

**ACCOUNT INFORMATION****ACCOUNT INFORMATION**

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**ACCOUNT INFORMATION  
REQUEST FORM**

Fax back to:  
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ACCOUNT SUMMARY	
NAME	MULTIPLIER
SALES REPRESENTATIVE	
CONTACT PHONE	CONTACT EMAIL ADDRESS
ACCOUNT MANAGER ACCESS	
CUSTOMER ID/ ACCOUNT #	AUTHORIZATION CODE

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5%**

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

## CONFIRMATIONS / NOTIFICATIONS

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

TYPE	E-MAIL	FAX	NONE	E-MAIL ADDRESS OR FAX NUMBER
ORDER CONFIRMATIONS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
INVOICES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
STATEMENTS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### LITERATURE ORDER FORM

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**Additional copies of the new 2012 Catalog** QTY \_\_\_\_\_

Please send to :

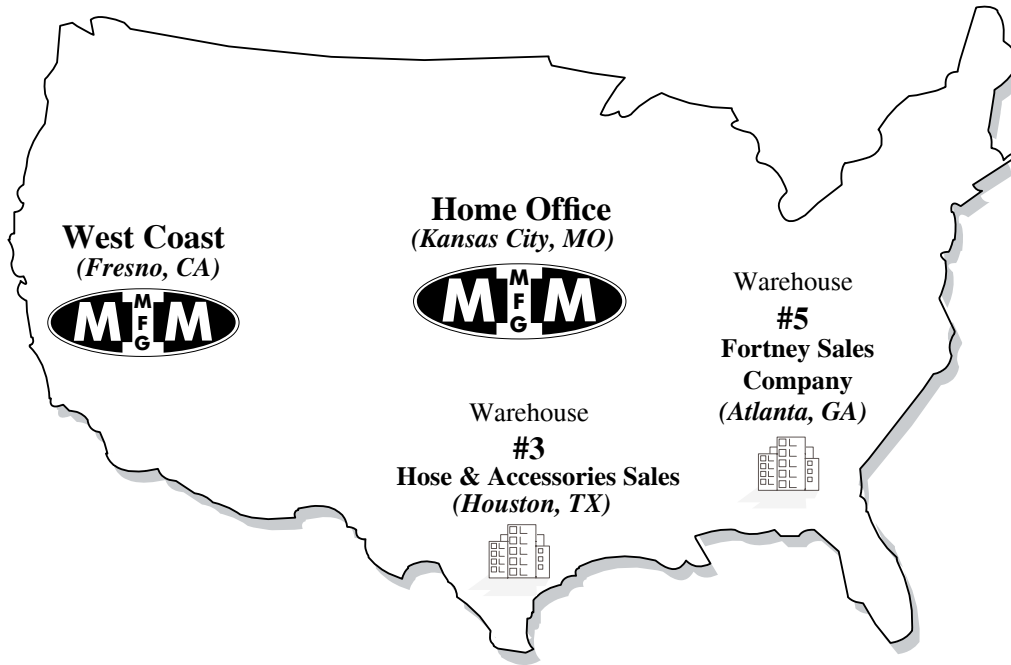
**Account # or  
Company Name:** \_\_\_\_\_ **Contact Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_ **Phone #** \_\_\_\_\_

**City:** \_\_\_\_\_ **State:** \_\_\_\_\_ **Zip:** \_\_\_\_\_

**Special Notes:** \_\_\_\_\_

**MORE LOCATIONS TO SERVE YOU!**



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](http://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**

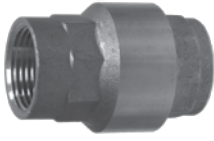
Each item currently stocked in each warehouse is noted in this catalog. Midland is constantly adding to each warehouse so call or visit the website to check stock! If it’s not there, let us know and we will stock it in any location for you!

<p><b>West Coast Distribution Center</b></p> <p>1403 Industrial Way Kerman, CA 93630 <b>Phone:</b> (559) 846-9301 <b>Fax:</b> (559) 846-9302</p> <p><b>FULLY STOCKED</b> with faster delivery to the entire West coast.</p>	<p><b>Houston Warehouse Hose &amp; Accessory Sales</b></p> <p>5537 Armour Drive Houston, TX 77020 <b>Phone:</b> 800.856.8888 <b>Fax:</b> 713.675.6422</p> <p>Ball Valves and Brass Fittings are currently stocked in this warehouse.</p>	<p><b>Atlanta Warehouse Fortney Sales Company</b></p> <p>1580 Big Shanty Drive Kennesaw, GA 30144 <b>Phone:</b> 800.241.3123 <b>Fax:</b> 800.423.9249</p> <p>Ball Valves, Brass Fittings and Hose clamps are currently stocked in this warehouse.</p>
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## NEW AT MIDLAND

## NEW PRODUCTS

### CHECK VALVES



**BRASS CHECK VALVE**  
p. 180



**STAINLESS STEEL IN-LINE CHECK VALVES**  
p. 186

### SWAGES



**STANDARD BULL PLUG**  
p. 241



**XH BULL PLUG**  
p. 241



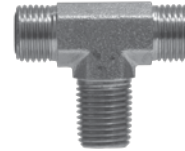
**STANDARD SCH. 40 SWAGE**  
p. 241

### HAMMER UNION



**HAMMER UNION**  
p. 242

### O-RING FACE SEAL ADAPTERS



**MANY NEW CONFIGURATIONS**  
p. 352-353

### HYDRAULIC QUICK DISCONNECT DUST CAPS & PLUGS



**ISO-A INTERCHANGE COUPLER DUST PLUG**  
p. 369



**ISO-A INTERCHANGE NIPPLE DUST CAP**  
p. 369



**ISO-B INTERCHANGE COUPLER DUST PLUG**  
p. 369



**ISO-B INTERCHANGE NIPPLE DUST CAP**  
p. 369

### STAINLESS STEEL SINGLE FERRULE COMPRESSION



**SSC 2404**  
p. 367

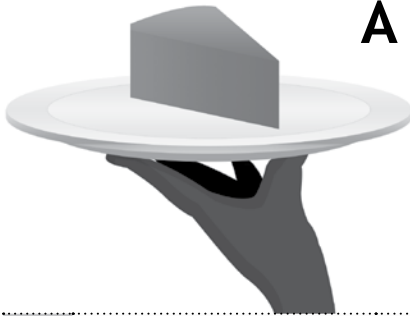












**SSC 2501**  
p. 367



**SSC 2601**  
p. 367

**A LA CARTE SERVICES**



 <p><b>CUSTOM CATALOGS</b></p>	 <p><b>POST CARDS</b></p>	 <p><b>FLYERS</b></p>	 <p><b>POSTERS</b></p>
 <p><b>BUSINESS CARDS</b></p>	 <p><b>APPAREL</b></p>	 <p><b>FAXES</b></p>	 <p><b>SHOPPING CART</b></p>
 <p><b>WEBSITE</b></p>	 <p><b>EMAILS</b></p>	 <p><b>INTERNET MARKETING</b></p>	

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

<http://midlandindustrial.com/map.php>





## 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...
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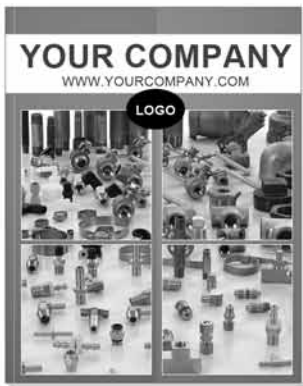
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- 1 Choose a cover from one of Midland's templates or work with our designers to create a unique cover all your own.
- 2 Send us your contact information so we can personalize the catalog pages.
- 3 Approve the final layout and its off to the printers!

Minimum quantity of **25** required, pricing varies depending on quantity requested - please call 888-821-5725 for more information.

- - - - - SAMPLE COVERS - ACTUAL COVERS ARE 100% CUSTOMIZABLE - - - - -



# UPS Ground transit maps

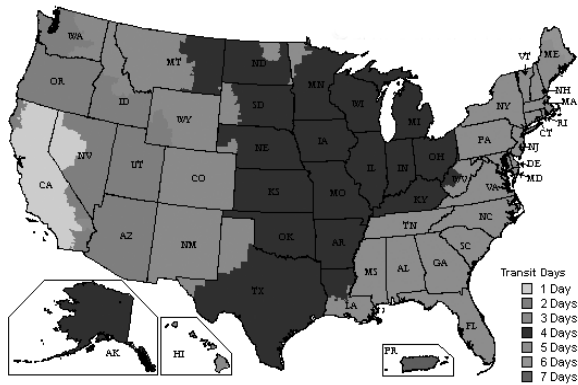
## Kansas City, Missouri (64106)



UPS Ground transit times

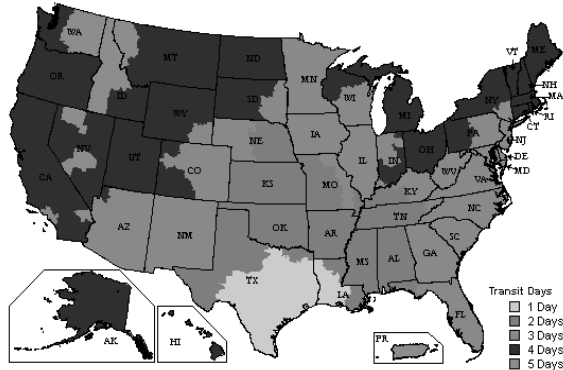


## Fresno, CA (93710)



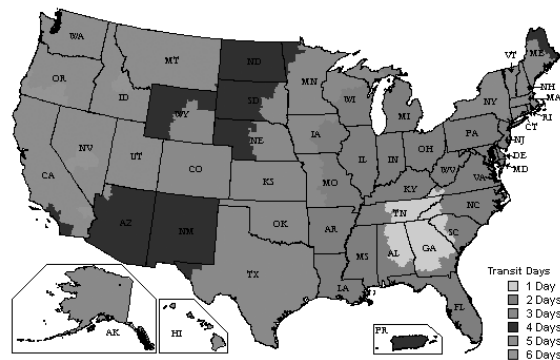
Transit Days  
 1 Day  
 2 Days  
 3 Days  
 4 Days  
 5 Days  
 6 Days  
 7 Days

## Houston, TX (77020)



Transit Days  
 1 Day  
 2 Days  
 3 Days  
 4 Days  
 5 Days

## Atlanta, GA (30144)



Transit Days  
 1 Day  
 2 Days  
 3 Days  
 4 Days  
 5 Days  
 6 Days

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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.



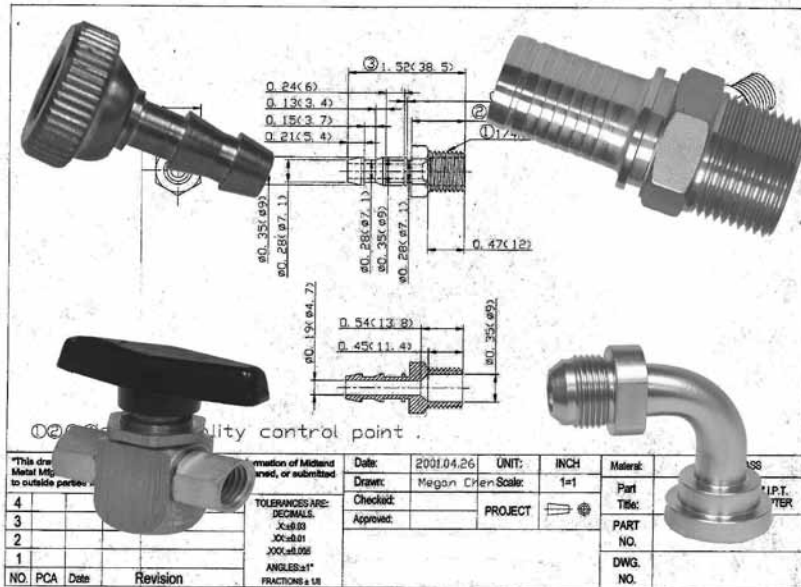
Box

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**Here's what you get:**

- Consistent, top quality products!
- Dedicated Inventory for your access only!
- Guaranteed on-time delivery everytime!

# PICTORIAL TABLE OF CONTENTS

PICTORIAL INDEX

BRASS

VALVES

NIPLLES & FITTINGS

PLASTIC FITTINGS

CLAMPS


TUBING


PNEUMATICS


ACCESSORIES


HYDRAULIC


NUMERICAL INDEX

	<b>Barstock and Forged Brass Fittings</b>	Pipe Fittings ..... 1-13	Compression Fittings ..... 71-84	Shut-Off Cocks ..... 145-146
		Hose Barb Fittings ..... 14-26	Flareless Fittings ..... 85-92	Air Cocks ..... 147-150
		Push-On Barb Fittings ..... 27-33	Push-In Fittings ..... 93-112	Needle Valves ..... 151-155
		Garden Hose Fittings ..... 34-45	BSPT/BSPP Metric ..... 113	Micro Metering ..... 156
		45° Flare Fittings ..... 46-60	Grease Fittings ..... 114-117	Toggle /Instrumentation .. 156-157
		JIC 37° Flare ..... 61	Air Brake Fittings ..... 118-131	Specialty Valves ..... 158-160
		Inverted Flare Fittings ..... 62-69	<b>SPECIALTY VALVES AND COCKS</b>	Mini Ball Valves ..... 161-162
		POL(Bottled Gas) ..... 70	Drain Cocks ..... 143-144	Check Valves ..... 162

	<b>Valves</b>	<b>FORGED BRASS VALVES</b>	Mini Ball Valves ..... 173	<b>STAINLESS STEEL VALVES</b>
		Ball Valve Handles ..... 163	3-Way Valves ..... 174	Standard Port ..... 182
		Full Port 600WOG ..... 164	Drum & Barrel Valves ..... 175	Full Port ..... 183
		NSF 61 Full Port ..... 165	Gate Valves ..... 176	In-Line Check Valves ..... 185
		MIP x FIP ..... 166	Bronze "Y" Strainer ..... 177	S.S. In-Line Check Valves. 186 <b>NEW</b>
		SWT x SWT ..... 169	Swing Check Valves ..... 178	<b>PLASTIC VALVES</b>
		FIP x FIP ..... 170	In-Line Check Valves <b>NEW</b> ..... 180	PVC Valves ..... 186
		Gas Valves ..... 171	Carbon Steel ..... 181	


	<b>Nipples &amp; Fittings</b>	Brass Nipples ..... 189-191	3000# Socket Weld ..... 212	Merchant Couplings ..... 224
		Xtra Heavy Red ..... 192-193	3000# Threaded	Malleable Fittings ..... 225-231
		Bronze Fittings ..... 194-201	Fittings #316 ..... 213-214	Full Port ..... 234-236
		Stainless Nipples ..... 202-206	3000# Socketweld	Schedule 80 Nipples ..... 240
		S.S. Toe Nipples ..... 204	Fittings #316 ..... 215	Extra Heavy Malleable ..... 240
		Stainless Fittings ..... 207-210	<b>BLACK &amp; GALVANIZED</b>	Swages ..... 241
		3000# Threaded	Black Schedule 40 ..... 216-223	Bushings & Plugs ..... 242
		Fittings #304 ..... 211	Steel Toe Nipples ..... 221	Forged Steel Fittings ... 243-245


	<b>Plastic Fittings</b>	PVC Nipples ..... 253		
		Plastic Fittings ..... 254-258		
		Pipe ..... 259-261		
		Hose Barb ..... 262		
		Garden Hose ..... 262		
		Compression ..... 263		
		Push-In ..... 264-266		
		Barbed Fittings for plastic pipe... 267-266		


	<b>Hose Clamps</b>	<b>WORM GEAR CLAMPS</b>	1 Ear Clamps ..... 281	Lined Band Clamps..... 288-289
		600 & 611 Series ..... 275	2 Ear & Gapless ..... 282	Hose Ferrules ..... 290
		620 Series ..... 276	F-Clamps ..... 283	Hose Crimper ..... 290
		300,325 & 350 Series ..... 277	K-Clamps ..... 284	
		500 & 550 Series ..... 278	FLJ-Clamps ..... 285	
		Hose Clamp Kits ..... 278	FLJS-Clamps ..... 286	
		Economy 830 Series ..... 279	Clamp-IT Strapping ..... 287	
		T-Bolt Clamps ..... 280	Clamp Tools ..... 287	


## HOSE CLAMP ASSORTMENTS

pg. 278

	<b>Tubing</b>	Polyethylene ..... 292-293	Tube Cutters ..... 297	
		Nylon 12 Tubing ..... 294	Clearbraid PVC Hose ..... 298	
		Endure™ Air Brake ..... 295	PVC Wire Vacuum	
		PVC Tubing ..... 296	Transfer Hose ..... 298	
		Aluminum ..... 296	General Purpose PVC ..... 299	
		Copper ..... 296	Heavy Duty PVC Spray ..... 299	

	<b>Pneumatic</b>	Universal Series ..... 300	ISO-B Interchange ..... 305	Air Adjusting Valve ..... 309
		Steel Couplers ..... 300	Flush Face ..... 306	Pistol Grip Blo-Gun ..... 309
		Industrial Interchange .. 301-302	AG Interchange ..... 306	Air Chucks ..... 310
		Parker (Tru-Flate) ..... 301	Mufflers ..... 307	Tank & Vent ..... 310
		ARO 210 Interchange ..... 302	Breather Vents ..... 307	Gauges ..... 311
		ST Series High Flow ..... 302	Speed Control Valve ..... 307	
		Mini Type ..... 303	Inline Filter ..... 308	
		Lincoln Interchange ..... 303	Sliding Hand Valve ..... 308	
		Mold Coolant ..... 304	Manifolds ..... 309	
		ISO-A Interchange ..... 305	Safety Blow Gun ..... 309	

	<b>Hose Accessories</b>	Combination Nipples ..... 268		<b>COMBINATION/ KC NIPLLES</b>
		Cam & Groove ..... 269-270		pg. 268
		Universal Couplings ..... 271		
		Ground Joint Couplings ..... 272		
		Fire Hose Fittings ..... 273-274		
		Copper Fitting Brushes ..... 312		
		Beverage Fittings ..... 313-314		

	<b>Hydraulic Adapters</b>	Steel Pipe Swivels ..... 316-320	Metric Adapters ..... 358-359	Wire Braid ..... 374-375
		Steel JIC 37° Adapters .. 321-326	High Pressure Swivel .. 360-361	Steel Ball Valves ..... 376
		JIC Bulkhead Adapters ..... 327	Beaded Insert ..... 362-363	Hydraulic Motors ..... 377
		Steel Pipe Adapters ..... 328-333	Flareless Bite-Type ..... 364-365	Hydraulic Pumps ..... 378-379
		O-Ring Adapters ..... 334-344	Hydraulic Couplings ... 366-367	Check Valves ..... 380
		Steel Flange Adapters . 345-349	Quick Disconnect ..... 366-367	Spiral Hose Wrap ..... 380
		O-Ring Face Seal ..... 350-355	Hydraulic Hose & Fittings ..... 368-371	Filter Filler ..... 381

Numerical Index ..... 389-421	Q.D. Crossover ..... 425
General Info ..... 422	Thread Chart ..... 426
New Account App ..... 423-424	Thread Profiles ..... 427



























# BRASS FITTINGS

# PICTORIAL INDEX
























## Pipe

Pages 1-13

90° Elbow  pg 2	45° Elbow  pg 2	Union Tee  pg 2	Cross  pg 3	Coupling  pg 3
Union  pg 4	Cap  pg 4	St. Elbow  pg 4	Hex Bushing  pg 5	Square Plug  pg 6
Countersunk  pg 6	Slotted-Head  pg 6	Hex Plug  pg 6	Locknut  pg 7	Close Nipple  pg 7
Long Nipple  pg 7	Hex Nipple  pg 8	45° Elbow  pg 8	Street Tee  pg 9	Extender  pg 9
Male Elbow  pg 10	Branch Tee  pg 10	Male Tee  pg 11	Bulkhead  pg 12-13	















## Hose Barb

Pages 14-26

Male Adapter  pg 15	Swivel  pg 16	Mender  pg 16	Fe. Adapter  pg 17	Swivel  pg 17
Swivel  pg 18	90° Elbow  pg 18	Tees  pg 19	HB Elbow  pg 19	Female HB  pg 20
Swivel Male  pg 21	45° Elbow  pg 21	Ball End  pg 21	Ballseat Adapt  pg 21	Ballseat Union  pg 21
Ballseat F Adapt  pg 21	45° Flare  pg 21	Flare Swivel  pg 22	Dbl Barb Ad.  pg 25	Dbl Barb Elb.  pg 25
Sig. Barb Ad.  pg 25	Sig. Barb El.  pg 25	SS Nipple  pg 26		




















## Push-on Hose Barb

Pages 27-33

Male Adapter  pg 28	Male Swivel  pg 28	Fe. Swivel  pg 28	Splicer  pg 29	Fe. Adapter  pg 29
Male Elbow  pg 29	Rigid Tube  pg 30	SAE Flare  pg 30	JIC Flare  pg 30	Dual Swivel  pg 30
45° SAE  pg 31	37° JIC  pg 31	Inverted Male  pg 31	Ballseat  pg 32	




















## Garden Hose

Pages 34-45

Swivel  pg 35	FGH x Fe.  pg 35	Rigid  pg 36	Swivel  pg 36	FGH x Male  pg 36
Rig. FGH x M  pg 36	Rig. FGH x F  pg 37	MGH x M  pg 37	MGH x MGH  pg 37	Plug  pg 38
"Y"  pg 39	Quick Disc.  pg 39	Coupling  pg 40	Coupling  pg 41	NPSM Shank  pg 42
NPSM Shank  pg 42	Shut-Off  pg 44	Nozzle  pg 45	Spray  pg 45	

## SAE 45° Flare

Pages 46-60









Short Rod Nut  pg 47	Extra Heavy  pg 48	Flared Plug  pg 49	Flared Cap  pg 49	Copper Gask.  pg 49
Union  pg 50	Union tee  pg 51	Fe. Adapter  pg 53	Male Adapter  pg 54	90° Elbow  pg 55
90° Elbow  pg 56	Forged Cross  pg 57	90° Flare  pg 57	Fe. Branch  pg 58	Flr x M Pipe  pg 58
Union  pg 59	Flare Reducer  pg 59	Swivel  pg 60	Union  pg 60	

## PICTORIAL INDEX

## BRASS FITTINGS


















### JIC 37° Adapters

Page 61

Straight  pg 61	45° Elbow  pg 61	Tube Union  pg 61	90° Elbow  pg 61	Straight Swiv.  pg 61
Straight Adap.  pg 61	Straight Union  pg 61	Tube Tee  pg 61		






### Inverted Flare

Pages 62-69

Steel Nut  pg 63	Fe. Adapter  pg 64	Male Adapter  pg 64	Elbow  pg 65	45° Elbow  pg 65
Union Tee  pg 65	Steel Plug  pg 66	M Branch Tee  pg 66	Female Elbow  pg 66	Male Run Tee  pg 66
Brake Tee  pg 67	Dual Adapter  pg 67	Pipe Adapter  pg 68	SAE x Invert F  pg 68	Metric Tee  pg 69
Stand. x Met.  pg 69	Metric Union  pg 69			
















### POL (Bottled Gas)

Page 70

Tee Check  pg 70	Tailpiece  pg 70	Nut  pg 70	Cap  pg 70	Cap Orifice  pg 70
---	---	---	---	---

### Compression Fittings

Pages 71-84

Brass Sleeve  pg 72	Brass Insert  pg 73	Brass Nut  pg 73	Long Nut  pg 74	Sleeve Nut  pg 74
Cap  pg 74	Union  pg 75	Tee  pg 76	Union Elbow  pg 77	Fe. Adapter  pg 78
Male Adapter  pg 79	Male Elbow  pg 80	M. Branch Tee  pg 81	Female Elbow  pg 82	45° Elbow  pg 83





















### Flareless

Pages 85-92

Plastic Sleeve  pg 86	Brass Sleeve  pg 86	Nut/ Plastic  pg 86	Nut/ Brass  pg 87	Union86  pg 87
Union Tee  pg 88	Fe. Connector  pg 88	Male Elbow  pg 89	Female Elbow  pg 89	Male Run Tee  pg 89
Male Branch  pg 90	Bulkhead  pg 90	Insert Only  pg 91	Tube x Male  pg 92	Insert Only  pg 92

### Push-in Fittings

Pages 93-111

Union Conn.  pg 94	Reducer  pg 94	Union Tee  pg 94	Fe. Connector  pg 94	Press-in  pg 95
M Connector  pg 95	Swivel Elbow  pg 96	Union Elbow  pg 96	Union "Y"  pg 97	Cross  pg 97
Swivel M Bran  pg 98	Fe. Branch  pg 98	Blkhead Union  pg 99	Male Connector  pg 101	Comp. Union  pg 109
Comp. Elbow  pg 109	Comp. Branch  pg 110	Comp. "Y"  pg 110	Metric Male 90°  pg 111	Metric Union  pg 111
















### British Pipe Fittings

Pages 112-113

Nipple  pg 112	Plug  pg 112	BSPT NPT  pg 112	Coupling  pg 113	BSPP Tee  pg 113
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### Steel Grease Fittings

Pages 114-117
















Pipe Thread  pg 114	Pipe Thread  pg 114	Pipe Thread  pg 114	Pipe Thread  pg 114	1/4-28 Taper  pg 115
1/4-28 Taper  pg 115	Drive Type  pg 116	Metric  pg 116	Metric  pg 116	Metric  pg 116
Metric  pg 116	Metric  pg 117	Button Head  pg 117	Whip Hose  pg 117	Gun Coupler  pg 117

## BRASS FITTINGS

## PICTORIAL INDEX













### Air Brake-Nylon Tubing

Pages 118-122

Sleeve  pg 119	Nut  pg 119	Union  pg 119	Bulkhead  pg 119	Steel Insert  pg 119
Brass Insert  pg 120	Tee  pg 120	Elbow  pg 120	Fe. Adapter  pg 120	Male Adapter  pg 121
Male Elbow  pg 121	Female Elbow  pg 121	Male Run Tee  pg 122	Male Branch  pg 122	45° Elbow  pg 122













### Air Brake - Copper

Pages 123-127

Sleeve  pg 124	Nut  pg 124	Union  pg 124	Tee  pg 124	Elbow  pg 125
Fe. Adapter  pg 125	Male Adapter  pg 125	90° Male Elbow  pg 126	90° Fe. Elbow  pg 126	Run Tee  pg 126
Branch Tee  pg 127	45° Elbow  pg 127			
















### Air Brake - Hoses/ Ends

Pages 128-131

Sleeve  pg 129	Nut  pg 129	Nut  pg 129	Spring  pg 130	Union  pg 130
Fe. Connector  pg 130	Male Connector  pg 130	Adapter  pg 130	Nut/ Spring  pg 131	Adapter Body  pg 131
Male Adapter  pg 131	Male Adapter  pg 131			

















### D.O.T. Push-in

Pages 132-138

Male 45°  pg 132	Male Swivel  pg 132	Plug  pg 133	Union  pg 133	Union Tee  pg 133
Union Elbow  pg 133	Fe. Connector  pg 134	Male Connector  pg 134	Male Elbow  pg 135	Male Swivel  pg 135
Male Run Tee  pg 136	M Swivel Run  pg 137	Male Branch  pg 138	Bulkhead Union  pg 138	Fe. Bulkhead Un  pg 138













### Air Brake - Accessories

Pages 139-142

Collet  pg 139	Tubing  pg 139	Fuel Line  pg 139	Steel Brake  pg 140	No Hub  pg 140
Seal  pg 140	Hex Ft Chuck  pg 140	1/4 I.D. Barb  pg 140	Dual Foot  pg 140	Angle Chuck  pg 140
Hose  pg 141	Airbrake Tube  pg 141	Male Connector  pg 142	90° Male Elbow  pg 142	Long Ells  pg 142
Extension Adap  pg 142				

### Drain Cocks

Pages 143-144

Shut Off  pg 143	Drain Valve  pg 143	Drain Cock  pg 143	Truck Drain  pg 143	Shut Off  pg 143
Lever Handle  pg 143	Internal Seat  pg 144	Internal Seat  pg 144	Long Seat  pg 144	Bibb Needle  pg 144
Needle Valve  pg 144	Radiator Type  pg 144			










# PICTORIAL INDEX

# BRASS FITTINGS









## Shut-off Cocks

Pages 145-146

Flare x Male  pg 145	Flare x Flare  pg 145	Flare x Female  pg 145	Comp x Male  pg 146	Fe. x Female  pg 146
Male x Fe.  pg 146	Male x Male  pg 146			









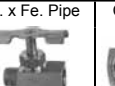




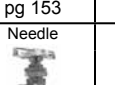

## Brass Air Cocks

Pages 147-150

MIB x BIBB  pg 147	MIP x BIBB  pg 147	MIP x MIP  pg 147	MIP x MIP  pg 148	MIP x BIBB  pg 148
MIP x BIBB  pg 148	FIP x FIP  pg 149	MIP x FIP  pg 150		






## Needle Valves

Pages 151-155

Comp x Male  pg 151	Comp x Male  pg 151	Comp x Comp  pg 151	Flare x Male  pg 152	Flare x Flare  pg 152
Air Vent  pg 152	M. x M. Pipe  pg 152	Fe. x Fe. Pipe  pg 153	M. x Fe. Pipe  pg 153	Check Valve  pg 153
Flow Control  pg 153	Needle Valve  pg 153	Needle  pg 154	Needle  pg 154	Metering  pg 155





## Toggle/ Instrumentation

Pages 156-157

Toggle  pg 156	Toggle  pg 156	Fe. x Fe.  pg 157	Fe. x Fe. Angle  pg 157	3 Way Valves  pg 157
---	---	--	--	---

## Specialty Valves

Pages 158-160

3-Way Valves  pg 158	6 Port Valves  pg 159	Brass Truck  pg 160	Solid Bottom  pg 160
---	--	--	---




## Mini/ Check Valves

Pages 161-162

Male x Female  pg 161	Check  pg 162	Check  pg 162
--	---	--



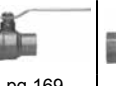









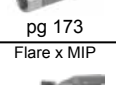
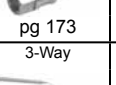
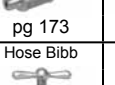

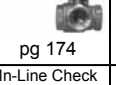






## Ball Valve Handles

Pages 163

Private Label  pg 163	Tee  pg 164	Locking  pg 164
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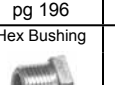
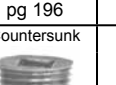

## Valves

Pages 164-187

Full Port  pg 164	NSF Full 61  pg 166	MIP x FIP  pg 168	SWT x SWT  pg 169	Std. Port  pg 170
Gas Ball  pg 170	Appliance  pg 170	Flare x Flare  pg 170	Mini Fe. x Fe.  pg 172	Mini M. x Fe.  pg 172
Mini Fe. x Fe.  pg 173	Mini M x Fe.  pg 173	Mini M x M  pg 173	Mini M x HB  pg 173	Barb x M Pipe  pg 173
Flare x MIP  pg 173	3-Way  pg 174	Hose Bibb  pg 175	Gate Valve  pg 176	Y-Stainer  pg 177
Check  pg 178	In-Line Check  pg 179	Carbon Ball  pg 181	Stainless  pg 182	Stainless  pg 183
SS Check  pg 185	PVC Thread  pg 187	PVC Slip  pg 187	Plastic  pg 187	

## Brass & Bronze

Pages 188-201











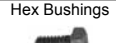



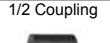
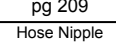
Nipple  pg 189-191	Xtra Heavy Red  pg 192-193	90° Elbow  pg 194	90° Street  pg 194	45° Elbow  pg 195
45° Street  pg 195	Tees  pg 195	Reducing  pg 196	Crosses  pg 196	Coupling  pg 197
Caps  pg 198	Union  pg 198	Hex Bushing  pg 199	Countersunk  pg 200	Locknut  pg 201

# VALVES/ FITTINGS

# PICTORIAL INDEX

## Stainless Steel

Pages 202-210

Nipple  pg 202-206	Toe Nipple  pg 204	90° Elbow  pg 207	90° Street  pg 207	45° Elbow  pg 207
Tees  pg 207	Crosses  pg 207	Machined  pg 207	Couplings  pg 208	Caps  pg 208
Hex Bushings  pg 209	Unions  pg 209	Hex Head  pg 209	Square Plug  pg 210	1/2 Coupling  pg 210
Hose Nipple  pg 210				

## 3000# Threaded Fittings #304

Page 211

90° Elbow  pg 211	Couplings  pg 211	Tees  pg 211	45° Elbow  pg 211	Caps  pg 211
--	--	---	--	---






## 3000# Socket Weld #304

Page 212

90° Elbow  pg 212	Couplings  pg 212	Tees  pg 212	Caps  pg 212
--	--	---	---

## 3000# Threaded Fitgs #316

Pages 213-214

Couplings  pg 213	Hex Bushing  pg 214	Unions  pg 214	Square Plugs  pg 214	Hex Nipples  pg 214
--	--	---	---	--

## 3000# Socket Weld #316

Page 215

90° Elbow  pg 215	Couplings  pg 215	Tees  pg 215	Caps  pg 215	Inserts  pg 215
--	--	---	---	--

## Black & Galvanized

Pages 216-239

Nipples  pg 217-221	Toe Nipple  pg 221	Black Sch. 40  pg 222-223	Merchant  pg 224	90° Elbow  pg 225
90° Street  pg 226	45° Elbow  pg 226	45° Street  pg 226	Tee  pg 227	Coupling  pg 227
Reducing  pg 228	Service  pg 229	Side Outlet  pg 229	Hex Bushing  pg 230	Union  pg 231
Cored Plug  pg 231	Cross  pg 231	Cap  pg 232	Flange  pg 232	Hex Bushing  pg 233
Cap  pg 233	Square Plug  pg 233	Countersunk  pg 234	Extra Heavy  pg 235-237	Extra Heavy 80  pg 238-239
90° Elbow  pg 240	45° Elbow  pg 240	90° Street  pg 240	Tee  pg 240	Coupling  pg 240
Union  pg 240				




## Swages

Pages 241

Standard Bull  pg 241	XH Bull Plug  pg 241	Std. 40 Swage  pg 241
--	--	--









## Bushings & Plugs

Pages 242

Forged Bushing  pg 242	Hex Head Plug  pg 242	Square Plug  pg 242
---	---	--






## 3000# Forged Steel

Pages 243-244

90° Elbow  pg 243	Cross  pg 243	Coupling  pg 243	45° Elbow  pg 243	Street Elbows  pg 243
Half Coupling  pg 243	Tees  pg 243	Union  pg 244		





















**6000# Forged Steel**

Pages 245

90° Elbow  pg 245	Tees  pg 245	Cross  pg 245	Street Elbows  pg 245	Half Coupling  pg 245
--	---	--	--	--





















**Copper Fittings**

Pages 247-252

90° Ell  pg 247	90° Street Ell  pg 247	90° Long Turn  pg 247	90° Long Turn  pg 247	45° Ell  pg 248
Street 45°  pg 248	Coupling  pg 248	Coupling  pg 248	Coupling  pg 249	Reducer  pg 249
Reducer  pg 249	Flush Bushing  pg 250	Male Adapter  pg 250	Male Fitting  pg 250	Fe. Adapter  pg 251
Fitting Adapter  pg 251	Cap  pg 251	Unions  pg 251	U-Type Strap  pg 251	Tee  pg 252









**Plastic Pipe**

Pages 253-260

PVC Nipples  pg 253	Slip Tees  pg 254	Threaded Coup  pg 254	90° Elbow  pg 254	Slip Cap  pg 255
45° Slip Elbow  pg 255	FIP x FIP  pg 256	Slip x Slip  pg 256	FIP x FIP Tee  pg 256	Slip Coupling  pg 256
MIP x SLIP  pg 257	MIP x FIP  pg 257	Slip Cap  pg 258	Hex Plug  pg 259	Pipe Cap  pg 259
Hex Nipples  pg 259	Hex Bushing  pg 259	Elbow  pg 260	Tee  pg 260	Coupling  pg 260









**Plastic Hose**

Pages 260-261

Female  pg 260	Male  pg 260	Elbow  pg 261	Hose x Female  pg 261	Union Elbow  pg 261
Connector  pg 261	Barbed Tee  pg 261	Tees  pg 261		







**Plastic Garden Hose**

Page 262

Cap  pg 262	Nut  pg 262	Adapter  pg 262	Thread Adapter  pg 262	MGH  pg 262
FGH  pg 262	FGH x Fe. Pipe  pg 262	Adapter  pg 262		

















**Plastic Compression**

Pages 262-263

Union  pg 262	Bulkhead  pg 262	Union Tees  pg 262	Union Elbow  pg 262	Connectors  pg 263
Run Tees  pg 263				











**Plastic Push-In**

Pages 264-266

Connector  pg 264	Union  pg 264	Cross  pg 264	Reducing  pg 264	Union Elbow  pg 264
Fixed Elbow  pg 265	Plug-in  pg 265	Stem Adapter  pg 265	Union Tee  pg 265	Reducing Tee  pg 265
Bulkhead  pg 265	Female  pg 265	2-Way  pg 266	PI x PI  pg 266	PI x NPTF  pg 266
Check Valve  pg 266				

**Hose Accessories**

Pages 267-268






Hex Adapter  pg 267	Bronze Tee  pg 267	Elbow  pg 267	S. Hose Nipple  pg 267	Steel Mender  pg 267
Steel Hose  pg 268	Plated Steel  pg 268	Brass  pg 268	Aluminum  pg 268	Mender  pg 268

# HOSE CLAMPS/ QUICK DISCONNECT

# PICTORIAL INDEX

## Cam & Groove

Pages 269-270

Type A  pg 269	Type B  pg 269	Type C  pg 269	Type D  pg 270	Type E  pg 270
---	---	---	---	---

## Hose Accessories

Pages 271-274

Male NPT  pg 271	Washer  pg 271	Female NPT  pg 271	Hose End  pg 271	Triple  pg 271
Hose Stem  pg 272	Wing Nut  pg 272	Female Spud  pg 272	Male Pipe  pg 272	Bolt Clamps  pg 272
Hydrant Adapt.  pg 273	Fe. x M. Nipple  pg 273	Dbl. Fe. Swivel  pg 273	Dbl. Male  pg 274	Dbl. Male  pg 274













## Hose Clamps

Pages 275-290

600 Series  pg 275	611 Series  pg 275	620 Series  pg 276	300 Series  pg 277	325 Series  pg 277
350 Series  pg 277	500 Series  pg 278	550 Series  pg 278	Worm  pg 279	T-Bolt  pg 280
1-Ear  pg 281	2-Ear  pg 282	F-Clamp  pg 283	K-Clamp  pg 284	FLJ-Clamp  pg 285
FLJS-Clamp  pg 286	Clamp-It  pg 287	Tools  pg 287	Mini-F  pg 288	Aluzinc  pg 288
Exhaust  pg 288	Rubber Clip  pg 289	Robust  pg 289	Ferrules  pg 290	Crimper  pg 290


























## Tubing

Pages 291-299

Polyethylene  pg 292-293	Nylon 12  pg 294	Endure Tubing  pg 295	Polyvinylchloride  pg 296	Aluminum  pg 296
Copper  pg 296	Soft Copper  pg 296	Polyurethane  pg 297	Mini Cutter  pg 297	Clear Braid  pg 298
Wire Vacuum  pg 298	PVC Hose  pg 299			



















## Quick Disconnects

Pages 300-306

Univ. Coupler  pg 300	U. HB Coupler  pg 300	Ind. Coupler  pg 300	Ind. Plug  pg 300	Interchange  pg 301
Inter. Plug  pg 301	Parker Coupler  pg 301	Parker Plug  pg 301	ARO Coupler  pg 301	ARO Plug  pg 301
Std. Coupler  pg 302	Std. Plug  pg 302	Mini Coupler  pg 303	Mini Plug  pg 303	Lincoln Coup.  pg 303
Lincoln Plug  pg 303	Mold-Coolant  pg 303	Straight Stem  pg 304	90° Stem  pg 304	45° Stem  pg 304
Body Only  pg 304	ISO-A  pg 305	ISO-B  pg 305	Flush Face  pg 306	AG  pg 306

## Pneumatics

Pages 307-310

Mufflers  pg 307	Vent  pg 307	Control Valve  pg 307	Press. Snubber  pg 307	Flow Adjust.  pg 307
Aluminum Muff.  pg 308	In-line  pg 308	High Flow  pg 308	Hand Valves  pg 308	3 in 1 Manifold  pg 309
Blow Gun  pg 309	Blo-Gun  pg 309	Rubber Nozzle  pg 309	Foot Chuck  pg 310	Air Vent  pg 310
Foot Chuck  pg 310	Valves  pg 310	Caps  pg 310		

# PICTORIAL INDEX

# HYDRAULIC ADAPTERS






## Accessories

Pages 311-312

Pencil Gauge  pg 311	Gauges  pg 311	Teflon Tape  pg 312	Brush  pg 312
---	---	--	--

## Beverage Fittings

Pages 313-314

Swivel Nut  pg 313	Swivel Hose  pg 313	90° Swivel  pg 313	Hose Splicer  pg 313	90° Barb  pg 313
Barb Hose Tee  pg 313	Male Flare  pg 314	NPT to Barb  pg 314	Swivel to Barb  pg 314	NPT Elbow  pg 314

## Steel Pipe Swivels

Pages 315-318

Male Swivel  pg 316	Female Swivel  pg 316	Elbow Swivel  pg 317	Pipe Elbow  pg 317	Swivel Elbow  pg 317
45° Swivel  pg 318	45° Swivel  pg 318	M. Swivel Tee  pg 318	Fe. Swivel Tee  pg 318	Fe. Swivel  pg 318








## Steel JIC Fittings

Pages 319-326

JIC Tube Nut  pg 320	JIC Cap  pg 320	JIC Tube Nut  pg 320	JIC Sleeve  pg 320	JIC Tube Union  pg 321
JIC Male  pg 321	JIC Long  pg 322	JIC Female  pg 322	JIC Reducer  pg 322	Reducer/ Exp  pg 323
JIC Plug  pg 323	JIC Union  pg 323	JIC M. Elbow  pg 323	JIC Restrictor  pg 323	Long Elbow  pg 324
X-Long Elbow  pg 324	XX-Long  pg 324	JIC Female  pg 324	JIC Male 45°  pg 325	JIC Union 45°  pg 325
JIC Female 45°  pg 325	JIC Run Tee  pg 326	Locknut  pg 326		

## JIC Bulkhead Adapters

Pages 327-328

Union  pg 326	Union Elbow  pg 326	Union 45° Elb.  pg 327	Branch Tee  pg 327	Run Tee  pg 327
JIC x Fe. Pipe  pg 327	JIC x M. Bulk  pg 327			











## Steel Pipe Fittings

Pages 328-333

Pipe Coupling  pg 329	Hex Nipple  pg 329	Pipe Adapter  pg 329	Pipe Cap  pg 330	Hex Plug  pg 330
Hollow Plug  pg 330	Hex Plug  pg 330	Square Plug  pg 330	Pipe Cap  pg 331	Male Elbow  pg 331
45° Elbow  pg 331	Female Elbow  pg 332	45° Female  pg 332	Male Pipe Tee  pg 333	Fe. Branch Tee  pg 333
Street Tee  pg 333	Run Pipe Tee  pg 333	Branch Tee  pg 333	Pipe Tee  pg 333	

## O-Ring Adapters

Pages 334-338










JIC O-Ring  pg 335	Long O-Ring  pg 335	O-Ring Adapter  pg 335	O-Ring Swivel  pg 336	O-Ring Hex  pg 336
O-Ring Pipe  pg 336	O-Ring Adapt.  pg 337	Hex Plug  pg 337	Hollow Plug  pg 337	O-Reducer  pg 348



## HYDRAULIC ADAPTERS














### 37° JIC Swivels

Pages 338-340

JIC Nut Elbow  pg 338	Swivel Elbow  pg 338	JIC 45° Swivel  pg 339	Pipe Elbow  pg 339	JIC Connector  pg 339
Swivel Adapter  pg 339	Pipe Adapter  pg 339	Swivel Branch  pg 340	Branch Tee  pg 340	

























### SAE O-Ring Fittings

Pages 340-344

JIC O-Ring  pg 340	Long O-Ring  pg 341	X-Long O-Ring  pg 341	Straight 45°  pg 341	O-Ring Branch  pg 341
O-Ring Run  pg 342	Pipe Elbow  pg 342	O-Ring Elbow  pg 342	37° JIC Swivel  pg 342	O-Ring Elbow  pg 342
O-Ring Swivel  pg 343	90° Swivel  pg 343	45° Swivel  pg 344		

### Flange Adapters


























Pages 344-349

Viton O-Ring  pg 344	Buna O-Ring  pg 344	Flange 61  pg 346	45° Flange 61  pg 346	JIC Flange  pg 346
Flange 62  pg 346	45° Flange 62  pg 347	90° Flange 62  pg 347	Split 61  pg 347	Split 62  pg 347
Plug 61  pg 347	Plug 62  pg 347	Flange O-Ring  pg 348	Flange Pad  pg 348	Flange Kit 61  pg 348
Flange Kit 62  pg 348	Split 61  pg 348	Split 62  pg 348	Pipe Weld  pg 349	Pipe Pad 62  pg 349
Pipe Thread  pg 349	Pipe Thread 62  pg 349	O-Ring 61  pg 349	O-Ring 62  pg 349	

## PICTORIAL INDEX





### O-Ring Face Seal

Pages 350-356

Tube Nut  pg 351	Tube Sleeve  pg 351	Tube Union  pg 351	Cap  pg 351	Plug  pg 354
Male Union  pg 351	Male O-Ring  pg 352	Fe ORFS Red.  pg 352	Plug  pg 352	Male Elbow  pg 352
ORFS to Pipe  pg 353	ORFS Tee  pg 353	ORFS Union  pg 353	ORFS Bulkhead  pg 353	ORFS 90°  pg 353
ORFS 45°  pg 353	ORFS Tee  pg 354	ORFS Union  pg 354	ORFS Branch  pg 354	Straight Thread  pg 354
Flat Face 37°  pg 354	Nut Elbow  pg 355	37° Swivel  pg 355	O-Ring Elbow  pg 355	Straight Elbow  pg 356












### BSPT Adapters

Page 356

JIC BSPT  pg 356	Elbow BSPT  pg 356	Nipple  pg 356	Plug  pg 356
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

### BSPP Adapters

Pages 356-358

Nipple  pg 356	Coupling  pg 357	Female Swivel  pg 357	Elbow  pg 357	45° Elbow  pg 357
Male Nipple  pg 357	Male BSPP  pg 357	Swivel BSPP  pg 358	Plug BSPP  pg 358	Hollow BSPP  pg 358
Female BSPP  pg 358				

### Metric Adapters












Pages 358-359

Connector  pg 358	Male Elbow  pg 359	Straight Swivel  pg 359	Metric Plug  pg 359	Metric Parallel  pg 359
Fe. Adapter  pg 359				







## PICTORIAL INDEX

## HYDRAULIC ADAPTERS/ MISC.






### High Pressure Swivels Pages 360-361

M. Connector  pg 360	Fe. Connector  pg 360	Tube Adapter  pg 360	Male Elbow  pg 360	Female Elbow  pg 360
Pipe Adapter  pg 360	Pipe Coupling  pg 361	Swivel Elbow  pg 361	Female Swivel  pg 361	Street Elbow  pg 361
O-Ring Elbow  pg 361				






### Beaded Hose Inserts Pages 362-363

Hose Insert  pg 362	90° Insert  pg 362	45° Insert  pg 362	90° O-Ring  pg 362	45° O-Ring  pg 363
O-Ring Hose  pg 363				





### Flareless Bite-Type Steel Pages 365-365

Tube Nut  pg 364	Tube Sleeve  pg 364	Male Connector  pg 364	Union Tee  pg 365	Male O-Ring  pg 365
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### Quick Disconnect Pages 368-369

ISO-A  pg 368	ISO-B  pg 368	Thread Conn.  pg 368	Flush Face  pg 369	AG  pg 369
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### Dust Caps & Plugs Page 369

ISO-A Plug  pg 368	ISO-B Plug  pg 368	ISO-A Cap  pg 368	ISO-B Cap  pg 369
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### Hydraulic Hose Fittings Pages 370-372

NPTF Solid  pg 370	Male O-Ring  pg 370	NPTF Male  pg 370	Male JIC 37°  pg 371	Male O-Ring  pg 371
Female O-Ring  pg 371	Female JIC  pg 372	Female JIC  pg 372		

### Hydraulic Hose Pages 374-375

SAE100 R1  pg 374	SAE100 R2  pg 374	SAE100 R17  pg 375	SAE100 R16  pg 375
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### Steel Valves Pages 376,380

Two-Way  pg 376	Three-Way  pg 376	Check Valve  pg 380
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### Hydraulic Motors & Pumps Pages 377-379

Motors  pg 377	Pumps  pg 378
---	---

### Wrap/ Protector/ Cover Pages 380-381

Wrap  pg 380	Hose Cover  pg 381
---	--

### Filter Filler Page 381

Breather  pg 381	Filter  pg 381
---	--

### Lead Free Fittings Page 382-388

Coupling  pg 382	Rigid M Adapter  pg 383	Hose Barb Tee  pg 384	Short Rod Nut  pg 385	Union  pg 387
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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

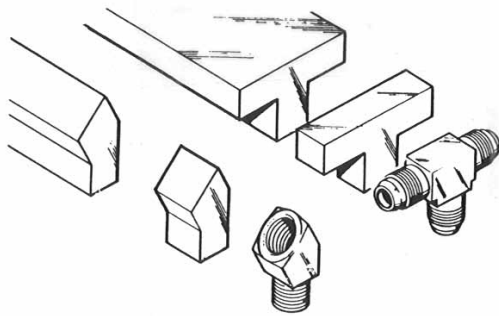
ASTM B16 - 92

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	



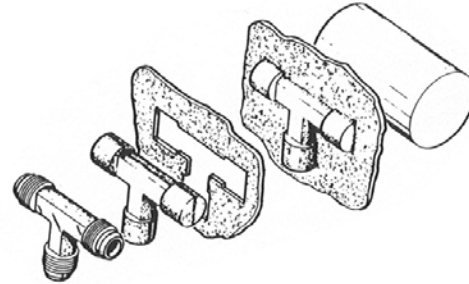
### Extruded Barstock Fittings

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.

### Why Brass Fittings?

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

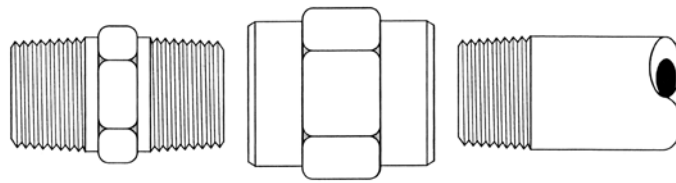
### Features of Brass Fittings:

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

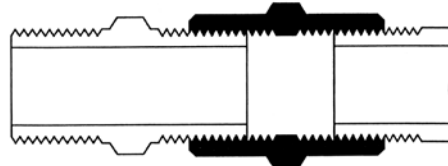
- Brass fittings are characterized by good strength.
- These fittings have excellent high temperature ductility.
- They have reasonable cold ductility.
- Fittings made of brass have good conductivity.
- They are excellent in corrosion resistance.
- Brass fittings have good bearing properties.
- They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



# Pipe



- For AB 1953 Compliant Lead Free Fittings see pages 382-388
- For Bronze & Larger Sizes see pages 194-201
- For BSPT/ BSPP see pages 112,113



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

**•Typical Application**

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

**•Pressure**

Operating pressure up to 1200 PSI.

**•Vibration**

Fair resistance.

**•Temperature Range**

-65°F to +250°F (-53°C to +121°C).

**•Material**

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

**•Used With**

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

**• Tolerance**

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

**•Conformance**

Meets specifications and standards of ASA, ASME and SAE.

**•“L” at the end of a Part# means Light Pattern**

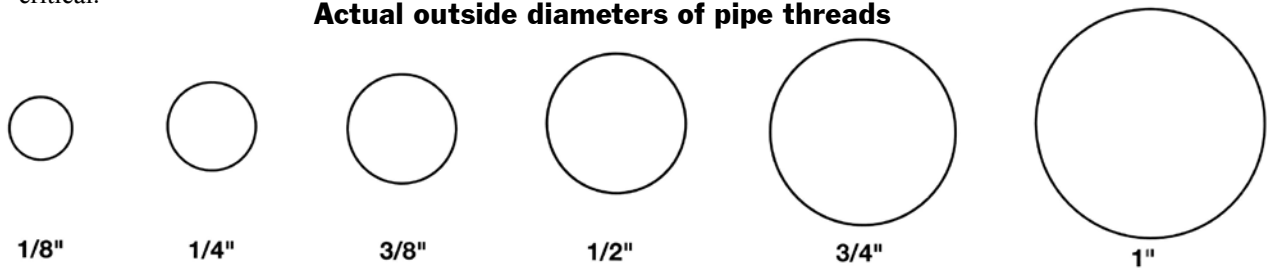
- these fittings are completely interchangeable with full pattern fittings, but have been modified in some way. This modification is usually in the length of the pipe threads. Used in plumbing and light industrial applications.

**•Assembly Instructions**

- 1- Tighten approximately 2-1/2 turns past hand tight.
- 2- Fittings with Everseal tighten two turns past hand tight. Brittle materials require special cautions.

- for larger sizes see bronze fittings on page 194
- see page 253 for plastic pipe fittings.

**Actual outside diameters of pipe threads**



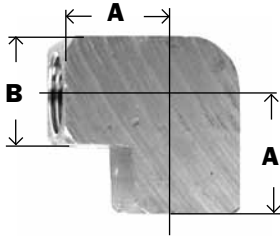
**Actual Male Thread Profiles**



**90° FEMALE ELBOW**

SAE# 130238

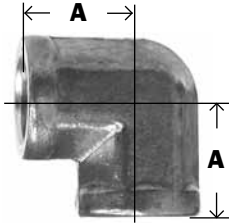
2200P  
3500  
302  
200



Part #	Thread Size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-001	1/8"	0.55	0.56	0.09	2.99
28-002	1/4"	0.78	0.68	0.13	4.55
28-003	3/8"	0.84	0.81	0.16	5.47
28-004	1/2"	1.09	1.00	0.34	8.56
28-005	3/4"	1.16	1.25	0.60	17.69

**90° FORGED FEMALE ELBOW**

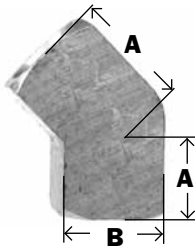
1200P  
E7  
100AF  
100B



Part #	Thread size NPTF	A	Body Width	Approx. Wt. Lbs.	List Price
28-009	1/8"	0.57	0.50	0.04	2.72
28-010	1/4"	0.70	0.68	0.10	4.13
28-011	3/8"	0.81	0.81	0.12	5.91
28-012	1/2"	1.00	1.00	0.23	9.89
28-013	3/4"	1.13	1.25	0.42	21.25
28-014	1/4" x 1/8"	0.72	0.69	0.12	5.54
28-015	3/8" x 1/4"	0.81	0.81	0.15	5.45
28-016	1/2" x 3/8"	1.00	1.00	0.28	14.26

**45° FEMALE ELBOW**

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

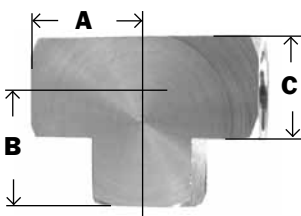


Part #	Thread size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-018	1/8"	0.45	0.56	0.06	4.69
28-019	1/4"	0.66	0.68	0.12	6.13

**UNION TEE**

SAE# 130438

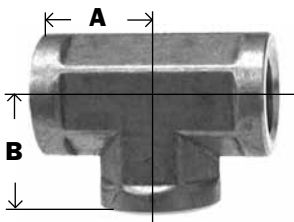
311  
101A  
322  
2203P  
3700  
203



Part #	Thread size NPTF	A	B	C	Approx. Wt. Lbs.	List Price
28-024	1/8"	0.55	0.55	0.56	0.08	3.38
28-025	1/4"	0.78	0.78	0.68	0.17	4.88
28-026	3/8"	0.84	0.84	0.81	0.22	7.60
28-027	1/2"	1.09	1.09	1.00	0.43	12.23
28-028	3/4"	1.16	1.16	1.25	0.64	23.81

**UNION FORGED TEE**

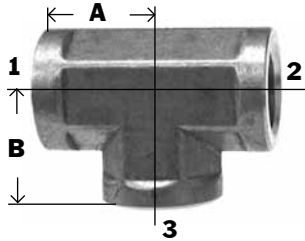
1203P  
LT7  
101AF  
101B



Part #	Thread size NPTF	A & B	Body Width	Approx. Wt. Lbs.	List Price
28-032	1/8"	0.56	0.50	0.06	3.18
28-033	1/4"	0.71	0.68	0.13	4.88
28-034	3/8"	0.81	0.81	0.16	6.06
28-035	1/2"	1.00	1.00	0.27	11.49
28-036	3/4"	1.16	1.25	0.53	18.46

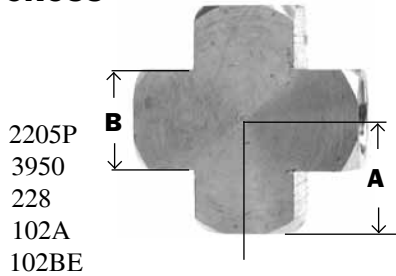
Some product stocked in Houston and Atlanta.

**REDUCING FORGED TEES**



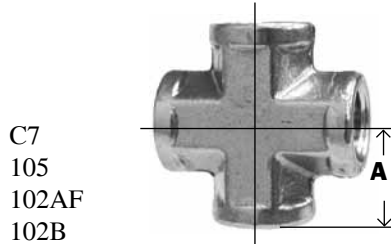
Part #	1 NPT	2 NPT	3 NPT	A & B	Body Width	Approx. Wt. Lbs.	List Price
28-029	1/8"	1/8"	1/4"	0.72	0.69	0.16	8.20
28-030	1/4"	1/4"	1/8"	0.72	0.69	0.14	6.99
28-031	1/4"	1/4"	3/8"	0.81	0.81	0.21	13.45
28-037	3/8"	3/8"	1/8"	0.81	0.81	0.19	13.09
28-038	3/8"	1/4"	3/8"	0.81	0.81	0.18	11.89
28-039	3/8"	3/8"	1/4"	0.81	0.81	0.18	12.54
28-046	1/2"	1/2"	3/8"	1.00	1.00	0.30	10.57
28-047	3/4"	1/2"	3/4"	1.16	1.25	0.56	31.11
28-048	3/4"	3/4"	1/2"	1.16	1.25	0.59	33.06

**CROSS**



Part #	Thread size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-041	1/8"	0.50	0.50	0.10	7.06
28-042	1/4"	0.78	0.68	0.21	7.59
28-043	3/8"	0.84	0.81	0.25	9.19
28-044	1/2"	1.09	1.00	0.51	18.10
28-045	3/4"	1.16	1.25	0.75	26.72

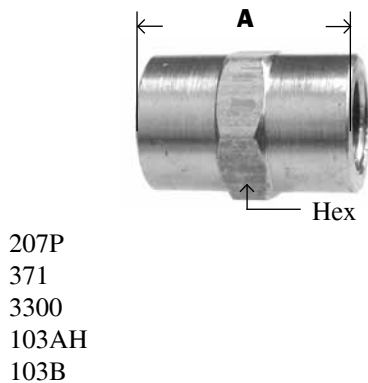
**FORGED CROSS**



Part #	Thread size NPTF	A	Body Width	Approx. Wt. Lbs.	List Price
28-049	1/8"	0.56	0.50	0.06	6.10
28-050	1/4"	0.72	0.69	0.15	8.06
28-051	3/8"	0.81	0.81	0.18	11.54
28-052	1/2"	1.00	1.00	0.34	17.50

**COUPLING**

**SAE# 130238**



Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-058L	1/8"	0.75	0.50	0.02	0.88
28-058	1/8"	0.75	0.56	0.03	1.88
28-059L	1/4"	0.88	0.63	0.03	1.32
28-059	1/4"	1.12	0.75	0.09	3.03
28-060L	3/8"	1.00	0.81	0.06	2.22
28-060	3/8"	1.12	0.87	0.10	3.97
28-061L	1/2"	1.19	0.93	0.09	4.00
28-061	1/2"	1.50	1.06	0.19	6.30
28-062L	3/4"	1.19	1.25	0.18	5.71
28-062	3/4"	1.53	1.25	0.24	15.87

• 1/16" available (28-057) - POR

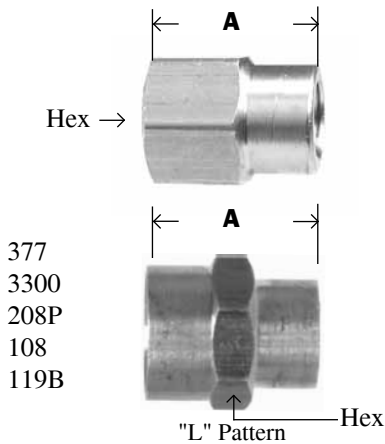
\* For larger sizes, see bronze couplings on pg. 197

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

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**REDUCING COUPLING**

**SAE# 130138**

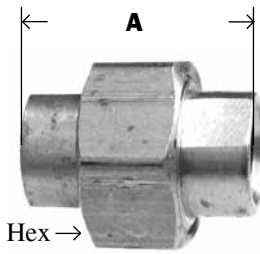


- 377
- 3300
- 208P
- 108
- 119B

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-181L	1/4" x 1/8"	0.83	0.62	0.04	1.77
28-181	1/4" x 1/8"	0.97	0.75	0.08	2.71
28-182	3/8" x 1/8"	0.94	0.87	0.10	4.89
28-183L	3/8" x 1/4"	1.00	0.81	0.06	2.76
28-183	3/8" x 1/4"	1.16	0.87	0.12	4.03
28-180*	1/2" x 1/8"	1.19	0.93	0.15	11.95
28-184L	1/2" x 1/4"	1.11	1.00	0.10	5.38
28-184	1/2" x 1/4"	1.28	1.06	0.20	6.98
28-185L	1/2" x 3/8"	1.19	0.93	0.10	4.99
28-185	1/2" x 3/8"	1.38	1.06	0.20	8.75
28-188*	3/4" x 3/8"	1.32	1.37	0.20	18.58
28-189*	3/4" x 1/2"	1.19	1.18	0.14	9.90

\*Not to SAE specs

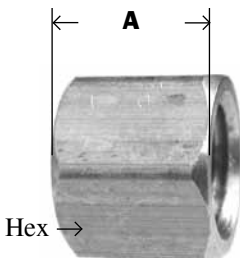
**UNION**



- 3250
- 212P
- 104A
- 104B

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-067	1/8"	1.19	0.94	0.13	21.89
28-068	1/4"	1.31	1.06	0.18	20.82
28-069	3/8"	1.75	1.25	0.33	44.46
28-070	1/2"	1.79	1.56	0.50	30.35

**CAP**

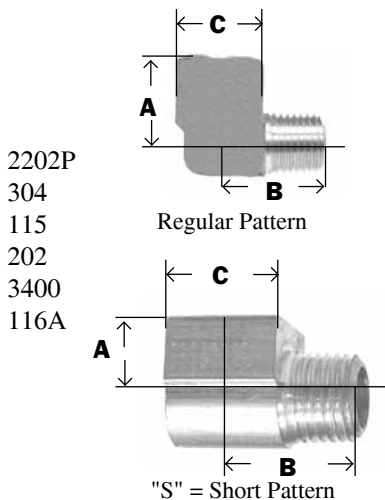


- 3129
- 213P
- 23129
- 108A
- 108B

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-075	1/8"	0.47	0.56	0.03	0.88
28-076	1/4"	0.60	0.68	0.04	1.84
28-077	3/8"	0.69	0.81	0.06	2.50
28-078	1/2"	0.78	0.93	0.08	4.00
28-079	3/4"	0.94	1.25	0.16	8.42

**90° STREET ELBOW**

**SAE# 130239**

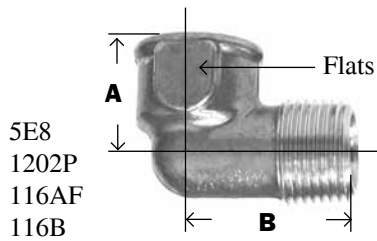


- 2202P
- 304
- 115
- 202
- 3400
- 116A

Part #	Thread size NPTF	A	B	C	Approx. Wt. Lbs.	List Price
28-156	1/8"	0.48	0.66	0.56	0.05	2.20
28-156S	1/8" short	0.34	0.57	0.50	0.03	1.46
28-157	1/4"	0.72	0.91	0.68	0.09	3.58
28-157S	1/4" short	0.45	0.78	0.68	0.07	2.57
28-158	3/8"	0.78	0.97	0.81	0.16	5.06
28-159	1/2"	1.03	1.25	1.00	0.33	9.17
28-160	3/4"	1.12	1.38	1.25	0.52	17.20

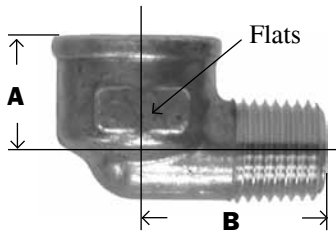
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**FORGED 90° STREET ELBOW**



Part #	Thread size NPTF	A	B	Wrench Flats	Approx. Wt. Lbs.	List Price
28-165	1/8"	0.61	0.85	0.62	0.06	3.50
28-166	1/4"	0.50	0.86	0.72	0.08	3.01
28-167	3/8"	0.70	1.00	0.88	0.10	5.09
28-168	1/2"	0.96	1.43	1.00	0.20	7.63
28-169	3/4"	0.90	1.40	1.25	0.25	12.11

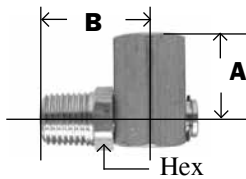
**FORGED REDUCING 90° STREET ELBOW**



Part #	Thread size NPTF FxM	A	B	Wrench flats	Approx. Wt. Lbs.	List Price
28-260	1/8" x 1/4"	0.50	0.87	0.71	0.08	4.90
28-261B*	1/4" x 1/8"	0.53	0.72	0.69	0.07	3.44
28-261	1/4" x 1/8"	0.50	0.81	0.72	0.06	4.69
28-262	1/4" x 3/8"	0.93	1.06	0.59	0.12	6.16
28-263	3/8" x 1/4"	0.58	0.94	0.81	0.07	7.72
28-264	3/8" x 1/2"	0.97	1.36	1.00	0.28	12.32
28-265	1/2" x 3/8"	0.96	1.37	1.00	0.22	13.59

\*Barstock

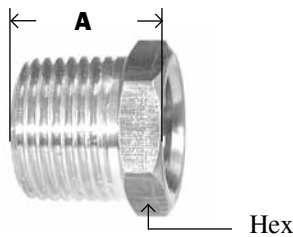
**PIPE SWIVEL 90° STEET ELBOW**



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

**HEX BUSHING**

**SAE# 130140**



Part #	Thread size NPTF MxF	A	Hex	Approx. Wt. Lbs.	List Price
28-102L	1/4" x 1/8"	0.62	0.56	0.02	0.70
28-102	1/4" x 1/8"	0.75	0.56	0.04	1.12
28-103	3/8" x 1/8"	0.75	0.68	0.05	1.83
28-104L	3/8" x 1/4"	0.69	0.68	0.03	1.25
28-104	3/8" x 1/4"	0.75	0.75	0.05	1.98
28-105L	1/2" x 1/8"	0.81	0.81	0.08	4.20
28-105	1/2" x 1/8"	1.00	0.87	0.10	3.71
28-106L	1/2" x 1/4"	0.81	0.81	0.08	2.42
28-106	1/2" x 1/4"	1.00	0.87	0.11	3.44
28-107L	1/2" x 3/8"	0.81	0.81	0.05	1.75
28-107	1/2" x 3/8"	1.00	0.87	0.10	2.60
28-108	3/4" x 1/8"	0.94	1.06	0.20	8.58
28-109L	3/4" x 1/4"	0.94	1.06	0.18	4.33
28-110L	3/4" x 3/8"	0.94	1.06	0.15	5.10
28-111L	3/4" x 1/2"	0.94	1.06	0.11	3.71
28-111	3/4" x 1/2"	1.00	1.12	0.14	4.98
28-112	1" x 1/4"	1.15	1.37	0.32	8.87
28-113	1" x 3/8"	1.12	1.37	0.30	9.64
28-114	1" x 1/2"	1.31	1.44	0.29	9.48
28-115	1" x 3/4"	1.31	1.37	0.20	7.44

373  
3220  
209P  
110A  
110B

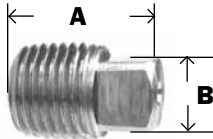
**FACE BUSHING**



Part #	Thread size NPTF MxF	A	Approx. Wt. Lbs.	List Price
28-121	1/4" x 1/8"	0.45	0.01	1.64
28-122	3/8" x 1/8"	0.50	0.03	2.58
28-116	3/8" x 1/4"	0.50	0.02	2.02
28-090	1/2" x 1/8"	0.56	0.06	4.36
28-128	1/2" x 1/4"	0.56	0.05	3.75
28-117	1/2" x 3/8"	0.56	0.03	2.26
28-129	3/4" x 1/4"	0.62	0.11	6.56
28-130	3/4" x 3/8"	0.62	0.08	5.65
28-118	3/4" x 1/2"	0.64	0.03	5.07

**SQUARE HEAD PLUG**

Solid

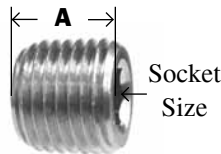


3151  
211P  
109A  
109B

Part #	Thread size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-084	1/8"	0.58	0.27	0.02	0.73
28-085	1/4"	0.80	0.37	0.03	1.15
28-086	3/8"	0.80	0.43	0.06	1.86
28-087	1/2"	1.07	0.55	0.13	3.13
28-088	3/4"	1.11	0.61	0.20	4.66
28-089	1"	1.24	0.81	0.35	10.53

**COUNTERSUNK HEX PLUG**

3/4" taper thread



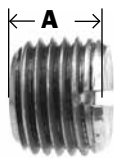
3153  
219P  
109CS  
118

SAE J531

Part #	Thread size NPTF	A	Socket size	Approx. Wt. Lbs.	List Price
28-092	1/16"	0.30	0.12	0.01	1.05
28-093	1/8"	0.30	0.18	0.01	0.84
28-094	1/4"	0.45	0.26	0.02	0.95
28-095	3/8"	0.45	0.31	0.03	1.23
28-096	1/2"	0.61	0.39	0.05	2.39
28-097	3/4"	0.62	0.56	0.10	4.20

• 7/8 Taper (flush) & countersunk square available upon request

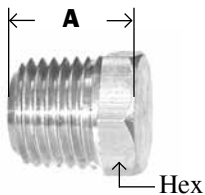
**SLOTTED-HEAD PLUG**



220P  
3150  
117A  
117B

Part #	Thread size NPTF	A	Approx. Wt. Lbs.	List Price
28-174	1/8"	0.31	0.01	0.99
28-175	1/4"	0.42	0.02	1.22
28-176	3/8"	0.45	0.05	1.99

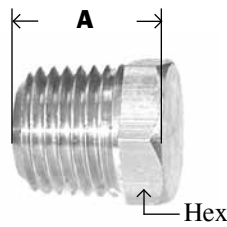
**CORED HEX PLUGS**



218P  
3152  
121A  
103  
121B  
PPH  
218P

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-201	1/8"	0.55	0.43	0.01	0.65
28-202	1/4"	0.62	0.56	0.02	1.07
28-203	3/8"	0.72	0.68	0.06	1.52
28-204	1/2"	0.81	0.87	0.09	2.85
28-205	3/4"	0.94	1.06	0.16	4.08
28-206	1"	1.16	1.37	0.28	13.67

**SOLID HEX HEAD PLUGS**



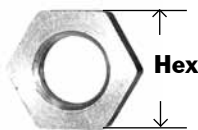
121AS

Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-201S	1/8"	0.55	0.43	0.02	1.52
28-202S	1/4"	0.75	0.56	0.05	1.68
28-203S	3/8"	0.66	0.68	0.07	3.13
28-204S	1/2"	0.81	0.87	0.12	3.31
28-205S	3/4"	0.92	1.06	0.24	6.26
28-206S	1"	1.00	1.31	0.38	19.01

**LOCKNUT**

- Jam Nuts
- Straight pipe thread

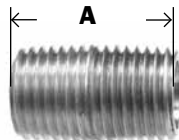
210P  
21102  
111A  
111B



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

**CLOSE NIPPLE**

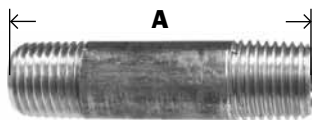
165  
215PN  
3326  
112A  
112B



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

**LONG NIPPLE**

113B  
113A  
166  
3327  
3331  
215PNL



Part #	Thread size NPTF	A Length	Approx. Wt. Lbs.	List Price
28-140	1/8"	1.50	0.03	1.42
28-141	1/8"	2.00	0.04	1.53
28-142	1/8"	2.50	0.06	2.69
28-143	1/8"	3.00	0.06	2.70
28-144	1/4"	1.50	0.03	1.97
28-145	1/4"	2.00	0.05	2.09
28-146	1/4"	2.50	0.08	3.28
28-147	1/4"	3.00	0.10	5.00
28-148	3/8"	1.50	0.06	2.32
28-149	3/8"	2.00	0.10	3.51
28-150	3/8"	2.50	0.10	4.54
28-151	3/8"	3.00	0.13	4.69
28-152	1/2"	1.50	0.08	2.71
28-153	1/2"	2.00	0.12	4.19
28-154	1/2"	2.50	0.16	5.42
28-155	1/2"	3.00	0.20	7.03

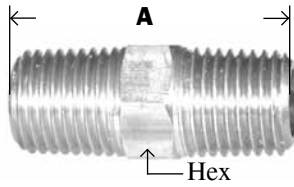
• NOTE: For longer lengths and larger diameters, see our red brass nipples section, pg. 188-192

Some product stocked in Houston and Atlanta.



**HEX NIPPLE**

**SAE# 130137**

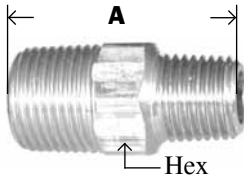


- 216P
- 3325
- 379
- 122AH
- 122B

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

**REDUCING HEX NIPPLE**

**SAE# 130137**



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

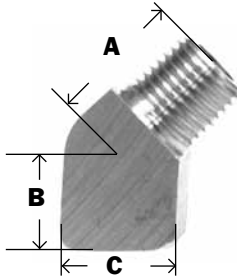
Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-220L	1/4" x 1/8"	1.00	0.56	0.04	1.31
28-220	1/4" x 1/8"	1.19	0.56	0.04	1.69
28-221L	3/8" x 1/8"	1.11	0.68	0.06	2.83
28-221	3/8" x 1/8"	1.22	0.68	0.07	2.99
28-222L	3/8" x 1/4"	1.19	0.68	0.06	1.80
28-222	3/8" x 1/4"	1.41	0.68	0.07	2.50
28-223L	1/2" x 1/4"	1.34	0.87	0.09	3.22
28-223	1/2" x 1/4"	1.62	0.87	0.12	3.50
28-224L	1/2" x 3/8"	1.41	0.87	0.11	3.78
28-224	1/2" x 3/8"	1.62	0.87	0.12	4.15
28-225	3/4" x 1/2"	1.50	1.06	0.15	5.83

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

**45° STREET ELBOW**

**SAE# 130339**

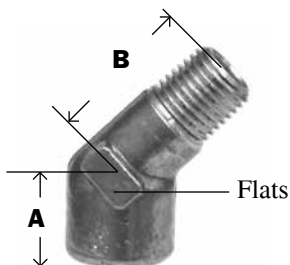
- 306
- 3350
- 2214P
- 224



Part #	Thread size NPTF	B	A	C	Approx. Wt. Lbs.	List Price
28-230	1/8"	0.38	0.50	0.56	0.03	2.58
28-231	1/4"	0.56	0.72	0.68	0.09	3.43
28-232	3/8"	0.56	0.78	0.81	0.12	5.95
28-233	1/2"	0.75	1.00	1.00	0.20	9.09
28-234	3/4"	0.75	1.06	1.25	0.34	28.05

**45° FORGED STREET ELBOW**

- 45E8
- 124B



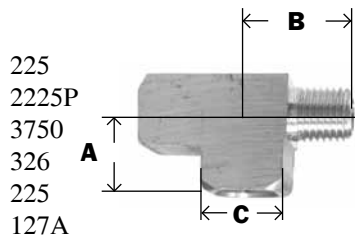
Part #	Thread size NPTF	A	B	Wrench flats	Approx. Wt. Lbs.	List Price
28-238	1/8"	0.63	0.81	0.56	0.05	4.89
28-239	1/4"	0.63	1.06	0.81	0.11	6.52
28-240	3/8"	0.72	1.06	0.93	0.17	8.85

Some product stocked in Houston and Atlanta.



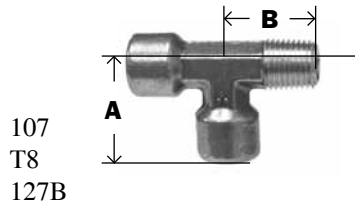
**STREET TEE/ SERVICE TEE/ MALE RUN TEE**

SAE# 130424



Part #	Thread size NPTF	A	B	C	Approx. Wt. Lbs.	List Price
28-245	1/8"	0.55	0.66	0.56	0.08	3.23
28-246	1/4"	0.78	0.91	0.68	0.17	6.12
28-247	3/8"	0.84	0.97	0.81	0.22	6.59
28-248	1/2"	1.09	1.25	1.00	0.40	12.46
28-249	3/4"	1.16	1.39	1.25	0.60	20.03

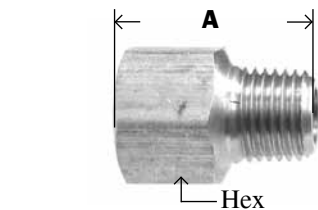
**FORGED STREET TEE**



Part #	Thread size NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
28-253	1/8"	0.56	0.75	0.50	0.05	4.96
28-254	1/4"	1.03	1.00	0.46	0.13	5.25
28-255	3/8"	1.19	1.09	0.68	0.24	9.00
28-256	1/2"	1.52	1.40	0.88	0.45	20.49
28-257	3/4"	1.34	1.73	1.25	0.65	49.20

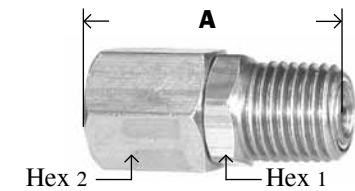
**EXTENDER ADAPTER**

SAE# 130139



Part #	Thread size NPTF FxM	A	Hex	Approx. Wt. Lbs.	List Price
28-190L	1/8" x 1/8"	0.83	0.50	0.03	1.63
28-190	1/8" x 1/8"	0.88	0.56	0.04	1.27
28-191L	1/4" x 1/8"	0.94	0.62	0.04	1.31
28-191	1/4" x 1/8"	1.06	0.75	0.07	3.07
28-192L	1/4" x 1/4"	1.00	0.62	0.04	1.45
28-192	1/4" x 1/4"	1.25	0.75	0.07	2.99
28-198	3/8" x 1/8"	1.00	0.81	0.06	4.96
28-193L	3/8" x 1/4"	1.12	0.81	0.08	2.44
28-193	3/8" x 1/4"	1.25	0.87	0.09	3.96
28-194L	3/8" x 3/8"	1.24	0.81	0.10	2.98
28-194	3/8" x 3/8"	1.25	0.87	0.11	3.62
28-199	1/2" x 1/4"	1.46	1.06	0.08	4.86
28-195L	1/2" x 3/8"	1.19	0.93	0.09	4.53
28-195	1/2" x 3/8"	1.47	1.06	0.18	6.99
28-196	1/2" x 1/2"	1.66	1.06	0.12	6.49
28-207	3/4" x 3/8"	1.59	1.25	0.26	25.28
28-208	3/4" x 1/2"	1.69	1.37	0.14	13.45
28-209	3/4" x 3/4"	1.69	1.37	0.34	18.33

**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	12.29
28-426	3/8"	1.36	0.68	0.75	0.08	43.85

**SWIVEL FITTING**

- 360° Turning
- Swivels



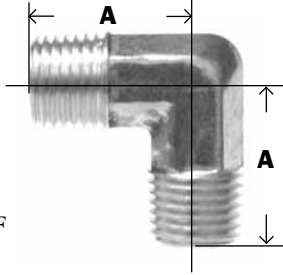
**Male NPT x Female NPT**

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

Some product stocked in Houston and Atlanta.

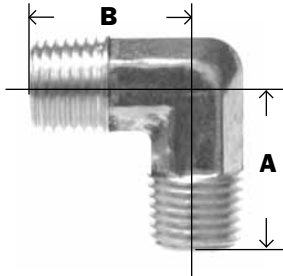
**FORGED 90° MALE ELBOW**

LE5  
3455  
116AMF



Part #	Thread size NPTF	A	Body Width	Approx. Wt. Lbs.	List Price
28-266	1/8"	0.79	0.38	0.04	2.99
28-267	1/4"	0.87	0.45	0.06	3.24
28-268	3/8"	1.00	0.59	0.12	6.22
28-269	1/2"	1.38	0.78	0.21	8.65

**FORGED 90° MALE REDUCING ELBOW**

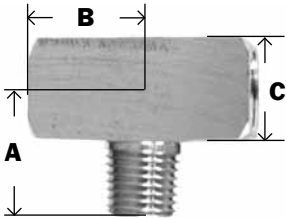


Part #	Thread size NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
28-274	1/4" x 1/8"	0.88	0.78	0.47	0.06	4.65
28-275	3/8" x 1/4"	0.90	0.90	0.46	0.06	4.78
28-276	1/2" x 3/8"	1.12	1.00	0.59	0.12	8.16

**MALE BRANCH TEE**

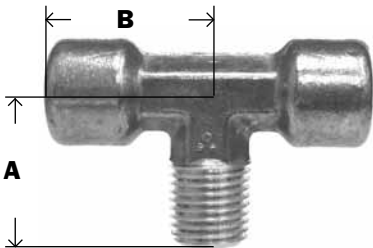
SAE# 130425

T9  
X106  
23601  
3600  
2224P  
226  
329  
128



Part #	Thread size NPTF	A	B	C	Approx. Wt. Lbs.	List Price
28-281	1/8"	0.66	0.55	0.56	0.08	3.33
28-282	1/4"	0.91	0.78	0.68	0.15	5.68
28-283	3/8"	0.97	0.84	0.81	0.22	8.00
28-284	1/2"	1.25	1.09	1.00	0.40	17.21
28-285	3/4"	1.38	1.16	1.25	0.62	23.47

**FORGED MALE BRANCH TEE**



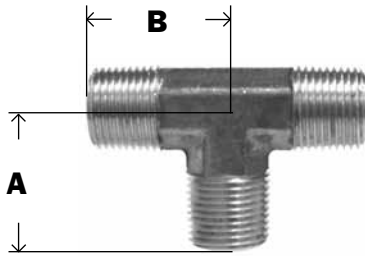
Part #	Thread size NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
28-281F	1/8"	0.75	0.56	0.50	0.06	4.29
28-282F	1/4"	1.00	1.03	0.46	0.12	7.01

T9

\*AMAZINGLY SIMPLE HOME REMEDIES\*

Avoid Cutting Yourself When Slicing Vegetables By Getting Someone Else To Hold The Vegetables While You Chop.

**FORGED ALL MALE TEE**

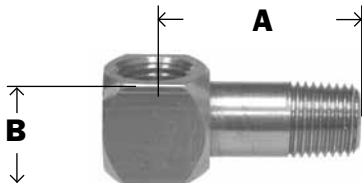


Part #	Thread size NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
28-290	1/8"	0.75	0.75	0.43	0.06	4.92
28-291	1/4"	0.86	0.86	0.43	0.08	4.89
28-292	3/8"	1.09	1.09	0.60	0.16	9.45
28-293	1/2"	1.22	1.22	0.68	0.22	9.76
28-294	3/4"	1.43	1.43	0.87	0.38	29.70

T12  
M101

**LONG STREET ELLS**

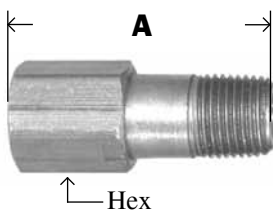
D.O.T. Approved



Part #	Thread size NPTF	A	B	Approx. Wt. Lbs.	List Price
28-440	1/8"	1-3/16"	0.50	0.06	8.24
28-441	1/8"	1-7/16"	0.50	0.06	3.97
28-442	1/8"	1-11/16"	0.50	0.06	8.51
28-443	1/8"	1-7/8"	0.50	0.16	11.30
28-328	1/4"	1-3/16"	0.75	0.12	17.29
28-329	1/4"	1-7/16"	0.75	0.14	14.08
28-330	1/4"	1-11/16"	0.75	0.15	14.05
28-331	1/4"	1-7/8"	0.62	0.09	13.30
28-332	1/4"	2-1/4"	0.75	0.17	19.15
28-333	3/8"	1-3/4"	0.87	0.22	21.93

**LONG EXTENSION ADAPTERS**

D.O.T. Approved



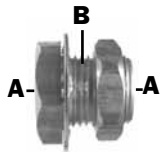
Part #	Thread size NPTF	A	Hex	Approx. Wt. Lbs.	List Price
28-335	1/8"	1-1/4"	0.50	0.04	9.28
28-336	1/8"	1-3/4"	0.50	0.05	12.33
28-337	1/8"	3"	0.50	0.09	22.22
28-338	1/4"	1-9/16"	0.62	0.07	6.60
28-339	1/4"	1-13/16"	0.62	0.08	8.66
28-340	1/4"	2-1/16"	0.62	0.10	8.04

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

Lead Free fittings available on  
pgs. 382-388

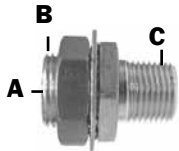
Some product stocked in Houston and Atlanta.

**BULKHEAD / ANCHOR / FRAME COUPLINGS**

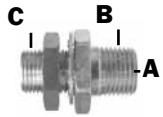


Part #	Terminal Bolts/ Frame			Length (in.)	List Price
	A	B	C		
28-300	1/8-27 NPTF	5/8-18 UNS	----	1-1/2	7.36
28-301	1/4-18 NPTF	3/4-16 UNS	----	15/16	6.85
28-302	1/4-18 NPTF	3/4-16 UNS	----	1-1/2	7.92
28-315*	1/4-18 NPTF	3/4-16 UNS	----	1-1/2	8.50
28-303	3/8-18 NPTF	1-14 UNS	----	1-5/16	10.40
28-304	1/2-14 NPTF	1-1/8-14 UNS	----	1-1/2	11.82

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

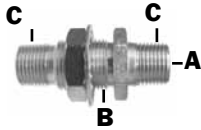


28-317	1/4-18 NPTF	1-14 UNS	1/2-14 NPTF	2-1/8	26.46
28-318	3/8-18 NPTF	1-14 UNS	1/2-14 NPTF	1-11/16	14.96
28-319	3/8-18 NPTF	1-14 UNS	1/2-14 NPTF	1-29/32	15.39

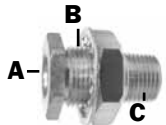


28-325	1/4-18 NPTF	3/4 - 16 UNS	1/2-14 NPTF	1-11/16	22.45
28-345*	1/4-18 NPTF	3/4 - 16 UNS	1/2-14 NPTF	2-5/32	18.97

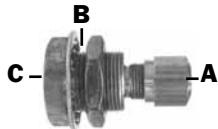
\* Steel



28-313	1/4-18 NPTF	1-14 UNS	1/2-14 NPTF	2-7/8	29.14
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28-346	3/8-18 NPTF	1-14 UNS	1/2-14 NPTF	1-7/8	18.57
28-347	1/2-14 NPTF	1-14 UNS	1/2-14 NPTF	2-3/8	26.86



28-321	1/2-O.D. Tube	7/8-20 UNCF	3/8-18 NPTF	1-5/16	13.34
28-322	3/8-O.D. Tube	7/8-20 UNCF	3/8-18 NPTF	1-3/8	12.15



28-348	3/8-18 NPTF	7/8-20 UNCF	3/8-18 NPTF	2-5/16	21.66
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**CROSSOVER NUMBERS**

28-300: 207x2 207ACBH-2 ACBH207-2 129A-A 392A-1&1/2 50004 55207

28-301: 114-44 1345 207x4 392C-94 ACBHS 207-4 382-44S 129AS-B 55611

28-302: 392C-1&1/2 114B-44 1344 207x4 382-44L 50005 ACBH 207-4 207ACBH-4 129A-B 035081 55661

28-303: 129A-C 392E-1&5/16 114-66 1346 035087 207x6 ACBH 207-6 382-66

207ACBH-6 50006 55607

28-304: 114-88 207x8 129A-D 1351 ACBH 207-8 207ACBH-8 50007 392F-1&1/2 55807

28-317: 117-84 55615

28-318: 381-86S 55620

28-319: 115-86 035079 1496-DC 381-86L 50001 55646

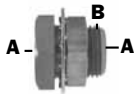
28-312: 115-88 1342 035021 005730 1342 380-84M 50010 55600

28-346: 50013 55613

28-347: 035029 50012 55629

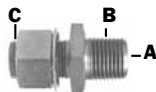
**BULKHEAD / ANCHOR / FRAME COUPLINGS**

Part #	Terminal Bolts/ Frame			Length (in.)	List Price
	A	B	C		



**STEEL BULKHEAD FITTINGS**

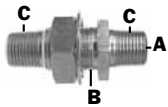
28-306	1/4-18 NPTF	3/4 - 16 UNS		0.94	10.67
28-307	1/4-18 NPTF	3/4 - 16 UNS		1.50	11.54



28-309	1/4-18 NPTF	3/4 - UNS	1/2-14 NPTF	2.16	17.71
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Crossover #: 005498 381-84S 50003 1340 390FC5 55689

28-310	1/4-18 NPTF	3/4 - UNS	1/2-14 NPTF	2.53	31.81
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28-312	1/4-18 NPTF	1-14 UNS	1/2-14 NPTF	2.94	27.93
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**MARINE BULKHEAD FITTINGS**

46-540	5/16 Hose ID	----	----	2.37	12.97
46-541	3/8 Hose ID	----	----	2.37	12.64



**BULKHEAD JAM NUTS**

Part #	Size	Material	QTY	Weight	List Price
28-301J	3/4-16UNEF	Brass	10	0.05 ea.	0.77
28-321J	7/8-20UNEF	Brass	10	0.04 ea.	2.93
28-317J	1-14UNS	Brass	10	0.07 ea.	3.91
28-304J	1-1/8-14UNS	Brass	10	0.07 ea.	4.99

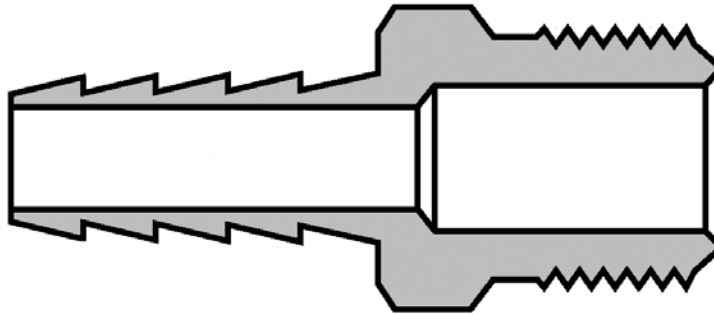


**BULKHEAD LOCK WASHERS**

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

Lead Free fittings available on  
pgs. 382-388

# Hose Barb Fittings



• For AB1953 Compliant Fittings  
see pages 388-394

• 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.

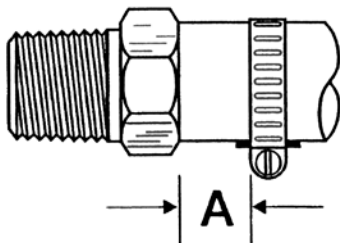
• Material  
CA360 Brass for Barstock fittings.  
CA377 Brass for Forged fittings.

**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.

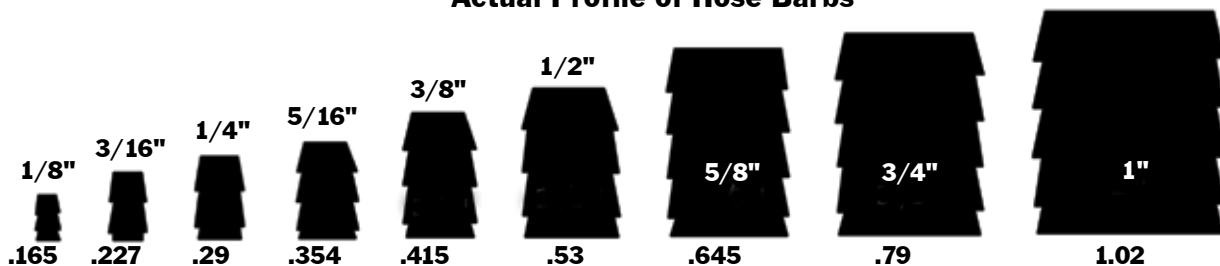
See page 290 for hose ferrules  
See page 275-289 for hose clamps  
See page 260-261 for plastic hose barb fittings  
See page 26 for stainless steel hose barbs  
See page 267-268 for Barb Fittings for plastic pipe



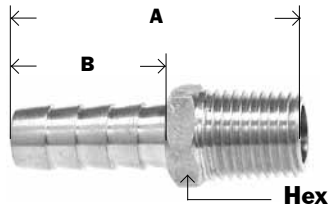
Hose Size	A
3/16"	1/4"
1/4"	1/4"
5/16"	1/4"
3/8"	1/8"
1/2"	1/8"
5/8"	1/8"
3/4"	1/8"

Stainless Steel hose barbs for beverage service available -  
See beverage fitting section, pg. 313-314

### 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	12.21
32-001	1/8" x 1/8"	1.19	0.69	0.43	0.02	0.99
32-027	1/8" x 1/4"	1.16	0.46	0.56	0.02	1.36
32-002	3/16" x 1/8"	1.19	0.75	0.43	0.02	0.94
32-003	3/16" x 1/4"	1.37	0.69	0.56	0.04	1.62
32-301	1/4" x 1/16"	1.44	0.88	0.43	0.02	5.08
32-004	1/4" x 1/8"	1.47	0.97	0.43	0.02	1.19
32-005	1/4" x 1/4"	1.72	0.97	0.56	0.04	1.30
32-006	1/4" x 3/8"	1.72	0.97	0.68	0.05	1.98
32-007	1/4" x 1/2"	1.72	0.81	0.87	0.10	3.30
32-008	5/16" x 1/8"	1.47	0.97	0.43	0.02	1.12
32-009	5/16" x 1/4"	1.72	0.97	0.56	0.04	1.55
32-010	5/16" x 3/8"	1.76	0.97	0.68	0.06	2.07
32-390	5/16" x 1/2"	1.88	0.95	0.87	0.10	3.90
32-011	3/8" x 1/8"	1.53	0.97	0.56	0.03	1.45
32-012	3/8" x 1/4"	1.75	0.97	0.56	0.05	1.32
32-013	3/8" x 3/8"	1.72	0.96	0.68	0.06	1.88
32-014	3/8" x 1/2"	1.97	0.97	0.87	0.09	3.40
32-026	3/8" x 3/4"	1.97	0.97	1.06	0.16	4.55
32-333	7/16" x 1/4"	1.76	0.97	0.56	0.04	4.47
32-302	1/2" x 1/8"	1.57	0.95	0.56	0.06	3.76
32-015	1/2" x 1/4"	1.72	0.97	0.56	0.04	1.83
32-016	1/2" x 3/8"	1.76	0.97	0.68	0.07	2.19
32-017	1/2" x 1/2"	1.87	0.96	0.87	0.11	2.99
32-018	1/2" x 3/4"	1.94	0.97	1.06	0.16	4.54
32-303	1/2" x 1"	2.31	0.99	1.37	0.33	13.05
32-304	5/8" x 1/4"	1.67	0.92	0.68	0.06	4.60
32-019	5/8" x 3/8"	1.76	0.97	0.68	0.08	2.59
32-020	5/8" x 1/2"	1.87	0.96	0.87	0.11	3.22
32-021	5/8" x 3/4"	1.87	0.96	1.06	0.14	4.47
32-305	5/8" x 1"	2.31	0.96	1.37	0.36	17.26
32-306	3/4" x 3/8"	1.65	0.87	0.81	0.12	5.65
32-022	3/4" x 1/2"	1.87	0.96	0.87	0.14	4.10
32-023	3/4" x 3/4"	1.87	0.96	1.06	0.15	5.27
32-316	3/4" x 1"	2.55	1.15	1.37	0.38	12.44
32-307	1" x 1/2"	1.80	0.87	1.06	0.24	7.52
32-024	1" x 3/4"	2.19	1.19	1.06	0.32	6.71
32-025	1" x 1"	2.48	1.19	1.37	0.39	10.18
32-029	1-1/4" x 3/4"	2.37	1.19	1.37	0.35	22.17
32-028	1-1/4" x 1"	2.55	1.19	1.37	0.46	14.99

\* See Bronze insert fittings on pages 267-268 for larger sizes.

For Stainless Barb Fittings see pg. 26 or beverage section, pg. 313-314

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

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

Some product stocked in Houston and Atlanta.



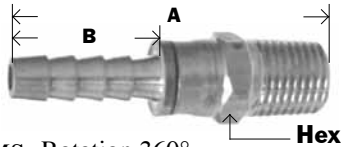


**BRASS RIGID MALE BSPT BARB ADAPTER**



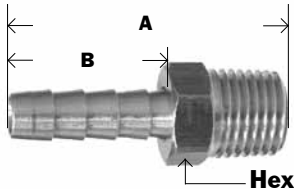
Part #	Hose I.D. x MALE BSPT	List Price
32-450	1/4" x 1/8"	1.40
32-451	1/4" x 1/4"	2.04
32-452	3/8" x 1/4"	2.23
32-453	3/8" x 3/8"	2.48
32-454	3/8" x 1/2"	4.12
32-455	1/2" x 3/8"	2.79
32-456	1/2" x 1/2"	4.57
32-457	3/4" x 3/4"	7.11
32-458	1" x 1"	14.66

**SWIVEL MALE ADAPTER**



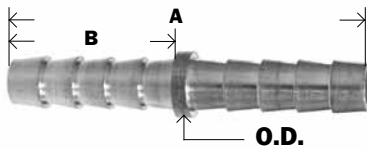
SMS Rotation 360°  
103

Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
32-201	3/8" x 1/4"	2.12	0.97	0.56	0.07	4.06
32-355	1/2" x 3/8"	2.12	0.97	0.68	0.10	6.25
32-356	1/2" x 1/2"	2.33	0.97	0.87	0.14	6.99
32-357	3/4" x 3/4"	2.33	0.97	1.06	0.20	10.58



Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
32-200	1/4" x 1/4"	2.12	0.97	0.56	0.04	3.96
32-202	3/8" x 3/8"	2.12	0.97	0.68	0.08	4.84

**MENDER/ SPLICER**



MSB  
122HBL  
HM  
129  
178  
73  
108

Part #	Hose I.D. x Hose I.D.	A	B	O.D.	Approx. Wt. Lbs.	List Price
32-091	1/8"	0.98	0.45	0.31	0.01	1.30
32-092	3/16"	1.62	0.77	0.36	0.02	1.73
32-093	1/4"	2.00	0.96	0.37	0.02	1.44
32-079	1/4" x 1/8"	1.55	0.97	0.56	0.02	3.31
32-094	5/16"	2.00	0.96	0.39	0.02	1.37
32-090	5/16" x 1/4"					2.41
32-095	3/8"	2.00	0.94	0.51	0.04	1.46
32-080	3/8" x 1/4"	2.06	0.97	0.56	0.03	3.98
32-096	1/2"	2.00	0.96	0.62	0.06	2.11
32-087	1/2" x 3/8"	2.06	0.97	0.71	0.06	5.40
32-097	5/8"	2.05	0.96	0.75	0.08	2.85
32-088	5/8" x 3/8"	2.06	0.97	0.75	0.06	5.70
32-098	3/4"	2.50	1.15	0.87	0.10	4.84
32-089	3/4" x 1/2"	2.28	1.19	0.87	0.10	7.81
32-099	1"	3.00	1.44		0.23	11.55

See Bronze insert fittings on page 266 for larger sizes.

See Hose Clamps on page 275-289 .

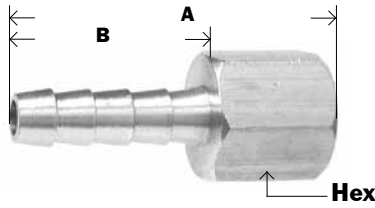
For Stainless Barb Fittings see pg. 26 or beverage section, pg. 313

Some product stocked in Houston and Atlanta.

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    144  
 126

Part #	Hose I.D. x Female NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
32-050	1/8" x 1/8"	0.96	0.46	0.50	0.02	1.54
32-317	1/8" x 1/4"	1.15	0.46	0.62	0.04	4.64
32-051	3/16" x 1/8"	1.10	0.68	0.50	0.02	1.39
32-062	3/16" x 1/4"	1.44	0.75	0.62	0.04	5.17
32-052	1/4" x 1/8"	1.35	0.93	0.50	0.02	1.69
32-053	1/4" x 1/4"	1.60	0.97	0.62	0.06	1.79
32-054	1/4" x 3/8"	1.65	1.03	0.75	0.04	2.45
32-441	1/4" x 1/2"	1.66	0.97	0.93	0.08	7.40
32-055	5/16" x 1/8"	1.47	0.97	0.56	0.04	3.67
32-056	5/16" x 1/4"	1.66	0.97	0.62	0.04	2.36
32-318	5/16" x 3/8"	1.66	0.97	0.75	0.06	5.23
32-320	5/16" x 1/2"	1.67	0.96	0.93	0.08	4.85
32-057	3/8" x 1/8"	1.47	0.97	0.56	0.04	2.37
32-058	3/8" x 1/4"	1.61	0.97	0.62	0.06	2.10
32-059	3/8" x 3/8"	1.63	1.00	0.81	0.08	2.30
32-063	3/8" x 1/2"	1.72	0.94	0.93	0.12	3.81
32-442	3/8" x 3/4"	1.97	0.97	1.18	0.20	13.02
32-064	1/2" x 1/4"	1.66	0.69	0.62	0.08	2.61
32-060	1/2" x 3/8"	1.66	0.97	0.75	0.08	5.08
32-061	1/2" x 1/2"	1.76	0.96	0.93	0.12	4.18
32-443	1/2" x 3/4"	1.97	0.97	1.18	0.26	13.85
32-444	5/8" x 3/8"	1.66	0.97	0.75	0.08	4.99
32-445	5/8" x 1/2"	1.66	0.97	0.93	0.10	7.50
32-446	5/8" x 3/4"	1.97	0.97	1.18	0.21	13.52
32-447	3/4" x 1/2"	1.88	1.19	0.93	0.13	8.30
32-065	3/4" x 3/4"	2.19	1.21	1.18	0.22	7.14
32-049	1" x 3/4"	2.19	1.19	1.18	0.26	17.20
32-321	1" x 1"	2.32	1.19	1.18	0.35	23.56
32-448	1-1/4" x 1"	2.32	1.19	1.43	0.44	22.80

**SWIVEL FEMALE ADAPTER NPTF**



Part #	Hose I.D. x Female NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
32-470	1/4" x 1/4"	1.80	0.97	0.62	0.06	9.69
32-472	3/8" x 1/4"	1.80	0.97	0.62	0.06	9.98
32-473	3/8" x 3/8"	1.82	0.97	0.75	0.09	10.14
32-475	1/2" x 3/8"	1.82	0.97	0.75	0.09	10.58
32-476	1/2" x 1/2"	1.86	0.97	0.93	0.14	11.49

\*AMAZINGLY SIMPLE HOME REMEDIES\*

Avoid Arguments With The Females About Lifting The Toilet Seat By Using The Sink.

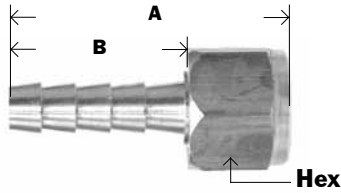
Lead Free fittings available on  
 pgs. 382-388



**SWIVEL FEMALE ADAPTER - With Gasket**

• NPSM Thread

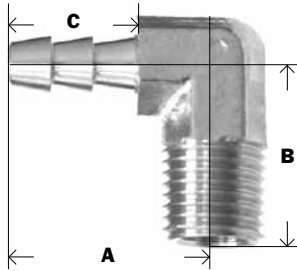
National Pipe Straight Gasket Seal Swivel



- 130
- 126
- 29FSG
- KF-RN
- NPSM Gasket

Part #	Hose I.D. x Female NPSM	A	B	Hex	Approx. Wt. Lbs.	List Price
32-131	1/8" x 1/8"	0.90	0.46	0.50	0.02	4.36
32-132	3/16" x 1/8"	1.19	0.75	0.50	0.03	4.06
32-133	3/16" x 1/4"	1.28	0.75	0.62	0.04	6.41
32-120	1/4" x 1/8"	1.41	0.97	0.50	0.02	7.32
32-121	1/4" x 1/4"	1.50	0.97	0.62	0.02	2.94
32-129	1/4" x 3/8"	1.63	0.97	0.75	0.04	6.73
32-130	5/16" x 1/4"	1.50	0.97	0.62	0.04	8.25
32-122	3/8" x 1/4"	1.54	1.00	0.62	0.06	4.95
32-123	3/8" x 3/8"	1.60	0.97	0.75	0.06	7.10
32-354	3/8" x 1/2"	1.66	0.97	0.93	0.10	9.69
32-124	1/2" x 3/8"	1.60	0.97	0.75	0.08	7.54
32-125	1/2" x 1/2"	1.66	0.97	0.93	0.12	7.18
32-117	1/2" x 3/4"	1.82	1.19	1.18	0.16	11.98
32-118	5/8" x 3/4"	1.82	1.19	1.18	0.18	12.76
32-119	3/4" x 3/4"	1.82	1.19	1.18	0.14	8.29

**FORGED HOSE BARB 90° ELBOW**



Grooved End Barb



Square Body

- 129
- HBE1
- KF-PS90
- HE-1
- 29E
- 139

Part #	Hose I.D. x Male NPTF	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
32-308	3/16" x 1/8"	0.95	0.70	0.66	0.37	0.02	2.69
32-391	3/16" x 1/4"	1.00	0.84	0.63	0.46	0.10	3.59
32-038	1/4" x 1/8"	1.01	0.81	0.71	0.47	0.06	2.40
32-039	1/4" x 1/4"	1.01	0.87	0.63	0.47	0.06	3.31
32-309*	1/4" x 3/8"	1.08	0.97	0.73	0.69	0.12	4.11
32-036	5/16" x 1/8"	1.01	0.81	0.63	0.47	0.04	2.93
32-040	5/16" x 1/4"	1.01	0.87	0.63	0.47	0.06	3.53
32-310	5/16" x 3/8"	1.06	0.94	0.63	0.50	0.06	6.31
32-046	3/8" x 1/8"	1.01	0.81	0.63	0.47	0.06	2.61
32-041	3/8" x 1/4"	1.02	0.88	0.65	0.47	0.06	3.33
32-042	3/8" x 3/8"	1.09	0.93	0.68	0.50	0.08	4.00
32-047	3/8" x 1/2"	1.11	1.09	0.63	0.59	0.10	4.28
32-048	1/2" x 1/4"	1.06	1.00	0.68	0.59	0.10	4.08
32-043	1/2" x 3/8"	1.06	1.09	0.69	0.59	0.10	4.70
32-311	1/2" x 1/2"	1.31	1.19	0.87	0.56	0.22	6.16
32-044**	5/8" x 3/8"	1.12	1.06	0.61	0.56	0.12	6.37
32-045**	5/8" x 1/2"	1.12	1.12	0.66	0.59	0.14	6.09
32-312	5/8" x 3/4"	1.46	1.26	0.93	1.06	0.32	10.90
32-313***	3/4" x 1/2"	1.31	1.28	0.87	0.85	0.22	8.33
32-314	3/4" x 3/4"	1.46	1.26	0.91	1.06	0.32	13.36
32-330***	3/4" x 1"	1.57	1.64	0.90	1.34	0.64	22.86
32-315	1" x 3/4"	1.60	1.40	0.95	1.06	0.32	12.29
32-319	1" x 1"	1.69		0.98		0.43	42.87

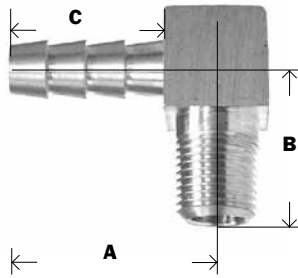
- \* Barstock
- \*\* Grooved End Barbs
- \*\*\* Square Body

See Bronze insert fittings on page 267 for larger sizes.

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

Some product stocked in Houston and Atlanta.

**BARSTOCK HOSE BARB 90° ELBOW**

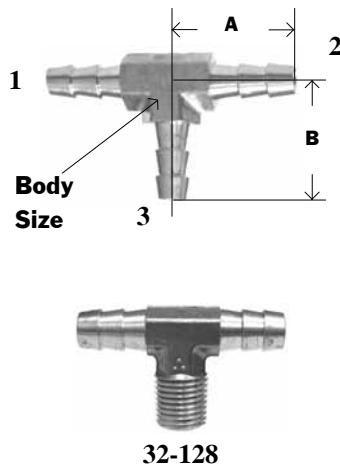


129HB

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	6.92
32-038B	1/4" X 1/8"	1.00	0.75	0.75	0.50	0.02	5.25
32-039B	1/4" X 1/4"	1.02	0.91	0.74	0.56	0.04	6.00
32-041B	3/8" X 1/4"	1.32	0.89	0.97	0.58	0.08	8.33
32-042B	3/8" X 3/8"	1.50	1.06	0.97	0.75	0.14	14.20
32-043B	1/2" X 3/8"	1.53	1.07	0.97	0.72	0.16	11.91

**BRASS**

**HOSE BARB TEES**

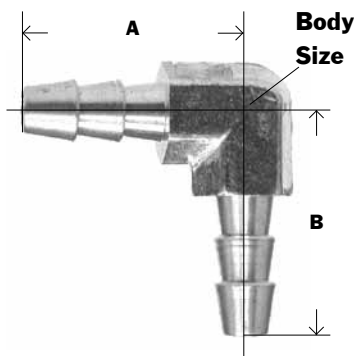


32-128

Part #	Hose Barb Size 1 x 2 x 3	A	B	Body Size	Approx. Wt. Lbs.	List Price
32-367	1/8"	0.84	0.83	0.25	0.02	3.81
32-368	3/16"	1.02	1.02	0.37	0.03	7.38
32-365	1/4"	1.00	1.00	0.44	0.06	3.21
32-350	1/4" x 1/8"	0.94	0.94	0.44	0.04	6.42
32-366	5/16"	1.00	1.00	0.44	0.06	3.99
32-126	3/8"	1.01	1.01	0.43	0.06	4.02
32-400	1/2"	1.02	1.00	0.43	0.08	4.88
32-352	1/2" x 3/8"	1.26	1.26	0.43	0.10	12.15
32-361	5/8"	1.26	1.26	0.75	0.16	18.62
32-363	3/4"	1.26	1.26	0.88	0.18	25.62
32-353	3/4" x 1/2"	1.41	1.41	0.88	0.23	25.36
32-128	3/8" HB x 1/4" MIP	1.00	0.94	0.43	0.06	10.73

\* See Bronze insert fittings on page 267 for larger sizes.

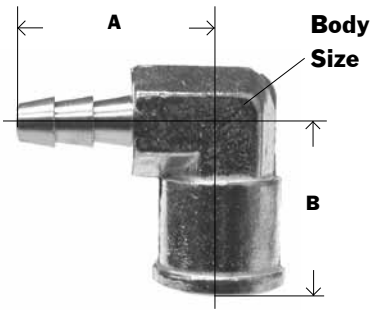
**90° HOSE BARB ELBOW**



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	0.03	6.61
32-433	3/16" x 3/16"	0.90	0.90	0.37	0.03	5.41
32-412	1/4" x 1/8"	1.02	1.02	0.44	0.04	3.00
32-413	1/4" x 1/4"	1.01	1.01	0.44	0.04	3.69
32-425	5/16" x 5/16"	1.15	1.15	0.48	0.05	8.51
32-414	3/8" x 1/8"	1.01	1.01	0.44	0.04	4.51
32-415	3/8" x 1/4"	1.00	1.00	0.44	0.04	4.20
32-416	3/8" x 3/8"	1.02	1.02	0.44	0.04	6.63
32-417	3/8" x 1/2"	1.24	1.10	0.50	0.06	5.12
32-418	1/2" x 1/4"	1.24	1.08	0.50	0.06	5.31
32-419	1/2" x 3/8"	1.22	1.09	0.50	0.06	5.08
32-420	1/2" x 1/2"	1.24	1.24	0.50	0.06	5.56
32-434	5/8" x 5/8"	1.20	1.20	0.75	0.16	16.69
32-435	3/4" x 1/2"	1.41	1.41	0.88	0.21	19.84
32-436	3/4" x 3/4"	1.41	1.41	0.88	0.21	22.00

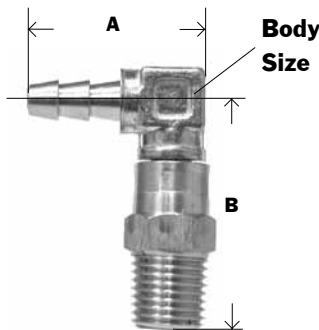
Some product stocked in Houston and Atlanta.

**90° FEMALE HOSE BARB ELBOW**



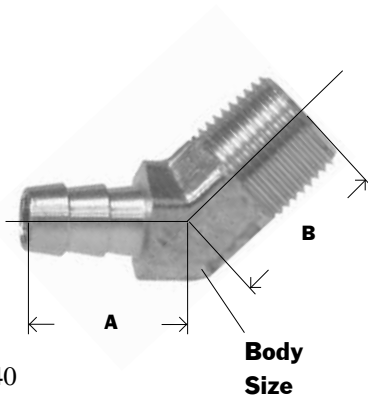
Part #	Hose I.D. x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
32-401	1/4" x 1/8"	1.01	0.82	0.47	0.06	4.88
32-402	1/4" x 1/4"	1.13	0.91	0.56	0.10	5.95
32-403	3/8" x 1/8"	1.01	0.82	0.47	0.06	4.69
32-404	3/8" x 1/4"	1.15	0.91	0.56	0.10	5.89
32-405	3/8" x 3/8"	1.15	1.11	0.68	0.14	7.40
32-406	3/8" x 1/2"	1.26	1.39	0.75	0.20	10.82
32-407	1/2" x 1/4"	1.26	0.91	0.56	0.10	6.89
32-410	1/2" x 3/8"	1.24	1.11	0.68	0.14	9.19
32-411	1/2" x 1/2"	1.37	1.39	0.75	0.20	10.26
32-409	3/4" x 3/4"	1.52		0.81	0.50	15.43

**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	6.69
32-422	1/4" x 1/4"	1.00	1.54	0.56	0.08	6.89
32-423	3/8" x 1/8"	1.00	1.53	0.47	0.08	9.03
32-424	3/8" x 1/4"	1.00	1.54	0.56	0.08	8.67
32-426	3/8" x 3/8"	0.98	1.46	0.68	0.12	9.58
32-427	3/8" x 1/2"	1.01	1.79	0.87	0.18	10.03
32-428	1/2" x 1/4"	1.07	1.61	0.56	0.12	9.42
32-431	1/2" x 3/8"	1.07	1.53	0.68	0.14	10.42
32-432	1/2" x 1/2"	1.07	1.79	0.87	0.16	12.77

**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	6.40
32-109*	1/4" x 1/4"	1.00	0.62	0.57	0.06	13.56
32-111	3/8" x 1/8"	0.83	0.66	0.53	0.04	5.23
32-112	3/8" x 1/4"	0.82	0.84	0.53	0.06	4.69
32-113	3/8" x 3/8"	0.93	0.87	0.59	0.08	6.00
32-346	1/2" x 1/4"	1.00	0.84	0.59	0.08	9.04
32-114	1/2" x 3/8"	1.00	0.88	0.59	0.08	7.87
32-116	1/2" x 1/2"				0.12	13.04
32-115	5/8" x 3/8"	0.97	0.88	0.59	0.10	7.97
32-345	3/4" x 1/2"	1.15	0.94	0.81	0.13	22.19

140  
HE145  
139HB  
KF-PS45  
13945

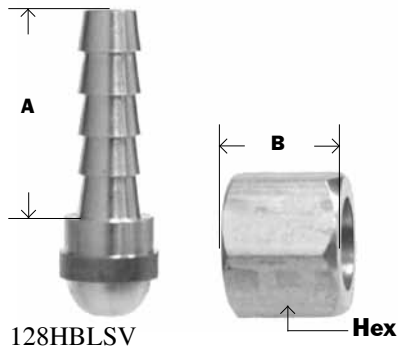
\* Barstock

Some product stocked in Houston and Atlanta.

TO WRITE WITH A BROKEN PENCIL IS POINTLESS.

**BALL END SWIVEL**

NPSM - Ball seat type

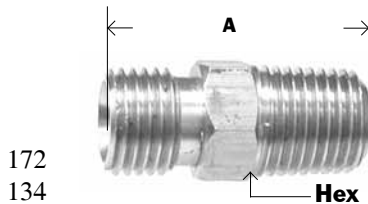


- 128HBLSV
- 29FS
- 209AS
- 124
- 131

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	4.06
32-067	3/16" x 1/8"	0.75	0.44	0.50	0.03	4.17
32-068	3/16" x 1/4"	0.75	0.52	0.62	0.04	4.61
32-069	1/4" x 1/8"	0.97	0.44	0.50	0.04	3.62
32-070	1/4" x 1/4"	0.97	0.53	0.62	0.06	2.55
32-078	1/4" x 3/8"	0.97	0.63	0.75	0.06	5.61
32-071	5/16" x 1/4"	0.97	0.52	0.62	0.05	3.33
32-072	3/8" x 1/4"	0.97	0.53	0.62	0.06	2.49
32-073	3/8" x 3/8"	0.97	0.59	0.75	0.08	2.81
32-074	3/8" x 1/2"	0.97	0.69	0.94	0.14	8.37
32-075	1/2" x 3/8"	0.97	0.59	0.75	0.08	2.97
32-076	1/2" x 1/2"	0.97	0.69	0.94	0.10	3.99
32-077	3/4" x 3/4"	0.97	0.70	1.12	0.14	6.73

**BALLSEAT MALE ADAPTER**

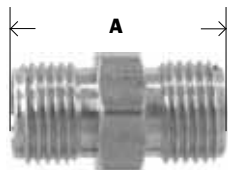
Beveled seat



- 172
- 134
- 127HB
- 122AS

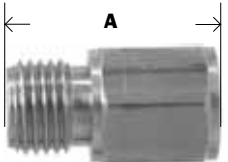
Part #	NPSM x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
32-359	1/8" x 1/8"	0.94	0.43	0.03	3.30
32-034	1/4" x 1/8"	1.06	0.56	0.04	2.73
32-030	1/4" x 1/4"	1.25	0.56	0.06	3.33
32-362	3/8" x 1/4"	1.28	0.68	0.08	3.81
32-031	3/8" x 3/8"	1.30	0.68	0.08	4.09
32-364	1/2" x 3/8"	1.35	0.87	0.10	7.04
32-032	1/2" x 1/2"	1.53	0.87	0.14	6.54
32-033	3/4" x 3/4"	1.53	1.06	0.20	10.44

**BALLSEAT UNION**



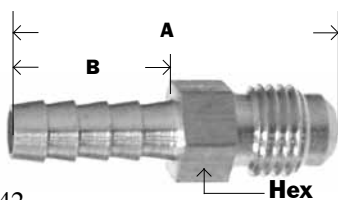
Part #	NPSM x NPSM	A	Hex	Approx. Wt. Lbs.	List Price
32-460	1/8"	0.79	0.43	0.02	3.70
32-461	1/4"	1.09	0.56	0.04	4.04
32-462	3/8"	1.19	0.68	0.07	5.73
32-463	1/2"	1.31	0.87	0.10	7.36

**FEMALE BALLSEAT ADAPTER**



Part #	NPSM x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
32-465	1/4" x 1/4"	1.12	0.62	0.05	4.79
32-466	3/8" x 3/8"	1.15	0.75	0.07	5.86
32-467	1/2" x 1/2"	1.22	0.94	0.10	7.24

**45° FLARE ADAPTER**

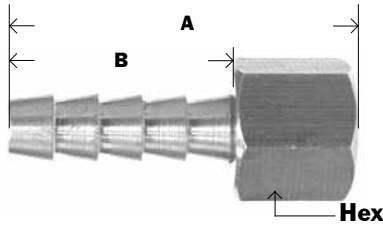


- 142
- 201BF
- KF-MS

Part #	Hose I.D. x 45° Flare	Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
32-322	3/16" x 1/4"	7/16-20	1.5	0.75	0.43	0.03	5.93
32-081	1/4" x 1/4"	7/16-20	1.72	0.97	0.43	0.03	2.95
32-082	1/4" x 3/8"	5/8-18	1.82	0.97	0.62	0.07	3.95
32-083	5/16" x 5/16"	1/2-20	1.75	0.97	0.50	0.08	4.66
32-084	3/8" x 3/8"	5/8-18	1.82	0.97	0.62	0.08	4.44
32-085	3/8" x 1/2"	3/4-16	1.97	0.97	0.75	0.10	6.13
32-086	1/2" x 1/2"	3/4-16	1.97	0.97	0.75	0.10	6.37

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

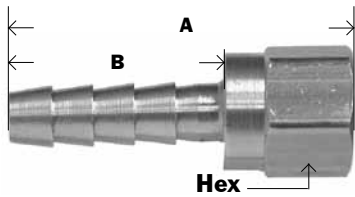
**FEMALE 45° FLARE SWIVEL**



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

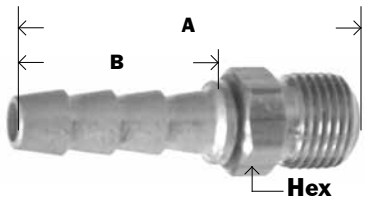
Part #	Hose I.D. x Female 45° Flare	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
32-326	3/16" x 3/16"	3/8-24	1.19	0.75	0.43	0.04	4.06
32-107	3/16" x 1/4"	7/16-20	1.34	0.75	0.56	0.04	3.21
32-101	1/4" x 1/4"	7/16-20	1.57	0.97	0.56	0.04	2.16
32-102	1/4" x 5/16"	1/2-20	1.53	0.97	0.62	0.06	2.82
32-103	1/4" x 3/8"	5/8-18	1.64	0.97	0.75	0.08	2.60
32-104	5/16" x 5/16"	1/2-20	1.58	0.97	0.62	0.05	4.90
32-327	5/16" x 3/8"	5/8-18	1.64	0.97	0.75	0.08	3.62
32-105	3/8" x 3/8"	5/8-18	1.64	0.97	0.75	0.08	3.22
32-106	3/8" x 1/2"	3/4-16	1.81	0.97	0.87	0.10	7.24
32-100	1/2" x 1/2"	3/4-16	1.68	0.97	0.87	0.12	3.99
32-328	3/4" x 3/4"	1-1/16-14	2.00	0.97	1.25	0.20	17.64

**DUAL 45°/ 37° FLARE SWIVEL**



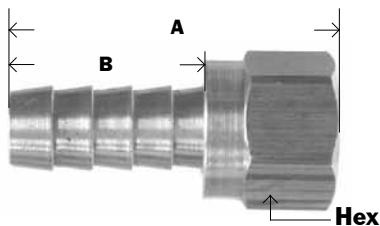
Part #	Hose ID x Dual Seat	Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
32-337	1/4" x 1/4"	7/16-20	1.56	0.97	0.56	0.04	2.73
32-339	5/16" x 5/16"	1/2-20	1.60	0.97	0.62	0.06	3.49
32-340	3/8" x 1/2"	3/4-16	1.68	0.97	0.87	0.10	5.52
32-341	1/2" x 1/2"	3/4-16	1.68	0.97	0.87	0.10	4.69
32-342	1/2" x 5/8"	7/8-14	1.76	0.97	1.00	0.12	7.07

**INVERTED FLARE SWIVEL**



Part #	Hose ID x Inverted Flare	Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
32-369	1/4" x 1/4"	7/16-24	1.56	0.95	0.43	0.04	9.86
32-371	3/8" x 3/8"	5/8-18	1.70	0.96	0.62	0.06	14.62
32-372	1/2" x 1/2"	3/4-18	1.80	0.96	0.75	0.08	10.14
32-373	5/8" x 5/8"	7/8-18	2.05	1.17	0.87	0.15	20.36

**FEMALE 37° J.I.C. FLARE SWIVEL**



Part #	Hose ID x Female 37° Flare	Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
32-334	1/4" x 3/8"	9/16-18	1.60	0.97	0.68	0.06	3.29
32-335	5/16" x 3/8"	9/16-18	1.60	0.97	0.68	0.06	3.75
32-336	3/8" x 3/8"	9/16-18	1.60	0.97	0.68	0.10	3.26
32-338	3/4" x 3/4"	1-1/16-12	2.00	0.97	1.25	0.20	17.74

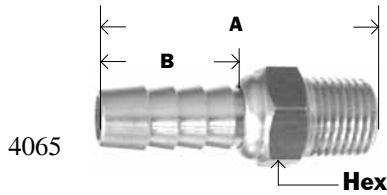
Some product stocked in Houston and Atlanta.

\*AMAZINGLY SIMPLE HOME REMEDIES\*

If You Can't Fix It With A Hammer, You've Got An Electrical Problem.



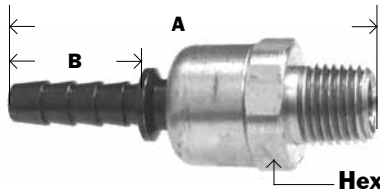
**HIGH PRESURE MALE SWIVEL**



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	17.80

**HOSE ID x MALE BALL SWIVEL**

**300 PSI. Max. Working Pressure**

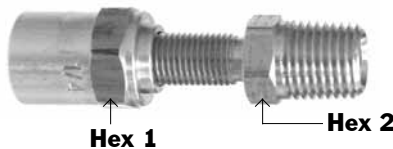


Part #	Hose I.D. x Male ball swivel	A	B	Hex	Approx. Wt. Lbs.	List Price
28-415	1/4" x 1/4"	1.30	0.94	0.81	0.14	35.18
28-417	3/8" x 1/4"	1.30	1.00	0.81	0.14	32.49

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

**Reusable Hose Couplings**

183



Part #	1/4" Male Thread ID x OD	Length	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
32-725	3/8" x 3/4" (23/32)	1.97	0.87	0.56	0.14	8.44
32-726	1/4" x 5/8"	1.86	0.81	0.56	0.13	7.58
32-727	1/4" x 1/2"	1.86	0.69	0.56	0.11	6.87
32-728	1/4" x 9/16"	1.86	0.75	0.56	0.12	11.23
32-741	5/16" x 5/8"	1.97	0.81	0.56	0.13	7.99
32-742	3/8" x 5/8"	1.97	0.81	0.56	0.14	12.37

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

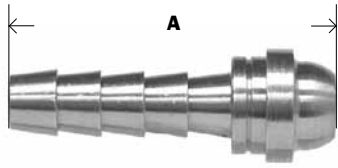
**Seven Habits for a Healthy Life**

(From Wellness on a Shoestring)

1. Rest, reflect and rejuvenate.
2. Breathe deeply.
3. Move your body.
4. Free your space.
5. Go for the greens.
6. Eat from the sea?and enjoy the sun!
7. Drink to your health.

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

**STEM ONLY - WELDING HOSE CONNECTOR**

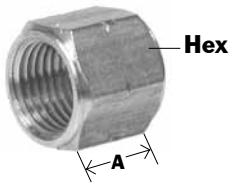


201RWA  
WRS  
WLS

Part #	Hose I.D.	A	Approx. Wt. Lbs.	List Price
30-410	3/16"	1.43	0.02	1.68
30-411	1/4"	1.43	0.02	1.46
30-412	5/16"	1.43	0.03	2.16
30-413	3/8"	1.43	0.04	2.20

Assemble with nuts below.

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

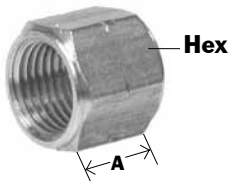


201RWA  
WRS  
KF-PE  
152

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-420	R.H. Nut only	0.63	0.68	0.04	1.90

Assemble with stem above.

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

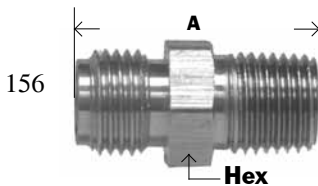


209LWA  
WLS  
154  
KF-RE

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

Assemble with stem above.

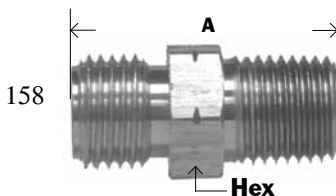
**RIGHT HAND 9/16 - 18 #122RWA - WELDING HOSE CONNECTOR**



156

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-401	1/4"-18	1.30	0.62	0.06	4.75
32-437	3/8"-18	1.30	0.68	0.09	5.23
32-438	9/16"-18	1.25	0.68	0.07	5.03

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



158

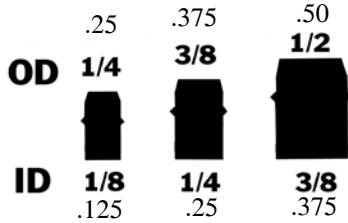
Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-406	1/4"-18	1.30	0.62	0.06	4.75
32-439	3/8"-18	1.30	0.68	0.09	5.35
32-440	9/16"-18	1.25	0.68	0.07	5.03

WHEN FISH ARE IN SCHOOLS THEY SOMETIMES TAKE DEBATE.

# BRASS FITTINGS

## BRASS BARBS FOR POLYETHYLENE TUBING

- Quick connecting fittings that do not require tube preparations for hand assembly. Inexpensive with excellent resistance to vibration.
- All sizes are tube O.D. (I.D.)



### UNION



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)	3.52
21-007	3/8(1/4) x 1/4(1/8)	5.77
21-009	3/8(1/4) x 3/8(1/4)	2.58

### MALE ADAPTER



1068  
968  
688

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

Part #	Size	List Price
21-021	1/4(1/8) x 1/16	4.39
21-023	1/4(1/8) x 1/8	3.10
21-025	1/4(1/8) x 1/4	5.07
21-027	3/8(1/4) x 1/8	4.07

### FEMALE ADAPTER



1066  
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	6.25
21-047	3/8(1/4) x 1/4	5.88

### BULKHEAD UNION



1074

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

Part #	Size	List Price
21-082	1/4(1/8)	13.51
21-083	3/8(1/4)	18.59

## UNION ELBOW



1065  
965

TUBE O.D. (I.D.)

Part #	Size	List Price
21-095	1/4(1/8)	5.02
21-097	3/8(1/4)	7.26
21-099	1/2(3/8)	8.48

## MALE 90° ELBOW



1069  
969  
229

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

Part #	Size	List Price
21-111	1/4(1/8) x 1/16	6.17
21-113	1/4(1/8) x 1/8	3.60
21-115	1/4(1/8) x 1/4	4.71
21-117	3/8(1/4) x 1/8	7.12
21-119	3/8(1/4) x 1/4	4.96
21-121	1/2(3/8) x 3/8	17.30

## FEMALE 90° ELBOW



1070  
970  
230

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

Part #	Size	List Price
21-133	1/4(1/8) x 1/8	6.52

## UNION TEE



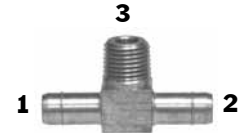
1064  
964  
224

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

Part #	Size	List Price
21-151	1/4(1/8)	6.37
21-153	3/8(1/4) X 3/8(1/4) X 1/4(1/8)	6.92
21-155	3/8(1/4)	1.70
21-159	1/2(3/8) X 1/2(3/8) X 3/8(1/4)	43.29
21-161	1/2(3/8)	10.32

# HOSE BARB

## MALE BRANCH TEE

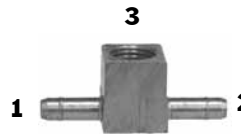


1072  
972  
232

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	5.60
21-195	3/8(1/4) x 3/8(1/4) x 1/8	9.02
21-197	3/8(1/4) x 3/8(1/4) x 1/4	10.18

## FEMALE BRANCH TEE



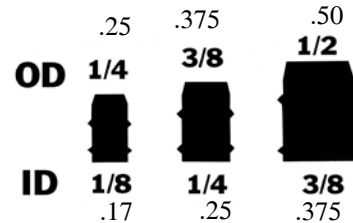
1077  
978

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	9.78

## TWO BARB FITTINGS

More Sizes Available - Please Ask!



### MALE ADAPTER PIPE



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

Part #	Size	List Price
32-150	1/4(1/8) x 1/8	4.08
32-151	1/4(1/8) x 1/4	6.69
32-153	3/8(1/4) x 1/4	8.08

### UNION TEE



Part #	Tube O.D. (I.D.)	List Price
32-159	1/4(1/8 ID)	6.53
32-160	3/8(1/4 ID)	11.39

### 90° ELBOW



Part #	Tube O.D. (I.D.)	List Price
32-170	1/4(1/8 ID)	7.20
32-171	3/8(1/4 ID)	10.19

# HOSE BARB

# STAINLESS STEEL

BRASS

## STAINLESS STEEL HOSE BARBS



• Cast

### 304 STAINLESS STEEL HOSE NIPPLES

Part #	Hose I.D. x Male Pipe	List Price
73-951	1/4"	6.38
73-952	3/8"	9.94
73-953	1/2"	11.09
73-954	3/4"	12.52
73-955	1"	15.99
73-956	1-1/4"	27.73
73-957	1-1/2"	28.94
73-958	2"	44.31
73-959	2-1/2"	96.24
73-960	3"	119.24

### 304 STAINLESS STEEL REDUCING HOSE NIPPLES

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

### 316 STAINLESS STEEL HOSE NIPPLES

Part #	Hose I.D. x Male Pipe	List Price
973-951	1/4"	7.14
973-952	3/8"	9.16
973-953	1/2"	16.35
973-954	3/4"	17.18
973-955	1"	20.58
973-956	1-1/4"	27.96
973-957	1-1/2"	48.61
973-958	2"	51.79
973-959	2-1/2"	133.67
973-990	3"	164.69
973-991	4"	204.55

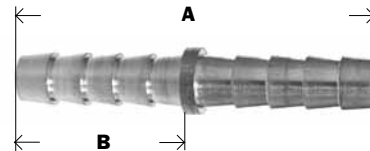
Dimension data can change without notice. Please call us when dimensions are critical.

• NOTE: See Stainless Steel Hose Barbs for beverage on pg. 313-314



### 316 STAINLESS STEEL MACHINED RIGID MALE ADAPTER

Part #	Hose I.D. x NPT	List Price
32-001SS	1/8" x 1/8"	6.86
32-002SS	3/16" x 1/8"	7.39
32-003SS	3/16" x 1/4"	9.83
32-004SS	1/4" x 1/8"	8.91
32-005SS	1/4" x 1/4"	9.90
32-006SS	1/4" x 3/8"	15.15
32-008SS	5/16" x 1/8"	8.81
32-009SS	5/16" x 1/4"	10.89
32-010SS	5/16" x 3/8"	15.15
32-011SS	3/8" x 1/8"	8.92
32-012SS	3/8" x 1/4"	10.36
32-013SS	3/8" x 3/8"	14.06
32-014SS	3/8" x 1/2"	19.34
32-015SS	1/2" x 1/4"	12.21
32-016SS	1/2" x 3/8"	15.15
32-017SS	1/2" x 1/2"	18.47
32-018SS	1/2" x 3/4"	25.08
32-019SS	5/8" x 3/8"	13.68
32-020SS	5/8" x 1/2"	19.07
32-021SS	5/8" x 3/4"	26.27
32-022SS	3/4" x 1/2"	19.56
32-023SS	3/4" x 3/4"	27.90
32-024SS	1" x 3/4"	28.12



### 316 STAINLESS STEEL SPLICER

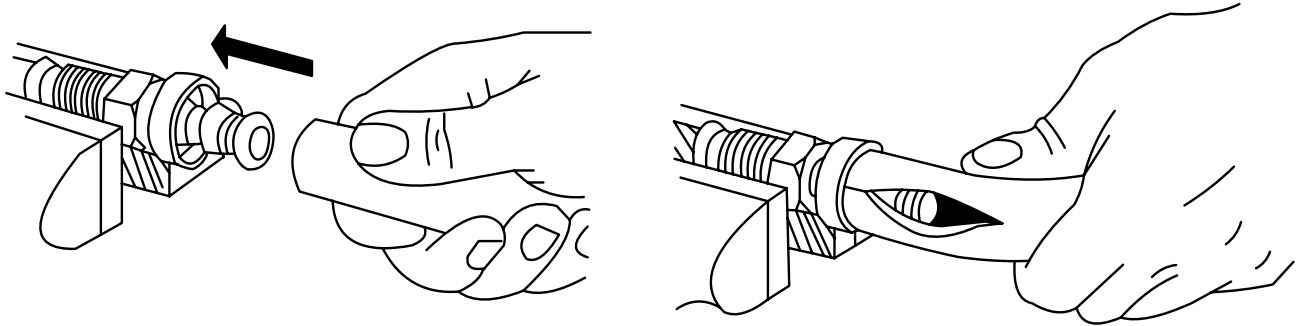
Part #	Hose I.D. x Hose I.D.	A	B	List Price
32-093SS	1/4"	2.03	0.97	4.20
32-095SS	3/8"	2.06	0.97	6.30
32-096SS	1/2"	2.06	0.97	9.57
32-098SS	3/4"	2.50	1.19	14.14



### STAINLESS STEEL BARB ELBOW

Part #	Size	List Price
32-038SS	1/4 x 1/8	14.92
32-039SS	1/4 x 1/4	14.92
32-041SS	3/8 x 1/4	14.92
32-042SS	3/8 x 3/8	14.92
32-311SS	1/2 x 1/2	17.89

# Push On Barb Fittings



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

**Material:** CA360 Brass

**Advantages:** Easy assembly. No clamps needed!!

• **Assembly Instructions**

- 1- Lubricate insert.
- 2- Hold hose at angle as shown & push on and up over first barb.
- 3- Continue to push straight on until hose 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.

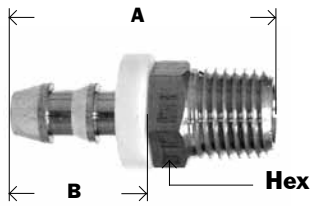
\*TROOPER WISECRACKS\*

"You know, stop lights don't come any redder than the one you just went through."

## Actual Profile of Push On Barbs



**MALE ADAPTER**

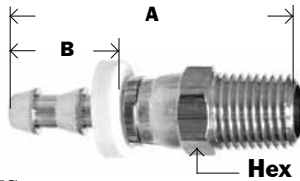


- 301
- P990A
- HLM
- 100B-1
- KA-MB
- 272
- 29PO
- 725
- 625
- BPN
- 941
- 30182

Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
30-200	1/4" x 1/8"	1.43	0.87	0.50	0.04	1.36
30-201	1/4" x 1/4"	1.66	0.87	0.56	0.06	1.93
30-211	1/4" x 3/8"	1.66	0.87	0.68	0.06	2.80
30-212	5/16" x 1/8"	1.42	0.77	0.43	0.04	4.31
30-213	5/16" x 1/4"	1.66	0.87	0.56	0.06	2.98
30-202	3/8" x 1/8"	1.53	0.97	0.50	0.04	2.00
30-203	3/8" x 1/4"	1.69	0.89	0.56	0.07	2.20
30-204	3/8" x 3/8"	1.76	0.97	0.68	0.08	2.67
30-205	3/8" x 1/2"	1.97	0.97	0.87	0.10	4.80
30-392	3/8" x 3/4"	1.97	0.92	1.06	0.16	12.15
30-216	1/2" x 1/4"	1.76	0.97	0.68	0.08	2.83
30-206	1/2" x 3/8"	1.76	0.97	0.68	0.09	2.79
30-207	1/2" x 1/2"	1.97	0.97	0.87	0.14	4.63
30-217	1/2" x 3/4"	1.97	0.97	1.06	0.16	6.25
30-219	5/8" x 3/8"	2.34	1.50	0.75	0.12	9.73
30-209	5/8" x 1/2"	2.45	1.45	0.87	0.16	6.39
30-214	5/8" x 3/4"	2.45	1.45	1.06	0.18	7.60
30-215	3/4" x 1/2"	2.45	1.45	0.87	0.21	6.90
30-210	3/4" x 3/4"	2.45	1.45	1.06	0.20	6.94
30-238	1" x 3/4"	2.93	1.50	1.25	0.43	24.92
30-239	1" x 1"	3.11	1.50	1.37	0.49	29.94

For STAINLESS PUSH ON FITTINGS see pg. 33

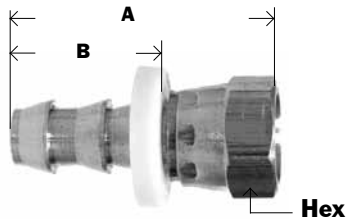
**MALE SWIVEL**



- HMS
- 285

Part #	Hose I.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
30-385	1/4" x 1/4"	2.02	0.87	0.56	0.06	5.28
30-386	3/8" x 1/4"	2.12	0.97	0.56	0.08	6.08
30-387	3/8" x 3/8"	2.12	0.97	0.68	0.08	6.81
30-388	1/2" x 3/8"	2.12	0.97	0.68	0.10	6.70
30-389	1/2" x 1/2"	2.33	0.97	0.87	0.14	7.45
30-390	3/4" x 3/4"	2.80	1.45	1.06	0.24	11.13

**FEMALE GASKET SEAL SWIVEL - NPSM**



- 280

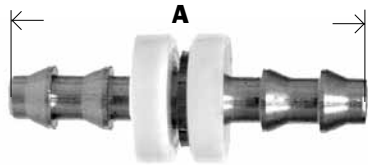
Part #	Hose I.D. x Gasket Swivel (NPSM)	A	B	Hex	Approx. Wt. Lbs.	List Price
30-359	1/4" x 1/8"	1.39	0.77	0.50	0.03	9.51
30-358	1/4" x 1/4"	1.47	0.82	0.68	0.06	6.17
30-360	3/8" x 1/4"	1.61	1.00	0.68	0.06	6.97
30-361	3/8" x 3/8"	1.77	0.97	0.81	0.08	8.24
30-362	3/8" x 1/2"	1.80	0.92	0.93	0.09	13.69
30-363	1/2" x 1/2"	1.88	1.02	0.93	0.11	11.68
30-365	5/8" x 3/4"	2.40	1.55	1.18	0.28	19.42
30-366	3/4" x 3/4"	2.36	1.55	1.18	0.32	23.70

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

Some product stocked in Houston and Atlanta.



**HOSE SPLICER**

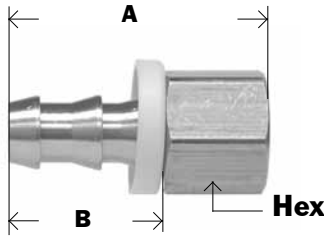


BPM  
696 100B-Y  
29SPO KA-RM  
296 MHL  
729 296

Part #	Hose I.D.	A	Approx. Wt. Lbs.	List Price
30-300	1/4"	1.87	0.04	1.69
30-305	5/16"	1.80	0.04	2.80
30-301	3/8"	2.00	0.06	2.10
30-302	1/2"	2.01	0.08	3.20
30-303	5/8"	3.03	0.14	7.34
30-304	3/4"	3.03	0.14	7.69
30-306	1"	3.21	0.28	18.87

For STAINLESS see pg. 33

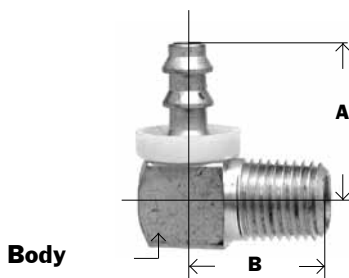
**RIGID FEMALE ADAPTER**



29FPO 274  
HLF 726  
626 940

Part #	Hose I.D. x Female NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
30-220	1/4" x 1/8"	1.35	0.87	0.50	0.02	2.44
30-221	1/4" x 1/4"	1.51	0.87	0.62	0.06	2.03
30-384	1/4" x 3/8"	1.51	0.77	0.75	0.06	5.92
30-391	5/16" x 1/8"	1.32	0.77	0.50	0.03	3.99
30-222	5/16" x 1/4"	1.51	0.87	0.62	0.06	3.51
30-393	3/8" x 1/8"	1.47	0.92	0.56	0.06	4.38
30-224	3/8" x 1/4"	1.61	0.97	0.62	0.06	2.42
30-225	3/8" x 3/8"	1.63	0.97	0.75	0.06	3.28
30-394	3/8" x 1/2"	1.66	0.92	0.93	0.12	7.05
30-397	3/8" x 3/4"	1.97	0.97	1.18	0.20	13.93
30-223	1/2" x 1/4"	1.76	1.02	0.68	0.08	9.93
30-226	1/2" x 3/8"	1.63	0.97	0.75	0.08	3.92
30-227	1/2" x 1/2"	1.77	0.97	0.93	0.14	6.72
30-396	1/2" x 3/4"	2.07	1.02	1.18	0.20	16.06
30-398	5/8" x 3/8"	2.24	1.55	0.75	0.10	7.40
30-229	5/8" x 1/2"	2.24	1.48	0.93	0.11	7.49
30-399	3/4" x 1/2"	2.24	1.50	0.93	0.14	9.78
30-395	3/4" x 3/4"	2.55	1.50	1.18	0.24	15.17
30-400	1" x 3/4"	2.55	1.55	1.18	0.25	20.62
30-402	1" x 1"	2.68	1.55	1.43	0.37	27.85

**MALE ELBOW**

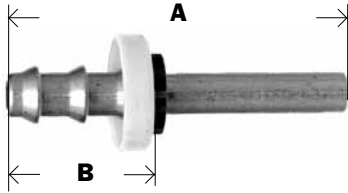


100-C  
29EPO  
273

Part #	Hose I.D. x Male NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
30-372	1/4" x 1/8"	0.98	0.75	0.50	0.04	7.70
30-373	1/4" x 1/4"	1.04	0.95	0.56	0.06	7.50
30-374	5/16" x 1/8"	1.02	0.94	0.50	0.06	15.16
30-375	5/16" x 1/4"	1.09	0.94	0.56	0.08	17.95
30-370	3/8" x 1/8"	1.11	0.75	0.50	0.10	8.68
30-371	3/8" x 1/4"	1.13	0.90	0.56	0.10	5.02
30-376	3/8" x 3/8"	1.21	0.92	0.70	0.12	5.40
30-377	3/8" x 1/2"	1.30	1.19	0.87	0.22	20.13
30-382	1/2" x 3/8"	1.54			0.13	12.12
30-378	1/2" x 1/2"	1.50	1.19	0.87	0.22	12.00
30-379	5/8" x 1/2"	1.98	1.19	0.87	0.26	27.22
30-380	5/8" x 3/4"	2.07	1.28	1.06	0.32	28.72
30-383	3/4" x 1/2"	2.15			0.25	32.10
30-381	3/4" x 3/4"	2.07	1.28	1.06	0.34	15.55

Some product stocked in Houston and Atlanta.

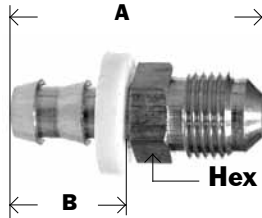
**RIGID TUBE ADAPTER**



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	4.27
30-291	1/4" x 1/4"	1.88	0.77	0.04	1.95
30-292	1/4" x 5/16"	1.88	0.77	0.04	4.95
30-293	5/16" x 5/16"	1.91	0.79	0.04	4.37
30-294	3/8" x 3/8"	2.03	0.92	0.06	3.38
30-297	1/2" x 1/2"	2.13	1.02	0.06	6.30
30-298	5/8" x 5/8"	2.61	1.50	0.10	8.55
30-299	3/4" x 3/4"	2.61	1.50	0.25	13.46

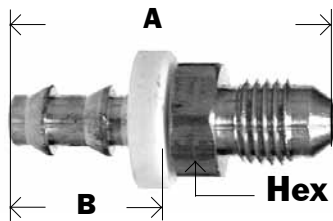
**MALE SAE FLARE ADAPTER**



100B-3 682  
KA-MS 302  
727 282

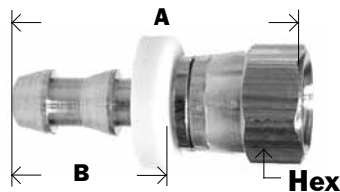
Part #	Hose I.D. x 45° Male Flare	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
30-240	1/4" x 1/4"	7/16-20	1.45	0.84	0.43	0.04	6.06
30-241	1/4" x 5/16"	1/2-20	1.59	0.84	0.50	0.04	4.19
30-249	5/16" x 5/16"	1/2-20	1.60	0.80	0.50	0.06	3.23
30-271	3/8" x 5/16"	1/2-20	1.64	0.86	0.50	0.08	3.96
30-243	3/8" x 3/8"	5/8-18	1.83	0.92	0.62	0.08	6.29
30-245	1/2" x 1/2"	3/4-16	2.04	1.05	0.75	0.10	10.57
30-246	5/8" x 5/8"	7/8-14	2.73	1.50	0.87	0.19	11.15
30-247	3/4" x 3/4"	1-1/16-14	2.98	1.50	1.06	0.32	18.00

**MALE JIC FLARE ADAPTER**



Part #	Hose I.D. x Male JIC	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
32-900	1/4" x 1/4"	7/16-20	1.57	0.84	0.50	0.04	4.69
32-901	1/4" x 5/16"	1/2-20	1.60	0.83	0.56	0.04	5.31
32-906	1/4" x 3/8"	9/16-18	1.63	0.77	0.62	0.05	7.03
32-902	3/8" x 3/8"	9/16-18	1.78	0.97	0.62	0.06	7.70
32-903	1/2" x 1/2"	3/4-16	1.97	0.97	0.75	0.10	10.27
32-907	5/8" x 5/8"	7/8-14	2.62	1.50	0.93	0.19	10.03
32-905	3/4" x 3/4"	1-1/16-12	2.79	1.50	1.12	0.29	18.07

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



29FDS  
287  
HDF  
309  
735  
690  
P990-K  
305

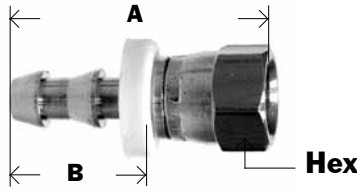
Part #	Hose I.D. x Dual Seat	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
30-230	1/4" x 1/4"	7/16-20	1.53	0.87	0.56	0.06	2.32
30-231	1/4" x 5/16"	1/2-20	1.57	0.87	0.62	0.04	3.38
30-232	5/16" x 5/16"	1/2-20	1.56	0.87	0.62	0.04	3.18
30-233	3/8" x 1/2"	3/4-16	1.79	0.97	0.87	0.10	4.99
30-234	1/2" x 1/2"	3/4-16	1.77	0.97	0.87	0.10	4.57
30-235	1/2" x 5/8"	7/8-14	1.84	0.97	1.00	0.12	7.55
30-236	5/8" x 1/2"	3/4-16	2.27	1.45	0.87	0.18	8.62
30-237	5/8" x 5/8"	7/8-14	2.33	1.45	1.00	0.14	6.97

For STAINLESS see pg. 33 or Beverage Fittings, pg. 313-314

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

Some product stocked in Houston and Atlanta.

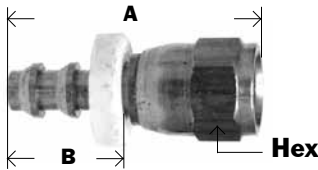
**45° SAE FLARE FEMALE SWIVEL**



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

Part #	Hose I.D. x 45° Female Flare	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
30-295	3/16" x 3/8"	5/8-18					4.26
30-250	1/4" x 1/4"	7/16-20	1.54	0.87	0.56	0.04	2.45
30-251	1/4" x 5/16"	1/2-20	1.57	0.87	0.62	0.04	3.79
30-253	1/4" x 3/8"	5/8-20	1.63	0.87	0.75	0.06	4.74
30-254	5/16" x 5/16"	1/2-20	1.58	0.87	0.68	0.06	10.20
30-260	5/16" x 3/8"	5/8-18	1.63	0.87	0.75	0.08	5.20
30-252	3/8" x 3/8"	5/8-18	1.73	0.97	0.75	0.10	3.72
30-257	3/8" x 1/2"	3/4-16	1.85	0.87	0.87	0.10	14.10
30-261	1/2" x 3/8"	5/8-18	1.92	1.05	0.75	0.10	12.82
30-255	1/2" x 1/2"	3/4-16	1.77	0.97	0.87	0.12	5.65
30-258	5/8" x 5/8"	7/8-14	2.35	1.45	1.00	0.14	10.31
30-259	3/4" x 3/4"	1-1/16-14	2.42	1.45	1.25	0.22	10.01

**FEMALE 37° JIC FLARE SWIVEL**



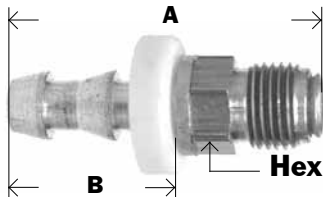
944 288  
 29J1CPO 100B-6  
 HJF 308  
 688 P990-F  
 738

Part #	Hose I.D. x Female JIC	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
30-265	1/4" x 1/4"	7/16-20	1.54	0.87	0.56	0.04	2.20
30-264	1/4" x 3/8"	9/16-18	1.60	0.87	0.68	0.06	3.61
30-270	5/16" x 3/8"	9/16-18	1.60	0.82	0.68	0.06	3.56
30-266	3/8" x 3/8"	9/16-18	1.70	0.97	0.68	0.08	3.47
30-267	1/2" x 1/2"	3/4-16	1.78	0.97	0.87	0.10	5.36
30-268	5/8" x 5/8"	7/8-14	2.33	1.45	1.00	0.14	7.32
30-269	3/4" x 3/4"	1-1/16-12	2.40	1.45	1.25	0.22	9.61

For STAINLESS see pg. 33

• More sizes available

**INVERTED FLARE MALE SWIVEL**



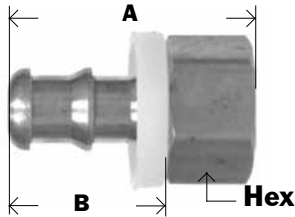
290  
 100B-B  
 KA-MF  
 1MS

Part #	Hose I.D. x Male INV Flare	UNF Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
30-275	1/4" x 3/16"	3/8-24	1.52	0.87	0.37	0.04	6.86
30-276	1/4" x 1/4"	7/16-24	1.56	0.87	0.43	0.04	4.11
30-277	1/4" x 5/16"	1/2-20	1.62	0.87	0.50	0.04	4.08
30-278	5/16" x 1/4"	7/16-24	1.56	0.87	0.43	0.06	6.31
30-280	5/16" x 5/16"	1/2-20	1.62	0.87	0.50	0.06	5.84
30-283	5/16" x 3/8"	5/8-18	1.63	0.87	0.62	0.06	8.83
30-284	3/8" x 5/16"	1/2-20	1.72	0.97	0.50	0.06	5.45
30-279	3/8" x 3/8"	5/8-18	1.76	0.97	0.62	0.06	4.71
30-281	1/2" x 3/8"	5/8-18	1.86	1.06	0.62	0.08	15.81
30-282	1/2" x 1/2"	3/4-18	1.84	0.97	0.75	0.10	9.01
30-286	5/8" x 5/8"	7/8-18	2.50	1.57	0.87	0.14	15.26

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

Some product stocked in Houston and Atlanta.

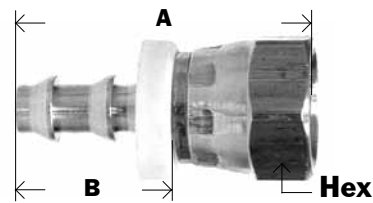
**INVERTED FLARE FEMALE ADAPTER**



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

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	5.08
30-311	1/4" x 1/4"	1.14	0.84	0.56	0.02	5.14
30-312	1/4" x 5/16"	1.18	0.84	0.62	0.02	7.88
30-316	5/16" x 5/16"	1.25	0.81	0.62	0.04	9.92
30-313	3/8" x 5/16"	1.32	0.87	0.62	0.04	7.54
30-314	3/8" x 3/8"	1.35	0.95	0.75	0.06	6.78
30-315	1/2" x 1/2"	1.73	1.04	0.87	0.12	18.75

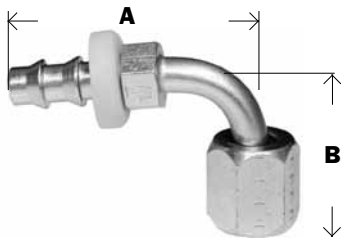
**FEMALE BALLSEAT SWIVEL**



628 731  
 278 NPSM  
 29SPO

Part #	Hose I.D. x Female NPSM	A	B	Hex	Approx. Wt. Lbs.	List Price
30-340	1/4" X 1/8"	1.39	0.85	0.50	0.06	7.61
30-341	1/4" X 1/4"	1.47	0.80	0.68	0.06	6.72
30-342	1/4" x 3/8"	1.40	0.77	0.68	0.09	8.44
30-343	3/8" X 1/4"	1.61	0.97	0.68	0.08	10.14
30-344	3/8" X 3/8"	1.75	0.95	0.81	0.10	9.33
30-346	1/2" X 1/2"	1.88	1.09	0.93	0.12	13.92
30-345	1/2" x 3/4"	2.36	1.02	1.18	0.18	15.27
30-349	3/4" X 3/4"	2.36	1.55	1.18	0.22	20.84

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



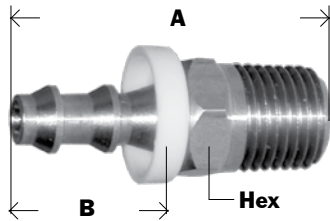
289

Part #	Hose I.D. x Female 37°/45°	UNF Thread	A	B	Approx. Wt. Lbs.	List Price
30-480	1/4"	7/16-20	1.55	0.83	.064	29.26
30-482	3/8"	9/16-18	1.85	0.91	.095	27.50
30-483*	3/8"	5/8-18	1.98	0.85	.095	36.85
30-484	1/2"	3/4-16	2.33	1.09	.171	39.95
30-486	3/4"	1-1/16-12	3.26	1.81	.281	109.33

\* SAE

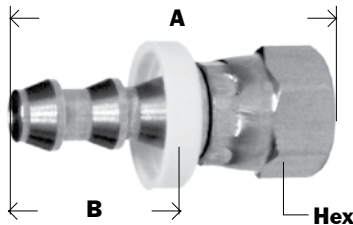
WHEN A CLOCK IS HUNGRY IT GOES BACK FOUR SECONDS

**STAINLESS STEEL MALE ADAPTERS**



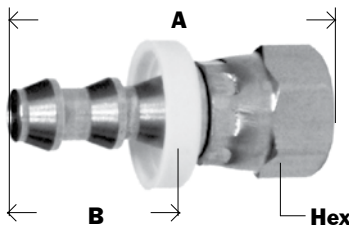
Part #	Hose I.D. x NPT	A	B	Hex	Approx. Wt. Lbs.	List Price
30-200SS	1/4" x 1/8"	1.42	0.77	0.44	0.027	11.54
30-201SS	1/4" x 1/4"	1.61	0.77	0.56	0.043	12.31
30-203SS	3/8" x 1/4"	1.76	0.92	0.56	0.053	14.18
30-204SS	3/8" x 3/8"	1.76	0.92	0.69	0.067	19.94
30-206SS	1/2" x 3/8"	1.86	1.02	0.69	0.071	24.06
30-207SS	1/2" x 1/2"	2.07	1.02	0.88	0.119	27.38
30-215SS	3/4" x 1/2"	2.55	1.50	0.88	0.20	51.40
30-210SS	3/4" x 3/4"	2.55	1.50	1.06	0.194	39.42

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



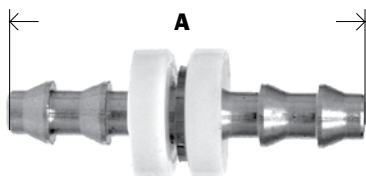
Part #	Hose I.D. x Female 45°/37°	A	B	Hex	Approx. Wt. Lbs.	List Price
30-230SS	1/4" x 1/4"	2.03	0.97	0.56	0.023	37.47
30-234SS	1/2" x 1/2"	2.06	0.97	0.88	0.04	57.57

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



Part #	Hose I.D. x Female 37°	A	B	Hex	Approx. Wt. Lbs.	List Price
30-266SS	3/8" x 3/8"	1.75	.92	1.06	0.065	44.39
30-269SS	3/4" x 3/4"	2.53	1.50	1.25	0.259	93.96

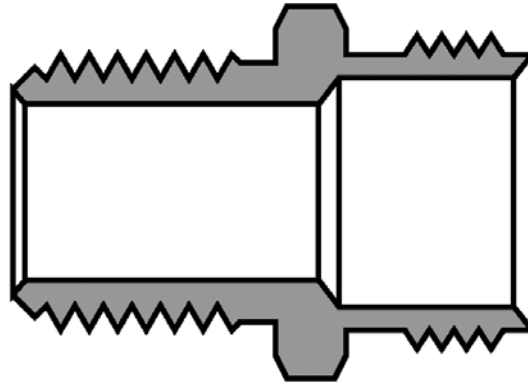
**STAINLESS STEEL HOSE SPLICER**



Part #	Hose I.D. x Tube O.D.	A	Approx. Wt. Lbs.	List Price
30-300SS	1/4"	1.73	0.025	46.49
30-301SS	3/8"	2.05	0.051	53.41
30-302SS	1/2"	2.25	0.073	56.12

• NOTE: See Stainless Steel beverage fittings on pg. 313-314

# Garden Hose Fittings



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



See page 262 for  
Plastic Garden Hose Fittings

- For AB1953 Compliant Fitting (Lead Free) see pages 384-386
- 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.

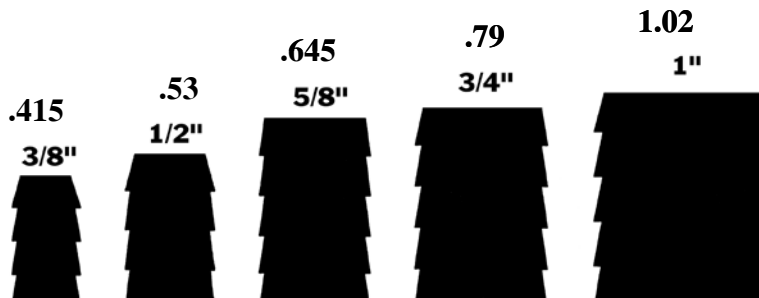
**FGH** = Female Garden Hose threads  
**MGH** = Male Garden Hose threads



**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

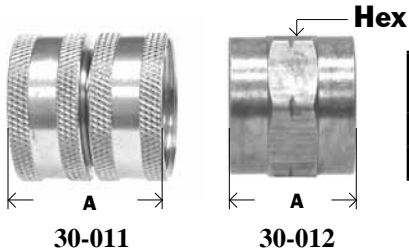


Part #	MGH X FGH	A	Hex	Approx. Wt. Lbs.	List Price
30-000	3/4" x 3/4"	1.03	0.50*	0.26	5.33

\* Internal Hex  
\* Not a live swivel

**SWIVEL - FGH X FGH**

•WASHER INCLUDED



Part #	FGH X FGH	A	Hex	Approx. Wt. Lbs.	List Price
30-011	3/4" x 3/4"	1.03	1.18 O.D.	0.24	4.99
30-012	No Swivel	1.08	1.19	0.24	6.27

HUS 91 203W  
GSU 101GHSV 22AS  
506 FS66

**SWIVEL - FGH X FEMALE PIPE**

•WASHER INCLUDED



Part #	FGH x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-001	3/4" x 1/2"	1.20	1.00	0.11	4.97
30-006	3/4" x 3/4"	1.11	1.12	0.11	4.99

S1 98GHSV  
5AS 21517  
HSU11 502  
91Z 197S  
FS65

**RIGID - FGH X FEMALE PIPE**

•WASHER INCLUDED



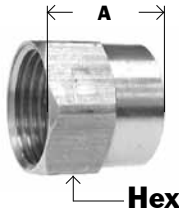
Part #	FGH x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-016	3/4" x 1/8"	1.02	1.18	0.08	5.19
30-017	3/4" x 1/4"	0.65	1.12	0.07	4.60
30-018	3/4" x 3/8"	1.19	1.18	0.11	10.16

95GH 501

WHEN THE SMOG LIFTS IN LOS ANGELES , U.C.L.A.

Some product stocked in Houston and Atlanta.

**RIGID - FGH X FEMALE PIPE**

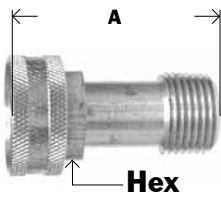


FS67  
198  
HU11  
21507  
501  
99GH  
5A  
H15PP

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

**SWIVEL - FGH X MALE PIPE**

•WASHER INCLUDED

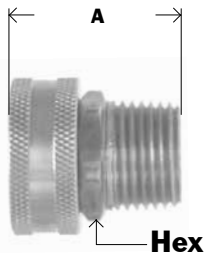


504  
89GH  
W1  
62H4  
88GH  
W1

Part #	FGH x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-047	3/4" x 1/4"	2.04	0.75	0.13	5.77
30-048	3/4" x 3/8"	2.06	0.75	0.14	5.10
30-049	3/4" x 1/2"	2.06	0.87	0.18	6.81

**SWIVEL - FGH X MALE PIPE**

•WASHER INCLUDED



Part #	FGH x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-181	3/4" x 1/4"	1.43	1.18	0.13	4.83
30-184	3/4" x 3/8"	1.43	1.18	0.15	5.02
30-183	3/4" x 1/2"	1.32	0.81	0.11	7.27
30-182	3/4" x 3/4"	1.43	1.18	0.14	13.39

**RIGID - FGH X MALE PIPE**



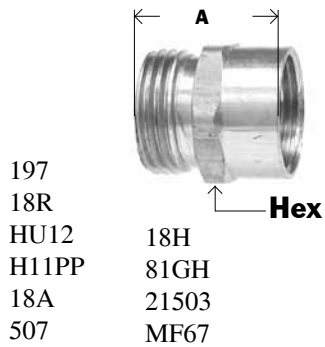
21505  
503  
83GH  
20A  
HU21  
199  
H7

Part #	FGH x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-087	3/4" x 3/8"	1.37	1.18	0.11	4.76
30-088	3/4" x 1/2"(1/2"SWT)**	1.06	1.18	0.09	6.45
30-093	3/4" x 3/4"	1.06	1.18	0.11	3.87
30-094	3/4" x 3/4"(1/2" FIP)	1.17	1.18	0.11	5.75
30-093L*	3/4" x 3/4"	1.22	1.18	0.14	14.59

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

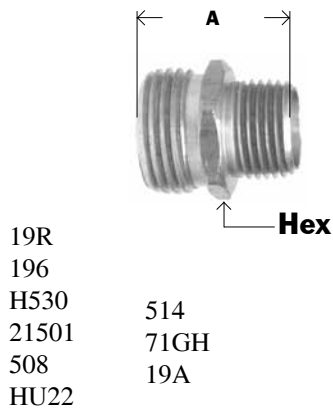
Some product stocked in Houston and Atlanta.

**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	4.62
30-067	3/4" x 3/8"	1.09	1.06	0.12	5.97
30-068	3/4" x 1/2"	0.81	1.06	0.10	3.40
30-073	3/4" x 3/4"	1.12	1.18	0.10	4.20

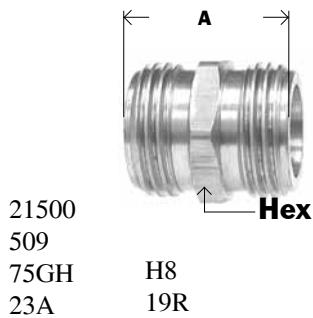
**RIGID - MGH X MALE PIPE**



Part #	MGH X Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
30-053	3/4" x 3/8"	1.25	1.06	0.10	3.73
30-058*	3/4" x 1/2"	1.31	1.06	0.12	3.78
30-063**	3/4" x 3/4" x 1/2"	1.31	1.06	0.13	4.46
30-063BE****	3/4" x 3/4"	1.31	1.06	0.15	6.72
30-063S	3/4" x 3/4" Short	1.10	1.06	0.10	3.56
30-064	3/4" x 1"	1.62	1.37	0.35	1.09

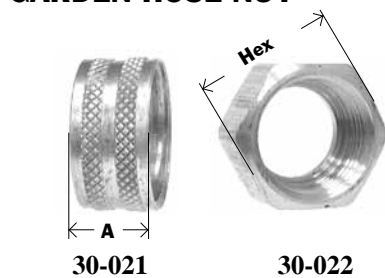
No Tap  
 \* (1/2 Swt = 5/8 O.D.)  
 \*\* (Tapped 1/2 FIP)  
 \*\*\* (Tapped 1/2 FIP Both ends)

**RIGID - MGH X MGH**



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

**GARDEN HOSE NUT**



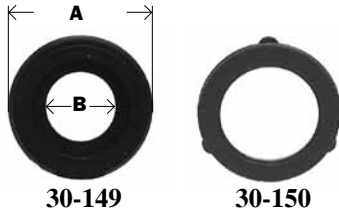
Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
30-021	Knurled	0.61	1.37 O.D.	0.08	2.74
30-022	Hex Nut	0.51	1.12	0.08	3.90

Dimension data can change without notice.  
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Some product stocked in Houston and Atlanta.

94GH  
 GHN1  
 HNR  
 21514

**GARDEN HOSE WASHERS**

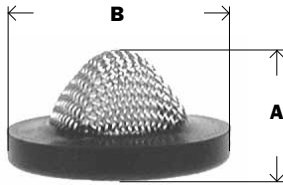


Part #	Size	A	B	Thickness	Approx. Wt. Lbs.	List Price
30-149	recessed washer	1.02	0.49	0.18	0.01	0.37
30-150	black*	0.98	0.68	0.13	0.01	0.21
30-150R	red	1.00	0.68	0.13	0.01	0.19
30-150B	black rubber	1.00	0.68	0.13	0.01	0.28

\* plasticized rubber

GHW  
901GH

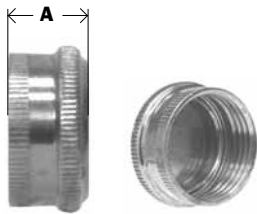
**GARDEN HOSE FILTER WASHER**



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-180	30 Mesh	0.52	1.00	0.02	0.99
30-180F	60 Mesh	0.52	1.00	0.02	1.12

LA662

**GARDEN HOSE CAP - Die Cast Brass**

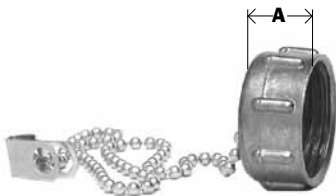


Part #	Size	A	Approx. Wt. Lbs.	List Price
30-103	3/4" Die Cast	0.58	0.04	1.62

• Barstock Caps available

513  
96GH  
GHN5  
HC1      21518  
LA215    200-W

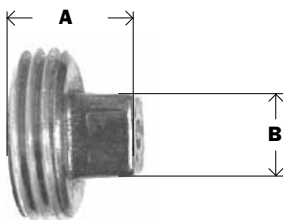
**GARDEN HOSE CAP WITH CHAIN**



Part #	Size	A	Approx. Wt. Lbs.	List Price
30-142	3/4" w/ 8" Chain	0.58	0.06	7.50

\* Zinc die cast

**GARDEN HOSE PLUG**

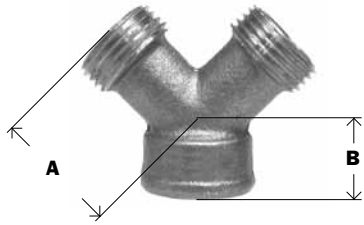


Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-026	3/4"	0.69	0.61	0.12	9.05

Some product stocked in Houston and Atlanta.

