

HYDRAULIC ADAPTERS & ACCESSORIES



STEEL ADAPTERS

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WORKING PRESSURE

The tables on the following pages list the recommended working pressure for a variety of hydraulic fittings made in accordance with certain industry standards. Many factors such as impulse, vibration, mechanical shock, and improper assembly may affect the integrity of the fitting connection.

We recommend sufficient testing be conducted to ensure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. Working pressure ratings are capable of a 4 to 1 minimum burst. All steel fittings meet or exceed the minimum SAE pressure ratings. Always consider application and maximum pressure requirements when selecting fittings.

METHODS FOR INSTALLING FITTINGS

There are three methods for installing a fitting:

- Torque wrench
- Flats From Wrench Resistance
- Turns From Finger Tight

For Flare and NPSM Fittings, we recommend the flats from wrench resistance method be used whenever possible.

The differences in material, plating, and surface finish impacts the coefficient of friction when installing or connecting fittings. To minimize these variances, we recommend that fitting connections are lubricated when installed. Connections that are lubricated provide a more accurate installation torque, which results in fewer leaks.

USING A TORQUE WRENCH

The torque values given in the tables on the following pages are for reference purposes only based on industry standard practice and for low carbon steel mating with steel/iron components. Actual torque values may need to be adjusted due to variances described above.

SAE recommends always making a wet (lubricated) installation or connection to reduce friction on moving parts, O-rings, and variances in material and plating. The torque values in these tables are based off SAE values using a .17 coefficient of friction as per SAE J2593. Many hydraulic leaks are a result of over-torque, which causes excessive deformation of material or exceeds the yield strength of the material, which may reduce the load or clamping force between seal contacts.

If more than one value or range is given, use the lower value first and increase only if required. Over-torquing can damage a fitting or mating component.

TECHNICAL INFORMATION

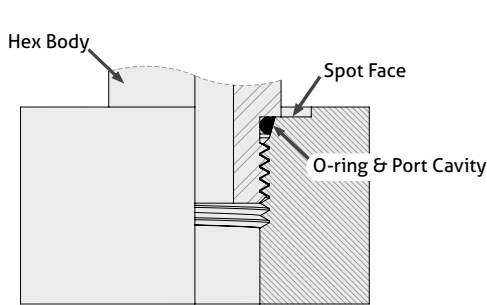
HYDRAULIC ADAPTER

SAE O-Ring Boss Port Specifications

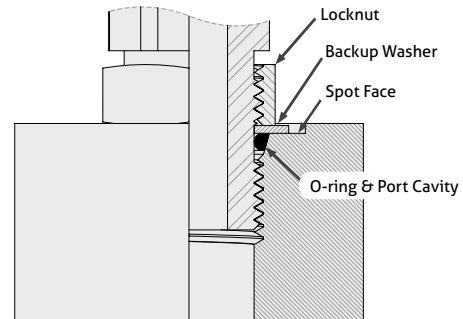
O-ring Boss ports (ORB) provide a seal by trapping the fitting's O-ring inside a port cavity. When a fitting is installed into the port, the O-ring is trapped between the fitting body hex or washer and port cavity.

Straight fittings include a hex, and sometimes an additional cylindrical shoulder below the hex and above the threads, to trap the O-ring in the port cavity.

Elbow and Tee fittings require a backup washer and a locknut above the O-ring on the threaded stud to permit a 360° orientation of the fitting around the port.



Straight SAE ORB



Adjustable SAE ORB

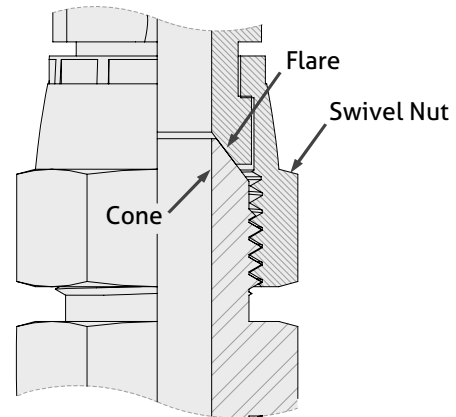
The following table lists the specifications for SAE O-Ring Boss Ports.

