24	6	6
-4	7/16-20	9	8
-5	1/2-20	14	9
-6	9/16-18	18	12
-8	3/4-16	27	20
-10	7/8-14	36	30
-12	1-1/16-12	65	44
-14	1-3/16-12	75	53
-16	1-5/16-12	85	59
-20	1-5/8-12	115	75
-24	1-7/8-12	125	105
-32	2-1/2-12	290	225

ADJUSTABLE STUD

- Step 1.** Follow steps 1 and 2 from the foregoing instructions, then proceed to the following steps below.
Step 2. Looking at fitting from end with nut/washer/O-ring assembly, turn nut clockwise as far as possible.
Step 3. Using wrench pad, turn fitting into port until the washer touches the port spot face. Continue turning fitting until washer touches the thread nearest wrench pad.
Step 4. Back off fitting counterclockwise not exceeding one revolution until it is orientated in the correct position.
Step 5. Place wrench on the wrench pad of fitting to prevent fitting from turning, and torque nut to the value shown in the following table.

J1453 & J1926/2 TORQUE VALUES

Dash Size	Straight Thread	Straight Stud Torque	Adjustable Stud Torque
-2	5/16-24	NA	NA
-3	3/8-24	NA	NA
-4	7/16-20	14	11
-5	1/2-20	18	14
-6	9/16-18	24	18
-8	3/4-16	40	28
-10	7/8-14	55	44
-12	1-1/16-12	95	65
-14	1-3/16-12	105	75
-16	1-5/16-12	120	85
-20	1-5/8-12	160	115
-24	1-7/8-12	175	125

WHY WET TORQUE?

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Overtightening causes threads to yield, deform and lose their ability to maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. Overtightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.

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	5.35
6400-3	3/8-24	3/8-24	5.14
6400-4	7/16-20	7/16-20	0.93
6400-4-3	7/16-20	3/8-24	2.95
6400-4-5	7/16-20	1/2-20	2.34
6400-4-6	7/16-20	9/16-18	1.37
6400-4-8	7/16-20	3/4-16	2.52
6400-4-10	7/16-20	7/8-14	4.91
6400-5	1/2-20	1/2-20	1.61
6400-5-4	1/2-20	7/16-20	2.26
6400-5-6	1/2-20	9/16-18	3.12
6400-6	9/16-18	9/16-18	1.08
6400-6-4	9/16-18	7/16-20	1.43
6400-6-5	9/16-18	1/2-20	2.18
6400-6-8	9/16-18	3/4-16	1.61
6400-6-10	9/16-18	7/8-14	2.53
6400-6-12	9/16-18	1-1/16-12	4.73
6400-6-16	9/16-18	1-5/16-12	6.50
6400-8	3/4-16	3/4-16	1.65
6400-8-4	3/4-16	7/16-20	7.71
6400-8-6	3/4-16	9/16-18	1.85
6400-8-10	3/4-16	7/8-14	2.35
6400-8-12	3/4-16	1-1/16-12	2.45
6400-8-16	3/4-16	1-5/16-12	8.53
6400-10	7/8-14	7/8-14	2.81
6400-10-6	7/8-14	9/16-18	3.64
6400-10-8	7/8-14	3/4-16	2.85
6400-10-12	7/8-14	1-1/16-12	3.52
6400-10-16	7/8-14	1-5/16-12	6.14
6400-12	1-1/16-12	1-1/16-12	3.41
6400-12-8	1-1/16-12	3/4-16	5.12
6400-12-10	1-1/16-12	7/8-14	3.41
6400-12-14	1-1/16-12	1-3/16-12	12.31
6400-12-16	1-1/16-12	1-5/16-12	5.59
6400-12-20	1-1/16-12	1-5/8-12	11.65
6400-14	1-3/16-12	1-3/16-12	5.67
6400-14-12	1-3/16-12	1-1/16-12	11.47
6400-14-16	1-3/16-12	1-5/16-12	5.76
6400-16	1-5/16-12	1-5/16-12	4.54
6400-16-10	1-5/16-12	7/8-14	11.84
6400-16-12	1-5/16-12	1-1/16-12	5.67
6400-16-14	1-5/16-12	1-3/16-12	13.83
6400-16-20	1-5/16-12	1-5/8-12	10.48
6400-16-24	1-5/16-12	1-7/8-12	25.08
6400-20	1-5/8-12	1-5/8-12	10.93
6400-20-12	1-5/8-12	1-1/16-12	23.72
6400-20-16	1-5/8-12	1-5/16-12	9.67
6400-20-24	1-5/8-12	1-7/8-12	16.74
6400-24	1-7/8-12	1-7/8-12	17.78
6400-24-20	1-7/8-12	1-5/8-12	20.33
6400-24-32	1-7/8-12	2-1/2-12	87.39
6400-32	2-1/2-12	2-1/2-12	51.07
6400-32-24	2-1/2-12	1-7/8-12	86.44

Also available in Stainless Steel

Also Available in restrictor

STEEL O-RING ADAPTERS

LONG JIC TO O-RING CONNECTOR



6400L
202713R
FF50X
1231LO
C5316

Part #	JIC Thread Size 1	O-Ring Thread 2	Length*	List Price
6400-L-4	7/16-20	7/16-20	2.12"	3.40
6400-L-6	9/16-18	9/16-18	2.31"	4.81
6400-L-8	3/4-16	3/4-16	2.68"	5.90
6400-L-10	7/8-14	7/8-14	3.00"	6.76
6400-L-12	1-1/16-12	1-1/16-12	3.56"	20.23
6400-L-16	1-5/16-12	1-5/16-12	4.00"	25.31
6400-L-20	1-5/8-12	1-5/8-12	4.62"	49.71

*Length= Overall length of fitting
Also available in Stainless Steel

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	1.81
6401-4-4	7/16-20	1/4	1.62
6401-5-2	1/2-20	1/8	7.55
6401-6-4	9/16-18	1/4	1.83
6401-6-6	9/16-18	3/8	1.86
6401-6-8	9/16-18	1/2	4.83
6401-8-6	3/4-16	3/8	2.90
6401-8-8	3/4-16	1/2	2.79
6401-8-12	3/4-16	3/4	9.48
6401-10-8	7/8-14	1/2	3.45
6401-12-8	1-1/16-12	1/2	4.78
6401-12-12	1-1/16-12	3/4	4.63
6401-16-16	1-5/16-12	1	8.11
6401-20-20	1-5/8-12	1-1/4	12.89
6401-24-24	1-7/8-12	1-1/2	41.13
6401-32-32	2-1/2-12	2	55.18

More sizes available
Some sizes available in Stainless Steel

Send Midland all your
high volume quotes!

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	3.48
6402-O-5-5	1/2-20	1/2-20	55.01
6402-O-6-6	9/16-18	9/16-18	3.12
6402-O-6-8	9/16-18	3/4-16	6.89
6402-O-8-8	3/4-16	3/4-16	4.52
6402-O-8-6	3/4-16	9/16-18	17.25
6402-O-10-10	7/8-14	7/8-14	9.12
6402-O-12-12	1-1/16-12	1-1/16-12	8.22
6402-O-14-14	1-3/16-12	1-3/16-12	102.72
6402-O-16-16	1-5/16-12	1-5/16-12	11.89
6402-O-16-12	1-5/16-12	1-1/16-12	44.35
6402-O-20-20	1-5/8-12	1-5/8-12	29.72
6402-O-24-24	1-7/8-12	1-7/8-12	159.46

*Some sizes available in Stainless Steel
More sizes available*

O-RING HEX NIPPLE UNION



Part #	O-Ring Thread 1	O-Ring Thread 2	List Price
6403-O-4	7/16-20	7/16-20	15.70
6403-O-6	9/16-18	9/16-18	2.22
6403-O-6-4	9/16-18	7/16-20	2.31
6403-O-8	3/4-16	3/4-16	3.19
6403-O-10	7/8-14	7/8-14	7.12
6403-O-10-8	7/8-14	3/4-16	6.80
6403-O-12	1-1/16-12	1-1/16-12	9.90
6403-O-12-8	1-1/16-12	3/4-16	16.11
6403-O-12-10	1-1/16-12	7/8-14	8.57
6403-O-16	1-5/16-12	1-5/16-12	26.01

More sizes available

HYDRAULIC ADAPTERS

ADJUSTABLE O-RING HEX NIPPLE

SAE 090109A



6403NWO
2220
F50HAO
1286

Part #	O-Ring Thread 1	O-Ring Thread 2	List Price
6403-AO-4	7/16-20	7/16-20	4.35
6403-AO-6	9/16-18	9/16-18	4.54
6403-AO-8	3/4-16	3/4-16	6.49
6403-AO-8-6	3/4-16	9/16-18	57.82
6403-AO-10	7/8-14	7/8-14	9.80
6403-AO-10-8	7/8-14	3/4-16	45.35
6403-AO-12	1-1/16-12	1-1/16-12	11.07
6403-AO-12-8	1-1/16-12	3/4-16	61.90
6403-AO-12-10	1-1/16-12	7/8-14	51.84
6403-AO-16	1-5/16-12	1-5/16-12	14.88
6403-AO-16-12	1-5/16-12	1-1/16-12	88.39
6403-AO-20	1-5/8-12	1-5/8-12	19.27
6403-AO-24	1-7/8-12	1-7/8-12	195.33
6403-AO-32	2-1/2-12	2-1/2-12	218.05

Also available in Stainless Steel

FEMALE O-RING TO MALE PIPE ADAPTER



6404
2246R
FHGJ
1267R
C3239

Part #	O-Ring Thread 1	Male Pipe Thread 2	List Price
6404-4-2	7/16-20	1/8	6.97
6404-4-4	7/16-20	1/4	3.91
6404-6-4	9/16-18	1/4	7.75
6404-6-6	9/16-18	3/8	2.98
6404-6-8	9/16-18	1/2	5.59
6404-8-4	3/4-16	1/4	35.83
6404-8-6	3/4-16	3/8	3.81
6404-8-8	3/4-16	1/2	3.37
6404-10-8	7/8-14	1/2	4.48
6404-10-12	7/8-14	3/4	23.72
6404-10-16	7/8-14	1	57.51
6404-12-12	1-1/16-12	3/4	7.00
6404-16-16	1-5/16-12	1	25.35
6404-20-20	1-5/8-12	1-1/4	54.81

More sizes available

HYDRAULIC ADAPTERS

O-RING TO FEMALE PIPE ADAPTER

1  2

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	37.55
6405-O-2-4	5/16-24	1/4	63.22
6405-O-3-2	3/8-24	1/8	23.62
6405-O-3-4	3/8-24	1/4	48.80
6405-O-4-2	7/16-20	1/8	1.88
6405-O-4-4	7/16-20	1/4	2.44
6405-O-5-2	1/2-20	1/8	2.54
6405-O-5-4	1/2-20	1/4	2.22
6405-O-6-2	9/16-18	1/8	7.00
6405-O-6-4	9/16-18	1/4	2.41
6405-O-6-6	9/16-18	3/8	2.49
6405-O-6-8	9/16-18	1/2	11.77
6405-O-6-12	9/16-18	3/4	18.14
6405-O-8-4	3/4-16	1/4	2.92
6405-O-8-6	3/4-16	3/8	2.58
6405-O-8-8	3/4-16	1/2	4.24
6405-O-8-12	3/4-16	3/4	17.13
6405-O-10-4	7/8-14	1/4	5.67
6405-O-10-6	7/8-14	3/8	4.48
6405-O-10-8	7/8-14	1/2	3.88
6405-O-10-12	7/8-14	3/4	6.45
6405-O-12-6	1-1/16-12	3/8	20.35
6405-O-12-8	1-1/16-12	1/2	7.96
6405-O-12-12	1-1/16-12	3/4	5.48
6405-O-12-16	1-1/16-12	1	35.12
6405-O-14-8	1-3/16-12	1/2	23.67
6405-O-14-12	1-3/16-12	3/4	12.10
6405-O-14-16	1-3/16-12	1	44.54
6405-O-16-6	1-5/16-12	3/8	36.28
6405-O-16-8	1-5/16-12	1/2	8.84
6405-O-16-12	1-5/16-12	3/4	9.81
6405-O-16-16	1-5/16-12	1	9.54
6405-O-16-20	1-5/16-12	1-1/4	22.60
6405-O-20-12	1-5/8-12	3/4	45.05
6405-O-20-20	1-5/8-12	1-1/4	12.59
6405-O-20-24	1-5/8-12	1-1/2	53.77
6405-O-24-16	1-7/8-12	1	25.07
6405-O-24-20	1-7/8-12	1-1/4	27.93
6405-O-24-24	1-7/8-12	1-1/2	30.31
6405-O-32-20	2-1/2-12	1-1/4	191.16
6405-O-32-24	2-1/2-12	1-1/2	113.38
6405-O-32-32	2-1/2-12	2	50.84

*Some sizes available in Stainless Steel
More sizes available*

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	1.32
6408-O-3	3/8-24	1.27
6408-O-4	7/16-20	0.63
6408-O-5	1/2-20	0.94
6408-O-6	9/16-18	0.81
6408-O-8	3/4-16	1.24
6408-O-10	7/8-14	1.80
6408-O-12	1-1/16-12	2.78
6408-O-14	1-3/16-20	3.87
6408-O-16	1-5/16-12	3.81
6408-O-20	1-5/8-12	6.59
6408-O-24	1-7/8-12	13.24
6408-O-32	2-1/2-12	30.66

Also available in Stainless Steel

O-RING HOLLOW HEX HEAD PLUG

SAE 090109B



6408HHP
FF2138
HP50N
1256
7238

Part #	O-Ring Thread	List Price
6408-H-O-2	5/16-24	0.82
6408-H-O-3	3/8-24	0.75
6408-H-O-4	7/16-20	0.67
6408-H-O-5	1/2-20	1.17
6408-H-O-6	9/16-18	0.86
6408-H-O-8	3/4-16	1.48
6408-H-O-10	7/8-14	1.95
6408-H-O-12	1-1/16-12	2.81
6408-H-O-14	1-3/16-20	5.87
6408-H-O-16	1-5/16-12	4.01
6408-H-O-20	1-5/8-12	7.00
6408-H-O-24	1-7/8-12	10.09
6408-H-O-32	2-1/2-12	30.35

Also available in Stainless Steel

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high volume quotes!*

STEEL O-RING ADAPTERS/ SWIVELS

HYDRAULIC ADAPTERS

O-RING PORT REDUCER/EXPANDER



6410
FF1010
F50G5
1270
7033

Part #	O-Ring Thread 1	O-Ring Thread 2	List Price
6410-O-2-4	5/16-24	7/16-20	44.13
6410-O-4-5	7/16-20	1/2-20	31.84
6410-O-4-6	7/16-20	9/16-18	3.19
6410-O-6-4	9/16-18	7/16-20	2.15
6410-O-6-8	9/16-18	3/4-16	4.52
6410-O-8-4	3/4-16	7/16-20	4.85
6410-O-8-6	3/4-16	9/16-18	2.54
6410-O-8-10	3/4-16	7/8-14	3.70
6410-O-8-12	3/4-16	1-1/16-12	23.49
6410-O-10-4	7/8-14	7/16-20	7.08
6410-O-10-6	7/8-14	9/16-18	3.15
6410-O-10-8	7/8-14	3/4-16	3.29
6410-O-10-12	7/8-14	1-1/16-12	11.17
6410-O-12-4	1-1/16-12	7/16-20	21.41
6410-O-12-6	1-1/16-12	9/16-18	12.28
6410-O-12-8	1-1/16-12	3/4-16	5.28
6410-O-12-10	1-1/16-12	7/8-14	8.17
6410-O-12-14	1-1/16-12	1-3/16-12	45.44
6410-O-12-16	1-1/16-12	1-5/16-12	20.02
6410-O-14-8	1-3/16-12	3/4-16	25.17
6410-O-14-10	1-3/16-12	7/8-14	16.55
6410-O-14-12	1-3/16-12	1-1/16-12	9.03
6410-O-16-6	1-5/16-12	9/16-18	18.14
6410-O-16-8	1-5/16-12	3/4-16	9.23
6410-O-16-10	1-5/16-12	7/8-14	11.14
6410-O-16-12	1-5/16-12	1-1/16-12	9.30
6410-O-16-14	1-5/16-12	1-3/16-12	37.01
6410-O-16-20	1-5/16-12	1-5/8-12	56.24
6410-O-20-10	1-5/8-12	7/8-14	35.46
6410-O-20-12	1-5/8-12	1-1/16-12	13.30
6410-O-20-16	1-5/8-12	1-5/16-12	12.99
6410-O-20-24	1-5/8-12	1-7/8-12	58.96
6410-O-24-12	1-7/8-12	1-1/16-12	24.81
6410-O-24-16	1-7/8-12	1-5/16-12	29.33
6410-O-24-20	1-7/8-12	1-5/8-12	38.55
6410-O-32-16	2-1/2-12	1-5/16-12	158.73
6410-O-32-20	2-1/2-12	1-5/8-12	99.32
6410-O-32-24	2-1/2-12	1-7/8-12	62.18

Some sizes available in Stainless Steel

More sizes available

Available in an extender

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	3.89
6500-6	9/16-18	9/16-18	3.56
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	5.48
6500-10-8	7/8-14	3/4-16	11.42
6500-12	1-1/16-12	1-1/16-12	7.59
6500-12-10	1-1/16-12	7/8-14	17.32
6500-14	1-3/16-12	1-3/16-12	17.23
6500-16	1-5/16-12	1-5/16-12	11.79
6500-20	1-5/8-12	1-5/8-12	29.30
6500-24	1-7/8-12	1-7/8-12	63.13
6500-32	2-1/2-12	2-1/2-12	132.70

More sizes available

Some sizes available in Stainless Steel

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	3.15
6501-4-4	7/16-20	1/4	3.74
6501-6-4	9/16-18	1/4	4.19
6501-6-6	9/16-18	3/8	4.37
6501-8-6	3/4-16	3/8	6.15
6501-8-8	3/4-16	1/2	6.55
6501-10-8	7/8-14	1/2	7.57
6501-12-12	1-1/16-12	3/4	8.11
6501-14-12	1-3/16-12	3/4	47.98
6501-16-16	1-5/16-12	1	12.59
6501-20-20	1-5/8-12	1-1/4	38.55
6501-24-24	1-7/8-12	1-1/2	52.19
6501-32-32	2-1/2-12	2	255.93

Also available in Stainless Steel
More sizes available

HYDRAULIC

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	4.40
6502-5	1/2-20	1/2-20	7.04
6502-6	9/16-18	9/16-18	3.69
6502-8	3/4-16	3/4-16	4.33
6502-10	7/8-14	7/8-14	6.92
6502-12	1-1/16-12	1-1/16-12	8.06
6502-14	1-3/16-12	1-3/16-12	18.54
6502-16	1-5/16-12	1-5/16-12	14.43
6502-20	1-5/8-12	1-5/8-12	28.74
6502-24	1-7/8-12	1-7/8-12	42.82
6502-32	2-1/2-12	2-1/2-12	122.49

Some sizes available in Stainless Steel

JIC SWIVEL TO FEMALE PIPE ELBOW



Part #	JIC Thread Size 1	Female Pipe Thread 2	List Price
6503-6-4	9/16-18	1/4	9.03
6503-6-6	9/16-18	3/8	10.32
6503-8-6	3/4-16	3/8	21.35
6503-8-8	3/4-16	1/2	17.36
6503-10-8	7/8-14	1/2	38.64
6503-12-12	1-1/16-12	3/4	22.68