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

•WASHER INCLUDED



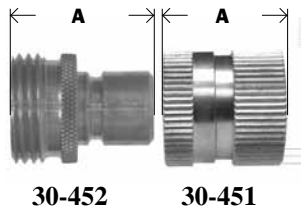
21A

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-140	3/4"	1.40	0.67	0.22	8.79

• See more Garden Hose "Y"'s on page 44

**QUICK DISCONNECT GARDEN HOSE COUPLERS**

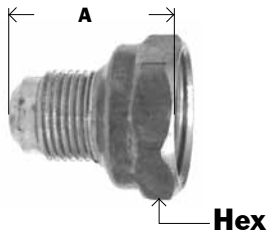
•WASHER INCLUDED



LA73C

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

**MALE FLARE X FGH RIGID**

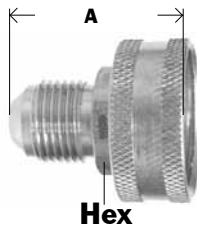


190  
46WH  
HFU21

Part #	Male Flare x FGH	A	Hex	Approx. Wt. Lbs.	List Price
30-123	3/8" x 3/4"	1.31	1.18	0.10	7.77
30-128	1/2" x 3/4"	1.38	1.18	0.12	7.37
30-133	5/8" x 3/4"	1.53	1.18	0.14	10.64

**MALE FLARE x FGH SWIVEL**

•WASHER INCLUDED



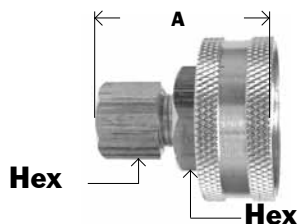
50GHSV  
51GHSV 68H  
W1 191

Part #	Male Flare x FGH	A	Hex	Approx. Wt. Lbs.	List Price
30-052	1/4" x 3/4"	1.24	0.75	0.10	4.61
30-138	3/8" x 3/4"	1.25	0.25*	0.12	13.16
30-139	1/2" x 3/4"	1.49	0.81	0.14	5.31

\* 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	7.96
30-051	3/8" x 3/4"	1.04	0.62	0.75	0.12	7.72

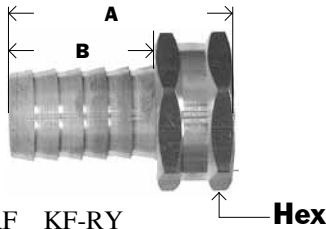
Some product stocked in Houston and Atlanta.

**BARSTOCK BRASS GARDEN HOSE COUPLINGS**

**BRASS**

**FEMALE SWIVEL ONLY**

•WASHER INCLUDED



22RF KF-RY  
591 HU126  
GHF 195

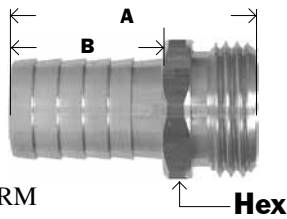
**BRASS**

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

**STAINLESS STEEL 316**

30-032SS	1/2" x 3/4"	1.82	1.19	1.18	0.12	30.15
30-033SS	5/8" x 3/4"	1.82	1.19	1.18	0.13	32.26
30-034SS	3/4" x 3/4"	1.82	1.19	1.18	0.15	32.26

**MALE END ONLY**



22RM  
590 201GH  
GHM 193  
KF-PY HU125

**BRASS**

Part #	Hose Barb x MGH	A	B	Hex	Approx. Wt. Lbs.	List Price
30-039	3/8" x 3/4"	1.88	1.19	1.06	0.12	4.21
30-040	1/2" x 3/4"	1.88	1.19	1.06	0.12	3.78
30-041	5/8" x 3/4"	1.88	1.19	1.06	0.12	4.17
30-042	3/4" x 3/4"	1.88	1.19	1.06	0.13	3.98
30-045	1" x 3/4"	1.94	1.19	1.06	0.21	6.22
30-043	1" x 1"	2.34	1.47	1.37	0.26	14.29

**STAINLESS STEEL 316**

30-040SS	1/2" x 3/4"	1.88	1.19	1.06	0.12	25.20
30-041SS	5/8" x 3/4"	1.88	1.19	1.06	0.12	25.20
30-042SS	3/4" x 3/4"	1.88	1.19	1.06	0.13	25.20

**GARDEN HOSE COUPLING**

•WASHER INCLUDED



GHS 22R  
92GH 592  
936H  
202GHS

**BRASS**

Part #	Hose Barb	List Price
30-025	3/8"	8.20
30-027	1/2"	8.57
30-028	5/8"	10.24
30-029	3/4"	9.44
30-046	1"(3/4" threads)	26.77
30-030	1"	29.03

**STAINLESS STEEL 316**

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

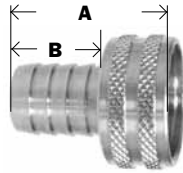
Some product stocked in Houston and Atlanta.

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





**FEMALE SWIVEL ONLY - Short Shank Knurled Nut**



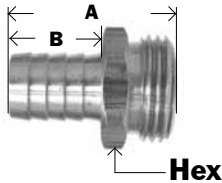
Part #	Hose Barb x FGH	A	B	Approx. Wt. Lbs.	List Price
30-466	1/2" x 3/4"	1.50	0.88	0.08	5.41
30-467	5/8" x 3/4"	1.50	0.88	0.09	4.46
30-468	3/4" x 3/4"	1.47	0.88	0.10	4.41

**FEMALE END ONLY - Short Shank w/ hex**



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

**MALE END ONLY - Short Shank**



Part #	Hose Barb x MGH	A	B	Hex	Approx. Wt. Lbs.	List Price
30-471	1/2" x 3/4"	1.55	0.88	1.06	0.11	5.43
30-472	5/8" x 3/4"	1.56	0.88	1.06	0.12	4.10
30-473	3/4" x 3/4"	1.56	0.88	1.06	0.13	4.90

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



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

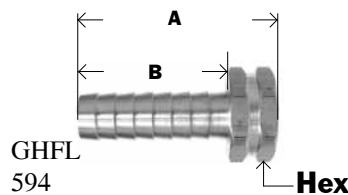
**GARDEN HOSE COUPLING SETS - Short Shank w/ hex nut**



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

**FEMALE SWIVEL ONLY - 2" SHANK**

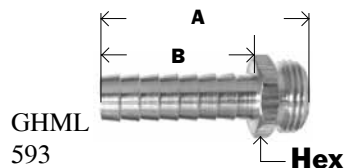
•WASHER INCLUDED



GHFL  
594

Part #	Hose Barb x FGH	A	B	Hex	Approx. Wt. Lbs.	List Price
30-505	1/2" x 3/4"	2.55	2.04	1.18	0.13	6.34
30-506	5/8" x 3/4"	2.56	2.04	1.18	0.16	6.34
30-507	3/4" x 3/4"	2.56	2.04	1.18	0.17	9.50
30-508	1" x 1"	2.84	2.03	1.43	0.29	9.90

**MALE END ONLY - 2" SHANK**



GHML  
593

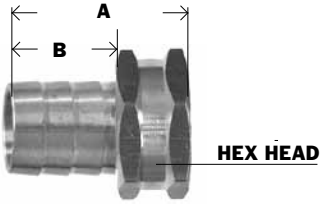
Part #	Hose Barb x MGH	A	B	Hex	Approx. Wt. Lbs.	List Price
30-510	1/2" x 3/4"	2.72	2.04	1.06	0.16	7.22
30-511	5/8" x 3/4"	2.72	2.04	1.06	0.17	6.30
30-512	3/4" x 3/4"	2.72	2.04	1.06	0.20	6.57
30-513	1" x 1"	2.90	2.03	1.37	0.28	10.79

**GARDEN HOSE COUPLING SETS - 2" SHANK**



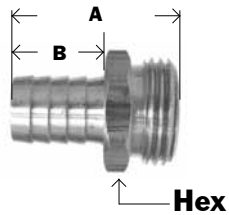
Part #	Hose x FGH	List Price
30-516	1/2"	13.64
30-517	5/8"	13.64
30-518	3/4"	17.01
30-519	1"	21.79

**NPSM FEMALE SHORT SHANK**



Part #	Hose ID	NPSM Thread	A	B	Hex	List Price
30-545	1/2	3/4"	1.45	0.88	1.18	4.62
30-546	5/8	3/4"	1.47	0.88	1.18	4.69
30-547	3/4	3/4"	1.47	0.88	1.18	4.75
30-548	1	1"	1.50	1.00	1.50	9.90

**NPSM MALE SHORT SHANK**



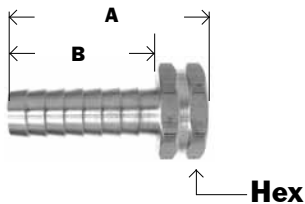
Part #	Hose ID	NPSM Thread	A	B	Hex	List Price
30-550	1/2	3/4"	1.56	0.88	1.06	4.42
30-551	5/8	3/4"	1.56	0.88	1.06	4.55
30-552	3/4	3/4"	1.56	0.88	1.06	4.69
30-553	1	1"	1.77	0.98	1.30	9.64

**NPSM SHORT SHANK SETS**



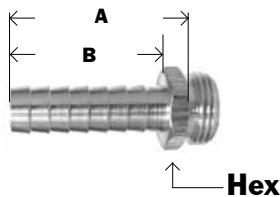
Part #	Size	List Price
30-540	1/2"	9.11
30-541	5/8"	9.31
30-542	3/4"	9.50
30-543	1"	19.60

**NPSM FEMALE LONG SHANK**



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

**NPSM MALE LONG SHANK**



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

**NPSM LONG SHANK SETS**



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

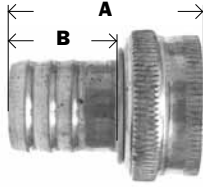
**BRASS FITTINGS**

**GARDEN HOSE VALVES**

**WROUGHT BRASS**

**WROUGHT BRASS - Female end only**

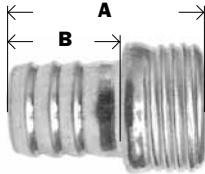
•WASHER INCLUDED



85L

Part #	Hose Barb x FGH	A	B	Approx. Wt. Lbs.	List Price
30-526	5/8" x 3/4"	1.58	0.91	0.05	4.66
30-527	3/4" x 3/4"	1.50	0.84	0.06	4.39

**WROUGHT BRASS COUPLINGS - Male end only**

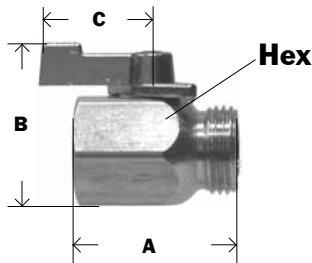


85M

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	2.82
30-531	5/8" x 3/4"	1.50	0.88	0.02	2.82

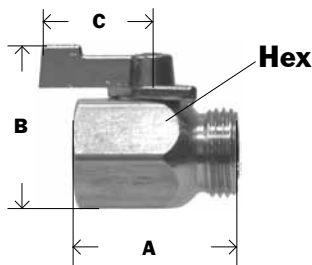
**GARDEN HOSE VALVES**

**ONE WAY BRASS BALL VALVE - FGH x MGH**



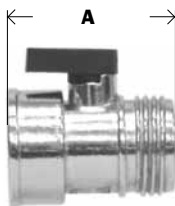
Part #	FGH x MGH	A	B	C	Hex	Approx. Wt. Lbs.	List Price
30-161	3/4" x 3/4"	1.55	1.89	1.31	1.06	0.42	51.57

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



Part #	Female NPTF x MGH	A	B	C	Hex	Approx. Wt. Lbs.	List Price
30-162	3/4" x 3/4"	1.55	1.89	1.31	1.06	0.42	54.35

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



Part #	FGH x MGH	A	Approx. Wt. Lbs.	List Price
30-631	3/4" x 3/4"	1.67	0.08	4.15

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



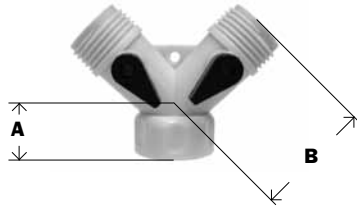
**PLASTIC GARDEN HOSE VALVE • CYCOLAC BODY & BALL**



LA450C

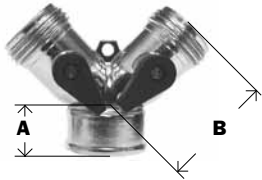
Part #	FGH x MGH	A	Hex	Approx. Wt. Lbs.	List Price
30-163	3/4" x 3/4"	1.75	1.25	0.04	4.70

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



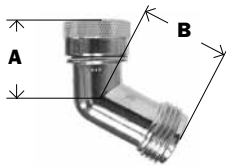
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-160	3/4"	0.74	1.87	0.08	3.48

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



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
30-626	3/4"	0.60	1.66	0.10	8.34

**ZINC ALLOY SWIVEL HOSE CONNECTOR**



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

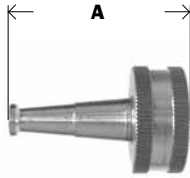
**"Y" SHAPE BRASS CONNECTOR W/ 2-WAY SHUT OFF**



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

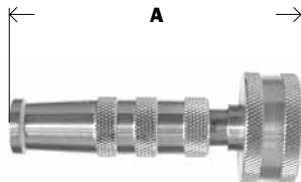
Dimension data can change without notice. Please call us when dimensions are critical.

**BRASS NOZZLE**



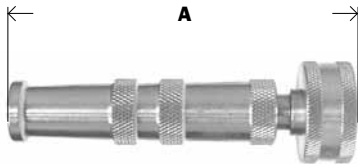
Part #	Size	A	Approx. Wt. Lbs.	List Price
30-637	3/4"	1.87	0.14	6.34

**3" CROSSED PATTERN BRASS NOZZLE**



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

**4" CROSSED PATTERN BRASS NOZZLE**



Part #	Size	A	Approx. Wt. Lbs.	List Price
30-638	3/4"	3.80	0.50	12.34



Lead Free  
Adjustable Spray

Part #	Size	Zinc Alloy spray nozzle with insulated handle soft grip and front thread protector	List Price
30-600	5-1/2"		16.77



Lead Free

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



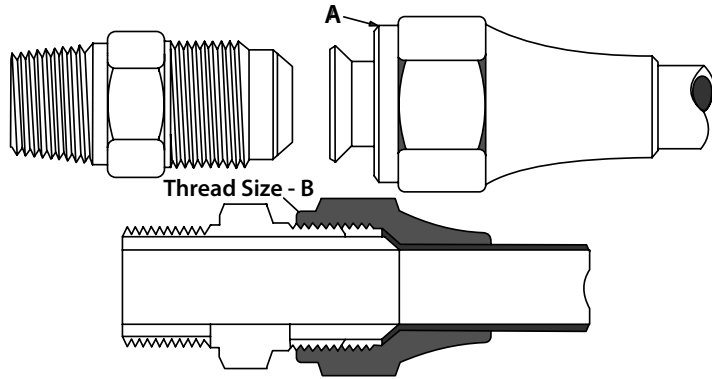
Lead Free  
Adjustable Spray

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



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

# SAE 45° Flare



<b>Tube O.D.</b>	<b>1/8</b>	<b>3/16</b>	<b>1/4</b>	<b>5/16</b>	<b>3/8</b>	<b>7/16</b>	<b>1/2</b>	<b>5/8</b>	<b>3/4</b>
<b>Thread Size-B</b>	<b>5/16-24</b>	<b>3/8-24</b>	<b>7/16-20</b>	<b>1/2-20</b>	<b>5/8-18</b>	<b>11/16-16</b>	<b>3/4-16</b>	<b>7/8-14</b>	<b>1-1/16-14</b>

**•Typical Application**

LP and natural gas, flammable liquids, instrumentation, refrigeration, power steering, hydraulic and pneumatic systems.

**•Working Pressure Ranges**

Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection. Temperature 73°F with copper tubing:

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

**•Vibration**

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

**•Temperature Range**

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

**•Material**

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

**•Used With**

Copper, brass, aluminum and steel hydraulic tubing that can be flared.

**•Tolerance**

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

**•Conformance**

Meets specifications and standards of ASA, ASME, SAE and MS (Military standards).

**Assembly Instructions**

- 1- Cut tubing to desired length. Make sure all burrs are removed and ends are cut square.
- 2- Slide nut on tube. Threaded end "A" of nut must face out.
- 3- Flare end of tube with a 45° flaring tool.
  - a- Measure flare diameter.
  - b- Examine flare for excessive thin out.
- 4- Lubricate threads and assemble to fitting body. Nut should be turned hand tight.
- 5- Tighten assembly with wrench until a solid feeling is encountered. From that point, apply a one-sixth turn.

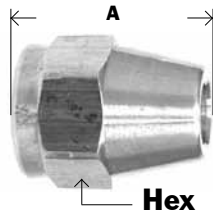
**Note:** Do not over-torque as it may damage the fitting or split the tubing at the flare.

**Actual O.D. of Flare Fittings**



**SHORT ROD NUT**

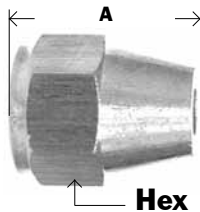
**SAE# 010110**



20910  
41FS  
1110  
N1  
41FX  
441S  
L'

Part #	Thread Size UNF	Thread	A	Hex	Approx. Wt. Lbs.	List Price
10-013	1/8"	5/16-24	0.50	0.37	0.01	1.69
10-014	3/16"	3/8-24	0.62	0.43	0.02	1.56
10-015	1/4"	7/16-20	0.75	0.56	0.03	1.40
10-015L	1/4"	7/16-20	0.75	0.50	0.03	1.16
10-016	5/16"	1/2-20	0.88	0.62	0.04	2.25
10-017L	3/8"	5/8-18	0.88	0.75	0.05	1.65
10-017	3/8"	5/8-18	1.00	0.75	0.04	2.09
10-018	7/16"	11/16-16	1.06	0.81	0.06	9.27
10-019L	1/2"	3/4-16	0.93	0.87	0.06	3.23
10-019	1/2"	3/4-16	1.12	0.87	0.09	2.95
10-020L	5/8"	7/8-14	1.08	1.00	0.10	4.10
10-020	5/8"	7/8-14	1.31	1.06	0.15	7.95
10-021	3/4"	1-1/16-14	1.50	1.25	0.24	6.79
10-022	7/8"	1-1/4-12	1.62	1.50	0.36	14.78
10-026	1"	1-3/8-12	1.81	1.62	0.44	20.72

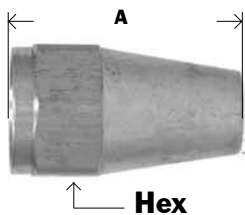
**REDUCING SHORT ROD NUT**



Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-023	3/8" x 1/4"	0.74	0.81	0.06	7.81
10-024	1/2" x 3/8"	0.86	0.94	0.10	11.71
10-025	5/8" x 1/2"	0.99	1.06	0.12	16.49

**LONG ROD NUT**

**SAE# 010111**



41FL  
N2  
241  
441  
41

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-001	1/8"	0.75	0.37	0.01	6.18
10-002	3/16"	0.81	0.43	0.02	1.80
10-003	1/4"	0.94	0.56	0.03	2.12
10-004	5/16"	1.12	0.62	0.04	2.78
10-005	3/8"	1.31	0.75	0.06	3.75
10-006	1/2"	1.62	0.87	0.12	7.23
10-007	5/8"	1.88	1.06	0.20	8.54
10-008	3/4"	2.19	1.25	0.34	21.08

Lead Free fittings available on  
**pgs. 382-388**

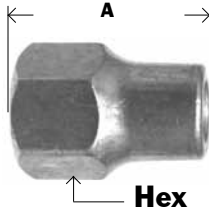
 **"L" means light pattern.**

-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**

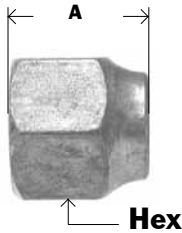


41FF  
39  
N4  
14FL  
641

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-028	1/4"	0.94	0.62	0.05	3.98
10-030	3/8"	1.06	0.81	0.08	6.04
10-031	1/2"	1.19	0.94	0.12	6.42
10-032	5/8"	1.44	1.06	0.26	11.31
10-033	3/4"	1.75	1.31	0.35	15.00

**SHORT FORGED NUT**

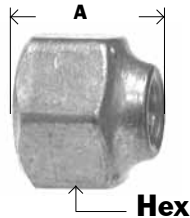
**SAE# 010166**



14FS  
41FFS  
40  
641-S  
1116  
NS4

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-038	3/16"	0.56	0.50	0.02	5.02
10-039	1/4"	0.60	0.62	0.04	1.62
10-040	5/16"	0.66	0.69	0.04	3.08
10-041	3/8"	0.70	0.81	0.06	2.27
10-042	1/2"	0.82	0.94	0.08	3.07
10-043	5/8"	0.95	1.06	0.12	4.91
10-044	3/4"	1.16	1.31	0.22	10.20
10-045	7/8"	1.18	1.38	0.30	13.18

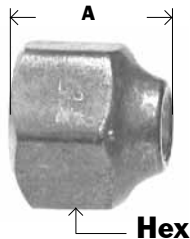
**EXTRA HEAVY SHORT FORGED NUT**



NSA

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-046	1/4"	0.63	0.75	0.04	3.12
10-047	3/8"	0.72	0.88	0.06	3.56
10-048	1/2"	0.88	1.00	0.08	4.22
10-049	5/8"	0.98	1.12	0.12	6.44

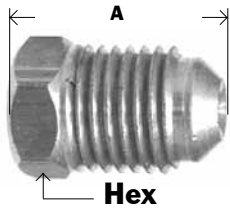
**FORGED REDUCING NUT**



NSR4  
14FS  
41FRS  
40R  
662-S

Part #	Female Flare x OD	A	Hex	Approx. Wt. Lbs.	List Price
10-051	5/16" x 1/4"	0.66	0.75	0.06	11.59
10-052	3/8" x 1/4"	0.72	0.81	0.06	4.74
10-053	3/8" x 5/16"	0.72	0.81	0.08	4.57
10-054	1/2" x 3/8"	0.81	0.94	0.08	4.08
10-055	5/8" x 3/8"	0.96	1.12	0.15	11.57
10-056	5/8" x 1/2"	0.97	1.06	0.12	6.86
10-058	3/4" x 5/8"	1.17	1.31	0.30	15.86

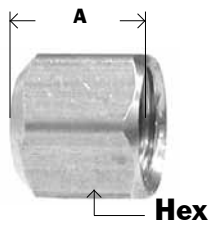
**FLARED PLUG**



58 57 439  
639F P2  
PF 2229

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-063	3/16"	0.59	0.50	0.02	4.95
10-064	1/4"	0.69	0.43	0.02	1.79
10-065	5/16"	0.78	0.50	0.04	4.24
10-066	3/8"	0.88	0.62	0.06	2.09
10-067	1/2"	1.06	0.75	0.10	3.58
10-068	5/8"	1.19	0.87	0.14	4.01

**FLARED CAP**

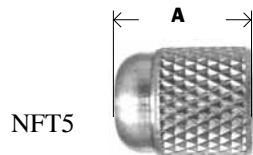


640F N5 440  
41FC 2129  
56 54

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-074	3/16"	0.47	0.50	0.02	3.52
10-075	1/4"	0.48	0.50	0.02	0.77
10-076	5/16"	0.62	0.62	0.04	2.68
10-077	3/8"	0.58	0.75	0.03	1.80
10-078	1/2"	0.69	0.81	0.14	1.81
10-079	5/8"	0.81	0.94	0.20	2.94
10-080	3/4"	1.17	1.37	0.30	13.16

**FINGER TIGHTENING CAP**

• O-Ring Included

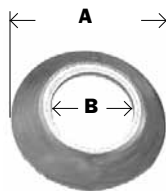


NFT5

Part #	Thread Size UNF	A	Approx. Wt. Lbs.	List Price
10-081	1/4"	0.62	0.02	1.53

**COPPER GASKET**

SAE# 010113



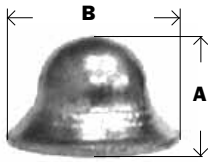
B2  
2GF  
6251  
FG  
157  
59  
463

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
10-084	3/16"	0.31	0.12	0.01	1.27
10-085	1/4"	0.36	0.19	0.01	0.63
10-086	5/16"	0.42	0.22	0.01	0.85
10-087	3/8"	0.55	0.28	0.01	0.75
10-088	1/2"	0.66	0.41	0.01	0.97
10-089	5/8"	0.77	0.50	0.01	1.33
10-090	3/4"	0.95	0.62	0.01	1.56

Some product stocked in Houston and Atlanta.

**COPPER BONNET**

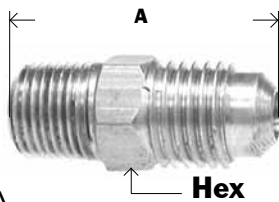
SAE# 010114



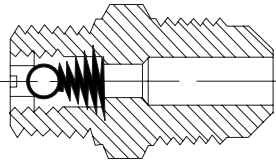
B1 156  
3GF FB  
64C 695  
57 464

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
10-094	3/16"	0.16	0.31	0.01	2.26
10-095	1/4"	0.22	0.36	0.01	1.82
10-097	3/8"	0.34	0.55	0.01	2.22
10-098	1/2"	0.41	0.66	0.01	2.89
10-099	5/8"	0.44	0.77	0.01	2.55
10-100	3/4"	0.56	0.95	0.01	6.30

**MALE BALL CHECK CONNECTOR**



43A

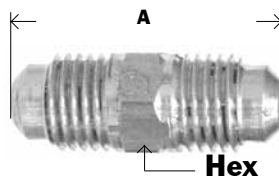


Part #	Male UNF x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
10-131	1/4" x 1/8"	1.06	0.43	0.04	18.04
10-133	3/8" x 1/4"	1.31	0.62	0.08	20.54

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

**UNION**

SAE# 010101



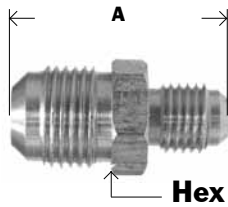
42F  
U2

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-104	1/8"	0.91	0.31	0.02	4.62
10-105	3/16"	1.06	0.37	0.02	4.33
10-106L	1/4"	1.19	0.43	0.03	1.33
10-106	1/4"	1.19	0.43	0.03	2.47
10-107	5/16"	1.34	0.50	0.05	3.46
10-108L	3/8"	1.50	0.62	0.09	2.55
10-108	3/8"	1.50	0.62	0.09	2.85
10-109L	1/2"	1.67	0.75	0.12	5.17
10-109	1/2"	1.81	0.75	0.14	6.11
10-110L	5/8"	2.00	0.87	0.20	6.37
10-110	5/8"	2.12	0.87	0.20	10.80
10-111	3/4"	2.44	1.06	0.35	18.50
10-112	7/8"	2.72	1.25	0.52	25.00

"L" means light pattern.

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

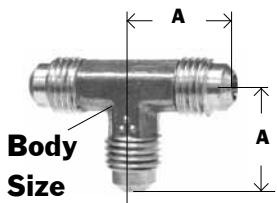
**REDUCING UNION**



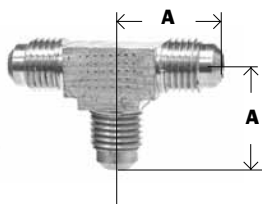
656F  
UR2  
42-R

Part #	Thread Size UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-117	5/16" x 1/4"	1.28	0.50	0.04	5.04
10-118	3/8" x 1/4"	1.38	0.62	0.06	3.54
10-119	3/8" x 5/16"	1.44	0.62	0.08	6.15
10-120	1/2" x 1/4"	1.53	0.75	0.10	5.76
10-121	1/2" x 3/8"	1.69	0.75	0.10	5.16
10-122	5/8" x 3/8"	1.88	0.87	0.17	10.06
10-123	5/8" x 1/2"	1.75	0.87	0.14	5.89

**UNION TEE**



**Forged Tee**



**Barstock Tee**

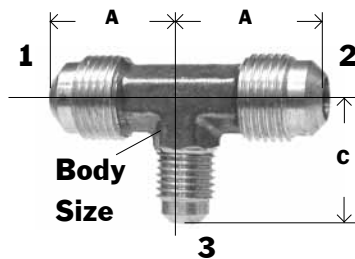
244F  
T2  
144F

**SAE# 010401**

Part #	Thread Size UNF	A	Body Size	Approx. Wt. Lbs.	List Price
10-157	1/8"	0.67	0.36	0.04	7.29
10-158	3/16"	0.75	0.36	0.06	4.20
10-159	1/4"	0.78	0.36	0.06	4.65
10-159B*	1/4"	0.88	0.50	0.08	7.17
10-160	5/16"	0.91	0.44	0.10	6.24
10-161	3/8"	1.00	0.44	0.12	6.32
10-162	1/2"	1.16	0.59	0.19	6.51
10-163	5/8"	1.41	0.69	0.30	11.96
10-164	3/4"	1.64	0.88	0.53	25.41
10-165	7/8"	1.75	1.25	0.93	51.64

\* 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	6.88
10-171	5/16" x 5/16" x 1/4"	0.94	0.94	0.44	0.12	10.29
10-172	3/8" x 1/4" x 1/4"	0.91	1.00	0.44	0.10	8.22
10-173	3/8" x 1/4" x 3/8"	1.00	0.91	0.44	0.12	10.25
10-174	3/8" x 3/8" x 1/4"	1.00	0.88	0.44	0.11	7.38
10-175	3/8" x 3/8" x 1/2"	1.00	1.19	0.59	0.14	10.29
10-176	3/8" x 3/8" x 5/8"	1.16	1.44	0.69	0.16	19.86
10-178	1/2" x 3/8" x 3/8"	1.16	1.12	0.59	0.18	8.36
10-179	1/2" x 3/8" x 1/2"	1.16	1.09	0.59	0.18	9.53
10-180	1/2" x 1/2" x 1/4"	1.16	0.97	0.59	0.18	13.19
10-181	1/2" x 1/2" x 3/8"	1.16	1.12	0.59	0.19	9.07
10-182	1/2" x 1/2" x 5/8"	1.28	1.41	0.69	0.28	12.57
10-187	5/8" x 1/2" x 5/8"	1.44	1.33	0.69	0.27	19.49
10-188	5/8" x 5/8" x 3/8"	1.38	1.16	0.69	0.30	16.97
10-189	5/8" x 5/8" x 1/2"	1.38	1.28	0.69	0.28	25.43
10-197	3/4" x 3/4" x 5/8"	1.66	1.50	0.88	0.36	42.31

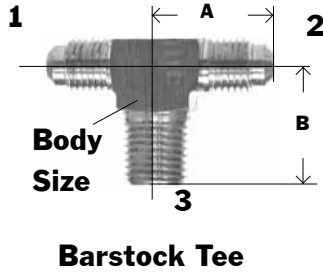
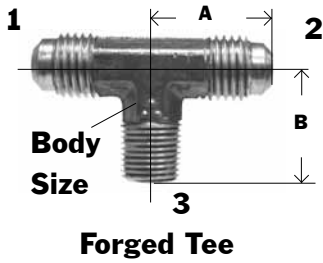
Some product stocked in Houston and Atlanta.

Save 5% by ordering online at [www.midlandindustrial.com](http://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	4.96
10-204	1/4" x 1/8"	0.78	0.75	0.36	0.05	4.96
10-204B*	1/4" x 1/8"	0.82	0.81	0.47	0.08	8.49
10-205	1/4" x 1/4"	0.88	0.88	0.44	0.08	5.26
10-206	1/4" x 3/8"	0.92	1.00	0.47	0.10	8.51
10-207	5/16" x 1/8"	0.89	0.78	0.44	0.08	6.06
10-208	5/16" x 1/4"	0.94	0.94	0.44	0.08	6.96
10-209	3/8" x 1/8"	1.00	0.91	0.44	0.14	10.12
10-210	3/8" x 1/4"	1.00	0.94	0.44	0.12	6.69
10-211	3/8" x 3/8"	1.00	1.00	0.47	0.13	8.09
10-212	3/8" x 1/2"	1.12	1.22	0.69	0.22	12.10
10-213	1/2" x 1/4"	1.16	1.00	0.59	0.20	17.82
10-214	1/2" x 3/8"	1.16	1.14	0.59	0.19	12.60
10-215	1/2" x 1/2"	1.22	1.22	0.69	0.24	11.92
10-216	1/2" x 3/4"	1.38	1.41	0.88	0.22	23.76
10-217	5/8" x 3/8"	1.38	1.25	0.69	0.24	20.24
10-218	5/8" x 1/2"	1.41	1.31	0.69	0.29	15.86
10-219	5/8" x 3/4"	1.41	1.41	0.88	0.36	23.90
10-220	3/4" x 1/2"	1.63	1.59	0.88	0.49	29.96
10-221	3/4" x 3/4"	1.63	1.44	0.88	0.48	30.81

\* Barstock

**\*NEOLOGISMS\***

Coffee (n.), the person upon whom one coughs.

Flabbergasted (adj.), appalled over how much weight you have gained.

Abdicate (v.), to give up all hope of ever having a flat stomach.

Esplanade (v.), to attempt an explanation while drunk.

Willy-nilly (adj.), impotent.

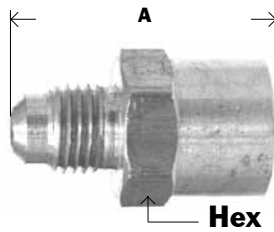
Negligent (adj.), describes a condition in which you absentmindedly answer the door in your nightgown.

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



**FEMALE ADAPTER**

**SAE# 010103**



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	5.00
10-227	3/16" x 1/8"	0.97	0.56	0.03	3.66
10-228L	1/4" x 1/8"	1.03	0.56	0.03	1.44
10-228	1/4" x 1/8"	1.03	0.56	0.04	2.80
10-229L	1/4" x 1/4"	1.06	0.68	0.06	3.49
10-229	1/4" x 1/4"	1.23	0.68	0.07	4.61
10-230	1/4" x 3/8"	1.18	0.75	0.08	5.41
10-231	1/4" x 1/2"	1.31	0.94	0.06	8.70
10-232	5/16" x 1/8"	1.06	0.56	0.05	4.79
10-233	5/16" x 1/4"	1.28	0.68	0.08	5.25
10-234	3/8" x 1/8"	1.09	0.62	0.08	4.17
10-235L	3/8" x 1/4"	1.25	0.68	0.08	2.91
10-235	3/8" x 1/4"	1.31	0.81	0.08	4.30
10-236L	3/8" x 3/8"	1.25	0.81	0.08	3.60
10-236	3/8" x 3/8"	1.25	0.81	0.10	10.31
10-237L	3/8" x 1/2"	1.31	0.94	0.08	3.51
10-237	3/8" x 1/2"	1.60	1.00	0.16	9.87
10-238	3/8" x 3/4"	1.41	1.18	0.11	8.94
10-239	1/2" x 1/4"	1.37	0.75	0.10	4.36
10-240L	1/2" x 3/8"	1.38	0.81	0.12	4.10
10-240	1/2" x 3/8"	1.50	0.81	0.14	7.40
10-241L	1/2" x 1/2"	1.42	0.87	0.10	5.83
10-241	1/2" x 1/2"	1.75	1.00	0.12	11.10
10-242	1/2" x 3/4"	1.60	1.12	0.16	5.78
10-243	5/8" x 3/8"	1.24	0.87	0.12	8.82
10-244	5/8" x 1/2"	1.62	0.94	0.12	5.42
10-245	5/8" x 3/4"	1.65	1.12	0.17	7.50
10-246	3/4" x 1/2"	1.74	1.18	0.32	18.91
10-247	3/4" x 3/4"	1.75	1.18	0.22	19.45
10-248	7/8" x 3/4"	1.94	1.31	0.26	19.12

 **"L" means light pattern.**

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

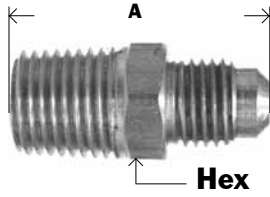
-These fittings are completely interchangeable with full pattern fittings, but have been modified in some way. This modification is usually in the length of the pipe threads. Used in plumbing and light industrial applications.

"Don't say you don't have enough time. You have exactly the same number of hours per day that were given to Helen Keller, Louis Pasteur, Michelangelo, Mother Teresa, Leonardo da Vinci, Thomas Jefferson and Albert Einstein."

- H. Jackson Brown, Jr.

**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	3.71
10-254	3/16" x 1/8"	1.00	0.43	0.03	1.91
10-255L	1/4" x 1/8"	1.06	0.43	0.03	1.30
10-255	1/4" x 1/8"	1.06	0.43	0.04	1.22
10-256L	1/4" x 1/4"	1.15	0.56	0.03	1.59
10-256	1/4" x 1/4"	1.25	0.56	0.04	1.60
10-257	1/4" x 3/8"	1.31	0.68	0.06	2.44
10-258	1/4" x 1/2"	1.44	0.87	0.11	5.34
10-259L	5/16" x 1/8"	1.15	0.50	0.04	2.37
10-259	5/16" x 1/8"	1.16	0.50	0.04	2.36
10-260L	5/16" x 1/4"	1.31	0.56	0.06	3.14
10-260	5/16" x 1/4"	1.34	0.56	0.06	2.57
10-261	5/16" x 3/8"	1.38	0.68	0.08	4.75
10-262	3/8" x 1/8"	1.25	0.62	0.07	2.13
10-263L	3/8" x 1/4"	1.31	0.62	0.06	2.32
10-263	3/8" x 1/4"	1.44	0.62	0.08	2.29
10-264L	3/8" x 3/8"	1.37	0.68	0.09	2.89
10-264	3/8" x 3/8"	1.44	0.68	0.09	2.70
10-265L	3/8" x 1/2"	1.44	0.89	0.12	3.19
10-265	3/8" x 1/2"	1.69	0.87	0.14	5.83
10-266	3/8" x 3/4"	1.81	1.06	0.18	7.39
10-267	1/2" x 1/4"	1.60	0.75	0.11	3.55
10-268L	1/2" x 3/8"	1.46	0.75	0.10	3.26
10-268	1/2" x 3/8"	1.62	0.75	0.12	3.65
10-269L	1/2" x 1/2"	1.62	0.87	0.13	3.47
10-269	1/2" x 1/2"	1.79	0.87	0.15	5.12
10-270	1/2" x 3/4"	1.75	1.06	0.22	6.86
10-271	5/8" x 1/4"	1.81	0.87	0.14	10.33
10-272L	5/8" x 3/8"	1.67	0.87	0.14	4.40
10-272	5/8" x 3/8"	1.81	0.87	0.18	7.87
10-273L	5/8" x 1/2"	1.80	0.87	0.11	4.93
10-273	5/8" x 1/2"	2.00	0.87	0.20	8.05
10-274	5/8" x 3/4"	1.85	1.06	0.21	5.70
10-275	3/4" x 1/2"	2.19	1.06	0.28	13.01
10-276	3/4" x 3/4"	2.08	1.06	0.28	8.46
10-277	7/8" x 1/2"	2.22	1.25	0.52	32.09
10-278	7/8" x 3/4"	2.35	1.25	0.41	22.04
10-279	1" x 3/4"	2.44	1.43	0.53	24.21
10-280	1" x 1"	2.44	1.43	0.53	29.72

**MIP x FLARE WITH CHECK**



Some product stocked in Houston and Atlanta.

Part #	Size	List Price
10-256WC	1/4" x 1/4"	2.80

**Key** "L" means light pattern.

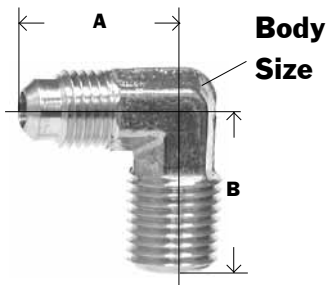
-These fittings are completely interchangeable with full pattern fittings, but have been modified in some way. This modification is usually in the length of the pipe threads. Used in plumbing and light industrial applications.



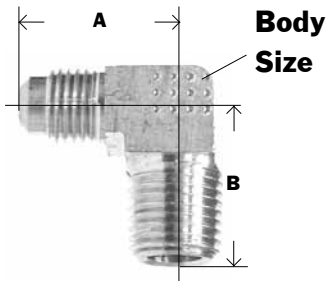


**90° MALE ELBOW**

**SAE# 010202**



**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	7.90
10-283B*	1/8" x 1/8"	0.62	0.69	0.43	0.04	7.33
10-284	3/16" x 1/8"	0.75	0.75	0.44	0.04	7.60
10-284B*	3/16" x 1/8"	0.75	0.75	0.43	0.06	3.64
10-285	3/16" x 1/4"	0.81	0.88	0.44	0.08	5.84
10-286	1/4" x 1/8"	0.84	0.78	0.38	0.04	2.92
10-286B*	1/4" x 1/8"	0.81	0.78	0.47	0.05	2.36
10-287	1/4" x 1/4"	0.81	0.88	0.44	0.05	3.00
10-287B*	1/4" x 1/4"	0.91	0.93	0.59	0.08	3.69
10-288	1/4" x 3/8"	0.91	0.91	0.47	0.08	4.69
10-289	1/4" x 1/2"	1.03	1.09	0.59	0.10	6.28
10-290	5/16" x 1/8"	0.91	0.88	0.44	0.06	5.01
10-290B*	5/16" x 1/8"	0.91	0.78	0.52	0.06	4.44
10-291	5/16" x 1/4"	0.98	0.96	0.44	0.08	5.11
10-291B*	5/16" x 1/4"	0.95	0.92	0.62	0.08	5.40
10-292	5/16" x 3/8"	1.06	1.09	0.59	0.08	5.72
10-293	3/8" x 1/8"	1.00	0.91	0.53	0.08	5.78
10-293B*	3/8" x 1/8"	1.03	0.91	0.65	0.08	8.30
10-294	3/8" x 1/4"	1.01	0.89	0.48	0.08	3.52
10-294B*	3/8" x 1/4"	0.97	1.04	0.68	0.11	5.42
10-295	3/8" x 3/8"	1.00	0.88	0.47	0.10	3.49
10-295B*	3/8" x 3/8"	1.06	1.09	0.69	0.12	7.19
10-296	3/8" x 1/2"	1.10	1.09	0.59	0.12	4.98
10-297	3/8" x 3/4"	1.25	1.31	0.81	0.12	12.99
10-298	1/2" x 1/4"	1.19	1.00	0.59	0.12	5.06
10-298B*	1/2" x 1/4"	1.22	1.19	0.81	0.12	11.42
10-299	1/2" x 3/8"	1.10	1.00	0.59	0.13	5.02
10-299B*	1/2" x 3/8"	1.22	1.12	0.77	0.18	8.02
10-300	1/2" x 1/2"	1.16	1.13	0.59	0.14	5.52
10-300B*	1/2" x 1/2"	1.26	1.36	0.94	0.26	11.33
10-301	1/2" x 3/4"	1.42	1.25	0.81	0.24	9.11
10-311	5/8" x 1/4"	1.34	1.13	0.72	0.28	10.46
10-302	5/8" x 3/8"	1.35	1.22	0.72	0.20	9.05
10-302B*	5/8" x 3/8"	1.41	1.25	0.94	0.20	21.93
10-303	5/8" x 1/2"	1.35	1.22	0.72	0.20	7.44
10-303B*	5/8" x 1/2"	1.41	1.38	0.94	0.20	14.02
10-304	5/8" x 3/4"	1.44	1.31	0.81	0.25	12.56
10-305	3/4" x 1/2"	1.67	1.50	0.88	0.34	15.50
10-306	3/4" x 3/4"	1.67	1.63	0.88	0.30	14.07
10-306B*	3/4" x 3/4"	1.60	1.62	0.91	0.32	26.61
10-307	7/8" x 3/4"	1.75	1.68	1.00	0.44	41.16
10-308	1" x 3/4"	1.94	1.69	1.31	0.75	47.64
10-309	1" x 1"	1.94	1.75	1.25	0.78	42.36

\* Barstock

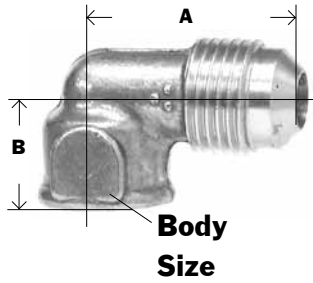
Dimension data can change without notice.  
Please call us when dimensions are critical.

Some product stocked in Houston and Atlanta.

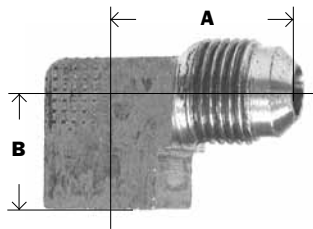


**90° FEMALE ELBOW**

**SAE# 010203**



**Forged Elbow**



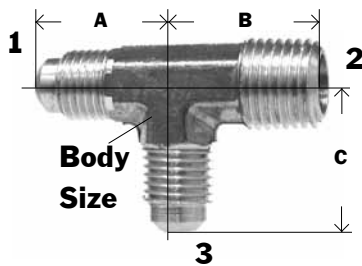
**Barstock Elbow**

E3  
50  
150F

Part #	Male Flare x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
10-312	3/16" x 1/8"	0.81	0.44	0.56	0.05	6.48
10-313	1/4" x 1/8"	0.90	0.46	0.56	0.06	3.93
10-313B*	1/4" x 1/8"	0.88	0.47	0.56	0.06	4.44
10-314	1/4" x 1/4"	0.97	0.59	0.75	0.08	5.53
10-315	1/4" x 3/8"	1.03	0.57	0.81	0.09	7.72
10-333	1/4" x 1/2"	1.08	0.66	1.00	0.12	9.90
10-316	5/16" x 1/8"	0.94	0.88	0.45	0.08	6.82
10-317	5/16" x 1/4"	1.03	0.58	0.75	0.06	11.09
10-318	3/8" x 1/8"	1.00	0.88	0.47	0.10	7.21
10-319	3/8" x 1/4"	1.06	0.59	0.75	0.09	3.53
10-319B*	3/8" x 1/4"	1.09	0.69	0.75	0.10	12.66
10-320	3/8" x 3/8"	1.06	0.57	0.81	0.10	5.08
10-321	3/8" x 1/2"	1.16	0.66	1.00	0.14	6.36
10-322	3/8" x 3/4"	1.28	0.72	1.25	0.12	11.03
10-323	1/2" x 1/4"	1.25	0.70	0.88	0.13	9.62
10-324	1/2" x 3/8"	1.25	0.70	0.88	0.12	7.15
10-324B*	1/2" x 3/8"	1.28	0.75	0.81	0.19	19.77
10-325	1/2" x 1/2"	1.29	0.72	1.00	0.18	7.53
10-326	1/2" x 3/4"	1.41	0.72	1.25	0.20	10.27
10-327	5/8" x 3/8"	1.35	1.22	0.72	0.22	12.82
10-328	5/8" x 1/2"	1.38	0.75	1.00	0.20	11.23
10-329	5/8" x 3/4"	1.50	0.76	1.25	0.28	11.35
10-330	3/4" x 1/2"	1.63	1.06	1.06	0.42	21.45
10-331	3/4" x 3/4"	1.88	1.06	1.31	0.40	33.63

\* Barstock

**FORGED MALE RUN TEE**



T3  
151F  
51

Part #	Male Flare x Male NPTF (1&3) x 2	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
10-361	3/16" x 5/16" x 1/8"	0.87	0.78	0.97	0.44	0.08	5.57
10-343	3/16" x 1/8"	0.75	0.75	0.75	0.37	0.05	6.39
10-344	1/4" x 1/8"	0.78	0.75	0.78	0.37	0.06	5.51
10-345	1/4" x 1/4"	0.88	0.88	0.88	0.44	0.08	6.75
10-347	5/16" x 1/8"	0.88	0.80	0.88	0.44	0.08	5.89
10-348	5/16" x 1/4"	0.94	0.94	0.94	0.44	0.08	8.64
10-350	3/8" x 1/4"	1.00	0.94	1.00	0.44	0.12	8.64
10-351	3/8" x 3/8"	1.00	1.00	1.00	0.47	0.10	11.97
10-340	3/8" x 1/2" x 3/8"	1.09	1.09	1.16	0.59	0.18	11.10
10-352	3/8" x 1/2"	1.12	1.22	1.12	0.69	0.12	16.81
10-353	1/2" x 3/8" x 1/2"	1.22	1.22	1.15	0.69	0.22	13.16
10-354	1/2" x 3/8"	1.16	1.09	1.16	0.59	0.18	14.54
10-355	1/2" x 1/2"	1.22	1.22	1.22	0.69	0.22	13.59
10-357	5/8" x 1/2"	1.41	1.31	1.41	0.69	0.28	18.03
10-359	3/4" x 1/2"	1.63	1.59	1.63	0.88	0.48	35.50
10-360	3/4" x 3/4"	1.62	1.44	1.62	0.88	0.48	31.35

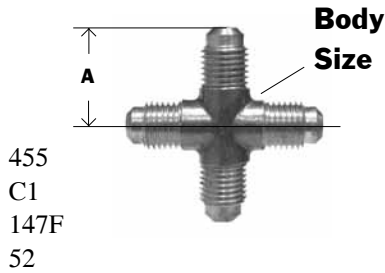
Dimension data can change without notice.  
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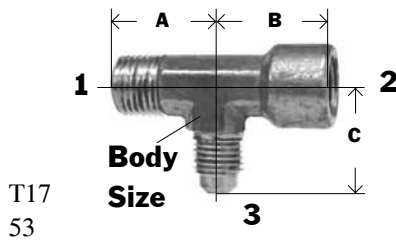
**FORGED FLARE CROSS**

SAE# 010501



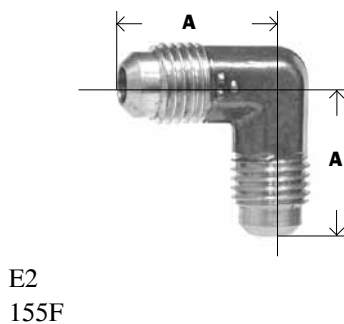
Part #	Thread Size UNF	A	Body Size	Approx. Wt. Lbs.	List Price
10-373	1/4"	0.88	0.44	0.10	12.99
10-374	5/16"	0.92	0.44	0.10	12.72
10-375	3/8"	1.00	0.44	0.16	12.14
10-376	1/2"	1.16	0.59	0.24	14.30

**FORGED ADAPTER TEE / SERVICE TEE**



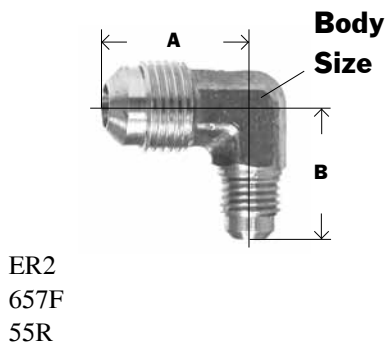
Part #	Size 1 x 2 x 3	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
10-382	1/8" x 1/8" x 1/4"	0.72	0.53	0.80	0.47	0.08	6.69
10-383	1/4" x 1/4" x 1/4"	0.88	1.00	0.91	0.47	0.11	8.46

**FORGED 90° FLARE ELBOW**



Part #	Thread Size UNF	A	Approx. Wt. Lbs.	List Price
10-404	1/8"	0.64	0.04	9.63
10-405	3/16"	0.75	0.06	10.91
10-406	1/4"	0.81	0.08	3.76
10-407	5/16"	0.91	0.10	5.68
10-408	3/8"	1.00	0.10	4.77
10-409	1/2"	1.16	0.14	7.34
10-410	5/8"	1.41	0.22	12.06
10-411	3/4"	1.66	0.68	23.49
10-412	7/8"	1.81	0.82	43.01

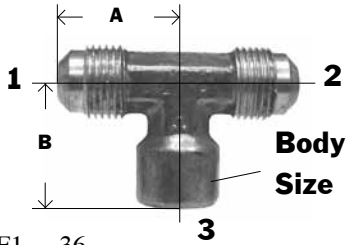
**FORGED REDUCING ELBOW**



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	5.78
10-417	3/8" x 5/16"	1.00	0.94	0.44	0.08	7.55
10-419	1/2" x 3/8"	1.19	1.02	0.59	0.14	7.34
10-421	5/8" x 1/2"	1.34	1.23	0.72	0.21	11.74

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**FORGED FEMALE BRANCH TEE**

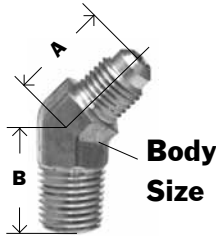


TF1 36  
136 58FP  
T4

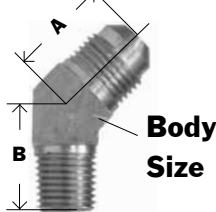
Part #	Male Flare x Female NPTF (1&2) x 3	A	B	Body Size	Approx. Wt. Lbs.	List Price
10-429	1/4" x 1/4"	0.97	0.75	0.69	0.12	9.89
10-430	3/8" x 1/4"	1.00	1.03	0.47	0.14	9.23
10-431	3/8" x 3/8"	1.17	0.69	1.05	0.22	14.28
10-432	3/8" x 1/2"	1.16	0.69	1.05	0.19	12.83
10-434	1/2" x 1/2"	1.31	0.69	1.06	0.22	21.45

**45° ELBOW**

SAE# 010302



Forged



Barstock

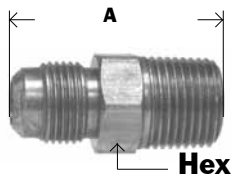
E145 654F 47  
54 59FF 4945  
159F 254

Part #	Male Flare x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
10-448	1/4" x 1/8"	0.67	0.64	0.41	0.04	3.14
10-448B*	1/4" x 1/8"	0.67	0.64	0.44	0.04	7.87
10-449	1/4" x 1/4"	0.75	0.86	0.53	0.07	6.05
10-450	5/16" x 1/8"	0.78	0.64	0.53	0.06	6.02
10-451	5/16" x 1/4"	0.81	0.86	0.53	0.07	6.36
10-452	3/8" x 1/4"	0.91	0.86	0.53	0.09	5.29
10-452B*	3/8" x 1/4"	0.89	0.86	0.64	0.12	12.35
10-453	3/8" x 3/8"	0.93	0.94	0.59	0.11	5.87
10-454	3/8" x 1/2"	0.99	1.17	0.75	0.19	8.51
10-455	1/2" x 3/8"	1.07	0.88	0.59	0.12	6.68
10-455B*	1/2" x 3/8"	1.06	0.94	0.76	0.18	13.81
10-456	1/2" x 1/2"	1.12	1.18	0.75	0.20	9.70
10-460	5/8" x 3/8"	1.13	0.95	0.81	0.22	14.78
10-457	5/8" x 1/2"	1.12	1.17	0.78	0.18	10.56
10-458	3/4" x 1/2"	1.28	1.16	0.88	0.26	16.88
10-459	3/4" x 3/4"	1.41	1.20	0.88	0.31	17.30

\* Barstock

**BRASS GAS RANGE FITTINGS**

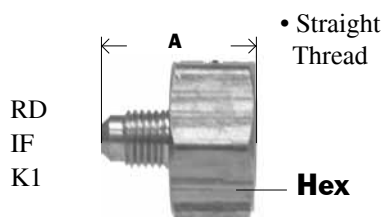
**BRASS MALE ADAPTERS**



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	6.60
35-134	15/16" x 1/2"	1.90	0.94	0.14	6.33

**DRUM ADAPTERS**

SAE# 010165



RD  
IF  
K1

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	25.26
50-001	1/4" x 3/4"	1.16	1.25	0.14	13.08

Some product stocked in Houston and Atlanta.

**FEMALE 45° FLARE FITTINGS**

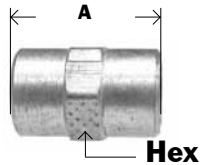
• Use with Copper Gasket

**BRASS**

**UNION**

**SAE# 010107**

2310  
U4  
660HD  
32

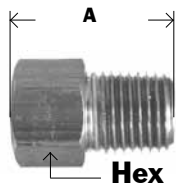


Part #	Female Flare x Female Flare	A	Hex	Approx. Wt. Lbs.	List Price
10-135	1/4"	1.00	0.62	0.06	10.71
10-136	3/8"	1.25	0.81	0.14	15.06
10-137	1/2"	1.43	0.94	0.18	16.17

**FEMALE FLARE ADAPTER**

**SAE# 010106**

U5  
664FHD  
33  
48-FF

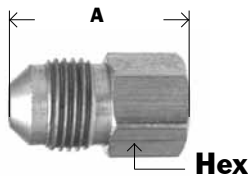


Part #	Female Flare x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
10-440	1/4" x 1/8"	0.91	0.62	0.05	6.56
10-441	1/4" x 1/4"	1.01	0.62	0.06	6.91
10-442	3/8" x 1/4"	1.28	0.81	0.10	8.54
10-443	1/2" x 3/8"	1.36	0.94	0.14	10.99
10-444	1/2" x 1/2"	1.46	0.94	0.14	11.09

**FLARE REDUCER**

**SAE# 010105**

UR3  
661FHD  
227  
46-FF

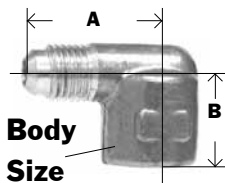


Part #	Male Flare x Female Flare	A	Hex	Approx. Wt. Lbs.	List Price
10-462	1/4" x 3/8"	1.22	0.81	0.10	6.09
10-461	1/4" x 1/2"	1.36	0.94	0.14	16.64
10-463	3/8" x 1/4"	1.12	0.62	0.06	6.45
10-464	3/8" x 1/2"	1.44	0.94	0.14	6.88
10-473	3/8" x 5/8"	1.63	1.12	0.16	16.14
10-467	1/2" x 3/8"	1.41	0.81	0.13	6.69
10-468	1/2" x 5/8"	1.68	1.06	0.20	20.65
10-469	5/8" x 1/2"	1.63	1.00	0.17	18.97
10-470	5/8" x 3/4"	1.97	1.31	0.31	19.37
10-471	3/4" x 5/8"	1.75	1.18	0.32	21.14

**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	7.74
10-495	1/2" x 1/2"	1.41	1.12	0.81	0.72	13.34

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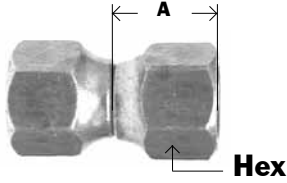
Dimension data can change without notice. Please call us when dimensions are critical.

**BRASS FLARE SWIVEL FITTINGS**

**FORGED SWIVEL**

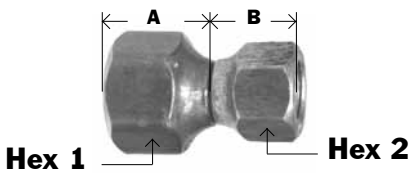
**SAE# 010108**

1350  
US4  
14FSV  
34



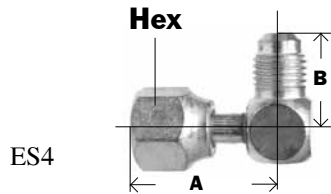
Part #	Female Flare UNF	A	Hex	Approx. Wt. Lbs.	List Price
10-481	1/4"	0.59	0.62	0.04	5.85
10-482	5/16"	0.62	0.68	0.06	8.37
10-483	3/8"	0.69	0.81	0.10	6.23
10-484	1/2"	0.81	0.94	0.16	8.55
10-485	5/8"	0.94	1.06	0.24	10.52
10-486	3/4"	1.12	1.31	0.34	33.84

**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	12.73
10-488	1/2" x 3/8"	0.84	0.70	0.94	0.81	0.12	15.55
10-489	5/8" x 1/2"	0.98	0.82	1.03	0.94	0.22	19.02

**FORGED SWIVEL ELBOWS**



ES4

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	10.21
10-494*	3/8"	1.09	1.00	0.75	0.36	27.12

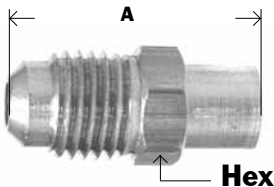
\* Steel

**BRASS SOLDER FITTINGS**

**FLARE TO SWT UNION**

**SAE# 010104**

4085 46FS  
US3 277  
672FS



Part #	Male Flare x SWT	A	Hex	Approx. Wt. Lbs.	List Price
10-602	1/4" x 3/8"	1.00	0.50	0.06	5.88
10-611	1/2" x 5/8"	1.56	0.75	0.12	20.90
10-615	3/4" x 3/4"	2.06	1.06	0.32	17.21

Lead Free fittings available on  
**pgs. 382-388**



# BRASS FITTINGS

# 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	2.98
28-702	7/16-20	1/4	6.03
28-703	7/16-20	3/8	5.60
28-704	1/2-20	1/8	20.57
28-705	1/2-20	1/4	20.91
28-706	9/16-18	1/8	6.68
28-707	9/16-18	1/4	5.39
28-708	9/16-18	3/8	4.40
28-709	9/16-18	1/2	8.36
28-710	3/4-16	1/4	12.35
28-711	3/4-16	3/8	8.02
28-712	3/4-16	1/2	10.91
28-713	3/4-16	3/4	21.63
28-714	7/8-14	3/8	21.78
28-715	7/8-14	1/2	20.19
28-716	7/8-14	3/4	22.28
28-717	1-1/16-12	3/4	21.58
28-718	1-5/16-12	1	40.56

## 45° FORGED ELBOW



Part #	JIC Thread	Pipe Size	List Price
28-722F	7/16-20	1/8	8.11
28-724F	7/16-20	1/4	10.87
28-728F	1/2-20	1/4	4.65
28-729F <sup>1</sup>	9/16-18	1/8	28.62
28-731F	9/16-18	1/4	8.42
28-733F	9/16-18	3/8	8.01
28-734F	9/16-18	1/2	16.41
28-736F	3/4-16	3/8	11.39
28-738F	3/4-16	1/2	37.05
28-740F	7/8-14	1/2	18.60
28-742F	1-1/16-12	3/4	64.52

## BULKHEAD TUBE UNION



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

## 90° FORGED ELBOW



Part #	JIC Thread	Pipe Size	List Price
28-760F	7/16-20	1/8	7.74
28-762F	7/16-20	1/4	5.19
28-766F	1/2-20	1/4	10.11
28-768F	9/16-18	1/8	22.77
28-770F	9/16-18	1/4	7.10
28-772F	9/16-18	3/8	13.66
28-773F	9/16-18	1/2	23.10
28-774F	3/4-16	3/8	17.83
28-777F	3/4-16	1/2	11.67
28-778F	3/4-16	3/4	34.33
28-780F	7/8-14	1/2	28.15
28-781F	1-1/16-12	1/2	57.38
28-783F	1-1/16-12	3/4	20.81
28-784F	1-5/16-12	3/4	43.78
28-786F	1-5/16-12	1	48.38

Have Midland quote all of your fitting needs.

For Steel 37° Flare JIC fittings see page 320

## STRAIGHT SWIVEL ADAPTER



Part #	JIC Thread	Pipe Size	List Price
28-753	9/16-18	1/4	8.61
28-754	9/16-18	3/8	15.82
28-756	3/4-16	1/2	20.33

## FEMALE STRAIGHT ADAPTER



Part #	JIC Thread	Pipe Size	List Price
28-957	7/16-20	1/8	8.04
28-958	7/16-20	1/4	10.19
28-959	9/16-18	1/4	12.02
28-960	9/16-18	3/8	46.20
28-961	3/4-16	3/8	8.95
28-962	3/4-16	1/2	24.06
28-963	7/8-14	1/2	18.61
28-964	1-1/16-12	3/4	30.21

## STRAIGHT TUBE UNION



Part #	JIC Thread	List Price
28-966	7/16-20	7.74
28-969	9/16-18	8.18
28-970	3/4-16	12.85
28-971	1-1/16-12	28.62
28-972	1-5/16-12	31.87

## TUBE TEE



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

## FEMALE ELBOW (FORGED BODY)



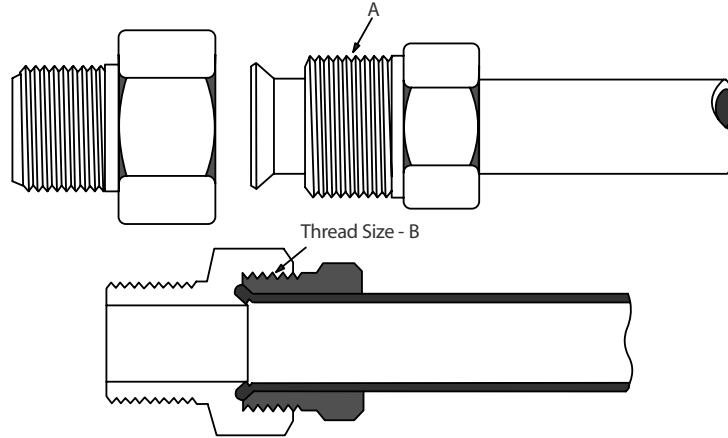
Part #	JIC Thread	Pipe Size	List Price
28-973	7/16-20	1/8	8.55
28-974	7/16-20	1/4	15.70
28-975	9/16-18	1/4	20.83

BRASS





# Inverted Flare



<b>Tube O.D.</b>	<b>1/8</b>	<b>3/16</b>	<b>1/4</b>	<b>5/16</b>	<b>3/8</b>	<b>7/16</b>	<b>1/2</b>	<b>5/8</b>	<b>3/4</b>	<b>7/8</b>	<b>1</b>
<b>Thread Size-B</b>	<b>5/16-24</b>	<b>3/8-24</b>	<b>7/16-24</b>	<b>1/2-20</b>	<b>5/8-18</b>	<b>1 1/16-18</b>	<b>3/4-18</b>	<b>7/8-18</b>	<b>1-1/16-16</b>	<b>1-3/16-16</b>	<b>1-5/16-16</b>

**•Typical Application**

Hydraulic brake, power steering, fuel lines and transmission cooler lines, LP and natural gas.

**•Working Pressure Ranges**

Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection. Temperature 73°F with copper tubing:

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

**•Vibration**

Excellent resistance.

**•Temperature Range**

-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.

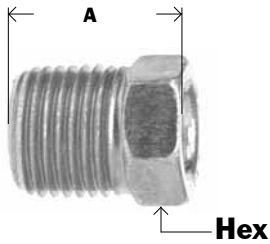
**Actual O.D. of male inverted flare threads**

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



**ZINC CHROMATE STEEL NUT**

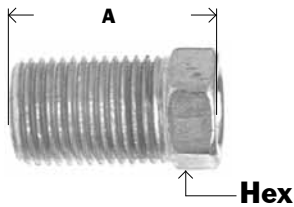
**SAE# 040110**



2105  
411FS  
105  
41W

Part #	Size	Thread	A	Hex	Approx. Wt. Lbs.	List Price
12-001	1/8"	5/16-24	0.52	0.31	0.01	1.22
12-002	3/16"	3/8-24	0.56	0.37	0.02	0.41
12-003	1/4"	7/16-24	0.56	0.43	0.02	0.46
12-004	5/16"	1/2-20	0.62	0.50	0.02	0.53
12-005	3/8"	5/8-18	0.66	0.62	0.03	0.83
12-000	7/16"	11/16-18	0.68	0.68	0.04	2.04
12-011	3/8"	11/16-18	0.66	0.68	0.05	5.47
12-006	1/2"	3/4-18	0.74	0.75	0.08	1.22
12-007	5/8"	7/8-18	0.80	0.87	0.10	2.95
12-008	3/4"	1-1/16-16	0.88	1.06	0.10	5.03

**LONG STEEL NUT**

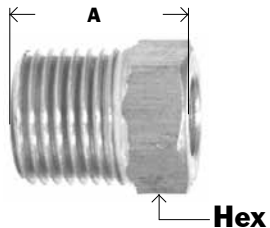


7896

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-009	3/16"	0.84	0.37	0.02	1.23
12-010	1/4"	0.81	0.43	0.02	1.39

**INVERTED FLARE BRASS NUT**

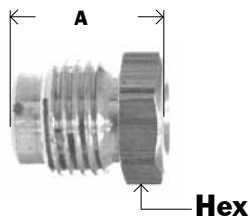
**SAE# 040110**



2100  
411F  
100  
411B

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-012	1/8"	0.52	0.31	0.01	2.66
12-013	3/16"	0.56	0.37	0.01	1.65
12-014	1/4"	0.56	0.43	0.02	1.07
12-015	5/16"	0.62	0.50	0.03	1.08
12-016	3/8"	0.66	0.62	0.04	1.63
12-017	1/2"	0.74	0.75	0.05	4.29

**SPECIAL FORD NUT**

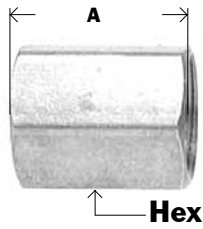


431F

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-020	1/4"	0.82	0.50	0.02	5.94

**UNION INTERNAL**

**SAE# 040101**

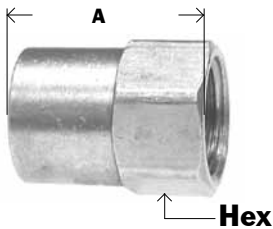


302  
2300  
42IFHD

Part #	Inv. Flare X Inv. Flare	A	Hex	Approx. Wt. Lbs.	List Price
12-022	1/8"	0.59	0.40	0.02	4.56
12-023	3/16"	0.62	0.47	0.02	0.80
12-024	1/4"	0.62	0.50	0.03	2.24
12-025	5/16"	0.70	0.56	0.04	3.95
12-026	3/8"	0.80	0.75	0.08	4.44
12-027	1/2"	0.91	0.90	0.10	6.62

**FEMALE ADAPTER**

**SAE# 040103**

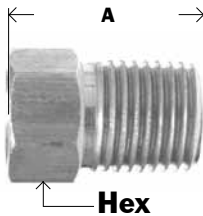


46IFHD  
252  
46W

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	2.87
12-033	1/4" x 1/8"	0.75	0.53	0.02	3.12
12-034	5/16" x 1/8"	0.78	0.59	0.04	10.92
12-035	3/8" x 1/4"	1.03	0.75	0.08	6.50
12-036	1/2" x 3/8"	1.10	0.90	0.12	10.94

**MALE ADAPTER**

**SAE# 040102**



2200  
48IFHD  
202  
48W  
200

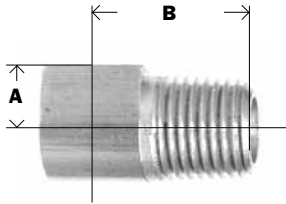
Part #	Inv. Flare X Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
12-041	1/8" x 1/8"	0.63	0.40	0.02	3.46
12-042	3/16" x 1/8"	0.70	0.43	0.02	2.27
12-043	1/4" x 1/8"	0.74	0.50	0.03	2.18
12-044	1/4" x 1/4"	0.89	0.56	0.04	2.25
12-045	5/16" x 1/8"	0.79	0.56	0.03	2.57
12-046	5/16" x 1/4"	0.98	0.56	0.05	3.60
12-047	3/8" x 1/8"	0.88	0.72	0.05	4.24
12-048	3/8" x 1/4"	1.02	0.75	0.06	3.40
12-049	3/8" x 3/8"	1.02	0.75	0.08	4.04
12-038	1/2" x 1/4"	0.97	0.87	0.10	8.17
12-050	1/2" x 3/8"	1.06	0.87	0.08	5.72
12-051	1/2" x 1/2"	1.06	0.87	0.11	8.93
12-052	5/8" x 1/2"	1.32	1.06	0.15	5.25
12-040	3/4" x 3/4"	1.39	1.25	0.24	16.56

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

"Dedicate your life to a cause greater than yourself, and your life will become a glorious romance and adventure." - Mack Douglas

**ELBOW**

**SAE# 040202**



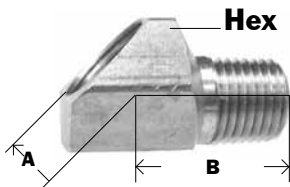
400  
2400  
249IFHD 249IF  
402 49W

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	3.75
12-058	3/16" x 1/8"	0.26	0.61	0.03	2.48
12-059	1/4" x 1/8"	0.33	0.65	0.04	2.65
12-054*	1/4" x 1/8"	0.33	0.65	0.04	14.71
12-060	1/4" x 1/4"	0.28	0.82	0.06	3.42
12-061	5/16" x 1/8"	0.47	0.68	0.05	3.26
12-062	5/16" x 1/4"	0.45	0.85	0.08	5.41
12-063	3/8" x 1/8"	0.54	0.76	0.14	6.45
12-064	3/8" x 1/4"	0.53	0.92	0.14	7.04
12-065	3/8" x 3/8"	0.50	0.94	0.12	8.00
12-066	1/2" x 3/8"	0.59	1.03	0.16	11.83
12-067	1/2" x 1/2"	0.66	1.22	0.25	15.33
12-056	5/8" x 3/8"	0.67	1.09	0.20	17.48
12-068	5/8" x 1/2"	0.67	1.29	0.18	15.46
12-069	3/4" x 1/2"	0.80	1.39	0.42	39.64
12-080	7/8" x 3/4"	0.94	1.43	0.48	59.43
12-081	1" x 1"	1.02	1.69	0.60	65.33

\* Restricted pipe end .062

**45° ELBOW**

**SAE# 040302**

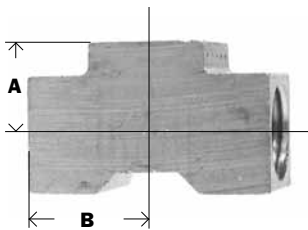


154  
2352  
259IFHD  
352 94W

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	4.52
12-073	1/4" x 1/8"	0.27	0.58	0.56	0.04	4.49
12-074	5/16" x 1/8"	0.36	0.56	0.62	0.06	6.03
12-075	5/16" x 1/4"	0.23	0.83	0.62	0.06	10.48
12-076	3/8" x 1/4"	0.51	0.84	0.78	0.09	8.65
12-077	1/2" x 3/8"	0.38	0.91	0.84	0.11	12.53
12-079	5/8" x 1/2"	0.44	1.00	1.06	0.21	23.77

**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	7.90
12-086	3/16"	0.39	0.55	0.04	4.12
12-087	1/4"	0.42	0.56	0.08	5.76
12-088	5/16"	0.45	0.63	0.09	6.87
12-089	3/8"	0.56	0.74	0.17	14.79
12-090	1/2"	0.67	0.88	0.24	26.72

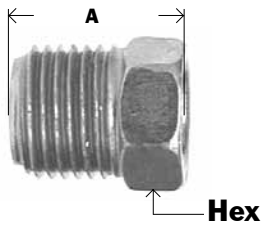
## INVERTED FLARE

## BRASS FITTINGS

## STEEL PLUG

• cored

SAE# 040109

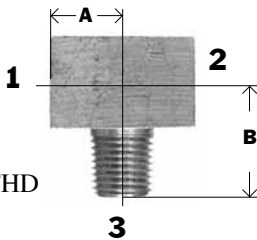


106  
411P  
131  
2131

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-091	3/16"	0.53	0.37	0.01	0.75
12-092	1/4"	0.54	0.43	0.02	1.07
12-093	5/16"	0.59	0.50	0.03	1.15
12-094	3/8"	0.66	0.62	0.04	3.06

## MALE BRANCH TEE

SAE# 040427

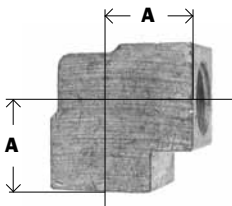


145  
245IFHD  
602  
2600  
600

Part #	Inv. Flare x Male NPTF (1&2)x3	A	B	Approx. Wt. Lbs.	List Price
12-100	3/16" x 1/8"	0.41	0.60	0.04	7.04
12-101	1/4" x 1/8"	0.42	0.64	0.06	6.11
12-102	5/16" x 1/8"	0.47	0.68	0.07	8.36
12-103	3/8" x 1/4"	0.58	0.93	0.15	19.91

## FEMALE ELBOW

SAE# 040203

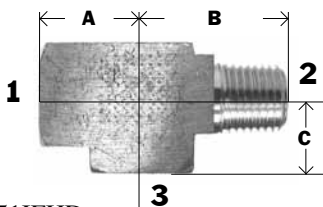


450

Part #	Inv. Flare x Female NPTF	A	Approx. Wt. Lbs.	List Price
12-110	1/4" x 1/8"	0.55	0.07	5.83
12-111	5/16" x 1/8"	0.51	0.08	7.25
12-112	3/8" x 1/4"	0.68	0.10	9.65

## MALE RUN TEE

SAE# 040424



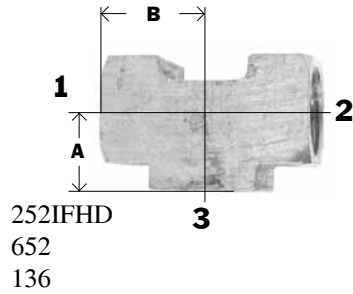
251IFHD  
752  
550  
151

Part #	Inv. Flare x Male NPTF (1&3)x2	A	B	C	Approx. Wt. Lbs.	List Price
12-118	3/16" x 1/8"	0.53	0.72	0.39	0.06	13.22
12-119	1/4" x 1/8"	0.56	0.75	0.42	0.08	9.69
12-120	5/16" x 1/8"	0.62	0.85	0.45	0.10	19.50
12-121	3/8" x 1/4"	0.75	1.08	0.56	0.14	16.69

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

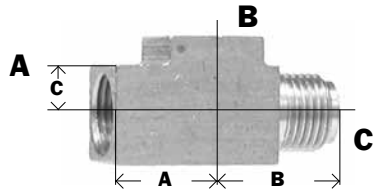
**FEMALE BRANCH TEE**

**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	17.80
12-129	5/16" x 1/8"	0.45	0.63	0.12	11.71
12-130	3/8" x 1/4"	0.56	0.74	0.17	14.25

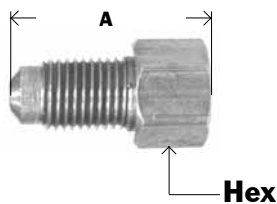
**TOWED TRAILER BRAKE TEE**



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	12.92
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	13.38
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	9.64
12-147	3/16" 0.57	3/16" 0.76	3/16" 0.42	7900	0.08	10.44
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	12.23
12-150	1/4" 0.56	3/16" 0.77	1/4" 0.43	7901	0.10	10.44
12-151	1/4" 0.56	1/4" 0.77	1/4" 0.43	7898	0.12	12.09

**INVERTED FLARE AUTO FITTINGS**

**DUAL MASTER CYLINDER ADAPTER**

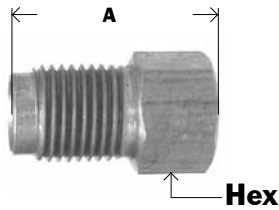


Part #	Male Flare x Female Inv.	A	Hex	Reference #	Approx. Wt. Lbs.	List Price
12-200	3/16" x 3/16"	1.00	0.50	1441	0.03	3.40
12-202	5/16" x 3/16"	0.96	0.68	7897	0.07	5.22

"If you aim at nothing, you'll hit it every time."

- B.J. Marshall

**DUAL MASTER CYLINDER ADAPTER**

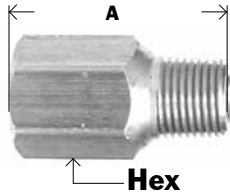


Part #	Male Inv. x Female Inv.	A	Hex	Reference #	Approx. Wt. Lbs.	List Price
12-210	3/16" x 1/4"	0.84	0.56	7828	0.03	3.92
12-212	1/4" x 3/16"	0.84	0.50	7818	0.04	4.38
12-214*	7/16-20 x 1/4"	0.87	0.68	7732	0.06	6.40
12-216	5/16" x 3/16"	0.94	0.50	7909	0.04	3.92
12-218*	5/16" x 1/4"	0.93	0.62	7727	0.06	5.60
12-220	5/16" x 1/4"	0.95	0.68	7829	0.07	4.55
12-222*	5/16" x 5/16"	0.95	0.68	1074	0.06	15.99
12-224	3/8" MPT x 5/16"	0.87	0.75	7771	0.08	9.92

\* Seals on hex face

47W

**CARBURETOR TO FUEL LINE ADAPTER - FORD**

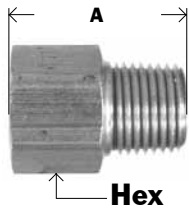


Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-230	1/4" (1/2-20) x 1/8" MPT	1.06	0.56	0.04	12.41

1513

**RESTRICTION PIPE ADAPTER**

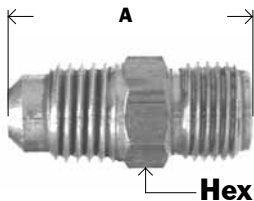
(.0625 ORIFICE)



Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
12-310	1/8"	0.75	0.50	0.02	5.29

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	28.56
12-252	1/4" x 1/4"	1.03	0.43	0.03	5.86
12-254	3/8" x 5/16"	1.34	0.63	0.08	20.59
12-256	3/8" x 3/8"	1.37	0.63	0.09	17.94
12-257	3/8" x 7/16"	1.40	0.68	0.10	13.79

4205

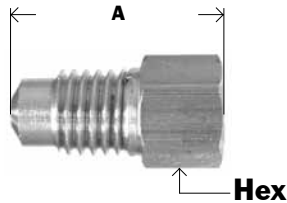
Dimension data can change without notice.  
Please call us when dimensions are critical.



**METRIC HYDRAULIC BRAKE FITTINGS**

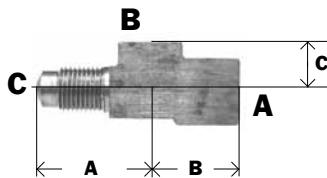
**BRASS**

**METRIC ADAPTER**



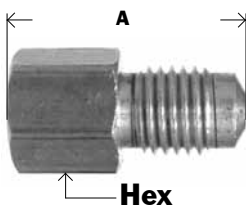
Part #	Male	O.D.	A	Hex	Approx. Wt. Lbs.	List Price
12-335	M10x1.0	3/16"(3/8-24)	1.02	0.50	0.02	3.00
12-326	M11x1.5	3/16"(M10x1.0)	1.06	0.50	0.02	14.48
12-327	M12x1.0	3/16"(M10x1.0)	1.02	0.53	0.04	13.78
12-328	M16x1.5	3/16"(M10x1.0)	1.02	0.56	0.06	14.48

**METRIC TOWED TRAILER BRAKE TEE**



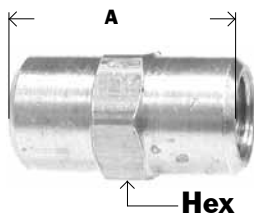
Part #	A	B	C	Approx. Wt. Lbs.	List Price
12-333	3/16" (M12x1.0) 1.03	3/16" (3/8-24) 0.75	3/16" (M12x1.0) 0.49	0.16	28.72

**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	11.14
12-339	3/16" (3/8-24)	13x1.5	1.03	0.56	7972	0.04	13.50
12-341	3/16" (3/8-24)	12x1.0	1.02	0.53	7974	0.04	14.37

**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	13.55

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



**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	27.52

**TAILPIECE WITH FLATS**1001AUL  
21605POL-LPT  
POL-LTPH  
M-2001-A

Part #	Length	List Price
34-011	2.34 w/ wrench Flats	17.21
34-012	2.13 w/ Hex	7.56

**STANDARD NUT**

7/8" Hex

1001BUL  
POL-N  
21601  
M-2001-B

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

**TAILPIECE & NUT ASSEMBLY**

2002AB

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

**BRASS FITTINGS****POL CAP**POL-N5  
2004  
1004A  
M-2004

Part #	Pipe Size	List Price
34-031	.880-14LH	11.55

**POL PLUG**1014A  
POL-P2  
2014  
M-2014

Part #	Pipe Size	List Price
34-036	.880-14LH	16.83

**ADAPTERS**POL 2005  
POL 2006  
POL 200721607  
POL-U2  
1015

Part #	Pipe Size	List Price
34-041	3/8 Flare x .880-14LH	16.60
34-046	1/2 Flare x .880-14LH	16.50
34-051	5/8 Flare x .880-14LH	17.43

**POL X 1/4 FPT**2008  
POL-U3B

Part #	Pipe Size	List Price
34-056	.880-14LH POL x 1/4 FPT	21.73

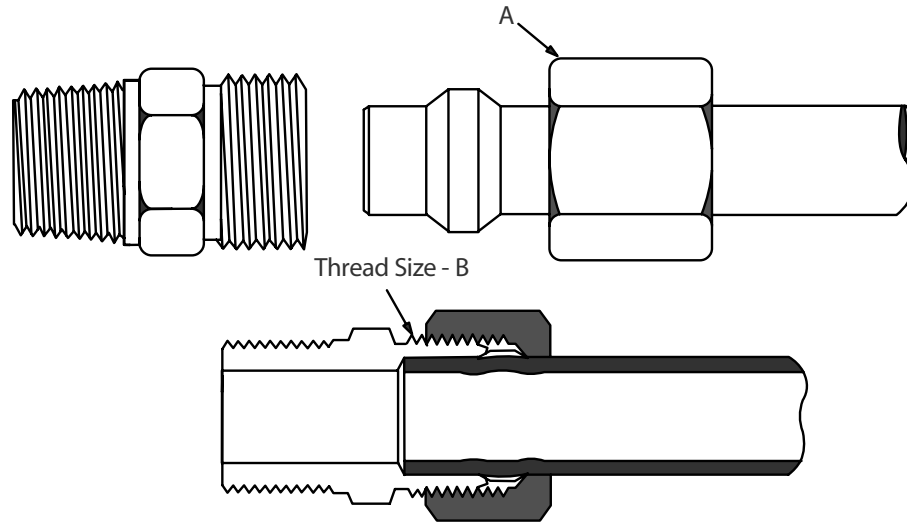
**TAILPIECE & NUT ASSEMBLY**

Part #	Size	List Price
34-025	POL x 1/4 Barb	17.90

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

# Compression Fittings

**BRASS**



<b>Tube O.D.</b>	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8
<b>Thread Size-B</b>	5/16-24	3/8-24	7/16-24	1/2-24	9/16-24	5/8-24	11/16-20	13/16-18	1-18	1-1/8 - 18

**•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.

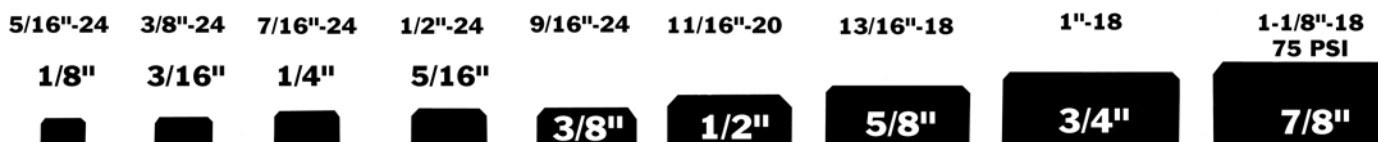
**•Assembly Instructions**

- 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.

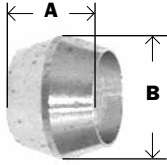
*Actual Profile of Compression Threads*



**BRASS SLEEVE**

**SAE# 060115**

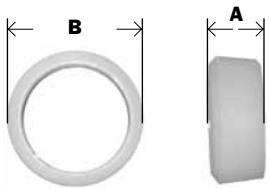
• FERRULES



60  
260

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
18-001	1/8"	0.19	0.19	0.01	0.28
18-002	3/16"	0.22	0.27	0.01	0.20
18-003	1/4"	0.25	0.34	0.01	0.21
18-004	5/16"	0.25	0.41	0.01	0.19
18-005	3/8"	0.25	0.47	0.02	0.23
18-006	7/16"	0.31	0.53	0.02	0.56
18-007	1/2"	0.38	0.59	0.02	0.57
18-008	5/8"	0.38	0.71	0.03	0.56
18-009	3/4"	0.44	0.87	0.03	1.60
18-010	7/8"	0.41	0.99	0.03	1.02

**DELRIN SLEEVE**

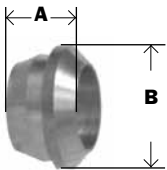


60-P

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
18-015	1/4"	0.19	0.37	0.01	0.19
18-016	5/16"	0.19	0.43	0.01	0.92
18-017	3/8"	0.19	0.50	0.02	0.28
18-018	1/2"	0.25	0.63	0.02	0.33
18-019	5/8"	0.22	0.74	0.02	0.35

**SELF-ALIGN SLEEVE**

601



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
27-001	1/8"	0.19	0.25	0.01	0.30
27-002	3/16"	0.20	0.31	0.01	0.93
27-003	1/4"	0.21	0.37	0.02	0.35

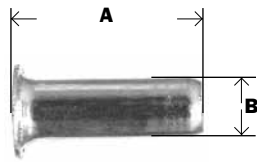
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
27-005	3/8"	0.23	0.50	0.03	0.63
27-006	1/2"	0.35	0.62	0.03	1.75

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

Some product stocked in Houston and Atlanta.

**BRASS INSERT**

• SLEEVE

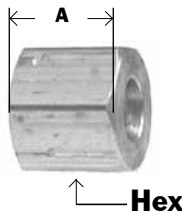


63-BI  
60AE  
2030  
63PT

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
22-008	1/8"	0.46	0.080	0.01	0.69
22-009	3/16"	0.45	0.135	0.01	0.67
22-009A	3/16"	0.52	0.095	0.01	0.78
22-010	1/4"	0.50	0.163	0.02	0.39
22-010A	1/4"	0.59	0.125	0.02	0.98
22-010B	1/4"	0.53	0.172	0.02	1.44
22-011A	5/16"	0.50	0.232	0.02	1.67
22-011	5/16"	0.53	0.187	0.02	0.69
22-012	3/8"	0.56	0.250	0.03	0.61
22-013	1/2"	0.72	0.372	0.03	0.75
22-014	5/8"	0.72	0.483	0.03	1.60
22-015	3/4"	1.03	0.563	0.03	3.81

**BRASS NUT**

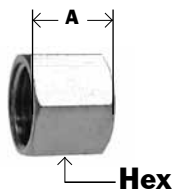
SAE# 060110



61  
261

Part #	Size	Thread	A	Hex	Approx. Wt. Lbs.	List Price
18-033	1/8"	5/16-24	0.38	0.37	0.01	0.75
18-034	3/16"	3/8-24	0.41	0.43	0.01	0.50
18-035L	1/4"	7/16-24	0.44	0.50	0.02	0.57
18-035	1/4"	7/16-24	0.44	0.50	0.02	0.77
18-036	5/16"	1/2-24	0.44	0.56	0.02	0.83
18-037L	3/8"	9/16-24	0.47	0.62	0.04	0.86
18-037	3/8"	9/16-24	0.47	0.62	0.04	0.98
18-038	7/16"	5/8-24	0.50	0.68	0.04	3.35
18-039L	1/2"	11/16-20	0.56	0.75	0.04	1.75
18-039	1/2"	11/16-20	0.62	0.81	0.04	2.26
18-040L	5/8"	13/16-18	0.56	0.87	0.06	1.65
18-040	5/8"	13/16-18	0.62	0.94	0.06	2.85
18-041	3/4"	1-18	0.68	1.12	0.08	3.54
18-042	7/8"	1-1/8 - 18	0.62	1.25	0.10	4.23

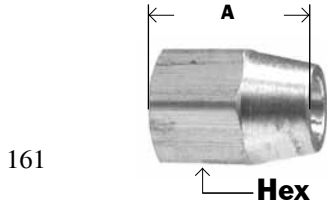
**NICKEL PLATED NUT**



Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-054	1/4"	0.44	0.50	0.02	0.72
18-055	3/8"	0.45	0.62	0.02	0.72
18-056	1/2"	0.56	0.75	0.04	1.74
18-057	5/8"	0.56	0.94	0.04	1.75

Some product stocked in Houston and Atlanta.

**LONG NUT COMPRESSION**



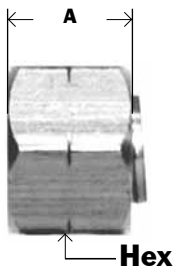
161

• More sizes available

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
24-003	1/4"	0.75	0.50	0.02	1.73
24-004	5/16"	0.84	0.56	0.02	1.34
24-005	3/8"	0.97	0.62	0.04	2.58
24-006	1/2"	1.06	0.81	0.06	6.79

\* 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**

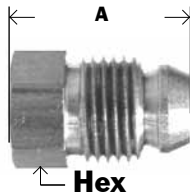


Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
26-001	1/8"	0.38	0.37	0.02	1.50
26-002	3/16"	0.40	0.43	0.02	1.57
26-003	1/4"	0.40	0.50	0.04	1.27
26-004	5/16"	0.44	0.56	0.04	1.63
26-005	3/8"	0.46	0.62	0.06	1.50
26-007	1/2"	0.50	0.81	0.08	3.01
26-008	5/8"	0.51	0.94	0.10	5.87

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

**BREAK-AWAY NUT**

181-BA  
21604  
99LB  
81LB

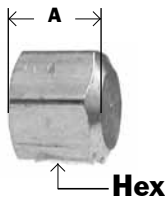


Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
16-090	3/16"	0.57	0.37	0.02	6.79
16-010	1/4"	0.62	0.43	0.02	1.88

\* Threaded sleeve fittings on page 84.

**CAP**

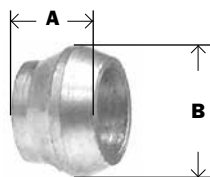
61-CC  
N5CT



Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-047	1/4"	0.44	0.50	0.02	1.29
18-048	3/8"	0.40	0.62	0.04	1.43
18-049	1/2"	0.48	0.75	0.06	2.64
18-050	5/8"	0.56	0.94	0.10	6.16

**COMPRESSION PLUG**

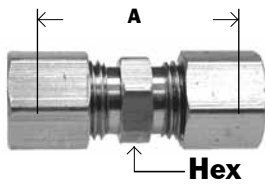
CSP



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
18-029	3/8"	0.31	0.47	0.04	1.28
18-030	1/2"	0.34	0.59	0.06	2.02

**UNION**

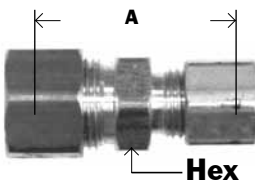
**SAE# 060101BA**



M-62

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-062	1/8"	0.64	0.31	0.03	4.59
18-063	3/16"	0.75	0.37	0.04	2.28
18-064L	1/4"	0.79	0.43	0.06	2.40
18-064	1/4"	0.81	0.43	0.06	2.76
18-065	5/16"	0.88	0.50	0.06	3.54
18-066L	3/8"	0.96	0.56	0.09	3.52
18-066	3/8"	0.98	0.56	0.10	3.38
18-067	7/16"	1.02	0.62	0.12	16.04
18-068L	1/2"	1.06	0.68	0.16	7.03
18-068	1/2"	1.25	0.68	0.16	8.73
18-069L	5/8"	1.43	0.81	0.24	7.16
18-069	5/8"	1.25	0.81	0.26	10.01
18-070	3/4"	1.41	1.00	0.35	18.96
18-071L	7/8"	1.03	1.12	0.34	15.69
18-071	7/8"	1.00	1.12	0.36	15.10

**REDUCING UNION**

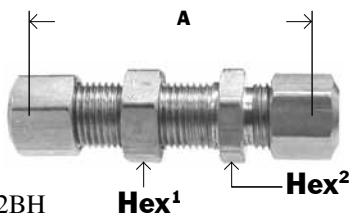


62-R

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-076	1/4" x 1/8"	0.73	0.44	0.04	3.90
18-077	1/4" x 3/16"	0.78	0.44	0.06	5.95
18-078	5/16" x 1/4"	0.81	0.50	0.06	4.23
18-079	3/8" x 1/4"	0.90	0.56	0.10	7.20
18-080	3/8" x 5/16"	0.94	0.56	0.10	6.29
18-081	1/2" x 3/8"	1.03	0.68	0.12	7.33
18-082	5/8" x 3/8"	1.03	0.81	0.15	7.27
18-083	5/8" x 1/2"	1.10	0.81	0.15	8.74
18-084	7/8" x 5/8"	1.23	1.18	0.20	29.30

**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	7.91
18-090	3/8"	1.76	0.68	0.68	0.14	19.45

"Because of our routines we forget that life is an ongoing adventure."

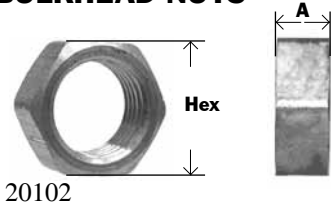
- Maya Angelou

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

Some product stocked in Houston and Atlanta.



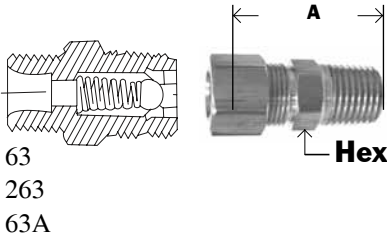
**BULKHEAD NUTS**



20102

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
18-097	1/4"	0.25	0.56	0.02	3.06
18-099	3/8"	0.25	0.68	0.04	4.19
18-100	1/2"	0.38	0.94	0.06	5.75

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

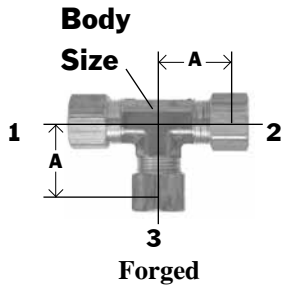


63  
263  
63A

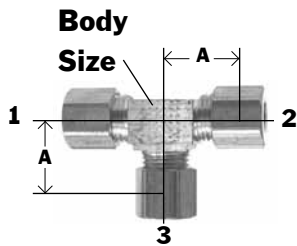
Part #	Tube OD x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
18-092	1/8" x 1/8"	0.78	0.44	0.04	11.63
18-094	1/4" x 1/8"	0.88	0.44	0.04	11.32
18-096	3/8" x 1/4"	1.16	0.56	0.08	15.87

**TEE**

**SAE# 060401**



Forged



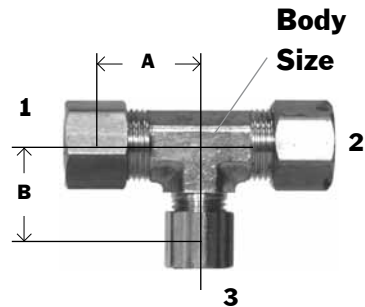
Barstock

64  
264C

Part #	Size	A	Body Size	Approx. Wt. Lbs.	List Price
18-101	1/8"	0.61	0.37	0.04	11.74
18-101B*	1/8"	0.62	0.33	0.04	10.38
18-102	3/16"	0.59	0.36	0.08	5.80
18-102B*	3/16"	0.60	0.38	0.08	7.29
18-103	1/4"	0.63	0.36	0.10	5.35
18-103B*	1/4"	0.62	0.49	0.10	9.61
18-104	5/16"	0.72	0.50	0.13	8.49
18-104B*	5/16"	0.60	0.50	0.14	11.70
18-105	3/8"	0.75	0.50	0.16	6.27
18-105B*	3/8"	0.73	0.59	0.16	10.84
18-106	1/2"	0.94	0.59	0.22	13.26
18-106B*	1/2"	0.94	0.69	0.24	24.64
18-107	5/8"	1.06	0.69	0.28	13.51
18-108	3/4"	1.22	0.88	0.32	47.28
18-109	7/8"	1.25	0.94	0.34	36.18

\* Barstock

**FORGED REDUCING TEE**



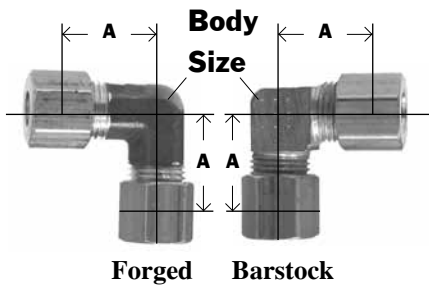
64-R

Part #	Size 1 x 2 x 3	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-114	1/4" x 1/4" x 1/8"	0.62	0.59	0.38	0.09	7.28
18-110	1/4" x 1/4" x 3/8"	0.69	0.75	0.50	0.14	16.10
18-111	3/8" x 1/4" x 1/4"	0.75	0.69	0.50	0.12	9.90
18-115	3/8" x 3/8" x 1/4"	0.75	0.69	0.50	0.14	7.27
18-116	1/2" x 1/2" x 1/4"	0.94	0.81	0.59	0.16	13.74
18-117	1/2" x 1/2" x 3/8"	0.94	0.81	0.59	0.24	14.79
18-118	5/8" x 5/8" x 3/8"	1.06	0.94	0.69	0.28	17.69
18-119	5/8" x 5/8" x 1/2"	1.06	1.06	0.69	0.30	18.81

Some product stocked in Houston and Atlanta.

**UNION ELBOW**

**SAE# 060201**

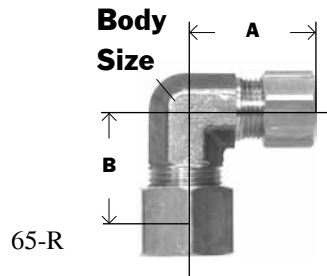


65  
BSE2  
165C Forged  
265C Barstock

Part #	Size	A	Body Size	Approx. Wt. Lbs.	List Price
18-122B*	1/8"	0.62	0.35	0.04	7.25
18-123	3/16"	0.61	0.37	0.06	6.28
18-123B*	3/16"	0.62	0.41	0.06	6.58
18-124	1/4"	0.66	0.38	0.08	4.55
18-124B*	1/4"	0.60	0.48	0.08	6.70
18-125	5/16"	0.69	0.47	0.09	7.50
18-125B*	5/16"	0.62	0.52	0.09	9.34
18-126	3/8"	0.72	0.43	0.12	5.31
18-127	1/2"	0.94	0.59	0.19	9.37
18-127B*	1/2"	0.94	0.71	0.19	18.50
18-128	5/8"	1.06	0.72	0.26	9.15
18-129	3/4"	1.19	0.94	0.48	24.01
18-130	7/8"	1.25	0.94	0.44	27.44

\* Barstock

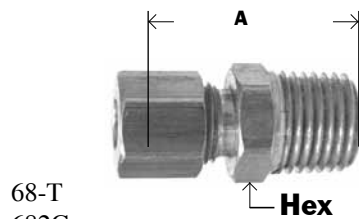
**REDUCING ELBOW - Forged**



65-R

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

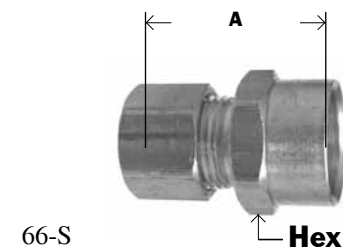
**TANK ADAPTER DRILLED THRU (NO STOP)**



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	2.70
18-209	1/4" x 1/4"	0.99	0.56	0.05	2.27
18-210	3/8" x 1/4"	1.16	0.56	0.05	3.44
18-211	3/8" x 3/8"	1.09	0.68	0.08	3.39
18-212	3/8" x 1/2"	1.19	0.87	0.10	4.91
18-213	1/2" x 3/8"	1.22	0.68	0.12	6.87
18-214	1/2" x 1/2"	1.09	0.81	0.14	5.44
18-215	5/8" x 1/2"	1.12	0.81	0.18	6.58

**COMP X SWEAT ADAPTER**



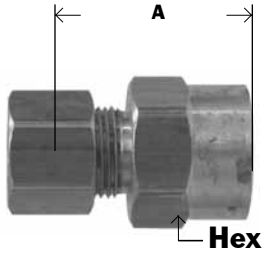
66-S

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

Lead Free fittings available on  
**pgs. 382-388**

**FEMALE ADAPTER**

**SAE# 060103**



66

Part #	Comp. X Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
18-142	1/8" x 1/8"	0.75	0.56	0.02	3.15
18-143	3/16" x 1/8"	0.78	0.56	0.04	2.82
18-144	3/16" x 1/4"	0.96	0.68	0.04	8.89
18-145L	1/4" x 1/8"	0.84	0.50	0.05	1.86
18-145	1/4" x 1/8"	0.78	0.56	0.05	2.67
18-146L	1/4" x 1/4"	0.88	0.62	0.09	3.69
18-146	1/4" x 1/4"	1.03	0.68	0.09	5.13
18-147	1/4" x 3/8"	1.00	0.81	0.10	4.21
18-148	1/4" x 1/2"	1.02	0.87	0.12	5.09
18-149	5/16" x 1/8"	0.81	0.56	0.05	3.21
18-150	5/16" x 1/4"	0.91	0.62	0.06	4.68
18-152	3/8" x 1/8"	0.88	0.56	0.06	3.34
18-153L	3/8" x 1/4"	0.97	0.62	0.08	4.31
18-153	3/8" x 1/4"	1.06	0.68	0.08	4.63
18-154L	3/8" x 3/8"	1.03	0.75	0.08	3.06
18-154	3/8" x 3/8"	1.06	0.81	0.10	6.51
18-155	3/8" x 1/2"	1.12	1.00	0.08	4.67
18-156	3/8" x 3/4"	1.19	1.16	0.14	16.01
18-157	1/2" x 1/4"	1.09	0.68	0.10	8.82
18-158L	1/2" x 3/8"	0.94	0.81	0.12	4.84
18-158	1/2" x 3/8"	1.12	0.81	0.12	6.61
18-159L	1/2" x 1/2"	1.19	1.00	0.12	5.76
18-159	1/2" x 1/2"	1.31	1.00	0.12	12.09
18-160	1/2" x 3/4"	1.25	1.16	0.18	15.19
18-161	5/8" x 3/8"	1.03	0.81	0.12	10.55
18-162L	5/8" x 1/2"	1.20	0.94	0.18	6.60
18-162	5/8" x 1/2"	1.38	1.00	0.18	9.43
18-163	5/8" x 3/4"	1.20	1.12	0.22	10.03
18-164	3/4" x 1/2"	1.25	1.06	0.26	17.17
18-165	3/4" x 3/4"	1.28	1.19	0.28	26.19
18-167	7/8" x 1/2"	1.28	1.19	0.32	16.43
18-166	7/8" x 3/4"	1.31	1.12	0.34	11.42

"You have brains in your head and feet in your shoes  
 You can steer yourself any direction you choose.  
 You're on your own and you know what you know.  
 And you are the one who'll decide where to go."

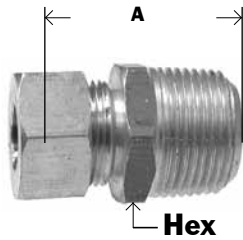
- Dr. Seuss

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



**MALE ADAPTER**

**SAE# 060102**



68

Part #	Comp. X Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
18-175	1/8" x 1/16"	0.78	0.37	0.02	7.05
18-176	1/8" x 1/8"	0.78	0.43	0.04	2.13
18-177	3/16" x 1/8"	0.84	0.43	0.04	2.04
18-178	3/16" x 1/4"	0.94	0.56	0.06	4.23
18-179L	1/4" x 1/8"	0.88	0.56	0.04	1.96
18-179	1/4" x 1/8"	0.88	0.43	0.04	1.91
18-180L	1/4" x 1/4"	0.94	0.56	0.05	1.68
18-180	1/4" x 1/4"	1.06	0.56	0.06	3.11
18-181	1/4" x 3/8"	1.03	0.68	0.08	2.79
18-182	1/4" x 1/2"	1.09	0.81	0.10	4.23
18-183	5/16" x 1/8"	0.91	0.50	0.05	2.60
18-184L	5/16" x 1/4"	1.01	0.56	0.06	3.04
18-184	5/16" x 1/4"	1.09	0.56	0.06	3.11
18-185	5/16" x 3/8"	1.06	0.68	0.07	5.05
18-186	5/16" x 1/2"	1.14	0.87	0.10	8.82
18-187L	3/8" x 1/8"	0.94	0.56	0.06	2.88
18-187	3/8" x 1/8"	0.97	0.56	0.06	3.24
18-188L	3/8" x 1/4"	1.03	0.56	0.06	2.82
18-188	3/8" x 1/4"	1.16	0.56	0.07	3.38
18-189L	3/8" x 3/8"	1.09	0.68	0.08	2.99
18-189	3/8" x 3/8"	1.14	0.69	0.08	4.04
18-190L	3/8" x 1/2"	1.19	0.88	0.12	4.88
18-190	3/8" x 1/2"	1.34	0.87	0.13	5.70
18-191	3/8" x 3/4"	1.29	1.06	0.16	9.14
18-192	7/16" x 1/4"	1.06	0.62	0.10	9.20
18-204	7/16" x 3/8"	1.10	0.68	0.12	6.98
18-193L	1/2" x 1/4"	1.09	0.69	0.11	5.60
18-193	1/2" x 1/4"	1.22	0.68	0.11	6.12
18-194L	1/2" x 3/8"	1.16	0.68	0.12	5.41
18-194	1/2" x 3/8"	1.16	0.69	0.12	5.55
18-195L	1/2" x 1/2"	1.09	0.81	0.12	5.41
18-195	1/2" x 1/2"	1.41	0.87	0.19	7.67
18-196	1/2" x 3/4"	1.38	1.06	0.22	7.67
18-197	5/8" x 3/8"	1.22	0.87	0.24	5.84
18-198	5/8" x 1/2"	1.12	0.81	0.24	6.90
18-199	5/8" x 3/4"	1.31	1.06	0.26	6.82
18-200	3/4" x 1/2"	1.44	1.00	0.26	10.36
18-201	3/4" x 3/4"	1.50	1.06	0.26	11.39
18-202	7/8" x 1/2"	1.18	1.12	0.26	17.87
18-203	7/8" x 3/4"	1.22	1.12	0.28	9.96
18-205	7/8" x 1"	1.67	1.37	0.32	25.30

**BRASS**

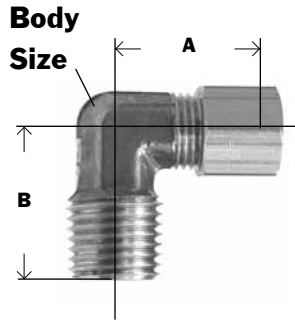
"We are here on earth to do good for others. What the others are here for I do not know."

- W. H. Auden

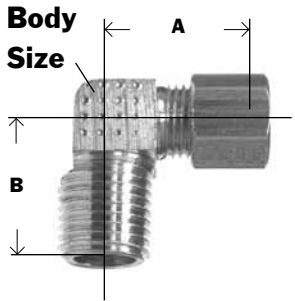


**MALE ELBOW**

**SAE# 060202**



**Forged**



**Barstock**

69  
269C  
BSE1  
169C

Part #	Comp. X Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-220	1/8" x 1/8"	0.59	0.75	0.34	0.02	4.55
18-220B*	1/8" x 1/8"	0.60	0.67	0.43	0.04	3.42
18-221	3/16" x 1/8"	0.63	0.72	0.34	0.04	4.28
18-221B*	3/16" x 1/8"	0.62	0.69	0.43	0.06	2.89
18-223	3/16" x 1/4"	0.60	0.81	0.39	0.05	4.92
18-224	1/4" x 1/8"	0.60	0.75	0.37	0.06	3.28
18-224B*	1/4" x 1/8"	0.62	0.75	0.43	0.06	2.86
18-225	1/4" x 1/4"	0.65	0.94	0.36	0.08	3.86
18-225B*	1/4" x 1/4"	0.61	0.81	0.56	0.08	3.42
18-226	1/4" x 3/8"	0.75	0.91	0.47	0.08	4.57
18-227	1/4" x 1/2"	0.81	1.13	0.56	0.12	7.38
18-228	5/16" x 1/8"	0.66	0.75	0.47	0.06	4.45
18-228B*	5/16" x 1/8"	0.62	0.75	0.42	0.06	3.76
18-229	5/16" x 1/4"	0.66	0.81	0.47	0.07	4.65
18-229B*	5/16" x 1/4"	0.69	0.84	0.57	0.08	5.04
18-230	5/16" x 3/8"	0.75	0.91	0.47	0.10	5.65
18-231	5/16" x 1/2"	0.84	1.12	0.56	0.12	8.40
18-232	3/8" x 1/8"	0.72	0.66	0.39	0.06	3.88
18-232B*	3/8" x 1/8"	0.69	0.69	0.57	0.06	5.65
18-233	3/8" x 1/4"	0.75	0.82	0.46	0.08	4.75
18-233B*	3/8" x 1/4"	0.75	0.94	0.57	0.08	4.36
18-234	3/8" x 3/8"	0.81	0.94	0.46	0.10	5.36
18-234B*	3/8" x 3/8"	0.71	0.83	0.69	0.10	9.04
18-235	3/8" x 1/2"	0.87	1.12	0.56	0.14	11.01
18-235B*	3/8" x 1/2"	0.88	1.16	0.94	0.14	16.68
18-248	3/8" x 3/4"	1.03	1.19	0.81	0.18	11.19
18-247	7/16" x 1/4"	0.84	1.00	0.56	0.14	8.76
18-236	1/2" x 1/4"	0.88	0.97	0.56	0.14	7.87
18-237	1/2" x 3/8"	0.88	1.03	0.56	0.19	6.97
18-237B*	1/2" x 3/8"	0.94	1.12	0.70	0.19	8.76
18-238	1/2" x 1/2"	0.94	1.13	0.59	0.17	7.51
18-238B*	1/2" x 1/2"	0.94	1.31	0.86	0.17	14.72
18-239	1/2" x 3/4"	1.16	1.25	0.81	0.18	13.95
18-240	5/8" x 3/8"	1.06	1.12	0.68	0.18	8.51
18-241	5/8" x 1/2"	1.06	1.16	0.68	0.20	9.10
18-241B*	5/8" x 1/2"	1.06	1.31	0.86	0.20	11.50
18-242	5/8" x 3/4"	1.16	1.31	0.81	0.24	14.29
18-243	3/4" x 1/2"	1.19	1.31	0.94	0.26	14.80
18-245	3/4" x 3/4"	1.19	1.38	0.94	0.30	17.73
18-246	7/8" x 3/4"	1.25	1.38	0.94	0.35	24.99

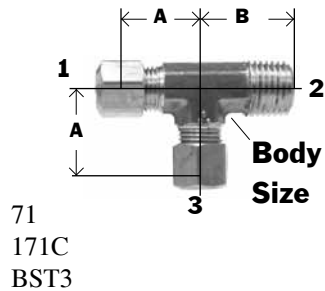
\* Barstock

Some product stocked in Houston and Atlanta.

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



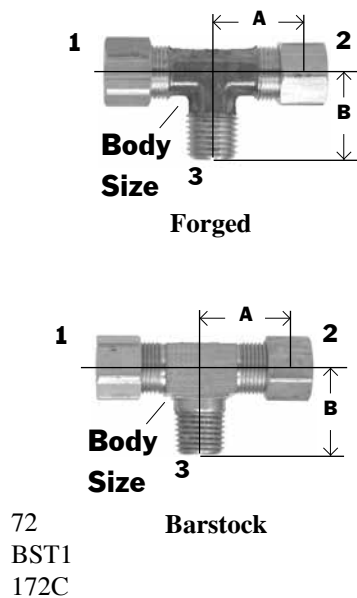
**FORGED MALE RUN TEE**



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	5.24
18-273	3/16" x 1/8"	0.63	0.69	0.36	0.07	6.30
18-274	1/4" x 1/8"	0.63	0.75	0.36	0.08	5.43
18-275	1/4" x 1/4"	0.69	0.88	0.44	0.10	6.43
18-276	5/16" x 1/8"	0.72	0.75	0.50	0.10	8.40
18-277	5/16" x 1/4"	0.75	0.88	0.44	0.10	7.60
18-278	3/8" x 1/8"	0.75	0.75	0.50	0.14	8.48
18-279	3/8" x 1/4"	0.79	0.87	0.44	0.18	7.30
18-280	3/8" x 3/8"	0.88	1.00	0.47	0.20	9.34
18-281	1/2" x 3/8"	0.94	1.09	0.59	0.24	12.86
18-282	1/2" x 1/2"	0.97	1.19	0.69	0.26	16.51
18-283	5/8" x 1/2"	1.06	1.31	0.69	0.28	15.74
18-284	3/4" x 1/2"	1.22	1.34	0.88	0.30	38.16

**MALE BRANCH TEE**

**SAE# 060203**



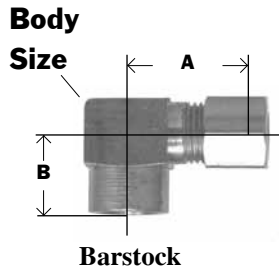
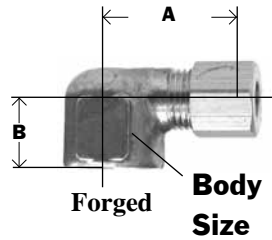
Part #	Comp. X Male NPTF (1&2) X 3	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-290	3/16" x 1/8"	0.63	0.69	0.36	0.08	8.21
18-291	1/4" x 1/8"	0.62	0.75	0.36	0.10	5.88
18-291B*	1/4" x 1/8"	0.64	0.73	0.45	0.10	8.05
18-292	1/4" x 1/4"	0.69	0.86	0.44	0.10	6.81
18-293	5/16" x 1/8"	0.72	0.75	0.50	0.11	6.81
18-294	5/16" x 1/4"	0.75	0.88	0.44	0.12	7.61
18-295	3/8" x 1/8"	0.75	0.75	0.50	0.14	8.72
18-296	3/8" x 1/4"	0.78	0.88	0.44	0.16	6.77
18-296B*	3/8" x 1/4"	0.78	0.91	0.62	0.16	9.45
18-297	3/8" x 3/8"	0.78	0.97	0.47	0.18	10.21
18-298	3/8" x 1/2"	0.88	1.22	0.69	0.20	15.31
18-304	1/2" x 1/4"	0.94	0.97	0.59	0.22	12.77
18-299B*	1/2" x 3/8"	0.96	1.09	0.70	0.24	20.59
18-299	1/2" x 3/8"	0.94	1.12	0.59	0.24	12.43
18-300	1/2" x 1/2"	0.97	1.19	0.69	0.30	16.11
18-301	5/8" x 1/2"	1.06	1.31	0.69	0.32	18.42
18-302	3/4" x 1/2"	1.22	1.34	0.88	0.50	40.93
18-303	3/4" x 3/4"	1.25	1.50	0.88	0.54	38.26

\* Barstock

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**FEMALE ELBOW**

**SAE# 060203**

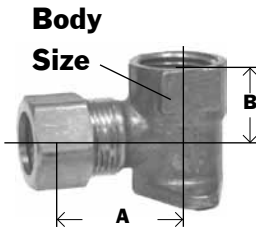


70  
270C  
BSE3  
170C

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	7.23
18-252	3/16" x 1/8"	0.69	0.47	0.56	0.04	4.75
18-253	1/4" x 1/8"	0.69	0.47	0.56	0.06	4.57
18-253B*	1/4" x 1/8"	0.69	0.56	0.56	0.06	4.89
18-254	1/4" x 1/4"	0.75	0.50	0.72	0.08	5.35
18-267	1/4" x 3/8"	0.81	0.58	0.81	0.08	7.57
18-268	1/4" x 1/2"	0.89	0.66	1.00	0.10	10.02
18-255	5/16" x 1/8"	0.72	0.84	0.47	0.08	8.73
18-256	5/16" x 1/4"	0.78	0.50	0.72	0.09	6.81
18-257	3/8" x 1/8"	0.75	0.84	0.47	0.10	5.41
18-258	3/8" x 1/4"	0.84	0.59	0.75	0.10	5.44
18-259	3/8" x 3/8"	0.88	0.58	0.81	0.12	6.13
18-260	3/8" x 1/2"	0.97	0.66	1.00	0.14	7.82
18-250	3/8" x 3/4"	1.09	0.72	1.25	0.18	12.68
18-261	1/2" x 1/4"	1.06	0.70	0.88	0.18	10.89
18-262	1/2" x 3/8"	1.00	0.70	0.88	0.16	8.75
18-263	1/2" x 1/2"	1.03	0.72	1.00	0.20	9.25
18-270	1/2" x 3/4"	1.16	0.72	1.25	0.23	13.67
18-269	5/8" x 3/8"	1.09	0.77	1.00	0.20	13.90
18-264	5/8" x 1/2"	1.09	0.77	1.00	0.22	10.88
18-265	5/8" x 3/4"	1.22	0.77	1.25	0.24	14.93
18-266	3/4" x 1/2"	1.25	1.25	0.94	0.28	24.45

\* Barstock

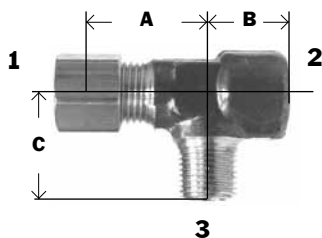
**FORGED DROP-EAR ELBOW**



BSE3-DE

Part #	Comp. X Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-271	5/8" x 1/2"	1.18	0.72	1.00	0.18	20.27

**FORGED TEE**



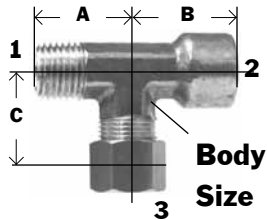
71  
171C  
BST3

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

Some product stocked in Houston and Atlanta.



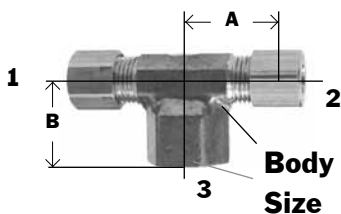
**ADAPTER TEE**



Part #	Male NPTF x Female NPTF x Comp. 3x (1&2)	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
18-314	1/8" x 1/4"	0.72	0.53	0.72	0.47	0.08	8.11
18-316	3/8" x 1/4"	0.84	0.97	0.81	0.47	0.10	9.12

76  
176C

**FEMALE BRANCH FORGED TEE**

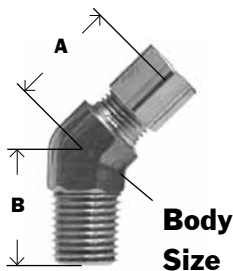


Part #	Comp. X Female NPTF (1&2)x3	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-321	1/4" x 1/8"	0.78	0.75	0.45	0.10	6.99
18-328	1/4" x 1/4"	0.78	0.75	0.44	0.12	10.91
18-325	3/8" x 1/8"	0.75	0.63	0.50	0.12	7.87
18-322	3/8" x 1/4"	0.81	0.97	0.47	0.14	10.65
18-323	3/8" x 3/8"	0.97	0.69	1.05	0.16	16.42
18-326	1/2" x 1/8"	0.94	0.75	0.59	0.20	14.00
18-324	1/2" x 3/8"	1.00	0.72	0.88	0.22	21.62
18-327	5/8" x 1/8"	1.06	0.81	0.69	0.26	19.50

78      2908  
BST4  
77  
177C

**45° ELBOW**

**SAE# 060302**



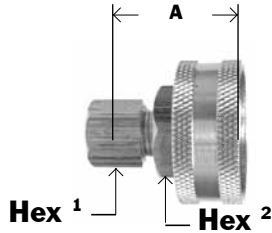
Part #	Comp. X Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
18-329	3/16" x 1/8"	0.40	0.63	0.41	0.04	5.42
18-330	1/4" x 1/8"	0.40	0.61	0.41	0.04	4.99
18-336	1/4" x 1/4"	0.59	0.84	0.53	0.06	7.31
18-331	5/16" x 1/8"	0.59	0.65	0.53	0.06	7.97
18-332	5/16" x 1/4"	0.59	0.83	0.53	0.08	7.65
18-333	3/8" x 1/4"	0.62	0.83	0.53	0.08	6.53
18-338	3/8" x 3/8"	0.75	0.95	0.59	0.10	13.49
18-334	1/2" x 3/8"	0.75	0.88	0.59	0.14	8.08
18-339	1/2" x 1/2"	0.94	1.14	0.75	0.14	14.88
18-335	5/8" x 1/2"	0.78	1.14	0.78	0.14	16.68

6945    273  
45BSE1   77  
74  
179C

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

**COMPRESSION****BRASS FITTINGS****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	7.96
30-051	3/8" x 3/4"	1.04	0.62	0.75	0.12	7.72

**DOUBLE COMPRESSION THREADED SLEEVE FITTINGS**

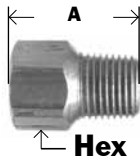
- Use with aluminum and copper tubing or plastic tubing with internal tube support. Not recommended for steel tubing.
- Easy to assemble, no flaring, two piece construction.
- For use on oil, air, water and grease lubrication systems.
- When design makes a dimension critical, contact us for information.

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 74.

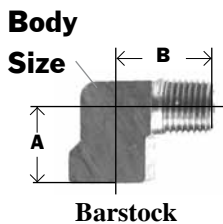
**NUT**181  
6100  
11

Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
16-001	1/8"	0.50	0.37	0.02	0.93
16-002	3/16"	0.53	0.43	0.02	1.40
16-003	1/4"	0.56	0.50	0.04	2.19
16-004	5/16"	0.61	0.56	0.04	1.77
16-005	3/8"	0.61	0.62	0.04	3.00

**MALE ADAPTER**188  
6200  
12

Part #	THRD Sleeve x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
16-117	1/8" x *	0.62	0.43	0.02	3.07
16-118	1/8" x 1/8"	0.62	0.43	0.02	2.08
16-119	3/16" x 1/8"	0.69	0.43	0.02	2.04
16-121	1/4" x 1/8"	0.75	0.50	0.04	2.37
16-122	5/16" x 1/8"	0.89	0.56	0.04	4.79
16-123	3/8" x 1/4"	0.84	0.62	0.06	5.19

\* 1/4 - 28 Male Thread Tapered.

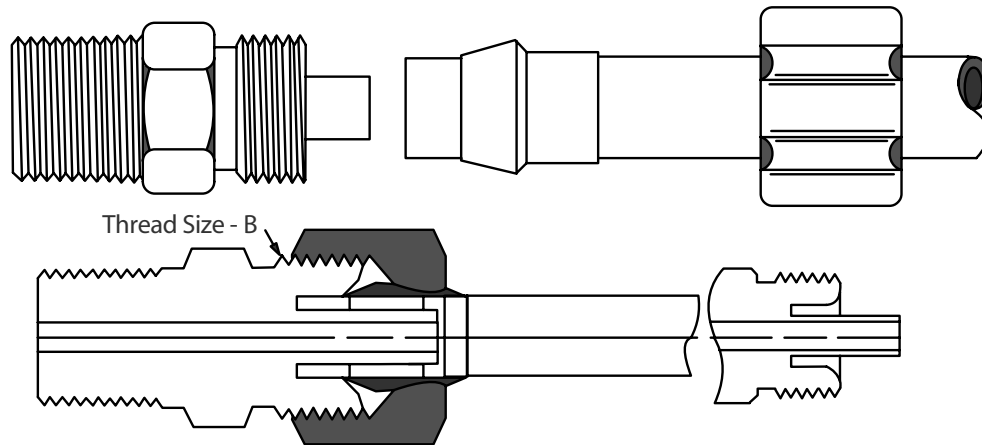
**90° ELBOW**189  
6400  
15

Part #	THRD Sleeve x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
16-127	1/8" x *	0.50	0.52	0.41	0.02	8.08
16-128	1/8" x 1/8"	0.50	0.66	0.43	0.02	9.92
16-129	3/16" x 1/8"	0.56	0.62	0.44	0.02	9.88
16-130	1/4" x 1/8"	0.52	0.62	0.50	0.04	9.12

\* 1/4 - 28 Male Thread Tapered

# 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	5/16	3/8	1/2
Thread Size-B	5/16-24	3/8-24	3/8-24	7/16-24	1/2-24	1 1/16-20

#### •Typical Application

Pneumatic instrumentation circuits, lubricant and cooling lines.

#### •Working Pressure and Temperature Ranges

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

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

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

#### •Vibration

Excellent Resistance.

#### •Temperature Range

Depends on tubing used. -65°F to +250°F (-53°C to +121°C) with brass sleeve, -40°F to +150°F (-40°C to +66°C) with plastic sleeve. (Refer to tubing temperature range.)

#### •Material

CA360 Brass body, plastic or brass sleeve.

#### •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.

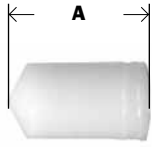
#### •Advantages

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.

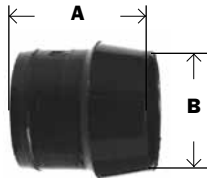
**PLASTIC CAP**



1229  
59P  
259P

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-201	1/4"	0.50	0.01	1.99
20-203	3/8"	0.56	0.01	1.60
20-204	1/2"	0.59	0.01	2.48

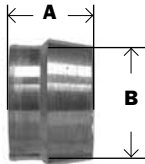
**PLASTIC SLEEVE**



260FF  
1260  
60P  
260P

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
20-205	1/4"	0.34	0.26	0.01	0.31
20-206	5/16"	0.39	0.32	0.01	0.40
20-207	3/8"	0.41	0.38	0.01	0.50
20-208	1/2"	0.44	0.51	0.01	0.33

**BRASS SLEEVE**



260FB

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
20-380	1/8"	0.19	0.12	0.01	2.14
20-381	3/16"	0.30	0.19	0.01	1.97
20-382	1/4"	0.32	0.25	0.01	0.99
20-384	3/8"	0.37	0.38	0.02	1.96

**NUT AND PLASTIC SLEEVE ASSEMBLY**



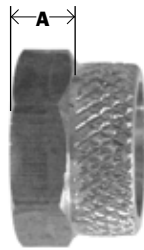
261PF  
1261  
61PN  
261U

Part #	Tube O.D.	Thread	A	Hex (Dia.)	Approx. Wt. Lbs.	List Price
20-211	1/4"	3/8-24	0.43	0.43	0.02	1.38
20-212	5/16"	7/16-24	0.45	0.50	0.02	2.28
20-213	3/8"	1/2-24	0.49	0.56	0.04	1.56
20-214	1/2"	11/16-20	0.42	0.81	0.04	3.01

Lead Free fittings available on  
**pgs. 382-388**

**NUT**

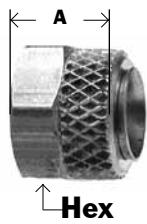
61PN  
1261  
261FPN



Part #	Tube O.D.	Thread	A	Hex (Dia.)	Approx. Wt. Lbs.	List Price
20-218	1/8"	5/16-24	0.37	0.37	0.01	1.20
20-219	3/16"	3/8-24	0.41	0.44	0.01	1.20
20-220	1/4"	3/8-24	0.34	0.44	0.02	1.40
20-221	5/16"	7/16-24	0.34	0.50	0.02	1.20
20-222	3/8"	1/2-24	0.38	0.56	0.04	1.52
20-223	1/2"	11/16-20	0.42	0.81	0.06	2.37

**UNIVERSAL NUT AND BRASS SLEEVE ASSEMBLY**

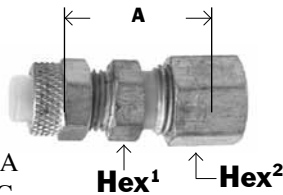
261PFB  
1261B  
61PB  
261UB



Part #	Tube O.D.	Thread	A	Hex	Approx. Wt. Lbs.	List Price
20-227	1/8"	5/16-24	0.37	0.37	0.02	1.87
20-228	3/16"	3/8-24	0.41	0.44	0.02	1.57
20-229	1/4"	3/8-24	0.34	0.43	0.02	2.01
20-230	5/16"	7/16-24	0.34	0.50	0.02	1.97
20-231	3/8"	1/2-24	0.37	0.56	0.04	2.68
20-232	1/2"	11/16-20	0.42	0.81	0.04	3.84

**UNION TUBE #M62C**

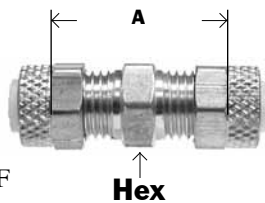
262S  
62PCA  
262PC



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	7.87
20-237	3/8"	0.84	0.62	0.62	0.08	9.55

**UNION**

262PF  
1262  
62P  
262P

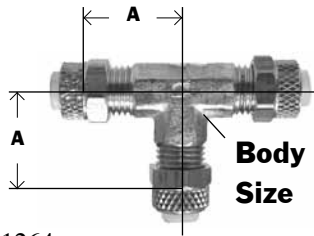


Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-240	1/8"	0.66	0.31	0.02	7.58
20-241	3/16"	0.75	0.37	0.04	8.26
20-242	1/4"	0.69	0.37	0.04	3.39
20-243	5/16"	0.69	0.44	0.04	8.46
20-244	3/8"	0.72	0.50	0.10	8.60
20-200	3/8" x 1/4"	0.72	0.50	0.08	8.83
20-245	1/2"	0.84	0.69	0.14	11.89

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

**UNION TEE**

**BRASS**

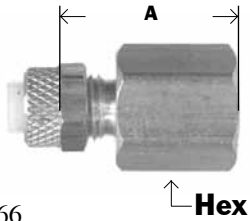


1264  
164P  
264P

Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
20-248	1/8"	0.62	0.31	0.02	12.30
20-249	3/16"	0.62	0.31	0.04	12.69
20-250	1/4"	0.73	0.44	0.06	10.00
20-251	5/16"	0.62	0.37	0.08	11.39
20-252	3/8"	0.86	0.56	0.08	11.25
20-330*	3/8" x 1/4"	0.72	0.44	0.08	20.68
20-253	1/2"	0.81	0.62	0.24	25.30

\* Reducing Branch

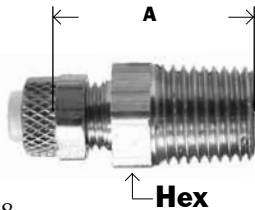
**FEMALE CONNECTOR**



1266  
66P  
266P

Part #	Tube O.D. x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-256	1/8" x 1/8"	0.75	0.56	0.03	6.99
20-257	3/16" x 1/8"	0.78	0.56	0.05	7.08
20-258	3/16" x 1/4"	0.97	0.69	0.05	14.32
20-259	1/4" x 1/8"	0.76	0.50	0.04	8.06
20-260	1/4" x 1/4"	1.08	0.62	0.05	7.21
20-261	5/16" x 1/8"	0.75	0.50	0.03	7.25
20-264	5/16" x 1/4"	0.90	0.62	0.04	8.13
20-265	3/8" x 1/8"	0.77	0.56	0.05	14.67
20-262	3/8" x 1/4"	0.94	0.62	0.05	7.49
20-263	1/2" x 3/8"	1.00	0.81	0.12	10.43

**MALE CONNECTOR**



1268  
68P  
268P

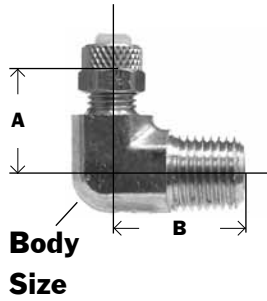
Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-266	1/8" x 1/16"	0.78	0.34	0.02	13.44
20-267	1/8" x 10-32*	0.59	0.37	0.02	7.11
20-268	1/8" x 1/8"	0.80	0.34	0.04	4.37
20-269	3/16" x 1/8"	0.86	0.44	0.04	4.04
20-280	1/4" x 1/16"	0.81	0.43	0.03	11.15
20-270	1/4" x 10-32*	0.75	0.37	0.02	7.94
20-271	1/4" x 1/8"	0.82	0.44	0.03	3.49
20-272	1/4" x 1/4"	1.00	0.56	0.05	4.23
20-273	1/4" x 3/8"	1.03	0.69	0.08	7.33
20-274	5/16" x 1/8"	0.81	0.44	0.04	4.21
20-275	5/16" x 1/4"	1.00	0.56	0.05	5.07
20-276	3/8" x 1/8"	0.84	0.50	0.06	5.09
20-277	3/8" x 1/4"	1.03	0.56	0.08	5.94
20-278	3/8" x 3/8"	1.03	0.69	0.10	7.00
20-279	1/2" x 3/8"	1.09	0.69	0.16	7.25
20-282	1/2" x 1/2"	1.33	0.88	0.18	12.85

\* Furnished with gasket.

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



**MALE ELBOW**

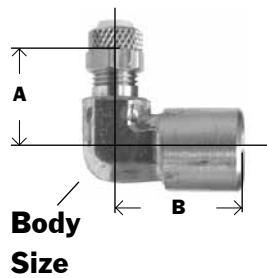


1269  
169P  
269P

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	4.83
20-288	3/16" x 1/8"	0.62	0.69	0.37	0.04	5.31
20-289*	1/4" x 1/8"	0.53	0.73	0.50	0.04	3.84
20-290	1/4" x 1/4"	0.66	0.94	0.37	0.06	6.67
20-291	1/4" x 3/8"	0.75	1.03	0.50	0.10	11.12
20-292	5/16" x 1/8"	0.62	0.75	0.41	0.04	5.47
20-293	3/8" x 1/8"	0.91	0.81	0.56	0.08	5.97
20-294	3/8" x 1/4"	0.72	0.94	0.44	0.10	8.00
20-295	3/8" x 3/8"	0.78	1.03	0.50	0.14	10.19
20-296	1/2" x 3/8"	1.09	1.10	0.73	0.16	8.50

\* Barstock

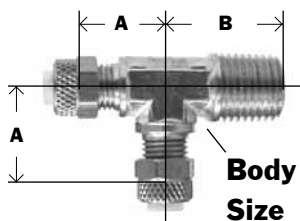
**FEMALE ELBOW**



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	7.98
20-301	3/16" x 1/8"	0.72	0.55	0.56	0.02	8.70
20-302	1/4" x 1/8"	0.62	0.75	0.37	0.08	8.36
20-303	1/4" x 1/4"	0.72	0.88	0.50	0.10	9.08
20-304	3/8" x 1/4"	0.72	0.88	0.50	0.12	8.32
20-305	1/2" x 3/8"	0.91	0.94	0.63	0.16	13.49

**MALE RUN TEE**



1271  
171P  
271P

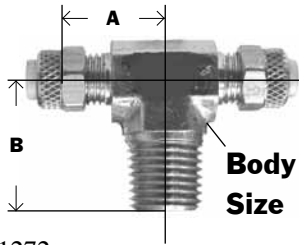
Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-308	1/8" x 1/8"	0.62	0.69	0.31	0.04	10.92
20-309	3/16" x 1/8"	0.62	0.69	0.31	0.04	11.22
20-310	1/4" x 1/8"	0.62	0.75	0.37	0.08	10.10
20-311	1/4" x 1/4"	0.66	0.94	0.37	0.10	13.39
20-312	5/16" x 1/8"	0.62	0.75	0.37	0.08	11.12
20-313	3/8" x 1/4"	0.66	0.94	0.44	0.10	12.25
20-314	1/2" x 3/8"	0.81	1.06	0.63	0.16	19.18

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



**MALE BRANCH TEE**

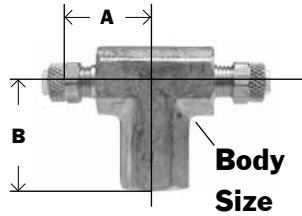
**BRASS**



1272  
172P  
272P

Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-317	1/8" x 1/8"	0.63	0.69	0.31	0.04	16.04
20-318	3/16" x 1/8"	0.63	0.69	0.31	0.04	11.32
20-319	1/4" x 1/8"	0.63	0.75	0.37	0.07	9.87
20-320	1/4" x 1/4"	0.66	0.94	0.37	0.09	11.73
20-321	5/16" x 1/8"	0.63	0.75	0.37	0.10	11.32
20-322	3/8" x 1/8"	0.63	0.75	0.44	0.08	15.70
20-323	3/8" x 1/4"	0.66	0.94	0.44	0.11	12.69
20-324	1/2" x 3/8"	0.81	1.06	0.63	0.21	30.76

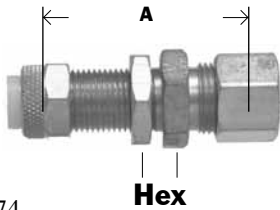
**FEMALE BRANCH TEE**



1277  
177P  
277P

Part #	Tube O.D. x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-327	1/4" x 1/8"	0.66	0.94	0.37	0.12	21.24
20-328	1/4" x 1/4"	0.84	1.16	0.56	0.16	17.16

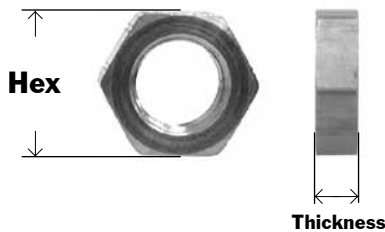
**BULKHEAD UNION - FLARELESS X COMPRESSION**



1274

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-333	1/4"	1.31	0.56	0.07	9.67
20-334	3/8"	1.44	0.69	0.12	15.54

**BULKHEAD NUT**



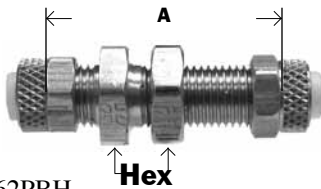
Part #	Tube O.D.	Hex	Thickness	Approx. Wt. Lbs.	List Price
20-370	1/8"	0.31	0.25	0.01	3.37
20-372	5/16"	0.62	0.19	0.02	2.98

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

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



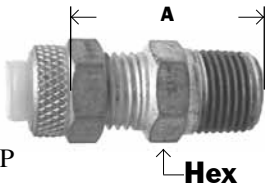
**BULKHEAD UNION**



62PBH  
329P  
282P

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-337	1/4"	1.25	0.56	0.06	10.58
20-338	5/16"	1.25	0.62	0.08	14.10
20-339	3/8"	1.31	0.69	0.10	15.04

**QUICK DISCONNECT FITTING**

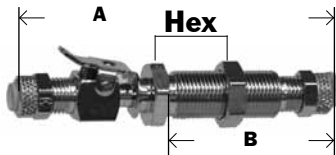


292P

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

**QUICK DISCONNECT COUPLERS**

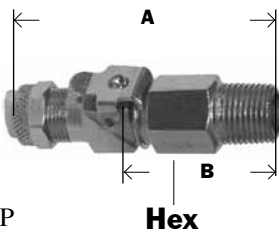
**TUBE X TUBE**



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	83.56
20-403	3/8"	3.56	1.92	0.81	0.10	84.71

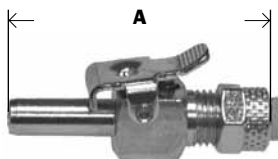
**TUBE TO MALE THREAD - Single end Shut-Off, Connector, Quick Coupler.**



398P  
391P + 393P

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

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



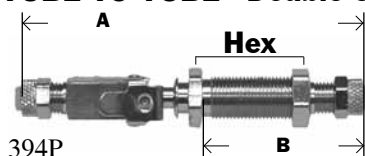
393P

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-417	1/4"	1.69	0.04	29.13
20-419	3/8"	1.93	0.06	34.41

## FLARELESS

## BRASS FITTINGS

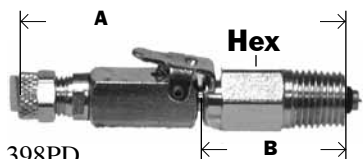
## TUBE TO TUBE - Double end Shut-Off Type.



394P  
392P + 393PD

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

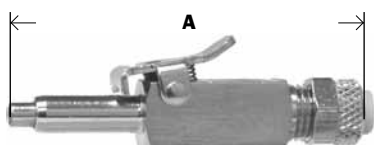
## TUBE X MALE PIPE - Double End Shut-Off, Connector, Quick coupler.



398PD  
393PD + 391P

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

## INSERT ONLY - Double End Shut-Off



393PD

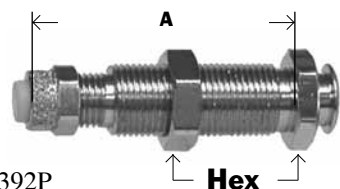
Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-445	1/4"	2.40	0.08	50.25

## CHROME PLATED NUT AND PLASTIC SLEEVE



Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-451	1/4"	0.34	0.43	0.01	2.02
20-453	3/8"	0.38	0.56	0.01	2.66

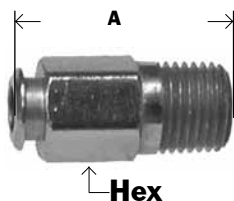
## TUBE CONNECTION - Single end or Double end Shut-Off Type body only.



392P

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

## MALE PIPE CONNECTION - Internal Shut-Off



391P

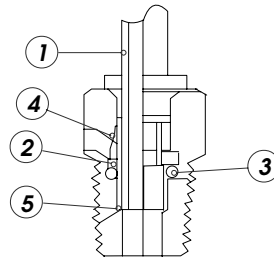
Part #	Tube O.D. x Male Pipe	A	Hex	Approx. Wt. Lbs.	List Price
20-461	1/4" x 1/8"	1.28	0.50	0.06	35.39
20-463	1/4" x 1/4"	1.27	0.56	0.08	42.33
20-465	3/8" x 1/4"	1.40	0.62	0.08	51.36

**BRASS PUSH-IN FITTINGS**

**PAGES 93-99**

**ENGINEERING AND DESIGN**

- **QUICK CONNECT**, simply push tubing in, no tools. Saves up to 75% of assembly time of standard compression fittings.
- **QUICK DISCONNECT**, hold two fingers on insert and pull tubing out, no tools required.
- **REUSEABLE**, connect and disconnect numerous times.
- **FULL FLOW DESIGN**, provides up to 60% more flow area than conventional fittings with internal tube supports.
- **POSITIVE SEAL**, no leaks. After tubing is inserted, seal is made.
- **VERSATILE**, BunaN "O" rings standard. Other materials of "O" rings available.
- **SECURE TUBE RETENTION**, pulling on tubing only serves to tighten the connection.
- **SELF CONTAINED ASSEMBLY**, no loose parts, brass body and insert.
- **BRASS CONSTRUCTION**, elbows and tees are forged brass.
- **CHOICE** of convenient swivel of economical stationary elbows and tees.
- **STRAIGHT CONNECTORS** have interior hex for Allen key tightening where space is limited...no need to use a wrench.
- **PRE-APPLIED TEFLON**® based pipe sealant on all male pipe threads, saving customer additional labor.
- **METRIC SIZES AVAILABLE**: Metric tube sizes from 2mm through 12mm in both standard NPT and metric pipe sizes are available on a special order basis.
- **WORKING PRESSURE**:  
The fitting is suitable for use up to the maximum working pressure of the plastic tubing used.
- **WORKING TEMPERATURE**:  
-10°F to 200°F (other ranges available on request).
- **PIPE THREAD**: NPTF with Teflon® based sealant pre-applied.

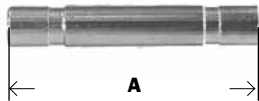


When tubing (1) is inserted into the fitting, it first passes through the gripping teeth (2). Just beyond the gripping teeth is the o-ring (3) which provides the leak proof seal against the OD of the tube. The gripping teeth grab the tube, which

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

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

**DOUBLE MALE UNION - NICKEL PLATED**

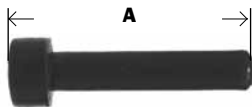


AQ34

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-004	1/8"	1.28	0.01	5.69
20-005	5/32"	1.28	0.01	11.02
20-006	1/4"	1.40	0.02	6.20
20-007	5/16"	1.59	0.02	7.50
20-008	3/8"	1.81	0.02	8.94
20-000	1/2"	1.89	0.03	13.56

( For polyurethane or other soft plastic tubing )

**PLASTIC PLUG**

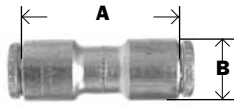


- 284PP 6900
- AQ59 639PL
- 209-OF 12-004
- 1129 50-526

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
20-009	5/32"	1.16	0.01	1.46
20-010	1/4"	1.40	0.01	1.81
20-011	3/8"	1.40	0.02	3.44
20-013	1/2"	1.50	0.02	4.49



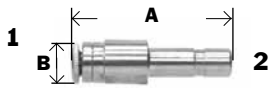
**UNION CONNECTOR**



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

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
20-017	1/8"	1.07	0.38	0.03	9.87
20-018	5/32"	1.07	0.38	0.03	7.26
20-019	1/4"	1.50	0.44	0.05	6.91
20-022	3/8" x 1/4"	1.46	0.56	0.05	9.33
20-020	3/8"	1.44	0.56	0.06	9.60
20-021	1/2"	1.63	0.81	0.18	14.05

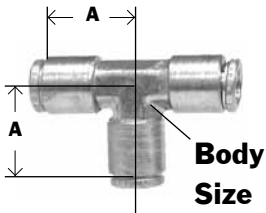
**REDUCER - NICKEL PLATED - TUBE OD X STUD**



67PPL  
 286PP

Part #	Tube O.D. 1 X 2	A	B	Approx. Wt. Lbs.	List Price
20-510	1/8" x 1/4"	1.38	0.39	0.02	13.33
20-511	5/32" x 1/4"	1.33	0.35	0.02	11.04
20-512	1/4" x 3/8"	1.50	0.51	0.04	15.48

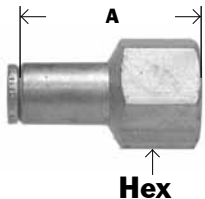
**UNION TEE**



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

Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
20-025	1/8"	0.65	0.31	0.04	10.31
20-026	5/32"	0.67	0.31	0.04	10.02
20-027	3/16"	0.75	0.37	0.06	14.19
20-028	1/4"	0.92	0.37	0.09	9.57
20-031	5/16"	0.89	0.49	0.10	22.16
20-029	3/8"	0.98	0.50	0.13	13.15
20-030	1/2"	1.16	0.62	0.24	20.19

**FEMALE CONNECTOR**

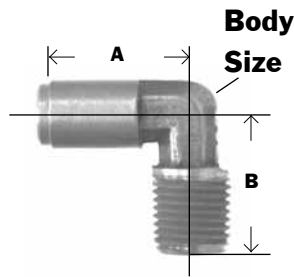


266PP  
 AQ66 12-426  
 6463 50-566  
 3114 266-OF  
 66PL 1166

Part #	Tube O.D. x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-032	1/8" x 1/8"	0.96	0.56	0.04	10.69
20-038	1/8" x 1/4"	1.04	0.67	0.04	19.68
20-012	5/32" x 1/8"	1.09	0.56	0.05	14.45
20-034	1/4" x 1/8"	1.23	0.56	0.06	10.42
20-035	1/4" x 1/4"	1.42	0.75	0.09	14.99
20-036	3/8" x 1/4"	1.32	0.75	0.09	16.41
20-037	3/8" x 3/8"	1.31	0.87	0.12	20.93

Some product stocked in Houston and Atlanta.

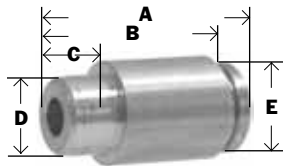
**FIXED MALE ELBOW**



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

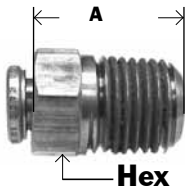
Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-065	1/8" x 1/8"	0.69	0.69	0.31	0.03	6.86
20-066	5/32" x 1/8"	0.68	0.68	0.31	0.03	11.07
20-067	3/16" x 1/8"	0.75	0.71	0.37	0.04	7.90
20-068	1/4" x 1/8"	0.89	0.75	0.37	0.06	5.99
20-069	1/4" x 1/4"	0.95	0.96	0.37	0.08	5.83
20-070	1/4" x 3/8"	1.00	0.98	0.50	0.10	11.22
20-071	3/8" x 1/8"	0.99	0.80	0.50	0.06	9.01
20-072	3/8" x 1/4"	0.98	0.98	0.50	0.09	7.85
20-073	3/8" x 3/8"	0.97	0.98	0.50	0.12	10.96
20-074	1/2" x 1/4"	1.15	1.05	0.62	0.15	12.15
20-075	1/2" x 3/8"	1.18	1.05	0.62	0.22	12.24
20-064	1/2" x 1/2"	1.16	1.66	0.62	0.20	14.39

**PRESS-IN CARTRIDGE**



Part #	Tube O.D.	A	B	C	D	E	List Price
20-040	1/8"	0.67	0.59	0.20	0.30	0.38	9.43
20-041	5/32"	0.67	0.59	0.20	0.30	0.38	2.99
20-043	1/4"	0.93	0.85	0.26	0.38	0.50	5.31
20-044	3/8"	1.21	1.13	0.26	0.38	0.63	8.02

**MALE CONNECTOR**



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

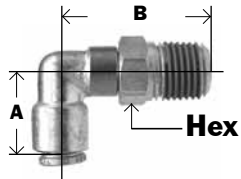
Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-047	1/8" x 10-32"*	0.69	0.37	0.02	6.44
20-045	1/8" x 1/16"	0.68	0.37	0.02	10.64
20-048	1/8" x 1/8"	0.61	0.43	0.02	4.69
20-023	1/8" x 1/4"	0.98	0.56	0.04	5.57
20-049	5/32" x 10-32"*	0.67	0.37	0.02	4.62
20-050	5/32" x 1/8"	0.67	0.43	0.03	4.62
20-046	5/32" x 1/4"	0.85	0.56	0.05	6.84
20-051	3/16" x 10-32"*	0.80	0.37	0.02	9.00
20-052	3/16" x 1/8"	0.93	0.43	0.03	5.74
20-053	1/4" x 10-32"*	0.87	0.43	0.03	7.93
20-039	1/4" x 1/16"	0.92	0.43	0.06	9.61
20-054	1/4" x 1/8"	0.93	0.43	0.06	4.44
20-055	1/4" x 1/4"	0.93	0.56	0.10	4.65
20-056	1/4" x 3/8"	0.94	0.68	0.08	7.47
20-530	5/16" x 1/8"	1.07	0.56	0.05	16.56
20-531	5/16" x 1/4"	0.98	0.56	0.10	17.43
20-532	5/16" x 3/8"	1.06	0.75	0.08	15.75
20-057	3/8" x 1/8"	1.10	0.56	0.06	7.31
20-058	3/8" x 1/4"	1.11	0.56	0.05	6.79
20-059	3/8" x 3/8"	1.02	0.68	0.08	7.25
20-062	3/8" x 1/2"	1.02	0.87	0.08	12.50
20-060	1/2" x 1/4"	1.36	0.81	0.11	9.41
20-061	1/2" x 3/8"	1.30	0.81	0.12	10.82
20-063	1/2" x 1/2"	1.23	0.87	0.14	13.65

\* Furnished with gaskets

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

Some product stocked in Houston and Atlanta.

**SWIVEL MALE ELBOW**

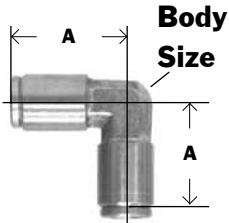


- AQ69-PS 12-447
- 56520 50-579
- 3109 269-OFS
- 169PL 11695
- KQL

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
20-079	1/8" x 1/8"	0.69	0.98	0.43	0.07	7.15
20-535*	1/8" x 1/4"	0.76	0.87	0.56	0.06	17.43
20-080	5/32" x 1/8"	0.68	0.89	0.43	0.05	7.85
20-076	5/32" x 10-32"*	0.67	0.71	0.37	0.04	14.57
20-077	5/32" x 1/4"	0.68	1.08	0.56	0.07	10.93
20-081	1/4" x 1/8"	0.90	0.93	0.37	0.08	6.99
20-078	1/4" x 10-32"*	0.86	0.79	0.31	0.05	10.55
20-082	1/4" x 1/4"	0.90	0.99	0.56	0.10	7.90
20-086	1/4" x 3/8"	0.98	1.14	0.68	0.09	15.26
20-538*	5/16" x 1/4"	0.91	0.85	0.56	0.07	21.29
20-539*	5/16" x 3/8"	0.91	0.87	0.75	0.08	25.46
20-087	3/8" x 1/8"	0.94	1.08	0.50	0.09	12.31
20-083	3/8" x 1/4"	0.99	1.15	0.56	0.10	9.72
20-084	3/8" x 3/8"	1.00	1.24	0.68	0.20	11.12
20-088	3/8" x 1/2"	1.00	1.54	0.87	0.19	18.12
20-085	1/2" x 3/8"	1.16	1.34	0.62	0.18	14.00
20-092	1/2" x 1/2"	1.16	1.61	0.62	0.24	20.14

\* Nickel Plated                      \* Furnished with gaskets

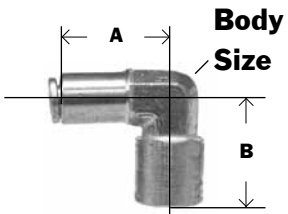
**UNION ELBOW**



- 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	9.68
20-151	5/32"	0.67	0.31	0.04	9.52
20-152	1/4"	0.87	0.37	0.06	8.80
20-155	5/16"	0.91	0.47	0.08	25.97
20-153	3/8"	0.97	0.50	0.09	13.09
20-154	1/2"	1.15	0.62	0.18	18.51

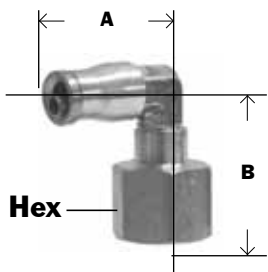
**FEMALE ELBOW**



- AQ70-P
- 3009

Part #	Tube O.D. x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-192	1/8" x 1/8"	0.78	0.82	0.31	0.02	7.66
20-094	5/32" x 1/8"	0.68	0.82	0.37	0.02	9.60
20-089	1/4" x 1/8"	0.91	0.75	0.37	0.06	10.93
20-090	1/4" x 1/4"	1.03	1.03	0.50	0.11	12.90
20-091	3/8" x 1/4"	0.98	0.95	0.50	0.16	19.65

**FEMALE SWIVEL ELBOW**

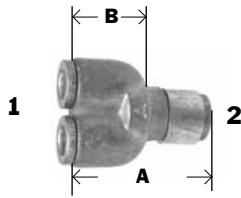


Part #	Tube O.D. x Female NPTF	A	B	Hex	List Price
20-094S	5/32" x 1/8"	0.76	1.06	0.56	14.58
20-089S	1/4" x 1/8"	0.98	1.08	0.56	14.67
20-090S	1/4" x 1/4"	0.98	1.26	0.75	12.87
20-091S	3/8" x 1/4"	1.07	1.48	0.75	17.43

Some product stocked in Houston and Atlanta.

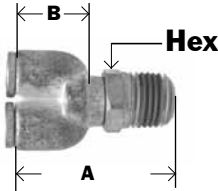


**UNION "Y"**



Part #	Tube O.D. 1 X 2	A	B	Approx. Wt. Lbs.	List Price
20-551	5/32" x 5/32"	1.36	0.81	0.11	57.20
20-552	1/4" x 1/8"	1.61	1.06	0.12	37.45
20-553	1/4" x 1/4"	1.81	1.16	0.14	34.97

**MALE "Y"**



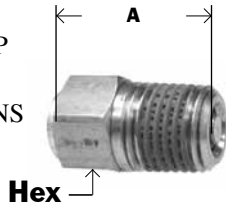
12-445  
50-569  
1169

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
20-557	1/4" x 1/4"	1.90	1.06	0.56	0.20	47.78

**QUICK DISCONNECT**

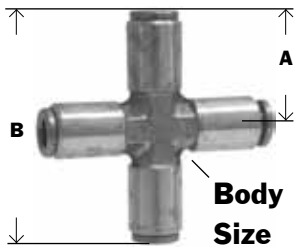
When tube is disconnected, flow shuts off automatically.

AQ92-P  
6500  
169PLNS



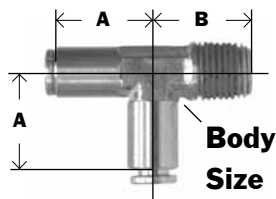
Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-133	1/4" x 1/8"	0.92	0.43	0.10	34.95
20-134	1/4" x 1/4"	0.92	0.56	0.12	25.86

**CROSS**



Size	Size	A	B	Body Size	List Price
20-142	1/4"	1.03	2.06	0.37	20.96
20-143	3/8"	1.06	2.12	0.50	24.82

**FIXED MALE RUN TEE**

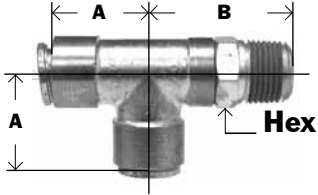


AQ71-P

Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-095	1/8" x 1/8"	0.65	0.72	0.31	0.04	11.15
20-097	3/16" x 1/8"	0.75	0.73	0.37	0.06	15.64
20-098	1/4" x 1/8"	0.92	0.74	0.37	0.08	10.38
20-093	1/4" x 1/4"	0.92	0.92	0.43	0.10	12.12
20-099	3/8" x 1/8"	0.94	0.82	0.50	0.14	15.04
20-100	3/8" x 1/4"	0.98	0.98	0.50	0.12	17.37
20-101	3/8" x 3/8"	1.05	1.05	0.62	0.10	17.45
20-102	1/2" x 3/8"	1.14	1.05	0.62	0.18	25.92

Some product stocked in Houston and Atlanta.

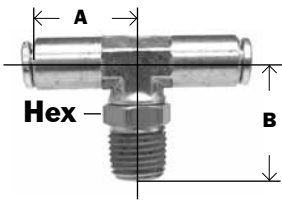
**SWIVEL MALE RUN TEE**



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

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
20-160	1/8" x 1/8"	0.65	0.86	0.43	0.08	11.36
20-161	5/32" x 1/8"	0.67	1.04	0.43	0.09	12.61
20-162	1/4" x 1/8"	0.92	1.04	0.44	0.09	12.56
20-163	1/4" x 1/4"	0.92	1.13	0.56	0.11	13.63
20-164	3/8" x 1/4"	0.94	1.19	0.56	0.11	15.04
20-165	3/8" x 3/8"	0.96	1.24	0.50	0.12	22.51
20-174	1/2" x 1/4"	1.12	1.18	0.51	0.16	43.10
20-166	1/2" x 3/8"	1.14	1.31	0.68	0.14	26.77
20-167	1/2" x 1/2"	1.14	1.61	0.87	0.16	28.16

**SWIVEL MALE BRANCH TEE**

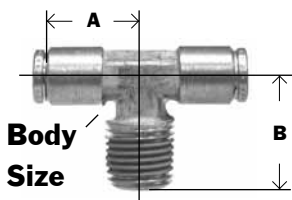


KQT AQ64  
 12-060 6540  
 50-564 3140  
 264OF 64PL

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	16.41
20-104	5/32" x 10-32**	0.65	0.71	0.31	0.04	23.14
20-109	5/32" x 1/8"	0.67	0.94	0.37	0.06	15.54
20-105	1/4" x 1/8"	0.92	0.97	0.37	0.08	14.61
20-106	1/4" x 1/4"	0.92	1.09	0.37	0.10	11.51
20-107	3/8" x 1/4"	0.96	1.14	0.56	0.18	15.29
20-108	3/8" x 3/8"	0.96	1.23	0.69	0.16	19.11
20-110	1/2" x 3/8"	1.16	1.34	0.69	0.24	27.42
20-111	1/2" x 1/2"	1.16	1.64	0.87	0.28	31.20

\* Furnished with gaskets

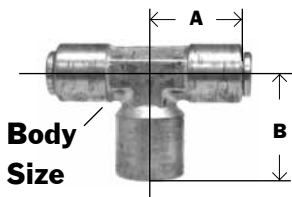
**FIXED MALE BRANCH TEE**



AQ72-P

Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
20-112	1/8" x 1/8"	0.69	0.72	0.31	0.04	12.16
20-113	5/32" x 1/8"	0.69	0.65	0.31	0.04	11.87
20-115	1/4" x 1/8"	0.92	0.74	0.37	0.12	12.48
20-116	1/4" x 1/4"	0.91	0.93	0.37	0.10	13.17
20-117	3/8" x 1/8"	0.98	0.80	0.50	0.08	16.08
20-118	3/8" x 1/4"	0.98	0.97	0.50	0.12	16.07
20-119	3/8" x 3/8"	0.98	0.97	0.50	0.14	17.70
20-120	1/2" x 3/8"	1.16	1.05	0.62	0.18	25.51

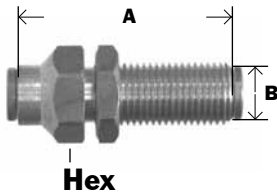
**FEMALE BRANCH TEE**



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	17.44
20-132	3/8" x 1/4"	0.96	0.98	0.50	0.12	23.87

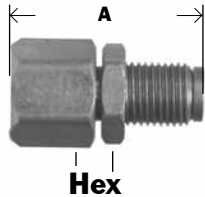
**BULKHEAD UNION**



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

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
20-124	1/8"	1.12	0.62	0.03	27.41
20-125	5/32"	1.12	0.62	0.03	25.92
20-126	3/16"	1.27	0.68	0.04	25.47
20-127	1/4"	1.69	0.68	0.06	17.48
20-128	3/8"	1.69	0.81	0.13	18.65
20-129	1/2"	1.85	1.12	0.16	35.54

**FEMALE BULKHEAD UNION**



AQ86-P

Part #	Tube O.D. x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-170	1/4" x 1/8"	1.19	0.68	0.08	15.26
20-171	1/4" x 1/4"	1.36	0.75	0.10	19.16
20-172	3/8" x 1/4"	1.71	0.75	0.14	20.46

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

**NICKEL PLATED PUSH-IN FITTINGS**

PAGES 99-107

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**

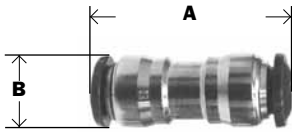
“Global Thread” fittings can be assembled with female threads produced to the following standards:  
**Tapered NPTF**  
**Parallel (BSPP, BSP, ISO 7)**  
**Tapered (BSPT, PT, ISO 7, ISO 228)**

Lead Free fittings available on  
**pgs. 382-388**



**NICKEL PLATED PUSH-IN FITTINGS**

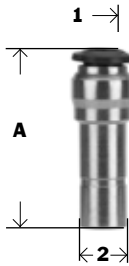
**UNION CONNECTOR**



62PL  
88040

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

**REDUCER**

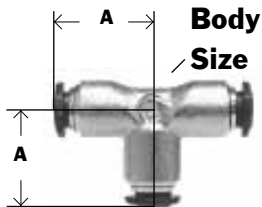


67PPL  
88700

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

**UNION TEE**

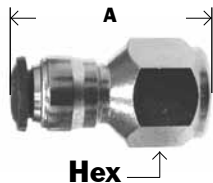
164PL  
88230



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

**FEMALE CONNECTOR**

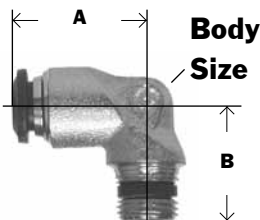
66PL  
88030



Part #	Tube O.D. x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
20-032N	1/8" x 1/8"	0.93	0.51	0.04	12.42
20-038N	1/8" x 1/4"	1.14	0.63	0.04	11.28
20-034N	1/4" x 1/8"	1.06	0.51	0.06	9.93
20-035N	1/4" x 1/4"	1.26	0.63	0.09	10.88
20-036N	3/8" x 1/4"	1.38	0.71	0.09	17.69
20-037N	3/8" x 3/8"	1.38	0.79	0.12	18.24

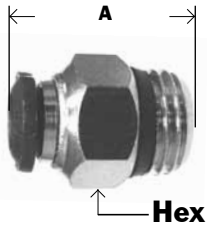
**FIXED MALE ELBOW**

W169P  
88100



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

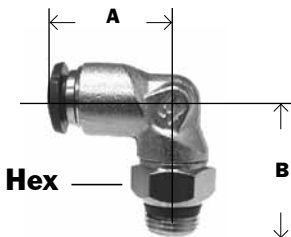
**MALE CONNECTOR**



68PL  
87000

Part #	Tube O.D. x Male Global Thread	A	Hex	Approx. Wt. Lbs.	List Price
20-047N	1/8" x 10-32"	0.75	0.31	0.02	6.02
20-048N	1/8" x 1/8"	0.77	0.43	0.02	5.26
20-023N	1/8" x 1/4"	0.97	0.55	0.04	5.35
20-049N	5/32" x 10-32"	0.83	0.39	0.02	5.91
20-050N	5/32" x 1/8"	0.83	0.43	0.03	4.58
20-046N	5/32" x 1/4"	0.98	0.55	0.05	7.14
20-053N	1/4" x 10-32"	0.97	0.51	0.03	6.73
20-054N	1/4" x 1/8"	0.98	0.51	0.06	4.71
20-055N	1/4" x 1/4"	0.98	0.55	0.10	5.39
20-056N	1/4" x 3/8"	0.98	0.71	0.08	6.89
20-530N	5/16" x 1/8"	0.98	0.55	0.05	7.45
20-531N	5/16" x 1/4"	1.08	0.55	0.10	7.82
20-532N	5/16" x 3/8"	1.08	0.71	0.08	9.14
20-057N	3/8" x 1/8"	1.38	0.67	0.06	7.82
20-058N	3/8" x 1/4"	1.32	0.67	0.05	7.28
20-059N	3/8" x 3/8"	1.32	0.71	0.08	8.11
20-062N	3/8" x 1/2"	1.32	0.87	0.08	13.85
20-060N	1/2" x 1/4"	1.54	0.79	0.11	10.52
20-061N	1/2" x 3/8"	1.42	0.79	0.12	12.22
20-063N	1/2" x 1/2"	1.58	0.87	0.14	15.69

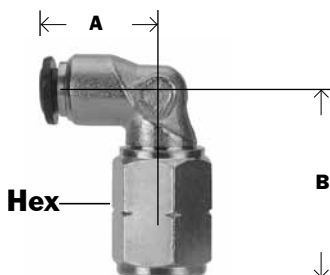
**SWIVEL MALE ELBOW**



W169PL  
87110

Part #	Tube O.D. x Male Global Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
20-079N	1/8" x 1/8"	0.67	0.78	0.51	0.07	7.94
20-535N	1/8" x 1/4"	0.67	0.95	0.59	0.06	10.04
20-080N	5/32" x 1/8"	0.67	0.79	0.51	0.05	8.49
20-076N	5/32" x 10-32"	0.67	0.95	0.59	0.04	9.17
20-081N	1/4" x 1/8"	0.83	0.87	0.51	0.08	7.81
20-082N	1/4" x 1/4"	0.83	0.98	0.59	0.10	8.71
20-086N	1/4" x 3/8"	0.83	1.10	0.67	0.09	13.75
20-538N	5/16" x 1/4"	0.89	1.02	0.59	0.07	11.28
20-539N	5/16" x 3/8"	0.87	1.10	0.67	0.08	13.65
20-087N	3/8" x 1/8"	1.04	1.02	0.51	0.09	13.38
20-083N	3/8" x 1/4"	1.04	1.10	0.59	0.10	11.31
20-084N	3/8" x 3/8"	1.04	1.18	0.67	0.20	14.06
20-088N	3/8" x 1/2"	1.04	1.30	0.83	0.19	19.11
20-085N	1/2" x 3/8"	1.20	1.24	0.59	0.18	17.74
20-092N	1/2" x 1/2"	1.20	1.42	0.83	0.24	19.97

**FEMALE SWIVEL ELBOW**



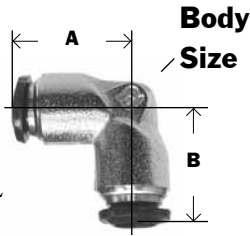
Part #	Tube O.D. x Female NPTF	A	B	Hex	List Price
20-094N	5/32" x 1/8"	0.669	0.994	0.354	9.97
20-761N	5/32" x 1/4"	0.669	1.161	0.354	10.66
20-089N	1/4" x 1/8"	0.826	1.023	0.433	11.80
20-090N	1/4" x 1/4"	0.826	1.200	0.433	11.62
20-762N	3/8" x 1/8"	0.885	1.082	0.511	12.69
20-091N	3/8" x 1/4"	0.885	1.240	0.511	13.45

# NICKEL PLATED PUSH - IN FITTINGS

# BRASS FITTINGS

BRASS

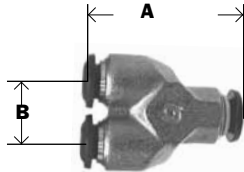
## UNION ELBOW



165PL  
88130

Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
20-150N	1/8"	0.67	0.35	0.02	10.25
20-151N	5/32"	0.67	0.35	0.04	8.51
20-152N	1/4"	0.83	0.43	0.06	8.79
20-155N	5/16"	0.87	0.51	0.08	10.80
20-153N	3/8"	1.04	0.63	0.09	13.09
20-154N	1/2"	1.20	0.75	0.18	18.91

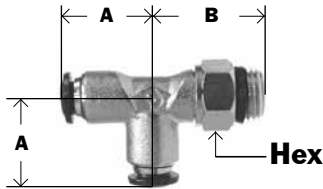
## UNION "Y"



662PL  
88310

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
20-553N	1/4" x 1/4"	1.44	0.53	0.14	24.94

## SWIVEL MALE RUN TEE

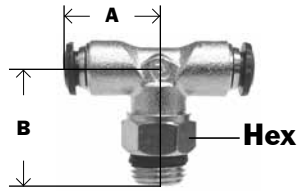


W171PL  
87222



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

## SWIVEL MALE BRANCH TEE

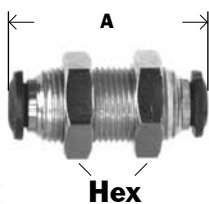


W172PL  
87210



Part #	Tube O.D. x Male Global Thread	A	B	Hex	Approx. Wt. Lbs.	List Price
20-103N	1/8" x 1/8"	0.67	0.78	0.51	0.04	11.86
20-104N	5/32" x 10-32"	0.67	0.79	0.31	0.04	12.64
20-109N	5/32" x 1/8"	0.67	0.78	0.51	0.06	14.25
20-105N	1/4" x 1/8"	0.83	0.87	0.51	0.08	12.99
20-106N	1/4" x 1/4"	0.83	0.98	0.59	0.10	12.99
20-156N	1/4" x 3/8"	1.043	1.10	0.59	0.18	15.04
20-107N	3/8" x 1/4"	1.04	1.10	0.59	0.18	17.88
20-108N	3/8" x 3/8"	1.04	1.18	0.67	0.16	20.25
20-110N	1/2" x 3/8"	1.20	1.30	0.67	0.24	27.08
20-111N	1/2" x 1/2"	1.20	1.42	0.82	0.28	28.44

## BULKHEAD UNION



62PLBH  
88050

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

**Push-In Ball Valves**

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

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

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

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



**BALL VALVE WITH PUSH-FIT CONNECTIONS**

Part #	Tube	List Price
28-400	1/8"	33.46
28-401	1/4"	38.14
28-402	3/8"	41.88



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

Part #	NPTF	Tube	List Price
28-403	1/8"	5/32"	25.66
28-404	1/4"	1/4"	27.07
28-405	3/8"	3/8"	30.55

**Adult/Senior Texting Codes (STC)**

- ATD - At the Doctor's
- BFF - Best Friend's Funeral
- BTW - Bring the Wheelchair
- BYOT - Bring Your Own Teeth
- CBM - Covered by Medicare
- CUATSC - See You at the Senior Center
- DWI - Driving While Incontinent
- FWBB - Friend with Beta Blockers
- FWIW - Forgot Where I Was
- FYI - Found Your Insulin
- GGPBL - Gotta Go, Pacemaker Battery Low
- GHA - Got Heartburn Again
- HGBM - Had Good Bowel Movement
- IMHO - Is My Hearing-Aid On?
- LMDO - Laughing My Dentures Out
- LOL - Living on Lipitor
- LWO - Lawrence Welk's On
- OMMR - On My Massage Recliner
- OMSG - Oh My! Sorry, Gas
- ROFL...CGU - Rolling on the Floor Laughing...Can't get Up!
- TTYL - Talk to You Louder
- WAITT - Who Am I Talking To?
- WTFA - Wet the Furniture Again
- WTP - Where's the Prunes
- WWNO - Walker Wheels Need Oil

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

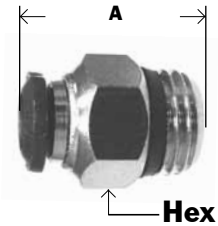




**NICKEL PLATED METRIC PUSH-IN FITTINGS**

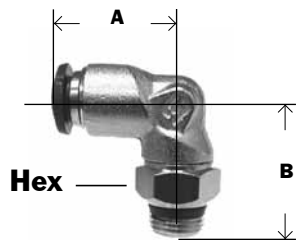
**BRASS**

**METRIC TUBE STRAIGHT MALE**



Part #	Tube O.D. (mm)	Global Thread	A	Hex	List Price
20-630N	4	1/8"	0.702	0.429	4.51
20-631N	4	1/4"	0.760	0.546	5.59
20-700N	5	1/8"	0.78	0.429	5.27
20-701N	5	1/4"	0.78	0.546	5.65
20-632N	6	1/8"	0.78	0.546	5.27
20-633N	6	1/4"	0.819	0.546	5.65
20-702N	8	1/8"	0.955	0.546	5.84
20-634N	8	1/4"	0.858	0.546	5.91
20-635N	8	3/8"	0.897	0.663	6.53
20-703N	8	1/2"	0.897	0.663	7.87
20-636N	10	1/4"	1.092	0.663	7.68
20-637N	10	3/8"	1.092	0.663	7.87
20-704N	10	1/2"	1.014	0.663	8.95
20-801N	12	1/4"	1.267	0.78	9.21
20-638N	12	3/8"	1.267	0.78	9.71
20-705N	12	1/2"	1.209	0.78	10.09
20-706N	14	3/8"	1.287	0.858	11.74
20-707N	14	1/2"	1.248	0.858	12.69

**METRIC TUBE SWIVEL MALE ELBOW**

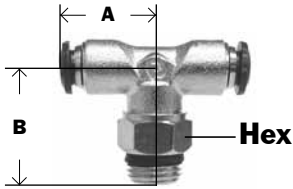


Part #	Tube O.D. (mm)	Global Thread	A	B	Hex	List Price
20-708N	4	1/8"	0.663	0.780	0.507	9.14
20-709N	4	1/4"	0.663	0.936	0.585	9.97
20-710N	5	1/8"	0.780	0.858	0.507	9.21
20-642N	6	1/8"	0.819	0.858	0.507	8.73
20-803N	6	1/4"	0.819	0.975	0.585	9.97
20-711N	8	1/8"	0.878	0.917	0.507	10.17
20-805N	8	1/4"	0.878	1.014	0.585	11.11
20-655N	8	3/8"	0.878	1.092	0.663	14.48
20-712N	8	1/2"	0.878	1.404	0.819	15.68
20-656N	10	1/4"	1.034	1.092	0.585	14.03
20-657N	10	3/8"	1.034	1.170	0.663	15.68
20-713N	10	1/2"	1.034	1.287	0.819	18.22
20-658N	12	3/8"	1.190	1.287	0.663	18.08
20-659N	12	1/2"	1.190	1.404	0.819	20.63
20-714N	14	3/8"	1.268	1.404	0.663	21.77
20-715N	14	1/2"	1.268	1.443	0.819	23.10

Low Lead fittings available on  
**pgs. 382-388**



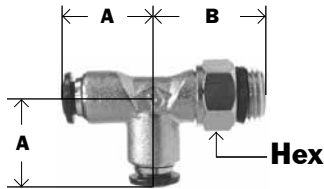
**METRIC TUBE SWIVEL MALE BRANCH TEE**



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

**BRASS**

**METRIC TUBE SWIVEL MALE RUN TEE**



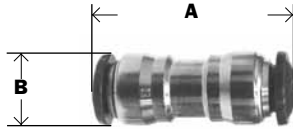
Part #	Tube O.D. (mm)	Global Thread	A	B	Hex	List Price
20-670N	4	1/8"	0.663	0.780	0.507	12.76
20-720N	4	1/4"	0.663	0.936	0.585	13.90
20-721N	5	1/8"	0.780	0.858	0.507	12.76
20-672N	6	1/8"	0.819	0.858	0.507	12.76
20-673N	6	1/4"	0.819	0.975	0.585	13.90
20-811N	8	1/8"	0.819	0.917	0.507	15.49
20-674N	8	1/4"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

"The best thing about the future is that it comes only one day at a time."