SAE O-Ring Boss Specifications								
Dash Size	Tube Size	Thread	SAE-ORB to JIC and Pipe Fittings*			SAE-ORB to ORFS Fittings**		
			Torque	Working Pressure		Torque	Working Pressure	
			Adjustable & Non-Adjustable	Adjustable	Non-Adjustable	Adjustable & Non-Adjustable	Adjustable	Non-Adjustable
			(ft-lbs) +25% -0%	(psi)	(psi)	(ft-lbs) +25% -0%	(psi)	(psi)
02	1/8	5/16-24	6	4500	4500	-	-	-
03	3/16	3/8-24	7	4500	4500	7	5800	9100
04	1/4	7/16-20	13	4500	4500	15	5800	9100
05	5/16	1/2-20	18	4500	4500	18	5800	9100
06	3/8	9/16-18	22	3600	4500	26	5800	9100
08	1/2	3/4-16	37	3600	4500	52	5800	9100
10	5/8	7/8-14	44	2900	3600	74	5800	9100
12	3/4	1-1/16-12	70	2900	3600	125	5800	5800
14	7/8	1-3/16-12	92	2300	2900	158	5800	5800
16	1	1-5/16-12	111	2300	2900	199	4500	5800
20	1 1/4	1-5/8-12	147	1800	2300	210	3600	3600
24	1 1/2	1-7/8-12	155	1800	2300	273	2900	3600
32	2	2-1/2-12	221	1450	1800	-	-	-
* = Light duty studs included on JIC, NPTF and NPSM fittings per SAE J1926/3 & J514								
** = Heavy duty studs included on ORFS fittings per SAE J1926/2 & J1453								
Note: Torque values are for wet torque and are allowed up to 25% the listed value according to SAE J2593.								

JIC Adapter Specifications

Male flared fittings include a conical nose with external threads for clamping.

A flared fitting or tube assembly is tightened against the cone with a swivel nut. By forcing the flare against the cone during the torquing process, the nose cone is slightly deformed and meshes to create a metal to metal seal between the flare and the cone.



The following table lists the specifications for JIC adapters.

JIC Specifications							
Dash Size	Tube Size	Thread	Working Pressure		Torque		
			Male	Female Swivel Nut	JIC Rigid	JIC Swivel	Bulkhead Locknut
			(psi)	(psi)	(FFWR)	(FFWR)	(ft-lbs) +25% -0%
02	1/8	5/16-24	5000	5000	1/4 - 1/2	2	4
03	3/16	3/8-24	5000	5000	1/4 - 1/2	2	6
04	1/4	7/16-20	5000	4500	1/4 - 1/2	2	10
05	5/16	1/2-20	5000	4000	1/4 - 1/2	2	13
06	3/8	9/16-18	5000	4000	1/4 - 1/2	2	16
08	1/2	3/4-16	4500	4000	1/4 - 1/2	2	27
10	5/8	7/8-14	3500	3000	1/4 - 1/2	1 1/2	32
12	3/4	1-1/16-12	3500	3000	1/4 - 1/2	1 1/2	52
14	7/8	1-3/16-12	3000	2500	1/4 - 1/2	1 1/2	66
16	1	1-5/16-12	3000	2500	1/4 - 1/2	1 1/2	85
20	1 1/4	1-5/8-12	2500	2000	1/4 - 1/2	1	111
24	1 1/2	1-7/8-12	2000	1500	1/4 - 1/2	1	114
32	2	2-1/2-12	1500	1125	1/4 - 1/2	1	162

Values are per SAE J514

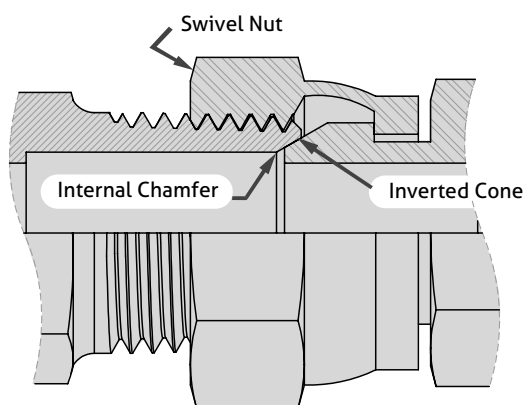
TECHNICAL INFORMATION

HYDRAULIC ADAPTER

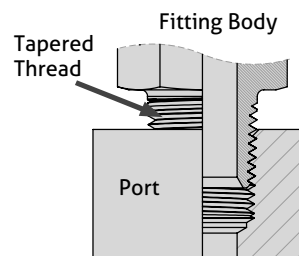
Pipe & Pipe Swivel Adapter Specifications

NPSM fittings include an inverted 60° cone inside an internally threaded swivel union nut. Male NPTF fittings that have a 30° internal chamfer that make a 60° inverted cone, will mate with NPSM swivel unions.