*Also available in Stainless Steel
More sizes available*

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	4.30
6504-6-6	9/16-18	9/16-18	4.44
6504-8-8	3/4-16	3/4-16	5.04
6504-10-10	7/8-14	7/8-14	5.87
6504-12-12	1-1/16-12	1-1/16-12	8.13
6504-16-16	1-5/16-12	1-5/16-12	16.94
6504-20-20	1-5/8-12	1-5/8-12	48.62
6504-24-24	1-7/8-12	1-7/8-12	42.24
6504-32-32	2-1/2-12	2-1/2-12	195.65

FEMALE SWIVELS

JIC SWIVEL TO MALE PIPE ADAPTER



6505
2018
F6X
1211
9100R

Part #	JIC Thread Size 1	Male Pipe Thread 2	List Price
6505-4-2	7/16-20	1/8	3.04
6505-4-4	7/16-20	1/4	2.70
6505-5-4	1/2-20	1/4	8.95
6505-6-4	9/16-18	1/4	3.15
6505-6-6	9/16-18	3/8	3.67
6505-8-6	3/4-16	3/8	4.74
6505-8-8	3/4-16	1/2	4.86
6505-10-8	7/8-14	1/2	5.26
6505-10-12	7/8-14	3/4	6.53
6505-12-8	1-1/16-12	1/2	8.84
6505-12-12	1-1/16-12	3/4	6.26
6505-16-12	1-5/16-12	3/4	33.09
6505-16-16	1-5/16-12	1	13.26
6505-20-20	1-5/8-12	1-1/4	22.85
6505-24-24	1-7/8-12	1-1/2	53.92
6505-32-32	2-1/2-12	2	173.33

Also available in Stainless Steel

JIC SWIVEL TO FEMALE PIPE ADAPTER



6506
2242
1215

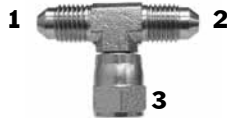
Part #	JIC Thread Size 1	Female Pipe Thread 2	List Price
6506-4-2	7/16-20	1/8	5.61
6506-4-4	7/16-20	1/4	4.54
6506-6-4	9/16-18	1/4	4.93
6506-6-6	9/16-18	3/8	3.67
6506-6-8	9/16-18	1/2	8.68
6506-8-6	3/4-16	3/8	5.76
6506-8-8	3/4-16	1/2	5.28
6506-8-12	3/4-16	3/4	18.10
6506-10-6	7/8-14	3/8	8.41
6506-10-8	7/8-14	1/2	6.96
6506-10-12	7/8-14	3/4	23.04
6506-12-8	1-1/16-12	1/2	24.22
6506-12-12	1-1/16-12	3/4	8.72
6506-14-12	1-3/16-12	3/4	40.27
6506-16-16	1-5/16-12	1	13.14
6506-20-20	1-5/8-12	1-1/4	29.52
6506-24-24	1-7/8-12	1-1/2	77.05
6506-32-32	2-1/2-12	2	211.29

*More sizes available
Also available in Stainless Steel*

FEMALE SWIVELS

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	4.22
6600-5-5	1/2-20	1/2-20	7.62
6600-6-6	9/16-18	9/16-18	4.63
6600-8-8	3/4-16	3/4-16	6.06
6600-10	7/8-14	7/8-14	11.31
6600-12	1-1/16-12	1-1/16-12	12.04
6600-14	1-3/16-12	1-3/16-12	23.23
6600-16	1-5/16-12	1-5/16-12	19.59
6600-20	1-5/8-12	1-5/8-12	41.03
6600-24	1-7/8-12	1-7/8-12	63.83

More sizes available

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	3.59
6602-5	1/2-20	1/2-20	5.83
6602-6	9/16-18	9/16-18	4.66
6602-8	3/4-16	3/4-16	6.78
6602-10	7/8-14	7/8-14	9.11
6602-12	1-1/16-12	1-1/16-12	11.93
6602-14	1-3/16-12	1-3/16-12	23.04
6602-16	1-5/16-12	1-5/16-12	16.41
6602-20	1-5/8-12	1-5/8-12	36.33
6602-24	1-7/8-12	1-7/8-12	50.49
6602-32	2-1/2-12	2-1/2-12	311.61

More sizes available

Also available in Stainless Steel

HYDRAULIC ADAPTERS

JIC BENT TUBE SWIVEL

NUT ELBOW



Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
6701-4	7/16-20	7/16-20	20.82
6701-6	9/16-18	9/16-18	20.18
6701-8	3/4-16	3/4-16	23.80
6701-10	7/8-14	7/8-14	32.65
6701-12	1-1/16-12	1-1/16-12	35.01
6701-16	1-5/16-12	1-5/16-12	72.56
6701-20	1-5/8-12	1-5/8-12	77.10
6701-24	1-7/8-12	1-7/8-12	145.76

JIC LONG BENT TUBE SWIVEL NUT ELBOW



Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
6701-L-4	7/16-20	7/16-20	27.66
6701-L-6	9/16-18	9/16-18	21.72
6701-L-8	3/4-16	3/4-16	37.58
6701-L-10	7/8-14	7/8-14	58.05
6701-L-12	1-1/16-12	1-1/16-12	34.24
6701-L-16	1-5/16-12	1-5/16-12	53.79
6701-L-20	1-5/8-12	1-5/8-12	108.84

JIC EXTRA HEAVY BENT TUBE SWIVEL NUT ELBOW



Meets SAE
100R10 pressures

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
6701-XH-8	3/4-16	3/4-16	159.64
6701-XH-12	1-1/16-12	1-1/16-12	161.36
6701-XH-16	1-5/16-12	1-5/16-12	181.54
6701-XH-20	1-5/8-12	1-5/8-12	406.08
6701-XH-24	1-7/8-12	1-7/8-12	498.87

HYDRAULIC ADAPTERS

JIC EXTRA HEAVY LONG BENT TUBE SWIVEL NUT ELBOW



Meets SAE
100R10 pressures

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
6701-LXH-8	3/4-16	3/4-16	216.78
6701-LXH-12	1-1/16-12	1-1/16-12	132.47
6701-LXH-16	1-5/16-12	1-5/16-12	226.76

JIC 45° BENT TUBE SWIVEL NUT ELBOW



Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
6702-6	9/16-18	9/16-18	22.81
6702-8	3/4-16	3/4-16	31.11
6702-10	7/8-14	7/8-14	29.39
6702-12	1-1/16-12	1-1/16-12	43.22
6702-16	1-5/16-12	1-5/16-12	51.52

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The world can only be grasped by action, not by contemplation.

- Jacob Bronowski

STEEL SAE O-RING

STEEL SAE O-RING FITTINGS

JIC TO O-RING ELBOW CONNECTOR

SAE 070220
MS 51527



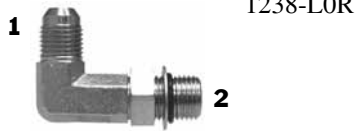
6801
2062R
C50X
1238L
C5515

Part #	JIC Thread Size 1	O-Ring Thread Size 2	List Price
6801-NWO-2	5/16-24	5/16-24	9.31
6801-NWO-3	3/8-24	3/8-24	5.79
6801-NWO-4	7/16-20	7/16-20	2.74
6801-NWO-4-3	7/16-20	3/8-24	114.01
6801-NWO-4-5	7/16-20	1/2-20	3.99
6801-NWO-4-6	7/16-20	9/16-18	3.11
6801-NWO-4-8	7/16-20	3/4-16	4.44
6801-NWO-5	1/2-20	1/2-20	3.96
6801-NWO-5-4	1/2-20	7/16-20	4.99
6801-NWO-5-6	1/2-20	8/16-18	4.11
6801-NWO-6	9/16-18	9/16-18	2.56
6801-NWO-6-4	9/16-18	7/16-20	3.11
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	6.96
6801-NWO-6-12	9/16-18	1-1/16-12	10.31
6801-NWO-8	3/4-16	3/4-16	3.44
6801-NWO-8-6	3/4-16	9/16-18	3.70
6801-NWO-8-10	3/4-16	7/8-14	4.96
6801-NWO-8-12	3/4-16	1-1/16-12	8.67
6801-NWO-8-16	3/4-16	1-5/16-12	15.22
6801-NWO-10	7/8-14	7/8-14	6.26
6801-NWO-10-6	7/8-14	9/16-18	5.55
6801-NWO-10-8	7/8-14	3/4-16	5.85
6801-NWO-10-12	7/8-14	1-1/16-12	9.00
6801-NWO-10-16	7/8-14	1-5/16-12	15.53
6801-NWO-12	1-1/16-12	1-1/16-12	8.59
6801-NWO-12-8	1-1/16-12	3/4-16	9.59
6801-NWO-12-10	1-1/16-12	7/8-14	8.59
6801-NWO-12-14	1-1/16-12	1-3/16-12	18.58
6801-NWO-12-16	1-1/16-12	1-5/16-12	14.33
6801-NWO-12-20	1-1/16-12	1-5/8-12	23.11
6801-NWO-14	1-3/16-12	1-3/16-12	17.78
6801-NWO-14-12	1-3/16-12	1-1/16-12	22.77
6801-NWO-14-16	1-3/16-12	1-5/16-12	32.16
6801-NWO-16	1-5/16-12	1-5/16-12	13.07
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	29.80
6801-NWO-16-20	1-5/16-12	1-5/8-12	26.60
6801-NWO-20	1-5/8-12	1-5/8-12	26.70
6801-NWO-20-12	1-5/8-12	1-1/16-12	25.85
6801-NWO-20-16	1-5/8-12	1-5/16-12	22.85
6801-NWO-20-24	1-5/8-12	1-7/8-12	39.00
6801-NWO-24	1-7/8-12	1-7/8-12	39.74
6801-NWO-24-20	1-7/8-12	1-5/8-12	36.81
6801-NWO-32	2-1/2-12	2-1/2-12	104.38

*Some sizes available in Stainless Steel
More sizes available*

STEEL SAE O-RING

LONG JIC TO O-RING ELBOW



Part #	JIC Thread Size 1	O-Ring Thread Size 2	List Price
6801-L-NWO-4	7/16-20	7/16-20	4.54
6801-L-NWO-6	9/16-18	9/16-18	5.44
6801-L-NWO-6-8	9/16-18	3/4-16	19.05
6801-L-NWO-8	3/4-16	3/4-16	6.76
6801-L-NWO-8-10	3/4-16	7/8-14	10.88
6801-L-NWO-10	7/8-14	7/8-14	10.75
6801-LNWO-12	1-1/16-12	1-1/16-12	14.97
6801-LNWO-16	1-5/16-12	1-5/16-12	24.13

More sizes available

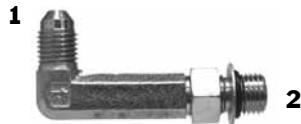
EXTRA LONG JIC TO O-RING ELBOW



Part #	JIC Thread Size 1	O-Ring Thread Size 2	List Price
6801-LL-NWO-4	7/16-20	7/16-20	5.99
6801-LL-NWO-6	9/16-18	9/16-18	5.35
6801-LL-NWO-6-8	9/16-18	3/4-16	11.25
6801-LL-NWO-8	3/4-16	3/4-16	9.16
6801-LL-NWO-8-10	3/4-16	7/8-14	19.05
6801-LL-NWO-10	7/8-14	7/8-14	12.52
6801-LL-NWO-12	1-1/16-12	1-1/16-12	13.38
6801-LL-NWO-16	1-5/16-12	1-5/16-12	25.94

More sizes available

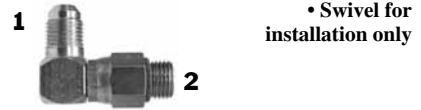
EXTRA-EXTRA LONG JIC TO O-RING ELBOW



Part #	JIC Thread Size 1	O-Ring Thread Size 2	List Price
6801-LLL-NWO-6	9/16-18	9/16-18	25.94
6801-LLL-NWO-8	3/4-16	3/4-16	22.63
6801-LLL-NWO-10	7/8-14	7/8-14	83.99

HYDRAULIC ADAPTERS

JIC TO O-RING SWIVEL ELBOW



Part #	JIC Thread Size 1	O-Ring Thread Size 2	List Price
6801-NWS-6-6	9/16-18	9/16-18	18.41
6801-NWS-8-8	3/4-16	3/4-16	24.26
6801-NWS-10-10	7/8-14	7/8-14	39.23

JIC TO O-RING 45° ELBOW

SAE 070320
MS 51528



6802
2061
V50X
1240R
C5716

Part #	JIC Thread Size 1	O-Ring Thread Size 2	List Price
6802-NWO-4	7/16-20	7/16-20	3.33
6802-NWO-4-6	7/16-20	9/16-18	5.42
6802-NWO-4-8	7/16-20	3/4-16	15.04
6802-NWO-5	1/2-20	1/2-20	4.22
6802-NWO-5-8	1/2-20	3/4-16	63.99
6802-NWO-6	9/16-18	9/16-18	3.41
6802-NWO-6-8	9/16-18	3/4-16	4.85
6802-NWO-6-10	9/16-18	7/8-14	9.39
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	6.52
6802-NWO-8-12	3/4-16	1-1/16-12	10.04
6802-NWO-10	7/8-14	7/8-14	7.07
6802-NWO-10-8	7/8-14	3/4-16	7.20
6802-NWO-10-12	7/8-14	1-1/16-12	16.10
6802-NWO-12	1-1/16-12	1-1/16-12	9.19
6802-NWO-12-14	1-1/16-12	1-3/16-12	59.68
6802-NWO-12-16	1-1/16-12	1-5/16-12	14.37
6802-NWO-14	1-3/16-12	1-3/16-12	22.03
6802-NWO-16	1-5/16-12	1-5/16-12	14.52
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	33.33
6802-NWO-20	1-5/8-12	1-5/8-12	34.92
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	37.93
6802-NWO-32	2-1/2-12	2-1/2-12	188.23

Some sizes available in Stainless Steel

More sizes available

HYDRAULIC ADAPTERS

JIC TO O-RING BRANCH TEE

SAE 070429
MS 51529



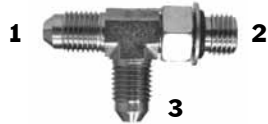
6803
203003X
S50X
1265R
C5716

Part #	JIC Thread Size 1 & 2	O-Ring Thread Size 3	List Price
6803-NWO-4	7/16-20	7/16-20	4.76
6803-NWO-5	1/2-20	1/2-20	7.48
6803-NWO-6	9/16-18	9/16-18	5.64
6803-NWO-6-8	9/16-18	3/4-16	9.75
6803-NWO-8	3/4-16	3/4-16	7.35
6803-NWO-8-10	3/4-16	7/8-14	14.69
6803-NWO-10	7/8-14	7/8-14	10.57
6803-NWO-12	1-1/16-12	1-1/16-12	14.83
6803-NWO-14	1-3/16-12	1-3/16-12	30.88
6803-NWO-16	1-5/16-12	1-5/16-12	15.83
6803-NWO-16-12	1-5/16-12	1-1/16-12	28.34
6803-NWO-20	1-5/8-12	1-5/8-12	39.68
6803-NWO-24	1-7/8-12	1-7/8-12	90.88
6803-NWO-32	2-1/2-12	2-1/2-12	558.19

Some sizes available in Stainless Steel
More sizes available

JIC TO O-RING RUN TEE

SAE 070428
MS 51530



6804
203005R
R50X
1266R
C3459

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	5.85
6804-NWO-6-8	9/16-18	3/4-16	24.99
6804-NWO-8	3/4-16	3/4-16	7.66
6804-NWO-8-10	3/4-16	7/8-14	25.90
6804-NWO-10	7/8-14	7/8-14	12.83
6804-NWO-12	1-1/16-12	1-1/16-12	15.28
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	41.13
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	355.42

More sizes available
Also available in stainless steel

**Send Midland all your
high volume quotes!**

STEEL SAE O-RING

O-RING TO FEMALE PIPE ELBOW



6805
206801R
AE0G
1264
C3469

Part #	O-Ring Thread Size 1	Pipe Thread Size 2	List Price
6805-NWO-4-2	7/16-20	1/8	4.77
6805-NWO-4-4	7/16-20	1/4	4.85
6805-NWO-5-2	1/2-20	1/8	7.80
6805-NWO-6-4	9/16-18	1/4	5.40
6805-NWO-6-6	9/16-18	3/8	6.57
6805-NWO-8-6	3/4-16	3/8	9.54
6805-NWO-8-8	3/4-16	1/2	7.41
6805-NWO-10-8	7/8-14	1/2	10.40
6805-NWO-12-12	1-1/16-12	3/4	14.12
6805-NWO-14-12	1-3/16-12	3/4	36.84
6805-NWO-16-16	1-5/16-12	1	17.13
6805-NWO-20-20	1-5/8-12	1-1/4	37.08
6805-NWO-24-24	1-7/8-12	1-1/2	73.47

More sizes available

EXTRA LONG O-RING TO FEMALE PIPE ELBOW



Part #	O-Ring Thread Size 1	Pipe Thread Size 2	List Price
6805-LL-8-6	3/4-16	3/8	17.78
6805-LL-10-8	7/8-14	1/2	22.63
6805-LL-12-12	1-1/16-12	3/4	36.87
6805-LL-16-16	1-5/16-12	1	128.62

Always be a first-rate version of yourself, instead
of a second-rate version of someone else.

- Judy Garland

Save 5% by ordering online at
www.midlandindustrial.com

STEEL SAE O-RING

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	4.94
6806-NWO-4-4	7/16-20	1/4	4.19
6806-NWO-6-4	9/16-18	1/4	4.41
6806-NWO-6-6	9/16-18	3/8	8.49
6806-NWO-8-6	3/4-16	3/8	5.96
6806-NWO-8-8	3/4-16	1/2	6.92
6806-NWO-10-8	7/8-14	1/2	8.48
6806-NWO-12-12	1-1/16-12	3/4	10.78
6806-NWO-16-16	1-5/16-12	1	18.58
6806-NWO-20-20	1-5/8-12	1-1/4	29.52
6806-NWO-24-24	1-7/8-12	1-1/2	56.15
6806-NWO-32-32	2-1/2-12	2	253.20

More sizes available

O-RING TO O-RING



Part #	O-Ring Thread Size 1 & 2	List Price
6807-NWO-4-4	7/16-20	5.53
6807-NWO-6-6	9/16-18	4.35
6807-NWO-8-8	3/4-16	9.07
6807-NWO-10-10	7/8-14	10.88
6807-NWO-12-12	1-1/16-12	10.52
6807-NWO-16-16	1-5/16-12	19.73
6807-NWO-20-20	1-5/8-12	60.41
6807-NWO-24-24	1-7/8-12	91.56

More sizes available

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	5.20
6809-NWO-6-6	9/16-18	9/16-18	5.98
6809-NWO-8-8	3/4-16	3/4-16	9.33
6809-NWO-8-10	3/4-16	7/8-16	33.92
6809-NWO-10-10	7/8-14	7/8-14	9.11
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	60.62

HYDRAULIC ADAPTERS

FEMALE O-RING TO MALE O-RING ELBOW



Part #	O-Ring Thread Size 1	O-Ring Thread Size 2	List Price
6815-NWO-6-6	9/16-18	9/16-18	7.82
6815-NWO-8-8	3/4-16	3/4-16	8.99
6815-NWO-10-10	7/8-14	7/8-14	26.12
6815-NWO-12-12	1-1/16-12	1-1/16-12	27.97

More sizes available

O-RING TO FEMALE PIPE BRANCH TEE



Part #	O-Ring Thread Size 1	Pipe Thread Size 2	List Price
6855-NWO-6-4	9/16-18	1/4	36.22
6855-NWO-6-6	9/16-18	3/8	28.93

More sizes available

It is surprisingly how easy it is to forget that the way to get things done is to do them.