- Abraham Lincoln

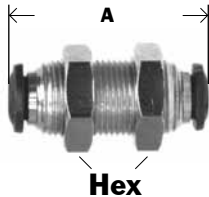
**BULKHEAD UNION**

**BRASS**



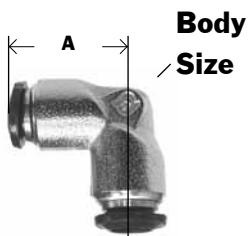
Part #	Tube O.D. (mm)	Tube O.D. (mm)	A	B	List Price
20-723N	3		1.014	0.332	11.87
20-600N	4		1.190	0.410	8.32
20-724N	5		1.287	0.449	8.64
20-725N	6	4	1.248	0.488	8.64
20-601N	6		1.326	0.488	8.64
20-726N	8	6	1.365	0.566	9.46
20-727N	8		1.404	0.566	9.46
20-728N	10	8	1.638	0.683	11.87
20-603N	10		1.638	0.683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

**BULKHEAD**



Part #	Tube O.D. (mm)	M	A	Hex	List Price
20-731N	3	M10x1	1.014	0.546	19.29
20-732N	4	M12x1	1.229	0.663	12.76
20-733N	5	M14x1	1.287	0.663	14.16
20-734N	6	M14x1	1.365	0.663	14.16
20-735N	8	M16x1	1.443	0.741	15.49
20-736N	10	M20x1	1.677	0.936	20.50
20-737N	12	M22x1	1.872	1.014	24.56

**UNION ELBOW**

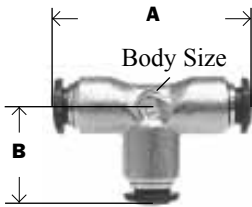


Part #	Tube O.D. (mm)	A	Body Size	List Price
20-738N	3	0.663	0.51	11.87
20-206N	4	0.663	0.351	9.21
20-739N	5	0.780	0.429	9.33
20-660N	6	0.780	0.429	9.33
20-661N	8	0.878	0.507	10.98
20-807N	10	1.034	0.624	13.52
20-808N	12	1.190	0.741	17.78
20-740N	14	1.268	0.741	21.90

"To the world you may be just one person, but to one person you may be the world."

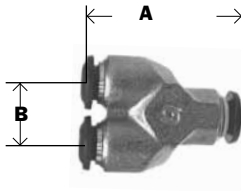
- Josephine Billings

**UNION TEE**



Part #	Tube O.D. (mm)	A	B	Body Size	List Price
20-741N	3	1.326	0.663	0.351	16.50
20-610N	4	1.326	0.663	0.351	12.69
20-742N	5	1.560	0.780	0.429	13.39
20-611N	6	1.638	0.819	0.429	13.39
20-612N	8	1.755	0.878	0.507	15.49
20-613N	10	2.067	1.034	0.624	20.12
20-614N	12	2.379	1.190	0.741	24.95
20-743N	14	2.379	2.535	0.741	30.47

**UNION Y**



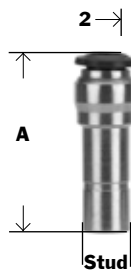
Part #	Tube O.D. (mm)	B	A	List Price
20-744N	3	0.390	1.131	23.35
20-813N	4	0.429	1.248	17.52
20-745N	5	0.527	1.365	18.54
20-814N	6	0.527	1.424	18.54
20-815N	8	0.605	1.599	21.01
20-746N	10	0.728	1.890	29.65

**PLUG**



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

**REDUCER**

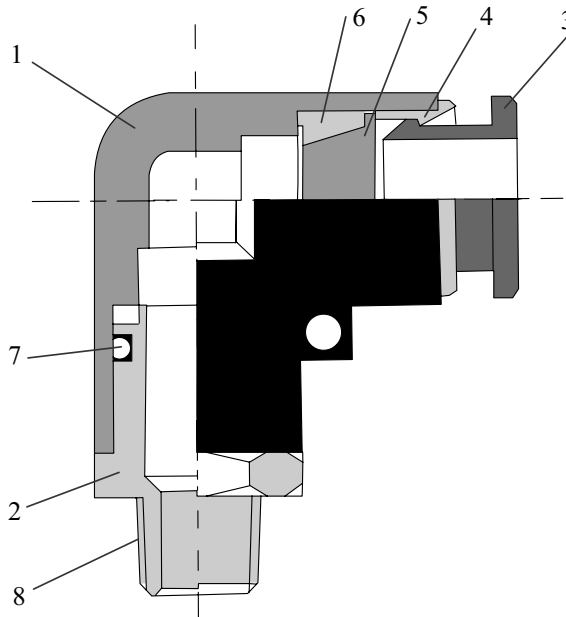


Part #	Stud (mm)	Tube O.D. 2 (mm)	A	List Price
20-754N	4	3	1.053	10.09
20-755N	5	4	1.131	5.27
20-756N	6	4	1.170	5.27
20-757N	6	5	1.248	5.27
20-758N	8	6	1.326	5.59
20-759N	10	8	1.482	5.91
20-760N	12	8	1.521	6.35

# Composite Body Push-In Fittings

**BRASS**

• For Food Grade, see page 264



**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



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

PQ62P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-019C	1/4"	0.01	3.44
20-020C	3/8"	0.02	4.40
20-021C	1/2"	0.03	7.24

**UNION TEE**

PQ64P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-028C	1/4"	0.02	4.47
20-029C	3/8"	0.02	5.46
20-030C	1/2"	0.08	9.98

**FEMALE CONNECTOR**

- Brass



PQ66P

Part #	Tube O.D. x Female NPT	Approx. Wt. Lbs.	List Price
20-034C	1/4" x 1/8"	0.02	5.32
20-035C	1/4" x 1/4"	0.04	5.48
20-036C	3/8" x 1/4"	0.04	4.05
20-037C	3/8" x 3/8"	0.06	4.05

**MALE CONNECTOR**

- Nickel Plated



PQ68P

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-054C	1/4" x 1/8"	0.02	2.67
20-055C	1/4" x 1/4"	0.02	2.21
20-056C	1/4" x 3/8"	0.04	3.40
20-058C	3/8" x 1/4"	0.06	3.51
20-059C	3/8" x 3/8"	0.06	3.63
20-062C	3/8" x 1/2"	0.08	5.12
20-060C	1/2" x 1/4"	0.06	5.15
20-061C	1/2" x 3/8"	0.08	5.02
20-063C	1/2" x 1/2"	0.10	5.41

**SWIVEL MALE ELBOW**

- Swivels for installation only.
- Not a live swivel



PQ69PS

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-081C	1/4" x 1/8"	0.02	3.94
20-082C	1/4" x 1/4"	0.04	3.75
20-086C	1/4" x 3/8"	0.06	4.00
20-087C	3/8" x 1/8"	0.04	4.98
20-083C	3/8" x 1/4"	0.08	5.20
20-084C	3/8" x 3/8"	0.10	4.66
20-088C	3/8" x 1/2"	0.12	9.42
20-085C	1/2" x 3/8"	0.16	9.98

**SWIVEL MALE BRANCH TEE**

- Swivels for installation only.
- Not a live swivel



PQ72PS

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-105C	1/4" x 1/8"	0.04	3.79
20-106C	1/4" x 1/4"	0.06	8.84
20-121C	1/4" x 3/8"	0.08	5.80
20-107C	3/8" x 1/4"	0.10	8.06
20-108C	3/8" x 3/8"	0.12	7.44

**BULKHEAD UNION**



PQ82P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-127C	1/4"	0.04	7.56
20-128C	3/8"	0.06	6.67

**90° UNION ELBOW**



PQ65P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-152C	1/4"	0.02	4.32
20-153C	3/8"	0.02	4.73

**SWIVEL MALE RUN TEE**

- Swivels for installation only.
- Not a live swivel



PQ71PS

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-162C	1/4" x 1/8"	0.04	8.86
20-163C	1/4" x 1/4"	0.04	4.96
20-099C	3/8" x 1/8"	0.06	6.22
20-100C	3/8" x 1/4"	0.08	5.77
20-165C	3/8" x 3/8"	0.10	6.86

**UNION "Y" CONNECTOR**



PQ89P

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-553C	1/4"	0.02	5.70
20-555C	3/8"	0.02	7.32

**SWIVEL "Y" CONNECTOR** • Swivels for installation only. • Not a live swivel



PQ88PS

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-557C	1/4" x 1/4"	0.02	5.84

**IN-LINE NEEDLE VALVE**



PQ310C

Part #	Tube O.D.	Approx. Wt. Lbs.	List Price
20-487C	1/4"	0.04	20.62

**RIGHT ANGLE FLOW CONTROL METER IN**

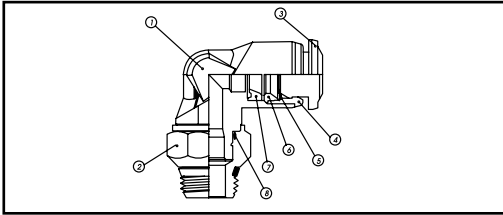


JPQ

Part #	Tube O.D. x Male NPT	Approx. Wt. Lbs.	List Price
20-728C	1/4" x 1/4"	0.04	17.92



**Technical Characteristics**



<b>PART 1</b>	BODY	COMPOSITE
<b>PART 2</b>	BODY	NICKEL PLATED BRASS
<b>PART 3</b>	TUBE RELEASE	ACETAL RESIN
<b>PART 4</b>	RETAINER	NICKEL PLATED BRASS
<b>PART 5</b>	GRIPPER RING	STAINLESS STEEL
<b>PART 6</b>	SPACER	COMPOSITE
<b>PART 7</b>	THREAD PACKING	NBR 70
<b>PART 8</b>	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"	4.50
20-631	4	1/4"	5.27
20-632	6	1/8"	5.63
20-633	6	1/4"	5.19
20-634	8	1/4"	5.85
20-635	8	3/8"	6.42
20-636	10	1/4"	7.46
20-637	10	3/8"	7.46
20-801	12	1/4"	8.87
20-638	12	3/8"	9.49

**UNION 90° ELBOW**



Part #	Tube O.D. (mm)	List Price
20-806	4	9.14
20-660	6	9.16
20-661	8	10.97
20-807	10	12.93
20-808	12	17.13

**UNION TEE**



Part #	Tube O.D. (mm)	List Price
20-610	4	12.46
20-611	6	12.84
20-612	8	14.77
20-613	10	19.31
20-614	12	24.62

**SWIVEL MALE BRANCH TEE**



Part #	Tube OD (mm)	BSPT Thread	List Price
20-680	4	1/8"	12.41
20-682	6	1/8"	11.53
20-683	6	1/4"	13.48
20-809	8	1/8"	14.03
20-684	8	1/4"	15.67
20-685	8	3/8"	23.38
20-686	10	1/4"	19.66
20-687	10	3/8"	22.24
20-810	10	1/2"	22.20
20-688	12	3/8"	21.58
20-689	12	1/2"	25.08

**SWIVEL MALE RUN TEE**



Part #	Tube OD (mm)	BSPT Thread	List Price
20-670	4	1/8"	12.29
20-672	6	1/8"	13.31
20-673	6	1/4"	12.10
20-811	8	1/8"	14.43
20-674	8	1/4"	14.61
20-675	8	3/8"	16.04
20-676	10	1/4"	20.89
20-677	10	3/8"	22.20
20-678	12	3/8"	23.03
20-679	12	1/2"	25.08

**UNION**



Part #	Tube O.D. (mm)	List Price
20-600	4	7.98
20-601	6	7.78
20-602	8	6.00
20-603	10	11.43
20-604	12	13.19

**SWIVEL MALE 90° ELBOW**



Part #	Tube OD (mm)	BSPT Thread	List Price
20-642	6	1/8"	7.16
20-803	6	1/4"	9.16
20-805	8	1/4"	10.98
20-655	8	3/8"	14.22
20-656	10	1/4"	13.27
20-657	10	3/8"	14.53
20-658	12	3/8"	16.89
20-659	12	1/2"	18.55

**UNION Y CONNECTOR**



Part #	Tube OD (mm)	List Price
20-813	4	16.48
20-814	6	11.19
20-815	8	19.70

## BSPT / BSPP FITTINGS

## BRASS FITTINGS

## MALE BSPP NIPPLE



Part #	Size	List Price
28-800	1/8 X 1/8	11.48
28-801	1/4 X 1/8	13.04
28-802	1/4 X 1/4	16.54
28-803	3/8 X 1/8	13.90
28-804	3/8 X 1/4	15.41
28-805	3/8 X 3/8	15.59
28-806	1/2 X 1/4	28.94
28-807	1/2 X 3/8	28.94
28-808	1/2 X 1/2	32.31
28-810	3/4 X 1/2	42.87
28-811	3/4 X 3/4	53.98

## MALE NIPPLE



## BSPT X MALE NPT

Part #	Size	List Price
28-815*	1/8 X 1/8	17.48
28-816*	1/4 X 1/4	26.21
28-817*	3/8 X 3/8	29.79
28-818*	1/2 X 1/2	47.22
28-819*	3/4 X 3/4	98.16

## MALE BSPT NIPPLE



Part #	Size	List Price
28-820	1/8 X 1/8	9.97
28-821	1/4 X 1/8	10.13
28-822	1/4 X 1/4	11.02
28-823	3/8 X 1/8	14.17
28-824	3/8 X 1/4	13.34
28-825	3/8 X 3/8	14.37
28-826	1/2 X 1/8	37.54
28-827	1/2 X 1/4	23.39
28-828	1/2 X 3/8	28.69
28-829	1/2 X 1/2	20.88
28-832	3/4 X 1/2	32.27
28-833	3/4 X 3/4	54.26

## BSPP COUNTERSUNK

## SEALED PLUG



Part #	Size	List Price
28-835	1/8	10.73
28-836	1/4	14.92
28-837	3/8	11.58
28-838	1/2	32.00

BSPT HEX COUNTERSUNK  
PLUG

Part #	Size	List Price
28-840*	1/8	4.27
28-841*	1/4	7.96
28-842*	3/8	14.33
28-843*	1/2	27.49
28-844*	3/4	53.80

FEMALE BSPP  
CAP

Part #	Size	List Price
28-855	1/8	8.17
28-856	1/4	10.63
28-857	3/8	16.44
28-858	1/2	29.69

## BSPT MALE X FEMALE NPT



Part #	Size	List Price
28-860*	1/8 X 1/8	11.37
28-861*	1/4 X 1/4	22.85
28-862*	3/8 X 3/8	36.50
28-863*	1/2 X 1/2	89.06
28-864*	3/4 X 3/4	97.31

## NPT MALE X FEMALE BSPP



Part #	Size	List Price
28-867*	1/8 X 1/8	14.94
28-868*	1/4 X 1/4	22.32
28-869*	3/8 X 3/8	46.98
28-870*	1/2 X 1/2	75.02
28-871*	3/4 X 3/4	101.87

## BUSHING

## BSPT MALE X BSPP FEMALE



Part #	Size	List Price
28-873	1/4 X 1/8	8.55
28-874	3/8 X 1/8	15.30
28-875	3/8 X 1/4	14.92
28-876	1/2 X 1/4	17.87
28-877	1/2 X 3/8	17.04
28-878	3/4 X 1/2	28.91

All Fittings are Nickel Plated

except (\*) which are Yellow Brass  
BRASS RIGID MALE BARB ADAPT-

## ER



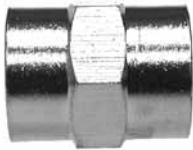
Part #	Hose I.D. x BSPT	List Price
32-450*	1/4" x 1/8"	1.40
32-451*	1/4" x 1/4"	2.04
32-452*	3/8" x 1/4"	2.23
32-453*	3/8" x 3/8"	2.48
32-454*	3/8" x 1/2"	4.12
32-455*	1/2" x 3/8"	2.79
32-456*	1/2" x 1/2"	4.57
32-457*	3/4" x 3/4"	7.11
32-458*	1" x 1"	14.66

**MALE BSPP  
X FEMALE BSPP ADAPTER**



Part #	Size	List Price
28-880	1/8 X 1/8	12.63
28-881	1/8 X 1/4	11.66
28-882	1/4 X 1/8	11.02
28-883	1/4 X 1/4	16.82
28-884	1/4 X 3/8	18.93
28-885	3/8 X 1/8	13.34
28-886	3/8 X 1/4	12.19
28-887	3/8 X 3/8	30.36
28-888	3/8 X 1/2	30.44
28-889	1/2 X 1/4	25.44
28-890	1/2 X 3/8	23.39
28-891	1/2 X 1/2	42.72

**FEMALE BSPP COUPLING**



Part #	Size	List Price
28-894	1/8 X 1/8	14.16
28-895	1/4 X 1/8	19.31
28-896	1/4 X 1/4	15.08
28-897	3/8 X 1/8	29.47
28-898	3/8 X 1/4	25.81
28-899	3/8 X 3/8	20.78
28-900	1/2 X 1/4	35.60
28-901	1/2 X 3/8	33.51
28-902	1/2 X 1/2	40.52

**All Fittings are Nickel Plated**

**90° BSPT MALE ELBOW**



Part #	Size	List Price
28-905	1/8 X 1/8	20.82
28-906	1/4 X 1/4	24.64
28-907	3/8 X 3/8	43.54
28-908	1/2 X 1/2	53.90

**MALE BSPT X FEMALE BSPP 90°  
ELBOW**



Part #	Size	List Price
28-911	1/8 X 1/8	19.39
28-912	1/4 X 1/4	24.38

**BSPP FEMALE 90° ELBOW**



Part #	Size	List Price
28-917	1/8 X 1/8	16.95
28-918	1/4 X 1/4	28.60
28-919	3/8 X 3/8	35.42
28-920	1/2 X 1/2	64.90

**BSPP FEMALE TEE**



Part #	Size	List Price
28-930	1/8	28.69
28-931	1/4	31.91
28-932	3/8	75.32
28-933	1/2	100.85

**BSPP MALE  
RUN TEE**



Part #	Size	List Price
28-947	1/8	23.66
28-948	1/4	31.91
28-949	3/8	52.43
28-950	1/2	79.95

Paul Newman founded the Hole in the Wall Gang Camp for children stricken with cancer, AIDS and blood diseases.

One afternoon, he and wife, Joanne Woodward, stopped by to have lunch with the kids.

A counselor at a nearby table, suspecting the young patients wouldn't know Newman was a famous movie star, explained, "That's the man who made this camp possible. Maybe you've seen his picture on his salad-dressing bottle?"

Blank stares. "Well, you've probably seen his face on his lemonade carton." An eight-year-old girl perked up. "How long was he missing?"

# STEEL GREASE FITTINGS

# BRASS FITTINGS

BRASS

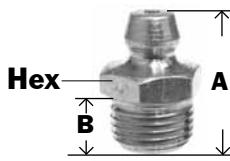
Meets SAE #J-534C

Many types available on special order.

## PIPE THREAD

## BALL CHECK

#610  
1610  
2800  
1720  
5000

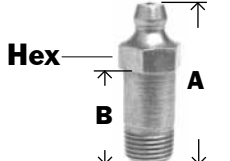


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-110	1/8" -27 NPT	0.68	0.29	0.43	0.01	0.82
36-111	Thread Forming	0.62	0.23	0.43	0.01	1.10

## PIPE THREAD

## BALL CHECK

#607  
1607  
2800  
1669  
5003

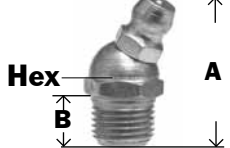


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-112	1/8" -27 NPT	1.25	0.78	0.43	0.02	2.31
36-113	1/8" -27 NPT	1.75	1.26	0.43	0.02	2.52

## PIPE THREAD

## 30° ANGLE BALL CHECK

#611  
1611  
2830  
5100

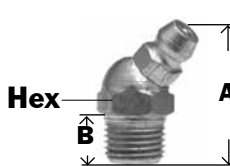


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-114	1/8" -27 NPT	0.90	0.29	0.43	0.01	1.35

## PIPE THREAD

## 45° ANGLE BALL CHECK

#688  
1688  
2845  
5200

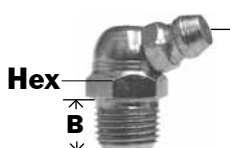


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-116	1/8" -27 NPT	0.89	0.29	0.43	0.01	1.47

## PIPE THREAD

## 65° ANGLE BALL CHECK

#612  
1612  
2865  
5300

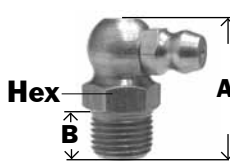


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-118	1/8" -27 NPT	0.84	0.29	0.43	0.01	1.33

## PIPE THREAD

## 90° ANGLE BALL CHECK

#613  
1613  
2890  
5400  
5407

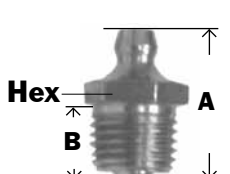


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-120	1/8" -27 NPT	0.84	0.29	0.43	0.01	1.31
36-121	1/8" -27 NPT	1.81	1.25	0.43	0.01	4.19

## PIPE THREAD

## BALL CHECK

#627  
1627  
2900K  
5050

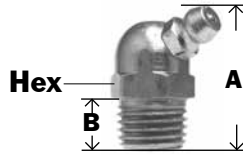


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-130	1/4" -18 NPT	0.87	0.42	0.56	0.02	1.43



**PIPE THREAD**

#629  
1629  
2965  
5350

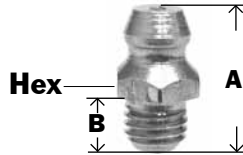


**65° ANGLE BALL CHECK**

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-132	1/4"-18 NPT	0.96	0.34	0.56	0.02	2.04

**1/4-28 TAPER THREAD**

#641  
1641  
2400  
3038  
5010

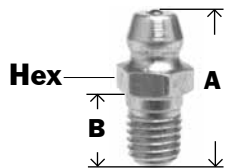


**SHORT BALL CHECK**

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-140	1/4"-28 NPT	0.54	0.18	0.31	0.01	0.46
36-141	Thread Forming	0.57	0.20	0.31	0.01	0.50

**1/4-28 TAPER THREAD**

#652  
1652  
2400  
5013

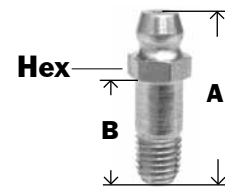


**LONG BALL CHECK**

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-142	1/4"-28 Taper Thread	0.90	0.29	0.43	0.01	0.59

**1/4-28 TAPER THREAD**

#680  
1680  
2400  
5014

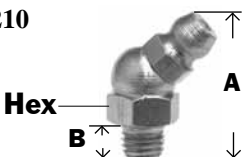


**EXTRA LONG BALL CHECK**

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-144	1/4"-28 Taper Thread	0.96	0.62	0.31	0.02	0.89

**1/4-28 TAPER THREAD**

#637 5210  
1637  
2445  
1665  
2465  
3010



**SHORT 45° BALL CHECK**

Part #	Size	Angle	A	B	Hex	Approx. Wt. Lbs.	List Price
36-146	1/4"-28 Taper Thread	45°	0.81	0.20	0.37	0.02	1.17
36-147	1/4"-28 Taper Thread	65°	0.78	0.20	0.37	0.02	1.32

**1/4-28 TAPER THREAD**

#636  
1630  
2445

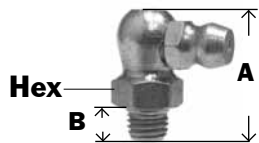


**LONG 45° BALL CHECK**

Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-148	1/4"-28 Taper Thread	0.90	0.29	0.37	0.02	1.64

**1/4-28 TAPER THREAD**

#911  
1911  
2490  
3054  
5410



**90° ANGLE BALL CHECK**

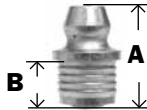
Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-150	1/4"-28 Taper Thread	0.75	0.20	0.37	0.02	0.99
36-152	Thread Forming	0.75	0.20	0.37	0.02	1.88

## STEEL GREASE FITTINGS

## BRASS FITTINGS

## DRIVE TYPE

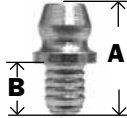
## BALL CHECK

#608  
1608  
5021

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
36-160	5/16"	0.54	0.25	0.01	0.67

## DRIVE TYPE

## BALL CHECK

#728  
1728  
2316  
5033

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
36-164	3/16"	0.51	0.25	0.01	0.66

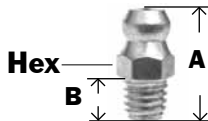
## DRIVE TYPE

## BALL CHECK

#743  
1743  
214  
5029

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

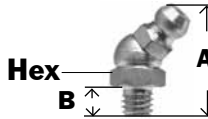
## METRIC

#711  
6000  
2106  
2M6  
5175

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-168	6MM x 1	16	6	7	0.01	0.86

## METRIC

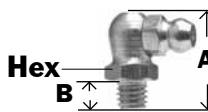
## 45° ANGLE

#712  
6045  
2107  
5176

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-170	6MM x 1	21	5.5	9	0.02	1.16

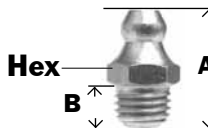
## METRIC

## 90° ANGLE

#713  
6090  
2108  
ZM906  
5177

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-172	6MM x 1	18	5.5	9	0.02	1.22

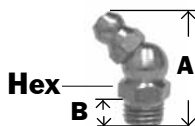
## METRIC

#811  
8000  
2103  
ZM58  
5178

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-174	8MM x 1	17	6	9	0.02	0.73

## METRIC

## 45° ANGLE

#812  
8045  
2104  
ZM458  
5179

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-176	8MM x 1	21	5.5	9	0.02	1.22

## METRIC

## 90° ANGLE

#813  
8090  
2105  
ZM908  
5180

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-178	8MM x 1	18	5.5	9	0.02	1.25



## BRASS FITTINGS

## STEEL GREASE FITTINGS

### METRIC

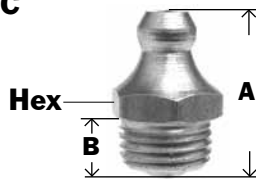
#911

9000

2109

ZM510

5181



Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-180	10MM x 1	18	6	11	0.02	1.09

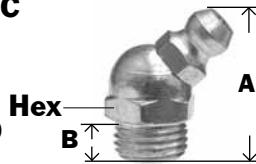
### METRIC

#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	1.60

### METRIC

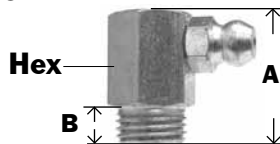
#913

9090

2111

ZM9010

5183



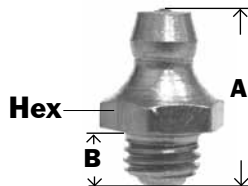
### 90° ANGLE

Part #	Size	A (mm)	B (mm)	Hex (mm)	Approx. Wt. Lbs.	List Price
36-184	10MM x 1	18	5.5	11	0.02	1.42

#711-B

1711

2500

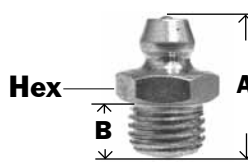


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-186	5/16"-24	0.65	0.25	0.37	0.02	0.86

#710-B

1710

2600

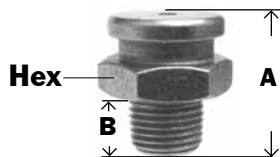


Part #	Size	A	B	Hex	Approx. Wt. Lbs.	List Price
36-188	3/8"-24	0.65	0.25	0.43	0.01	1.45

## 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	3.24
36-205	1/4"-18 NPT	0.82	0.42	0.62	0.03	3.62

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

10,000 PSI Burst Pressure Rubber Hose



3/16" ID

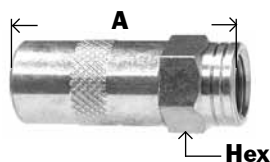
1/8" NPT Solid Base

3,000 PSI Working pressure

Part #	Length	List Price
36-210	12" RUBBER	30.23
36-212	18" RUBBER	21.08
36-214	24" RUBBER	25.79
36-216	36" RUBBER	40.50

## 4 JAW GREASE GUN COUPLER

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

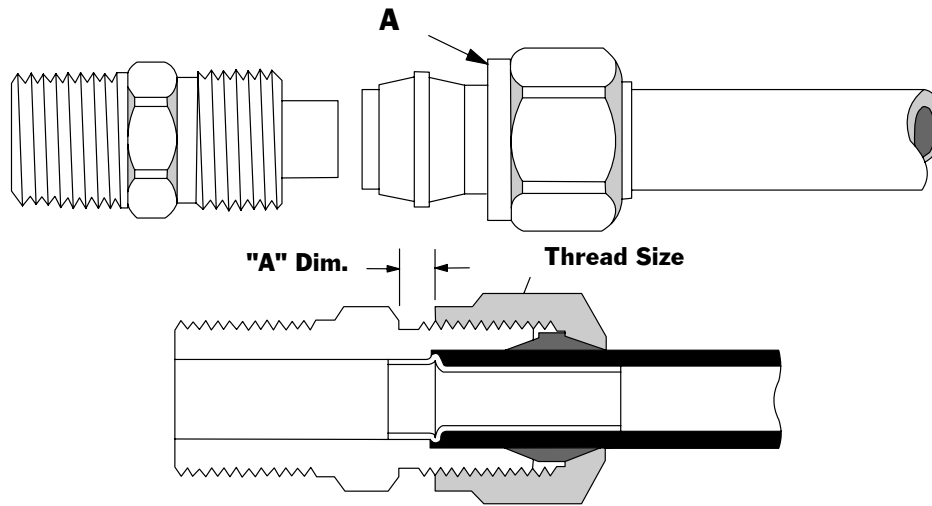


1/8" NPTF

Part #	A	Hex	Approx. Wt. Lbs.	List Price
36-220	1.50	0.56	0.05	9.60



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



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

**•Typical Application**

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

**•Pressure**

Maximum operating pressure of 150 PSI.

**•Vibration**

Fair resistance.

**•Temperature Range**

-40°F to +200°F (-40°C to +93°C).

**•Material**

CA360 Brass

**•Used With**

NT Nylon Tubing - SAE J844 Type A and B.

**•Tolerance**

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

**•Advantages**

Easy to assemble (no tube preparation or flaring required.) Built in tube support. Fittings utilize a ribbed sleeve for compression and positive grip. May be used with copper tubing by replacing nut, sleeve and insert with long nut and spherical sleeve. Insert should be removed for copper tubing use.

**•Conformance**

Meets specifications and standards of SAE and DOT FMVSS 571,106.

**•Assembly Instructions**

- 1- Cut tubing to desired length.
- 2-Slide nut and then sleeve on tubing. Threaded end of nut "A" must face toward fitting body.
- 3-Insert tubing into the preassembled fitting. Be sure tubing is bottomed in fitting.
- 4- Tighten nut to required torque as indicated on chart.

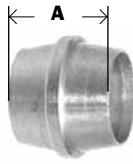
**Disassembling:** Remove nut and pull tubing out of fitting body. Insert will remain in tubing.

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

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

**SLEEVE**

**SAE# 100115**

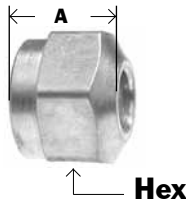


60NAB  
60NTA  
1460

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-001	1/4"	0.30	0.01	0.39
38-002	3/8"	0.39	0.02	0.52
38-003	1/2"	0.43	0.02	0.72
38-004	5/8"	0.48	0.03	1.19
38-005	3/4"	0.53	0.04	2.15

**NUT**

**SAE# 100110**

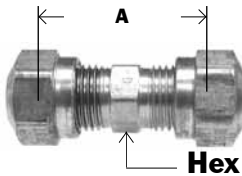


61NAB  
61NTA  
1461

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

**UNION**

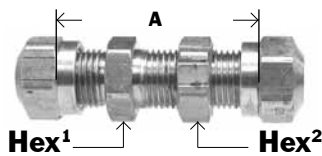
**SAE# 100101BA**



62NAB  
62NTA  
1462

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
38-019	1/4"	0.85	0.43	0.08	5.65
38-020	3/8"	1.10	0.56	0.18	6.68
38-021	1/2"	1.31	0.68	0.20	10.85
38-022	5/8"	1.43	0.81	0.26	22.33
38-023	3/4"	1.60	1.00	0.48	31.19

**BULKHEAD UNION**

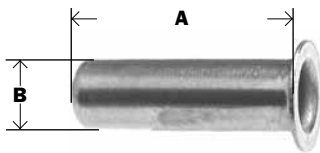


62NBH  
1474  
475

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	13.17
38-029	3/8"	1.61	0.69	0.75	0.16	18.50
38-030	1/2"	1.88	0.81	0.87	0.26	29.98

**STAINLESS STEEL INSERT**

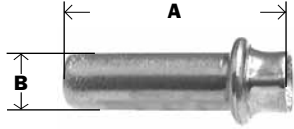
• For SAE# J844 TUBING



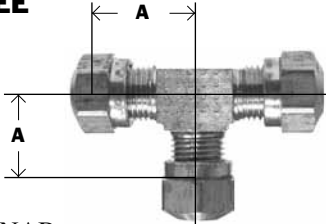
59A  
63NTA

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
38-035	1/4"	0.53	0.16	0.01	0.73
38-036	3/8"	0.64	0.24	0.02	0.78
38-037	1/2"	0.81	0.37	0.02	1.29
38-038	5/8"	0.86	0.43	0.03	3.14
38-039	3/4"	1.04	0.56	0.03	3.72

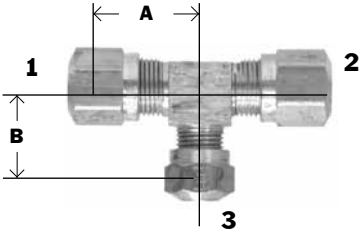
Some product stocked in Houston and Atlanta.

**D.O.T. AIR BRAKE - NYLON TUBING****BRASS FITTINGS****BRASS INSERT**1484  
463

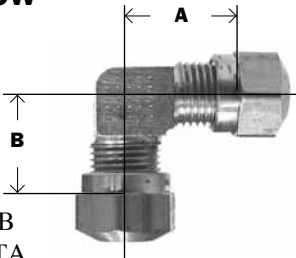
Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
38-040	1/4"	0.64	0.16	0.01	0.71
38-041	3/8"	0.76	0.24	0.02	0.71
38-042	1/2"	0.94	0.37	0.02	1.44
38-043	5/8"	1.06	0.43	0.02	1.27
38-048	3/4"	1.21	0.56	0.04	2.72

**TEE**64NAB  
264NTA  
1464**SAE# 100401BA**

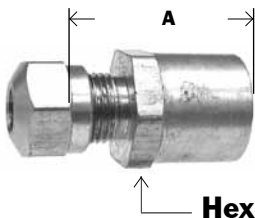
Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-044	1/4"	0.61	0.14	11.04
38-045	3/8"	0.78	0.18	11.76
38-046	1/2"	0.92	0.36	18.09
38-047	5/8"	1.09	0.46	40.20

**REDUCING BRANCH TEE**

Part #	Tube O.D. (1&2) x 3	A	B	Approx. Wt. Lbs.	List Price
38-049	3/8" x 1/4"	0.72	0.69	0.24	37.79
38-057	1/2" x 3/8"	0.92	0.85	0.30	21.45

**ELBOW**65NAB  
265NTA  
1465**SAE# 100201BA**

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-052	1/4"	0.61	0.10	11.99
38-053	3/8"	0.78	0.12	8.87
38-054	1/2"	0.92	0.26	23.51
38-055	5/8"	1.09	0.34	27.55

**FEMALE ADAPTER**66NAB  
66NTA  
1466  
66NBH**SAE# 100103BA**

Part #	Tube O.D. x Female NPT	A	Hex	Approx. Wt. Lbs.	List Price
38-060	1/4" x 1/8"	0.83	0.56	0.07	4.25
38-061	1/4" x 1/4"	1.06	0.68	0.08	6.58
38-062	3/8" x 1/8"	1.00	0.56	0.10	6.36
38-063	3/8" x 1/4"	1.18	0.68	0.10	7.73
38-064	3/8" x 3/8"	1.18	0.87	0.12	8.65
38-065	1/2" x 3/8"	1.27	0.87	0.16	12.35
38-066	1/2" x 1/2"	1.43	1.06	0.26	13.17
38-067	5/8" x 3/8"	1.31	0.87	0.28	19.76
38-068	5/8" x 1/2"	1.50	1.06	0.28	23.30

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

Some product stocked in Houston and Atlanta.

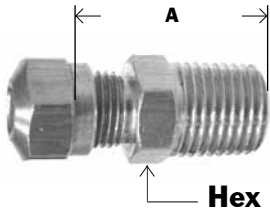
# BRASS FITTINGS

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

BRASS

## MALE ADAPTER

SAE# 100102BA

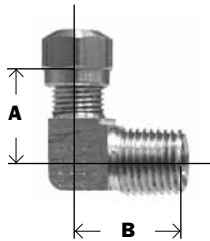


68NAB  
68NTA  
1468

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	10.14
38-073	1/4" x 1/8"	0.88	0.43	0.05	3.80
38-074	1/4" x 1/4"	1.09	0.56	0.07	6.42
38-075	1/4" x 3/8"	1.13	0.68	0.09	7.98
38-076	3/8" x 1/8"	1.03	0.56	0.08	4.33
38-077	3/8" x 1/4"	1.20	0.56	0.10	4.58
38-078	3/8" x 3/8"	1.24	0.68	0.10	5.12
38-079	3/8" x 1/2"	1.43	0.87	0.16	7.45
38-080	1/2" x 1/4"	1.32	0.68	0.13	7.57
38-081	1/2" x 3/8"	1.32	0.68	0.14	6.54
38-082	1/2" x 1/2"	1.51	0.87	0.21	8.45
38-087	1/2" x 3/4"	1.57	1.06	0.23	24.14
38-083	5/8" x 3/8"	1.39	0.81	0.17	13.58
38-084	5/8" x 1/2"	1.57	0.87	0.20	13.69
38-088	5/8" x 3/4"	1.71	1.06	0.25	18.93
38-085	3/4" x 1/2"	1.68	1.00	0.28	19.00
38-086	3/4" x 3/4"	1.71	1.06	0.33	22.26

## MALE ELBOW

SAE# 100202BA

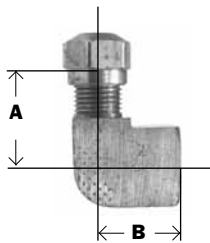


1469

Part #	Tube O.D. x Male NPTF	A	B	Approx. Wt. Lbs.	List Price
38-091	1/4" x 1/8"	0.61	0.65	0.06	4.78
38-092	1/4" x 1/4"	0.67	0.86	0.09	5.47
38-093	1/4" x 3/8"	0.72	0.85	0.12	6.45
38-094	3/8" x 1/8"	0.72	0.73	0.09	6.77
38-095	3/8" x 1/4"	0.80	0.93	0.11	6.04
38-090	3/8" x 1/4" LONG	0.80	1.44	0.14	16.68
38-101	3/8" x 3/8"	0.83	0.90	0.14	7.04
38-102	3/8" x 1/2"	0.93	1.09	0.21	9.69
38-103	1/2" x 1/4"	0.85	0.98	0.18	8.67
38-104	1/2" x 3/8"	0.92	0.98	0.19	10.26
38-109	1/2" x 3/8" LONG	0.94	1.38	0.26	23.57
38-105	1/2" x 1/2"	1.02	1.17	0.28	10.71
38-106	5/8" x 3/8"	1.00	1.05	0.24	18.35
38-107	5/8" x 1/2"	1.10	1.25	0.28	15.96
38-110	5/8" x 3/4"	1.09	1.24	0.38	27.52
38-108	3/4" x 1/2"	1.19	1.33	0.41	24.03

## FEMALE ELBOW

SAE# 100203BA



70NAB  
1470  
270NTA

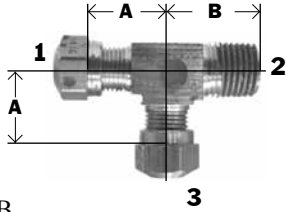
Part #	Tube O.D. x Female NPTF	A	B	Approx. Wt. Lbs.	List Price
38-113	1/4" x 1/8"	0.68	0.52	0.08	6.73
38-114	1/4" x 1/4"	0.77	0.70	0.12	14.60
38-115	3/8" x 1/8"	0.82	0.58	0.14	11.57
38-116	3/8" x 1/4"	0.88	0.76	0.10	9.48
38-117	3/8" x 3/8"	0.93	0.76	0.12	10.77
38-118	1/2" x 3/8"	1.02	0.81	0.23	18.50
38-119	1/2" x 1/2"	1.13	1.01	0.36	20.00
38-120	5/8" x 1/2"	1.19	1.07	0.38	19.78

Some product stocked in Houston and Atlanta.



**MALE RUN TEE**

**SAE# 100424BA**

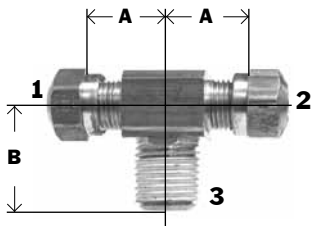


71NAB  
271NTA  
1471

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	11.32
38-126	1/4" x 1/4" x 1/4"	0.68	0.86	0.14	9.71
38-124	3/8" x 1/4" x 1/4"	0.72	0.69	0.14	24.60
38-127	3/8" x 1/4" x 3/8"	0.78	0.91	0.16	11.07
38-128	3/8" x 3/8" x 3/8"	0.83	0.90	0.20	9.62
38-129	1/2" x 3/8" x 1/2"	0.92	0.98	0.30	13.05

**MALE BRANCH TEE**

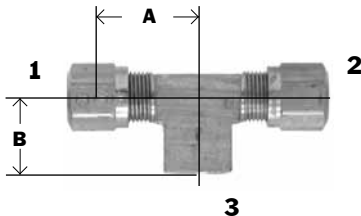
**SAE# 100425BA**



72NAB  
272NTA  
1472

Part #	Tube O.D. x Tube O.D. x Male NPTF 1x2x3	A	B	Approx. Wt. Lbs.	List Price
38-136	1/4" x 1/4" x 1/8"	0.61	0.65	0.10	9.60
38-137	1/4" x 1/4" x 1/4"	0.67	0.86	0.13	15.09
38-138	3/8" x 3/8" x 1/8"	0.71	0.73	0.14	16.11
38-132	3/8" x 1/4" x 1/4"	0.80	0.93	0.15	29.01
38-139	3/8" x 3/8" x 1/4"	0.78	0.91	0.16	10.09
38-133	1/2" x 1/2" x 1/4"	0.87	1.00	0.26	25.36
38-140	3/8" x 3/8" x 3/8"	0.83	0.90	0.20	10.26
38-134	1/2" x 3/8" x 3/8"	0.94	1.00	0.26	28.89
38-141	1/2" x 1/2" x 3/8"	0.92	0.98	0.30	14.76
38-142	1/2" x 1/2" x 1/2"	1.02	1.17	0.38	18.11
38-143	5/8" x 5/8" x 1/2"	1.09	1.24	0.44	52.50

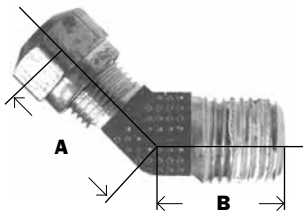
**FEMALE BRANCH TEE**



Part #	Tube O.D. x Tube O.D. x Female NPTF 1x2x3	A	B	Approx. Wt. Lbs.	List Price
38-144	3/8" x 3/8" x 1/4"	0.90	0.78	0.21	32.59
38-146	5/8" x 5/8" x 1/4"	1.04	0.89	0.48	49.66

**45° ELBOW**

**SAE# 100302BA**



6945NAB  
279NTA  
1480

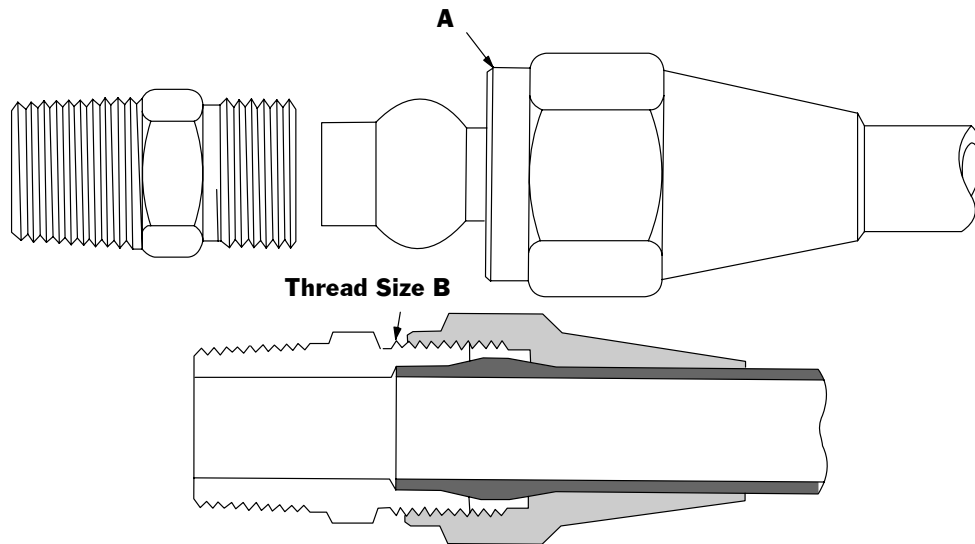
Part #	Tube O.D. x Male NPTF	A	B	Approx. Wt. Lbs.	List Price
38-148	1/4" x 1/8"	0.49	0.63	0.06	10.09
38-149	1/4" x 1/4"	0.60	0.85	0.08	11.24
38-150	3/8" x 1/8"	0.71	0.67	0.10	22.46
38-151	3/8" x 1/4"	0.72	0.86	0.10	8.19
38-152	3/8" x 3/8"	0.76	0.95	0.14	11.59
38-153	3/8" x 1/2"	0.78	1.20	0.24	17.30
38-157	1/2" x 1/4"	0.85	0.95	0.20	21.30
38-154	1/2" x 3/8"	0.84	0.94	0.20	12.98
38-155	1/2" x 1/2"	0.87	1.16	0.24	15.53
38-156	5/8" x 1/2"	1.00	1.20	0.28	18.01
38-158	3/4" x 1/2"	1.10	1.18	0.38	42.59

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

Some product stocked in Houston and Atlanta.



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



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

#### •Typical Application

Air brake systems.

#### •Pressure

Maximum operating pressure of 150 PSI.

#### •Vibration

Fair resistance.

#### •Temperature Range

-65°F to +250°F (-53°C to +121°C) with copper tubing.

#### •Material

CA360 Brass.

#### •Used With

Copper tubing in air brake systems.

#### •Tolerance

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

#### •Advantages

Easy to assemble (no flaring). May be used with nylon tubing by replacing long nut and spherical sleeve with insert, rigid sleeve and nut.

#### •Conformance

Meets specifications and standards of SAE and DOT.

#### •Assembly Instructions

- 1- Cut tubing to desired length. Make sure all burrs are removed and the ends are cut square.
- 2- Slide nut and then sleeve on tubing. Threaded end "A" must face toward fitting body.
- 3- Insert tubing into fitting. Be sure tubing is bottomed on fitting shoulder.
- 4- Thread nut onto fitting body until it is hand tight.
- 5- From that point, tighten with a wrench the number of turns indicated in the chart below:

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

**SLEEVE**

**SAE# 120115BA**

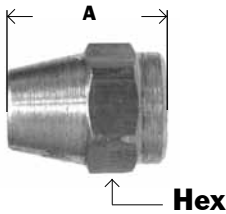


Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-161	1/4"	0.25	0.01	0.27
38-162	3/8"	0.31	0.02	0.59
38-163	1/2"	0.38	0.02	0.71
38-164	5/8"	0.44	0.02	1.33
38-165	3/4"	0.50	0.04	2.72

60AB  
1360

**NUT**

**SAE# 120111BA**

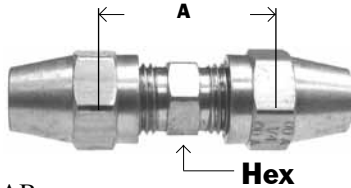


Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
38-170	1/4"	0.75	0.56	0.02	1.79
38-171	3/8"	1.13	0.62	0.04	1.95
38-172	1/2"	1.25	0.81	0.08	3.53
38-173	5/8"	1.38	0.94	0.12	4.70
38-174	3/4"	1.56	1.12	0.18	10.04

20961  
61AB  
1361

**UNION**

**SAE# 120101BA**

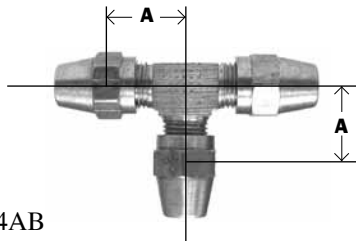


Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
38-179	1/4"	0.81	0.44	0.08	5.78
38-180	3/8"	1.10	0.56	0.14	7.62
38-181	1/2"	1.07	0.69	0.24	14.09
38-182	5/8"	1.41	0.81	0.34	20.35
38-183	3/4"	1.59	1.00	0.54	41.42

62AB  
1362

**TEE**

**SAE# 120401BA**



Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-188	1/4"	0.62	0.16	12.53
38-189	3/8"	0.82	0.24	15.19
38-190	1/2"	0.94	0.48	25.90
38-191	5/8"	1.09	0.60	38.76

264AB  
1364

**"You can do anything, but not everything."**

**- David Allen**

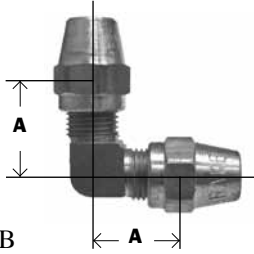
Dimension data can change without notice.  
Please call us when dimensions are critical.





**ELBOW**

**SAE# 120201BA**



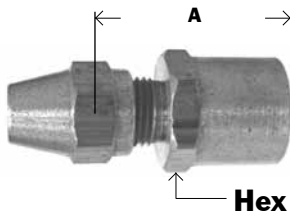
265AB  
1365

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
38-196	1/4"	0.62	0.10	16.03
38-197*	3/8"	0.78	0.16	11.61
38-198	1/2"	0.92	0.28	15.73
38-199	5/8"	1.10	0.42	25.76

\* Forged

**FEMALE ADAPTER**

**SAE# 120103BA**

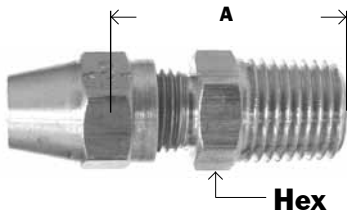


66AB  
1366

Part #	Tube O.D. x Female NPTF	A	Hex	Approx. Wt. Lbs.	List Price
38-204	1/4" x 1/8"	0.84	0.56	0.08	5.69
38-205	1/4" x 1/4"	1.07	0.68	0.10	9.50
38-206	3/8" x 1/8"	1.00	0.56	0.10	7.85
38-207	3/8" x 1/4"	1.19	0.68	0.12	7.31
38-208	3/8" x 3/8"	1.18	0.87	0.16	7.71
38-209	1/2" x 3/8"	1.27	0.87	0.18	16.55
38-210	1/2" x 1/2"	1.44	1.06	0.20	17.39
38-211	5/8" x 3/8"	1.31	0.87	0.24	15.71
38-212	5/8" x 1/2"	1.50	1.06	0.26	24.59

**MALE ADAPTER**

**SAE# 120102BA**



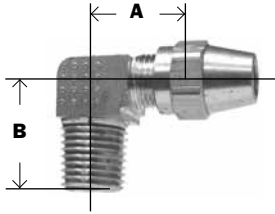
68AB  
1368

Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
38-217	1/4" x 1/8"	0.88	0.43	0.06	3.68
38-218	1/4" x 1/4"	0.97	0.56	0.08	5.00
38-219	1/4" x 3/8"	1.14	0.68	0.10	6.36
38-220	3/8" x 1/8"	1.02	0.56	0.08	6.36
38-221	3/8" x 1/4"	1.09	0.56	0.10	5.32
38-222	3/8" x 3/8"	1.19	0.69	0.12	5.72
38-223	3/8" x 1/2"	1.45	0.87	0.18	6.67
38-224	1/2" x 1/4"	1.32	0.69	0.16	9.80
38-225	1/2" x 3/8"	1.35	0.69	0.18	7.75
38-226	1/2" x 1/2"	1.51	0.87	0.24	11.88
38-227	5/8" x 3/8"	1.39	0.81	0.22	16.08
38-228	5/8" x 1/2"	1.57	0.87	0.24	14.28
38-229	3/4" x 1/2"	1.67	1.00	0.34	19.85
38-230	3/4" x 3/4"	1.71	1.06	0.40	28.15

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**90° MALE ELBOW**

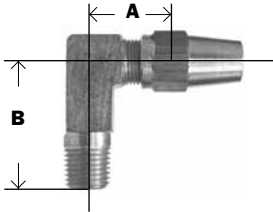
**SAE# 120202BA**



269AB  
1369

Part #	Tube O.D. x Male NPTF	A	B	Approx. Wt. Lbs.	List Price
38-235	1/4" x 1/8"	0.64	0.76	0.08	5.78
38-236	1/4" x 1/4"	0.69	0.88	0.10	6.63
38-237	1/4" x 3/8"	0.73	0.86	0.14	10.02
38-238	3/8" x 1/8"	0.73	0.75	0.12	7.66
38-239	3/8" x 1/4"	0.80	0.93	0.12	7.40
38-240	3/8" x 3/8"	0.83	0.90	0.16	9.52
38-241	3/8" x 1/2"	0.95	1.11	0.24	10.52
38-242	1/2" x 1/4"	0.85	0.98	0.24	11.42
38-243	1/2" x 3/8"	0.92	0.98	0.22	12.47
38-244	1/2" x 1/2"	1.04	1.19	0.30	14.93
38-245	5/8" x 3/8"	1.01	1.06	0.34	18.20
38-246	5/8" x 1/2"	1.10	1.25	0.36	19.22
38-247	3/4" x 1/2"	1.19	1.32	0.44	28.95

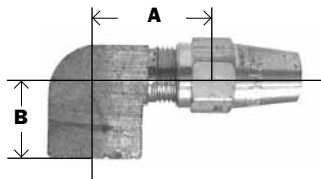
**LONG PATTERN ELBOW**



Part #	Tube O.D. x Male NPTF	A	B	Approx. Wt. Lbs.	List Price
38-249	3/8" x 1/4"	0.81	1.44	0.16	15.51

**90° FEMALE ELBOW**

**SAE# 120203BA**

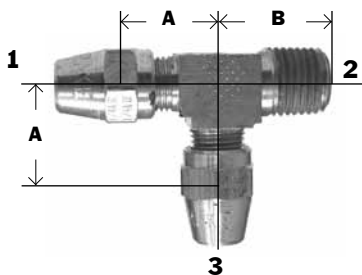


270AB  
1370

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	8.96
38-253	1/4" x 1/4"	0.78	0.71	0.14	14.15
38-255	3/8" x 1/4"	0.84	0.78	0.16	6.81
38-256	3/8" x 3/8"	0.93	0.77	0.18	9.38
38-257	1/2" x 3/8"	1.03	0.82	0.26	22.66
38-259	5/8" x 1/2"	1.19	1.07	0.44	31.22

**MALE RUN TEE**

**SAE# 120424BA**

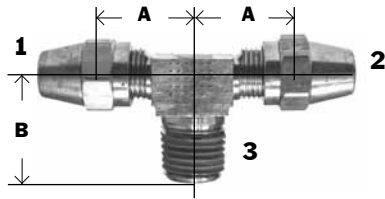


271AB  
1371

Part #	Tube O.D. x Male NPTF (1&3)x2	A	B	Approx. Wt. Lbs.	List Price
38-264	1/4" x 1/8"	0.62	0.66	0.12	20.21
38-265	1/4" x 1/4"	0.68	0.87	0.16	19.02
38-266	3/8" x 1/4"	0.79	0.92	0.20	17.80
38-267	3/8" x 3/8"	0.83	0.90	0.24	15.38
38-269	1/2" x 1/2"	1.03	1.18	0.42	20.37

**MALE BRANCH TEE**

**SAE# 120425BA**

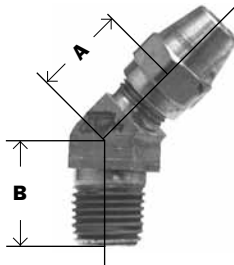


Part #	Tube O.D. x Male NPTF (1&2)x3	A	B	Approx. Wt. Lbs.	List Price
38-278	3/8" x 1/4"	0.78	0.91	0.18	16.84
38-279	3/8" x 3/8"	0.85	0.92	0.24	12.09
38-280	1/2" x 3/8"	0.91	0.98	0.36	12.66
38-281	1/2" x 1/2"	1.03	1.18	0.42	36.48

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	7.85
38-288	1/4" x 1/4"	0.60	0.85	0.10	15.48
38-290	3/8" x 1/4"	0.72	0.86	0.18	7.57
38-291	3/8" x 3/8"	0.75	0.94	0.20	13.43
38-292	3/8" x 1/2"	0.78	1.16	0.22	23.96
38-293*	1/2" x 3/8"	0.82	0.94	0.18	17.04
38-294	1/2" x 1/2"	0.87	1.16	0.24	16.16

\* Forged

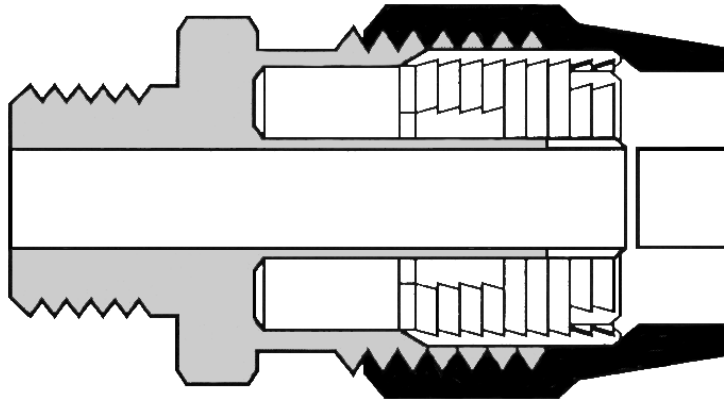
279AB  
1380

\*TROOPER WISECRACKS\*

"Warning! You want a warning? Okay, I'm warning you not to do that again or I'll give you another ticket."

# D.O.T. Air Brake - Hose/ Ends

BRASS



### •Typical Application

Air Brake hose connections.  
Meets SAE & DOT specifications  
(FMVCS 10 GAL)

### •Pressure

Determined by maximum working pressure for hose size.  
Up to 125 psi

### •Material

CA360 Brass.  
Temperature: -40°F to + 120° F ( -40°C to +48°C )

### •Advantages

Can be used for nearly any brake line. Easy to assemble with a good selection of hose end configurations. Brass material offers excellent resistance against corrosion.

### •Tolerance

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

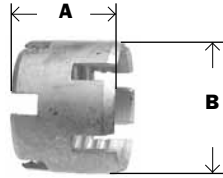
### •Assembly Instructions

- 1- Slide nut and sleeve onto hose. Make sure bevel edge of sleeve faces out toward fitting.
- 2- Push hose into fitting until it bottoms.
- 3- Screw nut until contact is made with body hex.

NOTE: When reassembling fitting, body and nut should be inspected. Only reuse if in proper condition. Sleeves should never be reused.

**SLEEVE**

#60HC  
3380-A  
0903610  
367



Part #	Hose I.D. Size	A	B	Approx. Wt. Lbs.	List Price
38-300	3/8"	0.69	0.90	0.02	1.99
38-301	1/2"	0.64	1.03	0.02	3.74

**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	4.57
38-307	1/2"	1.20	1.25	0.06	5.72

**SPRING NUT**

#61HCS  
0903613  
3380-D  
31RBSG



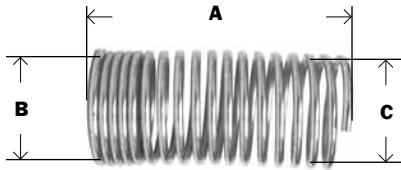
Part #	Hose I.D. Size	Thread	A	Hex	Approx. Wt. Lbs.	List Price
38-312	3/8"	31/32-20	1.25	1.03	0.04	4.59
38-313	1/2"	1-3/32-20	1.20	1.25	0.06	6.01

"A dream is your creative vision for your life in the future. You must break out of your current comfort zone and become comfortable with the unfamiliar and the unknown."

- Denis Waitley

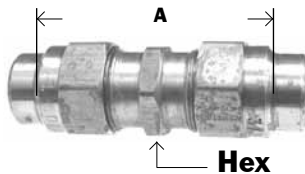
"The secret of making dreams come true can be summarized in four C's. They are Curiosity, Confidence, Courage, and Constancy; and the greatest of these is Confidence."

- Walt Disney

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

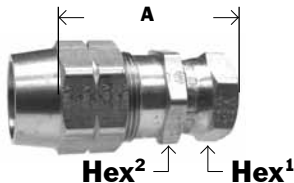
Part #	Hose I.D.	A	B	C	Approx. Wt. Lbs.	List Price
38-351	3/8"	2.75	0.84	0.78	0.20	1.50
38-352	1/2"	2.75	1.10	1.10	0.22	2.89

#60SG 3380-C  
0901045 377

**UNION**

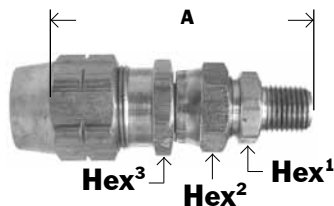
Part #	Hose I.D.	Thread	A	Hex	Approx. Wt. Lbs.	List Price
38-318	3/8"	31/32-30	2.55	0.97	0.32	28.08
38-319	1/2"	1-1/8-20	2.55	1.12	0.48	46.79

#62HC 362  
3380B-Y0

**FEMALE CONNECTOR HOSE**

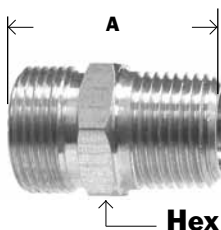
Part #	Hose I.D. x Female ABS	A	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
38-357	3/8" x 3/4-20	1.96	0.87	0.97	0.24	28.97
38-358	1/2" x 7/8-20	2.1	1.06	1.12	0.38	34.65

#66ABS 3380B-Y7  
66RBSV 386

**MALE CONNECTOR**

Part #	Hose I.D. x Male Pipe	A	Hex 1	Hex 2	Hex 3	Approx. Wt. Lbs.	List Price
38-363	3/8" x 1/4"	2.90	0.75	0.87	0.97	0.38	29.85
38-364	1/2" x 3/8"	2.96	0.87	1.06	1.12	0.46	57.18

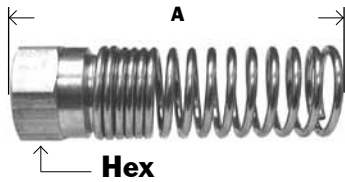
#68ABS 3380B-Y8  
09155 387

**ADAPTER**

Part #	Male ABS x Male Pipe	ABS Thread	A	Hex	Approx. Wt. Lbs.	List Price
38-369	3/8" x 1/4"	3/4-20	1.14	0.75	0.06	3.63
38-368	3/8" x 3/8"	3/4-20	1.14	0.75	0.08	3.24
38-372	3/8" x 1/2"	3/4-20	1.37	0.87	0.12	5.47
38-370	1/2" x 3/8"	7/8-20	1.18	0.87	0.10	4.92
38-371	1/2" x 1/2"	7/8-20	1.38	0.87	0.12	10.70

#68ABS 76RB  
1390 388

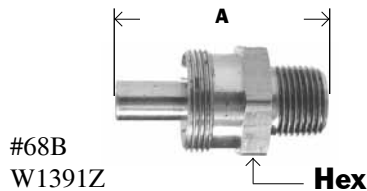
**NUT AND SPRING ASSEMBLY**



Part #	Hose I.D. Size	A	Hex	Approx. Wt. Lbs.	List Price
38-015	3/8"	3.55	1.03	0.18	4.64
38-016	1/2"	3.50	1.25	0.24	8.54

379  
67RBSG  
0999999

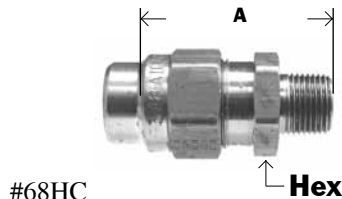
**ADAPTER BODY**



#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	5.39
38-325	3/8" x 3/8"	1.92	0.97	0.14	5.66
38-326	3/8" x 1/2"	2.02	1.00	0.20	6.05
38-327	1/2" x 3/8"	2.07	1.12	0.18	16.23
38-328	1/2" x 1/2"	2.06	1.12	0.20	9.34

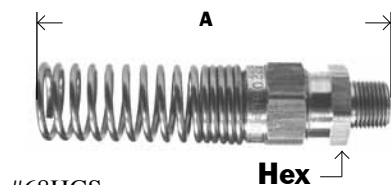
**MALE ADAPTER**



#68HC  
368  
3380B-Y2  
68RB

Part #	Hose I.D. x Male Pipe	A	Hex	Approx. Wt. Lbs.	List Price
38-333	3/8" x 1/4"	1.91	0.97	0.22	11.32
38-334	3/8" x 3/8"	1.94	0.97	0.24	12.80
38-335	3/8" x 1/2"	2.12	0.97	0.26	14.51
38-336	1/2" x 3/8"	2.07	1.12	0.33	17.25
38-337	1/2" x 1/2"	2.07	1.12	0.36	18.77

**MALE ADAPTER**



#68HCS  
3380B-Y3  
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	13.31
38-343	3/8" x 3/8"	4.96	1.00	0.34	13.53
38-344	3/8" x 1/2"	5.53	1.00	0.38	15.01
38-345	1/2" x 3/8"	4.75	1.12	0.48	18.99
38-346	1/2" x 1/2"	4.88	1.12	0.52	21.41



**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 with two fingers and pull out tube. No tools required.
- **Reusable:** Can be connected and disconnected several times.
- **Reliable sealing:** Using recommended tubing, full sealing is guaranteed.
- **Versatility:** Buna N O'ring standard. Viton and others available per request. Secure Tube Retention. Pulling on tubing only serves to tighten the connection.
- **Pre-Applied Teflon®** based pipe sealant on all male pipe threads, saving customer additional labor.
- **Full Flow Design,** provides more flow area than conventional fittings with internal tube supports even in the swivels.

lation of tubing. All male threads have a pre-applied Teflon® based pipe sealant to provide for easy assembly and leak proof seal.

• **Materials:**

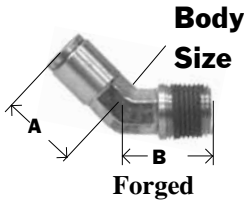
CA360 Brass - Barstock CA377 - Forged  
"O" Ring: Buna - Nitrile (90 Durometer)  
EP (Ethylene Propylene)

• **Working Pressures & Temperature Ranges**

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

DOT Fittings are constructed with an all brass captive eyelet which allows for maximum flow. The brass captive eyelet with extended length is floating and has a machined top end radius for easy instal-

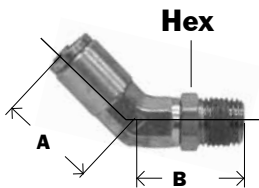
**MALE 45° ELBOW**



AQ54DOT  
179MTNS  
1880  
DQ54DOT

Part #	Tube O.D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
540402	1/4" x 1/8"	0.83	0.89	0.37	0.06	11.37
540404	1/4" x 1/4"	0.91	0.89	0.37	0.06	12.88
540602	3/8" x 1/8"	0.75	0.89	0.51	0.08	12.46
540604	3/8" x 1/4"	0.95	0.98	0.49	0.10	14.41
540606	3/8" x 3/8"	0.89	0.98	0.50	0.10	16.33
540608	3/8" x 1/2"	1.14	1.30	0.87	0.15	13.46
540804	1/2" x 1/4"	1.00	1.24	0.82	0.13	19.93
540806	1/2" x 3/8"	1.05	1.10	0.62	0.16	17.90
540808	1/2" x 1/2"	1.20	1.10	0.62	0.18	20.55
541006	5/8" x 3/8"	1.46	1.02	1.06	0.22	42.38
541008	5/8" x 1/2"	0.98	0.98	0.72	0.21	26.92
541208	3/4" x 1/2"	1.36	1.08	0.93	0.28	34.56
541212	3/4" x 3/4"	1.36	1.08	0.94	0.32	40.98

**MALE 45° SWIVEL ELBOW**



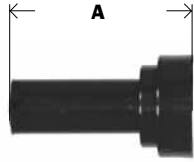
AQ54DOTS  
179PMT  
1880  
DQ54DOTS

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
540402S	1/4" x 1/8"	0.60	0.72	0.43	0.06	17.59
540404S	1/4" x 1/4"	1.10	0.89	0.56	0.09	17.90
540602S	3/8" x 1/8"	1.07	0.98	0.43	0.10	16.47
540604S	3/8" x 1/4"	1.07	0.98	0.56	0.11	16.55
540606S	3/8" x 3/8"	1.23	0.97	0.68	0.14	17.37
540804S	1/2" x 1/4"	1.22	1.12	0.56	0.14	31.38
540806S	1/2" x 3/8"	1.32	1.10	0.68	0.16	27.69
540808S	1/2" x 1/2"	1.61	1.10	0.88	0.18	24.39
541008S	5/8" x 1/2"	1.69	1.23	0.87	0.24	37.07

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



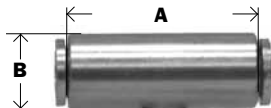
**PLUG**



1829  
DQ59DOT  
639PMT

Part #	Tube O.D.	A	Approx. Wt. Lbs.	List Price
595320	5/32"	1.16	0.01	1.17
590400	1/4"	0.81	0.02	2.14
590600	3/8"	0.99	0.02	1.90
590800	1/2"	0.99	0.04	2.27

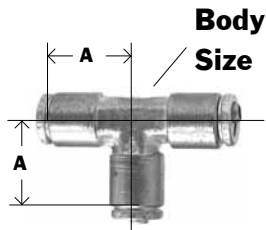
**UNION**



AQ62DOT  
62PMT  
1862  
DQ62DOT

Part #	Tube O.D.	A	B	Approx. Wt. Lbs.	List Price
620532	5/32"	1.18	.37	0.06	8.25
620400	1/4"	1.40	.51	0.08	10.45
620600	3/8"	1.54	.67	0.14	9.96
620604	3/8" x 1/4"				19.19
620800	1/2"	1.81	.81	0.19	9.86
621000	5/8"	1.84	.94	0.30	22.92
621200	3/4"	2.38	1.18	0.44	41.57

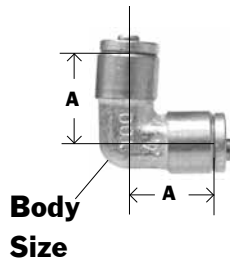
**UNION TEE**



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	15.28
640600	3/8"	0.97	0.52	0.22	18.75
640800	1/2"	1.16	0.62	0.25	25.28
641000	5/8"	1.44	0.69	0.32	43.10

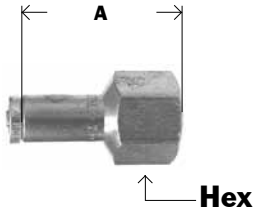
**UNION ELBOW**



AQ65DOT  
165 PMT  
1865  
DQ65DOT

Part #	Tube O.D.	A	Body Size	Approx. Wt. Lbs.	List Price
655320	5/32"	0.59	0.29	0.03	22.85
650400	1/4"	0.83	0.37	0.06	11.40
650600	3/8"	0.98	0.50	0.10	15.93
650800	1/2"	1.26	0.62	0.18	19.59

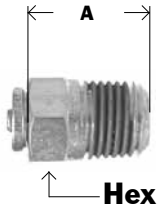
**FEMALE CONNECTOR**



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	10.25
660404	1/4" x 1/4"	1.42	0.75	0.10	13.54
660602	3/8" x 1/8"	1.37	0.68	0.09	28.45
660604	3/8" x 1/4"	1.30	0.75	0.11	12.53
660606	3/8" x 3/8"	1.41	0.87	0.14	15.52
660804	1/2" x 1/4"	1.56	0.81	0.14	22.85
660806	1/2" x 3/8"	1.51	0.87	0.16	27.49
660808	1/2" x 1/2"	2.01	0.68	0.25	31.16

**MALE CONNECTOR**



AQ68DOT  
68PM  
1868  
DQ68DOT  
68PMT

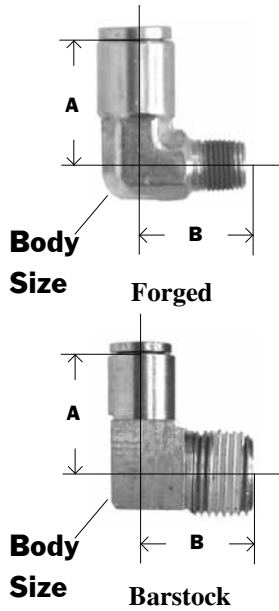
Part #	Tube O.D. x Male NPTF	A	Hex	Approx. Wt. Lbs.	List Price
685320	5/32" x 10/32"	0.69	0.37	0.02	11.75
685321	5/32" x 1/16"	0.67	0.37	0.02	8.15
685322	5/32" x 1/8"	0.67	0.43	0.02	9.07
680302	3/16" x 1/8"	1.82	0.50	0.02	9.60
680421	1/4" x 1/16"	1.17	0.44	0.02	12.14
680402	1/4" x 1/8"	0.94	0.50	0.04	4.69
680404	1/4" x 1/4"	1.08	0.56	0.05	5.40
680406	1/4" x 3/8"	1.10	0.68	0.08	8.88
680602	3/8" x 1/8"	1.22	0.68	0.04	7.15
680604	3/8" x 1/4"	1.38	0.68	0.08	6.44
680606	3/8" x 3/8"	1.32	0.68	0.08	7.68
680608	3/8" x 1/2"	1.02	0.87	0.14	12.34
680804	1/2" x 1/4"	1.36	0.81	0.11	16.55
680806	1/2" x 3/8"	1.54	0.87	0.12	9.81
680808	1/2" x 1/2"	1.62	0.87	0.14	10.16
681006	5/8" x 3/8"	1.34	.94	0.18	17.07
681008	5/8" x 1/2"	1.50	.94	0.18	18.50
681208	3/4" x 1/2"	1.28	1.06	0.20	22.69
681212	3/4" x 3/4"	1.93	1.18	0.20	23.47

"Only those who dare to fail greatly can ever achieve greatly."

- Robert F. Kennedy



**MALE ELBOW**

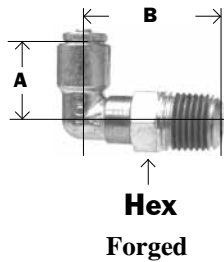


AQ69DOT  
169 PMTNS  
1869  
DQ69DOT

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	12.85
695322*	5/32" x 1/8"	0.65	0.59	0.32	0.03	9.82
690302	3/16" x 1/8"	0.71	0.75	0.47	0.03	16.51
690402	1/4" x 1/8"	0.91	0.75	0.37	0.05	8.65
690404	1/4" x 1/4"	0.77	1.02	0.71	0.06	8.27
690406	1/4" x 3/8"	1.00	0.98	0.50	0.11	11.49
690602	3/8" x 1/8"	0.97	0.80	0.49	0.14	12.47
690604	3/8" x 1/4"	0.96	1.02	0.71	0.14	9.84
690606	3/8" x 3/8"	1.04	1.10	0.87	0.15	10.84
690608	3/8" x 1/2"	1.04	1.19	0.62	0.20	20.01
690804	1/2" x 1/4"	1.15	1.05	0.62	0.22	17.12
690806	1/2" x 3/8"	1.15	1.05	0.62	0.22	17.02
690808	1/2" x 1/2"	1.16	1.12	0.87	0.24	20.58
691006	5/8" x 3/8"	1.34	1.10	0.95	0.30	23.66
691008	5/8" x 1/2"	1.44	1.42	1.18	0.32	25.61
691208	3/4" x 1/2"	1.42	1.48	0.94	0.32	31.32
691212	3/4" x 3/4"	1.22	1.40	0.93	0.34	41.56

\* Barstock

**MALE SWIVEL ELBOW**



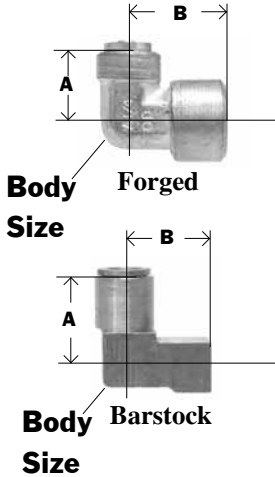
AQ69DOTS  
169PMT  
1869  
DQ69DOTS

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
695322S	5/32" x 1/8"	0.79	0.88	0.44	0.07	11.97
690402S	1/4" x 1/8"	0.89	0.88	0.43	0.07	11.07
690404S	1/4" x 1/4"	0.73	1.12	0.56	0.10	15.69
690406S	1/4" x 3/8"	0.75	1.25	0.75	0.10	14.01
690602S	3/8" x 1/8"	0.98	1.08	0.43	0.10	12.47
690604S	3/8" x 1/4"	0.98	1.14	0.56	0.10	14.27
690606S	3/8" x 3/8"	0.98	1.19	0.68	0.14	13.82
690608S	3/8" x 1/2"	0.98	1.52	0.87	0.19	21.75
690804S	1/2" x 1/4"	1.16	1.26	0.56	0.16	38.97
690806S	1/2" x 3/8"	1.16	1.34	0.68	0.18	18.41
690808S	1/2" x 1/2"	1.16	1.61	0.62	0.26	23.89
691006S	5/8" x 3/8"	1.23	1.41	0.68	0.28	24.08
691008S	5/8" x 1/2"	1.23	1.71	0.87	0.30	28.71
691208S	3/4" x 1/2"	1.42	1.77	0.87	0.50	48.91
691212S	3/4" x 3/4"	1.22	2.30	1.06	0.56	51.47

"Always remember that the future comes one day at a time."

- Dean Acheson

**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	9.95
700404	1/4" x 1/4"	1.02	1.02	0.50	0.10	12.39
700406	1/4" x 3/8"	1.11	0.98	0.62	0.16	15.68
700602	3/8" x 1/8"	0.96	0.67	0.71	0.15	21.12
700604	3/8" x 1/4"	0.96	0.94	0.48	0.12	12.44
700606	3/8" x 3/8"	0.98	0.91	0.68	0.17	17.30
700804*	1/2" x 1/4"	1.15	1.11	0.82	0.22	13.33
700806*	1/2" x 3/8"	1.12	1.11	0.82	0.26	23.31
700808	1/2" x 1/2"	1.05	1.22	1.06	0.30	18.65

\* Barstock

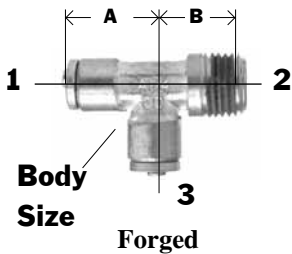
AQ70DOTS  
1870  
DQ70DOTS  
170PMTNS

**FEMALE SWIVEL ELBOW**



Part #	Size	List Price
700404S	1/4" x 1/4"	9.86

**MALE RUN TEE**



Part #	Tube O.D. x Male NPTF (1 x 3) x 2	A	B	Body Size	Approx. Wt. Lbs.	List Price
710402	1/4" x 1/8"	0.74	0.92	0.37	0.06	13.82
71040604	(1/4" x 3/8") x 1/4"	0.89	0.96	0.71	0.20	32.51
710404	1/4" x 1/4"	0.92	1.24	0.37	0.08	14.73
710604	3/8" x 1/4"	1.00	1.14	0.50	0.20	18.41
71060404	(3/8" x 1/4") x 1/4"	1.09	0.96	0.71	0.20	55.95
710606	3/8" x 3/8"	0.98	0.98	0.49	0.12	17.60
71060406	(3/8" x 1/4") x 3/8"	1.14	1.10	0.87	0.20	34.79
710608	3/8" x 1/2"	1.12	1.42	0.94	0.14	29.66
710806	1/2" x 3/8"	1.14	1.05	0.62	0.28	26.58
71080804	1/2" x 1/4"	1.30	1.14	0.87	0.28	64.02

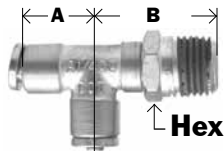
AQ71DOT  
171PMTNS  
1871  
DQ71DOT

"Dreams come in a size too big so we can grow into them."

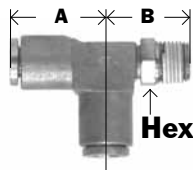
- Josie Bisset



**MALE SWIVEL RUN TEE**



Forged



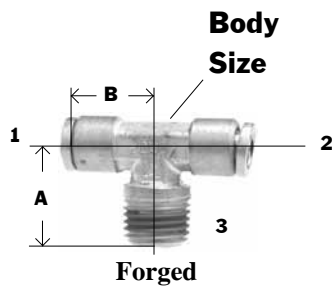
Barstock

AQ71DOTS  
171PMT  
1871  
DQ71DOTS

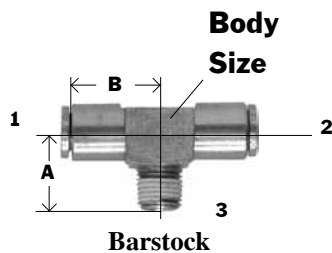
Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
710402S	1/4" x 1/8"	0.92	0.82	0.43	0.10	15.53
710404S	1/4" x 1/4"	0.92	1.24	0.56	0.11	17.49
710604S	3/8" x 1/4"	1.00	1.14	0.56	0.15	21.05
710606S	3/8" x 3/8"	0.98	1.18	0.68	0.14	22.04
710804S*	1/2" x 1/4"	1.18	1.22	0.56	0.24	40.63
710806S	1/2" x 3/8"	1.14	1.31	0.68	0.24	29.05
710808S	1/2" x 1/2"	1.14	1.61	0.62	0.30	32.24

\* Barstock

**MALE BRANCH TEE**



Forged



Barstock

AQ72DOT  
172PMTNS  
1872  
DQ72DOT

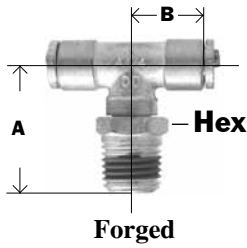
Part #	Tube O.D. x Male NPTF (1 x 2) x 3	A	B	Body Size	Approx. Wt. Lbs.	List Price
720302*	3/16" x 1/8"	0.64	0.75	0.41	0.07	22.63
720402	1/4" x 1/8"	0.74	0.92	0.37	0.10	14.14
720404	1/4" x 1/4"	0.92	0.92	0.43	0.10	14.73
720604	3/8" x 1/4"	1.00	0.99	0.50	0.20	17.52
72060404	(3/8" x 1/4") x 1/4"	0.96	0.89	0.71	0.20	46.42
720606	3/8" x 3/8"	0.98	0.99	0.50	0.10	26.00
720804	1/2" x 1/4"	1.14	1.12	0.87	0.20	30.92
720806	1/2" x 3/8"	1.05	1.16	0.62	0.24	27.09
720808	1/2" x 1/2"	1.42	1.24	0.94	0.32	35.58
72100808	(5/8" x 1/2") x 1/2"	1.46	1.30	1.18	0.20	72.89

\* Barstock

"One of the most tragic things I know about human nature is that all of us tend to put off living. We are all dreaming of some magical rose garden over the horizon – instead of enjoying the roses that are blooming outside our windows today."

- Dale Carnegie

**MALE SWIVEL BRANCH TEE**



AQ72DOTS  
172PMT  
1872  
DQ72DOTS

Part #	Tube O.D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
720402S	1/4" x 1/8"	1.04	0.92	0.43	0.12	15.52
720404S	1/4" x 1/4"	1.16	0.92	0.56	0.14	16.76
720602S	3/8" x 1/8"	1.06	0.96	0.43	0.19	17.97
720604S	3/8" x 1/4"	1.16	0.99	0.56	0.20	22.39
720606S	3/8" x 3/8"	1.21	0.98	0.68	0.18	22.12
720804S	1/2" x 1/4"	1.26	1.16	0.56	0.30	27.96
720806S	1/2" x 3/8"	1.34	1.16	0.68	0.34	29.26
720808S	1/2" x 1/2"	1.64	1.16	0.87	0.22	31.05

**FEMALE BRANCH TEE**



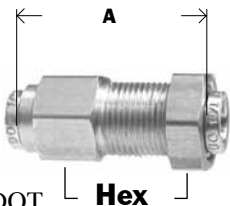
Part #	Size	List Price
770402	1/4" x 1/8"	16.88
770404	1/4" x 1/4"	16.90
770604	3/8" x 1/4"	17.67

**GLADHAND BULKHEAD CONNECTOR**



Part #	Size	List Price
830808	1/2" x 1/2"	55.94

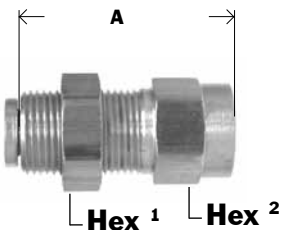
**BULKHEAD UNION**



AQ82DOT  
62PMTBH  
1874  
DQ82DOT

Part #	Tube O.D.	A	Hex	Approx. Wt. Lbs.	List Price
820400	1/4"	1.69	0.62	0.16	16.72
820600	3/8"	1.55	1.06	0.21	23.16
820800	1/2"	1.82	1.18	0.14	25.35
821000	5/8"	1.85	1.25	0.30	47.15

**FEMALE BULKHEAD UNION**



AQ86DOT  
1873  
DQ86DOT  
66PMTBH

Part #	Tube O.D. x Female NPTF	A	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
860402	1/4" x 1/8"	1.30	0.68	0.68	0.08	13.44
860404	1/4" x 1/4"	1.53	0.68	0.75	0.10	13.64
860604	3/8" x 1/4"	2.10	1.12	0.94	0.14	15.13
860606	3/8" x 3/8"	1.84	0.81	0.87	0.16	21.00
860808	1/2" x 1/2"	2.54	1.31	1.06	0.32	23.68



## BRASS FITTINGS

## AIR BRAKE - TUBING

### BRASS SPLIT SLEEVE D.O.T. FITTINGS (5/32 O.D.)

Ideally suited for use in passive protected air transmission applications.

A specially designed slotted sleeve helps eliminate notch stress related to over torque.

#### COLLET



Part #	Tube O.D.	List Price
38-711	5/32"	1.53
25-001	1/8"	1.57

#### NUT



Part #	Tube O.D.	List Price
38-732	5/32"	1.82
25-033	1/8"	1.43

#### DOUBLE END UNION



Part #	Tube O.D.	List Price
38-761	5/32"	13.84
25-062	1/8"	7.92

#### CONNECTOR



Part #	Tube O.D.	Pipe Thread	List Price
38-769	5/32"	1/16"	9.49
38-770	5/32"	1/8"	8.99
25-175	1/8"	1/16"	9.20
25-176	1/8"	1/8"	7.92

#### ELBOW



Part #	Tube O.D.	Pipe Thread	List Price
38-718	5/32"	1/8"	8.38
25-220	1/8"	1/8"	8.42

• See Page 295-296 for new Air Brake - Tubing

### 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'	POR
38-952	1/4"	Black	100'	POR
38-952R	1/4"	Red	100'	POR
38-952U	1/4"	Blue	100'	POR
38-952-2	1/4"	Black	500'	POR
38-952-3	1/4"	Black	1000'	52-3

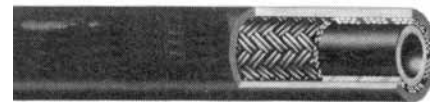
### AIR BRAKE TUBING

Part #	Type B	Color	Length	List Price
38-960	3/8"	Black	100'	POR
38-960U	3/8"	Blue	100'	POR
38-960B5	3/8"	Black	500'	POR
38-965	1/2"	Black	100'	POR
38-965R	1/2"	Red	100'	POR
38-965B5	1/2"	Black	500'	POR
38-970	5/8"	Black	100'	POR
38-975	3/4"	Black	100'	POR

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'	POR
38-926	5/16	9/16	25'	POR
38-923	1/4	1/2	25'	POR
38-927	3/8	5/8	50'	POR



**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	5.60						
8"	38-931	6.00						
10"	38-932	6.40						
12"	38-933	5.40					38-985	8.66
20"	38-934	7.56					38-986	11.33
30"	38-935	8.31	38-943	9.75				
40"	38-936	9.69	38-944	11.08			38-988	15.00
51"	38-937	11.31	38-945	13.62	38-984	16.02	38-989	19.10
60"	38-938	15.58	38-946	14.14			38-990	20.29
72"	38-939	17.42						

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	15.18

**EMERGENCY (Supply Line) Red**

Part #	connects only to emergency	List Price
38-714		15.18

**UNIVERSAL - Gold**  
connects to both styles

Part #	List Price
38-716	14.01

**GLADHAND SEAL**



Part #	Full Face	List Price
38-720		1.79

**HEX BALL FOOT CHUCK**



Part #	1/4" Female Pipe	List Price
46-600		3.51

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



Part #	1/4" I.D. Hex	List Price
46-607		3.45

**DUAL FOOT CHUCKS**

6999	99941
693	50-065
108	6569
DFG-1	



Standard straight-on chuck with 30° reverse angle chuck.

Part #	1/4" NPT Female Thread	List Price
320-000		32.13

**ANGLE CHUCK**



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

Part #	1/4" NPT Female Thread	List Price
320-005		10.48

**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'	120.44
38-915	1/2	7/8	50'	143.80

**REMOTE CONTROL DRAIN VALVES**

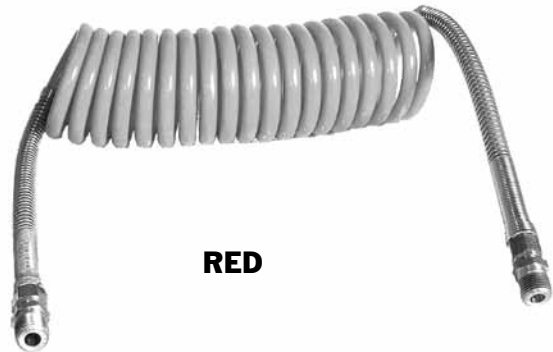
**REMOTE CONTROL DRAIN VALVES**



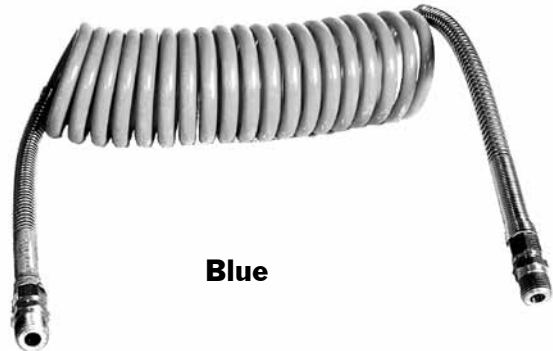
- Brass Body and stainless steel spring.
- Steel cable, nylon coated, certified to 200lbs pull test.
- Low profile to minimize accidental hits and damages.
- Pipe thread 1/4" NPTF.

Part #	Length	List Price
46-492	Standard 48"	27.54
46-493	Standard 60"	28.19

**COILED AIRBRAKE TUBE ASSEMBLIES**



**RED**



**Blue**

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

**Each contains 1 red, 1 blue.**

Part #	Working Length	Pigtail Length	List Price
38-700	12'	6"	143.56
38-705	12'	12"	211.79
38-710	15'	12"	181.61

**AIR BRAKE - HOSES****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	2.16
38-802	1/4	1/8	1537	2.08
32-377	1/4	1/4	1581	2.11
38-806	5/16	1/8	1551	2.48
38-808	5/16	1/4	1555	2.57
38-810	3/8	1/8	1565	3.06
32-381	3/8	1/4	1564	2.40
32-382	3/8	3/8	1566	4.70
32-383	1/2	3/8		3.36
32-384	1/2	1/2		5.31
32-182	5/8	3/8	1411	6.17
32-385	5/8	1/2	1431	6.65
32-387	3/4	1/2	1430	5.57
32-388	3/4	3/4		7.68
32-185	1	3/4		16.22

**INVERTED FLARE MALE CONNECTOR****HOSE BARB X INVERTED FLARE**

Part #	Hose ID	Inv. Flare	Ind #	List Price
38-828	5/16	1/4	1598	3.41
38-830	5/16	5/16	1560	2.72
38-832	5/16	3/8	1561	4.28
38-834	3/8	5/16	1568	4.05
38-836	3/8	3/8	1570	6.11

See Hose Clamps starting on page 275

**BRASS FITTINGS****90° MALE ELBOW****HOSE BARB X MALE PIPE**

Part #	Hose ID	Size	Ind #	List Price
38-860	1/4	1/8	1582	5.02
38-862	5/16	1/8	1556	4.77
38-864	5/16	1/4	1557	5.65
38-866	3/8	1/8	1572	6.01
38-868	3/8	1/4	1571	5.54
32-186	3/8	3/8		9.43
32-187	1/2	3/8		14.54
32-191	1/2	1/2		19.56
32-188	5/8	3/8		10.56
32-189	5/8	1/2		11.78
32-190	3/4	1/2		17.32

**INVERTED FLARE MALE SWIVEL 90° ELBOW****HOSE BARB X TUBE O.D.**

Part #	Hose ID	Inv. Flare	Ind #	List Price
38-873	5/16	5/16	1405	16.23
38-874	3/8	3/8	1407	10.91

**LONG STREET ELLS**

Part #	Size	Length	List Price
28-440	1/8	1-3/16"	8.24
28-441	1/8	1-7/16"	3.97
28-442	1/8	1-11/16"	8.51
28-328	1/4	1-3/16"	17.29
28-329	1/4	1-7/16"	14.08
28-330	1/4	1-11/16"	14.05
28-332	1/4	2-1/4"	19.15
28-333	3/8	1-3/4"	21.93

**EXTENSION ADAPTERS D.O.T.**

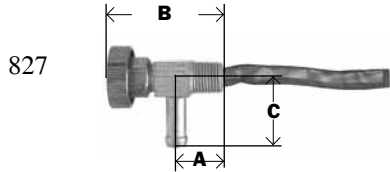
Part #	Size	Length	List Price
28-335	1/8	1-1/4"	9.28
28-336	1/8	1-3/4"	12.33
28-338	1/4	1-9/16"	6.60
28-339	1/4	1-13/16"	8.66
28-340	1/4	2-1/16"	8.04

Some product stocked in Houston and Atlanta.

**DRAIN COCKS**

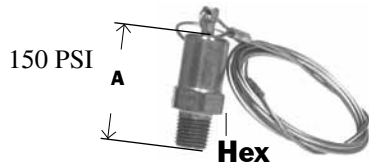
- For use with low pressure air, water and fluids.
- Designed for a working pressure of 150 PSI.
- Hand-tightening provides a metal-to-metal seal.
- Not intended for natural gas, LPG, nuclear or aircraft applications.

**GASOLINE SHUT OFF w/ SCREEN FILTER**



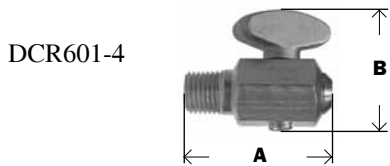
Part #	Barb X Male Pipe	A	B	C	Approx. Wt. Lbs.	List Price
46-064	1/4" x 1/8"	0.55	1.34	0.66	0.06	45.99

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



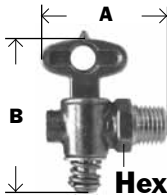
Part #	Male Pipe	A	Hex	Approx. Wt. Lbs.	List Price
46-065	1/4"	1.74	0.75	0.16	50.26

**DRAIN COCK 150 PSI - Trunk Air Tank**



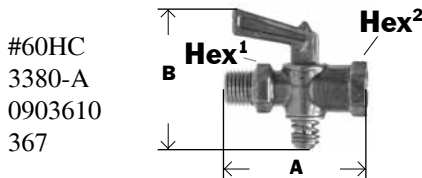
Part #	Male Pipe	A	B	Approx. Wt. Lbs.	List Price
46-066	1/4"	1.73	1.41	0.22	24.00

**TRUCK DRAIN - 125 P.S.I.G**



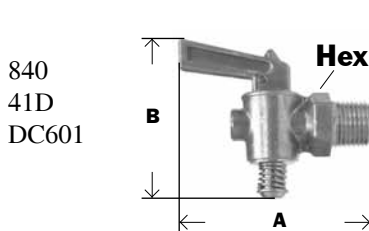
Part #	Male Pipe	Industry Number	A	B	Hex	Approx. Wt. Lbs.	List Price
46-067	1/8"		1.53	1.95	0.62	0.14	17.55
46-068	1/4"	W15310	1.53	1.95	0.62	0.18	17.56

**SHUT OFF - 150 P.S.I max.**



Part #	Male Pipe x Female Pipe	Industry Number	A	B	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
46-069	1/4"	W20332	1.96	1.96	0.75	0.62	0.20	29.77

**LEVER HANDLE**



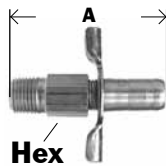
Part #	Male Pipe	Industry Number	A	B	Hex	Approx. Wt. Lbs.	List Price
46-070	1/8"	M-41-P	1.99	1.80	0.62	0.04	15.12
46-071	1/4"	M-42-P	2.06	1.81	0.62	0.06	15.12
46-072	3/8"	M-43-P	2.30	2.29	0.81	0.08	18.48
46-073	1/2"	M-44-P	3.00	2.50	0.87	0.16	48.17

## DRAIN COCKS

## BRASS FITTINGS

## INTERNAL SEAT

DC602  
808  
400A  
1800A



Part #	Male Pipe	Industry Number	A	Hex	Approx. Wt. Lbs.	List Price
46-079	1/8"	6783	1.63	0.40	0.02	12.35

## INTERNAL SEAT

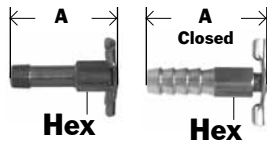
HB - 5/16  
803  
305A



Part #	Male Pipe	Industry Number	A	Hex	Approx. Wt. Lbs.	List Price
46-074	1/8"	130	0.92	0.40	0.04	8.31
46-075	1/4"	140	0.94	0.56	0.06	6.00
46-077	3/8"	230	1.34	0.68	0.08	11.60

## LONG INTERNAL SEAT

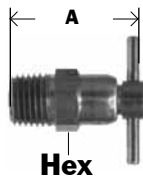
809



Part #	Size	Ind #	A	Hex	Approx. Wt. Lbs.	List Price
46-078	1/8" MIP	185	1.72	0.43	0.02	19.27
46-076	3/8" Hose I.D.		1.65	0.43	0.02	12.00

## TEE HANDLE - Internal Seat

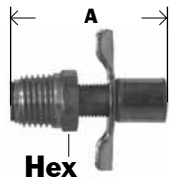
DC603  
802



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	14.77
46-081	1/4"	M-201-P	1.31	0.56	0.06	10.93
46-082	3/8"	M-202-P	1.69	0.68	0.12	18.18

## EXTERNAL SEAT w/ SPOUT

200A  
239  
DC606  
807

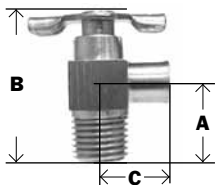


Part #	Male Pipe	Industry Number	A	Hex	Approx. Wt. Lbs.	List Price
46-084*	1/4"	6788	1.56	0.56	0.02	3.60

\* 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	11.42
46-089	1/4"	120	0.82	1.76	0.66	0.06	12.69
46-089A	1/4"	6660	0.55	1.34	0.66	0.06	8.00

## RADIATOR TYPE - External Seat

320D  
240  
DC604  
801



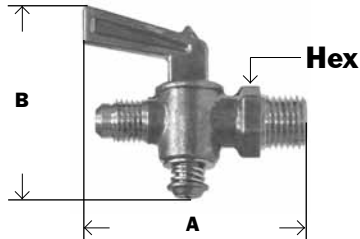
Part #	Male Pipe	Industry Number	Ind #	A	Hex	Approx. Wt. Lbs.	List Price
46-085	1/8"	M-320-P	135	0.90	0.43	0.02	3.43
46-086	1/4"	M-321-P	145	1.00	0.56	0.04	3.43
46-087	3/8"	M-322-P	270	1.25	0.68	0.08	10.45
46-083	1/2"		108	1.52	0.87	0.12	27.67



- 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.

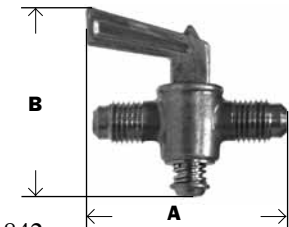
**FLARE X MALE PIPE**



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	15.58
46-101	1/4" x 1/4"	227SAE	2.19	1.84	0.62	0.16	20.16
46-102	5/16" x 1/8"	29SAE	2.06	1.88	0.50	0.14	15.87
46-103	5/16" x 1/4"	229SAE	2.12	1.82	0.69	0.16	19.29
46-104	3/8" x 1/4"	57SAE	2.27	1.84	0.62	0.17	19.29
46-107	1/2" x 3/8"	67SAE	2.36	2.27	0.82	0.20	17.71

**FLARE X FLARE**

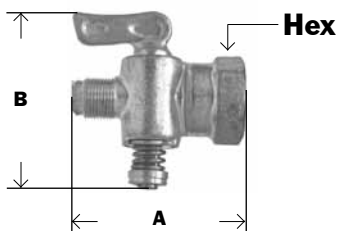


842  
V203F  
136C

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	16.43
46-116	5/16"	30SAE	2.00	1.90	0.16	51.35
46-117	3/8"	58SAE	2.20	1.83	0.18	18.57
46-118	1/2"	68SAE	2.50	2.31	0.50	22.62
46-119	5/8"	1010SAE	3.05	2.59	0.70	20.63

\* Please request AGA valves

**FLARE X FEMALE PIPE**



138C  
2046

Part #	Male Flare X Female Pipe	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-127	3/8" x 3/8"	163SAE	2.28	2.38	1.03	0.40	41.70
46-125	3/8" x 1/2"	161SAE	2.45	2.31	1.03	0.32	41.83
46-126*	3/8" x 1/2"	161SAE	2.26	2.32	1.03	0.28	37.00
46-128	1/2" x 1/2"	164SAE	2.52	2.19	1.03	0.34	42.46
46-123	5/8" x 1/2"	164SAE	2.61	2.12	1.25	0.54	66.08

\* Heater Valve

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

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



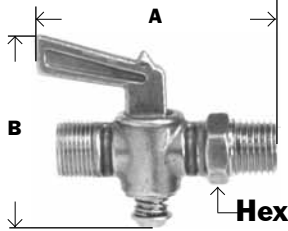
# SHUT-OFF COCKS

# BRASS FITTINGS

BRASS

## COMPRESSION X MALE PIPE

\* See pg. 72-73 to order nut and sleeve separately.

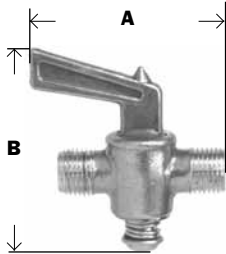


868 133C  
V304C VC206  
2068

Part #	Comp X Male Pipe	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-130	1/4" x 1/8"	27-C	1.87	1.81	0.51	0.14	17.08
46-131	1/4" x 1/4"	227-C	2.05	1.86	0.62	0.15	19.87
46-132	5/16" x 1/8"	29-C	2.05	1.90	0.50	0.16	17.08
46-134	3/8" x 1/4"	57-C	2.05	1.83	0.62	0.15	18.06

## COMPRESSION X COMPRESSION

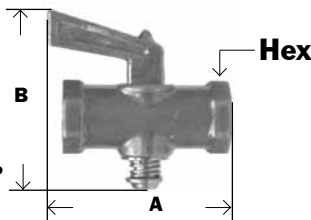
\* See pg. 72-73 to order nut and sleeve separately.



V3030F  
2062  
134C

Part #	Comp X Comp	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-140	1/4"	28-C	1.82	1.84	0.12	17.83
46-141	5/16"	30-C	1.84	1.88	0.14	18.71
46-142	3/8"	58-C	1.87	1.80	0.14	18.40
46-143	1/2"	68-C	2.21	2.32	0.22	27.86

## FEMALE X FEMALE PIPE

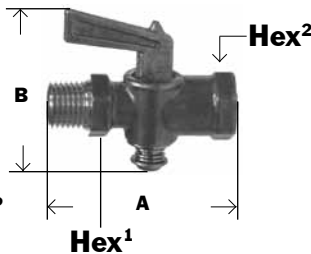


V403P  
132C  
875

Part #	Female Pipe X Female Pipe	A	B	Hex	Approx. Wt. Lbs.	List Price
46-151	1/8"	1.77	1.79	0.56	0.12	15.18
46-152	1/4"	2.28	1.82	0.69	0.20	16.05
46-152T*	1/4"	2.28	2.00	0.68	0.20	22.14
46-153	3/8"	2.44	2.28	0.81	0.30	25.89

\* 150 PSI

## MALE PIPE X FEMALE

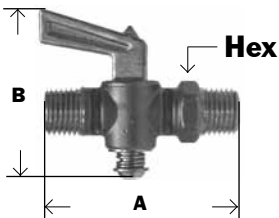


880  
V402P  
130C

Part #	Male Pipe X Female Pipe	Ind. #	A	B	Hex 1	Hex 2	Approx. Wt. Lbs.	List Price
46-160	1/8"	48-P	2.03	1.84	0.50	0.56	0.14	15.34
46-161	1/4"	49-P	2.26	1.84	0.69	0.69	0.18	16.05
46-161T*	1/4"		2.26	1.98	0.69	0.69	0.20	21.75
46-162	3/8"	50-P	2.33	2.28	0.82	0.82	0.28	25.89

\* 150 PSI

## MALE PIPE X MALE PIPE



1V401P  
890

Part #	Male Pipe X Male Pipe	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-165	1/8"	76-P	2.09	1.77	0.50	0.12	16.25
46-166	1/4"	77-P	2.22	1.84	0.70	0.17	17.19
46-166T*	1/4"		2.23	2.00	0.68	0.18	22.44
46-167	3/8"	78-P	2.43	2.24	0.82	0.22	27.96

\* 150 PSI

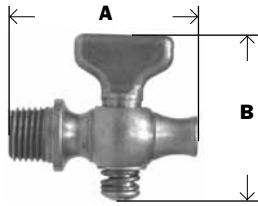
Some product stocked in Houston and Atlanta.



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

**MIB X BIBB**

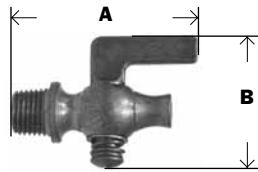
- tee handle
- no hex



Part #	MIP x BIBB	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-300	1/8"	6	1.53	1.55	0.12	18.28
46-301	1/4"	7	1.61	1.54	0.14	23.66

**MIP X BIBB**

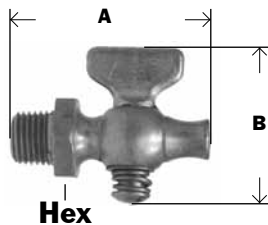
- lever handle
- no hex



Part #	MIP x BIBB	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-305	1/8"	12	2.01	1.71	0.14	21.33
46-306	1/4"	13	2.09	1.66	0.14	25.06

**MIP X BIBB**

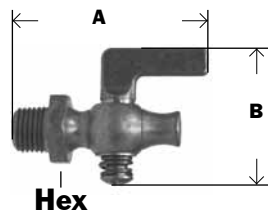
- tee handle
- hex



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	23.03
46-311	1/4"	64	1.69	1.54	0.62	0.14	25.38
46-312	3/8"	8	1.75	1.48	0.75	0.17	23.22

**MIP X BIBB**

- lever handle
- hex



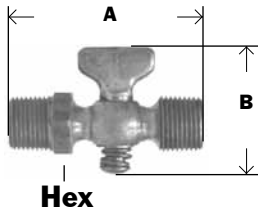
Part #	MIP x BIBB	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-315	1/8"	65	2.11	1.71	0.62	0.14	24.35
46-316	1/4"	66	2.16	1.71	0.62	0.16	26.83
46-317	3/8"	14	2.26	1.71	0.75	0.18	25.72
46-318	1/2"	15	2.32	1.46	0.87	0.26	26.76

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

**MIP X MIP**

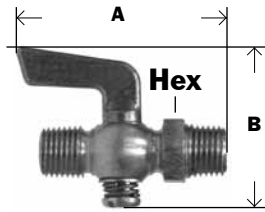
- tee handle
- hex



Part #	MIP X MIP	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-320	1/8"	18	1.81	1.51	0.75	0.14	23.81
46-321	1/4"	19	1.92	1.55	0.62	0.16	29.25
46-322	3/8"	20	2.34	1.55	0.75	0.19	24.95
46-323	1/2"	21	2.18	1.50	0.87	0.26	29.55

**MIP X MIP**

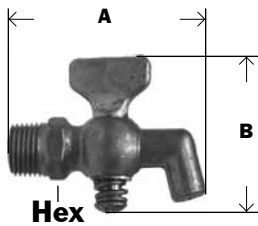
- lever handle
- hex



Part #	MIP X MIP	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-324	1/8"	22	2.09	1.69	0.56	0.14	25.99
46-325	1/4"	23	2.18	1.69	0.62	0.16	25.65
46-326	3/8"	24	2.26	1.72	0.75	0.20	27.76
46-327	1/2"	25	2.57	1.81	0.91	0.36	34.67

**MIP X BIBB NOSE**

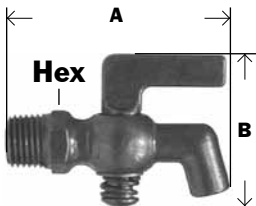
- tee handle
- hex



Part #	MIP X BIBB NOSE	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-330	1/8"	26	2.18	1.75	0.56	0.14	29.87
46-331	1/4"	27	2.11	1.57	0.56	0.16	30.97

**MIP X BIBB NOSE**

- lever handle
- hex

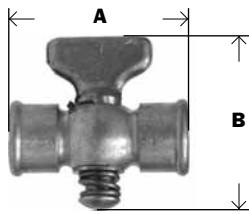


Part #	MIP X BIBB NOSE	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-335	1/8"	29	2.25	1.68	0.56	0.14	31.44
46-336	1/4"	30	2.20	1.67	0.56	0.17	31.90
46-337	3/8"	31	2.25	1.72	0.87	0.20	51.03
46-338	1/2"	32	2.31	1.71	0.87	0.22	50.04

Lead Free fittings available on  
pgs. 382-388

**FIP X FIP**

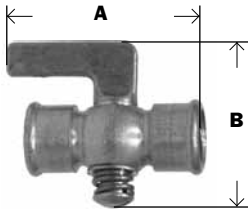
- tee handle
- no hex



Part #	FIP X FIP	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-340	1/8"	37	1.62	1.50	0.14	21.04
46-341	1/4"	38	1.93	1.56	0.16	22.21
46-342	3/8"	39	2.00	1.55	0.20	25.52

**FIP X FIP**

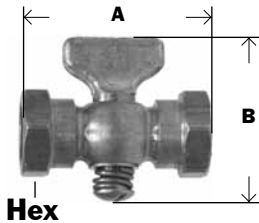
- lever handle
- no hex



Part #	FIP X FIP	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-345	1/8"	43	1.94	1.68	0.14	25.34
46-346	1/4"	44	2.10	1.71	0.16	27.37
46-347	3/8"	45	2.14	1.69	0.20	28.60

**FIP X FIP**

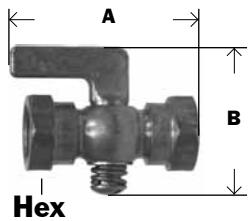
- tee handle
- hex



Part #	FIP X FIP	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-350	1/8"	55	1.62	1.54	0.75	0.17	25.52
46-351	1/4"	56	1.94	1.55	0.75	0.18	28.20
46-352	3/8"	57	1.99	1.58	0.81	0.20	29.82

**FIP X FIP**

- lever handle
- hex



Part #	FIP X FIP	Ind. #	A	B	Hex	Approx. Wt. Lbs.	List Price
46-355	1/8"	58	1.97	1.70	0.56	0.15	26.20
46-356	1/4"	59	2.10	1.71	0.75	0.18	26.49
46-357	3/8"	60	2.10	1.69	0.81	0.20	34.22
46-358	1/2"	60A	2.50	2.02	1.00	0.36	38.30

"Being fully present is the best guarantee for a bright future."

- Guy Finley

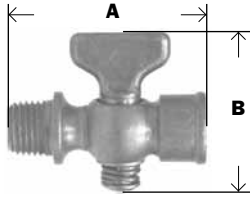
# BRASS AIR COCKS

# BRASS FITTINGS

BRASS

## MIP X FIP

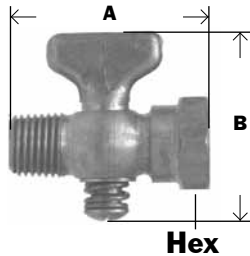
- tee handle
- no hex



Part #	MIP X FIP	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-360	1/8"	40	1.70	1.55	0.14	22.11
46-361	1/4"	41	1.94	1.55	0.16	26.16
46-362	3/8"	42	2.06	1.50	0.20	27.17

## MIP X FIP

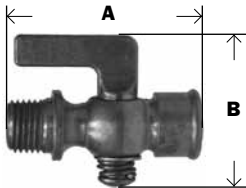
- tee handle
- hex



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	30.49
46-371	1/4"	50	2.06	1.55	0.75	0.20	28.56
46-372	3/8"	51	2.12	1.53	0.81	0.22	30.22
46-373	1/2"	51A	2.13	1.62	1.00	0.30	38.37

## MIP X FIP

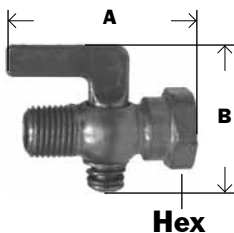
- lever handle
- no hex



Part #	MIP X FIP	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-365	1/8"	46	1.94	1.72	0.14	23.25
46-366	1/4"	47	2.10	1.65	0.16	25.93
46-367	3/8"	48	2.20	1.81	0.24	30.02
46-368	1/2"	48A	2.50	1.95	0.42	39.36

## 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	26.49
46-376	1/4"	53	2.06	1.76	0.75	0.20	28.11
46-377	3/8"	54	2.13	1.71	0.81	0.22	32.75
46-378	1/2"	54A	2.65	1.96	1.00	0.28	39.22

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**NEEDLE VALVES**

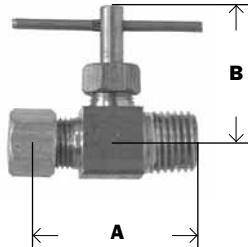
Made with either pin handle or pressed on handle.  
Please specify if you have a preference.

- 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.

**BRASS**

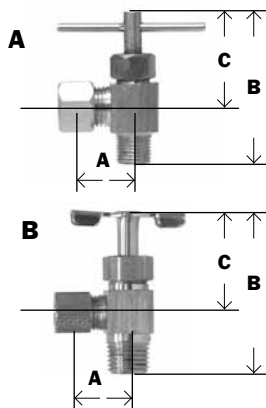
**COMP X MALE PIPE**



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	26.76
46-002	1/4" x 1/8"	M-101-C	1.29	1.12	0.07	19.39
46-002X	Heavy Pattern	M-101-C	1.19	0.88	0.09	16.50
46-003	1/4" x 1/4"	M-101-C	1.27	1.14	0.10	9.36
46-004	5/16" x 1/8"	M-102-C	1.50	1.25	0.14	18.35
46-005	3/8" x 1/4"	M-143-C	1.53	1.22	0.18	14.39

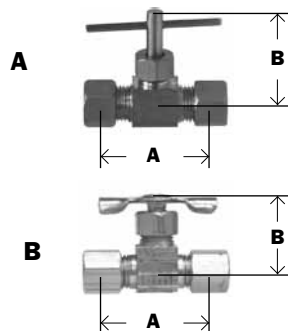
**COMP X MALE PIPE-ANGLE**



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	21.76
46-011	1/4" x 1/8"	A	M-103-C	0.56	1.48	0.93	0.08	6.16
46-011X	Heavy Pattern	B	M-103-C	0.53	1.53	0.83	0.08	15.47
46-012	1/4" x 1/4"	B	M-104-C	0.62	1.67	0.90	0.13	16.91
46-013	5/16" x 1/8"	B	M-104-C	0.63	1.63	0.95	0.10	19.02
46-014	5/16" x 1/4"	B	M-104-C	0.69	1.73	0.92	0.14	45.78
46-016	3/8" x 1/4"	A	M-303-C	0.69	1.81	0.92	0.16	9.66

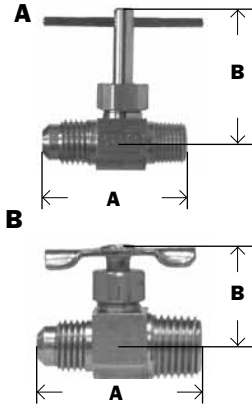
**COMP X COMP**



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	24.82
46-021	1/4"	A	M-106-C	1.17	1.12	0.10	6.57
46-022	5/16"	A	M-107-C	1.22	1.08	0.12	16.27
46-023	3/8"	B	M-113-C	1.31	1.15	0.13	10.09

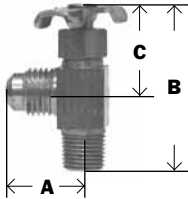
**FLARE X MALE PIPE**



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	14.37
46-029	1/4" x 1/4"	B	M-1040-SAE	1.38	0.88	0.09	15.31
46-031	3/8" x 1/4"	B	M-108-SAE	1.73	1.22	0.18	24.92

NV103F  
2405  
823  
3048

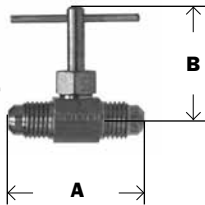
**FLARE X MALE PIPE**



Part #	Male Flare X Male Pipe	Ind. #	A	B	C	Approx. Wt. Lbs.	List Price
46-036	1/4" x 1/8"	M-103-SAE	0.68	1.54	0.86	0.08	12.14
46-038	5/16" x 1/8"	M-203-SAE	0.88	1.59	0.94	0.11	19.27
46-039	5/16" x 1/4"	M-204-SAE	0.90	1.94	1.00	0.14	17.14
46-040	3/8" x 1/4"	M-303-SAE	0.97	1.84	0.90	0.17	33.50

NV101F 824  
2403 3049

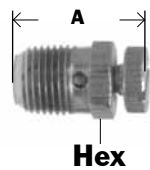
**FLARE X FLARE**



Part #	Male Flare X Male Flare	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-045	1/4"	M-110-SAE	1.48	1.20	0.18	5.39
46-046	3/8"	M-115-SAE	1.79	1.19	0.20	18.74

NV102F  
3042  
825  
2401

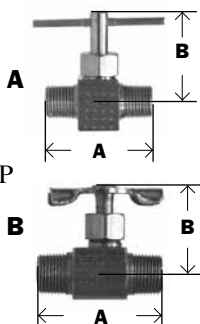
**MULTI-PURPOSE AIR VENT**



Part #	Male Pipe	A	Hex	Approx. Wt. Lbs.	List Price
46-048	1/8"	0.78	0.43	0.02	3.56

705

**MALE PIPE TO MALE PIPE**

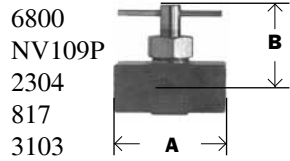


Part #	Male Pipe X Male Pipe	Handle	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-050	1/8"	A	M-108-P	1.25	1.09	0.08	22.13
46-050X	1/8"	B	M-108-P	1.38	0.66	0.08	15.26
46-051	1/4"	A	M-110-P	1.69	1.00	0.16	17.81

NV107P  
2301  
826  
3122



**FEMALE PIPE X FEMALE PIPE**

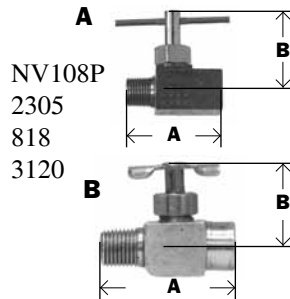


6800  
NV109P  
2304  
817  
3103

Part #	Female Pipe X Female Pipe	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-055	1/8"	M-304-P	1.12	0.88	0.18	15.18
46-056	1/4"	M-3044-P	1.60	1.24	0.21	9.66
46-056P*	1/4" Heavy	M-3044-P	1.62	2.53	0.20	14.83

\* Pressed on handle

**MALE X FEMALE PIPE**



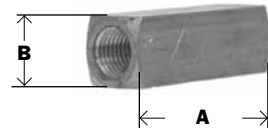
NV108P  
2305  
818  
3120

Part #	Male Pipe X Female Pipe	Handle	Ind. #	A	B	Approx. Wt. Lbs.	List Price
46-060	1/8"	A	M-305-P	1.18	1.09	0.10	6.68
46-061	1/4"	A	M-3055-P	1.60	1.14	0.18	9.53
46-061L	1/4" Light Pattern	B	M-3055-P	1.88	1.09	0.21	21.38

**FLOW CONTROL NEEDLE & CHECK VALVES**

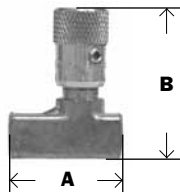
- Precision calibrated dial to determine and allow a return to required flow settings.
- Safe positive stop for needle travel.
- Positive no-leak stem seal.
- 2PSI cracking pressure.
- 1000 PSI maximum operating pressure.
- One piece forged housing.
- Nickel Plated available.
- Suitable for natural gas.

**CHECK VALVE**



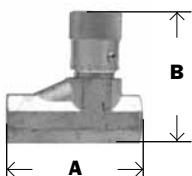
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
20-473	1/4"	1.94	0.68	0.20	97.74

**FLOW CONTROL**



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
20-485	1/8"	1.47	1.48	0.18	93.43
20-487	1/4"	1.94	1.92	0.27	130.99

**NEEDLE VALVE**



Part #	Size	A	B	Approx. Wt. Lbs.	List Price
20-501	1/8"	1.47	1.80	0.18	98.71
20-503	1/4"	1.94	2.00	0.28	117.85

## NEEDLE VALVES

### SCREW STEM SHUT-OFF VALVES NEEDLE VALVES

**NEEDLE VALVES** are constructed to meter fluids and gases. They are **O-RING SEALED** to eliminate valve maintenance. The O-ring is positioned between the actuating threads and the seat, and seals the closely fitted cylinder to give the lowest possible internal volume and protect threads from contamination.

**NEEDLE VALVES** have a medium tipped stem (37°) to offer **RAPID SHUT OFF, FULL FLOW** and a **SEMI-METERING FUNCTION**.

The standard construction is a forged brass body, brass stem, thrust washer, cap and a BUNA "N" 'O' - RING seal. This valve is rated for 1,000 p.s.i.g. service from -40° to 250° F.

**FACTORY MUST BE CONSULTED WHEN VALVES ARE TO BE USED WITH FLAMMABLE FLUIDS IN ORDER TO DETERMINE WORKING PRESSURE AND O-RING COMPATIBILITY.**

COMPRESSION AND FLARE ENDS CAN BE SUBSTITUTED FOR PIPE ENDS IN MOST CASES.

( Price on application )



#### MIP X FIP STRAIGHT

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-768	1/8 Male x 1/8 Female	Regular	0.141	50.78
46-769	1/8 Male x 1/8 Female	Panel	0.141	67.94
46-770	1/4 Male x 1/4 Female	Regular	0.188	48.72
46-771	1/4 Male x 1/4 Female	Panel	0.188	63.76

#### FIP X FIP STRAIGHT

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-780	1/8 Female x 1/8 Female	Regular	0.172	46.72
46-781	1/8 Female x 1/8 Female	Panel	0.172	62.50
46-782	1/4 Female x 1/4 Female	Regular	0.188	48.71
46-783	1/4 Female x 1/4 Female	Panel	0.188	63.76

## BRASS FITTINGS



#### 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	49.06
46-787	1/8 Male x 1/8 Female	Panel	0.188	66.00
46-788	1/4 Male x 1/4 Female	Regular	0.281	49.25

#### MIP X MIP ANGLE

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-792	1/8 Male x 1/8 Male	Regular	0.188	60.19
46-793	1/8 Male x 1/8 Male	Panel	0.188	----
46-794	1/4 Male x 1/4 Male	Regular	0.281	54.09
46-795	1/4 Male x 1/4 Male	Panel	0.281	67.28

#### FIP X FIP ANGLE

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-798	1/8 Female x 1/8 Female	Regular	0.188	43.08
46-799	1/8 Female x 1/8 Female	Panel	0.188	60.72
46-800	1/4 Female x 1/8 Female	Regular	0.281	46.21
46-801	1/4 Female x 1/4 Female	Panel	0.281	61.90

## SELF PIERCING SADDLE VALVES



FITS 3/8" OD  
THRU 3/4" OD

#### SELF PIERCING

#### NEEDLE VALVE KIT #M-104-VSP

- INDIVIDUALLY BAGGED WITH NEEDLE VALVE
- SADDLE CLAMP
- 2 NUTS
- 2 BOLTS & WASHERS

Has brass sleeve for copper tube installation & delrin sleeve & brass insert for plastic tube installation.

Part #	Tube O.D.	Min Pkg Qty	List Price
46-090A	1/4"	1	5.97

#### 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** offer PRECISE FLUID CONTROL through a full metering tip ( 5° ) and lubricated micrometer threads. Our O-ring seal arrangement eliminates contamination of system media by the thread lubricant.

The standard construction is forged brass body, brass stem and cap, a CELCON® thrust bearing and a BUNA “N” ‘O’-RING seal. It is rated for 3,500 p.s.i.g. service from -40° to 150° F.

Many variations and modifications have been made in these valves to accommodate customer applications. It is quite possible they can be economically adapted to your requirements.



**MIP X FIP STRAIGHT**

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-741	1/8 Male x 1/8 Female	Regular	0.102	53.38
46-742	1/8 Male x 1/8 Female	Panel	0.102	71.18
46-743	1/4 Male x 1/4 Female	Regular	0.172	61.90
46-744	1/4 Male x 1/4 Female	Panel	0.175	67.94

**MIP X MIP STRAIGHT**

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-746	1/8 Male x 1/8 Male	Panel	0.102	77.37
46-747	1/4 Male x 1/4 Male	Regular	0.172	61.90
46-748	1/4 Male x 1/4 Male	Panel	0.172	72.46

**FIP X FIP STRAIGHT**

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-752	1/8 Female x 1/8 Female	Regular	0.141	52.43
46-753	1/8 Female x 1/8 Female	Panel	0.141	71.18
46-754	1/4 Female x 1/4 Female	Regular	0.172	58.04
46-755	1/4 Female x 1/4 Female	Panel	0.172	67.94

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



**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	54.04
46-757	1/8 Male x 1/8 Female	Panel	0.182	69.32
46-758	1/4 Male x 1/4 Female	Regular	0.182	60.24

**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	58.96
46-761	1/8 Male x 1/8 Male	Panel	0.182	75.35
46-762	1/4 Male x 1/4 Male	Regular	0.182	55.42
46-763	1/4 Male x 1/4 Male	Panel	0.182	70.60

**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	75.35
46-766	1/4 Female x 1/4 Female	Regular	0.182	55.42
46-767	1/4 Female x 1/4 Female	Panel	0.182	65.37

COMPRESSION AND FLARE ENDS CAN BE SUBSTITUTED FOR PIPE ENDS IN MOST CASES

*Some valves only available on made-to-order basis.*

**BRASS**

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



## TOGGLE COCKS

## BRASS FITTINGS

## 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	50.19
46-805	1/8 Male x 1/8 Female	Panel	0.102	67.94

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	62.50
46-810	1/4 Male x 1/4 Male	Regular	0.172	47.83
46-811	1/4 Male x 1/4 Male	Panel	0.172	63.76

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	50.78
46-813	1/8 Female x 1/8 Female	Panel	0.141	63.25
46-814	1/4 Female x 1/4 Female	Regular	0.172	52.28
46-815	1/4 Female x 1/4 Female	Panel	0.172	59.79



MIP X FIP ANGLE

Part #	Pipe Thread Inlet Outlet	Style	Maximum Orifice	List Price
46-817	1/8 Male x 1/8 Female	Panel	0.182	66.00
46-818	1/4 Male x 1/4 Female	Regular	0.182	45.89
46-819	1/4 Male x 1/4 Female	Panel	0.182	67.28

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	49.06
46-822	1/4 Male x 1/4 Male	Regular	0.182	50.23
46-823	1/4 Male x 1/4 Male	Panel	0.182	67.28

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	45.06
46-825	1/8 Female x 1/8 Female	Panel	0.182	60.72
46-826	1/4 Female x 1/4 Female	Regular	0.182	47.94

COMPRESSION AND FLARE ENDS CAN BE SUBSTITUTED FOR PIPE ENDS IN MOST CASES

*Some valves only available on made-to-order basis*

## BRASS FITTINGS

## INDUSTRIAL INSTRUMENTATION BALL VALVES

### INDUSTRIAL INSTRUMENTATION BALL VALVES

• With Double O-RING STEM SEALS provide 20,000 leak-free performance cycles without leakage. Valves also have an exclusive stem seal design that never needs tightening and can be panel mounted for instrumentation applications. For systems with working pressures up to 1,500 p.s.i.g.

- TEFLON ® Ball Seats
- Blow Out Proof Stem Seal
- Double O-Ring
- Up to 1,500 P.S.I.



#### FEMALE X FEMALE

Part #	Size	List Price
46-830	1/8 x 1/8	77.33
46-832	1/4 x 1/4	82.24
46-833	3/8 x 3/8	185.43
46-834	1/2 x 1/2	210.88

#### FEMALE X MALE

Part #	Size	List Price
46-835	1/8 x 1/8	90.36
46-838	1/4 x 1/4	90.51
46-840	1/2 x 1/2	229.22

#### MALE X MALE

Part #	Size	List Price
46-841	1/8 x 1/8	104.86
46-843	1/4 x 1/4	97.33
46-845	3/8 x 3/8	195.10
46-846	1/2 x 1/2	239.75

### INDUSTRIAL INSTRUMENTATION ANGLE BALL VALVES



#### FEMALE X FEMALE

Part #	Size	List Price
46-875	1/8 x 1/8	84.71
46-876	1/8 x 1/4	94.11
46-877	1/4 x 1/8	94.31
46-878	1/4 x 1/4	79.88

### INDUSTRIAL INSTRUMENTATION 3-WAY BALL VALVES



Part #	Size	List Price
46-951	1/8 FPT	81.83
46-956	1/4 FPT	79.72
46-959	3/8 FPT	200.43
46-960	1/2 FPT	207.69

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*

### OLD FARMER'S ADVICE

Your fences need to be horse-high, pig-tight and bull-strong.

Keep skunks and bankers at a distance.

Life is simpler when you plow around the stump.

A bumble bee is considerably faster than a John Deere tractor.

Words that soak into your ears are whispered...not yelled.

Meanness don't jes' happen overnight.

Forgive your enemies; it messes up their heads.

Do not corner something that you know is meaner than you.

It don't take a very big person to carry a grudge.

You cannot unsay a cruel word.

Every path has a few puddles.

When you wallow with pigs, expect to get dirty.

The best sermons are lived, not preached.

Most of the stuff people worry about ain't never gonna happen anyway.

Don't judge folks by their relatives.

Remember that silence is sometimes the best answer.

Live a good, honorable life.. Then when you get older and think back, you'll enjoy it a second time.

Don't interfere with somethin' that ain't bothering you none.

Timing has a lot to do with the outcome of a Rain dance.

If you find yourself in a hole, the first thing to do is stop diggin'.

Sometimes you get, and sometimes you get got.

Always drink upstream from the herd.

BRASS

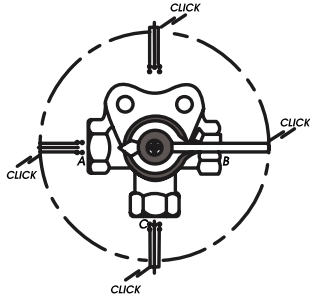
**SPECIALTY VALVES**

**BRASS FITTINGS**

**THREE AND FOUR-WAY  
SELECTOR VALVES**

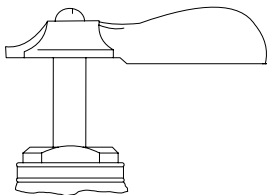
NON-LUBRICATED PLUG VALVES are designed to operate in systems where INSTANTANEOUS PORT SELECTION is desired. Since LUBRICANTS ARE NOT USED, relubrication is not required. There is no lubricant to freeze and lock the valve or to contaminate fine fluids. The O-RING SEALED CAP and STEM eliminate leakage 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 GASOLINE, OIL, AIR, WATER and DETERGENT systems from minus 40° to 180°F, at a maximum operating pressure of 30 p.s.i.g. The fluid port size is 9/32 (.281) diameter for 1/8 and 1/4 sizes, 5/16 (.312) diameter for the 3/8 size. (Consult factory for applications requiring a higher pressure).



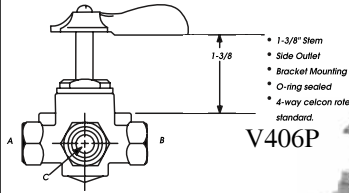
**Type 1 (Standard)**

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



**PANEL MOUNTING AVAILABLE**

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



**LESS CLICK**

Part #	A-B-C Female Pipe Thread	Length of Stem	List Price
46-247	1/4	1-3/8"	35.71
46-248	3/8	1-3/8"	42.08

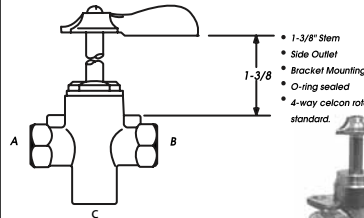
**M-108-MID WITH CLICK 360°**

Part #	A-B-C Female Pipe Thread	Length of Stem	List Price
46-250	1/8	1-3/8"	37.19
46-251	1/4	1-3/8"	36.35
46-252	3/8	1-3/8"	42.78

Openings:

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

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



**LESS CLICK**

Part #	A-B-C Female Pipe Thread	Length of Stem	List Price
46-241	1/4	1-3/8"	37.25

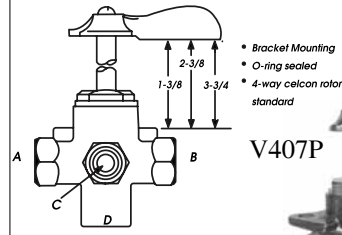
**WITH CLICK 360°**

Part #	A-B-C Female Pipe Thread	Length of Stem	List Price
46-243	1/8	1-3/8"	43.35
46-244	1/4	1-3/8"	38.96

Openings:

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

**FOUR-WAY VALVES**



**LESS CLICK**

Part #	A-B-C-D Female Pipe Thread	Length of Stem	List Price
46-257	1/4	1-3/8"	33.57

**M-114-MID WITH CLICK (360°)**

Part #	A-B-C-D Female Pipe Thread	Length of Stem	List Price
46-255	1/4	1-3/8"	39.50
46-256	3/8	1-3/8"	45.31

**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"	38.42

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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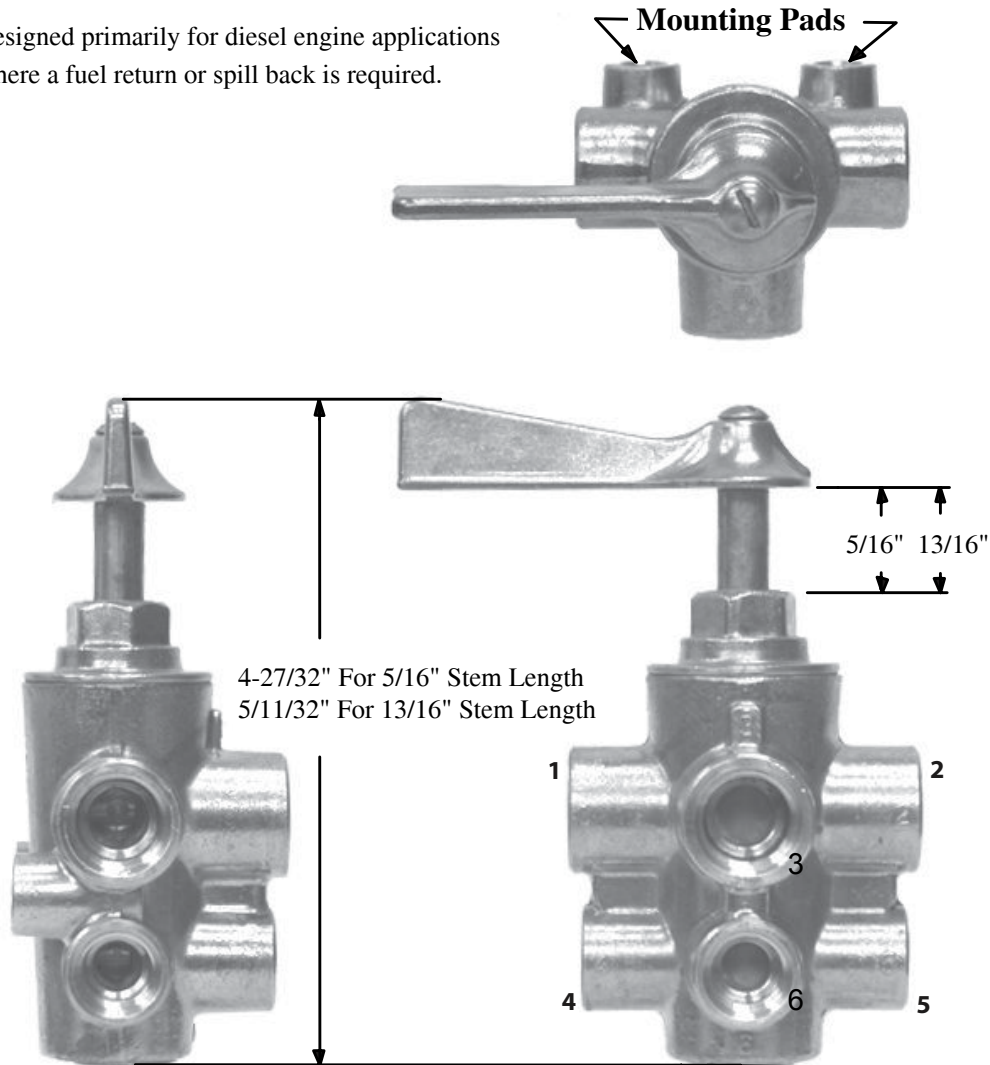




**SIX PORT VALVES**

**BRASS**

- 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	667.98

*More sizes available...just ask!*





**SPECIALTY VALVES**

**BRASS TRUCK VALVES**



404V

**HOSE TO MALE PIPE**

Part #	Size	List Price
46-450	3/8 x 3/8	17.91
46-451	5/8 x 3/8	17.90



404V

**HOSE TO MALE PIPE**

Part #	Size	List Price
46-455	5/8 x 1/2	35.78
46-457	3/4 x 3/8	42.47
46-456	3/4 x 1/2	37.69



405V

**FEMALE TO MALE PIPE**

Part #	Size	List Price
46-465	3/8 x 3/8	22.46
46-466	3/8 x 1/2	43.16
46-467	1/2 x 1/2	30.00



409V

**FLARE TO MALE PIPE**

Part #	Size	List Price
46-475	1/2 x 1/2	54.93
46-476	5/8 x 1/2	30.07



412V

**MALE PIPE TO FLARE**

Part #	Size	List Price
46-485	1/2 x 5/8	24.24

**SOLID BOTTOM VALVES**

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

1035D

M-70-SBV



**O-RING SEALED  
MIP X FIP**

Part #	Size	List Price
46-400	1/8	28.05
46-401	1/4	26.78
46-402	3/8	29.60

8875



**#M-72-SBV  
FIP x FIP**

Part #	Size	List Price
46-411	1/4	31.71



**#M-75-SBV  
MIP x FLARE**

Part #	Size	List Price
46-429	1/4 x 3/8	29.25

**BRASS FITTINGS**

**SOLID BOTTOM FUEL VALVES**

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



8980

**PIPE  
MALE X FEMALE**

Part #	Size	List Price
46-400M	1/8 x 1/8	49.23
46-401M	1/4 x 1/4	36.40
46-402M	3/8 x 3/8	43.20



8990

**PIPE  
MALE x MALE**

Part #	Size	List Price
46-406M	1/4 x 1/4	43.23



8975

**PIPE  
FEMALE X FEMALE**

Part #	Size	List Price
46-411M	1/4 x 1/4	43.79



8948

**MALE PIPE X FLARE**

Part #	Size	List Price
46-429M	1/4 x 3/8	41.00
46-430M	3/8 x 3/8	61.15

Some product stocked in Houston and Atlanta.



## BRASS FITTINGS

## MINIATURE BALL VALVES

### BRASS DOMESTIC MINIATURE BALL VALVES

- Working Pressure up to 1000 P.S.I.G.
- ASTM B-16 Corrosion Resistant Brass Body.
- Non-Adjusting Viton O-Ring Stem Seal Design Never Needs Tightening.
- Highly Inert Teflon Seats.
- Long Life Nickel Plated Brass Ball.
- Blow-Out Proof Stem for Safety.
- Temperature: -40°F to 300°F
- 1/4 Turn Instantaneous On-Off Operation.
- Quarter Turn Handle Design.
- Water, Oil, and Air Pressure Systems.
- Ideal for tight, confined areas, or when routing aesthetics are desired. Applications include instrumentation, gas sampling systems, high pressure gauges, test stands, hydraulic and pneumatic service lines on capital equipment.
- Not good for steam.



**MALE X FEMALE**

Part #	Size	List Price
46-900	1/8 x 1/8	23.29
46-903	1/4 x 1/4	25.13



**MALE X MALE**

Part #	Size	List Price
46-910	1/8 x 1/8	25.80
46-912	1/4 x 1/4	27.19



**MALE PIPE X HOSE BARB**

Part #	Size	List Price
47-042	1/8 x 1/4	31.36
46-980	1/4 x 1/4	25.36
46-981	1/4 x 3/8	23.77



46-920  
46-921  
46-922



46-922A  
46-923



46-924



46-925

**FEMALE X FEMALE**

Part #	Size	List Price
46-920	1/8 x 1/8	25.78
46-921	1/8 x 1/4	29.04
46-922	1/4 x 1/4	25.01
46-922A	1/4 x 1/4	18.16
46-923	3/8 x 3/8	29.93
46-924	1/2 x 1/2	48.17
46-925	3/4 x 3/4	51.50

### U.L. TWO WAY VALVES

- Buna-N Seal, Teflon Seat
- Plated metal handle, plated brass ball.
- 250 PSI Working Pressure



**U.L. TWO WAY VALVES  
FNPT X FNPT**

Part #	Size	List Price
46-440	1/4 x 1/4	24.97



**U.L. TWO WAY VALVES  
MNPT X FNPT**

Part #	Size	List Price
46-443	1/4 x 1/4	24.97

### MINI BALL VALVES

- See p. 172 for specifications



**FEMALE X FEMALE**

Part #	Size	List Price
46-920 I	1/8	15.16
46-922 I	1/4	15.16
46-923 I	3/8	15.16
46-924 I	1/2	17.52

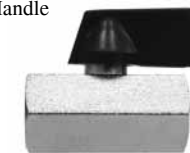


**MALE X FEMALE**

Part #	Size	List Price
46-900 I <sup>5</sup>	1/8	14.84
46-903 I	1/4	14.84
46-904 I <sup>5</sup>	3/8	14.84
46-905 I <sup>3</sup>	1/2	16.45

### ECONOMY MINI BALL VALVES

- Max Working Pressure: 450psi
- Maximum Temperatures: 356°F at 142 psi  
212°F at 355 psi
- 1/4 Turn Handle



**FEMALE X FEMALE**

Part #	Size	List Price
46-935	1/4	7.56
46-936	3/8	8.27



**MALE X FEMALE**

Part #	Size	List Price
46-931	1/4	7.56
46-932	3/8	7.11

*See more mini valves on page 172*

Some product stocked in Houston and Atlanta.

**CHECK VALVES/ MARINE FITTINGS**

**BRASS 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	22.96

MAX. 2500 PSI

- Flo direction ->
- 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	21.91

MAX. 1200 PSI

- O-Ring poppet seal Bubble tight operation
- 180°F max operating temp.



**FNPT X FNPT**

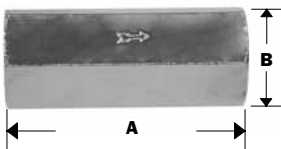
Part #	Size	Opening Dia.	List Price
46-510	1/4 x 1/4	0.25	25.54
46-511	3/8 x 3/8	0.375	30.78
46-512	1/2 x 1/2	0.437	40.35

**PNEUMATIC CHECK VALVES**

- Max Operating Pressure: 220 psi
- Working Pressure: 14.5-145 psi
- Cracking Pressure: 2.8 psi
- Maximum Temperatures: 140° F

**Materials**

Body	Chrome plated Brass
Spring	Steel
O-Ring	NBR Rubber



NPT- Inlet NPSM - Outlet

Part #	Size	Dimensions (In.)		List Price
		A	B	
46-200	1/4	1.97	0.67	18.03
46-201	3/8	1.97	0.83	17.77
46-202	1/2	2.48	0.98	38.69

**HIGH PRESSURE CHECK VALVES**

- Operates in any position, and is available in mixed or matched end combinations.
- Standard cracking pressure 1 p.s.i (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
- Brass
- 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	48.47
46-517	3/8	53.88

- Flo direction ->



**FEMALE X MALE**

Part #	Size	List Price
46-514	1/4	48.47
46-518	3/8	53.88

- Flo direction ->



**MALE X FEMALE**

Part #	Size	List Price
46-516	1/4	48.47
46-539	3/8	53.88



**MALE X MALE**

Part #	Size	List Price
46-515	1/4	48.47
46-519	3/8	53.88

**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	18.56
46-521	3/8 x 3/8	30.97

- Flo direction <-



**ANTI-SIPHON VALVES**

**BARB X NPT**

Part #	Size	List Price
46-530	5/16 x 1/4	17.93
46-531	3/8 x 1/4	16.37
46-532	3/8 x 3/8	30.05
46-533	1/2 x 3/8	30.05



**BULKHEAD FITTINGS**

Part #	Size	List Price
46-540	5/16	12.97
46-541	3/8	12.64

"If you believe you can, you probably can. If you believe you won't, you most assuredly won't. Belief is the ignition switch that gets you off the launching pad."

- Denis Waitley

Some product stocked in Houston and Atlanta.

**BALL VALVE PRIVATE LABEL PROGRAM**



Midland will put your company name and logo on our ball valve handle for FREE. Simply place a minimum blanket order of 10 cases per size and Midland will stock them under a special part # for your access only. Please allow 90-120 days for delivery on the first shipment only: Then have them delivered as you need them!

**\*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"	2.51
43-204T	1"	4.07

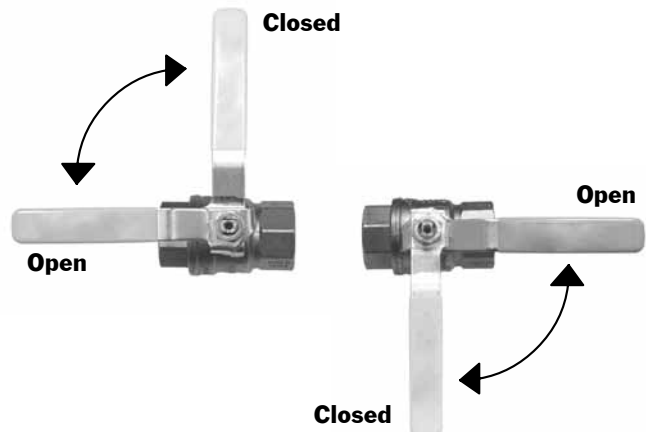
**LOCKING HANDLES**



Part #	Valve Size	List Price
43-200L	1/4" - 3/4"	16.05
43-204L	1" - 1 1/4"	28.75
43-206L	1 1/2" - 2"	48.31

**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**

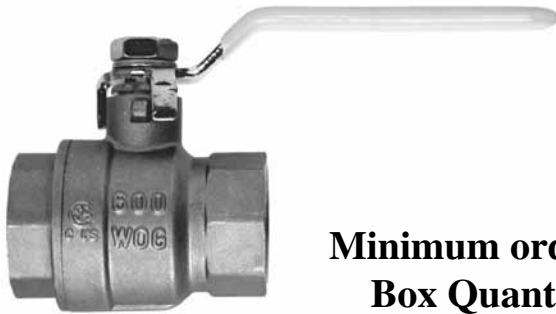
1/4-2" 600 PSI non-shock cold water, gas, oil  
- 150 PSI saturated steam

2-1/2" - 4" 400 PSI non-shock cold water, gas, oil

**VALVES**

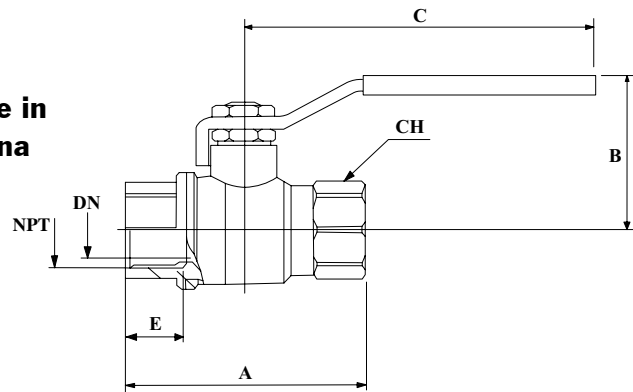
- Suitable for full range of liquids and gases
- Minimal pressure drop due to large full size ports
- Bottom loaded, pressure retaining stem
- Pressure rated for 1/4"-2" at 600psi (42 bars) and 2-1/2"-4" at 400 psi WOG (non-shock) and 150 WSP (10.34 bars) saturated steam. Virgin PTFE stem packing seal, 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

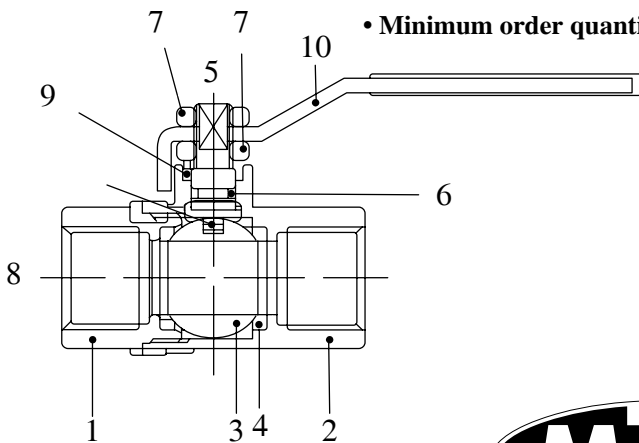


**Made in China**

**Minimum order is Box Quantity**



Part#	Size	Dimension Inches						Min. Order	Case	List Price
	NPT	DN	A	B	C	E	CH	Box		
940-171	1/4"	0.39	1.75	1.27	3.54	0.46	0.78	70	140	9.08
940-172	3/8"	0.41	1.75	1.27	3.54	0.46	0.78	70	140	9.08
940-173	1/2"	0.58	2.05	1.92	3.54	0.52	0.98	50	100	10.89
940-174	3/4"	0.75	2.36	2.08	3.78	0.56	1.20	30	60	15.95
940-175	1"	0.94	2.75	2.56	4.52	0.66	1.50	20	40	24.82
940-176	1-1/4"	1.26	3.30	2.95	4.52	0.70	1.82	12	24	36.53
940-177	1-1/2"	1.57	3.66	3.34	5.51	0.72	2.09	9	18	54.16
940-178	2"	1.97	4.18	3.68	5.51	0.74	2.62	6	12	84.72
940-179	2-1/2"	2.52	5.38	4.76	8.66	1.01	3.36	4	8	213.21
940-180	3"	2.95	6.04	5.08	8.66	1.11	3.86	2	4	249.34
940-181	4"	3.89	7.38	5.86	9.00	1.22	4.89	1	2	471.55



• 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

Some product stocked in Houston and Atlanta.

• Not AB1953 Compliant





**FULL PORT 600WOG FORGED BRASS BALL VALVE**



**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

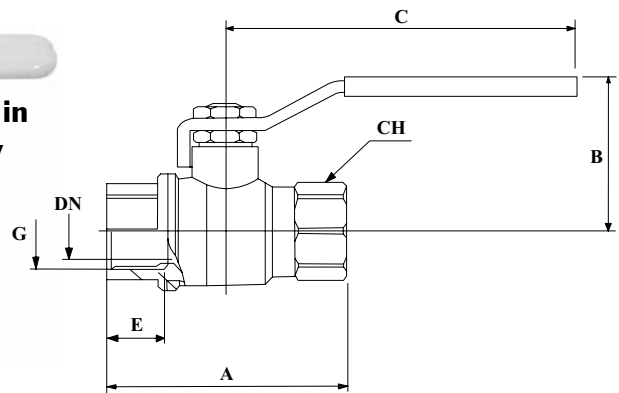
- **SOLID CHROME PLATED BRASS BALL**
- Suitable for full range of liquids and gases
- Minimal pressure drop due to large full size ports
- Bottom loaded, pressure retaining stem
- Pressure rated at 600psi (42 bars) WOG (non-shock) and 150 WSP (10.34 bars) saturated steam. Virgin TFE stem packing seal, 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



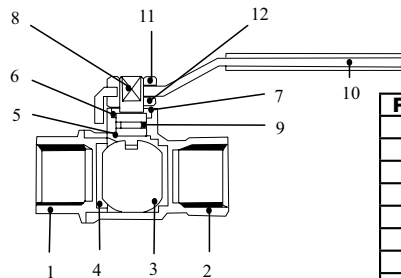
**Made in Italy**

**Female x Female**



Part#	Size		Dimension Inches					Box	Case	List Price
	G	DN	A	B	C	E	CH			
943-200	1/4"	.31	1.96	1.57	3.43	.43	.74	24	96	16.37
943-201	3/8"	.39	1.96	1.57	3.43	.43	.86	24	96	16.70
943-202	1/2"	.59	2.28	1.77	3.35	.61	.94	20	80	18.30
943-203	3/4"	.78	2.44	1.89	3.35	.64	1.22	14	56	27.97
943-204	1"	.98	3.03	2.20	4.61	.75	1.50	6	24	45.08
943-205	1-1/4"	1.26	3.46	2.36	4.61	.77	1.89	4	16	75.36
943-206	1-1/2"	1.57	3.94	3.15	6.30	.77	2.12	2	8	117.42
943-207	2"	1.97	4.45	3.15	6.30	.79	2.63	1	4	162.91
942-208	2-1/2"	2.48	5.94	4.17	7.48	1.06	3.30	---	5	334.12
942-209	3"	2.99	6.85	5.47	9.84	1.14	3.89	---	3	458.68
942-210	4"	3.54	7.67	5.88	9.84	1.50	4.80	---	2	848.50

See additional handle options on page 163.



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

Some product stocked in Houston and Atlanta.

• Not AB1953 Compliant



**NSF 61 FULL PORT 600WOG FORGED BRASS BALL VALVE**

- Two-Piece Body - Full Port - Blowout-Proof Stem - PTFE Seats
- 1/4" - 2" 600 PSI WOG, 2-1/2"-4" 400 PSI WOG, 1/4"-4" 150 PSI WSP
- NSF/ANSI 61-8
- CSA - ANSI Z21.15/CGA 9.1, ASME B16.44, CGA CR 91-002
- CAN/CGA 3.16, ASME B16.33 & ASME B16.38 ( Threaded Only)
- UL Guides YQNZ, YRBX, YRPV & YSDT
- FM Approved (1/4"-2")
- Not AB1953 compliant

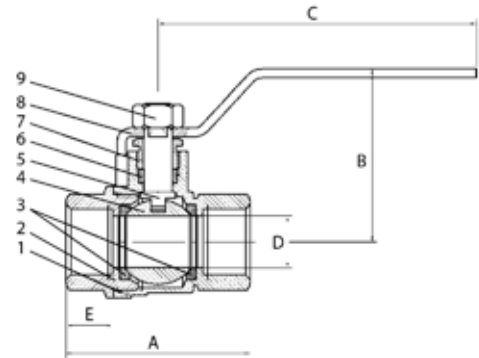
**VALVES**



Female x Female



**MADE IN CHINA**



POS	Components	Materials	N
1	BODY	BRASS	1
2	END CAP	BRASS	1
3	BALL SEAT	PTFE	1
4	BALL	BRASS	2
5	STEM	BRASS	1
6	STEM PACKING	PTFE	1
7	PACKING NUT	BRASS	1
8	LEVER HANDLE	CHROME PLATING STEEL	1
9	STEM NUT	NICKEL PLATING STEEL	1

Part#	DIMENSIONS						List Price
	Size	A	B	C	D	E	
943-101	1/4"	1.667	1.689	2.756	0.315	0.457	10.22
943-102	3/8"	1.756	1.732	3.543	0.394	0.457	10.22
943-103	1/2"	2.047	1.921	3.543	0.583	0.520	14.07
943-104	3/4"	2.362	2.087	3.780	0.748	0.563	21.14
943-105	1"	2.756	2.559	4.528	0.945	0.630	33.39
943-106	1-1/4"	3.307	2.953	4.528	1.260	0.709	50.12
943-107	1-1/2"	3.661	3.346	5.512	1.575	0.717	77.21
943-108	2"	4.181	3.681	5.512	1.969	0.748	113.19

**NSF 61 FULL PORT 600 WOG FORGED BRASS BALL VALVE - \*CLOSE-OUT ONCE STOCK IS GONE\***

NSF 61 Approved Part#	Size G	Dimension Inches						Box	Case	NSF 61 List Price
		DN	A	B	C	E	CH			
943-220	1/4"	.31	1.96	1.57	3.43	.43	.74	24	96	19.61
943-221	3/8"	.39	1.96	1.57	3.43	.43	.86	24	96	20.79
943-222	1/2"	.59	2.40	1.77	3.43	.59	1.06	20	80	22.40
943-223	3/4"	.78	2.72	1.77	3.43	.64	1.26	14	56	32.12
943-224	1"	.98	3.28	2.20	4.72	.75	1.59	6	24	54.23
943-225	1-1/4"	1.25	3.86	2.36	4.72	.84	1.96	4	16	82.55
943-226	1-1/2"	1.57	4.25	3.12	6.33	.84	2.16	2	8	134.73
943-227	2"	1.96	5.03	3.12	6.33	1.01	2.76	1	4	205.97



Gas Approved

**FULL PORT 600WOG FORGED BRASS BALL VALVE**



UL842, UL258, UL125,FM

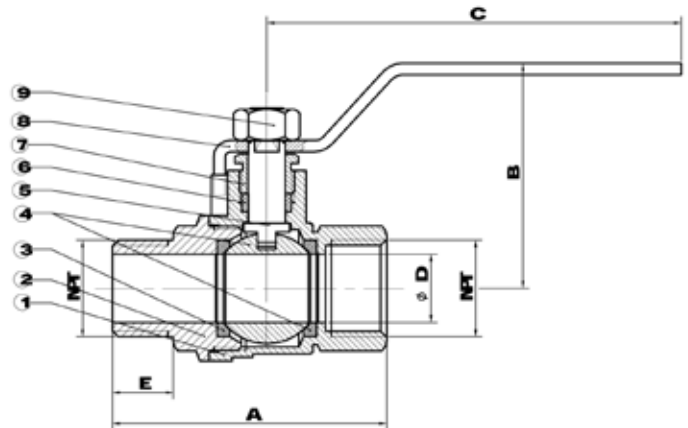
CSA AGA 3.88 5 PSIG

- 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	9.75
948-171	3/8	3/8 - 18	2.094	1.732	3.543	0.394	0.457	70	140	10.01
948-172	1/2	1/2 - 14	2.343	1.941	3.543	0.583	0.520	50	100	12.17
948-173	3/4	3/4 - 14	2.618	2.106	3.780	0.748	0.563	30	60	18.13
948-174	1	1 - 11.5	3.000	2.579	4.528	0.945	0.630	20	40	26.81
948-175	1-1/4	1-1/4 - 11.5	3.563	2.953	4.528	1.260	0.709	12	24	39.24
948-176	1-1/2	1-1/2 - 11.5	3.965	3.346	5.512	1.575	0.717	9	18	58.37
948-177	2	2 - 11.5	4.496	3.681	5.512	1.969	0.748	6	12	84.55

• Not AB1953 Compliant

**FULL PORT 600WOG FORGED BRASS BALL VALVE**

Gas Approved



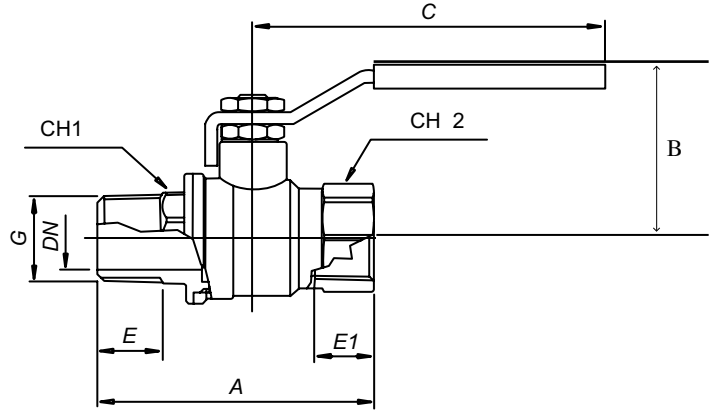
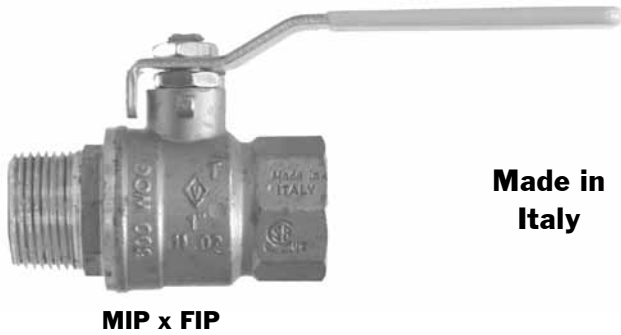
CSA AGA 3.88 5 PSIG Made in Italy

**ISO 9002 Manufacturer FEATURES**

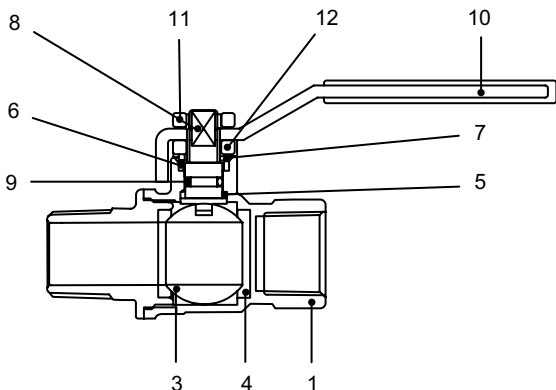
- Solid chrome plated brass ball
- Suitable for full range of liquids and gases.
- Minimal pressure drop due to large full size ports.
- Bottom loaded, pressure retaining stem.
- Pressure rated at 600psi (42 bars) WOG ( non-shock) and 150psi (10.34 bars) saturated steam. Virgin TFE stem packing seal, thrust washer and seats.
- Yellow vinyl insulator on heavy duty plated carbon steel handles.
- Fast 1/4 turn open or close operation.

- Low operating torque.
- Adjustable stem packing gland.
- Maximum operating temperature: 248°F (120°C) at 600 p.s.i
- Minimum operating temperature: -20°F (-40°C)
- KV: Pressure drop m<sup>3</sup>/h.
- Each valve individually tested.
- Forged Brass - for more strength.
- Threaded ends to ANSI B1.20.1
- Hard chromium plated solid ball
- Bottom entry, blow-out proof stem.
- Deeper threads - for better connections.

**VALVES**



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	16.73
948-102	3/8	.39	2.37	1.57	3.35	.46	.51	.71	.86	24	96	18.20
948-103	1/2	.59	2.28	1.49	3.35	.61	.59	.85	.96	14	56	22.16
948-104	3/4	.78	2.87	1.57	3.35	.66	.63	1.10	1.22	12	48	34.07
948-105	1	.98	3.42	1.93	5.20	.77	.75	1.36	1.50	6	24	51.35
948-106	1-1/4	1.26	3.94	2.36	4.72	.79	.76	1.69	1.89	4	16	89.90
948-107	1-1/2	1.57	4.25	3.00	6.34	.81	.76	2.12	2.12	2	8	124.40
948-108	2	1.97	4.96	2.95	6.34	.84	.76	2.40	2.63	1	4	188.13



POS	Components	Materials	N
1	Body	CW617N Forged Brass	1
2	End Connection	CW617N Forged Brass	1
3	Ball	CW617N CP Brass	1
4	Ball Stems	P.T.F.E.	2
5	Stem Antif. Seat	P.T.F.E.	1
6	Stem Seat	P.T.F.E.	1
7	Brass Ring	CW617N Brass	1
8	Stem	CW617N Brass	1
9	O-Ring	NBR 80	1
10	Handle	UNI EN 10025 Steel	1
11	Nut	UN 5771 Steel	1
12	Nut	CW617N Brass	1

• Not AB1953 Compliant

**FULL PORT 600WOG FORGED BRASS BALL VALVE**

- 600 PSI non-shock cold water, gas, oil
- 150 PSI saturated steam (WSP)

**ISO 9002 Manufacturer  
FEATURES**



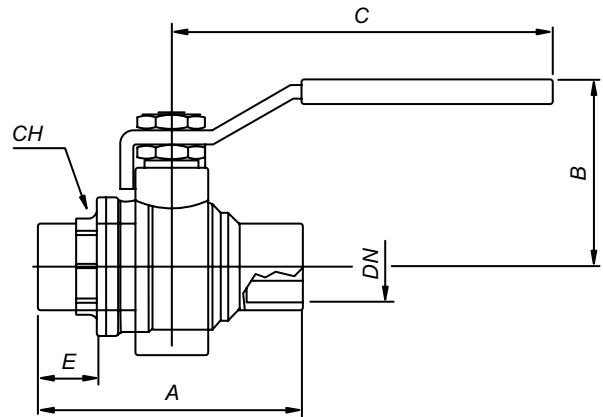
- Minimal pressure drop due to large full size ports.
- Bottom loaded, pressure retaining stem.
- Pressure rated at 600psi (42 bars) WOG (non-shock) and 150psi (10.34 bars) saturated steam. Virgin TFE stem packing seal, thrust washer and seats.
- Vinyl insulator on heavy duty plated carbon steel handles.
- 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.