NOTE: THE MATING MALE THREADS MUST INCLUDE AN INSIDE CHAMFER ON THE END OF THE FITTING THAT MATES WITH THE INVERTED CONE. THREADS ARE FOR CLAMPING FORCE ONLY AND THE SEALING OCCURS ON A SMALL RADIAL SECTION BETWEEN THE MALE FITTING INTERNAL CHAMFER AND THE SWIVEL UNION INVERTED CONE.



NPTF & NPSM Union



NPT & NPTF Assembly

NPT and NPTF pipe threads seal by wedging the tapered threads through deformation into each other. Both of these threads require thread sealants to complete a seal.

The following table lists the specifications for NPT, NPTF, and NPSM Pipe adapters.

NPT, NPTF, and NPSM Pipe Specifications						
Dash Size	Thread Size	Major OD* (inch)	Working Pressure		Torque	
			NPT, NPTF Male and Female	NPSM Female Swivel Nut	NPT, NPTF	NPSM Swivel Union
			(psi)	(psi)	(TFFT)	(FFWR)
02	1/8-27	.405	5000	5000	2-3	2
04	1/4-18	.540	4000	5000	2-3	2
06	3/8-18	.675	3000	4000	2-3	2
08	1/2-14	.84	3000	3500	2-3	2
12	3/4-14	1.050	2500	2250	2-3	2
16	1-11 1/2	1.315	2000	2000	1 1/2 - 2 1/2	1 1/2
20	1 1/4-11 1/2	1.660	1150	1625	1 1/2 - 2 1/2	1 1/2
24	1 1/2-11 1/2	1.900	1000	1250	1 1/2 - 2 1/2	1 1/2
32	2-11 1/2	2.375	1000	1125	1 1/2 - 2 1/2	1 1/2

Values are per SAE J514 & J2593

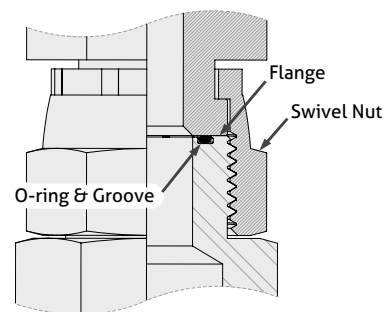
NPT, NPTF, and NPSM Pipe Specifications

O-ring Face Seal Adapter Specifications

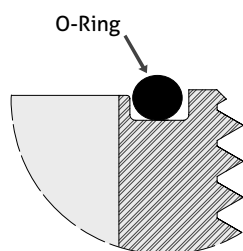
O-ring face seal fittings include a precision groove in the face of the male fitting. Sealing occurs when an O-ring is trapped in the groove by a smooth flat flange that is clamped against the face with a nut or nut and sleeve. The flat flange may be formed or brazed onto the end of a tube, or is machined on a fitting.

There are two SAE groove types:

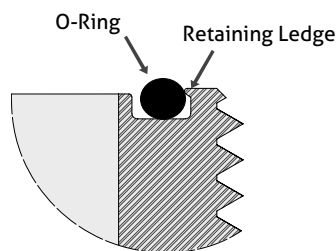
- Type A: The original style A O-ring has no retaining ledge.
- Type B: The Type B groove has a retaining ledge (half dovetail) that improves O-ring retention. The Type B style is more commonly found and is a design improvement over the Type A.



ORFS Fitting Assembly



Detail View of Cross Section of Groove Type A



View of Groove Type B

The following table lists the specifications for O-ring Face Seal adapters.