- Mark Forster

HYDRAULIC ADAPTERS

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	5.97
6900-O-4-4	7/16-20	1/4	2.30
6900-O-4-6	7/16-20	3/8	6.03
6900-O-4-8	7/16-20	1/2	28.51
6900-O-5-4	1/2-20	1/4	3.59
6900-O-6-4	9/16-18	1/4	2.54
6900-O-6-6	9/16-18	3/8	3.04
6900-O-6-8	9/16-18	1/2	4.38
6900-O-8-4	3/4-16	1/4	3.30
6900-O-8-6	3/4-16	3/8	3.25
6900-O-8-8	3/4-16	1/2	3.15
6900-O-8-12	3/4-16	3/4	8.48
6900-O-10-4	7/8-14	1/4	34.34
6900-O-10-6	7/8-14	3/8	7.39
6900-O-10-8	7/8-14	1/2	4.22
6900-O-10-12	7/8-14	3/4	6.06
6900-O-12-6	1-1/16-12	3/8	16.11
6900-O-12-8	1-1/16-12	1/2	6.11
6900-O-12-12	1-1/16-12	3/4	6.41
6900-O-12-16	1-1/16-12	1	11.85
6900-O-14-8	1-3/16-12	1/2	73.70
6900-O-14-12	1-3/16-12	3/4	11.29
6900-O-16-8	1-5/16-12	1/2	42.45
6900-O-16-12	1-5/16-12	3/4	8.72
6900-O-16-16	1-5/16-12	1	8.88
6900-O-16-20	1-5/16-12	1-1/4	28.35
6900-O-20-12	1-5/8-12	3/4	50.11
6900-O-20-16	1-5/8-12	1	18.58
6900-O-20-20	1-5/8-12	1-1/4	18.89
6900-O-24-24	1-7/8-12	1-1/2	48.69
6900-O-32-32	2-1/2-12	2	224.67

More sizes available

I can accept failure, but I can't accept not trying.

- Michael Jordan

STEEL SAE O-RING

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	10.87
6901-NWO-4-4	7/16-20	1/4	4.07
6901-NWO-4-6	7/16-20	3/8	9.62
6901-NWO-6-4	9/16-18	1/4	4.26
6901-NWO-6-6	9/16-18	3/8	5.67
6901-NWO-6-8	9/16-18	1/2	8.78
6901-NWO-8-4	3/4-16	1/4	7.86
6901-NWO-8-6	3/4-16	3/8	6.53
6901-NWO-8-8	3/4-16	1/2	5.96
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	7.39
6901-NWO-10-8	7/8-14	1/2	7.08
6901-NWO-10-12	7/8-14	3/4	13.37
6901-NWO-12-6	1-1/16-12	3/8	11.04
6901-NWO-12-8	1-1/16-12	1/2	10.76
6901-NWO-12-12	1-1/16-12	3/4	13.11
6901-NWO-12-16	1-1/16-12	1	44.78
6901-NWO-14-12	1-3/16-12	3/4	35.42
6901-NWO-16-12	1-5/16-12	3/4	19.44
6901-NWO-16-16	1-5/16-12	1	18.07
6901-NWO-16-20	1-5/16-12	1-1/4	59.20
6901-NWO-20-12	1-5/8-12	3/4	50.41
6901-NWO-20-16	1-5/8-12	1	38.68
6901-NWO-20-20	1-5/8-12	1-1/4	34.48
6901-NWO-24-24	1-7/8-12	1-1/2	129.88
6901-NWO-32-32	2-1/2-12	2	393.51

O-RING SWIVEL TEE



Part #	Female NPSM Size 1 & 2	O-Ring Thread Size 3	List Price
6911-NWO-4-4	1/4	7/16-20	57.14
6911-NWO-6-6	3/8	9/16-18	60.95
6911-NWO-8-8	1/2	3/4-16	43.63
6911-NWO-12-12	3/4	1-1/16-12	86.44

More sizes available

STEEL SAE O-RING

45° O-RING SWIVEL ADAPTER

SAE 140357



6902
2067R
1272
9365

2

Part #	O-Ring Thread Size 1	Female NPSM Size 2	List Price
6902-NWO-4-2	7/16-20	1/8	17.05
6902-NWO-4-4	7/16-20	1/4	8.03
6902-NWO-4-6	7/16-20	3/8	15.60
6902-NWO-6-4	9/16-18	1/4	7.48
6902-NWO-6-6	9/16-18	3/8	6.37
6902-NWO-6-8	9/16-18	1/2	10.96
6902-NWO-8-4	3/4-16	1/4	19.77
6902-NWO-8-6	3/4-16	3/8	8.45
6902-NWO-8-8	3/4-16	1/2	8.45
6902-NWO-8-12	3/4-16	3/4	23.04
6902-NWO-10-6	7/8-14	3/8	14.01
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	16.70
6902-NWO-12-12	1-1/16-12	3/4	15.00
6902-NWO-12-16	1-1/16-12	1	78.59
6902-NWO-16-12	1-5/16-12	3/4	81.36
6902-NWO-16-16	1-5/16-12	1	19.52
6902-NWO-20-20	1-5/8-12	1-1/4	71.80
6902-NWO-24-24	1-7/8-12	1-1/2	170.22

The best way to have a good idea is to have lots of ideas.

- Linus Pauling

HYDRAULIC ADAPTERS

O-RINGS

VITON 90 SAE BOSS O-RING

Fluorocarbon



Part #	O-Ring Thread	O-Ring I.D.	List Price
4001-2-2	5/16-24	.239	0.73
4001-3-3	3/8-24	.301	0.59
4001-4-4	7/16-20	.351	0.76
4001-5-5	1/2-20	.414	1.13
4001-6-6	9/16-18	.468	0.82
4001-8-8	3/4-16	.644	1.09
4001-10	7/8-14	.755	1.33
4001-12	1-1/16-12	.924	1.70
4001-16	1-5/16-12	1.171	2.01
4001-20	1-5/8-12	1.475	3.40
4001-24	1-7/8-12	1.720	9.89
4001-32	2-1/2-12	2.337	13.65

NITRILE 90 SAE BOSS O-RING



Part #	O-Ring Thread	O-Ring I.D.	List Price
4000-2-2	5/16-24	.239	0.24
4000-3-3	3/8-24	.301	0.24
4000-4-4	7/16-20	.351	0.27
4000-5-5	1/2-20	.414	0.30
4000-6-6	9/16-18	.468	0.30
4000-8-8	3/4-16	.644	0.33
4000-10	7/8-14	.755	0.35
4000-12	1-1/16-12	.924	0.23
4000-14	1-3/16-12	1.048	0.52
4000-16	1-5/16-12	1.171	0.60
4000-20	1-5/8-12	1.475	0.84
4000-24	1-7/8-12	1.720	0.98
4000-32	2-1/2-12	2.337	1.36

STEEL FLANGE ADAPTERS

CONFORMANCE

- SAE J518

MATERIALS

- Steel per SAE J518 with either black phosphate finish or plated chrome finish or iridite dip. Stainless Steel available upon request.

WORKING PRESSURES

The following table lists the recommended working pressures for steel Four-bolt Solid and Split Flange Fittings and Hose Ends manufactured in accordance with SAE standards J518 and J517. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using Flanged Fittings that have a threaded connection on one end, use the lower pressure rating of the two.

Caution: Although many Four-bolt Flanged Fittings have sufficient structural integrity to support the weight of many components, we recommend consulting with our technical support department for guidance in selection of parts for this purpose.

SAE J518 FOUR-BOLT CODE 61
FLANGE PRESSURE RATINGS

Dash Size	Flange Head OD Inches	4 TO 1 Minimum Burst PSI
-8	1-3/16 - 1.188	5000
-12	1-1/2 - 1.500	5000
-16	1-3/4 - 1.750	5000
-20	2 - 2.000	4000
-24	2-3/8 - 2.375	3000
-32	2-13/16 - 2.812	3000
-40	3-5/16 - 3.312	2500
-48	4 - 4.000	2000
-56	4-1/2 - 4.500	500
-64	5 - 5.000	500
-80	6 - 6.000	500

SAE J518 FOUR-BOLT CODE 62
FLANGE PRESSURE RATINGS

Dash Size	Flange Head OD Inches	4 TO 1 Minimum Burst PSI
-8	1-1/4 - 1.250	6000
-12	1-5/8 - 1.625	6000
-16	1-7/8 - 1.875	6000
-20	2-1/8 - 2.125	6000
-24	2-1/2 - 2.500	6000
-32	3-1/8 - 3.125	6000

STEEL FLANGE ADAPTERS
ASSEMBLY INSTRUCTIONS

RECOMMENDED SOLID FOUR-BOLT

- Step 1.** Inspect port area to be smooth and free of nicks, burrs, scratches, or contaminants.
- Step 2.** Lubricate the o-ring and place in flange head groove.
- Step 3.** Lubricate screw threads, slip lock washers onto screws, and insert screws into flange
- Step 4.** Position flange on port and finger tighten all screws.
- Step 5.** Torque the screws in a figure eight sequence, incrementally until the appropriate torque value in the following table is achieved.

J518 CODE 61 AND CODE 62
FLANGE MINIMUM TORQUE VALUES

Dash Size	Port Size	Code 61 Foot/Lbs.	Code 62 Foot/Lbs.
-8	1/2"	15-19	15-19
-12	3/4"	20-29	25-33
-16	1"	27-35	41-50
-20	1-1/4"	35-46	62-75
-24	1-1/2"	46-58	116-133
-32	2"	53-67	200-217
-40	2-1/2"	79	NA
-48	3"	137	NA
-56	3-1/2"	116	NA
-64	4"	116	NA
-80	5"	116	NA

RECOMMENDED SPLIT FOUR-BOLT

- Step 1.** Follow steps 1 through 3 above, then proceed to the following steps.
- Step 2.** Position both flanges on port and turn one screw in each flange about three turns.
- Step 3.** Rotate each flange away from the port for sufficient clearance to position hose or fitting flange head on port.
- Step 4.** Close each flange until it properly captures flange head. Insert remaining screws and finger tighten.
- Step 5.** Torque the screws in a figure eight sequence incrementally until the appropriate torque value in the preceding table is achieved.

WHY WET TORQUE?

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Overtightening causes threads to yield, deform and lose their ability to maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. Overtightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.

FLANGE ADAPTERS

JIC FLANGE ADAPTER CODE 61

6840
503



3000 PSI

Part #	JIC Thread Size 1	Flange Size 2	Flange Head OD	List Price
1700-8-8	3/4-16	1/2	1.18	20.41
1700-8-12	3/4-16	3/4	1.50	22.49
1700-12-12	1-1/16-12	3/4	1.50	19.27
1700-12-16	1-1/16-12	1	1.75	19.27
1700-16-16	1-5/16-12	1	1.75	24.04
1700-16-20	1-5/16-12	1-1/4	2.00	37.32
1700-16-24	1-5/16-12	1-1/2	2.37	73.02
1700-20-16	1-5/8-12	1	1.75	30.34
1700-20-20	1-5/8-12	1-1/4	2.00	30.43
1700-20-32	1-5/8-12	2	2.81	98.82
1700-24-24	1-7/8-12	1-1/2	2.37	42.18
1700-32-32	2-1/2-12	2	2.81	140.27
1700-40-40	3-12	2-1/2	3.31	282.99

More sizes available

JIC FLANGE 45° ADAPTER CODE 61

6845
505



3000 PSI

Part #	JIC Thread Size 1	Flange Size 2	Flange Head OD	List Price
1703-8-8	3/4-16	1/2	1.18	33.02
1703-8-12	3/4-16	3/4	1.50	54.83
1703-12-12	1-1/16-12	3/4	1.50	30.11
1703-12-16	1-1/16-12	1	1.75	54.69
1703-16-16	1-5/16-12	1	1.75	36.37
1703-16-20	1-5/16-12	1-1/4	2.00	56.12
1703-16-24	1-5/16-12	1-1/2	2.37	73.02
1703-20-16	1-5/8-12	1	1.75	43.85
1703-20-20	1-5/8-12	1-1/4	2.00	50.88
1703-20-24	1-5/8-12	1-1/2	2.37	77.28
1703-24-40	1-7/8-12	2-1/2	3.31	219.09
1703-32-24	2-1/2-12	1-1/2	2.37	117.14
1703-32-32	2-1/2-12	2	2.81	143.49

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HYDRAULIC ADAPTERS

JIC FLANGE 90° ADAPTER CODE 61

6890
504



3000 PSI

Part #	JIC Thread Size 1	Flange Size 2	Flange Head OD	List Price
1704-8-8	3/4-16	1/2	1.18	24.34
1704-8-12	3/4-16	3/4	1.50	41.68
1704-10-16	7/8-14	1	1.75	181.41
1704-12-12	1-1/16-12	3/4	1.50	33.62
1704-12-16	1-1/16-12	1	1.75	57.05
1704-12-20	1-1/16-12	1-1/4	2.00	51.47
1704-16-12	1-5/16-12	3/4	1.50	37.92
1704-16-16	1-5/16-12	1	1.75	45.49
1704-16-20	1-5/16-12	1-1/4	2.00	73.93
1704-16-24	1-5/16-12	1-1/2	2.37	71.43
1704-20-16	1-5/8-12	1	1.75	55.92
1704-20-20	1-5/8-12	1-1/4	2.00	71.20
1704-20-24	1-5/8-12	1-1/2	2.37	85.73
1704-24-16	1-7/8-12	1	1.75	73.51
1704-24-20	1-7/8-12	1-1/4	2.00	99.63
1704-24-32	1-7/8-12	2	2.81	140.82
1704-24-40	1-7/8-12	2-1/2	3.31	323.95
1704-32-24	2-1/2-12	1-1/2	2.37	217.05
1704-32-32	2-1/2-12	2	2.81	342.59

More sizes available

JIC FLANGE ADAPTER CODE 62

6842



6000 PSI

Part #	JIC Thread Size 1	Flange Size 2	Flange Head OD	List Price
1800-8-8	3/4-16	1/2	1.25	40.54
1800-12-12	1-1/16-12	3/4	1.62	29.25
1800-12-16	1-1/16-12	1	1.88	41.41
1800-16-16	1-5/16-12	1	1.88	31.52
1800-16-20	1-5/16-12	1-1/4	2.12	45.26
1800-20-16	1-5/8-12	1	1.88	45.14
1800-20-20	1-5/8-12	1-1/4	2.12	48.75
1800-20-24	1-5/8-12	1-1/2	2.50	56.28
1800-24-24	1-7/8-12	1-1/2	2.50	63.04
1800-32-32	2-1/2-12	2	3.12	74.06

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HYDRAULIC

HYDRAULIC ADAPTERS

JIC FLANGE 45° ADAPTER

CODE 62

1



2

6847
508

6000 PSI

Part #	JIC Thread Size 1	Flange Size 2	Flange Head OD	List Price
1803-12-12	1-1/16-12	3/4	1.62	41.22
1803-12-16	1-1/16-12	1	1.88	48.71
1803-16-16	1-5/16-12	1	1.88	53.11
1803-16-20	1-5/16-12	1-1/4	2.12	59.00
1803-20-16	1-5/8-12	1	1.88	85.85
1803-20-20	1-5/8-12	1-1/4	2.12	100.23
1803-20-24	1-5/8-12	1-1/2	2.50	92.29
1803-24-24	1-7/8-12	1-1/2	2.50	98.14
1803-32-32	2-1/2-12	2	3.12	212.74

More sizes available

JIC FLANGE 90° ADAPTER

CODE 62

1



2

6842

6000 PSI

Part #	JIC Thread Size 1	Flange Size 2	Flange Head OD	List Price
1804-8-8	3/4-16	1/2	1.25	43.36
1804-12-12	1-1/16-12	3/4	1.62	47.85
1804-12-16	1-1/16-12	1	1.88	46.12
1804-16-16	1-5/16-12	1	1.88	54.56
1804-16-20	1-5/16-12	1-1/4	2.12	70.98
1804-20-16	1-5/8-12	1	1.88	58.96
1804-20-20	1-5/8-12	1-1/4	2.12	98.32
1804-20-24	1-5/8-12	1-1/2	2.50	80.14
1804-24-24	1-7/8-12	1-1/2	2.50	119.27
1804-32-32	2-1/2-12	2	3.12	199.50

More sizes available

BRAZE TO SPLIT FLANGE

CODE 61



3000 PSI

Part #	Flange Size	Tube O.D.	List Price
1861-8	1/2	1/2	11.39
1861-12	3/4	3/4	9.07
1861-16	1	1	25.58
1861-20	1-1/4	1-1/4	13.50
1861-24	1-1/2	1-1/2	14.38
1861-32	2	2	16.33
1861-40	2-1/2	2-1/2	60.32

FLANGE ADAPTERS

BRAZE TO SPLIT FLANGE

CODE 62

6862



6000 PSI

Part #	Flange Size	Tube O.D.	List Price
1862-8	1/2	1/2	63.04
1862-12	3/4	3/4	23.58
1862-16	1	1	25.58
1862-20	1-1/4	1-1/4	29.73
1862-24	1-1/2	1-1/2	31.38
1862-32	2	2	52.61

SPLIT FLANGE PLUG

CODE 61

6861P



3000 PSI

Part #	Flange Size	List Price
1961-8	1/2	11.39
1961-12	3/4	10.57
1961-16	1	10.57
1961-20	1-1/4	12.07
1961-24	1-1/2	14.94
1961-32	2	37.41

SPLIT FLANGE PLUG

CODE 62

6862P



6000 PSI

Part #	Flange Size	List Price
1962-8	1/2	78.10
1962-12	3/4	25.17
1962-16	1	25.78
1962-20	1-1/4	28.57
1962-24	1-1/2	34.10
1962-32	2	79.18

FLANGE ADAPTERS

NITRILE 90 FLANGE O-RING



Viton Available
upon request
90DF

Part #	Flange Size	O-Ring Number	List Price
4004-8-8	1/2	210	0.59
4004-12	3/4	214	0.63
4004-16	1	219	0.77
4004-20	1-1/4	222	1.02
4004-24	1-1/2	225	1.04
4004-32	2	228	1.27
4004-40	2-1/2	232	1.90
4004-48	3	237	2.01

FLANGE CONNECTOR PLATES CODE 61



CP

Part #	Flange Size	List Price
1900-8	1/2	15.24
1900-12	3/4	20.11
1900-16	1	15.14
1900-20	1-1/4	18.66
1900-24	1-1/2	14.60
1900-32	2	16.96
1900-40	2-1/2	17.10

SPLIT FLANGE KIT CODE 61

SFK



3000 PSI

Part #	Flange Size	Flange Head Dia.	List Price
1901-8	1/2	1.19	20.87
1901-12	3/4	1.50	20.46
1901-16	1	1.75	20.46
1901-20	1-1/4	2.00	27.28
1901-24	1-1/2	2.38	33.27
1901-32	2	2.81	37.41
1901-40	2-1/2	3.31	44.54
1901-48	3	4.00	74.92

HYDRAULIC ADAPTERS

SPLIT FLANGE KIT CODE 62

SFXX



6000 PSI

Part #	Flange Size	Flange Head Diameter	List Price
1902-8	1/2	1.25	76.01
1902-12	3/4	1.63	38.28
1902-16	1	1.88	35.78
1902-20	1-1/4	2.12	44.12
1902-24	1-1/2	2.50	58.31
1902-32	2	3.12	141.00