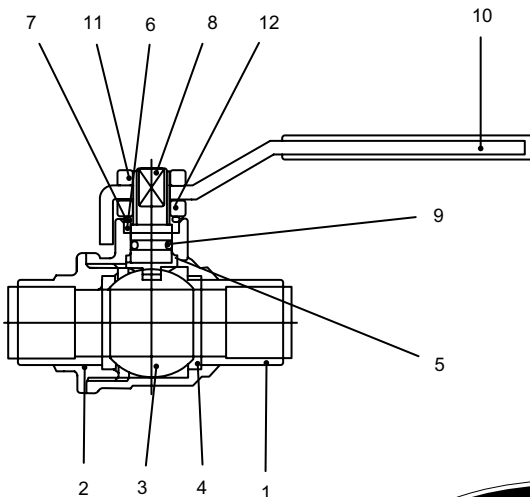


**MADE IN CHINA**

**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	19.27
940-213	3/4	0.74	2.74	1.99	3.78	0.63	1.05	30	60	24.44
940-214	1	0.94	3.22	2.44	4.52	0.75	1.33	20	40	35.16
940-215	1-1/4	1.26	3.81	2.85	4.52	0.83	1.60	12	24	54.88
940-216	1-1/2	1.57	4.42	3.16	5.51	0.90	1.90	9	18	90.33
940-217	2	1.97	5.31	3.44	5.51	1.30	2.37	6	12	132.32



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

• Not AB1953 Compliant



**FORGED BRASS BALL VALVE - STANDARD PORT**

1/2" Gas Approved



CSA AGA 3.88 5 PSIG



UL842, UL258, UL125, FM

**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.

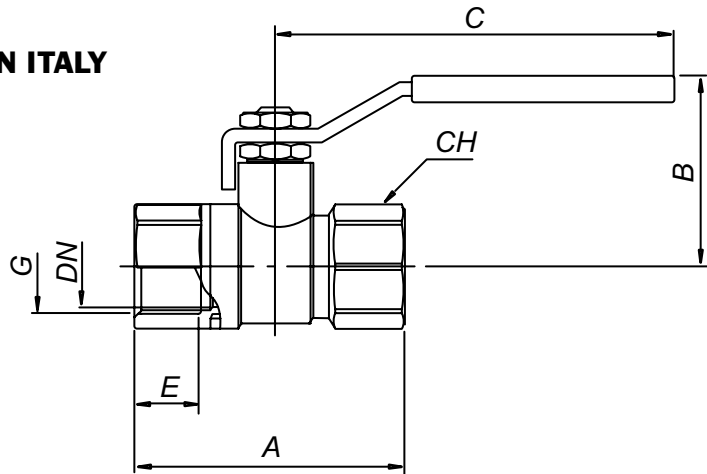
**VALVES**

Yellow Handle



**FIP x FIP**

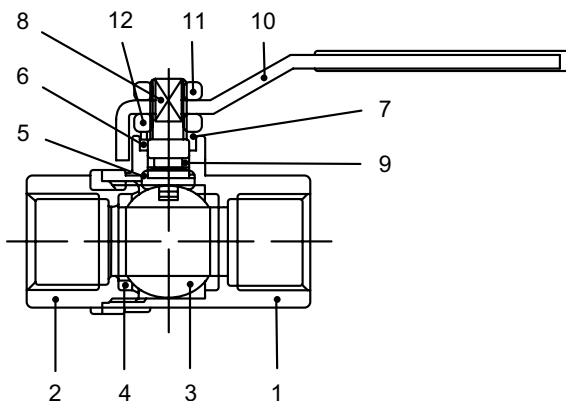
**MADE IN ITALY**



**FORGED BRASS BALL VALVE IPS SCREWED ENDS**

Part#	Size	Dimension Inches						Box	Case	List Price
	G	DN	A	B	C	E	CH			
940-241	1/2	0.47	2.26	1.51	3.27	0.61	0.98	20	80	18.23
940-242	3/4	0.59	2.50	1.59	3.27	0.63	1.22	14	56	25.62
940-243	1	0.78	2.87	1.88	3.74	0.75	1.49	10	40	38.33
940-244	1-1/4	0.98	3.46	2.08	4.61	0.77	1.89	4	16	65.86
940-245	1-1/2	1.26	3.52	2.45	4.61	0.77	2.13	4	16	91.51
940-246	2	1.57	4.05	2.65	4.61	0.79	2.64	1	4	132.86

See additional handle options on page 163



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

Some product stocked in Houston and Atlanta.

• Not AB1953 Compliant



**GAS BALL VALVES**

**ISO 9002 Manufacturer FEATURES**

**CS** 5 PSIG  
C US  
CSA AGA 3.88 5 PSIG

**UL** LISTED  
Manual Valve  
Threaded NPT  
UL 842, UL 258, UL 125

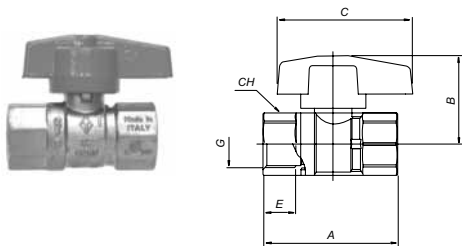
**Made in Italy**

- 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.

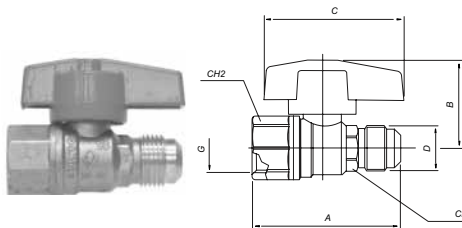
**VALVES**

**GAS BALL VALVES FEMALE x FEMALE**



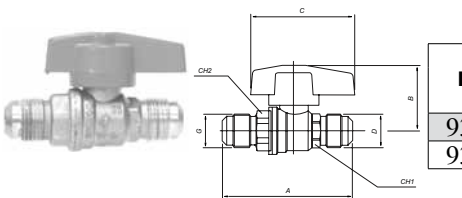
Part#	Size	Dimension Inches							PN in psi	Box	Case	List Price
	G	DN	A	B	C	E	CH					
943-212	1/2"	.31	1.96	1.57	3.43	.43	.98	600	20	80	13.57	
943-213	3/4"	.39	1.96	1.57	3.43	.43	1.22	600	14	56	19.69	

**APPLIANCE CONNECTOR VALVES FEMALE X FLARE**

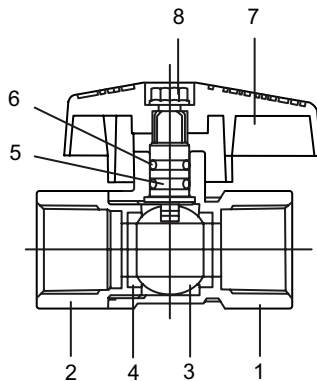


Part#	Size	Dimension Inches							PN in psi	Box	Case	List Price
	G	DN	A	B	C	CH1	CH2					
935-122	1/2 x 3/8	0.27	2.41	1.45	2.28	0.67	0.98	20	80	17.51		
935-123	1/2 x 1/2	0.39	2.44	1.45	2.28	0.67	0.98	20	80	19.48		
935-124	3/4 x 5/8	0.47	2.50	1.48	2.28	-	1.22	20	80	21.74		

**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	23.58	
935-130	1/2 x 1/2	0.39	2.87	1.45	2.28	0.67	0.83	363	20	80	20.37	



	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 VALVE

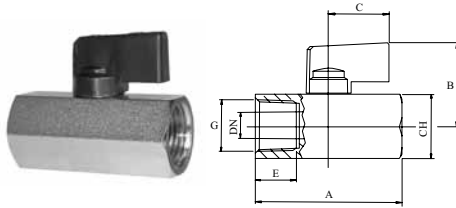
Made in Italy

ISO 9002 Manufacturer

### FEATURES

- Solid chrome plated brass ball
- Max working pressure 235 psi will handle 300psi@75° F
- Longer body style for longer, deeper thread connections
- One piece drawn sand blasted chrome plated body.
- Each valve is seal tested for maximum safety.
- Double seal system allows valve to be operated in both directions making installation easier.
- Blowout-proof brass stem.
- NPT taper ANSI B1.20.1 threads.
- 32°F to +176°F temperature.
- 1/4 Turn Nylon handle with mechanical stop.
- NSF Approved valves available upon request!
- Also available in Stainless Steel.

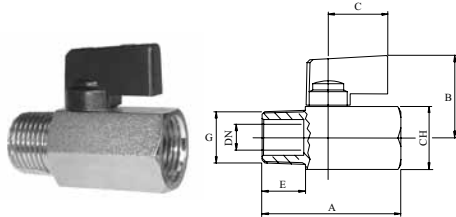
### Female x Female



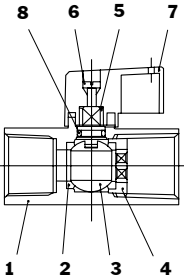
Part#	Size		Dimension Inches							
	G	DN	A	B	C	E	CH	BOX	CASE	List Price
46-920 I	1/8"	0.24	1.51	1.2	0.9	0.31	0.83	50	200	15.16
46-922 I	1/4"	0.31	1.88	1.2	0.9	0.51	0.83	50	200	15.16
46-923 I	3/8"	0.31	1.88	1.2	0.9	0.51	0.83	50	200	15.16
46-924 I	1/2"	0.39	2.18	1.28	0.9	0.61	0.96	40	160	17.52

Made in Italy

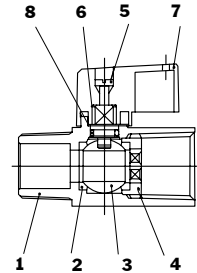
### Male x Female



Part#	Size		Dimension Inches							
	G	DN	A	B	C	E	CH	BOX	CASE	List Price
46-900 I	1/8"	0.24	1.5	1.2	0.9	0.34	0.83	50	200	14.84
46-903 I	1/4"	0.31	1.77	1.2	0.9	0.48	0.83	50	200	14.84
46-904 I	3/8"	0.31	1.81	1.2	0.9	0.49	0.83	50	200	14.84
46-905 I	1/2"	0.39	2.15	1.28	0.9	0.65	0.96	40	160	16.45



POS	Components	Materials	N
1	Body	CW517N Forged Brass	1
2	Ball Seats	P.T.F.E	2
3	Ball	CW517N CP Brass	1
4	Ring Unit	CW614N Brass	1
5	Stem	CW614N Brass	1
6	Screw	UNI 5771 Steel	1
7	Handle	Nylon	1
8	O-Ring	NBR 80	1



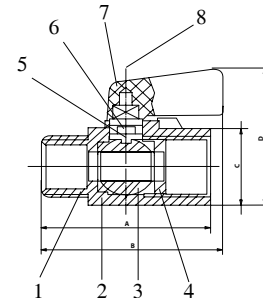
### ECONOMY MINI BALL VALVES

- Max Working Pressure: 450psi
- Maximum Temperatures: 356°F at 142 psi  
212°F at 355 psi
- 1/4 Turn Handle

Send us your volume quotes!



Part #	Size	Dimensions (In)				List Price
		A	B	C	D	
46-935	1/4	1.57	1.69	0.78	1.46	7.56
46-936	3/8	1.57	1.69	0.78	1.46	8.27



### MALE X FEMALE



Part #	Size	Dimensions (In)				List Price
		A	B	C	D	
46-930	1/8	1.67	1.69	0.78	1.46	6.87
46-931	1/4	1.57	1.69	0.78	1.46	7.56
46-932	3/8	1.57	1.69	0.78	1.46	7.11

Pos	Components	Materials	N
1	Body	CP Forged Brass	1
2	Ball Seats	P.T.F.E	2
3	Ball	CP Brass	1
4	Ring Unit	Brass	1
5	Stem	Brass	1
6	O-Ring	NBR 80	1
7	Handle	ABS	1
8	Screw	Steel	1

## BRASS VALVES

## MINI BALL 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	10.81
944-118	1/4X1/2	10.12

\* 90° Operational handle.



#### MALE x FEMALE

Part #	Size	List Price
944-106	1/8X1/8	10.12
944-100	1/8X1/4	13.70
944-101	1/4X1/4	11.99
944-102	1/4X3/8	10.12



#### MALE x MALE

Part #	Size	List Price
944-108	1/8X1/4	7.61
944-111	1/4X1/2	10.12
944-112	1/2X1/2	12.87



#### HOSE BARB x MALE

Part #	Size	List Price
944-138 *	1/4X1/4	8.03
944-128	3/8X1/4	7.51

\* 90° Operational handle.



#### HOSE BARB x HOSE BARB

Part #	Size	List Price
* 944-142	1/4X1/4	10.73
* 944-134	3/8X3/8	10.88

\* 90° Operational handle.



#### FEMALE x HOSE BARB

Part #	Size	List Price
944-135	1/8X1/8	10.30
944-121	1/4X5/16	10.30
944-136	1/4X1/4	9.67

#### NP MINI BALL VALVES

- With and without internal check valve.
- \* Nickel Plated



#### MALE PIPE x BARB w/ CHECK

Part #	Size	List Price
944-051	1/4 x 1/4	14.78
944-052	3/8 x 1/4	15.14

#### MALE PIPE x BARB WITHOUT CHECK

Part #	Size	List Price
944-012	3/8 x 1/4	14.29



#### MIP x FLARE w/ CHECK VALVE

Part #	Size	List Price
944-060	1/4 x 1/4	14.78

#### FLARE x MIP WITHOUT CHECK VALVE

Part #	Size	List Price
944-026	1/4 x 1/4	16.90



#### BARB x BARB NO CHECK

Part #	Size	List Price
944-005	1/4	14.99
944-013	3/8	14.99



#### MIP x FLARE WITH CHECK

Part #	Size	List Price
10-256WC	1/4 x 1/4	2.80

*Private label handle available on volume purchases.*



# 3 WAY BALL VALVES

# BRASS VALVES

## SIDE OUTLET 3 WAY BALL VALVE

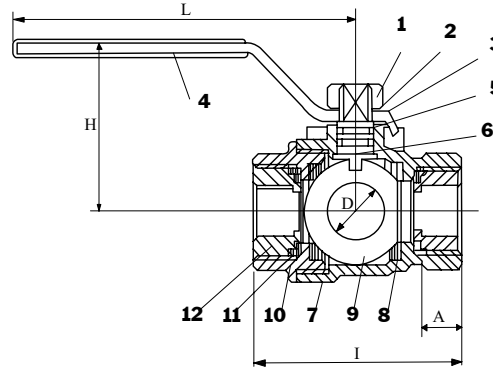
• 600 WOG

VALVES

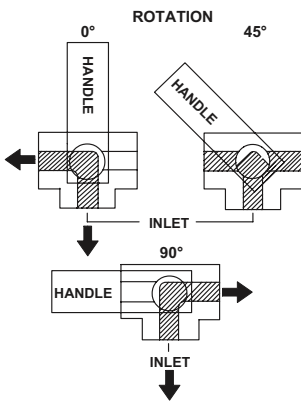


- Forged Brass
- 600 WOG
- Temp Rating 0-230°F

• Side outlet



- Full Port
- Blow-out proof stem
- double o-ring stem packing
- PTFE Seal



### Nomenclature & Materials

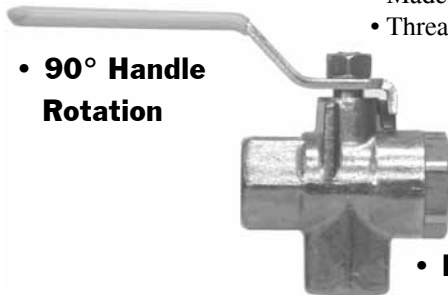
NO	Part Name	Material	Qty
1	Nut	Steel	1
2	Spring Washer	Steel	1
3	Handle	Steel	1
4	Cover	PVC	1
5	O-Ring	NBR	2
6	Stem	Brass	1
7	Body	Forged Brass	1
8	Seat	Teflon	2
9	Ball Disc	Brass	1
10	End Plug	Brass	1
11	O-Ring	NBR	3
12	Socket	Brass	3

Part#	Size	I	H	D	L	A	Box	Case	List Price
940-464	1/4"	1.89	1.73	0.39	3.35	0.47	50	100	42.45
940-465	3/8"	1.89	1.73	0.39	3.35	0.47	50	100	44.17
940-461	1/2"	2.11	1.80	0.50	3.35	0.51	30	60	35.20
940-462	3/4"	2.56	2.16	0.74	4.41	0.55	20	40	57.18

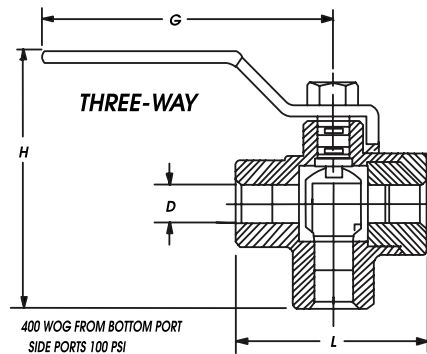
## BOTTOM OUTLET 3 WAY BALL VALVE

- Forged Brass
- Double O-Ring Seal
- Blow out proof stem
- Made in USA
- Threaded ports

• 90° Handle Rotation



• Bottom outlet



Part#	Size	D	G	H	L	Cv	List Price
940-121	1/4"	.44	3.50	3.12	2.25	5.2	58.45
940-122	3/8"	.50	3.50	3.12	2.25	5.5	49.19
940-123	1/2"	.50	3.50	3.12	2.25	5.5	61.36



## BRASS 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



#### T - HANDLE

Part #	Size	List Price
948-154ST	3/4	17.01



#### LEVER HANDLE

Part #	Size	List Price
948-154STL	3/4	17.47
948-155STL	1	27.70

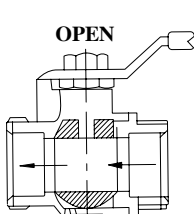
More options available ... just ask!

### EXHAUST VALVES

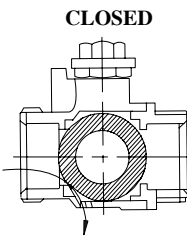
#### AUTOMATIC DRAIN & LATCH LOCK HANDLE

Full port hot forged brass ball valve, blow-out proof stem, downstream automatic vent with lockable handle in compliance with OSHA requirements.

- Maximum working pressure: 200 PSI (CWP).
- Temperature rating: -4°F through +350°F.



Valve - open position.  
Drain vent shut off.



Valve - closed and draining occurs. Upstream seat prevents air flow. Downstream system is vented to atmosphere.

Part#	Size	List Price
948-131	1/4"	45.65
948-132	3/8"	44.84
948-133	1/2"	52.66
948-134	3/4"	72.25
948-135	1"	79.70

## 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	10.27

### HOSE BIBBS 3/4" Hose Thread Outlet



#### IPS

Part #	Size	Box	List Price
942-170	1/2 (1/2"C)	12	12.65
942-171	3/4	12	16.10

### DRUM & BARREL FAUCET VALVE

- Die cast body w/ nylon seat and steel spring.
- For use with all petroleum products except trichlorethylene.
- Lockable handle.

G261N

Not suitable for potable water.



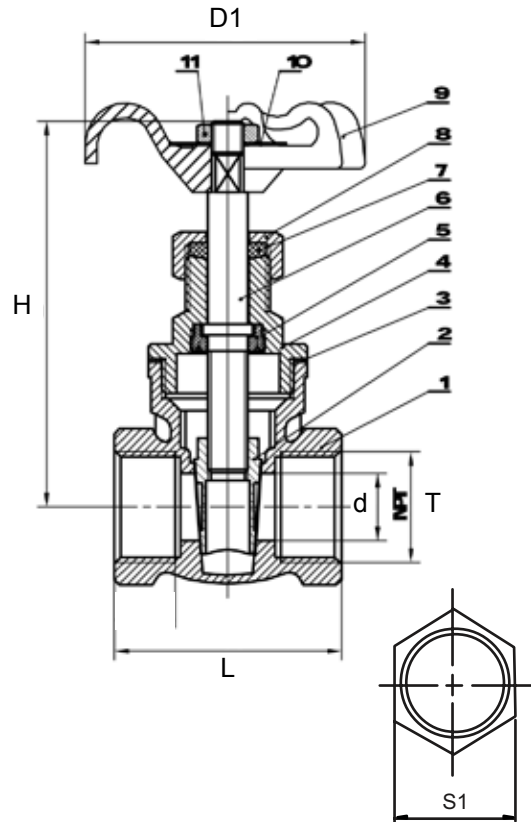
### SELF-CLOSING DRUM & BARREL FAUCET

Part #	Size	List Price
46-270	3/4"	12.87

**FULL PORT BRASS GATE VALVE**

**VALVES**

- 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.



NO	Description	Material
1	Body	C37700
2	Disk	C37700
3	Seat	PTFE
4	Cap	C37700
5	Packing	C37700
6	Stem	C37700
7	Rubber Seat	NBR
8	Packing Nut	C37700
9	Handle	HT200
10	Nameplate	AL
11	Stem Nut	A570 Gr.A

**BRASS GATE VALVES IPS**

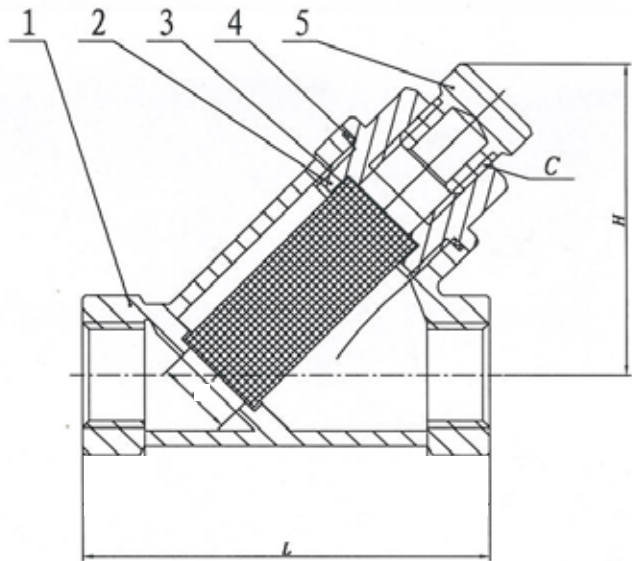
Part#	Size	L	H	D1	d	T	S1	Box	Case	List Price
940-130	1/4	1.57	2.91	2.09	.24	1/4-18 NPT	.85	10	120	21.10
940-131	3/8	1.61	2.91	2.09	.39	3/8-18 NPT	.85	10	120	22.00
940-132	1/2	1.575	2.874	2.087	0.50	1/2-14 NPT	1.03	10	100	14.01
940-133	3/4	1.752	3.228	2.087	0.748	3/4-14 NPT	1.26	5	60	18.82
940-134	1	1.984	3.661	2.283	0.984	1-11.5 NPT	1.51	5	40	25.80
940-135	1-1/4	2.165	4.567	2.835	1.22	1-1/4-11.5 NPT	1.89	5	30	46.76
940-136	1-1/2	2.283	4.98	3.11	2.496	1-1/2-11.5 NPT	2.17	4	24	59.85
940-137	2	2.677	5.846	3.819	1.85	2-11.5 NPT	2.60	2	16	78.75
940-138	2-1/2	3.661	7.638	4.252	2.48	2-1/2-8 NPT	3.27	2	8	136.78
940-139	3	3.819	8.839	4.961	2.835	3-8 NPT	3.86	1	6	204.34
940-140	4	4.567	10.189	4.961	3.661	4-8 NPT	4.88	1	3	329.01



**CLASS 150 BRONZE Y-PATTERN STRAINER**

- Casting bronze body, size 1/4"-3".
- Pressure rating: 150 WOG (water, oil, gas)/PN25  
150 WSP (Saturated Stem)
- NPT Threaded ends to ANSI B1.20.1
- Protects regulators, pumps, meters and other controls from damage due to sediment scale, metal chips or other foreign materials.

- Screwed cap is threaded & gasketed.
- Tapped drain plug opening in cap.
- 304 stainless steel screen #20 mesh.
- Self cleaning.
- Self cleaning can be accomplished by opening the valve or plug connected to the blow-off outlet.



Part#	Size	L	H	C	List Price
940-521	1/4"	2.60	1.67	NPT 1/4	36.32
940-522	3/8"	2.60	1.67	NPT 1/4	38.30
940-523	1/2"	3.13	2.33	NPT 1/4	28.60
940-524	3/4"	3.43	2.17	NPT 1/4	41.46
940-525	1"	4.09	2.66	NPT 1/2	71.96
940-526	1-1/4"	4.90	3.24	NPT 1/2	98.67
940-527	1-1/2"	5.59	3.51	NPT 1/2	130.54
940-528	2"	6.69	4.34	NPT 1/2	215.16
940-529	2-1/2"	8.26	5.61	NPT 3/4	500.00
940-530	3"	9.37	6.69	NPT 3/4	716.11

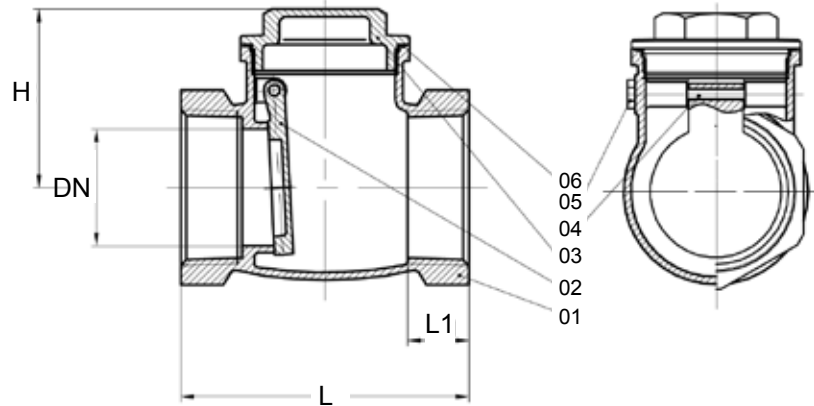
NO	Name	Material
1	BODY	BRONZE
2	BONNET	BRONZE
3	STRAINER	S.S.
4	SPRING SEAL	PTFE
5	END CAP	BRONZE

Lead Free fittings available on  
**pgs. 382-388**

**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.

**VALVES**



NO	Description	Material
1	Body	C37700
2	Disc	C37700
3	Cap	C37700
4	Brass Bar	C37700
5	Screw	C37700
6	Gasket	PTFE

**CAST BRASS SWING CHECK VALVES IPS SCREWED ENDS**

Part #	Size	L	H	L1	DN	Box	Case	List Price
940-352	1/2	2.071	1.299	0.531	0.512	10	120	15.83
940-353	3/4	2.382	1.417	0.579	0.728	10	80	17.81
940-354	1	2.835	1.614	0.748	0.925	5	60	25.51
940-355	1-1/4	3.228	1.969	0.748	1.201	4	36	40.26
940-356	1-1/2	3.740	2.244	0.846	1.417	4	24	55.54
940-357	2	4.212	2.638	0.886	1.772	4	16	83.39
940-358	2-1/2	5.591	3.346	1.063	2.224	2	8	157.73
940-359	3	6.024	3.504	1.102	2.579	1	6	221.86
940-360	4	7.008	4.212	1.102	3.602	1	4	360.38

Some product stocked in Houston and Atlanta.



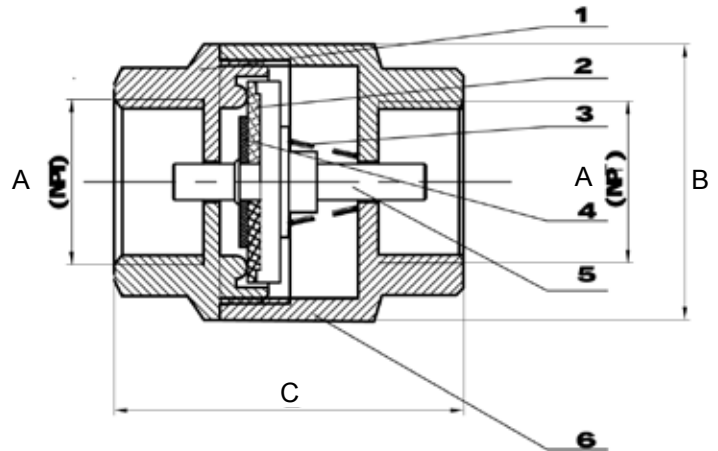
**BRASS CHECK VALVES**

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  
 14°F - 248°F

**VALVES**



**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	16.49
944-429	3/8"	-	3/8"	1.50	2.28	21	168	19.30
944-430	1/2"	1-1/4"	1/2"	1.299	1.89	10	100	15.13
944-431	3/4"	1-1/4"	3/4"	1.594	2.126	10	100	22.49
944-432	1"	2"	1"	1.85	2.303	10	60	30.14
944-433	1-1/4"	2-1/2"	1-1/4"	2.205	2.52	10	40	43.95
944-434	1-1/2"	3"	1-1/2"	2.618	2.717	5	30	54.27
944-435	2"	3-1/2"	2"	3.091	3.071	2	20	84.90

See more Check Valves on page 162

NO	Part	Material
1	Cap	C37700
2	Gasket	PTFE
3	Spring	Stainless Steel
4	Positioning Seat	ABS
5	Screw	ABS
6	Body	C37700



**BRASS IN-LINE CHECK VALVES**

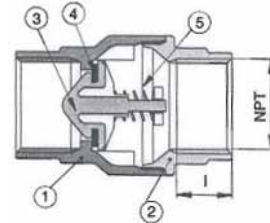
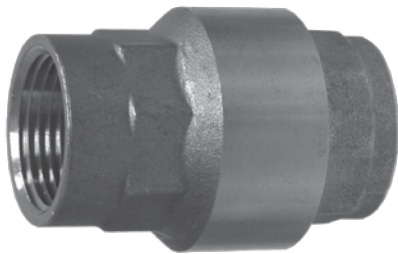
**High Capacity, Size 1/4"-2" 400 WOG, 2 1/2"-4" 175 WOG**

- Soft Seat for Bubble Tight Shutoff, Spring Loaded for Fast Seating Action.
- Compact design.
- Low Cracking Pressure 1/2 psi.
- Flow Profile Designed to Minimize Head Loss.
- Perfect Seating both at High and Low Pressure, Wide Temperature Range: +10° to 210°F.
- Polyetherimide Disc to ensure the Best Resistance For Corrosion and Abrasion.
- Patented Disc Guide to Prevent Any Side Loading.
- Connection: FNPT x FNPT.

NBR for water, oils and general purpose.

With VITON® Seal for fuels and hydrocarbons. Max working TEMPERATURE 325°F/125 psi steam

Add V to part# for Viton®



**Brass In-Line Check**

Part#	Size	I	psi	Lbs	NBR List	Viton List
944-401	1/4"	0.39	400	0.22	20.27	***
944-402	3/8"	0.40	400	0.37	20.27	20.88
944-403	1/2"	0.53	400	0.32	22.37	23.28
944-404	3/4"	0.55	400	0.49	30.52	32.70
944-405	1"	0.66	400	0.68	40.12	42.17
944-406	1-1/4"	0.68	400	1.13	63.05	67.25
944-407	1-1/2"	0.68	400	1.61	94.90	99.81
944-408	2"	0.69	400	2.28	128.37	133.88
944-409	2-1/2"	0.93	175	4.83	293.75	304.59
944-410	3"	1.01	175	6.70	397.82	411.02
944-411	4"	1.09	175	12.43	640.09	648.12

NO	Part	Material	PCS
1	BODY	BRASS	1
2	END CONNECTION	BRASS	1
3	DISC	POLYETHERIMIDE	1
4	SEAT	100002 NBR	1
		100003 Viton	1
5	SPRING	STAINLESS STEEL	1

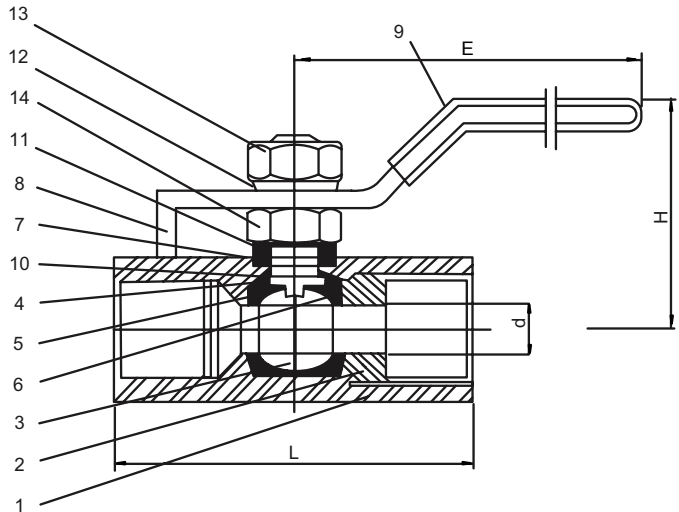
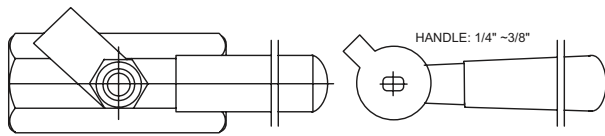


**STANDARD PORT CARBON STEEL BALL VALVE**

- For chemical and industrial applications.
- Blow-out proof stem design.
- 100% air tested under water, at 100 psi, open and closed positions.

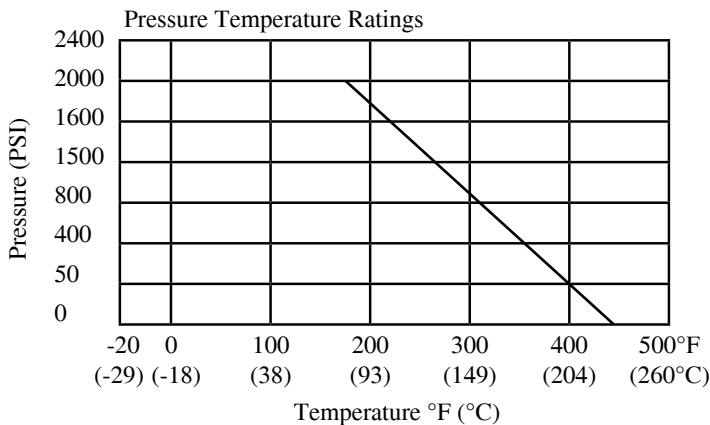
**SPECIFICATIONS**

- 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



**2000 PSI STANDARD PORT**

Part #	Size	d	H	E	L	Box	Case	List Price
949-121	1/4	.20	1.14	2.40	1.71	10	100	65.21
949-122	3/8	.28	1.38	3.55	1.87	10	100	60.81
949-123	1/2	.36	2.60	4.08	2.20	5	75	58.64
949-124	3/4	.49	2.72	4.21	2.58	5	60	65.76
949-125	1	.59	2.95	4.65	3.19	6	36	84.43
949-126	1-1/4	.78	3.07	5.83	3.62	4	20	130.77
949-127	1-1/2	1.02	3.39	5.83	3.78	3	15	158.13
949-128	2	1.26	3.86	5.90	4.49	3	12	226.37



Item	Parts	Material
1	Body	ASTM A108 CL. 1018 or AISI 1021 C.S.
2	Unscrewed Seat Retainer	
3	Ball	SS304
4	Stem	SS316
5	Ball Seat	RPTFE
6	Cap Seal	PTFE
7	Packing	PTFE
8	Handle	SS304
9	Handle Sleeve	Vinyl Grip
10	Thrust Washer	PTFE
11	Gland	SS304
12	Washer	SS304
13	Handle Nut	SS304
14	Stem Nut	SS304

**VALVES**



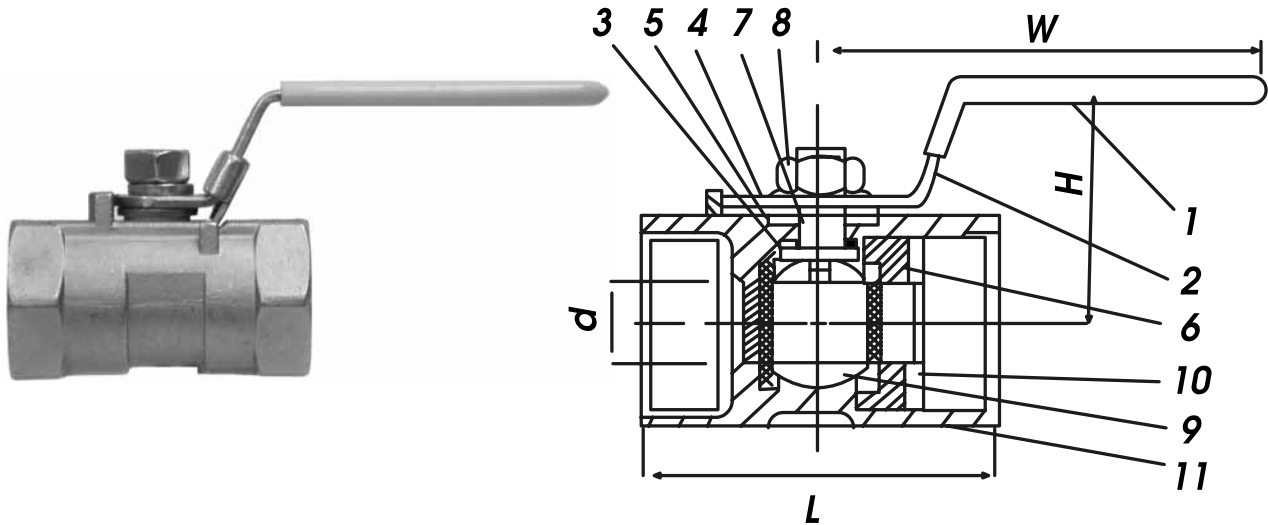
**ONE PIECE STANDARD PORT BALL VALVE**

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
949-101	1/4"	.18	2.24	1.54	3.15	32.68
949-102	3/8"	.27	2.24	1.73	3.15	33.15
949-103	1/2"	.36	2.48	2.20	3.62	36.82
949-104	3/4"	.49	2.95	2.32	3.62	43.10
949-105	1"	.59	3.50	2.80	4.13	55.21
949-106	1-1/4"	.79	4.13	3.07	4.13	96.48
949-107	1-1/2"	.98	4.65	3.27	5.08	98.29
949-108	2"	1.26	5.35	3.94	5.08	139.91

Larger sizes available on special order basis

Dimensions may change. Please contact Midland if dimensions are critical.

*Private Label handles available.  
See Page 163 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

Some product stocked in Houston and Atlanta.



**1000 PSI 2 PC FULL PORT STAINLESS STEEL VALVE**

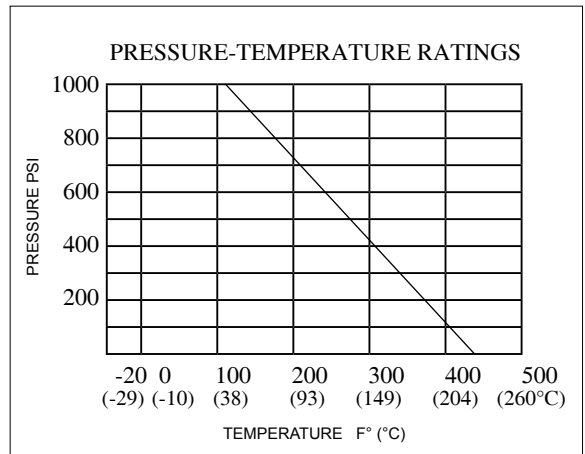
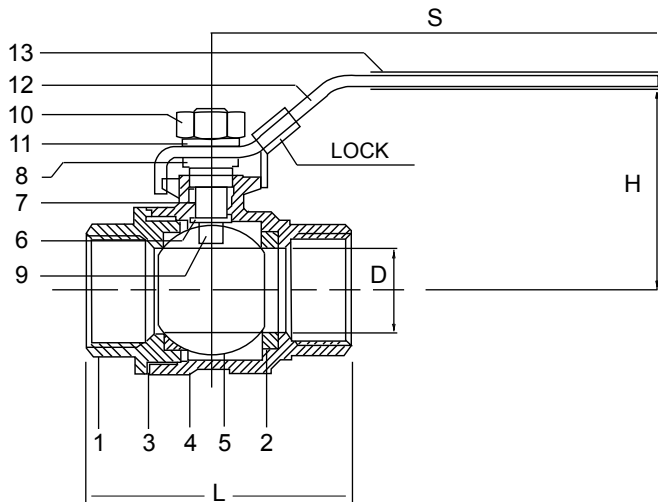
Materials: CFM8M (SS316), DIN 1.4408

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**



Valves will accept a pad-lock on the handle.

NO.	NAME	MATERIAL	QTY
1	CAP	316 SS	1
2	BALL SEAT	PTFE	2
3	JOINT GASKET	PTFE	1
4	BODY	316 SS	1
5	BALL	316 SS	1
6	THRUST WASHER	PTFE	1
7	STEM PACKING	PTFE	1
8	GLAND NUT	304 SS	1
9	STEM	316 SS	1
10	STEM NUT	304 SS	1
11	SPRING WASHER	304 SS	1
12	HANDLE	304 SS	1
13	PLASTIC SLEEVE	PVC	1

Part #	Size	D	L	H	S	Approx. Wt. Lbs.	List Price
949-181	1/4"	0.46	1.84	1.89	4.06	0.44	37.81
949-182	3/8"	0.46	1.91	1.89	4.06	0.55	38.45
949-183	1/2"	0.59	2.28	1.89	4.06	0.66	41.79
949-184	3/4"	0.79	2.56	2.05	4.84	0.77	49.75
949-185	1"	0.98	3.03	2.45	4.84	1.43	74.23



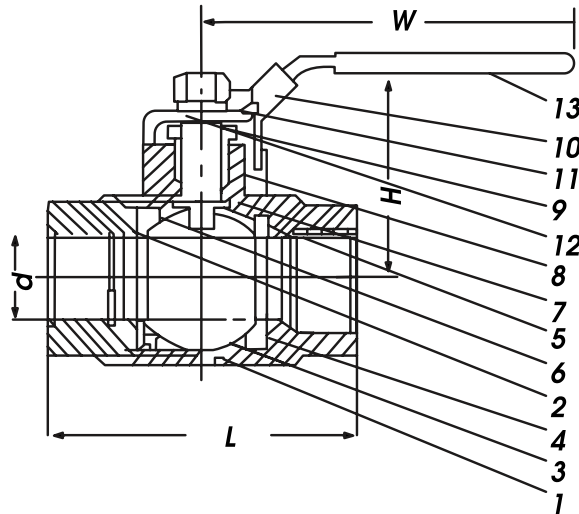
**TWO PIECE FULL PORT BALL VALVE**

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	1/4"	.46	2.24	1.93	4.13	57.03
949-162	3/8"	.50	2.24	1.93	4.13	47.93
949-163	1/2"	.59	2.48	2.01	4.13	64.71
949-164	3/4"	.78	2.95	2.28	5.12	68.66
949-165	1"	.98	3.50	2.76	5.71	86.86
949-166	1-1/4"	1.26	4.13	2.87	5.71	133.89
949-167	1-1/2"	1.50	4.65	3.29	7.48	176.42
949-168	2"	2	5.35	3.62	7.48	211.07

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 163 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

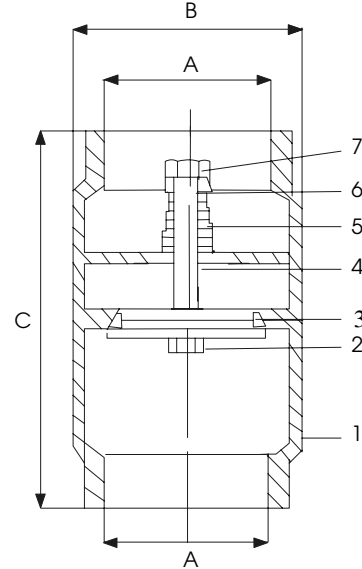
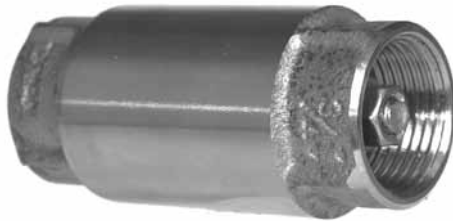
Some product stocked in Houston and Atlanta.



**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.

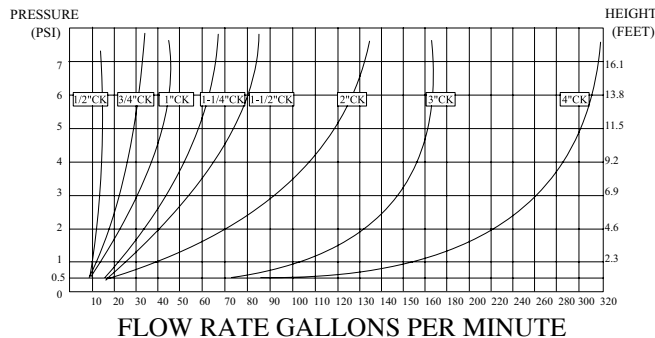


**VALVES**

**Dimensions (Inches)**

Part#	Size	A NPT	B	C	Box	Case	List Price
949-430	1/2"	1/2"	1.26	2.43	10	100	37.68
949-431	3/4"	3/4"	1.50	2.72	10	80	52.04
949-432	1"	1"	1.77	3.23	10	60	65.24

More sizes available on a special order basis.



NO	Part	Material
1	Body	S.S 304
2	Stopper	S.S 304
3	O-Ring	Viton
4	Washer	PE
5	Spring	S.S 304
6	Cap	S.S 304
7	Nut	S.S 304

See more Check Valves on page 162

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

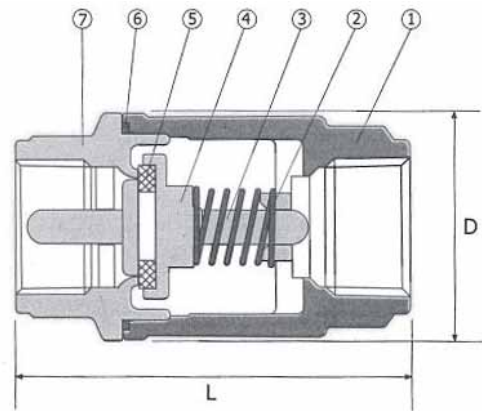


**STAINLESS STEEL IN-LINE CHECK VALVE**

**High Capacity, Size 1/4"-2" 800 WOG**

- Soft PTFE Seat for Bubble Tight Shutoff, Spring Loaded for Fast Seating Action
- Low Cracking Pressure 1/2 psi.
- Flow Profile Designed to Minimize Head Loss.
- Perfect Seating both at High and Low Pressure, Wide Temperature Range: +10° to 450°F.
- Corrosion Resistant-Excellent for use on Chemicals.
- ASTM A351-CF8M Investment Casting.
- Connection: FNPT x FNPT.
- 125WSP Saturated Steam.
- ANSI B1.20.1 Threads.
- Dual Guided Stem & Disc.

**VALVES**



**Brass In-Line Check**

Part#	Size	D	L	psi	Lbs	List
949-401	1/4"	1.35	2.31	800	0.42	145.00
949-402	3/8"	1.35	2.31	800	0.42	145.00
949-403	1/2"	1.35	2.31	800	0.40	157.50
949-404	3/4"	1.81	2.87	800	0.85	215.00
949-405	1"	2.13	3.50	800	1.30	248.75
949-406	1-1/4"	2.46	4.18	800	2.50	496.88
949-407	1-1/2"	2.88	4.93	800	3.40	690.63
949-408	2"	3.56	6.00	800	6.0	1012.75

NO	Part	Material	PCS
1	BODY	ASTM A351-CF8M	1
2	SPRING	SS316	1
3	CENTER GUIDE	ASTM A351-CF8M	1
4	DISC	ASTM A351-CF8M	1
5	SEAT	PTFE	1
6	GASKET	PTFE	1
7	END CAP	ASTM A351-CF8M	1



## PVC VALVES

## 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	260	4.16
940-285	3/4"	5	160	6.06
940-286	1"	5	80	8.61
940-287	1-1/4"	5	60	13.18
940-288	1-1/2"	4	44	16.16
940-289	2"	4	24	26.10
940-291	3"	3	10	110.69
940-292	4"	2	6	195.13



### WHITE SOCKET

### SLIP X SLIP

Part #	Size	Box	Case	List Price
940-294	1/2"	10	100	4.57
940-295	3/4"	5	60	6.06
940-296	1"	5	40	8.71
940-297	1-1/4"	5	30	13.18
940-298	1-1/2"	4	24	17.74
940-299	2"	4	16	26.27

### COMPACT BALL VALVES

#### FEATURES

- Sizes range from 1/2" to 4"
- Excellent flow characteristics
- Leak-tight shut-off
- Test pressure: 225 psi @ 73°F
- Working Pressure: 150 psi @ 73°F



### SLIP X SLIP BALL VALVE

Part #	Size	List Price
899050	1/2"	12.27
899051	3/4"	14.23
899052	1"	20.60
899053	1-1/4"	25.04
899054	1-1/2"	44.34
899055	2"	57.02
899056	2-1/2"	241.25
899057	3"	317.17
899058	4"	603.96



### FIP X FIP THREADED BALL VALVE

Part #	Size	List Price
899000	1/2"	12.27
899001	3/4"	14.23
899002	1"	20.60
899003	1-1/4"	25.76
899004	1-1/2"	44.34
899005	2"	57.02
899006	2-1/2"	241.25
899007	3"	317.17
899008	4"	603.96

## PLASTIC DRUM FAUCETS

- Pipe threads to ANSI B1.20.1
  - Hose threads to ANSI B 1.20.7
- The FLO-RITE faucet has been engineered to meet the demand for greater chemical resistance, using linear polyethylene for the stem.



### "FLO-RITE" DRUM FAUCET

Part #	Size	List Price
46-277	3/4"	11.99



### "FLO-KING" DRUM FAUCET

Part #	Size	List Price
46-278	2	98.55



# BRASS NIPPLES

# BRASS NIPPLES

We hereby certify that to the best of our knowledge and belief the CDA 230 alloy Red Brass Pipe from which our nipples are produced meet the requirements of ASTM Specifications B43-91 and is free of mercury contamination. The chemical analysis is 85% copper, 15% Zinc and conforms to federal Specifications WWN-351. Our brass nipples meet ASTM B687-97 and MS51846 for standard brass nipples, and MS51872 for extra heavy brass nipples.

Threads: Nipples are threaded with American Standard taper pipe threads (NPT) in accordance with screw-thread standard for Federal Services Handbook H-28.

Brass nipples are in compliance with California's Health & Safety code section 116875 (AB1953) and Vermont Act 193. This product is certified by NSF to NSF/ANSI 61 for use in drinking water supplies of pH 6.5 and above.

## STANDARD RED BRASS 85% PIPE WITH THREADED ENDS SPECIFICATIONS:

Pipe Size in Inches	Dimension in Inches			Allowable Pressure POUNDS PER SQUARE INCH				
	O.D.	I.D.	Wall Thickness	Standard Size (Inches)	@ 100° F	@ 200° F	@ 300° F	@ 400° F
1/8"	.405	.281	.062	1/8"	370	370	320	140
1/4"	.540	.376	.082	1/4"	870	870	760	330
3/8"	.675	.495	.090	3/8"	890	890	780	340
1/2"	.840	.626	.107	1/2"	900	900	790	340
3/4"	1.050	.822	.114	3/4"	810	810	710	310
1"	1.315	1.063	.126	1"	630	630	560	240
1-1/4"	1.660	1.368	.146	1-1/4"	690	690	610	260
1-1/2"	1.900	1.600	.150	1-1/2"	630	630	560	240
2"	2.375	2.063	.156	2"	540	540	480	210
2-1/2"	2.875	2.501	.187	2-1/2"	450	450	390	170
3"	3.500	3.062	.219	3"	510	510	450	190
3-1/2"	4.000	3.500	.250	3-1/2"	570	570	500	220
4"	4.500	4.000	.250	4"	510	510	440	190
4-1/2"	5.000	4.500	.250	5"	410	410	360	160
5"	5.563	5.063	.250	6"	340	340	300	130
6"	6.625	6.125	.250					

## 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

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 428**

NIPPLES & FITTINGS

## BRASS NIPPLES

## BRASS NIPPLES

### 1/8" Diameter



Part #	Size	List Price
40-001	Close ( 3/4" )	3.61
40-002	x 1-1/2"	4.08
40-003	x 2"	4.37
40-004	x 2-1/2"	4.96
40-005	x 3"	5.35
40-006	x 3-1/2"	5.78
40-007	x 4"	6.49
40-008	x 4-1/2"	7.33
40-009	x 5"	7.94
40-010	x 5-1/2"	8.58
40-011	x 6"	9.20
40-012	x 7"	10.93
40-013	x 8"	12.05
40-014	x 9"	14.82
40-015	x 10"	16.21
40-016	x 11"	17.58
40-017	x 12"	18.72

### 3/8" Diameter



Part #	Size	List Price
40-040	Close ( 1" )	4.37
40-041	x 1-1/2"	5.17
40-042	x 2"	6.28
40-043	x 2-1/2"	6.80
40-044	x 3"	8.33
40-045	x 3-1/2"	8.98
40-046	x 4"	10.69
40-047	x 4-1/2"	11.39
40-048	x 5"	12.48
40-049	x 5-1/2"	13.57
40-050	x 6"	14.69
40-051	x 7"	17.83
40-052	x 8"	19.98
40-053	x 9"	23.64
40-054	x 10"	23.81
40-055	x 11"	25.99
40-056	x 12"	28.19

### 1/4" Diameter



Part #	Size	List Price
40-020	Close ( 7/8" )	4.21
40-021	x 1-1/2"	4.87
40-022	x 2"	5.52
40-023	x 2-1/2"	5.98
40-024	x 3"	7.02
40-025	x 3-1/2"	7.64
40-026	x 4"	8.98
40-027	x 4-1/2"	9.76
40-028	x 5"	10.63
40-029	x 5-1/2"	11.53
40-030	x 6"	12.96
40-031	x 7"	14.77
40-032	x 8"	16.19
40-033	x 9"	17.99
40-034	x 10"	19.75
40-035	x 11"	21.55
40-036	x 12"	23.33

### 1/2" Diameter



Part #	Size	List Price
40-060	Close ( 1-1/8" )	5.82
40-061	x 1-1/2"	6.74
40-062	x 2"	7.92
40-063	x 2-1/2"	9.42
40-064	x 3"	11.06
40-065	x 3-1/2"	12.62
40-066	x 4"	14.46
40-067	x 4-1/2"	15.71
40-068	x 5"	17.30
40-069	x 5-1/2"	19.01
40-070	x 6"	21.06
40-071	x 7"	24.40
40-072	x 8"	27.34
40-073	x 9"	30.34
40-074	x 10"	33.56
40-075	x 11"	36.72
40-076	x 12"	39.92

NIPPLES & FITTINGS

*Extra Heavy Schedule 80 Red Brass Nipples page 192  
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Some product stocked in Houston and Atlanta.

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

## BRASS NIPPLES

### 3/4" Diameter



Part #	Length	List Price
40-080	Close (1- 3/8" )	8.40
40-081	x 1-1/2"	8.95
40-082	x 2"	10.57
40-083	x 2-1/2"	12.26
40-084	x 3"	14.14
40-085	x 3-1/2"	15.88
40-086	x 4"	18.46
40-087	x 4-1/2"	20.06
40-088	x 5"	22.15
40-089	x 5-1/2"	24.20
40-090	x 6"	26.95
40-091	x 7"	31.58
40-092	x 8"	35.57
40-093	x 9"	39.38
40-094	x 10"	43.40
40-095	x 11"	47.36
40-096	x 12"	51.65

### 1" Diameter



Part #	Length	List Price
40-100	Close ( 1-1/2" )	12.38
40-101	x 2"	15.28
40-102	x 2-1/2"	17.83
40-103	x 3"	20.52
40-104	x 3-1/2"	23.76
40-105	x 4"	26.74
40-106	x 4-1/2"	29.81
40-107	x 5"	32.95
40-108	x 5-1/2"	36.10
40-109	x 6"	39.36
40-110	x 7"	45.97
40-111	x 8"	52.48
40-112	x 9"	58.56
40-113	x 10"	64.96
40-114	x 11"	70.08
40-115	x 12"	77.45

## BRASS NIPPLES

### 1-1/4" Diameter



Part #	Length	List Price
40-120	Close ( 1-5/8" )	18.68
40-121	x 2"	21.34
40-122	x 2-1/2"	24.13
40-123	x 3"	28.56
40-124	x 3-1/2"	33.42
40-125	x 4"	37.61
40-126	x 4-1/2"	41.65
40-127	x 5"	45.94
40-128	x 5-1/2"	50.24
40-129	x 6"	54.88
40-130	x 7"	64.73
40-131	x 8"	73.32
40-132	x 9"	86.96
40-133	x 10"	90.67
40-134	x 11"	103.80
40-135	x 12"	108.47

### 1-1/2" Diameter



Part #	Length	List Price
40-140	Close ( 1-3/4" )	24.30
40-141	x 2"	26.14
40-142	x 2-1/2"	31.31
40-143	x 3"	35.98
40-144	x 3-1/2"	41.33
40-145	x 4"	46.87
40-146	x 4-1/2"	52.67
40-147	x 5"	58.27
40-148	x 5-1/2"	63.76
40-149	x 6"	69.26
40-150	x 7"	80.94
40-151	x 8"	91.96
40-152	x 9"	102.94
40-153	x 10"	113.93
40-154	x 11"	124.92
40-155	x 12"	135.89

*Extra Heavy Schedule 80 Red Brass Nipples page 192  
Chrome Plated Brass Nipples Available upon request*

*Send Midland all your high volume quotes!*

## BRASS NIPPLES

## BRASS NIPPLES

### 2" Diameter



Part #	Length	List Price
40-160	Close ( 2" )	37.00
40-161	x 2-1/2"	39.94
40-162	x 3"	46.10
40-163	x 3-1/2"	53.06
40-164	x 4"	60.30
40-165	x 4-1/2"	67.24
40-166	x 5"	74.56
40-167	x 5-1/2"	81.78
40-168	x 6"	89.03
40-169	x 7"	104.14
40-170	x 8"	118.76
40-171	x 9"	132.43
40-172	x 10"	147.10
40-173	x 11"	158.95
40-174	x 12"	175.44

### 2-1/2" Diameter



Part #	Length	List Price
40-180	Close ( 2-1/2" )	97.64
40-181	x 3"	102.08
40-182	x 3-1/2"	115.66
40-183	x 4"	128.57
40-184	x 4-1/2"	137.94
40-185	x 5"	151.74
40-186	x 5-1/2"	163.43
40-187	x 6"	178.92
40-188	x 7"	203.83
40-189	x 8"	234.10
40-190	x 9"	259.84
40-191	x 10"	287.11
40-192	x 11"	309.37
40-193	x 12"	339.42

### 3" Diameter



Part #	Length	List Price
40-200	Close ( 2-5/8" )	132.77
40-201	x 3"	137.98
40-202	x 3-1/2"	156.08
40-203	x 4"	175.81
40-204	x 4-1/2"	193.26
40-205	x 5"	212.63
40-206	x 5-1/2"	231.04
40-207	x 6"	251.15
40-208	x 7"	293.05
40-209	x 8"	333.86
40-210	x 9"	365.60
40-211	x 10"	405.58
40-212	x 11"	441.05
40-213	x 12"	485.80

### 4" Diameter



Part #	Length	List Price
40-220	Close ( 2-7/8" )	199.76
40-221	x 3"	202.90
40-222	x 3-1/2"	227.82
40-223	x 4"	259.81
40-224	x 4-1/2"	280.64
40-225	x 5"	309.96
40-226	x 5-1/2"	330.54
40-234	x 6"	364.98
40-229	x 8"	475.28
40-233	x 12"	693.53

*Extra Heavy Schedule 80 Red Brass Nipples page 192  
Chrome Plated Brass Nipples Available upon request*

Avocados have the highest calories of any fruit  
at 167 calories per hundred grams

Some product stocked in Houston and Atlanta.

# EXTRA HEAVY RED BRASS NIPPLES

# BRASS NIPPLES

## 1/8" Diameter - Sch. 80



Part #	Length	List Price
42-001	Close (3/4")	8.40
42-002	1-1/2"	9.47
42-003	2"	10.19
42-004	2-1/2"	11.53
42-005	3"	12.46
42-006	3-1/2"	13.45
42-007	4"	15.12
42-008	4-1/2"	17.09
42-009	5"	18.50
42-010	5-1/2"	19.98

## 1/4" Diameter - Sch. 80



Part #	Length	List Price
42-020	Close (7/8")	9.82
42-021	1-1/2"	11.36
42-022	2"	12.86
42-023	2-1/2"	13.93
42-024	3"	16.36
42-025	3-1/2"	17.80
42-026	4"	20.92
42-027	4-1/2"	22.70
42-028	5"	24.76
42-029	5-1/2"	26.83
42-030	6"	30.17

## 3/8" Diameter - Sch. 80



Part #	Length	List Price
42-040	Close (1")	10.16
42-041	1-1/2"	12.04
42-042	2"	14.62
42-043	2-1/2"	15.85
42-044	3"	19.39
42-045	3-1/2"	20.92
42-046	4"	24.89
42-047	4-1/2"	26.51
42-048	5"	29.08
42-049	5-1/2"	31.61
42-050	6"	34.19

## 1/2" Diameter - Sch. 80



Part #	Length	List Price
42-060	Close (1-1/8")	13.57
42-061	1-1/2"	15.71
42-062	2"	18.46
42-063	2-1/2"	21.95
42-064	3"	24.00
42-065	3-1/2"	29.40
42-066	4"	33.70
42-067	4-1/2"	36.56
42-068	5"	40.30
42-069	5-1/2"	44.24
42-070	6"	49.04

## 3/4" Diameter - Sch. 80



Part #	Length	List Price
42-080	Close (1-3/8")	19.55
42-082	2"	24.64
42-083	2-1/2"	28.56
42-084	3"	32.92
42-085	3-1/2"	36.96
42-086	4"	42.97
42-087	4-1/2"	46.75
42-088	5"	51.59
42-089	5-1/2"	56.38
42-090	6"	62.76

## 1" Diameter - Sch. 80



Part #	Length	List Price
42-100	Close (1-1/2")	28.84
42-101	2"	35.57
42-102	2-1/2"	41.51
42-103	3"	47.80
42-104	3-1/2"	55.32
42-105	4"	62.23
42-106	4-1/2"	69.40
42-107	5"	76.75
42-108	5-1/2"	84.06
42-109	6"	91.64

NIPPLES & FITTINGS



## BRASS NIPPLES

## EXTRA HEAVY RED BRASS NIPPLES

### 1-1/4" Diameter - Sch. 80



Part #	Length	List Price
42-120	Close (1-5/8")	43.51
42-121	2"	49.68
42-122	2-1/2"	56.20
42-123	3"	66.50
42-124	3-1/2"	77.81
42-125	4"	87.58
42-126	4-1/2"	96.98
42-127	5"	106.94
42-128	5-1/2"	116.99
42-129	6"	127.78

### 1-1/2" Diameter - Sch. 80



Part #	Length	List Price
42-140	Close (1-3/4")	56.57
42-141	2"	60.88
42-142	2-1/2"	72.94
42-143	3"	83.81
42-144	3-1/2"	96.24
42-145	4"	109.18
42-146	4-1/2"	122.66
42-147	5"	135.72
42-148	5-1/2"	148.50
42-149	6"	161.28

### 2" Diameter - Sch. 80



Part #	Length	List Price
42-160	Close (2")	86.15
42-161	2-1/2"	93.02
42-162	3"	107.35
42-163	3-1/2"	123.58
42-164	4"	140.45
42-165	4-1/2"	156.58
42-166	5"	173.62
42-167	5-1/2"	190.44
42-168	6"	207.35

### 2-1/2" Diameter - Sch. 80



Part #	Length	List Price
42-180	Close (2-1/2")	227.40
42-181	3"	237.73
42-182	3-1/2"	269.35
42-183	4"	299.42
42-184	4-1/2"	321.24
42-185	5"	353.38
42-186	5-1/2"	380.57
42-187	6"	416.70

### 3" Diameter - Sch. 80



Part #	Length	List Price
42-200	Close (2-5/8")	309.22
42-201	3"	321.32
42-202	3-1/2"	363.50
42-203	4"	409.40
42-204	4-1/2"	450.06
42-205	5"	495.19
42-206	5-1/2"	538.06
42-207	6"	515.71

### 4" Diameter - Sch. 80



Part #	Length	List Price
42-220	Close (2-3/4")	465.23
42-221	3"	472.52
42-222	3-1/2"	530.57
42-223	4"	605.08
42-224	4-1/2"	653.57
42-225	5"	721.86
42-226	5-1/2"	769.78
42-227	6"	849.96

The moon moves about two inches away from the Earth each year

NIPPLES & FITTINGS



**Class 125 (150) For steam, water, gas, oil and air service**

Standard specifications

Materials - ASTM B62-93 (85,5,5,5) C83600

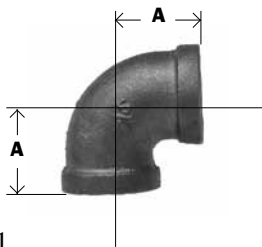
Dimensions - ANSI B 16.15

Threads - ANSI B2.1 or BA 21 and Fed. WW-P-460

- UL/ FM Approved
- ISO 9001:2000
- Not AB1953 Compliant

Bronze threaded fittings are manufactured from smooth-cored castings, designed to provide full flow with minimum restriction. All threads are accurately machined and gauged to ensure a perfect fit with the pipe. All fittings are individually tested under water to ensure quality. Bronze provides a tighter seal and is easier to install than other metals. Can be used for water, plumbing, heating, pneumatic and marine applications. Able to resist the harmful effects of corrosion when coming into contact with salt water or fresh water polluted with mineral acids or peaty soils.

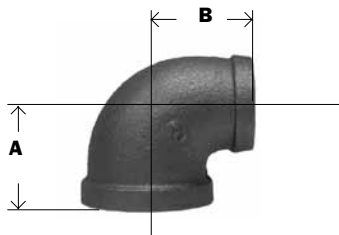
**90° ELBOWS**



X101

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-100	1/8"	0.55	0.08	5.93
44-101	1/4"	0.72	0.10	5.93
44-102	3/8"	0.83	0.17	5.93
44-103	1/2"	1.03	0.24	9.02
44-104	3/4"	1.19	0.35	12.13
44-105	1"	1.43	0.59	18.73
44-106	1-1/4"	1.71	0.96	29.78
44-107	1-1/2"	1.87	1.33	37.19
44-108	2"	2.14	2.34	60.55
44-109	2-1/2"	2.74	3.79	118.76
44-110	3"	3.10	5.21	182.18
44-112	4"	3.80	8.59	439.36

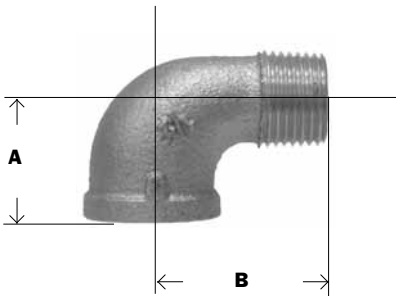
**90° REDUCING ELBOWS**



X101

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
44-120	1/4" x 1/8"	0.67	0.60	0.10	9.18
44-124	1/2" x 3/8"	0.93	0.90	0.22	9.74
44-127	3/4" x 1/2"	1.08	1.11	0.31	13.28
44-131	1" x 3/4"	1.30	1.31	0.56	23.32
44-134	1-1/4" x 1"	1.52	1.60	0.81	36.41
44-137	1-1/2" x 1"	1.56	1.72	1.02	46.01
44-140	2" x 1"	1.72	2.02	1.30	84.89
44-142	2"x1-1/2"	1.89	2.07	1.65	84.89

**90° STREET ELLS**



X103

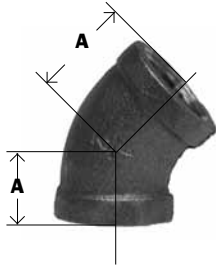
Part #	Size	A	B	Approx. Wt. Lbs.	List Price
44-160	1/8"	0.55	0.92	0.07	9.02
44-161	1/4"	0.72	1.11	0.11	9.02
44-162	3/8"	0.83	1.24	0.16	9.02
44-163	1/2"	1.03	1.51	0.21	11.20
44-164	3/4"	1.19	1.66	0.34	15.82
44-165	1"	1.43	1.98	0.65	23.97
44-166	1-1/4"	1.71	2.26	1.11	40.04
44-167	1-1/2"	1.87	2.46	1.16	52.16
44-168	2"	2.14	2.98	2.09	88.44
44-169	2-1/2"	2.74	3.92	3.79	139.82
44-170	3"	3.10	4.45	6.38	209.70

Some product stocked in Houston and Atlanta.





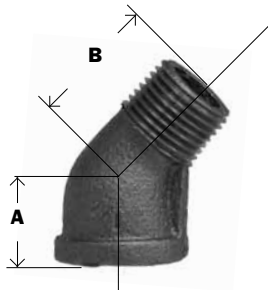
**45° ELBOWS**



X102

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-180	1/8"	0.43	0.05	6.50
44-181	1/4"	0.55	0.08	6.50
44-182	3/8"	0.63	0.12	6.50
44-183	1/2"	0.79	0.22	8.24
44-184	3/4"	0.91	0.34	12.13
44-185	1"	1.07	0.57	20.51
44-186	1-1/4"	1.23	0.90	32.78
44-187	1-1/2"	1.31	1.08	41.08
44-188	2"	1.47	1.54	66.59
44-189	2-1/2"	1.95	3.25	130.94
44-190	3"	2.17	5.00	210.48

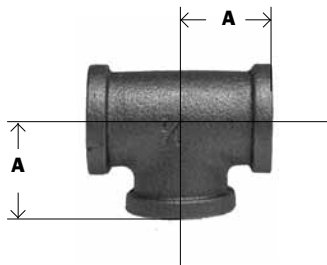
**45° STREET ELBOWS**



X103A

Part #	Size	A	B	Approx. Wt. Lbs.	List Price
44-200	1/8"	0.26	0.43	0.06	9.18
44-201	1/4"	0.35	0.56	0.11	9.18
44-202	3/8"	0.37	0.63	0.13	9.18
44-203	1/2"	0.45	0.79	0.18	11.20
44-204	3/4"	0.52	0.91	0.28	22.04
44-205	1"	0.60	1.07	0.52	26.15
44-206	1-1/4"	0.67	1.23	0.77	40.04
44-207	1-1/2"	0.70	1.31	0.97	53.78
44-208	2"	0.76	1.47	2.04	91.15

**TEES**



X106

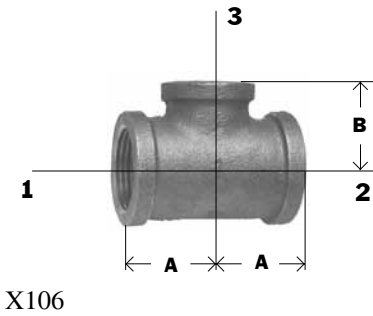
Part #	Size	A	Approx. Wt. Lbs.	List Price
44-250	1/8"	0.55	0.09	8.24
44-251	1/4"	0.72	0.16	8.24
44-252	3/8"	0.83	0.25	8.24
44-253	1/2"	1.03	0.31	10.37
44-254	3/4"	1.19	0.48	14.92
44-255	1"	1.43	0.84	26.52
44-256	1-1/4"	1.71	1.18	37.19
44-257	1-1/2"	1.87	1.69	51.17
44-258	2"	2.14	2.69	83.82
44-259	2-1/2"	2.74	4.70	163.00
44-260	3"	3.10	6.69	249.28

The Earth gets 100 tons heavier every day due to falling space dust

Some product stocked in Houston and Atlanta.

**REDUCING TEES**

**REDUCING ON THE BRANCH**

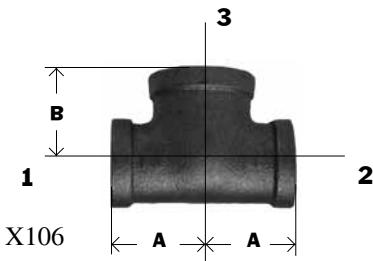


X106

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	12.59
44-279	1/2" x 3/8"	0.93	0.90	0.40	14.40
44-282	3/4" x 1/4"	1.05	1.08	0.38	17.87
44-283	3/4" x 3/8"	1.00	1.00	0.46	17.87
44-286	3/4" x 1/2"	1.08	1.11	0.40	17.87
44-291	1" x 1/2"	1.20	1.24	0.73	32.68
44-298	1" x 3/4"	1.30	1.31	0.71	32.68
44-301	1-1/4" x 1/2"	1.34	1.53	1.18	46.01
44-303	1-1/4" x 3/4"	1.30	1.31	1.08	46.01
44-306	1-1/4" x 1"	1.58	1.67	1.23	46.01

**BULLHEAD TEES**

**LARGER BRANCH**

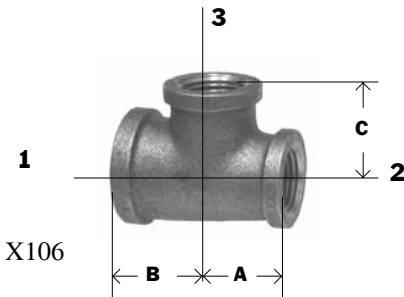


X106

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	19.66

**REDUCING TEES**

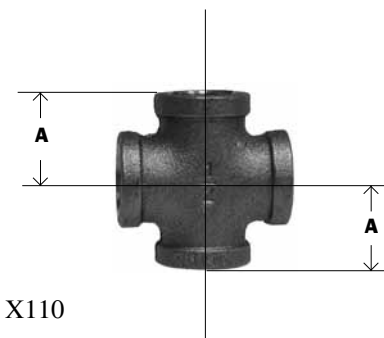
**REDUCING ON THE RUN**



X106

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	19.66
44-296	1" x 3/4" x 3/4"	1.31	1.37	1.45	0.71	35.59

**CROSSES**



X110

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-391	1/4"	0.72	0.20	13.78
44-392	3/8"	0.83	0.29	13.78
44-393	1/2"	1.03	0.43	16.74
44-394	3/4"	1.19	0.59	24.18
44-395	1"	1.19	1.15	38.35
44-396	1-1/4"	1.71	1.70	60.04
44-397	1-1/2"	1.87	1.97	76.69
44-398	2"	2.14	2.52	159.85

Strawberries are the only fruits whose seeds grow on the outside

**COUPLINGS**



X111

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-410	1/8"	0.80	0.06	5.93
44-411	1/4"	0.80	0.08	5.93
44-412	3/8"	1.05	0.14	5.93
44-413	1/2"	1.29	0.21	7.45
44-414	3/4"	1.43	0.29	9.83
44-415	1"	1.68	0.45	14.92
44-416	1-1/4"	1.86	0.80	23.32
44-417	1-1/2"	1.92	0.98	31.70
44-418	2"	2.20	1.56	52.16
44-419	2-1/2"	2.88	2.75	86.68
44-420	3"	3.18	3.63	119.83

**REDUCING COUPLINGS**



X112

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-430	1/4" x 1/8"	0.88	0.08	6.36
44-431	3/8" x 1/8"	0.92	0.10	6.36
44-432	3/8" x 1/4"	0.92	0.12	6.36
44-433	1/2" x 1/8"	1.17	0.14	9.18
44-434	1/2" x 1/4"	1.17	0.17	7.93
44-435	1/2" x 3/8"	1.17	0.17	7.93
44-436	3/4" x 1/4"	1.35	0.24	13.12
44-437	3/4" x 3/8"	1.35	0.24	11.81
44-438	3/4" x 1/2"	1.35	0.27	11.81
44-440	1" x 3/8"	1.56	0.40	22.14
44-441	1" x 1/2"	1.56	0.36	19.64
44-442	1" x 3/4"	1.56	0.45	19.64
44-444	1-1/4" x 1/2"	1.77	0.60	37.62
44-445	1-1/4" x 3/4"	1.77	0.67	31.70
44-446	1-1/4" x 1"	1.77	0.65	31.70
44-447	1-1/2" x 1/2"	1.80	0.77	45.08
44-448	1-1/2" x 3/4"	1.80	0.70	45.08
44-449	1-1/2" x 1"	1.80	0.74	40.04
44-450	1-1/2" x 1-1/4"	1.80	0.83	40.04
44-458	2" x 1/2"	2.03	1.07	67.06
44-451	2" x 3/4"	2.03	1.25	67.06
44-452	2" x 1"	2.03	1.32	67.06
44-453	2" x 1-1/4"	2.03	1.37	59.51
44-454	2" x 1-1/2"	2.03	1.74	59.51
44-461	2-1/2" x 1-1/2"	3.15	1.94	105.42
44-462	2-1/2" x 2"	3.15	2.37	105.42
44-456	3" x 2"	3.69	2.40	139.72
44-463	3" x 2-1/2"	3.69	3.82	139.72

In ancient times strangers shook hands to show that they were unarmed

**CAPS**



X116

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-470	1/8"	0.53	0.03	4.44
44-471	1/4"	0.58	0.06	4.44
44-472	3/8"	0.66	0.09	4.44
44-473	1/2"	0.75	0.13	5.93
44-474	3/4"	0.87	0.20	7.84
44-475	1"	1.03	0.29	12.28
44-476	1-1/4"	1.10	0.47	18.67
44-477	1-1/2"	1.12	0.61	25.21
44-478	2"	1.35	1.10	42.78
44-480	3"	1.83	2.64	129.91

**UNIONS**



X187

Part #	Size	A	Approx. Wt. Lbs.	List Price
44-600	1/8"	1.18	0.13	21.02
44-601	1/4"	1.26	0.22	21.02
44-602	3/8"	1.50	0.39	21.02
44-603	1/2"	1.57	0.47	22.86
44-604	3/4"	1.89	0.69	31.70
44-605	1"	2.13	1.01	41.98
44-606	1-1/4"	2.36	1.48	61.49
44-607	1-1/2"	2.68	1.92	72.56
44-608	2"	2.99	3.04	111.68
44-609	2-1/2"	3.35	4.80	219.78
44-610	3"	3.74	6.49	339.55

Due to earth's gravity it is impossible for mountains to be higher than 15,000 meters.

**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	4.01
44-501	3/8" x 1/8"	0.64	0.72	0.06	4.01
44-502	3/8" x 1/4"	0.64	0.75	0.06	4.01
44-503	1/2" x 1/8"	0.75	0.92	0.11	5.62
44-504	1/2" x 1/4"	0.75	0.93	0.10	4.72
44-505	1/2" x 3/8"	0.75	0.92	0.09	4.72
44-506	3/4" x 1/8"	0.87	1.15	0.17	7.84
44-507	3/4" x 1/4"	0.85	1.14	0.17	7.84
44-508	3/4" x 3/8"	0.85	1.14	0.16	6.50
44-509	3/4" x 1/2"	0.85	1.15	0.14	6.50
44-510	1" x 1/4"	1.05	1.43	0.30	11.93
44-511	1" x 3/8"	1.05	1.50	0.26	11.93
44-512	1" x 1/2"	1.00	1.40	0.27	9.83
44-513	1" x 3/4"	1.00	1.43	0.22	9.83
44-514	1-1/4" x 1/4"	1.22	1.10	0.34	20.21
44-515	1-1/4" x 3/8"	1.19	1.84	0.29	21.05
44-516	1-1/4" x 1/2"	1.14	1.33	0.47	20.21
44-517	1-1/4" x 3/4"	1.08	1.75	0.46	16.74
44-518	1-1/4" x 1"	1.08	1.76	0.33	16.74
44-519	1-1/2" x 1/4"	1.09	2.12	0.29	26.15
44-520	1-1/2" x 3/8"	1.35	2.16	0.44	26.15
44-521	1-1/2" x 1/2"	1.20	2.10	0.51	26.15
44-522	1-1/2" x 3/4"	1.20	2.12	0.51	26.15
44-523	1-1/2" x 1"	1.14	2.08	0.61	21.38
44-524	1-1/2" x 1-1/4"	1.14	2.12	0.40	21.38
44-527	2" x 1/2"	1.27	1.32	1.10	38.18
44-528	2" x 3/4"	1.27	1.62	0.77	38.18
44-529	2" x 1"	1.29	1.95	0.88	38.18
44-530	2" x 1-1/4"	1.22	2.47	0.97	31.70
44-531	2" x 1-1/2"	1.22	2.50	0.77	31.70
44-532	2-1/2" x 1"	1.53	1.94	1.19	78.61
44-534	2-1/2" x 1-1/2"	1.50	2.38	1.15	63.37
44-535	2-1/2" x 2"	1.43	2.97	1.12	63.37
44-537	3" x 1-1/2"	1.61	2.68	2.44	124.58
44-538	3" x 2"	1.61	3.70	1.82	95.83
44-539	3" x 2-1/2"	1.53	3.70	2.11	95.83
44-543	4" x 3"	2.01	4.62	3.30	220.60

**NIPLS & FITTINGS**

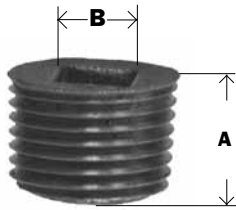
If you get into the bottom of a well or a tall chimney and look up, you can see stars, even in the middle of the day.

Some product stocked in Houston and Atlanta.

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



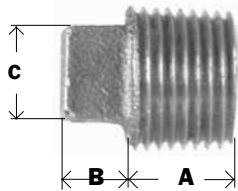
**BRONZE COUNTERSUNK PLUGS**



Part #	Size	A	Socket Size	Approx. Wt. Lbs.	List Price
44-633	1/2"	0.57	0.43	0.06	4.85
44-634	3/4"	0.58	0.47	0.11	5.56
44-635	1"	0.75	0.59	0.22	10.39
44-636	1-1/4"	0.74	0.72	0.33	17.30
44-637	1-1/2"	0.79	0.72	0.50	25.98
44-638	2"	0.80	0.85	0.88	42.29
44-639	2-1/2"	1.06	1.12	1.56	86.50

**NIPPLES & FITTINGS**

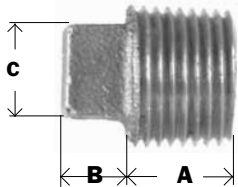
**CORED SQUARE HEAD PLUGS**



X117

Part #	Size	A	B	C	Approx. Wt. Lbs.	List Price
44-650	1/8"	0.27	0.24	0.28	0.02	4.44
44-651	1/4"	0.41	0.28	0.37	0.04	4.44
44-652	3/8"	0.41	0.31	0.43	0.07	4.44
44-653	1/2"	0.54	0.38	0.56	0.11	6.20
44-654	3/4"	0.55	0.44	0.62	0.17	7.10
44-655	1"	0.69	0.50	0.81	0.25	9.36
44-656	1-1/4"	0.71	0.56	0.93	0.39	13.93
44-657	1-1/2"	0.73	0.62	1.12	0.51	17.76
44-658	2"	0.76	0.68	1.31	0.83	28.04
44-659	2-1/2"	1.07	0.74	1.50	1.26	47.98
44-660	3"	1.13	0.80	1.68	1.49	76.69
44-662	4"	1.22	0.92	2.25	3.20	149.82

**SOLID SQUARE HEAD PLUGS**



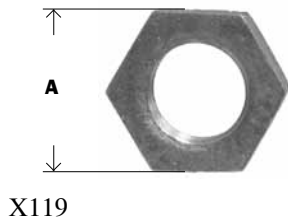
X117A

Part #	Size	A	B	C	Approx. Wt. Lbs.	List Price
44-670	1/8"	0.27	0.24	0.28	0.04	4.72
44-671	1/4"	0.41	0.28	0.37	0.05	4.72
44-672	3/8"	0.41	0.31	0.43	0.08	3.94
44-673	1/2"	0.54	0.38	0.56	0.12	7.45
44-674	3/4"	0.55	0.44	0.62	0.18	9.72
44-675	1"	0.69	0.50	0.81	0.28	16.56
44-676	1-1/4"	0.71	0.56	0.93	0.40	29.84
44-677	1-1/2"	0.73	0.62	1.12	0.56	38.78
44-678	2"	0.76	0.68	1.31	0.90	61.49

Everything weighs one percent less at the equator

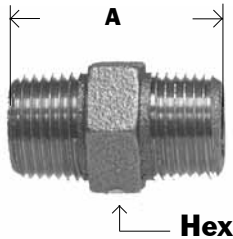


**HEX LOCKNUTS**



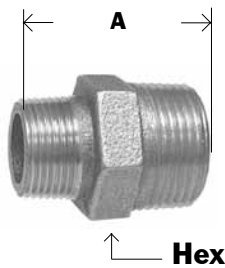
Part #	Size	A	Thickness	Approx. Wt. Lbs.	List Price
44-700	1/8"	0.50	0.19	0.02	2.94
44-701	1/4"	0.66	0.25	0.03	2.94
44-702	3/8"	0.77	0.28	0.04	2.94
44-703	1/2"	0.97	0.31	0.10	4.72
44-704	3/4"	1.23	0.34	0.13	5.62
44-705	1"	1.50	0.38	0.20	8.38
44-706	1-1/4"	1.86	0.42	0.28	13.62
44-707	1-1/2"	2.12	0.47	0.52	17.66
44-708	2"	2.63	0.53	0.64	28.06

**HEX NIPPLES**



Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
44-720	1/8"	1.25	0.50	0.05	6.91
44-721	1/4"	1.25	0.61	0.06	11.45
44-723	1/2"	1.65	1.03	0.18	11.77
44-724	3/4"	1.77	1.21	0.24	12.36
44-725	1"	2.06	1.46	0.36	13.33
44-726	1-1/4"	2.12	1.81	0.47	27.68
44-727	1-1/2"	2.25	2.07	0.76	42.29
44-728	2"	2.50	2.41	1.50	51.17
44-729	2-1/2"	2.80	3.10	2.10	52.72

**REDUCING NIPPLES**



Part #	Size	A	Hex	Approx. Wt. Lbs.	List Price
44-740	1/4" x 1/8"	1.22	0.68	0.06	11.83
44-742	1/2" x 3/8"	1.49	0.97	0.20	14.77
44-743	3/4" x 1/2"	1.65	1.18	0.26	19.37
44-744	1" x 1/2"	1.87	1.41	0.32	25.21
44-745	1" x 3/4"	1.95	1.50	0.37	25.21
44-748	1-1/4" x 1"	2.48	1.75	0.69	42.30
44-750	1-1/2" x 1"	2.28	2.10	0.70	48.40
44-753	1-1/2" x 1-1/4"	2.47	1.96	1.10	51.73
44-760	2" x 1-1/2"	2.83	2.43	1.36	60.13

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.

Why Stainless Steel - Corrosion-resistant to hundreds of industrial and chemical solutions, high strength at high temperatures. Can be used with water, oil and gas. Is sanitary and does not contaminate product being transported, makes it an excellent choice for pharmaceutical, dairy, brewery, beverage and food industries.

- Max. Pressure: 150 PSI WOG @ 150°F
- Temp. Range: -60° to 450°F

304 stainless steel offers great corrosion resistance at an economical price. Type 316 has a larger nickel content and offers even better corrosion resistance.



**1/8" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-001	2.09	X Close (3/4")	49-001	2.60
48-002	2.74	x 1-1/2"	49-002	3.64
48-003	3.27	x 2"	49-003	4.43
48-004	3.78	x 2-1/2"	49-004	5.21
48-005	4.30	x 3"	49-005	6.01
48-006	4.83	x 3-1/2"	49-006	6.80
48-007	5.37	x 4"	49-007	7.60
48-008	5.89	x 4-1/2"	49-008	8.39
48-009	6.41	x 5"	49-009	9.20
48-010	6.95	x 5-1/2"	49-010	9.99
48-011	7.47	x 6"	49-011	10.79
48-015	11.84	x 10"		



**1/4" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-020	2.37	X Close (7/8")	49-020	2.92
48-021	2.93	x 1-1/2"	49-021	3.74
48-022	3.52	x 2"	49-022	4.55
48-023	4.17	x 2-1/2"	49-023	5.43
48-024	4.82	x 3"	49-024	6.40
48-025	5.47	x 3-1/2"	49-025	7.19
48-026	6.16	x 4"	49-026	8.14
48-027	6.82	x 4-1/2"	49-027	9.01
48-028	7.47	x 5"	49-028	9.90
48-029	8.12	x 5-1/2"	49-029	10.78
48-030	8.77	x 6"	49-030	11.66
48-032	11.53	x 8"		
48-034	14.12	x 10"		
48-036	16.72	x 12"		



**3/8" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-040	2.84	X Close (1")	49-040	3.60
48-041	3.44	x 1-1/2"	49-041	4.50
48-042	4.17	x 2"	49-042	5.52
48-043	4.96	x 2-1/2"	49-043	6.62
48-044	5.75	x 3"	49-044	7.73
48-045	6.56	x 3-1/2"	49-045	8.83
48-046	7.35	x 4"	49-046	9.93
48-047	8.14	x 4-1/2"	49-047	11.03
48-048	8.93	x 5"	49-048	12.14
48-049	9.72	x 5-1/2"	49-049	13.23
48-050	10.53	x 6"	49-050	14.34
48-052	13.95	x 8"		
48-054	17.13	x 10"		



**1/2" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-060	3.66	X Close (1")	49-060	4.80
48-061	4.41	x 1-1/2"	49-061	5.90
48-062	5.29	x 2"	49-062	7.22
48-063	6.34	x 2-1/2"	49-063	8.73
48-064	7.38	x 3"	49-064	10.24
48-065	8.44	x 3-1/2"	49-065	11.75
48-066	9.52	x 4"	49-066	2.48
48-067	10.56	x 4-1/2"	49-067	14.81
48-068	11.61	x 5"	49-068	16.15
48-069	12.65	x 5-1/2"	49-069	17.83
48-070	13.71	x 6"	49-070	19.34
48-071	15.98	x 7"		
48-072	18.08	x 8"		
48-073	20.17	x 9"		
48-074	22.28	10"		
48-075	24.37	x 11"		
48-076	26.46	x 12"		

\* Stainless Steel Nipples available in SCH80 seamless beginning on page 204

NIPPLES & FITTINGS



## 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	4.94	X Close (1-3/8")	49-080	6.26
48-081	5.26	x 1-1/2"	49-081	6.68
48-082	6.30	x 2"	49-082	8.16
48-083	7.57	x 2-1/2"	49-083	9.87
48-084	8.83	x 3"	49-084	11.57
48-085	10.10	x 3-1/2"	49-085	13.29
48-086	11.36	x 4"	49-086	14.99
48-087	12.63	x 4-1/2"	49-087	16.71
48-088	13.90	x 5"	49-088	18.41
48-089	15.17	x 5-1/2"	49-089	20.13
48-090	16.43	x 6"	49-090	21.85
48-091	19.10	x 7"		
48-092	21.64	x 8"		
48-094	26.71	x 10"	49-094	35.66
48-096	31.78	x 12"		



**1" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-100	6.49	X Close (1-1/2")	49-100	8.68
48-101	8.13	x 2"	49-101	11.01
48-102	9.65	x 2-1/2"	49-102	13.21
48-103	11.29	x 3"	49-103	15.54
48-104	12.91	x 3-1/2"	49-104	17.86
48-105	14.54	x 4"	49-105	20.20
48-106	16.18	x 4-1/2"	49-106	22.52
48-107	17.81	x 5"	49-107	24.84
48-108	19.45	x 5-1/2"	49-108	27.17
48-109	21.08	x 6"	49-109	29.49
48-110	24.68	x 7"		
48-111	27.95	x 8"		
48-113	34.49	x 10"		

\* Stainless Steel Nipples available in SCH40 seamless beginning on page 204

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



**1-1/4" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-120	8.72	X Close (1-5/8")	49-120	11.88
48-121	10.27	x 2"	49-121	14.14
48-122	12.17	x 2-1/2"	49-122	16.94
48-123	14.25	x 3"	49-123	19.94
48-124	16.31	x 3-1/2"	49-124	22.94
48-125	18.38	x 4"	49-125	25.94
48-126	20.45	x 4-1/2"	49-126	28.93
48-127	22.52	x 5"	49-127	31.93
48-128	24.59	x 5-1/2"	49-128	34.93
48-129	26.65	x 6"	49-129	37.93
48-131	35.05	x 8"		
48-135	51.59	x 12"		



**1-1/2" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-140	10.68	x 1-3/4"	49-140	14.67
48-141	11.70	x 2"	49-141	16.24
48-142	14.15	x 2-1/2"	49-142	19.78
48-143	16.59	x 3"	49-143	23.32
48-144	19.04	x 3-1/2"	49-144	26.86
48-145	21.48	x 4"	49-145	30.40
48-146	23.93	x 4-1/2"	49-146	33.95
48-147	26.37	x 5"	49-147	37.48
48-148	28.81	x 5-1/2"	49-148	41.02
48-149	31.25	x 6"	49-149	44.56
48-151	41.29	x 8"		
48-152	46.18	x 9"		

The letter J does not appear anywhere on the periodic table of the elements.

NIPPLES & FITTINGS

# SCH 40 STAINLESS STEEL NIPPLES

# STAINLESS STEEL



**2" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-160	16.58	X Close (2")	49-160	22.79
48-161	18.47	x 2-1/2"	49-161	26.07
48-162	21.37	x 3"	49-162	30.45
48-163	24.56	x 3-1/2"	49-163	35.11
48-164	27.74	x 4"	49-164	39.79
48-165	30.92	x 4-1/2"	49-165	44.45
48-166	34.11	x 5"	49-166	49.13
48-167	37.29	x 5-1/2"	49-167	53.79
48-168	40.48	x 6"	49-168	58.45
48-169	47.45	x 7"	49-169	68.45
48-170	53.82	x 8"		
48-171	60.19	x 9"		
48-172	66.55	x 10"		



**2-1/2" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-180	33.62	X Close (2-1/2")		
48-193	129.07	x 12"		
		x 5-1/2"	49-186	83.57



**3" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-200	47.30	X Close (2-5/8")		
48-201	52.23	x 3"		
48-203	65.38	x 4"	49-203	86.37
48-205	74.89	x 5"		
48-207	88.04	x 6"		
		x 7"	49-208	141.46
48-209	118.54	x 8"		
48-213	171.15	x 12"		



**4" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
48-220	60.45	X Close (2-7/8")		
		x 5"	49-225	134.33
48-227	113.00	x 6"		

\* Stainless Steel Nipples available in SCH80 seamless beginning on page 205

## 304 STAINLESS STEEL TOE NIPPLES/ WELDING NIPPLES

Toe nipples are only threaded on one end to allow for easy connections, unthreaded end allows for welding a permanent leak-resistenteant bond.

- Roller cut



Part #	Size	List Price
48-021T	1/4" x 1-1/2"	7.87
48-022T	1/4" x 2"	8.31
48-041T	3/8" x 1-1/2"	8.96
48-042T	3/8" x 2"	10.29
48-061T	1/2" x 1-1/2"	10.30
48-062T	1/2" x 2"	11.74
48-081T	3/4" x 1-1/2"	13.26
48-082T	3/4" x 2"	14.18
48-101T	1" x 2"	17.77
48-102T	1" x 2-1/2"	20.14
48-121T	1-1/4" x 2"	20.96
48-122T	1-1/4" x 2-1/2"	22.39
48-141T	1-1/2" x 2"	23.72
48-142T	1-1/2" x 2-1/2"	24.59
48-160T	2" x 2"	31.86
48-161T	2" x 2-1/2"	33.06

Reamed & Chamfer or Saw Cut available upon request.

NIPPLES & FITTINGS

# STAINLESS STEEL

# SCH 80 SEAMLESS SS NIPPLES

## • SEAMLESS



**Sch 80  
1/8" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-001	6.41	X Close (3/4")	52-001	7.94
51-002	8.39	X 1-1/2"	52-002	11.14
51-003	9.86	X 2"	52-003	13.59
51-004	11.59	X 2-1/2"	52-004	15.96
51-005	13.19	X 3"	52-005	18.40
51-006	14.82	X 3-1/2"	52-006	20.85
51-007	16.43	X 4"	52-007	23.29
51-008	18.04	X 4-1/2"	52-008	25.73
51-009	19.67	X 5"	52-009	28.17
51-010	21.30	X 5-1/2"	52-010	30.61
51-011	22.90	X 6"	52-011	33.07

**Sch 80  
1/4" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-020	6.95	X Close (7/8")	52-020	8.92
51-021	8.62	X 1-1/2"	52-021	11.45
51-022	10.36	X 2"	52-022	13.95
51-023	12.28	X 2-1/2"	52-023	16.63
51-024	14.19	X 3"	52-024	19.34
51-025	16.09	X 3-1/2"	52-025	22.04
51-026	18.17	X 4"	52-026	24.94
51-027	20.09	X 4-1/2"	52-027	27.62
51-028	22.00	X 5"	52-028	30.34
51-029	23.91	X 5-1/2"	52-029	33.02
51-030	25.83	X 6"	52-030	35.72

**Sch 80  
3/8" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-040	8.70	X CLOSE (1")	52-040	11.04
51-041	10.56	X 1-1/2"	52-041	13.78
51-042	12.77	X 2"	52-042	16.93
51-043	15.21	X 2-1/2"	52-043	20.31
51-044	17.63	X 3"	52-044	23.68
51-045	20.09	X 3-1/2"	52-045	27.06
51-046	22.50	X 4"	52-046	30.43
51-047	24.95	X 4-1/2"	52-047	33.81
51-048	27.36	X 5"	52-048	37.20
51-049	29.80	X 5-1/2"	52-049	40.56
51-050	32.24	X 6"	52-050	43.95



**Sch 80  
1/2" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-060	10.79	X Close (1-1/8")	52-060	14.69
51-061	13.01	X 1-1/2"	52-061	18.06
51-062	15.59	X 2"	52-062	22.12
51-063	18.68	X 2-1/2"	52-063	26.76
51-064	21.76	X 3"	52-064	31.37
51-065	24.85	X 3-1/2"	52-065	36.01
51-066	28.03	X 4"	52-066	40.77
51-067	31.13	X 4-1/2"	52-067	45.38
51-068	34.21	X 5"	52-068	49.49
51-069	37.29	X 5-1/2"	52-069	54.65
51-070	40.38	X 6"	52-070	59.27

**Sch 80  
3/4" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-080	15.13	X Close (1-3/8")	52-080	19.17
51-081	16.10	X 1-1/2"	52-081	20.48
51-082	19.31	X 2"	52-082	25.00
51-083	23.18	X 2-1/2"	52-083	30.24
51-084	27.06	X 3"	52-084	35.48
51-085	30.95	X 3-1/2"	52-085	40.71
51-086	34.84	X 4"	52-086	45.96
51-087	38.70	X 4-1/2"	52-087	51.21
51-088	42.59	X 5"	52-088	56.44
51-089	46.48	X 5-1/2"	52-089	61.69
51-090	50.36	X 6"	52-090	66.94

**Sch 80  
1" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-100	19.13	X Close (1-1/2")	52-100	26.61
51-101	23.96	X 2"	52-101	33.74
51-102	28.44	X 2-1/2"	52-102	40.50
51-103	33.25	X 3"	52-103	47.62
51-104	38.06	X 3-1/2"	52-104	54.74
51-105	42.87	X 4"	52-105	61.88
51-106	47.67	X 4-1/2"	52-106	68.98
51-107	52.49	X 5"	52-107	76.12
51-108	57.32	X 5-1/2"	52-108	83.25
51-109	62.12	X 6"	52-109	90.38

NIPPLES & FITTINGS



# SCH 80 SEAMLESS SS NIPPLES

# STAINLESS STEEL



**Sch 80**  
**1-1/4" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-120	26.73	X Close (1-5/8")	52-120	36.41
51-121	31.48	X 2"	52-121	43.30
51-122	37.29	X 2-1/2"	52-122	51.91
51-123	43.64	X 3"	52-123	61.12
51-124	49.98	X 3-1/2"	52-124	70.29
51-125	56.32	X 4"	52-125	79.48
51-126	62.66	X 4-1/2"	52-126	88.67
51-127	68.99	X 5"	52-127	97.86
51-128	75.33	X 5-1/2"	52-128	107.02
51-129	81.68	X 6"	52-129	116.22

**Sch 80**  
**1-1/2" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-140	31.47	X Close (1-3/4")	52-140	44.96
51-141	34.50	X 2"	52-141	49.75
51-142	41.69	X 2-1/2"	52-142	60.61
51-143	48.88	X 3"	52-143	71.46
51-144	56.11	X 3-1/2"	52-144	82.31
51-145	63.29	X 4"	52-145	93.16
51-146	70.50	X 4-1/2"	52-146	104.01
51-147	77.69	X 5"	52-147	114.86
51-148	84.89	X 5-1/2"	52-148	125.71
51-149	92.09	X 6"	52-150	113.80

**Sch 80**  
**2" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-160	50.80	X Close (2")	52-160	69.84
51-161	56.58	X 2-1/2"	52-161	79.90
51-162	65.49	X 3"	52-162	93.31
51-163	75.26	X 3-1/2"	52-163	107.59
51-164	85.01	X 4"	52-164	121.91
51-165	94.75	X 4-1/2"	52-165	136.22
51-166	104.51	X 5"	52-166	150.54
51-167	114.27	X 5-1/2"	52-167	164.82
51-168	124.04	X 6"	52-168	179.12

• SEAMLESS



**Sch 80**  
**2-1/2" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-180	99.07	X Close (2-1/2")	52-180	132.80
51-181	113.80	X 3"	52-181	153.70
51-182	128.54	X 3-1/2"	52-182	174.60
51-183	143.24	X 4"	52-183	195.49
51-184	156.08	X 4-1/2"	52-184	214.38
51-185	170.82	X 5"	52-185	235.16
51-186	185.54	X 5-1/2"	52-186	256.07
51-187	200.28	X 6"	52-187	276.95

**Sch 80**  
**3" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-200	144.93	X Close (2-5/8")	52-200	188.10
51-201	160.05	X 3"	52-201	209.00
51-202	180.20	X 3-1/2"	52-202	236.83
51-203	200.37	X 4"	52-203	264.67
51-204	209.34	X 4-1/2"	52-204	280.54
51-205	229.49	X 5"	52-205	308.37
51-206	249.65	X 5-1/2"	52-206	336.23
51-207	269.80	X 6"	52-207	364.06

**Sch 80**  
**4" Diameter**

Part # 304 S.S.	List Price	Length	Part # 316 S.S.	List Price
51-220	178.13	X Close (2-7/8")	52-220	254.03
51-223	234.69	X 4"	52-223	338.79
51-224	257.57	X 4-1/2"	52-224	373.97
51-225	282.72	X 5"	52-225	411.63
51-226	307.87	X 5-1/2"	52-226	449.31
51-227	332.98	X 6"	52-227	486.98

NIPPLES & FITTINGS





# STAINLESS STEEL

# 304 AND 316 150# STAINLESS STEEL FITTINGS

- Stainless Casting conform to ASTM A351
- NPT Threads conform to ASME B1.20.1

• Max pressure: 300 psi WOG; 150 psi saturated steam

## 90° ELBOWS



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-100	5.60	1/8"	63-100	7.18
62-101	5.60	1/4"	63-101	7.18
62-102	6.95	3/8"	63-102	8.71
62-103	7.40	1/2"	63-103	9.63
62-104	10.63	3/4"	63-104	13.96
62-105	15.06	1"	63-105	17.52
62-106	26.42	1-1/4"	63-106	30.04
62-107	35.17	1-1/2"	63-107	40.07
62-108	44.59	2"	63-108	50.66
62-109	101.59	2-1/2"	63-109	45.06
62-110	129.44	3"	63-110	92.52
62-112	252.60	4"	63-112	281.35

## 90° STREET ELLS



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-160	8.00	1/8"	63-160	9.61
62-161	8.00	1/4"	63-161	9.80
62-162	9.63	3/8"	63-162	12.05
62-163	11.33	1/2"	63-163	14.17
62-164	15.72	3/4"	63-164	18.68
62-165	27.20	1"	63-165	29.82
62-166	39.50	1-1/4"	63-166	44.56
62-167	46.73	1-1/2"	63-167	49.64
62-168	63.29	2"	63-168	70.90

## 45° ELBOWS



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-180	7.08	1/8"	63-180	8.55
62-181	7.08	1/4"	63-181	8.55
62-182	8.32	3/8"	63-182	10.44
62-183	9.14	1/2"	63-183	11.46
62-184	13.34	3/4"	63-184	15.05
62-185	16.29	1"	63-185	18.85
62-186	26.09	1-1/4"	63-186	29.66
62-187	31.04	1-1/2"	63-187	35.27
62-188	43.67	2"	63-188	49.31

## TEES



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-250	7.51	1/8"	63-250	8.92
62-251	7.51	1/4"	63-251	8.92
62-252	9.57	3/8"	63-252	11.83
62-253	10.04	1/2"	63-253	12.47
62-254	15.98	3/4"	63-254	18.39
62-255	20.35	1"	63-255	23.10
62-256	40.48	1-1/4"	63-256	45.97
62-257	50.31	1-1/2"	63-257	55.77
62-258	64.63	2"	63-258	71.85
62-259	126.01	2-1/2"		
62-260	199.77	3"		

## CROSSES



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
		1/8"	63-390	16.14
62-391	13.07	1/4"	63-391	16.14
62-392	15.58	3/8"	63-392	18.99
62-393	19.18	1/2"	63-393	23.56
62-394	32.82	3/4"	63-394	41.17
62-395	48.58	1"	63-395	49.70
62-396	57.68	1-1/4"	63-396	71.85
62-397	71.47	1-1/2"	63-397	89.67
62-398	102.30	2"	63-398	123.54

## STAINLESS STEEL OD MACHINED COUPLINGS



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-410B	4.69	1/8"	63-410B	5.45
62-411B	4.55	1/4"	63-411B	5.45
62-412B	5.84	3/8"	63-412B	5.94
62-413B	6.29	1/2"	63-413B	8.33
62-414B	8.70	3/4"	63-414B	11.70
62-415B	17.11	1"	63-415B	19.01
62-416B	22.35	1-1/4"	63-416B	26.66
62-417B	29.81	1-1/2"	63-417B	33.33
62-418B	43.24	2"	63-418B	49.97

\* 3000 LB Forged Stainless Steel Fittings available pg. 211

**COUPLINGS**



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-413	5.98	1/2"	63-413	6.92
62-414	8.64	3/4"	63-414	10.00
62-415	13.12	1"	63-415	14.91
62-416	44.19	1-1/4"	63-416	23.69
62-417	24.76	1-1/2"	63-417	28.16
62-418	34.90	2"	63-418	39.64
62-419	76.60	2-1/2"	63-419	93.13
62-420	99.03	3"	63-420	120.30
62-421	153.95	4"	63-421	185.78

**REDUCING COUPLINGS**



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-430	5.85	1/4" x 1/8"	63-430	6.67
62-431	6.50	3/8" x 1/8"		
62-432	6.50	3/8" x 1/4"	63-432	7.40
62-433	6.20	1/2" x 1/8"		
62-434	6.20	1/2" x 1/4"	63-434	8.88
62-435	6.20	1/2" x 3/8"	63-435	8.88
62-455	9.34	3/4" x 1/8"		
62-436	9.34	3/4" x 1/4"	63-436	11.39
62-437	9.34	3/4" x 3/8"	63-437	11.39
62-438	9.34	3/4" x 1/2"	63-438	11.39
62-440	12.77	1" x 3/8"		
62-441	12.77	1" x 1/2"	63-441	18.79
62-442	12.77	1" x 3/4"	63-442	18.79
62-445	18.62	1-1/4" x 3/4"	63-445	24.53
62-446	18.62	1-1/4" x 1"	63-446	24.53
62-447	26.85	1-1/2" x 1/2"	63-447	32.76
62-448	26.85	1-1/2" x 3/4"	63-448	32.76
62-449	26.85	1-1/2" x 1"	63-449	32.76
62-450	26.85	1-1/2" x 1-1/4"	63-450	32.76
62-452	44.85	2" x 1"	63-452	55.25
62-453	44.85	2" x 1-1/4"	63-453	55.25
62-454	44.85	2" x 1-1/2"	63-454	55.25

**CAPS**



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-470	2.82	1/8"	63-470	3.42
62-471	4.04	1/4"	63-471	4.60
62-472	4.75	3/8"	63-472	5.42
62-473	4.93	1/2"	63-473	6.28
62-474	6.17	3/4"	63-474	7.21
62-475	9.27	1"	63-475	11.04
62-476	16.79	1-1/4"	63-476	21.69
62-477	22.02	1-1/2"	63-477	27.82
62-478	28.08	2"	63-478	35.61
62-480	70.02	3"	63-480	73.39
62-481	108.07	4"		

**HEX CAPS**



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-075	1.71	1/8"	63-075	3.06
62-076	2.31	1/4"	63-076	3.06
62-077	2.86	3/8"	63-077	3.06
62-078	2.30	1/2"	63-078	3.66
62-079	3.39	3/4"	63-079	4.74
62-080	6.97	1"	63-080	6.47
62-081	11.11	1-1/4"	63-081	14.71
62-082	13.71	1-1/2"	63-082	18.03
62-083	13.55	2"	63-083	27.13

\* 3000 LB Forged Stainless Steel Fittings available pg. 211

**HEX SOCKET PLUGS**



Part # 316 S.S.	Size	List Price
63-759	1/16"	3.36
63-760	1/8 "	3.01
63-761	1/4 "	4.29
63-762	3/8 "	6.04
63-763	1/2 "	10.07
63-764	3/4 "	24.12

**NIPPLES & FITTINGS**



**HEX BUSHINGS**



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-500	3.65	1/4" x 1/8"	63-500	4.11
		3/8" x 1/8"	63-501	4.70
62-502	3.99	3/8" x 1/4"	63-502	4.70
62-503	5.05	1/2" x 1/8"		
62-504	5.05	1/2" x 1/4"	63-504	5.52
62-505	5.05	1/2" x 3/8"	63-505	5.52
62-507	4.15	3/4" x 1/4"	63-507	8.21
62-508	7.38	3/4" x 3/8"	63-508	9.28
62-509	7.38	3/4" x 1/2"	63-509	8.21
62-512	10.26	1" x 1/2"	63-512	11.72
62-513	10.26	1" x 3/4"	63-513	11.72
62-516	11.58	1-1/4" x 1/2"	63-516	22.90
62-517	18.36	1-1/4" x 3/4"	63-517	22.90
62-518	18.36	1-1/4" x 1"	63-518	22.90
62-521	21.97	1-1/2" x 1/2"	63-521	27.08
62-522	21.97	1-1/2" x 3/4"	63-522	27.08
62-532	26.86	1-1/2" x 1"	63-523	27.08
62-524	21.97	1-1/2" x 1-1/4"	63-524	27.08
62-527	33.51	2" x 1/2"		
62-528	33.51	2" x 3/4"	63-528	38.46
62-529	33.51	2" x 1"	63-529	38.46
62-530	33.51	2" x 1-1/4"	63-530	38.46
62-531	33.51	2" x 1-1/2"	63-531	38.46
62-534	57.43	2-1/2" x 1-1/2"	63-534	65.34
62-535	57.43	2-1/2" x 2"	63-535	65.34
62-538	88.00	3" x 2"	63-538	100.47
62-539	88.00	3" x 2-1/2"		
62-543	160.13	4" x 3"		

**UNIONS**



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-600	18.91	1/8"	63-600	21.45
62-601	18.91	1/4"	63-601	21.45
62-602	19.27	3/8"	63-602	21.82
62-603	20.86	1/2"	63-603	23.69
62-604	26.42	3/4"	63-604	30.05
62-605	39.86	1"	63-605	45.36
62-606	69.14	1-1/4"	63-606	78.43
62-607	78.20	1-1/2"	63-607	89.02
62-608	93.62	2"	63-608	106.16
62-610	319.32	3"	63-610	379.35

**HEX HEAD PLUGS**



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-630	2.68	1/8"	63-630	3.32
62-631	2.68	1/4"	63-631	3.32
62-632	3.31	3/8"	63-632	3.75
62-633	5.23	1/2"	63-633	6.28
62-634	6.57	3/4"	63-634	7.92
62-635	11.33	1"	63-635	12.62
62-636	18.18	1-1/4"	63-636	21.79
62-637	19.90	1-1/2"	63-637	25.80
62-638	27.47	2"	63-638	37.22

**SOLID HEX HEAD PLUGS**



Part # 316 S.S.	Size	List Price
63-660	1/8"	6.20
63-661	1/4"	7.81
63-662	3/8"	11.43
63-663	1/2"	20.31

**HEX NIPPLES**



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-720	5.46	1/8"	63-720	6.12
62-721	5.13	1/4"	63-721	6.12
62-722	6.06	3/8"	63-722	6.79
62-723	7.19	1/2"	63-723	8.04
62-724	8.84	3/4"	63-724	10.51
62-725	12.94	1"	63-725	14.47
62-726	19.82	1-1/4"	63-726	23.63
62-727	25.05	1-1/2"	63-727	28.04
62-728	57.16	2"	63-728	40.23

\* 3000 LB Forged Stainless Steel Fittings available pg. 211

**NIPPLES &  
FITTINGS**

**SQUARE HEAD PLUGS**



Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-670	2.42	1/8"	63-670	2.61
62-671	2.86	1/4"	63-671	3.31
62-672	3.83	3/8"	63-672	4.37
62-653	5.47	1/2"	63-653	6.17
62-654	6.67	3/4"	63-654	7.55
62-655	8.43	1"	63-655	9.43
62-656	16.79	1-1/4"	63-656	22.30
62-657	20.01	1-1/2"	63-657	24.64
62-658	23.68	2"	63-658	34.00
62-660	56.72	3"		

**SOLID SQUARE HEAD PLUGS**



Part # 316 S.S.	Size	List Price
63-680	1/8"	5.64
63-681	1/4"	7.58
63-682	3/8"	8.89
63-683	1/2"	13.33
63-684	3/4"	25.38

**HEX LOCKNUTS**



• Straight Thread

Part # 304 S.S.	List Price	Size	Part # 316 S.S.	List Price
62-701	11.51	1/4"	63-701	12.55
62-702	11.51	3/8"	63-702	12.55
62-703	11.51	1/2"	63-703	12.55
62-704	14.04	3/4"	63-704	15.75
62-705	15.92	1"	63-705	17.70
62-706	32.93	1-1/4"	63-706	35.85
62-707	32.97	1-1/2"	63-707	35.85
62-708	36.26	2"	63-708	39.34

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	2.43	1/4"	63-771	2.56
62-772	2.63	3/8"	63-772	2.99
62-773	3.65	1/2"	63-773	4.36
62-774	4.88	3/4"	63-774	5.54
62-775	6.26	1"	63-775	8.43
62-776	10.22	1-1/4"	63-776	12.78
62-777	13.10	1-1/2"	63-777	17.01
62-778	17.96	2"	63-778	22.25

**HOSE NIPPLES**



Part # 304 S.S.	List Price	Hose I.D. x Male Pipe	Part # 316 S.S.	List Price
73-951	6.38	1/4"	973-951	7.14
73-952	9.94	3/8"	973-952	9.16
73-953	11.09	1/2"	973-953	16.35
73-954	12.52	3/4"	973-954	17.18
73-955	15.99	1"	973-955	20.58
73-956	27.73	1-1/4"	973-956	27.96
73-957	28.94	1-1/2"	973-957	48.61
73-958	44.31	2"	973-958	51.79
73-959	96.24	2-1/2"	973-959	133.67
73-960	119.24	3"	973-990	164.69
73-961	377.81	4"	973-991	204.55

**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"	6.50
73-971	3/8" x 1/4"	7.51
73-972	1/2" x 3/8"	11.22
73-973	1/2" x 1/4"	11.59
73-974	3/4" x 1/2"	14.81
73-975	1" x 3/4"	16.72
73-976	1" x 1/2"	27.23
73-977	1-1/4" x 1"	26.93
73-979	1-1/2" x 1-1/4"	42.33
73-980	1-1/2" x 1"	32.47
73-981	2" x 1-1/2"	56.00
73-982	2" x 1-1/4"	44.78

**NIPPLES & FITTINGS**

**STAINLESS STEEL 3000 LB THREADED FITTINGS  
ASTM A182/ASME SA182 & ANSI B16.11**

**90° ELBOWS**



Part #	Size	List Price
103-100	1/8"	17.35
103-101	1/4"	21.86
103-102	3/8"	25.27
103-103	1/2"	26.13
103-104	3/4"	37.76
103-105	1"	57.80
103-106	1-1/4"	85.36
103-107	1-1/2"	136.29
103-108	2"	172.87

**STREET ELBOWS**



Part #	Size	List Price
103-160	1/8"	30.65
103-161	1/4"	27.73
103-162	3/8"	39.77
103-163	1/2"	49.63
103-164	3/4"	71.85
103-165	1"	111.06
103-166	1-1/4"	278.67
103-167	1-1/2"	381.66

**45° ELBOWS**



Part #	Size	List Price
103-180	1/8"	38.24
103-181	1/4"	38.24
103-182	3/8"	38.24
103-183	1/2"	38.24
103-184	3/4"	52.09
103-185	1"	71.83
103-186	1-1/4"	105.78
103-187	1-1/2"	127.18
103-188	2"	152.86
103-189	2-1/2"	662.59
103-190	3"	1096.70

**COUPLINGS**



Part #	Size	List Price
103-410	1/8"	6.17
103-411	1/4"	6.72
103-412	3/8"	7.83
103-413	1/2"	9.43
103-414	3/4"	12.57
103-415	1"	21.31
103-416	1-1/4"	47.92
103-417	1-1/2"	55.69
103-418	2"	79.58
103-419	2-1/2"	211.34
103-420	3"	300.83
103-421	4"	POR

**REDUCING COUPLINGS**



Part #	Size	List Price
103-434	1/2" x 1/4"	19.47
103-435	1/2" x 3/8"	19.47
103-437	3/4" x 3/8"	28.19
103-438	3/4" x 1/2"	26.87
103-440	1" x 3/8"	38.70
103-441	1" x 1/2"	38.70
103-442	1" x 3/4"	38.70
103-443	1-1/4" x 3/8"	66.11
103-444	1-1/4" x 1/2"	66.11
103-445	1-1/4" x 3/4"	66.11
103-446	1-1/4" x 1"	66.11
103-447	1-1/2" x 1/2"	71.43
103-448	1-1/2" x 3/4"	71.43
103-449	1-1/2" x 1"	71.43
103-450	1-1/2" x 1-1/4"	71.43
103-458	2" x 1/2"	102.12
103-451	2" x 3/4"	102.12
103-452	2" x 1"	102.12
103-453	2" x 1-1/4"	102.12
103-454	2" x 1-1/2"	102.12

**HALF COUPLINGS**



Part #	Size	List Price
103-770	1/8"	6.34
103-771	1/4"	5.32
103-772	3/8"	7.86
103-773	1/2"	9.05
103-774	3/4"	12.57
103-775	1"	20.75
103-776	1-1/4"	33.30
103-777	1-1/2"	43.79
103-778	2"	61.92
103-779	2-1/2"	178.98
103-780	3"	224.67
103-781	4"	POR

**TEES**



Part #	Size	List Price
103-250	1/8"	22.30
103-251	1/4"	22.90
103-252	3/8"	31.24
103-253	1/2"	35.40
103-254	3/4"	46.76
103-255	1"	81.00
103-256	1-1/4"	123.40
103-257	1-1/2"	187.17
103-258	2"	217.57

**CAPS**



Part #	Size	List Price
103-470	1/8"	6.94
103-471	1/4"	7.20
103-472	3/8"	7.37
103-473	1/2"	9.58
103-474	3/4"	12.62
103-475	1"	22.46
103-477	1-1/2"	40.86

**NIPPLES & FITTINGS**



**ASTM A182/ASME SA182 & ANSI B16.11**

**THREADED CONT.**

**SOCKET WELD**

**UNIONS**



Part #	Size	List Price
103-600	1/8"	46.42
103-601	1/4"	47.22
103-602	3/8"	49.62
103-603	1/2"	50.61
103-604	3/4"	60.82
103-605	1"	98.13
103-606	1-1/4"	147.12
103-607	1-1/2"	166.02
103-608	2"	221.97
103-609	2-1/2"	428.40
103-610	3"	706.38

**HEX BUSHING**



Part #	Size	List Price
103-504	1/2" x 1/4"	12.02
103-505	1/2" x 3/8"	12.02
103-508	3/4" x 3/8"	15.19
103-509	3/4" x 1/2"	15.19
103-511	1" x 3/8"	24.64
103-512	1" x 1/2"	24.64
103-513	1" x 3/4"	24.64
103-515	1-1/4" x 3/8"	46.76
103-516	1-1/4" x 1/2"	46.76
103-517	1-1/4" x 3/4"	46.76
103-518	1-1/4" x 1"	46.76
103-520	1-1/2" x 3/8"	52.67
103-521	1-1/2" x 1/2"	52.67
103-522	1-1/2" x 3/4"	52.67
103-523	1-1/2" x 1"	52.67
103-524	1-1/2" x 1-1/4"	52.67
103-526	2" x 3/8"	75.38
103-527	2" x 1/2"	75.38
103-528	2" x 3/4"	75.38
103-529	2" x 1"	75.38
103-530	2" x 1-1/4"	74.03
103-531	2" x 1-1/2"	75.38

**90° ELBOWS**



Part #	Size	List Price
104-100	1/8"	13.90
104-101	1/4"	14.25
104-102	3/8"	18.09
104-103	1/2"	19.88
104-104	3/4"	25.03
104-105	1"	37.76
104-106	1-1/4"	60.32
104-107	1-1/2"	84.45
104-108	2"	136.29

**COUPLINGS**



Part #	Size	List Price
104-410	1/8"	9.77
104-411	1/4"	9.96
104-412	3/8"	10.09
104-413	1/2"	10.72
104-414	3/4"	13.91
104-415	1"	20.75
104-416	1-1/4"	37.37
104-417	1-1/2"	43.43
104-418	2"	60.36

**REDUCING COUPLINGS**

Part #	Size	List Price
104-434	1/2" x 1/4"	15.66
104-435	1/2" x 3/8"	15.66
104-437	3/4" x 3/8"	20.59
104-438	3/4" x 1/2"	20.22
104-440	1" x 3/8"	33.94
104-441	1" x 1/2"	33.94
104-442	1" x 3/4"	33.33
104-443	1-1/4" x 3/8"	51.46
104-444	1-1/4" x 1/2"	51.46
104-445	1-1/4" x 3/4"	51.46
104-446	1-1/4" x 1"	51.46
104-447	1-1/2" x 1/2"	56.44
104-448	1-1/2" x 3/4"	56.44
104-449	1-1/2" x 1"	56.44
104-450	1-1/2" x 1-1/4"	56.44
104-458	2" x 1/2"	84.37
104-451	2" x 3/4"	84.37
104-452	2" x 1"	84.37
104-453	2" x 1-1/4"	84.37
104-454	2" x 1-1/2"	84.37

**TEES**



Part #	Size	List Price
104-250	1/8"	18.68
104-251	1/4"	19.01
104-252	3/8"	22.29
104-253	1/2"	30.71
104-254	3/4"	46.78
104-255	1"	46.78
104-256	1-1/4"	83.12
104-257	1-1/2"	123.40
104-258	2"	187.16
104-259	2-1/2"	717.81
104-260	3"	1046.25

**CAPS**



Part #	Size	List Price
104-470	1/8"	8.62
104-471	1/4"	8.92
104-472	3/8"	10.27
104-473	1/2"	13.48
104-474	3/4"	17.08
104-475	1"	20.45
104-476	1-1/4"	32.64
104-477	1-1/2"	33.94
104-478	2"	52.19

**NIPPLES & FITTINGS**

**STAINLESS STEEL 3000 LB THREADED FITTINGS  
ASTM A182/ASME SA182 & ANSI B16.11**

**90° ELBOWS**



Part #	Size	List Price
105-100	1/8"	24.47
105-101	1/4"	24.47
105-102	3/8"	32.74
105-103	1/2"	41.69
105-104	3/4"	62.16
105-105	1"	103.82
105-106	1-1/4"	133.90
105-107	1-1/2"	228.13
105-108	2"	317.64
105-109	2-1/2"	1285.20
105-110	3"	1408.96

**45° ELBOWS**



Part #	Size	List Price
105-180	1/8"	63.13
105-181	1/4"	63.13
105-182	3/8"	63.13
105-183	1/2"	63.13
105-184	3/4"	81.45
105-185	1"	108.52
105-186	1-1/4"	140.53
105-187	1-1/2"	189.18
105-188	2"	230.08
105-189	2-1/2"	1073.86
105-190	3"	1831.65

**TEES**



Part #	Size	List Price
105-250	1/8"	32.75
105-251	1/4"	32.75
105-252	3/8"	44.68
105-253	1/2"	53.51
105-254	3/4"	82.47
105-255	1"	139.75
105-256	1-1/4"	186.50
105-257	1-1/2"	297.90
105-258	2"	398.53
105-259	2-1/2"	1389.92
105-260	3"	1569.85

**CAPS**



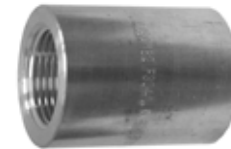
Part #	Size	List Price
105-470	1/8"	10.77
105-471	1/4"	10.77
105-472	3/8"	11.45
105-473	1/2"	15.60
105-474	3/4"	20.22
105-475	1"	31.07
105-476	1-1/4"	46.42
105-477	1-1/2"	60.22
105-478	2"	94.17
105-479	2-1/2"	272.27
105-480	3"	348.43

**HALF COUPLINGS**



Part #	Size	List Price
105-770	1/8"	5.52
105-771	1/4"	5.52
105-772	3/8"	8.11
105-773	1/2"	9.25
105-774	3/4"	13.90
105-775	1"	23.04
105-776	1-1/4"	43.76
105-777	1-1/2"	58.32
105-778	2"	83.31
105-779	2-1/2"	222.77
105-780	3"	323.68

**COUPLINGS**



Part #	Size	List Price
105-410	1/8"	7.86
105-411	1/4"	8.94
105-412	3/8"	9.58
105-413	1/2"	13.57
105-414	3/4"	19.95
105-415	1"	33.42
105-416	1-1/4"	69.61
105-417	1-1/2"	83.32
105-418	2"	115.24
105-419	2-1/2"	346.53
105-420	3"	500.75

"So many of our dreams at first seem impossible, then seem improbable, and then, when we summon the will, they soon seem inevitable."

- Christopher Reeve

"One of my best moves is to surround myself with friends who, instead of asking, "Why?" are quick to say, "Why not?" That attitude is contagious."

- Oprah Winfrey

"It's easy to come up with big ideas. Just think of something that everyone agrees would be "wonderful" if it were only "possible"... and then set out to make it possible."

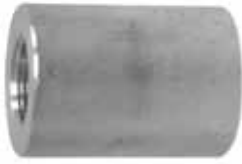
- Armand Hammer

**NIPPLES & FITTINGS**





**REDUCING COUPLINGS**



Part #	Size	List Price
105-434	1/2" x 1/4"	23.53
105-435	1/2" x 3/8"	23.53
105-437	3/4" x 3/8"	34.46
105-438	3/4" x 1/2"	34.46
105-440	1" x 3/8"	59.64
105-441	1" x 1/2"	59.64
105-442	1" x 3/4"	59.64
105-443	1-1/4" x 3/8"	89.47
105-444	1-1/4" x 1/2"	89.47
105-445	1-1/4" x 3/4"	89.47
105-446	1-1/4" x 1"	89.47
105-447	1-1/2" x 1/2"	113.90
105-448	1-1/2" x 3/4"	113.90
105-449	1-1/2" x 1"	113.90
105-450	1-1/2" x 1-1/4"	113.90
105-458	2" x 1/2"	162.93
105-451	2" x 3/4"	162.93
105-452	2" x 1"	162.93
105-453	2" x 1-1/4"	162.93
105-454	2" x 1-1/2"	162.93

**HEX BUSHING**



Part #	Size	List Price
105-500	1/4" x 1/8"	11.79
105-502	3/8" x 1/4"	16.13
105-504	1/2" x 1/4"	18.85
105-505	1/2" x 3/8"	18.85
105-508	3/4" x 3/8"	22.61
105-509	3/4" x 1/2"	22.61
105-511	1" x 3/8"	35.30
105-512	1" x 1/2"	35.30
105-513	1" x 3/4"	35.30
105-515	1-1/4" x 3/8"	55.56
105-516	1-1/4" x 1/2"	55.56
105-517	1-1/4" x 3/4"	55.56
105-518	1-1/4" x 1"	55.56
105-521	1-1/2" x 1/2"	52.42
105-522	1-1/2" x 3/4"	51.48
105-523	1-1/2" x 1"	52.42
105-524	1-1/2" x 1-1/4"	52.42
105-525	2" x 3/8"	92.71
105-527	2" x 1/2"	92.71
105-528	2" x 3/4"	92.71
105-529	2" x 1"	92.71
105-530	2" x 1-1/2"	92.71
105-531	2" x 1-1/2"	92.71

**SQUARE PLUG**



Part #	Size	List Price
105-650	1/8"	5.71
105-651	1/4"	6.14
105-652	3/8"	7.58
105-653	1/2"	13.47
105-654	3/4"	17.18
105-655	1"	24.93
105-656	1-1/4"	48.40
105-657	1-1/2"	53.39
105-658	2"	84.91

**HIGH PRESSURE HEX NIPPLES**



Part #	Size	PSI	List Price
SS54044	1/4 x CL	5000	7.94
SS540442.0	1/4 x 2	5000	9.40
SS540443.0	1/4 x 3	5000	13.09
SS54046	3/8 x CL	4000	11.66
SS540462.0	3/8 x 2	4000	12.64
SS54048	1/2 x CL	3000	16.72
SS540482.0	1/2 x 2	3000	19.97
SS540483.0	1/2 x 3	3000	24.19

**UNIONS**



Part #	Size	List Price
105-600	1/8"	59.14
105-601	1/4"	59.14
105-602	3/8"	68.49
105-603	1/2"	68.58
105-604	3/4"	89.42
105-605	1"	143.85
105-606	1-1/4"	213.15
105-607	1-1/2"	268.43
105-608	2"	341.30
105-609	2-1/2"	677.82
105-610	3"	1041.49

"The future depends on what we do in the present."

- Mahatma Gandhi

"The dream was always running ahead of me. To catch up, to live for a moment in unison with it, that was the miracle."

- Anais Nin

"Get excited and enthusiastic about your own dream. This excitement is like a forest fire...you can smell it, taste it, and see it from a mile away."

- Denis Waitley

**SOCKET WELD  
ASTM A182/ASME SA182 & ANSI B16.11**

**90° ELBOWS**



Part #	Size	List Price
106-100	1/8"	20.62
106-101	1/4"	20.62
106-102	3/8"	24.09
106-103	1/2"	31.47
106-104	3/4"	41.48
106-105	1"	61.75
106-106	1-1/4"	110.01
106-107	1-1/2"	126.54
106-108	2"	136.29

**REDUCING COUPLINGS**



Part #	Size	List Price
106-434	1/2" x 1/4"	26.60
106-435	1/2" x 3/8"	26.60
106-437	3/4" x 3/8"	36.83
106-438	3/4" x 1/2"	36.83
106-440	1" x 3/8"	43.55
106-441	1" x 1/2"	43.55
106-442	1" x 3/4"	43.55
106-443	1-1/4" x 3/8"	83.38
106-444	1-1/4" x 1/2"	83.38
106-445	1-1/4" x 3/4"	83.38
106-446	1-1/4" x 1"	83.38
106-447	1-1/2" x 1/2"	110.17
106-448	1-1/2" X 3/4"	110.17
106-449	1-1/2" x 1"	110.17
106-450	1-1/2" x 1-1/4"	110.17
106-458	2" x 1/2"	160.28
106-451	2" x 3/4"	160.28
106-452	2" x 1"	160.28
106-453	2" x 1-1/4"	160.28
106-454	2" x 1-1/2"	160.28

**45° ELBOWS**



Part #	Size	List Price
106-183	1/2"	46.45
106-184	3/4"	52.43
106-185	1"	79.12
106-186	1-1/4"	99.92
106-187	1-1/2"	124.71
106-188	2"	186.02

**COUPLINGS**



Part #	Size	List Price
106-410	1/8"	14.78
106-411	1/4"	14.78
106-412	3/8"	16.28
106-413	1/2"	16.78
106-414	3/4"	21.88
106-415	1"	31.15
106-416	1-1/4"	60.55
106-417	1-1/2"	82.67
106-418	2"	110.97
106-419	2-1/2"	300.83
106-420	3"	440.78

**UNIONS**



Part #	Size	List Price
106-600	1/8"	59.14
106-601	1/4"	59.14
106-602	3/8"	68.49
106-603	1/2"	68.59
106-604	3/4"	89.42
106-605	1"	143.85
106-606	1-1/4"	213.15
106-607	1-1/2"	268.44
106-608	2"	341.30

**TEES**



Part #	Size	List Price
106-250	1/8"	26.22
106-251	1/4"	26.22
106-252	3/8"	31.91
106-253	1/2"	43.27
106-254	3/4"	53.51
106-255	1"	81.74
106-256	1-1/4"	130.05
106-257	1-1/2"	186.50
106-258	2"	297.90

**CAPS**



Part #	Size	List Price
106-470	1/8"	11.76
106-471	1/4"	11.76
106-472	3/8"	13.90
106-473	1/2"	17.76
106-474	3/4"	22.60
106-475	1"	28.86
106-476	1-1/4"	42.75
106-477	1-1/2"	55.84
106-478	2"	90.55

**NIPPLES & FITTINGS**





# Black and Galvanized Steel Nipples

## Product Specifications

Welded steel pipe nipples both galvanized and black in diameters ranging from 1/8" up to 4" in lengths from close to 12" and cut-pipe up to 120".

## Technical Specifications

**Standards:** Product complies with ASTM A-53, 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	1.80	X Close (3/4")	57-001	1.28
56-002	1.86	x 1-1/2"	57-002	1.44
56-003	2.09	x 2"	57-003	1.55
56-004	2.27	x 2-1/2"	57-004	1.72
56-005	2.57	x 3"	57-005	1.91
56-006	2.75	x 3-1/2"	57-006	2.09
56-007	3.04	x 4"	57-007	2.42
56-008	3.90	x 4-1/2"	57-008	3.14
56-009	5.12	x 5"	57-009	3.62
56-010	5.52	x 5-1/2"	57-010	3.97
56-011	5.76	x 6"	57-011	4.40
56-012	7.19	x 7"	57-012	5.23
56-013	7.58	x 8"	57-013	5.52
56-014	7.97	x 9"	57-014	5.74
56-015	8.64	x 10"	57-015	6.10
56-016	9.77	x 11"	57-016	6.41
56-017	9.68	x 12"	57-017	6.44

**1/4" Diameter**



Part # Galv	List Price	Length	Part # Black	List Price
56-020	1.88	X Close (7/8")	57-020	1.54
56-021	2.02	x 1-1/2"	57-021	1.64
56-022	2.34	x 2"	57-022	1.82
56-023	2.70	x 2-1/2"	57-023	2.06
56-024	3.06	x 3"	57-024	2.27
56-025	3.29	x 3-1/2"	57-025	2.51
56-026	3.43	x 4"	57-026	2.77
56-027	4.12	x 4-1/2"	57-027	3.36
56-028	4.86	x 5"	57-028	3.97
56-029	5.64	x 5-1/2"	57-029	4.38
56-030	5.89	x 6"	57-030	4.88
56-031	7.09	x 7"	57-031	5.72
56-032	7.22	x 8"	57-032	5.83
56-033	7.58	x 9"	57-033	6.34
56-034	8.56	x 10"	57-034	6.88
56-035	10.90	x 11"	57-035	7.19
56-036	11.10	x 12"	57-036	7.62
56-038	28.75	x 18"		
56-037	34.44	x 24"		

*More sizes available*

**3/8" DIAMETER**



Part # Galv	List Price	Length	Part # Black	List Price
56-040	2.20	X Close (1")	57-040	1.69
56-041	2.54	x 1-1/2"	57-041	1.80
56-042	2.63	x 2"	57-042	2.23
56-043	2.94	x 2-1/2"	57-043	2.20
56-044	3.30	x 3"	57-044	2.62
56-045	4.26	x 3-1/2"	57-045	2.77
56-046	4.26	x 4"	57-046	3.07
56-047	4.49	x 4-1/2"	57-047	3.36
56-048	5.82	x 5"	57-048	4.49
56-049	6.29	x 5-1/2"	57-049	4.75
56-050	6.61	x 6"	57-050	5.04
56-051	7.01	x 7"	57-051	6.04
56-052	7.31	x 8"	57-052	6.61
56-053	8.84	x 9"	57-053	7.04
56-054	9.10	x 10"	57-054	7.48
56-055	9.28	x 11"	57-055	7.90
56-056	9.71	x 12"	57-056	8.12
56-430	23.70	x 18"	57-430	30.13
56-431	23.70	x 24"	57-431	22.13
56-432	26.48	x 30"	57-432	20.93
56-433	28.96	x 36"	57-433	28.60
56-234	57.19	x 42"	57-234	36.73
56-235	58.54	x 48"	57-235	40.34
56-236	62.71	x 60"	57-236	50.59
56-237	75.04	x 72"	57-237	63.84

Black Steel Nipples available in Schedule 40 Seamless beginning on page 222.

Black Steel Nipples available in Schedule 80 beginning on page 235.

Other Steel Nipples available upon request:

- Toe Nipples, see pg. 221
- L&R Nipples
- Di-electric Nipples
- Nipple Assortments
- Nipples cut to any lengths

**1/2" DIAMETER**



**3/4" DIAMETER**



**NIPPLES & FITTINGS**

Part # Galv	List Price	Length	Part # Black	List Price
56-060	1.33	X Close (1-1/8")	57-060	1.19
56-061	1.50	x 1-1/2"	57-061	1.28
56-062	1.66	x 2"	57-062	1.36
56-063	1.74	x 2-1/2"	57-063	1.44
56-064	1.88	x 3"	57-064	1.62
56-065	2.09	x 3-1/2"	57-065	1.78
56-066	2.30	x 4"	57-066	2.02
56-067	2.57	x 4-1/2"	57-067	2.17
56-068	2.78	x 5"	57-068	2.39
56-069	2.95	x 5-1/2"	57-069	2.68
56-070	3.14	x 6"	57-070	2.86
56-071	5.04	x 7"	57-071	4.33
56-072	5.50	x 8"	57-072	4.67
56-073	6.41	x 9"	57-073	5.26
56-074	6.55	x 10"	57-074	5.59
56-075	7.07	x 11"	57-075	6.25
56-076	7.46	x 12"	57-076	9.11
56-240	12.80	x 18"	57-240	14.90
56-241	20.08	x 24"	57-241	18.24
56-242	21.64	x 30"	57-242	22.44
56-243	28.08	x 36"	57-243	24.24
56-244	61.87	x 42"	57-244	51.52
56-245	32.30	x 48"	57-245	29.22
56-246	41.15	x 60"	57-246	33.94
56-247	47.26	x 72"	57-247	43.24

Part # Galv	List Price	Length	Part # Black	List Price
56-080	1.78	X Close (1-3/8")	57-080	1.62
56-081	1.88	x 1-1/2"	57-081	1.70
56-082	2.02	x 2"	57-082	1.79
56-083	2.18	x 2-1/2"	57-083	1.98
56-084	2.40	x 3"	57-084	2.17
56-085	2.65	x 3-1/2"	57-085	2.41
56-086	2.90	x 4"	57-086	2.64
56-087	3.17	x 4-1/2"	57-087	2.89
56-088	3.67	x 5"	57-088	3.19
56-089	4.19	x 5-1/2"	57-089	3.44
56-090	4.08	x 6"	57-090	3.71
56-091	6.90	x 7"	57-091	5.29
56-092	7.15	x 8"	57-092	5.88
56-093	7.80	x 9"	57-093	7.06
56-094	7.84	x 10"	57-094	7.39
56-095	9.11	x 11"	57-095	7.56
56-096	8.77	x 12"	57-096	7.84
56-250	14.30	x 18"	57-250	12.66
56-251	18.38	x 24"	57-251	14.99
56-252	21.94	x 30"	57-252	19.62
56-253	25.82	x 36"	57-253	22.69
56-254	66.40	x 42"	57-254	57.41
56-255	35.80	x 48"	57-255	28.84
56-256	43.85	x 60"	57-256	37.07
56-257	52.14	x 72"	57-257	42.50

As I was nursing my baby, my cousin's six-year-old daughter, Krissy, came into the room. Never having seen anyone breast feed before, she was intrigued and full of all kinds of questions about what I was doing. After mulling over my answers, she remarked, "My mom has some of those, but I don't think she knows how to use them."

His wife's graveside service was just barely finished, when there was a massive clap of thunder, followed by a tremendous bolt of lightning, accompanied by even more thunder rumbling in the distance. The little old man looked at the pastor and calmly said, "Well, she's there."

Some product stocked in Houston and Atlanta.



**STEEL NIPPLES****BLACK AND GALVANIZED SCHEDULE 40****1" DIAMETER**

Part # Galv	List Price	Length	Part # Black	List Price
56-100	2.62	X Close (1-1/2")	57-100	2.38
56-101	2.75	x 2"	57-101	2.64
56-102	3.00	x 2-1/2"	57-102	2.64
56-103	3.30	x 3"	57-103	2.94
56-104	3.97	x 3-1/2"	57-104	3.25
56-105	4.52	x 4"	57-105	3.60
56-106	4.51	x 4-1/2"	57-106	3.86
56-107	4.73	x 5"	57-107	4.16
56-108	5.28	x 5-1/2"	57-108	4.49
56-109	5.42	x 6"	57-109	4.88
56-110	8.12	x 7"	57-110	6.64
56-111	8.87	x 8"	57-111	7.27
56-112	16.60	x 9"	57-112	8.04
56-113	17.11	x 10"	57-113	8.63
56-114	20.92	x 11"	57-114	11.72
56-115	20.92	x 12"	57-115	10.07
56-260	26.03	x 18"	57-260	22.13
56-261	31.49	x 24"	57-261	25.62
56-262	52.68	x 30"	57-262	38.86
56-263	45.98	x 36"	57-263	36.42
56-264	84.64	x 42"	57-264	76.15
56-265	66.92	x 48"	57-265	65.04
56-266	80.29	x 60"	57-266	71.09
56-267	89.21	x 72"	57-267	99.90

**1-1/4" DIAMETER**

Part # Galv	List Price	Length	Part # Black	List Price
56-120	3.52	X Close (1-5/8")	57-120	3.13
56-121	3.66	x 2"	57-121	3.36
56-122	3.98	x 2-1/2"	57-122	3.61
56-123	4.36	x 3"	57-123	3.96
56-124	5.00	x 3-1/2"	57-124	4.33
56-125	5.76	x 4"	57-125	4.80
56-126	6.40	x 4-1/2"	57-126	5.17
56-127	6.16	x 5"	57-127	5.69
56-128	6.79	x 5-1/2"	57-128	5.88
56-129	6.97	x 6"	57-129	6.29
56-130	12.70	x 7"	57-130	8.72
56-131	11.71	x 8"	57-131	9.67
56-132	18.26	x 9"	57-132	10.42
56-133	18.82	x 10"	57-133	11.15
56-134	19.03	x 11"	57-134	13.30
56-135	23.70	x 12"	57-135	20.30
56-270	31.22	x 18"	57-270	24.07
56-271	40.64	x 24"	57-271	31.22
56-272	47.40	x 30"	57-272	48.54
56-273	61.08	x 36"	57-273	61.06
56-274	71.81	x 42"	57-274	72.28
56-275	81.44	x 48"	57-275	77.71
56-276	99.94	x 60"	57-276	78.06
56-277	166.18	x 72"	57-277	

**NIPPLES & FITTINGS**

While I sat in the reception area of my doctor's office, a woman rolled an elderly man in a wheelchair into the room. As she went to the receptionist's desk, the man sat there, alone and silent. Just as I was thinking I should make small talk with him, a little boy slipped off his mother's lap and walked over to the wheelchair. Placing his hand on the man's, he said, "I know how you feel. My mom makes me ride in the stroller too."

Just before I was deployed to Iraq, I sat my eight-year-old son down and broke the news to him. "I'm going to be away for a long time," I told him. "I'm going to Iraq." "Why?" he asked. "Don't you know there's a war going on over there?"

**1-1/2" DIAMETER**



Part # Galv	List Price	Length	Part # Black	List Price
56-140	4.40	X Close (1-3/4")	57-140	3.77
56-141	4.63	x 2"	57-141	3.89
56-142	4.86	x 2-1/2"	57-142	4.31
56-143	5.32	x 3"	57-143	4.86
56-144	5.81	x 3-1/2"	57-144	5.50
56-145	6.34	x 4"	57-145	5.84
56-146	7.13	x 4-1/2"	57-146	6.44
56-147	7.36	x 5"	57-147	6.55
56-148	8.22	x 5-1/2"	57-148	6.94
56-149	8.35	x 6"	57-149	7.27
56-150	12.56	x 7"	57-150	10.10
56-151	13.76	x 8"	57-151	11.06
56-152	18.00	x 9"	57-152	12.37
56-153	17.16	x 10"	57-153	13.08
56-154	22.31	x 11"	57-154	21.76
56-155	22.14	x 12"	57-155	15.26
56-280	33.46	x 18"	57-280	31.63
56-281	48.30	x 24"	57-281	44.23
56-282	74.52	x 30"	57-282	56.76
56-283	78.06	x 36"	57-283	68.83
56-284	134.80	x 42"	57-284	91.76
56-285	89.81	x 48"	57-285	106.15
56-286	131.02	x 60"	57-286	118.58
56-287	167.26	x 72"	57-287	149.10

**2" DIAMETER**



Part # Galv	List Price	Length	Part # Black	List Price
56-160	6.00	X Close (2")	57-160	4.99
56-161	6.92	x 2-1/2"	57-161	6.00
56-162	7.18	x 3"	57-162	6.29
56-163	8.10	x 3-1/2"	57-163	7.39
56-164	9.37	x 4"	57-164	7.31
56-165	9.71	x 4-1/2"	57-165	8.24
56-166	11.15	x 5"	57-166	8.74
56-167	10.68	x 5-1/2"	57-167	9.49
56-168	11.75	x 6"	57-168	9.85
56-169	17.83	x 7"	57-169	13.52
56-170	18.29	x 8"	57-170	15.64
56-171	31.44	x 9"	57-171	17.28
56-172	21.43	x 10"	57-172	19.45
56-173	24.53	x 11"	57-173	21.38
56-174	27.46	x 12"	57-174	25.55
56-290	39.68	x 18"	57-290	42.04
56-291	51.67	x 24"	57-291	58.50
56-292	79.85	x 30"	57-292	65.51
56-293	84.00	x 36"	57-293	74.71
56-294	145.93	x 42"	57-294	121.74
56-295	111.04	x 48"	57-295	126.70
56-296	142.26	x 60"	57-296	147.08
56-297	182.95	x 72"	57-297	180.41

**NIPPLES & FITTINGS**

On the way back from a Cub Scout meeting, my grandson innocently said to my son, "Dad, I know babies come from mommies' tummies, but how do they get there in the first place?" After my son hemmed and hawed awhile, my grandson finally spoke up in disgust, "You don't have to make up something, Dad. It's okay if you don't know the answer."

Working as a pediatric nurse, I had the difficult assignment of giving immunization shots to children. One day, I entered the examining room to give four-year-old Lizzie her needle. "No, no, no!" she screamed. "Lizzie," scolded her mother, "that's not polite behavior." With that, the girl yelled even louder, "No, thank you! No, thank you!"

Out bicycling one day with my eight-year-old granddaughter, Carolyn, I got a little wistful. "In ten years," I said, "You'll want to be with your friends and you won't go walking, biking, and swimming with me like you do now. Carolyn shrugged. "In ten years you'll be too old to do all those things anyway."



# STEEL NIPPLES

# BLACK AND GALVANIZED SCHEDULE 40

## 2-1/2" DIAMETER



Part # Galv	List Price	Length	Part # Black	List Price
56-180	17.54	X Close (2-1/2")	57-180	16.24
56-181	18.06	x 3"	57-181	16.94
56-182	22.79	x 3-1/2"	57-182	17.88
56-183	19.88	x 4"	57-183	18.42
56-184	22.42	x 4-1/2"	57-184	19.55
56-185	22.14	x 5"	57-185	20.58
56-186	24.76	x 5-1/2"	57-186	22.40
56-187	24.32	x 6"	57-187	22.54
56-188	30.86	x 7"	57-188	37.15
56-189	38.83	x 8"	57-189	31.12
56-190	37.08	x 9"	57-190	40.20
56-191	38.15	x 10"	57-191	31.16
56-192	40.28	x 11"	57-192	39.71
56-193	40.43	x 12"	57-193	37.67



## 4" DIAMETER

Part # Galv	List Price	Length	Part # Black	List Price
56-220	30.62	X Close (2-7/8")	57-220	29.69
56-221	31.43	3-1/2"		
56-223	33.68	x 4"	57-223	32.24
56-224	40.12	x 4-1/2"	57-224	34.20
56-225	42.36	x 5"	57-225	36.35
56-226	56.45	x 5-1/2"	57-226	38.56
56-227	45.68	x 6"	57-227	39.48
56-330	78.06	x 7"	57-330	69.31
56-229	75.79	x 8"	57-229	70.25
56-331	78.42	x 9"	57-331	80.93
56-332	91.99	x 10"	57-332	79.54
56-228	91.46	x 12"		



## 6" DIAMETER

Part # Galv	List Price	6" Dia.	Part # Black	List Price
56-300	189.38	Close (3-1/8")	57-300	114.60

## 3" DIAMETER



Part # Galv	List Price	Length	Part # Black	List Price
56-200	21.42	X Close (2-5/8")	57-200	20.44
56-201	22.57	x 3"	57-201	21.50
56-202	24.85	x 3-1/2"	57-202	22.56
56-203	25.39	x 4"	57-203	23.88
56-204	30.60	x 4-1/2"	57-204	33.50
56-205	31.38	x 5"	57-205	26.96
56-206	34.14	x 5-1/2"	57-206	27.80
56-207	33.05	x 6"	57-207	29.53
56-208	40.57	x 7"	57-208	37.67
56-209	40.98	x 8"	57-209	39.02
56-210	46.03	x 9"	57-210	44.40
56-211	49.32	x 10"	57-211	45.64
56-212	50.03	x 11"	57-212	54.44
56-213	65.62	x 12"	57-213	57.80
		x 24"	57-311	163.87

## BLACK STEEL TOE NIPPLE

Toe nipples are only threaded on one end to allow for easy connections, unthreaded end allows for welding a permanent leak-resistant bond.

- Roller cut
- Reamed and Chamfer or Saw Cut available upon request.



Part #	Size	List Price
57-021T	1/4" x 1-1/2"	5.45
57-022T	1/4" x 2"	5.45
57-041T	3/8" x 1-1/2"	5.63
57-042T	3/8" x 2"	5.95
57-061T	1/2" x 1-1/2"	4.44
57-062T	1/2" x 2"	4.44
57-081T	3/4" x 1-1/2"	5.45
57-082T	3/4" x 2"	5.45
57-101T	1" x 2"	8.09
57-102T	1" x 2-1/2"	8.52
57-121T	1-1/4" x 2"	10.08
57-122T	1-1/4" x 2-1/2"	10.70
57-141T	1-1/2" x 2"	11.93
57-142T	1-1/2" x 2-1/2"	13.32
57-160T	2" x 2"	15.12
57-161T	2" x 2-1/2"	17.30
57-181T*	2-1/2" x 3"	48.38
57-201T*	3" x 3"	60.96
57-223T*	4" x 4"	97.68

\* Saw Cut



**SCHEDULE 40 SEAMLESS NIPPLES  
1/8" DIAMETER**



Part #	Length	List Price
71-001	X Close (3/4")	9.47
71-002	x 1-1/2"	10.03
71-003	x 2"	10.78
71-004	x 2-1/2"	11.77
71-005	x 3"	12.96
71-006	x 3-1/2"	14.26
71-007	x 4"	15.82
71-008	x 4-1/2"	17.12
71-009	x 5"	23.59
71-010	x 5-1/2"	25.18
71-011	x 6"	27.02

**SCHEDULE 40 SEAMLESS NIPPLES  
1/4" DIAMETER**



Part #	Length	List Price
71-020	X Close (7/8")	11.16
71-021	x 1-1/2"	11.42
71-022	x 2"	12.60
71-023	x 2-1/2"	13.68
71-024	x 3"	15.32
71-025	x 3-1/2"	16.92
71-026	x 4"	18.77
71-027	x 4-1/2"	20.42
71-028	x 5"	28.87
71-029	x 5-1/2"	30.55

**SCHEDULE 40 SEAMLESS NIPPLES  
3/8" DIAMETER**



Part #	Length	List Price
71-040	X Close (1")	12.02
71-041	x 1-1/2"	12.52
71-042	x 2"	13.68
71-043	x 2-1/2"	15.37
71-044	x 3"	17.33
71-045	x 3-1/2"	19.04
71-046	x 4"	20.69
71-047	x 4-1/2"	22.78
71-048	x 5"	30.49
71-049	x 5-1/2"	32.47
71-050	x 6"	34.56

**SCHEDULE 40 SEAMLESS NIPPLES  
1/2" DIAMETER**



Part #	Length	List Price
71-060	X Close (1-1/8")	6.25
71-061	x 1-1/2"	6.67
71-062	x 2"	7.34
71-063	x 2-1/2"	8.11
71-064	x 3"	8.93
71-065	x 3-1/2"	10.18
71-066	x 4"	11.12
71-067	x 4-1/2"	12.25
71-068	x 5"	14.10
71-069	x 5-1/2"	15.36
71-070	x 6"	16.58

**SCHEDULE 40 SEAMLESS NIPPLES  
3/4" DIAMETER**



Part #	Length	List Price
71-080	X Close (1-3/8")	7.06
71-081	x 1-1/2"	7.60
71-082	x 2"	7.92
71-083	x 2-1/2"	8.95
71-084	x 3"	10.01
71-085	x 3-1/2"	11.36
71-086	x 4"	12.48
71-087	x 4-1/2"	13.63
71-088	x 5"	15.54
71-089	x 5-1/2"	16.76
71-090	x 6"	17.95

**SCHEDULE 40 SEAMLESS NIPPLES  
1" DIAMETER**



Part #	Length	List Price
71-100	X Close (1-1/2")	10.01
71-101	x 2"	10.58
71-102	x 2-1/2"	11.38
71-103	x 3"	13.30
71-104	x 3-1/2"	14.76
71-105	x 4"	15.83
71-106	x 4-1/2"	17.92
71-107	x 5"	20.70
71-108	x 5-1/2"	22.20
71-109	x 6"	23.66

**NIPPLES & FITTINGS**



**SCHEDULE 40 SEAMLESS NIPPLES  
1-1/4" DIAMETER**



Part #	Length	List Price
71-120	X Close (1-5/8")	12.55
71-121	x 2"	13.06
71-122	x 2-1/2"	14.38
71-123	x 3"	16.70
71-124	x 3-1/2"	18.25
71-125	x 4"	20.42
71-126	x 4-1/2"	22.20
71-127	x 5"	25.76
71-128	x 5-1/2"	27.71
71-129	x 6"	29.62

**SCHEDULE 40 SEAMLESS NIPPLES  
1-1/2" DIAMETER**



Part #	Length	List Price
71-140	X Close (1-3/4")	15.37
71-141	x 2"	16.00
71-142	x 2-1/2"	17.41
71-143	x 3"	20.00
71-144	x 3-1/2"	21.83
71-145	x 4"	24.44
71-146	x 4-1/2"	26.72
71-147	x 5"	30.91
71-148	x 5-1/2"	32.83
71-149	x 6"	36.35

**SCHEDULE 40 SEAMLESS NIPPLES  
2" DIAMETER**



Part #	Length	List Price
71-160	X Close (2")	15.06
71-161	x 2-1/2"	16.96
71-162	x 3"	19.70
71-163	x 3-1/2"	21.22
71-164	x 4"	23.70
71-165	x 4-1/2"	25.62
71-166	x 5"	29.93
71-167	x 5-1/2"	32.29
71-168	x 6"	34.15

**SCHEDULE 40 SEAMLESS NIPPLES  
2-1/2" DIAMETER**



Part #	Length	List Price
71-180	X Close (2-1/2")	50.16
71-181	x 3"	52.64
71-182	x 3-1/2"	56.62
71-183	x 4"	58.73
71-184	x 4-1/2"	61.88
71-185	x 5"	66.12
71-186	x 5-1/2"	69.42
71-187	x 6"	72.44

**SCHEDULE 40 SEAMLESS NIPPLES  
3" DIAMETER**



Part #	Length	List Price
71-200	X Close (2-5/8")	63.30
71-201	x 3"	66.95
71-202	x 3-1/2"	71.56
71-203	x 4"	75.76
71-204	x 4-1/2"	79.92
71-205	x 5"	85.50
71-206	x 5-1/2"	89.80
71-207	x 6"	93.98

**SCHEDULE 40 SEAMLESS NIPPLES  
4" DIAMETER**



Part #	Length	List Price
71-220	X Close (2-7/8")	90.24
71-223	x 4"	102.12
71-224	x 4-1/2"	108.10
71-225	x 5"	117.24
71-226	x 5-1/2"	121.84
71-227	x 6"	127.73

**NIPPLES &  
FITTINGS**

**Product Specifications**

Welded steel couplings both galvanized and black in diameters from 1/8" up to 4".

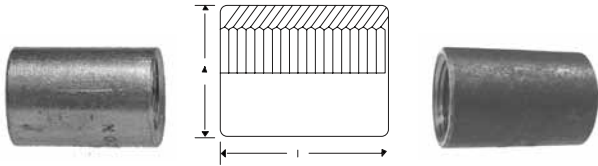
**Technical Specifications**

**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**



**HALF MERCHANT COUPLINGS**



**NIPLLES & FITTINGS**

Part # Galv	List Price	Size	Part # Black	List Price
64-770	3.25	1/8"	65-770	2.03
64-771	4.19	1/4"	65-771	2.86
64-772	3.83	3/8"	65-772	2.41
64-773	3.35	1/2"	65-773	2.34
64-774	4.76	3/4"	65-774	3.44
64-775	7.64	1"	65-775	5.42
64-776	8.26	1-1/4"	65-776	7.48
64-777	11.59	1-1/2"	65-777	8.02
64-778	19.00	2"	65-778	11.40
64-779	37.32	2-1/2"	65-779	34.72
64-780	80.98	3"	65-780	67.03
		3-1/2"	65-782	187.83
64-781	108.01	4"	65-781	85.98
		5"	65-783	193.03
		6"	65-784	132.15

Part # Galv	List Price	Size	Part # Black	List Price
		1/4"	65-771H	3.62
		3/8"	65-772H	4.19
64-773H	2.86	1/2"	65-773H	2.80
64-774H	3.88	3/4"	65-774H	3.71
64-775H	7.84	1"	65-775H	5.40
64-776H	6.94	1-1/4"	65-776H	7.00
64-777H	9.88	1-1/2"	65-777H	8.08
64-778H	17.35	2"	65-778H	10.97
		2-1/2"	65-779H	35.56
		3"	65-780H	51.22
		4"	65-781H	69.41

**Also available:**  
**API Line Couplings**  
**L&R Merchant Coupling**  
**Extra Heavy Merchant Couplings**

**MERCHANT COUPLINGS SPECIFICATIONS**

Size	Outside Diam.	Length	Weight 100 pcs approx.	Quantity per box	Threads per Inch	Threads
		Inches	Pounds			Type
1/8"	.59"	.78	3.5	1000	27	Straight
1/4"	.73"	1.18	7.5	500	18	Straight
3/8"	.86"	1.18"	9	600	18	Straight
1/2"	1.063"	1-9/16"	13.0	100	14	Straight
3/4"	1.313"	1-5/8"	28.3	50	14	Straight
1"	1.576"	2"	40.1	30	11-1/2	Straight
1-1/4"	1.900"	2-1/16"	49.5	25	11-1/2	Straight
1-1/2"	2.200"	2-1/16"	71.48	25	11-1/2	Straight
2"	2.750"	2-1/8"	112.0	20	11-1/2	Straight
2-1/2"	3.250"	3-1/8"	231.2	8	8	Taper Tapped
3"	4.000"	3-1/4"	353.8	5	8	Taper Tapped
4"	5.000"	3-1/2"	471.8	4	8	Taper Tapped

**ISO 9002 - CERTIFICATE OF QUALITY - UL/FM LISTED AND APPROVED**

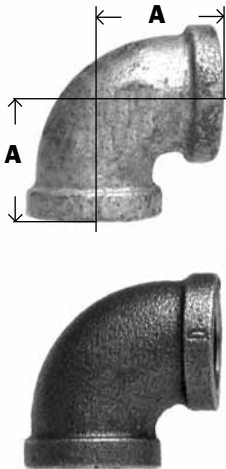
Our quality fittings are made with care and attention to detail. With better molds we can reduce parting lines and rough edges resulting in better fluid flow. By using a low temperature galvanizing process the coating is more durable which means a longer lasting fitting.

*(Every fitting is subjected to an underwater fitness test to ensure the highest quality)*

**SPECIFICATIONS**

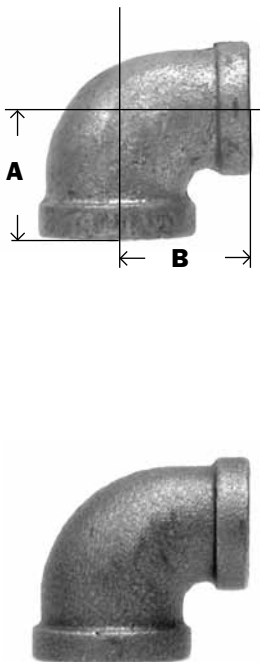
- MATERIAL: ASTM A 197 - Cuppla Malleable Iron, ASTM A 153 - Hot dipped galvanizing
- DIMENSIONS: ANSI B 16.3 - Malleable Iron threaded fittings, ANSI B 16.14 - Ferrous Pipe Plugs, Bushings etc..., ANSI B 16.39 - Malleable Iron threaded pipe unions.
- THREADS: ANSI B 2.1 or BS 21
- PHYSICAL PROPERTIES: Tensile Strength - 28.4kg ./mm. Min. Elongation - 5% min.

**ELBOWS 90°**



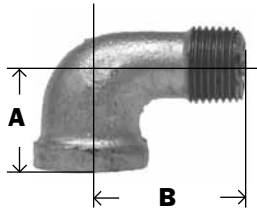
Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-100	3.42	1/8"	0.69	50/600	0.06	65-100	2.30
64-101	3.25	1/4"	0.81	35/420	0.11	65-101	2.09
64-102	3.07	3/8"	0.95	90/360	0.16	65-102	2.09
64-103	1.98	1/2"	1.12	50/200	0.24	65-103	1.67
64-104	2.64	3/4"	1.31	35/105	0.37	65-104	2.27
64-105	4.42	1"	1.50	20/60	0.59	65-105	3.64
64-106	7.44	1-1/4"	1.75	20/40	0.94	65-106	5.47
64-107	9.80	1-1/2"	1.94	15/30	1.15	65-107	7.27
64-108	14.88	2"	2.25	8/16	1.76	65-108	11.63
64-109	40.74	2-1/2"	2.70	12	2.90	65-109	26.63
64-110	68.39	3"	3.08	8	5.41	65-110	37.64
64-112	114.61	4"	3.79	2	9.07	65-112	84.43
64-114	404.93	6"	5.13	1	18.92	65-114	272.12

**REDUCING ELBOWS 90°**



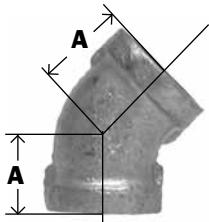
Part # Galvanized	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-121	6.90	3/8" x 1/8"	0.81	0.85	105/420	0.13	65-121	5.60
64-122	4.84	3/8" x 1/4"	0.88	0.90	90/360	0.14	65-122	3.32
64-123	4.01	1/2" x 1/4"	0.97	0.98	60/240	0.18	65-123	3.44
64-124	3.77	1/2" x 3/8"	1.04	1.03	60/240	0.21	65-124	3.04
64-126	5.40	3/4" x 3/8"	1.12	1.13	40/160	0.28	65-126	4.33
64-127	4.34	3/4" x 1/2"	1.20	1.22	40/160	0.32	65-127	3.29
64-130	5.56	1" x 1/2"	1.26	1.40	25/100	0.44	65-130	4.44
64-131	5.63	1" x 3/4"	1.37	1.45	50/100	0.52	65-131	4.20
64-133	11.92	1-1/4" x 3/4"	1.45	1.62	15/60	0.70	65-133	7.76
64-134	9.32	1-1/4" x 1"	1.58	1.67	10/40	0.81	65-134	7.26
64-136	13.51	1-1/2" x 3/4"	1.52	1.75	10/40	0.74	65-136	11.20
64-137	14.33	1-1/2" x 1"	1.65	1.80	10/40	0.66	65-137	9.78
64-138	15.29	1-1/2" x 1-1/4"	1.82	1.88	15/30	1.27	65-138	9.79
64-139	21.67	2" x 3/4"	1.60	1.97	9/36	1.21	65-139	16.44
64-140	21.26	2" x 1"	1.73	2.02	14/28	1.22	65-140	17.21
64-141	19.93	2" x 1-1/4"	1.90	2.10	10/20	1.43	65-141	17.21
64-142	17.42	2" x 1-1/2"	2.02	2.16	10/20	1.38	65-142	14.18
64-145	83.30	2-1/2" x 1-1/2"	2.16	2.51	6/12	2.20	65-145	39.65
64-146	60.55	2-1/2" x 2"	2.39	2.60	6/12	2.70	65-146	38.90
64-148	95.62	3" x 1-1/2"	2.28	2.83	6/18	4.50	65-148	67.06
		3" x 2-1/2"	2.83	2.99	8/16	5.00	65-151	67.06
		4" x 2"	2.72	3.43	1/12	8.00	65-152	174.13
		4" x 2-1/2"	3.03	3.50	1/8	8.00	65-153	174.13
		4" x 3"	3.27	3.58	1/9	9.00	65-154	163.25

**90° STREET ELBOWS**



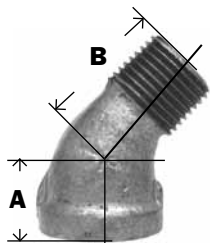
Part # Galvanized	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-160	4.19	1/8"	0.69	1.00	60/720	0.06	65-160	3.32
64-161	4.26	1/4"	0.80	1.17	35/420	0.10	65-161	3.18
64-162	4.42	3/8"	0.95	1.48	40/260	0.17	65-162	3.18
64-163	4.33	1/2"	1.10	1.59	60/180	0.25	65-163	3.26
64-164	4.18	3/4"	1.28	1.85	35/105	0.42	65-164	3.13
64-165	5.69	1"	1.47	2.10	45/90	0.57	65-165	4.60
64-166	10.19	1-1/4"	1.75	2.57	25/50	1.01	65-166	7.01
64-167	12.55	1-1/2"	1.90	2.63	9/27	1.32	65-167	8.94
64-168	19.82	2"	2.21	3.19	8/16	2.22	65-168	15.17
64-169	58.99	2-1/2"	2.65	3.78	5/10	2.83	65-169	38.66
64-170	89.04	3"	3.02	4.42	8	5.71	65-170	57.07
64-171	146.96	4"	3.72	5.57	4	10.47	65-171	92.98

**ELBOWS 45°**



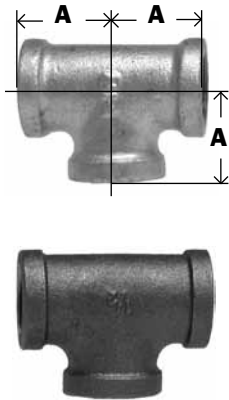
Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-180	4.88	1/8"	0.63	50/600	0.07	65-180	3.52
64-181	4.34	1/4"	0.73	30/360	0.11	65-181	3.56
64-182	4.34	3/8"	0.80	75/300	0.16	65-182	3.24
64-183	3.32	1/2"	0.88	50/200	0.24	65-183	2.80
64-184	4.64	3/4"	0.98	40/120	0.56	65-184	3.44
64-185	5.35	1"	1.12	20/60	0.35	65-185	4.40
64-186	9.74	1-1/4"	1.29	20/40	0.85	65-186	7.67
64-187	11.64	1-1/2"	1.43	10/30	1.11	65-187	9.50
64-188	17.35	2"	1.68	12/24	1.80	65-188	13.82
64-189	58.78	2-1/2"	1.95	12	2.68	65-189	40.36
64-190	85.46	3"	2.17	10	4.33	65-190	50.69
64-191	143.24	4"	2.61	4	7.54	65-191	101.76
64-192	506.18	6"	3.46	1	12.76	65-192	402.62

**45° STREET ELBOWS**



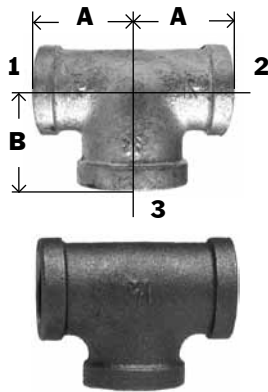
Part # Galvanized	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-200	6.37	1/8"	0.63	0.83	70/840	0.05	65-200	5.42
64-201	5.42	1/4"	0.73	0.94	40/480	0.13	65-201	3.83
64-202	6.24	3/8"	0.80	1.03	100/400	0.13	65-202	4.58
64-203	4.82	1/2"	0.86	1.30	75/225	0.23	65-203	3.68
64-204	7.76	3/4"	0.96	1.48	40/120	0.33	65-204	5.34
64-205	9.60	1"	1.10	1.69	25/75	0.55	65-205	6.59
64-206	14.41	1-1/4"	1.26	1.87	10/40	0.76	65-206	11.03
64-207	17.46	1-1/2"	1.40	2.05	10/30	1.13	65-207	14.02
64-208	30.00	2"	1.65	2.38	12/24	1.76	65-208	24.84
64-209	70.57	2-1/2"	1.95	2.72	12/24	2.57	65-209	52.76
64-210	114.14	3"	2.17	3.16	3/6	3.52	65-210	77.76
64-211	237.17	4"	2.61	3.90	4	8.29	65-211	144.37

**TEES**



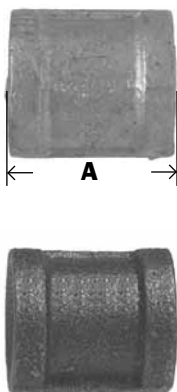
Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-250	4.58	1/8"	0.69	120/480	0.09	65-250	3.55
64-251	4.00	1/4"	0.81	75/300	0.16	65-251	3.17
64-252	4.22	3/8"	0.95	45/180	0.24	65-252	3.17
64-253	2.51	1/2"	1.12	40/120	0.35	65-253 <sup>5</sup>	2.02
64-254	4.39	3/4"	1.31	35/70	0.55	65-254	2.99
64-255	6.50	1"	1.50	20/40	0.84	65-255	5.14
64-256	11.29	1-1/4"	1.75	14/28	1.37	65-256	8.33
64-257	14.08	1-1/2"	1.94	12/24	1.74	65-257	10.36
64-258	23.51	2"	2.26	8/16	2.54	65-258	17.63
64-259	63.13	2-1/2"	2.70	4/8	3.76	65-259	39.85
64-260	74.06	3"	3.08	6	6.36	65-260	54.47
64-261	175.09	4"	3.79	1/2	11.69	65-261	140.48
64-262	539.94	6"	5.13	1	24.55	65-262	402.62

**BULLHEAD TEES**



Part # Galvanized	List Price	Size (1&2) x 3	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-280	6.90	1/2" x 3/4"	1.22	1.20	30/120	0.43	65-280	5.63
64-733	10.40	1/2" x 1"	1.36	1.26	40/160	0.48	65-733	12.88
64-289	10.19	3/4" x 1"	1.45	1.37	40/80	0.67	65-289	7.14
64-299	16.21	1" x 1-1/4"	1.67	1.58	11/44	0.91	65-299	13.28
64-300	27.56	1" x 1-1/2"	1.80	1.65	9/36	1.16	65-300	21.14
64-317	23.36	1-1/4" x 1-1/2"	1.88	1.82	12/24	1.45	65-317	16.61
64-319	43.55	1-1/2" x 2"	2.12	1.98	16	1.98	65-319	45.83

**COUPLINGS**



Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-410	4.06	1/8"	0.96	70/840	0.06	65-410	3.30
64-411	3.77	1/4"	1.06	40/480	0.09	65-411	3.11
64-412	3.77	3/8"	1.16	40/480	0.06	65-412	3.38
64-413	2.99	1/2"	1.34	60/240	0.19	65-413	3.38
64-414	3.49	3/4"	1.52	50/150	0.30	65-414	2.76
64-415	5.74	1"	1.67	25/100	0.45	65-415	4.20
64-416	7.90	1-1/4"	1.93	16/64	0.65	65-416	5.36
64-417	9.02	1-1/2"	2.15	18/36	0.90	65-417	7.19
64-418	13.14	2"	2.54	12/24	1.39	65-418	9.80
64-419	40.18	2-1/2"	2.88	8/16	2.42	65-419	28.43
64-420	53.70	3"	3.18	12	3.40	65-420	38.41
64-421	114.06	4"	3.69	3/6	6.23	65-421	76.66
64-422	297.92	6"	4.23	2	11.22	65-422	205.70

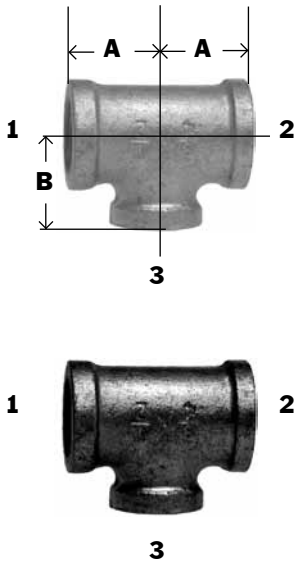
**NIPPLES & FITTINGS**





**REDUCING TEES**

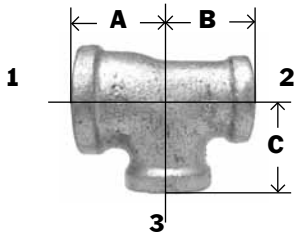
(SAME SIZE ON RUN, REDUCING ON BRANCH)



Part # Galvanized	List Price	Size (1&2) x 3	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-273	6.64	3/8" x 1/4"	0.81	0.90	25	0.20	65-273	6.35
64-276	5.05	1/2" x 1/4"	0.97	0.98	40/160	0.26	65-276	3.82
64-279	5.88	1/2" x 3/8"	1.04	1.03	40/160	0.29	65-279	4.79
64-282	6.25	3/4" x 1/4"	1.05	1.08	125	0.35	65-282	6.89
64-283	6.66	3/4" x 3/8"	1.12	1.13	55/110	0.40	65-283	6.12
64-286	7.07	3/4" x 1/2"	1.20	1.18	50/100	0.47	65-286	4.61
64-268	11.90	1" x 1/4"	1.11	1.22	20/80	0.52	65-268	6.86
64-269	10.39	1" x 3/8"	1.18	1.27	15/60	0.60	65-269	8.87
64-291	8.47	1" x 1/2"	1.26	1.40	15/60	0.70	65-291	6.29
64-298	8.47	1" x 3/4"	1.37	1.45	12/48	0.77	65-298	6.29
64-301	19.82	1-1/4" x 1/2"	1.34	1.45	20/40	0.97	65-301	11.40
64-303	13.08	1-1/4" x 3/4"	1.45	1.62	20/40	1.00	65-303	10.01
64-306	13.08	1-1/4" x 1"	1.58	1.66	20/40	1.10	65-306	10.84
64-316	16.21	1-1/2" x 3/4"	1.41	1.75	15/30	1.25	65-316	12.62
64-318	17.28	1-1/2" x 1"	1.65	1.88	10/30	1.41	65-318	12.62
64-322	20.80	1-1/2" x 1-1/4"	1.65	1.88	12/24	1.58	65-322	16.32
64-327	23.58	2" x 1/2"	1.49	1.88	10/20	1.61	65-327	19.79
64-328	23.58	2" x 3/4"	1.60	1.97	10/20	1.77	65-328	19.79
64-330	23.58	2" x 1"	1.73	2.02	10/20	1.97	65-330	19.79
64-334	29.64	2" x 1-1/4"	1.86	2.06	8/16	1.92	65-334	20.90
64-336	29.64	2" x 1-1/2"	1.98	2.12	8/16	2.08	65-336	20.90
64-343	80.39	2-1/2" x 1-1/2"	2.16	2.51	5/10	3.38	65-343	51.83
64-351	102.41	3" x 2"	2.52	2.89	3/6	4.54	65-351	69.20

**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	10.64	3/4" x 1/2" x 1/2"	1.18	1.18	1.20	30/180	0.45	65-287	5.11
64-288	7.33	3/4" x 1/2" x 3/4"	1.28	1.20	1.28	20/80	0.52	65-288	5.63
		1" x 1/2" x 1/2"	1.31	1.22	1.31	20/120	0.60	65-292	8.50
		1" x 3/4" x 3/4"	1.34	1.28	1.42	15/60	0.66	65-296	6.62
		1-1/4" x 1" x 1"	1.55	1.47	1.63	18/72	0.98	65-309	14.52

**LOCKNUTS**



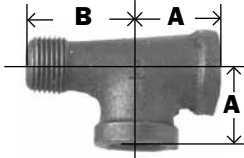
Part # Galvanized	Size	Hex	Thickness	Box/ Case	Approx. Wt. Lbs.	List Price
64-703	1/2"	1.18	0.32	150/600	0.08	2.57
64-704	3/4"	1.43	0.35	90/360	0.13	2.93
64-705	1"	1.75	0.39	60/240	0.19	5.54
64-706	1-1/4"	2.10	0.43	45/180	0.27	5.39
64-707	1-1/2"	2.35	0.48	45/135	0.47	7.64
64-708	2"	2.88	0.54	25/75	0.56	11.66

\* Black locknuts available on special order basis.