ORFS Specifications								
Dash Size	Tube Size	Thread Size	Working Pressure		Torque			
			Male	Female Swivel Nut	Male & Female	Bulkhead Locknut	Tube Nuts	Swivel Nuts
			(psi)	(psi)	(ft-lbs) +25% -0%	(ft-lbs) +25% -0%		
04	1/4	9/16-18	6000	6000	18	16	1/4-1/2	1/2-3/4
06	3/8	11/16-16	6000	6000	29	22	1/4-1/2	1/2-3/4
08	1/2	13/16-16	6000	6000	41	29	1/4-1/2	1/2-3/4
10	5/8	1-14	6000	6000	44	44	1/4-1/2	1/2-3/4
12	3/4	1-3/16-12	6000	6000	66	66	1/4-1/2	1/3-1/2
16	1	1-7/16-12	6000	5000	92	92	1/4-1/2	1/3-1/2
20	1 1/4	1-11/16-12	4000	4000	125	111	1/4-1/2	1/3-1/2
24	1 1/2	2-12	4000	3000	147	125	1/4-1/2	1/3-1/2
Note: Values are per SAE J2593 & J1453								
Torque values are for wet installation of steel components. Reduce torque values for softer material components.								

ORFS Specifications

TECHNICAL INFORMATION

HYDRAULIC ADAPTER

BSPT, BSPP and Metric Adapter Specifications

BSPT and Metric tapered threads install and work in the same manner as NPT and NPTF.

Male BSPP fittings include an inverted 60° cone inside an internally threaded swivel union nut. Male BSPP fittings that have a 30° internal chamfer that make a 60° inverted cone, will mate with Female BSPP swivel unions.

NOTE: THE MATING MALE THREADS MUST INCLUDE AN INSIDE CHAMFER ON THE END OF THE FITTING THAT MATES WITH THE INVERTED CONE. THREADS ARE FOR CLAMPING FORCE ONLY AND THE SEALING OCCURS ON A SMALL RADIAL SECTION BETWEEN THE MALE FITTING INTERNAL CHAMFER AND THE SWIVEL UNION INVERTED CONE.

DIN swivel unions have a 24° inverted cone and may be installed into DIN bite-ring compression fittings. To provide enhanced performance, an O-ring is sometimes included in the cone of some DIN swivel unions.

British Standard Pipe Parallel (BSPP) and Metric Parallel threaded ports do not include a port cavity like the O-ring Boss or ISO 6149 port. Instead, an O-ring sits on top of the spot face or external surface and is surrounded by a metal retaining ring or other retaining component to trap the O-ring between the fitting hex, body, and spot face.

Elbow and Tee fittings have a locknut, backup washer, O-ring and retaining washer to permit 360° orientation around the axis of the port.

The following table lists the specifications for **BSPP & BSPT Adapters**

BSPP & BSPT Specifications				
Dash Size	BSPT & BSPP		Torque	
	THREAD SIZE	MAJOR OD*	BSPP Swivel Union	BSPT
		(inch)		
02	1/8-28	0.383	2	2-3
04	1/4-19	0.518	2	2-3
06	3/8-19	0.656	2	2-3
08	1/2-14	0.825	2	2-3
10	5/8-14	0.929	2	2-3
12	3/4-14	1.041	2	2-3
16	1-11	1.309	1 1/2	1 1/2 - 2 1/2
20	1 1/4-11	1.650	1 1/2	1 1/2 - 2 1/2
24	1 1/2-11	1.882	1 1/2	1 1/2 - 2 1/2
32	2-11	2.347	1 1/2	1 1/2 - 2 1/2

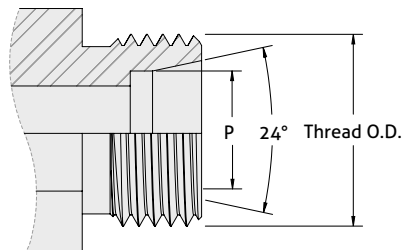
The following table lists the specifications for **Metric Adapters**

Metric DIN 3852-1 Threads	
Dash Size	THREAD SIZE
	(mm)
08	8 x 1.0
10	10 x 1.0
12	12 x 1.5
14	14 x 1.5
16	16 x 1.5
18	18 x 1.5
20	20 x 1.5
22	22 x 1.5
24	24 x 1.5
26	26 x 1.5
27	27 x 2.0
30	30 x 2.0
33	33 x 2.0
39	39 x 2.0
42	42 x 2.0
48	48 x 2.0
60	60 x 2.0

Values are from DIN 3852-1

HYDRAULIC ADAPTER**TECHNICAL INFORMATION****Metric Compression Tube Adapter Specifications (DIN L, & S)**

You can use a metric compression tube adapter with different types of fitting connections that use a metric tube size. The DIN figure to the right shows the cross sectional cut of a DIN connection. The Tube size dimension is P. The thread size is the Thread O.D.