SPLIT FLANGE HALF CODE 61

SF



3000 PSI

Part #	Flange Size	Flange Head Diameter	List Price
2061-8	1/2	1.19	4.54
2061-12	3/4	1.50	3.67
2061-16	1	1.75	3.90
2061-20	1-1/4	2.00	4.99
2061-24	1-1/2	2.38	6.67
2061-32	2	2.81	7.26
2061-40	2-1/2	3.31	13.88
2061-48	3	4	21.41

SPLIT FLANGE HALF CODE 62

SFX



6000 PSI

Part #	Flange Size	Flange Head Diameter	List Price
2062-8	1/2	1.25	17.69
2062-12	3/4	1.63	7.85
2062-16	1	1.88	9.21
2062-20	1-1/4	2.12	15.96
2062-24	1-1/2	2.50	17.14
2062-32	2	3.12	35.60

HYDRAULIC ADAPTERS

PIPE WELD FLANGE PAD CODE 61

W4



3000 PSI

Part #	Pipe Size	List Price
2161-8-8	1/2	33.79
2161-12-12	3/4	26.30
2161-16-16	1	29.34
2161-20-20	1-1/4	34.60
2161-24-24	1-1/2	46.08
2161-32-32	2	71.34

PIPE WELD FLANGE PAD CODE 62

W42



6000 PSI

Part #	Pipe Size	List Price
2162-8-8	1/2	99.09
2162-12-12	3/4	53.97
2162-16-16	1	92.02
2162-20-20	1-1/4	97.01
2162-24-24	1-1/2	115.56
2162-32-32	2	193.97

PIPE THREAD FLANGE PAD CODE 61

W43



3000 PSI

Part #	Pipe Size	List Price
2261-8-8	1/2	33.15
2261-12-12	3/4	28.78
2261-16-16	1	29.46
2261-20-20	1-1/4	34.64
2261-24-24	1-1/2	38.60
2261-32-32	2	45.89
2261-40-40	2-1/2	77.33
2261-48-48	3	105.77

FLANGE ADAPTERS

PIPE THREAD FLANGE PAD CODE 62

W44



6000 PSI

Part #	Pipe Size	List Price
2262-8-8	1/2	50.98
2262-12-12	3/4	65.17
2262-16-16	1	96.05
2262-20-20	1-1/4	102.86
2262-24-24	1-1/2	144.85
2262-32-32	2	205.49
2262-40-40	2-1/2	511.66
2262-48-48	3	679.77

O-RING FLANGE PAD CODE 61

W46



3000 PSI

Part #	O-Ring Thread Size	Pad Size	List Price
2361-12-12	1-1/16-12	3/4	32.61
2361-16-16	1-5/16-12	1	42.29
2361-20-20	1-5/8-12	1-1/4	48.97
2361-24-24	1-7/8-12	1-1/2	64.99

O-RING FLANGE PAD CODE 62

W48



6000 PSI

Part #	O-Ring Thread Size	Pad Size	List Price
2362-12-12	1-1/16-12	3/4	84.08
2362-16-16	1-5/16-12	1	93.02
2362-20-20	1-5/8-12	1-1/4	119.91
2362-24-24	1-7/8-12	1-1/2	161.95

O-RING FACE SEAL ADAPTER

CONFORMANCE

- SAE J1453

MATERIALS

- Steel- SAE 12L14 carbon steel trivalent chrome plated or clear silver finish.

WORKING PRESSURES

The following table lists the recommended working pressures for steel O-ring Face Seal tube fittings made in accordance with SAE standard J1943. Many factors such as impulsing, vibration, mechanical shock and overtightening may affect the integrity of fitting connections. SAE recommends sufficient testing be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using fittings with different size or thread type, use lower pressure rating of the two threads.

Caution: O-ring Face Seal fittings are not designed to provide structural support for other components.

SAE J1453 O-RING FACE SEAL FITTINGS PRESSURE RATINGS

Dash Size	Flared Thread Size	4 TO 1 Minimum Burst PSI
-4	9/16-18	6000
-6	11/16-16	6000
-8	13/16-16	6000
-10	1-14	6000
-12	1-3/16-12	6000
-16	1-7/16-12	6000
-20	1-11/16-12	4000
-24	2-12	4000

SAE J1453 O-RING FACE SEAL PRESSURE RATINGS FOR STRAIGHT THREAD PORT

Dash Size	Flared Thread Size	4 TO 1 Minimum Burst Straight	Minimum Burst Adjustable
-4	9/16-18	6000	6000
-6	11/16-16	6000	6000
-8	13/16-16	6000	6000
-10	1-14	6000	6000
-12	1-3/16-12	6000	6000
-16	1-7/16-12	6000	5000
-20	1-11/16-12	4000	4000
-24	2-12	4000	3000

O-RING FACE SEAL ASSEMBLY INSTRUCTIONS

RECOMMENDED

- Step 1.** Lubricate the threads and the entire surface of the face seal o-ring
Step 2. Install o-ring into face seal groove.
Step 3. Place matting face seal flange against o-ring and finger tighten face seal flange nut.
Step 4. Torque flange nut to the value in the following table.

Dash Size	Flared Thread Size	Torque Foot/Lbs.
-4	9/16-20	10
-6	11/16-16	20
-8	13/16-16	32
-10	1-14	46
-12	1-3/16-12	65
-16	1-7/16-12	92
-20	1-7/8-12	125
-24	2-12	150

ALTERNATE ASSEMBLY METHOD

- Step 1.** If torque method not possible, follow steps 1-3 above, then proceed to the steps below.
Step 2. Lightly wrench tighten the nut until there is firm resistance.
Step 3. Place a wrench on wrench pad next to nut as near the 6 o'clock as possible.
Step 4. Place second wrench on nut as near the 3 o'clock position as possible.
Step 5. Turn nut clockwise to no less than half way to the 4 o'clock position and no more than the 6 o'clock position.

WHY WET TORQUE?

Due to the difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Overtightening causes threads to yield, deform and lose their ability to maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. Overtightening is the single greatest cause for leaks in metal to metal seat hydraulic connections. It is our firm position, that to not wet torque, is to compromise consistency and quality for convenience.

Torque Values: The torque values provided are to provide benchmarks that we believe give optimum results for leak free connections. Actual torque val-

HYDRAULIC 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	0.73
FSO318-6	3/8	.38	1.45
FSO318-8	1/2	.50	1.18
FSO318-10	5/8	.62	2.77
FSO318-12	3/4	.72	3.99
FSO318-16	1	1.00	5.62
FSO318-20	1 1/4	1.25	7.03
FSO318-24	1 1/2	1.50	22.36

BRAZE TUBE SLEEVE

SAE 520115



FF319
FF3019

Part #	Tube O.D.	List Price
FSO319-4	1/4	0.68
FSO319-6	3/8	0.63
FSO319-8	1/2	1.00
FSO319-10	5/8	1.09
FSO319-12	3/4	1.68
FSO319-16	1	2.90
FSO319-20	1-1/4	5.17
FSO319-24	1-1/2	24.72

Also available in Stainless Steel

See Page 310 for JIC Nut and Sleeve

If you eat a frog first thing in the morning,
the rest of your day will be wonderful.

- Mark Twain

O-RING FACE SEAL ADAPTERS

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	5.77
FSO403-8-8	1/2	13/16-16	6.61
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	10.20
FSO403-20-20	1-1/4	1-11/16-12	33.79
FSO403-24-24	1-1/2	2-12	41.04

More sizes available

CAP

SAE 520112



FF304C

Part #	Tube O.D.	Flat Face Thread	List Price
FSO304-C-4	1/4	9/16-18	1.32
FSO304-C-6	3/8	11/16-16	2.59
FSO304-C-8	1/2	13/16-16	2.99
FSO304-C-10	5/8	1-14	3.58
FSO304-C-12	3/4	1-3/8-12	4.08
FSO304-C-16	1	1-7/16-12	6.99
FSO304-C-20	1-1/4	1-11/16-12	10.93
FSO304-C-24	1-1/2	2-12	18.82

PLUG

SAE 520109



FF2408
FF1254

Part #	Tube O.D.	Flat Face Thread	List Price
FSO2408-4	1/4	9/16-18	1.21
FSO2408-6	3/8	11/16-16	1.24
FSO2408-8	1/2	13/16-16	1.85
FSO2408-10	5/8	1-14	1.95
FSO2408-12	3/4	1-3/8-12	2.72
FSO2408-16	1	1-7/16-12	5.94
FSO2408-20	1-1/4	1-11/16-12	7.76
FSO2408-24	1-1/2	2-12	21.77

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O-RING FACE SEAL ADAPTERS

O-RING FACE SEAL ADAPTERS

MALE CONNECTOR

SAE 520102

FF2404
FF1202



Part #	Flat Face Thread 1	Male Pipe Thread 2	List Price
FSO2404-4-4	9/16-18	1/8	1.90
FSO2404-4-6	9/16-18	3/8	2.63
FSO2404-6-4	11/16-16	1/4	1.77
FSO2404-6-6	11/16-16	3/8	1.90
FSO2404-8-4	13/16-16	1/4	3.22
FSO2404-8-6	13/16-16	3/8	2.22
FSO2404-8-8	13/16-16	1/2	3.67
FSO2404-10-8	1-14	1/2	4.40
FSO2404-12-12	1-3/16-12	3/4	5.44
FSO2404-16-16	1-7/16-12	1	5.44
FSO2404-20-20	1-11/16-12	1-1/4	12.20
FSO2404-24-24	2-12	1-1/2	39.55

Also available in Stainless Steel

More sizes available

MALE ELBOW

SAE 520202

FF2501
FF1208



Part #	Flat Face Thread 1	Male Pipe Thread 2	List Price
FS2501-4-4	9/16-18	1/4	3.27
FS2501-6-4	11/16-16	1/4	4.22
FS2501-6-6	11/16-16	3/8	3.72
FS2501-8-6	13/16-16	3/8	4.08
FS2501-8-8	13/16-16	1/2	5.94
FS2501-8-12	13/16-16	3/4	12.11
FS2501-10-8	1-14	1/2	11.07
FS2501-10-12	1-14	3/4	8.03
FS2501-12-8	1-3/8-12	1/2	9.21
FS2501-12-12	1-3/8-12	3/4	10.39
FS2501-12-16	1-3/8-12	1	12.52
FS2501-16-12	1-7/16-12	3/4	13.47
FS2501-16-16	1-7/16-12	1	24.44
FS2501-20-20	1-11/16-12	1-1/4	30.39
FS2501-24-24	2-12	1-1/2	61.22

Also available in Stainless Steel

More sizes available

HYDRAULIC ADAPTERS

STRAIGHT THREAD CONNECTOR

SAE 520120

FF6400
FF1231



Part #	Flat Face Thread 1	O-Ring Thread 2	List Price
FS6400-O-4-4	9/16-18	7/16-20	1.77
FS6400-O-4-6	9/16-18	9/16-18	2.09
FS6400-O-6-4	11/16-16	7/16-20	2.95
FS6400-O-6-6	11/16-16	9/16-18	1.54
FS6400-O-6-8	11/16-16	3/4-16	2.95
FS6400-O-8-6	13/16-16	9/16-18	2.09
FS6400-O-8-8	13/16-16	3/4-16	2.95
FS6400-O-8-10	13/16-16	7/8-14	3.58
FS6400-O-10-8	1-14	3/4-16	4.35
FS6400-O-10-10	1-14	7/8-14	3.90
FS6400-O-10-12	1-14	1-1/16-12	6.49
FS6400-O-12-8	1-3/16-12	3/4-16	5.94
FS6400-O-12-10	1-3/16-12	7/8-14	5.40
FS6400-O-12-12	1-3/16-12	1-1/16-12	3.90
FS6400-O-12-16	1-3/16-12	1-5/16-12	10.25
FS6400-O-16-12	1-7/16-12	1-1/16-12	8.03
FS6400-O-16-16	1-7/16-12	1-5/16-12	8.12
FS6400-O-16-20	1-7/16-12	1-5/8-12	27.53
FS6400-O-20-20	1-11/16-12	1-5/8-12	29.43
FS6400-O-20-24	1-11/16-12	1-7/8-12	30.02
FS6400-O-24-20	2-12	1-5/8-12	82.13
FS6400-O-24-24	2-12	1-7/8-12	24.40

Also available in Stainless Steel

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	33.38
FS6402-6-6	11/16-16	9/16-18	29.52
FS6402-8-8	13/16-16	3/4-16	38.37
FS6402-10-10	1-14	7/8-14	55.65
FS6402-12-12	1-3/16-12	1-1/16-12	49.52
FS6402-16-16	1-7/16-12	1-5/16-12	60.73

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	5.49
FS6500-6-6	11/16-16	11/16-16	6.08
FS6500-8-8	13/16-16	13/16-16	7.80
FS6500-10-10	1-14	1-14	10.07
FS6500-12-12	1-3/16-12	1-3/16-12	15.56
FS6500-16-16	1-7/16-12	1-7/16-12	22.18
FS6500-20-20	1-11/16-12	1-11/16-12	33.56
FS6500-24-24	2-12	2-12	95.24

More sizes available

Also available in Stainless Steel

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	7.48
FS6504-6-6	9/16-18	11/16-16	5.22
FS6504-8-8	3/4-16	13/16-16	5.76
FS6504-10-10	7/8-14	1-14	30.70
FS6504-12-12	1-1/16-12	1-3/16-12	47.89
FS6504-16-16	1-5/16-12	1-7/16-12	53.74

More sizes available

Your manuscript is both good and original, but the part that is good is not original and the part that is original is not good.

- Samuel Johnson

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O-RING FACE SEAL ADAPTERS

O-RING ELBOW CONNECTOR



FF6801
FF1238

Part #	Flat Face Thread 1	O-Ring Thread 2	List Price
FS6801-4-4	9/16-18	7/16-20	3.63
FS6801-4-6	9/16-18	9/16-18	5.26
FS6801-6-4	11/16-16	7/16-20	4.63
FS6801-6-6	11/16-16	9/16-18	5.44
FS6801-6-8	11/16-16	3/4-16	4.99
FS6801-8-6	13/16-16	9/16-18	6.03
FS6801-8-8	13/16-16	3/4-16	5.58
FS6801-8-10	13/16-16	7/8-14	8.44
FS6801-10-8	1-14	3/4-16	8.62
FS6801-10-10	1-14	7/8-14	9.21
FS6801-10-12	1-14	1-1/16-12	11.66
FS6801-12-10	1-3/16-12	7/8-14	12.74
FS6801-12-12	1-3/16-12	1-1/16-12	11.07
FS6801-12-16	1-3/16-12	1-5/16-12	21.04
FS6801-16-12	1-7/16-12	1-1/16-12	17.69
FS6801-16-16	1-7/16-12	1-5/16-12	20.68
FS6801-16-20	1-7/16-12	1-5/8-12	30.16
FS6801-20-16	1-11/16-12	1-5/16-12	28.44
FS6801-20-20	1-11/16-12	1-5/8-12	28.84
FS6801-24-24	2-12	1-7/8-12	40.68

More sizes available

Also available in Stainless Steel

STRAIGHT THREAD SWIVEL NUT ELBOW



FF6809
FF1239

Part #	O-Ring Thread 1	Flat Face Thread 2	List Price
FS6809-4-4	7/16-20	9/16-18	6.98
FS6809-6-6	9/16-18	11/16-16	7.57
FS6809-8-8	3/4-16	13/16-16	10.75
FS6809-10-10	7/8-14	1-14	14.01
FS6809-12-12	1-1/16-12	1-3/16-12	20.41
FS6809-16-16	1-5/16-12	1-7/16-12	28.25

More sizes available

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STEEL BSPT ADAPTERS

STEEL BSPT ADAPTERS

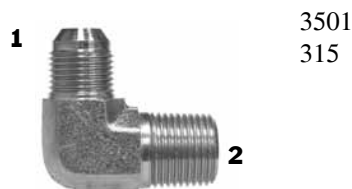
JIC MALE CONNECTOR BSPT



Part #	JIC Thread Size 1	Male BSPT 2	List Price
7000-4-2	7/16-20	1/8-28	9.83
7000-4-4	7/16-20	1/4-19	6.29
7000-6-4	9/16-18	1/4-19	11.34
7000-6-6	9/16-18	3/8-19	12.68
7000-6-8	9/16-18	1/2-14	17.32
7000-8-6	3/4-16	3/8-19	14.51
7000-8-8	3/4-16	1/2-14	11.25
7000-8-12	3/4-16	3/4-14	59.20
7000-10-8	7/8-14	1/2-14	10.20
7000-10-12	7/8-14	3/4-14	21.77
7000-12-8	1-1/16-12	1/2-14	17.23
7000-12-12	1-1/16-12	3/4-14	28.45
7000-16-16	1-5/16-12	1-11	19.95
7000-20-20	1-5/8-12	1-1/4-11	45.26

More sizes available

JIC MALE ELBOW BSPT



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	20.35
7200-6-4	9/16-18	1/4-19	15.83
7200-6-6	9/16-18	3/8-19	22.76
7200-6-8	9/16-18	1/2-14	29.48
7200-8-6	3/4-16	3/8-19	22.63
7200-8-8	3/4-16	1/2-14	20.41
7200-10-8	7/8-14	1/2-14	38.72
7200-12-12	1-1/16-12	3/4-14	29.75
7200-16-16	1-5/16-12	1-11	62.36
7200-20-20	1-5/8-12	1-1/4-11	137.29

More sizes available

HYDRAULIC ADAPTERS

BSPT HEX NIPPLE



Part #	Male BSPT 1	Male BSPT 2	List Price
7520-2-2	1/8-28	1/8-28	20.86
7520-4-4	1/4-19	1/4-19	21.77
7520-6-6	3/8-19	3/8-19	18.69
7520-8-8	1/2-14	1/2-14	25.40
7520-10-10	5/8-14	5/8-14	39.46
7520-12-12	3/4-14	3/4-14	39.46

More sizes available

BSPT PLUG



Part #	BSPT	List Price
9508-2	1/8-28	7.86
9508-4	1/4-19	8.29
9508-6	3/8-19	10.75
9508-8	1/2-14	11.11
9508-12	3/4-14	18.23
9508-16	1-11	27.33

More sizes available

STEEL BSPP ADAPTERS

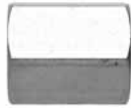
BSPP HEX NIPPLE



Part #	Male BSPP 1	Male BSPP 2	List Price
7420-2-2	1/8-28	1/8-28	9.61
7420-4-2	1/4-19	1/8-28	10.88
7420-6-4	3/8-19	1/4-19	10.88
7420-6-6	3/8-19	3/8-19	11.34
7420-8-6	1/2-14	3/8-19	14.29
7420-8-8	1/2-14	1/2-14	14.29
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	24.94
7420-16-12	1-11	3/4-14	36.04
7420-16-16	1-11	1-11	42.18
7420-20-16	1-1/4-11	1-11	81.18
7420-20-20	1-1/4-11	1-1/4-11	90.70

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

Reducing sizes available

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

More sizes available

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	24.94
7202-NWO-4-4	7/16-20	1/4-19	18.55
7202-NWO-6-4	9/16-18	1/4-19	20.41
7202-NWO-6-6	9/16-18	3/8-19	23.08
7202-NWO-6-8	9/16-18	1/2-14	30.70
7202-NWO-8-6	3/4-16	3/8-19	33.73
7202-NWO-8-8	3/4-16	1/2-14	41.18
7202-NWO-8-12	3/4-16	3/4-14	43.08
7202-NWO-10-8	7/8-14	1/2-14	27.66
7202-NWO-12-12	1-1/16-12	3/4-14	58.32
7202-NWO-12-16	1-1/16-12	1-11	91.43
7202-NWO-16-16	1-5/16-12	1-11	56.92
7202-NWO-20-20	1-5/8-12	1-1/4-11	109.39
7202-NWO-24-24	1-7/8-12	1-1/2-11	205.99