# MALLEABLE FITTINGS

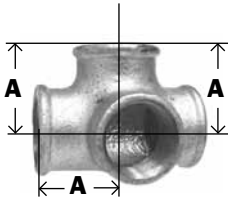
# BLACK & GALVANIZED MALLEABLE IRON 150#

## MALLEABLE SERVICE TEE (STREET TEE)



Part # Galvanized	List Price	Size	A	B	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-363	8.29	1/2"	1.12	1.62	40/120	0.31	65-363	5.78
64-364	9.10	3/4"	1.31	1.89	25/75	0.55	65-364	7.67

## SIDE OUTLET TEES



Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-383	12.92	1/2"	1.12	25/100	0.38	65-383	9.98
64-384	16.32	3/4"	1.31	15/60	0.58	65-384	12.73
64-385	26.45	1"	1.50	20/40	0.89	65-385	20.42
64-386	44.03	1-1/4"	1.75	12/24	1.39	65-386	31.97

## REDUCING COUPLINGS



Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-430	3.49	1/4" x 1/8"	1.00	50/600	0.08	65-430	2.57
64-431	3.54	3/8" x 1/8"	1.13	35/420	0.10	65-431	2.80
64-432	3.54	3/8" x 1/4"	1.13	30/360	0.12	65-432	2.57
64-433	3.96	1/2" x 1/8"	1.25	75/300	0.17	65-433	2.78
64-434	3.22	1/2" x 1/4"	1.25	75/300	0.15	65-434	2.57
64-435	2.99	1/2" x 3/8"	1.25	60/240	0.16	65-435	2.34
64-439	4.34	3/4" x 1/8"	1.44	70/210	0.20	65-439	3.24
64-436	4.01	3/4" x 1/4"	1.44	45/180	0.21	65-436	3.18
64-437	4.01	3/4" x 3/8"	1.44	45/180	0.22	65-437	3.18
64-438	3.54	3/4" x 1/2"	1.44	60/180	0.29	65-438	2.53
64-459	7.08	1" x 1/4"	1.69	45/135	0.32	65-459	4.92
64-440	7.24	1" x 3/8"	1.69	30/120	0.35	65-440	4.99
64-441	5.54	1" x 1/2"	1.69	30/120	0.37	65-441	4.27
64-442	5.42	1" x 3/4"	1.69	25/100	0.40	65-442	4.18
64-460	14.77	1-1/4" x 3/8"	2.06	25/75	0.49	65-460	11.33
64-444	9.24	1-1/4" x 1/2"	2.06	25/75	0.55	65-444	6.18
64-445	7.48	1-1/4" x 3/4"	2.06	25/75	0.60	65-445	5.36
64-446	7.48	1-1/4" x 1"	2.06	15/60	0.66	65-446	5.88
64-443	17.35	1-1/2" x 3/8"	2.31	15/120	0.61	65-443	10.02
64-447	10.90	1-1/2" x 1/2"	2.31	20/60	0.77	65-447	7.86
64-448	9.64	1-1/2" x 3/4"	2.31	15/60	0.77	65-448	8.86
64-449	9.64	1-1/2" x 1"	2.31	25/50	0.84	65-449	7.86
64-450	9.12	1-1/2" x 1-1/4"	2.31	12/48	0.86	65-450	6.79
64-458	25.13	2" x 1/2"	2.81	12/36	1.12	65-458	12.79
64-451	15.74	2" x 3/4"	2.81	12/36	1.11	65-451	11.27
64-452	13.14	2" x 1"	2.81	12/36	1.28	65-452	10.63
64-453	13.90	2" x 1-1/4"	2.81	9/27	1.30	65-453	11.27
64-454	13.14	2" x 1-1/2"	2.81	9/27	1.41	65-454	9.83
64-461	41.45	2-1/2" x 1-1/2"	3.25	7/14	1.74	65-461	29.30
64-462	40.68	2-1/2" x 2"	3.25	7/14	1.79	65-462	25.13
64-486	60.04	3" x 1-1/2"	3.69	16/32	2.18	65-486	39.19
64-456	52.54	3" x 2"	3.69	6/12	2.26	65-456	29.60
64-463	54.07	3" x 2-1/2"	3.69	5/10	3.52	65-463	39.19
64-464	116.98	4" x 2"	4.38	3/6	4.96	65-464	78.54
64-465	107.28	4" x 2-1/2"	4.38	3/6	4.00	65-465	78.54
64-457	116.98	4" x 3"	4.38	3/6	4.07	65-457	73.93
		6" x 4"	4.24	1/8	9.84	65-491	297.88

NIPPLES & FITTINGS



**HEX BUSHING**



Hex



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 233
		*3/8" x 1/8"						
		*3/8" x 1/4"						
64-503	4.84	1/2" x 1/8"	0.84	1.03	150/600	0.10	65-503	3.19
		*1/2" x 1/4"						
64-505	4.84	1/2" x 3/8"	0.75	1.03	150/600	0.07	65-505	2.99
64-506	5.16	3/4" x 1/8"	0.85	1.15	75/300	0.17	65-506	3.13
64-507	4.99	3/4" x 1/4"	0.85	1.15	75/300	0.16	65-507	3.08
64-508	5.27	3/4" x 3/8"	0.85	1.15	75/300	0.14	65-508	3.13
64-509	4.51	3/4" x 1/2"	0.93	1.15	75/300	0.10	65-509	2.65
64-510	5.40	1" x 1/4"	1.13	1.12	50/200	0.19	65-510	3.68
64-511	8.47	1" x 3/8"	1.13	1.12	50/200	0.24	65-511	3.78
64-512	4.88	1" x 1/2"	1.10	1.42	50/200	0.21	65-512	2.59
64-513	4.34	1" x 3/4"	1.10	1.42	50/200	0.17	65-513	2.59
64-514	7.84	1-1/4" x 1/4"	1.24	1.12	30/120	0.31	65-514	4.74
64-515	7.84	1-1/4" x 3/8"	1.24	1.12	30/120	0.43	65-515	4.22
64-516	6.85	1-1/4" x 1/2"	1.24	1.24	30/120	0.29	65-516	4.07
64-517	6.25	1-1/4" x 3/4"	1.08	1.76	30/120	0.35	65-517	3.64
64-518	6.25	1-1/4" x 1"	1.08	1.76	30/120	0.29	65-518	3.64
64-519	15.88	1-1/2" x 1/4"	1.30	1.12	25/75	0.64	65-519	5.62
64-520	15.88	1-1/2" x 3/8"	1.30	1.12	25/75	0.64	65-520	5.62
64-521	9.10	1-1/2" x 1/2"	1.30	1.34	25/75	0.40	65-521	4.46
64-522	9.10	1-1/2" x 3/4"	1.30	1.44	25/75	0.39	65-522	4.46
64-523	8.17	1-1/2" x 1"	1.23	2.00	25/75	0.46	65-523	4.27
64-524	7.55	1-1/2" x 1-1/4"	1.23	2.00	25/75	0.32	65-524	4.27
64-525	12.06	2" x 3/8"	1.28	1.12	20/60	0.95	65-525	7.00
64-527	11.32	2" x 1/2"	1.39	1.34	20/60	0.84	65-527	7.00
64-528	10.56	2" x 3/4"	1.39	1.63	20/60	0.63	65-528	5.92
64-529	9.98	2" x 1"	1.39	1.77	20/60	0.67	65-529	5.92
64-530	9.98	2" x 1-1/4"	1.50	2.48	20/60	0.73	65-530	5.92
64-531	8.48	2" x 1-1/2"	1.50	2.48	20/60	0.70	65-531	5.92
64-546	24.86	2-1/2" x 1/2"	1.51	1.34	15/30	1.57	65-546	10.02
64-547	16.43	2-1/2" x 3/4"	1.51	1.63	15/30	1.54	65-547	10.02
64-532	23.50	2-1/2" x 1"	1.51	1.95	15/30	1.51	65-532	10.02
64-533	16.05	2-1/2" x 1-1/4"	1.51	2.39	15/30	1.41	65-533	10.02
64-534	16.08	2-1/2" x 1-1/2"	1.51	2.98	15/30	1.37	65-534	10.02
64-535	14.32	2-1/2" x 2"	1.54	2.98	15/30	1.11	65-535	10.02
64-550	21.65	3" x 1"	1.61	1.95	12/24	1.46	65-550	13.35
64-549	25.42	3" x 1-1/4"	1.61	2.39	12/24	2.22	65-549	14.57
64-537	19.28	3" x 1-1/2"	1.61	2.68	12/24	1.96	65-537	14.57
64-538	20.38	3" x 2"	1.61	3.86	12/24	1.91	65-538	14.57
64-539	38.78	3" x 2-1/2"	1.61	3.86	12/24	1.50	65-539	13.69
64-551	74.46	4" x 3/4"	2.15	4.90	5/10	4.50	65-551	34.75
64-553	48.46	4" x 1"	2.00	4.75	5/10	4.00	65-553	30.00
64-540	53.90	4" x 1-1/2"	1.82	2.68	5/10	3.91	65-540	29.18
64-541	40.04	4" x 2"	1.82	3.31	5/10	2.89	65-541	28.58
64-542	45.42	4" x 2-1/2"	2.06	3.87	5/10	2.77	65-542	25.00
64-543	41.06	4" x 3"	2.17	4.96	5/10	3.03	65-543	27.28
		5" x 4"					65-544	68.58
64-545	87.20	6" x 4"	2.33	5.79	2/4	5.69	65-545	76.37

**NIPPLES & FITTINGS**

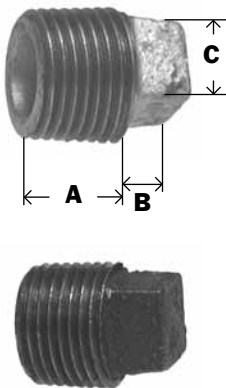


**UNIONS**



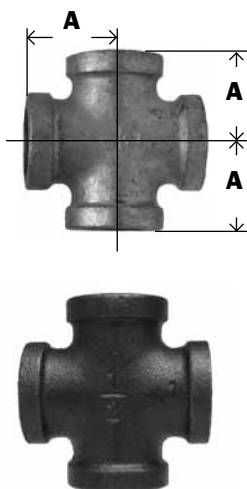
Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-600	15.05	1/8"	1.26	60/240	0.19	65-600	12.52
64-601	14.57	1/4"	1.44	20/240	0.20	65-601	11.52
64-602	9.71	3/8"	1.61	40/160	0.35	65-602	9.31
64-603	9.24	1/2"	1.72	50/100	0.43	65-603	7.00
64-604	10.14	3/4"	1.94	35/70	0.63	65-604	9.10
64-605	12.67	1"	2.06	20/40	0.91	65-605	10.92
64-606	19.63	1-1/4"	2.26	15/30	1.35	65-606	14.57
64-607	24.24	1-1/2"	2.41	10/20	1.75	65-607	19.09
64-608	31.42	2"	2.75	6/12	2.62	65-608	27.01
64-609	94.98	2-1/2"	3.22	4/8	4.40	65-609	69.41
64-610	132.94	3"	3.50	4/8	5.63	65-610	80.45
64-611	287.98	4"	3.85	2/4	10.31	65-611	211.36

**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. 233						
		*1/4"							
		*3/8"							
64-653	2.17	1/2"	0.58	0.38	0.56	50/600	0.09	65-653	1.30
64-654	3.37	3/4"	0.65	0.44	0.63	30/360	0.13	65-654	1.44
64-655	3.08	1"	0.75	0.50	0.82	20/240	0.22	65-655	2.02
64-656	5.17	1-1/4"	0.82	0.56	0.94	40/120	0.40	65-656	3.08
64-657	7.01	1-1/2"	0.85	0.62	1.13	30/90	0.46	65-657	3.73
64-658	8.68	2"	0.91	0.68	1.31	20/60	0.74	65-658	4.78
64-659	17.12	2-1/2"	1.26	0.74	1.50	16/32	1.24	65-659	11.27
64-660	23.56	3"	1.16	0.80	1.69	16/32	1.69	65-660	15.98
64-661	30.38	4"	1.22	1.00	2.28	6/12	2.70	65-661	33.30

**CROSSES**



Part # Galvanized	List Price	Size	A	Box/ Case	Approx. Wt. Lbs.	Part # Black	List Price
64-390	14.44	1/8"	0.65	---	0.12	65-390	11.38
64-391	14.44	1/4"	0.80	60/240	0.18	65-391	9.73
64-392	14.44	3/8"	0.95	50/150	0.27	65-392	9.73
64-393	14.44	1/2"	1.12	30/90	0.45	65-393	9.73
64-394	16.07	3/4"	1.31	20/60	0.69	65-394	11.11
64-395	18.16	1"	1.50	15/30	1.06	65-395	12.34
64-396	26.29	1-1/4"	1.75	10/20	1.56	65-396	20.05
64-397	31.91	1-1/2"	1.94	8/16	1.91	65-397	24.82
64-398	60.88	2"	2.25	5/10	3.24	65-398	41.10
64-399	152.12	2-1/2"	2.71	3/6	5.55	65-399	92.40
64-400	204.92	3"	3.06	1/8	8.00	65-400	147.29

Don't see what your looking for? Hex Nipples, Wyes, etc... Just call us for availability.

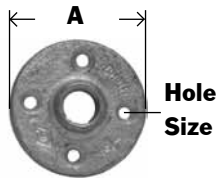
**CAPS**



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	1.44
64-472	3.05	3/8"	0.74	60/720	0.08	65-472	1.79
64-473	2.33	1/2"	0.87	75/300	0.13	65-473	1.85
64-474	3.34	3/4"	0.97	40/160	0.22	65-474	2.44
64-475	3.70	1"	1.16	25/100	0.37	65-475	2.70
64-476	5.38	1-1/4"	1.28	20/80	0.49	65-476	3.68
64-477	6.85	1-1/2"	1.33	18/54	0.64	65-477	5.22
64-478	8.66	2"	1.45	12/36	1.00	65-478	6.19
64-479	27.55	2-1/2"	1.70	20/40	1.45	65-479	16.03
64-480	33.37	3"	1.80	24	2.20	65-480	25.32
64-481	66.26	4"	2.08	6/12	3.75	65-481	39.54
64-482	241.20	6"	2.55	2/4	8.86	65-482	159.08

\* 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	14.20	1/2"	3.50	0.50	0.25	25/50	0.63	65-692	6.55
64-693	15.85	3/4"	3.50	0.63	0.25	15/45	0.75	65-693	6.79
64-694	17.44	1"	4.00	0.69	0.25	15/30	1.06	65-694	9.79
64-695	19.87	1-1/4"	4.00	0.75	0.25	10/30	1.08	65-695	10.92
64-696	24.80	1-1/2"	4.50	0.87	0.31	8/24	1.43	65-696	11.98
64-697	32.66	2"	5.50	1.00	0.31	8/16	2.23	65-697	15.47

**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.

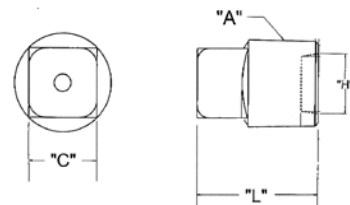


**Magnetic Drain Plugs** prevent excessive wear to the system's components.

**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

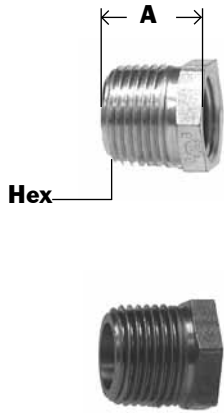
Part	Size "A"	Head Width "C"	Recess Dia. "H"	O/L Length "L"	List Price
28-996	3/8 - 18	.428 - .440	.435 - .445	.805 - .860	3.12
28-997	1/2 - 14	.553 - 565	.560 - .570	.970 - 1.04	3.73
28-998	3/4 - 14	.615 - .627	.725 - .735	1.120 - 1.170	4.72
28-999	1-11 1/2	.803 - 815	.895 - .905	1.25 - 1.33	6.84



## STEEL FITTINGS

## BLACK & GALVANIZED STEEL FITTINGS

### HEX BUSHINGS



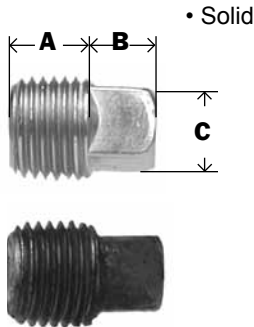
Part # Galvanized	List Price	Size M x F	A	Hex	Approx. Wt. Lbs.	Part # Black	List Price
66-500	1.22	1/4" x 1/8"	0.63	0.62	0.02	67-500	1.49
66-501	1.44	3/8" x 1/8"	0.66	0.68	0.04	67-501	1.96
66-502	1.44	3/8" x 1/4"	0.66	0.68	0.02	67-502	1.96
66-503	2.26	1/2" x 1/8"	0.80	0.87	0.10	67-503	2.10
66-504	2.26	1/2" x 1/4"	0.80	0.87	0.08	67-504	2.10
66-505	2.26	1/2" x 3/8"	0.80	0.87	0.06	67-505	2.10
66-506	3.54	3/4" x 1/8"	0.94	1.06	0.18	67-506	3.21
66-507	3.54	3/4" x 1/4"	0.94	1.06	0.14	67-507	3.21
66-508	3.54	3/4" x 3/8"	0.94	1.06	0.14	67-508	3.21
66-509	3.54	3/4" x 1/2"	0.94	1.06	0.10	67-509	3.21
66-510	6.65	1" x 1/4"	1.00	1.31	0.16	67-510	5.65
66-511	6.65	1" x 3/8"	1.00	1.31	0.26	67-511	5.65
66-512	6.65	1" x 1/2"	1.00	1.31	0.22	67-512	5.65
66-513	6.65	1" x 3/4"	1.00	1.31	0.14	67-513	5.65

### CAPS



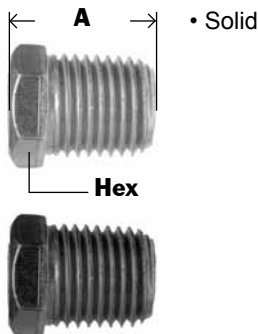
Part # Galvanized	List Price	Size	A	Hex	Approx. Wt. Lbs.	Part # Black	List Price
66-470	1.14	1/8"	0.53	0.56	0.02	67-470	1.01
66-471	1.20	1/4"	0.63	0.62	0.04	67-471	1.21
66-472	2.01	3/8"	0.69	0.81	0.06	67-472	1.89
66-473	3.35	1/2"	0.87	1.00	0.12	67-473	2.95
66-474	4.77	3/4"	0.97	1.18	0.16	67-474	4.22
66-475	6.88	1"	1.16	1.50	0.30	67-475	5.85
66-476	31.05	1-1/4"	1.28	2.00	0.68	67-476	28.11
66-477	42.17	1-1/2"	1.35	2.25	0.83	67-477	38.66
66-478	88.55	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	0.46
66-670	0.50	1/8"	0.33	0.24	0.28	0.01	67-670	0.46
66-671	0.56	1/4"	0.45	0.28	0.37	0.02	67-671	0.44
66-672	0.88	3/8"	0.50	0.31	0.43	0.04	67-672	0.70
66-653	1.34	1/2"	0.59	0.38	0.55	0.12	67-653	1.21
66-654	1.98	3/4"	0.63	0.44	0.62	0.18	67-654	1.77
66-655	7.18	1"	0.75	0.5	0.81	0.34	67-655	6.36
66-656	12.83	1-1/4"	0.80	0.56	0.93	0.62	67-656	10.86
66-657	18.76	1-1/2"	0.83	0.62	1.12	0.82	67-657	16.45
66-658	25.67	2"	0.88	0.68	1.31	1.36	67-658	22.38

### HEX HEAD PLUGS



Part # Galvanized	List Price	Size	A	Hex	Approx. Wt. Lbs.	Part # Black	List Price
66-770	0.46	1/8"	0.55	0.43	0.01	67-770	0.35
66-771	0.75	1/4"	0.74	0.56	0.04	67-771	0.67
66-772	1.33	3/8"	0.67	0.68	0.06	67-772	1.21
66-773	2.27	1/2"	0.80	0.70	0.12	67-773	2.01
66-774	3.45	3/4"	0.94	1.06	0.18	67-774	3.21
66-775	7.33	1"	1.00	1.31	0.22	67-775	5.65
66-776	10.53	1-1/4"	1.17	1.75	0.7	67-776	9.60
66-777	25.48	1-1/2"	1.51	2.00	1.2	67-777	20.21
66-778	43.64	2"	1.65	2.50	2.06	67-778	37.20

• 1010 Carbon Steel, 3/4 taper threads ( see hydraulic section for 7/8 taper threads.)

**COUNTERSUNK PLUG - Square Socket**



Galvanized						Black	
Part #	List Price	Size	A	Socket Size	Approx. Wt. Lbs.	Part #	List Price
66-630	0.35	1/8"	0.29	0.19	0.01	67-630	0.33
66-631	0.49	1/4"	0.45	0.25	0.02	67-631	0.46
66-632	0.67	3/8"	0.45	0.31	0.04	67-632	0.59
66-633	1.03	1/2"	0.59	0.38	0.08	67-633	0.89
66-634	1.58	3/4"	0.60	0.50	0.12	67-634	1.44
66-635	3.86	1"	0.75	0.50	0.16	67-635	3.22
66-636	6.27	1-1/4"	0.80	0.75	0.32	67-636	6.00
66-637	14.27	1-1/2"	0.83	0.75	0.45	67-637	12.48
66-638	25.90	2"	0.88	0.875	2.06	67-638	21.99

**COUNTERSUNK PLUG - Hex Socket**



Galvanized						Black	
Part #	List Price	Size	A	Socket Size	Approx. Wt. Lbs.	Part #	List Price
66-760	0.49	1/16"	0.29	0.15	0.01	67-760	0.46
66-761	0.35	1/8"	0.29	0.18	0.01	67-761	0.46
66-762	0.46	1/4"	0.44	0.25	0.02	67-762	0.46
66-763	0.59	3/8"	0.44	0.31	0.04	67-763	0.59
66-764	0.91	1/2"	0.59	0.37	0.08	67-764	0.89
66-765	1.58	3/4"	0.60	0.56	0.14	67-765	1.43
66-766	4.00	1"	0.75	0.625	0.22	67-766	2.82
66-767	6.27	1-1/4"	0.80	0.75	0.37	67-767	4.90
66-768	14.27	1-1/2"	0.83	1.0	0.45	67-768	12.48
66-769	25.90	2"	0.88	1.0	0.86	67-769	21.99

**FACE BUSHING**



Galvanized					Black	
Part #	List Price	Size M x F	A	Approx. Wt. Lbs.	Part #	List Price
66-700	1.21	1/4" x 1/8"	0.44	0.01	67-700	1.14
66-701	1.49	3/8" x 1/8"	0.48	0.02	67-701	1.33
66-702	2.25	3/8" x 1/4"	0.48	0.02	67-702	1.33
		1/2" x 1/8"	0.56	0.04	67-703	2.01
66-704	2.10	1/2" x 1/4"	0.56	0.04	67-704	2.01
66-705	2.25	1/2" x 3/8"	0.56	0.04	67-705	2.01
		3/4" x 1/4"	0.62	0.12	67-707	2.65
66-708	3.25	3/4" x 3/8"	0.62	0.10	67-708	2.65
66-709	3.25	3/4" x 1/2"	0.62	0.10	67-709	2.72
		1" x 3/8"	0.75	0.18	67-711	4.88
66-712	5.55	1" x 1/2"	0.75	0.16	67-712	4.88
66-713	5.80	1" x 3/4"	0.75	0.16	67-713	4.88



**STEEL NIPPLES****BLACK & GALVANIZED SCHEDULE 80****STANDARDS & SPECIFICATIONS**

- DIMENSIONAL: ASTM A733
- MATERIAL: ASTM A53 Type F or Type E
- GALVANIZING: Hot dip galvanizing
- THREADING: ASME B 1.20.1

Max Pressure: 200 psi WOG @ 72°F; 150 psi saturated steam

**SCHEDULE 80 EXTRA HEAVY NIPPLES**  
**1/8" DIAMETER**



Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-001	6.10	Close (3/4")	59-001	3.83
58-002	7.30	1-1/2"	59-002	4.43
58-003	7.30	2"	59-003	4.34
58-004	8.65	2-1/2"	59-004	4.84
58-005	8.98	3"	59-005	5.15
58-006	10.58	3-1/2"	59-006	6.61
58-007	10.93	4"	59-007	7.28
58-008	15.80	4-1/2"	59-008	13.33
58-009	20.34	5"	59-009	11.87
58-010	19.50	5-1/2"	59-010	13.32
58-011	21.90	6"	59-011	12.95
58-012	29.09	7"	59-012	28.74
58-013	29.29	8"	59-013	18.30
58-014	30.65	9"	59-014	19.34
58-015	33.92	10"	59-015	20.42
58-016	34.79	11"	59-016	21.50
58-017	34.20	12"	59-017	22.32

**SCHEDULE 80 EXTRA HEAVY NIPPLES**  
**3/8" DIAMETER**



Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-040	7.08	Close (1")	59-040	4.16
58-041	8.35	1-1/2"	59-041	5.20
58-042	8.78	2"	59-042	5.24
58-043	10.90	2-1/2"	59-043	6.10
58-044	10.57	3"	59-044	6.24
58-045	13.69	3-1/2"	59-045	7.70
58-046	14.12	4"	59-046	7.45
58-047	16.80	4-1/2"	59-047	10.08
58-048	17.75	5"	59-048	9.80
58-049	19.04	5-1/2"	59-049	12.62
58-050	19.37	6"	59-050	11.96
58-051	31.51	7"	59-051	22.56
58-052	33.36	8"	59-052	23.92
58-053	39.92	9"	59-053	25.25
58-054	41.84	10"	59-054	26.05
58-055	44.42	11"	59-055	26.86
58-056	45.85	12"	59-056	27.52

**SCHEDULE 80 EXTRA HEAVY NIPPLES**  
**1/4" DIAMETER**



Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-020	6.58	Close (3/4")	59-020	3.71
58-021	7.57	1-1/2"	59-021	4.64
58-022	7.57	2"	59-022	4.70
58-023	9.86	2-1/2"	59-023	6.05
58-024	9.91	3"	59-024	6.24
58-025	8.08	3-1/2"	59-025	6.44
58-026	11.48	4"	59-026	6.65
58-027	13.46	4-1/2"	59-027	10.69
58-028	16.75	5"	59-028	10.54
58-029	18.88	5-1/2"	59-029	11.24
58-030	18.36	6"	59-030	11.95
58-031	29.98	7"	59-031	19.14
58-032	32.50	8"	59-032	21.50
58-033	35.15	9"	59-033	22.56
58-034	36.56	10"	59-034	22.85
58-035	39.92	11"	59-035	24.19
58-036	40.64	12"	59-036	25.25

**SCHEDULE 80 EXTRA HEAVY NIPPLES**  
**1/2" DIAMETER**



Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-060	6.47	Close (1-1/8")	59-060	3.80
58-061	7.21	1-1/2"	59-061	3.92
58-062	7.08	2"	59-062	4.15
58-063	7.79	2-1/2"	59-063	4.54
58-064	8.48	3"	59-064	4.92
58-065	9.61	3-1/2"	59-065	5.44
58-066	10.02	4"	59-066	5.94
58-067	11.48	4-1/2"	59-067	6.55
58-068	12.31	5"	59-068	6.82
58-069	13.14	5-1/2"	59-069	7.22
58-070	13.10	6"	59-070	7.66
58-071	22.56	7"	59-071	13.09
58-072	22.14	8"	59-072	15.06
58-073	26.70	9"	59-073	16.13
58-074	28.28	10"	59-074	17.20
58-075	30.11	11"	59-075	18.79
58-076	32.26	12"	59-076	18.50

**SCHEDULE 80 EXTRA HEAVY NIPPLES  
3/4" DIAMETER**



Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-080	7.07	Close (1-3/8")	59-080	3.96
58-081	7.19	1-1/2"	59-081	4.44
58-082	7.76	2"	59-082	4.34
58-083	9.50	2-1/2"	59-083	4.99
58-084	9.20	3"	59-084	5.45
58-085	11.29	3-1/2"	59-085	6.05
58-086	11.00	4"	59-086	6.54
58-087	13.69	4-1/2"	59-087	7.63
58-088	15.01	5"	59-088	8.02
58-089	15.70	5-1/2"	59-089	9.53
58-090	15.41	6"	59-090	9.56
58-091	27.43	7"	59-091	15.34
58-092	27.35	8"	59-092	17.62
58-093	31.62	9"	59-093	19.92
58-094	34.62	10"	59-094	19.79
58-095	36.95	11"	59-095	22.72
58-096	36.26	12"	59-096	24.68

**SCHEDULE 80 EXTRA HEAVY NIPPLES  
1-1/4" DIAMETER**



Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-120	13.19	Close (1-5/8")	59-120	7.73
58-121	13.44	2"	59-121	7.99
58-122	15.54	2-1/2"	59-122	9.70
58-123	16.63	3"	59-123	10.36
58-124	17.78	3-1/2"	59-124	11.95
58-125	18.49	4"	59-125	12.16
58-126	23.41	4-1/2"	59-126	15.06
58-127	26.00	5"	59-127	14.96
58-128	28.10	5-1/2"	59-128	17.00
58-129	32.22	6"	59-129	16.81
58-130	46.19	7"	59-130	26.53
58-131	49.81	8"	59-131	28.02
58-132	54.42	9"	59-132	32.45
58-133	35.77	10"	59-133	34.52
58-134	65.18	11"	59-134	38.38
58-135	68.32	12"	59-135	37.24

**SCHEDULE 80 EXTRA HEAVY NIPPLES  
1" DIAMETER**



Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-100	10.56	Close (1-1/2")	59-100	5.86
58-101	11.11	2"	59-101	6.14
58-102	12.14	2-1/2"	59-102	7.15
58-103	12.60	3"	59-103	7.73
58-104	14.94	3-1/2"	59-104	8.69
58-105	15.06	4"	59-105	9.37
58-106	18.26	4-1/2"	59-106	10.92
58-107	18.89	5"	59-107	11.15
58-108	21.46	5-1/2"	59-108	17.93
58-109	21.74	6"	59-109	13.14
58-110	37.64	7"	59-110	22.72
58-111	37.86	8"	59-111	23.69
58-112	42.74	9"	59-112	27.02
58-113	47.03	10"	59-113	25.60
58-114	50.64	11"	59-114	30.83
58-115	52.44	12"	59-115	30.90

**SCHEDULE 80 EXTRA HEAVY NIPPLES  
1-1/2" DIAMETER**



Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-140	15.80	Close (1-3/4")	59-140	9.04
58-141	19.66	2"	59-141	10.12
58-142	19.82	2-1/2"	59-142	11.11
58-143	18.78	3"	59-143	12.07
58-144	22.88	3-1/2"	59-144	14.44
58-145	25.01	4"	59-145	14.48
58-146	26.39	4-1/2"	59-146	17.00
58-147	39.26	5"	59-147	16.91
58-148	30.79	5-1/2"	59-148	19.58
58-149	33.16	6"	59-149	19.31
58-150	51.32	7"	59-150	32.45
58-151	57.61	8"	59-151	33.96
58-152	63.52	9"	59-152	37.84
58-153	69.80	10"	59-153	41.63
58-154	73.85	11"	59-154	46.51
58-155	72.64	12"	59-155	50.28

**NIPPLES & FITTINGS**





**SCHEDULE 80 EXTRA HEAVY NIPPLES  
2" DIAMETER**



Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-160	27.38	Close (2")	59-160	13.28
58-161	24.65	2-1/2"	59-161	15.19
58-162	26.03	3"	59-162	15.95
58-163	29.03	3-1/2"	59-163	17.16
58-164	31.32	4"	59-164	18.35
58-165	35.45	4-1/2"	59-165	29.77
58-166	39.26	5"	59-166	31.26
58-167	44.72	5-1/2"	59-167	33.79
58-168	45.72	6"	59-168	38.63
58-169	70.33	7"	59-169	59.24
58-170	84.50	8"	59-170	64.36
58-171	91.46	9"	59-171	69.53
58-172	96.16	10"	59-172	78.43
58-173	106.10	11"	59-173	89.22
58-174	115.98	12"	59-174	97.36

**SCHEDULE 80 EXTRA HEAVY NIPPLES  
3" DIAMETER**



Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-200	85.61	Close (2-5/8")	59-200	49.51
58-201	102.46	3"	59-201	58.73
58-202	115.07	3-1/2"	59-202	67.19
58-203	116.77	4"	59-203	64.80
58-204	127.72	4-1/2"	59-204	73.38
58-205	136.68	5"	59-205	75.55
58-206	142.49	5-1/2"	59-206	85.64
58-207	140.36	6"	59-207	77.16
58-208	184.74	7"	59-208	117.35
58-209	194.44	8"	59-209	112.28
58-210	211.04	9"	59-210	134.35
58-211	215.66	10"	59-211	136.04
58-212	227.40	11"	59-212	139.20
58-213	240.29	12"	59-213	148.24

**SCHEDULE 80 EXTRA HEAVY NIPPLES  
2-1/2" DIAMETER**



Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-180	74.11	Close (2-1/2")	59-180	61.49
58-181	79.61	3"	59-181	45.19
58-182	102.06	3-1/2"	59-182	54.25
58-183	104.35	4"	59-183	52.63
58-184	114.84	4-1/2"	59-184	64.63
58-185	113.44	5"	59-185	62.87
58-186	120.44	5-1/2"	59-186	73.38
58-187	123.16	6"	59-187	69.53
58-188	142.73	7"	59-188	88.44
58-189	147.23	8"	59-189	83.96
58-190	131.83	9"	59-190	100.75
58-191	163.98	10"	59-191	99.53
58-192	179.04	11"	59-192	110.86
58-193	168.60	12"	59-193	117.16

**SCHEDULE 80 EXTRA HEAVY NIPPLES  
4" DIAMETER**



Galvanized			Black	
Part #	List Price	Length	Part #	List Price
58-220	126.70	Close (2-7/8")	59-220	110.50
58-221	173.57	4"	59-221	95.30
58-222	189.10	4-1/2"	59-222	112.52
58-223	191.03	5"	59-223	114.12
58-224	209.54	5-1/2"	59-224	114.86
58-225	212.18	6"	59-225	118.20
58-226	237.54	7"	59-226	147.80
58-227	245.87	8"	59-227	139.06
58-228	273.47	9"	59-228	169.07
58-229	285.10	10"	59-229	160.16
58-230	311.89	11"	59-230	189.78
58-231	314.69	12"	59-231	186.56

**NIPPLES &  
FITTINGS**

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**STANDARDS & SPECIFICATIONS**

- DIMENSIONAL: ASTM A733      • MATERIAL: ASTM A 106 Grade B
  - THREADING: ASME B 1.20.1      • Thicker walls      • Excellent leak protection
- Max Pressure: 300 psi WOG @ 150°F; 150 psi saturated steam

**SCHEDULE 80 SEAMLESS NIPPLES  
1/8" DIAMETER**



Part #	Length	List Price
72-001	X Close (3/4")	9.32
72-002	x 1-1/2"	9.88
72-003	x 2"	10.66
72-004	x 2-1/2"	11.56
72-005	x 3"	12.83
72-006	x 3-1/2"	14.00
72-007	x 4"	15.55
72-008	x 4-1/2"	16.87
72-009	x 5"	23.18
72-010	x 5-1/2"	24.83
72-011	x 6"	26.66

**SCHEDULE 80 SEAMLESS NIPPLES  
1/4" DIAMETER**



Part #	Length	List Price
72-020	X Close (7/8")	10.25
72-021	x 1-1/2"	11.22
72-022	x 2"	12.41
72-023	x 2-1/2"	13.51
72-024	x 3"	15.04
72-025	x 3-1/2"	16.70
72-026	x 4"	17.28
72-027	x 4-1/2"	20.12
72-028	x 5"	28.55
72-029	x 5-1/2"	30.12
72-030	x 6"	30.05

**SCHEDULE 80 SEAMLESS NIPPLES  
3/8" DIAMETER**



Part #	Length	List Price
72-040	X Close (1")	11.87
72-041	x 1-1/2"	12.36
72-042	x 2"	13.51
72-043	x 2-1/2"	15.19
72-044	x 3"	17.06
72-045	x 3-1/2"	18.77
72-046	x 4"	20.46
72-047	x 4-1/2"	22.48
72-048	x 5"	29.96
72-049	x 5-1/2"	32.02
72-050	x 6"	34.09

**SCHEDULE 80 SEAMLESS NIPPLES  
1/2" DIAMETER**



Part #	Length	List Price
72-060	X Close (1-1/8")	5.65
72-061	x 1-1/2"	6.43
72-062	x 2"	6.61
72-063	x 2-1/2"	7.82
72-064	x 3"	8.60
72-065	x 3-1/2"	9.76
72-066	x 4"	10.72
72-067	x 4-1/2"	11.80
72-068	x 5"	13.60
72-069	x 5-1/2"	14.81
72-070	x 6"	16.01

**SCHEDULE 80 SEAMLESS NIPPLES  
3/4" DIAMETER**



Part #	Length	List Price
72-080	X Close (1-3/8")	6.37
72-081	x 1-1/2"	7.28
72-082	x 2"	7.64
72-083	x 2-1/2"	8.63
72-084	x 3"	9.60
72-085	x 3-1/2"	10.96
72-086	x 4"	12.04
72-087	x 4-1/2"	13.14
72-088	x 5"	14.99
72-089	x 5-1/2"	16.09
72-090	x 6"	17.30

**SCHEDULE 80 SEAMLESS NIPPLES  
1" DIAMETER**



Part #	Length	List Price
72-100	X Close (1-1/2")	9.01
72-101	x 2"	10.25
72-102	x 2-1/2"	10.96
72-103	x 3"	12.82
72-104	x 3-1/2"	14.20
72-105	x 4"	15.88
72-106	x 4-1/2"	17.27
72-107	x 5"	19.99
72-108	x 5-1/2"	21.38
72-109	x 6"	22.81

**SCHEDULE 80 SEAMLESS NIPPLES  
1-1/4" DIAMETER**



Part #	Length	List Price
72-120	X Close (1-5/8")	11.32
72-121	x 2"	11.76
72-122	x 2-1/2"	13.86
72-123	x 3"	16.10
72-124	x 3-1/2"	17.59
72-125	x 4"	19.68
72-126	x 4-1/2"	21.41
72-127	x 5"	24.83
72-128	x 5-1/2"	26.71
72-129	x 6"	28.55

**SCHEDULE 80 SEAMLESS NIPPLES  
1-1/2" DIAMETER**



Part #	Length	List Price
72-140	X Close (1-3/4")	14.57
72-141	x 2"	15.42
72-142	x 2-1/2"	16.74
72-143	x 3"	19.28
72-144	x 3-1/2"	21.05
72-145	x 4"	23.56
72-146	x 4-1/2"	25.75
72-147	x 5"	29.80
72-148	x 5-1/2"	31.68
72-149	x 6"	33.50

**SCHEDULE 80 SEAMLESS NIPPLES  
2" DIAMETER**



Part #	Length	List Price
72-160	X Close (2")	17.30
72-161	x 2-1/2"	19.42
72-162	x 3"	22.58
72-163	x 3-1/2"	24.29
72-164	x 4"	27.12
72-165	x 4-1/2"	29.27
72-166	x 5"	34.26
72-167	x 5-1/2"	37.00
72-168	x 6"	39.13

**SCHEDULE 80 SEAMLESS NIPPLES  
2-1/2" DIAMETER**



Part #	Length	List Price
72-180	X Close (2-1/2")	57.49
72-181	x 3"	60.22
72-182	x 3-1/2"	64.85
72-183	x 4"	67.25
72-184	x 4-1/2"	70.88
72-185	x 5"	75.70
72-186	x 5-1/2"	79.49
72-187	x 6"	82.90

**SCHEDULE 80 SEAMLESS NIPPLES  
3" DIAMETER**



Part #	Length	List Price
72-200	X Close (2-5/8")	72.52
72-201	x 3"	76.69
72-202	x 3-1/2"	81.92
72-203	x 4"	86.74
72-204	x 4-1/2"	91.54
72-205	x 5"	97.92
72-206	x 5-1/2"	102.88
72-207	x 6"	107.63

**SCHEDULE 80 SEAMLESS NIPPLES  
4" DIAMETER**



Part #	Length	List Price
72-220	X Close (2-7/8")	103.30
72-223	x 4"	116.96
72-224	x 4-1/2"	123.76
72-225	x 5"	134.21
72-226	x 5-1/2"	139.55
72-227	x 6"	146.20

**NIPPLES &  
FITTINGS**

# EXTRA HEAVY 300# MALLEABLE IRON

# MALLEABLE FITTINGS

Max. pressure: 300 psi WOG @ 72°F; 150 psi WOG saturated steam

• Meet ANSI/ ASME B1.20.1 standards • Galvanized meet ASME B16.3 Standards • Black meet ASTM 197 standards



## 90° ELBOWS



Galvanized

Black

Part #	List Price	Size	Part #	List Price
68-101	34.09	1/4"	69-101	18.89
68-102	34.46	3/8"	69-102	16.78
68-103	38.82	1/2"	69-103	23.05
68-104	43.18	3/4"	69-104	25.09
68-105	59.60	1"	69-105	32.10
68-106	92.78	1-1/4"	69-106	45.83
68-107	101.48	1-1/2"	69-107	49.99
68-108	205.20	2"	69-108	79.42



## 45° ELBOWS



Galvanized

Black

Part #	List Price	Size	Part #	List Price
68-181	55.87	1/4"	69-181	29.51
68-182	55.36	3/8"	69-182	31.79
68-183	64.03	1/2"	69-183	31.30
68-184	70.44	3/4"	69-184	34.79
68-185	80.84	1"	69-185	41.14
68-186	125.50	1-1/4"	69-186	61.69
68-187	156.00	1-1/2"	69-187	79.69
68-188	224.78	2"	69-188	121.49



## 90° STREET ELBOWS



Galvanized

Black

Part #	List Price	Size	Part #	List Price
68-161	47.18	1/4"	69-161	22.39
68-162	41.29	3/8"	69-162	26.83
68-163	70.28	1/2"	69-163	29.18
68-164	89.71	3/4"	69-164	41.50
68-165	97.63	1"	69-165	48.67
68-166	137.92	1-1/4"	69-166	66.91
68-167	162.35	1-1/2"	69-167	82.76
68-168	284.76	2"	69-168	128.74



## TEES



Galvanized

Black

Part #	List Price	Size	Part #	List Price
68-252	45.74	3/8"	69-252	25.18
68-253	61.86	1/2"	69-253	32.05
68-254	67.54	3/4"	69-254	34.62
68-255	78.73	1"	69-255	38.54
68-256	144.07	1-1/4"	69-256	72.62
68-257	124.63	1-1/2"	69-257	83.88
68-258	215.59	2"	69-258	102.72



## COUPLINGS



Galvanized

Black

Part #	List Price	Size	Part #	List Price
68-411	27.60	1/4"	69-411	15.79
68-412	38.70	3/8"	69-412	15.79
68-413	41.41	1/2"	69-413	19.02
68-414	37.30	3/4"	69-414	21.85
68-415	48.86	1"	69-415	23.14
68-416	63.68	1-1/4"	69-416	28.93
68-417	107.70	1-1/2"	69-417	44.53
68-418	108.17	2"	69-418	68.39



## REDUCING COUPLING



Galvanized

Black

Part #	List Price	Size	Part #	List Price
68-432	57.55	3/8 x 1/4"	69-432	25.74
68-434	48.98	1/2 x 1/4"	69-434	26.36
68-435	46.22	1/2 x 3/8"	69-435	25.10
68-438	56.63	3/4 x 1/2"	69-438	25.66
68-441	67.88	1 x 1/2"	69-441	36.60
68-442	67.61	1 x 3/4"	69-442	40.27



## CAPS



Galvanized

Black

Part #	List Price	Size	Part #	List Price
68-471	29.78	1/4"	69-471	17.45
68-472	29.76	3/8"	69-472	19.62
68-473	36.19	1/2"	69-473	19.81
68-474	37.15	3/4"	69-474	21.85
68-475	50.98	1"	69-475	28.69
68-476	77.03	1-1/4"	69-476	31.78
68-477	103.84	1-1/2"	69-477	46.45
68-478	124.86	2"	69-478	64.49



## UNIONS

• Brass Seat



Galvanized

Black

Part #	List Price	Size	Part #	List Price
68-600	84.91	1/8"	69-600	50.56
68-601	95.27	1/4"	69-601	50.56
68-602	84.13	3/8"	69-602	53.92
68-603	92.99	1/2"	69-603	50.56
68-604	96.13	3/4"	69-604	52.01
68-605	99.05	1"	69-605	54.29
68-606	101.11	1-1/4"	69-606	85.19
68-607	134.72	1-1/2"	69-607	115.96
68-608	149.20	2"	69-608	102.59

# SWAGES

# SWAGES

## STANDARD BULL PLUG

NEW



Part #	Description	List Price
91-008	2"	86.96
91-009	2-1/2"	126.33
91-010	3"	174.35
91-011	4"	219.23

## XH BULL PLUG

NEW



Part #	Description	List Price
90-001	1/4"	32.16
90-002	3/8"	34.85
90-003	1/2"	36.60
90-004	3/4"	37.64
90-005	1"	44.25
90-006	1-1/4"	69.22
90-007	1-1/2"	66.82
90-008	2"	128.75
90-212	2" w/ 1/2" TAP	269.40
90-009	2-1/2"	164.38
90-010	3"	218.61
90-011	4"	307.57

## STANDARD SCH. 40 SWAGE

NEW



Part #	Description	List Price
93-113	1-1/4" x 1"	98.86
93-121	2" x 1"	131.10
93-122	2" x 1-1/4"	134.30
93-123	2" x 1-1/2"	101.42
93-124	2-1/2" x 2"	127.80
93-125	3" x 1"	207.41
93-127	3" x 1-1/2"	209.50
93-128	3" x 2"	146.25
93-129	3" x 2-1/2"	146.25
93-130	4" x 2"	255.08
93-131	4" x 3"	234.19

NEW

## XH SWAGES

Part #	Description	List Price
90-100	1/4" x 1/8"	42.22
90-102	1/2" x 1/4"	34.79
90-103	1/2" x 3/8"	34.79
90-104	3/8" x 1/4"	37.08
90-105	3/4" x 1/4"	51.51
90-106	3/4" x 3/8"	51.51
90-107	3/4" x 1/2"	39.52
90-108	1" x 1/4"	61.24
90-109	1" x 3/8"	61.24
90-110	1" x 1/2"	47.85
90-111	1" x 3/4"	48.83
90-140	1-1/4" x 3/4"	75.92
90-141	1-1/4" x 1"	72.35
90-114	1-1/2" x 1/2"	96.90
90-115	1-1/2" x 3/4"	96.90
90-116	1-1/2" x 1"	84.73
90-117	1-1/2" x 1-1/4"	84.73
90-118	2" x 1/4"	196.44
90-119	2" x 1/2"	173.96
90-120	2" x 3/4"	173.96
90-121	2" x 1"	137.63
90-122	2" x 1-1/4"	145.99
90-123	2" x 1-1/2"	137.63
90-124	2-1/2" x 2"	164.33
90-125	3" x 1"	257.45
90-126	3" x 1-1/4"	270.14
90-127	3" x 1-1/2"	245.52
90-128	3" x 2"	189.32
90-129	3" x 2-1/2"	189.32
90-130	4" x 2"	313.58
90-131	4" x 3"	285.52
90-132	6" x 4"	1017.63

NEW

## XXH SWAGE

Part #	Description	List Price
92-102	1/2" x 1/4"	42.91
92-107	3/4" x 1/2"	48.77
92-108	1" x 1/4"	79.34
92-109	1" x 3/8"	79.34
92-110	1" x 1/2"	63.22
92-111	1" x 3/4"	63.22
92-114	1-1/2" x 1/2"	183.53
92-115	1-1/2" x 3/4"	183.53
92-116	1-1/2" x 1"	145.26
92-119	2" x 1/2"	292.69
92-120	2" x 3/4"	292.69
92-121	2" x 1"	272.02
92-122	2" x 1-1/4"	272.02
92-123	2" x 1-1/2"	272.02
92-128	3" x 2"	369.20

NIPLLES & FITTINGS

**NEW**

**HAMMER UNION**



Part #	1,000 PSI Threaded	List Price
91-608	2"	64.05
91-610	3"	238.70
91-611	4"	262.50

Part #	2,000 PSI Threaded	List Price
92-605	1"	43.75
92-608	2"	64.05
92-610	3"	245.00
92-611	4"	311.50

- Water, oil and steam in the chemical, petrochemical, pulp, paper, shipbuilding, waste incineration and semiconductor industries.
- Max pressure determined by the fittings threaded into.

**FORGED BUSHING**



Part #	Size	List Price
107-500	1/4" x 1/8"	2.87
107-501	3/8" x 1/8"	2.87
107-502	3/8" x 1/4"	2.87
107-503	1/2" x 1/8"	2.89
107-504	1/2" x 1/4"	2.89
107-505	1/2" x 3/8"	2.89
107-508	3/4" x 3/8"	3.55
107-509	3/4" x 1/2"	3.55
107-510	1" x 1/4"	5.78
107-511	1" x 3/8"	5.78
107-512	1" x 1/2"	5.78
107-513	1" x 3/4"	5.78
107-515	1-1/4" x 3/8"	9.42
107-516	1-1/4" x 1/2"	9.42
107-517	1-1/4" x 3/4"	9.42
107-518	1-1/4" x 1"	9.42
107-521	1-1/2" x 1/2"	10.85
107-522	1-1/2" x 3/4"	10.85
107-523	1-1/2" x 1"	10.85
107-524	1-1/2" x 1-1/4"	10.85
107-527	2" x 1/2"	16.28
107-528	2" x 3/4"	16.28
107-529	2" x 1"	16.28
107-530	2" x 1-1/4"	16.28
107-531	2" x 1-1/2"	16.28
107-532	2-1/2" x 1"	51.06
107-533	2-1/2" x 1-1/4"	51.06
107-534	2-1/2" x 1-1/2"	51.06
107-535	2-1/2" x 2"	51.06
107-550	3" x 1"	78.98
107-537	3" x 1-1/2"	78.98
107-538	3" x 2"	78.98
107-539	3" x 2-1/2"	78.98
107-540	4" x 1-1/2"	171.12
107-541	4" x 2"	171.12
107-542	4" x 2-1/2"	171.12
107-543	4" x 3"	171.12

**HEX HEAD FORGED PLUG**



Part #	Size	List Price
107-630	1/8"	1.75
107-631	1/4"	1.75
107-632	3/8"	1.81
107-633	1/2"	1.81
107-634	3/4"	3.36
107-635	1"	4.74
107-636	1-1/4"	8.04
107-637	1-1/2"	11.45
107-638	2"	17.75
107-639	2-1/2"	40.03
107-640	3"	73.12
107-641	4"	120.34

**SQUARE HEAD FORGED PLUG**



Part #	Size	List Price
107-670	1/8"	2.08
107-671	1/4"	2.08
107-672	3/8"	2.18
107-673	1/2"	2.28
107-674	3/4"	2.84
107-675	1"	4.36
107-676	1-1/4"	8.98
107-677	1-1/2"	10.25
107-678	2"	16.18
107-679	2-1/2"	41.64
107-680	3"	69.69
107-681	4"	110.10



**2000 LB FORGED STEEL THREADED FITTINGS**

**ASTM: A105 ANSI: B16.11**

**90° ELBOWS**



Part #	Size	List Price
100-100	1/8"	11.79
100-101	1/4"	8.76
100-102	3/8"	10.12
100-103	1/2"	8.87
100-104	3/4"	9.67
100-105	1"	12.47
100-106	1-1/4"	24.91
100-107	1-1/2"	30.39
100-108	2"	41.68
100-109	2-1/2"	109.69
100-110	3"	169.38
100-111	4"	555.35

**45° ELBOWS**



Part #	Size	List Price
100-181	1/4"	13.04
100-182	3/8"	13.55
100-183	1/2"	12.89
100-184	3/4"	14.44
100-179	1"	16.89
100-186	1-1/4"	26.72
100-187	1-1/2"	33.63
100-188	2"	52.45
100-189	2-1/2"	140.24
100-190	3"	226.44
100-191	4"	545.80

**TEES**



Part #	Size	List Price
100-251	1/4"	11.19
100-252	3/8"	12.49
100-253	1/2"	10.74
100-254	3/4"	14.55
100-255	1"	20.22
100-256	1-1/4"	35.76
100-257	1-1/2"	43.23
100-258	2"	54.12
100-259	2-1/2"	137.22
100-260	3"	236.51
100-261	4"	586.52

**CROSS**



Part #	Size	List Price
100-392	3/8"	34.05
100-393	1/2"	33.70
100-394	3/4"	37.49
100-395	1"	44.02
100-396	1-1/4"	80.43
100-397	1-1/2"	98.65
100-398	2"	135.06

**FORGED STEEL 3000# FITTINGS**

**90° ELBOWS**



Part #	Size	List Price
101-100	1/8"	12.52
101-101	1/4"	18.28
101-102	3/8"	18.07
101-103	1/2"	14.37
101-104	3/4"	18.05
101-105	1"	26.85
101-106	1-1/4"	51.00
101-107	1-1/2"	65.80
101-108	2"	79.91
101-109	2-1/2"	157.71
101-110	3"	227.19
101-111	4"	573.82

**\*For 3000# Socket Weld Forged Steel fittings, replace the 101 part# prefix with a 111 prefix.**

**\* Special Order**

**STREET ELBOWS**



Part #	Size	List Price
101-161	1/4"	18.74
101-162	3/8"	18.07
101-163	1/2"	27.09
101-164	3/4"	34.24
101-165	1"	45.68
101-166	1-1/4"	82.76
101-167	1-1/2"	100.03
101-168	2"	144.28

**45° ELBOWS**



Part #	Size	List Price
101-180	1/8"	15.89
101-181	1/4"	15.89
101-182	3/8"	15.89
101-183	1/2"	23.51
101-184	3/4"	27.16
101-185	1"	36.98
101-186	1-1/4"	51.12
101-187	1-1/2"	73.39
101-188	2"	101.27
101-189	2-1/2"	157.75
101-190	3"	256.46

**TEES**



Part #	Size	List Price
101-250	1/8"	15.21
101-251	1/4"	18.30
101-252	3/8"	15.21
101-253	1/2"	20.54
101-254	3/4"	27.74
101-255	1"	36.55
101-256	1-1/4"	70.92
101-257	1-1/2"	82.72
101-258	2"	106.99
101-259	2-1/2"	193.30
101-260	3"	360.47
101-261	4"	600.59



**3000 LB FORGED STEEL THREADED FITTINGS  
ASTM A105/ASME SA105 & ANSI B16.11**

**CROSS**



Part #	Size	List Price
101-390	1/8"	57.47
101-391	1/4"	57.48
101-392	3/8"	57.48
101-393	1/2"	58.06
101-394	3/4"	76.62
101-395	1"	107.81
101-396	1-1/4"	142.83
101-397	1-1/2"	190.31
101-398	2"	256.55
101-399	2-1/2"	434.55
101-400	3"	575.38
101-401	4"	996.41

**CAPS**



Part #	Size	List Price
101-470	1/8"	4.64
101-471	1/4"	4.60
101-472	3/8"	4.60
101-473	1/2"	6.71
101-474	3/4"	9.35
101-475	1"	14.35
101-476	1-1/4"	23.11
101-477	1-1/2"	27.61
101-478	2"	39.74
101-479	2-1/2"	72.96
101-480	3"	134.42
101-481	4"	169.60

**REDUCING COUPLINGS**

Part #	Size	List Price
101-431	1/4" x 1/8"	7.48
101-432	3/8" x 1/8"	7.81
101-433	3/8" x 1/4"	7.81
101-434	1/2" x 1/4"	11.70
101-435	1/2" x 3/8"	11.70
101-437	3/4" x 3/8"	13.89
101-438	3/4" x 1/2"	13.89
101-440	1" x 3/8"	18.09
101-441	1" x 1/2"	18.09
101-442	1" x 3/4"	18.09
101-443	1-1/4" x 3/8"	31.67
101-444	1-1/4" x 1/2"	31.67
101-445	1-1/4" x 3/4"	31.67
101-446	1-1/4" x 1"	31.67
101-447	1-1/2" x 1/2"	34.40
101-449	1-1/2" x 1"	34.40
101-450	1-1/2" x 1-1/4"	34.40
101-451	2" x 3/4"	49.88
101-452	2" x 1"	49.88
101-453	2" x 1-1/4"	49.88
101-454	2" x 1-1/2"	49.88
101-458	2" x 1/2"	49.88
101-459	2-1/2" x 1-1/2"	132.34
101-460	2-1/2" x 2"	132.34
101-461	3" x 1-1/2"	175.02
101-462	3" x 2"	180.33
101-463	3" x 2-1/2"	175.02
101-464	4" x 1-1/2"	267.97
101-465	4" x 2"	267.97
101-466	4" x 2-1/2"	267.97
101-467	4" x 3"	267.97

**HALF COUPLINGS**



Part #	Size	List Price
101-770	1/8"	2.49
101-771	1/4"	2.49
101-772	3/8"	2.58
101-773	1/2"	3.58
101-774	3/4"	5.14
101-775	1"	7.04
101-776	1-1/4"	12.75
101-777	1-1/2"	16.96
101-778	2"	22.79
101-779	2-1/2"	31.16
101-780	3"	70.09
101-781	4"	122.46

**COUPLINGS**



Part #	Size	List Price
101-410	1/8"	4.52
101-411	1/4"	4.52
101-412	3/8"	4.52
101-413	1/2"	5.88
101-414	3/4"	7.65
101-415	1"	13.32
101-416	1-1/4"	22.19
101-417	1-1/2"	28.19
101-418	2"	35.82
101-419	2-1/2"	58.58
101-420	3"	111.72
101-421	4"	209.56

**UNIONS**



Part #	Size	List Price
101-600	1/8"	19.25
101-601	1/4"	19.25
101-602	3/8"	19.59
101-603	1/2"	24.74
101-604	3/4"	30.54
101-605	1"	39.92
101-606	1-1/4"	63.31
101-607	1-1/2"	75.51
101-608	2"	102.38
101-609	2-1/2"	169.15
101-610	3"	199.14
101-611	4"	462.44

**NIPPLES & FITTINGS**

# FORGED STEEL FITTINGS

# FORGED STEEL 6000# FITTINGS

## 6000 LB FORGED STEEL THREADED FITTINGS

ASTM: A105 ANSI: B16.11

### 90° ELBOWS



Part #	Size	List Price
102-100	1/8"	POR
102-101	1/4"	91.79
102-102	3/8"	91.79
102-103	1/2"	18.72
102-104	3/4"	23.84
102-105	1"	30.57
102-106	1-1/4"	66.21
102-107	1-1/2"	80.07
102-108	2"	134.90
102-110	3"	689.56

### TEES



Part #	Size	List Price
102-251	1/4"	122.01
102-252	3/8"	116.30
102-253	1/2"	26.14
102-254	3/4"	35.36
102-255	1"	61.07
102-256	1-1/4"	74.32
102-257	1-1/2"	108.83
102-258	2"	190.98
102-259	2-1/2"	POR
102-260	3"	POR

**\*For 6000# Socket Weld Forged Steel fittings, replace the 102 part# prefix with a 112 prefix.**

**\* Special Order**

### CROSS



Part #	Size	List Price
102-393	1/2"	96.14
102-394	3/4"	206.67
102-395	1"	297.57
102-396	1-1/4"	406.84
102-397	1-1/2"	489.43
102-398	2"	538.98
102-399	2-1/2"	957.75
102-400	3"	1016.96

### HALF COUPLINGS



Part #	Size	List Price
102-770	1/8"	11.03
102-771	1/4"	11.03
102-772	3/8"	12.31
102-773	1/2"	7.53
102-774	3/4"	7.99
102-775	1"	9.95
102-776	1-1/4"	22.36
102-777	1-1/2"	27.88
102-778	2"	50.78
102-779	2-1/2"	261.91
102-780	3"	299.50

### CAPS



Part #	Size	List Price
102-470	1/8"	20.10
102-471	1/4"	20.10
102-472	3/8"	20.10
102-473	1/2"	14.00
102-474	3/4"	16.80
102-475	1"	18.42
102-476	1-1/4"	45.48
102-477	1-1/2"	47.72
102-478	2"	55.07
102-479	2-1/2"	408.64
102-480	3"	442.96

### COUPLINGS



Part #	Size	List Price
102-410	1/8"	14.73
102-411	1/4"	11.95
102-412	3/8"	11.95
102-413	1/2"	10.02
102-414	3/4"	11.47
102-415	1"	15.40
102-416	1-1/4"	28.86
102-417	1-1/2"	31.81
102-418	2"	47.23

### REDUCING COUPLINGS

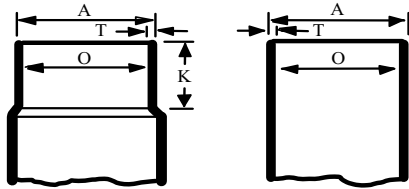
Part #	Size	List Price
102-434	1/2" x 1/4"	POR
102-435	1/2" x 3/8"	POR
102-437	3/4" x 3/8"	79.75
102-438	3/4" x 1/2"	79.75
102-440	1" x 3/8"	112.50
102-441	1" x 1/2"	112.50
102-442	1" x 3/4"	112.50
102-443	1-1/4" x 3/8"	181.29
102-444	1-1/4" x 1/2"	181.29
102-445	1-1/4" x 3/4"	181.29
102-448	1-1/4" x 1"	181.29
102-447	1-1/2" x 1/2"	155.82
102-449	1-1/2" x 1"	155.82
102-450	1-1/2" x 1-1/4"	151.23
102-451	2" x 3/4"	212.17
102-452	2" x 1"	218.61
102-453	2" x 1-1/4"	212.17
102-454	2" x 1-1/2"	212.17
102-458	2" x 1/2"	212.17

### UNIONS

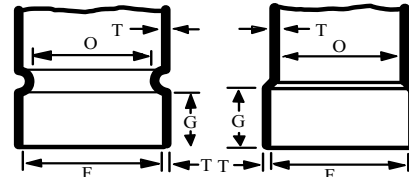


Part #	Size	List Price
102-600	1/8"	59.29
102-601	1/4"	51.95
102-602	3/8"	47.23
102-603	1/2"	41.06
102-604	3/4"	46.56
102-605	1"	60.23
102-606	1-1/4"	103.10
102-607	1-1/2"	117.19
102-608	2"	242.09

NIPPLES & FITTINGS



**MALE (FITTING)**



**FEMALE (COPPER)**

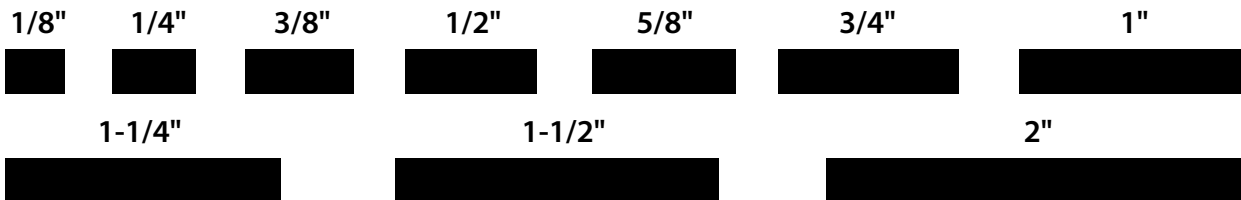
Nominal Size	Joint Ends										Metal Thickness T (in)	Inside Diameter O (in)
	Male End					Female End						
	Outside Diameter (A) in	Average Tolerance (mm)	Actual MIN in	O.D. MAX in	Length (Min) H (in)	Inside Diameter F (in)	Average Tolerance (mm)	Actual MIN in	O.D. MAX in	Length (Min) G (in)		
1/8	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		10-2/8	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
- Ftg.** Solder joint fitting end made to copper tube diameter
- F** Internal ANSI Standard Taper Pipe Thread-Female
- M** External ANSI Standard Taper Pipe Thread-Male

**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.



# COPPER FITTINGS

# WROT SOLDER JOINT

## 90° Ell C x C



WE-500-R  
607-R  
107-C

Part#	Nominal (ID)	OD	Approx Net Wt.	Ind #	List Price
77-100	1/8"	1/4"	0.01	W 02003	6.83
77-101	1/4"	3/8"	0.01	W 02009	7.64
77-102	3/8"	1/2"	0.03	W 02017	7.69
77-103	3/8" x 1/4"		0.03	W 02019	12.25
77-104	1/2"	5/8"	0.04	W 02022	2.26
77-105	1/2"x3/8"		-	W 02023	26.18
77-107	5/8"	3/4"	0.07	W 02028	14.38
77-108	3/4"	7/8"	0.09	W 02034	5.04
77-109	3/4" x 1/2"		0.12	W 02036	13.06
77-110	1"	1-1/8"	0.17	W 02047	12.35
77-111	1"x3/4"		0.23	W 02049	25.21
77-112	1"x1/2"		0.23	W 02051	28.10
77-113	1-1/4"	1-3/8"	0.27	W 02077	13.96
77-114	1-1/2"	1-5/8"	0.41	W 02085	29.11
77-116	2"	2-1/8"	0.73	W 02086	53.05
77-117	2"x1 -1/2"		0.73	W 02078	113.64
77-118	2-1/2"	2-5/8"	1.16	W 02087	111.91
77-119	3"	3-1/8"	1.87	W 02088	146.51
77-120	4"	4-1/8"	3.79	W 02090	213.70

## 90° Street Ell Ftg. x C



77-124	1/4"		0.01	W 02312	10.81
77-125	3/8"		0.03	W 02321	7.45
77-126	1/2"		0.05	W 01652	3.32
77-127	5/8"		0.07	W 02330	11.66
77-128	3/4"		0.12	W 01654	11.29
77-129	1"		0.22	W 02344	18.90
77-130	1-1/4"		0.33	W 02384	24.80
77-131	1-1/2"		0.45	W 02385	39.31
77-132	2"		0.87	W 02386	70.85
77-134	3"		1.93	W 02388	180.22

## 90° Long Turn Ell C x C



WE-500-L  
607-LT  
107-L

77-139	1/8"		0.01	W 02715	12.94
77-140	1/4"		0.02	W 02716	11.10
77-141	5/16"		0.03		10.98
77-142	3/8"		0.04	W 02717	13.31
77-143	1/2"		0.06	W 02722	9.89
77-144	5/8"		0.10	W 02728	12.10
77-145	3/4"		0.15	W 02734	12.73

## 90° Long Turn Street Ell Ftg. x C



WE-503-L  
607-2LT

77-152	1/8"		0.01		10.03
77-153	1/4"		0.22	W 02809	6.05
77-154	3/8"		0.04	W 02817	21.53
77-155	1/2"		0.06	W 02822	15.56
77-156	5/8"		0.11	W 02828	17.00
77-157	3/4"		0.15	W 02834	17.16

See copper fitting brushes on page 312.

# WROT SOLDER JOINT

# COPPER FITTINGS

## 45° ELL C x C

WE-504  
606  
106



Part#	Nominal	Approx Net Wt.	Ind #	List Price
77-161	1/8"	0.01	W 03005	14.69
77-162	1/4"	0.01	W 03012	11.75
77-163	3/8"	0.02	W 03021	13.60
77-164	1/2"	0.04	W 03026	3.46
77-165	5/8"	0.06	W 03030	18.59
77-166	3/4"	0.10	W 03034	7.22
77-167	1"	0.19	W 03044	18.53
77-168	1-1/4"	0.27	W 03050	21.36
77-169	1-1/2"	0.39	W 03055	25.70
77-170	2"	0.75	W 03059	51.89
77-171	2-1/2"	1.23	W 03063	74.15

## Street 45° Ftg. x C

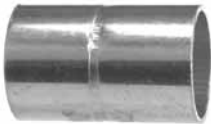
WE-505  
606-2



77-177	1/4"	0.01	W 03312	16.32
77-178	3/8"	0.02	W 03321	12.82
77-179	1/2"	0.06	W 03326	4.69
77-180	5/8"	0.06	W 03330	27.08
77-181	3/4"	0.10	W 03334	6.50
77-182	1"	0.18	W 03344	25.21
77-183	1-1/4"	0.27	W 03350	26.27
77-184	1-1/2"	0.38	W 03355	32.74
77-185	2"	0.75	W 03359	51.02

## Coupling (Socket) w/Rolled Tube Stop C x C

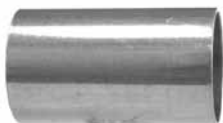
WC-400  
100



77-201	1/8"	0.01	W 01003	2.03
77-202	1/4"	0.01	W 01009	1.66
77-203	3/8"	0.02	W 01017	2.27
77-204	1/2"	0.03	W 01022	1.72
77-205	5/8"	0.04	W 01028	5.35
77-206	3/4"	0.06	W 01034	3.32
77-207	1"	0.10	W 01047	6.12
77-208	1-1/4"	0.15	W 01055	13.01
77-209	1-1/2"	0.22	W 01063	16.81
77-210	2"	0.39	W 01072	28.10
77-211	2-1/2"	0.71	W 01082	52.36
77-212	3"	0.98	W 01092	91.68
77-214	4"	2.01	W 10107	126.12

## Coupling (Socket) Less Tube Stop C x C

WC-400NS  
601



77-219	1/8"	0.01	W 01900	2.11
77-220	1/4"	0.01	W 01901	1.43
77-222	1/2"	0.03	W 01903	2.26
77-223	3/4"	0.06	W 01905	4.07
77-224	1"	0.10	W 01906	10.93
77-225	1-1/4"	0.15	W 01907	16.01
77-226	1-1/2"	0.22	W 01908	21.67
77-227	2"	0.39	W 01909	35.72

Send Midland all your high volume quotes!

# COPPER FITTINGS

# WROT SOLDER JOINT

**Coupling (Socket)  
w/Dimpled Tube Stop  
C x C**



WC-400S

Part#	Nominal	Approx Net Wt.	Ind #	List Price
77-238	1/2"	0.03		1.73
77-240	3/4"	0.06		3.68
77-241	1"	0.10		6.82
77-242	1-1/4"	0.15		12.72
77-244	2"	0.39		23.26
77-247	4"	2.01		126.12

**Reducer Coupling  
w/ Stop  
C x C**



WC-400R  
600-R

77-252	1/4" x 1/8"	0.01	W 01011	11.70
77-253	3/8" x 1/4"	0.02	W 01019	3.92
77-255	1/2" x 3/8"	0.03	W 01021	3.08
77-256	1/2" x 1/4"	0.03	W 01023	4.56
77-258	5/8" x 1/2"	0.04	W 01025	8.18
77-262	3/4" x 1/2"	0.06	W 01029	6.04
77-263	3/4" x 3/8"	0.06	W 01036	6.67
77-264	3/4" x 1/4"	0.06	W 01037	6.59
77-265	1"x3/4"	0.12	W 01038	11.76
77-267	1"x1/2"	0.10	W 01049	12.49
77-268	1-1/4" x 1"	0.17	W 01051	15.84
77-269	1 -1/4" x 3/4"	0.17	W 01056	15.84
77-270	1 -1/4" x 1/2"	0.14	W 01058	14.24
77-271	1-1/2" x 1-1/4"	0.24	W 01060	27.46
77-272	1-1/2" x 1"	0.24	W 01064	23.16
77-273	1 -1/2" x 3/4"	0.25	W 01065	27.46
77-274	1-1/2" x 1/2"	0.19	W 01067	25.49
77-275	2" x 1-1/2"	0.42	W 01069	42.44
77-276	2 x 1-1/4"	0.46	W 01073	35.14
77-277	2" x 1"	0.48	W 01074	37.01
77-280	2-1/2"x2"	0.79	W 01075	56.80
77-284	3" x 2-1/2"	1.15	W 01093	74.66

**Fitting Reducer**

**Ftg. x C**



WC-403  
600-2

77-291	3/8" x 1/4"	0.02	W 01312	4.31
77-292	3/8" x 1/8"	0.01	W 01314	6.35
77-294	1/2" x 1/4"	0.03	W 01317	3.85
77-295	5/8" X 1/2"	0.03	W 01320	8.41
77-296	3/4" x 5/8"	0.08	W 01325	6.22
77-297	3/4" x 1/2"	0.06	W 01326	6.02
77-298	3/4" x 3/8"	0.05	W 01327	6.92
77-299	3/4" X 1/4"	0.05	W 01328	7.45
77-300	1"x3/4"	0.11	W 01337	9.86
77-352	1" x 1/2"	0.10	W 01265	13.09
77-354	1-1/4" x 1"	0.17	W 01343	14.94
77-355	1 -1/4" x 3/4"	0.15	W 01345	15.67
77-356	1 -1/4" x 1/2"	0.14	W 01347	15.67
77-357	1 -1/2" X 1-1/4"	0.21	W 01350	21.14
77-358	1-1/2"x1"	0.22	W 01351	19.91
77-359	1 -1/2" x 3/4"	0.21	W 01353	21.14
77-360	1 -1/2" x 1/2"	0.21	W 01355	24.25
77-361	2" x 1-1/2"	0.39	W 01358	37.44
77-362	2" x 1 -1/4"	0.38	W 01359	36.74
77-363	2" x 1"	0.40	W 01360	38.71
77-364	2" x 3/4"	0.39	W 01362	38.71
77-365	2" x 1/2"	0.44	W 01364	41.08
77-370	3" x 2-1/2"	0.93	W 01376	68.65

NIPPLES & FITTINGS

**Flush Bushing**  
Ftg. x C  
WC-106  
618



Part#	Nominal	Approx Net Wt.	Ind #	List Price
77-382	3/4" x 1/2"	0.08	W 01726	7.55
77-383	3/4" x 5/8"	0.04	W 01725	7.90
77-385	1" x 3/4"	0.13	W 01737	11.78
77-387	1" x 1/2"	0.22	W 01739	13.02
77-389	1-1/4" x 3/4"	0.30	W 01745	13.09
77-391	1-1/2" x 1-1/4"	0.22	W 01750	18.89
77-392	2" x 1-1/2"	0.68	W 01758	54.13

**NIPPLES & FITTINGS**

**Male Adapter**  
C x M  
WC-401  
604



77-393	1/8"	0.02	W 01107	25.90
77-394	1/4"	0.03	W 01115	23.52
77-395	1/4" x 1/2"	0.09	W 01113	17.50
77-396	1/4"x3/8"	0.06	W 01114	24.35
77-397	1/4" x 1/8"	0.02	W 01116	17.50
77-398	3/8"	0.06	W 01125	10.09
77-401	1/2"	0.08	WB01131	4.69
77-303	1/2"x3/4"	0.16	WB01130	12.29
77-306	3/4"	0.14	WB01146	7.88
77-307	3/4" x 1"	0.29		30.32
77-309	1"	0.24	WB01163	20.34
77-312	1"x3/4"	0.18	W 01164	26.27
77-314	1-1/4"	0.41	W 01171	31.76
77-318	1-1/2"	0.50	W 01179	36.46
77-320	1-1/2" x 1-1/4"	0.44	W 01180	61.06
77-322	2"	0.87	W 01187	51.04

**Fitting Male Adapters**  
Ftg. x M

WC-404  
604-2



77-331	1/2"	0.09	W 01431	37.28
77-332	1/2" x 3/4"	0.15		42.58
77-333	3/4"	0.15	W 01446	23.26
77-335	1-1/4"	0.41	W 01471	91.36
77-337	2"	0.86	W 01487	178.91

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Can't find it here? Ask us for price & availability.

For every extra kilogram carried on a space flight, 530 kg of excess fuel are needed at lift-off



# COPPER FITTINGS

# WROT SOLDER JOINT

**Female Adapters  
C x F  
WC402  
603  
WC402R  
603R**



Part#	Nominal	Approx Net Wt.	Ind #	List Price
77-338	1/8"	0.03	W 01207	19.08
77-339	1/4"	0.04	W 01215	14.38
77-340	3/8"	0.06	W 01225	13.86
77-341	3/8" x 1/2"	0.10	W 01224	13.52
77-343	1/2"	0.10	WB01231	7.46
77-345	1/2" x 3/4"	0.15	WB01230	15.25
77-346	1/2"x3/8"	0.70	W 01232	12.20
77-347	1/2" x 1/4"	0.05	W 01233	12.20
77-349	3/4"	0.14	WB01246	12.83
77-351	3/4" x 1/2"	0.11	W 01247	17.02
77-402	1"	0.24	WB01263	24.89
77-404	1"x3/4"	0.22	W 01264	36.46
77-405	1"x 1/2"	0.29	W 01265	37.69
77-406	1-1/4"	0.43	W 01271	36.46
77-407	1-1/4" x 1-1/2"	0.52	W 01270	64.40
77-409	1 -1/4" x 3/4"	0.26		50.05
77-410	1-1/2"	0.58	W 01279	57.05
77-413	2"	0.74	W 01287	77.48
77-416	3"	1.83	W 01297	353.75

**Fitting Female Adapt.  
Ftg. x F**



WC405  
603-2

WC405R  
603R

77-419	3/8"	0.05	W 01525	17.81
77-420	1/2"	0.11	W 01531	13.19
77-423	3/4"	0.19	W 01546	20.22
77-424	1"	0.25	W 01563	29.87
77-426	1-1/2"	0.55	W 01579	63.40
77-427	2"	0.68	W 01587	85.00

**Cap  
WC-415  
617**



77-428	1/8"	0.003	W 07002	3.30
77-429	1/4"	0.01	W 07004	1.86
77-430	3/8"	0.01	W 07006	2.90
77-431	1/2"	0.02	WB07007	1.62
77-432	5/8"	0.03	W 07008	4.20
77-433	3/4"	0.04	WB07009	2.93
77-434	1"	0.08	WB07011	6.82
77-435	1-1/4"	0.11	W 07012	11.24
77-436	1-1/2"	0.18	W 07013	14.87
77-437	2"	0.30	W 07014	28.04

**Unions C x C  
WC-407**



77-453	1/4"	0.11	W 08001	42.64
77-454	3/8"	0.11	W 08002	44.82
77-455	1/2"	0.17	W 08003	21.29
77-456	3/4"	0.37	W 08004	32.38
77-457	1"	0.51	W 08005	54.52

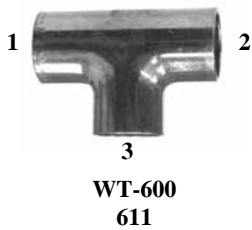
**U-Type Strap  
WS-1100**



77-458	1/8"	0.01	A 01203	1.06
77-459	1/4"	0.02	A 01278	1.48
77-460	3/8"	0.02	A 01366	2.75
77-461	1/2"	0.03	A 02529	2.28
77-462	3/4"	0.03	A 02574	3.11
77-463	1"	0.04	A 02614	5.80
77-464	1-1/4"	0.04	A 02650	2.38
77-465	1-1/2"	0.05	A 02675	2.81
77-466	2	0.06	A 02708	3.16

Part#	Nominal 1 x 2 x 3	Approx Net Wt.	Ind #	List Price
77-467	1/8"	0.02	W 40306	15.13
77-468	1/4"	0.03	W 04000	14.03
77-470	3/8"	0.05	W 04001	12.30
77-473	1/2"	0.08	WB04006	3.80
77-474	1/2"x1/2"x1"	-	W 04067	33.05
77-481	5/8"	-	W 04017	23.28
77-483	3/4"	0.18	WB04031	9.22
77-485	3/4"x3/4"x1"	0.25	W 04065	27.08
77-486	3/4" x 3/4" x 1/2"	0.15	WB04033	7.73
77-488	3/4" x 1/2" x 3/4"	0.19	WB04041	11.22
77-489	3/4"x1/2"x1/2"	0.15	WB04043	31.27
77-490	1"	0.35	WB04048	28.61
77-492	1"x1"x 1-1/4"	0.64	W 04082	55.54
77-493	1"x1"x3/4"	0.29	WB04049	36.06
77-496	1"x1"x1/2"	0.24	WB04051	30.18
77-498	1"x3/4"x1"	0.38	W 04055	35.89
77-499	1"x3/4"x3/4"	0.31	W 04056	34.31
77-500	1"x3/4"x1/2"	0.27	W 04058	29.70
77-501	1"x1/2"x1"	0.34	W 04061	29.70
77-502	1"x1/2"x3/4"	0.34	W 04062	31.27
77-504	1-1/4"	0.58	W 04068	41.99
77-506	1 -1/4" x1 -1/4" x 1-1/2"	0.79	W 40100	79.61
77-507	1-1/4"x1-1/4"x1"	0.47	W 04069	36.74
77-508	1-1/4" x 1-1/4" x 3/4"	0.39	W 04070	41.21
77-509	1-1/4"x1-1/4"x1/2"	0.33	W 04071	36.74
77-510	1-1/4" x 1" x 1-1/4"	-	W 04073	48.28
77-511	1-1/4" x 1"x1"	0.50	W 04074	47.17
77-514	1 -1/4" x 3/4" x 1-1/4"	0.63	W 04078	47.17
77-516	1-1/4"x3/4"x3/4"	-	W 04080	47.17
77-518	1 -1/4"x 1/2" x 1-1/4"	-	W 04083	37.70
77-519	1-1/2"	-	W 04084	63.38
77-521	1-1/2"x1-1/2"x 1-1/4"	-	W 04085	30.55
77-522	1-1/2" x 1-1/2" x1"	-	W 04086	29.09
77-523	1 -1/2" x 1-1/2" x 3/4"	0.51	W 04087	29.09
77-524	1 -1/2" x 1 -1/2" x 1/2"	0.46	W 04088	47.18
77-543	2"	1.35	W 40102	81.76
77-545	2" x 2" x 1-1/2"	1.17	W 40103	63.65
77-546	2" x 2" x 1-1/4"	1.01	W 40104	70.70
77-547	2"x2"x1"	0.99	W 40105	63.65
77-548	2" x 2" x 3/4"	0.90	W 40106	63.25
77-549	2"x2"x1/2"	0.77	W 40107	63.25
77-554	2" x 1 -1/2" x 3/4"	1.40	W 40113	77.72
77-556	2" x 1-1/4" x 1-1/4"	1.14	W 40117	84.31
77-559	2"x1"x2"	1.34	W 40245	77.72
77-560	2"x1"x1"	0.98	W 40247	77.72
77-563	2-1/2"	2.21	W 40123	164.95
77-585	3"x 3" x 2"	2.53	W 40150	211.81
77-587	3" x 3" x 1-1/4"	2.18	W 04074	154.81
77-588	3"x3"x1"	2.14	W 04075	154.81

**Tee**  
**C x C x C**



**NIPPLES & FITTINGS**

*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")	0.71
55-061	1-1/2"	0.83
55-062	2"	0.74
55-063	2-1/2"	0.92
55-064	3"	0.80
55-065	3-1/2"	0.94
55-066	4"	1.19
55-067	4-1/2"	1.19
55-068	5"	1.19
55-069	5-1/2"	1.31
55-070	6"	1.23
55-072	8"	1.62
55-076	12"	1.81
55-241	24"	3.70
55-243	36"	6.09

**3/4" DIAMETER**

Part #	Length	List Price
55-080	X Close (1-3/8")	0.75
55-081	1-1/2"	0.82
55-082	2"	0.85
55-083	2-1/2"	0.78
55-084	3"	0.84
55-085	3-1/2"	1.02
55-086	4"	1.12
55-087	4-1/2"	1.39
55-088	5"	1.22
55-089	5-1/2"	1.44
55-090	6"	1.65
55-250	18"	4.37
55-253	36"	9.60

**1" DIAMETER**

Part #	Length	List Price
55-100	X Close (1-1/2")	1.17
55-101	2"	1.38
55-102	2-1/2"	1.39
55-103	3"	1.95
55-104	3-1/2"	1.44
55-105	4"	1.55
55-106	4-1/2"	1.81
55-107	5"	1.93
55-108	5-1/2"	2.01
55-109	6"	2.44
55-111	8"	3.03
55-115	12"	3.39

**1-1/4" DIAMETER**

Part #	Length	List Price
55-120	X Close (1-5/8")	1.96
55-121	2"	1.76
55-122	2-1/2"	1.96
55-123	3"	2.68
55-124	3-1/2"	2.44
55-125	4"	2.94
55-126	4-1/2"	2.80
55-127	5"	2.82
55-128	5-1/2"	3.47
55-129	6"	3.51

**1-1/2" DIAMETER**

Part #	Length	List Price
55-140	X Close (1-5/8")	2.14
55-141	2"	2.04
55-142	2-1/2"	4.13
55-143	3"	2.52
55-144	3-1/2"	2.95
55-145	4"	2.91
55-146	4-1/2"	3.29
55-147	5"	3.52
55-148	5-1/2"	3.72
55-149	6"	4.05

**2" DIAMETER**

Part #	Length	List Price
55-160	X Close (2")	3.11
55-161	2-1/2"	2.81
55-162	3"	3.64
55-163	3-1/2"	3.66
55-164	4"	3.80
55-165	4-1/2"	4.27
55-166	5"	4.55
55-167	5-1/2"	4.95
55-168	6"	4.87
55-174	12"	8.41
55-292	30"	17.90

*More sizes available...just ask!*

**When a person dies, hearing is the last sense to go.**

**The first sense lost is sight.**

**PLASTIC FITTINGS**



# PVC SCHEDULE 40 FITTINGS

# PLASTIC FITTINGS

## SLIP TEES



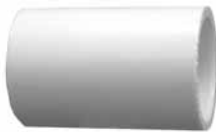
Part #	Size	List Price
55-710	1/2"	0.78
55-711	3/4"	0.90
55-712	3/4" x 3/4" x 1/2"	1.02
55-713	1"	1.65
55-714	1" x 1" x 1/2"	1.75
55-715	1" x 1" x 3/4"	1.92
55-716	1-1/4"	2.61
55-717	1-1/2"	3.16
55-718	2"	4.60
55-719	2-1/2"	15.18

## SLIP COUPLING



Part #	Size	List Price
55-736	1/2"	0.41
55-737	3/4"	0.57
55-738	1"	0.99
55-739	1-1/4"	1.37
55-740	1-1/2"	1.44
55-741	2"	2.22
55-742	2-1/2"	4.93
55-743	3"	7.70

## THREADED COUPLING



Part #	Size	List Price
55-950	1/2"	0.79
55-951	3/4"	1.44

The military salute is a motion that evolved from medieval times, when knights in armor raised their visors to reveal their identity.

## SLIP X FEMALE ADAPTER



Part #	Size	List Price
55-744	1/2"	0.70
55-812	1/2" x 1/4"	1.25
55-813	1/2" x 3/8"	1.25
55-745	3/4"	0.90
55-746	1"	1.02
55-747	1-1/4"	1.60
55-748	1-1/2"	1.82
55-749	2"	2.44
55-807	2-1/2"	6.20
55-804	3"	8.33

## MIP X ADAPTER



Part #	Size	List Price
55-750	1/2"	0.57
55-751	3/4"	0.62
55-752	1"	1.12
55-753	1-1/4"	1.37
55-754	1-1/2"	1.82
55-755	2"	2.40
55-808	2-1/2"	7.06
55-811	3"	10.35

## 90° SLIP ELBOW



Part #	Size	List Price
55-720	1/2"	0.62
55-721	3/4"	0.70
55-722	1"	1.25
55-723	1-1/4"	2.21
55-725	2"	3.73
55-726	2-1/2"	11.36
55-727	3"	13.60

PLASTIC FITTINGS

# PLASTIC FITTINGS

# PVC SCHEDULE 40 FITTINGS

## SLIP CAP



Part #	Size	List Price
55-756	1/2"	0.57
55-757	3/4"	0.64
55-758	1"	1.02
55-759	1-1/4"	1.44
55-760	1-1/2"	1.60
55-761	2"	1.92
55-762	2-1/2"	6.11
55-801	3"	6.68

## THREADED PIPE CAP



Part #	Size	List Price
55-763	1/2"	1.18
55-764	3/4"	1.37

## SLIP X FIP BUSHING



Part #	Size	List Price
55-805	1/2" x 1/4"	1.37
55-806	1/2" x 3/8"	1.37
55-781	3/4" x 1/2"	1.02
55-782	1" x 1/2"	1.65
55-783	1" x 3/4"	1.65
55-784	1-1/4" x 1/2"	2.56
55-785	1-1/4" x 3/4"	2.56
55-786	1-1/4" x 1"	2.56
55-803	1-1/2" x 1/2"	2.95
55-787	1-1/2" x 3/4"	2.95
55-788	1-1/2" x 1"	2.95
55-809	1-1/2" x 1-1/4"	2.95
55-810	2" x 1/2"	3.95
55-789	2" x 3/4"	3.95
55-790	2" x 1"	3.95
55-791	2" x 1-1/4"	3.95
55-792	2" x 1-1/2"	3.95
55-798	2-1/2" x 1-1/2"	5.72
55-796	2-1/2" x 2"	5.72
55-816	3" x 2"	6.59
55-780	3" x 2-1/2"	6.59

## 45° SLIP ELBOW



Part #	Size	List Price
55-728	1/2"	1.02
55-729	3/4"	1.60
55-730	1"	1.92
55-731	1-1/4"	2.68
55-732	1-1/2"	3.10
55-733	2"	4.36
55-734	2-1/2"	11.38
55-735	3"	17.66

## SLIP BUSHING



Part #	Size	List Price
55-765	3/4" x 1/2"	0.64
55-766	1" x 1/2"	1.18
55-767	1" x 3/4"	1.18
55-768	1-1/4" x 1/2"	1.60
55-769	1-1/4" x 3/4"	1.60
55-770	1-1/4" x 1"	1.60
55-815	1-1/2" x 1/2"	1.69
55-771	1-1/2" x 3/4"	1.69
55-772	1-1/2" x 1"	1.69
55-773	1-1/2" x 1-1/4"	1.69
55-774	2" x 1/2"	2.79
55-775	2" x 3/4"	2.79
55-776	2" x 1"	2.79
55-777	2" x 1-1/4"	2.79
55-778	2" x 1-1/2"	2.79
55-814	2-1/2" x 1-1/2"	4.48
55-779	2-1/2" x 2"	4.48
55-797	3" x 2"	6.59
55-802	3" x 2-1/2"	6.59

PLASTIC FITTINGS

A comet's tail always points away from the sun.

# PVC SCHEDULE 80 FITTINGS

# PLASTIC FITTINGS

PVC Material is Type 1 according to the American Society for Testing Materials (ASTM) D-1784. Fittings conform to ASTM D-2464 & ASTM D-2467. Temperature rating is 140°F. PSI is based on water at 73°F. Derate 50% at 110°F and 78% at 140°F. Not recommended for use in compressed air or gas systems.



## SLIP X SLIP 90° ELBOW

Part #	Size	List Price
806-002	1/4"	4.15
806-003	3/8"	4.15
806-005	1/2"	4.15
806-007	3/4"	5.31
806-010	1"	8.56
806-012	1-1/4"	11.46
806-015	1-1/2"	12.27
806-020	2"	14.84
806-025	2-1/2"	34.71
806-030	3"	39.03
806-040	4"	59.30
806-060	6"	168.81



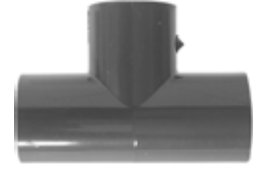
## FIP X FIP 90° ELBOW

Part #	Size	List Price
808-002	1/4"	10.31
808-003	3/8"	10.31
808-005	1/2"	9.63
808-007	3/4"	11.99
808-010	1"	15.09
808-012	1-1/4"	16.25
808-015	1-1/2"	23.05
808-020	2"	25.96
808-025	2-1/2"	101.09
808-030	3"	163.03
808-040	4"	286.86



## SLIP X SLIP 45° ELBOW

Part #	Size	List Price
817-002	1/4"	14.93
817-003	3/8"	14.93
817-005	1/2"	7.84
817-007	3/4"	11.96
817-010	1"	17.93
817-012	1-1/4"	22.85
817-015	1-1/2"	20.68
817-020	2"	35.00
817-025	2-1/2"	73.49
817-030	3"	89.44
817-040	4"	161.08
817-060	6"	202.85



## SLIP X SLIP TEE

Part #	Size	List Price
801-002	1/4"	11.72
801-003	3/8"	11.72
801-005	1/2"	11.72
801-007	3/4"	12.29
801-010	1"	15.37
801-012	1-1/4"	42.22
801-015	1-1/2"	42.22
801-020	2"	52.81
801-025	2-1/2"	57.40
801-030	3"	71.74
801-040	4"	83.14
801-060	6"	283.88



## FIP X FIP TEE

Part #	Size	List Price
805-002	1/4"	13.55
805-003	3/8"	13.55
805-005	1/2"	13.55
805-007	3/4"	15.09
805-010	1"	33.30
805-012	1-1/4"	35.30
805-015	1-1/2"	42.79
805-020	2"	46.01
805-025	2-1/2"	167.49
805-030	3"	174.92
805-040	4"	284.30



## SLIP X SLIP COUPLING

Part #	Size	List Price
829-002	1/4"	12.03
829-003	3/8"	12.03
829-005	1/2"	7.54
829-007	3/4"	10.19
829-010	1"	10.46
829-012	1-1/4"	15.95
829-015	1-1/2"	17.18
829-020	2"	18.45
829-025	2-1/2"	45.43
829-030	3"	52.16
829-040	4"	65.32
829-060	6"	140.57

PLASTIC FITTINGS



**FIP X FIP COUPLING**

Part #	Size	List Price
830-002	1/4"	9.02
830-003	3/8"	9.02
830-005	1/2"	8.42
830-007	3/4"	12.01
830-010	1"	12.89
830-012	1-1/4"	15.95
830-015	1-1/2"	35.48
830-020	2"	37.24
830-030	3"	104.24
830-040	4"	180.49



**SLIP X SLIP REDUCING COUPLING**

Part #	Size	List Price
829-101	3/4" x 1/2"	9.21
829-130	1" x 1/2"	12.86
829-131	1" x 3/4"	13.42
829-168	1-1/4" x 1"	27.25
829-211	1-1/2" x 1"	28.55
829-212	1-1/2" x 1-1/4"	35.26
829-251	2" x 1-1/2"	32.18
829-338	3" x 2"	79.05
829-422	4" x 3"	148.89
829-532	6" x 4"	303.69



**FIP X FIP REDUCING COUPLING**

Part #	Size	List Price
830-052	3/8" x 1/4"	13.20
830-073	1/2" x 3/8"	13.78
830-101	3/4" x 1/2"	10.00
830-130	1" x 1/2"	14.15
830-131	1" x 3/4"	14.18
830-167	1-1/4" x 3/4"	31.92
830-168	1-1/4" x 1"	22.79
830-211	1-1/2" x 1"	47.36
830-212	1-1/2" x 1-1/4"	50.66
830-251	2" x 1-1/2"	62.90



**MIP X SLIP ADAPTER**

Part #	Size	List Price
836002	1/4"	8.79
836003	3/8"	8.79
836005	1/2"	8.79
836007	3/4"	9.70
836010	1"	16.79
836012	1-1/4"	19.61
836015	1-1/2"	28.18
836020	2"	40.76
836025	2-1/2"	46.35
836030	3"	51.45
836040	4"	91.52



**MIP X FIP BUSHING**

Part #	Size	List Price
839041	1/4" x 1/8"	15.16
839050	3/8" x 1/8"	15.16
839052	3/8" x 1/4"	15.16
839072	1/2" x 1/4"	15.16
839073	1/2" x 3/8"	15.16
839099	3/4" x 3/8"	11.30
839101	3/4" x 1/2"	9.31
839130	1" x 1/2"	14.59
839131	1" x 3/4"	14.59
839166	1-1/4" x 1/2"	15.47
839167	1-1/4" x 3/4"	15.47
839168	1-1/4" x 1"	15.47
839209	1-1/2" x 1/2"	18.33
839210	1-1/2" x 3/4"	18.33
839211	1-1/2" x 1"	18.33
839212	1-1/2" x 1-1/4"	18.33
839247	2" x 1/2"	26.86
839248	2" x 3/4"	26.86
839249	2" x 1"	26.86
839250	2" x 1-1/4"	26.86
839251	2" x 1-1/2"	26.86
839338	3" x 2"	49.41
839420	4" x 2"	101.86
839422	4" x 3"	130.10

**PLASTIC FITTINGS**





**SLIP X SLIP UNION**

Part #	Size	List Price
897002	1/4"	28.45
897003	3/8"	28.45
897005	1/2"	15.20
897007	3/4"	19.35
897010	1"	22.14
897012	1-1/4"	43.89
897015	1-1/2"	49.68
897020	2"	67.39
897025	2-1/2"	107.13
897030	3"	125.39
897040	4"	173.45



**FIP X FIP THREADED UNION**

Part #	Size	List Price
898002	1/4"	30.66
898003	3/8"	30.66
898005	1/2"	17.67
898007	3/4"	24.71
898010	1"	32.89
898012	1-1/4"	62.77
898015	1-1/2"	77.70
898020	2"	119.58
898025	2-1/2"	160.13
898030	3"	303.36
898040	4"	354.79



**MIP THREADED PLUG**

Part #	Size	List Price
850002	1/4"	7.94
850003	3/8"	7.94
850005	1/2"	7.08
850007	3/4"	7.37
850010	1"	9.02
850012	1-1/4"	13.28
850015	1-1/2"	16.17
850020	2"	16.60
850025	2-1/2"	46.35
850030	3"	54.08
850040	4"	105.28



**SLIP CAP**

Part #	Size	List Price
847002	1/4"	9.56
847003	3/8"	9.56
847005	1/2"	7.37
847007	3/4"	7.77
847010	1"	13.78
847012	1-1/4"	16.64
847015	1-1/2"	16.64
847020	2"	32.84
847025	2-1/2"	67.06
847030	3"	78.45
847040	4"	132.31
847060	6"	329.16



**FIP THREADED CAP**

Part #	Size	List Price
848002	1/4"	9.21
848003	3/8"	9.21
848005	1/2"	9.21
848007	3/4"	10.31
848010	1"	12.99
848012	1-1/4"	15.47
848015	1-1/2"	17.67
848020	2"	34.71
848025	2-1/2"	69.42
848030	3"	81.74
848040	4"	143.91

**PLASTIC FITTINGS**

**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"	0.58	0.73	0.80
28-602	1/4"	0.53	0.73	0.80
28-603	3/8"	0.62	0.89	0.73
28-604	1/2"	0.73		1.83
28-605	3/4"	1.28		1.09
28-606	1"			1.76
28-607	1-1/4"			2.26
28-608	1-1/2"			3.26
28-609	2"			4.83

**PIPE CAP**



Part #	Size	List Price
		W
28-640	1/4"	0.81
28-641	3/8"	0.96
28-642	1/2"	1.05
28-643	3/4"	0.98

**HEX NIPPLES**



Part #	Size	List Price		
		B	P	W
28-611	1/8"	0.64		0.78
28-612	1/4"	0.70	0.86	1.29
28-613	3/8"	0.70	0.89	0.78
28-614	1/2"	0.90	0.97	1.01
28-615	3/4"		1.38	1.23
28-616	1"			2.12
28-617	1 1/4"			4.25

**REDUCER NIPPLES**



Part #	Size	List Price		
		B	P	W
28-620	1/4 x 1/8"			1.19
28-621	3/8 x 1/8"			0.89
28-622	3/8 x 1/4"			0.85
28-627	1/2" x 1/8"			0.99
28-623	1/2 x 1/4"	0.84		1.02
28-624	1/2 x 3/8"	0.85		1.00
28-628	3/4 x 3/8"	0.98		1.00
28-625	3/4 x 1/2"	1.32		1.10
28-629	1 x 3/4"		6.78	
28-631	1-1/4 x 3/4"		7.26	
28-634	2 x 1-1/4"		9.68	
28-635	3 x 2"		29.73	

More shapes and sizes available

**HEX BUSHING**



Part #	Size	List Price	
		P	W
28-659	1/4 x 1/8"	2.31	2.16
28-660	3/8 x 1/8"	2.27	1.68
28-661	3/8 x 1/4"	2.19	2.13
28-663	1/2 x 1/4"	2.22	1.76
28-664	1/2 x 3/8"	1.94	2.22
28-665	3/4 x 1/8"		3.06
28-666	3/4 x 1/4"	2.52	1.94
28-667	3/4 x 3/8"		2.33
28-668	3/4 x 1/2"	2.62	1.90
28-671	1 x 1/2"	2.59	2.83
28-672	1 x 3/4"	3.07	2.22
28-674	1-1/4 x 3/4"		4.14
28-675	1-1/4 x 1"		3.63
28-678	1-1/2 x 3/4"	4.41	4.80
28-679	1-1/2 x 1"		5.31
28-680	1-1/2 x 1-1/4"	3.39	4.04
28-682	2 x 3/4"		12.98
28-683	2 x 1"		10.62
28-685	2 x 1-1/2"		5.97

**ALL HOSE BARB "Y"**



Part #	Size	List Price	
		P*	W
33-300*	1/4"	6.33	
33-301*	3/8"	2.95	3.09
33-302*	1/2"	7.25	

\*Natural Polypro

# PLASTIC PIPE

# PLASTIC FITTINGS

## ELBOW



Part #	Size	List Price	
		P	W
28-701	1/4"		5.81
28-702	3/8"	8.58	
28-703	1/2"		6.18
28-704	3/4"	6.86	6.79
28-705	1"		12.42
28-706	1-1/4"		14.50
28-707	1-1/2"		16.20

## COUPLING



Part #	Size	List Price	
		P	W
28-760	1/8"	5.18	4.63
28-761	1/4"	5.16	5.28
28-762	3/8"	4.63	5.81
28-763	1/2"	5.32	5.09
28-764	3/4"	5.47	5.23
28-765	1"		6.59
28-767	1-1/2"		8.32
28-768	2"		10.30

## HOSE BARB X FEMALE ADAPTERS



Hose ID x FIP

Part #	Size	List Price		
		B	P	W
33-053	1/4 x 1/4"	2.93		5.71
33-058	3/8 x 1/4"	4.35		1.71
33-059	3/8 x 3/8"			3.81
33-060	3/8 x 1/2"			4.87
33-062	1/2 x 3/8"		4.16	
33-061	1/2 x 1/2"			3.49
33-063	5/8 x 3/4"			5.31
33-064	3/4 x 1/2"			4.27
33-065	3/4 x 3/4"			5.49

## STREET ELBOW



Part #	Size	List Price	
		P	W
28-720	1/4"		5.20
28-721	3/8"		6.42
28-723	1/2"	4.66	4.58
28-724	3/4"		6.16
28-725	1"		13.93
28-726	1-1/4"		15.38

## MALE ADAPTERS



Hose ID x MIP

Part #	Size	List Price		
		B	P	W
33-002	3/16 x 1/8"	0.56		0.75
33-003	3/16 x 1/4"	0.59		0.84
33-004	1/4 x 1/8"	0.56		0.75
33-005	1/4 x 1/4"	0.68		0.72
33-006	1/4 x 3/8"	0.70		0.96
33-007	1/4 x 1/2"	0.77		1.01
33-380	1/4 x 3/4"			1.07
33-008	5/16 x 1/8"	0.61		0.78
33-009	5/16 x 1/4"	0.68		0.85
33-010	5/16 x 3/8"			0.73
33-011	3/8 X 1/8"			0.83
33-012	3/8 x 1/4"	0.64	0.77	1.12
33-013	3/8 x 3/8"	0.74		0.92
33-014	3/8 x 1/2"	0.77	1.05	0.99
33-026	3/8 x 3/4"	0.69		1.23
33-015	1/2 x 1/4"	0.64	0.84	0.85
33-016	1/2 x 3/8"	0.74	0.87	0.85
33-017	1/2 x 1/2"	0.83	0.87	0.96
33-018	1/2 x 3/4"	0.92	1.28	1.30
33-019	5/8 x 3/8"	0.79		0.85
33-020	5/8 x 1/2"	0.78	0.92	1.14
33-021	5/8 x 3/4"	0.94		1.29
33-022	3/4 x 1/2"	0.86	1.02	1.33
33-023	3/4 x 3/4"	0.99	1.12	1.25
33-000	3/4 x 1"			1.60
33-024	1 x 3/4"	3.34	1.57	1.52
33-025	1 x 1"	2.13	1.56	1.95
33-029	1 x 1-1/4"			3.55
33-028	1-1/4 x 1"			2.79
33-030	1-1/4 x 1-1/4"			3.34
33-032	1-1/4 x 1-1/2"			2.93
33-033	1-1/2 x 1-1/2"			3.72
33-035	2 x 2"			6.28

## TEE



Part #	Size	List Price	
		P	W
28-741	1/4"	5.54	4.46
28-742	3/8"	9.85	
28-743	1/2"	5.89	6.78
28-744	3/4"	8.02	7.56
28-745	1"		16.90
28-746	1-1/4"		18.33
28-747	1-1/2"		25.32

More shapes and sizes available

## 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	1.07		
33-381	3/16 x 1/4			1.55
33-038	1/4 x 1/8	1.18		1.49
33-039	1/4 x 1/4	1.12		1.12
33-309	1/4 x 3/8	0.97		1.50
33-040	5/16 x 1/4	1.12		1.60
33-310	5/16 x 3/8	1.24		1.78
33-046	3/8 x 1/8	1.12		1.52
33-041	3/8 x 1/4	1.34		1.36
33-042	3/8 x 3/8	2.05		1.38
33-047	3/8 x 1/2	1.63		1.52
33-384	3/8 x 3/4	2.13		2.09
33-048	1/2 x 1/4		1.46	1.46
33-043	1/2 x 3/8	1.30		1.44
33-311	1/2 x 1/2	1.28	1.53	1.71
33-385	1/2 x 3/4	2.38	1.90	1.94
33-044	5/8 x 3/8	1.80		1.63
33-045	5/8 x 1/2	1.85		1.89
33-312	5/8 x 3/4	2.26		2.18
33-313	3/4 x 1/2	2.08	1.75	1.98
33-314	3/4 x 3/4	2.43	2.12	2.02
33-315	3/4 x 1			2.19
33-386	1x3/4			2.70
33-316	1 x 1	3.38	2.53	2.53
33-460	1 x 1-1/4			4.03
33-461	1-1/4 x 1-1/4		4.07	4.71
33-463	1-1/2 x 1-1/2		6.02	6.04
33-464	2 x 2			7.07

### HOSE BARB X FEMALE ELBOW



Hose ID x Female Pipe

Part #	Size	List Price	
		B	W
33-402	1/2 x 3/8		4.64
33-403	1/2 x 3/4		3.85
33-471	3/4 x 3/4		5.09

### UNION ELBOWS



Part #	Size	List Price		
		B	P	W
33-390	1/4	1.23		1.33
33-391	3/8	1.11		1.40
33-394	1/2	1.12		1.43
33-395	5/8	1.64	1.35	1.60
33-396	3/4	1.84	2.05	1.84
33-397	1			3.18
33-398	1-1/4			8.39
33-399	1-1/2			11.02
33-389	2			17.01

### REDUCING UNION ELBOWS

Part #	Size	List Price
		W
33-392	1/2 X 1/4	1.75

### SPLICERS



Part #	Size	List Price		
		B	P	W
33-091	1/8	0.62		0.74
33-092	3/16	0.61		1.08
33-093	1/4	0.62		0.80
33-094	5/16			0.78
33-095	3/8	0.67	0.78	0.78
33-096	1/2	0.64	0.88	0.78
33-097	5/8	0.96		0.97
33-098	3/4	2.34	1.28	1.35
33-099	1		1.60	2.00
33-480	1-1/4			3.64
33-481	1-1/2			3.84
33-482	2			13.54

### REDUCER CONNECTORS

Part #	Size	List Price	
		B	W
33-406	3/8 x 1/4	0.67	0.83
33-407	1/2 x 1/4	0.60	0.77
33-408	1/2 x 3/8	0.62	0.86
33-409	5/8 x 3/8		0.84
33-410	5/8 x 1/2	0.70	0.94

### TEES BARBED ON ALL SIDES



Part #	Size	List Price		
		B	P	W
33-415	1/8	1.07		1.46
33-417	5/32			3.32
33-418*	3/16	1.05		2.54
33-420	3/16	1.10		1.45
33-422	1/4	1.13		1.55
33-426	5/16	1.83		1.50
33-429	3/8	1.19	1.84	1.50
33-433	1/2	1.24		1.71
33-436	5/8	1.54		1.68
33-437	3/4	1.64		2.00
33-438	1	2.01		2.29
33-439	1-1/4			4.95
33-440	1-1/2		4.49	5.49
33-441	2			17.56

\* single barb

### REDUCING TEES

Part #	Size 3 x 1 x 2	List Price	
		B	W
33-416*	1/8 x 5/32 x 5/32		1.52
33-423	1/4 x 3/8 x 3/8	1.17	
33-424	1/4 x 1/2 x 1/2	1.40	1.62
33-430	3/8 x 1/2 x 1/2	1.43	1.67
33-431	3/8 x 5/8 x 5/8		1.74
33-432	1/2 x 3/8 x 3/8	1.36	1.87
33-434	1/2 x 1/2 x 5/8	1.93	
33-435	1/2 x 3/4 x 3/4	1.67	2.06

\* single barb

### TEES



Part #	Size 1 & 2 x 3	List Price	
		B	W
33-448	1/4 x 1/4	1.24	1.46
33-450	3/8 x 1/4		1.76
33-451	3/8 x 3/8		1.62
33-453	1/2 x 1/4		2.71
33-454	1/2 x 3/8		1.63
33-455	1/2 x 1/2		1.56
33-456	3/4 x 3/4		2.33

More sizes available...just ask!

# PLASTIC GARDEN HOSE & COMPRESSION

# PLASTIC FITTINGS

## PLASTIC GARDEN HOSE FITTINGS

FITTINGS WITH GARDEN HOSE THREAD

### GARDEN HOSE CAP

• Washer not included



• White Nylon

Part #	Size	List Price
30-103P	3/4"	1.23

### GARDEN HOSE NUT



• White Nylon

Part #	Size	List Price
31-022	3/4"	0.94

### GARDEN HOSE ADAPTER INSERTS



• White Nylon

Part #	Size	List Price
31-031	3/8"	0.37
31-032	1/2"	0.77
31-033	5/8"	0.77
31-034	3/4"	0.77

### GARDEN HOSE THREAD ADAPTERS



• White Nylon

Part #	Size	List Price
31-040	1/2"	1.56
31-041	5/8"	1.30

More sizes available

## MALE GARDEN HOSE X FEMALE PIPE



• White Nylon

Part #	Size	List Price
31-068	MGH X 1/2 FIP	3.55

## FEMALE GARDEN HOSE X MALE PIPE



• White Nylon

Part #	Size	List Price
31-093	FGH X 3/4 MPT	3.77

## FEMALE GARDEN HOSE X FEMALE PIPE



• White Nylon

Part #	Size	List Price
31-096	FGH X 1/2 FIP	3.26

## ADAPTERS GARDEN TO PIPE THREAD



• White Nylon

Part #	Size	List Price
31-055	GHT X 3/8 MPT	0.85
31-058	GHT X 1/2 MPT	1.18
31-063	GHT X 3/4 MPT	1.40

## 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"	3.78	3.73
17-065	5/16"	4.03	3.78
17-078	5/16" x 1/4"		4.41
17-066	3/8"	7.00	5.79
17-079	3/8" x 1/4"	5.47	7.77
17-068	1/2"	6.86	8.62
17-081	1/2" x 3/8"	6.42	

## BULKHEAD UNIONS



Part #	Size	List Price
17-088N	1/4"	5.91
17-090N	3/8"	7.04
17-091N	1/2"	9.19

## UNION TEES



Part #	Size	List Price	
		P	N
17-103	1/4"	9.36	6.97
17-105	3/8"	11.94	8.97
17-106	1/2"	10.82	10.26

## UNION ELBOWS



Part #	Size	List Price	
		P	N
17-124	1/4"	4.70	4.70
17-126	3/8"	6.87	6.82
17-127	1/2"	8.97	

PLASTIC FITTINGS



# PLASTIC FITTINGS

# PLASTIC COMPRESSION

## FEMALE CONNECTORS



Part #	Tube x Female Pipe	List Price	
		P	N
17-145	1/4 x 1/8	3.45	
17-146	1/4 x 1/4		3.54
17-153	3/8 x 1/4	3.88	3.84
17-154	3/8 x 3/8	4.49	4.45
17-158	1/2 x 3/8	5.78	
17-159	1/2 x 1/2	4.93	

## MALE CONNECTORS



Part #	Tube x Male Pipe	List Price	
		P	N
17-176	1/8 x 1/8		2.13
17-179	1/4 x 1/8	2.51	2.51
17-180	1/4 x 1/4	3.06	2.78
17-181	1/4 x 3/8	2.87	2.87
17-184	5/16 x 1/4		2.91
17-187	3/8 x 1/8	2.95	3.10
17-188	3/8 x 1/4	3.83	3.44
17-189	3/8 x 3/8	3.83	3.75
17-190	3/8 x 1/2	5.03	4.57
17-193	1/2 x 1/4	5.52	5.57
17-194	1/2 x 3/8	6.06	4.86
17-195	1/2 x 1/2	6.06	5.60

## MALE ELBOWS



Part #	Tube x Male Pipe	List Price	
		P	N
17-224	1/4 x 1/8	3.54	3.99
17-225	1/4 x 1/4	3.88	3.88
17-226	1/4 x 3/8		4.54
17-229	5/16 x 1/4		4.71
17-233	3/8 x 1/4	5.01	5.85
17-234	3/8 x 3/8	5.24	8.61
17-237	1/2 x 3/8	6.36	5.49
17-238	1/2 x 1/2	6.10	5.77

## FEMALE ELBOWS



Part #	Tube x Female Pipe	List Price	
		P	N
17-254	1/4 x 1/4	6.38	
17-258	3/8 x 1/4	5.42	6.39
17-259	3/8 x 3/8	7.44	7.44
17-262	1/2 x 3/8	9.78	
17-263	1/2 x 1/2	10.10	

## MALE RUN TEES



Part #	Tube x Male Pipe	List Price	
		P	N
17-279	3/8 x 1/4		7.98
17-282	1/2 x 1/2		10.63

## MALE BRANCH TEES



Part #	Tube x Male Pipe	List Price	
		P	N
17-291	1/4 x 1/8	5.23	
17-292	1/4 x 1/4	6.41	6.99
17-296	3/8 x 1/4	10.03	8.20
17-297	3/8 x 3/8	8.14	
17-299	1/2 x 3/8	9.96	

THOMAS JEFFERSON  
At 5, began studying under his cousins tutor.

At 9, studied Latin, Greek and French.

At 14, studied classical literature and additional languages.

At 16, entered the College of William and Mary.

At 19, studied Law for 5 years starting under George Wythe.

At 23, started his own law practice.

At 25, was elected to the Virginia House of Burgesses.

At 31, wrote the widely circulated "Summary View of the Rights of British America " and retired from his law practice.

At 32, was a Delegate to the Second Continental Congress.

At 33, wrote the Declaration of Independence .

At 33, took three years to revise Virginia 's legal code and wrote a Public Education bill and a statute for Religious Freedom.

At 36, was elected the second Governor of Virginia succeeding Patrick Henry.

At 40, served in Congress for two years.

At 41, was the American minister to France and negotiated commercial treaties with European nations along with Ben Franklin and John Adams.

At 46, served as the first Secretary of State under George Washington.

At 53, served as Vice President and was elected president of the American Philosophical Society.

At 55, drafted the Kentucky Resolutions and became the active head of Republican Party.

At 57, was elected the third president of the United States .

At 60, obtained the Louisiana Purchase doubling the nation's size.

At 61, was elected to a second term as President.

At 65, retired to Monticello .

At 80, helped President Monroe shape the Monroe Doctrine.

At 81, almost single-handedly created the University of Virginia and served as its first president.

At 83, died on the 50th anniversary of the Signing of the Declaration of Independence .



**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"	3.20
20-046P	5/32"	1/4"	3.07
20-052P	3/16"	1/8"	3.06
20-054P	1/4"	1/8"	3.20
20-055P	1/4"	1/4"	3.33
20-531P	5/16"	1/4"	4.58
20-056P	1/4"	3/8"	4.99
20-532P	5/16"	3/8"	5.77
20-057P	3/8"	1/8"	6.81
20-058P	3/8"	1/4"	4.53
20-059P	3/8"	3/8"	5.06
20-062P	3/8"	1/2"	9.78
20-061P	1/2"	3/8"	7.49
20-063P	1/2"	1/2"	8.52

*More sizes available upon request*

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

The Swine Flu vaccine in 1976 caused more death and illness than the disease it was intended to prevent.

**UNION CONNECTOR**



Part #	Tube OD	List Price
20-018P	5/32"	4.22
20-702P	3/16"	3.86
20-019P	1/4"	4.10
20-703P	5/16"	4.58
20-020P	3/8"	5.54
20-021P	1/2"	6.46

**CROSS**



Part #	Tube OD	List Price
20-143P	3/8"	16.99

**REDUCING UNION**



Part #	Tube OD	Tube OD	List Price
20-750P	1/4"	3/16"	7.81
20-751P	5/16"	5/32"	7.71
20-752P	5/16"	3/16"	9.46
20-753P	5/16"	1/4"	7.59
20-754P	3/8"	3/16"	11.55
20-755P	3/8"	1/4"	7.28
20-756P	3/8"	5/16"	9.83
20-757P	1/2"	5/16"	15.26
20-758P	1/2"	3/8"	8.81

**UNION ELBOW**



Part #	Tube OD	List Price
20-151P	5/32"	5.36
20-704P	3/16"	5.00
20-152P	1/4"	5.24
20-155P	5/16"	6.84
20-153P	3/8"	8.75
20-154P	1/2"	9.67





## PLASTIC FITTINGS

## PLASTIC PUSH-IN

### REDUCING ELBOW



Part #	Tube OD	Tube OD	List Price
20-730P	5/16"	5/32"	12.66
20-731P	5/16"	3/16"	6.41
20-732P	5/16"	1/4"	8.31
20-733P	3/8"	3/16"	16.81
20-734P	3/8"	1/4"	8.68
20-735P	3/8"	5/16"	10.79
20-736P	1/2"	3/8"	12.42

### FIXED ELBOW



Part #	Tube OD	Thread NPTF	List Price
20-068P	1/4"	1/8"	4.62
20-069P	1/4"	1/4"	5.17
20-070P	1/4"	3/8"	6.05
20-072P	3/8"	1/4"	6.83
20-073P	3/8"	3/8"	9.27

### PLUG-IN ELBOW



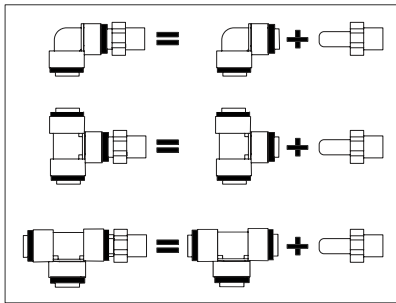
Part #	Stem OD	Tube OD	List Price
20-740P	5/32"	5/32"	5.22
20-741P	3/16"	3/16"	6.54
20-742P	1/4"	1/4"	17.13
20-743P	5/16"	5/16"	8.49
20-744P	3/8"	3/16"	9.28
20-745P	3/8"	1/4"	8.20
20-746P	3/8"	5/16"	9.28
20-747P	3/8"	3/8"	10.08
20-748P	1/2"	1/2"	11.98

More sizes available upon request

Caffeine increases the power of aspirin and other painkillers, that is why it is found in some medicines.

### Adaptability

Products can be coupled together to form new, intergral fittings.



Use to get reducing swivel sizes you need!

### STEM ADAPTER



Part #	Stem OD	Thread NPTF	List Price
20-522P	5/32"	1/8"	1.99
20-523P	5/32"	1/4"	1.90
20-700P	3/16"	1/8"	2.44
20-524P	1/4"	1/8"	1.87
20-526P	5/16"	1/8"	2.41
20-525P	1/4"	1/4"	1.87
20-527P	5/16"	1/4"	2.41
20-701P	5/16"	3/8"	3.91
20-528P	3/8"	1/4"	2.19
20-529P	3/8"	3/8"	2.73
20-530P	1/2"	3/8"	4.22
20-533P	1/2"	1/2"	4.98

### REDUCER



Part #	Stem OD	Tube OD	List Price
20-760P	5/16"	3/16"	5.76
20-761P	5/16"	1/4"	6.22
20-762P	3/8"	3/16"	7.10
20-512P	3/8"	1/4"	7.15
20-763P	3/8"	5/16"	7.21
20-764P	1/2"	5/16"	8.73
20-514P	1/2"	3/8"	11.86

### UNION TEE



Part #	Tube OD	List Price
20-026P	5/32"	6.90
20-027P	3/16"	10.07
20-028P	1/4"	6.36
20-031P	5/16"	6.57
20-029P	3/8"	7.38
20-030P	1/2"	9.11

### REDUCING BRANCH TEE



Part #	Tube OD Ends	Tube OD Branch	List Price
20-724P	1/2"	3/8"	15.44
20-725P	3/8"	1/4"	12.82

### BULKHEAD UNION



Part #	Tube OD	List Price
20-125P	5/32"	11.06
20-126P	3/16"	9.91
20-127P	1/4"	8.75
20-123P	5/16"	15.87
20-128P	3/8"	10.68
20-129P	1/2"	16.12

### FEMALE CONNECTOR



Part #	Tube OD	Thread NPTF	List Price
20-993P	1/4"	1/8"	8.07
20-035P	1/4"	1/4"	6.89
20-944P	3/8"	1/8"	9.22
20-036P	3/8"	1/4"	9.01

PLASTIC FITTINGS

# PLASTIC PUSH-IN

# PLASTIC FITTINGS

## 2-WAY DIVIDER



Part #	Tube OD	List Price
20-776P	5/16"	11.28
20-777P	3/8"	9.67

## TUBE TO HOSE STEM



Part #	Stem OD	Hose OD	List Price
20-853P	1/4"	3/16"	3.04
20-854P	1/4"	1/4"	3.22
20-855P	5/16"	5/16"	4.58
20-856P	1/4"	5/16"	3.68
20-857P	5/16"	3/16"	4.09
20-858P	5/16"	1/4"	4.43
20-859P	5/16"	3/8"	5.82
20-860P	3/8"	1/4"	4.56
20-861P	3/8"	5/16"	5.82
20-862P	3/8"	3/8"	5.68
20-863P	3/8"	1/2"	6.13
20-864P	1/2"	3/8"	6.91
20-865P	1/2"	1/2"	8.00

## PLUG



Part #	Stem OD	List Price
20-876P	5/32"	1.37
20-877P	3/16"	1.43
20-878P	1/4"	1.44
20-879P	5/16"	2.36
20-880P	3/8"	2.30
20-881P	1/2"	3.68

## TUBE SUPPORT



Part #	Tube OD	Tube ID	List Price
20-836P	5/16"	1/4"	0.68
20-837P	3/8"	5/16"	0.76
20-838P	1/2"	3/8"	0.76

## 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"	14.47
20-901P	3/8"	14.69

## CHECK VALVE



Part #	Tube OD	List Price
20-779P	3/8"	54.57

Only in America.....  
can a pizza get to your house faster than an ambulance.

Only in America.....  
are there handicap parking spaces in front of a skating rink.

Only in America.....  
do drugstores make the sick walk all the way to the back of the store to get their prescriptions while healthy people can buy cigarettes at the front.

Only in America.....  
do people order double cheese burgers, large fries, and a diet Coke.

Only in America.....  
do banks leave both doors to the vault open and then chain the pens to the counters.

Only in America.....  
do we leave cars worth thousands of dollars in the driveway and put our useless junk in the garage.

## PL X MALE NPTF



Part #	Tube OD	Thread NPTF	List Price
20-904P	1/4"	1/4"	13.15
20-905P	3/8"	3/8"	16.61

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

## HOSE ACCESSORIES

## BARB FITTINGS FOR PLASTIC PIPE

### BRONZE INSERT FITTINGS

150 PSI Genuine red brass  
- for plastic pipe  
**HEX MALE ADAPTERS**



( Barb x Male Pipe )

Part #	Barb x Male	List Price
973-927	1" x 1"	29.35
973-930	1" x 1-1/4"	27.82
973-928	1-1/4" x 1-1/4"	30.06
973-929	1-1/4" x 1"	23.32
973-948	1-1/2" x 1-1/2"	39.81
973-949	2" x 2"	54.00

### BRONZE TEES ALL BARB



Part #	Size	List Price
973-965	3/4"	21.01
973-966	1"	38.61
973-967	1-1/4"	58.32

### ELBOWS



( BARB X MALE PIPE )

Part #	Size	List Price
973-980	3/4" x 3/4"	19.74
973-981	1" x 3/4"	26.50
973-982	1" x 1"	32.18

### ELBOWS



( Barb x Barb )

Part #	Hose Size	List Price
973-975	3/4"	24.82
973-976	1"	26.67
973-977	1-1/4" x 1"	44.53
973-978	1-1/4"	46.65
973-979	1-1/2"	82.25

### STEEL INSERT FITTINGS FOR PLASTIC PIPE

#### MALE ADAPTER



( BARB X MALE PIPE )

Part #	Size	Box/Case	List Price
973-906	1/2"	25/100	3.31
973-907	3/4"	25/10	5.00
973-908	1"	16/48	5.30
973-909	1-1/4"	12/36	6.57
973-910	1-1/2"	6/36	11.60
973-911	2"	5/25	18.33
973-912	2-1/2"	1/3	46.97
973-877	3"	1/3	50.55
973-914	4"	1/3	65.05

#### REDUCING ADAPTER



( INSERT X NPT )

Part #	Size	List Price
974-264	3/4 x 1/2	14.97
974-265	1 x 3/4	11.76
974-266	1-1/4 x 1	20.76
974-267	1-1/2 x 1-1/4	26.64

#### COUPLINGS



Part #	Size	Box/Case	List Price
973-900	1/2	30/120	2.49
973-901	3/4	20/100	3.67
973-902	1	20/100	4.42
973-903	1-1/4	16/64	7.38
973-904	1-1/2	12/48	8.80
973-905	2	5/25	12.52

WORDS OF WISDOM FROM THE NOW GENERATION

It's not whether you win or lose, but how you place the blame.

We have enough youth. How about a fountain of "smart?"

The original point-and-click interface was a Smith & Wesson.

A fool and his money can throw one heck of a party.

When blondes have more fun, do they know it?

Money may not be everything, but it sure keeps the kids in touch.

Don't drink and drive, you might hit a bump and spill something.

If at first you don't succeed, skydiving isn't for you.

Reality is only an illusion that occurs due to a lack of alcohol.

We are born naked, wet and hungry, then things get worse.

Red meat is not bad for you; fuzzy green meat is bad for you.

Xerox and Wurlitzer will merge to produce reproductive organs.

Artificial intelligence is no match for natural stupidity.

The latest survey shows that three of four people make up 75% of the population.

I think members of congress should wear uniforms such as NASCAR drivers so we could identify their corporate sponsors.

but life HAS NOT. In some schools, they have abolished failing grades

and they'll give you as MANY TIMES as you want to get the right answer.

\*This doesn't bear the slightest resemblance to ANYTHING in real life.

PLASTIC FITTINGS

# COMBINATION (KING) NIPPLES

# HOSE ACCESSORIES

## STEEL HOSE NIPPLES



( Barb x Male Pipe )

Part #	Hose Size	List Price
973-850	1/2"	6.62
973-851	3/4"	7.86
973-852	1"	7.50
973-853	1-1/4"	9.71
973-854	1-1/2"	10.86
973-855	2"	14.13
973-856	2-1/2"	29.81
973-857	3"	36.31
973-858	4"	68.93

## PLATED STEEL



Part #	Size	List Price
973-870	1/2"	4.90
973-871	3/4"	5.68
973-872	1"	6.65
973-873	1-1/4"	8.84
973-874	1-1/2"	10.63
973-875	2"	11.88
973-876	2-1/2"	25.94
973-877	3"	50.55
973-878	4"	71.06
973-879	5"	165.53
973-880	6"	126.45
973-881	8"	385.94

## 316 STAINLESS STEEL



Part #	Size	List Price
973-700	1/2"	42.17
973-701	3/4"	40.46
973-702	1"	42.29
973-703	1-1/4"	49.68
973-704	1-1/2"	60.71
973-705	2"	85.90
973-706	2-1/2"	165.55
973-707	3"	230.88
973-708	4"	335.60

## BRASS



Part #	Size	List Price
973-600	1/2"	28.01
973-601	3/4"	40.19
973-602	1"	40.50
973-603	1-1/4"	51.37
973-604	1-1/2"	57.59
973-605	2"	82.33
973-606	2-1/2"	144.49
973-607	3"	197.49

## ALUMINUM



Part #	Size	List Price
973-620	1/2"	26.02
973-621	3/4"	24.68
973-622	1"	24.68
973-623	1-1/4"	27.43
973-624	1-1/2"	28.33
973-625	2"	33.72
973-626	2-1/2"	82.26
973-627	3"	82.26
973-628	4"	131.58

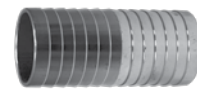
## MENDERS

### STEEL HOSE MENDERS



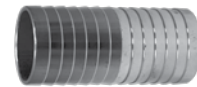
Part #	Hose Size	List Price
973-890	1/2"	11.49
973-891	3/4"	8.52
973-892	1"	9.54
973-893	1-1/4"	14.62
973-894	1-1/2"	15.03
973-895	2"	19.00

### PLATED STEEL MENDER



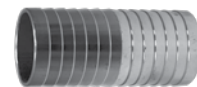
Part #	Size	List Price
973-650	3/8"	13.98
973-651	1/2"	8.13
973-652	3/4"	4.86
973-653	1"	5.90
973-654	1-1/4"	9.05
973-655	1-1/2"	8.86
973-656	2"	11.71
973-657	2-1/2"	38.84
973-658	3"	22.85
973-659	4"	71.04

### 316 STAINLESS STEEL HOSE MENDER



Part #	Size	List Price
73-670	3/4"	107.33
73-671	1"	119.56
73-672	1-1/4"	128.79
73-673	1-1/2"	151.22
73-674	2"	153.31

### BRASS HOSE MENDER



Part #	Size	List Price
73-983	3/4"	24.48
73-984	1"	25.19
73-985	1-1/4"	42.75
73-986	1-1/2"	69.34
73-987	2"	75.25

HOSE ACCESSORIES





**TYPE A**



**TYPE B**



**TYPE C**



**TYPE D**

**ALUMINUM**

Type	A		B		C		D	
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price
3/4"	61-911	6.80	61-921	15.08	61-931	13.26	61-941	15.48
1"	61-912	8.63	61-922	18.95	61-932	16.56	61-942	18.95
1-1/4"	61-913	10.73	61-923	22.16	61-933	22.74	61-943	23.90
1-1/2"	61-914	8.45	61-924	21.19	61-934	20.82	61-944	24.04
2"	61-915	9.48	61-925	22.74	61-935	23.37	61-945	24.29
2-1/2"	61-916	21.50	61-926	38.24	61-936	34.50	61-946	37.74
3"	61-917	19.22	61-927	41.62	61-937	41.72	61-947	37.61
4"	61-918	31.64	61-928	52.61	61-938	54.51	61-948	61.11

**316 STAINLESS STEEL**

Type	A		B		C		D	
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price
3/4"	63-911	28.43	63-921	44.22	63-931	40.26	63-941	46.40
1"	63-912	35.28	63-922	62.50	63-932	56.28	63-942	65.21
1-1/4"	63-913	49.34	63-923	84.88	63-933	71.86	63-943	79.29
1-1/2"	63-914	54.04	63-924	95.87	63-934	87.08	63-944	78.52
2"	63-915	60.47	63-925	98.96	63-935	107.97	63-945	101.96
2-1/2"	63-916	103.60	63-926	149.17	63-936	159.09	63-946	151.50
3"	63-917	124.61	63-927	181.97	63-937	194.60	63-947	207.54
4"	63-918	185.13	63-928	268.75	63-938	326.62	63-948	290.67



**TYPE E**



**TYPE F**



**TYPE DC**



**TYPE DP**

**ALUMINUM**

Type	E		F		DC		DP	
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price
3/4"	61-951	7.21	61-961	8.05	61-971	14.26	61-981	7.42
1"	61-952	8.72	61-962	11.04	61-972	16.77	61-982	7.55
1-1/4"	61-953	13.14	61-963	14.81	61-973	24.47	61-983	8.40
1-1/2"	61-954	9.21	61-964	11.16	61-974	17.78	61-984	7.52
2"	61-955	12.04	61-965	12.37	61-975	21.80	61-985	8.67
2-1/2"	61-956	22.90	61-966	23.90	61-976	28.10	61-986	17.51
3"	61-957	27.85	61-967	27.11	61-977	34.82	61-987	16.32
4"	61-958	40.56	61-968	43.54	61-978	45.56	61-988	26.14

**316 STAINLESS STEEL**

Type	E		F		DC		DP	
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price
3/4"	63-951	24.97	63-961	31.04	63-971	36.71	63-981	19.58
1"	63-952	35.53	63-962	43.35	63-972	47.44	63-982	30.24
1-1/4"	63-953	52.87	63-963	67.12	63-973	63.86	63-983	39.32
1-1/2"	63-954	70.89	63-964	83.44	63-974	70.64	63-984	41.99
2"	63-955	82.70	63-965	125.70	63-975	87.81	63-985	53.53
2-1/2"	63-956	113.64	63-966	175.05	63-976	119.79	63-986	79.49
3"	63-957	172.18	63-967	186.72	63-977	155.80	63-987	92.41
4"	63-958	265.86	63-968	272.57	63-978	194.79	63-988	140.78

# CAM & GROOVE

# HOSE ACCESSORIES



**TYPE A**



**TYPE B**



**TYPE C**



**TYPE D**

### BRASS

Type	A		B		C		D	
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price
3/4"	44-911	18.30	44-921	36.55	44-931	34.80	44-941	33.08
1"	44-912	22.71	44-922	44.23	44-932	43.58	44-942	45.11
1-1/4"	44-913	31.94	44-923	58.25	44-933	54.88	44-943	67.36
1-1/2"	44-914	29.80	44-924	54.30	44-934	44.62	44-944	62.37
2"	44-915	37.26	44-925	78.44	44-935	89.83	44-945	79.57
2-1/2"	44-916	51.62	44-926	82.11	44-936	78.54	44-946	65.81
3"	44-917	57.72	44-927	104.33	44-937	130.36	44-947	102.43

### POLYPROPYLENE

Type	A		B		C		D	
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price
1/2"	35-910	6.89	35-920	19.85	35-930	19.17	35-940	19.17
3/4"	35-911	7.53	35-921	18.26	35-931	18.26	35-941	20.90
1"	35-912	7.91	35-922	20.62	35-932	19.33	35-942	20.30
1-1/4"	35-913	9.11	35-923	23.01	35-933	22.22	35-943	22.22
1-1/2"	35-914	8.60	35-924	24.70	35-934	22.05	35-944	21.13
2"	35-915	10.30	35-925	29.54	35-935	29.54	35-945	29.54
3"	35-917	28.41	35-927	54.45	35-937	52.60	35-947	52.60



**TYPE E**



**TYPE F**



**TYPE DC**



**TYPE DP**

### BRASS

Type	E		F		DC		DP	
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price
3/4"	44-951	24.39	44-961	23.03	44-971	30.82	44-981	17.12
1"	44-952	28.74	44-962	29.23	44-972	32.52	44-982	18.24
1-1/4"	44-953	35.83	44-963	33.61	44-973	40.75	44-983	21.20
1-1/2"	44-954	38.24	44-964	46.04	44-974	42.83	44-984	19.62
2"	44-955	55.81	44-965	62.74	44-975	68.22	44-985	39.93
2-1/2"	44-956	58.13	44-966	60.67	44-976	61.53	44-986	39.29
3"	44-957	85.18	44-967	103.30	44-977	122.74	44-987	46.30
4"	44-958	136.47	44-968	128.24	44-978	123.37	44-988	73.01

### POLYPROPYLENE

Type	E		F		DC		DP	
Size	Part#	List Price	Part#	List Price	Part#	List Price	Part#	List Price
1/2"	35-950	8.38	35-960	8.38	35-970	18.10	35-980	8.19
3/4"	35-951	8.38	35-961	9.16	35-971	19.01	35-981	7.91
1"	35-952	10.30	35-962	9.20	35-972	21.60	35-982	8.00
1-1/4"	35-953	10.66	35-963	9.81	35-973	22.36	35-983	9.52
1-1/2"	35-954	10.52	35-964	9.41	35-974	24.94	35-984	9.85
2"	35-955	12.63	35-965	13.08	35-975	27.78	35-985	11.61
3"	35-957	35.56	35-967	36.81	35-977	52.60	35-987	29.41

HOSE ACCESSORIES



**MALE NPT ENDS**



\* Safety clip included

Part #	Size	List Price
66005	3/8"	7.39
66006	1/2"	6.15
66007	3/4"	6.53
66008	1"	7.34

**WASHER**



Part #	List Price
66000	0.60

**FEMALE NPT ENDS**



\* Safety clip included

Part #	Size	List Price
66009	3/8"	7.39
66010	1/2"	6.15
66011	3/4"	6.53
66012	1"	7.34

**HOSE END**



\* Safety clip included

Part #	Size	List Price
66001	3/8"	8.58
66002	1/2"	5.58
66003	3/4"	5.64
66004	1"	7.39

**TRIPLE CONNECTIONS**



Part #	List Price
66013	19.24

"People are never more insecure than when they become obsessed with their fears at the expense of their dreams."

- Norman Cousins



For high pressure air and water service, steam, sanitary, high pressure spray, LPG and anhydrous ammonia service, petroleum products and chemicals: All parts plated malleable iron. Insert and spud may be either steel or malleable iron. NPT Male and Female spud. Female wing nut-to-spud connection is NPSM ground joint.

## HEAVY DUTY COUPLINGS - Ground Joint Type, Plated

### Hose Stem with

#### Wing Nut & Female Spud



Part #	Size	List Price
73-003	1/2"	40.25
73-004	3/4"	42.78
73-005	1"	43.30
73-006	1-1/4"	74.18
73-007	1-1/2"	74.18
73-008	2"	102.29
73-009	2-1/2"	277.21
73-010	3"	294.06
73-011	4"	580.92

#### Hose Stem Only



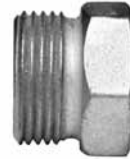
Part #	Size	List Price
73-023	1/2"	11.44
73-024	3/4"	13.92
73-025	1"	13.97
73-026	1-1/4"	23.75
73-027	1-1/2"	25.76
73-028	2"	33.24
73-029	2-1/2"	89.76
73-030	3"	95.22
73-031	4"	208.90

#### Wing Nut Only



Part #	Size	List Price
73-033	1/2"	13.00
73-035	1"	16.22
73-036	1-1/4"	27.49
73-037	1-1/2"	29.21
73-038	2"	37.84
73-039	2-1/2"	102.58
73-040	3"	108.73
73-041	4"	238.74

#### Female Spud Only



Part #	Size	List Price
73-063	1/2"	19.09
73-064	3/4"	23.12
73-065	1"	23.40
73-066	1-1/4"	40.19
73-067	1-1/2"	42.55
73-068	2"	55.32
73-069	2-1/2"	145.65
73-070	3"	159.10
73-071	4"	349.14

### Male Pipe Stem Only (NPT)



Part #	Size	List Price
73-043	1/2"	9.09
73-044	3/4"	14.20
73-045	1"	21.85
73-046	1-1/4"	19.90
73-047	1-1/2"	23.75
73-048	2"	38.87
73-049	2-1/2"	65.32
73-050	3"	81.31
73-051	4"	141.85

### 2, 4, 6 Bolt Clamps



Part #	Size	List Price
73-056	3/4"	9.60
73-057	1"	16.50
73-058	1-1/2"	31.57
73-059	2"	40.54
73-060	3"	91.94

**Danger:** Failure or improper selection or improper use of hose couplings or related accessories can cause death, personal injury and property damage. Possible consequences of failure or improper selection or improper use of hose couplings or related accessories include but are not limited to:

- Coupling or parts thrown off at high speed.
- High velocity fluid discharge.
- Explosion or burning of the conveyed fluid.
- Contact with suddenly moving or falling objects that are to be held in position or moved by the conveyor fluid.
- Dangerously whipping hose.
- Contact with conveyed fluids that may be hot, cold, toxic or otherwise injurious.
- Sparking or explosion while paint or flammable liquid spraying.

Before selecting or using any of our products, it is important to check with our offices for more detailed specifications regarding use.

**HYDRANT ADAPTERS - BRASS**



**FEMALE X MALE**

Part #	Description	List Price
444-011	1-1/2" NST x 3/4" GHT	49.31
444-000	2-1/2" NST x 3/4" GHT	49.31
444-001	2-1/2" NST x 3/4" NPT	49.31
444-003	2-1/2" NST x 1" NPSH	43.56
444-002	2-1/2" NST x 1" NPT	43.56
444-004	2-1/2" NST x 1-1/2" NPSH	43.56
444-005	2-1/2" NST x 1-1/2" NPT	43.56
444-007	2-1/2" NST x 2" NPSH	49.33
444-008	2-1/2" NST x 2" NPT	50.31
444-006	2-1/2" NST x 1-1/2" NST	43.56
444-009	3" NPSH x 2-1/2" NST	125.27
444-010	3" NST x 2-1/2" NST	105.65

**FEMALE TO MALE HEX ADAPTER - BRASS**



**FEMALE X MALE**

Part #	Description	List Price
444-021	1-1/2" NST x 1-1/2" NPSH	47.86
444-023	1-1/2" NPT x 1-1/2" NPSH	47.86
444-027	2-1/2" NST x 2-1/2" NPSH	90.89
444-028	2-1/2" NPT x 2-1/2" NPSH	90.89
444-024	1-1/2" NPSH x 1-1/2" NST	49.33
444-020	1-1/2" NST x 1-1/2" NPT	29.02
444-026	2-1/2" NST x 2-1/2" NPT	97.61

**DOUBLE MALE HEX NIPPLE - BRASS**



Part #	Description	List Price
444-042	1-1/2" NPT x 1-1/2" NPSH	44.43
444-047	2-1/2" NPT x 2-1/2" NPSH	72.41
444-040	1-1/2" NPT x 1-1/2" NST	35.83
444-048	2" NPT x 2-1/2" NST	106.44
444-045	2-1/2" NPT x 2-1/2" NST	86.77
444-049	3" NPT x 2-1/2" NST	182.41

**DOUBLE FEMALE SWIVEL - BRASS**



Part #	Description	List Price
444-100	1-1/2" NPT x 1-1/2" NPSH	158.81
444-101	2-1/2" NPT x 2-1/2" NPSH	311.83
444-102	1-1/2" NPT x 1-1/2" NST	158.81
444-103	2" NPT x 2-1/2" NST	311.83
444-104	2-1/2" NPT x 2-1/2" NST	158.81
444-105	3" NPT x 2-1/2" NST	311.83

**HOSE ACCESSORIES**



**MALE SWIVEL ADAPTER - BRASS**



Part #	Description Female x Male	List Price
444-110	1-1/2" NST x 1-1/2" NPT	180.90
444-111	2-1/2" NST x 2" NPT	272.63
444-112	2-1/2" NST x 2-1/2" NPT	210.34
444-113	2-1/2" NST x 3" NPT	348.77

**FEMALE SWIVEL ADAPTER - BRASS**



Part #	Description	List Price
444-120	2-1/2" NST x 2-1/2" NPT	227.10
444-121	2-1/2" NST x 3" NPT	271.84

**DOUBLE MALE - BRASS**



Part #	Description	List Price
444-130	1-1/2" NPSH x 1-1/2" NPSH	79.46
444-131	2-1/2" NPSH x 2-1/2" NPSH	147.70
444-132	1-1/2" NST x 1-1/2" NST	79.46
444-133	2-1/2" NST x 2-1/2" NST	147.70

**CAP - BRASS**



Part #	Description	List Price
444-061	1-1/2" NPSH	45.19
444-060	1-1/2" NST	45.19
444-062	2-1/2" NST	65.44

**PLUG AND CHAIN - BRASS**



Part #	Description	List Price
444-071	1-1/2" NST	57.18
444-072	2-1/2" NST	105.68

**HOSE ACCESSORIES**

**1/2" BAND CLAMPS**

57  
62  
HS  
H  
HF  
015  
100  
500



**Applications:** A general purpose clamp for automobiles, plumbing, home and garden general clamping applications, with anti-corrosive properties varying with the number of components made from stainless steel.



**600 Series**

- 5/16" Hex Slotted Carbon Steel Screw
- 1/2" Wide 201 Stainless Steel Band
- Carbon Steel Housing

**611 Series**

- 5/16" Hex Slotted Carbon Steel Screw
- 1/2" Wide 201 Stainless Steel Band
- 301 Stainless Steel Housing

#	Dia. Range		Part #	List Price	Part #	List Price
	Min.	Max.				
6	3/8"	7/8"	600-006	1.45	611-006	1.58
8	7/16"	1"	600-008	1.45	611-008	1.67
10	9/16"	1-1/16"	600-010	1.47	611-010	1.43
12	9/16"	1-1/4"	600-012	1.55	611-012	1.69
16	11/16"	1-1/2"	600-016	1.46	611-016	1.69
20	3/4"	1-3/4"	600-020	1.47	611-020	1.72
24	1-1/16"	2"	600-024	1.47	611-024	1.49
28	1-5/16"	2-1/4"	600-028	1.72	611-028	2.41
32	1-9/16"	2-1/2"	600-032	1.52	611-032	2.41
36	1-13/16"	2-3/4"	600-036	1.53	611-036	1.53
40	2-1/16"	3"	600-040	1.75	611-040	1.74
44	2-5/16"	3-1/4"	600-044	2.41	611-044	2.88
48	2-9/16"	3-1/2"	600-048	2.05	611-048	1.97
52	2-13/16"	3-3/4"	600-052	3.41	611-052	2.16
56	3-1/16"	4"	600-056	3.04	611-056	2.51
60	3-5/16"	4-1/4"	600-060	2.24	611-060	2.24
64	2-1/2"	4-1/2"	600-064	2.33	611-064	2.46
72	3"	5"	600-072	2.40	611-072	3.15
80	3-1/2"	5-1/2"	600-080	2.44	611-080	3.67
88	4"	6"	600-088	3.06	611-088	3.22
96	4-1/2"	6-1/2"	600-096	3.34	611-096	3.22
104	5"	7"	600-104	3.62	611-104	2.94
116	5-3/4"	7-3/4"			611-116	4.90
128	6-1/2"	8-1/2"			611-128	4.18
152	2"	10"			611-152	4.80
164	1-3/4"	10-3/4"			611-164	6.07
176	9-1/4"	11-1/4"			611-176	4.58
188	2-1/16"	12-1/4"			611-188	5.28
200	11"	13"			611-200	5.75
212	11-3/4"	13-3/4"			611-212	7.46
224	12-1/2"	14-1/2"			611-224	5.46
248	10-3/4"	16"			611-248	5.71
270	15-3/8"	17-3/8"			611-270	8.31
312	18"	20"			611-312	8.47
332	19-1/8"	21-1/4"			611-332	6.22
390	22-7/8"	24-7/8"			611-390	9.34

**CLAMPS**

*Send Midland all your high volume quotes!*

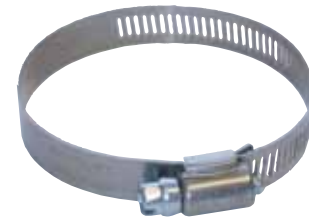
Some product stocked in Houston and Atlanta.



67-5  
63  
HSS  
HF-SS  
035  
HAS-X  
300

**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	1.71
8	7/16"	1"	620-008	1.93
10	9/16"	1-1/16"	620-010	1.93
12	9/16"	1-1/4"	620-012	2.15
16	11/16"	1-1/2"	620-016	1.95
20	3/4"	1-3/4"	620-020	1.97
24	1-1/16"	2"	620-024	1.76
28	1-5/16"	2-1/4"	620-028	1.77
32	1-9/16"	2-1/2"	620-032	1.77
36	1-13/16"	2-3/4"	620-036	1.83
40	2-1/16"	3"	620-040	2.33
44	2-5/16"	3-1/4"	620-044	3.16
48	2-9/16"	3-1/2"	620-048	2.33
52	2-13/16"	3-3/4"	620-052	2.54
56	3-1/16"	4"	620-056	2.54
60	3-5/16"	4-1/4"	620-060	4.03
64	2-1/2"	4-1/2"	620-064	2.68
72	3"	5"	620-072	2.82
80	3-1/2"	5-1/2"	620-080	4.62
88	4"	6"	620-088	3.21
96	4-1/2"	6-1/2"	620-096	4.48
104	5"	7"	620-104	3.50
116	5-3/4"	7-3/4"	620-116	7.50
128	6-1/2"	8-1/2"	620-128	4.85
152	2"	10"	620-152	6.73
164	1-3/4"	10-3/4"	620-164	7.34
176	9-1/4"	11-1/4"	620-176	5.50
188	2-1/16"	12-1/4"	620-188	7.39
200	11"	13"	620-200	6.03
212	11-3/4"	13-3/4"	620-212	7.80
224	12-1/2"	14-1/2"	620-224	6.53
248	10-3/4"	16"	620-248	7.81
270	15-3/8"	17-3/8"	620-270	7.35
312	18"	20"	620-312	7.55
332	19-1/8"	21-1/4"	620-332	7.50
390	22-7/8"	24-7/8"	620-390	7.85

**CLAMPS**

Some product stocked in Houston and Atlanta.



**MINIATURE CLAMPS - 5/16" BAND**

**Applications:** For marine, agricultural, industrial and automotive uses.  
Corrosion resistance varies with stainless components.

Mechanically interlocked, 3 piece construction for service sealing pressure without spot welding.

52

**300 Series**

- 1/4" Hex Slotted Carbon Steel Screw
- 5/16" Wide 301 Stainless Steel Band
- Carbon Steel Housing



Dia. Range		Part #	List Price
Min.	Max.		
7/32"	5/8"	300-004	1.19
7/16"	11/16"	300-005	1.19
5/16"	7/8"	300-006	1.15
7/16"	1"	300-008	1.23
1/2"	1-1/16"	300-010	1.31
9/16"	1-1/4"	300-012	1.25
11/16"	1-1/2"	300-016	1.53
7/8"	1-3/4"	300-020	1.63

62P 011  
MHX 21  
35  
MH  
MF

**325 Series**

- 1/4" Hex Slotted Carbon Steel Screw
- 5/16" Wide 301 Stainless Steel Band
- 301 Stainless Steel Housing



Dia. Range		Part #	List Price
Min.	Max.		
7/32"	5/8"	325-004	0.95
7/16"	11/16"	325-005	1.17
5/16"	7/8"	325-006	0.94
7/16"	1"	325-008	1.24
1/2"	1-1/16"	325-010	1.46
9/16"	1-1/4"	325-012	1.38
11/16"	1-1/2"	325-016	1.52
7/8"	1-3/4"	325-020	1.76

**350 Series**

- 1/4" Hex Slotted 410 Stainless Steel Screw
- 5/16" Wide 301 Stainless Steel Band
- 301 stainless Steel Housing



Dia. Range		Part #	List Price
Min.	Max.		
7/32"	5/8"	350-004	0.96
7/16"	11/16"	350-005	1.56
5/16"	7/8"	350-006	0.96
7/16"	1"	350-008	1.08
1/2"	1-1/16"	350-010	1.25
9/16"	1-1/4"	350-012	1.25
11/16"	1-1/2"	350-016	1.77
7/8"	1-3/4"	350-020	1.85

Some product stocked in Houston and Atlanta.

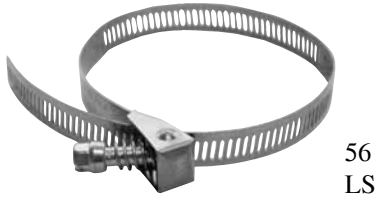
**CLAMPS**



## QUICK RELEASE 500/550 SERIES

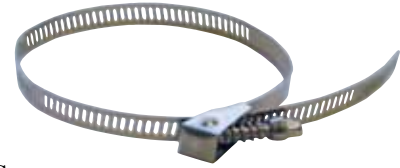
These clamps feature a unique quick release design between the one piece housing and band allowing for quick and easy installation in restricted or difficult areas.

**Applications:** Quick release action permits easy installation in applications where clamp must be opened to be applied. Quick release clamps are used extensively in the telecommunications industry on cable enclosures where open air application demands durability.



56  
LS

Open/Close design allows easy installation.



58  
LSS

### 500 Series

- 5/16" Hex Slotted Carbon Steel Screw
- 1/2" 301 Stainless Steel band
- 301 Stainless Steel Housing
- 410 Stainless Steel Bridge

### 550 Series

- 5/16" Hex Slotted 410 Stainless Steel Screw
- 1/2" 301 Stainless Steel band
- 301 Stainless Steel Housing
- 410 Stainless Steel Bridge

#	Dia. Range		Part #	List Price	Part #	List Price
	Min.	Max.				
12	1/2"	1-1/4"	500-012	2.41	550-012	3.26
20	3/4"	1-3/4"	500-020	2.45	550-020	2.59
28	1"	2-1/4"	500-028	2.51	550-028	2.78
36	1"	2-3/4"	500-036	1.90	550-036	2.88
48	1-1/2"	3-1/2"	500-048	3.20	550-048	3.41
56	1"	4"	500-056	3.65	550-056	4.95
72	2"	5"	500-072	3.08	550-072	5.70
88	2-1/16"	6"	500-088	4.58	550-088	5.45
104	1-3/4"	7"	500-104	4.82	550-104	6.95
128	1-3/4"	8-9/16"	500-128	4.28	550-128	6.13
152	2"	10"	500-152	4.53	550-152	6.66
188	2-1/16"	12-5/16"	500-188	5.04	550-188	8.49
216	10-3/16"	14"	500-216	5.43	550-216	10.23
248	10-3/4"	16"	500-248	5.61	550-248	9.45
280	14-1/4"	18"	500-280	6.79	550-280	9.08
312	14"	20"			550-312	10.78

CLAMPS

### HOSE CLAMP KITS

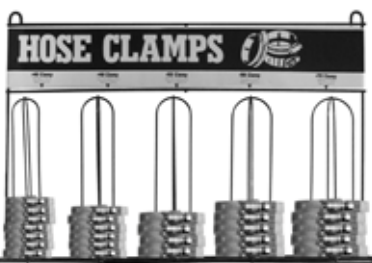
#### DISPLAY RACK

600-000 231.00



#### DISPLAY RACK

600-001 231.00



KIT#	LIST
600-100	563.45

Qty	Part#
60	300-0004
60	300-0006
30	600-008
30	600-010
90	600-012
40	600-016
40	600-020
20	600-028
20	600-032
10	600-036

KIT#	LIST
600-101	113.64

Qty	Part#
10	600-040
10	600-048
10	600-052
10	600-056
10	600-072

KIT#	LIST
611-100	548.91

Qty	Part#
60	325-0004
60	325-006
30	611-006
30	611-010
90	611-012
40	611-016
40	611-020
20	611-028
20	611-032
10	311-036

KIT#	LIST
611-101	115.18

Qty	Part#
10	611-040
10	611-048
10	611-052
10	611-056
10	611-072

KIT#	LIST
620-100	662.57

Qty	Part#
60	350-004
60	350-006
30	620-006
30	620-010
90	620-012
40	620-016
40	620-020
20	620-028
20	620-032
10	620-036

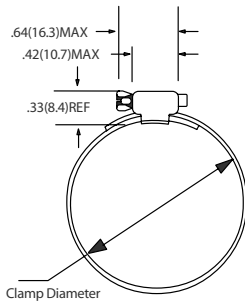
KIT#	LIST
620-101	125.65

Qty	Part#
10	620-040
10	620-048
10	620-052
10	620-056
10	620-072

NOTE: Kits do not include display racks.

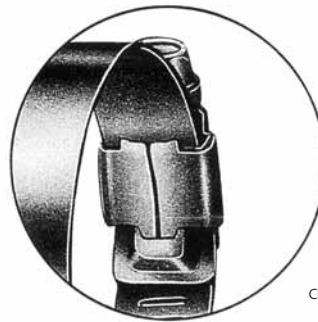
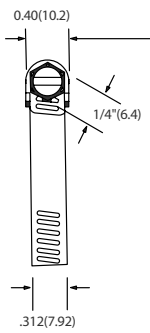


## WORM GEAR HOSE CLAMPS 830 Series



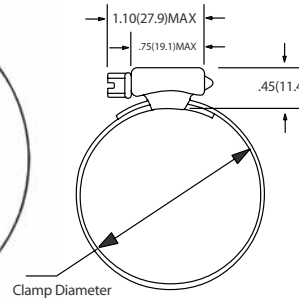
**MINI CLAMP**

Screw: 1/4" hex-head  
Band: 5/16" wide



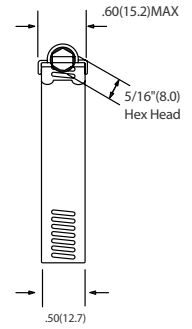
**Interlock Construction**

No welds, no bumps, which strengthens under tension to ensure maximum torque application.



**REGULAR CLAMP**

Screw: 5/16" hex-head  
Band: 1/2" wide



No.	Diameter Range		Use for General Industrial Application			
	Inch	MM	All Galvanized Steel		400 Series Stainless Steel Band, Housing and Screw	
	Min-Max	Min-Max	Part #	List Price	Part #	List Price
<b>Mini Clamp with 8 mm wide Band (5/16")</b>						
4	7/32"-5/8"	6-16	830-185	0.75	830-185S	0.91
6	7/16"-3/4"	11-20	830-184	0.78	830-184S	0.89
8	1/2"-7/8"	13-23	830-183	0.48	830-183S	0.92
<b>Regular Clamp with 12.7 mm (1/2") wide Band</b>						
10	9/16"-1-1/16"	14-27	830-188	1.21	830-188S	1.32
12	11/16"-1-1/4"	18-32	830-189	0.86	830-189S	1.41
16	13/16"-1-1/2"	21-38	830-190	1.22	830-190S	1.25
20	13/16"-1-3/4"	21-44	830-192	0.91	830-192S	1.52
24	1-1/16"-2"	27-51	830-193	0.94	830-193S	1.64
28	15/16"-2-1/4"	33-57	830-194	0.99	830-194S	1.52
32	19/16"-2-1/2"	40-63	830-132	1.00	830-132S	1.58
36	1-13/16"-2 3/4"	46-70	830-195	0.98	830-195S	1.56
40	2-1/16"-3"	52-76	830-182	1.18	830-182S	1.65
44	2-5/16"-3-1/4"	59-82	830-196	0.91	830-196S	2.13
48	2-9/16"-3-3/4"	65-89	830-197	1.02	830-197S	1.66
52	2-13/16"-3-3/4"	72-95	830-152	1.25	830-152S	2.16
56	3-1/16"-4"	78-101	830-198	1.05	830-198S	1.69
60	3-5/16"-4-1/4"	84-108	830-060	1.45	830-060S	1.87
64	3-9/16"-4-1/2"	91-114	830-064	1.09	830-064S	2.74
72	4-1/8"-5"	105-127	830-072	1.39	830-072S	1.85
80	4-5/8"-5-1/2"	118-140	830-080	1.49	830-080S	1.84
88	5-1/8"-6"	130-152	830-288	1.41	830-288S	2.04
96	5-5/8"-6-1/2"	143-165	830-096	1.46	830-096S	2.37

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



**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

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.

*Send Midland all your high volume quotes!*

30010

Nominal Size	O.D. Range		Part#	List Price
	From:	To:		
1-1/4	1-5/32"	1-15/32"	840-131	5.06
1-1/2	1-3/8"	1-9/16"	840-150	4.63
1-3/4	1-5/8"	1-13/16"	840-175	4.40
1-7/8	1-3/4"	1-15/16"	840-188	4.80
2	1-7/8"	2-1/16"	840-200	4.88
2-1/4	2-1/8"	2-5/16"	840-225	5.67
2-3/8	2-1/4"	2-7/16"	840-238	4.84
2-1/2	2-3/8"	2-9/16"	840-250	4.73
2-9/16	2-11/32"	2-5/8"	840-256	6.77
2-5/8	2-13/32"	2-11/16"	840-263	4.82
2-3/4	2-17/32"	2-13/16"	840-275	5.78
2-7/8	2-21/32"	2-15/16"	840-288	5.35
3	2-25/32"	3-1/16"	840-300	5.47
3-1/8	2-29/32"	3-3/16"	840-312	6.72
3-1/4	3-1/32"	3-5/16"	840-325	5.45
3-1/2	3-9/32"	3-9/16"	840-350	5.40
3-3/4	3-17/32"	3-13/16"	840-375	6.38
3-53/64	3-19/32"	3-7/8"	840-382	7.15
4	3-25/32"	4-1/16"	840-400	5.80
4-1/4	4-1/32"	4-5/16"	840-425	5.85
4-1/2	4-9/32"	4-9/16"	840-450	6.24
4-3/4	4-17/32"	4-13/16"	840-475	6.34
5	4-25/32"	5-1/16"	840-500	7.04
5-1/4	5-1/32"	5-5/16"	840-525	7.15
5-1/2	5-9/32"	5-9/16"	840-550	7.26
5-3/4	5-17/32"	5-13/16"	840-575	8.18
6	5-25/32"	6-1/16"	840-600	8.32
6-1/4	6-1/32"	6-5/16"	840-625	8.56
6-1/2	6-9/32"	6-9/16"	840-650	8.68
6-3/4	6-17/32"	6-13/16"	840-675	8.80
7	6-25/32"	7-1/16"	840-700	8.92
7-1/2	7-9/32"	7-9/16"	840-750	9.04
8	7-25/32"	8-1/16"	840-800	8.47
8-1/4	8-9/32"	8-9/16"	840-850	9.78
8-7/8	8-21/32"	8-15/16"	840-888	10.26

## HOSE CLAMPS

## 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	0.48
1050001	113	7/16"	0.381	0.444	0.51
1050002	123	15/32"	0.394	0.486	0.51
1050003	133	1/2"	0.453	0.524	0.51
1050006	140	35/64"	0.472	0.551	0.55
1050007	145	9/16"	0.496	0.571	0.59
1050008	157	5/8"	0.543	0.618	0.56
1050009	170	11/16"	0.594	0.669	0.53
1050010	185	23/32"	0.618	0.728	0.56
1050011	198	3/4"	0.669	0.779	0.53
1050012	210	13/16"	0.716	0.827	0.58
1050013	226	7/8"	0.779	0.890	0.53
1050014	241	15/16"	0.839	0.949	0.56
1050015	256	1"	0.898	1.008	0.56
1050016	271	1-1/16"	0.945	1.067	0.63
1050017	286	1-1/8"	1.004	1.126	0.62
1050018	301	1-3/16"	1.063	1.185	0.69
1050020	331	1-5/16"	1.181	1.303	0.69
1050021	346	1-3/8"	1.240	1.362	0.75
1050023	376	1-15/32"	1.358	1.480	0.80
1050025	396	1-9/16"	1.437	1.559	0.78
1050026	410	1-5/8"	1.492	1.614	0.84
1050027	425	1-11/16"	1.551	1.673	0.83
1050028	440	1-23/32"	1.610	1.732	0.91
1050029	455	1-3/4"	1.669	1.791	0.91
1050030	470	1-16/16"	1.728	1.850	0.92
1050031	485	1-7/8"	1.787	1.909	0.97
1050032	500	1-15/16"	1.846	1.968	0.98
1050033	515	2"	1.905	2.028	1.02

### 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.



#### Material:

- Zinc plated-steel SAE 1008/1010 or DIN 1.0338
- Stainless steel UNS S30400 or DIN 1.4301

### STAINLESS STEEL

Part #	Nominal Size	Inches		Band Width	List Price
		Close	Open		
15300000	1/8"	0.114	0.130	0.118	1.16
15300001	9/64"	0.118	0.138	0.118	1.27
15300002	5/32"	0.130	0.161	0.157	1.29
15300003	3/16"	0.161	0.201	0.157	1.41
15300004	15/64"	0.201	0.240	0.157	1.27
15300005	1/4"	0.221	0.260	0.157	0.77
15300006	9/32"	0.240	0.276	0.197	1.17
15300008	5/16"	0.268	0.315	0.197	1.22
15300010	11/32"	0.295	0.343	0.236	1.27
15300012	3/8"	0.319	0.374	0.276	1.31
15300013	25/64"	0.335	0.394	0.236	1.24
15300014	13/32"	0.369	0.413	0.256	0.85
15300015	27/64"	0.370	0.433	0.256	1.35
15300016	7/16"	0.376	0.445	0.236	1.24
15300017	29/64"	0.398	0.465	0.236	1.35
15300018	15/32"	0.398	0.472	0.276	1.35
15300019	31/64"	0.406	0.484	0.236	1.35
15300020	1/2"	0.425	0.504	0.236	1.42
15300021	33/64"	0.448	0.524	0.276	0.97
15300023	35/64"	0.476	0.551	0.276	1.35
15300024	9/16"	0.492	0.571	0.236	1.35
15300027	5/8"	0.543	0.630	0.295	1.57
15300030	11/16"	0.602	0.689	0.236	1.20

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do we use answering machines to screen calls and then have call waiting so we won't miss a call from someone we didn't want to talk to in the first place.

Only in America.....

do we buy hot dogs in packages of ten and buns in packages of eight.

Only in America.....

do we use the word 'politics' to describe the process so well: "Poli" in Latin meaning "many" and "tics" meaning "bloodsucking creatures".

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## EAR CLAMPS

### 2-EAR CLAMPS

2-Ear Clamps are especially suited for industrial use and with heavily vibrating equipment.

This is a medium pressure clamp and is widely used for maintenance and OEM applications. Rubber hose, plastic tubing, coaxial and electrical cable, rope, etc. are all easily clamped. These clamps are installed on air, fluid, gas and steam lines. The one piece design offers a positive, tamper-proof seal without damaging the hose.

#### PRESSURE:

As a guideline, 2-Ear Clamps successfully seal at 54 bar - 800 psi with 35 pulsating strokes a minute.

#### MATERIAL:

Zinc plated carbon steel

SAE 1008/1010 or DIN 1.0338

Stainless steel tubing

UNS S30400 or DIN 1.4301



Note: When ordering your 2-Ear Clamps select nominal clamp size nearest to, but always larger than, O.D. of material to be clamped after insert has been fitted.