DIN Standard 2353**DIN Identification**

The following table lists the specifications for DIN **L** adapters

DIN S			
Metric Tube O.D. Size	Thread O.D.	Tube (P)ilot	Pressure
(mm)	(mm)	(mm)	(psi)
6	14 x 1.5	6	9000
8	16 x 1.5	8	9000
10	18 x 1.5	10	9000
12	20 x 1.5	12	9000
14	22 x 1.5	14	5800
16	24 x 1.5	16	5800
20	30 x 2.0	20	5800
25	36 x 2.0	25	5800
30	42 x 2.0	30	3600
38	52 x 2.0	38	3600
*Meets standard ISO 8434-1			

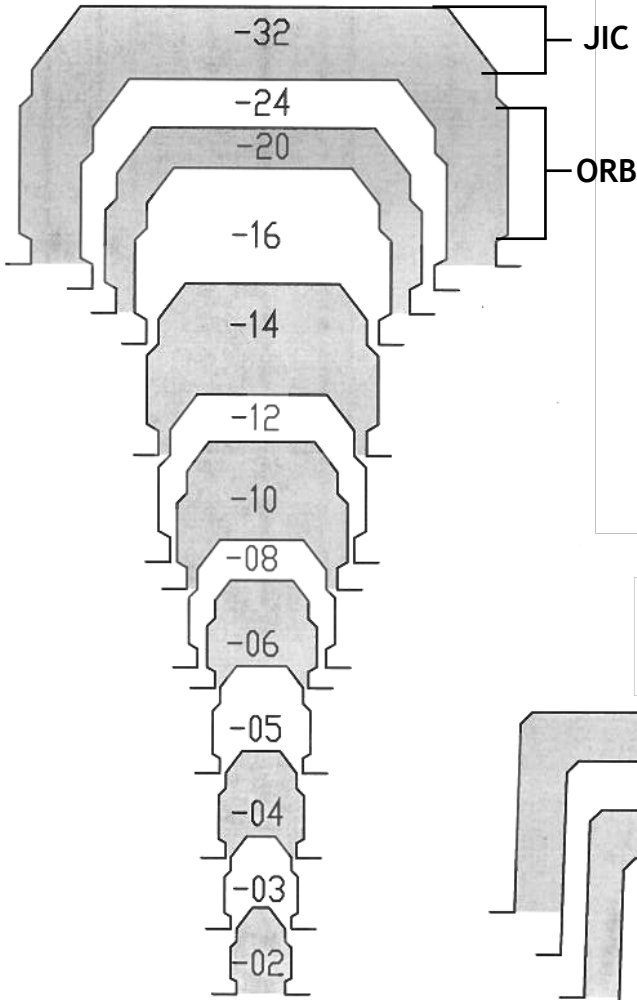
The following table lists the specifications for DIN **S** adapters

DIN L			
Metric Tube O.D. Size	Thread O.D.	Tube (P)ilot	Pressure
(mm)	(mm)	(mm)	(psi)
6	12 x 1.5	6	3600
8	14 x 1.5	8	3600
10	16 x 1.5	10	3600
12	18 x 1.5	12	3600
15	22 x 1.5	15	3600
18	26 x 1.5	18	2300
22	30 x 2.0	22	2300
28	36 x 2.0	28	1500
35	45 x 2.0	35	1500
42	52 x 2.0	42	1500
*Meets standard ISO 8434-1			