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	8.39
7825-4	1/4-19	1/4	8.00
7825-6	3/8-19	3/8	8.93
7825-8	1/2-14	1/2	10.18
7825-12	3/4-14	3/4	12.79
7825-16	1-11	1	30.57
7825-20	1-1/4-11	1-1/4	72.56

More sizes available

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	6.58
7002-4-4	7/16-20	1/4-19	7.02
7002-4-6	7/16-20	3/8-19	7.26
7002-4-8	7/16-20	1/2-14	25.62
7002-6-4	9/16-18	1/4-19	6.71
7002-6-6	9/16-18	3/8-19	6.71
7002-6-8	9/16-18	1/2-14	8.53
7002-8-6	3/4-16	3/8-19	8.26
7002-8-8	3/4-16	1/2-14	15.54
7002-8-12	3/4-16	3/4-14	30.53
7002-10-8	7/8-14	1/2-14	15.54
7002-12-12	1-1/16-12	3/4-14	18.76
7002-12-16	1-1/16-12	1-11	24.72
7002-16-16	1-5/16-12	1-11	22.27
7002-20-20	1-5/8-12	1-1/4-11	80.30
7002-24-24	1-7/8-12	1-1/2-11	82.31

More sizes available

STEEL BSPP/ METRIC 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	20.41
7022-6-6	9/16-18	3/8-19	14.74
7022-8-6	3/4-16	3/8-19	17.46
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	24.49
7022-16-16	1-5/16-12	1-11	68.03

More sizes available

HEX HEAD PLUG BSPP



3408

Part #	Male BSPP	List Price
9522-P-2	1/8-28	5.74
9522-P-4	1/4-19	6.05
9522-P-6	3/8-19	5.90
9522-P-8	1/2-14	8.60
9522-P-12	3/4-14	11.07
9522-P-16	1-11	20.39
9522-P-20	1-1/4-11	29.48

HOLLOW HEX PLUG BSPP



3408 HHP

Part #	Male BSPP	List Price
9522-H-2	1/8-28	10.20
9522-H-4	1/4-19	9.98
9522-H-6	3/8-19	12.24
9522-H-8	1/2-14	16.60
9522-H-12	3/4-14	20.14
9522-H-16	1-11	28.21
9522-H-20	1-1/4-11	56.92

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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	14.02
7042-4-2	1/4	1/8-28	20.41
7042-4-4	1/4	1/4-19	10.86
7042-6-6	3/8	3/8-19	24.15
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	44.90
7042-20-20	1-1/4	1-1/4-11	64.04
7042-24-24	1-1/2	1-1/2-11	96.15

More sizes available

STEEL METRIC ADAPTERS

MALE CONNECTOR



7400
30J (R)

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	9.99
7005-4-12	7/16-20	12x1.5	11.52
7005-4-14	7/16-20	14x1.5	11.84
7005-4-18	7/16-20	18x1.5	24.94
7005-5-10	1/2-20	10x1.0	46.35
7005-5-12	1/2-20	12x1.5	12.76
7005-5-14	1/2-20	14x1.5	65.76
7005-6-14	9/16-18	14x1.5	10.20
7005-6-16	9/16-18	16x1.5	14.38
7005-6-18	9/16-18	18x1.5	14.51
7005-8-16	3/4-16	16x1.5	14.38
7005-8-18	3/4-16	18x1.5	11.97
7005-8-22	3/4-16	22x1.5	22.48
7005-10-18	7/8-14	18x1.5	18.97
7005-10-20	7/8-14	20x1.5	20.72
7005-10-22	7/8-14	22x1.5	20.72
7005-12-22	1-1/16-12	22x1.5	23.36
7005-12-27	1-1/16-12	27x2.0	45.71
7005-14-26	1-3/16-12	26x1.5	57.10
7005-16-27	1-5/16-12	27x2.0	57.10
7005-16-33	1-5/16-12	33x2.0	18.27
7005-20-42	1-5/8-12	42x2.0	79.59
7005-24-48	1-7/8-12	48x2.0	143.08

HYDRAULIC ADAPTERS

MALE ELBOW

1



Port-seal crush washer
and O-ring included

2

7801
315 (R)

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	29.48
7205-NWO-4-14	7/16-20	14x1.5	23.13
7205NWO-5-12	1/2-20	12x1.5	24.17
7205-NWO-6-14	9/16-18	14x1.5	33.17
7205-NWO-6-16	9/16-18	16x1.5	28.57
7205-NWO-8-16	3/4-16	16x1.5	39.69
7205-NWO-8-18	3/4-16	18x1.5	11.93
7205-NWO-8-22	3/4-16	22x1.5	33.51
7205-NWO-10-18	7/8-14	18x1.5	36.28
7205-NWO-10-20	7/8-14	20x1.5	41.27
7205-NWO-10-22	7/8-14	22x1.5	39.27
7205-NWO-12-22	1-1/16-12	22x1.5	65.44
7205-NWO-12-27	1-1/16-12	27x2.0	56.24
7205-NWO-16-27	1-5/16-12	27x2.0	68.39
7205-NWO-16-33	1-5/16-12	33x2.0	64.49
7205-NWO-20-42	1-5/8-12	42x2.0	126.08

STRAIGHT SWIVEL

1



2

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	20.63
7025-6-14	9/16-18	14x1.5	23.13
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	8.29
8555-P-12	12x1.5	8.69
8555-P-14	14x1.5	9.95
8555-P-16	16x1.5	11.14
8555-P-18	18x1.5	13.28
8555-P-20	20x1.5	15.73
8555-P-22	22x1.5	15.73
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	6.44
8555-H-12	12x1.5	8.46
8555-H-14	14x1.5	9.99
8555-H-16	16x1.5	16.78
8555-H-18	18x1.5	19.14
8555-H-20	20x1.5	17.95
8555-H-22	22x1.5	18.41
8555-H-26	26x1.5	26.76
8555-H-30	30x1.5	29.02

More sizes available

FEMALE ADAPTER

MMFP (R)

1



2

Part #	Female Pipe Thread 1	Metric Thread 2	List Price
7045-2-10	1/8	10x1.0	20.05
7045-4-12	1/4	12x1.5	14.06
7045-4-14	1/4	14x1.5	17.07
7045-6-16	3/8	16x1.5	21.81
7045-6-18	3/8	18x1.5	23.46
7045-8-16	1/2	16x1.5	25.71
7045-8-18	1/2	18x1.5	16.73
7045-8-22	1/2	22x1.5	24.11
7045-12-27	3/4	27x2.0	40.82
7045-16-33	1	33x2.0	76.98
7045-20-42	1-1/4	42x2.0	144.72

More sizes available

HIGH PRESSURE SWIVELS 3000 PSI

HYDRAULIC ADAPTERS

HIGH PRESSURE SWIVELS

MALE CONNECTOR



Part #	JIC Thread Size 1	Male Pipe Thread 2	List Price
HP2404-6-4	9/16-18	1/4	104.38
HP2404-8-6	3/4-16	3/8	86.49
HP2404-10-8	7/8-14	1/2	94.38
HP2404-12-12	1-1/16-12	3/4	140.45
HP2404-16-16	1-5/16-12	1	189.61
HP2404-20-20	1-5/8-12	1-1/4	362.63
HP2404-24-24	1-7/8-12	1-1/2	761.04

FEMALE CONNECTOR



Part #	JIC Thread Size 1	Female Pipe Thread 2	List Price
HP2405-6-4	9/16-18	1/4	120.56
HP2405-8-6	3/4-16	3/8	86.12
HP2405-10-8	7/8-14	1/2	98.10
HP2405-12-12	1-1/16-12	3/4	100.63
HP2405-16-16	1-5/16-12	1	189.21
HP2405-20-20	1-5/8-12	1-1/4	362.63
HP2405-24-24	1-7/8-12	1-1/2	1016.92

TUBE ADAPTER



Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
HP2406-6-6	9/16-18	9/16-18	104.38
HP2406-8-8	3/4-16	3/4-16	89.48
HP2406-10-10	7/8-14	7/8-14	100.86
HP2406-12-12	1-1/16-12	1-1/16-12	121.61
HP2406-14-14	1-3/16-12	1-3/16-12	181.27
HP2406-16-16	1-5/16-12	1-5/16-12	218.05
HP2406-20-20	1-5/8-12	1-5/8-12	362.63
HP2406-24-24	1-7/8-12	1-7/8-12	778.55
HP2406-32-32	2-1/2-12	2-1/2-12	1235.56

MALE ELBOW



Part #	JIC Thread Size 1	Male Pipe Thread 2	List Price
HP2501-6-4	9/16-18	1/4	126.91
HP2501-6-6	9/16-18	3/8	105.35
HP2501-8-6	3/4-16	3/8	105.35
HP2501-8-8	3/4-16	1/2	113.88
HP2501-10-8	7/8-14	1/2	155.21
HP2501-12-12	1-1/16-12	3/4	239.66
HP2501-16-16	1-5/16-12	1	236.19
HP2501-20-20	1-5/8-12	1-1/4	437.60
HP2501-24-24	1-7/8-12	1-1/2	825.71
HP2501-32-32	2-1/2-12	2	1170.48

FEMALE ELBOW



Part #	JIC Thread Size 1	Female Pipe Thread 2	List Price
HP2502-6-4	9/16-18	1/4	104.94
HP2502-6-6	9/16-18	3/8	105.08
HP2502-8-6	3/4-16	3/8	126.89
HP2502-10-8	7/8-14	1/2	112.74
HP2502-12-12	1-1/16-12	3/4	207.50
HP2502-16-16	1-5/16-12	1	262.27
HP2502-20-20	1-5/8-12	1-1/4	437.60
HP2502-24-24	1-7/8-12	1-1/2	839.46
HP2502-32-32	2-1/2-12	2	1685.67

PIPE ADAPTER



Part #	Male Pipe Thread 1	Female Pipe Thread 2	List Price
HP5405-4-4	1/4	1/4	121.78
HP5405-6-6	3/8	3/8	104.38
HP5405-8-8	1/2	1/2	147.48
HP5405-12-12	3/4	3/4	147.48
HP5405-16-16	1	1	264.43
HP5405-20-20	1-1/4	1-1/4	361.77
HP5405-24-24	1-1/2	1-1/2	804.72
HP5405-32-32	2	2	1539.55

Also available in Stainless Steel

HYDRAULIC ADAPTERS

HIGH PRESSURE SWIVELS 3000 PSI

PIPE COUPLING



Part #	Female Pipe Thread 1	Female Pipe 2	List Price
HP5000-4-4	1/4	1/4	109.62
HP5000-6-6	3/8	3/8	109.62
HP5000-8-8	1/2	1/2	147.48
HP5000-12-12	3/4	3/4	140.45
HP5000-16-16	1	1	218.04
HP5000-20-20	1-1/4	1-1/4	406.63
HP5000-24-24	1-1/2	1-1/2	1067.76
HP5000-32-32	2	2	1539.55

Also available in Stainless Steel

MALE SWIVEL ELBOW



Part #	Male Pipe Thread 1	Female NPSM 2	List Price
HP1501-4-4	1/4	1/4	126.91
HP1501-4-6	1/4	3/8	103.08
HP1501-6-4	3/8	1/4	105.35
HP1501-6-6	3/8	3/8	105.35
HP1501-8-8	1/2	1/2	134.38
HP1501-12-12	3/4	3/4	235.47
HP1501-16-16	1	1	236.24
HP1501-20-20	1-1/4	1-1/4	437.60
HP1501-24-24	1-1/2	1-1/2	437.60
HP1501-32-32	2	2	1841.59

Also available in Stainless Steel

FEMALE SWIVEL ELBOW



Part #	Female Pipe Thread 1	Female NPSM 2	List Price
HP1502-4-4	1/4	1/4	105.17
HP1502-4-6	1/4	3/8	108.34
HP1502-6-4	3/8	1/4	126.89
HP1502-6-6	3/8	3/8	126.91
HP1502-8-8	1/2	1/2	134.38
HP1502-12-12	3/4	3/4	183.67
HP1502-16-16	1	1	231.16
HP1502-20-20	1-1/4	1-1/4	435.69
HP1502-24-24	1-1/2	1-1/2	839.46
HP1502-32-32	2	2	1841.59

Also available in Stainless Steel

STREET ELBOW



Part #	Male Pipe Thread 1	Female Pipe Thread 2	List Price
HP5502-4-4	1/4	1/4	126.91
HP5502-4-6	1/4	3/8	126.89
HP5502-6-4	3/8	1/4	105.35
HP5502-6-6	3/8	3/8	126.91
HP5502-8-8	1/2	1/2	155.21
HP5502-12-12	3/4	3/4	217.76
HP5502-16-16	1	1	275.38
HP5502-20-20	1-1/4	1-1/4	444.28
HP5502-24-24	1-1/2	1-1/2	955.60
HP5502-32-32	2	2	1200.45

Also available in Stainless Steel

JIC TO O-RING ELBOW CONNECTOR



Part #	JIC Thread Size 1	O-Ring Thread 2	List Price
HP6801-6-6	9/16-18	9/16-18	126.91
HP6801-6-8	9/16-18	3/4-16	105.76
HP6801-8-8	3/4-16	3/4-16	126.91
HP6801-10-10	7/8-14	7/8-14	106.30
HP6801-12-12	1-1/16-12	1-1/16-12	185.08
HP6801-16-16	1-5/16-12	1-5/16-12	236.05
HP6801-20-20	1-5/8-12	1-5/8-12	437.60
HP6801-24-24	1-7/8-12	1-7/8-12	997.73
HP6801-32-32	2-1/2-12	2-1/2-12	1685.67

** Live swivel is on the 2 side as pictured.*

STEEL BEADED HOSE INSERTS

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	2.99
4404-4-4	1/4	1/4	5.16
4404-5-2	5/16	1/8	11.34
4404-6-4	3/8	1/4	3.31
4404-6-6	3/8	3/8	3.44
4404-8-6	1/2	3/8	4.22
4404-8-8	1/2	1/2	3.67
4404-10-8	5/8	1/2	5.76
4404-12-12	3/4	3/4	5.93
4404-16-12	1	3/4	9.15
4404-16-16	1	1	8.07
4404-20-20	1-1/4	1-1/4	12.86
4404-24-20	1-1/2	1-1/4	30.19
4404-24-24	1-1/2	1-1/2	22.26
4404-32-32	2	2	109.34

More sizes available

90° PIPE HOSE INSERT

SAE 430260



Part #	Hose I.D. 1	Pipe Thread 2	List Price
4501-4-2	1/4	1/8	3.63
4501-4-4	1/4	1/4	4.19
4501-5-2	5/16	1/8	6.80
4501-6-2	3/8	1/4	15.56
4501-6-6	3/8	3/8	4.56
4501-8-6	1/2	3/8	5.90
4501-8-8	1/2	1/2	5.93
4501-10-8	5/8	1/2	5.81
4501-12-12	3/4	3/4	7.33
4501-16-12	1	3/4	12.85
4501-16-16	1	1	10.63
4501-20-16	1-1/4	1	24.13
4501-20-20	1-1/4	1-1/4	26.09
4501-24-24	1-1/2	1-1/2	47.36
4501-32-32	2	2	348.80

More sizes available

HYDRAULIC ADAPTERS

45° PIPE HOSE INSERT

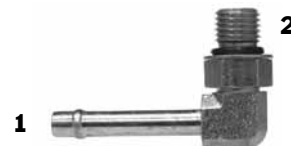
SAE 430360



Part #	Hose I.D. 1	Pipe Thread 2	List Price
4503-4-2	1/4	1/8	11.61
4503-6-4	3/8	1/4	4.81
4503-8-6	1/2	3/8	6.35
4503-10-8	5/8	1/2	8.21
4503-12-12	3/4	3/4	8.89
4503-16-16	1	1	14.11
4503-20-20	1-1/4	1-1/4	22.30

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	4.67
4601-NWO-5	5/16	1/2-20	9.39
4601-NWO-6	3/8	9/16-18	4.59
4601-NWO-8	1/2	3/4-16	5.81
4601-NWO-10	5/8	7/8-14	8.33
4601-NWO-10-8	5/8	3/4-16	9.54
4601-NWO-12	3/4	1-1/16-12	10.79
4601-NWO-16	1	1-5/16-12	14.78
4601-NWO-16-12	1	1-1/16-12	13.22
4601-NWO-20	1-1/4	1-5/8-12	26.98
4601-NWO-24	1-1/2	1-7/8-12	43.02
4601-NWO-24-20	1-1/2	1-5/8-12	55.77
4601-NWO-32	2	2-1/2-12	336.92

More sizes available

HYDRAULIC ADAPTERS

45° O-RING HOSE INSERT



Part #	Hose I.D. 1	O-Ring Thread 2	List Price
4603-NWO-4	1/4	7/16-20	5.56
4603-NWO-6	3/8	9/16-18	6.69
4603-NWO-8	1/2	3/4-16	5.90
4603-NWO-10	5/8	7/8-14	10.56
4603-NWO-12	3/4	1-1/12-12	11.07
4603-NWO-16	1	1-5/16-12	17.79
4603-NWO-20	1-1/4	1-5/8-12	26.40
4603-NWO-20-16	1-1/4	1-5/16-12	20.77
4603-NWO-20-24	1-1/4	1-7/8-12	90.84
4603-NWO-24	1-1/2	1-7/8-12	35.47
4603-NWO-24-20	1-1/2	1-5/8-12	27.03
4603-NWO-32	2	2-1/2-12	316.31

More sizes available

O-RING HOSE INSERT



Part #	Hose I.D. 1	O-Ring Thread 2	List Price
4604-O-4	1/4	7/16-20	3.85
4604-O-5	5/16	1/2-20	4.31
4604-O-6	3/8	9/16-18	2.89
4604-O-8	1/2	3/4-16	4.72
4604-O-10	5/8	7/8-14	6.49
4604-O-10-8	5/8	3/4-16	28.25
4604-O-12	3/4	1-1/16-12	5.63
4604-O-16	1	1-5/16-12	8.89
4604-O-16-12	1	1-1/16-12	9.03
4604-O-20	1-1/4	1-5/8-12	14.19
4604-O-20-16	1-1/4	1-5/16-12	31.73
4604-O-24	1-1/2	1-7/8-12	23.81
4604-O-24-20	1-1/2	1-5/8-12	37.51

More sizes available

STEEL BEADED HOSE INSERTS

Aphorism: A short, pointed sentence expressing a wise or clever observation or general truth:

1. The nicest thing about the future is that it always starts tomorrow.
2. Money will buy a fine dog but only kindness will make him wag his tail.
3. If you don't have a sense of humor, you probably don't have any sense.
4. Seat belts are not as confining as wheelchairs.
5. A good time to keep your mouth shut is when you're in deep water.
6. How come it takes so little time for a child who is afraid of the dark to become a teenager who wants to stay out all night?
7. Business conventions are important because they demonstrate how many people a company can operate without.
8. Why is it that at class reunions you feel younger than everyone else looks?
9. Scratch a cat and you will have a permanent job.
10. No one has more driving ambition than the boy who wants to buy a car.
11. There are no new sins; the old ones just get more publicity.
12. There are worse things than getting a call for a wrong number at 4 AM. It could be a right number.
13. No one ever says 'It's only a game.' when their team is winning.
14. I've reached the age where the happy hour is a nap.
15. Be careful reading the fine print. There's no way you're going to like it.
16. The trouble with bucket seats is that not everybody has the same size bucket.
17. Do you realize that in about 40 years, we'll have thousands of old ladies running around with tattoos? (And rap music will be Golden Oldies!)
18. Money can't buy happiness -- but somehow it's more comfortable to cry in a Corvette than in a Yugo.
19. After 60, if you don't wake up aching in every joint, you are probably dead!!
20. Always be yourself because the people that matter don't mind, and the ones who mind, don't matter.