#### ZINC PLATED CARBON STEEL

Part #	Nominal Size	Inches		List Price
		Close	Open	
1010002	3/16"	0.134	0.197	1.02
1010008	5/16"	0.276	0.354	1.16
1010011	3/8"	0.319	0.433	0.77
1010016	1/2"	0.425	0.512	0.70
1010019	9/16"	0.492	0.591	1.03
1010022	19/32"	0.551	0.669	1.17
1010024	5/8"	0.591	0.709	0.81
1010027	3/4"	0.638	0.787	0.90

#### STAINLESS STEEL

Part #	Nominal Size	Inches		List Price
		Close	Open	
1510003	1/4"	0.197	0.276	0.77
1510004	5/16"	0.276	0.354	1.75
1510023	3/8"	0.319	0.433	0.77
1510006	1/2"	0.425	0.512	1.38
1510007	9/16"	0.492	0.591	1.69
1510008	19/32"	0.551	0.669	1.67
1510009	5/8"	0.591	0.709	0.99
1510010	3/4"	0.638	0.787	1.88
1510011	13/16"	0.709	0.866	2.16
1510012	7/8"	0.748	0.906	1.24
1510013	15/16"	0.827	0.984	2.40
1510014	1"	0.886	1.063	2.30
1510016	1-1/8"	1.035	1.221	2.76
1510019	1-9/16"	1.260	1.457	3.16
1510020	1-1/2"	1.378	1.575	3.43

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## 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	0.92
16700004	3/8"	5mm	0.307	0.374	1.01
16700007	7/16"	5mm	0.378	0.445	1.29
16700010	1/2"	7mm	0.425	0.524	1.08
16700012	35/64"	7mm	0.453	0.551	1.08
16700013	9/16"	7mm	0.472	0.571	1.42
16700016	5/8"	7mm	0.520	0.618	1.33
16700017	11/16"	7mm	0.571	0.669	1.00
16700022	3/4"	7mm	0.654	0.780	0.81
16700024	13/16"	7mm	0.701	0.827	0.81

### PINCERS

#### Model 1098 I Standard Jaw Pincers



Part #  
1410118

List Price  
156.75

#### 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  
153.26



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	4.52	13/16	FOS-3	3/8 x .020	5.02
FO-311	3/8 x .022	4.71	1 3/8	FOS-311	3/8 x .020	5.34
FO-316	3/8 x .022	4.84	2	FOS-316	3/8 x .020	5.62
FO-325	3/8 x .022	4.91	3 1/8	FOS-325	3/8 x .020	6.32
WITH STAINLESS STEEL LOK						
FO-8	5/8 x .025	3.91	2	FOS-8	5/8 x .022	5.82
FO-10	5/8 x .025	4.00	2 1/2	FOS-10	5/8 x .022	6.15
HEAVY DUTY BANDS						
FO-12	5/8 x .031	4.32	3	FOS-12	5/8 x .022	7.71
FO-14	5/8 x .031	4.28	3 1/2	FOS-14	5/8 x .022	7.47
FO-16	5/8 x .031	4.58	4	FOS-16	5/8 x .022	7.93
FO-18	5/8 x .031	4.48	4 1/2	FOS-18	5/8 x .022	8.41
FO-20	5/8 x .031	4.82	5	FOS-20	5/8 x .022	9.05
FO-24	5/8 x .031	5.27	6	FOS-24	5/8 x .022	10.06
FO-28	5/8 x .031	5.55	7	FOS-28	5/8 x .022	11.80
FO-32	5/8 x .031	5.98	8	FOS-32	5/8 x .022	13.19
FO-36	5/8 x .031	5.95	9	FOS-36	5/8 x .022	13.69
FO-40	5/8 x .031	6.87	10	FOS-40	5/8 x .022	15.16
FO-48	5/8 x .031	7.93	12	FOS-48	5/8 x .022	17.50
FO-56	5/8 x .031	10.12	14	FOS-56	5/8 x .022	18.87
FO-64	5/8 x .031	10.67	16			
FO-80	5/8 x .031	11.12	20			
FO-96	5/8 x .031	12.40	24			
FO-144	5/8 x .031	15.40	36			
FO-168	5/8 x .031	19.90	42			

**APPLICATION TOOLS**

For 3/8", 5/8" .....F-38, F-40, F-100  
See page 285 for these tools.



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	1.31	13/16	FS-3	3/8 x .020	2.08
F-311	3/8 x .025	1.50	1 3/8	FS-311	3/8 x .020	2.13
F-4	5/8 x .025	1.23	1	FS-4	5/8 x .022	2.69
F-5	5/8 x .025	1.37	1 1/4	FS-5	5/8 x .022	2.90
HEAVY DUTY BANDS						
F-6	5/8 x .031	1.38	1 1/2	FS-6	5/8 x .022	2.87
F-7	5/8 x .031	1.44	1 3/4	FS-7	5/8 x .022	3.26
F-8	5/8 x .031	1.44	2	FS-8	5/8 x .022	3.34
F-9	5/8 x .031	1.65	2 1/4	FS-9	5/8 x .022	3.34

F-10	5/8 x .031	1.79	2 1/2	FS-10	5/8 x .022	3.74
F-11	5/8 x .031	2.08	2 3/4	FS-11	5/8 x .022	4.15
F-12	5/8 x .031	2.22	3	FS-12	5/8 x .022	4.00
F-14	5/8 x .031	2.05	3 1/2	FS-14	5/8 x .022	4.57
F-16	5/8 x .031	2.49	4	FS-16	5/8 x .022	5.08
F-18	5/8 x .031	2.81	4 1/2	FS-18	5/8 x .022	5.58
F-20	5/8 x .031	2.78	5	FS-20	5/8 x .022	5.91
F-24	5/8 x .031	3.40	6	FS-24	5/8 x .022	7.20
F-28	5/8 x .031	3.93	7	FS-28	5/8 x .022	7.20
F-32	5/8 x .031	4.46	8	FS-32	5/8 x .022	9.44

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.

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**K-CLAMP PREFORMED HOSE CLAMPS**

Each clamp is a double wrapped metal band formed to a given diameter. The clamp is designed to be slid over the hose end before the fitting is inserted. A punch-type or fold-up tool is then used to apply the clamp.

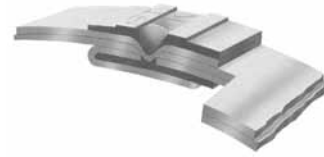
**Punch Indentation for ease of center punching**

Heavy Duty Lock for greater strength and rigidity



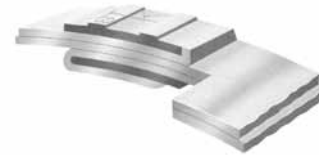
Heavy Duty Clamp

**Center Punched**



Less tension loss. Patented hole in inner band gives better internal mechanical locking after punching

**Fold-up**



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	1.30	13/16"	3/8" x .025	KS-3	2.03
K-311	1.29	1-3/8"	3/8" x .025	KS-311	2.05
K-4	1.72	1"	5/8" x .030	KS-4	3.24
K-5	1.95	1-1/4"	5/8" x .030	KS-5	3.16
K-6	1.93	1-1/2"	5/8" x .030	KS-6	3.40
K-7	2.19	1-3/4"	5/8" x .030	KS-7	3.45
K-8	2.05	2"	5/8" x .030	KS-8	4.08
K-9	2.32	2-1/4"	5/8" x .030	KS-9	4.10
K-10	2.24	2-1/2"	5/8" x .030	KS-10	4.60
K-11	2.33	2-3/4"	5/8" x .030	KS-11	4.78
K-12	2.75	3"	5/8" x .030	KS-12	5.39
K-14	2.91	3-1/2"	5/8" x .030	KS-14	6.55
K-16	2.79	4"	5/8" x .030	KS-16	6.23
K-18	3.00	4-1/2"	5/8" x .030	KS-18	7.12
K-20	3.26	5"	5/8" x .030	KS-20	7.54
K-24	3.69	6"	5/8" x .030	KS-24	8.14
K-28	4.85	7"	5/8" x .030	KS-28	10.49
K-32	5.54	8"	5/8" x .030	KS-32	11.51

**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	3.39	2"	3/4" x .030	KS-87501	5.62
K-97500	3.46	2-1/4"	3/4" x .030	KS-97501	6.04
K-107500	3.61	2-1/2"	3/4" x .030	KS-107501	6.18
K-117500	3.67	2-3/4"	3/4" x .030	KS-117501	6.74
K-127500	3.76	3"	3/4" x .030	KS-127501	6.88
K-147500	5.73	3-1/2"	3/4" x .030	KS-147501	7.47
K-167500	4.34	4"	3/4" x .030	KS-167501	8.20
K-187500	4.70	4-1/2"	3/4" x .030	KS-187501	9.42
K-207500	5.14	5"	3/4" x .030	KS-207501	10.12
K-247500	5.76	6"	3/4" x .030	KS-247501	11.63
K-287500	6.65	7"	3/4" x .030	KS-287501	13.45
K-327500	7.07	8"	3/4" x .030	KS-327501	14.73

*316 Stainless available upon request*

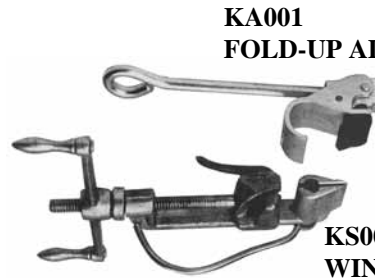
*For 3/8" and 5/8" widths .....F-40, F-100  
 For 3/4" width .....F-175(special order item)  
 For all widths .....KS001 (with KA001 aapter)*

See page 287 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  
278.29**

**KS001  
WIND-UP TOOL**

**List Price:  
360.13**

**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	1.45	13/16"	3/8" x .025	FLJ-201	2.16
FLJ-343	1.58	1"	3/8" x .025	FLJ-243	2.00
FLJ-302	1.65	1-3/8"	3/8" x .025	FLJ-202	2.00
FLJ-345	1.73	2"	3/8" x .025	FLJ-245	2.34
FLJ-346	2.29	3"	3/8" x .025	FLJ-246	3.27
N/A		3-1/4"	3/8" x .025	FLJ-255	3.95
5/8" ( NOMINAL WIDTH )					
FLJ-303	2.80	1"	5/8" x 0.30	FLJ-203	4.02
FLJ-304	2.78	1-1/4"	5/8" x 0.30	FLJ-204	3.73
FLJ-305	2.96	1-1/2"	5/8" x 0.30	FLJ-205	4.05
FLJ-306	3.05	1-3/4"	5/8" x 0.30	FLJ-206	4.53
FLJ-307	3.07	2"	5/8" x 0.30	FLJ-207	4.63
FLJ-308	3.10	2-1/4"	5/8" x 0.30	FLJ-208	4.71
FLJ-309	3.31	2-1/2"	5/8" x 0.30	FLJ-209	4.80
3/4" ( NOMINAL WIDTH )					
FLJ-327	3.95	2"	3/4" x 0.30	FLJ-227	6.39
FLJ-310	4.40	2-3/4"	3/4" x 0.30	FLJ-210	7.00
FLJ-311	4.43	3"	3/4" x 0.30	FLJ-211	7.47
FLJ-312	4.60	3-1/2"	3/4" x 0.30	FLJ-212	7.68
FLJ-313	5.24	4"	3/4" x 0.30	FLJ-213	9.71
FLJ-314	5.45	4-1/2"	3/4" x 0.30	FLJ-214	10.11
FLJ-315	5.93	5"	3/4" x 0.30	FLJ-215	10.81
FLJ-316	6.76	6"	3/4" x 0.30	FLJ-216	12.31
FLJ-318	7.58	7"	3/4" x 0.30	FLJ-218	14.36
FLJ-319	8.13	8"	3/4" x 0.30	FLJ-219	15.66

*Send Midland all your quotes!*

**CLAMPS**





**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.

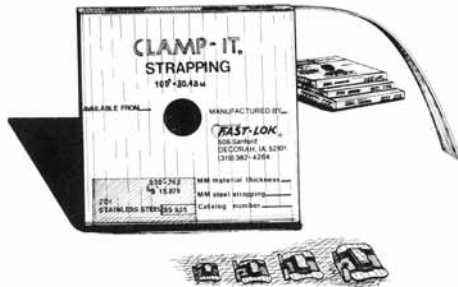
**Preformed JS** - Clamps are available in 5/8" and 3/4" widths, 1" I.D. to 8" I.D. in 1/4" increments.

**The FLJS** - Clamp is intended to be applied with a KS001 tool or other comparable fold-up locking tool.



**STAINLESS  
STEEL**

<b>5/8" (NOMINAL WIDTH)</b>			
<b>Catalog Number</b>	<b>Clamp I.D. Inches</b>	<b>Band Width &amp; Thickness</b>	<b>List Price</b>
FLJS-203	1"	5/8" x .030	3.51
FLJS-204	1-1/4"	5/8" x .030	3.96
FLJS-205	1-1/2"	5/8" x .030	3.76
FLJS-206	1-3/4"	5/8" x .030	5.12
FLJS-207	2"	5/8" x .030	4.42
FLJS-208	2-1/4"	5/8" x .030	4.92
FLJS-209	2-1/2"	5/8" x .030	4.94
<b>3/4" (NOMINAL WIDTH)</b>			
FLJS-227	2"	3/4" x .030	6.07
FLJS-210	2-3/4"	3/4" x .030	7.00
FLJS-211	3"	3/4" x .030	6.74
FLJS-212	3-1/2"	3/4" x .030	8.09
FLJS-213	4"	3/4" x .030	8.85
FLJS-214	4-1/2"	3/4" x .030	9.78
FLJS-215	5"	3/4" x .030	10.13
FLJS-216	6"	3/4" x .030	11.99
FLJS-218	7"	3/4" x .030	14.04
FLJS-219	8"	3/4" x .030	15.33



**CLAMP-IT**

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**

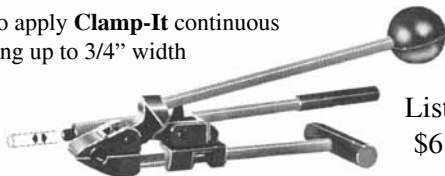
Catalog Number	Width	Thickness	Material 100'/CTN.	List Price/CNT
SS-3751	3/8"	.025	301 Stainless	124.36
SS-5001	1/2"	.030	301 Stainless	188.40
SS-6251	5/8"	.030	301 Stainless	219.65
SS-7501	3/4"	.030	301 Stainless	267.08
SG-3750	3/8"	.025	Galvanized	74.94
SG-5000	1/2"	.030	Galvanized	83.58
SG-6250	5/8"	.030	Galvanized	109.17
SG-7500	3/4"	.030	Galvanized	122.32

**CLAMPS (BUCKLES)**

Catalog Number	Width	Material 100'/CTN.	List Price Each pc.
CS-3751	3/8"	301 Stainless	0.95
CS-5001	1/2"	301 Stainless	1.07
CS-6251	5/8"	301 Stainless	1.45
CS-7501	3/4"	301 Stainless	1.94
CG-3750	3/8"	Galvanized	0.47
CG-5000	1/2"	Galvanized	0.60
CG-6250	5/8"	Galvanized	0.74
CG-7500	3/4"	Galvanized	0.99

**C-2 Orbitor (Loking Tool)**

Used to apply Clamp-It continuous strapping up to 3/4" width



List Price \$618.92

**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: \$121.75

Portable hand tool used to apply punch Type 3/8 & 5/8 Clamps

**F-40 Loking Tool**



List Price: \$205.74

Used to apply Punch Type 3/8 & 5/8 clamps. Order mallet separately

**F-100 Loking Tool**



List Price: \$496.06

Used to apply Punch Type 3/8 & 5/8 clamps. Order mallet separately

**F-225 Mallet**



List Price: \$122.53

Used for punching of all punch type clamps.

**F-550 Clamp Cutter**



List Price: \$228.20

Used to remove clamps with minimum effort

**KS001 Wind-up Tool**



List Price: \$360.13

Used to apply fold-up clamps and continuous strapping up to 3/4" width

**CLAMPS**

# 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	1.44
92-009	9/32-3/8	1.29
92-010	5/16-13/32	1.32
92-011	23/64-29/64	1.18
92-012	25/64-31/64	1.32
92-013	7/16-17/32	1.49
92-014	15/32-9/16	1.22
92-015	33/64-29/64	1.47
92-016	35/64-41/64	1.57
92-017	19/32-11/16	1.31

### 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	3.20
93-009	9/32-3/8	3.37
93-010	5/16-13/32	3.06
93-011	23/64-29/64	3.48
93-012	25/64-31/64	4.19
93-013	7/16-17/32	4.11
93-014	15/32-9/16	2.95
93-015	33/64-29/64	2.95
93-016	35/64-41/64	3.06
93-017	19/32-11/16	3.57

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	3.05
88-028	10	3/4-1-1/8	2.95
88-032	12	7/8-1-1/4	3.58
88-038	16	1-1/16-1-1/2	3.37
88-044	20	1-1/4-1-3/4	3.37
88-050	24	1-1/2-2	3.82
88-056	28	1-3/4-2-1/4	4.00
88-065	32	2-2-9/16	5.30
88-075	40	2-5/16-3	5.29
88-085	44	2-11/16-3-3/8	4.70
88-095	52	3-3-3/4	4.99
88-112	64	3-7/16-4-7/16	6.42
88-138	80	4-1/8-5-7/16	8.26
88-165	96	5-1/8-7-1/8	13.48
88-180	104	5-7/8-7-1/8	11.96
88-205	122	6-7/8-8-1/8	11.34
88-231	138	7-7/8-9-1/8	10.68
88-256	154	8-7/8-10-1/16	12.58
88-282	170	9-7/8-11-1/8	13.43
88-307	186	10-7/8-12-1/8	15.14

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	5.76
89-028	10	3/4-1-1/8	6.04
89-032	12	7/8-1-1/4	7.04
89-038	16	1-1/16-1-1/2	6.35
89-044	20	1-1/4-1-3/4	7.34
89-050	24	1-1/2-2	8.29
89-056	28	1-3/4-2-1/4	7.98
89-065	32	2-2-9/16	8.94
89-075	40	2-5/16-3	10.32
89-085	44	2-11/16-3-3/8	10.82
89-095	52	3-3-3/4	12.50
89-112	64	3-7/16-4-7/16	11.90
89-138	80	4-1/8-5-7/16	14.89
89-165	96	5-1/8-7-1/8	14.99
89-180	104	5-7/8-7-1/8	16.30
89-205	122	6-7/8-8-1/8	19.46
89-231	138	7-7/8-9-1/8	19.14
89-256	154	8-7/8-10-1/16	22.78
89-282	170	9-7/8-11-1/8	21.66
89-307	186	10-7/8-12-1/8	20.80

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	2.38
91-017	4	7/16-11/16	2.09
91-022	6	1/2-13/16	2.22
91-025	8	5/8-15/16	3.31
91-028	10	3/4-1-1/8	3.06
91-032	12	7/8-1-1/4	3.22
91-040	16	1-1/16-1-1/2	3.17
91-045	20	1-1/4-1-3/4	3.06
91-051	24	1-1/2-2	3.38
91-056	28	1-3/4-2-1/4	3.48
91-065	32	2-2-9/16	3.55
91-075	40	2-5/16-3	3.59
91-085	44	2-11/16-3-3/8	3.89

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



Eliminates hose and cable wear due to vibrations

### ALL 316 ACID RESISTANT



Part #	SAE	Size	List Price
90-014	3	5/16-9/16	5.49
90-017	4	7/16-11/16	7.11
90-020	6	1/2-13/16	7.54
90-024	8	5/8-15/16	7.34
90-028	10	3/4-1-1/8	8.19
90-032	12	7/8-1-1/4	7.88
90-038	16	1-1/16-1-1/2	8.45
90-044	20	1-1/4-1-3/4	10.37
90-050	24	1-1/2-2	8.30
90-056	28	1-3/4-2-1/4	8.88
90-065	32	2-2-9/16	9.61
90-075	40	2-5/16-3	11.11
90-085	44	2-11/16-3-3/8	9.52
90-095	52	3-3-3/4	10.81
90-112	64	3-7/16-4-7/16	20.46
90-138	80	4-1/8-5-7/16	13.37
90-165	96	5-1/8-7-1/8	12.03
90-180	104	5-7/8-7-1/8	12.87
90-205	122	6-7/8-8-1/8	13.87
90-231	138	7-7/8-9-1/8	14.58
90-256	154	8-7/8-10-1/16	16.29
90-282	170	9-7/8-11-1/8	16.63
90-307	186	10-7/8-12-1/8	17.50

### 304 S.S. RUBBER CLIP



Eliminates hose and cable wear due to vibrations

Part #	Size	Hole Dia.	List Price
96-301	3/16	.20	2.21
96-302	1/4	.20	2.27
96-303	5/16	.20	2.11
96-304	3/8	.20	2.43
96-305	7/16	.20	2.30
96-306	1/2	.20	2.40
96-307	9/16	.20	2.91
96-308	5/8	.20	3.07
96-310	3/4	.20	3.11
96-312	7/8	.20	3.17
96-314	1	.20	3.74
96-316	1-1/8	.20	3.83
96-318	1-1/4	.25	5.29
96-320	1-3/8	.20	6.83
96-322	1-1/2	.20	6.89
96-323	1-3/4	.25	7.49

### ALUZINC RUBBER CLIP

Part #	Size	Hole Dia.	List Price
95-300	1/8	.26	0.90
95-301	3/16	.26	1.38
95-302	1/4	.26	1.27
95-303	5/16	.26	1.35
95-304	3/8	.26	1.21
95-305	7/16	.26	1.17
95-306	1/2	.26	1.48
95-307	9/16	.26	1.47
95-308	5/8	.26	1.35
95-309	11/16	.26	1.56
95-310	3/4	.26	1.54
95-311	13/16	.26	1.86
95-312	7/8	.26	1.91
95-313	15/16	.26	2.04
95-314	1	.26	1.82
95-315	1-1/6	.26	2.32
95-316	1-1/8	.26	2.24
95-317	1-3/16	.26	3.21
95-318	1-1/4	.26	3.26
95-319	1-5/16	.26	3.30
95-320	1-3/8	.26	3.55
95-321	1-7/16	.26	3.48
95-322	1-1/2	.26	3.99
95-326	1-5/8	.26	5.91
95-323	1-3/4	.26	4.55
95-328	1-7/8	.26	6.02
95-324	2	.26	4.96
95-325	2-1/8	.26	5.10
95-329	2-3/8	.26	6.17
95-327	2-1/2	.26	5.83
95-330	2-15/16	.26	6.44
95-331	4-5/16	.26	9.76

Bozone (n.): The substance surrounding stupid people that stops bright ideas from penetrating. The bozone layer, unfortunately, shows little sign of breaking down in the near future.

Foreplay (v): Any misrepresentation about yourself for the purpose of getting laid.

Cashtration (n.): The act of buying a house, which renders the subject financially impotent for an indefinite period.

Giraffiti (n): Vandalism spray-painted very, very high.

Sarchasm (n): The gulf between the author of sarcastic wit and the person who doesn't get it.

Inoculate (v): To take coffee intravenously when you are running late.

Hipatitis (n): Terminal coolness.

Osteopornosis (n): A degenerate disease.

Karmageddon (n): its like, when everybody is sending off all these really bad vibes, right? And then, like, the Earth explodes and it's like, a serious bummer.

Decafalon (n.): The grueling event of getting through the day consuming only things that are good for you.

Glibido (v): All talk and no action.

Dopeler effect (n): The tendency of stupid ideas to seem smarter when they come at you rapidly.

Beelzebub (n.): Satan in the form of a mosquito that gets into your bedroom at three in the morning and cannot be cast out.

Caterpallor (n.): The color you turn after finding half a grub in the fruit you're eating.

CLAMPS



# 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	0.35
32-501	833	0.358	0.500	0.265	0.020	0.35
32-502	622	0.380	0.500	0.265	0.020	0.35
32-550	619	0.400	0.47	0.27	0.020	0.42
32-504	620	0.410	0.500	0.265	0.020	0.39
32-551	769R	0.450	0.562	0.343	0.020	0.40
32-552	4750	0.478	0.687	0.328	0.025	0.44
32-553	624R	0.500	0.500	0.343	0.020	0.43
32-554	7322	0.500	1.000	0.328	0.025	0.59
32-555	625	0.525	0.47	0.36	0.020	0.43
32-517	625A	0.525	0.56	0.360	0.020	0.41
32-556	7323	0.525	1.000	0.375	0.025	0.81
32-521	9974	0.525	1.000	0.437	0.025	0.69
32-557	7324	0.531	1.000	0.375	0.025	0.65
32-558	626	0.550	0.484	0.375	0.020	0.53
32-559	7325	0.56	1.000	0.437	0.025	0.77
32-561	7326	0.593	1.000	0.437	0.025	0.69
32-562	JJ	0.600	0.484	0.437	0.016	0.80
32-563	JJ	0.600	0.500	0.500	0.020	0.49
32-526	II	0.625	0.500	0.500	0.020	0.43
32-564	7327	0.625	1.000	0.437	0.025	0.69
32-565	HH	0.650	0.500	0.500	0.020	0.47
32-566	7328	0.656	1.000	0.437	0.025	0.80
32-567	GG	0.675	0.515	0.500	0.020	0.75
32-568	7329	0.69	1.000	0.500	0.025	0.82
32-570	7330	0.718	1.000	0.500	0.025	0.79
32-571	EE	0.725	0.530	0.500	0.020	0.61
32-572	DD	0.750	0.531	0.500	0.020	0.54
32-573	7331	0.750	1.000	0.625	0.025	1.12
32-574	CC	0.775	0.531	0.500	0.020	0.74
32-533	7332B	0.781	1.000	0.500	0.025	0.89
32-575	7332	0.781	1.000	0.625	0.025	0.86
32-576	BB	0.800	0.546	0.562	0.020	0.69
32-577	7333	0.812	1.000	0.625	0.025	0.92
32-578	AA	0.825	0.546	0.562	0.020	0.71
32-579	7244	0.875	0.843	0.687	0.025	1.07
32-580	7113	0.925	0.968	0.750	0.025	1.02
32-545	5235A	1.000	0.843	0.687	0.025	1.18
32-549	7145A	1.050	0.843	0.687	0.025	1.17
32-584	5027	1.100	0.843	0.812	0.025	1.23
32-588	7088	1.175	0.875	0.875	0.025	1.29
32-590	875L	1.200	0.843	0.875	0.025	1.61
32-591	7291	1.225	0.968	0.875	0.025	1.46

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



**LOWER PRICE**

### HOSE CRIMPER COMES WITH 5 DIES

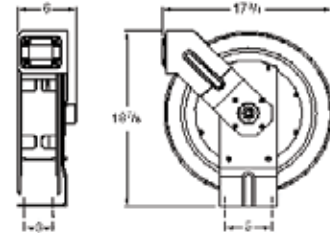
# 308-071 THRU # 308-075

Part #		List Price
308-070	Hose Crimper	222.22

### REPLACEMENT DIES

Part #	Size	List Price
308-071	5/8"	61.84
308-072	37/64"	61.84
308-073	17/32"	64.93
308-074	31/64"	61.84
308-075	11/16"	68.02
308-076	7/16"	60.87
308-077	3/4"	78.88
308-078	13/16"	82.82
308-079	3/8"	81.33

## 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	645.36
940-250	300	1/4	50	44	986.58

940350 - Air/ Water

940250 - Oxygen/ Acetylene

CLAMPS



**CORROSION RESISTANCE VALUES  
for Plastic Tubing**

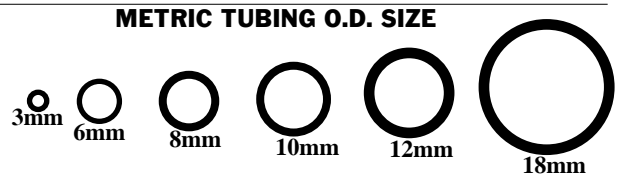
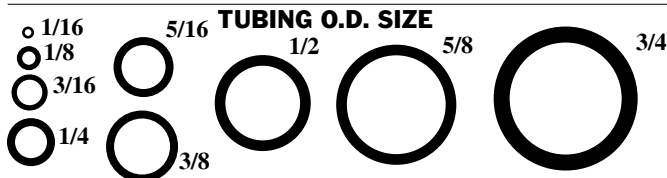
Ratings based on tests at 70°F and should not be exposed to higher temperature without testing

**F**-5000 Poly Vinyl Chloride  
**U**-2000 Polyurethane  
**E**-1000 Low Density Polyethylene  
**N**-6000 Nylon

**P**-1100 Polypropylene  
**D**-4000 EVA  
**T**-7000 Teflon  
**U**-8000 Special Plasticizers PVC

**G**-Good  
**L**-Limited  
**P**-Poor  
**N**-Not Tested

<b>FUELS:</b>	<b>F</b>	<b>U</b>	<b>E</b>	<b>N</b>	<b>P</b>	<b>D</b>	<b>T</b>	<b>U</b>	<b>ACIDS &amp; BASES</b>	<b>F</b>	<b>U</b>	<b>E</b>	<b>N</b>	<b>P</b>	<b>D</b>	<b>T</b>
Butane (1).....	G	G	L	G	L	G	G	N	Acetic, 50%.....	G	P	P	L	G	P	G
Diesel Fuel .....	L	G	L	G	L	P	N	G	Boric.....	G	G	G	G	G	G	G
Gasoline (regular) .....	L	G	P	G	L	N	G	G	Carbolic (phenol) .....	P	P	G	P	G	P	N
Kerosene .....	L	G	P	G	G	P	G	G	Fatty .....	G	G	P	G	G	N	G
Methane (nat. gas)(1).....	G	G	L	G	G	N	N	N	Formic, 90%.....	G	P	G	P	G	G	G
Propane (1).....	G	G	L	G	L	N	N	N	Hydrochloric, 10%.....	G	G	G	L	G	G	G
<b>OTHERS:</b>									Hydrochloric, 25%.....	G	L	G	P	G	L	G
Acetylene .....	N	G	G	G	G	N	N	N	Hydrochloric, 50%.....	G	L	G	P	G	L	G
Ammonia gas .....	P	G	G	G	G	G	N	N	Hydrocyanic, 50%.....	L	P	G	P	G	G	G
Ammonium salts .....	G	G	G	G	G	N	N	N	Maleic .....	G	P	G	G	G	N	N
Amyl acetate .....	P	P	L	G	P	P	G	N	Nitric, 10%.....	G	P	G	L	G	L	G
Aniline.....	P	P	L	L	G	P	G	N	Nitric, 30%.....	G	P	G	P	L	L	G
Animal oils.....	G	G	P	G	G	N	G	G	Oleic.....	L	G	L	G	G	P	N
Bleach, 7% .....	G	P	G	L	L	N	N	G	Phosphoric, 25% .....	G	L	G	G	G	G	N
Bromine.....	L	G	P	P	P	P	G	N	Sulfuric, 30% .....	G	L	G	L	G	L	G
Butandiol.....	G	G	G	G	G	N	N	N	Sulfuric, 70% .....	L	P	P	P	G	P	G
Calcium salts incl. Chloride....	G	G	G	G	G	N	G	G	Sulfuric, 98% .....	P	P	P	P	G	P	G
Chlorine gas, dry.....	G	G	P	P	P	P	N	N	Sulfurous, 30%.....	G	P	G	L	G	N	G
Dibutyl phthalate.....	N	P	L	G	L	P	N	G	Tannic .....	G	P	G	G	G	N	G
Glucose .....	G	G	G	G	G	G	G	G	Ammonium hydroxide, 25%... P	G	G	L	G	G	G	N
Glycerine.....	G	G	G	G	G	G	N	G	Potassium hydroxide, 25%. L	G	G	G	G	G	G	G
Hydrogen peroxide 10% ....	G	G	G	G	G	G	G	G	Sodium hydroxide, 50%.... G	G	G	G	G	G	L	G
Hydrogen peroxide 25% ....	L	G	G	P	G	G	G	G	<b>SOLVENTS:</b>							
Hydrogen sulfide.....	G	P	G	L	G	N	G	N	Acetone .....	P	P	G	G	L	P	G
Isocyanates.....	N	G	G	G	N	P	N	N	Benzene.....	P	L	P	G	P	P	G
Lead salts (3).....	G	G	G	G	G	N	N	N	Carbon tetrachloride.....	P	L	L	L	P	P	G
Magnesium salts.....	G	G	G	G	G	N	G	N	Chloroform.....	P	P	P	L	P	P	G
Mercury.....	G	G	G	G	G	G	N	N	Cyclohexanone.....	P	P	P	G	L	P	G
Milk.....	G	G	G	G	G	G	N	G	Dimethylformamide.....	P	P	L	N	G	N	N
Mineral Oil.....	G	G	L	G	L	P	G	G	Dioxane.....	N	N	P	G	L	N	N
Nitrous Oxide (1).....	G	G	L	G	G	N	N	N	Ethyl acetate.....	P	L	G	G	L	P	G
Oxygen (1) .....	G	G	G	G	G	G	G	G	Ethyl alcohol (1) .....	L	G	G	L	G	G	G
Ozone, ambient .....	G	G	L	G	L	N	N	G	Ethyl ether.....	L	L	G	G	L	P	N
Paint, oil base.....	L	G	L	G	G	N	N	G	Ethylene glycol .....	G	G	G	G	G	N	N
Polyglycols.....	G	G	G	G	G	N	N	N	Formaldehyde .....	G	G	G	G	G	L	N
Potassium salts .....	G	G	G	G	G	N	G	N	Freon - 12' .....	L	L	G	G	L	N	G
Pydraul .....	P	P	P	G	N	N	N	N	Methyl alcohol .....	L	G	G	L	G	N	N
Pyridine .....	P	L	G	L	G	N	G	N	Methylene chloride .....	P	P	L	G	L	P	N
Salt Water.....	G	G	G	G	G	G	G	G	Methyl ethyl ketone .....	P	P	G	G	L	P	N
Silver Nitrate.....	G	G	G	G	G	G	G	N	Naphthas (2).....	P	G	P	G	L	P	G
Skydrol.....	P	P	P	G	N	N	N	N	Tolulene .....	P	G	P	G	L	P	N
Soap solution (conc.) .....	G	G	L	G	G	N	G	G	Triclorethylene.....	P	P	P	L	P	P	G
Sodium salts.....	G	G	G	G	G	N	G	G	Turpentine .....	G	G	P	G	L	P	G
Sodium thiosulphate.....	G	G	G	G	G	N	G	G	Xylene.....	P	G	P	G	L	P	N
Styrene .....	P	G	P	G	N	N	N	G	<b>HYDRAULIC FLUIDS:</b>							
Trisodium phosphate.....	G	G	N	G	G	N	N	G	Diester base grease.....	N	G	P	G	L	P	N
Ucon oil.....	G	G	G	G	N	N	N	N	Petroleum base grease.....	G	G	L	G	L	P	N
Urea.....	G	G	G	G	G	N	G	G	Phosphate ester.....	L	P	P	G	G	N	N
Vegetable oils (1).....	G	G	G	G	G	P	N	G	Polyol ester.....	P	N	P	G	G	N	N
Water at 730F.....	G	G	G	G	G	G	G	G	Water-glycol .....	G	G	G	G	G	N	N
Water at 1400F.....	L	G	G	G	G	G	G	G	SAE motor oils.....	G	G	G	G	G	N	N
Water at 1700F.....	P	L	N	L	G	P	N	G	Machine oil .....	G	G	L	G	L	N	N
Whiskey, wine (1).....	N	G	G	G	G	N	G	N	MIL-L-7808 H .....	G	G	L	G	G	N	N
Zinc Chloride .....	G	G	G	G	G	G	N	N	Brake Fluid.....	N	N	N	N	N	N	N



**TUBING**



**LINEAR LOW DENSITY POLYETHYLENE TUBING**



Polyethylene is made from 100% non-toxic ingredients. It's inert nature and FDA compliant status makes it perfect for food, water and beverage piping. It is ideal for use in pneumatic, drain piping, lab use and chemical transfer applications which require an inexpensive tubing

Polyethylene is highly-resistant to stress cracking from chemicals, aging and ultraviolet exposure. For use with barb-type, push-to-connect or compression-style fittings.

**Features**

- Chemically Inert
- Chemical Resistant
- Lightweight & Flexible
- Good Dielectric Properties
- Impermeable to Gases
- Meets FDA Requirements
- Multiple Colors Available

**Specifications**

Temperature Range: -50°F to +140°F  
 Hardness: Shore A 93A  
 Shore D 45D

**Applications**

Food & Beverage      Process Control  
 Pneumatic Tools      Laboratories  
 Pneumatic Piping  
 Electrical Jacketing  
 Drain Lines  
 Instrumentation  
 Chemical Transfer

**Colors Available: Black=B ,Blue = U, Green = G, Red = R, Yellow = Y, Orange = O.**

*To order colors, delete the 9 prefix and add color suffix. For longer lengths, add length suffix.*

**100' LENGTH**

Part #	Tube O.D.	Tube Wall	Working Pressure	List Price
973-200	1/8"	0.020	400	23.54
973-201	5/32"	0.025	400	19.53
973-202	3/16"	0.030	400	26.77
973-203	1/4"	0.040	400	20.81
973-204	1/4"	0.062	600	28.50
973-205	5/16"	0.062	800	43.25
973-206	3/8"	0.062	400	43.47
973-207	1/2"	0.062	300	62.78
973-208	5/8"	0.062	250	78.99
973-211	3/4"	0.062	150	115.52
973-209	3/4"	0.094	200	143.59
973-210	1"	0.125	300	228.26

**500' LENGTH**

Part #	Tube O.D.	Tube Wall	Working Pressure	List Price
73-200N5	1/8"	0.020	400	103.17
73-203N5	1/4"	0.040	400	111.96
73-204N5	1/4"	0.062	800	148.45
73-206N5	3/8"	0.062	400	225.35
73-207N5	1/2"	0.062	300	308.89

**1000' LENGTH**

Part #	Tube O.D.	Tube Wall	Working Pressure	List Price
73-203N1	1/4"	0.040	400	218.11
73-204N1	1/4"	0.062	800	262.83
73-206N1	3/8"	0.062	400	428.64

**TUBING**



## TUBING

## PLASTIC TUBING

### 100' BLACK POLYETHYLENE TUBING

Part #	O.D.	List Price
73-200B	1/8"	23.54
73-201B	5/32"	26.87
73-202B	3/16"	26.77
73-203B	1/4"	27.01
73-204B	1/4"	28.50
73-205B	5/16"	43.25
73-206B	3/8"	47.54
73-207B	1/2"	64.45
73-208B	5/8"	78.99

### 100' BLUE POLYETHYLENE TUBING

Part #	O.D.	List Price
73-200U	1/8"	23.54
73-201U	5/32"	26.87
73-202U	3/16"	26.77
73-203U	1/4"	27.01
73-204U	1/4"	28.50
73-205U	5/16"	43.25
73-206U	3/8"	47.54
73-207U	1/2"	64.45

### 100' GREEN POLYETHYLENE TUBING

Part #	O.D.	List Price
73-201G	5/32"	26.87
73-203G	1/4"	27.01
73-204G	1/4"	28.50
73-205G	5/16"	43.25
73-206G	3/8"	47.54
73-207G	1/2"	64.45

### 100' RED POLYETHYLENE TUBING

Part #	O.D.	List Price
73-203R	1/4"	27.01
73-205R	5/16"	43.25
73-206R	3/8"	47.54

### 100' WHITE POLYETHYLENE TUBING

Part #	O.D.	List Price
73-203W	1/4"	27.01
73-206W	3/8"	47.54
73-207W	1/2"	64.45

### 100' YELLOW POLYETHYLENE TUBING

Part #	O.D.	List Price
73-203Y	1/4"	27.01
73-205Y	5/16"	43.25
73-206Y	3/8"	47.54

### 100' ORANGE POLYETHYLENE TUBING

Part #	O.D.	List Price
73-203O	1/4"	27.01

### 100' GRAY POLYETHYLENE TUBING

Part #	O.D.	List Price
73-206A	3/8"	47.54

### 500' BLACK REEL

Part #	O.D.	List Price
73-203B5	1/4"	121.51
73-205B5	5/16"	187.98
73-206B5	3/8"	225.35
73-207B5	1/2"	308.89

### 500' BLUE REEL

Part #	O.D.	List Price
73-203U5	1/4"	111.96
73-206U5	3/8"	225.35

### 500' GREEN REEL

Part #	O.D.	List Price
73-203G5	1/4"	111.96

### 500' RED REEL

Part #	O.D.	List Price
73-203R5	1/4"	123.87

### 500' WHITE REEL

Part #	O.D.	List Price
73-207W5	1/2"	308.89

### 1000' BLACK REEL

Part #	O.D.	List Price
73-206B1	3/8"	428.64

### 1000' BLUE REEL

Part #	O.D.	List Price
73-203U1	1/4"	218.11

### 1000' GREEN REEL

Part #	O.D.	List Price
73-203G1	1/4"	218.11

### 1000' RED REEL

Part #	O.D.	List Price
73-203R1	1/4"	218.11

### NSF-61 CERTIFIED POLYETHYLENE TUBING

Exceeds FDA expectations with it's NSF-61 Certification for drinking water applications. manufactured from 100% non-toxic ingredients. Perfect for drinking water, beverage and food applications. With a complete range of sizes, colors and packaged lengths, is the perfect one stop shop tubing option. Include NSF-61 Certified plastic push-in fittings and complete your assembly needs.

- Water Purification
- Water Conditioners
- Ice Makers
- Misting systems

**Colors Available:**  
Black=B, Blue = U, Red = R,  
Yellow = Y.

Part #;s are for 100' rolls  
Package Lengths:  
5=500', 1=1000'

*To order colors, delete the 9 prefix and add color suffix. For longer lengths, add length suffix.*

Part #	O.D.	List Price
973-212	1/4"	23.65
973-213	3/8"	49.40
973-214	1/2"	71.34

TUBING

**NYLON 12 TUBING**



Nylon 12 tubing is recognized as an industry standard for applications which require higher working pressures and higher heat and/or chemical resistance. It is ideal for outdoor use applications because of its superior stress crack resistance. Nylon 12 is strong, lightweight and has a very low moisture absorption rate compared to other nylons. By not absorbing moisture, Nylon 12 remains more flexible, which in turn extends its service life. Nylon 12 tubing can be used with standard push-to-connect fittings and compression fittings for simple installation.

Because of its semi-rigid properties, a thinner tube wall provides higher flow rates and working pressure.

**Features**

- Strong
- Lightweight
- Flexible
- Abrasion Resistant
- Heat Resistant
- Chemical Resistant

**Specifications**

Temperature Range: -60°F to +200°F  
 Hardness: Rockwell 78 R  
 Shore D 70  
 Vacuum Rating: To 28" Hg  
 Higher Flow Rates & Working Pressure  
 Tolerances: 1/8"-1/4" +/- .004  
 3/4"-1/2" +/- .006

**Applications**

Pneumatic Tools      Chemical Transfer  
 Pneumatic Piping      Vacuum  
 Instrumentation      Process Control  
 Lube Lines      Fuel Lines  
 Coolants      Paint Supply Lines  
 Refrigeration      Laboratories

**Colors Available: Black=B ,Blue = U, Green = G, Red = R, Yellow = Y, Orange = O.**

*Part #'s shown are for natural. For colors, delete 9 prefix and add color. for 500' add a 5 suffix, for 1000' reels add a 1.*

**100' LENGTH**

Part #	Tube O.D.	Tube Wall	Working Pressure	List Price
973-230	1/8"	.017	400	28.49
973-231	5/32"	.025	400	38.50
973-229	3/16"	.024	400	54.97
973-232	1/4"	.035	400	81.62
973-238	1/4"	.040	800	107.97
973-239	1/4"	.062	600	145.48
973-226	5/16"	.040	400	137.95
973-233	3/8"	.050	300	169.40
973-234	1/2"	.062	250	300.30
973-235	5/8"	.062	150	445.76

**METRIC LENGTH - 25 METERS**

Part #	MM O.D.	MM I.D.	MM Wall	Working Pressure	List Price
973-323	4	2.3	0.85	1800	29.37
973-325	6	4	1	1200	61.05
973-327	8	6	1	800	87.45
973-329	10	8	1	600	118.80
973-332	12	10	1	480	297.61
973-334	14	12	1	950	224.40

*\* Metric Sizes Natural color only\**

**ENDURE™ AIR BRAKE TUBING**



**Applications**

- Truck, Bus & Commercial vehicle air brake systems.
- Trailer air brake systems.
- Auxiliary air systems.

**Features**

- Flexible - Retains its flexibility longer.
- Leading impact strength & vibration cracking resistance
- Exceeds Industry Performance Standards.

**Service Temp. Range:**

-85°F (-65°C) to + 200°F (+93°C)

**Compliances:**

- Meets DOT FMVSS 106.
- Meets requirements of SAE J844 Type B.

**Construction**

- Uses DuPont™ Hytrel®
  - Tube: Polyester elastomer
  - Reinforcement: Poly. yarn
  - Cover: Poly. elastomer (colored)
- Available in Black, Blue, Green, Orange, Red & Yellow.

**Add suffix 'B' = Black, 'U' = Blue, 'G' = Green, 'O' = Orange, 'R' = Red, 'Y' = Yellow**

Part #	Nominal O.D.	Nominal I.D.	Nominal Wall	Minimum Burst Pressure (PSI @ 70°F)	Standard Lengths		Standard Lengths		List Price CTN	List Price Spool
					Ctn/Spool	Ctn/Coil	Ctn/Spool	Ctn/Coil		
38604	3/8	0.251	0.062	1,400	500 ft.	100 ft.	17.0 lbs.	3.2 lbs.	233.60	1168.00
38605	1/2	0.376	0.062	950	500 ft.	100 ft.	23.0 lbs.	4.4 lbs.	312.32	1561.58
38606	5/8	0.441	0.094	900	250 ft.	100 ft.	22.0 lbs.	8.0 lbs.	577.39	1443.49
38607	3/4	0.566	0.094	850	250 ft.	100 ft.	27.0 lbs.	10.0 lbs.	802.16	2005.39

**Add a '5' to the end of the part # for 500 ft. & 250 spools**

**MAYONNAISE JAR & TWO BEERS**

A professor stood before his philosophy class and had some items in front of him..When the class began, he wordlessly picked up a very large and empty mayonnaise jar and proceeded to fill it with golf balls. He then asked the students if the jar was full. They agreed that it was. The professor then picked up a box of pebbles and poured them into the jar He shook the jar lightly. The pebbles rolled into the open areas between the golf balls. He then asked the students again if the jar was full. They agreed it was. The professor next picked up a box of sand and poured it into the jar. Of course, the sand filled up everything else. He asked once more if the jar was full. The students responded with a unanimous 'yes.' The professor then produced two Beers from under the table and poured the entire contents into the jar effectively filling the empty space between the sand. The students laughed..

'Now,' said the professor as the laughter subsided, 'I want you to recognize that this jar represents your life. The golf balls are the important things---your family, your children, your health, your friends and your favorite passions---and if everything else was lost and only they remained, your life would still be full. The pebbles are the other things that matter like your job, your house and your car. The sand is everything else---the small stuff. 'If you put the sand into the jar first,' he continued, 'there is no room for the pebbles or the golf balls. The same goes for life. If you spend all your time and energy on the small stuff you will never have room for the things that are important to you.. Pay attention to the things that are critical to your happiness. Spend time with your children. Spend time with your parents. Visit with grandparents..Take time to get medical checkups. Take your spouse out to dinner. Play another 18. There will always be time to clean the house and fix the disposal. Take care of the golf balls first---the things that really matter. Set your priorities. The rest is just sand.

One of the students raised her hand and inquired what the Beer represented. The professor smiled and said, 'I'm glad you asked.' The Beer just shows you that no matter how full your life may seem, there's always room for a couple of Beers with a friend.



**PVC POLYVINYLCHLORIDE TUBING**

PVC is suited for general, low-pressure, industrial applications for the conveyance of liquids and solids of suitable granular size. Made from a PVC compound that complies with FDA regulations. Although it is primarily intended for applications where pressure is not essential, it will withstand the pressures shown.

The clear PVC Tubing provides good chemical resistance, is lightweight, flexible and economically priced.

**Features**

- Lightweight
- Flexible
- Food Grade
- Clear Color

**Specifications**

Temperature Range: +25°F to +150°F  
 Hardness: Shore A 75 PVC  
 Meets FDA requirements  
 NSF 51 Certified to 100°F(38°C)  
 USP Class VI rated materials

**Applications**

- Beverage Dispensing
- Drain Tubing
- Potable Water
- Laboratory Tubing
- Wine Transfer
- Low Pressure Air Line
- Distilled Water Transfer
- Light Vacuum
- Wire Harness

**Colors Available: Clear**

**Package Lengths: 100'**

**100' LENGTH**

Part #	Tube I.D.	Tube O.D.	Tube Wall	Min. Burst	List Price
973-222	1/8	3/16	1/32	200	31.20
973-224	1/8	1/4	1/16	400	33.24
973-223	3/16	5/16	1/16	250	34.30
973-215	1/4	3/8	1/16	200	47.15
973-252	5/16	7/16	1/16	150	57.30
973-253	5/16	1/2	3/32	250	84.76
973-216	3/8	1/2	1/16	125	60.71
973-255	3/8"	5/8"	1/8"	250	141.35
973-262	3/8	9/16	3/32	200	113.10
973-217	1/2	5/8	1/16	100	116.41
973-219	3/4	1	1/8	120	207.52
973-221	1	1-1/4	1/8	100	311.86

**TUBING**

**ALUMINUM TUBING**

Alloy 3003-0  
 ASTM B-483



Material to ASTM B-483  
**POR**

900 PSI max  
 3700 Burst PSI

**ALUMINUM VERSATUBE 50' COILS**

Part #	O.D.	Wall Thick	50' Coils
972-190	1/8	.025	POR
972-191	3/16	.028	POR
972-192	1/4	.032	POR
972-193	5/16	.035	POR
972-194	3/8	.035	POR
972-195	1/2	.035	POR

**COPPER TUBING**

ASTMB280



**POR**

**REFRIGERATION COPPER TUBE 50' COILS**

Part #	O.D. Actual	Wt. 50' Coil	Wall Thick.
972-180	1/8	1.74	.030
972-181	3/16	2.88	.030
972-182	1/4	4.02	.030
972-183	5/16	5.45	.032
972-184	3/8	6.7	.032
972-185	1/2	9.1	.032
972-186	5/8	12.55	.035
972-187	3/4	15.25	.035

**COPPER TUBING**

For residential water lines



**POR**

**TYPE L SOFT COPPER TUBING 60' COILS**

Part #	O.D. Nom	Wt. 50' Coil	Wall Thick.
972-171	1/4	.126	.030
972-172	3/8	.198	.035
972-173	1/2	.285	.040

\* Add 1/8" to Nom OD to get the Actual OD

**POR = Price On Request**

**POLYURETHANE**



Polyurethane (PUR) tubing is made from the highest quality raw materials available. It is etherbased to provide excellent hydrolysis, oil and cold resistance. Polyurethane is strong and flexible and offers superior kink resistance compared to other tubing. It is 5 to 10 times more wear resistant and lighter in weight than any rubber hose.

Polyurethane tubing has an outside diameter made to extremely tight tolerances. it is ideal for use with push-to-connect fittings, as well as barb-type compression fittings for simple installation.

**Features**

- Strong
- Lightweight
- Flexible
- Abrasion Resistant
- Heat & Cold Resistant
- Chemical Resistant
- Meets NSF Requirement
- Kink Resistance

**Specifications**

Temperature Range: -40°F to +160°F  
 Hardness: Shore A 98  
 Vacuum Rating: To 28" Hg  
 Higher Flow Rates & Working Pressure  
 Tolerances: 1/8"-1/2" +/- .005  
 9/16"-3/4" +/- .006

**Applications**

Pneumatic Tools      Instrumentation  
 Pneumatic Piping      Agriculture  
 Vacuum      Ship Piping  
 Laboratories      Chemical Plant  
 Robotics      Lubrication Systems  
 Motion Control      Painting Systems

**Colors Available: Black=B ,Clear Blue = CB, Clear Green = CG, Green = G, Light Green = LG, Red = R, Yellow = Y, White = W. Metric available only Natural.**

*Parts shown are for clear tubing. For colors delete the 9 prefix in part number add color suffix to the end of the part number. Add a 5 to the end of the part # to specify 500' or a 1 for 1000'.*

**100' LENGTH**

Part #	Tube O.D.	Working Pressure	Burst	I.D.	List Price
973-340	1/8	240	720	1/16	40.04
973-341	5/32	200	600	3/32	47.05
973-342	3/16	150	450	1/8	52.21
973-343	1/4	180	540	1/8	83.55
973-345	3/8	150	450	1/4	170.63
973-346	1/2	150	450	3/8	303.89

**METRIC SIZES**

Part #	Tube O.D.	Tube I.D.	List Price
973-350	4	2.5	38.58
973-352	6	4	59.98
973-353	8	6	105.68

*\* Metric Sizes Natural color only\**

**TUBING ACCESSORIES**

**MINI-TUBING CUTTER**

• Great for tight places



**TUBING CUTTER**



**PLASTIC TUBE CUTTER**

Range: 1/8" - 3/8" I.D. (3mm-10mm)



Part #	Size	List Price	Part #	Size	List Price	Part #	Description	List Price
990-571	3mm-22mm (1/8"-7/8")	6.15	990-570	1/8"-1-1/8"	10.76	91-707	Cutter w/Blade	9.20



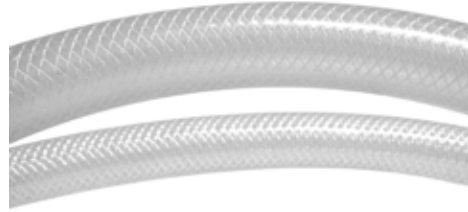
- Route and secure multiple tubing lines
- Mounting versatility
  - Racks can be easily hand separated down to single holders.
  - Thru holes provided (all sizes)
- Standard color is BLACK.  
Other colors available on special request.

Part #	Tubing OD	Description	Channels	List Price
28-988	1/4	non-adhesive	10	3.15
28-989	1/4	adhesive	10	4.22
28-990	3/8	non-adhesive	7	10.19
28-991	1/2	non-adhesive	5	9.70

**NOTE: MOUNTING SCREWS NOT PROVIDED**

**CLEARBRAID PVC HOSE ( FDA LISTED )**

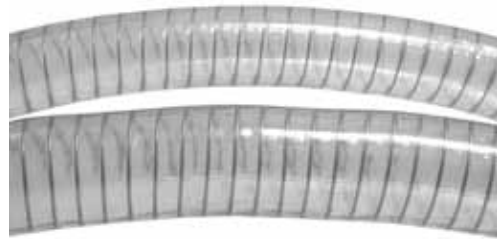
- **DESCRIPTION:** Food and beverage transfer hose
- **TUBE COMPOUND:** PVC
- **REINFORCEMENT:** 3 Polyester Spirals
- **COVER:** PVC Clear
- **TEMP. RANGE:** +25 to +150F / -5 to +65C°
- **APPLICATIONS:** Food and Beverage Transfer, General Industrial, Water Main and Water Feed Hoses, Air, Pneumatic Applications and Light Vacuum



Part Number	ID	Length	Working Pressure	Burst Pressure	Weight	List Price
	Inch		PSI	PSI		
973-430	3/16	300'	250	1000	0.036	554.40
973-431	1/4	300'	250	1000	0.045	633.60
973-432	3/8	300'	225	900	0.09	851.40
973-433	1/2	300'	200	800	0.138	1148.40
973-434	3/4	300'	150	600	0.165	1801.80
973-435	1	200'	125	500	0.219	1808.40
973-436	1-1/4	100'	100	400	0.45	1531.20
973-437	1-1/2	100'	100	400	0.64	1920.60
973-438	2	100'	75	300	0.95	2871.00

**PVC WIRE VACUUM TRANSFER HOSE**

**CLEAR PVC WIRE REINFORCED VACUUM HOSE  
100' STANDARD LENGTHS**



- **DESCRIPTION:** Potable and Pure Water Transfer Hose
- **TUBE COMPOUND:** PVC Clear
- **REINFORCEMENT:** Multiple Polyester Spirals
- **COVER:** UV Resistant Opaque Blue Flexible PVC
- **TEMP. RANGE:** -13 to +150F / -25 to +65C°
- **APPLICATIONS:** Potable and pure water transfer, temporary municipal water supply connections, bottled water plants, collection of water of analysis.

**100' LENGTHS**

Part Number	ID	OD	Working Pressure	Weight	List Price
	Inch	Inch	PSI	lb/ft	
973-400	1/2	0.72	90	0.12	673.20
973-401	5/8	0.88	90	0.17	844.80
973-402	3/4	1.06	75	0.24	844.80
973-404	1	1.3	75	0.35	1188.00
973-405	1-1/4	1.62	60	0.44	1557.60
973-406	1-1/2	1.85	60	0.54	2171.40
973-407	2	2.36	60	0.85	2844.60



**GENERAL PURPOSE PVC HOSE**

- **150' LENGTHS**
- **TUBE:** Black PVC
- **REINFORCEMENT:** 2 Polyester Spirals
- **COVER:** PVC ( Red, Yellow, Blue and Black )
- **TEMP. RANGE:** +25 to +150F / -5 to +65C°
- **APPLICATIONS:** Air and water lines, light vacuum, mold machine water cooling, water soluble chemical spray.



*Parts shown are for black. For Blue add U to part #, Yellow add Y and red add R.*

Part #	ID	OD	Working Pressure	Burst Pressure	Weight	List Price
	Inch	Inch	PSI	PSI	lb/ft	
973-420	1/4	0.5	300	1200	0.084	376.20
973-421	5/16	0.562	300	1200	0.098	415.80
973-422	3/8	0.625	300	1200	0.113	475.20
973-423	1/2	0.75	300	1200	0.144	534.60
973-424	3/4	1.03	200	800	0.233	910.80
973-425	1	1.312	175	700	0.341	1227.60

**HEAVY DUTY PVC SPRAY HOSE**



- **HEAVY DUTY SPRAY HOSE 600PSI ( YELLOW ) AND 800PSI ( GREEN )**
- **5 PLY BONDED CONSTRUCTION**
- **SPECIALLY FORMULATED COMPOUND SUITABLE FOR HARSH FIELDWORK ENVIRONMENT**
- **SUPERB ABRASION RESISTANCE**
- **LONG LASTING FLEXIBILITY**
- **RESISTANT TO FUNGICIDES, INSECTICIDES, FERTILIZERS AND MORE**

**300' ROLLS**

Part #	ID	COLOR	WP	Weight Per/ft	List Price
973-450	3/8"	Yellow	600PSI	0.12	1405.80
973-451	1/2"	Yellow	600 PSI	0.18	1960.20
973-460	3/8"	Green	800 PSI		1425.60
973-461	1/2"	Green	800 PSI		1980.00



1/4" BASIC SIZE

**UNIVERSAL SERIES COUPLERS**

1/4" BASIC SIZE

**For ARO, TRU-FLATE, INDUSTRIAL INTERCHANGE**

1/4" BASIC SIZE

- Automatic Coupler
- Brass body, NBR Seal, Stainless Steel spring, Steel locking balls.
- Good for low pressure fluid lines.

**Working range:**

Maximum operating Pressure  
To 220 psi

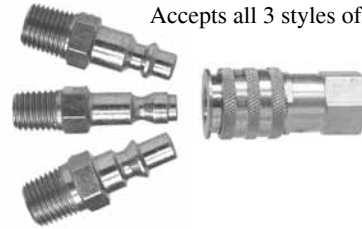
Temperature: -4° to +176°F

Industrial

Accepts all 3 styles of plugs!

Parker

ARO



**MALE COUPLER**



**BRASS**

Part #	Size	List Price
28-579	1/4" NPTF	10.07
28-589	3/8" NPTF	9.68

**FEMALE COUPLER**



**BRASS**

Part #	Size	List Price
28-560	1/4" NPTF	12.85

**HOSE BARB COUPLER**



**BRASS**

Part #	Hose I.D. Size	List Price
28-690	1/4"	11.67
28-691	3/8"	10.97

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.

- The standard is a brass coupler and valve with steel locking balls, NBR seat, and stainless steel springs.

**MALE PIPE COUPLER**

**BRASS**



Part #	NPT Size	List Price
28-552	1/4"	6.82
28-553	3/8"	7.32

**STEEL**

28552S	1/4"	5.20
28553S	3/8"	5.50

**MALE PLUG**

**STEEL**



Part #	NPT Size	List Price
28-545	1/8"	1.60
28-546	1/4"	1.42
28-547	3/8"	2.29

**360° TURNING SWIVEL PLUG**

1/4" Basic size

Industrial Interchange Plug

•360° Turning

•Swivels



Part #	Size	List Price
320-065	1/4"	10.51

**FEMALE PIPE COUPLER**

**BRASS**



Part #	NPT Size	List Price
28-540 <sup>3,5</sup>	1/4"	6.89
28-541 <sup>5</sup>	3/8"	7.43

**STEEL**

28540S	1/4"	5.09
28541S	3/8"	5.72

**FEMALE PLUG**

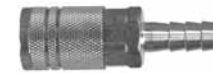
**STEEL**



Part #	NPT Size	List Price
28-533	1/8"	1.41
28-534	1/4"	1.27
28-535	3/8"	2.42

**HOSE ID COUPLER**

**BRASS**



Part #	Hose ID	List Price
28-562	1/4"	8.91
28-564	3/8"	8.97
28-565	1/4(Push on)	10.01
28-566	3/8(Push on)	10.86

**STEEL**

28-562S	1/4"	5.25
28-564S	3/8"	5.75
28-565S	1/4(Push on)	5.72
28-566S	3/8(Push on)	6.24

**HOSE ID PLUG**

**STEEL**



Part #	NPT Size	List Price
28-557	1/4"	1.36
28-559	3/8"	1.65
28-558	1/4(Push on)	1.78
28-561	3/8(Push on)	1.96

Send Midland all your quotes

Some product stocked in Houston and Atlanta.



**3/8" BASIC SIZE**

**INDUSTRIAL INTERCHANGE**

**3/8" BASIC SIZE**

**Specifications**

Body Size (in.)	3/8
Rated Pressure (PSI)	250
Temperature Range	-4° to +176°

• Sleeve type couplings are widely used to connect compressed air and low pressure fluid lines.

Their compact and economical design uses a ball locking mechanism consisting of captive steel balls that engage the locking groove on the mating nipple. The sliding spring loaded sleeve on the coupler must be manually retracted in order to connect or disconnect the nipple. It is easy to do, but two hands are normally required.

**Common applications include:** compressed air, water, grease, paint, limited vacuum and limited gases.

- The standard is a Steel coupler with a Steel valve, NBR seat, and stainless steel springs. Brass coupler avail. on request.
- 3/8" Basic size.

**MALE COUPLER  
STEEL**



Part #	NPT Size	List Price
98-823	1/4"	10.30
98-824	3/8"	12.27
98-825	1/2"	15.40

**FEMALE COUPLER  
STEEL**



Part #	NPT Size	List Price
98-810	1/4"	11.44
98-811	3/8"	10.92
98-812	1/2"	12.77

**HOSE ID COUPLER  
STEEL**



Part #	NPT Size	List Price
98-840	1/4"	14.45
98-841	3/8"	14.63
98-842	3/8"( Push on )	14.91

**MALE PLUG  
STEEL**



Part #	NPT Size	List Price
98-814	1/4"	2.66
98-815	3/8"	2.96

**FEMALE PLUG  
STEEL**



Part #	NPT Size	List Price
98-801	1/4"	1.91
98-802	3/8"	2.49

**HOSE ID PLUG  
STEEL**



Part #	Hose I.D. Size	List Price
98-828	3/8"	3.95
98-830	3/8"( Push on )	4.16

**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"	18.93
28-516	1/4"	7.46
28-517	3/8"	17.24

1/4"  
Body Size

**FEMALE PIPE COUPLER  
BRASS**



Part #	NPT Size	List Price
28-507	1/4"	7.50
28-508	3/8"	16.70

**HOSE ID COUPLER  
BRASS**



Part #	Size	List Price
28-528	1/4"	20.52
28-530	3/8"	22.21
28-531	1/4"(Push on)	21.15
28-532	3/8"(Push on)	21.15

**MALE PLUG  
STEEL**



Part #	NPT Size	List Price
28-509	1/8"	1.84
28-510	1/4"	1.36
28-511	3/8"	2.61

**FEMALE PLUG  
STEEL**



Part #	NPT Size	List Price
28-500	1/8"	4.55
28-501	1/4"	1.53
28-502	3/8"	2.52

**HOSE ID PLUG  
STEEL**



Part #	Size	List Price
28-518	1/4"	1.85
28-520	3/8"	6.87
28-521	1/4"(Push on)	12.03
28-522	3/8"(Push on)	12.79

# QUICK DISCONNECTS

# PNEUMATIC ACCESSORIES

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"	20.37
28-593	1/4"	9.42
28-594	3/8"	13.64

### FEMALE PIPE COUPLER

BRASS



Part #	NPT Size	List Price
28-583	1/8"	15.46
28-584	1/4"	8.57
28-585	3/8"	24.78

### HOSE ID COUPLER

BRASS



Part #	Size	List Price
28-601	1/4"	10.01
28-603	3/8"	12.78

### MALE PLUG

STEEL



Part #	NPT Size	List Price
28-586	1/8"	3.88
28-587	1/4"	1.74

### FEMALE PLUG

STEEL



Part #	NPT Size	List Price
28-578	1/4"	2.04

### HOSE ID PLUG

STEEL



Part #	Size	List Price
28-595	1/4"	4.18
28-597	3/8"	7.46

## ST SERIES...HIGH FLOW

## Specifications

Brass - Coupler & Steel Plug		
Temperature Range	-40° to 250°	
Rated Pressure	4650	2350

### MALE PIPE COUPLER

BRASS



Part #	Body & Thread Size	List Price
28-667	1/8"	20.63
28-665	1/4"	14.25
28-666	3/8"	16.10
28-668	1/2"	19.29
28-669	3/4"	48.38
28-670	1"	75.37

### FEMALE PIPE COUPLER

BRASS



Part #	Body & Thread Size	List Price
28-671	1/8"	12.81
28-651	1/4"	13.98
28-652	3/8"	15.11
28-672	1/2"	24.16
28-673	3/4"	42.76

### MALE PLUG

STEEL



Part #	Size	List Price
28-675	1/8"	8.88
28-639	1/4"	6.55
28-640	3/8"	4.79
28-676	1/2"	5.69
28-677	3/4"	17.39

### FEMALE PLUG

STEEL



Part #	Size	List Price
28-688	1/8"	5.44
28-619	1/4"	6.60
28-620	3/8"	5.04
28-679	1/2"	9.00
28-680	3/4"	17.32
28-681	1"	43.98

- Non-valved couplings for applications where maximum flow is required. Ideal for applications such as high pressure water and steam washers, carpet cleaners and mold coolant lines. They are often used in food processing, on fluid and dye transfer lines.

- Standard seals are Buna-N (Nitrile).

PNEUMATICS

**MINI TYPE QUICK DISCONNECTS**

**Working Range:** 0-145 psi  
**Material:** Chrome Plated Brass

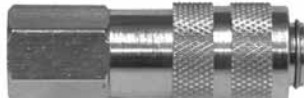
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**MALE COUPLER**



Part #	Size	List Price
28-605	1/8"	7.55

**FEMALE COUPLER**



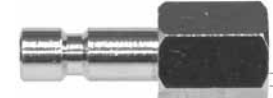
Part #	Size	List Price
28-606	1/8"	7.55

**MALE PLUG**



Part #	Size	List Price
28-607	1/8"	2.53

**FEMALE PLUG**



Part #	Size	List Price
28-608	1/8"	2.02

**LINCOLN INTERCHANGE**

- 1/4" Basic Size

**Specifications**

Body Size (in.)	1/4
Rated Pressure (PSI)	250
Temperature Range	-40° to +250°

- Brass body with steel sleeve and backnut. Valve material is Acetal and seal is Nitrile.

**MALE PIPE COUPLER**



Part #	Size	List Price
28-683	1/4"	23.50

**FEMALE PIPE COUPLER**



Part #	Size	List Price
28-684	1/4"	28.72

**MALE PLUG**

Steel



Part #	Size	List Price
28-685	1/8"	5.97
28-686	1/4"	5.02

**FEMALE PLUG**

Steel



Part #	Size	List Price
28-687	1/4"	5.02

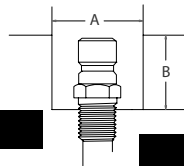
**MOLD COOLANT-LINE QUICK COUPLERS**

**OPERATING PRESSURE:**  
 200 PSIG (14.06 Kg/sq. cm)  
**Standard Seal:**  
**SILICONE:** -90°F to 400°F (-68°C to +205°C)

- MIDLAND coolant couplers are engineered for optimum speed and performance in connecting coolant lines to molds used for thermoplastic, thermosetting, blow molding, diecasting and on other types of tooling and equipment utilizing a constant fluid flow pumped through cooling channels.



BRASS



STEEL

**MALE PLUG (BRASS)**

**1/4" BASIC SIZE**

Part #	Size	A	B	List Price
29-900	1/8"	0.69	0.69	2.34
29-901	1/4"	0.84	0.94	3.00
29-902	3/8"	1.00	0.97	3.19

**3/8" BASIC SIZE**

Part #	Size	A	B	List Price
29-906	1/4"	1.00	0.94	3.27
29-907	3/8"	1.00	1.13	3.54
29-908	1/2"	1.81	1.25	6.66

**1/2" BASIC SIZE**

Part #	Size	A	B	List Price
29-911	1/2"	1.25	1.50	9.42
29-912	3/4"	1.50	1.56	14.49

**FEMALE PLUG (STEEL)**

**1/4" BASIC SIZE**

Part #	Size	List Price
29-903	1/8"	3.10
29-904	1/4"	3.25
29-905	3/8"	4.88

**3/8" BASIC SIZE**

Part #	Size	List Price
29-909	1/4"	4.05
29-910	3/8"	5.47

**1/2" BASIC SIZE**

Part #	Size	List Price
29-913	1/2"	13.07
29-914	3/4"	24.19

**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	15.80	98-920	23.11	98-925	22.33	98-930	13.32
1/4" (Push On)	98-916	16.12	98-921	23.09	98-926	24.19	(1/8" Female Pipe)	
5/16"	98-917	15.80	98-922	23.11	98-927	23.11		
3/8"	98-918	14.83	98-923	21.22	98-928	22.33		
3/8" (Push On)	98-919	19.23	98-924	24.48	98-929	24.48		

**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	23.58	98-936	30.40	98-941	30.72	98-946	22.90
1/4" (Push On)	98-932	26.70	98-937	31.41	98-942	31.50	(1/8" Female Pipe)	
5/16"	98-933	25.15	98-938	30.40	98-943	30.72		
3/8"	98-934	26.03	98-939	30.40	98-944	30.72		
3/8" (Push On)	98-935	27.50	98-940	31.89	98-945	31.89		

**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	28.26	98-952	30.24	98-957	30.24	98-962	20.32
3/8" (Push On)	98-948	21.53	98-953	29.68	98-958	33.23	(1/4" Female Pipe)	
1/2"	98-949	20.94	98-954	27.09	98-959	30.24	98-986	18.90
1/2" (Push On)	98-951	26.03	98-956	26.03	98-961	33.23		

**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	35.68	98-967	40.80	98-971	45.42	98-975	30.72
3/8" (Push On)	98-964	35.68	98-968	46.59	98-972	47.59	(1/4" Female Pipe)	
1/2"	98-965	30.59	98-969	45.05	98-973	45.42		

**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	55.37	98-979	70.53	98-982	80.32	98-985	49.81
1/2" (Push On)	98-977	55.65	98-980	72.51	98-983	82.47	(1/2" Female Pipe)	
3/4"	98-978	52.64	98-981	72.72	98-984	82.95		

Send Midland all your quotes!





# HYDRAULIC COUPLINGS

# QUICK DISCONNECT

**THREAD TO CONNECT, DRYBREAK NO-SPILL QUICK CONNECT - 3000 PSI MAX**



- Brass Body
- Steel Wing Nut
- Buna-Seal ( -40° to +250°F)

Aeroquip S100  
Parker 6100  
Snaptite B78



- Bonded Face Seal
- External ORing ensures Full Connection

Part #	Body Size	Female NPT	List Price
61-150	3/4	1/2	60.29

Part #	Body Size	NPT	List Price
61-050	3/4	1/2	55.76

\* More sizes available, just ask.

## FEATURES

- Poppet valves to prevent uncoupled leakage
- Critical parts are induction hardened for durability
- Dependable ball-locking mechanism holds the mating halves together
- Socket and plug are precision machined from solid barstock
- Standard nitrile seals temp range -40°F to +250°F



ISO 7241-1 ISO-A Interchange ( Connected )				
Body Size	Steel Coupler/ Plug			
	Maximum Working		Burst	
	PSI	Bar	PSI	Bar
1/4"	5,000	345	18,270	1,200
3/8"	4,000	275	18,270	1,200
1/2"	4,000	275	16,500	1,100
3/4"	4,000	275	14,800	1,000
1"	4,000	275	12,400	850
1-1/4"	3,000	200	12,600	850
1-1/2"	3,000	200	12,600	850
2"	1,450	100	5,800	400

## FEMALE PIPE COUPLER



Part #	Body Size	NPT	List Price
ANV-14-F	1/4"	1/4"	10.43
ANV-38-F	3/8"	3/8"	11.75
ANV-12-F	1/2"	1/2"	15.81
ANV-34-F	3/4"	3/4"	33.06
ANV-1-F	1"	1"	42.86

## INTERCHANGE DATA:

- Parker 6600, Aeroquip/ Eaton FD56, Dixon 'K' Series.
- Hansen HA 15000, Safeway S56

## FEMALE PIPE PLUG



Part #	Body Size	NPT	List Price
ANV-14-M	1/4"	1/4"	5.00
ANV-38-M	3/8"	3/8"	6.38
ANV-12-M	1/2"	1/2"	7.34
ANV-34-M	3/4"	3/4"	10.95
ANV-1-M	1"	1"	17.76

ISO 7241-1 Series B ISO-B Interchange ( Connected )								
Body Size	Steel Coupler/ Plug				Brass Coupler/ Plug			
	Max. Working		Burst		Max. Working		Burst	
	PSI	Bar	PSI	Bar	PSI	Bar	PSI	Bar
1/8"	4,000	275	14,500	1,000	3,000	200	16,500	1,100
1/4"	5,000	345	22,500	1,550	3,000	200	15,000	1,000
3/8"	4,000	275	16,500	1,150	2,500	175	12,000	800
1/2"	4,000	275	16,000	1,100	2,500	175	11,500	750
3/4"	4,000	275	16,500	1,150	2,000	150	12,000	800
1"	4,000	275	16,000	1,100	1,500	100	8,500	800

## INTERCHANGE DATA:

- Parker 60 Series, Snap-tite 72 series, Dixon 'H' series
- Hansen HK - series, Aeroquip/ Eaton FDH5



**SUFFIX 'B' = BRASS MATERIAL**

## FEMALE PIPE COUPLER



Part #	Body Size	NPT	List Price
HNV-14-F	1/4"	1/4"	11.46
HNV-14-F-B	1/4"	1/4"	19.05
HNV-38-F	3/8"	3/8"	12.18
HNV-38-F-B	3/8"	3/8"	26.47
HNV-12-F	1/2"	1/2"	17.39
HNV-12-F-B	1/2"	1/2"	34.77
HNV-34-F	3/4"	3/4"	28.00
HNV-34-F-B	3/4"	3/4"	48.29
HNV-1-F	1"	1"	44.73
HNV-1-F-B	1"	1"	93.25

## PLUG



Part #	Body Size	NPT	List Price
HNV-14-M	1/4"	1/4"	5.27
HNV-14-M-B	1/4"	1/4"	9.01
HNV-38-M	3/8"	3/8"	6.16
HNV-38-M-B	3/8"	3/8"	13.33
HNV-12-M	1/2"	1/2"	7.81
HNV-12-M-B	1/2"	1/2"	22.61
HNV-34-M	3/4"	3/4"	13.03
HNV-34-M-B	3/4"	3/4"	26.71
HNV-1-M	1"	1"	23.63
HNV-1-M-B	1"	1"	40.95

PNEUMATICS

<b>FLUSH FACE</b>				
Body Size	<i>Steel Coupler/ Plug Coupled</i>			
	<i>Maximum Working</i>		<i>Burst</i>	
	PSI	Bar	PSI	Bar
1/4"	5,000	345	18,270	1,200
3/8"	4,000	275	18,270	1,200
1/2"	4,000	275	16,500	1,100
5/8"	4,000	275	14,800	1,000
3/4"	4,000	275	12,400	850
1"	3,000	200	12,600	850

**FEATURES**

- Steel construction, zinc plated trivalent finish. Hardened Nipples and sleeves and solid barstock construction for maximum resistance to damage from hydraulic and mechanical shock.
- This Anti-Blowout Nitrile/ PTFE bonded seal is designed to prevent blow out or damage during severe service conditions.
- Durable ball-locking mechanism assures reliable connection everytime.

FF Series  
HTMC  
74C



**FEMALE PIPE COUPLER**

Part #	Body Size	NPT	List Price
FF-14-F	1/4"	1/4"	46.21
FF-38-F	3/8"	3/8"	55.87
FF-12-F	1/2"	1/2"	71.42
FF-34-F	3/4"	3/4"	122.00
FF-1-F	1"	1"	158.73

FF Series  
HTMN  
74N



**PLUG**

Part #	Body Size	NPT	List Price
FF-14-M	1/4"	1/4"	20.09
FF-38-M	3/8"	3/8"	31.91
FF-12-M	1/2"	1/2"	24.87
FF-34-M	3/4"	3/4"	66.66
FF-1-M	1"	1"	101.20

**AG - Series Agricultural Interchange ( Connected )**

Nominal Size	<i>Steel Coupler/ Plug</i>			
	<i>Maximum Working</i>		<i>Burst</i>	
	PSI	Bar	PSI	Bar
1/4"	4,000	275	21,000	1,500
3/8"	4,000	275	23,100	1,600
1/2"	4,000	275	16,500	1,100
3/4"	3,000	200	10,300	700
1"	3,000	200	13,000	900

**FEATURES**

- Heavy duty heat treated poppet: valves are standard with rugged, specially-designed seals made of nitrite for leak-free performance in the toughest application.
- High-strength steel valve guides designed for high flow rates and made extra tough for agricultural service.
- Dependable hardened chrome alloy steel locking balls. Heat treated plugs and sleeves.
- Standard seals temp range -40°F to +250°F

**Snap-Tite 60 Series**



**FEMALE PIPE COUPLER**

Part #	Body Size	NPT	List Price
NV-14-F	1/4"	1/4"	20.19
NV-38-F	3/8"	3/8"	21.18
NV-12-F	1/2"	1/2"	24.13
NV-34-F	3/4"	3/4"	54.17
NV-1-F	1"	1"	72.80



**PLUG**

Part #	Body Size	NPT	List Price
NV-14-M	1/4"	1/4"	11.61
NV-38-M	3/8"	3/8"	9.85
NV-12-M	1/2"	1/2"	10.34
NV-34-M	3/4"	3/4"	29.55
NV-1-M	1"	1"	29.40

PNEUMATICS





**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"	1.69
300-021	1/8"	2.54
300-022	1/4"	4.02
300-023	3/8"	5.39
300-024	1/2"	7.83
300-026	3/4"	15.95
300-028	1"	43.95

40 Micron element

**STAINLESS MUFFLERS**

**Materials:**  
**Body: 303 Grade Stainless Steel**  
**Element: 316 Grade Stainless Steel**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 392°F**



Part #	Size	List Price
300-031	10-32 NF	18.15
300-032	1/8"	18.15
300-033	1/4"	18.45
300-034	3/8"	22.04
300-035	1/2"	31.16
300-036	3/4"	91.67
300-037	1"	121.02

**BRASS BREATHER VENT**

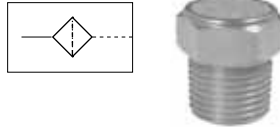
**Materials:**  
**Body: Brass**  
**Element: Sintered Bronze**  
**Max Operating Pressure: 150PSI**  
**Temperature: 35° to 300°F**



Part #	Size	List Price
300-000	10-32"	3.03
300-001	1/8"	2.41
300-002	1/4"	3.55
300-003	3/8"	4.38
300-004	1/2"	5.87
300-006	3/4"	16.36
300-008	1"	28.48

**STAINLESS BREATHER VENT**

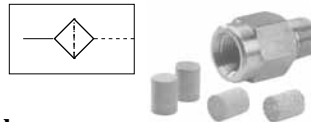
**Materials:**  
**Body: 303 Grade Stainless Steel**  
**Element: 316 Grade Stainless Steel**  
**Max Operating Pressure: 150PSI**  
**Temperature: 35° to 390°F**



Part #	Size	List Price
300-014	1/8"	10.02
300-015	1/4"	15.65
300-017	3/8"	21.23
300-018	1/2"	29.72
300-019	3/4"	72.01
300-007	1"	92.63

**PRESSURE SNUBBER**

**Materials:**  
**Body: Brass**  
**Element: Sintered Bronze**  
**Max Operating Pressure: 9000PSI**  
**Temperature: 35° to 300°F**



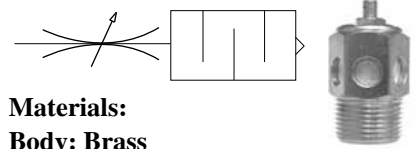
Part #	Size	Porosity	List Price
28-354	1/4"	40 um	15.69
28-353	1/4"	30 um	16.24
28-352	1/4"	25 um	14.95
28-351	1/4"	20 um	16.24
28-350	1/4"	10 um	14.62

Part #	Size	Porosity	List Price
28-359	3/8"	40 um	16.24
28-358	3/8"	30 um	15.69
28-357	3/8"	25 um	14.94
28-356	3/8"	20 um	16.24
28-355	3/8"	10 um	16.24

Recommended Element Porosity Rating		
Porosity Rating	Color Code	Recommended Application
40 um	None	Viscous Fluids (over 500 ssu)
30 um	Black	Med. Type Oils (225 to 500 ssu)
25 um	Brown	Water & L.T. Oils (30 to 25 ssu)
20 um	Green	Low Viscosity Fluids (under 30 ssu)
10 um	Red	
5 um	Purple	Air and Other Gases

**SPEED CONTROL VALVE**

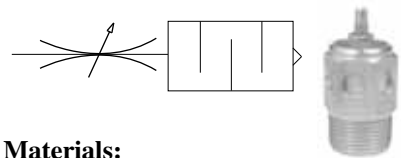
**Materials:**  
**Body: Brass**  
**Element: 40 Micron Sintered Bronze**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 300°F**



Part #	Size	List Price
940-800	1/8"	9.04
940-801	1/4"	10.63
940-803	3/8"	13.68
940-804	1/2"	19.38
940-805	3/4"	35.77
940-806	1"	58.11

**STAINLESS SPEED CONTROL VALVE**

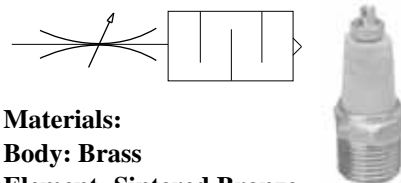
**Materials:**  
**Body: 303 Grade Stainless Steel**  
**Element: 316 Grade Stainless Steel**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 392°F**



Part #	Size	List Price
940-810	1/8"	48.32
940-811	1/4"	53.09
940-812	3/8"	58.06
940-813	1/2"	76.01
940-814	3/4"	109.05
940-815	1"	148.39

**MUFFLER W/ FLOW ADJUSTMENT**

**Materials:**  
**Body: Brass**  
**Element: Sintered Bronze**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 300°F**

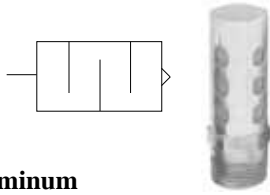


Part #	Size	List Price
28-379	1/8"	7.14
28-380	1/4"	9.09
28-381	3/8"	12.44
28-382	1/2"	14.16



# PNEUMATICS

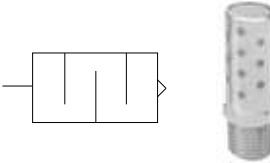
## HIGH FLOW ALUMINUM MUFFLER



**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"	13.64
940-823	1/4"	6.29
940-824	3/8"	8.51
940-825	1/2"	9.98
940-826	3/4"	17.29
940-827	1"	20.36

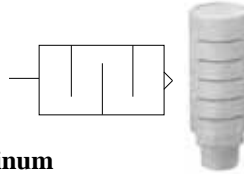
## HIGH FLOW STEEL MUFFLER



**Materials:**  
**Body: Steel**  
**Element: 50 Mesh Stainless Steel**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 160°F**

Part #	Size	List Price
28-373	1/8"	6.11
28-374	1/4"	6.60
28-375	3/8"	9.24
28-376	1/2"	12.19
28-377	3/4"	20.22
28-378	1"	23.73

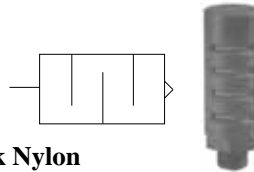
## ALUMINUM HIGH FLOW MUFFLER



**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"	17.40
28-368	1/4"	18.57
28-369	3/8"	25.48
28-370	1/2"	24.32
28-371	3/4"	50.13
28-372	1"	51.84

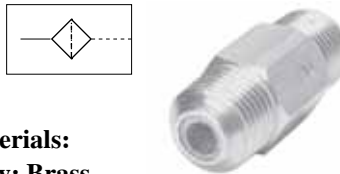
## PLASTIC HIGH FLOW MUFFLER



**Materials:**  
**Body: Black Nylon**  
**Element: 50 Mesh Stainless Steel**  
**Max Operating Pressure: 150PSI**  
**Temperature: 35° to 120°F**

Part #	Size	List Price
28-363	1/8"	7.23
28-364	1/4"	7.22
28-365	3/8"	15.03
28-366	1/2"	15.03

## NIPPLE INLINE FILTER

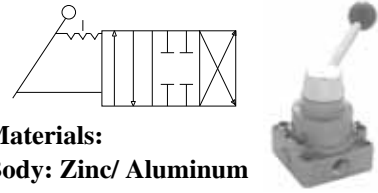


**Materials:**  
**Body: Brass**  
**Element: 40 Micron Sintered Bronze**  
**Max Operating Pressure: 300PSI**  
**Temperature: 35° to 300°F**

Part #	Size	List Price
940-845	1/8"	14.17
940-846	1/4"	13.54
940-847	3/8"	21.18
940-848	1/2"	20.38

# 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**

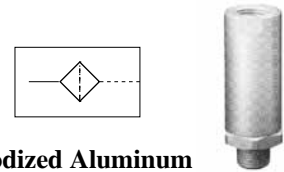
**Body: Zinc**

Part #	Size	List Price
28-360	1/4"	152.33

**Body: Aluminum**

28-361	3/8"	143.96
28-362	1/2"	165.58

## 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"	18.54
940-841	1/4"	18.54
940-842	3/8"	29.34
940-843	1/2"	68.57
940-844	3/4"	68.57

I'm working as hard as I can to get my life and my cash to run out at the same time. If I can just die after lunch Tuesday, everything will be perfect.

Doug Sanders,  
 professional golfer

**Materials:**

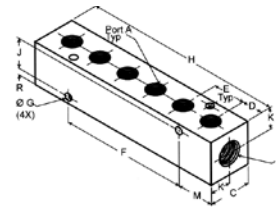
Aluminum with black anodizing for corrosion resistance.

**Specifications:**

Max Operating Pressure: 1000PSI

Temperature: -10° to 200°F

Media: Air and liquids compatible with materials of construction.



**THREADED PORTS**

Part #	Ports	List Price	A NPT	B NPT	C	D	E	F	G	H	J	K	M	R
28-448	2	40.11	1/8"	1/4"	1.00	0.50	0.75	N/A	0.17	1.75	0.70	0.50	0.88	0.15
28-449	3	44.99						0.75		2.50				
28-450	4	19.27						1.5		3.25				
28-451	5	52.94						2.25		4.00				
28-452	6	51.65						3.00		4.75				
28-453	7	59.13						3.75		5.50				
28-454	8	62.18						4.50		6.25				
28-455	9	64.47						5.25		7.00				
28-456	10	25.96						6.00		7.75				
28-457	2	17.57						1/4"		3/8"				
28-458	3	19.13	0.88	3.00										
28-459	4	20.52	1.75	3.88										
28-460	5	22.08	2.63	4.75										
28-461	6	23.49	3.50	5.63										
28-462	7	24.87	4.38	6.50										
28-463	8	26.27	5.25	7.38										
28-464	9	27.37	6.13	8.25										
28-465	10	28.29	7.00	9.13										
28-466	2	67.39	3/8"	3/8"	1.25	1.00	1.13		N/A		0.20	3.13	0.89	0.63
28-467	3	28.92						1.13	4.25					
28-468	4	30.48						2.25	5.38					
28-469	5	31.87						3.38	6.50					
28-470	6	33.58						4.50	7.63					
28-471	7	102.25						5.63	8.75					
28-472	8	111.25						6.75	9.88					
28-473	9	113.74						7.88	N/A					
28-474	10	133.08						9.00	N/A					

**3 IN 1 ALUMINUM AIR MANIFOLD**

No need to connect and disconnect every time you want to change tools. Supply 3 air tools from one outlet. These manifolds have one inlet with three 1/4 outlets.



- S685-4 D3406
- S685-6 D3408
- S685-8 3104
- D3404 3106

Part #	Size	List Price
320-120	1/4" Inlet	9.82
320-121	3/8" Inlet	28.00
320-122	1/2" Inlet	42.04
three 1/4" Outlets		

**SAFETY BLOW GUN**

- N/P steel handle with plastic sleeve
- Brass Valve **90 PSI**
- 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	8.44

**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"	8.92

**RUBBER TIPPED NOZZLE**



- 51-521
- 2058
- D201RT
- 411R

Makes positive seal between gun and fuel line or other openings. Use only on air line regulated to 30 PSI or less

Part #	Thread Size	List Price
320-070	1/8 - 27	9.42

**HIGH FLOW SAFETY NOZZLE**



- 51-338
- SST10
- 411BT
- 2056

Meets OSHA regulations of 30 PSI maximum outlet pressure when line pressure is 150 PSI or less. Has an air pressure bypass which prevent build up of tip pressure even if nozzle is blocked. Adapts to any blow gun with a 1/8" NPT nozzle port

Part #	List Price
320-075	2.55

# PNEUMATICS

# PNEUMATIC ACCESSORIES

## MULTI-PURPOSE AIR VENT



705

Part #	Size	List Price
46-048	1/8"	3.56

## BRASS BICYCLE PUMP FITTING

Screw on swivel chuck for most hand operated tire pumps.

Buna-N-Seal • Deflator



Part #	Size	List Price
32-782	3/16"	3.17

## INFLATOR



Part #	Size	List Price
32-783	3/16"	3.49

## 360° Turning Swivel Fitting

1/4" Basic size Industrial Interchange Plug •360° Turning •Swivels



Part #	Size	List Price
320-065	1/4"	10.51

## SWIVEL FITTING

•360° Turning  
•Swivels

### Male NPT x Female NPT



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

## AIR CHUCKS

### HEX BALL FOOT CHUCK



Part #	Size	List Price
46-600	1/4 FPT Live	3.51

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



Part #	Size	List Price
46-607	1/4 ID Live Air	3.45

## DUAL FOOT CHUCKS

6999	DTC-02	99941
693		50-065
108		6569



Part #	List Price
320-000	32.13

## ANGLE CHUCK



690  
6172

Part #	List Price
320-005	10.48

## TANK & VENT VALVES

Three standard styles of valve bodies, complete with short core, for air lifts, water pumps, vacuum, pressurized containers, air jacks, and other pneumatic devices.

**REGULAR:** 300 PSI and cracking pressure 80 PSI

### 1/8" NPT, .9" LONG SPRING CORD

Thread - .302 x 32 w/ Black cap

7/16" Hex



Part #	Size	List Price
46-620	REGULAR	6.41

### 1/8" NPT 1.207" LONG SPRING CORD

7/16" Hex w/ Black cap



Part #	Size	List Price
46-621	REGULAR	5.84

### 1/4" NPT 1" LONG SPRING CORD

9/16" Hex w/ Black cap



Part #	Size	List Price
46-622	REGULAR	7.85

## TANK VALVE ACCESSORIES

### BLACK PLASTIC CAP

No Gasket



Part #	List Price
46-630	0.22

### SHORT NICKEL PLATED DOME CAP



Dome skirted type

Part #	List Price
46-631	1.14

**DUAL ANGLE-FOOT TRUCK  
PENCIL GAUGE**



High pressure 20-120 PSI, in 2lb unit

Part #	List Price
320-023	28.97

**DUAL STRAIGHT-FOOT  
PENCIL GAUGE**



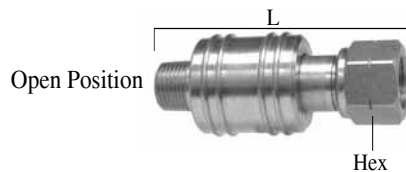
Identical to above except has straight chuck with 30° reverse angle chuck.

Part #	List Price
320-027	69.43

**PNEUMATIC SLIDE VALVES**

- Max Operating Pressure: 200 psig
- Temperatures: -20°F to +200°F

Manually operated slide valves provide simple on/off airflow control. They can be mounted horizontally, vertically or at any angle.



**MALE X FEMALE**

Part #	Size	L	Hex	List Price
20-780	1/8"	2.15	9/16"	9.27

**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	10.45
80-002	0-30	9.50
80-003	0-60	10.45
80-004	0-100	10.45
80-005	0-160	10.45
80-006	0-200	10.45
80-007	0-300	9.50



**2-1/2" FACE  
1/4" LOWER MOUNT**

Part #	PSI	List Price
80-031	0-15	13.48
80-032	0-30	13.48
80-033	0-60	11.84
80-034	0-100	13.48
80-035	0-160	11.55
80-036	0-200	10.50

Save 5% by ordering online at [www.midlandindustrial.com](http://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	28.05
80-062	0-30	28.05
80-063	0-60	28.05
80-064	0-100	28.05
80-065	0-160	28.05
80-066	0-200	28.05
80-067	0-300	28.05
80-068	0-400	28.05
80-069	0-600	28.05
80-100	0-1000	28.05
80-101	0-1500	28.05
80-102	0-2000	28.05
80-103	0-3000	28.05
80-104	0-5000	28.05
80-080	30-0 Vacuum	28.05

**2-1/2" FACE  
1/4" CENTER BACK MOUNT**

Part #	PSI	List Price
80-201	0-15	29.43
80-202	0-30	29.43
80-203	0-160	26.75

1-1/2" & 2" ABS also available

**4" FACE  
1/4" LOWER MOUNT**

Part #	PSI	List Price
80-463	0-100	75.35

Other Gauges available upon request...Just Ask!

[sales@midlandindustrial.com](mailto:sales@midlandindustrial.com)





## ACCESSORIES

### TEFLON TAPE

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

### TEFLON TAPE



### Thread Sealant

Part #	Size	List Price
982-107	1/2" x 260"	1.34
982-108	1/2" x 520"	1.50
982-109	3/4" x 260"	2.50
982-110	3/4" x 520"	2.50

POP OUT COVERED SPOOL

### COPPER FITTING BRUSHES

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



Part #	Size	List Price
990-540	3/8"	4.26
990-541	1/2"	4.40
990-542	3/4"	6.06
990-543	1"	5.24

### SCRUBS IN A BUCKET



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

Part #	PSI	List Price
980-100	30 Scrubs™/container	27.81
980-101	72 Scrubs™/container	54.14

## ACCESSORIES

Drinking water after eating reduces the acid in your mouth by 61 percent

Peanut oil is used for cooking in submarines because it doesn't smoke unless it's heated above 450°F

Nine out of every 10 living things live in the ocean

The banana cannot reproduce itself. It can be propagated only by the hand of man

Airports at higher altitudes require a longer airstrip due to lower air density

The University of Alaska spans four time zones

The tooth is the only part of the human body that cannot heal itself.

In ancient Greece, tossing an apple to a girl was a traditional proposal of marriage. Catching it meant she accepted.

Warner Communications paid \$28 million for the copyright to the song Happy Birthday.

Intelligent people have more zinc and copper in their hair.

## STAINLESS FITTINGS

**1/4"**

**SWIVEL NUT (NICKEL PLATED BRASS)**



Part #	List Price
34-500	1.16

**SWIVEL HOSE STEM FOR 1/4" SWIVEL NUT**



Part #	List Price
34-503	2.41

**3/8"**

**SWIVEL NUT (NICKEL PLATED BRASS)**



Part #	List Price
34-512	2.05

**SWIVEL HOSE STEM FOR 3/8" SWIVEL NUT**



Part #	List Price
34-515	3.00

## BEVERAGE FITTINGS

**SWIVEL ELBOWS**

**90° SWIVEL ELBOW**



**HOSE ID x FEMALE 45° FLARE**

Part #	Size	List Price
34-525	1/4" x 1/4"	5.31
34-529	3/8" x 3/8"	11.06

**BARB SPLICERS**

**HOSE SPLICER (STRAIGHT)**



**ID HOSE**

Part #	Size	List Price
34-533	1/4"	3.71
34-535	3/8"	4.54
34-543	3/8" x 1/4"	4.54

**90° BARB SPLICER**



**ID HOSE**

Part #	Size	List Price
34-551	1/4"	4.41
34-552	3/8"	7.03

**TEES & CROSSES**

**BARB HOSE TEES**



**ID HOSE**

Part #	Size	List Price
34-562	1/4"	12.21
34-563	3/8"	13.74

MISC



# BEVERAGE FITTINGS

# STAINLESS FITTINGS

## ADAPTERS

### MALE FLARE TO BARB ADAPTER



### HOSE ID x 45° FLARE

Part #	Size	List Price
34-579	1/4" x 1/4"	5.12
34-583	1/4" x 3/8"	7.73
34-584	3/8" x 1/4"	5.63
34-585	3/8" x 3/8"	7.92

### NPT TO BARB ADAPTER



### HOSE ID x MALE NPTF

Part #	Size	List Price
34-587	1/4" x 1/8"	6.96
34-588	1/4" x 1/4"	6.59
34-589	1/4" x 3/8"	8.89
34-590	3/8" x 1/8"	8.93
34-591	3/8" x 1/4"	7.23
34-592	3/8" x 3/8"	8.89
34-595	3/8" x 1/2"	13.99
34-597	1/2" x 3/4"	20.39

## SWIVEL ELBOWS

### SWIVEL TO BARB ELBOW



### HOSE ID x FEMALE 45° FLARE

Part #	Size	List Price
34-600	1/4" x 1/4"	11.83

## ADAPTERS

### NPT ELBOWS



### HOSE ID x MALE NPTF

Part #	Size	List Price
34-610	1/4" x 1/8"	13.96
34-611	3/8" x 1/4"	13.96
34-612	3/8" x 3/8"	15.60
34-613	1/2" x 1/2"	32.14

**PLEASE CALL US FOR ANY STAINLESS STEEL BEVERAGE FITTINGS**

*If you don't see what you need, ask us!*



MISC

### 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 zinc 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



1404  
2045R  
1210  
9205R  
0107

Part #	Male Pipe 1	Female NPSM 2	List Price
1404-2-2	1/8	1/8	1.64
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	1.77
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	2.53
1404-6-8	3/8	1/2	3.49
1404-8-4	1/2	1/4	3.60
1404-8-6	1/2	3/8	3.49
1404-8-8	1/2	1/2	2.91
1404-8-12	1/2	3/4	5.62
1404-12-6	3/4	3/8	7.67
1404-12-8	3/4	1/2	4.75
1404-12-12	3/4	3/4	4.44
1404-12-16	3/4	1	11.83
1404-16-12	1	3/4	8.00
1404-16-16	1	1	7.56
1404-16-20	1	1-1/4	17.83
1404-20-16	1-1/4	1	18.92
1404-20-20	1-1/4	1-1/4	14.55
1404-24-24	1-1/2	1-1/2	19.93
1404-32-32	2	2	32.67

I found out that it's not good to talk about my troubles. Eighty percent of the people who hear them don't care and the other twenty percent are glad you're having trouble.

Tommy LaSorda, LA Dodgers manager

We were tipping off our plays. Whenever we broke from the huddle, three backs were laughing and one was pale as a ghost.

John Breen, Houston Oilers

### FEMALE PIPE SWIVEL ADAPTER

SAE 140131



1405  
2046R  
1212  
9255R  
C207

Part #	Female Pipe 1	Female NPSM 2	List Price
1405-2-2	1/8	1/8	1.77
1405-2-4	1/8	1/4	5.75
1405-4-2	1/4	1/8	24.75
1405-4-4	1/4	1/4	2.09
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	3.40
1405-12-12	3/4	3/4	4.88
1405-16-12	1	3/4	13.49
1405-16-16	1	1	7.53
1405-20-20	1-1/4	1-1/4	11.97
1405-24-24	1-1/2	1-1/2	20.39
1405-32-32	2	2	33.21

Last year we couldn't win at home and we were losing on the road. My failure as a coach was that I couldn't think of anyplace else to play.

Harry Neale, professional hockey coach

I have discovered, in twenty years of moving around the ball park, that the knowledge of the game is usually in inverse proportion to the price of the seats.

Bill Veeck, Chicago White Sox owner

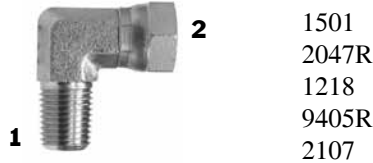
My theory is that if you buy an ice-cream cone and make it hit your mouth, you can learn to play. If you stick it on your forehead, your chances aren't as good.

Vic Braden, tennis instructor

# HYDRAULIC ADAPTERS

# STEEL PIPE SWIVELS NPSM

## 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	2.35
1501-2-4	1/8	1/4	3.81
1501-4-2	1/4	1/8	2.79
1501-4-4	1/4	1/4	2.26
1501-4-6	1/4	3/8	3.76
1501-6-4	3/8	1/4	3.43
1501-6-6	3/8	3/8	3.02
1501-6-8	3/8	1/2	5.61
1501-6-12	3/8	3/4	42.63
1501-8-4	1/2	1/4	4.54
1501-8-6	1/2	3/8	4.10
1501-8-8	1/2	1/2	4.07
1501-8-12	1/2	3/4	8.73
1501-12-6	3/4	3/8	10.37
1501-12-8	3/4	1/2	7.76
1501-12-12	3/4	3/4	6.48
1501-12-16	3/4	1	15.10
1501-16-8	1	1/2	30.19
1501-16-12	1	3/4	17.20
1501-16-16	1	1	11.02
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	26.64
1501-20-24	1-1/4	1-1/2	129.57
1501-24-20	1-1/2	1-1/4	53.22
1501-24-24	1-1/2	1-1/2	35.33
1501-32-32	2	2	77.49

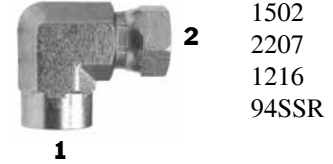
*Also available in Stainless Steel*  
**-Available in a Restrictor-**

## 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

## 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
1502-4-4	1/4	1/4	2.70
1502-4-6	1/4	3/8	13.34
1502-6-4	3/8	1/4	6.14
1502-6-6	3/8	3/8	4.37
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	5.47
1502-8-8	1/2	1/2	4.63
1502-12-8	3/4	1/2	11.52
1502-12-12	3/4	3/4	9.26
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*

## 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	2.38
1503-4-4	1/4	1/4	2.48
1503-4-6	1/4	3/8	7.18
1503-6-4	3/8	1/4	3.78
1503-6-6	3/8	3/8	3.59
1503-6-8	3/8	1/2	6.19
1503-8-4	1/2	1/4	9.67
1503-8-6	1/2	3/8	4.70
1503-8-8	1/2	1/2	4.79
1503-8-12	1/2	3/4	15.46
1503-12-8	3/4	1/2	10.42
1503-12-12	3/4	3/4	6.63
1503-12-16	3/4	1	21.45
1503-16-12	1	3/4	13.11
1503-16-16	1	1	13.15
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	20.63
1503-24-24	1-1/2	1-1/2	49.66
1503-32-32	2	2	79.17

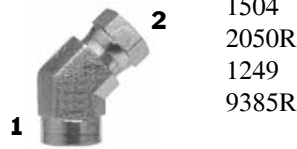
*Also available in Stainless Steel*

# STEEL PIPE SWIVELS NPSM

# HYDRAULIC ADAPTERS

## FEMALE 45° UNION ELBOW SWIVEL ADAPTER

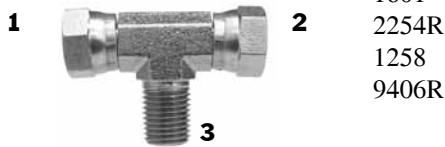
SAE 140331



Part #	Female Pipe 1	Female NPSM 2	List Price
1504-2-2	1/8	1/8	5.83
1504-4-4	1/4	1/4	4.60
1504-6-4	3/8	1/4	5.78
1504-6-6	3/8	3/8	5.56
1504-8-6	1/2	3/8	25.71
1504-8-8	1/2	1/2	6.80
1504-12-12	3/4	3/4	10.67
1504-16-16	1	1	15.98
1504-20-20	1-1/4	1-1/4	30.42
1504-24-24	1-1/2	1-1/2	52.24

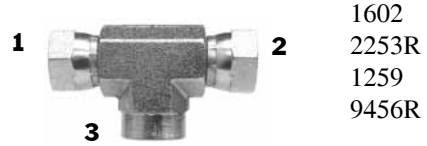
Also available in Stainless Steel  
More sizes available

## MALE SWIVEL BRANCH TEE



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	6.83
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	9.95
1601-8-8	1/2	1/2	10.74
1601-12-8	1/2	3/4	20.09
1601-12-12	3/4	3/4	19.48
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

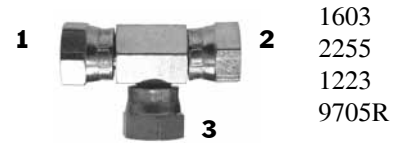
## FEMALE SWIVEL TEE



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

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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	6.14
1603-6-6	3/8	9.33
1603-8-8	1/2	11.81
1603-12-12	3/4	19.14
1603-16-16	1	43.41
1603-20-20	1-1/4	88.44

**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

**Caution: 37-Degree flared fittings are not designed to provide structural support for other components.**

**CONFORMANCE**

- SAE J514
- MS51500-MS51534
- Temperature Range: -65°F to +400°F

**MATERIALS**

- Carbon Steel trivalent zinc 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.

**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**





# STRAIGHTS STEEL 37° JIC FLARE

# HYDRAULIC ADAPTERS

## LONG JIC TUBE NUT

SAE 070111



304  
221000  
0304

Part #	Tube O.D	JIC Thread Size	List Price
0304-4	1/4	7/16-20	1.09
0304-5	5/16	1/2-20	1.00
0304-6	3/8	9/16-18	1.03
0304-8	1/2	3/4-16	1.19
0304-10	5/8	7/8-14	2.78
0304-12	3/4	1-1/16-12	4.52
0304-14	7/8	1-3/16-12	7.18
0304-16	1	1-5/16-12	9.52
0304-20	1-1/4	1-5/8-12	10.96
0304-24	1-1/2	1-7/8-12	23.49
0304-32	2	2-1/2-12	101.15

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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	0.67
0304-C-5	5/16	1/2-20	0.75
0304-C-6	3/8	9/16-18	0.97
0304-C-8	1/2	3/4-16	0.85
0304-C-10	5/8	7/8-14	1.16
0304-C-12	3/4	1-1/16-12	1.69
0304-C-14	7/8	1-3/16-12	2.75
0304-C-16	1	1-5/16-12	2.96
0304-C-20	1-1/4	1-5/8-12	5.37
0304-C-24	1-1/2	1-7/8-12	7.49
0304-C-32	2	2-1/2-12	17.73

Some available in Stainless Steel

## 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	1.13
0318-3	3/16	3/8-24	0.64
0318-4	1/4	7/16-20	0.44
0318-5	5/16	1/2-20	0.47
0318-6	3/8	9/16-18	0.59
0318-8	1/2	3/4-16	0.75
0318-10	5/8	7/8-14	0.97
0318-12	3/4	1-1/16-12	1.66
0318-14	7/8	1-3/16-12	2.47
0318-16	1	1-5/16-12	2.56
0318-20	1-1/4	1-5/8-12	5.16
0318-24	1-1/2	1-7/8-12	7.67
0318-32	2	2-1/2-12	26.91

## JIC TUBE SLEEVE

SAE 070115  
MS 51533



319  
900605  
TX  
1253  
C5165

Part #	Tube O.D	List Price
0319-2	1/8	0.83
0319-3	3/16	0.54
0319-4	1/4	0.25
0319-5	5/16	0.28
0319-6	3/8	0.46
0319-8	1/2	0.44
0319-10	5/8	0.72
0319-12	3/4	0.60
0319-14	7/8	1.39
0319-16	1	1.34
0319-20	1-1/4	2.86
0319-24	1-1/2	5.59
0319-32	2	16.68

Also available in Stainless Steel

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# HYDRAULIC ADAPTERS

# STRAIGHTS STEEL 37° JIC FLARE

## 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	2.06
2403-3	3/8-24	3/8-24	7.57
2403-4	7/16-20	7/16-20	0.77
2403-5	1/2-20	1/2-20	1.91
2403-6	9/16-18	9/16-18	1.27
2403-6-4	9/16-18	7/16-20	1.59
2403-6-5	9/16-18	1/2-20	5.35
2403-8	3/4-16	3/4-16	1.43
2403-8-4	3/4-16	7/16-20	4.14
2403-8-6	3/4-16	9/16-18	1.70
2403-10	7/8-14	7/8-14	2.22
2403-10-4	7/8-14	7/16-20	16.61
2403-10-6	7/8-14	9/16-18	5.55
2403-10-8	7/8-14	3/4-16	2.50
2403-12	1-1/16-12	1-1/16-12	2.73
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	5.49
2403-16	1-5/16-12	1-5/16-12	4.06
2403-16-10	1-5/16-12	7/8-14	27.07
2403-16-12	1-5/16-12	1-1/16-12	8.14
2403-20	1-5/8-12	1-5/8-12	7.27
2403-20-12	1-5/8-12	1-1/16-12	48.52
2403-20-16	1-5/8-12	1-5/16-12	10.53
2403-24	1-7/8-12	1-7/8-12	12.97
2403-24-20	1-7/8-12	1-5/8-12	29.77
2403-32	2-1/2-12	2-1/2-12	32.86

*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	10.49
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

*More Sizes Available*

## 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	2.16
2404-2-4	5/16-24	1/4	1.38
2404-3-2	3/8-24	1/8	1.22
2404-3-4	3/8-24	1/4	38.55
2404-4-2	7/16-20	1/8	0.70
2404-4-4	7/16-20	1/4	0.73
2404-4-6	7/16-20	3/8	1.12
2404-4-8	7/16-20	1/2	2.54
2404-5-2	1/2-20	1/8	1.59
2404-5-4	1/2-20	1/4	1.78
2404-5-6	1/2-20	3/8	2.16
2404-6-2	9/16-18	1/8	1.65
2404-6-4	9/16-18	1/4	0.95
2404-6-6	9/16-18	3/8	1.23
2404-6-8	9/16-18	1/2	1.67
2404-6-12	9/16-18	3/4	4.22
2404-8-4	3/4-16	1/4	2.48
2404-8-6	3/4-16	3/8	2.10
2404-8-8	3/4-16	1/2	1.47
2404-8-12	3/4-16	3/4	2.59
2404-8-16	3/4-16	1	14.97
2404-10-4	7/8-14	1/4	3.92
2404-10-6	7/8-14	3/8	2.86
2404-10-8	7/8-14	1/2	2.07
2404-10-12	7/8-14	3/4	3.49
2404-10-16	7/8-14	1	6.48
2404-12-6	1-1/16-12	3/8	3.97
2404-12-8	1-1/16-12	1/2	2.67
2404-12-12	1-1/16-12	3/4	2.60
2404-12-16	1-1/16-12	1	3.61
2404-12-20	1-1/16-12	1-1/4	9.31
2404-14-12	1-3/16-12	3/4	4.50
2404-14-16	1-3/16-12	1	8.10
2404-16-12	1-5/16-12	3/4	4.27
2404-16-16	1-5/16-12	1	3.41
2404-16-20	1-5/16-12	1-1/4	6.89
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	7.41
2404-20-20	1-5/8-12	1-1/4	5.62
2404-20-24	1-5/8-12	1-1/2	14.97
2404-24-16	1-7/8-12	1	45.80
2404-24-20	1-7/8-12	1-1/4	14.95
2404-24-24	1-7/8-12	1-1/2	11.00
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	33.11
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

# HYDRAULIC ADAPTERS

## JIC LONG MALE CONNECTOR

SAE 070102  
MS 51500



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

## JIC FEMALE CONNECTOR

SAE 070103  
MS 51503



2405  
2022R  
GTX  
1230R  
C5255

Part #	JIC Thread Size 1	Female Pipe Size 2	List Price
2405-2-2	5/16-24	1/8	6.21
2405-3-2	3/8-24	1/8	1.72
2405-4-2	7/16-20	1/8	1.21
2405-4-4	7/16-20	1/4	1.81
2405-4-6	7/16-20	3/8	10.61
2405-5-2	1/2-20	1/8	4.00
2405-5-4	1/2-20	1/4	2.67
2405-6-2	9/16-18	1/8	3.99
2405-6-4	9/16-18	1/4	1.40
2405-6-6	9/16-18	3/8	2.04
2405-6-8	9/16-18	1/2	4.80
2405-8-4	3/4-16	1/4	9.45
2405-8-6	3/4-16	3/8	1.87
2405-8-8	3/4-16	1/2	2.92
2405-8-12	3/4-16	3/4	10.34
2405-10-6	7/8-14	3/8	4.79
2405-10-8	7/8-14	1/2	5.40
2405-10-12	7/8-14	3/4	26.35
2405-12-8	1-1/16-12	1/2	6.05
2405-12-12	1-1/16-12	3/4	4.25
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	7.78
2405-16-20	1-5/16-12	1-1/4	22.03
2405-20-20	1-5/8-12	1-1/4	11.37
2405-24-24	1-7/8-12	1-1/2	17.64
2405-32-32	2-1/2-12	2	72.19

Some sizes available in Stainless Steel

## 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	1.43
2406-6-5	9/16-18	1/2-20	14.74
2406-8-4	3/4-16	7/16-20	2.33
2406-8-6	3/4-16	9/16-18	2.12
2406-8-12*	3/4-16	1-1/16-12	6812
2406-10-4	7/8-14	7/16-20	5.15
2406-10-6	7/8-14	9/16-18	4.48
2406-10-8	7/8-14	3/4-16	2.90
2406-12-4	1-1/16-12	7/16-20	5.43
2406-12-6	1-1/16-12	9/16-18	5.46
2406-12-8	1-1/16-12	3/4-16	3.48
2406-12-10	1-1/16-12	7/8-14	4.66
2406-12-16*	1-1/16-12	1-5/16-12	1216
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	9.95
2406-16-6	1-5/16-12	9/16-18	9.95
2406-16-8	1-5/16-12	3/4-16	8.44
2406-16-10	1-5/16-12	7/8-14	15.56
2406-16-12	1-5/16-12	1-1/16-12	6.07
2406-16-20*	1-5/16-12	1-5/8-12	12.24
2406-20-8	1-5/8-12	3/4-16	14.82
2406-20-12	1-5/8-12	1-1/16-12	12.94
2406-20-16	1-5/8-12	1-5/16-12	10.73
2406-24-16	1-7/8-12	1-5/16-12	44.19
2406-24-20	1-7/8-12	1-5/8-12	24.67
2406-32-24	2-1/2-12	1-7/8-12	61.98

\*Tube Expander

More expanding sizes available

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## HYDRAULIC ADAPTERS

SAE 070109  
MS 51518

### PLUG



2408  
430549  
PNTX  
1254  
C5229

Part #	Tube O.D.	JIC Thread Size	List Price
2408-2	1/8	5/16-24	2.32
2408-3	3/16	3/8-24	0.95
2408-4	1/4	7/16-20	0.61
2408-5	5/16	1/2-20	0.95
2408-6	3/8	9/16-18	0.74
2408-8	1/2	3/4-16	1.02
2408-10	5/8	7/8-14	1.30
2408-12	3/4	1-1/16-12	2.04
2408-14	7/8	1-3/16-12	3.63
2408-16	1	1-5/16-12	2.92
2408-20	1-1/4	1-5/8-12	5.56
2408-24	1-1/2	1-7/8-12	11.81
2408-32	2	2-1/2-12	32.78

*Some available in Stainless Steel*

SAE 070201  
MS 51505

### JIC UNION ELBOW



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
2500-4-4	7/16-20	7/16-20	1.81
2500-5-5	1/2-20	1/2-20	3.04
2500-6	9/16-18	9/16-18	2.23
2500-6-4	9/16-18	7/16-20	2.89
2500-8-8	3/4-16	3/4-16	3.19
2500-8-4	3/4-16	7/16-20	24.62
2500-8-6	3/4-16	9/16-18	3.68
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	5.50
2500-12-8	1-1/16-12	3/4-16	8.15
2500-14	1-3/16-12	1-3/16-12	13.41
2500-16	1-5/16-12	1-5/16-12	10.16
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*

## STRAIGHTS 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
2501-3-2	3/8-24	1/8	5.02
2501-4-2	7/16-20	1/8	1.78
2501-4-4	7/16-20	1/4	1.95
2501-4-6	7/16-20	3/8	3.95
2501-4-8	7/16-20	1/2	4.57
2501-5-2	1/2-20	1/8	2.48
2501-5-4	1/2-20	1/4	2.61
2501-5-6	1/2-20	3/8	4.90
2501-6-2	9/16-18	1/8	2.32
2501-6-4	9/16-18	1/4	2.03
2501-6-6	9/16-18	3/8	2.90
2501-6-8	9/16-18	1/2	2.76
2501-6-12	9/16-18	3/4	5.97
2501-8-4	3/4-16	1/4	3.53
2501-8-6	3/4-16	3/8	3.12
2501-8-8	3/4-16	1/2	3.08
2501-8-12	3/4-16	3/4	5.63
2501-8-16	3/4-16	1	11.80
2501-10-6	7/8-14	3/8	4.61
2501-10-8	7/8-14	1/2	3.77
2501-10-12	7/8-14	3/4	7.06
2501-10-16	7/8-14	1	53.17
2501-12-6	1-1/16-12	3/8	8.88
2501-12-8	1-1/16-12	1/2	5.81
2501-12-12	1-1/16-12	3/4	5.02
2501-12-16	1-1/16-12	1	6.68
2501-14-12	1-3/16-12	3/4	16.82
2501-14-16	1-3/16-12	1	22.22
2501-16-12	1-5/16-12	3/4	7.84
2501-16-16	1-5/16-12	1	7.27
2501-16-20	1-5/16-12	1-1/4	19.21
2501-20-16	1-5/8-12	1	20.81
2501-20-20	1-5/8-12	1-1/4	16.86
2501-20-24	1-5/8-12	1-1/2	27.91
2501-24-20	1-7/8-12	1-1/4	28.06
2501-24-24	1-7/8-12	1-1/2	26.06
2501-24-32	1-7/8-12	2	256.83
2501-32-24	2-1/2-12	1-1/2	61.69
2501-32-32	2-1/2-12	2	69.71

*Some sizes available in Stainless Steel*

## SHAPES STEEL 37° JIC FLARE

### JIC 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"	5.08
2501-L-4-4	7/16-20	1/4	1.58"	5.90
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-6-4	9/16-18	1/4	1.58"	6.54
2501-L-6-6	9/16-18	3/8	1.83"	5.67
2501-L-8-6	3/4-16	3/8	1.83"	6.17
2501-L-8-8	3/4-16	1/2	2.17"	6.54
2501-L-10-8	7/8-14	1/2	2.17"	15.01
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

\* Length = mid-JIC to end of threads  
Also available in Stainless Steel

### 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"	6.48
2501-LL-4-4	7/16-20	1/4	2.11"	6.54
2501-LL-5-4	1/2-20	1/4	2.04"	6.76
2501-LL-6-4	9/16-18	1/4	2.08"	4.67
2501-LL-6-6	9/16-18	3/8	2.44"	5.55
2501-LL-8-6	3/4-16	3/8	2.42"	6.80
2501-LL-8-8	3/4-16	1/2	2.88"	10.73
2501-LL-10-8	7/8-14	1/2	2.88"	9.52
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

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## HYDRAULIC ADAPTERS

### 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"	17.84
2501-LLL-6-4	9/16-18	1/4	3.06"	21.32
2501-LLL-6-6	9/16-18	3/8	3.06"	18.18
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

\* Length = mid-JIC to end of threads

### JIC FEMALE ELBOW

SAE 070203  
MS 51506



2502  
2025R  
DTX  
1240R  
C5455

Part #	JIC Thread Size 1	Female Pipe Size 2	List Price
2502-2-2	1/8	1/8	4.76
2502-4-2	7/16-20	1/8	3.26
2502-4-4	7/16-20	1/4	2.80
2502-4-6	7/16-20	3/8	3.26
2502-5-2	1/2-20	1/8	3.83
2502-5-4	1/2-20	1/4	3.49
2502-6-2	9/16-18	1/8	3.68
2502-6-4	9/16-18	1/4	3.12
2502-6-6	9/16-18	3/8	3.78
2502-6-8	9/16-18	1/2	5.56
2502-8-4	3/4-16	1/4	5.46
2502-8-6	3/4-16	3/8	3.87
2502-8-8	3/4-16	1/2	5.72
2502-8-12	3/4-16	3/4	11.17
2502-10-6	7/8-14	3/8	13.18
2502-10-8	7/8-14	1/2	6.00
2502-12-8	1-1/16-12	1/2	8.52
2502-12-12	1-1/16-12	3/4	8.43
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	12.74
2502-20-20	1-5/8-12	1-1/4	19.18
2502-24-24	1-7/8-12	1-1/2	60.89
2502-32-32	2-1/2-12	2	132.97

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# HYDRAULIC ADAPTERS

# 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	2.46
2503-4-2	7/16-20	1/8	2.24
2503-4-4	7/16-20	1/4	2.19
2503-4-6	7/16-20	3/8	3.05
2503-5-2	1/2-20	1/8	2.75
2503-5-4	1/2-20	1/4	2.82
2503-6-2	9/16-18	1/8	3.97
2503-6-4	9/16-18	1/4	2.70
2503-6-6	9/16-18	3/8	3.05
2503-6-8	9/16-18	1/2	3.99
2503-6-12	9/16-18	3/4	10.29
2503-8-4	3/4-16	1/4	4.98
2503-8-6	3/4-16	3/8	3.43
2503-8-8	3/4-16	1/2	4.19
2503-8-12	3/4-16	3/4	7.94
2503-10-6	7/8-14	3/8	5.49
2503-10-8	7/8-14	1/2	4.78
2503-10-12	7/8-14	3/4	5.71
2503-12-8	1-1/16-12	1/2	5.66
2503-12-12	1-1/16-12	3/4	9.38
2503-12-16	1-1/16-12	1	11.14
2503-14-12	1-3/16-12	3/4	11.21
2503-16-12	1-5/16-12	3/4	5.48
2503-16-16	1-5/16-12	1	8.60
2503-16-20	1-5/16-12	1-1/4	24.91
2503-20-16	1-5/8-12	1	20.18
2503-20-20	1-5/8-12	1-1/4	18.06
2503-24-24	1-7/8-12	1-1/2	34.48
2503-32-32	2-1/2-12	2	58.66

*Some sizes available in Stainless Steel*

## JIC 45° UNION ELBOW



2504

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2504-4	7/16-20	7/16-20	3.83
2504-6	9/16-18	9/16-18	8.88
2504-8	3/4-16	3/4-16	8.88
2504-10	7/8-14	7/8-14	11.94
2504-12	1-1/16-12	1-1/16-12	15.43
2504-16	1-5/16-12	1-5/16-12	14.66

## JIC 45° FEMALE ELBOW



2505  
2044-R

Part #	JIC Thread Size 1	Female Pipe Size 2	List Price
2505-4-4	7/16-20	1/4	5.77
2505-6-4	9/16-18	1/4	18.00
2505-8-6	3/4-16	3/8	8.20
2505-8-8	3/4-16	1/2	6.22
2505-10-8	7/8-14	1/2	29.84
2505-12-12	1-1/16-12	3/4	11.62

*More sizes available*

## JIC MALE BRANCH TEE



2601  
2030R  
STX  
1221R  
C5605

Part #	JIC Thread Size 1&2	Pipe Thread Size 3	List Price
2601-3-2	3/8-24	1/8	5.46
2601-4-2	7/16-20	1/8	2.99
2601-4-4	7/16-20	1/4	3.62
2601-5-2	1/2-20	1/8	4.64
2601-5-4	1/2-20	1/4	4.86
2601-6-4	9/16-18	1/4	3.56
2601-6-6	9/16-18	3/8	4.93
2601-8-6	3/4-16	3/8	4.48
2601-8-8	3/4-16	1/2	5.54
2601-10-6	7/8-14	3/8	33.33
2601-10-8	7/8-14	1/2	7.11
2601-12-8	1-1/16-12	1/2	11.94
2601-12-12	1-1/16-12	3/4	8.67
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	15.59
2601-20-20	1-5/8-12	1-1/4	32.12
2601-24-24	1-7/8-12	1-1/2	75.91

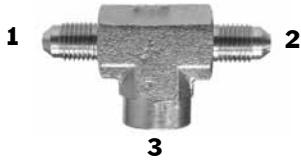
*Also available in Stainless Steel*



## SHAPES STEEL 37° JIC FLARE

### JIC FEMALE BRANCH TEE

SAE 070427  
MS 51513

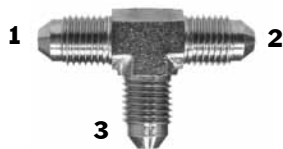


2602  
2031R  
OTX  
1228R  
C6566

Part #	JIC Thread Size 1 & 2	Female Pipe Size 3	List Price
2602-4-2	7/16-20	1/8	4.04
2602-4-4	7/16-20	1/4	5.08
2602-5-2	1/2-20	1/8	7.61
2602-6-4	9/16-18	1/4	5.31
2602-6-6	9/16-18	3/8	5.94
2602-8-8	3/4-16	1/2	8.21
2602-12-8	1-1/16-12	1/2	30.88
2602-12-12	1-1/16-12	3/4	12.13
2602-16-16	1-5/16-12	1	21.33
2602-20-20	1-5/8-12	1-1/4	32.01
2602-24-24	1-7/8-12	1-1/2	60.83

### JIC UNION TEE

SAE 070401  
MS 51510



2603  
2033  
JTX  
1220  
C5705

Part #	JIC Thread Size 1 & 2	JIC Thread Size 3	List Price
2603-2-2	5/16-24	5/16-24	3.49
2603-3-3	3/8-24	3/8-24	6.77
2603-4-4	7/16-20	7/16-20	2.96
2603-5-5	1/2-20	1/2-20	3.83
2603-6	9/16-18	9/16-18	2.88
2603-8	3/4-16	3/4-16	4.23
2603-10	7/8-14	7/8-14	5.94
2603-12	1-1/16-12	1-1/16-12	7.15
2603-14	1-3/16-12	1-3/16-12	18.57
2603-16	1-5/16-12	1-5/16-12	11.57
2603-20	1-5/8-12	1-5/8-12	40.32
2603-24	1-7/8-12	1-7/8-12	39.43
2603-32	2-1/2-12	2-1/2-12	340.77

*Jump sizes available*

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## HYDRAULIC ADAPTERS

### STEEL BULKHEAD FITTINGS

SAE 070118  
MS 51860



1306  
894  
210212  
WLN  
1332  
C5624

\* Lock Nut no longer included on fittings

Part #	Thread Size	List Price
0306-2	5/16-24	0.55
0306-4	7/16-20	0.41
0306-5	1/2-20	0.43
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	1.70
0306-16	1-5/16-12	2.49
0306-20	1-5/8-12	6.15
0306-24	1-7/8-12	4.85
0306-32	2-1/2-12	3.00

### JIC BULKHEAD UNION

SAE 070601  
MS 51520



2700  
2041R  
WTX  
1260  
C5325

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2700-2-2	5/16-24	5/16-24	2.95
2700-4-4	7/16-20	7/16-20	2.09
2700-5-5	1/2-20	1/2-20	2.60
2700-6-6	9/16-18	9/16-18	2.29
2700-8	3/4-16	3/4-16	2.93
2700-10	7/8-14	7/8-14	4.64
2700-12	1-1/16-12	1-1/16-12	4.46
2700-14	1-3/16-12	1-3/16-12	9.08
2700-16	1-5/16-12	1-5/16-12	8.64
2700-20	1-5/8-12	1-5/8-12	19.30
2700-24	1-7/8-12	1-7/8-12	23.72
2700-32	2-1/2-12	2-1/2-12	92.39

\* Lock Nuts sold separately

### JIC BULKHEAD UNION ELBOW

SAE 070701  
MS 51507



2701  
2043R  
WETX  
1262  
C5525

Part #	JIC Thread Size 1	JIC Bulkhead Thread 2	List Price
2701-4	7/16-20	7/16-20	3.49
2701-5	1/2-20	1/2-20	5.08
2701-6	9/16-18	9/16-18	4.38
2701-8	3/4-16	3/4-16	6.92
2701-10	7/8-14	7/8-14	8.95
2701-12	1-1/16-12	1-1/16-12	13.14
2701-16	1-5/16-12	1-5/16-12	13.33
2701-20	1-5/8-12	1-5/8-12	25.65
2701-24	1-7/8-12	1-7/8-12	53.21

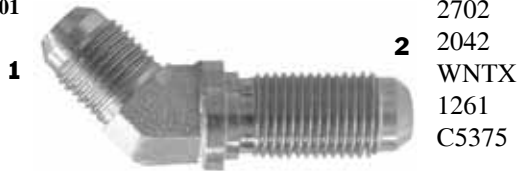
\* Lock Nuts sold separately

# HYDRAULIC ADAPTERS

# SHAPES STEEL 37° JIC FLARE

## JIC BULKHEAD UNION 45° ELBOW

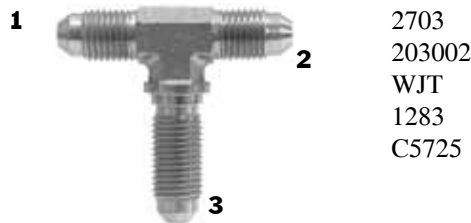
SAE 070801  
MS 51509



Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2702-4	7/16-20	7/16-20	3.06
2702-6	9/16-18	9/16-18	5.33
2702-8	3/4-16	3/4-16	4.97
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	24.83

## JIC BULKHEAD BRANCH TEE

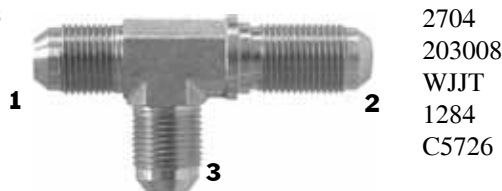
SAE 070959  
MS 51515



Part #	JIC Thread Size 1&2	JIC Thread Size 3	List Price
2703-4	7/16-20	7/16-20	4.97
2703-6	9/16-18	9/16-18	5.87
2703-8	3/4-16	3/4-16	9.01
2703-10	7/8-14	7/8-14	12.76
2703-12	1-1/16-12	1-1/16-12	18.48
2703-16	1-5/16-12	1-5/16-12	25.71
2703-20	1-5/8-12	1-5/8-12	57.52

## JIC BULKHEAD RUN TEE

SAE 070958  
MS 51516



Part #	JIC Thread Size 1&3	JIC Thread Size 2	List Price
2704-4	7/16-20	7/16-20	4.97
2704-6	9/16-18	9/16-18	6.34
2704-8	3/4-16	3/4-16	9.02
2704-10	7/8-14	7/8-14	12.76
2704-12	1-1/16-12	1-1/16-12	18.48
2704-16	1-5/16-12	1-5/16-12	25.72

## JIC TO FEMALE PIPE BULKHEAD



Part #	JIC Thread	Female Pipe	List
2705-4-2	7/16-20	1/8	2.93
2705-4-4	7/16-20	1/4	3.11
2705-5-2	1/2-20	1/8	3.94
2705-6-4	9/16-18	1/4	4.64
2705-6-6	9/16-18	3/8	5.02
2705-8-6	3/4-16	3/8	5.97
2705-8-8	3/4-16	1/2	6.73
2705-10-8	7/8-14	1/2	19.41
2705-12-12	1-1/16-12	3/4	10.54
2705-16-16	1-5/16-12	1	17.15
2705-20-20	1-5/8-12	1-1/4	28.45
2705-24-24	1-7/8-12	1-1/2	44.32

## JIC TO MALE PIPE BULKHEAD



Part #	JIC Thread Size 1	Pipe Thread Size 2	List Price
2706-4-2	7/16-20	1/8	2.70
2706-4-4	7/16-20	1/4	2.98
2706-6-4	9/16-18	1/4	3.87
2706-6-6	9/16-18	3/8	4.06
2706-8-6	3/4-16	3/8	5.34
2706-8-8	3/4-16	1/2	4.39
2706-10-8	7/8-14	1/2	7.11
2706-12-12	1-1/16-12	3/4	10.11
2706-16-16	1-5/16-12	1	15.49
2706-20-20	1-5/8-12	1-1/4	25.72
2706-24-24	1-7/8-12	1-1/2	38.42

\* Lock Nuts sold separately - pg. 326



**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 zinc 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.**

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	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

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

### 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	3.28
5000-4	1/4	1/4	1.66
5000-6-4	3/8	1/4	1.95
5000-6-6	3/8	3/8	1.75
5000-8-4	1/2	1/4	4.45
5000-8-6	1/2	3/8	3.16
5000-8	1/2	1/2	3.30
5000-12-6	3/4	3/8	6.25
5000-12-8	3/4	1/2	5.32
5000-12-12	3/4	3/4	3.86
5000-16-12	1	3/4	9.72
5000-16	1	1	6.25
5000-20-16	1-1/4	1	24.64
5000-20-20	1-1/4	1-1/4	10.90
5000-24	1-1/2	1-1/2	21.50
5000-32	2	2	43.45

### HEX PIPE FITTINGS

SAE 140137



5404 C3069  
2083  
FF  
1252

Part #	Male Pipe 1	Male Pipe 2	List Price
5404-2	1/8	1/8	0.93
5404-4-2	1/4	1/8	1.15
5404-4	1/4	1/4	0.90
5404-6-2	3/8	1/8	2.08
5404-6-4	3/8	1/4	1.49
5404-6	3/8	3/8	1.56
5404-8-4	1/2	1/4	2.18
5404-8-6	1/2	3/8	1.69
5404-8	1/2	1/2	1.63
5404-12-4	3/4	1/4	5.72
5404-12-6	3/4	3/8	4.88
5404-12-8	3/4	1/2	2.90
5404-12	3/4	3/4	2.95
5404-16-12	1	3/4	5.78
5404-16	1	1	5.21
5404-20-12	1-1/4	3/4	14.66
5404-20-16	1-1/4	1	11.60
5404-20	1-1/4	1-1/4	10.33
5404-24-12	1-1/2	3/4	40.51
5404-24-16	1-1/2	1	27.22
5404-24-20	1-1/2	1-1/4	23.33
5404-24	1-1/2	1-1/2	14.20
5404-32-24	2	1-1/2	45.45
5404-32	2	2	38.69

## STEEL PIPE FITTINGS

### EXPANDING PIPE ADAPTER

SAE 140139



5405  
2040  
FG-(R)  
1274  
C3209(R)

Part #	Male Pipe 1	Female Pipe 2	List Price
5405-2-2	1/8	1/8	5.29
5405-2-4	1/8	1/4	1.61
5405-2-6	1/8	3/8	4.79
5405-4-2	1/4	1/4	2.39
5405-4-4	1/4	1/4	1.66
5405-4-6	1/4	3/8	1.71
5405-4-8	1/4	1/2	4.32
5405-6-4	3/8	1/4	3.33
5405-6-6	3/8	3/8	2.59
5405-6-8	3/8	1/2	2.73
5405-8-8	1/2	1/2	4.86
5405-8-12	1/2	3/4	4.93
5405-8-16	1/2	1	13.54
5405-12-6	3/4	3/8	8.67
5405-12-8	3/4	1/2	7.95
5405-12-12	3/4	3/4	7.84
5405-12-16	3/4	1	10.83
5405-12-20	3/4	1-1/4	30.77
5405-16-12	1	3/4	10.67
5405-16-16	1	1	14.36
5405-16-20	1	1-1/4	17.05
5405-20-20	1-1/4	1-1/4	24.03
5405-20-24	1-1/4	1-1/2	26.58
5405-24-24	1-1/2	1-1/2	33.94
5405-24-32	1-1/2	2	53.15
5405-32-32	2	2	62.79

# STEEL PIPE FITTINGS

# HYDRAULIC ADAPTERS

## HEX REDUCER BUSHING



5406  
2081  
PTR  
1250  
C3109

Part #	Male Pipe	Female Pipe	List Price
5406-4-2	1/4	1/8	0.75
5406-6-2	3/8	1/8	1.02
5406-6-4	3/8	1/4	1.02
5406-8-2	1/2	1/8	1.69
5406-8-4	1/2	1/4	1.40
5406-8-6	1/2	3/8	1.40
5406-12-2	3/4	1/8	3.02
5406-12-4	3/4	1/4	2.83
5406-12-6	3/4	3/8	2.83
5406-12-8	3/4	1/2	2.83
5406-16-4	1	1/4	5.04
5406-16-6	1	3/8	6.00
5406-16-8	1	1/2	3.40
5406-16-12	1	3/4	3.65
5406-20-4	1-1/4	1/4	9.47
5406-20-6	1-1/4	3/8	8.87
5406-20-8	1-1/4	1/2	8.20
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	19.64
5406-24-8	1-1/2	1/2	17.40
5406-24-12	1-1/2	3/4	13.68
5406-24-16	1-1/2	1	13.95
5406-24-20	1-1/2	1-1/4	12.61
5406-32-6	2	3/8	29.93
5406-32-8	2	1/2	29.93
5406-32-12	2	3/4	22.75
5406-32-16	2	1	27.99
5406-32-20	2	1-1/4	22.75
5406-32-24	2	1-1/2	22.75

*Some sizes available in Stainless Steel  
Also available in short pattern*

SAE 130109E

## HEX HEAD PLUG



5406P  
2082  
HP  
1251  
C3159

Part #	Male Pipe	List Price
5406-P-2	1/8	0.43
5406-P-4	1/4	0.87
5406-P-6	3/8	0.79
5406-P-8	1/2	1.18
5406-P-12	3/4	2.21
5406-P-16	1	3.27
5406-P-20	1-1/4	6.60
5406-P-24	1-1/2	15.03
5406-P-32	2	24.61

*Also available in Stainless Steel*

## HOLLOW HEX PLUG

SAE 130109



Part #	Male Pipe	List Price
5406-HHP-1	1/16	0.63
5406-HHP-2	1/8	0.41
5406-HHP-4	1/4	0.32
5406-HHP-6	3/8	0.38
5406-HHP-8	1/2	0.56
5406-HHP-12	3/4	1.11
5406-HHP-16	1	2.45
5406-HHP-20	1-1/4	6.83

## FLUSH HOLLOW HEX PLUG W/ 7/8 TAPER



Part #	Male Pipe	List Price
5406-FLP-1	1/16	0.69
5406-FLP-2	1/8	0.37
5406-FLP-4	1/4	0.53
5406-FLP-6	3/8	0.91
5406-FLP-8	1/2	1.11
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	0.40
5406-SHP-6	3/8	0.81
5406-SHP-8	1/2	0.99
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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## HYDRAULIC ADAPTERS

### PIPE CAP



Part #	Female Pipe	List Price
5406-C-2	1/8	0.73
5406-C-4	1/4	0.89
5406-C-6	3/8	1.24
5406-C-8	1/2	2.29
5406-C-12	3/4	3.18
5406-C-16	1	6.41
5406-C-24	1-1/2	18.89

*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	2.44
5500-4-2	1/4	1/8	2.32
5500-4	1/4	1/4	2.00
5500-6-4	3/8	1/4	2.80
5500-6	3/8	3/8	2.80
5500-8-4	1/2	1/4	4.38
5500-8-6	1/2	3/8	4.25
5500-8	1/2	1/2	4.00
5500-12-8	3/4	1/2	6.34
5500-12-12	3/4	3/4	7.15
5500-16	1	1	8.74
5500-16-12	1	3/4	14.78
5500-20-20	1-1/4	1-1/4	17.65
5500-24	1-1/2	1-1/2	29.78
5500-32	2	2	61.06

*Also available in Stainless Steel*

## STEEL PIPE FITTINGS

### 45° MALE ELBOW



5501  
2247

Part #	Male Pipe 1	Male Pipe 2	List Price
5501-2-2	1/8	1/8	4.39
5501-4-4	1/4	1/4	2.58
5501-6-6	3/8	3/8	4.49
5501-8	1/2	1/2	4.60
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

### 90° STREET ELBOW

SAE 140239



5502  
2089  
CD  
1234R  
C3409

Part #	Male Pipe 1	Female Pipe 2	List Price
5502-2	1/8	1/8	2.12
5502-4-2	1/4	1/8	2.76
5502-4	1/4	1/4	2.75
5502-4-6	1/4	3/8	4.28
5502-4-8-8	1/4	1/2	30.25
5502-6-2	3/8	1/8	19.11
5502-6-4	3/8	1/4	3.72
5502-6	3/8	3/8	3.84
5502-6-8	3/8	1/2	5.23
5502-8-4	1/2	1/4	6.32
5502-8-6	1/2	3/8	5.76
5502-8-8	1/2	1/2	4.51
5502-8-12	1/2	3/4	8.52
5502-12-8	3/4	1/2	9.27
5502-12	3/4	3/4	6.63
5502-12-16	3/4	1	18.73
5502-16-12	1	3/4	11.77
5502-16-16	1	1	12.44
5502-16-20	1	1-1/4	31.75
5502-20-16	1-1/4	1	23.04
5502-20	1-1/4	1-1/4	18.92
5502-24	1-1/2	1-1/2	44.52
5502-32	2	2	110.32

*Also available in Stainless Steel  
More sizes available*

Send Midland all your high volume quotes!

# STEEL PIPE FITTINGS

# HYDRAULIC ADAPTERS

## 45° STREET ELBOW

SAE 140339



5503  
CD45  
1244

Part #	Male Pipe 1	Female Pipe 2	List Price
5503-2	1/8	1/8	2.62
5503-4	1/4	1/4	2.65
5503-6	3/8	3/8	4.18
5503-8	1/2	1/2	4.93
5503-12-12	3/4	3/4	6.54
5503-16	1	1	9.99
5503-20	1-1/4	1-1/4	33.49
5503-24	1-1/2	1-1/2	46.48

## 45° FEMALE ELBOW

SAE 140338



5505  
DD45  
1241  
C3559

Part #	Female Pipe 1	Female Pipe 2	List Price
5505-2	1/8	1/8	4.16
5505-4	1/4	1/4	3.87
5505-6	3/8	3/8	5.59
5505-8	1/2	1/2	7.98
5505-12	3/4	3/4	9.05
5505-16	1	1	15.78
5505-20	1-1/4	1-1/4	25.34

## FEMALE ELBOW

SAE 140238



5504  
2087  
DD  
1245  
C3509

Part #	Female Pipe 1	Female Pipe 2	List Price
5504-2	1/8	1/8	2.59
5504-4-2	1/4	1/8	3.65
5504-4	1/4	1/4	2.85
5504-6-4	3/8	1/4	3.84
5504-6	3/8	3/8	3.93
5504-8-6	1/2	3/8	4.96
5504-8	1/2	1/2	3.86
5504-12-8	3/4	1/2	7.88
5504-12	3/4	3/4	7.14
5504-16-12	1	3/4	10.70
5504-16	1	1	11.00
5504-20	1-1/4	1-1/4	18.44
5504-24	1-1/2	1-1/2	53.17
5504-32	2	2	99.87

More sizes available

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HYDRAULIC



## HYDRAULIC ADAPTERS

SAE 140437

### MALE PIPE TEE



5600  
2257  
RRS

Part #	Male Pipe 1 & 2	Male Pipe 3	List Price
5600-2-2	1/8	1/8	4.90
5600-4-4	1/4	1/4	5.36
5600-6-6	3/8	3/8	6.54
5600-8-8	1/2	1/2	8.05
5600-12	3/4	3/4	12.54
5600-16	1	1	21.62
5600-20	1-1/4	1-1/4	57.84
5600-24	1-1/2	1-1/2	115.95

*Also available in Stainless Steel*

SAE 140427

### FEMALE BRANCH PIPE TEE

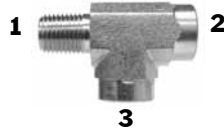


5601  
2256

Part #	Male Pipe 1 & 2	Female Pipe 3	List Price
5601-2-2	1/8	1/8	3.02
5601-4-4	1/4	1/4	5.70
5601-6-6	3/8	3/8	6.62
5601-8	1/2	1/2	10.19
5601-12	3/4	3/4	14.08
5601-16	1	1	26.15
5601-20	1-1/4	1-1/4	53.44
5601-24	1-1/2	1-1/2	125.56

### STREET PIPE TEE

SAE 140424



5602  
2092  
MRO  
1276  
C3759

Part #	Male Pipe 1	Female Pipe 2 & 3	List Price
5602-2-2	1/8	1/8	3.02
5602-4-4	1/4	1/4	3.40
5602-6-6	3/8	3/8	4.64
5602-8-8	1/2	1/2	8.37
5602-12	3/4	3/4	13.29
5602-16	1	1	19.62
5602-20	1-1/4	1-1/4	32.08
5602-24	1-1/2	1-1/2	108.52

*Also available in Stainless Steel*

## STEEL PIPE FITTINGS

### FEMALE RUN PIPE TEE

SAE 1404276



5603  
2093  
MMO  
1277

Part #	Male Pipe 1 & 3	Female Pipe 2	List Price
5603-2-2	1/8	1/8	3.75
5603-4-4	1/4	1/4	4.59
5603-6-6	3/8	3/8	5.81
5603-8-8	1/2	1/2	8.28
5603-12	3/4	3/4	12.37
5603-16	1	1	21.65
5603-20	1-1/4	1-1/4	57.93
5603-24	1-1/2	1-1/2	110.51

*Some sizes available in Stainless Steel*

### MALE BRANCH PIPE TEE



5604  
2091  
KMMOO  
1278  
C3609

Part #	Female Pipe 1 & 2	Male Pipe 3	List Price
5604-2-2	1/8	1/8	3.81
5604-4-4	1/4	1/4	5.29
5604-6-6	3/8	3/8	6.35
5604-8-8	1/2	1/2	9.47
5604-12	3/4	3/4	12.63
5604-16	1	1	24.39
5604-20	1-1/4	1-1/4	36.38
5604-24	1-1/2	1-1/2	75.45

*Some sizes available in Stainless Steel*

### FEMALE PIPE TEE

SAE 140438



5605  
2090  
1225  
C3709

Part #	Female Pipe	List Price
5605-2-2	1/8	3.97
5605-4-4	1/4	5.24
5605-6-6	3/8	4.73
5605-8	1/2	6.83
5605-12	3/4	10.00
5605-16	1	17.62
5605-20	1-1/4	39.09
5605-24	1-1/2	105.38
5605-32	2	254.17

*More sizes available  
All sizes available in Stainless Steel*



**STEEL STRAIGHT THREAD O-RING 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
- SAE J1926/1, SAE J1926/3
- ISO 11926-1, ISO 11926-3

**MATERIALS**

- Steel- SAE 12L14 Carbon steel trivalent zinc plated or bright silver finish.
- Buna Nitrile O-Ring

**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	4.59
6400-3	3/8-24	3/8-24	4.41
6400-4	7/16-20	7/16-20	0.79
6400-4-2	7/16-20	5/16-24	1.83
6400-4-3	7/16-20	3/8-24	1.89
6400-4-5	7/16-20	1/2-20	2.00
6400-4-6	7/16-20	9/16-18	1.18
6400-4-8	7/16-20	3/4-16	2.43
6400-4-10	7/16-20	7/8-14	4.21
6400-5	1/2-20	1/2-20	1.38
6400-5-4	1/2-20	7/16-20	1.94
6400-5-6	1/2-20	9/16-18	2.67
6400-6	9/16-18	9/16-18	0.95
6400-6-4	9/16-18	7/16-20	0.92
6400-6-5	9/16-18	1/2-20	1.31
6400-6-8	9/16-18	3/4-16	1.60
6400-6-10	9/16-18	7/8-14	2.58
6400-6-12	9/16-18	1-1/16-12	4.06
6400-6-16	9/16-18	1-5/16-12	4.79
6400-8	3/4-16	3/4-16	1.41
6400-8-4	3/4-16	7/16-20	3.05
6400-8-6	3/4-16	9/16-18	1.76
6400-8-10	3/4-16	7/8-14	2.01
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	2.48
6400-10-6	7/8-14	9/16-18	3.12
6400-10-8	7/8-14	3/4-16	2.67
6400-10-12	7/8-14	1-1/16-12	3.02
6400-10-16	7/8-14	1-5/16-12	5.27
6400-12	1-1/16-12	1-1/16-12	3.08
6400-12-6	1-1/16-12	3/8	5.11
6400-12-8	1-1/16-12	3/4-16	5.12
6400-12-10	1-1/16-12	7/8-14	2.92
6400-12-14	1-1/16-12	1-3/16-12	6.98
6400-12-16	1-1/16-12	1-5/16-12	4.79
6400-12-20	1-1/16-12	1-5/8-12	9.99
6400-14	1-3/16-12	1-3/16-12	4.87
6400-16	1-5/16-12	1-5/16-12	4.67
6400-16-8	1-5/16-12	3/4-16	7.39
6400-16-10	1-5/16-12	7/8-14	5.69
6400-16-12	1-5/16-12	1-1/16-12	4.32
6400-16-14	1-5/16-12	1-3/16-12	10.23
6400-16-20	1-5/16-12	1-5/8-12	9.24
6400-16-24	1-5/16-12	1-7/8-12	21.50
6400-20	1-5/8-12	1-5/8-12	9.37
6400-20-12	1-5/8-12	1-1/16-12	20.33
6400-20-16	1-5/8-12	1-5/16-12	10.74
6400-20-24	1-5/8-12	1-7/8-12	16.74
6400-24	1-7/8-12	1-7/8-12	15.24
6400-24-20	1-7/8-12	1-5/8-12	17.43
6400-24-32	1-7/8-12	2-1/2-12	74.91
6400-32	2-1/2-12	2-1/2-12	51.07

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	1.59
6401-4-4	7/16-20	1/4	1.56
6401-4-6	7/16-20	3/8	2.56
6401-5-2	1/2-20	1/8	5.03
6401-5-4	1/2-20	1/4	2.95
6401-6-4	9/16-18	1/4	1.57
6401-6-6	9/16-18	3/8	1.60
6401-6-8	9/16-18	1/2	2.48
6401-8-6	3/4-16	3/8	2.49
6401-8-8	3/4-16	1/2	2.39
6401-8-12	3/4-16	3/4	11.06
6401-10-6	7/8-14	3/8	5.00
6401-10-8	7/8-14	1/2	2.96
6401-12-6	1-1/16-12	3/8	7.06
6401-12-8	1-1/16-12	1/2	4.10
6401-12-12	1-1/16-12	3/4	3.98
6401-16-12	1-5/16-12	3/4	12.73
6401-16-16	1-5/16-12	1	6.95
6401-20-20	1-5/8-12	1-1/4	13.33
6401-24-24	1-7/8-12	1-1/2	23.94
6401-32-32	2-1/2-12	2	47.30

More sizes available  
Some sizes available in Stainless Steel

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## STEEL O-RING ADAPTERS

### O-RING TO 37° JIC SWIVEL ADAPTER



6402  
2266  
F65X  
1213  
9316

Part #	O-Ring Thread 1	JIC Thread Size 2	List Price
6402-O-4-4	7/16-20	7/16-20	2.99
6402-O-4-6	7/16-20	9/16-18	4.11
6402-O-6-6	9/16-18	9/16-18	2.68
6402-O-6-8	9/16-18	3/4-16	5.90
6402-O-8-8	3/4-16	3/4-16	3.88
6402-O-8-6	3/4-16	9/16-18	8.05
6402-O-10-10	7/8-14	7/8-14	7.82
6402-O-12-12	1-1/16-12	1-1/16-12	7.05
6402-O-14-14	1-3/16-12	1-3/16-12	16.61
6402-O-16-16	1-5/16-12	1-5/16-12	10.19
6402-O-16-12	1-5/16-12	1-1/16-12	17.30
6402-O-20-20	1-5/8-12	1-5/8-12	25.48
6402-O-24-24	1-7/8-12	1-7/8-12	38.83

*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-6	9/16-18	9/16-18	1.90
6403-O-8	3/4-16	3/4-16	2.73
6403-O-10	7/8-14	7/8-14	7.62
6403-O-12	1-1/16-12	1-1/16-12	8.49
6403-O-16	1-5/16-12	1-5/16-12	18.73

*More sizes available*

## HYDRAULIC ADAPTERS

### 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	5.98
6404-4-4	7/16-20	1/4	3.35
6404-4-6	7/16-20	3/8	3.67
6404-6-4	9/16-18	1/4	6.64
6404-6-6	9/16-18	3/8	2.55
6404-6-8	9/16-18	1/2	3.92
6404-8-4	3/4-16	1/4	41.80
6404-8-6	3/4-16	3/8	4.45
6404-8-8	3/4-16	1/2	2.89
6404-10-6	7/8-14	3/8	6.61
6404-10-8	7/8-14	1/2	5.24
6404-10-12	7/8-14	3/4	27.67
6404-12-12	1-1/16-12	3/4	6.00
6404-16-16	1-5/16-12	1	21.73
6404-20-20	1-5/8-12	1-1/4	17.96
6404-24-24	1-7/8-12	1-1/2	37.72

**Call Midland for a Domestic Hydraulic Adapter pricelist!**

# HYDRAULIC ADAPTERS

## O-RING TO FEMALE PIPE ADAPTER



6405  
2216R  
F50G  
1268R  
C3269

Part #	O-Ring Thread 1	Female Pipe Thread 2	List Price
6405-O-2-2	5/16-24	1/8	31.92
6405-O-4-2	7/16-20	1/8	1.61
6405-O-4-4	7/16-20	1/4	2.09
6405-O-4-6	7/16-20	3/8	2.22
6405-O-5-2	1/2-20	1/8	2.54
6405-O-5-4	1/2-20	1/4	2.60
6405-O-6-2	9/16-18	1/8	6.00
6405-O-6-4	9/16-18	1/4	2.06
6405-O-6-6	9/16-18	3/8	1.60
6405-O-6-8	9/16-18	1/2	2.65
6405-O-8-4	3/4-16	1/4	2.51
6405-O-8-6	3/4-16	3/8	2.21
6405-O-8-8	3/4-16	1/2	3.64
6405-O-8-12	3/4-16	3/4	14.68
6405-O-10-4	7/8-14	1/4	3.30
6405-O-10-6	7/8-14	3/8	3.84
6405-O-10-8	7/8-14	1/2	3.33
6405-O-10-12	7/8-14	3/4	5.53
6405-O-12-6	1-1/16-12	3/8	11.85
6405-O-12-8	1-1/16-12	1/2	6.82
6405-O-12-12	1-1/16-12	3/4	4.70
6405-O-12-16	1-1/16-12	1	6.35
6405-O-14-8	1-3/16-12	1/2	23.67
6405-O-14-12	1-3/16-12	3/4	7.33
6405-O-14-16	1-3/16-12	1	44.54
6405-O-16-6	1-5/16-12	3/8	30.84
6405-O-16-8	1-5/16-12	1/2	7.58
6405-O-16-12	1-5/16-12	3/4	8.41
6405-O-16-16	1-5/16-12	1	5.80
6405-O-16-20	1-5/16-12	1-1/4	19.38
6405-O-20-20	1-5/8-12	1-1/4	10.80
6405-O-20-24	1-5/8-12	1-1/2	46.10
6405-O-24-16	1-7/8-12	1	21.31
6405-O-24-20	1-7/8-12	1-1/4	23.74
6405-O-24-24	1-7/8-12	1-1/2	30.31
6405-O-32-32	2-1/2-12	2	43.21

*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	0.84
6408-O-3	3/8-24	0.81
6408-O-4	7/16-20	0.54
6408-O-5	1/2-20	0.81
6408-O-6	9/16-18	0.68
6408-O-8	3/4-16	1.06
6408-O-10	7/8-14	1.54
6408-O-12	1-1/16-12	2.39
6408-O-14	1-3/16-20	3.32
6408-O-16	1-5/16-12	3.27
6408-O-20	1-5/8-12	5.65
6408-O-24	1-7/8-12	8.70
6408-O-32	2-1/2-12	29.06

*Also available in Stainless Steel*

## O-RING HOLLOW HEX HEAD PLUG

SAE 090109B



6408HHP  
FF2138  
HP50N  
1256  
7238  
6409

Part #	O-Ring Thread	List Price
6408-H-O-2	5/16-24	0.70
6408-H-O-3	3/8-24	0.64
6408-H-O-4	7/16-20	0.57
6408-H-O-5	1/2-20	1.01
6408-H-O-6	9/16-18	0.74
6408-H-O-8	3/4-16	1.28
6408-H-O-10	7/8-14	1.85
6408-H-O-12	1-1/16-12	2.41
6408-H-O-14	1-3/16-20	5.03
6408-H-O-16	1-5/16-12	3.44
6408-H-O-20	1-5/8-12	6.00
6408-H-O-24	1-7/8-12	8.65
6408-H-O-32	2-1/2-12	26.02

*Also available in Stainless Steel*

*Send Midland all your  
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-4-4	7/16-20	7/16-20	6.89
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-8-8	3/4-16	3/4-16	3.84
6410-O-8-10	3/4-16	7/8-14	4.71
6410-O-8-12	3/4-16	1-1/16-12	23.49
6410-O-10-4	7/8-14	7/16-20	6.02
6410-O-10-6	7/8-14	9/16-18	2.68
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	18.20
6410-O-12-6	1-1/16-12	9/16-18	10.44
6410-O-12-8	1-1/16-12	3/4-16	5.28
6410-O-12-10	1-1/16-12	7/8-14	8.17
6410-O-12-12	1-1/16-12	1-1/16-12	8.84
6410-O-14-12	1-3/16-12	1-1/16-12	7.68
6410-O-16-6	1-5/16-12	9/16-18	15.42
6410-O-16-8	1-5/16-12	3/4-16	7.85
6410-O-16-10	1-5/16-12	7/8-14	9.47
6410-O-16-12	1-5/16-12	1-1/16-12	7.91
6410-O-16-20	1-5/16-12	1-5/8-12	16.67
6410-O-20-12	1-5/8-12	1-1/16-12	9.95
6410-O-20-16	1-5/8-12	1-5/16-12	9.26
6410-O-20-24	1-5/8-12	1-7/8-12	50.12
6410-O-24-12	1-7/8-12	1-1/16-12	27.99
6410-O-24-16	1-7/8-12	1-5/16-12	15.35
6410-O-24-20	1-7/8-12	1-5/8-12	38.55
6410-O-32-16	2-1/2-12	1-5/16-12	134.93
6410-O-32-20	2-1/2-12	1-5/8-12	84.42
6410-O-32-24	2-1/2-12	1-7/8-12	52.86

## 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
6500-4-6	7/16-20	9/16-18	6.56
6500-5	1/2-20	1/2-20	4.08
6500-6	9/16-18	9/16-18	3.56
6500-6-8	9/16-18	3/4-16	6.39
6500-8	3/4-16	3/4-16	4.30
6500-8-6	3/4-16	9/16-18	5.55
6500-10	7/8-14	7/8-14	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
6500-12-8	1-1/16-12	3/4-16	13.39
6500-12-10	1-1/16-12	7/8-14	23.44
6500-14	1-3/16-12	1-3/16-12	14.65
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	50.75
6500-32	2-1/2-12	2-1/2-12	79.38

*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	3.92
6501-4-4	7/16-20	1/4	3.21
6501-6-4	9/16-18	1/4	3.59
6501-6-6	9/16-18	3/8	3.75
6501-8-6	3/4-16	3/8	5.27
6501-8-8	3/4-16	1/2	5.61
6501-10-8	7/8-14	1/2	7.57
6501-12-12	1-1/16-12	3/4	8.99
6501-14-12	1-3/16-12	3/4	47.98
6501-16-16	1-5/16-12	1	12.91
6501-20-20	1-5/8-12	1-1/4	41.75
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	3.11
6502-5	1/2-20	1/2-20	6.04
6502-6	9/16-18	9/16-18	3.16
6502-8	3/4-16	3/4-16	4.10
6502-10	7/8-14	7/8-14	5.93
6502-12	1-1/16-12	1-1/16-12	6.91
6502-16	1-5/16-12	1-5/16-12	12.37
6502-20	1-5/8-12	1-5/8-12	24.63
6502-24	1-7/8-12	1-7/8-12	36.71
6502-32	2-1/2-12	2-1/2-12	104.99

*Some sizes available in Stainless Steel*

### JIC SWIVEL TO FEMALE PIPE ELBOW



Part #	JIC Thread Size 1	Female Pipe Thread 2	List Price
6503-4-4	7/16-20	1/4	11.00
6503-6-4	9/16-18	1/4	9.03
6503-6-6	9/16-18	3/8	10.32
6503-8-6	3/4-16	3/8	12.58
6503-8-8	3/4-16	1/2	11.43
6503-10-8	7/8-14	1/2	46.08
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	3.69
6504-6-4	9/16-18	7/16-20	4.45
6504-6-6	9/16-18	9/16-18	3.81
6504-8-6	3/4-16	9/16-18	5.84
6504-8-8	3/4-16	3/4-16	4.32
6504-10-10	7/8-14	7/8-14	5.58
6504-12-12	1-1/16-12	1-1/16-12	6.98
6504-16-16	1-5/16-12	1-5/16-12	10.27
6504-20-20	1-5/8-12	1-5/8-12	29.05
6504-24-24	1-7/8-12	1-7/8-12	36.21

## FEMALE SWIVELS

### JIC SWIVEL TO MALE PIPE ADAPTER



6505  
2018  
F6X  
1211  
9100R

Part #	JIC Thread Size 1	Male Pipe Thread 2	List Price
6505-2-4	5/16-24	1/4	1.33
6505-4-2	7/16-20	1/8	2.61
6505-4-4	7/16-20	1/4	2.32
6505-5-4	1/2-20	1/4	7.68
6505-6-4	9/16-18	1/4	2.70
6505-6-6	9/16-18	3/8	3.14
6505-8-6	3/4-16	3/8	4.91
6505-8-8	3/4-16	1/2	3.43
6505-10-8	7/8-14	1/2	4.51
6505-10-12	7/8-14	3/4	7.62
6505-12-8	1-1/16-12	1/2	7.58
6505-12-12	1-1/16-12	3/4	5.37
6505-16-12	1-5/16-12	3/4	28.13
6505-16-16	1-5/16-12	1	10.27
6505-20-20	1-5/8-12	1-1/4	19.59
6505-24-24	1-7/8-12	1-1/2	60.11
6505-32-32	2-1/2-12	2	148.57

*Also available in Stainless Steel*

### JIC SWIVEL TO FEMALE PIPE ADAPTER



6506  
2242  
1215

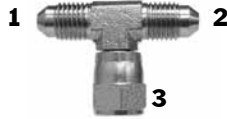
Part #	JIC Thread Size 1	Female Pipe Thread 2	List Price
6506-4-2	7/16-20	1/8	4.81
6506-4-4	7/16-20	1/4	3.89
6506-4-6	7/16-20	3/8	4.56
6506-6-4	9/16-18	1/4	4.22
6506-6-6	9/16-18	3/8	3.15
6506-6-8	9/16-18	1/2	7.44
6506-8-6	3/4-16	3/8	4.94
6506-8-8	3/4-16	1/2	4.53
6506-10-6	7/8-14	3/8	7.21
6506-10-8	7/8-14	1/2	5.97
6506-10-12	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	7.48
6506-16-16	1-5/16-12	1	12.70
6506-20-20	1-5/8-12	1-1/4	25.31
6506-24-24	1-7/8-12	1-1/2	49.39
6506-32-32	2-1/2-12	2	100.25

*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
6600-3-3	3/8-24	3/8-24	8.17
6600-4-4	7/16-20	7/16-20	3.78
6600-5-5	1/2-20	1/2-20	5.06
6600-6-6	9/16-18	9/16-18	4.64
6600-8-8	3/4-16	3/4-16	5.19
6600-10	7/8-14	7/8-14	9.69
6600-12	1-1/16-12	1-1/16-12	10.32
6600-14	1-3/16-12	1-3/16-12	19.91
6600-16	1-5/16-12	1-5/16-12	16.80
6600-20	1-5/8-12	1-5/8-12	35.17
6600-24	1-7/8-12	1-7/8-12	54.71

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
6602-3	3/8-24	3/8-24	7.39
6602-4	7/16-20	7/16-20	3.46
6602-5	1/2-20	1/2-20	5.01
6602-6	9/16-18	9/16-18	4.00
6602-8	3/4-16	3/4-16	5.81
6602-10	7/8-14	7/8-14	7.81
6602-12	1-1/16-12	1-1/16-12	10.23
6602-14	1-3/16-12	1-3/16-12	19.75
6602-16	1-5/16-12	1-5/16-12	14.07
6602-20	1-5/8-12	1-5/8-12	29.80
6602-24	1-7/8-12	1-7/8-12	43.28

More sizes available

Also available in Stainless Steel

NWO = Nut, Washer & O-Ring

## HYDRAULIC ADAPTERS

### STEEL SAE O-RING FITTINGS

#### JIC TO O-RING ELBOW CONNECTOR

SAE 070220  
MS 51527



6801  
2062R  
C50X  
1238L  
C5515

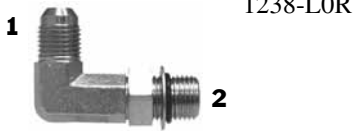
Part #	JIC Thread Size 1	O-Ring Thread Size 2	List Price
6801-NWO-2	5/16-24	5/16-24	9.31
6801-NWO-3	3/8-24	3/8-24	5.46
6801-NWO-4	7/16-20	7/16-20	2.35
6801-NWO-4-5	7/16-20	1/2-20	4.63
6801-NWO-4-6	7/16-20	9/16-18	3.11
6801-NWO-4-8	7/16-20	3/4-16	4.44
6801-NWO-5	1/2-20	1/2-20	3.40
6801-NWO-5-4	1/2-20	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	2.19
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	3.70
6801-NWO-8-4	3/4-16	7/16-20	6.06
6801-NWO-8-6	3/4-16	9/16-18	3.70
6801-NWO-8-10	3/4-16	7/8-14	4.96
6801-NWO-8-12	3/4-16	1-1/16-12	9.66
6801-NWO-8-16	3/4-16	1-5/16-12	12.37
6801-NWO-10	7/8-14	7/8-14	5.71
6801-NWO-10-6	7/8-14	9/16-18	5.55
6801-NWO-10-8	7/8-14	3/4-16	5.02
6801-NWO-10-12	7/8-14	1-1/16-12	7.42
6801-NWO-10-16	7/8-14	1-5/16-12	13.31
6801-NWO-12	1-1/16-12	1-1/16-12	7.37
6801-NWO-12-8	1-1/16-12	3/4-16	8.23
6801-NWO-12-10	1-1/16-12	7/8-14	8.22
6801-NWO-12-14	1-1/16-12	1-3/16-12	19.81
6801-NWO-12-16	1-1/16-12	1-5/16-12	15.93
6801-NWO-12-20	1-1/16-12	1-5/8-12	28.47
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	12.95
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	11.21
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	29.58
6801-NWO-20	1-5/8-12	1-5/8-12	22.80
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	25.72
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



# HYDRAULIC ADAPTERS

# STEEL SAE O-RING

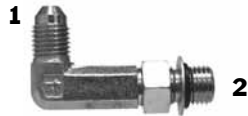
## LONG JIC TO O-RING ELBOW



1238-LOR

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-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-L-NWO-12	1-1/16-12	1-1/16-12	14.97
6801-L-NWO-16	1-5/16-12	1-5/16-12	24.13
6801-L-NWO-20	1-5/8-12	1-5/8-12	33.67

## EXTRA LONG JIC TO O-RING ELBOW



6801-LL  
206209R  
1238-LLR

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
6801-LL-NWO-20	1-5/8-12	1-5/8-12	62.67

More sizes available

## 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-2	5/16-24	5/16-24	5.45
6802-NWO-4	7/16-20	7/16-20	3.33
6802-NWO-4-6	7/16-20	9/16-18	5.42
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-6	9/16-18	9/16-18	3.41
6802-NWO-6-4	9/16-18	7/16-20	4.61
6802-NWO-6-8	9/16-18	3/4-16	4.85
6802-NWO-6-10	9/16-18	7/8-14	7.99
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	8.53
6802-NWO-10	7/8-14	7/8-14	7.07
6802-NWO-10-8	7/8-14	3/4-16	6.12
6802-NWO-10-12	7/8-14	1-1/16-12	11.69
6802-NWO-12	1-1/16-12	1-1/16-12	11.37
6802-NWO-12-14	1-1/16-12	1-3/16-12	59.69
6802-NWO-12-16	1-1/16-12	1-5/16-12	15.29
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	30.16
6802-NWO-20-16	1-5/8-12	1-5/16-12	41.59
6802-NWO-24	1-7/8-12	1-7/8-12	36.19
6802-NWO-32	2-1/2-12	2-1/2-12	96.19

Some sizes available in Stainless Steel

More sizes available

## JIC TO O-RING BRANCH TEE

SAE 070429  
MS 51529



6803  
203003X  
S50X  
1265R  
C5715

Part #	JIC Thread Size 1 & 2	O-Ring Thread Size 3	List Price
6803-NWO-2	5/16-24	5/16-24	6.67
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	12.61
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	24.09
6803-NWO-20	1-5/8-12	1-5/8-12	33.73
6803-NWO-24	1-7/8-12	1-7/8-12	77.25

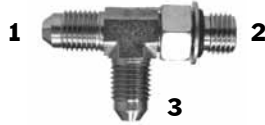


# STEEL SAE O-RING

# HYDRAULIC ADAPTERS

SAE 070428  
MS 51530

## JIC TO O-RING RUN TEE



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	12.99
6804-NWO-16	1-5/16-12	1-5/16-12	23.81
6804-NWO-16-12	1-5/16-12	1-1/16-12	30.00
6804-NWO-20	1-5/8-12	1-5/8-12	39.86
6804-NWO-24	1-7/8-12	1-7/8-12	70.52
6804-NWO-32	2-1/2-12	2-1/2-12	302.11

More sizes available  
Also available in stainless steel

## 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	4.09
6805-NWO-4-4	7/16-20	1/4	4.15
6805-NWO-5-2	1/2-20	1/8	7.80
6805-NWO-6-4	9/16-18	1/4	4.63
6805-NWO-6-6	9/16-18	3/8	5.63
6805-NWO-8-6	3/4-16	3/8	8.18
6805-NWO-8-8	3/4-16	1/2	6.35
6805-NWO-10-6	7/8-14	3/8	16.50
6805-NWO-10-8	7/8-14	1/2	8.63
6805-NWO-12-8	1-1/16-12	1/2	19.12
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	62.45

More sizes available

## 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	3.56
6806-NWO-4-4	7/16-20	1/4	3.59
6806-NWO-6-4	9/16-18	1/4	3.78
6806-NWO-6-6	9/16-18	3/8	7.27
6806-NWO-8-6	3/4-16	3/8	5.11
6806-NWO-8-8	3/4-16	1/2	5.47
6806-NWO-10-8	7/8-14	1/2	7.21
6806-NWO-12-12	1-1/16-12	3/4	9.16
6806-NWO-16-16	1-5/16-12	1	21.56
6806-NWO-20-20	1-5/8-12	1-1/4	25.31
6806-NWO-24-24	1-7/8-12	1-1/2	48.13
6806-NWO-32-32	2-1/2-12	2	162.18

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	4.46
6809-NWO-6-6	9/16-18	9/16-18	5.13
6809-NWO-8-8	3/4-16	3/4-16	8.01
6809-NWO-8-10	3/4-16	7/8-16	33.92
6809-NWO-10-10	7/8-14	7/8-14	7.75
6809-NWO-12-12	1-1/16-12	1-1/16-12	13.22
6809-NWO-16-16	1-5/16-12	1-5/16-12	21.55
6809-NWO-20-20	1-5/8-12	1-5/8-12	51.53
6809-NWO-24-24	1-7/8-12	1-7/8-12	80.62

## FEMALE O-RING TO MALE O-RING ELBOW



Part #	O-Ring Thread Size 1	O-Ring Thread Size 2	List Price
6815-NWO-4-4	7/16-20	7/16-20	5.73
6815-NWO-6-6	9/16-18	9/16-18	6.71
6815-NWO-6-8	9/16-18	3/4-16	11.62
6815-NWO-8-8	3/4-16	3/4-16	7.71
6815-NWO-10-10	7/8-14	7/8-14	22.20
6815-NWO-12-12	1-1/16-12	1-1/16-12	15.56
6815-NWO-16-16	1-5/16-12	1-5/16-12	23.28

More sizes available

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## HYDRAULIC ADAPTERS

## STEEL SAE O-RING

### MALE O-RING SWIVEL ADAPTER

SAE 140157



6900  
2066R  
1235  
9315

Part #	O-Ring Thread Size 1	Female NPSM Size 2	List Price
6900-O-4-2	7/16-20	1/8	5.08
6900-O-4-4	7/16-20	1/4	1.98
6900-O-4-6	7/16-20	3/8	5.17
6900-O-5-4	1/2-20	1/4	3.08
6900-O-6-4	9/16-18	1/4	2.18
6900-O-6-6	9/16-18	3/8	2.60
6900-O-6-8	9/16-18	1/2	3.75
6900-O-8-4	3/4-16	1/4	2.83
6900-O-8-6	3/4-16	3/8	2.78
6900-O-8-8	3/4-16	1/2	2.70
6900-O-8-12	3/4-16	3/4	5.52
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-14-12	1-3/16-12	3/4	11.29
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	24.10
6900-O-20-16	1-5/8-12	1	15.80
6900-O-20-20	1-5/8-12	1-1/4	16.06
6900-O-24-20	1-7/8-12	1-1/4	22.05
6900-O-24-24	1-7/8-12	1-1/2	17.33
6900-O-32-32	2-1/2-12	2	190.97

### 90° O-RING SWIVEL ADAPTER

SAE 140257



6401  
2068R  
1271  
9515

Part #	O-Ring Thread Size 1	Female NPSM Size 2	List Price
6901-NWO-4-2	7/16-20	1/8	9.32
6901-NWO-4-4	7/16-20	1/4	3.49
6901-NWO-4-6	7/16-20	3/8	6.51
6901-NWO-5-4	1/2-20	1/4	5.72
6901-NWO-6-4	9/16-18	1/4	3.66
6901-NWO-6-6	9/16-18	3/8	4.87
6901-NWO-6-8	9/16-18	1/2	7.53
6901-NWO-8-4	3/4-16	1/4	6.74
6901-NWO-8-6	3/4-16	3/8	4.71
6901-NWO-8-8	3/4-16	1/2	5.67
6901-NWO-8-12	3/4-16	3/4	11.31
6901-NWO-10-4	7/8-14	1/4	17.01
6901-NWO-10-6	7/8-14	3/8	6.34
6901-NWO-10-8	7/8-14	1/2	7.08
6901-NWO-10-12	7/8-14	3/4	11.46
6901-NWO-12-6	1-1/16-12	3/8	12.22
6901-NWO-12-8	1-1/16-12	1/2	9.22
6901-NWO-12-12	1-1/16-12	3/4	13.11
6901-NWO-12-16	1-1/16-12	1	38.39
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	37.14
6901-NWO-20-12	1-5/8-12	3/4	50.69
6901-NWO-20-16	1-5/8-12	1	32.88
6901-NWO-20-20	1-5/8-12	1-1/4	29.56
6901-NWO-24-24	1-7/8-12	1-1/2	111.33
6901-NWO-32-32	2-1/2-12	2	393.51

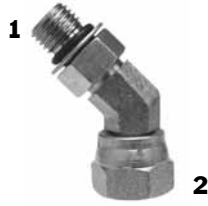
More sizes available

# STEEL SAE O-RING

# HYDRAULIC ADAPTERS

## 45° O-RING SWIVEL ADAPTER

SAE 140357



6902  
2067R  
1272  
9365

Part #	O-Ring Thread Size 1	Female NPSM Size 2	List Price
6902-NWO-4-2	7/16-20	1/8	18.00
6902-NWO-4-4	7/16-20	1/4	8.03
6902-NWO-4-6	7/16-20	3/8	15.60
6902-NWO-5-4	1/2-20	1/4	10.67
6902-NWO-6-4	9/16-18	1/4	7.48
6902-NWO-6-6	9/16-18	3/8	6.37
6902-NWO-8-6	3/4-16	3/8	7.19
6902-NWO-8-8	3/4-16	1/2	8.45
6902-NWO-8-12	3/4-16	3/4	19.59
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	14.20
6902-NWO-12-12	1-1/16-12	3/4	15.00
6902-NWO-16-12	1-5/16-12	3/4	69.16
6902-NWO-16-16	1-5/16-12	1	20.00
6902-NWO-20-20	1-5/8-12	1-1/4	62.00
6902-NWO-24-24	1-7/8-12	1-1/2	68.19

## 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	0.32
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

## 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

HYDRAULIC

**STEEL FLANGE ADAPTERS**

**CONFORMANCE**

- SAE J518

**MATERIALS**

- Steel per SAE J518 with either black phosphate finish or plated zinc 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.