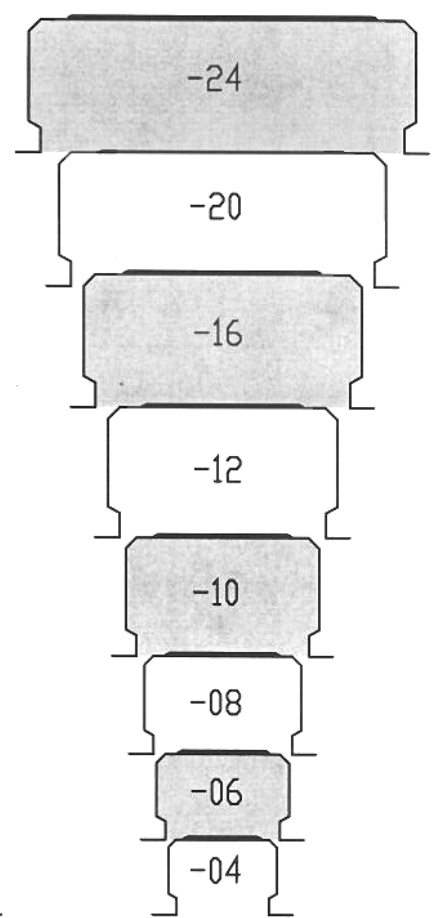
PROFILE SIZE CHART

HYDRAULIC ADAPTER

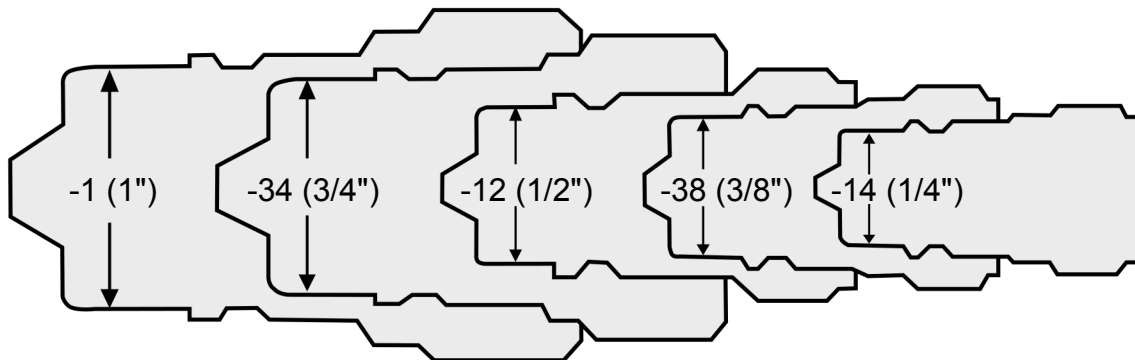
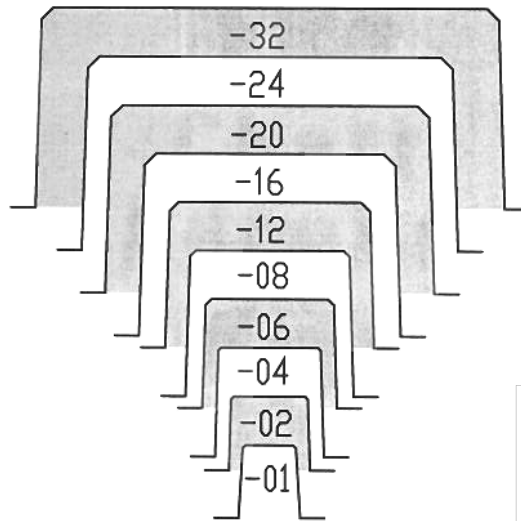
MALE JIC/ MALE O-RING BOSS