QUICK DISCONNECT

HYDRAULIC COUPLINGS

ISO-A Interchange

Nominal Size	Material	Rated Flow	Minimum Burst-Coupler	Minimum Burst-Plug	Minimum Burst Connected
1/4"	Steel	2.5 GPM	27,260 PSI	20,155 PSI	18,850 PSI
3/8"	Steel	6.6 GPM	22,185 PSI	18,125 PSI	17,400
1/2"	Steel	11.3 GPM	18,850 PSI	15,370 PSI	16,820
3/4"	Steel	24.5 GPM	18,705 PSI	17,400 PSI	15,080
1"	Steel	29.7 GPM	16,820 PSI	14,500 PSI	14,500

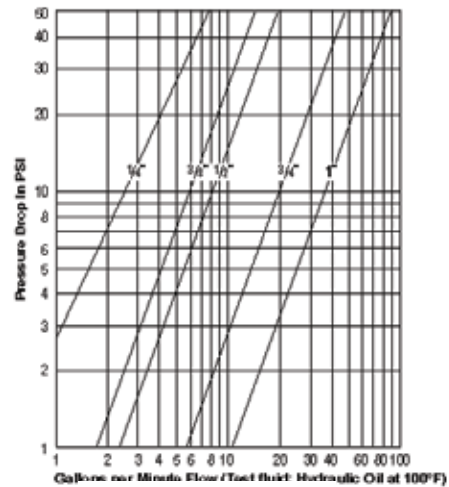
ISO 7241-A



COUPLER

660 Series
56
61C

Part #	Body Size	NPT Female	Working PSI	List Price
ANV-14-F	1/4	1/4	5075	12.56
ANV-38-F	3/8	3/8	4550	13.42
ANV-12-F	1/2	1/2	4500	15.65
ANV-34-F	3/4	3/4	3625	48.05
ANV-1-F	1	1	3335	75.70



PLUG

660 Series
56N
61N

Part #	Body Size	NPT Female	Working PSI	List Price
ANV-14-M	1/4	1/4	5075	6.80
ANV-38-M	3/8	3/8	4550	7.30
ANV-12-M	1/2	1/2	4500	8.39
ANV-34-M	3/4	3/4	3625	26.11
ANV-1-M	1	1	3335	50.70

ISO-B Interchange

Nominal Size	Material	Rated Flow	Minimum Burst-Coupler	Minimum Burst-Plug	Minimum Burst Connected
1/8"	Steel	2.0 GPM	25,300 PSI	23,200 PSI	23,200 PSI
1/4"	Steel	4.2 GPM	27,260 PSI	21,460 PSI	20,880 PSI
3/8"	Steel	8.0 GPM	27,550 PSI	18,850 PSI	19,430 PSI
1/2"	Steel	11.0 GPM	23,780	15,370 PSI	15,370 PSI
3/4"	Steel	24.0 GPM	19,720	15,950 PSI	15,660 PSI
1"	Steel	25.0 GPM	19,720	15,950 PSI	15,660 PSI

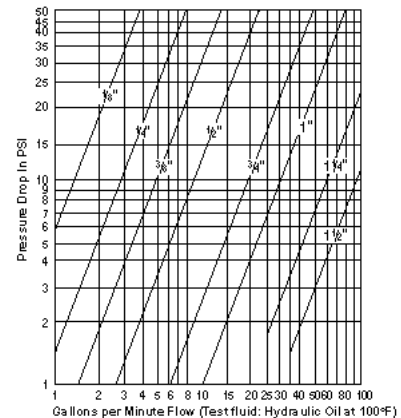
ISO 7241-B



COUPLER

'H' Series
PCC
72C

Part #	Body Size	NPT Female	Working PSI	List Price
HNV-14-F	1/4	1/4	5075	24.25
HNV-38-F	3/8	3/8	4350	35.50
HNV-12-F	1/2	1/2	4060	32.00
HNV-34-F	3/4	3/4	2610	60.20
HNV-1-F	1	1	2175	154.41



PLUG

'H' Series
PCN
72N

Part #	Body Size	NPT Female	Working PSI	List Price
HNV-14-M	1/4	1/4	5075	12.00
HNV-38-M	3/8	3/8	4350	7.30
HNV-12-M	1/2	1/2	4060	18.85
HNV-34-M	3/4	3/4	2610	31.10
HNV-1-M	1	1	2175	47.66

HYDRAULIC

HYDRAULIC COUPLINGS

QUICK DISCONNECT

FLUSH FACE

Nominal Size	ISO Size	Maximum Working Pressure	Rated Flow	Minimum Burst-Plug	Minimum Burst-Coupler	Minimum Burst Connected
1/8"	5	7250 PSI	1.6 GPM	43,500 PSI	29,000 PSI	43,500 PSI
1/4"	6.3	5000 PSI	4.8 GPM	28,275 PSI	23,925 PSI	33,350 PSI
3/8"	10	5000 PSI	10.0 GPM	29,200 PSI	21,025 PSI	20,590 PSI
1/2"	12.5	5000 PSI	19.8 GPM	25,375 PSI	21,750 PSI	23,925 PSI
5/8"	16	5000 PSI	26.4 GPM	24,255 PSI	21,750 PSI	23,200 PSI
3/4"	19	5000 PSI	37.0 GPM	20,580 PSI	20,580 PSI	20,300 PSI
1"	25	5000 PSI	52.8 GPM	20,580 PSI	20,580 PSI	21,750 PSI
1 1/2"	40	3625 PSI	89.5 GPM	14,500 PSI	14,500 PSI	14,500 PSI

ISO 16028



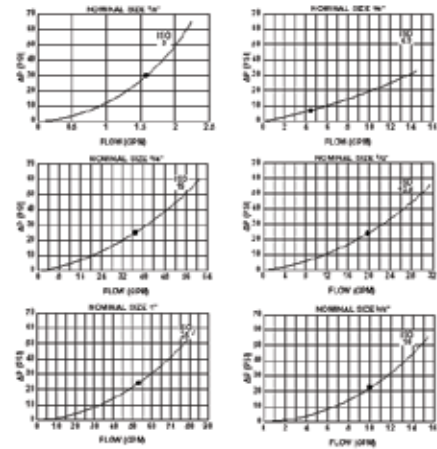
COUPLER

FF Series
HTMC
74C



PLUG

FF Series
HTMN
74N



Part #	Body Size	NPT Female	Working PSI	List Price
FF-14-F	1/4	1/4	4400	80.59
FF-38-12-F	3/8	1/2	4350	64.91
FF-38-F	3/8	3/8	4350	80.59
FF-12-F	1/2	1/2	3650	80.59
FF-34-12-SAE-F	1/2	3/4	3675	163.31
FF-34-F	3/4	3/4	3650	125.94
FF-1-F	1	1	3675	80.59

Part #	Body Size	NPT Female	Working PSI	List Price
FF-14-M	1/4	1/4	4400	31.29
FF-38-12-M	3/8	1/2	4350	34.01
FF-38-M	3/8	3/8	4350	34.74
FF-12-M	1/2	1/2	3650	34.74
FF-34-12-SAE-M	1/2	3/4	3675	87.57
FF-34-M	3/4	3/4	3650	54.15
FF-1-M	1	1	3675	34.74

AG INTERCHANGE

Nominal Size	Rated Flow	Minimum Burst-Coupler	Minimum Burst-Plug	Minimum Burst Connected
1/4"	6.08 GPM	27,550 PSI	21,170 PSI	22,040 PSI
3/8"	9.5 GPM	26,970 PSI	18,125 PSI	23,200 PSI
1/2"	11.3 GPM	18,850 PSI	15,370 PSI	16,820 PSI
3/4"	24.5 GPM	17,400 PSI	17,400 PSI	15,370 PSI
1"	27.5 GPM	16,820 PSI	14,500 PSI	14,790 PSI

ISO 7241-A

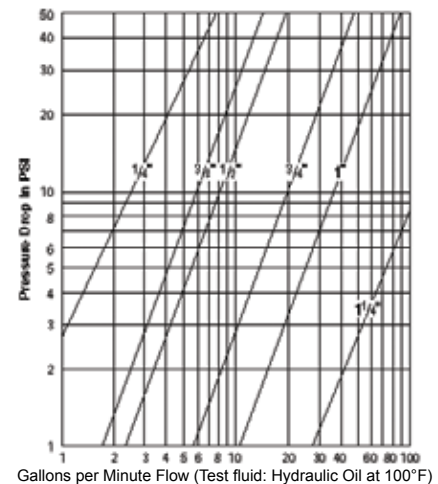


COUPLER

Pioneer 4000 Series



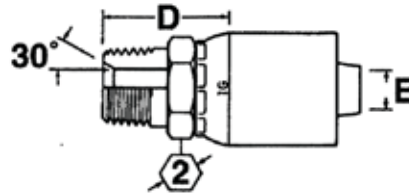
PLUG



Part #	Body Size	NPT Female	Working PSI	List Price
NV-14-F	1/4	1/4	5075	24.08
NV-38-F	3/8	3/8	4550	35.69
NV-12-F	1/2	1/2	3625	30.10
NV-34-F	3/4	3/4	3625	71.29
NV-1-F	1	1	3335	72.80

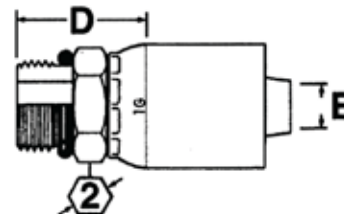
Part #	Body Size	NPT Female	Working PSI	List Price
NV-14-M	1/4	1/4	5075	11.61
NV-38-M	3/8	3/8	4550	19.92
NV-12-M	1/2	1/2	3625	13.64
NV-34-M	3/4	3/4	3625	36.64
NV-1-M	1	1	3335	36.64

NPTF SOLID MALE PIPE FITTING - ONE PIECE BITE TYPE



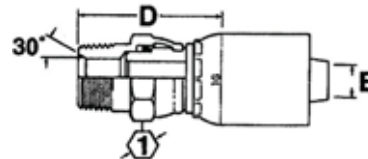
Part #	Thread Size	Hose ID	Overall Length	D Cut-off	E Nipple ID	Hex 2	Price
D1MP 101-0404	1/4-18	1/4	2.06	1.14	.17	.56	4.41
D1MP 101-0606	3/8-18	3/8	2.27	1.28	.26	.69	4.79
D1MP 101-0808	1/2-14	1/2	2.74	1.56	.38	.88	5.52
D1MP 101-1212	3/4-14	3/4	2.84	1.65	.61	1.13	9.43
D1MP 101-1616	1-11 1/2	1	3.22	1.86	.82	1.38	20.41
D1MP 101-2020	1-1/4 - 11-1/2	1-1/4	3.52	1.79	1.05	1.81	34.48
D1MP 101-2424	1-1/2 - 11-1/2	1-1/2	4.18	2.36	1.26	2.00	46.89

MALE BOSS O-RING - ONE PIECE/ FITTING

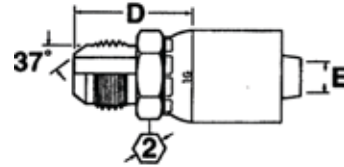


Part #	Thread Size	Hose ID	Overall Length	D Cut-off	E Nipple ID	Hex 2	Price
D1MB 105-0404	7/16-20	1/4	1.84	.92	.17	.56	6.67
D1MB 105-0606	9/16-18	3/8	2.00	1.00	.26	.69	7.08
D1MB 105-0808	3/4-16	1/2	2.36	1.19	.38	.88	8.98
D1MB 105-1212	1-1/16 - 12	3/4	2.44	1.25	.61	1.25	12.70
D1MB 105-1616	1-5/16 - 12	1	2.74	1.39	.82	1.50	25.08
D1MB 105-2020	1-5/8 - 12	1-1/4	3.63	1.90	1.05	1.88	46.03

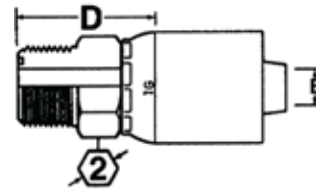
NPTF MALE SWIVEL PIPE FITTING - ONE PIECE BITE TYPE



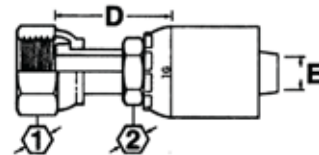
Part #	Thread Size	Hose ID	Overall Length	D Cut-off	E Nipple ID	Hex 1	Price
D1PS 113-0404	1/4 - 18	1/4	2.59	1.62	.17	.56	6.13
D1PS 113-0606	3/8 - 18	3/8	2.66	1.67	.26	.69	7.02
D1PS 113-0808	1/2 - 14	1/2	3.13	1.96	.38	.88	9.34
D1PS 113-1212	3/4 - 14	3/4	3.24	2.05	.61	1.13	15.69
D1PS 113-1616	1 - 11-1/2	1	3.88	2.53	.81	1.38	26.17

MALE JIC 37° FITTING - ONE PIECE BITE TYPE


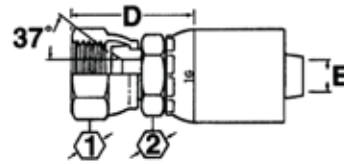
Part #	Thread Size	Hose ID	A Overall	D Cut-Off	E Nipple	Hex Dia. 2	Price
D1MJ 103-0404	7/16-20	1/4	2.00	1.07	.17	.56	4.79
D1MJ 103-0606	9/16-18	3/8	2.16	1.17	.26	.69	5.59
D1MJ 103-0808	3/4-16	1/2	2.57	1.41	.38	.81	6.76
D1MJ 103-1212	1 1/16-12	3/4	2.94	1.75	.61	1.12	9.75
D1MJ 103-1616	1 5/16-12	1	3.25	1.90	.82	1.38	17.05
D1MJ 103-2020	1 5/8-12	1-1/4	3.89	2.16	1.05	1.75	37.56

MALE O-RING FACE SEAL FITTING - ONE PIECE BITE TYPE


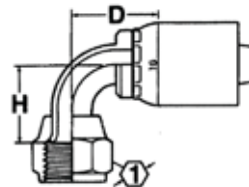
Part #	Thread Size	Hose ID	A Overall	D Cut-Off	E Nipple	Hex Dia. 2	Price
D1MR 1J0-0404	9/16-18	1/4	1.78	.86	.17	.62	12.92
D1MR 1J0-0606	11/16-16	3/8	1.99	.99	.26	.75	14.70
D1MR 1J0-0808	13/16-16	1/2	2.30	1.13	.38	.88	16.95
D1MR 1J0-1212	1 3/16-12	3/4	2.63	1.44	.61	1.25	24.98
D1MR 1J0-1616	1 7/16-12	1	2.53	1.34	.61	1.50	38.25

FEMALE O-RING FACE SEAL FITTING - ONE PIECE BITE TYPE


Part #	Thread Size	Hose ID	A Overall	D Cut-Off	E Nipple	Hex Dia. 1	Hex Dia. 2	Price
D1FR 1JC-0404	9/16-18	1/4	1.95	1.03	.17	.69	.56	5.52
D1FR 1JC-0606	11/16-16	3/8	2.23	1.24	.26	.81	.69	6.32
D1FR 1JC-0808	13/16-16	1/2	2.67	1.50	.38	.94	.88	8.35
D1FR 1JC-1212	1 3/16-12	3/4	2.91	1.72	.61	1.38	1.12	14.89
D1FR 1JC-1616	1 7/16-12	1	3.29	1.94	.81	1.62	1.38	29.52

FEMALE JIC 37° SWIVEL FITTING - ONE PIECE BITE TYPE


Part #	Thread Size	Hose ID	Overall Length	D Cut-off	E Nipple ID	Hex 1	Hex 2	Price
D1FJ 106-0404	7/16-20	1/4	2.00	1.07	.17	.56	.56	5.05
D1FJ 106-0606	9/16-18	3/8	2.28	1.28	.26	.69	.56	5.76
D1FJ 106-0808	3/4-16	1/2	2.63	1.46	.38	.88	.81	7.40
D1FJ 106-1212	1 1/16-12	3/4	2.84	1.65	.61	1.25	1.12	12.43
D1FJ 106-1616	1 5/16-12	1	3.29	1.93	.81	1.50	1.38	23.36
D1FJ 106-2020	1 5/8-12	5/4	3.61	1.88	1.05	2.00	1.88	44.76
D1FJ 106-2424	1 7/8-12	1-1/2	3.90	2.07	1.26	2.25	2.12	55.37

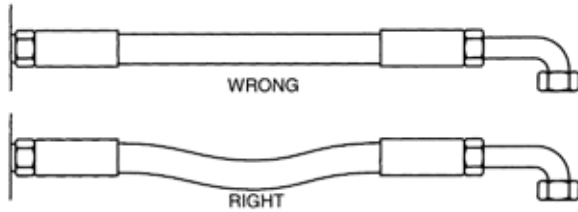
FEMALE JIC 37° SWIVEL 90° ELBOW - ONE PIECE BITE TYPE


Part #	Thread Size	Hose ID	Overall Length	D Cut-off	H Drop	Hex 1	Price
D1FJB 139-0404	7/16-20	1/4	1.84	.92	.68	.56	12.11
D1FJB 139-0606	9/16-18	3/8	2.21	1.22	.84	.69	13.43
D1FJB 139-0808	3/4-16	1/2	2.59	1.42	1.09	.88	15.75
D1FJB 139-1212	1 1/16-12	3/4	3.36	2.17	1.80	1.25	26.89
D1FJB 139-1616	1 5/16-12	1	3.56	2.20	2.39	1.50	40.29
D1FJB 139-2020	1 5/8-12	1-1/4	4.25	2.52	2.75	2.00	71.84

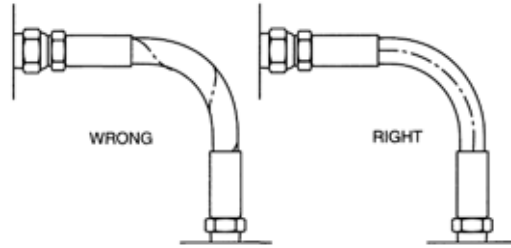
SAVE 5% when ordering online & **2%** more
when you pay w/ a credit card.

Let Midland make your Hose Assemblies

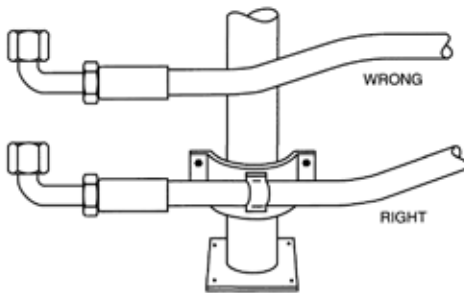
Call or Email for pricing & delivery on your specific assembly needs.
888-821-5725 or pat@midlandindustrial.com

1. Provide for length change.

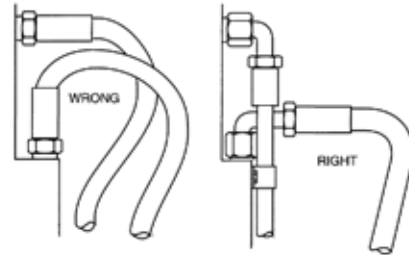
In straight hose installations, allow enough slack in the hose line to provide for changes in length that will occur when pressure is applied. This change in length can be from +2% to -4%.