**HYDRAULIC**



# 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	17.35
1700-8-12	3/4-16	3/4	1.50	19.12
1700-12-12	1-1/16-12	3/4	1.50	18.20
1700-12-16	1-1/16-12	1	1.75	18.20
1700-16-16	1-5/16-12	1	1.75	22.43
1700-16-20	1-5/16-12	1-1/4	2.00	28.20
1700-16-24	1-5/16-12	1-1/2	2.37	69.37
1700-20-16	1-5/8-12	1	1.75	25.79
1700-20-20	1-5/8-12	1-1/4	2.00	25.87
1700-20-32	1-5/8-12	2	2.81	83.99
1700-24-24	1-7/8-12	1-1/2	2.37	35.85
1700-32-32	2-1/2-12	2	2.81	119.23
1700-40-40	3-12	2-1/2	3.31	240.15

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	28.07
1703-8-12	3/4-16	3/4	1.50	46.61
1703-12-12	1-1/16-12	3/4	1.50	25.95
1703-12-16	1-1/16-12	1	1.75	46.49
1703-16-16	1-5/16-12	1	1.75	30.92
1703-16-20	1-5/16-12	1-1/4	2.00	47.70
1703-16-24	1-5/16-12	1-1/2	2.37	62.07
1703-20-16	1-5/8-12	1	1.75	37.28
1703-20-20	1-5/8-12	1-1/4	2.00	43.25
1703-20-24	1-5/8-12	1-1/2	2.37	65.69
1703-32-24	2-1/2-12	1-1/2	2.37	99.57
1703-32-32	2-1/2-12	2	2.81	121.95

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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	35.43
1704-10-16	7/8-14	1	1.75	155.00
1704-12-12	1-1/16-12	3/4	1.50	28.58
1704-12-16	1-1/16-12	1	1.75	33.65
1704-12-20	1-1/16-12	1-1/4	2.00	43.75
1704-16-12	1-5/16-12	3/4	1.50	25.56
1704-16-16	1-5/16-12	1	1.75	30.75
1704-16-20	1-5/16-12	1-1/4	2.00	52.91
1704-16-24	1-5/16-12	1-1/2	2.37	75.13
1704-20-16	1-5/8-12	1	1.75	37.94
1704-20-20	1-5/8-12	1-1/4	2.00	41.75
1704-20-24	1-5/8-12	1-1/2	2.37	54.66
1704-24-16	1-7/8-12	1	1.75	73.51
1704-24-20	1-7/8-12	1-1/4	2.00	57.31
1704-24-32	1-7/8-12	2	2.81	94.76
1704-24-40	1-7/8-12	2-1/2	3.31	275.35
1704-32-24	2-1/2-12	1-1/2	2.37	184.49
1704-32-32	2-1/2-12	2	2.81	93.02

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	34.46
1800-12-12	1-1/16-12	3/4	1.62	24.29
1800-12-16	1-1/16-12	1	1.88	35.20
1800-16-16	1-5/16-12	1	1.88	26.79
1800-16-20	1-5/16-12	1-1/4	2.12	38.47
1800-20-16	1-5/8-12	1	1.88	38.37
1800-20-20	1-5/8-12	1-1/4	2.12	37.78
1800-20-24	1-5/8-12	1-1/2	2.50	58.25
1800-24-24	1-7/8-12	1-1/2	2.50	53.58
1800-32-32	2-1/2-12	2	3.12	171.48

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# HYDRAULIC ADAPTERS

## JIC FLANGE 45° ADAPTER



Part #	JIC Thread Size 1	Flange Size 2	Flange Head OD	List Price
1803-12-12	1-1/16-12	3/4	1.62	35.04
1803-12-16	1-1/16-12	1	1.88	41.41
1803-16-16	1-5/16-12	1	1.88	45.15
1803-16-20	1-5/16-12	1-1/4	2.12	40.00
1803-20-16	1-5/8-12	1	1.88	72.98
1803-20-20	1-5/8-12	1-1/4	2.12	80.19
1803-20-24	1-5/8-12	1-1/2	2.50	78.45
1803-24-24	1-7/8-12	1-1/2	2.50	83.42
1803-32-32	2-1/2-12	2	3.12	18.83

More sizes available

## JIC FLANGE 90° ADAPTER



Part #	JIC Thread Size 1	Flange Size 2	Flange Head OD	List Price
1804-8-8	3/4-16	1/2	1.25	35.77
1804-12-12	1-1/16-12	3/4	1.62	24.76
1804-12-16	1-1/16-12	1	1.88	39.21
1804-16-16	1-5/16-12	1	1.88	46.38
1804-16-20	1-5/16-12	1-1/4	2.12	60.34
1804-20-16	1-5/8-12	1	1.88	50.12
1804-20-20	1-5/8-12	1-1/4	2.12	51.43
1804-20-24	1-5/8-12	1-1/2	2.50	68.12
1804-24-24	1-7/8-12	1-1/2	2.50	101.38
1804-32-32	2-1/2-12	2	3.12	169.58

More sizes available

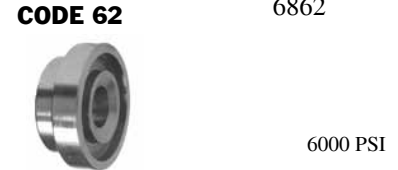
## BRAZE TO SPLIT FLANGE



Part #	Flange Size	Tube O.D.	List Price
1861-8	1/2	1/2	9.70
1861-12	3/4	3/4	7.71
1861-16	1	1	21.74
1861-20	1-1/4	1-1/4	11.48
1861-24	1-1/2	1-1/2	12.22
1861-32	2	2	13.88
1861-40	2-1/2	2-1/2	51.28

# FLANGE ADAPTERS

## BRAZE TO SPLIT FLANGE



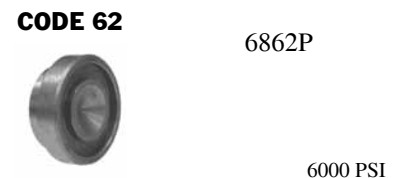
Part #	Flange Size	Tube O.D.	List Price
1862-8	1/2	1/2	53.60
1862-12	3/4	3/4	23.58
1862-16	1	1	21.74
1862-20	1-1/4	1-1/4	25.21
1862-24	1-1/2	1-1/2	26.10
1862-32	2	2	44.72

## SPLIT FLANGE PLUG



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



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

# HYDRAULIC 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	29.31
1901-20	1-1/4	2.00	27.28
1901-24	1-1/2	2.38	28.28
1901-32	2	2.81	37.41
1901-40	2-1/2	3.31	44.54
1901-48	3	4.00	74.92

## SPLIT FLANGE KIT

SFXX

### CODE 62



6000 PSI

Part #	Flange Size	Flange Head Diameter	List Price
1902-8	1/2	1.25	64.61
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	49.56
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	4.00
2061-12	3/4	1.50	3.67
2061-16	1	1.75	3.32
2061-20	1-1/4	2.00	4.24
2061-24	1-1/2	2.38	5.68
2061-32	2	2.81	7.26
2061-40	2-1/2	3.31	12.00
2061-48	3	4	19.00

## 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	6.67
2062-16	1	1.88	7.84
2062-20	1-1/4	2.12	13.57
2062-24	1-1/2	2.50	17.14
2062-32	2	3.12	35.60

HYDRAULIC



## HYDRAULIC ADAPTERS

## FLANGE 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	24.94
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	28.78
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	34.64

### 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	105.77
2262-16-16	1	65.17
2262-20-20	1-1/4	96.05
2262-24-24	1-1/2	102.86
2262-32-32	2	123.13
2262-40-40	2-1/2	175.00
2262-48-48	3	434.92

### 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	43.31
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	577.81

### 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	64.99
2362-16-16	1-5/16-12	1	84.08
2362-20-20	1-5/8-12	1-1/4	93.02
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 zinc 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 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-

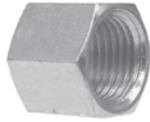


## HYDRAULIC ADAPTERS

## O-RING FACE SEAL ADAPTERS

### BRAZE TUBE NUT (SLEEVE REQUIRED)

SAE 520110



FF318  
FF1311

Part #	Tube O.D.	Braze Tube O.D.	List Price
FSO318-4	1/4	.25	0.73
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	5.98
FSO318-24	1 1/2	1.50	9.37

### BRAZE TUBE SLEEVE

SAE 520115



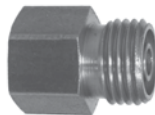
FF319  
FF3019

Part #	Tube O.D.	List Price
FSO319-4	1/4	0.68
FSO319-6	3/8	0.83
FSO319-8	1/2	1.00
FSO319-10	5/8	1.09
FSO319-12	3/4	1.68
FSO319-16	1	2.54
FSO319-20	1-1/4	3.76
FSO319-24	1-1/2	5.24

See Page 320 for JIC Nut and Sleeve

### BRAZE TUBE UNION

SAE 520104



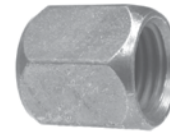
FF403

Part #	Braze Port	Flat Face Thread	List Price
FSO403-4-4	1/4	9/16-18	4.84
FSO403-6-6	3/8	11/16-16	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	8.67
FSO403-20-20	1-1/4	1-11/16-12	28.72
FSO403-24-24	1-1/2	2-12	34.88

More sizes available

### CAP

SAE 520112

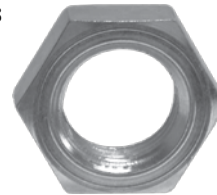


FF304C

Part #	Tube O.D.	Flat Face Thread	List Price
FSO304-C-4	1/4	9/16-18	1.46
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	4.53
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	14.69

### BULKHEAD LOCKNUT

SAE 520118



Part #	Thread Size	List Price
FSO306-4	9/16-18	0.61
FSO306-6	11/16-16	0.78
FSO306-8	13/16-16	1.23
FSO306-10	1-14	1.23
FSO306-12	1-3/16-12	1.78
FSO306-16	1-7/16-12	3.67
FSO306-20	1-11/16-12	4.39
FSO306-24	2-12	6.17

### MALE UNION CONNECTOR

SAE 520102



FF2403  
FF1203

Part #	Tube O.D.	Flat Face Thread 1	List Price
FSO2403-4-4	1/4	9/16-18	2.00
FSO2403-6-6	3/8	11/16-16	2.67
FSO2403-8-8	1/2	13/16-16	3.56
FSO2403-12-12	3/4	1-3/16-12	6.95
FSO2403-16-16	1	1-7/16-12	11.06
FSO2403-20-20	1-1/4	1-11/16-12	14.89
FSO2403-24-24	1-1/2	2-12	26.45

# O-RING FACE SEAL ADAPTERS

# HYDRAULIC ADAPTERS

## MALE O-RING FACE SEAL ADAPTER

**NEW**



Part #	Flat Face Thread 1	Male Pipe Size 2	List Price
FSO2404-4-2	9/16-18	1/8-27	1.90
FSO2404-4-4	9/16-18	1/4-18	1.71
FSO2404-4-6	9/16-18	3/8-18	2.48
FSO2404-4-8	9/16-18	1/2-14	3.71
FSO2404-6-2	11/16-16	1/8-27	2.33
FSO2404-6-4	11/16-16	1/4-18	2.05
FSO2404-6-6	11/16-16	3/8-18	2.24
FSO2404-6-8	11/16-16	1/2-14	2.57
FSO2404-8-4	13/16-16	1/4-18	3.38
FSO2404-8-6	13/16-16	3/8-18	2.57
FSO2404-8-8	13/16-16	1/2-14	2.57
FSO2404-8-12	13/16-16	3/4-14	4.81
FSO2404-10-8	1-14	1/2-14	2.90
FSO2404-10-12	1-14	3/4-14	4.29
FSO2404-12-8	1-3/16-12	1/2-14	5.57
FSO2404-12-12	1-3/16-12	3/4-14	4.38
FSO2404-12-16	1-3/16-12	1-11-1/2	6.10
FSO2404-16-12	1-7/16-12	3/4-14	6.10
FSO2404-16-16	1-7/16-12	1-11-1/2	6.33
FSO2404-16-20	1-7/16-12	1-1/4-11-1/2	13.24
FSO2404-20-16	1-11/16-12	1-11-1/2	14.00
FSO2404-20-20	1-11/16-12	1-1/4-11-1/2	10.38
FSO2404-24-24	2-12	1-1/2-11-1/2	23.00

## FEMALE ORFS REDUCER

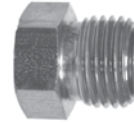
**NEW**



Part #	JIC Thread Size 1	Flat Face Thread 2	List Price
FSO2406-6-4	11/16-16	9/16-18	4.29
FSO2406-8-4	13/16-16	9/16-18	5.95
FSO2406-8-6	13/16-16	11/16-16	4.76
FSO2406-10-6	1-14	11/16-16	5.48
FSO2406-10-8	1-14	13/16-16	5.48
FSO2406-12-6	1-3/16-12	11/16-16	8.33
FSO2406-12-8	1-3/16-12	13/16-16	8.33
FSO2406-12-10	1-3/16-12	1-14	8.93
FSO2406-16-8	1-7/16-12	13/16-16	12.86
FSO2406-16-12	1-7/16-12	1-3/16-12	12.86
FSO2406-20-12	1-11/16-12	1-3/16-12	21.00
FSO2406-20-16	1-11/16-12	1-7/16-12	21.00
FSO2406-24-20	2-12	1-11/16-12	21.00

SAE 520109

## PLUG



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	2.18
FSO2408-12	3/4	1-3/8-12	3.04
FSO2408-16	1	1-7/16-12	4.82
FSO2408-20	1-1/4	1-11/16-12	7.76
FSO2408-24	1-1/2	2-12	21.77

## ORFS UNION ELBOW 90°

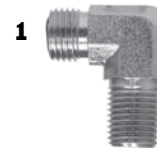
**NEW**



Part #	Flat Face Thread 1	Flat Face Thread 2	List Price
FS2500-4-4	9/16-18	9/16-18	3.14
FS2500-6-6	11/16-16	11/16-16	4.24
FS2500-8-8	13/16-16	13/16-16	5.05
FS2500-10-10	1-14	1-14	6.86
FS2500-12-12	1-3/16-12	1-3/16-12	10.00
FS2500-16-16	1-7/16-12	1-7/16-12	13.00
FS2500-20-20	1-11/16-12	1-11/16-12	25.24
FS2500-24-24	2-12	2-12	50.29

## 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	3.54
FS2501-6-4	11/16-16	1/4	4.22
FS2501-6-6	11/16-16	3/8	3.16
FS2501-8-6	13/16-16	3/8	3.47
FS2501-8-8	13/16-16	1/2	5.05
FS2501-8-12	13/16-16	3/4	8.26
FS2501-10-8	1-14	1/2	9.41
FS2501-10-12	1-14	3/4	7.41
FS2501-12-8	1-3/8-12	1/2	7.78
FS2501-12-12	1-3/8-12	3/4	10.39
FS2501-12-16	1-3/8-12	1	10.64
FS2501-16-12	1-7/16-12	3/4	11.45
FS2501-16-16	1-7/16-12	1	24.44
FS2501-20-20	1-11/16-12	1-1/4	25.83
FS2501-24-24	2-12	1-1/2	41.11

More sizes available

HYDRAULIC

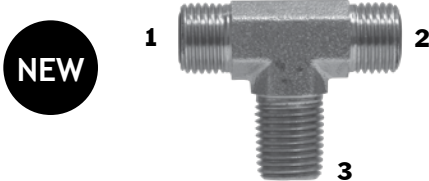
## HYDRAULIC ADAPTERS

### ORFS TO PIPE ELBOW 45°



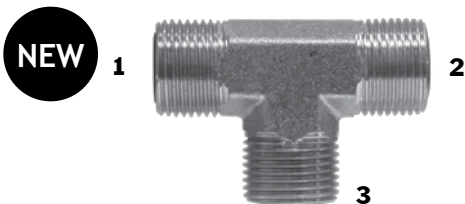
Part #	Flat Face Thread 1	Flat Face Thread 2	List Price
FS2503-4-2	9/16-18	9/16-18	3.76
FS2503-4-4	9/16-18	11/16-16	3.14
FS2503-6-4	11/16-16	13/16-16	3.71
FS2503-6-6	11/16-16	1-14	3.95
FS2503-8-6	13/16-16	1-3/16-12	5.38
FS2503-8-8	13/16-16	1-7/16-12	5.05
FS2503-10-8	1-14	1-11/16-12	6.29
FS2503-12-12	1-3/16-12	2-12	7.95
FS2503-16-16	1-7/16-12	1-11/16-12	12.98

### ORFS TO PIPE BRANCH TEE



Part #	Flat Face Thread 1+2	Male Pipe 3	List Price
FS2601-4-4	9/16-18	1/4-18	6.86
FS2601-6-6	11/16-16	3/8-18	7.33
FS2601-8-8	13/16-16	1/2-14	7.95
FS2601-12-12	1-3/16-12	3/4-14	15.00
FS2601-16-16	1-7/16-12	1-11-1/2	29.19

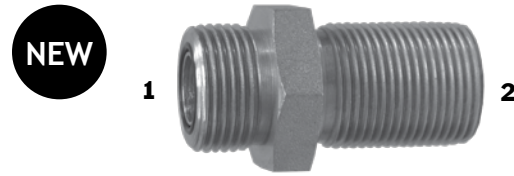
### ORFS UNION TEE



Part #	Flat Face Thread 1+2+3	List Price
FS2603-4-4	9/16-18	5.14
FS2603-6-6	11/16-16	7.05
FS2603-8-8	13/16-16	7.43
FS2603-10-10	1-14	10.43
FS2603-12-12	1-3/16-12	16.14
FS2603-16-16	1-7/16-12	21.14
FS2603-20-20	1-11/16-12	32.29
FS2603-24-24	2-12	47.81

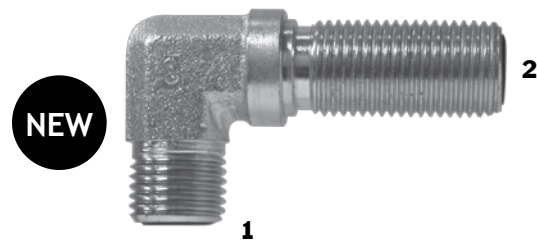
## O-RING FACE SEAL ADAPTERS

### ORFS BULKHEAD UNION



Part #	Flat Face Thread 1+2	List Price
FS2700-4-4	9/16-18	2.10
FS2700-6-6	11/16-16	2.81
FS2700-8-8	13/16-16	3.86
FS2700-10-10	1-14	7.57
FS2700-12-12	1-3/16-12	8.19
FS2700-16-16	1-7/16-12	9.67
FS2700-20-20	1-11/16-12	18.90
FS2700-24-24	2-12	28.10

### ORFS BULKHEAD UNION 90°



Part #	Flat Face Thread 1+2	List Price
FS2701-4-4	9/16-18	4.19
FS2701-6-6	11/16-16	5.24
FS2701-8-8	13/16-16	6.29
FS2701-10-10	1-14	7.62
FS2701-12-12	1-3/16-12	12.14
FS2701-16-16	1-7/16-12	14.76
FS2701-20-20	1-11/16-12	28.05
FS2701-24-24	2-12	45.29

### ORFS BULKHEAD UNION 45°

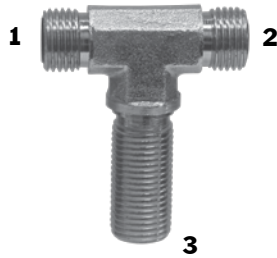


Part #	Flat Face Thread 1+2	List Price
FS2702-4-4	9/16-18	4.19
FS2702-6-6	11/16-16	5.48
FS2702-8-8	13/16-16	5.95
FS2702-10-10	1-14	8.43
FS2702-12-12	1-3/16-12	11.62
FS2702-16-16	1-7/16-12	17.95
FS2702-20-20	1-11/16-12	28.05



# O-RING FACE SEAL ADAPTERS

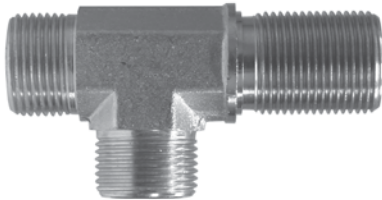
## ORFS BULKHEAD UNION BRANCH TEE



**NEW**

Part #	Flat Face Thread 1+2+3	List Price
FS2703-4	9/16-18	6.38
FS2703-6	11/16-16	8.48
FS2703-8	13/16-16	10.86
FS2703-10	1-14	15.86
FS2703-12	1-3/16-12	19.95
FS2703-16	1-7/16-12	26.57
FS2703-20	1-11/16-12	44.95

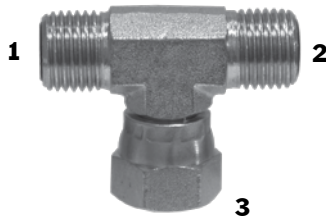
## ORFS BULKHEAD UNION RUN TEE



**NEW**

Part #	Flat Face Thread 1+2+3	List Price
FS2704-4-4	9/16-18	6.38
FS2704-6-6	11/16-16	9.43
FS2704-8-8	13/16-16	10.86
FS2704-10-10	1-14	15.86
FS2704-12-12	1-3/16-12	20.14
FS2704-16-16	1-7/16-12	27.95
FS2704-20-20	1-11/16-12	44.95

## ORFS TO SWIVEL BRANCH TEE

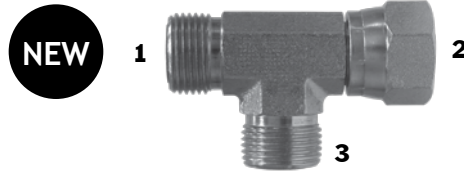


**NEW**

Part #	Flat Face Thread 1+2	Female JIC 3	List Price
FS6600-4-4	9/16-18	9/16-18	7.05
FS6600-6-6	11/16-16	11/16-16	8.38
FS6600-8-8	13/16-16	13/16-16	10.33
FS6600-10-10	1-14	1-14	16.10
FS6600-12-12	1-3/16-12	1-3/16-12	21.38
FS6600-16-16	1-7/16-12	1-7/16-12	30.67
FS6600-20-20	1-11/16-12	1-11/16-12	47.57
FS6600-24-24	2-12	2-12	66.81

# HYDRAULIC ADAPTERS

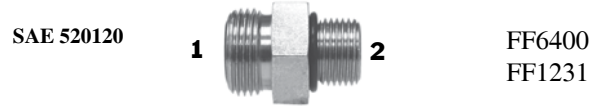
## ORFS TO SWIVEL RUN TEE



**NEW**

Part #	Flat Face Thread 1+3	Female JIC 2	List Price
FS6602-4-4	9/16-18	9/16-18	6.81
FS6602-6-6	11/16-16	11/16-16	9.10
FS6602-8-8	13/16-16	13/16-16	9.81
FS6602-10-10	1-14	1-14	15.86
FS6602-12-12	1-3/16-12	1-3/16-12	21.33
FS6602-16-16	1-7/16-12	1-7/16-12	31.05
FS6602-20-20	1-11/16-12	1-11/16-12	44.90
FS6602-24-24	2-12	2-12	75.81

## STRAIGHT THREAD CONNECTOR

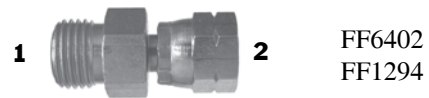


SAE 520120

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	1.78
FS6400-O-6-4	11/16-16	7/16-20	2.95
FS6400-O-6-6	11/16-16	9/16-18	1.72
FS6400-O-6-8	11/16-16	3/4-16	2.95
FS6400-O-8-6	13/16-16	9/16-18	1.78
FS6400-O-8-8	13/16-16	3/4-16	2.95
FS6400-O-8-10	13/16-16	7/8-14	3.04
FS6400-O-10-8	1-14	3/4-16	3.70
FS6400-O-10-10	1-14	7/8-14	3.32
FS6400-O-10-12	1-14	1-1/16-12	4.66
FS6400-O-12-8	1-3/16-12	3/4-16	5.05
FS6400-O-12-10	1-3/16-12	7/8-14	4.59
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	8.71
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	6.90
FS6400-O-16-20	1-7/16-12	1-5/8-12	23.40
FS6400-O-20-20	1-11/16-12	1-5/8-12	15.35
FS6400-O-20-24	1-11/16-12	1-7/8-12	25.52
FS6400-O-24-20	2-12	1-5/8-12	69.81
FS6400-O-24-24	2-12	1-7/8-12	20.74

## MALE FLAT FACE TO FEMALE 37 ° SWIVEL



FF6402  
FF1294

Part #	Flat Face Thread 1	JIC Thread 2	List Price
FS6402-4-4	9/16-18	7/16-20	3.81
FS6402-6-6	11/16-16	9/16-18	4.66
FS6402-8-8	13/16-16	3/4-16	5.61
FS6402-10-10	1-14	7/8-14	7.89
FS6402-12-12	1-3/16-12	1-1/16-12	49.52
FS6402-16-16	1-7/16-12	1-5/16-12	29.58

More sizes available

HYDRAULIC

# HYDRAULIC ADAPTERS

# O-RING FACE SEAL ADAPTERS

## SWIVEL NUT ELBOW



FF6500  
FF1236

Part #	Flat Face Thread 1	Flat Face Thread 2	List Price
FS6500-4-4	9/16-18	9/16-18	4.67
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	9.66
FS6500-12-12	1-3/16-12	1-3/16-12	15.56
FS6500-16-16	1-7/16-12	1-7/16-12	24.23
FS6500-20-20	1-11/16-12	1-11/16-12	34.66
FS6500-24-24	2-12	2-12	50.22

## MALE JIC 37° FLARE TO FEMALE FLAT FACE SWIVEL



FF6504  
FF1296

Part #	JIC Thread Size 1	Flat Face Thread 2	List Price
FS6504-4-4	7/16-20	9/16-18	6.36
FS6504-6-6	9/16-18	11/16-16	5.22
FS6504-8-8	3/4-16	13/16-16	6.46
FS6504-10-10	7/8-14	1-14	30.70
FS6504-12-12	1-1/16-12	1-3/16-12	10.39
FS6504-16-16	1-5/16-12	1-7/16-12	53.74

## 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	3.08
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	6.46
FS6801-8-6	13/16-16	9/16-18	5.37
FS6801-8-8	13/16-16	3/4-16	5.58
FS6801-8-10	13/16-16	7/8-14	7.17
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	13.76
FS6801-12-10	1-3/16-12	7/8-14	10.83
FS6801-12-12	1-3/16-12	1-1/16-12	12.29
FS6801-12-16	1-3/16-12	1-5/16-12	19.58
FS6801-16-12	1-7/16-12	1-1/16-12	18.04
FS6801-16-16	1-7/16-12	1-5/16-12	17.58
FS6801-16-20	1-7/16-12	1-5/8-12	25.64
FS6801-20-16	1-11/16-12	1-5/16-12	27.62
FS6801-20-20	1-11/16-12	1-5/8-12	24.51
FS6801-24-24	2-12	1-7/8-12	34.58

More sizes available

## ORFS TO O-RING ELBOW 45°



NEW

Part #	Flat Face Thread 1	O-Ring Size 2	List Price
FS6802-4-4	9/16-18	7/16-20	3.33
FS6802-4-6	9/16-18	9/16-18	4.52
FS6802-6-4	11/16-16	7/16-20	4.76
FS6802-6-6	11/16-16	9/16-18	4.76
FS6802-6-8	11/16-16	3/4-16	5.48
FS6802-8-6	13/16-16	9/16-18	5.48
FS6802-8-8	13/16-16	3/4-16	5.48
FS6802-8-10	13/16-16	7/8-14	9.10
FS6802-10-8	1-14	3/4-16	9.14
FS6802-10-10	1-14	7/8-14	9.14
FS6802-10-12	1-14	1-1/16-12	12.67
FS6802-12-8	1-3/16-12	3/4-16	11.90
FS6802-12-10	1-3/16-12	7/8-14	11.90
FS6802-12-12	1-3/16-12	1-1/16-12	12.67
FS6802-12-16	1-3/16-12	1-5/16-12	16.38
FS6802-16-12	1-7/16-12	1-1/16-12	16.33
FS6802-16-16	1-7/16-12	1-5/16-12	18.00
FS6802-16-20	1-7/16-12	1-5/8-12	24.29
FS6802-20-20	1-11/16-12	1-5/8-12	23.76
FS6802-24-24	2-12	1-7/8-12	38.76

## ORFS TO O-RING BRANCH TEE



NEW

Part #	Face Seal Thread 1 + 2	O-Ring Size 3	List Price
FS6803-4-4	9/16-18	7/16-20	6.62
FS6803-6-6	11/16-16	9/16-18	8.10
FS6803-8-8	13/16-16	3/4-16	9.24
FS6803-10-10	1-14	7/8-14	15.24
FS6803-12-12	1-3/16-12	1-1/16-12	21.05
FS6803-16-16	1-7/16-12	1-5/16-12-16	28.52
FS6803-20-20	1-11/16-12	1-5/8-12	46.52
FS6803-24-24	2-12	1-7/8-12	70.48

## ORFS TO O-RING RUN TEE



NEW

Part #	Face Seal Thread 1	O-Ring Size 2	Thread Size 3	List Price
FS6804-4-4	9/16-18	9/16-18	7/16-20	6.62
FS6804-6-6	11/16-16	11/16-16	9/16-18	8.10
FS6804-8-8	13/16-16	13/16-16	3/4-16	9.24
FS6804-10-10	1-14	1-14	7/8-14	13.33
FS6804-12-12	1-3/16-12	1-3/16-12	1-1/16-12	21.05
FS6804-16-16	1-7/16-12	1-7/16-12	1-5/16-12-16	28.52
FS6804-20-20	1-11/16-12	1-11/16-12	1-5/8-12	46.52
FS6804-24-24	2-12	2-12	1-7/8-12	70.40



# STEEL BSPT ADAPTERS

## 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	7.25
FS6809-6-6	9/16-18	11/16-16	6.43
FS6809-8-8	3/4-16	13/16-16	9.14
FS6809-10-10	7/8-14	1-14	16.61
FS6809-12-12	1-1/16-12	1-3/16-12	20.85
FS6809-16-16	1-5/16-12	1-7/16-12	25.13

# STEEL BSPT ADAPTERS

## JIC MALE CONNECTOR BSPT



3404  
305

Part #	JIC Thread Size 1	Male BSPT 2	List Price
7000-4-2	7/16-20	1/8-28	7.86
7000-4-4	7/16-20	1/4-19	6.29
7000-6-4	9/16-18	1/4-19	9.64
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	12.35
7000-8-8	3/4-16	1/2-14	11.25
7000-8-12	3/4-16	3/4-14	50.32
7000-10-8	7/8-14	1/2-14	11.45
7000-10-12	7/8-14	3/4-14	21.77
7000-12-8	1-1/16-12	1/2-14	14.66
7000-12-12	1-1/16-12	3/4-14	24.19
7000-16-16	1-5/16-12	1-11	45.75
7000-20-20	1-5/8-12	1-1/4-11	45.20

More sizes available

## JIC MALE ELBOW BSPT



3501  
315

Part #	JIC Thread Size 1	Male BSPT 2	List Price
7200-4-2	7/16-20	1/8-28	20.35
7200-4-4	7/16-20	1/4-19	24.00
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



3520  
MBT

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	15.00
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



100B-Y  
KA-RM  
MHL  
296

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



3420  
MB

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	42.13
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

# STEEL BSPP 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	33.97
7202-NWO-4-4	7/16-20	1/4-19	21.55
7202-NWO-6-4	9/16-18	1/4-19	23.00
7202-NWO-6-6	9/16-18	3/8-19	28.45
7202-NWO-6-8	9/16-18	1/2-14	30.70
7202-NWO-8-6	3/4-16	3/8-19	33.79
7202-NWO-8-8	3/4-16	1/2-14	41.18
7202-NWO-8-12	3/4-16	3/4-14	75.55
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

## 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	8.29
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	25.95
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	72.25
7002-24-24	1-7/8-12	1-1/2-11	79.00

*More sizes available*

# STEEL BSPP METRIC ADAPTERS

# HYDRAULIC ADAPTERS

## JIC TO BSPP STRAIGHT SWIVEL



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	20.84
7022-6-6	9/16-18	3/8-19	16.83
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



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	3.94
9522-P-12	3/4-14	11.07
9522-P-16	1-11	20.39
9522-P-20	1-1/4-11	37.00

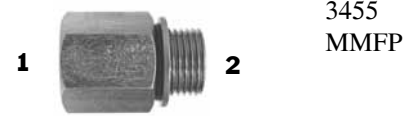
## HOLLOW HEX PLUG BSPP



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

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

## FEMALE ADAPTER BSPP

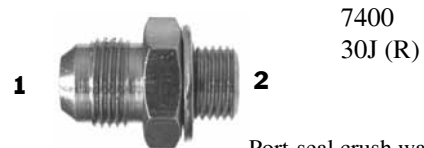


Part #	Female Pipe 1	Male BSPP 2	List Price
7042-2-2	1/8	1/8-28	14.02
7042-4-2	1/4	1/8-28	20.41
7042-4-4	1/4	1/4-19	10.86
7042-6-6	3/8	3/8-19	24.15
7042-8-8	1/2	1/2-14	28.57
7042-12-12	3/4	3/4-14	31.43
7042-16-16	1	1-11	44.90
7042-20-20	1-1/4	1-1/4-11	64.04
7042-24-24	1-1/2	1-1/2-11	96.15

More sizes available

# STEEL METRIC ADAPTERS

## MALE CONNECTOR



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	12.80
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	11.43
7005-6-16	9/16-18	16x1.5	14.38
7005-6-18	9/16-18	18x1.5	21.14
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	186.19

# HYDRAULIC ADAPTERS

## MALE ELBOW



7801  
315 (R)

Port-seal crush washer  
and O-ring included

Part #	JIC Thread Size 1	Metric Thread 2	List Price
7205-NWO-4-10	7/16-20	10x1.0	29.93
7205-NWO-4-12	7/16-20	12x1.5	29.48
7205-NWO-4-14	7/16-20	14x1.5	23.13
7205NWO-5-12	1/2-20	12x1.5	40.00
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

## STRAIGHT SWIVEL



7402  
30JS (R)

Part #	JIC Thread Size 1	Metric Thread 2	List Price
7025-4-10	7/16-20	10x1.0	24.94
7025-4-12	7/16-20	12x1.5	24.40
7025-5-12	1/2-20	12x1.5	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

*Send Midland all your  
high volume quotes!*

# 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	16.39
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)



Part #	Female Pipe Thread 1	Metric Thread 2	List Price
7045-2-10	1/8	10x1.0	25.96
7045-4-12	1/4	12x1.5	19.89
7045-4-14	1/4	14x1.5	17.07
7045-6-12	3/8	12x1.5	33.06
7045-6-16	3/8	16x1.5	21.81
7045-6-18	3/8	18x1.5	25.23
7045-8-16	1/2	16x1.5	45.11
7045-8-18	1/2	18x1.5	18.22
7045-8-22	1/2	22x1.5	36.54
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	177.23
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



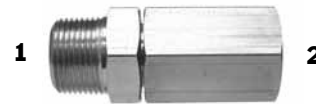
Part #	JIC Thread Size 1	Male Pipe Thread 2	List Price
HP2501-6-4	9/16-18	1/4	126.91
HP2501-6-6	9/16-18	3/8	105.35
HP2501-8-6	3/4-16	3/8	105.35
HP2501-8-8	3/4-16	1/2	113.88
HP2501-10-8	7/8-14	1/2	155.21
HP2501-12-12	1-1/16-12	3/4	239.66
HP2501-16-16	1-5/16-12	1	236.19
HP2501-20-20	1-5/8-12	1-1/4	437.60
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	170.33
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

HYDRAULIC



# 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	264.43
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

## 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	166.80
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

## 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

## 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

## 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	179.61
HP6801-8-8	3/4-16	3/4-16	126.91
HP6801-10-10	7/8-14	7/8-14	132.29
HP6801-12-12	1-1/16-12	1-1/16-12	191.88
HP6801-16-16	1-5/16-12	1-5/16-12	275.46
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	4.39
4404-4-4	1/4	1/4	2.65
4404-5-2	5/16	1/8	11.34
4404-6-4	3/8	1/4	3.31
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	3.14
4404-10-8	5/8	1/2	6.72
4404-12-12	3/4	3/4	5.08
4404-16-12	1	3/4	7.24
4404-16-16	1	1	6.93
4404-20-16	1-1/4	1	19.06
4404-20-20	1-1/4	1-1/4	18.83
4404-24-24	1-1/2	1-1/2	26.67

More sizes available

### 90° PIPE HOSE INSERT

SAE 430260



Part #	Hose I.D. 1	Pipe Thread 2	List Price
4501-4-4	1/4	1/4	5.24
4501-6-6	3/8	3/8	3.88
4501-8-6	1/2	3/8	5.02
4501-8-8	1/2	1/2	6.88
4501-10-8	5/8	1/2	4.98
4501-12-12	3/4	3/4	7.33
4501-16-12	1	3/4	11.02
4501-16-16	1	1	9.11
4501-20-16	1-1/4	1	20.68
4501-20-20	1-1/4	1-1/4	24.88
4501-24-24	1-1/2	1-1/2	40.59
4501-32-32	2	2	100.56

More sizes available

# HYDRAULIC ADAPTERS

### 45° PIPE HOSE INSERT

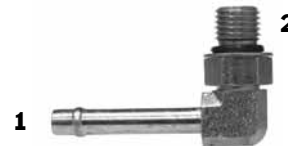
SAE 430360



Part #	Hose I.D. 1	Pipe Thread 2	List Price
4503-8-6	1/2	3/8	8.20
4503-10-8	5/8	1/2	6.98
4503-12-12	3/4	3/4	7.62
4503-16-16	1	1	12.10
4503-20-20	1-1/4	1-1/4	19.11

More sizes available

### 90° O-RING HOSE INSERT



Part #	Hose I.D. 1	O-Ring Thread 2	List Price
4601-NWO-4	1/4	7/16-20	4.00
4601-NWO-5	5/16	1/2-20	8.05
4601-NWO-6	3/8	9/16-18	3.94
4601-NWO-8	1/2	3/4-16	4.99
4601-NWO-10	5/8	7/8-14	7.14
4601-NWO-10-8	5/8	3/4-16	8.18
4601-NWO-12	3/4	1-1/16-12	7.55
4601-NWO-16	1	1-5/16-12	12.67
4601-NWO-16-12	1	1-1/16-12	11.33
4601-NWO-20	1-1/4	1-5/8-12	25.72
4601-NWO-24	1-1/2	1-7/8-12	36.88

More sizes available



## HYDRAULIC ADAPTERS

## STEEL BEADED HOSE INSERTS

### 45° O-RING HOSE INSERT



Part #	Hose I.D. 1	O-Ring Thread 2	List Price
4603-NWO-4	1/4	7/16-20	4.76
4603-NWO-6	3/8	9/16-18	5.74
4603-NWO-8	1/2	3/4-16	5.06
4603-NWO-10	5/8	7/8-14	9.05
4603-NWO-12	3/4	1-1/12-12	9.49
4603-NWO-16	1	1-5/16-12	15.25
4603-NWO-20	1-1/4	1-5/8-12	22.63
4603-NWO-24	1-1/2	1-7/8-12	35.47

*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	3.92
4604-O-6	3/8	9/16-18	4.39
4604-O-8	1/2	3/4-16	3.27
4604-O-10	5/8	7/8-14	4.15
4604-O-10-8	5/8	3/4-16	6.83
4604-O-12	3/4	1-1/16-12	4.83
4604-O-16	1	1-5/16-12	7.61
4604-O-16-12	1	1-1/16-12	7.74
4604-O-20	1-1/4	1-5/8-12	16.72
4604-O-20-16	1-1/4	1-5/16-12	20.42
4604-O-24	1-1/2	1-7/8-12	32.15
4604-O-24-20	1-1/2	1-5/8-12	32.16

*More sizes available*

A small boy swallowed some coins and was taken to a hospital. When his grandmother telephoned to ask how he was, a nurse said, "No change yet."

A chicken crossing the road is poultry in motion.

The short fortune-teller who escaped from prison was a small medium at large.

The man who survived mustard gas and pepper spray is now a seasoned veteran.

A backward poet writes inverse.

In democracy it's your vote that counts. In feudalism (as in DC) it's your count that votes.

When cannibals ate a missionary, they got a taste of religion and were sanctified.

Don't join dangerous cults: Practice safe sects.

# FLARELESS BITE-TYPE STEEL

## TUBE NUT

SAE 080110



7105  
BU-S

Part #	Tube O.D	JIC Thread Size	List Price
C318-2	1/8	5/16-24	2.45
C318-4	1/4	7/16-20	1.28
C318-6	3/8	9/16-18	1.52
C318-8	1/2	3/4-16	2.28
C318-12	3/4	1-1/16-12	4.03
C318-16	1	1-5/16-12	5.20

## TUBE SLEEVE

SAE 08011SA



TU-S  
7165

Part #	Tube O.D	List Price
C319-2	1/8	2.45
C319-4	1/4	1.40
C319-6	3/8	2.33
C319-8	1/2	3.08
C319-12	3/4	5.60
C319-16	1	8.40

## TUBE UNION

SAE 080101



7305  
HBU-S

Part #	Tube Size	List Price
C2403-2-2	1/8	17.62
C2403-4-4	1/4	9.63
C2403-6-6	3/8	14.05
C2403-8-8	1/2	19.18
C2403-12-12	3/4	33.83
C2403-16-16	1	52.90

# HYDRAULIC ADAPTERS

## MALE CONNECTOR

SAE 080102



FBU-S  
7205

Part #	Tube Size 1	Male Pipe Thread 2	List Price
C2404-2-2	1/8	1/8	9.22
C2404-6-4	3/8	1/4	8.63
C2404-6-6	3/8	3/8	10.78
C2404-8-6	1/2	3/8	12.08
C2404-8-8	1/2	1/2	13.00
C2404-12-12	3/4	3/4	22.30
C2404-16-16	1	1	35.12

## UNION ELBOW

SAE 080201

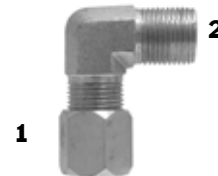


7505  
EBU-S

Part #	Tube Size	List Price
C2500-2-2	1/8	26.48
C2500-4-4	1/4	12.95
C2500-6-6	3/8	14.89
C2500-8-8	1/2	20.07
C2500-12-12	3/4	40.18
C2500-16-16	1	65.96

## MALE ELBOW

SAE 080202  
ms 51504



7405  
CBU-S

Part #	Tube Size 1	Male Pipe Size 2	List Price
C2501-4-2	1/4	1/8	9.33
C2501-4-4	1/4	1/4	11.90
C2501-6-2	3/8	1/8	16.75
C2501-6-4	3/8	1/4	11.27
C2501-6-6	3/8	3/8	15.75
C2501-6-8	3/8	1/2	19.02
C2501-8-4	1/2	1/4	17.27
C2501-8-6	1/2	3/8	15.51
C2501-8-8	1/2	1/2	23.92
C2501-12-12	3/4	3/4	29.65
C2501-16-16	1	1	48.42

## HYDRAULIC ADAPTERS

### FEMALE ELBOW

SAE 080203



7455  
DBU-S

Part #	Tube Size 1	Female Pipe Size 2	List Price
C2502-4-4	1/4	1/4	15.05
C2502-6-4	3/8	1/4	18.57
C2502-6-6	3/8	3/8	21.60
C2502-8-8	1/2	1/2	27.30
C2502-12-12	3/4	3/4	41.83
C2502-16-16	1	1	77.88

### MALE BRANCH TEE

SAE 080425



SBU-S  
7605

Part #	Tube Size 1&2	Pipe Thread Size 3	List Price
C2601-2-2	1/8	1/8	33.78
C2601-4-2	1/4	1/8	15.65
C2601-4-4	1/4	1/4	25.08
C2601-6-4	3/8	1/4	24.50
C2601-6-6	3/8	3/8	38.90
C2601-8-8	1/2	1/2	31.80
C2601-12-12	3/4	3/4	55.93
C2601-16-16	1	1	133.53

### FEMALE BRANCH TEE

SAE 080427



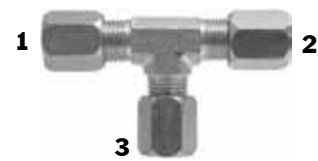
7655  
OBU-S

Part #	Tube Size 1+2	Female Pipe Size 3	List Price
C2602-4-4	1/4	1/4	28.25
C2602-6-4	3/8	3/8	30.21
C2602-6-6	1/2	3/8	47.48
C2602-8-8	1/2	1/2	35.00
C2602-12-12	3/4	3/4	60.73
C2602-16-16	1	1	200.25

## FLARELESS BITE-TYPE STEEL

### UNION TEE

SAE 080401



7705  
JBU-S

Part #	Tube Size	List Price
C2603-2-2	1/8	55.65
C2603-4-4	1/4	21.86
C2603-6-6	3/8	26.08
C2603-8-8	1/2	34.18
C2603-12-12	3/4	61.78
C2603-16-16	1	98.55

### MALE O-RING CONNECTOR

SAE 080120



7315  
F5B-J

Part #	Tube Size	O-Ring Thread 2	List Price
C6400-4-4	1/4	7/16-20	7.05
C6400-6-6	3/8	9/16-18	11.22
C6400-8-8	1/2	3/4-16	15.86
C6400-8-10	1/2	7/8-14	16.10
C6400-12-12	3/4	1-1/16-12	28.18
C6400-16-16	1	1-5/16-12	54.08

### O-RING ELBOW CONNECTOR

SAE 080220



7515  
C5BU-S

Part #	Tube Size 1	O-Ring Thread Size 2	List Price
C6801-2-2	1/8	5/16-24	10.50
C6801-4-4	1/4	7/16-20	12.43
C6801-6-6	3/8	9/16-18	17.38
C6801-8-8	1/2	3/4-16	17.38
C6801-12-12	3/4	1-1/16-12	34.05
C6801-16-16	1	1-5/16-12	45.80

### MALE O-RING BRANCH TEE

SAE 080429



7715  
S5BU-S

Part #	Tube Size Size 1 & 2	O-Ring Thread Size 3	List Price
C6803-4-4	1/4	7/16-20	26.83
C6803-6-6	3/8	9/16-18	26.43
C6803-8-8	1/2	3/4-16	41.83
C6803-12-12	3/4	1-1/16-12	86.44
C6803-16-16	1	1-5/16-12	95.81

# STAINLESS STEEL FLARELESS BITE-TYPE

# STAINLESS STEEL HYDRAULIC ADAPTERS

- Single Ferule bite-type
- Material 316SS
- Metal to Metal

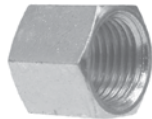


SAE 080110

## TUBE NUT

BU-SS

STAINLESS STEEL



Part #	Tube O.D	JIC Thread Size	List Price
SSC318-2	1/8	5/16-24	8.90
SSC318-4	1/4	7/16-20	6.26
SSC318-6	3/8	9/16-18	7.33
SSC318-8	1/2	3/4-16	12.02
SSC318-12	3/4	1-1/16-12	38.61
SSC318-16	1	1-5/16-12	34.39

## TUBE SLEEVE

SAE 08011SA

TU-SS

STAINLESS STEEL



Part #	Tube O.D	List Price
SSC319-2	1/8	7.93
SSC319-4	1/4	3.76
SSC319-6	3/8	5.06
SSC319-8	1/2	5.91
SSC319-12	3/4	12.42
SSC319-16	1	24.82

## TUBE UNION

STAINLESS STEEL

SAE 080101

HBU-SS



Part #	Tube Size	List Price
SSC2403-2-2	1/8	67.00
SSC2403-4-4	1/4	29.25
SSC2403-6-6	3/8	46.54
SSC2403-8-8	1/2	65.96
SSC2403-12-12	3/4	167.90
SSC2403-16-16	1	245.70

Don't see what you need?  
More sizes and configurations available on request.

**SS = Stainless Steel (316)**

## MALE CONNECTOR

SAE 080102

STAINLESS STEEL

FBU-SS



Part #	Tube Size 1	Male Pipe Thread 2	List Price
SSC2404-2-2	1/8	1/8	33.27
SSC2404-6-4	3/8	1/4	31.74
SSC2404-6-6	3/8	3/8	34.85
SSC2404-8-6	1/2	3/8	43.47
SSC2404-8-8	1/2	1/2	50.31
SSC2404-12-12	3/4	3/4	108.65
SSC2404-16-16	1	1	154.96

## UNION ELBOW

SAE 080201

EBU-SS

STAINLESS STEEL



Part #	Tube Size	List Price
SSC2500-2-2	1/8	144.97
SSC2500-4-4	1/4	49.48
SSC2500-6-6	3/8	76.08
SSC2500-8-8	1/2	109.65
SSC2500-12-12	3/4	168.05
SSC2500-16-16	1	331.45

## MALE ELBOW

SAE 080202  
ms 51504

CBU-SS

STAINLESS STEEL



Part #	Tube Size 1	Male Pipe Size 2	List Price
SSC2501-2-2	1/8	1/8	68.56
SSC2501-4-2	1/4	1/8	36.28
SSC2501-4-4	1/4	1/4	33.36
SSC2501-6-2	3/8	1/8	54.63
SSC2501-6-4	3/8	1/4	51.81
SSC2501-6-6	3/8	3/8	57.78
SSC2501-6-8	3/8	1/2	63.75
SSC2501-8-4	1/2	1/4	79.33
SSC2501-8-6	1/2	3/8	83.49
SSC2501-8-8	1/2	1/2	94.10
SSC2501-12-12	3/4	3/4	172.52
SSC2501-16-16	1	1	248.99

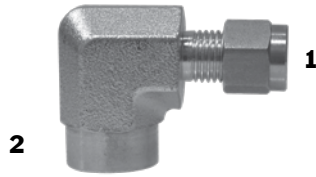
## HYDRAULIC ADAPTERS

### FEMALE ELBOW

SAE 080203

DBU-SS

**STAINLESS STEEL**



Part #	Tube Size 1	Female Pipe Size 2	List Price
SSC2502-4-4	1/4	1/4	71.44
SSC2502-6-4	3/8	1/4	66.42
SSC2502-6-6	3/8	3/8	139.48
SSC2502-8-8	1/2	1/2	125.87
SSC2502-12-12	3/4	3/4	204.39
SSC2502-16-16	1	1	332.16

### MALE BRANCH TEE

SAE 080425

SBU-SS

**STAINLESS STEEL**



Part #	Tube Size 1&2	Pipe Thread Size 3	List Price
SSC2601-2-2	1/8	1/8	134.49
SSC2601-4-2	1/4	1/8	56.45
SSC2601-4-4	1/4	1/4	85.84
SSC2601-6-4	3/8	1/4	76.66
SSC2601-6-6	3/8	3/8	132.24
SSC2601-8-8	1/2	1/2	198.96
SSC2601-12-12	3/4	3/4	415.82
SSC2601-16-16	1	1	492.40

### FEMALE BRANCH TEE

SAE 080427

OBU-SS

**STAINLESS STEEL**



Part #	Tube Size 1+2	Female Pipe Size 3	List Price
SSC2602-4-4	1/4	1/4	90.17
SSC2602-6-6	3/8	3/8	104.27
SSC2602-12-12	3/4	3/4	412.59

## STAINLESS STEEL BITE-TYPE

### UNION TEE

SAE 080401

7705

JBU-SS



**STAINLESS STEEL**

Part #	Tube Size	List Price
SSC2603-2-2	1/8	231.52
SSC2603-4-4	1/4	72.70
SSC2603-6-6	3/8	100.61
SSC2603-8-8	1/2	121.37
SSC2603-12-12	3/4	324.29
SSC2603-16-16	1	499.98

### MALE O-RING CONNECTOR

SAE 080120

F5B-SS



**STAINLESS STEEL**

Part #	Tube Size	O-Ring Thread 2	List Price
SSC6400-4-4	1/4	7/16-20	24.31
SSC6400-6-6	3/8	9/16-18	39.04
SSC6400-8-8	1/2	3/4-16	47.60
SSC6400-8-10	1/2	7/8-14	99.58
SSC6400-12-12	3/4	1-1/16-12	120.76
SSC6400-16-16	1	1-5/16-12	175.71

### O-RING ELBOW CONNECTOR

SAE 080220

C5BU-SS



**STAINLESS STEEL**

Part #	Tube Size 1	O-Ring Thread Size 2	List Price
SSC6801-4-4	1/4	7/16-20	28.34
SSC6801-6-6	3/8	9/16-18	68.97
SSC6801-8-8	1/2	3/4-16	71.79
SSC6801-12-12	3/4	1-1/16-12	231.13
SSC6801-16-16	1	1-5/16-12	354.38

### MALE O-RING BRANCH TEE

SAE 080429

S5BU-SS



**STAINLESS STEEL**

Part #	Tube Size Size 1 & 2	O-Ring Thread Size 3	List Price
SSC6803-4-4	1/4	7/16-20	95.74
SSC6803-6-6	3/8	9/16-18	150.85
SSC6803-8-8	1/2	3/4-16	102.03
SSC6803-12-12	3/4	1-1/16-12	447.74

# QUICK DISCONNECT

# HYDRAULIC COUPLINGS

**THREAD TO CONNECT, DRYBREAK NO-SPILL QUICK CONNECT - 3000 PSI MAX**



- Brass Body
- Steel Wing Nut
- Buna-Seal ( -40° to +250°F)

Aeroquip S100  
Parker 6100  
Snaptite B78



- Bonded Face Seal
- External ORing Alleviates Full Connection

Part #	Body Size	Female NPT	List Price
61-150	3/4	1/2	60.29

Part #	Body Size	NPT	List Price
61-050	3/4	1/2	55.76

\* More sizes available, just ask.

FEATURES - ISO A and ISO B (bold)

- Poppet valves to prevent uncoupled leakage
- Critical parts are induction hardened for durability
- Dependable ball-locking mechanism holds the mating halves together
- Socket and plug are precision machined from solid barstock
- Standard nitrile seals temp range -40°F to +250°F



## ISO-A FEMALE PIPE COUPLER

Part #	Body Size	NPT	List Price
ANV-14-F	1/4"	1/4"	10.43
ANV-38-F	3/8"	3/8"	11.75
ANV-12-F	1/2"	1/2"	15.81
ANV-34-F	3/4"	3/4"	33.06
ANV-1-F	1"	1"	42.86

ISO 7241-1 ISO-A Interchange ( Connected )				
Body Size	Steel Coupler/ Plug			
	Maximum Working		Burst	
	PSI	Bar	PSI	Bar
1/4"	5,000	345	18,270	1,200
3/8"	4,000	275	18,270	1,200
1/2"	4,000	275	16,500	1,100
3/4"	4,000	275	14,800	1,000
1"	4,000	275	12,400	850
1-1/4"	3,000	200	12,600	850
1-1/2"	3,000	200	12,600	850
2"	1,450	100	5,800	400



## ISO-A FEMALE PIPE PLUG

Part #	Body Size	NPT	List Price
ANV-14-M	1/4"	1/4"	5.00
ANV-38-M	3/8"	3/8"	6.38
ANV-12-M	1/2"	1/2"	7.34
ANV-34-M	3/4"	3/4"	10.95
ANV-1-M	1"	1"	17.76

INTERCHANGE DATA:

- Parker 6600, Aeroquip/ Eaton FD56, Dixon 'K' Series.
- Hansen HA 15000, Safeway S56



## ISO-B FEMALE PIPE COUPLER

Part #	Body Size	NPT	List Price
HNV-14-F	1/4"	1/4"	11.46
HNV-14-F-B	1/4"	1/4"	19.05
HNV-38-F	3/8"	3/8"	12.18
HNV-38-F-B	3/8"	3/8"	26.47
HNV-12-F	1/2"	1/2"	17.39
HNV-12-F-B	1/2"	1/2"	34.77
HNV-34-F	3/4"	3/4"	28.00
HNV-34-F-B	3/4"	3/4"	48.29
HNV-1-F	1"	1"	44.73
HNV-1-F-B	1"	1"	93.25

ISO 7241-1 Series B ISO-B Interchange ( Connected )								
Body Size	Steel Coupler/ Plug				Brass Coupler/ Plug			
	Max. Working		Burst		Max. Working		Burst	
	PSI	Bar	PSI	Bar	PSI	Bar	PSI	Bar
1/8"	4,000	275	14,500	1,000	3,000	200	16,500	1,100
1/4"	5,000	345	22,500	1,550	3,000	200	15,000	1,000
3/8"	4,000	275	16,500	1,150	2,500	175	12,000	800
1/2"	4,000	275	16,000	1,100	2,500	175	11,500	750
3/4"	4,000	275	16,500	1,150	2,000	150	12,000	800
1"	4,000	275	16,000	1,100	1,500	100	8,500	800

INTERCHANGE DATA:

- Parker 60 Series, Snap-tite 72 series, Dixon 'H' series
- Hansen HK - series, Aeroquip/ Eaton FDH5



## ISO-B FEMALE PIPE PLUG

Part #	Body Size	NPT	List Price
HNV-14-M	1/4"	1/4"	5.27
HNV-14-M-B	1/4"	1/4"	9.01
HNV-38-M	3/8"	3/8"	6.16
HNV-38-M-B	3/8"	3/8"	13.33
HNV-12-M	1/2"	1/2"	7.81
HNV-12-M-B	1/2"	1/2"	22.61
HNV-34-M	3/4"	3/4"	13.03
HNV-34-M-B	3/4"	3/4"	26.71
HNV-1-M	1"	1"	23.63
HNV-1-M-B	1"	1"	40.95

Suffix 'B' = Brass Material

HYDRAULIC



# HYDRAULIC COUPLINGS

# QUICK DISCONNECT

FLUSH FACE				
Body Size	Steel Coupler/ Plug Coupled			
	Maximum Working		Burst	
	PSI	Bar	PSI	Bar
1/4"	5,000	345	18,270	1,200
3/8"	4,000	275	18,270	1,200
1/2"	4,000	275	16,500	1,100
5/8"	4,000	275	14,800	1,000
3/4"	4,000	275	12,400	850
1"	3,000	200	12,600	850

FF Series  
HTMC  
74C



FF Series  
HTMN  
74N



### FEMALE PIPE COUPLER

Part #	Body Size	NPT	List Price
FF-14-F	1/4"	1/4"	46.21
FF-38-F	3/8"	3/8"	55.87
FF-12-F	1/2"	1/2"	71.42
FF-34-F	3/4"	3/4"	122.00
FF-1-F	1"	1"	158.73

### FEMALE PIPE PLUG

Part #	Body Size	NPT	List Price
FF-14-M	1/4"	1/4"	20.09
FF-38-M	3/8"	3/8"	31.91
FF-12-M	1/2"	1/2"	24.87
FF-34-M	3/4"	3/4"	66.66
FF-1-M	1"	1"	101.20

#### FEATURES

- Steel construction, zinc plated trivalent finish. Hardened Nipples and sleeves and solid barstock construction for maximum resistance to damage from hydraulic and mechanical shock.
- This Anti-Blowout Nitrile/ PTFE bonded seal is designed to prevent blow out or damage during severe service conditions.
- Durable ball-locking mechanism assures reliable connection everytime.

AG - Series Agricultural Interchange ( Connected )				
Nominal Size	Steel Coupler/ Plug			
	Maximum Working		Burst	
	PSI	Bar	PSI	Bar
1/4"	4,000	275	21,000	1,500
3/8"	4,000	275	23,100	1,600
1/2"	4,000	275	16,500	1,100
3/4"	3,000	200	10,300	700
1"	3,000	200	13,000	900

### Snap-Tite 60 Series



### FEMALE PIPE COUPLER

Part #	Body Size	NPT	List Price
NV-14-F	1/4"	1/4"	20.19
NV-38-F	3/8"	3/8"	21.18
NV-12-F	1/2"	1/2"	24.13
NV-34-F	3/4"	3/4"	54.17
NV-1-F	1"	1"	72.80

### FEMALE PIPE PLUG

Part #	Body Size	NPT	List Price
NV-14-M	1/4"	1/4"	11.61
NV-38-M	3/8"	3/8"	9.85
NV-12-M	1/2"	1/2"	10.34
NV-34-M	3/4"	3/4"	29.55
NV-1-M	1"	1"	29.40

#### FEATURES

- Heavy duty heat treated poppet: valves are standard with rugged, specially-designed seals made of nitrite for leak-free performance in the toughest application.
- High-strength steel valve guides designed for high flow rates and made extra tough for agricultural service.
- Dependable hardened chrome alloy steel locking balls. Heat treated plugs and sleeves.
- Standard seals temp range -40°F to +250°F

## HYDRAULIC QUICK DISCONNECT DUST CAPS AND PLUGS



**NEW**

### ISO-A INTERCHANGE COUPLER DUST PLUG

Part #	Body Size	Material	Weight Lb	List Price
ANV14PLUG	1/4"	Elastomer	0.02	3.36
ANV38PLUG	3/8"	Elastomer	0.03	3.37
ANV12PLUG	1/2"	Elastomer	0.06	3.05
ANV34PLUG	3/4"	Elastomer	0.09	5.91
ANV1PLUG	1"	Elastomer	0.08	7.43



**NEW**

### ISO-B INTERCHANGE COUPLER DUST PLUG

Part #	Body Size	Material	Weight Lb	List Price
HNV14PLUG	1/4"	Santoprene	0.02	3.36
HNV38PLUG	3/8"	Santoprene	0.03	3.37
HNV12PLUG	1/2"	Santoprene	0.06	3.05
HNV34PLUG	3/4"	Santoprene	0.09	5.91
HNV1PLUG	1"	Santoprene	0.08	7.43



**NEW**

### ISO-A INTERCHANGE NIPPLE DUST CAP

Part #	Body Size	Material	Weight Lb	List Price
ANV14CAP	1/4"	Elastomer	0.03	3.36
ANV38CAP	3/8"	Elastomer	0.04	3.37
ANV12CAP	1/2"	Elastomer	0.08	3.05
ANV34CAP	3/4"	Elastomer	0.09	5.91
ANV1CAP	1"	Elastomer	0.10	7.43



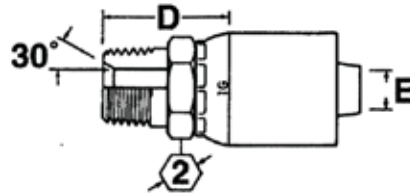
**NEW**

### ISO-B INTERCHANGE NIPPLE DUST CAP

Part #	Body Size	Material	Weight Lb	List Price
HNV14CAP	1/4"	Santoprene	0.03	3.36
HNV38CAP	3/8"	Santoprene	0.04	3.37
HNV12CAP	1/2"	Santoprene	0.08	3.05
HNV34CAP	3/4"	Santoprene	0.09	5.91
HNV1CAP	1"	Santoprene	0.10	7.43

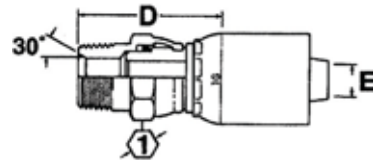
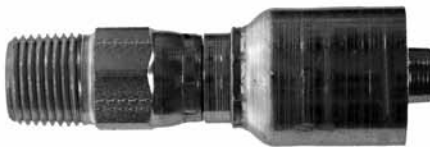


**NPTF SOLID MALE PIPE FITTING - ONE PIECE BITE TYPE**



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	6.88
D1MP 101-0606	3/8-18	3/8	2.27	1.28	.26	.69	7.56
D1MP 101-0808	1/2-14	1/2	2.74	1.56	.38	.88	8.61
D1MP 101-1212	3/4-14	3/4	2.84	1.65	.61	1.13	14.89
D1MP 101-1616	1-11 1/2	1	3.22	1.86	.82	1.38	32.39

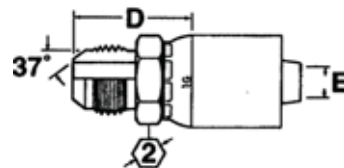
**NPTF MALE SWIVEL PIPE FITTING - ONE PIECE BITE TYPE**



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	9.50
D1PS 113-0606	3/8 - 18	3/8	2.66	1.67	.26	.69	15.78
D1PS 113-0808	1/2 - 14	1/2	3.13	1.96	.38	.88	19.22
D1PS 113-1212	3/4 - 14	3/4	3.24	2.05	.61	1.13	24.39
D1PS 113-1616	1 - 11-1/2	1	3.88	2.53	.81	1.38	53.84

• Fitting Pressures are tested to max working pressure of the hose on a 4:1 safety ratio.

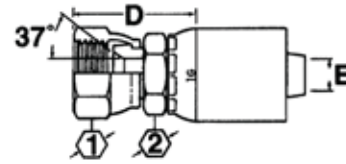
**MALE JIC 37° FITTING - ONE PIECE BITE TYPE**



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	7.89
D1MJ 103-0606	9/16-18	3/8	2.16	1.17	.26	.69	8.89
D1MJ 103-0808	3/4-16	1/2	2.57	1.41	.38	.81	10.73
D1MJ 103-1212	1 1/16-12	3/4	2.94	1.75	.61	1.12	16.00
D1MJ 103-1616	1 5/16-12	1	3.25	1.90	.82	1.38	36.95

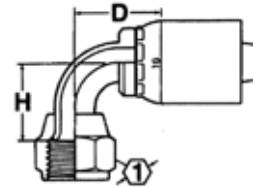
Call Midland for quotes on more configurations and sizes.

**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	7.89
D1FJ 106-0606	9/16-18	3/8	2.28	1.28	.26	.69	.56	9.12
D1FJ 106-0808	3/4-16	1/2	2.63	1.46	.38	.88	.81	11.73
D1FJ 106-1212	1 1/16-12	3/4	2.84	1.65	.61	1.25	1.12	19.12
D1FJ 106-1616	1 5/16-12	1	3.29	1.93	.81	1.50	1.38	37.39
D1FJ 106-2020	1 5/8-12	5/4	3.61	1.88	1.05	2.00	1.88	63.94

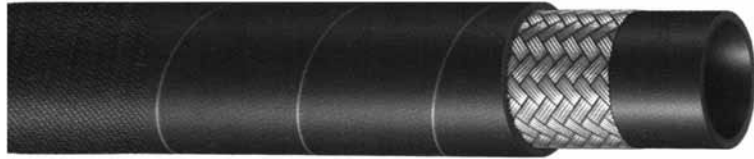
**FEMALE JIC 37° SWIVEL 90° ELBOW - ONE PIECE BITE TYPE**



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	13.05
D1FJB 139-0606	9/16-18	3/8	2.21	1.22	.84	.69	14.50
D1FJB 139-0808	3/4-16	1/2	2.59	1.42	1.09	.88	16.95
D1FJB 139-1212	1 1/16-12	3/4	3.36	2.17	1.80	1.25	29.00
D1FJB 139-1616	1 5/16-12	1	3.56	2.20	2.39	1.50	43.45

**SAVE 5%** when ordering online & **2%** more when you pay with a credit card.

**SAE100 R1 AT/ 1SN**



**Construction**

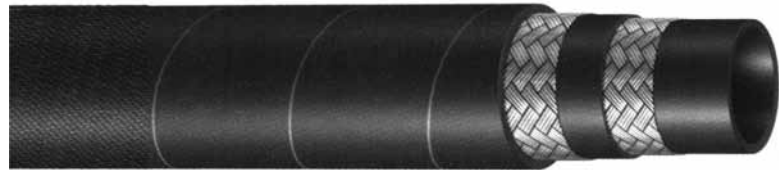
- **Tube:** Oil resistant Synthetic Rubber.
- **Reinforcement:** 1-Wire Braid. High tensile steel wire.
- **Cover:** Oil, weather and abrasion resistant Synthetic Rubber.
- **Hose is shipped in bundles.**
- Reel price available upon request.

**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	455.56
100R1038	3/8	0.69	2600	10400	5.12	0.23	164	628.67
100R1050	1/2	0.81	2325	9300	7.09	0.28	164	701.56
100R1075	3/4	1.09	1525	6100	9.45	0.42	164	1056.89
100R1100	1	1.40	1275	5100	11.81	0.59	164	1384.89

**SAE100 R2 AT/ 2SN**



**Construction**

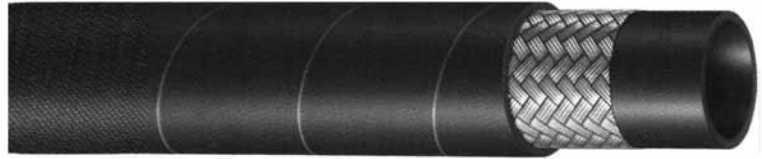
- **Tube:** Oil resistant Synthetic Rubber.
- **Reinforcement:** 2-Wire Braid. High tensile steel wire.
- **Cover:** Oil, weather and abrasion resistant Synthetic Rubber.
- **Hose is shipped in bundles.**
- Reel price available upon request.

**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	574.00
100R2038	3/8	0.75	4750	19000	5.12	0.36	164	756.23
100R2075	3/4	1.15	3100	12400	9.45	0.60	164	1403.12
100R2100	1	1.50	2400	9600	11.81	0.89	164	1840.45

**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 price 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	464.67
100R17050	1/2	0.78	3000	12000	3.54	0.34	164	719.78
100R17075	3/4	1.10	3000	12000	4.92	0.57	164	1093.33
100R17100	1	1.43	3000	12000	5.91	1.02	164	1439.56

**Two-Way**



BKH

Part Number	Thread	Working Pressure	List Price
GE2-14-NPT	1/4" NPTF	7250 PSI	53.81
GE2-38-NPT	3/8" NPTF	7250 PSI	52.65
GE2-12-NPT	1/2" NPTF	7250 PSI	66.95
GE2-34-NPT	3/4" NPTF	5800 PSI	128.15
GE2-1-NPT	1" NPTF	5075 PSI	160.20
*GE2-114T-NPT	1-1/4" NPTF	5075 PSI	188.10
*GE2-112T-NPT	1-1/2" NPTF	5075 PSI	188.10
*GE2-2T-NPT	2" NPTF	5075 PSI	428.57

Part Number	Thread	Working Pressure	List Price
GE2-04-SAE	7/16-20 UNF	7250 PSI	53.80
GE2-06-SAE	9/16-18 UNF	7250 PSI	54.82
GE2-08-SAE	3/4-16 UNF	7250 PSI	75.53
GE2-12-SAE	1-1/16-12 UNF	5800 PSI	115.52
GE2-16-SAE	1-5/16-12 UNF	5075 PSI	145.31
*GB2-20T-SAE	1-5/8-12 UNF	5075 PSI	126.67
*GB2-24T-SAE	1-7/8-12 UNF	5075 PSI	126.67
*GB2-32T-SAE	2-1/2-12 UNF	5075 PSI	460.16

\* = Reduced Port Only  
Full Port available by special quote.

**Temp Rating = -22° - 212°F**

**Construction:** Steel Body, Ball, Stem  
Zinc Chromate Plate  
Buna "O" Rings (Viton on request)  
Delrin Ball Seats

**Three-Way**



BK3

Part Number	Thread	Working Pressure	List Price
GE3L-14-NPT	1/4" NPTF	5800 PSI	142.86
GE3L-38-NPT	3/8" NPTF	5800 PSI	108.84
GE3L-12-NPT	1/2" NPTF	5800 PSI	116.10
GE3L-34-NPT	3/4" NPTF	5075 PSI	167.62
GE3L-1-NPT	1" NPTF	5075 PSI	203.17
*GE3L-114T-NPT	1 1/4" NPTF	5075 PSI	1073.92
*GE3L-112T-NPT	1 1/2" NPTF	5075 PSI	1362.36
*GE3L-2T-NPT	2" NPTF	5075 PSI	1456.69

Part Number	Thread	Working Pressure	List Price
GE3L-04-SAE	7/16-20 UNF	5800 PSI	177.72
GE3L-06-SAE	9/16-18 UNF	5800 PSI	185.79
GE3L-08-SAE	3/4-16 UNF	5800 PSI	222.15
GE3L-12-SAE	1-1/16-12 UNF	5075 PSI	179.95
GE3L-16-SAE	1-5/16-12 UNF	5075 PSI	214.06
*GB3L-20T-SAE	1-5/8-12 UNF	5075 PSI	1488.68
*GB3L-24T-SAE	1-7/8-12 UNF	5075 PSI	1630.00
*GB3L-32T-SAE	2-1/2-12 UNF	5075 PSI	2054.00

\* = Reduced Port Only  
Available in Reduced Port  
Full Port available by special quote.

**Temp Rating = -22° - 212°F**

**Construction:** Steel Body, Ball, Stem  
Zinc Chromate Plate  
Buna "O" Rings (Viton on request)  
Delrin Ball Seats

**Also Available in Stainless Steel**



# HYDRAULIC MOTOR

# ACCESSORIES

(Charlynn 101 / Danfoss DH / White HS / Parker ME-MB-TE-TJ / -RR-USA HP)

The MMPH series gear set, shaft distribution flow, hydraulic motor is a compact, high efficient, low speed high torque design which can be used in either parallel or series systems.



Part #		MMPH50	MMPH80	MMPH100	MMPH125	MMPH160	MMPH200	MMPH250	MMPH315	MMPH400
List Price		348.39	350.48	362.99	376.55	386.98	395.33	405.76	415.15	449.57
Displacement cm <sup>3</sup> /rev(cu.in/rev)		51.7 (3.15)	77.7 (4.75)	96.2 (5.9)	118 (7.2)	156 (9.5)	190 (11.6)	231 (14.1)	312 (19)	387 (23.6)
Max Speed rpm	Cont.	880	740	590	475	370	295	240	190	150
	Int.	975	825	675	595	465	370	295	235	185
Max Torque NW (in.lbs)	Cont.	81 (717)	129(1140)	161(1425)	202(1790)	245(2170)	286(2530)	360(3185)	406(3575)	435(3850)
	Int.	108(956)	171(1514)	213(1885)	268(2372)	342(3026)	390(3450)	456(4035)	505(4470)	533(4717)
Max performance KW/ (HP)	Cont.	7(9.4)	9.1(12.2)	9(12.1)	9.1(12.2)	8.7(11.65)	8.1(10.85)	8.2(11)	7.2(9.7)	6.1(8.2)
	Int.	8.9(12)	11.8(15.8)	11.9(15.95)	11.8(15.8)	11.9(15.95)	10.9(14.7)	10.1(13.5)	8.6(11.5)	7.2(9.65)
Max Differential Mpa/ (PSI)	Cont.	12.5(1840)	12.5(1840)	12.5(1840)	12.5(1840)	12.5(1840)	11(1625)	11(1625)	11(1625)	10(1450)
	Int.	16.5(2425)	16.5(2425)	16.5(2425)	16.5(2425)	16.5(2425)	16.5(2425)	14(2060)	12.5(1840)	10.5(1540)
Max flow L/min. / (gpm)	Cont.	45(11.85)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)
	Int.	50(13.15)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)
Weight	lb.	5.6	5.7	5.9	6	6.2	6.4	6.6	6.9	7.4

## ORDERING INFORMATION

### MMPH

### 50

### H2

### K

### P

#### MODEL SERIES

MMPH (GEROTOR)

MMRS (GEROTOR)

#### FRAME SIZE

(cu.in/rev)

MMPH

MMRS

50 (3.15) 50 (3.13)  
 80 (4.74) 80 (4.92)  
 100 (5.87) 100 (6.15)  
 125 (7.19) 125 (7.62)  
 160 (9.49) 160 (9.59)  
 200 (11.59) 200 (12.15)  
 250 (15.25) 250 (15.38)  
 315 (19.02) 315 (19.2)  
 400 (23.57) 375 (22.58)

#### MOUNTING FLANGE TYPE

H4 - 4 Bolt  
 H2 - SAE "A" 2 Bolt  
 H6 - Magneto

#### DRIVE SHAFT

K - 1 Inch Woodruff Key  
 S - SAE - 6B Spline  
 H - 1 Inch parallel  
 0.40 dia. crosshole  
 H1 - 1 Inch parallel  
 0.31 dia. crosshole

#### PORT SIZE

P - 1/2 NPTF  
 S - 7/8-14 SAE "O" Ring  
 F - Manifold

(Charlynn 103 & 158 / Danfoss DS / Parker ME-MB-TE-TJ / RR-USA HR)

The MMRS series advanced gear set, shaft distribution flow, hydraulic motor is a compact, low noise, highly efficient torque low speed design. The gear set also affords a reliable smooth start-up at low pressure. The special design of the drive linkage and high pressure capability of the shaft seal provides a long life and these motors can be used in either series or parallel operation.



Part #		MMRS50	MMRS80	MMRS100	MMRS125	MMRS160	MMRS200	MMRS250	MMRS315	MMRS375
List Price		438.10	455.83	460.00	476.69	492.34	499.64	524.67	528.84	559.09
Displacement cm <sup>3</sup> /rev(cu.in/rev)		51.3 (3.13)	80.6 (4.92)	100.8 (6.15)	124.9 (7.62)	157.2 (9.59)	199.2 (12.15)	252 (15.38)	314.5 (19.2)	370 (22.58)
Max Speed rpm	Rated	755	750	600	475	375	300	240	190	160
	Cont.	970	940	750	600	470	375	300	240	200
Max Torque NW (in.lbs)	Cont.	100(885)	190(1682)	240(2124)	292(2584)	363(3273)	358(3168)	352(3115)	360(3186)	420(3717)
	Int.	126(1115)	220(1947)	280(2478)	340(3010)	430(3806)	448(3965)	470(4159)	470(4159)	548(4850)
Max performance KW/ (HP)	Cont.	7.7(10.3)	15(20.10)	15(20.10)	14(18.75)	14(18.75)	11(14.75)	9(12.10)	7.2(9.7)	6.1(8.2)
	Int.	9.7(13)	17(22.8)	17(22.8)	16(21.45)	16(21.45)	14(18.75)	12(16.10)	9(12.10)	12(16.10)
Max Differential Mpa/ (PSI)	Cont.	14(2061)	17.5(2576)	17.5(2576)	17.5(2576)	16.5(2429)	13(1914)	11(1619)	8.5(1251)	8.5(1251)
	Int.	17.5(2576)	20(2944)	20(2944)	20(2944)	20(2944)	17.5(2576)	14(2061)	11.5(1693)	11.5(1693)
Max flow L/min. / (gpm)	Cont.	40(10.5)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)	60(15.8)
	Int.	50(13.1)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)	75(19.75)
Weight	lb.	6.7	6.9	6.9	7.2	7.5	8.0	8.5	9.0	9.3

**MODEL # MGP-F20**

- Aluminium construction.
- 8 Displacement sizes from 0.36 to 1.52 cu. in/rev.
- Mounting flange is SAE A-2 bolt.
- Ports are SAE-12 inlet and SAE-10 outlet.
- Drive shaft is a 5/8 inch diameter straight with 5/32 straight key.

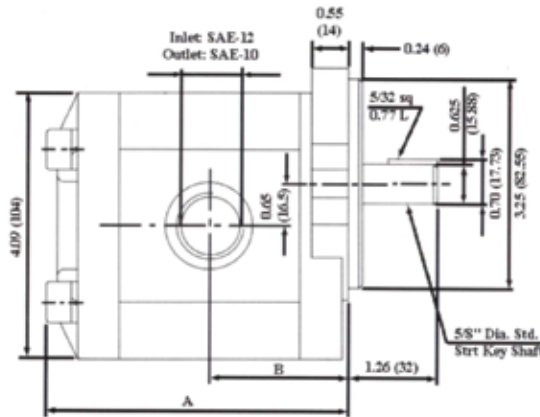
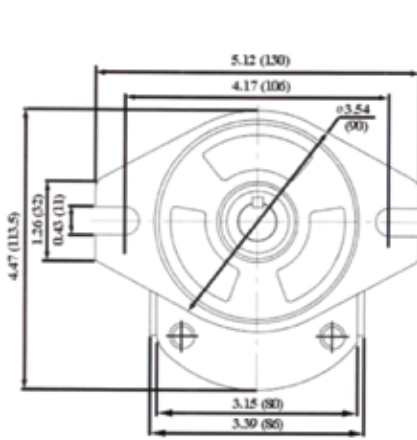
**Recommended working conditions:**

- Filtration 25 micron or better.
- Oil Viscosity 6 to 200 cSt.
- Inlet pressure 12 to 32 psi abs.
- Oil Temperature -25 to 55 degrees C (-12 to 175 F°).
- Ambient -22 to 55 C° (-8 to 130 F°).



Part #	Displacement cu.in/rev	PSI	Speed RPM		Weight Lbs	List Price
			Rated	Max		
MGP-F20-06	0.36	3650	2000	3000	5.35	291.60
MGP-F20-08	0.48	3650	2000	3000	5.61	291.60
MGP-F20-10	0.61	3650	2000	3000	5.72	291.60
MGP-F20-12	0.73	3650	2000	3000	5.91	291.60
MGP-F20-14	0.85	3650	2000	3000	6.00	308.34
MGP-F20-16	0.97	2900	2000	3000	6.27	308.34
MGP-F20-20	1.22	2900	2000	3000	6.73	308.34
MGP-F20-25	1.52	2900	2000	3000	7.19	321.70

**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.

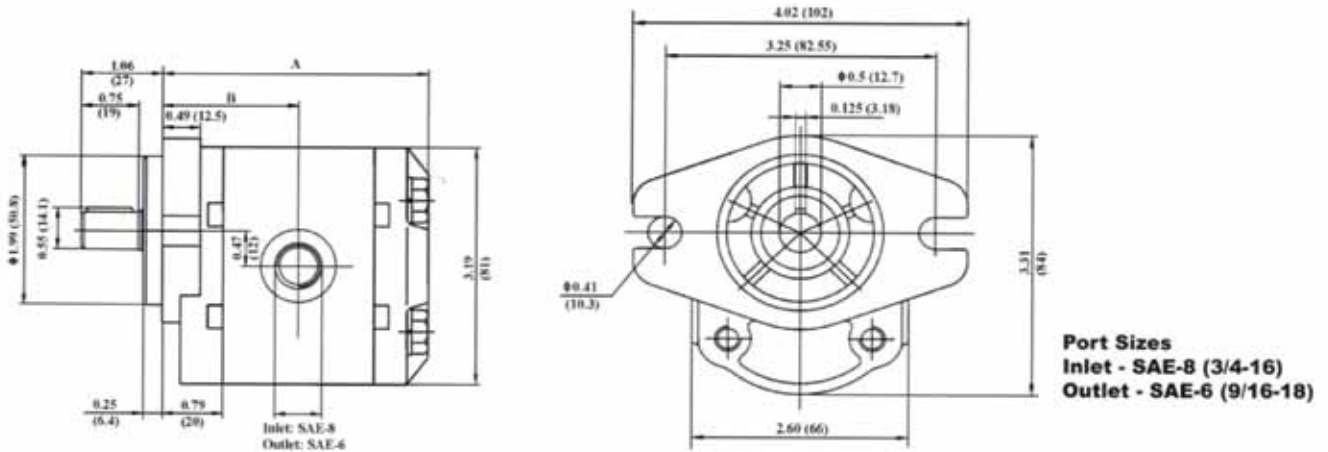
### Recommended working conditions:

- 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	232.86
MGP-F10-20	0.12	3625	2000	3000	2.31	232.86
MGP-F10-27	0.16	3625	2000	3000	2.68	232.86
MGP-F10-34	0.20	3625	2000	3000	2.99	232.86
MGP-F10-41	0.25	3625	2000	3000	3.34	291.08
MGP-F10-51	0.31	3625	2000	3000	3.78	291.08
MGP-F10-61	0.37	3625	2000	3000	4.18	291.08

## INSTALLATION DATA



Part #	A		B	
	Millimeters	Inches	Millimeters	Inches
MGP-F10-13	82	3.23	42	1.65
MGP-F10-20	84	3.3	43	1.69
MGP-F10-27	86	3.39	44	1.73
MGP-F10-34	88	3.46	45	1.77

Part #	A		B	
	Millimeters	Inches	Millimeters	Inches
MGP-F10-41	90	3.54	46	1.81
MGP-F10-51	93	3.66	47.5	1.87
MGP-F10-61	96	3.78	49	1.93

## ORDERING INFORMATION

### MGP

Aluminum  
Gear Pump

### F10

High  
Pressure  
Series

### 16

Displacement  
cm<sup>3</sup>/rev  
(see chart)  
13/20/27/34  
41/51/61

### P

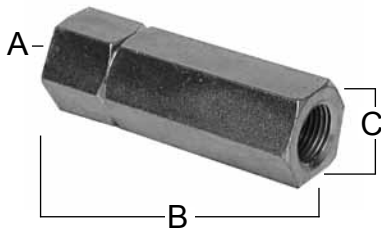
Drive  
Shaft  
P-5/8 Dia  
Straight  
P1-3/4 Dia  
Straight  
S9-Spline 9 tooth

### C

Rotation  
Direction  
C-Clockwise  
A-Counter Clockwise  
(viewed from drive shaft  
end)

**HARD SEAT CARBON STEEL CONSTRUCTION - 5lb or 65lb Cracking Pressure Available**

- Available w/ NPT or SAE threads



A ( NPT Female both ends )

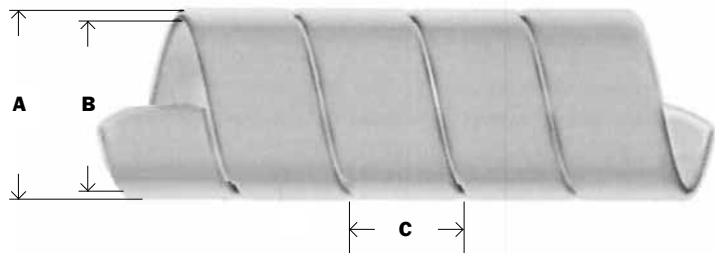
Part #	A Size	B Inches	C Inches	Rated Flow gpm	List Price
1000-2-5 or 65	1/4 NPT	2.44	.87	6	29.30
1000-3-5 or 65	3/8 NPT	2.87	.95	10	40.95
1000-4-5 or 65	1/2 NPT	3.50	1.14	18	50.48
1000-6-5 or 65	3/4 NPT	4.25	1.50	30	77.14
1000-8-5 or 65	1 NPT	5.12	1.69	36	96.00
1000-10-5 or 65	1-1/4 NPT	5.56	2.40	50	281.14
1000-12-5 or 65	1-1/2 NPT	5.56	2.56	60	138.86
1001-4-5 or 65	7/16-20 SAE	2.56	.87	6	32.00
1001-6-5 or 65	9/16-18 SAE	2.91	.94	10	38.00
1001-8-5 or 65	3/4-16 SAE	3.74	1.18	18	48.00
1001-12-5 or 65	1-1/6-12 SAE	4.29	1.50	30	74.57
1001-16-5 or 65	1-5/16-12 SAE	5.00	1.81	36	113.09
1001-20-5 or 65	1-5/8-12 SAE	5.20	2.41	50	150.01
1001-24-5 or 65	1-7/8-12 SAE	5.20	2.56	60	161.96

Rated Pressure: Sizes 2 thru 8 - 5000 psi / Sizes 10 thru 24 - 3000 psi

**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

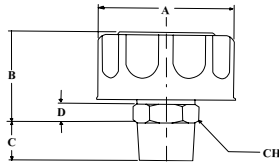
- \* More sizes & colors available.
- \* Shipped in 100'FT coils only.

**HYDRAULIC**

**SCREW-ON TYPE AIR BREATHERS**



- 1/4 To 1 Inch NPT
- Steel Model
- 40 Micron Breather

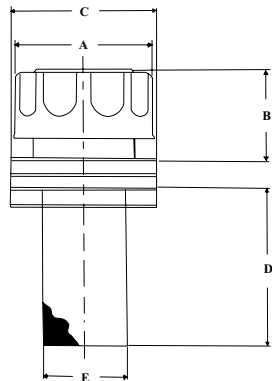


Part Number	Flow cfm	NPT	A	B	C	D	CH	Micron	List Price
MB40-04	10	1/4	1.85	1.60	.50	.30	.63	40	16.96
MB40-06	10	3/8	1.85	1.70	.50	.30	.75	40	22.68
MB40-08	10	1/2	2.54	1.88	.68	.29	.95	40	23.78
MB40-12	25	3/4	3.13	2.00	.82	.35	1.12	40	27.77
MB40-16	25	1	3.13	2.11	.90	.42	1.35	40	36.11

**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	36.11

**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"	162.00
MHS-090	1-1/2"	0.90"	396.83
MHS-100	1-2/3"	1.00"	277.00
MHS-114	1-7/8"	1.06"	335.24
MHS-130	2-1/8"	1.22"	394.00
MHS-138	2-1/4"	1.38"	435.37
MHS-153	2-1/2"	1.42"	503.41
MHS-159	2-5/8"	1.59"	448.22
MHS-175	2-7/8"	1.75"	440.45
MHS-185	3"	1.81"	585.03
MHS-225	3-5/8"	2.19"	727.27
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"	978.12
MHS-366	5-7/8"	3.66"	1412.70

**MEETS AB1953**

**90° FORGED FEMALE ELBOW**

Part #	Thread size NPTF	List Price
28-010LF	1/4"	4.74
28-011LF	3/8"	4.99
28-012LF	1/2"	9.21
28-013LF	3/4"	18.36

**UNION FORGED TEE**

Part #	Thread size NPTF	List Price
28-032LF	1/8"	4.56
28-033LF	1/4"	5.78
28-034LF	3/8"	6.74
28-035LF	1/2"	12.05
28-036LF	3/4"	24.14

**COUPLING**

Part #	Thread size NPTF	List Price
28-059LF	1/4"	1.52
28-060LF	3/8"	2.69
28-061LF	1/2"	3.64

**REDUCING COUPLING**

Part #	Thread size NPTF	List Price
28-185LF	1/2" x 3/8"	5.21
28-189LF	3/4" x 1/2"	6.92

**CAP**

Part #	Thread size NPTF	List Price
28-077LF	3/8"	1.73
28-079LF	3/4"	5.06

**90° STREET ELBOW**

Part #	Thread size NPTF	List Price
28-165LF	1/8"	2.57
28-166LF	1/4"	3.04
28-167LF	3/8"	4.36
28-168LF	1/2"	8.63
28-169LF	3/4"	10.29

**HEX BUSHING**

Part #	Thread size NPTF MxF	List Price
28-102LF	1/4" x 1/8"	1.09
28-104LF	3/8" x 1/4"	1.73
28-106LF	1/2" x 1/4"	3.65
28-107LF	1/2" x 3/8"	2.67
28-111LF	3/4" x 1/2"	4.52

**SQUARE HEAD PLUG**

Part #	Thread size NPTF	List Price
28-085LF	1/4"	1.13
28-088LF	3/4"	4.15

**COUNTERSUNK HEX PLUG**

Part #	Thread size NPTF	List Price
28-095LF	3/8"	1.96
28-096LF	1/2"	3.45

**CORED HEX PLUGS**

Part #	Thread size NPTF	List Price
28-201LF	1/8"	0.86

**CLOSE NIPPLE**

Part #	Thread size NPTF	List Price
28-131LF	1/8"	1.05
28-132LF	1/4"	1.70
28-133LF	3/8"	2.11
28-134LF	1/2"	2.94
28-135LF	3/4"	4.09

**LONG NIPPLE**

Part #	Thread size NPTF	List Price
28-144LF	1/4" x 1-1/2"	1.92
28-148LF	3/8" x 1-1/2"	2.49
28-152LF	1/2" x 1-1/2"	3.41

**HEX NIPPLE**

Part #	Thread size NPTF	List Price
28-211LF	1/8"	1.26

**EXTENDER ADAPTER**

Part #	Thread size NPTF FxM	List Price
28-192LF	1/4" x 1/4"	1.86

**MALE BRANCH TEE**

Part #	Thread size NPTF	List Price
28-283LF	3/8"	11.96

**STREET TEE/ SERVICE TEE**

Part #	Thread size NPTF	List Price
28-246LF	1/4"	8.99
28-247LF	3/8"	11.43

**RIGID MALE ADAPTER**

Part #	Hose I.D. x Male NPTF	List Price
32-002LF	3/16" x 1/8"	1.12
32-005LF	1/4" x 1/4"	1.86
32-008LF	5/16" x 1/8"	1.26
32-009LF	5/16" x 1/4"	1.93
32-011LF	3/8" x 1/8"	1.52
32-012LF	3/8" x 1/4"	2.17
32-013LF	3/8" x 3/8"	2.60
32-015LF	1/2" x 1/4"	2.58
32-016LF	1/2" x 3/8"	3.05
32-017LF	1/2" x 1/2"	4.27
32-020LF	5/8" x 1/2"	4.61
32-022LF	3/4" x 1/2"	4.69

**LEAD FREE**

**LEAD FREE BRASS FITTINGS****MENDER/ SPLICER**

Part #	Hose I.D. x Hose I.D.	List Price
32-095LF	3/8"	1.46
32-096LF	1/2"	2.39

**RIGID FEMALE ADAPTER**

Part #	Hose I.D. x Female NPTF	List Price
32-053LF	1/4" x 1/4"	2.02
32-058LF	3/8" x 1/4"	2.21
32-059LF	3/8" x 3/8"	2.62
32-063LF	3/8" x 1/2"	3.45
32-061LF	1/2" x 1/2"	3.59

**FORGED HOSE BARB 90° ELBOW**

Part #	Hose I.D. x Male NPTF	List Price
32-039LF	1/4" x 1/4"	2.49
32-036LF	5/16" x 1/8"	2.24
32-040LF	5/16" x 1/4"	2.09
32-042LF	3/8" x 3/8"	3.82

**HOSE BARB TEES**

Part #	Hose Barb Size	List Price
32-365LF	1/4"	2.81
32-126LF	3/8"	2.96

**DUAL 45°/ 37° FLARE SWIVEL**

Part #	Hose I.D. x Dual Seat	List Price
32-337LF	1/4" x 1/4"	2.96

**MALE ADAPTER**

Part #	Hose I.D. x Male NPTF	List Price
30-200LF	1/4" x 1/8"	2.45
30-201LF	1/4" x 1/4"	3.29
30-203LF	3/8" x 1/4"	3.40
30-204LF	3/8" x 3/8"	4.64
30-206LF	1/2" x 3/8"	5.35
30-207LF	1/2" x 1/2"	8.83

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

Part #	Hose I.D. x Female 45°/37°	List Price
30-230LF	1/4" x 1/4"	3.37

**GARDEN HOSE****SWIVEL - FGH X FGH**

•WASHER INCLUDED

Part #	FGH X FGH	List Price
30-011LF	3/4" x 3/4"	4.06

**SWIVEL - FGH X FEMALE PIPE**

•WASHER INCLUDED

Part #	FGH x Female NPTF	List Price
30-001LF	3/4" x 1/2"	3.84
30-006LF	3/4" x 3/4"	4.19

For more information on Lead Free fittings log in to

[www.midlandindustrial.com](http://www.midlandindustrial.com)**BARB, GARDEN HOSE, FLARE****RIGID - MGH X FEMALE PIPE**

Part #	MGH x Female NPTF	List Price
30-073LF	3/4" x 3/4"	4.36

**RIGID - MGH X MALE PIPE**

Part #	MGH x Male NPTF	List Price
30-053LF	3/4" x 3/8"	6.24

**FEMALE SWIVEL ONLY**

Part #	Hose Barb x FGH	List Price
30-032LF	1/2" x 3/4"	10.67

**MALE END ONLY**

Part #	Hose Barb x MGH	List Price
30-040LF	1/2" x 3/4"	11.12

**SAE 45° FLARE****SHORT ROD NUT**

Part #	Thread Size UNF	List Price
10-017LF	3/8"	2.21
10-019LF	1/2"	2.32

**SHORT FORGED NUT**

Part #	Thread Size UNF	List Price
10-041LF	3/8"	2.32
10-042LF	1/2"	3.30

**FLARED CAP**

Part #	Thread Size UNF	List Price
10-075LF	1/4"	0.77
10-079LF	5/8"	2.57

**UNION**

Part #	Thread Size UNF	List Price
10-108LF	3/8"	3.47
10-109LF	1/2"	4.95
10-110LF	5/8"	7.19

**FEMALE ADAPTER**

Part #	Male Flare x Female NPTF	List Price
10-236LF	3/8" x 3/8"	2.80
10-237LF	3/8" x 1/2"	3.07
10-240LF	1/2" x 3/8"	3.49
10-241LF	1/2" x 1/2"	3.44
10-242LF	1/2" x 3/4"	4.77

**MALE ADAPTER**

Part #	Male Flare x Male NPTF	List Price
10-256LF	1/4" x 1/4"	1.67
10-258LF	1/4" x 1/2"	3.59
10-262LF	3/8" x 1/8"	2.63
10-263LF	3/8" x 1/4"	2.54
10-264LF	3/8" x 3/8"	2.84
10-265LF	3/8" x 1/2"	3.86
10-268LF	1/2" x 3/8"	3.68
10-269LF	1/2" x 1/2"	4.06
10-270LF	1/2" x 3/4"	6.33
10-276LF	3/4" x 3/4"	8.40

LEAD FREE

## FLARE & COMPRESSION

### 90° MALE ELBOW

#### Forged Elbow

Part #	Male Flare x Male NPTF	List Price
10-286LF	1/4" x 1/8"	1.98
10-287LF	1/4" x 1/4"	2.26
10-294LF	3/8" x 1/4"	3.32
10-295LF	3/8" x 3/8"	3.68
10-296LF	3/8" x 1/2"	4.83
10-299LF	1/2" x 3/8"	5.10
10-300LF	1/2" x 1/2"	5.57
10-301LF	1/2" x 3/4"	8.00

### FORGED MALE RUN TEE

Part #	Male Flare x Male NPTF (1&3) x 2	List Price
10-355LF	1/2" x 1/2"	7.74

### FORGED SWIVEL

Part #	Female Flare UNF	List Price
10-485LF	5/8"	8.98

### BRASS SLEEVE

#### • FERRULES

Part #	Size	List Price
18-005LF	3/8"	0.19
18-007LF	1/2"	0.28

### BRASS NUT

Part #	Size	List Price
18-035LF	1/4"	0.61
18-037LF	3/8"	0.83
18-039LF	1/2"	1.36

### UNION

Part #	Size	List Price
18-064LF	1/4"	2.79
18-066LF	3/8"	3.69
18-068LF	1/2"	5.36
18-069LF	5/8"	6.46
18-071LF	7/8"	13.72

### REDUCING UNION

Part #	Size	List Price
18-079LF	3/8" x 1/4"	3.35
18-081LF	1/2" x 3/8"	4.85
18-083LF	5/8" x 1/2"	6.32

### TEE

#### Forged

Part #	Size	List Price
18-103LF	1/4"	4.15
18-105LF	3/8"	5.98
18-106LF	1/2"	9.74
18-107LF	5/8"	12.79

### UNION ELBOW

#### Forged

Part #	Size	List Price
18-126LF	3/8"	4.02
18-127LF	1/2"	6.80

## LEAD FREE BRASS FITTINGS

### FEMALE ADAPTER

Part #	Comp. X Female NPTF	List Price
18-147LF	1/4" x 3/8"	2.80
18-158LF	1/2" x 3/8"	3.62
18-162LF	5/8" x 1/2"	4.56
18-163LF	5/8" x 3/4"	7.32
18-166LF	7/8" x 3/4"	9.88

### MALE ADAPTER

Part #	Comp. X Male NPTF	List Price
18-179LF	1/4" x 1/8"	1.88
18-182LF	1/4" x 1/2"	4.23
18-188LF	3/8" x 1/4"	2.60
18-189LF	3/8" x 3/8"	3.14
18-195LF	1/2" x 1/2"	5.21
18-196LF	1/2" x 3/4"	6.71
18-198LF	5/8" x 1/2"	5.44
18-199LF	5/8" x 3/4"	6.41

### MALE ELBOW

Part #	Comp. X Male NPTF	List Price
18-226LF	1/4" x 3/8"	3.21
18-234LF	3/8" x 3/8"	4.03
18-235LF	3/8" x 1/2"	5.82
18-241LF	5/8" x 1/2"	7.25

## NEEDLE VALVES

### COMP X MALE PIPE

Part #	Comp x Male Pipe	List Price
46-002LF	1/4" x 1/8"	7.39
46-003LF	1/4" x 1/4"	8.79

### COMP X MALE PIPE-ANGLE

Part #	Comp x Male Pipe	List Price
46-011LF	1/4" x 1/8"	7.01

### COMP X COMP

Part #	Comp x Comp	List Price
46-023LF	3/8"	12.42

## SELF PIERCING SADDLE VALVES

FITS 3/8" OD  
THRU 3/4" OD

### SELF PIERCING

#### NEEDLE VALVE KIT #M-104-VSP

- INDIVIDUALLY BAGGED WITH NEEDLE VALVE
  - SADDLE CLAMP
  - 2 NUTS
  - 2 BOLTS & WASHERS

Has brass sleeve for copper tube installation & delrin sleeve & brass insert for plastic tube installation.

Part #	Tube O.D.	Min Pkg Qty	List Price
46-090ALF	1/4	1	8.42

#M-302-BSV1.60

LEAD FREE



Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
0304-10	320	1000-4-5	378	100-260	243	100R17100	373	101-254	243	101-477	244
0304-12	320	10-005	47	100-261	243	100R2025	372	101-255	243	101-478	244
0304-14	320	10-006	47	10-028	48	100R2038	372	101-256	243	101-479	244
0304-16	320	1000-6-5	378	10-030	48	100R2050	372	101-257	243	101-480	244
0304-20	320	1000-6-5	378	10-031	48	100R2075	372	101-258	243	101-481	244
0304-24	320	10-007	47	10-032	48	100R2100	372	101-259	243	10-157	51
0304-32	320	10-008	47	10-033	48	100R2125	372	101-260	243	10-158	51
0304-4	320	1000-8-5	378	10-038	48	100R2150	372	101-261	243	10-159	51
0304-5	320	1000-8-5	378	10-039	48	10-100	50	10-131	50	10-159B	51
0304-6	320	100-100	243	100-392	243	1010002	282	10-133	50	10-160	51
0304-8	320	100-101	243	100-393	243	1010008	282	10-135	59	101-600	244
0304-C-10	320	100-102	243	100-394	243	1010011	282	10-136	59	101-601	244
0304-C-12	320	100-103	243	100-395	243	1010016	282	10-137	59	101-602	244
0304-C-14	320	100-104	243	100-396	243	1010019	282	101-390	244	101-603	244
0304-C-16	320	100-105	243	100-397	243	1010022	282	101-391	244	101-604	244
0304-C-2	320	100-106	243	100-398	243	1010024	282	101-392	244	101-605	244
0304-C-20	320	100-107	243	10-040	48	1010027	282	101-393	244	101-606	244
0304-C-24	320	100-108	243	10-041	48	10-104	50	101-394	244	101-607	244
0304-C-3	320	100-109	243	10-041LF	381	10-105	50	101-395	244	101-608	244
0304-C-32	320	100-110	243	10-042	48	10-106	50	101-396	244	101-609	244
0304-C-4	320	100-111	243	10-042LF	381	10-106L	50	101-397	244	10-161	51
0304-C-5	320	1001-12-5	378	10-043	48	10-107	50	101-398	244	101-610	244
0304-C-6	320	1001-12-5	378	10-044	48	10-108	50	101-399	244	101-611	244
0304-C-8	320	1001-16-5	378	10-045	48	10-108L	50	101-400	244	10-162	51
0306-10	326	1001-16-5	378	10-046	48	10-108LF	381	101-401	244	10-163	51
0306-12	326	1001-20-5	378	10-047	48	10-109	50	101-410	244	10-164	51
0306-14	326	1001-20-5	378	10-048	48	10-109L	50	101-411	244	10-165	51
0306-16	326	1001-24-5	378	10-049	48	10-109LF	381	101-412	244	10-170	51
0306-2	326	1001-24-5	378	10-051	48	10-110	50	101-413	244	10-171	51
0306-20	326	10-013	47	10-052	48	101-100	243	101-414	244	10-172	51
0306-24	326	10-014	47	10-053	48	101-101	243	101-415	244	10-173	51
0306-32	326	1001-4-5	378	10-054	48	101-102	243	101-416	244	10-174	51
0306-4	326	1001-4-5	378	10-055	48	101-103	243	101-417	244	10-175	51
0306-5	326	10-015	47	10-056	48	101-104	243	101-418	244	10-176	51
0306-6	326	10-015L	47	10-058	48	101-105	243	101-419	244	101-770	244
0306-8	326	10-016	47	10-063	49	101-106	243	101-420	244	101-771	244
0318-10	320	1001-6-5	378	10-064	49	101-107	243	101-421	244	101-772	244
0318-12	320	1001-6-5	378	10-065	49	101-108	243	101-431	244	101-773	244
0318-14	320	10-017	47	10-066	49	101-109	243	101-432	244	101-774	244
0318-16	320	100-179	243	10-067	49	10-110L	50	101-433	244	101-775	244
0318-2	320	10-017L	47	10-068	49	10-110LF	381	101-434	244	101-776	244
0318-20	320	10-017LF	381	10-074	49	10-111	50	101-435	244	101-777	244
0318-24	320	10-018	47	10-075	49	101-110	243	101-437	244	101-778	244
0318-3	320	100-181	243	10-075LF	381	101-111	243	101-438	244	101-779	244
0318-32	320	100-182	243	10-076	49	10-112	50	101-440	244	10-178	51
0318-4	320	100-183	243	10-077	49	101-161	243	101-441	244	101-780	244
0318-5	320	100-184	243	10-078	49	101-162	243	101-442	244	101-781	244
0318-6	320	1001-8-5	378	10-079	49	101-163	243	101-443	244	10-179	51
0318-8	320	1001-8-5	378	10-079LF	381	101-164	243	101-444	244	10-180	51
0319-10	320	100-186	243	10-080	49	101-165	243	101-445	244	10-181	51
0319-12	320	100-187	243	10-081	49	101-166	243	101-446	244	10-182	51
0319-14	320	100-188	243	10-084	49	101-167	243	101-447	244	10-187	51
0319-16	320	100-189	243	10-085	49	101-168	243	101-449	244	10-188	51
0319-2	320	10-019	47	10-086	49	10-117	51	101-450	244	10-189	51
0319-20	320	100-190	243	10-087	49	10-118	51	101-451	244	10-197	51
0319-24	320	100-191	243	10-088	49	101-180	243	101-452	244	10-203	52
0319-3	320	10-019L	47	10-089	49	101-181	243	101-453	244	10-204	52
0319-32	320	10-019LF	381	10-090	49	101-182	243	101-454	244	10-204B	52
0319-4	320	10-020	47	10-094	50	101-183	243	101-458	244	10-205	52
0319-5	320	10-020L	47	10-095	50	101-184	243	101-459	244	10-206	52
0319-6	320	10-021	47	10-097	50	101-185	243	101-460	244	10-207	52
0319-8	320	10-022	47	10-098	50	101-186	243	101-461	244	10-208	52
10-001	47	10-023	47	10-099	50	101-187	243	101-462	244	10-209	52
1000-10-5	378	10-024	47	100C100B	378	101-188	243	101-463	244	10-210	52
1000-10-5	378	10-025	47	100R1025	372	101-189	243	101-464	244	102-100	245
1000-12-5	378	100-251	243	100R1038	372	10-119	51	101-465	244	102-101	245
1000-12-5	378	100-252	243	100R1050	372	101-190	243	101-466	244	102-102	245
10-002	47	100-253	243	100R1075	372	10-120	51	101-467	244	102-103	245
1000-2-5	378	100-254	243	100R1100	372	10-121	51	101-470	244	102-104	245
1000-2-5	378	100-255	243	100R1125	372	10-122	51	101-471	244	102-105	245
10-003	47	100-256	243	100R1150	372	10-123	51	101-472	244	102-106	245
1000-3-5	378	100-257	243	100R17025	373	101-250	243	101-473	244	102-107	245
1000-3-5	378	100-258	243	100R17038	373	101-251	243	101-474	244	102-108	245
10-004	47	100-259	243	100R17050	373	101-252	243	101-475	244	10-211	52
1000-4-5	378	10-026	47	100R17075	373	101-253	243	101-476	244	102-110	245



Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
10-212	52	102-443	245	10-272	54	103-102	211	103-435	211	10-374	57
10-213	52	102-444	245	10-272L	54	103-103	211	103-437	211	10-375	57
10-214	52	102-445	245	10-273	54	103-104	211	103-438	211	10-376	57
10-215	52	102-447	245	10-273L	54	103-105	211	10-344	56	103-770	211
10-216	52	102-448	245	10-274	54	103-106	211	103-440	211	103-771	211
10-217	52	102-449	245	10-275	54	103-107	211	103-441	211	103-772	211
10-218	52	10-245	53	10-276	54	103-108	211	103-442	211	103-773	211
10-219	52	102-450	245	10-276LF	381	10-311	55	103-443	211	103-774	211
10-220	52	102-451	245	10-277	54	10-312	56	103-444	211	103-775	211
10-221	52	102-452	245	102-770	245	10-313	56	103-445	211	103-776	211
102-251	245	102-453	245	102-771	245	10-313B	56	103-446	211	103-777	211
102-252	245	102-454	245	102-772	245	10-314	56	103-447	211	103-778	211
102-253	245	102-458	245	102-773	245	10-315	56	103-448	211	103-779	211
102-254	245	10-246	53	102-774	245	10-316	56	103-449	211	103-780	211
102-255	245	10-247	53	102-775	245	103-160	211	10-345	56	103-781	211
102-256	245	102-470	245	102-776	245	103-161	211	103-450	211	10-382	57
102-257	245	102-471	245	102-777	245	103-162	211	103-451	211	10-383	57
102-258	245	102-472	245	102-778	245	103-163	211	103-452	211	10-404	57
102-259	245	102-473	245	102-779	245	103-164	211	103-453	211	10-405	57
10-226	53	102-474	245	10-278	54	103-165	211	103-454	211	10-406	57
102-260	245	102-475	245	102-780	245	103-166	211	103-458	211	10-407	57
10-227	53	102-476	245	10-279	54	103-167	211	10-347	56	10-408	57
10-228	53	102-477	245	10-280	54	10-317	56	103-470	211	10-409	57
10-228L	53	102-478	245	10-283	55	10-318	56	103-471	211	10-410	57
10-229	53	102-479	245	10-283B	55	103-180	211	103-472	211	104-100	212
10-229L	53	10-248	53	10-284	55	103-181	211	103-473	211	104-101	212
10-230	53	102-480	245	10-284B	55	103-182	211	103-474	211	104-102	212
10-231	53	10-253	54	10-285	55	103-183	211	103-475	211	104-103	212
10-232	53	10-254	54	10-286	55	103-184	211	103-477	211	104-104	212
10-233	53	10-255	54	10-286B	55	103-185	211	10-348	56	104-105	212
10-234	53	10-255L	54	10-286LF	382	103-186	211	10-350	56	104-106	212
10-235	53	10-256	54	10-287	55	103-187	211	103-504	212	104-107	212
10-235L	53	10-256L	54	10-287B	55	103-188	211	103-505	212	104-108	212
10-236	53	10-256LF	381	10-287LF	382	103-189	211	103-508	212	10-411	57
10-236L	53	10-256WC	54	10-288	55	10-319	56	103-509	212	10-412	57
10-236LF	381	10-256WC	173	10-289	55	103-190	211	10-351	56	10-416	57
10-237	53	10-257	54	10-290	55	10-319B	56	103-511	212	10-417	57
10-237L	53	10-258	54	10-290B	55	10-320	56	103-512	212	10-419	57
10-237LF	381	10-258LF	381	10-291	55	10-321	56	103-513	212	10-421	57
10-238	53	10-259	54	10-291B	55	10-322	56	103-515	212	104-250	212
10-239	53	10-259L	54	10-292	55	10-323	56	103-516	212	104-251	212
102-393	245	10-260	54	10-293	55	10-324	56	103-517	212	104-252	212
102-394	245	102-600	245	10-293B	55	10-324B	56	103-518	212	104-253	212
102-395	245	102-601	245	10-294	55	10-325	56	10-352	56	104-254	212
102-396	245	102-602	245	10-294B	55	103-250	211	103-520	212	104-255	212
102-397	245	102-603	245	10-294LF	382	103-251	211	103-521	212	104-256	212
102-398	245	102-604	245	10-295	55	103-252	211	103-522	212	104-257	212
102-399	245	102-605	245	10-295B	55	103-253	211	103-523	212	104-258	212
10-240	53	102-606	245	10-295LF	382	103-254	211	103-524	212	104-259	212
102-400	245	102-607	245	10-296	55	103-255	211	103-526	212	104-260	212
10-240L	53	102-608	245	10-296LF	382	103-256	211	103-527	212	10-429	58
10-240LF	381	10-260L	54	10-297	55	103-257	211	103-528	212	10-430	58
10-241	53	10-261	54	10-298	55	103-258	211	103-529	212	10-431	58
102-410	245	10-262	54	10-298B	55	10-326	56	10-353	56	10-432	58
102-411	245	10-262LF	381	10-299	55	10-327	56	103-530	212	10-434	58
102-412	245	10-263	54	10-299B	55	10-328	56	103-531	212	10-440	59
102-413	245	10-263L	54	10-299LF	382	10-329	56	10-354	56	10-441	59
102-414	245	10-263LF	381	10-300	55	10-330	56	10-355	56	104-410	212
102-415	245	10-264	54	10-300B	55	10-331	56	10-355LF	382	104-411	212
102-416	245	10-264L	54	10-300LF	382	10-333	56	10-357	56	104-412	212
102-417	245	10-264LF	381	10-301	55	10-340	56	10-359	56	104-413	212
102-418	245	10-265	54	10-301LF	382	103-410	211	10-360	56	104-414	212
10-241L	53	10-265L	54	10-302	55	103-411	211	103-600	212	104-415	212
10-241LF	381	10-265LF	381	10-302B	55	103-412	211	103-601	212	104-416	212
10-242	53	10-266	54	10-303	55	103-413	211	103-602	212	104-417	212
10-242LF	381	10-267	54	10-303B	55	103-414	211	103-603	212	104-418	212
10-243	53	10-268	54	10-304	55	103-415	211	103-604	212	10-442	59
102-434	245	10-268L	54	10-305	55	103-416	211	103-605	212	10-443	59
102-435	245	10-268LF	381	10-306	55	103-417	211	103-606	212	104-434	212
102-437	245	10-269	54	10-306B	55	103-418	211	103-607	212	104-435	212
102-438	245	10-269L	54	10-307	55	103-419	211	103-608	212	104-437	212
10-244	53	10-269LF	381	10-308	55	103-420	211	103-609	212	104-438	212
102-440	245	10-270	54	10-309	55	103-421	211	10-361	56	10-444	59
102-441	245	10-270LF	381	103-100	211	10-343	56	103-610	212	104-440	212
102-442	245	10-271	54	103-101	211	103-434	211	10-373	57	104-441	212

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
104-442	212	1050014	281	105-450	214	106-103	215	107-503	242	12-017	63
104-443	212	1050015	281	105-451	214	106-104	215	107-504	242	12-020	63
104-444	212	1050016	281	105-452	214	106-105	215	107-505	242	12-022	64
104-445	212	1050017	281	105-453	214	106-106	215	107-508	242	12-023	64
104-446	212	1050018	281	105-454	214	106-107	215	107-509	242	12-024	64
104-447	212	1050020	281	105-458	214	106-108	215	107-510	242	12-025	64
104-448	212	1050021	281	105-470	213	10-611	60	107-511	242	12-026	64
104-449	212	1050023	281	105-471	213	10-615	60	107-512	242	12-027	64
104-450	212	1050025	281	105-472	213	106-183	215	107-513	242	12-032	64
104-451	212	1050026	281	105-473	213	106-184	215	107-515	242	12-033	64
104-452	212	1050027	281	105-474	213	106-185	215	107-516	242	12-034	64
104-453	212	1050028	281	105-475	213	106-186	215	107-517	242	12-035	64
104-454	212	1050029	281	105-476	213	106-187	215	107-518	242	12-036	64
104-458	212	1050030	281	105-477	213	106-188	215	107-521	242	12-038	64
104-470	212	1050031	281	105-478	213	106-250	215	107-522	242	12-040	64
104-471	212	1050032	281	105-479	213	106-251	215	107-523	242	12-041	64
104-472	212	1050033	281	105-480	213	106-252	215	107-524	242	12-042	64
104-473	212	105-100	213	105-500	214	106-253	215	107-527	242	12-043	64
104-474	212	105-101	213	105-502	214	106-254	215	107-528	242	12-044	64
104-475	212	105-102	213	105-504	214	106-255	215	107-529	242	12-045	64
104-476	212	105-103	213	105-505	214	106-256	215	107-530	242	12-046	64
104-477	212	105-104	213	105-508	214	106-257	215	107-531	242	12-047	64
104-478	212	105-105	213	105-509	214	106-258	215	107-532	242	12-048	64
10-448	58	105-106	213	105-511	214	106-410	215	107-533	242	12-049	64
10-448B	58	105-107	213	105-512	214	106-411	215	107-534	242	12-050	64
10-449	58	105-108	213	105-513	214	106-412	215	107-535	242	12-051	64
10-450	58	105-109	213	105-515	214	106-413	215	107-537	242	12-052	64
10-451	58	105-110	213	105-516	214	106-414	215	107-538	242	12-054	65
10-452	58	105-180	213	105-517	214	106-415	215	107-539	242	12-056	65
10-452B	58	105-181	213	105-518	214	106-416	215	107-540	242	12-057	65
10-453	58	105-182	213	105-521	214	106-417	215	107-541	242	12-058	65
10-454	58	105-183	213	105-522	214	106-418	215	107-542	242	12-059	65
10-455	58	105-184	213	105-523	214	106-419	215	107-543	242	12-060	65
10-455B	58	105-185	213	105-524	214	106-420	215	107-550	242	12-061	65
10-456	58	105-186	213	105-525	214	106-434	215	107-630	242	12-062	65
10-457	58	105-187	213	105-527	214	106-435	215	107-631	242	12-063	65
10-458	58	105-188	213	105-528	214	106-437	215	107-632	242	12-064	65
10-459	58	105-189	213	105-529	214	106-438	215	107-633	242	12-065	65
10-460	58	105-190	213	105-530	214	106-440	215	107-634	242	12-066	65
10-461	59	105-250	213	105-531	214	106-441	215	107-635	242	12-067	65
10-462	59	105-251	213	105-600	214	106-442	215	107-636	242	12-068	65
10-463	59	105-252	213	105-601	214	106-443	215	107-637	242	12-069	65
10-464	59	105-253	213	105-602	214	106-444	215	107-638	242	12-072	65
10-467	59	105-254	213	105-603	214	106-445	215	107-639	242	12-073	65
10-468	59	105-255	213	105-604	214	106-446	215	107-640	242	12-074	65
10-469	59	105-256	213	105-605	214	106-447	215	107-641	242	12-075	65
10-470	59	105-257	213	105-606	214	106-448	215	107-670	242	12-076	65
10-471	59	105-258	213	105-607	214	106-449	215	107-671	242	12-077	65
10-473	59	105-259	213	105-608	214	106-450	215	107-672	242	12-079	65
10-481	60	105-260	213	105-609	214	106-451	215	107-673	242	12-080	65
10-482	60	105-410	213	105-610	214	106-452	215	107-674	242	12-081	65
10-483	60	105-411	213	105-650	214	106-453	215	107-675	242	12-085	65
10-484	60	105-412	213	105-651	214	106-454	215	107-676	242	12-086	65
10-485	60	105-413	213	105-652	214	106-458	215	107-677	242	12-087	65
10-485LF	382	105-414	213	105-653	214	106-470	215	107-678	242	12-088	65
10-486	60	105-415	213	105-654	214	106-471	215	107-679	242	12-089	65
10-487	60	105-416	213	105-655	214	106-472	215	107-680	242	12-090	65
10-488	60	105-417	213	105-656	214	106-473	215	107-681	242	12-091	66
10-489	60	105-418	213	105-657	214	106-474	215	12-000	63	12-092	66
10-493	60	105-419	213	105-658	214	106-475	215	12-001	63	12-093	66
10-494	60	105-420	213	105-770	213	106-476	215	12-002	63	12-094	66
10-495	59	105-434	214	105-771	213	106-477	215	12-003	63	12-100	66
10-500	59	105-435	214	105-772	213	106-478	215	12-004	63	12-101	66
1050000	281	105-437	214	105-773	213	106-600	215	12-005	63	12-102	66
1050001	281	105-438	214	105-774	213	106-601	215	12-006	63	12-103	66
1050002	281	105-440	214	105-775	213	106-602	215	12-007	63	12-110	66
1050003	281	105-441	214	105-776	213	106-603	215	12-008	63	12-111	66
1050006	281	105-442	214	105-777	213	106-604	215	12-009	63	12-112	66
1050007	281	105-443	214	105-778	213	106-605	215	12-010	63	12-118	66
1050008	281	105-444	214	105-779	213	106-606	215	12-011	63	12-119	66
1050009	281	105-445	214	105-780	213	106-607	215	12-012	63	12-120	66
1050010	281	105-446	214	10-602	60	106-608	215	12-013	63	12-121	66
1050011	281	105-447	214	106-100	215	107-500	242	12-014	63	12-127	67
1050012	281	105-448	214	106-101	215	107-501	242	12-015	63	12-129	67
1050013	281	105-449	214	106-102	215	107-502	242	12-016	63	12-130	67

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
12-144	67	1410118	282	1504-2-2	318	1602-8-8	318	17-064N	262	17-190N	263
12-145	67	1501-12-12	317	1504-24-24	318	1603-12-12	318	17-064P	262	17-190P	263
12-146	67	1501-12-16	317	1504-4-4	318	1603-16-16	318	17-065	262	17-193	263
12-147	67	1501-12-6	317	1504-6-4	318	1603-20-20	318	17-065N	262	17-193N	263
12-149	67	1501-12-8	317	1504-6-6	318	1603-2-2	318	17-065P	262	17-193P	263
12-150	67	1501-16-12	317	1504-8-6	318	1603-4-4	318	17-066	262	17-194	263
12-151	67	1501-16-16	317	1504-8-8	318	1603-6-6	318	17-066N	262	17-194N	263
12-200	67	1501-16-20	317	1510003	282	1603-8-8	318	17-066P	262	17-194P	263
12-202	67	1501-16-8	317	1510004	282	16-090	74	17-068	262	17-195	263
12-210	68	1501-20-12	317	1510006	282	16-117	84	17-068N	262	17-195N	263
12-212	68	1501-20-16	317	1510007	282	16-118	84	17-068P	262	17-195P	263
12-214	68	1501-20-20	317	1510008	282	16-119	84	17-078	262	17-224	263
12-216	68	1501-20-24	317	1510009	282	16-121	84	17-078N	262	17-224N	263
12-218	68	1501-2-2	317	1510010	282	16-122	84	17-079	262	17-224P	263
12-220	68	1501-2-4	317	1510011	282	16-123	84	17-079N	262	17-225	263
12-222	68	1501-24-20	317	1510012	282	16-127	84	17-079P	262	17-225N	263
12-224	68	1501-24-24	317	1510013	282	16-128	84	17-081	262	17-225P	263
12-230	68	1501-32-32	317	1510014	282	16-129	84	17-081P	262	17-226	263
12-250	68	1501-4-2	317	1510016	282	16-130	84	17-088N	262	17-226N	263
12-252	68	1501-4-4	317	1510019	282	16700001	282	17-090N	262	17-229	263
12-254	68	1501-4-6	317	1510020	282	16700004	282	17-091N	262	17-229N	263
12-256	68	1501-6-12	317	1510023	282	16700007	282	17-103	262	17-233	263
12-257	68	1501-6-4	317	15300000	281	16700010	282	17-103N	262	17-233N	263
12-310	68	1501-6-6	317	15300001	281	16700012	282	17-103P	262	17-233P	263
12-326	69	1501-6-8	317	15300002	281	16700013	282	17-105	262	17-234	263
12-327	69	1501-8-12	317	15300003	281	16700016	282	17-105N	262	17-234N	263
12-328	69	1501-8-4	317	15300004	281	16700017	282	17-105P	262	17-234P	263
12-333	69	1501-8-6	317	15300005	281	16700022	282	17-106	262	17-237	263
12-335	69	1501-8-8	317	15300006	281	16700024	282	17-106N	262	17-237N	263
12-337	69	1501-LL-12-12	317	15300008	281	1700-12-12	346	17-106P	262	17-237P	263
12-339	69	1501-LL-16-16	317	15300010	281	1700-12-16	346	17-124	262	17-238	263
12-341	69	1501-LL-4-4	317	15300012	281	1700-16-16	346	17-124N	262	17-238N	263
12-343	69	1501-LL-6-6	317	15300013	281	1700-16-20	346	17-124P	262	17-238P	263
1404-12-12	316	1501-LL-8-8	317	15300014	281	1700-16-24	346	17-126	262	17-254	263
1404-12-16	316	1502-12-12	317	15300015	281	1700-20-16	346	17-126N	262	17-254N	263
1404-12-6	316	1502-12-16	317	15300016	281	1700-20-20	346	17-126P	262	17-254P	263
1404-12-8	316	1502-12-8	317	15300017	281	1700-20-32	346	17-127	262	17-258	263
1404-16-12	316	1502-16-12	317	15300018	281	1700-24-24	346	17-127P	262	17-258N	263
1404-16-16	316	1502-16-16	317	15300019	281	1700-32-32	346	17-145	263	17-258P	263
1404-16-20	316	1502-20-20	317	15300020	281	1700-40-40	346	17-145P	263	17-259	263
1404-20-16	316	1502-2-2	317	15300021	281	1700-8-12	346	17-146	263	17-259N	263
1404-20-20	316	1502-2-4	317	15300023	281	1700-8-8	346	17-146N	263	17-259P	263
1404-2-2	316	1502-24-24	317	15300024	281	1703-12-12	346	17-153	263	17-262	263
1404-2-4	316	1502-32-32	317	15300027	281	1703-12-16	346	17-153N	263	17-262P	263
1404-24-24	316	1502-4-4	317	15300030	281	1703-16-16	346	17-153P	263	17-263	263
1404-32-32	316	1502-4-6	317	16-001	84	1703-16-20	346	17-154	263	17-263P	263
1404-4-2	316	1502-6-4	317	16-002	84	1703-16-24	346	17-154N	263	17-279	263
1404-4-4	316	1502-6-6	317	16-003	84	1703-20-16	346	17-154P	263	17-279P	263
1404-4-6	316	1502-6-8	317	16-004	84	1703-20-20	346	17-158	263	17-282	263
1404-4-8	316	1502-8-4	317	16-005	84	1703-20-24	346	17-158P	263	17-282P	263
1404-6-4	316	1502-8-6	317	16-010	74	1703-24-40	346	17-159	263	17-291	263
1404-6-6	316	1502-8-8	317	1601-12-12	318	1703-32-24	346	17-159P	263	17-291P	263
1404-6-8	316	1503-12-12	317	1601-12-8	318	1703-32-32	346	17-176	263	17-292	263
1404-8-12	316	1503-12-16	317	1601-16-12	318	1703-8-12	346	17-176N	263	17-292N	263
1404-8-4	316	1503-12-8	317	1601-16-16	318	1703-8-8	346	17-179	263	17-292P	263
1404-8-6	316	1503-16-12	317	1601-20-20	318	1704-10-16	346	17-179N	263	17-296	263
1404-8-8	316	1503-16-16	317	1601-2-2	318	1704-12-12	346	17-179P	263	17-296N	263
1405-12-12	316	1503-16-20	317	1601-24-24	318	1704-12-16	346	17-180	263	17-296P	263
1405-16-12	316	1503-20-16	317	1601-4-4	318	1704-12-20	346	17-180N	263	17-297	263
1405-16-16	316	1503-20-20	317	1601-6-4	318	1704-16-12	346	17-180P	263	17-297N	263
1405-20-20	316	1503-2-2	317	1601-6-6	318	1704-16-16	346	17-181	263	17-297P	263
1405-2-2	316	1503-24-24	317	1601-6-8	318	1704-16-20	346	17-181N	263	17-299	263
1405-2-4	316	1503-32-32	317	1601-8-4	318	1704-16-24	346	17-181P	263	17-299P	263
1405-24-24	316	1503-4-4	317	1601-8-6	318	1704-20-16	346	17-184	263	18-001	72
1405-32-32	316	1503-4-6	317	1601-8-8	318	1704-20-20	346	17-184N	263	1800-12-12	346
1405-4-2	316	1503-6-4	317	1602-12-12	318	1704-20-24	346	17-187	263	1800-12-16	346
1405-4-4	316	1503-6-6	317	1602-12-8	318	1704-24-16	346	17-187N	263	1800-16-16	346
1405-4-6	316	1503-6-8	317	1602-16-12	318	1704-24-20	346	17-187P	263	1800-16-20	346
1405-6-4	316	1503-8-12	317	1602-16-16	318	1704-24-32	346	17-188	263	18-002	72
1405-6-6	316	1503-8-4	317	1602-20-20	318	1704-24-40	346	17-188N	263	1800-20-16	346
1405-6-8	316	1503-8-6	317	1602-2-2	318	1704-32-24	346	17-188P	263	1800-20-20	346
1405-8-4	316	1503-8-8	317	1602-4-4	318	1704-32-32	346	17-189	263	1800-20-24	346
1405-8-6	316	1504-12-12	318	1602-6-4	318	1704-8-12	346	17-189N	263	1800-24-24	346
1405-8-8	316	1504-16-16	318	1602-6-6	318	1704-8-8	346	17-189P	263	18-003	72
1410083	282	1504-20-20	318	1602-8-6	318	17-064	262	17-190	263	1800-32-32	346

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
18-004	72	18-069	75	18-145	78	18-198LF	382	18-263	82
18-005	72	18-069L	75	18-145L	78	18-199	79	18-264	82
18-005LF	382	18-069LF	382	18-146	78	18-199LF	382	18-265	82
18-006	72	18-070	75	18-146L	78	18-200	79	18-266	82
18-007	72	18-071	75	18-147	78	18-201	79	18-267	82
18-007LF	382	18-071L	75	18-147LF	382	18-202	79	18-268	82
18-008	72	18-071LF	382	18-148	79	18-203	79	18-269	82
1800-8-8	346	18-076	75	18-149	78	18-204	79	18-270	82
18-009	72	18-077	75	18-150	78	18-205	79	18-271	82
18-010	72	18-078	75	18-152	78	18-208	77	18-272	81
18-015	72	18-079	75	18-153	78	18-209	77	18-273	81
18-016	72	18-079LF	382	18-153L	78	18-210	77	18-274	81
18-017	72	18-080	75	18-154	78	18-211	77	18-275	81
18-018	72	18-081	75	18-154L	78	18-212	77	18-276	81
18-019	72	18-081LF	382	18-155	78	18-213	77	18-277	81
18-020	72	18-082	75	18-156	78	18-214	77	18-278	81
18-029	74	18-083	75	18-157	78	18-215	77	18-279	81
18-030	74	18-083LF	382	18-158	78	18-220	80	18-280	81
1803-12-12	347	18-084	75	18-158L	78	18-220B	80	18-281	81
1803-12-16	347	18-088	75	18-158LF	382	18-221	80	18-282	81
1803-16-16	347	18-090	75	18-159	78	18-221B	80	18-283	81
1803-16-20	347	18-092	76	18-159L	78	18-223	80	18-284	81
1803-20-16	347	18-094	76	18-160	78	18-224	80	18-290	81
1803-20-20	347	18-096	76	18-161	78	18-224B	80	18-291	81
1803-20-24	347	18-097	76	18-162	78	18-225	80	18-291B	81
1803-24-24	347	18-099	76	18-162L	78	18-225B	80	18-292	81
18-033	73	18-100	76	18-162LF	382	18-226	80	18-293	81
1803-32-32	347	18-101	76	18-163	78	18-226LF	382	18-294	81
18-034	73	18-101B	76	18-163LF	382	18-227	80	18-295	81
18-035	73	18-102	76	18-164	78	18-228	80	18-296	81
18-035L	73	18-102B	76	18-165	78	18-228B	80	18-296B	81
18-035LF	382	18-103	76	18-166	78	18-229	80	18-297	81
18-036	73	18-103B	76	18-166LF	382	18-229B	80	18-298	81
18-037	73	18-103LF	382	18-167	78	18-230	80	18-299	81
18-037L	73	18-104	76	18-171	77	18-231	80	18-299B	81
18-037LF	382	18-104B	76	18-175	79	18-232	80	18-300	81
18-038	73	18-105	76	18-176	79	18-232B	80	18-301	81
18-039	73	18-105B	76	18-177	79	18-233	80	18-302	81
18-039L	73	18-105LF	382	18-178	79	18-233B	80	18-303	81
18-039LF	382	18-106	76	18-179	79	18-234	80	18-304	81
18-040	73	18-106B	76	18-179L	79	18-234B	80	18-307	82
18-040L	73	18-106LF	382	18-179LF	382	18-234LF	382	18-314	83
18-041	73	18-107	76	18-180	79	18-235	80	18-316	83
1804-12-12	347	18-107LF	382	18-180L	79	18-235B	80	18-321	83
1804-12-16	347	18-108	76	18-181	79	18-235LF	382	18-322	83
1804-16-16	347	18-109	76	18-182	79	18-236	80	18-323	83
1804-16-20	347	18-110	76	18-182LF	382	18-237	80	18-324	83
18-042	73	18-111	76	18-183	79	18-237B	80	18-325	83
1804-20-16	347	18-114	76	18-184	79	18-238	80	18-326	83
1804-20-20	347	18-115	76	18-184L	79	18-238B	80	18-327	83
1804-20-24	347	18-116	76	18-185	79	18-239	80	18-328	83
1804-24-24	347	18-117	76	18-186	79	18-240	80	18-329	83
1804-32-32	347	18-118	76	18-187	79	18-241	80	18-330	83
18-047	74	18-119	76	18-187L	79	18-241B	80	18-331	83
18-048	74	18-122B	77	18-188	79	18-241LF	382	18-332	83
1804-8-8	347	18-123	77	18-188L	79	18-242	80	18-333	83
18-049	74	18-123B	77	18-188LF	382	18-243	80	18-334	83
18-050	74	18-124	77	18-189	79	18-245	80	18-335	83
18-054	73	18-124B	77	18-189L	79	18-246	80	18-336	83
18-055	73	18-125	77	18-189LF	382	18-247	80	18-338	83
18-056	73	18-125B	77	18-190	79	18-248	80	18-339	83
18-057	73	18-126	77	18-190L	79	18-250	82	1861-12	347
18-062	75	18-126LF	382	18-191	79	18-251	82	1861-16	347
18-063	75	18-127	77	18-192	79	18-252	82	1861-20	347
18-064	75	18-127B	77	18-193	79	18-253	82	1861-24	347
18-064L	75	18-127LF	382	18-193L	79	18-253B	82	1861-32	347
18-064LF	382	18-128	77	18-194	79	18-254	82	1861-40	347
18-065	75	18-129	77	18-194L	79	18-255	82	1861-8	347
18-066	75	18-130	77	18-195	79	18-256	82	1862-12	347
18-066L	75	18-135	77	18-195L	79	18-257	82	1862-16	347
18-066LF	382	18-136	77	18-195LF	382	18-258	82	1862-20	347
18-067	75	18-137	77	18-196	79	18-259	82	1862-24	347
18-068	75	18-142	78	18-196LF	382	18-260	82	1862-32	347
18-068L	75	18-143	78	18-197	79	18-261	82	1862-8	347
18-068LF	382	18-144	78	18-198	79	18-262	82	1900-12	348
								1900-16	348
								1900-20	348
								1900-24	348
								1900-32	348
								1900-40	348
								1900-8	348
								1901-12	348
								1901-16	348
								1901-20	348
								1901-24	348
								1901-32	348
								1901-40	348
								1901-48	348
								1901-8	348
								1902-12	348
								1902-16	348
								1902-20	348
								1902-24	348
								1902-32	348
								1902-8	348
								1961-12	347
								1961-16	347
								1961-20	347
								1961-24	347
								1961-32	347
								1961-8	347
								1962-12	347
								1962-16	347
								1962-20	347
								1962-24	347
								1962-32	347
								1962-8	347
								20-000	93
								20-004	93
								20-005	93
								20-006	93
								20-007	93
								20-008	93
								20-009	93
								20-010	93
								20-011	93
								20-012	94
								20-013	93
								20-016N	100
								20-017	94
								20-017N	100
								20-018	94
								20-018N	100
								20-018P	264
								20-019	94
								20-019C	109
								20-019N	100
								20-019P	264
								20-020	94
								20-020C	109
								20-020N	100
								20-020P	264
								20-021	94
								20-021C	109
								20-021N	100
								20-021P	264
								20-022	94
								20-022N	100
								20-023	95
								20-023N	101
								20-024N	100
								20-025	94
								20-025N	100
								20-026	94
								20-026N	100
								20-026P	265
								20-027	94
								20-027P	265
								20-028	94
								20-028C	109

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
20-028N	100	20-059N	101	20-090S	96	20-150N	102	20-249	88	20-382	86
20-028P	265	20-059P	264	20-091	96	20-151	96	20-250	88	20-384	86
20-029	94	20-060	95	20-091N	101	20-151N	102	20-251	88	20-401	91
20-029C	109	20-060C	109	20-091S	96	20-151P	264	20-252	88	20-403	91
20-029N	100	20-060N	101	20-092	96	20-152	96	20-253	88	20-409	91
20-029P	265	20-061	95	20-092N	101	20-152C	110	20-256	88	20-411	91
20-030	94	20-061C	109	20-093	97	20-152N	102	20-257	88	20-413	91
20-030C	109	20-061N	101	20-094	96	20-152P	264	20-258	88	20-417	91
20-030N	100	20-061P	264	20-094N	101	20-153	96	20-259	88	20-419	91
20-030P	265	20-062	95	20-094S	96	20-153C	110	20-260	88	20-425	92
20-031	94	20-062C	109	20-095	97	20-153N	102	20-261	88	20-427	92
20-031N	100	20-062N	101	20-097	97	20-153P	264	20-262	88	20-435	92
20-031P	265	20-062P	264	20-098	97	20-154	96	20-263	88	20-437	92
20-032	94	20-063	95	20-099	97	20-154N	102	20-264	88	20-439	92
20-032N	100	20-063C	109	20-099C	110	20-154P	264	20-265	88	20-445	92
20-034	94	20-063N	101	20-100	97	20-155	96	20-266	88	20-451	92
20-034C	109	20-063P	264	20-100C	110	20-155N	102	20-267	88	20-453	92
20-034N	100	20-064	95	20-101	97	20-155P	264	20-268	88	20-455	92
20-035	94	20-065	95	20-102	97	20-156N	102	20-269	88	20-457	92
20-035C	109	20-066	95	20-103	98	20-160	98	20-270	88	20-461	92
20-035N	100	20-067	95	20-103N	102	20-161	98	20-271	88	20-463	92
20-035P	265	20-068	95	20-104	98	20-162	98	20-272	88	20-465	92
20-036	94	20-068N	100	20-104N	102	20-162C	110	20-273	88	20-473	153
20-036C	109	20-068P	265	20-105	98	20-162N	102	20-274	88	20-485	153
20-036N	100	20-069	95	20-105C	110	20-163	98	20-275	88	20-487	153
20-036P	265	20-069N	100	20-105N	102	20-163C	110	20-276	88	20-487C	110
20-037	94	20-069P	265	20-106	98	20-163N	102	20-277	88	20-501	153
20-037C	109	20-070	95	20-106C	110	20-164	98	20-278	88	20-503	153
20-037N	100	20-070P	265	20-106N	102	20-164N	102	20-279	88	20-510	94
20-038	94	20-071	95	20-107	98	20-165	98	20-280	88	20-510N	100
20-038N	100	20-072	95	20-107C	110	20-165C	110	20-282	88	20-511	94
20-039	95	20-072N	100	20-107N	102	20-165N	102	20-287	89	20-511N	100
20-040	95	20-072P	265	20-108	98	20-166	98	20-288	89	20-512	94
20-041	95	20-073	95	20-108C	110	20-166N	102	20-289	89	20-512N	100
20-043	95	20-073N	100	20-108N	102	20-167	98	20-290	89	20-512P	265
20-044	95	20-073P	265	20-109	98	20-170	99	20-291	89	20-513N	100
20-045	95	20-074	95	20-109N	102	20-171	99	20-292	89	20-514N	100
20-046	95	20-075	95	20-110	98	20-172	99	20-293	89	20-514P	265
20-046N	101	20-076	96	20-110N	102	20-174	98	20-294	89	20-522P	265
20-046P	264	20-076N	101	20-111	98	20-174N	102	20-295	89	20-523P	265
20-047	95	20-077	96	20-111N	102	20-192	96	20-296	89	20-524P	265
20-047N	101	20-078	96	20-112	98	20-200	87	20-300	89	20-525P	265
20-048	95	20-079	96	20-113	98	20-201	86	20-301	89	20-526P	265
20-048N	101	20-079N	101	20-115	98	20-203	86	20-302	89	20-527P	265
20-049	95	20-080	96	20-116	98	20-204	86	20-303	89	20-528P	265
20-049N	101	20-080N	101	20-117	98	20-205	86	20-304	89	20-529P	265
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Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
20-603	111	20-678	111	20-739N	106	20-838P	266	22-011A	73	2404-12-20	321
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Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
2405-6-8	322	2501-16-16	323	2502-4-6	324	2601-3-2	325	2704-16	327	28-049	3
2405-8-12	322	2501-16-20	323	2502-5-2	324	2601-4-2	325	2704-4	327	28-050	3
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2501-10-8	323	2502-16-12	324	2601-10-8	325	2703-12	327	28-041	3	28-112	5
2501-12-12	323	2502-16-16	324	2601-12-12	325	2703-16	327	28-042	3	28-113	5
2501-12-16	323	2502-20-20	324	2601-12-8	325	2703-20	327	28-043	3	28-114	5
2501-12-6	323	2502-2-2	324	2601-14-12	325	2703-4	327	28-044	3	28-115	5
2501-12-8	323	2502-24-24	324	2601-16-12	325	2703-6	327	28-045	3	28-116	6
2501-14-12	323	2502-32-32	324	2601-16-16	325	2703-8	327	28-046	3	28-117	6
2501-14-16	323	2502-4-2	324	2601-20-20	325	2704-10	327	28-047	3	28-118	6
2501-16-12	323	2502-4-4	324	2601-24-24	325	2704-12	327	28-048	3	28-121	6



Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
28-122	6	28-192	9	28-264	5	28-359	307	28-464R	309	28-592	302
28-123	7	28-192L	9	28-265	5	28-360	308	28-465	309	28-593	302
28-124	7	28-192LF	380	28-266	10	28-361	308	28-465R	309	28-594	302
28-125	7	28-193	9	28-267	10	28-362	308	28-466	309	28-595	302
28-126	7	28-193L	9	28-268	10	28-363	308	28-466R	309	28-597	302
28-128	6	28-194	9	28-269	10	28-364	308	28-467	309	28-601	259
28-129	6	28-194L	9	28-274	10	28-365	308	28-467R	309	28-601	302
28-130	6	28-195	9	28-275	10	28-366	308	28-468	309	28-601B	259
28-131	7	28-195L	9	28-276	10	28-367	308	28-468R	309	28-601P	259
28-131LF	380	28-196	9	28-281	10	28-368	308	28-469	309	28-601W	259
28-132	7	28-198	9	28-281F	10	28-369	308	28-469R	309	28-602	259
28-132LF	380	28-199	9	28-282	10	28-370	308	28-470	309	28-602B	259
28-133	7	28-201	6	28-282F	10	28-371	308	28-470R	309	28-602BA	259
28-133LF	380	28-201LF	380	28-283	10	28-372	308	28-471	309	28-602P	259
28-134	7	28-201S	7	28-283LF	380	28-373	308	28-471R	309	28-602W	259
28-134LF	380	28-202	6	28-284	10	28-374	308	28-472	309	28-603	259
28-135	7	28-202S	7	28-285	10	28-375	308	28-472R	309	28-603	302
28-135LF	380	28-203	6	28-290	11	28-376	308	28-473	309	28-603B	259
28-140	7	28-203S	7	28-291	11	28-377	308	28-473R	309	28-603P	259
28-141	7	28-204	6	28-292	11	28-378	308	28-474	309	28-603W	259
28-142	7	28-204S	7	28-293	11	28-379	307	28-474R	309	28-604	259
28-143	7	28-205	6	28-294	11	28-380	307	28-500	301	28-604B	259
28-144	7	28-205S	7	28-300	12	28-381	307	28-501	301	28-604W	259
28-144LF	380	28-206	6	28-301	12	28-382	307	28-502	301	28-605	259
28-145	7	28-206S	7	28-302	12	28-400	103	28-507	301	28-605	303
28-146	7	28-207	9	28-303	12	28-401	103	28-508	301	28-605B	259
28-147	7	28-208	9	28-304	12	28-402	103	28-509	301	28-605W	259
28-148	7	28-209	9	28-306	13	28-403	103	28-510	301	28-606	259
28-148LF	380	28-211	8	28-307	13	28-404	103	28-511	301	28-606	303
28-149	7	28-211L	8	28-309	13	28-405	103	28-515	301	28-606N	259
28-150	7	28-211LF	380	28-310	13	28-415	23	28-516	301	28-606P	259
28-151	7	28-212	8	28-312	13	28-417	23	28-517	301	28-606W	259
28-152	7	28-212L	8	28-313	12	28-425	9	28-518	301	28-607	259
28-152LF	380	28-213	8	28-315	12	28-426	9	28-520	301	28-607	303
28-153	7	28-213L	8	28-317	12	28-430	5	28-521	301	28-607W	259
28-154	7	28-214	8	28-318	12	28-440	11	28-522	301	28-608	259
28-155	7	28-214L	8	28-319	12	28-440	142	28-528	301	28-608	303
28-156	4	28-215	8	28-321	12	28-441	11	28-530	301	28-608W	259
28-156S	4	28-216	8	28-322	12	28-441	142	28-531	301	28-609	259
28-157	4	28-220	8	28-325	12	28-442	11	28-532	301	28-609W	259
28-157S	4	28-220L	8	28-328	11	28-442	142	28-533	300	28-611	259
28-158	4	28-221	8	28-328	142	28-443	11	28-534	300	28-611B	259
28-159	4	28-221L	8	28-329	11	28-448	309	28-535	300	28-611W	259
28-160	4	28-222	8	28-329	142	28-448R	309	28-540	300	28-612	259
28-165	5	28-222L	8	28-330	11	28-449	309	28540S	300	28-612B	259
28-165LF	380	28-223	8	28-330	142	28-449R	309	28-541	300	28-612P	259
28-166	5	28-223L	8	28-331	11	28-450	309	28541S	300	28-612W	259
28-166LF	380	28-224	8	28-332	11	28-450R	309	28-545	300	28-613	259
28-167	5	28-224L	8	28-332	142	28-451	309	28-546	300	28-613B	259
28-167LF	380	28-225	8	28-333	11	28-451R	309	28-547	300	28-613P	259
28-168	5	28-230	8	28-333	142	28-452	309	28-552	300	28-613W	259
28-168LF	380	28-231	8	28-335	11	28-452R	309	28552S	300	28-614	259
28-169	5	28-232	8	28-335	142	28-453	309	28-553	300	28-614B	259
28-169LF	380	28-233	8	28-336	11	28-453R	309	28553S	300	28-614P	259
28-174	6	28-234	8	28-336	142	28-454	309	28-557	300	28-614W	259
28-175	6	28-238	8	28-337	11	28-454R	309	28-558	300	28-615	259
28-176	6	28-239	8	28-338	11	28-455	309	28-559	300	28-615P	259
28-180	4	28-240	8	28-338	142	28-455R	309	28-560	300	28-615W	259
28-181	4	28-245	9	28-339	11	28-456	309	28-561	300	28-616	259
28-181L	4	28-246	9	28-339	142	28-456R	309	28-562	300	28-616W	259
28-182	4	28-246LF	380	28-340	11	28-457	309	28-562S	300	28-617	259
28-183	4	28-247	9	28-340	142	28-457R	309	28-564	300	28-617W	259
28-183L	4	28-247LF	380	28-345	12	28-458	309	28-564S	300	28-619	302
28-184	4	28-248	9	28-346	12	28-458R	309	28-565	300	28-620	259
28-184L	4	28-249	9	28-347	12	28-459	309	28-565S	300	28-620	302
28-185	4	28-253	9	28-348	12	28-459R	309	28-566	300	28-620W	259
28-185L	4	28-254	9	28-350	307	28-460	309	28-566S	300	28-621	259
28-185LF	380	28-255	9	28-351	307	28-460R	309	28-578	302	28-621W	259
28-188	4	28-256	9	28-352	307	28-461	309	28-579	300	28-622	259
28-189	4	28-257	9	28-353	307	28-461R	309	28-583	302	28-622W	259
28-189LF	380	28-260	5	28-354	307	28-462	309	28-584	302	28-623	259
28-190	9	28-261	5	28-355	307	28-462R	309	28-585	302	28-623B	259
28-190L	9	28-261B	5	28-356	307	28-463	309	28-586	302	28-623W	259
28-191	9	28-262	5	28-357	307	28-463R	309	28-587	302	28-624	259
28-191L	9	28-263	5	28-358	307	28-464	309	28-589	300	28-624B	259

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
28-624W	259	28-675P	259	28-726W	260	28-808	112	28-912	113	300-017	307
28-625	259	28-675W	259	28-728F	61	28-810	112	28-917	113	300-018	307
28-625B	259	28-676	302	28-729F	61	28-811	112	28-918	113	300-019	307
28-625W	259	28-677	302	28-731F	61	28-815	112	28-919	113	30-001LF	381
28-627	259	28-678	259	28-733F	61	28-816	112	28-920	113	300-020	307
28-628	259	28-678	302	28-734F	61	28-817	112	28-930	113	300-021	307
28-628B	259	28-678P	259	28-736F	61	28-818	112	28-931	113	300-022	307
28-628W	259	28-678W	259	28-738F	61	28-819	112	28-932	113	300-023	307
28-629	259	28-679	259	28-740F	61	28-820	112	28-933	113	300-024	307
28-629P	259	28-679	302	28-741	260	28-821	112	28-947	113	300-026	307
28-630P	259	28-679W	259	28-741P	260	28-822	112	28-948	113	300-028	307
28-631	259	28-680	259	28-741W	260	28-823	112	28-949	113	300-031	307
28-631P	259	28-680	302	28-742	260	28-824	112	28-950	113	300-032	307
28-632P	259	28-680P	259	28-742F	61	28-825	112	28-955	61	300-033	307
28-634	259	28-680W	259	28-742P	260	28-826	112	28-957	61	300-034	307
28-634P	259	28-681	302	28-743	260	28-827	112	28-958	61	300-035	307
28-635	259	28-682	259	28-743P	260	28-828	112	28-959	61	300-036	307
28-635P	259	28-682W	259	28-743W	260	28-829	112	28-960	61	300-037	307
28-639	302	28-683	259	28-744	260	28-832	112	28-961	61	30-006	35
28-640	259	28-683	303	28-744P	260	28-833	112	28-962	61	30-006LF	381
28-640	302	28-683W	259	28-744W	260	28-835	112	28-963	61	30-011	35
28-640W	259	28-684	303	28-745	260	28-836	112	28-964	61	30-011LF	381
28-641	259	28-685	259	28-745W	260	28-837	112	28-966	61	30-012	35
28-641W	259	28-685	303	28-746	260	28-838	112	28-969	61	30-016	35
28-642	259	28-686	303	28-746W	260	28-840	112	28-970	61	30-017	35
28-642W	259	28-687	303	28-747	260	28-841	112	28-971	61	30-018	35
28-643	259	28-688	302	28-747W	260	28-842	112	28-972	61	30-021	37
28-643W	259	28-690	300	28-753	61	28-843	112	28-973	61	30-022	37
28-651	302	28-691	300	28-754	61	28-844	112	28-974	61	30-025	40
28-652	302	28-701	61	28-756	61	28-855	112	28-975	61	30-026	38
28-659	259	28-701	260	28-760	260	28-856	112	28-981	61	30-027	40
28-659P	259	28-701W	260	28-760F	61	28-857	112	28-982	61	30-027SS	40
28-659W	259	28-702	61	28-760P	260	28-858	112	28-988	297	30-028	40
28-660	259	28-702	260	28-760W	260	28-860	112	28-989	297	30-028SS	40
28-660P	259	28-702P	260	28-761	260	28-861	112	28-990	297	30-029	40
28-660W	259	28-703	61	28-761P	260	28-862	112	28-991	297	30-029SS	40
28-661	259	28-703	260	28-761W	260	28-863	112	28-996	232	30-030	40
28-661P	259	28-703W	260	28-762	260	28-864	112	28-997	232	30-031	40
28-661W	259	28-704	61	28-762F	61	28-867	112	28-998	232	30-032	40
28-663	259	28-704	260	28-762P	260	28-868	112	28-999	232	30-032LF	381
28-663P	259	28-704P	260	28-762W	260	28-869	112	28-990	303	30-032SS	40
28-663W	259	28-704W	260	28-763	260	28-870	112	29-901	303	30-033	40
28-664	259	28-705	61	28-763P	260	28-871	112	29-902	303	30-033SS	40
28-664P	259	28-705	260	28-763W	260	28-873	112	29-903	303	30-034	40
28-664W	259	28-705W	260	28-764	260	28-874	112	29-904	303	30-034SS	40
28-665	259	28-706	61	28-764P	260	28-875	112	29-905	303	30-035	40
28-665	302	28-706	260	28-764W	260	28-876	112	29-906	303	30-039	40
28-665W	259	28-706W	260	28-765	260	28-877	112	29-907	303	30-040	40
28-666	259	28-707	61	28-765W	260	28-878	112	29-908	303	30-040LF	381
28-666	302	28-707W	260	28-766F	61	28-880	113	29-909	303	30-040SS	40
28-666P	259	28-708	61	28-767	260	28-881	113	29-910	303	30-041	40
28-666W	259	28-709	61	28-767W	260	28-882	113	29-911	303	30-041SS	40
28-667	259	28-710	61	28-768	260	28-883	113	29-912	303	30-042	40
28-667	302	28-711	61	28-768F	61	28-884	113	29-913	303	30-042SS	40
28-667W	259	28-712	61	28-768W	260	28-885	113	29-914	303	30-043	40
28-668	259	28-713	61	28-770F	61	28-886	113	30-000	35	30-044	40
28-668	302	28-714	61	28-772F	61	28-887	113	300-000	307	30-045	40
28-668P	259	28-715	61	28-773F	61	28-888	113	300-004	277	30-046	40
28-668W	259	28-716	61	28-774F	61	28-889	113	300-0006	277	30-047	36
28-669	302	28-717	61	28-777F	61	28-890	113	300-0008	277	30-048	36
28-670	302	28-718	61	28-778F	61	28-891	113	300-001	307	30-049	36
28-671	259	28-720	260	28-780F	61	28-894	113	300-002	307	30-050	39
28-671	302	28-720W	260	28-781F	61	28-895	113	300-0020	277	30-050	84
28-671P	259	28-721	260	28-783F	61	28-896	113	300-003	307	30-051	39
28-671W	259	28-721W	260	28-784F	61	28-897	113	300-004	307	30-051	84
28-672	259	28-722F	61	28-786F	61	28-898	113	300-005	277	30-052	39
28-672	302	28-723	260	28-797	61	28-899	113	300-006	307	30-053	37
28-672P	259	28-723P	260	28-800	112	28-900	113	300-007	307	30-053LF	381
28-672W	259	28-723W	260	28-801	112	28-901	113	300-008	307	30-058	37
28-673	302	28-724	260	28-802	112	28-902	113	30-001	35	30-063	37
28-674	259	28-724F	61	28-803	112	28-905	113	300-010	277	30-063BE	37
28-674	302	28-724W	260	28-804	112	28-906	113	300-012	277	30-063S	260
28-674W	259	28-725	260	28-805	112	28-907	113	300-014	307	30-064	37
28-675	259	28-725W	260	28-806	112	28-908	113	300-015	307	30-066	37
28-675	302	28-726	260	28-807	112	28-911	113	300-016	277	30-067	37

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
30-068	37	30-229	29	30-313	32	30-471	41	31-041	262	32-021SS	26
30-073	37	30-230	30	30-314	32	30-472	41	31-055	262	32-022	15
30-073LF	381	30-230LF	381	30-315	32	30-473	41	31-058	262	32-022LF	380
30-078	36	30-230SS	33	30-316	32	30-480	32	31-063	262	32-022SS	26
30-083	36	30-231	30	30-340	32	30-482	32	31-068	262	32-023	15
30-087	36	30-232	30	30-341	32	30-483	32	31-093	262	32-023SS	26
30-088	36	30-233	30	30-342	32	30-484	32	31-096	262	32-024	15
30-093	36	30-234	30	30-343	32	30-486	32	320-000	140	32-024SS	26
30-093L	36	30-234SS	33	30-344	32	30-505	41	320-000	310	32-025	15
30-094	36	30-235	30	30-345	32	30-506	41	320-005	140	32-026	15
30-098	37	30-236	30	30-346	32	30-507	41	320-005	310	32-027	15
30-100	37	30-237	30	30-349	32	30-508	41	32-001	15	32-028	15
30-103	38	30-238	28	30-358	28	30-510	41	32-001SS	26	32-029	15
30-103P	262	30-239	28	30-359	28	30-511	41	32-002	15	32-030	21
30-123	39	30-240	30	30-360	28	30-512	41	320-023	311	32-031	21
30-128	39	30-241	30	30-361	28	30-513	41	320-027	311	32-032	21
30-133	39	30-243	30	30-362	28	30-516	41	32-002LF	380	32-033	21
30-138	39	30-245	30	30-363	28	30-517	41	32-002SS	26	32-034	21
30-139	39	30-246	30	30-365	28	30-518	41	32-003	15	32-036	18
30-140	39	30-247	30	30-366	28	30-519	41	320-035	309	32-036LF	381
30-142	38	30-249	30	30-370	29	30-526	43	32-003SS	26	32-038	18
30-149	38	30-250	31	30-371	29	30-527	43	32-004	15	32-038B	19
30-150	38	30-251	31	30-372	29	30-530	43	32-004SS	26	32-038SS	26
30-150B	38	30-252	31	30-373	29	30-531	43	32-005	15	32-039	18
30-150R	38	30-253	31	30-374	29	30-540	42	320-050	309	32-039B	19
30-160	44	30-254	31	30-375	29	30-541	42	32-005LF	380	32-039LF	381
30-161	43	30-255	31	30-376	29	30-542	42	32-005SS	26	32-039SS	26
30-162	43	30-257	31	30-377	29	30-543	42	32-006	15	32-040	18
30-163	44	30-258	31	30-378	29	30-545	42	320-061	9	32-040LF	381
30-180	38	30-259	31	30-379	29	30-546	42	320-061	310	32-041	18
30-180F	38	30-260	31	30-380	29	30-547	42	320-065	300	32-041B	19
30-181	36	30-261	31	30-381	29	30-548	42	320-065	310	32-041SS	26
30-182	36	30-264	31	30-382	29	30-550	42	32-006SS	26	32-042	18
30-183	36	30-265	31	30-383	29	30-551	42	32-007	15	32-042B	19
30-184	36	30-266	31	30-384	29	30-552	42	320-070	309	32-042LF	381
30-200	28	30-266SS	33	30-385	28	30-553	42	320-075	309	32-042SS	26
30-200LF	381	30-267	31	30-386	28	30-560	42	32-008	15	32-043	18
30-200SS	33	30-268	31	30-387	28	30-561	42	32-008LF	380	32-043B	19
30-201	28	30-269	31	30-388	28	30-562	42	32-008SS	26	32-044	18
30-201LF	381	30-269SS	33	30-389	28	30-563	42	32-009	15	32-045	18
30-201SS	33	30-270	31	30-390	28	30-565	42	32-009LF	380	32-046	18
30-202	28	30-271	30	30-391	29	30-566	42	32-009SS	26	32-047	18
30-203	28	30-275	31	30-392	28	30-567	42	32-010	15	32-048	18
30-203LF	381	30-276	31	30-393	29	30-568	42	32-010SS	26	32-049	17
30-203SS	33	30-277	31	30-394	29	30-570	42	32-011	15	32-050	17
30-204	28	30-278	31	30-395	29	30-571	42	32-011LF	380	32-051	17
30-204LF	381	30-279	31	30-396	29	30-572	42	32-011SS	26	32-052	17
30-204SS	33	30-280	31	30-397	29	30-573	42	32-012	15	32-053	17
30-205	28	30-281	31	30-398	29	30-600	45	320-120	309	32-053LF	381
30-206	28	30-282	31	30-399	29	30-609	45	320-121	309	32-054	17
30-206LF	381	30-283	31	30-400	29	30-620	45	320-122	309	32-055	17
30-206SS	33	30-284	31	30-401	24	30-626	44	32-012LF	380	32-056	17
30-207	28	30-286	31	30-402	29	30-627	44	32-012SS	26	32-057	17
30-207LF	381	30-290	30	30-406	24	30-629	44	32-013	15	32-058	17
30-207SS	33	30-291	30	30-410	24	30-630	45	32-013LF	380	32-058LF	381
30-209	28	30-292	30	30-411	24	30-631	43	32-013SS	26	32-059	17
30-210	28	30-293	30	30-412	24	30-637	45	32-014	15	32-059LF	381
30-210SS	33	30-294	30	30-413	24	30-638	45	32-014SS	26	32-060	17
30-211	28	30-295	31	30-420	24	30-640	45	32-015	15	32-061	17
30-212	28	30-297	30	30-421	24	308-070	290	32-015LF	380	32-061LF	381
30-213	28	30-298	30	30-450	39	308-071	290	32-015SS	26	32-062	17
30-214	28	30-299	30	30-451	39	308-072	290	32-016	15	32-063	17
30-215	28	30-300	29	30-452	39	308-073	290	32-016LF	380	32-063LF	381
30-215SS	33	30-300SS	33	30-453	41	308-074	290	32-016SS	26	32-064	17
30-216	28	30-301	29	30-454	41	308-075	290	32-017	15	32-065	17
30-217	28	30-301SS	33	30-455	41	308-076	290	32-017LF	380	32-066	21
30-219	28	30-302	29	30-457	41	308-077	290	32-017SS	26	32-067	21
30-220	29	30-302SS	33	30-458	41	308-078	290	32-018	15	32-068	21
30-221	29	30-303	29	30-459	41	308-079	290	32-018SS	26	32-069	21
30-222	29	30-304	29	30-461	41	31-022	262	32-019	15	32-070	21
30-223	29	30-305	29	30-462	41	31-031	262	32-019SS	26	32-071	21
30-224	29	30-306	29	30-463	41	31-032	262	32-020	15	32-072	21
30-225	29	30-310	32	30-466	41	31-033	262	32-020LF	380	32-073	21
30-226	29	30-311	32	30-467	41	31-034	262	32-020SS	26	32-074	21
30-227	29	30-312	32	30-468	41	31-040	262	32-021	15	32-075	21

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
32-076	21	32-189	142	32-387	142	32-467	21	33-002	260	33-024P	260
32-077	21	32-190	142	32-388	142	32-470	17	33-002B	260	33-024W	260
32-078	21	32-191	142	32-390	15	32-472	17	33-002W	260	33-025	260
32-079	16	32-200	16	32-391	18	32-473	17	33-003	260	33-025B	260
32-080	16	32-201	16	32-400	19	32-475	17	33-003B	260	33-025P	260
32-081	21	32-202	16	32-401	20	32-476	17	33-003W	260	33-025W	260
32-082	21	32-300	15	32-402	20	32-500	290	33-004	260	33-026	260
32-083	21	32-301	15	32-403	20	325-004	277	33-004B	260	33-026B	260
32-084	21	32-302	15	32-404	20	325-005	277	33-004W	260	33-026W	260
32-085	21	32-303	15	32-405	20	325-006	277	33-005	260	33-028	260
32-086	21	32-304	15	32-406	20	325-008	277	33-005B	260	33-028W	260
32-087	16	32-305	15	32-407	20	32-501	290	33-005W	260	33-029	260
32-088	16	32-306	15	32-409	20	325-010	277	33-006	260	33-029W	260
32-089	16	32-307	15	32-410	20	325-012	277	33-006B	260	33-030	260
32-090	16	32-308	18	32-411	20	325-016	277	33-006W	260	33-030W	260
32-091	16	32-308B	19	32-412	19	32-502	290	33-007	260	33-032	260
32-092	16	32-309	18	32-413	19	325-020	277	33-007B	260	33-032W	260
32-093	16	32-310	18	32-414	19	32-504	290	33-007W	260	33-033	260
32-093SS	26	32-311	18	32-415	19	32-517	290	33-008	260	33-033W	260
32-094	16	32-311SS	26	32-416	19	32-521	290	33-008B	260	33-035	260
32-095	16	32-312	18	32-417	19	32-526	290	33-008W	260	33-035W	260
32-095LF	381	32-313	18	32-418	19	32-533	290	33-009	260	33-038	261
32-095SS	26	32-314	18	32-419	19	32-545	290	33-009B	260	33-038B	261
32-096	16	32-315	18	32-420	19	32-549	290	33-009W	260	33-038W	261
32-096LF	381	32-316	15	32-421	20	32-550	290	33-010	260	33-038WM	261
32-096SS	26	32-317	17	32-422	20	32-551	290	33-010W	260	33-039	261
32-097	16	32-318	17	32-423	20	32-552	290	33-011	260	33-039B	261
32-098	16	32-319	18	32-424	20	32-553	290	33-011W	260	33-039W	261
32-098SS	26	32-320	17	32-425	19	32-554	290	33-012	260	33-040	261
32-099	16	32-321	17	32-426	20	32-555	290	33-012B	260	33-040B	261
32-100	22	32-322	21	32-427	20	32-556	290	33-012P	260	33-040W	261
32-101	22	32-326	22	32-428	20	32-557	290	33-012W	260	33-041	261
32-102	22	32-327	22	32-429	19	32-558	290	33-013	260	33-041B	261
32-103	22	32-328	22	32-431	20	32-559	290	33-013B	260	33-041W	261
32-104	22	32-330	18	32-432	20	32-561	290	33-013W	260	33-042	261
32-105	22	32-333	15	32-433	19	32-562	290	33-014	260	33-042B	261
32-106	22	32-334	22	32-434	19	32-563	290	33-014B	260	33-042W	261
32-107	22	32-335	22	32-435	19	32-564	290	33-014P	260	33-043	261
32-109	20	32-336	22	32-436	19	32-565	290	33-014W	260	33-043B	261
32-110	20	32-337	22	32-437	24	32-566	290	33-015	260	33-043W	261
32-111	20	32-337LF	381	32-438	24	32-567	290	33-015B	260	33-044	261
32-112	20	32-338	22	32-439	24	32-568	290	33-015P	260	33-044B	261
32-113	20	32-339	22	32-440	24	32-570	290	33-015W	260	33-044W	261
32-114	20	32-340	22	32-441	17	32-571	290	33-016	260	33-045	261
32-115	20	32-341	22	32-442	17	32-572	290	33-016B	260	33-045B	261
32-116	20	32-342	22	32-443	17	32-573	290	33-016P	260	33-045W	261
32-117	18	32-345	20	32-444	17	32-574	290	33-016W	260	33-046	261
32-118	18	32-346	20	32-445	17	32-575	290	33-017	260	33-046B	261
32-119	18	32-350	19	32-446	17	32-576	290	33-017B	260	33-046W	261
32-120	18	32-352	19	32-447	17	32-577	290	33-017P	260	33-047	261
32-121	18	32-353	19	32-448	17	32-578	290	33-017W	260	33-047B	261
32-122	18	32-354	18	32-450	16	32-579	290	33-018	260	33-047W	261
32-123	18	32-355	16	32-450	112	32-580	290	33-018B	260	33-048	261
32-124	18	32-356	16	32-451	16	32-584	290	33-018P	260	33-048P	261
32-125	18	32-357	16	32-451	112	32-588	290	33-018W	260	33-048W	261
32-126	19	32-359	21	32-452	16	32-590	290	33-019	260	33-053	260
32-126LF	381	32-361	19	32-452	112	32-591	290	33-019B	260	33-053B	260
32-128	19	32-362	21	32-453	16	32-725	23	33-019W	260	33-053W	260
32-129	18	32-363	19	32-453	112	32-726	23	33-020	260	33-058	260
32-130	18	32-364	21	32-454	16	32-727	23	33-020B	260	33-058B	260
32-131	18	32-365	19	32-454	112	32-728	23	33-020P	260	33-058W	260
32-132	18	32-365LF	381	32-455	16	32-741	23	33-020W	260	33-059	260
32-133	18	32-366	19	32-455	112	32-742	23	33-021	260	33-059W	260
32-150	25	32-367	19	32-456	16	32-781	23	33-021B	260	33-060	260
32-151	25	32-368	19	32-456	112	32-782	310	33-021W	260	33-060W	260
32-153	25	32-369	22	32-457	16	32-783	310	33-022	260	33-061	260
32-159	25	32-371	22	32-457	112	32-900	30	33-022B	260	33-061W	260
32-160	25	32-372	22	32-458	16	32-901	30	33-022P	260	33-062	260
32-170	25	32-373	22	32-458	112	32-902	30	33-022W	260	33-062P	260
32-171	25	32-377	142	32-460	21	32-903	30	33-023	260	33-063	260
32-182	142	32-381	142	32-461	21	32-905	30	33-023B	260	33-063W	260
32-185	142	32-382	142	32-462	21	32-906	30	33-023P	260	33-064	260
32-186	142	32-383	142	32-463	21	32-907	30	33-023W	260	33-064W	260
32-187	142	32-384	142	32-465	21	33-000	260	33-024	260	33-065	260
32-188	142	32-385	142	32-466	21	33-000W	260	33-024B	260	33-065W	260