2. Avoid twisting and orient properly.

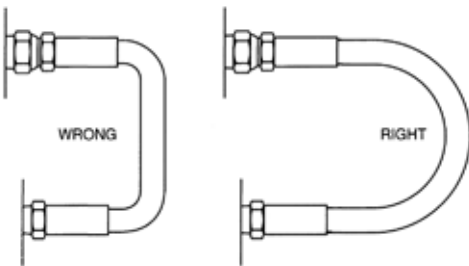
Do not twist hose during installation. This can be determined by the printed layline on the hose. Pressure applied to a twisted hose can cause failure or loosening of connections.

3. Protect from hazardous environment

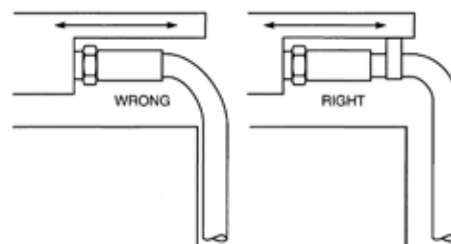
Keep hose away from hot parts. High ambient temperature will shorten hose life. If you can not route it away from the heat source, insulate it.

4. Avoid mechanical strain.

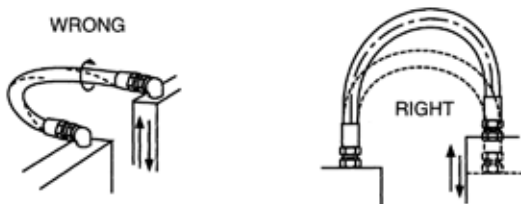
Use elbows and adapters in the installation to relieve strain on the assembly and to provide easier and neater installations that are accessible for inspection and maintenance.

5. Use proper bend radius.

Keep the bend radius of the hose as large as possible to avoid collapsing of the hose and restriction of flow. Follow catalog specs on minimum bend radii.

6. Secure for protection.

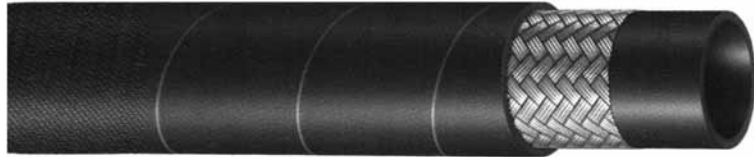
Install hose runs to avoid rubbing or abrasion.

8. Avoid improper hose movement

Make sure relative motion of the machine components produces bending rather than twisting of the hose. Hose should be routed so that the flex is in the same plane as the equipment movement.

SAE100 R1 AT/ 1SN**Construction**

- **Tube:** Oil resistant Synthetic Rubber.
- **Reinforcement:** 1-Wire Braid. High tensile steel wire.
- **Cover:** Oil, weather and abrasion resistant Synthetic Rubber.
- **Hose is shipped in bundles.**
- Reel \$ available upon request.

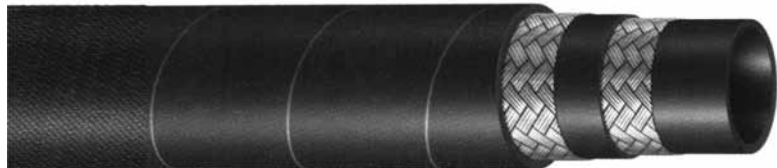
**Application and Temperature Range**

- Petroleum base hydraulic fluids and lubricating oils within a temperature range of -40°F to +212°F (-40°C to + 100°C).
- Water, water/ glycol and water/ oil emulsion hydraulic fluids up to +185°F (+85°C).
- Air within a temperature range of -40°F to +158°F (-40°C to + 70°C).
- **Maximum operating temperature:** 125°C (257°F).
- **Air Maximum temperature:** 70°C (160°F).

Part #	I.D.	O.D.	Working Pressure	Burst Pressure	Min. B/ Radius	Weight /FT	Roll Length/ feet	List Price
100R1025	1/4	0.53	3250	13000	3.94	0.15	164	271.25
100R1038	3/8	0.69	2600	10400	5.12	0.23	164	361.32
100R1050	1/2	0.81	2325	9300	7.09	0.28	164	520.64
100R1075	3/4	1.09	1525	6100	9.45	0.42	164	614.35
100R1100	1	1.40	1275	5100	11.81	0.59	65	317.78
100R1125	1-1/4	1.71	625	2500	16.54	0.85	65	507.62
100R1150	1-1/2	1.99	500	2000	19.69	1.01	65	569.52

SAE100 R2 AT/ 2SN**Construction**

- **Tube:** Oil resistant Synthetic Rubber.
- **Reinforcement:** 2-Wire Braid. High tensile steel wire.
- **Cover:** Oil, weather and abrasion resistant Synthetic Rubber.
- **Hose is shipped in bundles.**
- Reel \$ available upon request.

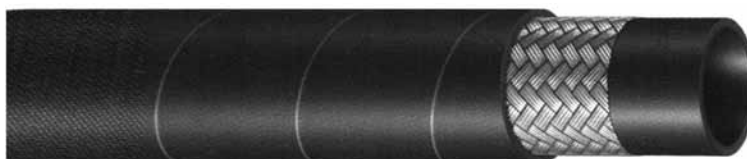
**Application and Temperature Range**

- Petroleum base hydraulic fluids and lubricating oils within a temperature range of -40°F to +212°F (-40°C to + 100°C).
- Water, water/ glycol and water/ oil emulsion hydraulic fluids up to +185°F (+85°C).
- Air within a temperature range of -40°F to +158°F (-40°C to + 70°C).

Part #	I.D.	O.D.	Working Pressure	Burst Pressure	Min. B/ Radius	Weight /FT	Roll Length/ feet	List Price
100R2025	1/4	0.59	5800	23200	3.94	0.22	164	333.21
100R2038	3/8	0.75	4750	19000	5.12	0.36	164	437.33
100R2050	1/2	0.87	4000	16000	7.09	0.41	164	536.25
100R2075	3/4	1.15	3100	12400	9.45	0.60	164	806.98
100R2100	1	1.50	2400	9600	11.81	0.89	65	423.02
100R2125	1-1/4	1.90	1625	6500	16.54	1.39	65	600.48
100R2150	1-1/2	2.15	1250	5000	19.69	1.58	65	846.03

SAE100 R17**Construction**

- **Tube:** Oil resistant Synthetic Rubber.
- **Reinforcement:** one (upto 1/2") or two (from 5/8") high tensile steel wire braids.
- **Cover:** Oil, weather and abrasion resistant Synthetic Rubber.
- **Hose is shipped in bundles.**
- Reel \$ available upon request.

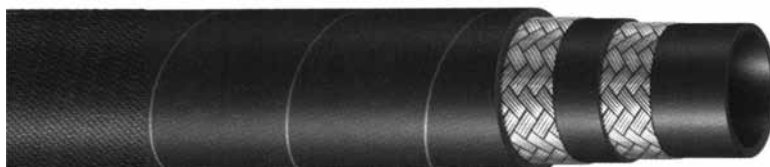
**Application and Temperature Range**

- Petroleum base hydraulic fluids and lubricating oils within a temperature range of -40°F to +257°F (-40°C to + 125°C).
- Water, water/ glycol and water/ oil emulsion hydraulic fluids up to +185°F (+85°C).
- Air within a temperature range of -40°F to +158°F (-40°C to + 70°C).

Part #	I.D.	O.D.	Working Pressure	Burst Pressure	Min. B/ Radius	Weight /FT	Roll Length/ feet	List Price
100R17025	1/4	0.49	3000	12000	1.97	0.14	164	281.14
100R17038	3/8	0.65	3000	12000	2.56	0.20	164	374.86
100R17050	1/2	0.78	3000	12000	3.54	0.34	164	421.71
100R17075	3/4	1.10	3000	12000	4.92	0.57	164	630.49
100R17100	1	1.43	3000	12000	5.91	1.02	65	326.03

SAE100 R16**Construction**

- **Tube:** Oil resistant Synthetic Rubber.
- **Reinforcement:** 2-Wire Braid. High tensile steel wire.
- **Cover:** Oil, weather and abrasion resistant Synthetic Rubber.
- **Hose is shipped in bundles.**
- Reel \$ available upon request.

**Application and Temperature Range**

- Petroleum base hydraulic fluids and lubricating oils within a temperature range of -40°F to +212°F (-40°C to + 125°C).
- Water, water/ glycol and water/ oil emulsion hydraulic fluids up to +185°F (+85°C).
- Air within a temperature range of -40°F to +158°F (-40°C to + 70°C).

Part #	I.D.	O.D.	Working Pressure	Burst Pressure	Min. B/ Radius	Weight /FT	Roll Length/ feet	List Price
100R16025	1/4	0.57	5000	20000	1.97	0.19	164	343.10
100R16038	3/8	0.74	4000	16000	2.48	0.29	164	449.83
100R16050	1/2	0.86	3500	14000	3.46	0.35	164	553.96
100R16075	3/4	1.14	2250	9000	4.72	0.52	164	827.81
100R16100	1	1.44	2000	8000	5.91	0.73	65	435.40

Two-Way



BKH

Part Number	Nominal Size	Thread	Working Pressure	List Price
GE2-14-NPT	1/4"	1/4" NPTF	7250 PSI	53.81
GE2-38-NPT	3/8"	3/8" NPTF	7250 PSI	52.65
GE2-12-NPT	1/2"	1/2" NPTF	7250 PSI	66.95
GE2-34-NPT	3/4"	3/4" NPTF	5800 PSI	128.15
GE2-1-NPT	1"	1" NPTF	5075 PSI	160.20
*GE2-114T-NPT	1"	1-1/4" NPTF	5075 PSI	188.10
*GE2-112T-NPT	1"	1-1/2" NPTF	5075 PSI	188.10
*GE2-2T-NPT	2"	2" NPTF	5075 PSI	692.40

Part Number	Nominal Size	Thread	Working Pressure	List Price
GE2-04-SAE	1/4"	7/16-20 UNF	7250 PSI	53.80
GE2-06-SAE	3/8"	9/16-18 UNF	7250 PSI	54.82
GE2-08-SAE	1/2"	3/4-16 UNF	7250 PSI	75.53
GE2-12-SAE	3/4"	1-1/16-12 UNF	5800 PSI	115.52
GE2-16-SAE	1"	1-5/16-12 UNF	5075 PSI	145.31
*GB2-20T-SAE	1"	1-5/8-12 UNF	5075 PSI	126.67
*GB2-24T-SAE	1"	1-7/8-12 UNF	5075 PSI	126.67
*GB2-32T-SAE	2"	2-1/2-12 UNF	5075 PSI	460.16

* = Reduced Port Only
Full Port available by special quote.

Construction: Steel Body, Ball, Stem
Zinc Chromate Plate
Buna "O" Rings (Viton on request)
Delrin Ball Seats

Temp Rating = -22° - 212°F

Three-Way



BK3

Part Number	Nominal Size	Thread	Working Pressure	List Price
GE3L-14-NPT	1/4"	1/4" NPTF	5800 PSI	142.86
GE3L-38-NPT	3/8"	3/8" NPTF	5800 PSI	108.84
GE3L-12-NPT	1/2"	1/2" NPTF	5800 PSI	116.10
GE3L-34-NPT	3/4"	3/4" NPTF	5075 PSI	167.62
GE3L-1-NPT	1"	1" NPTF	5075 PSI	203.17
*GE3L-114T-NPT	1 1/4"	1 1/4" NPTF	5075 PSI	1073.92
*GE3L-112T-NPT	1 1/2"	1 1/2" NPTF	5075 PSI	1362.36
*GE3L-2T-NPT	2"	2" NPTF	5075 PSI	1456.69

Part Number	Nominal Size	Thread	Working Pressure	List Price
GE3L-04-SAE	1/4"	7/16-20 UNF	5800 PSI	177.72
GE3L-06-SAE	3/8"	9/16-18 UNF	5800 PSI	185.79
GE3L-08-SAE	1/2"	3/4-16 UNF	5800 PSI	222.15
GE3L-12-SAE	3/4"	1-1/16-12 UNF	5075 PSI	179.95
GE3L-16-SAE	1"	1-5/16-12 UNF	5075 PSI	214.06
*GB3L-20T-SAE	1 1/4"	1-5/8-12 UNF	5075 PSI	1488.68
*GB3L-24T-SAE	1 1/2"	1-7/8-12 UNF	5075 PSI	1630.00
*GB3L-32T-SAE	2"	2-1/2-12 UNF	5075 PSI	2054.00

* = Reduced Port Only
Available in Reduced Port
Full Port available by special quote.

Construction: Steel Body, Ball, Stem
Zinc Chromate Plate
Buna "O" Rings (Viton on request)
Delrin Ball Seats

Temp Rating = -22° - 212°F

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 ³ /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 ³ /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-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.

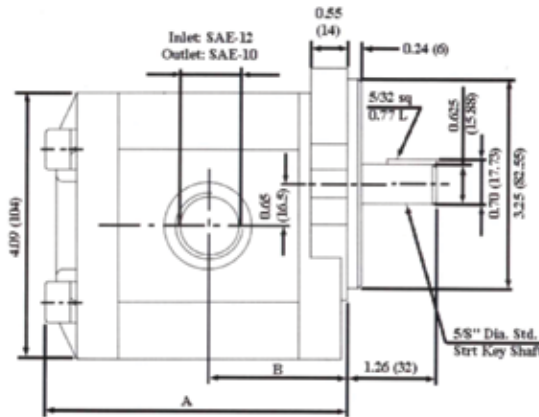
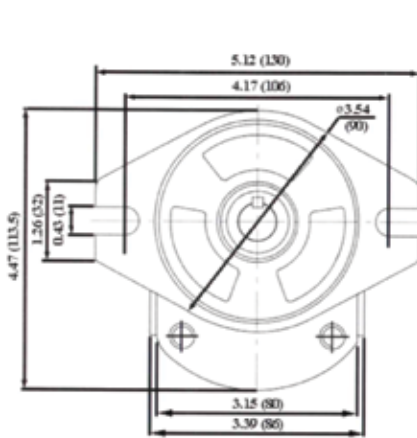
Recommended working conditions:

- 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	238.10
MGP-F20-08	0.48	3650	2000	3000	5.61	238.10
MGP-F20-10	0.61	3650	2000	3000	5.72	238.10
MGP-F20-12	0.73	3650	2000	3000	5.91	238.10
MGP-F20-14	0.85	3650	2000	3000	6.00	251.70
MGP-F20-16	0.97	2900	2000	3000	6.27	251.70
MGP-F20-20	1.22	2900	2000	3000	6.73	251.70
MGP-F20-25	1.52	2900	2000	3000	7.19	251.70

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)

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.

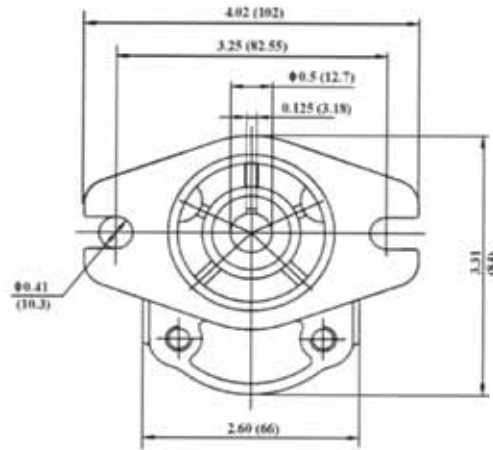
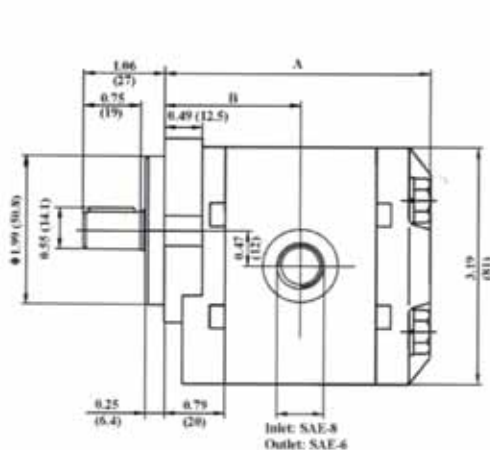
Recommended working conditions:

- 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	3000	2.02	175.51
MGP-F10-20	0.12	3625	2000	3000	2.31	175.51
MGP-F10-27	0.16	3625	2000	3000	2.68	175.51
MGP-F10-34	0.20	3625	2000	3000	2.99	175.51
MGP-F10-41	0.25	3625	2000	3000	3.34	190.48
MGP-F10-51	0.31	3625	2000	3000	3.78	190.48
MGP-F10-61	0.37	3625	2000	3000	4.18	190.48

INSTALLATION DATA



Port Sizes
Inlet - SAE-8 (3/4-16)
Outlet - SAE-6 (9/16-18)

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
cm³/rev
(see chart)
13/20/27/34
41/51/61

P

Drive
Shaft
P-5/8 Dia
Straight
P1-3/4 Dia
Straight
S9-Spline 9 tooth

C

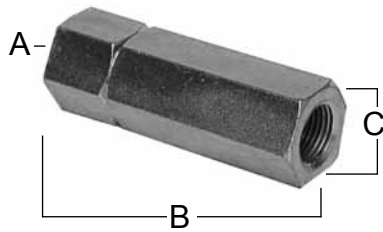
Rotation
Direction
C-Clockwise
A-Counter Clockwise
(viewed from drive shaft
end)

HYDRAULIC ACCESSORIES

CHECK VALVE

HARD SEAT CARBON STEEL CONSTRUCTION - 5lb or 65lb Cracking Pressure Available

- Available w/ NPT or SAE threads



A (NPT Female both ends)

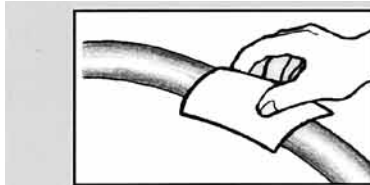
Part #	A Size	B Inches	C Inches	Rated Flow gpm	List Price
1000-2-5 or 65	1/4 NPT	2.44	.87	6	33.33
1000-3-5 or 65	3/8 NPT	2.87	.95	10	40.95
1000-4-5 or 65	1/2 NPT	3.50	1.14	18	50.48
1000-6-5 or 65	3/4 NPT	4.25	1.50	30	75.24
1000-8-5 or 65	1 NPT	5.12	1.69	36	106.67
1000-10-5 or 65	1-1/4 NPT	5.56	2.40	50	150.48
1000-12-5 or 65	1-1/2 NPT	5.56	2.56	60	154.29
1001-4-5 or 65	7/16-20 SAE	2.56	.87	6	35.24
1001-6-5 or 65	9/16-20 SAE	2.91	.94	10	42.86
1001-8-5 or 65	3/4-16 SAE	3.74	1.18	18	55.24
1001-12-5 or 65	1-1/6-12 SAE	4.29	1.50	30	82.86
1001-16-5 or 65	1-5/16-12 SAE	5.00	1.81	36	117.14
1001-20-5 or 65	1-5/8-12 SAE	5.20	2.41	50	166.67
1001-24-5 or 65	1-7/8-12 SAE	5.20	2.56	60	170.48

Rated Pressure: Sizes 2 thru 8 - 5000 psi / Sizes 10 thru 24 - 3000 psi

HYDRAULIC HOSE PROTECTOR



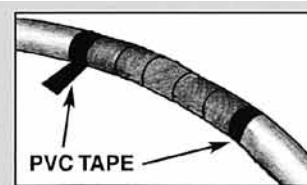
- Tough abrasion resistant self-adhering neoprene wrap
- Protects against cuts and abrasions
- Can be easily applied to hoses of varying diameters, even after hose is installed on equipment.
- Covers and protects wear areas
- Chemical resistant neoprene resists oil, gasoline, and solvents
- Flexible self-adhering wrap material allows hoses to flex and bend.
- Wrap can also be used to bundle hoses and cables.
- Performance temperature range -20°F to 200°F



Step 1: Clean hose of all dirt, grime and grease in the application area.



Step 2: Remove paper backing as Hose Protector is applied. Wrap tightly at a slight angle while overlapping in notched area.



Step 3: To finish, wrap both ends of Hydraulic Hose Protector with PVC tape.

Part #	Description	List Price
MHP112	12' Kit	92.33
MHP150	50' Kit	274.29
MHP1300	300' Kit	1607.80

- Stored in GA warehouse.

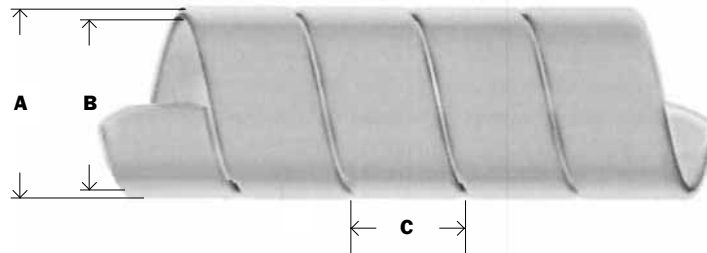
MATERIAL COVERAGE CHART

	12' Roll	50' Roll	300' Roll
3/8" Hydraulic Hose I.D.	52"	217"	1,302"
1/2" Hydraulic Hose I.D.	40"	167"	1,002"
3/4" Hydraulic Hose I.D.	29"	121"	726"
1" Hydraulic Hose I.D.	24"	100"	600"

SAFEGUARD SPIRALS - PROTECTION FOR HYDRAULIC HOSES

- **WHAT IS SPIRAL WRAP:** Spiral wrap is the proven way to protect hose, wire, cable , etc... against chaffing, rubbing, crushing, ultraviolet and other environmental hazards that cause premature failure.
- **COST SAVINGS:** Used effectively on all types of hoses, ropes, wires and cables. Users have realized a dramatic increase in serviceable life and reduction in costly repairs and down time.
- **MATERIAL:** Heavy wall, high Grade HDPE, polyethylene resin, high tensile strength, thermal plastic.
- **RESILIENCE:** Has a high resistance against ultra violet weathering and a wide temperature range. (-60 - + 175°F)

Proprietary extrusion method gives the final product smooth round, edges, which are non-abrasive, greater strength & durability.

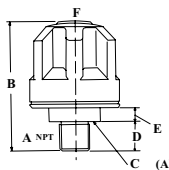


Part #		Spiral Size	Pitch (C)	Inches		Coil Wt. lbs.	Coil Lgth feet	List Price
Black	Yellow			OD (A)	ID (B)			
25C100B	25C100Y	1/4" (#4) HYDRAULIC HOSE	0.47	2/3	0.50	4.0	100	227.51
38C100B	38C100Y	3/8" (#6) HYDRAULIC HOSE	0.78	3/4	0.65	6.0	100	243.80
50C100B	50C100Y	1/2" (#8) & 5/8" (#10) HYDRAULIC HOSE	0.98	1	0.80	10.1	100	253.97
75C100B	75C100Y	3/4" (#12) HYDRAULIC HOSE	0.87	1-1/4	1.10	12.8	100	306.88
100C100B	100C100Y	1" (#16) & 1-1/4" (#20) HYDRAULIC HOSE	1.39	1-3/5	1.40	20.1	100	476.20

* More sizes & colors available.

* Shipped in 100'FT coils only.

SCREW-ON TYPE AIR BREATHERS

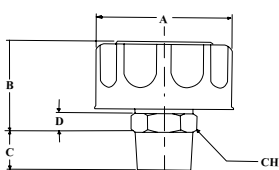


- 1/4 NPT
- Plastic Model
- 10 Micron Breather

Part Number	Description	A	B	C	D	E	F	List Price
PDSAB-3101	10 Micron 1/4 NPT Screw Type Breather - Weight .5 ozs.	1/4	2.28	79	.53	.24	1.57	20.41



- 1/4 To 1 Inch NPT
- Steel Model
- 40 Micron Breather

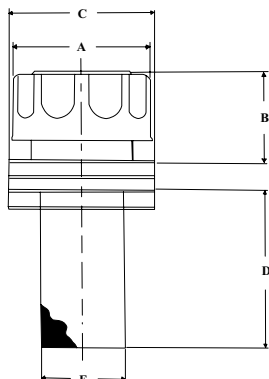


Part Number	Flow cfm	NPT	A	B	C	D	CH	Micron	List Price
MB40-04	10	1/4	1.85	1.60	.50	.30	.63	40	16.73
MB40-06	10	3/8	1.85	1.70	.50	.30	.75	40	16.73
MB40-08	10	1/2	2.54	1.88	.68	.29	.95	40	16.96
MB40-12	25	3/4	3.13	2.00	.82	.35	1.12	40	22.68
MB40-16	25	1	3.13	2.11	.90	.42	1.35	40	29.48

FILTER FILLER BREATHERS



- Chrome Plated Cap
- 40 Micron Breather
- 3" Basket Length
- Lockable Options
- Plastic Basket Standard



Part Number	A	B	C	D	E	List Price
MFB40-03	2.95	1.97	1.97	1.97	1.90	29.48

PROTECTIVE HOSE COVERINGS



Material: Cordura or Anso-tex bulk nylon fiber yarn. Cordura is a registered trademark of Dupont. Anso-tex is a registered trademark of Allied Fibers.

Thickness: .090" ± .020"
Doubled Flat

Color: Black

Flammability: Passes FMVSS 302 horizontal flame test, MSHA accepted.

Temperature: Maximum ambient temperature 250°F

Packaging: 300ft. rolls. **Only**

Part Number	Flat Width	ID	List Price
MHS-077	1-1/3"	0.79"	190.48
MHS-090	1-1/2"	0.90"	299.32
MHS-100	1-2/3"	1.00"	325.50
MHS-114	1-7/8"	1.06"	340.14
MHS-130	2-1/8"	1.22"	394.56
MHS-138	2-1/4"	1.38"	435.37
MHS-153	2-1/2"	1.42"	462.59
MHS-159	2-5/8"	1.59"	503.40
MHS-175	2-7/8"	1.75"	517.01
MHS-185	3"	1.81"	585.03
MHS-225	3-5/8"	2.19"	707.48
MHS-238	3-7/8"	2.38"	789.12
MHS-264	4-1/4"	2.63"	870.75
MHS-296	4-3/4"	2.88"	1034.01
MHS-366	5-7/8"	3.66"	1034.01

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
0302-10	309	0319-32	310	10-042	47	100R2125	364	101-396	232
0302-12	309	0319-4	310	10-043	47	100R2150	364	101-397	232
0302-16	309	0319-5	310	10-044	47	10-100	49	101-398	232
0302-20	309	0319-6	310	10-045	47	1010002	262	101-413	232
0302-24	309	0319-8	310	10-046	47	1010004	262	101-414	232
0302-4	309	0403-10	310	10-047	47	1010008	262	101-415	232
0302-6	309	0403-12	310	10-048	47	1010011	262	101-416	232
0302-8	309	0403-14	310	10-049	47	1010016	262	101-417	232
0304-10	309	0403-16	310	10-051	47	1010019	262	101-418	232
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0304-4	309	10-001	46	10-063	48	10-106L	49	101-442	232
0304-5	309	1000-10-5	370	10-064	48	10-107	49	101-443	232
0304-6	309	1000-12-5	370	10-065	48	10-108	49	101-444	232
0304-8	309	10-002	46	10-066	48	10-108L	49	101-445	232
0304-C-10	309	1000-2-5	370	10-067	48	10-109	49	101-446	232
0304-C-12	309	10-003	46	10-068	48	10-109L	49	101-447	232
0304-C-14	309	1000-3-5	370	10-074	48	10-110	49	101-449	232
0304-C-16	309	10-004	46	10-075	48	101-103	232	101-450	232
0304-C-2	309	1000-4-5	370	10-076	48	101-104	232	101-451	232
0304-C-20	309	10-005	46	10-077	48	101-105	232	101-452	232
0304-C-24	309	10-006	46	10-078	48	101-106	232	101-453	232
0304-C-3	309	1000-6-5	370	10-079	48	101-107	232	101-454	232
0304-C-32	309	10-007	46	10-080	48	101-108	232	101-458	232
0304-C-4	309	10-008	46	10-081	48	10-110L	49	101-473	232
0304-C-5	309	1000-8-5	370	10-084	48	10-111	49	101-474	232
0304-C-6	309	1001-12-5	370	10-085	48	10-112	49	101-475	232
0304-C-8	309	1001-16-5	370	10-086	48	101-163	232	101-476	232
0306-10	318	1001-20-5	370	10-087	48	101-164	232	101-477	232
0306-12	318	1001-24-5	370	10-088	48	101-165	232	101-478	232
0306-14	318	10-013	46	10-089	48	101-166	232	10-157	50
0306-16	318	10-014	46	10-090	48	101-167	232	10-158	50
0306-20	318	1001-4-5	370	10-094	49	101-168	232	10-159	50
0306-24	318	10-015	46	10-095	49	10-117	50	10159B	50
0306-32	318	10-015L	46	10-097	49	10-118	50	10-159B	50
0306-4	318	10-016	46	10-098	49	101-183	232	10-160	50
0306-5	318	1001-6-5	370	10-099	49	101-184	232	101-603	232
0306-6	318	10-017	46	100C100B	371	101-185	232	101-604	232
0306-8	318	10-017L	46	100R1025	364	101-186	232	101-605	232
0318-10	310	10-018	46	100R1038	364	101-187	232	101-606	232
0318-12	310	1001-8-5	370	100R1050	364	101-188	232	101-607	232
0318-14	310	10-019	46	100R1075	364	10-119	50	101-608	232
0318-16	310	10-019L	46	100R1100	364	10-120	50	10-161	50
0318-2	310	10-020	46	100R1125	364	10-121	50	10-162	50
0318-20	310	10-020L	46	100R1150	364	10-122	50	10-163	50
0318-24	310	10-021	46	100R16025	365	10-123	50	10-164	50
0318-3	310	10-022	46	100R16038	365	101-253	232	10-165	50
0318-32	310	10-023	46	100R16050	365	101-254	232	10-170	50
0318-4	310	10-024	46	100R16075	365	101-255	232	10-171	50
0318-5	310	10-025	46	100R16100	365	101-256	232	10-172	50
0318-6	310	10-026	46	100R17025	365	101-257	232	10-173	50
0318-8	310	10-028	47	100R17038	365	101-258	232	10-174	50
0319-10	310	10-030	47	100R17050	365	10-131	49	10-175	50
0319-12	310	10-031	47	100R17075	365	10-133	49	10-176	50
0319-14	310	10-032	47	100R17100	365	10-135	58	101-773	232
0319-16	310	10-033	47	100R2025	364	10-136	58	101-774	232
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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.

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.

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 one year 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 1-888-821-5725. 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.

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.

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Midland Metal Manufacturing Company
 phone **888-821-5725** fax **888-877-5391**
 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)	
Street Address		Mailing Address	
City	State	Zip	Phone
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:



QUICK DISCONNECT CROSSOVER						CROSSOVER				
	Midland	Parker	Tomco	Amflo	Breco	Milton	Dixon	Hansen	Foster	
Industrial Interchange 1/4	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	
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	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	
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		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			
ST Series/High Flow 1/4 , 3/8	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	
Lincoln Interchange 1/4	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	
Industrial Interchange 3/8	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	

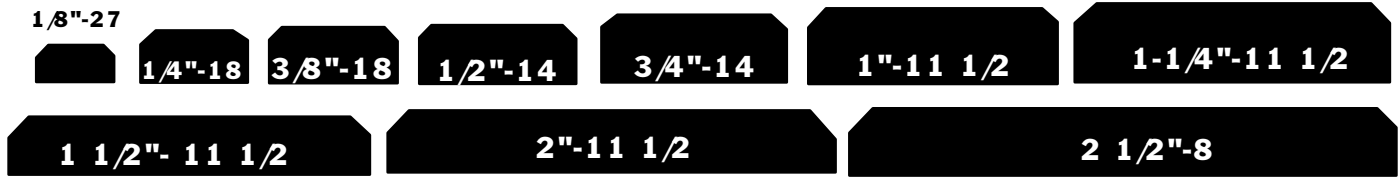
Thread Chart

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	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
SIZE N.P.T.F. (DRYSEAL)*																	
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			1/2-20	9/16-18	5/8-18		7/8-14	1 -14	1 1/8-12	1 1/2-12	1 3/4-12	2 -12					
NPSM SWIVEL THREAD	1/8-27		1/4-18		3/8-18		1/2-14		3/4-14		1-11 1/2	1 1/4 -11 1/2	1 1/2 - 11 1/2	2- 11 1/2			
FLAT FACE THREAD			9/16-18		11/16-16		13/16-16	1-14	1 3/16-12		1 7/16-12	1 11/16-12	2-12				
BRITISH THREAD BSPP/BSPT	1/8-28		1/4-19		3/8-19		1/2-14		3/4-14		1-11	1 1/4-11	1 1/2-11	2-11			
METRIC THREAD	10 M10X1.0	12 M12x1.5	14 M14x1.5	16 M16x1.5	18 M18x1.5	20 M20x1.5	22 M22x1.5	24 M24x1.5	26 M26x1.5	27 M27x2.0	30 M30x2.0	33 M33x2.0	36 M36x2.0	42 M42x2.0	48 M48x2.0		
CODE 61 FLANGE							1.19	1.335	1.50		1.75	2.00	2.38	2.81	3.31	4.00	
HEAD O.D																	
CODE 62 FLANGE							1.25		1.62		1.88	2.12	2.50	3.12			
HEAD O.D																	

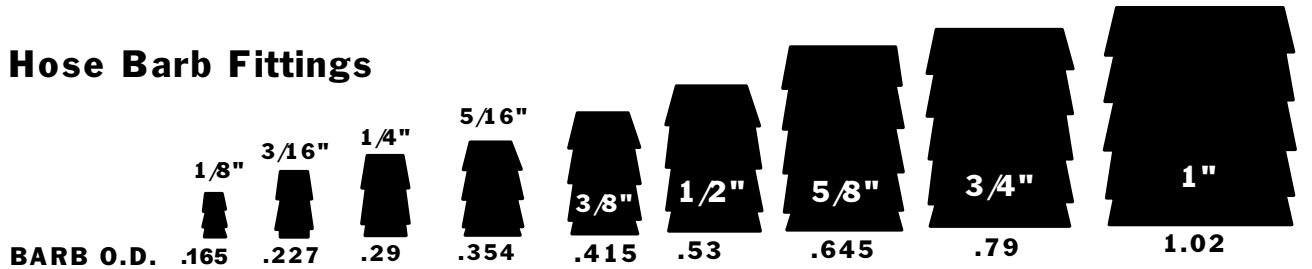
THREAD PROFILES

THREAD PROFILES

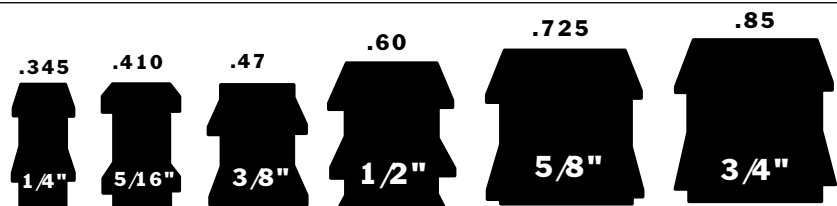
Pipe Threads



Hose Barb Fittings

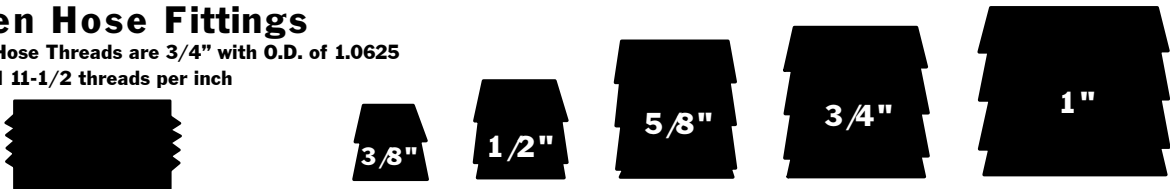


Push On Fittings

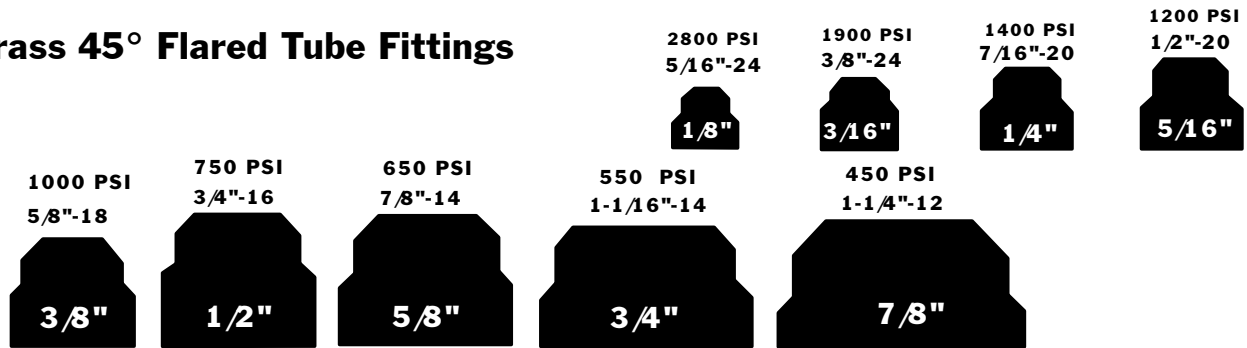


Garden Hose Fittings

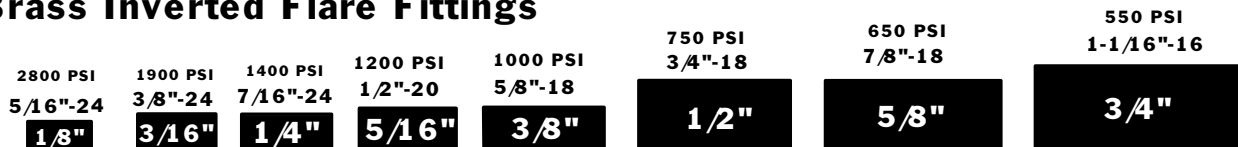
Male Garden Hose Threads are 3/4" with O.D. of 1.0625 and 11-1/2 threads per inch



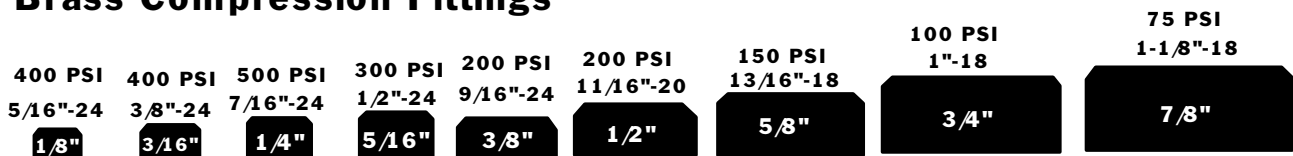
Brass 45° Flared Tube Fittings



Brass Inverted Flare Fittings



Brass Compression Fittings



Tubing O.D. Size