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
33-091	261	33-385W	261	33-430	261	34-500	313	35-960	270	38-020	119
33-091B	261	33-386	261	33-430B	261	34-503	313	35-961	270	38-021	119
33-091W	261	33-386W	261	33-430W	261	34-512	313	35-962	270	38-022	119
33-092	261	33-389	261	33-431	261	34-515	313	35-963	270	38-023	119
33-092B	261	33-389W	261	33-431W	261	34-525	313	35-964	270	38-028	119
33-092W	261	33-390	261	33-432	261	34-529	313	35-965	270	38-029	119
33-093	261	33-390B	261	33-432B	261	34-533	313	35-967	270	38-030	119
33-093B	261	33-390W	261	33-432W	261	34-535	313	35-970	270	38-035	119
33-093W	261	33-391	261	33-433	261	34-543	313	35-971	270	38-036	119
33-094	261	33-391B	261	33-433B	261	34-551	313	35-972	270	38-037	119
33-094W	261	33-391W	261	33-433W	261	34-552	313	35-973	270	38-038	119
33-095	261	33-392	261	33-434	261	34-562	313	35-974	270	38-039	119
33-095B	261	33-392W	261	33-435	261	34-563	313	35-975	270	38-040	120
33-095P	261	33-394	261	33-435B	261	34-579	314	35-977	270	38-041	120
33-095W	261	33-394B	261	33-435W	261	34-583	314	35-980	270	38-042	120
33-096	261	33-394W	261	33-436	261	34-584	314	35-981	270	38-043	120
33-096B	261	33-395	261	33-436B	261	34-585	314	35-982	270	38-044	120
33-096P	261	33-395B	261	33-436W	261	34-587	314	35-983	270	38-045	120
33-096W	261	33-395P	261	33-437	261	34-588	314	35-984	270	38-046	120
33-097	261	33-395W	261	33-437B	261	34-589	314	35-985	270	38-047	120
33-097B	261	33-396	261	33-437W	261	34-590	314	35-987	270	38-048	120
33-097W	261	33-396B	261	33-438	261	34-591	314	36-110	114	38-049	120
33-098	261	33-396P	261	33-438B	261	34-592	314	36-111	114	38-052	120
33-098B	261	33-396W	261	33-438W	261	34-595	314	36-112	114	38-053	120
33-098P	261	33-397	261	33-439	261	34-597	314	36-113	114	38-054	120
33-098W	261	33-397W	261	33-439W	261	34-600	314	36-114	114	38-055	120
33-099	261	33-398	261	33-440	261	34-610	314	36-116	114	38-057	120
33-099P	261	33-398W	261	33-440P	261	34-611	314	36-118	114	38-060	120
33-099W	261	33-399	261	33-440W	261	34-612	314	36-120	114	38-061	120
33-300	259	33-399W	261	33-441	261	34-613	314	36-121	114	38-062	120
33-300P	261	33-402	261	33-441W	261	350-004	277	36-130	114	38-063	120
33-301	259	33-402W	261	33-448	261	350-005	277	36-132	115	38-064	120
33-301P	261	33-403	261	33-448B	261	350-006	277	36-140	115	38-065	120
33-301W	261	33-403W	261	33-448W	261	350-008	277	36-141	115	38-066	120
33-302	259	33-406	261	33-450	261	350-010	277	36-142	115	38-067	120
33-302P	261	33-406B	261	33-450W	261	350-012	277	36-144	115	38-068	120
33-308	261	33-406W	261	33-451	261	350-016	277	36-146	115	38-072	121
33-308B	261	33-407	261	33-451W	261	350-020	277	36-147	115	38-073	121
33-309	261	33-407B	261	33-453	261	35-132	58	36-148	115	38-074	121
33-309B	261	33-407W	261	33-453W	261	35-134	58	36-150	115	38-075	121
33-309W	261	33-408	261	33-454	261	35-910	270	36-152	115	38-076	121
33-310	261	33-408B	261	33-454W	261	35-911	270	36-160	116	38-077	121
33-310B	261	33-408W	261	33-455	261	35-912	270	36-164	116	38-078	121
33-310W	261	33-409	261	33-456	261	35-913	270	36-166	116	38-079	121
33-311	261	33-409W	261	33-456W	261	35-914	270	36-168	116	38-080	121
33-311B	261	33-410	261	33-460	261	35-915	270	36-170	116	38-081	121
33-311P	261	33-410B	261	33-460W	261	35-917	270	36-172	116	38-082	121
33-311W	261	33-410W	261	33-461	261	35-920	270	36-174	116	38-083	121
33-312	261	33-415	261	33-461P	261	35-921	270	36-176	116	38-084	121
33-312B	261	33-415B	261	33-461W	261	35-922	270	36-178	116	38-085	121
33-312W	261	33-415W	261	33-463	261	35-923	270	36-180	117	38-086	121
33-313	261	33-416	261	33-463P	261	35-924	270	36-182	117	38-087	121
33-313B	261	33-417	261	33-463W	261	35-925	270	36-184	117	38-088	121
33-313P	261	33-417W	261	33-464	261	35-927	270	36-186	117	38-090	121
33-313W	261	33-418	261	33-464W	261	35-930	270	36-188	117	38-091	121
33-314	261	33-418B	261	33-471	261	35-931	270	36-200	117	38-092	121
33-314B	261	33-418W	261	33-471W	261	35-932	270	36-205	117	38-093	121
33-314P	261	33-420	261	33-480	261	35-933	270	36-210	117	38-094	121
33-314W	261	33-420B	261	33-480W	261	35-934	270	36-212	117	38-095	121
33-315	261	33-420W	261	33-481	261	35-935	270	36-214	117	38-101	121
33-315W	261	33-422	261	33-481W	261	35-937	270	36-216	117	38-102	121
33-316	261	33-422B	261	33-482	261	35-940	270	36-220	117	38-103	121
33-316B	261	33-422W	261	33-482W	261	35-941	270	38-001	119	38-104	121
33-316P	261	33-423	261	34-001	70	35-942	270	38-002	119	38-105	121
33-316W	261	33-423B	261	34-011	70	35-943	270	38-003	119	38-106	121
33-380	260	33-424	261	34-012	70	35-944	270	38-004	119	38-107	121
33-380W	261	33-424B	261	34-016	70	35-945	270	38-005	119	38-108	121
33-381	261	33-424W	261	34-022	70	35-947	270	38-010	119	38-109	121
33-381W	261	33-426	261	34-025	70	35-950	270	38-011	119	38-110	121
33-384	261	33-426B	261	34-031	70	35-951	270	38-012	119	38-113	121
33-384B	261	33-426W	261	34-036	70	35-952	270	38-013	119	38-114	121
33-384W	261	33-429	261	34-041	70	35-953	270	38-014	119	38-115	121
33-385	261	33-429B	261	34-046	70	35-954	270	38-015	131	38-116	121
33-385B	261	33-429P	261	34-051	70	35-955	270	38-016	131	38-117	121
33-385P	261	33-429W	261	34-056	70	35-957	270	38-019	119	38-118	121

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
38-119	121	38-228	125	38602N	295	40-001	189	4004-8-8	348	40-140	190
38-120	121	38-229	125	38603N	295	4000-10	344	40-049	189	40-141	190
38-124	122	38-230	125	38604	295	4000-12	344	40-050	189	40-142	190
38-125	122	38-235	126	38605	295	4000-14	344	40-051	189	40-143	190
38-126	122	38-236	126	38606	295	4000-16	344	40-052	189	40-144	190
38-127	122	38-237	126	38607	295	40-002	189	40-053	189	40-145	190
38-128	122	38-238	126	38-700	141	4000-20	344	40-054	189	40-146	190
38-129	122	38-239	126	38-705	141	4000-2-2	344	40-055	189	40-147	190
38-132	122	38-240	126	38-710	141	4000-24	344	40-056	189	40-148	190
38-133	122	38-241	126	38-711	139	40-003	189	40-060	189	40-149	190
38-134	122	38-242	126	38-712	140	4000-32	344	40-061	189	40-150	190
38-136	122	38-243	126	38-714	140	4000-3-3	344	40-062	189	40-151	190
38-137	122	38-244	126	38-716	140	40-004	189	40-063	189	40-152	190
38-138	122	38-245	126	38-718	139	4000-4-4	344	40-064	189	40-153	190
38-139	122	38-246	126	38-720	140	40-005	189	40-065	189	40-154	190
38-140	122	38-247	126	38-732	139	4000-5-5	344	40-066	189	40-155	190
38-141	122	38-249	126	38-761	139	40-006	189	40-067	189	40-160	191
38-142	122	38-252	126	38-769	139	4000-6-6	344	40-068	189	40-161	191
38-143	122	38-253	126	38-770	139	40-007	189	40-069	189	40-162	191
38-144	122	38-255	126	38-800	142	40-008	189	40-070	189	40-163	191
38-146	122	38-256	126	38-802	142	4000-8-8	344	40-071	189	40-164	191
38-148	122	38-257	126	38-806	142	40-009	189	40-072	189	40-165	191
38-149	122	38-259	126	38-808	142	40-010	189	40-073	189	40-166	191
38-150	122	38-264	126	38-810	142	40-011	189	40-074	189	40-167	191
38-151	122	38-265	126	38-828	142	4001-10	344	40-075	189	40-168	191
38-152	122	38-266	126	38-830	142	4001-12	344	40-076	189	40-169	191
38-153	122	38-267	126	38-832	142	4001-16	344	40-080	190	40-170	191
38-154	122	38-269	126	38-834	142	40-012	189	40-081	190	40-171	191
38-155	122	38-278	127	38-836	142	4001-20	344	40-082	190	40-172	191
38-156	122	38-279	127	38-860	142	4001-2-2	344	40-083	190	40-173	191
38-157	122	38-280	127	38-862	142	4001-24	344	40-084	190	40-174	191
38-158	122	38-281	127	38-864	142	40-013	189	40-085	190	40-180	191
38-161	124	38-287	127	38-866	142	4001-32	344	40-086	190	40-181	191
38-162	124	38-288	127	38-868	142	4001-3-3	344	40-087	190	40-182	191
38-163	124	38-290	127	38-873	142	40-014	189	40-088	190	40-183	191
38-164	124	38-291	127	38-874	142	4001-4-4	344	40-089	190	40-184	191
38-165	124	38-292	127	38-910	141	40-015	189	40-090	190	40-185	191
38-170	124	38-293	127	38-915	141	4001-5-5	344	40-091	190	40-186	191
38-171	124	38-294	127	38-920	139	40-016	189	40-092	190	40-187	191
38-172	124	38-300	129	38-923	139	4001-6-6	344	40-093	190	40-188	191
38-173	124	38-301	129	38-926	139	40-017	189	40-094	190	40-189	191
38-174	124	38-306	129	38-927	139	4001-8-8	344	40-095	190	40-190	191
38-179	124	38-307	129	38-930	140	40-020	189	40-096	190	40-191	191
38-180	124	38-312	129	38-931	140	40-021	189	40-100	190	40-192	191
38-181	124	38-313	129	38-932	140	40-022	189	40-101	190	40-193	191
38-182	124	38-318	130	38-933	140	40-023	189	40-102	190	40-200	191
38-183	124	38-319	130	38-934	140	40-024	189	40-103	190	40-201	191
38-188	124	38-324	131	38-935	140	40-025	189	40-104	190	40-202	191
38-189	124	38-325	131	38-936	140	40-026	189	40-105	190	40-203	191
38-190	124	38-326	131	38-937	140	40-027	189	40-106	190	40-204	191
38-191	124	38-327	131	38-938	140	40-028	189	40-107	190	40-205	191
38-196	125	38-328	131	38-939	140	40-029	189	40-108	190	40-206	191
38-197	125	38-333	131	38-943	140	40-030	189	40-109	190	40-207	191
38-198	125	38-334	131	38-944	140	40-031	189	40-110	190	40-208	191
38-199	125	38-335	131	38-945	140	40-032	189	40-111	190	40-209	191
38-204	125	38-336	131	38-946	140	40-033	189	40-112	190	40-210	191
38-205	125	38-337	131	38-950	139	40-034	189	40-113	190	40-211	191
38-206	125	38-342	131	38-952	139	40-035	189	40-114	190	40-212	191
38-207	125	38-343	131	38-952-2	139	40-036	189	40-115	190	40-213	191
38-208	125	38-344	131	38-952R	139	40-040	189	40-120	190	40-220	191
38-209	125	38-345	131	38-952U	139	40-041	189	40-121	190	40-221	191
38-210	125	38-346	131	38-960	139	4004-12	348	40-122	190	40-222	191
38-211	125	38-351	130	38-960B5	139	4004-16	348	40-123	190	40-223	191
38-212	125	38-352	130	38-960U	139	40-042	189	40-124	190	40-224	191
38-217	125	38-357	130	38-965	139	4004-20	348	40-125	190	40-225	191
38-218	125	38-358	130	38-965B5	139	4004-24	348	40-126	190	40-226	191
38-219	125	38-363	130	38-965R	139	40-043	189	40-127	190	40-229	191
38-220	125	38-364	130	38-970	139	4004-32	348	40-128	190	40-233	191
38-221	125	38-368	130	38-975	139	40-044	189	40-129	190	40-234	191
38-222	125	38-369	130	38-985	140	4004-40	348	40-130	190	42-001	192
38-223	125	38-370	130	38-986	140	4004-48	348	40-131	190	42-002	192
38-224	125	38-371	130	38-988	140	40-045	189	40-132	190	42-003	192
38-225	125	38-372	130	38-989	140	40-046	189	40-133	190	42-004	192
38-226	125	38600N	295	38-990	140	40-047	189	40-134	190	42-005	192
38-227	125	38601N	295	38C100B	378	40-048	189	40-135	190	42-006	192

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
42-007	192	42-148	193	44-161	194	444-021	273	44-473	198	44-671	200
42-008	192	42-149	193	44-162	194	444-023	273	44-474	198	44-672	200
42-009	192	42-160	193	44-163	194	444-024	273	44-475	198	44-673	200
42-010	192	42-161	193	44-164	194	444-026	273	44-476	198	44-674	200
42-020	192	42-162	193	44-165	194	444-027	273	44-477	198	44-675	200
42-021	192	42-163	193	44-166	194	444-028	273	44-478	198	44-676	200
42-022	192	42-164	193	44-167	194	444-040	273	44-480	198	44-677	200
42-023	192	42-165	193	44-168	194	444-042	273	44-500	199	44-678	200
42-024	192	42-166	193	44-169	194	444-045	273	44-501	199	44-700	201
42-025	192	42-167	193	44-170	194	444-047	273	44-502	199	44-701	201
42-026	192	42-168	193	44-180	195	444-048	273	44-503	199	44-702	201
42-027	192	42-180	193	44-181	195	444-049	273	44-504	199	44-703	201
42-028	192	42-181	193	44-182	195	444-060	274	44-505	199	44-704	201
42-029	192	42-182	193	44-183	195	444-061	274	44-506	199	44-705	201
42-030	192	42-183	193	44-184	195	444-062	274	44-507	199	44-706	201
42-040	192	42-184	193	44-185	195	444-071	274	44-508	199	44-707	201
42-041	192	42-185	193	44-186	195	444-072	274	44-509	199	44-708	201
42-042	192	42-186	193	44-187	195	44-410	197	44-510	199	44-720	201
42-043	192	42-187	193	44-188	195	444-100	273	44-511	199	44-721	201
42-044	192	42-200	193	44-189	195	444-101	273	44-512	199	44-723	201
42-045	192	42-201	193	44-190	195	444-102	273	44-513	199	44-724	201
42-046	192	42-202	193	44-200	195	444-103	273	44-514	199	44-725	201
42-047	192	42-203	193	44-201	195	444-104	273	44-515	199	44-726	201
42-048	192	42-204	193	44-202	195	444-105	273	44-516	199	44-727	201
42-049	192	42-205	193	44-203	195	44-411	197	44-517	199	44-728	201
42-050	192	42-206	193	44-204	195	444-110	274	44-518	199	44-729	201
42-060	192	42-207	193	44-205	195	444-111	274	44-519	199	44-740	201
42-061	192	42-220	193	44-206	195	444-112	274	44-520	199	44-742	201
42-062	192	42-221	193	44-207	195	444-113	274	44-521	199	44-743	201
42-063	192	42-222	193	44-208	195	44-412	197	44-522	199	44-744	201
42-064	192	42-223	193	44-250	195	444-120	274	44-523	199	44-745	201
42-065	192	42-224	193	44-251	195	444-121	274	44-524	199	44-748	201
42-066	192	42-225	193	44-252	195	44-413	197	44-527	199	44-750	201
42-067	192	42-226	193	44-253	195	444-130	274	44-528	199	44-753	201
42-068	192	42-227	193	44-254	195	444-131	274	44-529	199	44-760	201
42-069	192	43-200L	163	44-255	195	444-132	274	44-530	199	44-911	270
42-070	192	43-200T	163	44-256	195	444-133	274	44-531	199	44-912	270
42-080	192	43-204L	163	44-257	195	44-414	197	44-532	199	44-913	270
42-082	192	43-204T	163	44-258	195	44-415	197	44-534	199	44-914	270
42-083	192	43-206L	163	44-259	195	44-416	197	44-535	199	44-915	270
42-084	192	4404-10-8	362	44-260	195	44-417	197	44-537	199	44-916	270
42-085	192	4404-12-12	362	44-276	196	44-418	197	44-538	199	44-917	270
42-086	192	4404-16-12	362	44-279	196	44-419	197	44-539	199	44-921	270
42-087	192	4404-16-16	362	44-280	196	44-420	197	44-543	199	44-922	270
42-088	192	4404-20-16	362	44-282	196	44-430	197	44-600	198	44-923	270
42-089	192	4404-20-20	362	44-283	196	44-431	197	44-601	198	44-924	270
42-090	192	4404-24-24	362	44-286	196	44-432	197	44-602	198	44-925	270
42-100	192	4404-4-2	362	44-287	196	44-433	197	44-603	198	44-926	270
42-101	192	4404-4-4	362	44-291	196	44-434	197	44-604	198	44-927	270
42-102	192	4404-5-2	362	44-296	196	44-435	197	44-605	198	44-931	270
42-103	192	4404-6-4	362	44-298	196	44-436	197	44-606	198	44-932	270
42-104	192	4404-6-6	362	44-301	196	44-437	197	44-607	198	44-933	270
42-105	192	4404-8-6	362	44-303	196	44-438	197	44-608	198	44-934	270
42-106	192	4404-8-8	362	44-306	196	44-440	197	44-609	198	44-935	270
42-107	192	44-100	194	44-391	196	44-441	197	44-610	198	44-936	270
42-108	192	44-101	194	44-392	196	44-442	197	44-633	200	44-937	270
42-109	192	44-102	194	44-393	196	44-444	197	44-634	200	44-941	270
42-120	193	44-103	194	44-394	196	44-445	197	44-635	200	44-942	270
42-121	193	44-104	194	44-395	196	44-446	197	44-636	200	44-943	270
42-122	193	44-105	194	44-396	196	44-447	197	44-637	200	44-944	270
42-123	193	44-106	194	44-397	196	44-448	197	44-638	200	44-945	270
42-124	193	44-107	194	44-398	196	44-449	197	44-639	200	44-946	270
42-125	193	44-108	194	444-000	273	44-450	197	44-650	200	44-947	270
42-126	193	44-109	194	444-001	273	44-451	197	44-651	200	44-951	270
42-127	193	44-110	194	444-002	273	44-452	197	44-652	200	44-952	270
42-128	193	44-112	194	444-003	273	44-453	197	44-653	200	44-953	270
42-129	193	44-120	194	444-004	273	44-454	197	44-654	200	44-954	270
42-140	193	44-124	194	444-005	273	44-456	197	44-655	200	44-955	270
42-141	193	44-127	194	444-006	273	44-458	197	44-656	200	44-956	270
42-142	193	44-131	194	444-007	273	44-461	197	44-657	200	44-957	270
42-143	193	44-134	194	444-008	273	44-462	197	44-658	200	44-958	270
42-144	193	44-137	194	444-009	273	44-463	197	44-659	200	44-961	270
42-145	193	44-140	194	444-010	273	44-470	198	44-660	200	44-962	270
42-146	193	44-142	194	444-011	273	44-471	198	44-662	200	44-963	270
42-147	193	44-160	194	444-020	273	44-472	198	44-670	200	44-964	270



Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
44-965	270	4603-NWO-10	363	46-125	145	46-351	149	46-620	310	46-876	157
44-966	270	4603-NWO-12	363	46-126	145	46-352	149	46-621	310	46-877	157
44-967	270	4603-NWO-16	363	46-127	145	46-355	149	46-622	310	46-878	157
44-968	270	4603-NWO-20	363	46-128	145	46-356	149	46-630	310	46-900	161
44-971	270	4603-NWO-24	363	46-130	146	46-357	149	46-631	310	46-900I	161
44-972	270	4603-NWO-4	363	46-131	146	46-358	149	46-741	155	46-900I	172
44-973	270	4603-NWO-6	363	46-132	146	46-360	150	46-742	155	46-903	161
44-974	270	4603-NWO-8	363	46-134	146	46-361	150	46-743	155	46-903I	161
44-975	270	46-040	152	46-140	146	46-362	150	46-744	155	46-903I	172
44-976	270	46-045	152	46-141	146	46-365	150	46-746	155	46-904I	161
44-977	270	46-046	152	46-142	146	46-366	150	46-747	155	46-904I	172
44-978	270	46-048	152	46-143	146	46-367	150	46-748	155	46-905I	161
44-981	270	46-048	310	46-151	146	46-368	150	46-752	155	46-905I	172
44-982	270	4604-O-10	363	46-152	146	46-370	150	46-753	155	46-910	161
44-983	270	4604-O-10-8	363	46-152T	146	46-371	150	46-754	155	46-912	161
44-984	270	4604-O-12	363	46-153	146	46-372	150	46-755	155	46-920	161
44-985	270	4604-O-16	363	46-160	146	46-373	150	46-756	155	46-920I	161
44-986	270	4604-O-16-12	363	46-161	146	46-375	150	46-757	155	46-920I	172
44-987	270	4604-O-20	363	46-161T	146	46-376	150	46-758	155	46-921	161
44-988	270	4604-O-20-16	363	46-162	146	46-377	150	46-760	155	46-922	161
4501-10-8	362	4604-O-24	363	46-165	146	46-378	150	46-761	155	46-922A	161
4501-12-12	362	4604-O-24-20	363	46-166	146	46-400	160	46-762	155	46-922I	161
4501-16-12	362	4604-O-4	363	46-166T	146	46-400M	160	46-763	155	46-922I	172
4501-16-16	362	4604-O-6	363	46-167	146	46-401	160	46-765	155	46-923	161
4501-20-16	362	4604-O-8	363	46-200	162	46-401M	160	46-766	155	46-923I	161
4501-20-20	362	46-050	152	46-201	162	46-402	160	46-767	155	46-923I	172
4501-24-24	362	46-050X	152	46-202	162	46-402M	160	46-768	154	46-924	161
4501-32-32	362	46-051	152	46-238	159	46-406M	160	46-769	154	46-924I	161
4501-4-4	362	46-055	153	46-241	158	46-411	160	46-770	154	46-924I	172
4501-6-6	362	46-056	153	46-243	158	46-411M	160	46-771	154	46-925	161
4501-8-6	362	46-056P	153	46-244	158	46-429	160	46-780	154	46-930	172
4501-8-8	362	46-060	153	46-247	158	46-429M	160	46-781	154	46-931	161
4503-10-8	362	46-061	153	46-248	158	46-430M	160	46-782	154	46-931	172
4503-12-12	362	46-061L	153	46-250	158	46-440	161	46-783	154	46-932	161
4503-16-16	362	46-064	143	46-251	158	46-443	161	46-786	154	46-932	172
4503-20-20	362	46-065	143	46-252	158	46-450	160	46-787	154	46-935	161
4503-8-6	362	46-066	143	46-255	158	46-451	160	46-788	154	46-935	172
46-001	151	46-067	143	46-256	158	46-455	160	46-792	154	46-936	161
46-002	151	46-068	143	46-257	158	46-456	160	46-793	154	46-936	172
46-002LF	382	46-069	143	46-260	158	46-457	160	46-794	154	46-951	157
46-002X	151	46-070	143	46-270	175	46-465	160	46-795	154	46-956	157
46-003	151	46-071	143	46-277	187	46-466	160	46-798	154	46-959	157
46-003LF	382	46-072	143	46-278	187	46-467	160	46-799	154	46-960	157
46-004	151	46-073	143	46-300	147	46-475	160	46-800	154	46-980	161
46-005	151	46-074	144	46-301	147	46-476	160	46-801	154	46-981	161
46-010	151	46-075	144	46-305	147	46-485	160	46-804	156	47-042	161
46-011	151	46-076	144	46-306	147	46-492	141	46-805	156	48-001	202
46-011LF	382	46-077	144	46-310	147	46-493	141	46-809	156	48-002	202
46-011X	151	46-078	144	46-311	147	46-500	162	46-810	156	48-003	202
46-012	151	46-079	144	46-312	147	46-505	162	46-811	156	48-004	202
46-013	151	46-080	144	46-315	147	46-510	162	46-812	156	48-005	202
46-014	151	46-081	144	46-316	147	46-511	162	46-813	156	48-006	202
46-016	151	46-082	144	46-317	147	46-512	162	46-814	156	48-007	202
4601-NWO-10	362	46-083	144	46-318	147	46-513	162	46-815	156	48-008	202
4601-NWO-10-8	362	46-084	144	46-320	148	46-514	162	46-817	156	48-009	202
4601-NWO-12	362	46-085	144	46-321	148	46-515	162	46-818	156	48-010	202
4601-NWO-16	362	46-086	144	46-322	148	46-516	162	46-819	156	48-011	202
4601-NWO-16-12	362	46-087	144	46-323	148	46-517	162	46-820	156	48-015	202
4601-NWO-20	362	46-088	144	46-324	148	46-518	162	46-822	156	48-020	202
4601-NWO-24	362	46-089	144	46-325	148	46-519	162	46-823	156	48-021	202
4601-NWO-4	362	46-089A	144	46-326	148	46-520	162	46-824	156	48-021T	204
4601-NWO-5	362	46-090A	154	46-327	148	46-521	162	46-825	156	48-022	202
4601-NWO-6	362	46-090ALF	382	46-330	148	46-530	162	46-826	156	48-022T	204
4601-NWO-8	362	46-100	145	46-331	148	46-531	162	46-830	157	48-023	202
46-020	151	46-101	145	46-335	148	46-532	162	46-832	157	48-024	202
46-021	151	46-102	145	46-336	148	46-533	162	46-833	157	48-025	202
46-022	151	46-103	145	46-337	148	46-539	162	46-834	157	48-026	202
46-023	151	46-104	145	46-338	148	46-540	13	46-835	157	48-027	202
46-023LF	382	46-107	145	46-340	149	46-540	162	46-838	157	48-028	202
46-028	152	46-115	145	46-341	149	46-541	13	46-840	157	48-029	202
46-029	152	46-116	145	46-342	149	46-541	162	46-841	157	48-030	202
46-031	152	46-117	145	46-345	149	46-600	140	46-843	157	48-032	202
46-036	152	46-118	145	46-346	149	46-600	310	46-845	157	48-034	202
46-038	152	46-119	145	46-347	149	46-607	140	46-846	157	48-036	202
46-039	152	46-123	145	46-350	149	46-607	310	46-875	157	48-040	202

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
48-041	202	48-128	203	49-049	202	5000-16-12	329	51-082	205	52-006	205
48-041T	204	48-129	203	49-050	202	5000-2	329	51-083	205	52-007	205
48-042	202	48-131	203	49-060	202	500-020	278	51-084	205	52-008	205
48-042T	204	48-135	203	49-061	202	5000-20-16	329	51-085	205	52-009	205
48-043	202	48-140	203	49-062	202	5000-20-20	329	51-086	205	52-010	205
48-044	202	48-141	203	49-063	202	5000-24	329	51-087	205	52-011	205
48-045	202	48-141T	204	49-064	202	500-028	278	51-088	205	52-020	205
48-046	202	48-142	203	49-065	202	5000-32	329	51-089	205	52-021	205
48-047	202	48-142T	204	49-066	202	500-036	278	51-090	205	52-022	205
48-048	202	48-143	203	49-067	202	5000-4	329	51-100	205	52-023	205
48-049	202	48-144	203	49-068	202	5000-4-2	329	51-101	205	52-024	205
48-050	202	48-145	203	49-069	202	500-048	278	51-102	205	52-025	205
48-052	202	48-146	203	49-070	202	500-056	278	51-103	205	52-026	205
48-054	202	48-147	203	49-080	203	5000-6-4	329	51-104	205	52-027	205
48-060	202	48-148	203	49-081	203	5000-6-6	329	51-105	205	52-028	205
48-061	202	48-149	203	49-082	203	500-072	278	51-106	205	52-029	205
48-061T	204	48-151	203	49-083	203	5000-8	329	51-107	205	52-030	205
48-062	202	48-152	203	49-084	203	5000-8-4	329	51-108	205	52-040	205
48-062T	204	48-160	204	49-085	203	5000-8-6	329	51-109	205	52-041	205
48-063	202	48-160T	204	49-086	203	500-088	278	51-120	206	52-042	205
48-064	202	48-161	204	49-087	203	500-104	278	51-121	206	52-043	205
48-065	202	48-161T	204	49-088	203	50-011	58	51-122	206	52-044	205
48-066	202	48-162	204	49-089	203	500-128	278	51-123	206	52-045	205
48-067	202	48-163	204	49-090	203	500-152	278	51-124	206	52-046	205
48-068	202	48-164	204	49-094	203	500-188	278	51-125	206	52-047	205
48-069	202	48-165	204	49-100	203	500-216	278	51-126	206	52-048	205
48-070	202	48-166	204	49-101	203	500-248	278	51-127	206	52-049	205
48-071	202	48-167	204	49-102	203	500-280	278	51-128	206	52-050	205
48-072	202	48-168	204	49-103	203	50C100B	378	51-129	206	52-060	205
48-073	202	48-169	204	49-104	203	51-001	205	51-140	206	52-061	205
48-074	202	48-170	204	49-105	203	51-002	205	51-141	206	52-062	205
48-075	202	48-171	204	49-106	203	51-003	205	51-142	206	52-063	205
48-076	202	48-172	204	49-107	203	51-004	205	51-143	206	52-064	205
48-080	203	48-180	204	49-108	203	51-005	205	51-144	206	52-065	205
48-081	203	48-193	204	49-109	203	51-006	205	51-145	206	52-066	205
48-081T	204	48-200	204	49-120	203	51-007	205	51-146	206	52-067	205
48-082	203	48-201	204	49-121	203	51-008	205	51-147	206	52-068	205
48-082T	204	48-203	204	49-122	203	51-009	205	51-148	206	52-069	205
48-083	203	48-205	204	49-123	203	51-010	205	51-149	206	52-070	205
48-084	203	48-207	204	49-124	203	51-011	205	51-160	206	52-080	205
48-085	203	48-209	204	49-125	203	51-020	205	51-161	206	52-081	205
48-086	203	48-213	204	49-126	203	51-021	205	51-162	206	52-082	205
48-087	203	48-220	204	49-127	203	51-022	205	51-163	206	52-083	205
48-088	203	48-227	204	49-128	203	51-023	205	51-164	206	52-084	205
48-089	203	49-001	202	49-129	203	51-024	205	51-165	206	52-085	205
48-090	203	49-002	202	49-140	203	51-025	205	51-166	206	52-086	205
48-091	203	49-003	202	49-141	203	51-026	205	51-167	206	52-087	205
48-092	203	49-004	202	49-142	203	51-027	205	51-168	206	52-088	205
48-094	203	49-005	202	49-143	203	51-028	205	51-180	206	52-089	205
48-096	203	49-006	202	49-144	203	51-029	205	51-181	206	52-090	205
48-100	203	49-007	202	49-145	203	51-030	205	51-182	206	52-100	205
48-101	203	49-008	202	49-146	203	51-040	205	51-183	206	52-101	205
48-101T	204	49-009	202	49-147	203	51-041	205	51-184	206	52-102	205
48-102	203	49-010	202	49-148	203	51-042	205	51-185	206	52-103	205
48-102T	204	49-011	202	49-149	203	51-043	205	51-186	206	52-104	205
48-103	203	49-020	202	49-160	204	51-044	205	51-187	206	52-105	205
48-104	203	49-021	202	49-161	204	51-045	205	51-200	206	52-106	205
48-105	203	49-022	202	49-162	204	51-046	205	51-201	206	52-107	205
48-106	203	49-023	202	49-163	204	51-047	205	51-202	206	52-108	205
48-107	203	49-024	202	49-164	204	51-048	205	51-203	206	52-109	205
48-108	203	49-025	202	49-165	204	51-049	205	51-204	206	52-120	206
48-109	203	49-026	202	49-166	204	51-050	205	51-205	206	52-121	206
48-110	203	49-027	202	49-167	204	51-060	205	51-206	206	52-122	206
48-111	203	49-028	202	49-168	204	51-061	205	51-207	206	52-123	206
48-113	203	49-029	202	49-169	204	51-062	205	51-220	206	52-124	206
48-120	203	49-030	202	49-186	204	51-063	205	51-223	206	52-125	206
48-121	203	49-040	202	49-203	204	51-064	205	51-224	206	52-126	206
48-121T	204	49-041	202	49-208	204	51-065	205	51-225	206	52-127	206
48-122	203	49-042	202	49-225	204	51-066	205	51-226	206	52-128	206
48-122T	204	49-043	202	50-001	58	51-067	205	51-227	206	52-129	206
48-123	203	49-044	202	500-012	278	51-068	205	52-001	205	52-140	206
48-124	203	49-045	202	5000-12-12	329	51-069	205	52-002	205	52-141	206
48-125	203	49-046	202	5000-12-6	329	51-070	205	52-003	205	52-142	206
48-126	203	49-047	202	5000-12-8	329	51-080	205	52-004	205	52-143	206
48-127	203	49-048	202	5000-16	329	51-081	205	52-005	205	52-144	206

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
52-145	206	5405-2-4	329	5406-P-2	330	5502-4-6	331	55-109	253	55-748	254
52-146	206	5405-24-24	329	5406-P-20	330	550-248	278	55-111	253	55-749	254
52-147	206	5405-24-32	329	5406-P-24	330	5502-4-8-8	331	55-115	253	55-750	254
52-148	206	5405-2-6	329	5406-P-32	330	5502-6	331	55-120	253	55-751	254
52-150	206	5405-32-32	329	5406-P-4	330	5502-6-2	331	55-121	253	55-752	254
52-160	206	5405-4-2	329	5406-P-6	330	5502-6-4	331	55-122	253	55-753	254
52-161	206	5405-4-4	329	5406-P-8	330	5502-6-8	331	55-123	253	55-754	254
52-162	206	5405-4-6	329	5406-SHP-12	330	550-280	278	55-124	253	55-755	254
52-163	206	5405-4-8	329	5406-SHP-16	330	5502-8-12	331	55-125	253	55-756	255
52-164	206	5405-6-4	329	5406-SHP-2	330	5502-8-4	331	55-126	253	55-757	255
52-165	206	5405-6-6	329	5406-SHP-20	330	5502-8-6	331	55-127	253	55-758	255
52-166	206	5405-6-8	329	5406-SHP-24	330	5502-8-8	331	55-128	253	55-759	255
52-167	206	5405-8-12	329	5406-SHP-32	330	550-312	278	55-129	253	55-760	255
52-168	206	5405-8-16	329	5406-SHP-4	330	5503-12-12	332	55-140	253	55-761	255
52-180	206	5405-8-8	329	5406-SHP-6	330	5503-16	332	55-141	253	55-762	255
52-181	206	540602	132	5406-SHP-8	330	5503-2	332	55-142	253	55-763	255
52-182	206	540602S	132	540804	132	5503-20	332	55-143	253	55-764	255
52-183	206	540604	132	540804S	132	5503-24	332	55-144	253	55-765	255
52-184	206	540604S	132	540806	132	5503-4	332	55-145	253	55-766	255
52-185	206	540606	132	540806S	132	5503-6	332	55-146	253	55-767	255
52-186	206	540606S	132	540808	132	5503-8	332	55-147	253	55-768	255
52-187	206	540608	132	540808S	132	5504-12	332	55-148	253	55-769	255
52-200	206	5406-12-2	330	541006	132	5504-12-8	332	55-149	253	55-770	255
52-201	206	5406-12-4	330	541008	132	5504-16	332	55-160	253	55-771	255
52-202	206	5406-12-6	330	541008S	132	5504-16-12	332	55-161	253	55-772	255
52-203	206	5406-12-8	330	541208	132	5504-2	332	55-162	253	55-773	255
52-204	206	5406-16-12	330	541212	132	5504-20	332	55-163	253	55-774	255
52-205	206	5406-16-4	330	550-012	278	5504-24	332	55-164	253	55-775	255
52-206	206	5406-16-6	330	5500-12-12	331	5504-32	332	55-165	253	55-776	255
52-207	206	5406-16-8	330	5500-12-8	331	5504-4	332	55-166	253	55-777	255
52-220	206	5406-20-12	330	5500-16	331	5504-4-2	332	55-167	253	55-778	255
52-223	206	5406-20-16	330	5500-16-12	331	5504-6	332	55-168	253	55-779	255
52-224	206	5406-20-4	330	5500-2	331	5504-6-4	332	55-174	253	55-780	255
52-225	206	5406-20-6	330	550-020	278	5504-8	332	55-241	253	55-781	255
52-226	206	5406-20-8	330	5500-20-20	331	5504-8-6	332	55-243	253	55-782	255
52-227	206	5406-24-12	330	5500-24	331	5505-12	332	55-250	253	55-783	255
540402	132	5406-24-16	330	550-028	278	5505-16	332	55-253	253	55-784	255
540402S	132	5406-24-20	330	5500-32	331	5505-2	332	55-292	253	55-785	255
540404	132	5406-24-6	330	550-036	278	5505-20	332	55-710	254	55-786	255
540404S	132	5406-24-8	330	5500-4	331	5505-4	332	55-711	254	55-787	255
5404-12	329	5406-32-12	330	5500-4-2	331	5505-6	332	55-712	254	55-788	255
5404-12-4	329	5406-32-16	330	550-048	278	5505-8	332	55-713	254	55-789	255
5404-12-6	329	5406-32-20	330	550-056	278	55-060	253	55-714	254	55-790	255
5404-12-8	329	5406-32-24	330	5500-6	331	55-061	253	55-715	254	55-791	255
5404-16	329	5406-32-6	330	5500-6-4	331	55-062	253	55-716	254	55-792	255
5404-16-12	329	5406-32-8	330	550-072	278	55-063	253	55-717	254	55-796	255
5404-2	329	5406-4-2	330	5500-8	331	55-064	253	55-718	254	55-797	255
5404-20	329	5406-6-2	330	5500-8-4	331	55-065	253	55-719	254	55-798	255
5404-20-12	329	5406-6-4	330	5500-8-6	331	55-066	253	55-720	254	55-801	255
5404-20-16	329	5406-8-2	330	550-088	278	55-067	253	55-721	254	55-802	255
5404-24	329	5406-8-4	330	550-104	278	55-068	253	55-722	254	55-803	255
5404-24-12	329	5406-8-6	330	5501-12-12	331	55-069	253	55-723	254	55-804	254
5404-24-16	329	5406-C-12	331	5501-16-16	331	55-070	253	55-725	254	55-805	255
5404-24-20	329	5406-C-16	331	5501-20-20	331	55-072	253	55-726	254	55-806	255
5404-32	329	5406-C-2	331	5501-2-2	331	55-076	253	55-727	254	55-807	254
5404-32-24	329	5406-C-24	331	550-128	278	55-080	253	55-728	255	55-808	254
5404-4	329	5406-C-4	331	5501-4-4	331	55-081	253	55-729	255	55-809	255
5404-4-2	329	5406-C-6	331	550-152	278	55-082	253	55-730	255	55-810	255
5404-6	329	5406-C-8	331	5501-6-6	331	55-083	253	55-731	255	55-811	254
5404-6-2	329	5406-FLP-1	330	5501-8	331	55-084	253	55-732	255	55-812	254
5404-6-4	329	5406-FLP-12	330	550-188	278	55-085	253	55-733	255	55-813	254
5404-8	329	5406-FLP-2	330	5502-12	331	55-086	253	55-734	255	55-814	255
5404-8-4	329	5406-FLP-4	330	5502-12-16	331	55-087	253	55-735	255	55-815	255
5404-8-6	329	5406-FLP-6	330	5502-12-8	331	55-088	253	55-736	254	55-816	255
5405-12-12	329	5406-FLP-8	330	550-216	278	55-089	253	55-737	254	55-950	254
5405-12-16	329	5406-HHP-1	330	5502-16-12	331	55-090	253	55-738	254	55-951	254
5405-12-20	329	5406-HHP-12	330	5502-16-16	331	55-100	253	55-739	254	56-001	217
5405-12-6	329	5406-HHP-16	330	5502-16-20	331	55-101	253	55-740	254	5600-12	333
5405-12-8	329	5406-HHP-2	330	5502-2	331	55-102	253	55-741	254	5600-16	333
5405-16-12	329	5406-HHP-20	330	5502-20	331	55-103	253	55-742	254	56-002	217
5405-16-16	329	5406-HHP-4	330	5502-20-16	331	55-104	253	55-743	254	5600-20	333
5405-16-20	329	5406-HHP-6	330	5502-24	331	55-105	253	55-744	254	5600-2-2	333
5405-20-20	329	5406-HHP-8	330	5502-32	331	55-106	253	55-745	254	5600-24	333
5405-20-24	329	5406-P-12	330	5502-4	331	55-107	253	55-746	254	56-003	217
5405-2-2	329	5406-P-16	330	5502-4-2	331	55-108	253	55-747	254	56-004	217

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
5600-4-4	333	5604-8-8	333	56-127	219	56-228	221	57-014	217	57-092	218
56-005	217	56-049	217	56-128	219	56-229	221	57-015	217	57-093	218
56-006	217	56-050	217	56-129	219	56-234	217	57-016	217	57-094	218
5600-6-6	333	56-051	217	56-130	219	56-235	217	57-017	217	57-095	218
56-007	217	5605-12	333	56-131	219	56-236	217	57-020	217	57-096	218
56-008	217	5605-16	333	56-132	219	56-237	217	57-021	217	57-100	219
5600-8-8	333	56-052	217	56-133	219	56-240	218	57-021T	221	57-101	219
56-009	217	5605-20	333	56-134	219	56-241	218	57-022	217	57-101T	221
56-010	217	5605-2-2	333	56-135	219	56-242	218	57-022T	221	57-102	219
56-011	217	5605-24	333	56-140	220	56-243	218	57-023	217	57-102T	221
5601-12	333	56-053	217	56-141	220	56-244	218	57-024	217	57-103	219
5601-16	333	5605-32	333	56-142	220	56-245	218	57-025	217	57-104	219
56-012	217	56-054	217	56-143	220	56-246	218	57-026	217	57-105	219
5601-20	333	5605-4-4	333	56-144	220	56-247	218	57-027	217	57-106	219
5601-2-2	333	56-055	217	56-145	220	56-250	218	57-028	217	57-107	219
5601-24	333	56-056	217	56-146	220	56-251	218	57-029	217	57-108	219
56-013	217	5605-6-6	333	56-147	220	56-252	218	57-030	217	57-109	219
56-014	217	5605-8	333	56-148	220	56-253	218	57-031	217	57-110	219
5601-4-4	333	56-060	218	56-149	220	56-254	218	57-032	217	57-111	219
56-015	217	56-061	218	56-150	220	56-255	218	57-033	217	57-112	219
56-016	217	56-062	218	56-151	220	56-256	218	57-034	217	57-113	219
5601-6-6	333	56-063	218	56-152	220	56-257	218	57-035	217	57-114	219
56-017	217	56-064	218	56-153	220	56-260	219	57-036	217	57-115	219
5601-8	333	56-065	218	56-154	220	56-261	219	57-040	217	57-120	219
56-020	217	56-066	218	56-155	220	56-262	219	57-041	217	57-121	219
56-021	217	56-067	218	56-160	220	56-263	219	57-041T	221	57-121T	221
5602-12	333	56-068	218	56-161	220	56-264	219	57-042	217	57-122	219
5602-16	333	56-069	218	56-162	220	56-265	219	57-042T	221	57-122T	221
56-022	217	56-070	218	56-163	220	56-266	219	57-043	217	57-123	219
5602-20	333	56-071	218	56-164	220	56-267	219	57-044	217	57-124	219
5602-2-2	333	56-072	218	56-165	220	56-270	219	57-045	217	57-125	219
5602-24	333	56-073	218	56-166	220	56-271	219	57-046	217	57-126	219
56-023	217	56-074	218	56-167	220	56-272	219	57-047	217	57-127	219
56-024	217	56-075	218	56-168	220	56-273	219	57-048	217	57-128	219
5602-4-4	333	56-076	218	56-169	220	56-274	219	57-049	217	57-129	219
56-025	217	56-080	218	56-170	220	56-275	219	57-050	217	57-130	219
56-026	217	56-081	218	56-171	220	56-276	219	57-051	217	57-131	219
5602-6-6	333	56-082	218	56-172	220	56-277	219	57-052	217	57-132	219
56-027	217	56-083	218	56-173	220	56-280	220	57-053	217	57-133	219
56-028	217	56-084	218	56-174	220	56-281	220	57-054	217	57-134	219
5602-8-8	333	56-085	218	56-180	221	56-282	220	57-055	217	57-135	219
56-029	217	56-086	218	56-181	221	56-283	220	57-056	217	57-140	220
56-030	217	56-087	218	56-182	221	56-284	220	57-060	218	57-141	220
56-031	217	56-088	218	56-183	221	56-285	220	57-061	218	57-141T	221
5603-12	333	56-089	218	56-184	221	56-286	220	57-061T	221	57-142	220
5603-16	333	56-090	218	56-185	221	56-287	220	57-062	218	57-142T	221
56-032	217	56-091	218	56-186	221	56-290	220	57-062T	221	57-143	220
5603-20	333	56-092	218	56-187	221	56-291	220	57-063	218	57-144	220
5603-2-2	333	56-093	218	56-188	221	56-292	220	57-064	218	57-145	220
5603-24	333	56-094	218	56-189	221	56-293	220	57-065	218	57-146	220
56-033	217	56-095	218	56-190	221	56-294	220	57-066	218	57-147	220
56-034	217	56-096	218	56-191	221	56-295	220	57-067	218	57-148	220
5603-4-4	333	56-100	219	56-192	221	56-296	220	57-068	218	57-149	220
56-035	217	56-101	219	56-193	221	56-297	220	57-069	218	57-150	220
56-036	217	56-102	219	56-200	221	56-300	221	57-070	218	57-151	220
5603-6-6	333	56-103	219	56-201	221	56-330	221	57-071	218	57-152	220
56-037	217	56-104	219	56-202	221	56-331	221	57-072	218	57-153	220
56-038	217	56-105	219	56-203	221	56-332	221	57-073	218	57-154	220
5603-8-8	333	56-106	219	56-204	221	56-430	217	57-074	218	57-155	220
56-040	217	56-107	219	56-205	221	56-431	217	57-075	218	57-160	220
56-041	217	56-108	219	56-206	221	56-432	217	57-076	218	57-160T	221
5604-12	333	56-109	219	56-207	221	56-433	217	57-080	218	57-161	220
5604-16	333	56-110	219	56-208	221	57-001	217	57-081	218	57-161T	221
56-042	217	56-111	219	56-209	221	57-002	217	57-081T	221	57-162	220
5604-20	333	56-112	219	56-210	221	57-003	217	57-082	218	57-163	220
5604-2-2	333	56-113	219	56-211	221	57-004	217	57-082T	221	57-164	220
5604-24	333	56-114	219	56-212	221	57-005	217	57-083	218	57-165	220
56-043	217	56-115	219	56-213	221	57-006	217	57-084	218	57-166	220
56-044	217	56-120	219	56-220	221	57-007	217	57-085	218	57-167	220
5604-4-4	333	56-121	219	56-221	221	57-008	217	57-086	218	57-168	220
56-045	217	56-122	219	56-223	221	57-009	217	57-087	218	57-169	220
56-046	217	56-123	219	56-224	221	57-010	217	57-088	218	57-170	220
5604-6-6	333	56-124	219	56-225	221	57-011	217	57-089	218	57-171	220
56-047	217	56-125	219	56-226	221	57-012	217	57-090	218	57-172	220
56-048	217	56-126	219	56-227	221	57-013	217	57-091	218	57-173	220

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
57-174	220	57-280	220	58-056	235	58-148	236	59-013	235	59-096	236
57-180	221	57-281	220	58-060	235	58-149	236	59-014	235	59-100	236
57-181	221	57-282	220	58-061	235	58-150	236	59-015	235	59-101	236
57-181T	221	57-283	220	58-062	235	58-151	236	59-016	235	59-102	236
57-182	221	57-284	220	58-063	235	58-152	236	59-017	235	59-103	236
57-183	221	57-285	220	58-064	235	58-153	236	59-020	235	59-104	236
57-184	221	57-286	220	58-065	235	58-154	236	59-021	235	59-105	236
57-185	221	57-287	220	58-066	235	58-155	236	59-022	235	59-106	236
57-186	221	57-290	220	58-067	235	58-160	237	59-023	235	59-107	236
57-187	221	57-291	220	58-068	235	58-161	237	59-024	235	59-108	236
57-188	221	57-292	220	58-069	235	58-162	237	59-025	235	59-109	236
57-189	221	57-293	220	58-070	235	58-163	237	59-026	235	59-110	236
57-190	221	57-294	220	58-071	235	58-164	237	59-027	235	59-111	236
57-191	221	57-295	220	58-072	235	58-165	237	59-028	235	59-112	236
57-192	221	57-296	220	58-073	235	58-166	237	59-029	235	59-113	236
57-193	221	57-297	220	58-074	235	58-167	237	59-030	235	59-114	236
57-200	221	57-300	221	58-075	235	58-168	237	59-031	235	59-115	236
57-201	221	57-311	221	58-076	235	58-169	237	59-032	235	59-120	236
57-201T	221	57-330	221	58-080	236	58-170	237	59-033	235	59-121	236
57-202	221	57-331	221	58-081	236	58-171	237	59-034	235	59-122	236
57-203	221	57-332	221	58-082	236	58-172	237	59-035	235	59-123	236
57-204	221	57-430	217	58-083	236	58-173	237	59-036	235	59-124	236
57-205	221	57-431	217	58-084	236	58-174	237	59-040	235	59-125	236
57-206	221	57-432	217	58-085	236	58-180	237	590400	133	59-126	236
57-207	221	57-433	217	58-086	236	58-181	237	59-041	235	59-127	236
57-208	221	58-001	235	58-087	236	58-182	237	59-042	235	59-128	236
57-209	221	58-002	235	58-088	236	58-183	237	59-043	235	59-129	236
57-210	221	58-003	235	58-089	236	58-184	237	59-044	235	59-130	236
57-211	221	58-004	235	58-090	236	58-185	237	59-045	235	59-131	236
57-212	221	58-005	235	58-091	236	58-186	237	59-046	235	59-132	236
57-213	221	58-006	235	58-092	236	58-187	237	59-047	235	59-133	236
57-220	221	58-007	235	58-093	236	58-188	237	59-048	235	59-134	236
57-223	221	58-008	235	58-094	236	58-189	237	59-049	235	59-135	236
57-223T	221	58-009	235	58-095	236	58-190	237	59-050	235	59-140	236
57-224	221	58-010	235	58-096	236	58-191	237	59-051	235	59-141	236
57-225	221	58-011	235	58-100	236	58-192	237	59-052	235	59-142	236
57-226	221	58-012	235	58-101	236	58-193	237	59-053	235	59-143	236
57-227	221	58-013	235	58-102	236	58-200	237	59-054	235	59-144	236
57-229	221	58-014	235	58-103	236	58-201	237	59-055	235	59-145	236
57-234	217	58-015	235	58-104	236	58-202	237	59-056	235	59-146	236
57-235	217	58-016	235	58-105	236	58-203	237	59-060	235	59-147	236
57-236	217	58-017	235	58-106	236	58-204	237	590600	133	59-148	236
57-237	217	58-020	235	58-107	236	58-205	237	59-061	235	59-149	236
57-240	218	58-021	235	58-108	236	58-206	237	59-062	235	59-150	236
57-241	218	58-022	235	58-109	236	58-207	237	59-063	235	59-151	236
57-242	218	58-023	235	58-110	236	58-208	237	59-064	235	59-152	236
57-243	218	58-024	235	58-111	236	58-209	237	59-065	235	59-153	236
57-244	218	58-025	235	58-112	236	58-210	237	59-066	235	59-154	236
57-245	218	58-026	235	58-113	236	58-211	237	59-067	235	59-155	236
57-246	218	58-027	235	58-114	236	58-212	237	59-068	235	59-160	237
57-247	218	58-028	235	58-115	236	58-213	237	59-069	235	59-161	237
57-250	218	58-029	235	58-120	236	58-220	237	59-070	235	59-162	237
57-251	218	58-030	235	58-121	236	58-221	237	59-071	235	59-163	237
57-252	218	58-031	235	58-122	236	58-222	237	59-072	235	59-164	237
57-253	218	58-032	235	58-123	236	58-223	237	59-073	235	59-165	237
57-254	218	58-033	235	58-124	236	58-224	237	59-074	235	59-166	237
57-255	218	58-034	235	58-125	236	58-225	237	59-075	235	59-167	237
57-256	218	58-035	235	58-126	236	58-226	237	59-076	235	59-168	237
57-257	218	58-036	235	58-127	236	58-227	237	59-080	236	59-169	237
57-260	219	58-040	235	58-128	236	58-228	237	590800	133	59-170	237
57-261	219	58-041	235	58-129	236	58-229	237	59-081	236	59-171	237
57-262	219	58-042	235	58-130	236	58-230	237	59-082	236	59-172	237
57-263	219	58-043	235	58-131	236	58-231	237	59-083	236	59-173	237
57-264	219	58-044	235	58-132	236	59-001	235	59-084	236	59-174	237
57-265	219	58-045	235	58-133	236	59-002	235	59-085	236	59-180	237
57-266	219	58-046	235	58-134	236	59-003	235	59-086	236	59-181	237
57-267	219	58-047	235	58-135	236	59-004	235	59-087	236	59-182	237
57-270	219	58-048	235	58-140	236	59-005	235	59-088	236	59-183	237
57-271	219	58-049	235	58-141	236	59-006	235	59-089	236	59-184	237
57-272	219	58-050	235	58-142	236	59-007	235	59-090	236	59-185	237
57-273	219	58-051	235	58-143	236	59-008	235	59-091	236	59-186	237
57-274	219	58-052	235	58-144	236	59-009	235	59-092	236	59-187	237
57-275	219	58-053	235	58-145	236	59-010	235	59-093	236	59-188	237
57-276	219	58-054	235	58-146	236	59-011	235	59-094	236	59-189	237
57-277	219	58-055	235	58-147	236	59-012	235	59-095	236	59-190	237

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
59-191	237	611-100	278	61-981	269	62-163	207	62-471	208	62-721	209
59-192	237	611-101	278	61-982	269	62-164	207	62-472	208	62-722	209
59-193	237	611-104	275	61-983	269	62-165	207	62-473	208	62-723	209
59-200	237	611-116	275	61-984	269	62-166	207	62-474	208	62-724	209
59-201	237	611-128	275	61-985	269	62-167	207	62-475	208	62-725	209
59-202	237	611-152	275	61-986	269	62-168	207	62-476	208	62-726	209
59-203	237	611-164	275	61-987	269	62-180	207	62-477	208	62-727	209
59-204	237	611-176	275	61-988	269	62-181	207	62-478	208	62-728	209
59-205	237	611-188	275	620-006	276	62-182	207	62-480	208	62-771	210
59-206	237	611-200	275	620-008	276	62-183	207	62-481	208	62-772	210
59-207	237	611-212	275	620-010	276	62-184	207	62-500	209	62-773	210
59-208	237	611-224	275	620-012	276	62-185	207	62-502	209	62-774	210
59-209	237	611-248	275	620-016	276	62-186	207	62-503	209	62-775	210
59-210	237	611-270	275	620-020	276	62-187	207	62-504	209	62-776	210
59-211	237	611-312	275	620-024	276	62-188	207	62-505	209	62-777	210
59-212	237	611-332	275	620-028	276	62-250	207	62-507	209	62-778	210
59-213	237	611-390	275	620-032	276	62-251	207	62-508	209	63-075	208
59-220	237	61-150	305	620-036	276	62-252	207	62-509	209	63-076	208
59-221	237	61-150	368	620-040	276	62-253	207	62-512	209	63-077	208
59-222	237	61-911	269	620-044	276	62-254	207	62-513	209	63-078	208
59-223	237	61-912	269	620-048	276	62-255	207	62-516	209	63-079	208
59-224	237	61-913	269	620-052	276	62-256	207	62-517	209	63-080	208
59-225	237	61-914	269	620-056	276	62-257	207	62-518	209	63-081	208
59-226	237	61-915	269	620-060	276	62-258	207	62-521	209	63-082	208
59-227	237	61-916	269	620-064	276	62-259	207	62-522	209	63-083	208
59-228	237	61-917	269	620-072	276	62-260	207	62-524	209	63-100	207
59-229	237	61-918	269	620-080	276	62-391	207	62-527	209	63-101	207
59-230	237	61-921	269	620-088	276	62-392	207	62-528	209	63-102	207
59-231	237	61-922	269	620-096	276	62-393	207	62-529	209	63-103	207
595320	133	61-923	269	620-104	276	62-394	207	62-530	209	63-104	207
600-006	275	61-924	269	620-116	276	62-395	207	62-531	209	63-105	207
600-008	275	61-925	269	620-128	276	62-396	207	62-532	209	63-106	207
600-010	275	61-926	269	620-152	276	62-397	207	62-534	209	63-107	207
600-012	275	61-927	269	620-164	276	62-398	207	62-535	209	63-108	207
600-016	275	61-928	269	620-176	276	62-410B	207	62-538	209	63-109	207
600-020	275	61-931	269	620-188	276	62-411B	207	62-539	209	63-110	207
600-024	275	61-932	269	620-200	276	62-412B	207	62-543	209	63-112	207
600-028	275	61-933	269	620-212	276	62-413	208	62-600	209	63-160	207
600-032	275	61-934	269	620-224	276	62-413B	207	62-601	209	63-161	207
600-036	275	61-935	269	620-248	276	62-414	208	62-602	209	63-162	207
600-040	275	61-936	269	620-270	276	62-414B	207	62-603	209	63-163	207
600-044	275	61-937	269	620-312	276	62-415	208	62-604	209	63-164	207
600-048	275	61-938	269	620-332	276	62-415B	207	62-605	209	63-165	207
600-052	275	61-941	269	620-390	276	62-416	208	62-606	209	63-166	207
600-056	275	61-942	269	620400	133	62-416B	207	62-607	209	63-167	207
600-060	275	61-943	269	620532	133	62-417	208	62-608	209	63-168	207
600-064	275	61-944	269	620600	133	62-417B	207	62-610	209	63-180	207
600-072	275	61-945	269	620604	133	62-418	208	62-630	209	63-181	207
600-080	275	61-946	269	62-075	208	62-418B	207	62-631	209	63-182	207
600-088	275	61-947	269	62-076	208	62-419	208	62-632	209	63-183	207
600-096	275	61-948	269	62-077	208	62-420	208	62-633	209	63-184	207
600-104	275	61-951	269	62-078	208	62-421	208	62-634	209	63-185	207
61-050	305	61-952	269	62-079	208	62-430	208	62-635	209	63-186	207
61-050	368	61-953	269	62-080	208	62-431	208	62-636	209	63-187	207
611-006	275	61-954	269	620800	133	62-432	208	62-637	209	63-188	207
611-008	275	61-955	269	62-081	208	62-433	208	62-638	209	63-250	207
611-010	275	61-956	269	62-082	208	62-434	208	62-653	210	63-251	207
611-012	275	61-957	269	62-083	208	62-435	208	62-654	210	63-252	207
611-016	275	61-958	269	62-100	207	62-436	208	62-655	210	63-253	207
611-020	275	61-961	269	621000	133	62-437	208	62-656	210	63-254	207
611-024	275	61-962	269	62-101	207	62-438	208	62-657	210	63-255	207
611-028	275	61-963	269	62-102	207	62-440	208	62-658	210	63-256	207
611-032	275	61-964	269	62-103	207	62-441	208	62-660	210	63-257	207
611-036	275	61-965	269	62-104	207	62-442	208	62-670	210	63-258	207
611-040	275	61-966	269	62-105	207	62-445	208	62-671	210	63-390	207
611-044	275	61-967	269	62-106	207	62-446	208	62-672	210	63-391	207
611-048	275	61-968	269	62-107	207	62-447	208	62-701	210	63-392	207
611-052	275	61-971	269	62-108	207	62-448	208	62-702	210	63-393	207
611-056	275	61-972	269	62-109	207	62-449	208	62-703	210	63-394	207
611-060	275	61-973	269	62-110	207	62-450	208	62-704	210	63-395	207
611-064	275	61-974	269	62-112	207	62-452	208	62-705	210	63-396	207
611-072	275	61-975	269	621200	133	62-453	208	62-706	210	63-397	207
611-080	275	61-976	269	62-160	207	62-454	208	62-707	210	63-398	207
611-088	275	61-977	269	62-161	207	62-455	208	62-708	210	63-410B	207
611-096	275	61-978	269	62-162	207	62-470	208	62-720	209	63-411B	207

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
63-412B.....	207	63-607.....	209	63-927.....	269	6400-24.....	335	6404-10-12.....	336	6408-O-32.....	337
63-413.....	208	63-608.....	209	63-928.....	269	6400-24-20.....	335	6404-10-6.....	336	6408-O-4.....	337
63-413B.....	207	63-610.....	209	63-931.....	269	6400-24-32.....	335	6404-10-8.....	336	6408-O-5.....	337
63-414.....	208	63-630.....	209	63-932.....	269	6400-3.....	335	6404-12-12.....	336	6408-O-6.....	337
63-414B.....	207	63-631.....	209	63-933.....	269	6400-32.....	335	6404-16-16.....	336	6408-O-8.....	337
63-415.....	208	63-632.....	209	63-934.....	269	6400-4.....	335	6404-20-20.....	336	64-100.....	225
63-415B.....	207	63-633.....	209	63-935.....	269	6400-4-10.....	335	6404-24-24.....	336	641000.....	133
63-416.....	208	63-634.....	209	63-936.....	269	6400-4-2.....	335	6404-4-2.....	336	64-101.....	225
63-416B.....	207	63-635.....	209	63-937.....	269	6400-4-3.....	335	6404-4-4.....	336	64-102.....	225
63-417.....	208	63-636.....	209	63-938.....	269	6400-4-5.....	335	6404-4-6.....	336	64-103.....	225
63-417B.....	207	63-637.....	209	63-941.....	269	6400-4-6.....	335	6404-6-4.....	336	64-104.....	225
63-418.....	208	63-638.....	209	63-942.....	269	6400-4-8.....	335	6404-6-6.....	336	64-105.....	225
63-418B.....	207	63-653.....	210	63-943.....	269	6400-5.....	335	6404-6-8.....	336	64-106.....	225
63-419.....	208	63-654.....	210	63-944.....	269	6400-5-4.....	335	6404-8-4.....	336	64-107.....	225
63-420.....	208	63-655.....	210	63-945.....	269	6400-5-6.....	335	6404-8-6.....	336	64-108.....	225
63-421.....	208	63-656.....	210	63-946.....	269	6400-6.....	335	6404-8-8.....	336	64-109.....	225
63-430.....	208	63-657.....	210	63-947.....	269	6400-6-10.....	335	6405-O-10-12.....	337	6410-O-10-12.....	338
63-432.....	208	63-658.....	210	63-948.....	269	6400-6-12.....	335	6405-O-10-4.....	337	6410-O-10-4.....	338
63-434.....	208	63-660.....	209	63-951.....	269	6400-6-16.....	335	6405-O-10-6.....	337	6410-O-10-6.....	338
63-435.....	208	63-661.....	209	63-952.....	269	6400-6-4.....	335	6405-O-10-8.....	337	6410-O-10-8.....	338
63-436.....	208	63-662.....	209	63-953.....	269	6400-6-5.....	335	6405-O-12-12.....	337	6410-O-12-10.....	338
63-437.....	208	63-663.....	209	63-954.....	269	6400-6-8.....	335	6405-O-12-16.....	337	6410-O-12-12.....	338
63-438.....	208	63-670.....	210	63-955.....	269	6400-8.....	335	6405-O-12-6.....	337	6410-O-12-4.....	338
63-441.....	208	63-671.....	210	63-956.....	269	6400-8-10.....	335	6405-O-12-8.....	337	6410-O-12-6.....	338
63-442.....	208	63-672.....	210	63-957.....	269	6400-8-12.....	335	6405-O-14-12.....	337	6410-O-12-8.....	338
63-445.....	208	63-680.....	210	63-958.....	269	6400-8-16.....	335	6405-O-14-16.....	337	6410-O-14-12.....	338
63-446.....	208	63-681.....	210	63-961.....	269	6400-8-4.....	335	6405-O-14-8.....	337	6410-O-16-10.....	338
63-447.....	208	63-682.....	210	63-962.....	269	6400-8-6.....	335	6405-O-16-12.....	337	6410-O-16-12.....	338
63-448.....	208	63-683.....	210	63-963.....	269	6400-L-10.....	335	6405-O-16-16.....	337	6410-O-16-20.....	338
63-449.....	208	63-684.....	210	63-964.....	269	6400-L-12.....	335	6405-O-16-20.....	337	6410-O-16-6.....	338
63-450.....	208	63-701.....	210	63-965.....	269	6400-L-16.....	335	6405-O-16-6.....	337	6410-O-16-8.....	338
63-452.....	208	63-702.....	210	63-966.....	269	6400-L-20.....	335	6405-O-16-8.....	337	6410-O-20-12.....	338
63-453.....	208	63-703.....	210	63-967.....	269	6400-L-4.....	335	6405-O-20-20.....	337	6410-O-20-16.....	338
63-454.....	208	63-704.....	210	63-968.....	269	6400-L-6.....	335	6405-O-20-24.....	337	6410-O-20-24.....	338
63-470.....	208	63-705.....	210	63-971.....	269	6400-L-8.....	335	6405-O-2-2.....	337	6410-O-24-12.....	338
63-471.....	208	63-706.....	210	63-972.....	269	6401-10-6.....	335	6405-O-24-16.....	337	6410-O-24-16.....	338
63-472.....	208	63-707.....	210	63-973.....	269	6401-10-8.....	335	6405-O-24-20.....	337	6410-O-24-20.....	338
63-473.....	208	63-708.....	210	63-974.....	269	6401-12-12.....	335	6405-O-24-24.....	337	6410-O-32-16.....	338
63-474.....	208	63-720.....	209	63-975.....	269	6401-12-6.....	335	6405-O-32-32.....	337	6410-O-32-20.....	338
63-475.....	208	63-721.....	209	63-976.....	269	6401-12-8.....	335	6405-O-4-2.....	337	6410-O-32-24.....	338
63-476.....	208	63-722.....	209	63-977.....	269	6401-16-12.....	335	6405-O-4-4.....	337	6410-O-4-4.....	338
63-477.....	208	63-723.....	209	63-978.....	269	6401-16-16.....	335	6405-O-4-6.....	337	6410-O-4-6.....	338
63-478.....	208	63-724.....	209	63-981.....	269	6401-20-20.....	335	6405-O-5-2.....	337	6410-O-6-4.....	338
63-480.....	208	63-725.....	209	63-982.....	269	6401-24-24.....	335	6405-O-5-4.....	337	6410-O-6-8.....	338
63-500.....	209	63-726.....	209	63-983.....	269	6401-32-32.....	335	6405-O-6-2.....	337	6410-O-8-10.....	338
63-501.....	209	63-727.....	209	63-984.....	269	6401-4-2.....	335	6405-O-6-4.....	337	6410-O-8-12.....	338
63-502.....	209	63-728.....	209	63-985.....	269	6401-4-4.....	335	6405-O-6-6.....	337	6410-O-8-4.....	338
63-504.....	209	63-759.....	208	63-986.....	269	6401-4-6.....	335	6405-O-6-8.....	337	6410-O-8-6.....	338
63-505.....	209	63-760.....	208	63-987.....	269	6401-5-2.....	335	6405-O-8-12.....	337	6410-O-8-8.....	338
63-507.....	209	63-761.....	208	63-988.....	269	6401-5-4.....	335	6405-O-8-4.....	337	64-110.....	225
63-508.....	209	63-762.....	208	6400-10.....	335	6401-6-4.....	335	6405-O-8-6.....	337	64-112.....	225
63-509.....	209	63-763.....	208	6400-10-12.....	335	6401-6-6.....	335	6405-O-8-8.....	337	64-114.....	225
63-512.....	209	63-764.....	208	6400-10-16.....	335	6401-6-8.....	335	640600.....	133	64-121.....	225
63-513.....	209	63-771.....	210	6400-10-6.....	335	6401-8-12.....	335	640800.....	133	64-122.....	225
63-516.....	209	63-772.....	210	6400-10-8.....	335	6401-8-6.....	335	6408-H-O-10.....	337	64-123.....	225
63-517.....	209	63-773.....	210	6400-12.....	335	6401-8-8.....	335	6408-H-O-12.....	337	64-124.....	225
63-518.....	209	63-774.....	210	6400-12-10.....	335	6401-8-8.....	335	6408-H-O-14.....	337	64-126.....	225
63-521.....	209	63-775.....	210	6400-12-14.....	335	6402-O-10-10.....	336	6408-H-O-16.....	337	64-127.....	225
63-522.....	209	63-776.....	210	6400-12-16.....	335	6402-O-12-12.....	336	6408-H-O-2.....	337	64-130.....	225
63-523.....	209	63-777.....	210	6400-12-20.....	335	6402-O-14-14.....	336	6408-H-O-20.....	337	64-131.....	225
63-524.....	209	63-778.....	210	6400-12-6.....	335	6402-O-16-12.....	336	6408-H-O-24.....	337	64-133.....	225
63-528.....	209	63-911.....	269	6400-12-8.....	335	6402-O-16-16.....	336	6408-H-O-3.....	337	64-134.....	225
63-529.....	209	63-912.....	269	6400-14.....	335	6402-O-20-20.....	336	6408-H-O-32.....	337	64-136.....	225
63-530.....	209	63-913.....	269	6400-16.....	335	6402-O-24-24.....	336	6408-H-O-4.....	337	64-137.....	225
63-531.....	209	63-914.....	269	6400-16-10.....	335	6402-O-4-4.....	336	6408-H-O-5.....	337	64-138.....	225
63-534.....	209	63-915.....	269	6400-16-12.....	335	6402-O-4-6.....	336	6408-H-O-6.....	337	64-139.....	225
63-535.....	209	63-916.....	269	6400-16-14.....	335	6402-O-6-6.....	336	6408-H-O-8.....	337	64-140.....	225
63-538.....	209	63-917.....	269	6400-16-14.....	335	6402-O-6-8.....	336	6408-H-O-8.....	337	64-141.....	225
63-600.....	209	63-918.....	269	6400-16-20.....	335	6402-O-8-6.....	336	6408-O-10.....	337	64-142.....	225
63-601.....	209	63-921.....	269	6400-16-24.....	335	6402-O-8-8.....	336	6408-O-12.....	337	64-145.....	225
63-602.....	209	63-922.....	269	6400-16-8.....	335	6402-O-10-10.....	336	6408-O-14.....	337	64-146.....	225
63-603.....	209	63-923.....	269	6400-20.....	335	6403-O-12.....	336	6408-O-16.....	337	64-148.....	225
63-604.....	209	63-924.....	269	6400-20.....	335	6403-O-16.....	336	6408-O-2.....	337	64-160.....	226
63-605.....	209	63-925.....	269	6400-20-12.....	335	6403-O-6.....	336	6408-O-20.....	337	64-161.....	226
63-606.....	209	63-925.....	269	6400-20-16.....	335	6403-O-8.....	336	6408-O-24.....	337	64-162.....	226
		63-926.....	269	6400-20-24.....	335	640400.....	133	6408-O-3.....	337		



Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
64-163	226	64-336	228	64-479	232	64-696	232	6504-10-10	339	65-142	225
64-164	226	64-343	228	64-480	232	64-697	232	6504-12-12	339	65-145	225
64-165	226	64-351	228	64-481	232	64-703	228	6504-16-16	339	65-146	225
64-166	226	64-363	229	64-482	232	64-704	228	6504-20-20	339	65-148	225
64-167	226	64-364	229	64-486	229	64-705	228	6504-24-24	339	65-151	225
64-168	226	64-383	229	64-503	230	64-706	228	6504-4-4	339	65-152	225
64-169	226	64-384	229	64-505	230	64-707	228	6504-6-4	339	65-153	225
64-170	226	64-385	229	64-506	230	64-708	228	6504-6-6	339	65-154	225
64-171	226	64-386	229	64-507	230	64-733	227	6504-8-6	339	65-160	226
64-180	226	64-390	231	64-508	230	64-770	224	6504-8-8	339	65-161	226
64-181	226	64-391	231	64-509	230	64-771	224	6505-10-12	339	65-162	226
64-182	226	64-392	231	64-510	230	64-772	224	6505-10-8	339	65-163	226
64-183	226	64-393	231	64-511	230	64-773	224	6505-12-12	339	65-164	226
64-184	226	64-394	231	64-512	230	64-773H	224	6505-12-8	339	65-165	226
64-185	226	64-395	231	64-513	230	64-774	224	6505-16-12	339	65-166	226
64-186	226	64-396	231	64-514	230	64-774H	224	6505-16-16	339	65-167	226
64-187	226	64-397	231	64-515	230	64-775	224	6505-20-20	339	65-168	226
64-188	226	64-398	231	64-516	230	64-775H	224	6505-2-4	339	65-169	226
64-189	226	64-399	231	64-517	230	64-776	224	6505-24-24	339	65-170	226
64-190	226	64-400	231	64-518	230	64-776H	224	6505-32-32	339	65-171	226
64-191	226	64-410	227	64-519	230	64-777	224	6505-4-2	339	65-180	226
64-192	226	64-411	227	64-520	230	64-777H	224	6505-4-4	339	65-181	226
64-200	226	64-412	227	64-521	230	64-778	224	6505-5-4	339	65-182	226
64-201	226	64-413	227	64-522	230	64-778H	224	6505-6-4	339	65-183	226
64-202	226	64-414	227	64-523	230	64-779	224	6505-6-6	339	65-184	226
64-203	226	64-415	227	64-524	230	64-780	224	6505-8-6	339	65-185	226
64-204	226	64-416	227	64-525	230	64-781	224	6505-8-8	339	65-186	226
64-205	226	64-417	227	64-527	230	6500-10	338	650600	133	65-187	226
64-206	226	64-418	227	64-528	230	6500-10-8	338	6506-10-12	339	65-188	226
64-207	226	64-419	227	64-529	230	6500-12	338	6506-10-6	339	65-189	226
64-208	226	64-420	227	64-530	230	6500-12-10	338	6506-10-8	339	65-190	226
64-209	226	64-421	227	64-531	230	6500-12-8	338	6506-12-12	339	65-191	226
64-210	226	64-422	227	64-532	230	6500-14	338	6506-12-8	339	65-192	226
64-211	226	64-430	229	64-533	230	6500-16	338	6506-16-16	339	65-200	226
64-250	227	64-431	229	64-534	230	6500-20	338	6506-20-20	339	65-201	226
64-251	227	64-432	229	64-535	230	6500-24	338	6506-24-24	339	65-202	226
64-252	227	64-433	229	64-537	230	6500-32	338	6506-32-32	339	65-203	226
64-253	227	64-434	229	64-538	230	6500-4	338	6506-4-2	339	65-204	226
64-254	227	64-435	229	64-539	230	6500-4-6	338	6506-4-4	339	65-205	226
64-255	227	64-436	229	64-540	230	6500-5	338	6506-4-6	339	65-206	226
64-256	227	64-437	229	64-541	230	6500-6	338	6506-6-4	339	65-207	226
64-257	227	64-438	229	64-542	230	6500-6-8	338	6506-6-6	339	65-208	226
64-258	227	64-439	229	64-543	230	6500-8	338	6506-6-8	339	65-209	226
64-259	227	64-440	229	64-545	230	6500-8-6	338	6506-8-6	339	65-210	226
64-260	227	64-441	229	64-546	230	6501-10-8	338	6506-8-8	339	65-211	226
64-261	227	64-442	229	64-547	230	6501-12-12	338	650800	133	65-250	227
64-262	227	64-443	229	64-549	230	6501-14-12	338	65-100	225	65-251	227
64-268	228	64-444	229	64-550	230	6501-16-16	338	65-101	225	65-252	227
64-269	228	64-445	229	64-551	230	6501-20-20	338	65-102	225	65-253	227
64-273	228	64-446	229	64-553	230	6501-24-24	338	65-103	225	65-254	227
64-276	228	64-447	229	64-600	231	6501-32-32	338	65-104	225	65-255	227
64-279	228	64-448	229	64-601	231	6501-4-2	338	65-105	225	65-256	227
64-280	227	64-449	229	64-602	231	6501-4-4	338	65-106	225	65-257	227
64-282	228	64-450	229	64-603	231	6501-6-4	338	65-107	225	65-258	227
64-283	228	64-451	229	64-604	231	6501-6-6	338	65-108	225	65-259	227
64-286	228	64-452	229	64-605	231	6501-8-6	338	65-109	225	65-260	227
64-287	228	64-453	229	64-606	231	6501-8-8	338	65-110	225	65-261	227
64-288	228	64-454	229	64-607	231	6502-10	339	65-112	225	65-262	227
64-289	227	64-456	229	64-608	231	6502-12	339	65-114	225	65-268	228
64-291	228	64-457	229	64-609	231	6502-16	339	65-121	225	65-269	228
64-298	228	64-458	229	64-610	231	6502-20	339	65-122	225	65-273	228
64-299	227	64-459	229	64-611	231	6502-24	339	65-123	225	65-276	228
64-300	227	64-460	229	64-653	231	6502-32	339	65-124	225	65-279	228
64-301	228	64-461	229	64-654	231	6502-4	339	65-126	225	65-280	227
64-303	228	64-462	229	64-655	231	6502-5	339	65-127	225	65-282	228
64-306	228	64-463	229	64-656	231	6502-6	339	65-130	225	65-283	228
64-316	228	64-464	229	64-657	231	6502-8	339	65-131	225	65-286	228
64-317	227	64-465	229	64-658	231	6503-10-8	339	65-133	225	65-287	228
64-318	228	64-472	232	64-659	231	6503-12-12	339	65-134	225	65-288	228
64-319	227	64-473	232	64-660	231	6503-4-4	339	65-136	225	65-289	227
64-322	228	64-474	232	64-661	231	6503-6-4	339	65-137	225	65-291	228
64-327	228	64-475	232	64-692	232	6503-6-6	339	65-138	225	65-292	228
64-328	228	64-476	232	64-693	232	6503-8-6	339	65-139	225	65-296	228
64-330	228	64-477	232	64-694	232	6503-8-8	339	65-140	225	65-298	228
64-334	228	64-478	232	64-695	232	650400	133	65-141	225	65-299	227

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
65-300	227	65-459	229	65-607	231	6602-16	340	66-769	234	67-772	233
65-301	228	65-460	229	65-608	231	6602-20	340	66-770	233	67-773	233
65-303	228	65-461	229	65-609	231	6602-24	340	66-771	233	67-774	233
65-306	228	65-462	229	65-610	231	6602-3	340	66-772	233	67-775	233
65-309	228	65-463	229	65-611	231	6602-4	340	66-773	233	67-776	233
65-316	228	65-464	229	65-653	231	6602-5	340	66-774	233	67-777	233
65-317	227	65-465	229	65-654	231	6602-6	340	66-775	233	67-778	233
65-318	228	65-471	232	65-655	231	6602-8	340	66-776	233	6801-LL-NWO-10	341
65-319	227	65-472	232	65-656	231	660402	134	66-777	233	6801-LL-NWO-12	341
65-322	228	65-473	232	65-657	231	660404	134	66-778	233	6801-LL-NWO-16	341
65-327	228	65-474	232	65-658	231	660602	134	67-470	233	6801-LL-NWO-20	341
65-328	228	65-475	232	65-659	231	660604	134	67-471	233	6801-LL-NWO-4	341
65-330	228	65-476	232	65-660	231	660606	134	67-472	233	6801-LL-NWO-6	341
65-334	228	65-477	232	65-661	231	660804	134	67-473	233	6801-LL-NWO-6-8	341
65-336	228	65-478	232	65-692	232	660806	134	67-474	233	6801-LL-NWO-8	341
65-343	228	65-479	232	65-693	232	660808	134	67-475	233	6801-L-NWO-8-10	341
65-351	228	65-480	232	65-694	232	66-470	233	67-476	233	6801-L-NWO-10	341
65-363	229	65-481	232	65-695	232	66-471	233	67-477	233	6801-L-NWO-12	341
65-364	229	65-482	232	65-696	232	66-472	233	67-500	233	6801-L-NWO-16	341
65-383	229	65-486	229	65-697	232	66-473	233	67-501	233	6801-L-NWO-20	341
65-384	229	65-491	229	65-733	227	66-474	233	67-502	233	6801-L-NWO-4	341
65-385	229	65-503	230	65-770	224	66-475	233	67-503	233	6801-L-NWO-6	341
65-386	229	65-505	230	65-771	224	66-476	233	67-504	233	6801-L-NWO-8	341
65-390	231	65-506	230	65-771H	224	66-477	233	67-505	233	6801-L-NWO-8-10	341
65-391	231	65-507	230	65-772	224	66-478	233	67-506	233	6801-NWO-10	340
65-392	231	65-508	230	65-772H	224	66-500	233	67-507	233	6801-NWO-10-12	340
65-393	231	65-509	230	65-773	224	66-501	233	67-508	233	6801-NWO-10-16	340
65-394	231	65-510	230	65-773H	224	66-502	233	67-509	233	6801-NWO-10-6	340
65-395	231	65-511	230	65-774	224	66-503	233	67-510	233	6801-NWO-10-8	340
65-396	231	65-512	230	65-774H	224	66-504	233	67-511	233	6801-NWO-12	340
65-397	231	65-513	230	65-775	224	66-505	233	67-512	233	6801-NWO-12-10	340
65-398	231	65-514	230	65-775H	224	66-506	233	67-513	233	6801-NWO-12-14	340
65-399	231	65-515	230	65-776	224	66-507	233	67-630	234	6801-NWO-12-16	340
65-400	231	65-516	230	65-776H	224	66-508	233	67-631	234	6801-NWO-12-20	340
65-410	227	65-517	230	65-777	224	66-509	233	67-632	234	6801-NWO-12-8	340
65-411	227	65-518	230	65-777H	224	66-510	233	67-633	234	6801-NWO-14	340
65-412	227	65-519	230	65-778	224	66-511	233	67-634	234	6801-NWO-14-12	340
65-413	227	65-520	230	65-778H	224	66-512	233	67-635	234	6801-NWO-14-16	340
65-414	227	65-521	230	65-779	224	66-513	233	67-636	234	6801-NWO-16	340
65-415	227	65-522	230	65-779H	224	66-630	234	67-637	234	6801-NWO-16-12	340
65-416	227	65-523	230	65-780	224	66-631	234	67-638	234	6801-NWO-16-14	340
65-417	227	65-524	230	65-780H	224	66-632	234	67-653	233	6801-NWO-16-20	340
65-418	227	65-525	230	65-781	224	66-633	234	67-654	233	6801-NWO-2	340
65-419	227	65-527	230	65-781H	224	66-634	234	67-655	233	6801-NWO-20	340
65-420	227	65-528	230	65-782	224	66-635	234	67-656	233	6801-NWO-20-12	340
65-421	227	65-529	230	65-783	224	66-636	234	67-657	233	6801-NWO-20-16	340
65-422	227	65-530	230	65-784	224	66-637	234	67-658	233	6801-NWO-20-24	340
65-430	229	65-531	230	66000	271	66-638	234	67-669	233	6801-NWO-24	340
65-431	229	65-532	230	66001	271	66-653	233	67-670	233	6801-NWO-24-20	340
65-432	229	655320	133	6600-10	340	66-654	233	67-671	233	6801-NWO-3	340
65-433	229	65-533	230	6600-12	340	66-655	233	67-672	233	6801-NWO-32	340
65-434	229	65-534	230	6600-14	340	66-656	233	67-700	234	6801-NWO-4	340
65-435	229	65-535	230	6600-16	340	66-657	233	67-701	234	6801-NWO-4-5	340
65-436	229	65-537	230	66002	271	66-658	233	67-702	234	6801-NWO-4-6	340
65-437	229	65-538	230	6600-20	340	66-670	233	67-703	234	6801-NWO-4-8	340
65-438	229	65-539	230	6600-24	340	66-671	233	67-704	234	6801-NWO-5	340
65-439	229	65-540	230	66003	271	66-672	233	67-705	234	6801-NWO-5-4	340
65-440	229	65-541	230	6600-3-3	340	66-700	234	67-707	234	6801-NWO-5-6	340
65-441	229	65-542	230	66004	271	66-701	234	67-708	234	6801-NWO-6	340
65-442	229	65-543	230	6600-4-4	340	66-702	234	67-709	234	6801-NWO-6-10	340
65-443	229	65-544	230	66005	271	66-704	234	67-711	234	6801-NWO-6-12	340
65-444	229	65-545	230	6600-5-5	340	66-705	234	67-712	234	6801-NWO-6-4	340
65-445	229	65-546	230	66006	271	66-708	234	67-713	234	6801-NWO-6-5	340
65-446	229	65-547	230	6600-6-6	340	66-709	234	67-760	234	6801-NWO-6-8	340
65-447	229	65-549	230	66007	271	66-712	234	67-761	234	6801-NWO-8	340
65-448	229	65-550	230	66008	271	66-713	234	67-762	234	6801-NWO-8-10	340
65-449	229	65-551	230	6600-8-8	340	66-760	234	67-763	234	6801-NWO-8-12	340
65-450	229	65-553	230	66009	271	66-761	234	67-764	234	6801-NWO-8-16	340
65-451	229	65-600	231	66010	271	66-762	234	67-765	234	6801-NWO-8-4	340
65-452	229	65-601	231	66011	271	66-763	234	67-766	234	6801-NWO-8-6	340
65-453	229	65-602	231	66012	271	66-764	234	67-767	234	6802-NWO-10	341
65-454	229	65-603	231	66013	271	66-765	234	67-768	234	6802-NWO-10-12	341
65-456	229	65-604	231	6602-10	340	66-766	234	67-769	234	6802-NWO-10-8	341
65-457	229	65-605	231	6602-12	340	66-767	234	67-770	233	6802-NWO-12	341
65-458	229	65-606	231	6602-14	340	66-768	234	67-771	233	6802-NWO-12-14	341

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
6802-NWO-12-16...	341	6806-NWO-16-16...	342	68-438	240	6901-NWO-8-4	343	69-253	240	7005-10-20	358
6802-NWO-14	341	6806-NWO-20-20	342	68-441	240	6901-NWO-8-6	343	69-254	240	7005-10-22	358
6802-NWO-16	341	6806-NWO-24-24	342	68-442	240	6901-NWO-8-8	343	69-255	240	7005-12-22	358
6802-NWO-16-12	341	6806-NWO-32-32	342	68-471	240	6902-NWO-10-12	344	69-256	240	7005-12-27	358
6802-NWO-16-20	341	6806-NWO-4-2	342	68-472	240	6902-NWO-10-6	344	69-257	240	7005-14-26	358
6802-NWO-2	341	6806-NWO-4-4	342	68-473	240	6902-NWO-10-8	344	69-258	240	7005-16-27	358
6802-NWO-20	341	6806-NWO-6-4	342	68-474	240	6902-NWO-12-12	344	69-411	240	7005-16-33	358
6802-NWO-20-16	341	6806-NWO-6-6	342	68-475	240	6902-NWO-12-8	344	69-412	240	7005-20-42	358
6802-NWO-24	341	6806-NWO-8-6	342	68-476	240	6902-NWO-16-12	344	69-413	240	7005-24-48	358
6802-NWO-32	341	6806-NWO-8-8	342	68-477	240	6902-NWO-16-16	344	69-414	240	7005-4-10	358
6802-NWO-4	341	680804	134	68-478	240	6902-NWO-20-20	344	69-415	240	7005-4-12	358
6802-NWO-4-6	341	680806	134	685320	134	6902-NWO-24-24	344	69-416	240	7005-4-14	358
6802-NWO-4-8	341	680808	134	685321	134	6902-NWO-4-2	344	69-417	240	7005-4-18	358
6802-NWO-5	341	6809-NWO-10-10	342	685322	134	6902-NWO-4-4	344	69-418	240	7005-5-10	358
6802-NWO-6	341	6809-NWO-12-12	342	68-600	240	6902-NWO-4-6	344	69-432	240	7005-5-12	358
6802-NWO-6-10	341	6809-NWO-16-16	342	68-601	240	6902-NWO-5-4	344	69-434	240	7005-5-14	358
6802-NWO-6-4	341	6809-NWO-20-20	342	68-602	240	6902-NWO-6-4	344	69-435	240	7005-6-14	358
6802-NWO-6-8	341	6809-NWO-24-24	342	68-603	240	6902-NWO-6-6	344	69-438	240	7005-6-16	358
6802-NWO-8	341	6809-NWO-4-4	342	68-604	240	6902-NWO-8-12	344	69-441	240	7005-6-18	358
6802-NWO-8-10	341	6809-NWO-6-6	342	68-605	240	6902-NWO-8-6	344	69-442	240	7005-8-16	358
6802-NWO-8-12	341	6809-NWO-8-10	342	68-606	240	6902-NWO-8-8	344	69-471	240	7005-8-18	358
6802-NWO-8-6	341	6809-NWO-8-8	342	68-607	240	690302	135	69-472	240	7005-8-22	358
680302	134	681006	134	68-608	240	690402	135	69-473	240	700602	136
6803-NWO-10	341	681008	134	6900-O-10-12	343	690402S	135	69-474	240	700604	136
6803-NWO-12	341	68-101	240	6900-O-10-6	343	690404	135	69-475	240	700606	136
6803-NWO-14	341	68-102	240	6900-O-10-8	343	690404S	135	69-476	240	700804	136
6803-NWO-16	341	68-103	240	6900-O-12-12	343	690406	135	69-477	240	700806	136
6803-NWO-16-12	341	68-104	240	6900-O-12-16	343	690406S	135	69-478	240	700808	136
6803-NWO-2	341	68-105	240	6900-O-12-6	343	690602	135	695302	135	7022-10-8	358
6803-NWO-20	341	68-106	240	6900-O-12-8	343	690602S	135	695322	135	7022-12-12	358
6803-NWO-24	341	68-107	240	6900-O-14-12	343	690604	135	695322S	135	7022-16-16	358
6803-NWO-4	341	68-108	240	6900-O-16-12	343	690604S	135	69-600	240	7022-4-2	358
6803-NWO-5	341	681208	134	6900-O-16-16	343	690606	135	69-601	240	7022-4-4	358
6803-NWO-6	341	681212	134	6900-O-16-20	343	690606S	135	69-602	240	7022-6-4	358
6803-NWO-6-8	341	6815-NWO-10-10	342	6900-O-20-16	343	690608	135	69-603	240	7022-6-6	358
6803-NWO-8	341	6815-NWO-12-12	342	6900-O-20-20	343	690608S	135	69-604	240	7022-8-6	358
6803-NWO-8-10	341	6815-NWO-16-16	342	6900-O-24-20	343	690804	135	69-605	240	7022-8-8	358
680402	134	6815-NWO-4-4	342	6900-O-24-24	343	690804S	135	69-606	240	7025-10-22	359
680404	134	6815-NWO-6-6	342	6900-O-32-32	343	690806	135	69-607	240	7025-12-27	359
680406	134	6815-NWO-6-8	342	6900-O-4-2	343	690806S	135	69-608	240	7025-16-33	359
680421	134	6815-NWO-8-8	342	6900-O-4-4	343	690808	135	7000-10-12	356	7025-4-10	359
6804-NWO-10	342	68-161	240	6900-O-4-6	343	690808S	135	7000-10-8	356	7025-4-12	359
6804-NWO-12	342	68-162	240	6900-O-5-4	343	691006	135	7000-12-12	356	7025-5-12	359
6804-NWO-16	342	68-163	240	6900-O-6-4	343	691006S	135	7000-12-8	356	7025-6-14	359
6804-NWO-16-12	342	68-164	240	6900-O-6-6	343	691008	135	7000-16-16	356	7025-6-16	359
6804-NWO-20	342	68-165	240	6900-O-6-8	343	691008S	135	7000-20-20	356	7025-8-16	359
6804-NWO-24	342	68-166	240	6900-O-8-12	343	69-101	240	7000-4-2	356	7042-12-12	358
6804-NWO-32	342	68-167	240	6900-O-8-4	343	69-102	240	7000-4-4	356	7042-16-16	358
6804-NWO-4	342	68-168	240	6900-O-8-6	343	69-103	240	7000-6-4	356	7042-20-20	358
6804-NWO-5	342	68-181	240	6900-O-8-8	343	69-104	240	7000-6-6	356	7042-2-2	358
6804-NWO-6	342	68-182	240	6901-NWO-10-12	343	69-105	240	7000-6-8	356	7042-24-24	358
6804-NWO-6-8	342	68-183	240	6901-NWO-10-4	343	69-106	240	7000-8-12	356	7042-4-2	358
6804-NWO-8	342	68-184	240	6901-NWO-10-6	343	69-107	240	7000-8-6	356	7042-4-4	358
6804-NWO-8-10	342	68-185	240	6901-NWO-10-8	343	69-108	240	7000-8-8	356	7042-6-6	358
6805-NWO-10-6	342	68-186	240	6901-NWO-12-12	343	691208	135	7002-10-8	357	7042-8-8	358
6805-NWO-10-8	342	68-187	240	6901-NWO-12-16	343	691208S	135	7002-12-12	357	7045-12-27	359
6805-NWO-12-12	342	68-188	240	6901-NWO-12-6	343	691212	135	7002-12-16	357	7045-16-33	359
6805-NWO-12-8	342	68-252	240	6901-NWO-12-8	343	691212S	135	7002-16-16	357	7045-20-42	359
6805-NWO-14-12	342	68-253	240	6901-NWO-14-12	343	69-161	240	7002-20-20	357	7045-2-10	359
6805-NWO-16-16	342	68-254	240	6901-NWO-16-12	343	69-162	240	7002-24-24	357	7045-4-12	359
6805-NWO-20-20	342	68-255	240	6901-NWO-16-16	343	69-163	240	7002-4-2	357	7045-4-14	359
6805-NWO-24-24	342	68-256	240	6901-NWO-16-20	343	69-164	240	7002-4-4	357	7045-6-12	359
6805-NWO-4-2	342	68-257	240	6901-NWO-20-12	343	69-165	240	7002-4-6	357	7045-6-16	359
6805-NWO-4-4	342	68-258	240	6901-NWO-20-16	343	69-166	240	7002-4-8	357	7045-6-18	359
6805-NWO-5-2	342	68-411	240	6901-NWO-20-20	343	69-167	240	7002-6-4	357	7045-8-16	359
6805-NWO-6-4	342	68-412	240	6901-NWO-24-24	343	69-168	240	7002-6-6	357	7045-8-18	359
6805-NWO-6-6	342	68-413	240	6901-NWO-32-32	343	69-181	240	7002-6-8	357	7045-8-22	359
6805-NWO-8-6	342	68-414	240	6901-NWO-4-2	343	69-182	240	7002-8-12	357	71-001	222
6805-NWO-8-8	342	68-415	240	6901-NWO-4-4	343	69-183	240	7002-8-6	357	71-002	222
680602	134	68-416	240	6901-NWO-4-6	343	69-184	240	7002-8-8	357	71-003	222
680604	134	68-417	240	6901-NWO-5-4	343	69-185	240	700402	136	71-004	222
680606	134	68-418	240	6901-NWO-6-4	343	69-186	240	700404	136	71-005	222
680608	134	68-432	240	6901-NWO-6-6	343	69-187	240	700404S	136	71-006	222
6806-NWO-10-8	342	68-434	240	6901-NWO-6-8	343	69-188	240	700406	136	71-007	222
6806-NWO-12-12	342	68-435	240	6901-NWO-8-12	343	69-252	240	7005-10-18	358	71-008	222

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
71-009	222	71-122	223	72-024	238	72-085	238	73-004	272	73-204N5	292
71-010	222	71-123	223	72-025	238	72-086	238	73-005	272	73-204U	293
71-011	222	71-124	223	72-026	238	72-087	238	73-006	272	73-205B	293
71-020	222	71-125	223	72-027	238	72-088	238	73-007	272	73-205B5	293
71-021	222	71-126	223	72-028	238	72-089	238	73-008	272	73-205G	293
71-022	222	71-127	223	72-029	238	72-090	238	73-009	272	73-205R	293
71-023	222	71-128	223	7202-NWO-10-8	357	72-100	238	73-010	272	73-205U	293
71-024	222	71-129	223	7202-NWO-12-12	357	72100808	137	73-011	272	73-205Y	293
71-025	222	71-140	223	7202-NWO-12-16	357	72-101	238	73-023	272	73-206A	293
71-026	222	71-141	223	7202-NWO-16-16	357	72-102	238	73-024	272	73-206B	293
71-027	222	71-142	223	7202-NWO-20-20	357	72-103	238	73-025	272	73-206B1	293
71-028	222	71-143	223	7202-NWO-24-24	357	72-104	238	73-026	272	73-206B5	293
71-029	222	71-144	223	7202-NWO-4-2	357	72-105	238	73-027	272	73-206G	293
71-040	222	71-145	223	7202-NWO-4-4	357	72-106	238	73-028	272	73-206N1	292
710402	136	71-146	223	7202-NWO-6-4	357	72-107	238	73-029	272	73-206N5	292
710402S	137	71-147	223	7202-NWO-6-6	357	72-108	238	73-030	272	73-206R	293
710404	136	71-148	223	7202-NWO-6-8	357	72-109	238	73-031	272	73-206U	293
710404S	137	71-149	223	7202-NWO-8-12	357	72-120	239	73-033	272	73-206U5	293
71040604	136	71-160	223	7202-NWO-8-6	357	72-121	239	73-035	272	73-206W	293
71-041	222	71-161	223	7202-NWO-8-8	357	72-122	239	73-036	272	73-206Y	293
71-042	222	71-162	223	72-030	238	72-123	239	73-037	272	73-207B	293
71-043	222	71-163	223	720302	137	72-124	239	73-038	272	73-207B5	293
71-044	222	71-164	223	72-040	238	72-125	239	73-039	272	73-207G	293
71-045	222	71-165	223	720402	137	72-126	239	73-040	272	73-207N5	292
71-046	222	71-166	223	720402S	138	72-127	239	73-041	272	73-207U	293
71-047	222	71-167	223	720404	137	72-128	239	73-043	272	73-207W	293
71-048	222	71-168	223	720404S	138	72-129	239	73-044	272	73-207W5	293
71-049	222	71-180	223	72-041	238	72-140	239	73-045	272	73-208B	293
71-050	222	71-181	223	72-042	238	72-141	239	73-046	272	73-669	268
71-060	222	71-182	223	72-043	238	72-142	239	73-047	272	73-670	268
710604	136	71-183	223	72-044	238	72-143	239	73-048	272	73-671	268
71060404	136	71-184	223	72-045	238	72-144	239	73-049	272	73-672	268
71060406	136	71-185	223	72-046	238	72-145	239	73-050	272	73-673	268
710604S	137	71-186	223	72-047	238	72-146	239	73-051	272	73-674	268
710606	136	71-187	223	72-048	238	72-147	239	73-056	272	73-951	26
710606S	137	71-200	223	72-049	238	72-148	239	73-057	272	73-951	210
710608	136	71-201	223	72-050	238	72-149	239	73-058	272	73-952	26
71-061	222	71-202	223	7205-NWO-10-18	359	72-160	239	73-059	272	73-952	210
71-062	222	71-203	223	7205-NWO-4-10	359	72-161	239	73-060	272	73-953	26
71-063	222	71-204	223	7205-NWO-4-12	359	72-162	239	73-063	272	73-953	210
71-064	222	71-205	223	7205-NWO-4-14	359	72-163	239	73-064	272	73-954	26
71-065	222	71-206	223	7205NWO-5-12	359	72-164	239	73-065	272	73-954	210
71-066	222	71-207	223	7205-NWO-6-14	359	72-165	239	73-066	272	73-955	26
71-067	222	71-220	223	7205-NWO-6-16	359	72-166	239	73-067	272	73-955	210
71-068	222	71-223	223	7205-NWO-8-16	359	72-167	239	73-068	272	73-956	26
71-069	222	71-224	223	7205-NWO-8-18	359	72-168	239	73-069	272	73-956	210
71-070	222	71-225	223	7205-NWO-8-22	359	72-180	239	73-070	272	73-957	26
71-080	222	71-226	223	72-060	238	72-181	239	73-071	272	73-957	210
710804S	137	71-227	223	720602S	138	72-182	239	73-200B	293	73-958	26
710806	136	72-001	238	720604	137	72-183	239	73-200N5	292	73-958	210
710806S	137	7200-10-8	356	72060404	137	72-184	239	73-200U	293	73-959	26
71080804	136	7200-12-12	356	720604S	138	72-185	239	73-201B	293	73-959	210
710808S	137	7200-16-16	356	720606	137	72-186	239	73-201G	293	73-960	26
71-081	222	72-002	238	720606S	138	72-187	239	73-201U	293	73-960	210
71-082	222	7200-20-20	356	72-061	238	72-200	239	73-202B	293	73-961	210
71-083	222	72-003	238	72-062	238	72-201	239	73-202U	293	73-970	26
71-084	222	72-004	238	72-063	238	72-202	239	73-203B	293	73-970	210
71-085	222	7200-4-2	356	72-064	238	72-203	239	73-203B5	293	73-971	26
71-086	222	7200-4-4	356	72-065	238	72-204	239	73-203G	293	73-971	210
71-087	222	72-005	238	72-066	238	72-205	239	73-203G1	293	73-972	26
71-088	222	72-006	238	72-067	238	72-206	239	73-203G5	293	73-972	210
71-089	222	7200-6-4	356	72-068	238	72-207	239	73-203N1	292	73-973	26
71-090	222	7200-6-6	356	72-069	238	72-220	239	73-203N5	292	73-973	210
71-100	222	7200-6-8	356	72-070	238	72-223	239	73-203O	293	73-974	26
71-101	222	72-007	238	72-080	238	72-224	239	73-203R	293	73-974	210
71-102	222	72-008	238	720804	137	72-225	239	73-203R1	293	73-975	26
71-103	222	7200-8-6	356	720804S	138	72-226	239	73-203R5	293	73-975	210
71-104	222	7200-8-8	356	720806	137	72-227	239	73-203U	293	73-976	26
71-105	222	72-009	238	720806S	138	7240-10	357	73-203U1	293	73-976	210
71-106	222	72-010	238	720808	137	7240-12	357	73-203U5	293	73-977	26
71-107	222	72-011	238	720808S	138	7240-16	357	73-203W	293	73-977	210
71-108	222	72-020	238	72-081	238	7240-4	357	73-203Y	293	73-979	26
71-109	222	72-021	238	72-082	238	7240-6	357	73-204B	293	73-979	210
71-120	223	72-022	238	72-083	238	7240-8	357	73-204G	293	73-980	26
71-121	223	72-023	238	72-084	238	73-003	272	73-204N1	292	73-980	210

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
73-981	26	77-153	247	77-292	249	77-428	251	7802-4	357
73-981	210	77-154	247	77-294	249	77-429	251	7802-6	357
73-982	26	77-155	247	77-295	249	77-430	251	7802-8	357
73-982	210	77-156	247	77-296	249	77-431	251	7825-12	357
73-983	268	77-157	247	77-297	249	77-432	251	7825-16	357
73-984	268	77-161	248	77-298	249	77-433	251	7825-2	357
73-985	268	77-162	248	77-299	249	77-434	251	7825-20	357
73-986	268	77-163	248	77-300	249	77-435	251	7825-4	357
73-987	268	77-164	248	77-303	250	77-436	251	7825-6	357
7420-10-8	356	77-165	248	77-306	250	77-437	251	7825-8	357
7420-12-12	356	77-166	248	77-307	250	77-453	251	80-001	311
7420-12-8	356	77-167	248	77-309	250	77-454	251	80-002	311
7420-16-12	356	77-168	248	77-312	250	77-455	251	80-003	311
7420-16-16	356	77-169	248	77-314	250	77-456	251	80-004	311
7420-20-16	356	77-170	248	77-318	250	77-457	251	80-005	311
7420-20-20	356	77-171	248	77-320	250	77-458	251	80-006	311
7420-2-2	356	77-177	248	77-322	250	77-459	251	80-007	311
7420-4-2	356	77-178	248	77-331	250	77-460	251	80-031	311
7420-6-4	356	77-179	248	77-332	250	77-461	251	80-032	311
7420-6-6	356	77-180	248	77-333	250	77-462	251	80-033	311
7420-8-6	356	77-181	248	77-335	250	77-463	251	80-034	311
7420-8-8	356	77-182	248	77-337	250	77-464	251	80-035	311
7425-10	357	77-183	248	77-338	251	77-465	251	80-036	311
7425-12	357	77-184	248	77-339	251	77-466	251	80-061	311
7425-16	357	77-185	248	77-340	251	77-467	252	80-062	311
7425-2	357	77-201	248	77-341	251	77-468	252	80-063	311
7425-4	357	77-202	248	77-343	251	77-470	252	80-064	311
7425-8	357	77-203	248	77-345	251	77-473	252	80-065	311
7520-10-10	356	77-204	248	77-346	251	77-474	252	80-066	311
7520-12-12	356	77-205	248	77-347	251	77-481	252	80-067	311
7520-2-2	356	77-206	248	77-349	251	77-483	252	80-068	311
7520-4-4	356	77-207	248	77-351	251	77-485	252	80-069	311
7520-6-6	356	77-208	248	77-352	249	77-486	252	80-080	311
7520-8-8	356	77-209	248	77-354	249	77-488	252	80-100	311
75C100B	378	77-210	248	77-355	249	77-489	252	801-002	256
770402	138	77-211	248	77-356	249	77-490	252	801-003	256
770404	138	77-212	248	77-357	249	77-492	252	801-005	256
770604	138	77-214	248	77-358	249	77-493	252	801-007	256
77-100	247	77-219	248	77-359	249	77-496	252	80-101	311
77-101	247	77-220	248	77-360	249	77-498	252	801-010	256
77-102	247	77-222	248	77-361	249	77-499	252	801-012	256
77-103	247	77-223	248	77-362	249	77-500	252	801-015	256
77-104	247	77-224	248	77-363	249	77-501	252	80-102	311
77-105	247	77-225	248	77-364	249	77-502	252	801-020	256
77-107	247	77-226	248	77-365	249	77-504	252	801-025	256
77-108	247	77-227	248	77-370	249	77-506	252	80-103	311
77-109	247	77-238	249	77-382	250	77-507	252	801-030	256
77-110	247	77-240	249	77-383	250	77-508	252	80-104	311
77-111	247	77-241	249	77-385	250	77-509	252	801-040	256
77-112	247	77-242	249	77-387	250	77-510	252	801-060	256
77-113	247	77-244	249	77-389	250	77-511	252	80-201	311
77-114	247	77-247	249	77-391	250	77-514	252	80-202	311
77-116	247	77-252	249	77-392	250	77-516	252	80-203	311
77-117	247	77-253	249	77-393	250	77-518	252	80-463	311
77-118	247	77-255	249	77-394	250	77-519	252	805-002	256
77-119	247	77-256	249	77-395	250	77-521	252	805-003	256
77-120	247	77-258	249	77-396	250	77-522	252	805-005	256
77-124	247	77-262	249	77-397	250	77-523	252	805-007	256
77-125	247	77-263	249	77-398	250	77-524	252	805-010	256
77-126	247	77-264	249	77-401	250	77-543	252	805-012	256
77-127	247	77-265	249	77-402	251	77-545	252	805-015	256
77-128	247	77-267	249	77-404	251	77-546	252	805-020	256
77-129	247	77-268	249	77-405	251	77-547	252	805-025	256
77-130	247	77-269	249	77-406	251	77-548	252	805-030	256
77-131	247	77-270	249	77-407	251	77-549	252	805-040	256
77-132	247	77-271	249	77-409	251	77-554	252	806-002	256
77-134	247	77-272	249	77-410	251	77-556	252	806-003	256
77-139	247	77-273	249	77-413	251	77-559	252	806-005	256
77-140	247	77-274	249	77-416	251	77-560	252	806-007	256
77-141	247	77-275	249	77-419	251	77-563	252	806-010	256
77-142	247	77-276	249	77-420	251	77-585	252	806-012	256
77-143	247	77-277	249	77-423	251	77-587	252	806-015	256
77-144	247	77-280	249	77-424	251	77-588	252	806-020	256
77-145	247	77-284	249	77-426	251	7802-12	357	806-025	256
77-152	247	77-291	249	77-427	251	7802-16	357	806-030	256

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
830-131	257	839422	257	8555-H-20	359	898015	258	90-128	241	93-016	288
830-132	279	840-131	280	8555-H-22	359	898020	258	90-129	241	93-017	288
830-132S	279	840-150	280	8555-H-26	359	898025	258	90-130	241	93-113	241
830-152	279	840-175	280	8555-H-30	359	898030	258	90-131	241	93-121	241
830-152S	279	840-188	280	8555-P-10	359	898040	258	90-132	241	93-122	241
830-167	257	840-200	280	8555-P-12	359	899000	187	90-138	289	93-123	241
830-168	257	840-225	280	8555-P-14	359	899001	187	90-140	241	93-124	241
830-182	279	840-238	280	8555-P-16	359	899002	187	90-141	241	93-125	241
830-182S	279	840-250	280	8555-P-18	359	899003	187	90-165	289	93-127	241
830-183	279	840-256	280	8555-P-20	359	899004	187	90-180	289	93-128	241
830-183S	279	840-263	280	8555-P-22	359	899005	187	90-205	289	93-129	241
830-184	279	840-275	280	8555-P-26	359	899006	187	90-212	241	93-130	241
830-184S	279	840-288	280	8555-P-30	359	899007	187	90-231	289	93-131	241
830-185	279	840-300	280	860402	138	899008	187	90-256	289	935-122	171
830-185S	279	840-312	280	860404	138	899050	187	90-282	289	935-123	171
830-188	279	840-325	280	860604	138	899051	187	90-307	289	935-124	171
830-188S	279	840-350	280	860606	138	899052	187	91-008	241	935-129	171
830-189	279	840-375	280	860808	138	899053	187	91-009	241	935-130	171
830-189S	279	840-382	280	88-024	288	899054	187	91-010	241	940-121	174
830-190	279	840-400	280	88-028	288	899055	187	91-011	241	940-122	174
830-190S	279	840-425	280	88-032	288	899056	187	91-015	288	940-123	174
830-192	279	840-450	280	88-038	288	899057	187	91-017	288	940-130	176
830-192S	279	840-475	280	88-044	288	899058	187	91-022	288	940-131	176
830-193	279	840-500	280	88-050	288	90-001	241	91-025	288	940-132	176
830-193S	279	840-525	280	88-056	288	90-002	241	91-028	288	940-133	176
830-194	279	840-550	280	88-065	288	90-003	241	91-032	288	940-134	176
830-194S	279	840-575	280	88-075	288	90-004	241	91-040	288	940-135	176
830-195	279	840-600	280	88-085	288	90-005	241	91-045	288	940-136	176
830-195S	279	840-625	280	88-095	288	90-006	241	91-051	288	940-137	176
830-196	279	840-650	280	88-112	288	90-007	241	91-056	288	940-138	176
830-196S	279	840-675	280	88-138	288	90-008	241	91-065	288	940-139	176
830-197	279	840-700	280	88-165	288	90-009	241	91-075	288	940-140	176
830-197S	279	840-750	280	88-180	288	90-010	241	91-085	288	940-171	164
830-198	279	840-800	280	88-205	288	90-011	241	91-608	242	940-172	164
830-198S	279	840-850	280	88-231	288	90-014	289	91-610	242	940-173	164
830-211	257	840-888	280	88-256	288	90-017	289	91-611	242	940-174	164
830-212	257	847002	258	88-282	288	90-020	289	91-707	297	940-175	164
830-251	257	847003	258	88-307	288	90-024	289	92-008	288	940-176	164
830-288	279	847005	258	89-024	288	90-028	289	92-009	288	940-177	164
830-288S	279	847007	258	89-028	288	90-032	289	92-010	288	940-178	164
830808	138	847010	258	89-032	288	90-038	289	92-011	288	940-179	164
836002	257	847012	258	89-038	288	90-044	289	92-012	288	940-180	164
836003	257	847015	258	89-044	288	90-050	289	92-013	288	940-181	164
836005	257	847020	258	89-050	288	90-056	289	92-014	288	940-212	169
836007	257	847025	258	89-056	288	90-065	289	92-015	288	940-213	169
836010	257	847030	258	89-065	288	90-075	289	92-016	288	940-214	169
836012	257	847040	258	89-075	288	90-085	289	92-017	288	940-215	169
836015	257	847060	258	89-085	288	90-095	289	92-102	241	940-216	169
836020	257	848002	258	89-095	288	90-100	241	92-107	241	940-217	169
836025	257	848003	258	89-112	288	90-102	241	92-108	241	940-241	170
836030	257	848005	258	89-138	288	90-103	241	92-109	241	940-242	170
836040	257	848007	258	89-165	288	90-104	241	92-110	241	940-243	170
839041	257	848010	258	89-180	288	90-105	241	92-111	241	940-244	170
839050	257	848012	258	89-205	288	90-106	241	92-114	241	940-245	170
839052	257	848015	258	89-231	288	90-107	241	92-115	241	940-246	170
839072	257	848020	258	89-256	288	90-108	241	92-116	241	940-250	290
839073	257	848025	258	89-282	288	90-109	241	92-119	241	940-284	187
839099	257	848030	258	89-307	288	90-110	241	92-120	241	940-285	187
839101	257	848040	258	897002	258	90-111	241	92-121	241	940-286	187
839130	257	850002	258	897003	258	90-112	289	92-122	241	940-287	187
839131	257	850003	258	897005	258	90-113	241	92-123	241	940-288	187
839166	257	850005	258	897007	258	90-114	241	92-128	241	940-289	187
839167	257	850007	258	897010	258	90-115	241	92-605	242	940-291	187
839168	257	850010	258	897012	258	90-116	241	92-608	242	940-292	187
839209	257	850012	258	897015	258	90-117	241	92-610	242	940-294	187
839210	257	850015	258	897020	258	90-118	241	92-611	242	940-295	187
839211	257	850020	258	897025	258	90-119	241	92-611	242	940-296	187
839212	257	850025	258	897030	258	90-120	241	93-008	288	940-297	187
839247	257	850030	258	897040	258	90-121	241	93-009	288	940-298	187
839248	257	850040	258	898002	258	90-122	241	93-010	288	940-299	187
839249	257	8555-H-10	359	898003	258	90-123	241	93-011	288	940-350	290
839250	257	8555-H-12	359	898005	258	90-124	241	93-012	288	940-352	178
839251	257	8555-H-14	359	898007	258	90-125	241	93-013	288	940-353	178
839338	257	8555-H-16	359	898010	258	90-126	241	93-014	288	940-354	178
839420	257	8555-H-18	359	898012	258	90-127	241	93-015	288	940-355	178

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
940-356	178	943-225	166	949-107	182	95-321	289	973-238	294	973-701	268
940-357	178	943-226	166	949-108	182	95-322	289	973-239	294	973-702	268
940-358	178	943-227	166	949-121	181	95-323	289	973-252	296	973-703	268
940-359	178	944-005	173	949-122	181	95-324	289	973-253	296	973-704	268
940-360	178	944-012	173	949-123	181	95-325	289	973-255	296	973-705	268
940-461	174	944-013	173	949-124	181	95-326	289	973-262	296	973-706	268
940-462	174	944-026	173	949-125	181	95-327	289	973-323	294	973-707	268
940-464	174	944-051	173	949-126	181	95-328	289	973-325	294	973-708	268
940-465	174	944-052	173	949-127	181	95-329	289	973-327	294	973-850	268
940-521	177	944-060	173	949-128	181	95-330	289	973-329	294	973-851	268
940-522	177	944-100	173	949-161	184	95-331	289	973-332	294	973-852	268
940-523	177	944-101	173	949-162	184	96-301	289	973-334	294	973-853	268
940-524	177	944-102	173	949-163	184	96-302	289	973-340	297	973-854	268
940-525	177	944-106	173	949-164	184	96-303	289	973-341	297	973-855	268
940-526	177	944-108	173	949-165	184	96-304	289	973-342	297	973-856	268
940-527	177	944-111	173	949-166	184	96-305	289	973-343	297	973-857	268
940-528	177	944-112	173	949-167	184	96-306	289	973-345	297	973-858	268
940-529	177	944-116	173	949-168	184	96-307	289	973-346	297	973-870	268
940-530	177	944-118	173	949-181	183	96-308	289	973-350	297	973-871	268
940-800	307	944-121	173	949-182	183	96-310	289	973-352	297	973-872	268
940-801	307	944-128	173	949-183	183	96-312	289	973-353	297	973-873	268
940-803	307	944-134	173	949-184	183	96-314	289	973-400	298	973-874	268
940-804	307	944-135	173	949-185	183	96-316	289	973-401	298	973-875	268
940-805	307	944-136	173	949-401	186	96-318	289	973-402	298	973-876	268
940-806	307	944-138	173	949-402	186	96-320	289	973-404	298	973-877	267
940-810	307	944-142	173	949-403	186	96-322	289	973-405	298	973-877	268
940-811	307	944-401	180	949-404	186	96-323	289	973-406	298	973-878	268
940-812	307	944-402	180	949-405	186	972-171	296	973-407	298	973-879	268
940-813	307	944-403	180	949-406	186	972-172	296	973-420	299	973-880	268
940-814	307	944-404	180	949-407	186	972-173	296	973-421	299	973-881	268
940-815	307	944-405	180	949-408	186	972-180	296	973-422	299	973-890	268
940-822	308	944-406	180	949-430	185	972-181	296	973-423	299	973-891	268
940-823	308	944-407	180	949-431	185	972-182	296	973-424	299	973-892	268
940-824	308	944-408	180	949-432	185	972-183	296	973-425	299	973-893	268
940-825	308	944-409	180	9508-12	356	972-184	296	973-430	298	973-894	268
940-826	308	944-410	180	9508-16	356	972-185	296	973-431	298	973-895	268
940-827	308	944-411	180	9508-2	356	972-186	296	973-432	298	973-900	267
940-840	308	944-428	179	9508-4	356	972-187	296	973-433	298	973-901	267
940-841	308	944-429	179	9508-6	356	972-190	296	973-434	298	973-902	267
940-842	308	944-430	179	9508-8	356	972-191	296	973-435	298	973-903	267
940-843	308	944-431	179	9522-H-12	358	972-192	296	973-436	298	973-904	267
940-844	308	944-432	179	9522-H-16	358	972-193	296	973-437	298	973-905	267
940-845	308	944-433	179	9522-H-2	358	972-194	296	973-438	298	973-906	267
940-846	308	944-434	179	9522-H-20	358	972-195	296	973-450	299	973-907	267
940-847	308	944-435	179	9522-H-4	358	973-200	292	973-451	299	973-908	267
940-848	308	948-101	168	9522-H-6	358	973-201	292	973-460	299	973-909	267
942-142	175	948-102	168	9522-H-8	358	973-202	292	973-461	299	973-910	267
942-170	175	948-103	168	9522-P-12	358	973-203	292	973-600	268	973-911	267
942-171	175	948-104	168	9522-P-16	358	973-204	292	973-601	268	973-912	267
942-208	165	948-105	168	9522-P-2	358	973-205	292	973-602	268	973-914	267
942-209	165	948-106	168	9522-P-20	358	973-206	292	973-603	268	973-927	267
942-210	165	948-107	168	9522-P-4	358	973-207	292	973-604	268	973-928	267
943-101	166	948-108	168	9522-P-6	358	973-208	292	973-605	268	973-929	267
943-102	166	948-131	175	9522-P-8	358	973-209	292	973-606	268	973-930	267
943-103	166	948-132	175	95-300	289	973-210	292	973-607	268	973-948	267
943-104	166	948-133	175	95-301	289	973-211	292	973-620	268	973-949	267
943-105	166	948-134	175	95-302	289	973-212	293	973-621	268	973-951	26
943-106	166	948-135	175	95-303	289	973-213	293	973-622	268	973-951	210
943-107	166	948-154ST	175	95-304	289	973-214	293	973-623	268	973-952	26
943-108	166	948-154STL	175	95-305	289	973-215	296	973-624	268	973-952	210
943-200	165	948-155STL	175	95-306	289	973-216	296	973-625	268	973-953	26
943-201	165	948-170	167	95-307	289	973-217	296	973-626	268	973-953	210
943-202	165	948-171	167	95-308	289	973-219	296	973-627	268	973-954	26
943-203	165	948-172	167	95-309	289	973-221	296	973-628	268	973-954	210
943-204	165	948-173	167	95-310	289	973-222	296	973-650	268	973-955	26
943-205	165	948-174	167	95-311	289	973-223	296	973-651	268	973-955	210
943-206	165	948-175	167	95-312	289	973-224	296	973-652	268	973-956	26
943-207	165	948-176	167	95-313	289	973-226	294	973-653	268	973-956	210
943-212	171	948-177	167	95-314	289	973-229	294	973-654	268	973-957	26
943-213	171	949-101	182	95-315	289	973-230	294	973-655	268	973-957	210
943-220	166	949-102	182	95-316	289	973-231	294	973-656	268	973-958	26
943-221	166	949-103	182	95-317	289	973-232	294	973-657	268	973-958	210
943-222	166	949-104	182	95-318	289	973-233	294	973-658	268	973-959	26
943-223	166	949-105	182	95-319	289	973-234	294	973-659	268	973-959	210
943-224	166	949-106	182	95-320	289	973-235	294	973-700	268	973-965	267



Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
973-966	267	98-952	304	C2404-2-2	364	C6803-4-4	365	FF-14-F	306	FLJS-218	286
973-967	267	98-953	304	C2404-6-4	364	C6803-6-6	365	FF-14-F	369	FLJS-219	286
973-975	267	98-954	304	C2404-6-6	364	C6803-8-8	365	FF-14-M	306	FLJS-227	286
973-976	267	98-956	304	C2404-8-6	364	CG-3750	287	FF-14-M	369	FO-10	283
973-977	267	98-957	304	C2404-8-8	364	CG-5000	287	FF-1-F	306	FO-12	283
973-978	267	98-958	304	C2500-12-12	364	CG-6250	287	FF-1-F	369	FO-14	283
973-979	267	98-959	304	C2500-16-16	364	CG-7500	287	FF-1-M	306	FO-144	283
973-980	267	98-961	304	C2500-2-2	364	CS-3751	287	FF-1-M	369	FO-16	283
973-981	267	98-962	304	C2500-4-4	364	CS-5001	287	FF-34-F	306	FO-168	283
973-982	267	98-963	304	C2500-6-6	364	CS-6251	287	FF-34-F	369	FO-18	283
973-990	26	98-964	304	C2500-8-8	364	CS-7501	287	FF-34-M	306	FO-20	283
973-990	210	98-965	304	C2501-12-12	364	D1FJ106-0404	371	FF-34-M	369	FO-24	283
973-991	26	98-967	304	C2501-16-16	364	D1FJ106-0606	371	FF-38-F	306	FO-28	283
973-991	210	98-968	304	C2501-2-2	364	D1FJ106-0808	371	FF-38-F	369	FO-3	283
974-264	267	98-969	304	C2501-4-2	364	D1FJ106-1212	371	FF-38-M	306	FO-311	283
974-265	267	98-971	304	C2501-4-4	364	D1FJ106-1616	371	FF-38-M	369	FO-316	283
974-266	267	98-972	304	C2501-6-2	364	D1FJ106-2020	371	FLJ-201	285	FO-32	283
974-267	267	98-973	304	C2501-6-4	364	D1FJ106-2424	371	FLJ-202	285	FO-325	283
980-100	312	98-975	304	C2501-6-6	364	D1FJB139-0404	371	FLJ-203	285	FO-36	283
980-101	312	98-976	304	C2501-6-8	364	D1FJB139-0606	371	FLJ-204	285	FO-40	283
982-107	312	98-977	304	C2501-8-4	364	D1FJB139-0808	371	FLJ-205	285	FO-48	283
982-108	312	98-978	304	C2501-8-6	364	D1FJB139-1212	371	FLJ-206	285	FO-56	283
982-109	312	98-979	304	C2501-8-8	364	D1FJB139-1616	371	FLJ-207	285	FO-64	283
982-110	312	98-980	304	C2502-12-12	365	D1FJB139-2020	371	FLJ-208	285	FO-8	283
98-801	301	98-981	304	C2502-16-16	365	D1MB105-0404	370	FLJ-209	285	FO-80	283
98-802	301	98-982	304	C2502-4-4	365	D1MB105-0606	370	FLJ-210	285	FO-96	283
98-810	301	98-983	304	C2502-6-4	365	D1MB105-0808	370	FLJ-211	285	FOS-10	283
98-811	301	98-984	304	C2502-6-6	365	D1MB105-1212	370	FLJ-212	285	FOS-12	283
98-812	301	98-985	304	C2502-8-8	365	D1MB105-1616	370	FLJ-213	285	FOS-14	283
98-814	301	98-986	304	C2601-12-12	365	D1MB105-2020	370	FLJ-214	285	FOS-16	283
98-815	301	990-540	312	C2601-16-16	365	D1MJ103-0404	370	FLJ-215	285	FOS-18	283
98-823	301	990-541	312	C2601-2-2	365	D1MJ103-0606	370	FLJ-216	285	FOS-20	283
98-824	301	990-542	312	C2601-4-2	365	D1MJ103-0808	370	FLJ-218	285	FOS-24	283
98-825	301	990-543	312	C2601-4-4	365	D1MJ103-1212	370	FLJ-219	285	FOS-28	283
98-828	301	990-570	297	C2601-6-4	365	D1MJ103-1616	370	FLJ-227	285	FOS-3	283
98-830	301	990-571	297	C2601-6-6	365	D1MJ103-2020	370	FLJ-243	285	FOS-311	283
98-840	301	ANV12CAP	369	C2601-8-8	365	D1MP101-0404	370	FLJ-245	285	FOS-316	283
98-841	301	ANV-12-F	305	C2602-12-12	365	D1MP101-0606	370	FLJ-246	285	FOS-32	283
98-842	301	ANV-12-F	368	C2602-16-16	365	D1MP101-0808	370	FLJ-255	285	FOS-325	283
98-915	304	ANV-12-M	305	C2602-4-4	365	D1MP101-1212	370	FLJ-301	285	FOS-36	283
98-916	304	ANV-12-M	368	C2602-6-4	365	D1MP101-1616	370	FLJ-302	285	FOS-40	283
98-917	304	ANV12PLUG	369	C2602-6-6	365	D1MP101-2020	370	FLJ-303	285	FOS-48	283
98-918	304	ANV14CAP	369	C2602-8-8	365	D1MP101-2424	370	FLJ-304	285	FOS-56	283
98-919	304	ANV-14-F	305	C2603-12-12	365	D1PS113-0404	370	FLJ-305	285	FOS-8	283
98-920	304	ANV-14-F	368	C2603-16-16	365	D1PS113-0606	370	FLJ-306	285	FS-10	283
98-921	304	ANV-14-M	305	C2603-2-2	365	D1PS113-0808	370	FLJ-307	285	FS-11	283
98-922	304	ANV-14-M	368	C2603-4-4	365	D1PS113-1212	370	FLJ-308	285	FS-12	283
98-923	304	ANV14PLUG	369	C2603-6-6	365	D1PS113-1616	370	FLJ-309	285	FS-14	283
98-924	304	ANV1CAP	369	C2603-8-8	365	F-10	283	FLJ-310	285	FS-16	283
98-925	304	ANV-1-F	305	C318-12	364	F-100	287	FLJ-311	285	FS-18	283
98-926	304	ANV-1-F	368	C318-16	364	F-11	283	FLJ-312	285	FS-20	283
98-927	304	ANV-1-M	305	C318-2	364	F-12	283	FLJ-313	285	FS-24	283
98-928	304	ANV-1-M	368	C318-4	364	F-14	283	FLJ-314	285	FS2500-10-10	352
98-929	304	ANV1PLUG	369	C318-6	364	F-16	283	FLJ-315	285	FS2500-12-12	352
98-930	304	ANV34CAP	369	C318-8	364	F-18	283	FLJ-316	285	FS2500-16-16	352
98-931	304	ANV-34-F	305	C319-12	364	F-20	283	FLJ-318	285	FS2500-20-20	352
98-932	304	ANV-34-F	368	C319-16	364	F-225	287	FLJ-319	285	FS2500-24-24	352
98-933	304	ANV-34-M	305	C319-2	364	F-24	283	FLJ-327	285	FS2500-4-4	352
98-934	304	ANV-34-M	368	C319-4	364	F-28	283	FLJ-343	285	FS2500-6-6	352
98-935	304	ANV34PLUG	369	C319-6	364	F-3	283	FLJ-345	285	FS2500-8-8	352
98-936	304	ANV38CAP	369	C319-8	364	F-311	283	FLJ-346	285	FS2501-10-12	352
98-937	304	ANV-38-F	305	C6400-12-12	365	F-32	283	FLJS-203	286	FS2501-16-12	352
98-938	304	ANV-38-F	368	C6400-16-16	365	F-38	287	FLJS-204	286	FS2501-12-12	352
98-939	304	ANV-38-M	305	C6400-4-4	365	F-4	283	FLJS-205	286	FS2501-12-16	352
98-940	304	ANV-38-M	368	C6400-6-6	365	F-40	287	FLJS-206	286	FS2501-12-8	352
98-941	304	ANV38PLUG	369	C6400-8-10	365	F-5	283	FLJS-207	286	FS2501-16-12	352
98-942	304	C2	287	C6400-8-8	365	F-550	287	FLJS-208	286	FS2501-16-16	352
98-943	304	C2403-12-12	364	C6801-12-12	365	F-6	283	FLJS-209	286	FS2501-20-20	352
98-944	304	C2403-16-16	364	C6801-16-16	365	F-7	283	FLJS-210	286	FS2501-24-24	352
98-945	304	C2403-2-2	364	C6801-2-2	365	F-8	283	FLJS-211	286	FS2501-4-4	352
98-946	304	C2403-4-4	364	C6801-4-4	365	F-9	283	FLJS-212	286	FS2501-6-4	352
98-947	304	C2403-6-6	364	C6801-6-6	365	FF-12-F	306	FLJS-213	286	FS2501-6-6	352
98-948	304	C2403-8-8	364	C6801-8-8	365	FF-12-F	369	FLJS-214	286	FS2501-8-12	352
98-949	304	C2404-12-12	364	C6803-12-12	365	FF-12-M	306	FLJS-215	286	FS2501-8-6	352
98-951	304	C2404-16-16	364	C6803-16-16	365	FF-12-M	369	FLJS-216	286	FS2501-8-8	352

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
FS2503-10-8	353	FS6400-O-12-10	354	FS6802-10-10	355	FSO2406-10-6	352	GE2-16-SAE	374	HP1501-24-24	361
FS2503-12-12	353	FS6400-O-12-12	354	FS6802-10-12	355	FSO2406-10-8	352	GE2-1-NPT	374	HP1501-32-32	361
FS2503-16-12	353	FS6400-O-12-16	354	FS6802-10-8	355	FSO2406-12-10	352	GE2-2T-NPT	374	HP1501-4-4	361
FS2503-16-16	353	FS6400-O-12-8	354	FS6802-12-10	355	FSO2406-12-6	352	GE2-34-NPT	374	HP1501-4-6	361
FS2503-4-2	353	FS6400-O-16-12	354	FS6802-12-12	355	FSO2406-12-8	352	GE2-38-NPT	374	HP1501-6-4	361
FS2503-4-4	353	FS6400-O-16-16	354	FS6802-12-16	355	FSO2406-16-12	352	GE3L-04-SAE	374	HP1501-6-6	361
FS2503-6-4	353	FS6400-O-16-20	354	FS6802-12-8	355	FSO2406-16-8	352	GE3L-06-SAE	374	HP1501-8-8	361
FS2503-6-6	353	FS6400-O-20-20	354	FS6802-16-12	355	FSO2406-20-12	352	GE3L-08-SAE	374	HP1502-12-12	361
FS2503-8-6	353	FS6400-O-20-24	354	FS6802-16-16	355	FSO2406-20-16	352	GE3L-112T-NPT	374	HP1502-16-16	361
FS2503-8-8	353	FS6400-O-24-20	354	FS6802-16-20	355	FSO2406-20-24	352	GE3L-114T-NPT	374	HP1502-20-20	361
FS2601-12-12	353	FS6400-O-24-24	354	FS6802-20-20	355	FSO2406-6-4	352	GE3L-12-NPT	374	HP1502-24-24	361
FS2601-16-16	353	FS6400-O-4-4	354	FS6802-24-24	355	FSO2406-8-4	352	GE3L-12-SAE	374	HP1502-32-32	361
FS2601-20-20	353	FS6400-O-4-6	354	FS6802-4-4	355	FSO2406-8-6	352	GE3L-14-NPT	374	HP1502-4-4	361
FS2601-4-4	353	FS6400-O-6-4	354	FS6802-4-6	355	FSO2408-10	352	GE3L-16-SAE	374	HP1502-4-6	361
FS2601-6-4	353	FS6400-O-6-6	354	FS6802-6-4	355	FSO2408-12	352	GE3L-1-NPT	374	HP1502-6-4	361
FS2601-6-6	353	FS6400-O-6-8	354	FS6802-6-6	355	FSO2408-16	352	GE3L-2T-NPT	374	HP1502-6-6	361
FS2601-8-6	353	FS6400-O-8-10	354	FS6802-6-8	355	FSO2408-20	352	GE3L-34-NPT	374	HP1502-8-8	361
FS2601-8-8	353	FS6400-O-8-6	354	FS6802-8-10	355	FSO2408-24	352	GE3L-38-NPT	374	HP2404-10-8	360
FS2603-10-10	353	FS6400-O-8-8	354	FS6802-8-6	355	FSO2408-4	352	HEAVYDU-		HP2404-12-12	360
FS2603-12-12	353	FS6402-10-10	354	FS6802-8-8	355	FSO2408-6	352	TYBANDS	283	HP2404-16-16	360
FS2603-16-16	353	FS6402-12-12	354	FS6803-10-10	355	FSO2408-8	352	HEAVYDU-		HP2404-20-20	360
FS2603-20-20	353	FS6402-16-16	354	FS6803-12-12	355	FSO304-C-10	351	TYBANDS	283	HP2404-24-24	360
FS2603-24-24	353	FS6402-4-4	354	FS6803-16-16	355	FSO304-C-12	351	HNV12CAP	369	HP2404-6-4	360
FS2603-4-4	353	FS6402-6-6	354	FS6803-20-20	355	FSO304-C-16	351	HNV-12-F	305	HP2404-8-6	360
FS2603-6-6	353	FS6402-8-8	354	FS6803-24-24	355	FSO304-C-20	351	HNV-12-F	368	HP2405-10-8	360
FS2603-8-8	353	FS6500-10-10	355	FS6803-4-4	355	FSO304-C-24	351	HNV-12-F-B	305	HP2405-12-12	360
FS2700-10-10	353	FS6500-12-12	355	FS6803-6-6	355	FSO304-C-4	351	HNV-12-F-B	368	HP2405-16-16	360
FS2700-12-12	353	FS6500-16-16	355	FS6803-8-8	355	FSO304-C-6	351	HNV-12-M	305	HP2405-20-20	360
FS2700-16-16	353	FS6500-20-20	355	FS6804-10-10	355	FSO304-C-8	351	HNV-12-M	368	HP2405-24-24	360
FS2700-20-20	353	FS6500-24-24	355	FS6804-12-12	355	FSO306-10	351	HNV-12-M-B	305	HP2405-6-4	360
FS2700-24-24	353	FS6500-4-4	355	FS6804-16-16	355	FSO306-12	351	HNV-12-M-B	368	HP2405-8-6	360
FS2700-4-4	353	FS6500-6-6	355	FS6804-20-20	355	FSO306-16	351	HNV12PLUG	369	HP2406-10-10	360
FS2700-6-6	353	FS6500-8-8	355	FS6804-24-24	355	FSO306-20	351	HNV14CAP	369	HP2406-12-12	360
FS2700-8-8	353	FS6504-10-10	355	FS6804-4-4	355	FSO306-24	351	HNV-14-F	305	HP2406-14-14	360
FS2701-10-10	353	FS6504-12-12	355	FS6804-6-6	355	FSO306-4	351	HNV-14-F	368	HP2406-16-16	360
FS2701-12-12	353	FS6504-16-16	355	FS6804-8-8	355	FSO306-6	351	HNV-14-F-B	305	HP2406-20-20	360
FS2701-16-16	353	FS6504-4-4	355	FS6809-10-10	356	FSO306-8	351	HNV-14-F-B	368	HP2406-24-24	360
FS2701-20-20	353	FS6504-6-6	355	FS6809-12-12	356	FSO318-10	351	HNV-14-M	305	HP2406-32-32	360
FS2701-24-24	353	FS6504-8-8	355	FS6809-16-16	356	FSO318-12	351	HNV-14-M	368	HP2406-6-6	360
FS2701-4-4	353	FS6600-10-10	354	FS6809-4-4	356	FSO318-16	351	HNV-14-M-B	305	HP2406-8-8	360
FS2701-6-6	353	FS6600-12-12	354	FS6809-6-6	356	FSO318-20	351	HNV-14-M-B	368	HP2501-10-8	360
FS2701-8-8	353	FS6600-16-16	354	FS6809-8-8	356	FSO318-24	351	HNV14PLUG	369	HP2501-12-12	360
FS2702-10-10	353	FS6600-20-20	354	FS-7	283	FSO318-4	351	HNV1CAP	369	HP2501-16-16	360
FS2702-12-12	353	FS6600-24-24	354	FS-8	283	FSO318-6	351	HNV-1-F	305	HP2501-20-20	360
FS2702-16-16	353	FS6600-4-4	354	FS-9	283	FSO318-8	351	HNV-1-F	368	HP2501-24-24	360
FS2702-20-20	353	FS6600-6-6	354	FSO2403-12-12	351	FSO318-8	351	HNV-1-F-B	305	HP2501-32-32	360
FS2702-24-24	353	FS6600-8-8	354	FSO2403-16-16	351	FSO319-10	351	HNV-1-F-B	368	HP2501-6-4	360
FS2702-4-4	353	FS6602-10-10	354	FSO2403-20-20	351	FSO319-12	351	HNV-1-M	305	HP2501-6-6	360
FS2702-6-6	353	FS6602-12-12	354	FSO2403-24-24	351	FSO319-16	351	HNV-1-M	368	HP2501-8-6	360
FS2702-8-8	353	FS6602-16-16	354	FSO2403-4-4	351	FSO319-20	351	HNV-1-M-B	305	HP2501-8-8	360
FS2703-10-10	354	FS6602-20-20	354	FSO2403-6-6	351	FSO319-24	351	HNV-1-M-B	368	HP2502-10-8	360
FS2703-12-12	354	FS6602-24-24	354	FSO2403-8-8	351	FSO319-4	351	HNV1PLUG	369	HP2502-12-12	360
FS2703-16-16	354	FS6602-4-4	354	FSO2403-10-10	352	FSO319-6	351	HNV34CAP	369	HP2502-16-16	360
FS2703-20-20	354	FS6602-6-6	354	FSO2404-10-8	352	FSO319-8	351	HNV-34-F	305	HP2502-20-20	360
FS2703-4-4	354	FS6602-8-8	354	FSO2404-12-12	352	FSO403-10-10	351	HNV-34-F	368	HP2502-24-24	360
FS2703-6-6	354	FS6801-10-10	355	FSO2404-12-16	352	FSO403-12-12	351	HNV-34-F-B	305	HP2502-32-32	360
FS2703-8-8	354	FS6801-10-12	355	FSO2404-16-12	352	FSO403-16-16	351	HNV-34-F-B	368	HP2502-6-4	360
FS2704-10-10	354	FS6801-10-8	355	FSO2404-16-16	352	FSO403-20-20	351	HNV-34-M	305	HP2502-6-6	360
FS2704-12-12	354	FS6801-12-10	355	FSO2404-16-16	352	FSO403-24-24	351	HNV-34-M	368	HP2502-8-6	360
FS2704-16-16	354	FS6801-12-12	355	FSO2404-16-20	352	FSO403-4-4	351	HNV-34-M-B	305	HP5000-12-12	361
FS2704-20-20	354	FS6801-12-16	355	FSO2404-20-16	352	FSO403-6-6	351	HNV-34-M-B	368	HP5000-16-16	361
FS2704-24-24	354	FS6801-16-12	355	FSO2404-20-20	352	FSO403-8-8	351	HNV34PLUG	369	HP5000-20-20	361
FS2704-4-4	354	FS6801-16-16	355	FSO2404-24-24	352	GB2-20T-SAE	374	HNV38CAP	369	HP5000-24-24	361
FS2704-6-6	354	FS6801-16-20	355	FSO2404-4-2	352	GB2-24T-SAE	374	HNV-38-F	305	HP5000-32-32	361
FS2704-8-8	354	FS6801-20-16	355	FSO2404-4-4	352	GB2-32T-SAE	374	HNV-38-F	368	HP5000-4-4	361
FS-28	283	FS6801-20-20	355	FSO2404-4-6	352	GB3L-20T-SAE	374	HNV-38-F-B	305	HP5000-6-6	361
FS-3	283	FS6801-24-24	355	FSO2404-8-8	352	GB3L-24T-SAE	374	HNV-38-F-B	368	HP5000-8-8	361
FS-311	283	FS6801-4-4	355	FSO2404-6-2	352	GB3L-32T-SAE	374	HNV-38-M	305	HP5405-12-12	360
FS-32	283	FS6801-4-6	355	FSO2404-6-4	352	GE2-04-SAE	374	HNV-38-M	368	HP5405-16-16	360
FS-4	283	FS6801-6-4	355	FSO2404-6-6	352	GE2-06-SAE	374	HNV-38-M-B	305	HP5405-20-20	360
FS-5	283	FS6801-6-6	355	FSO2404-6-8	352	GE2-08-SAE	374	HNV-38-M-B	368	HP5405-24-24	360
FS-6	283	FS6801-6-8	355	FSO2404-8-12	352	GE2-112T-NPT	374	HNV-38-M-B	368	HP5405-32-32	360
FS6400-O-10-10	354	FS6801-8-10	355	FSO2404-8-4	352	GE2-114T-NPT	374	HP1501-12-12	361	HP5405-4-4	360
FS6400-O-10-12	354	FS6801-8-6	355	FSO2404-8-6	352	GE2-12-NPT	374	HP1501-16-16	361	HP5405-6-6	360
FS6400-O-10-8	354	FS6801-8-8	355	FSO2404-8-8	352	GE2-12-SAE	374	HP1501-20-20	361	HP5405-8-8	360
						GE2-14-NPT	374				

Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page	Part#	Page
HP5502-12-12	361	KS-7	284	MMRS50	375	SSC2502-8-8	367				
HP5502-16-16	361	KS-8	284	MMRS80	375	SSC2601-12-12	367				
HP5502-20-20	361	KS-87501	284	N/A	285	SSC2601-16-16	367				
HP5502-24-24	361	KS-9	284	NV-12-F	306	SSC2601-2-2	367				
HP5502-32-32	361	KS-97501	284	NV-12-F	369	SSC2601-4-2	367				
HP5502-4-4	361	MB40-04	379	NV-12-M	306	SSC2601-4-4	367				
HP5502-4-6	361	MB40-06	379	NV-12-M	369	SSC2601-6-4	367				
HP5502-6-4	361	MB40-08	379	NV-14-F	306	SSC2601-6-6	367				
HP5502-6-6	361	MB40-12	379	NV-14-F	369	SSC2601-8-8	367				
HP5502-8-8	361	MB40-16	379	NV-14-M	306	SSC2602-12-12	367				
HP6801-10-10	361	MFB40-03	379	NV-14-M	369	SSC2602-4-4	367				
HP6801-12-12	361	MGP-F10-13	377	NV-1-F	306	SSC2602-6-4	367				
HP6801-16-16	361	MGP-F10-13	377	NV-1-F	369	SSC2603-12-12	367				
HP6801-20-20	361	MGP-F10-20	377	NV-1-M	306	SSC2603-16-16	367				
HP6801-24-24	361	MGP-F10-20	377	NV-1-M	369	SSC2603-2-2	367				
HP6801-32-32	361	MGP-F10-27	377	NV-34-F	306	SSC2603-4-4	367				
HP6801-6-6	361	MGP-F10-27	377	NV-34-F	369	SSC2603-6-6	367				
HP6801-6-8	361	MGP-F10-34	377	NV-34-M	306	SSC2603-8-8	367				
HP6801-8-8	361	MGP-F10-34	377	NV-34-M	369	SSC318-12	366				
K-10	284	MGP-F10-41	377	NV-38-F	306	SSC318-16	366				
K-107500	284	MGP-F10-41	377	NV-38-F	369	SSC318-2	366				
K-11	284	MGP-F10-51	377	NV-38-M	306	SSC318-4	366				
K-117500	284	MGP-F10-51	377	NV-38-M	369	SSC318-6	366				
K-12	284	MGP-F10-61	377	SG-3750	287	SSC318-8	366				
K-127500	284	MGP-F10-61	377	SG-5000	287	SSC319-12	366				
K-14	284	MGP-F20-06	376	SG-6250	287	SSC319-16	366				
K-147500	284	MGP-F20-06	376	SG-7500	287	SSC319-2	366				
K-16	284	MGP-F20-08	376	SS-3751	287	SSC319-4	366				
K-167500	284	MGP-F20-08	376	SS-5001	287	SSC319-6	366				
K-18	284	MGP-F20-10	376	SS54044	214	SSC319-8	366				
K-187500	284	MGP-F20-10	376	SS540442.0	214	SSC6400-12-12	367				
K-20	284	MGP-F20-12	376	SS540443.0	214	SSC6400-16-16	367				
K-207500	284	MGP-F20-12	376	SS54046	214	SSC6400-4-4	367				
K-24	284	MGP-F20-14	376	SS540462.0	214	SSC6400-6-6	367				
K-247500	284	MGP-F20-14	376	SS54048	214	SSC6400-8-10	367				
K-28	284	MGP-F20-16	376	SS540482.0	214	SSC6400-8-8	367				
K-287500	284	MGP-F20-16	376	SS540483.0	214	SSC6801-12-12	367				
K-3	284	MGP-F20-20	376	SS-6251	287	SSC6801-16-16	367				
K-311	284	MGP-F20-20	376	SS-7501	287	SSC6801-4-4	367				
K-32	284	MGP-F20-25	376	SSC2403-12-12	366	SSC6801-6-6	367				
K-327500	284	MGP-F20-25	376	SSC2403-16-16	366	SSC6801-8-8	367				
K-4	284	MHP112	378	SSC2403-2-2	366	SSC6803-12-12	367				
K-5	284	MHP1300	378	SSC2403-4-4	366	SSC6803-4-4	367				
K-6	284	MHP150	378	SSC2403-6-6	366	SSC6803-6-6	367				
K-7	284	MHS-077	379	SSC2403-8-8	366	SSC6803-8-8	367				
K-8	284	MHS-090	379	SSC2404-12-12	366						
K-87500	284	MHS-100	379	SSC2404-16-16	366						
K-9	284	MHS-114	379	SSC2404-2-2	366						
K-97500	284	MHS-130	379	SSC2404-6-4	366						
KS001	287	MHS-138	379	SSC2404-6-6	366						
KS-10	284	MHS-153	379	SSC2404-8-6	366						
KS-107501	284	MHS-159	379	SSC2404-8-8	366						
KS-11	284	MHS-175	379	SSC2500-12-12	366						
KS-117501	284	MHS-185	379	SSC2500-16-16	366						
KS-12	284	MHS-225	379	SSC2500-2-2	366						
KS-127501	284	MHS-238	379	SSC2500-4-4	366						
KS-14	284	MHS-264	379	SSC2500-6-6	366						
KS-147501	284	MHS-296	379	SSC2500-8-8	366						
KS-16	284	MHS-366	379	SSC2501-12-12	366						
KS-167501	284	MMPH100	375	SSC2501-16-16	366						
KS-18	284	MMPH125	375	SSC2501-2-2	366						
KS-187501	284	MMPH160	375	SSC2501-4-2	366						
KS-20	284	MMPH200	375	SSC2501-4-4	366						
KS-207501	284	MMPH250	375	SSC2501-6-2	366						
KS-24	284	MMPH315	375	SSC2501-6-4	366						
KS-247501	284	MMPH400	375	SSC2501-6-6	366						
KS-28	284	MMPH50	375	SSC2501-6-8	366						
KS-287501	284	MMPH80	375	SSC2501-8-4	366						
KS-3	284	MMRS100	375	SSC2501-8-6	366						
KS-311	284	MMRS125	375	SSC2501-8-8	366						
KS-32	284	MMRS160	375	SSC2502-12-12	367						
KS-327501	284	MMRS200	375	SSC2502-16-16	367						
KS-4	284	MMRS250	375	SSC2502-4-4	367						
KS-5	284	MMRS315	375	SSC2502-6-4	367						
KS-6	284	MMRS375	375	SSC2502-6-6	367						

**Minimum Order**

There is no minimum order. However, all orders under \$50 are subject to a \$5 handling fee. Payment terms are 2% 10 days/ net 30 days. A 2% service charge per month will be collected on all past due balances. All Backorders under \$10 will be canceled. Online orders have no minimum

**Uh...Oh Catalog Errors**

We strive to provide a completely error free catalog, but if errors are discovered, they are corrected in our computer immediately. **Please note that current computer pricing supercedes printed catalog errors.**

**Damage/ Shortage Claims**

Please be sure to count the cartons you sign for and note any damage on the bill of Lading. Open your order immediately to check for any concealed damage. If damaged, the original carton should be kept for possible carrier inspection. Shortage or damage claims must be reported within **5 days** of delivery. To process a claim, we need your invoice number or customer number. Once we ship an order it's consigned to the carrier. Please note: THEY are responsible for any shortage or damage incurred - until you sign a clear bill of receipt. Usually, carriers will not honor a claim if they have a signed receipt from you.

**Be Smart**

These products are intended for use by qualified, experienced professionals, and the selection of appropriate products for the intended use must be made by persons knowledgeable in this field.

**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.

**Copyright Protection**

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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	
Do you except backorders?	YES	NO	UPS Collect # (If Preferred)
Accounting Contact Informaiton	FAX	EMAIL	

How did you hear about Midland:  Referral  Postcard  Email  Web  Magazine

Other \_\_\_\_\_

Please place a check mark where appropriate:

( ) Corporation

( ) Partnership

( ) Proprietorship

**Business premises:**

( ) Owned Value \$ \_\_\_\_\_ Mortgage \$ \_\_\_\_\_

( ) Rented Lessor: \_\_\_\_\_

Founded \_\_\_\_/\_\_\_\_/\_\_\_\_ Fed ID# \_\_\_\_\_ EIN \_\_\_\_\_ Annual sales \$ \_\_\_\_\_

Name of Principal	Name of Principal	Name of Principal
Residence Address	Residence Address	Residence Address
City	City	City
State & Zip	State & Zip	State & Zip
Title & S/S No.	Title S/S No.	Title & S/S No.

References:

- 1. Vendor: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_
- 2. Vendor: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_
- 3. Vendor: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_
- 4. Bank: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_
- 5. Bank Contact: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

**Credit, if extended, depends upon the degree of confidence this Credit Application affords.**

In consideration for the extension of credit by **Midland Metal Manufacturing Company**, Applicant agrees to pay invoices within terms. Invoices not timely paid will be subject to service charges of 18 percent per annum. Should an account be referred to third parties for collection, Applicant agrees to pay all cost of collecting, including attorneys' fees.

\_\_\_\_\_

Applicant's Signature Date

By: \_\_\_\_\_, \_\_\_\_\_

**FOR PROPRIETORSHIP ONLY**  
**\* Please Sign Personal Guaranty**

In consideration for the extension of credit to above Applicant by **Midland Metal Manufacturing Company** the undersigned, jointly and severally, personally and unconditionally, guaranty performance in accordance with this Credit Application. This is a continuing guaranty, subject to cancellation only by registered mail directed to **Midland Metal Manufacturing Company**, P.O. Box 415040, Kansas City, MO 64141-5040.

**EXECUTED** at \_\_\_\_\_, \_\_\_\_\_, on the date above stated.  
City State

\_\_\_\_\_  
 Guarantor (Sign and Print Name) Social Security Number

\_\_\_\_\_  
 Guarantor (Sign and Print Name) Social Security Number

Midland Also Accepts:



# QUICK DISCONNECT CROSSOVER

# CROSSOVER

	Midland	Parker	Tomco	Amflo	Breco	Milton	Dixon	Hansen	Foster	
<b>Industrial Interchange 1/4</b>	28560	UC304F-4	UC2-16	C60		745				
	28579	UC304M-4	UC2-15	C61		746				
	28589	UC304M-6	UC2-20	C61-03						
	28551	B22A	M180	C20-01	B2CM1-B		DC2101	900	2903	
	28552	B22	M181	C21	B2CM2-B	716M	DC21	1100	3103	
	28553	B22E	M182	C21-03	B2CM3-B	719M	DC2103	1300	3303	
	28539	B23A	M183	C20-21	B2CF1-B		DC2021	800	2803	
	28540	B23	M184	C20	B2CF2-B	715M	DC20	1000	3003	
	28541	B23E	M185	C20-23	B2CF3-B	718M	DC2023	1200	3203	
	28562	B20-3B	M186	C20-42	B2CS2-B	717M	DC2042			
	28564	B20-5B	M187		B2CS3-B	717-6M	DC2044	1700	3703	
	28565	B20-3BP	M189	C20-42L	B2CPS2-B	1717-4M	DC2042L	1600P	1513	
	28566	B20-5BP	M190	C20-44L	B2CPS3-B	1717-6M	DC2044L	1700P	1713	
	28545	H0C	1802	CP21-01	BB2M1-S	726	DCP2101	12	12-3	
	28546	H2C	1804	CP21	BB2M2-S	727	DCP21	10	10-3	
	28547	H2C-E	1806	CP21-03	BB2M3-S	733	DCP2103	14	14-3	
	28533	H1C	1803	CP20-21	BB2F1-S	729	DCP2021	13	13-3	
	28534	H3C	1805	CP20	BB2F2-S	728	DCP20	11	11-3	
	28535	H3C-E	1807	CP20-23	BB2F3-S	732	DCP2023	15	15-3	
	28557	H8C	1824	CP21-42	BB2S2-S	736	DCP2142	16	16-3	
	28559	H9C	1826	CP21-44	BB2S3-S	736-6	DCP2144	17	17-3	
	28558	H8CP	1850	CP21-42L	BB2PS2-S	1736-4	DCP2142L		51-3	
	28561	H9CP	1860	CP21-44L	BB2PS3-S	1736-6	DCP2144L		71-3	
	<b>Parker Interchange (Tru-Flate) 1/4</b>	28515	B12A	A2180	C1-01	B2JM1-B		DC101	B21QS-12M	TF2903
		28516	B12	A2181	C1	B2JM2-B	786	DC1	B21QS-25M	TF3103
		28517	B12E	A2182	C1-03	B2JM3-B	789	DC103	B21QS-37M	TF3303
		28506	B13A	A2183	C2-21	B2JF1-B		DC221	B21QS-12F	TF2803
		28507	B13	A2184	C2	B2JF2-B	785	DC2	B21QS-25F	TF3003
28508		B13E	A2185	C2-23	B2JF3-B	788	DC223	B21QS-37F	TF3203	
28528		B10-3B	A2186	C2-42	B2JS2-B	786-4	DC242	B21QS-25H	TF3603	
28530		B10-5B	A2188	C2-44	B2JS3-B	786-6	DC244	B21QS-37H	TF3703	
28531		B10-3BP	A2189	C2-42L	B2JPS2-B	1786-4	DC242L	B21QS-25HP	TF1513	
28532		B10-5BP	A2190	C2-44L	B2JPS3-B	1786-6	DC244L	B21QS-37HP	TF1713	
28509		0C	2152	CP1-01	BJ2M1-S		DCP101		TF12	
28510		2C	2154	CP1	BJ2M2-S	783	DCP1	21AP-25M	TF10	
28511		2C-E	2156	CP1-03	BJ2M3-S		DCP103	21AP-37M	TF14	
28500		1C	2153	CP2-21	BJ2F1-S		DCP221		TF13	
28501		3C	2155	CP2	BJ2F2-S	784	DCP2	21AP-25F	TF11	
28502		3C-E		CP2-23	BJ2F3-S		DCP223	21AP-37F	TF15	
28518		8C	2164	CP1-42	BJ2S2-S	783-4	DCP142	21AP-25H	TF16	
28520		9C	2166	CP1-44	BJ2S3-S	783-6	DCP144	21AP-37H	TF17	
28521		8CP	2150	CP1-42L	BJ2PS2-S	1783-4	DCP142L		TF51	
28522		9CP	2160	CP1-44L	BJ2PS3-S	1783-6	DCP144L		TF71	
<b>Aro 210 Interchange 1/4</b>		28592		A102		B20M1-B				
		28593	B52	A101	C45	B20M2-B	776	DC37	20AS-25M	210-3103
		28594	B52E	A107		B20M3-B		DC3703	20AS-37M	210-3303
		28583		A103		B20F1-B				
		28584	B53	A100	C38B	B20F2-B	775	DC38	20AS25F	210-3003
		28585	B53E	A106		B20F3-B		DC3823	20AS37F	210-3203
		28601		A104		B20S2-B	776-4	DC3842		
		28603		A105		B20S3-B	776-6	DC3844		
	28586		202		B02M1-S				210-12	
	28587	A2C	200	CP37	B02M2-S	777	DCP37	20AP-25M	210-10	
	28577		302		B02F1-S					
	28578	A3C	300	CP38	B02F2-S	778	DCP38		210-11	
	28595	A8C	400	CP37-42	B02S2-S	777-7	DCP3742			
	28597		500		B02S3-S	777-6	DCP3744			
<b>ST Series/High Flow 1/4, 3/8</b>	28667	BST-1M	ST1M	CST1B	1STM1-B				12MS	
	28665	BST-2M	ST2M	CST3B	2STM2-B	1762	STMC2	2-S15	25MS	
	28666	BST-3M	ST3M	CST5B	3STM3-B		STMC3	3-S20	38MS	
	28668	BST-4M	ST4M	CST7B	4STM4-B		STMC4	4-S25	50MS	
	28669	BST-6M	ST6M				STMC6	6-S30	75MS	
	28670	BST-8M	ST8M				STMC8	8-S35	100MS	
	28671	BST-1	ST1	CST2B	1STF1-B				12FS	
	28651	BST-2	ST2	CST4B	2STF2-B	1761	STFC2	2-S16	25FS	
	28652	BST-3	ST3	CST6B	3STF3-B		STFC3	3-S21	38FS	
	28672	BST-4	ST4	CST8B	4STF4-B		STFC4	4-S26	50FS	
	28673	BST-6	ST6				STFC6	6-S31	75FS	
	28674	BST-8	ST8				STFC8	8-S36	100FS	
	28675	ST-N1M	SP1M-S	CPST1	ST1M1-S				12MP	
	28639	ST-N2M	SP2M-S	CPST3	ST2M2-S	1763	STMP2	2-T15	25MP	
	28640	ST-N3M	SP3M-S	CPST5	ST3M3-S		STMP3	3-T20	38MP	
	28676	ST-N4M	SP4M-S	CPST7	ST4M4-S		STMP4	4-T25	50MP	
	28677	ST-N6M	SP6M-S				STMP6	6-T30	75MP	
	28678	ST-N8M	SP8M-S				STMP8	8-T35	100MP	
28688	ST-N1	SP1-S	CPST2	ST1F1-S						
28619	ST-N2	SP2-S	CPST4	ST2F2-S	1764	STFP2	2-T16	25FP		
28620	ST-N3	SP3-S	CPST6	ST3F3-S		STFP3	3-T21	38FP		
28679	ST-N4	SP4-S	CPST8	ST4F4-S		STFP4	4-T26	50FP		
28680	ST-N6	SP5-S				STFP6	6-T31	75FP		
28681	ST-N8	SP6-S				STFP8	8-T3	100FP		
<b>Lincoln Interchange 1/4</b>	28682		1102							
	28683	B72	1101	C27	B-2LM2-B	794	DC27		LM3103	
	28684	B73	1100	C28	B2LF2-B	790	DC28		LM3003	
	28685		1106							
	28686	L2C	1109	CP27	B-L2M2-S	791	DCP27		LM10	
	28687	L3C	1110	CP28	B-L2F2-S	792	DCP28		LM11	
	98823	24C	T410	C25-02	B-3CM2-S	1834	DC2502	410	4104	
	98824	24	T430	C25	B-3CM3-S	1836	DC25	430	4304	
98810	25C	T400	C26-22	B-3CF2-S	1833	DC2622	400	4004		
98811	25	T420	C26	B-3CF3-S	1835	DC26	420	4204		
98814	H0E	T40	CP25-02	B-B3M2-S	1839	DCP2502	40	40-4		
98815	H2E	T42	CP25	B-B3M3-S	1837	DCP25	42	42-4		
98801	H1E	T41	CP26-22	B-B3F2-S	1840	DCP2622	41	41-4		
98802	H3E	T43	CP26	B-B3F3-S	1838	DCP26	43	43-4		



# THREAD INFORMATION

# THREAD INFORMATION

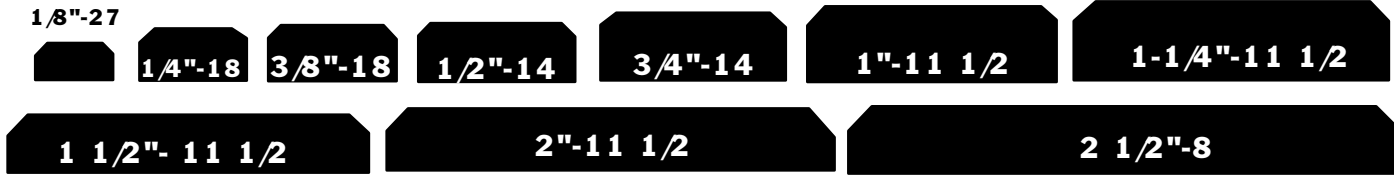
Thread Chart

DASH SIZE	2	3	4	5	6	7	8	10	12	14	16	20	24	32	40	48	
O.D. TUBING SIZE	1/8	5/32	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	1-1/4	1-1/2	2	2-1/2	3
STANDARD PIPE SIZE N.P.T.F. (DRYSEAL)*	1/8-27		1/4-18		3/8-18		1/2-14		3/4-14		1-11 1/2	1 1/4-11 1/2	1 1/2-11 1/2	2-11 1/2	2 1/2 -8	3-8	
S.A.E. 45° FLARE	5/16-24		7/16-20	1/2-20	5/8-18	11/16-16	3/4-16	7/8-14	1 1/16-14	1 1/4-12	1 3/8-12						
INVERTED FLARE	5/16-24		7/16-24	1/2-20	5/8-18	11/16-18	3/4-18	7/8-18	1 1/16-16								
J.I.C. 37° FLARE	5/16-24		7/16-20	1/2-20	9/16-18		3/4-16	7/8-14	1 1/16-12	1 3/16-12	1 5/16-12	1 5/8-12	1 7/8-12	2 1/2-12	3-12	3 1/2-12	
COMPRESSION	5/16-24	3/8-24	7/16-24	1/2-24	9/16-24	5/8-24	11/16-20	13/16-18	1 -18	1 1/8-18							
FLARELESS																	
COMPRESSION (PLASTIC TUBE)	5/16-24		3/8-24	7/16-24	1/2-24		11/16-20										
AIR BRAKE - PLASTIC TUBE			7/16-24		17/32-24		11/16-20	13/16-18	1 -18								
AIR BRAKE - COPPER TUBE			7/16-24	1/2-24	17/32-24		11/16-20	13/16-18	1 -18								
DOUBLE COMPRESSION	5/16-24		7/16-24	1/2-20	9/16-20		11/16-16										
STEEL																	
COMPRESSION (HIGH PRESSURE)	5/16-24		7/16-20	1/2-20	9/16-18		3/4-16	7/8-14	1 1/16-12	1 3/16-12	1 5/16-12	1 5/8-12	1 7/8-12	2 1/2-12			
S.A.E. O-RING	5/16-24		7/16-20	1/2-20	9/16-18		3/4-16	7/8-14	1 1/16-12	1 3/16-12	1 5/16-12	1 5/8-12	1 7/8-12	2 1/2-12			
INTERNAL O-RING																	
NPSM SWIVEL THREAD	1/8-27		1/4-18		3/8-18		1/2-14		3/4-14		1-11 1/2	1 1/4 -11 1/2	1 1/2 - 11 1/2	2- 11 1/2			
FLAT FACE THREAD			9/16-18		11/16-16		13/16-16	1-14	1 3/16-12		1 7/16-12	1 11/16-12	2-12				
BRITISH THREAD BSPP/BSPT	1/8-28		1/4-19		3/8-19		1/2-14		3/4-14		1-11	1 1/4-11	1 1/2-11	2-11			
METRIC THREAD	10		14	16	18	20	22	24	26	27	30	33	36	42	48		
CODE 61	M10X1.0		M12X1.5	M14X1.5	M16X1.5	M18X1.5	M20X1.5	M22X1.5	M24X1.5	M26X1.5	M30X2.0	M33X2.0	M36X2.0	M42X2.0	M48X2.0		
FLANGE HEAD O.D							1.19	1.335	1.50		1.75	2.00	2.38	2.81	3.31	4.00	
CODE 62																	
FLANGE HEAD O.D							1.25		1.62		1.88	2.12	2.50	3.12			

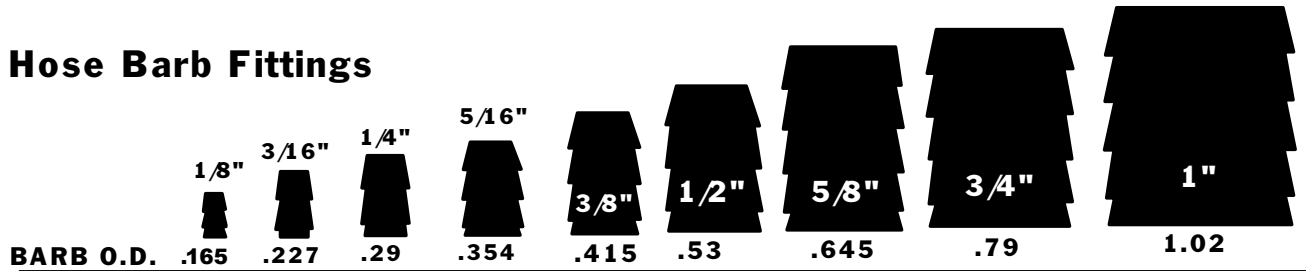
# THREAD PROFILES

# THREAD PROFILES

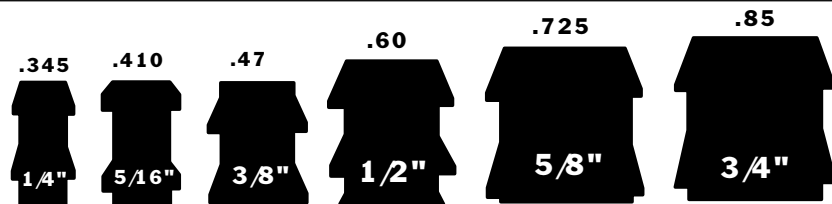
## Pipe Threads



## Hose Barb Fittings

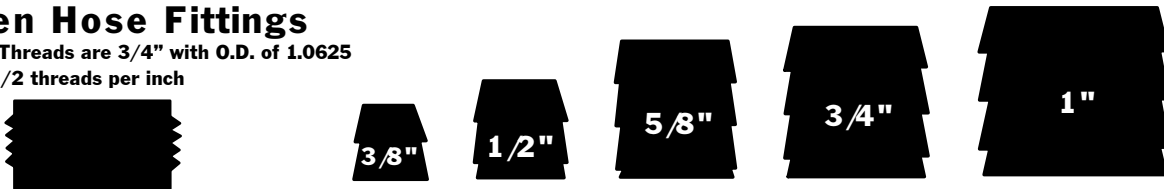


## Push On Fittings

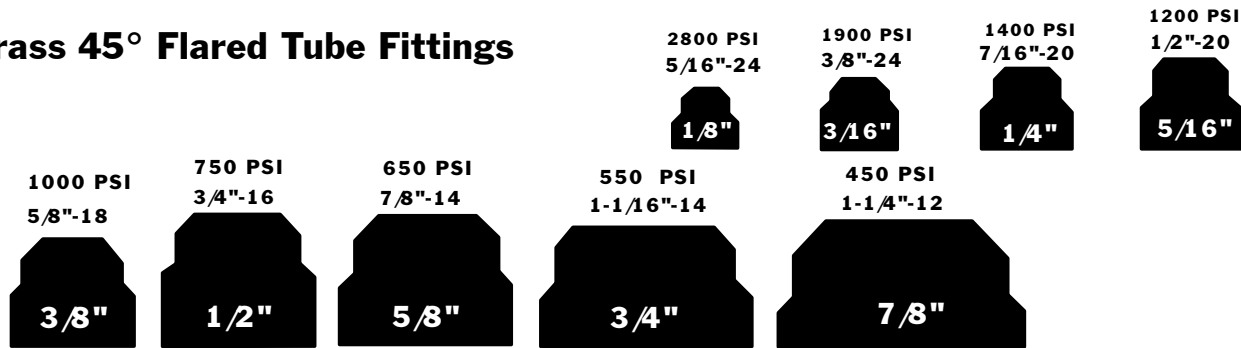


## Garden Hose Fittings

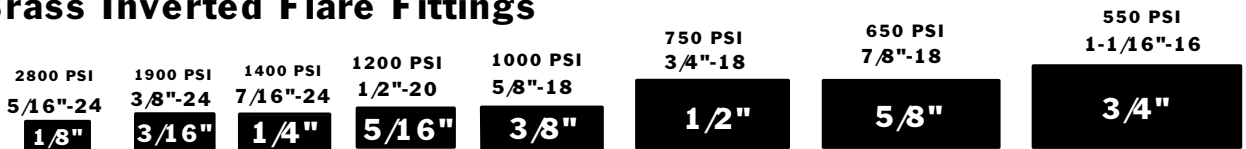
Male Garden Hose Threads are 3/4" with O.D. of 1.0625 and 11-1/2 threads per inch



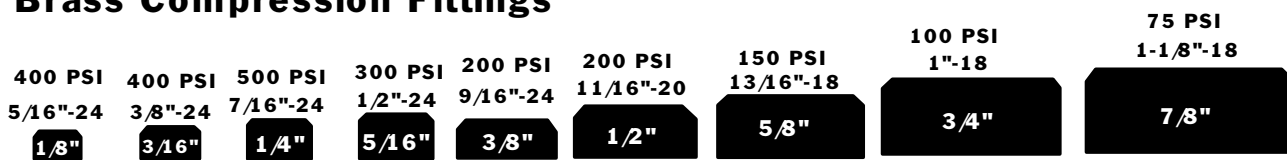
## Brass 45° Flared Tube Fittings



## Brass Inverted Flare Fittings



## Brass Compression Fittings



## Tubing O.D. Size