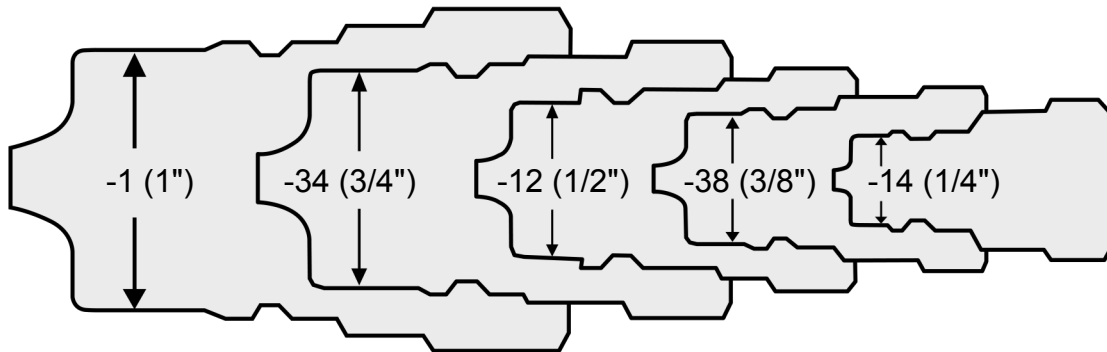
O-RING FACE SEAL



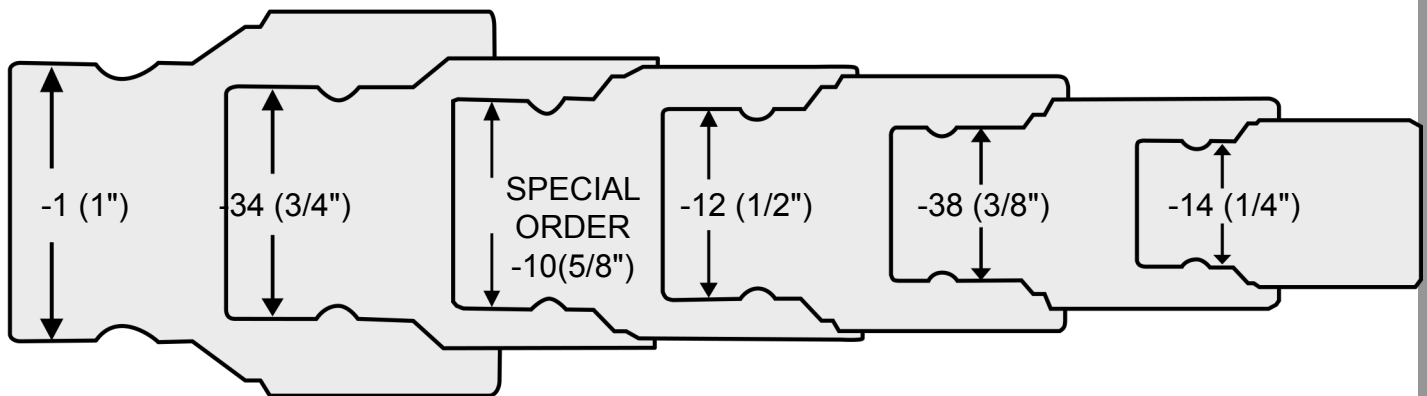
MALE PIPE



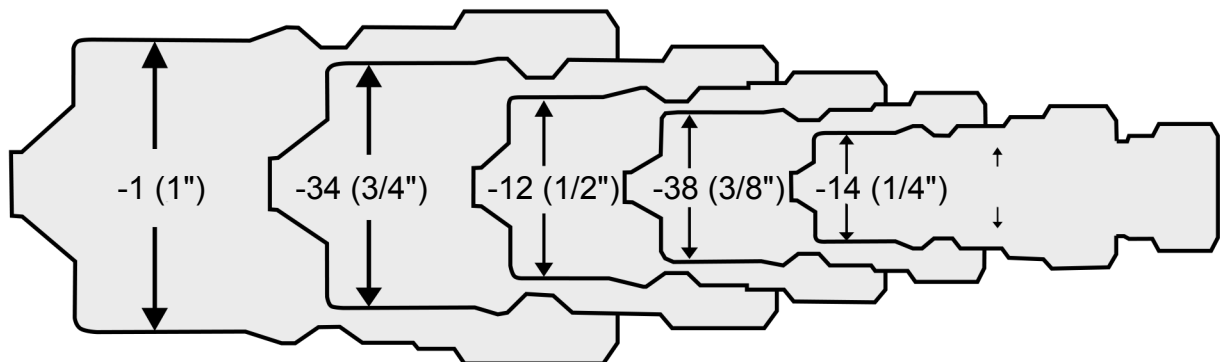
AG INTERCHANGE - NV SERIES



ISO 7241 - 1 - ISO A - ANV SERIES



ISO 16028 - FF SERIES



ISO 7241 - 1 ISO B - HNV SERIES

FEMALE PIPE SWIVELS**STEEL PIPE SWIVEL ADAPTERS****MALE PIPE SWIVEL ADAPTER**

SAE 140130

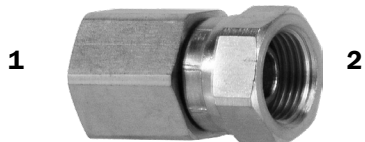


Part #	Male Pipe 1	Female NPSM 2	List Price
1404-2-2	1/8	1/8	1.68
1404-2-4	1/8	1/4	2.76
1404-4-2	1/4	1/8	3.69
1404-4-4	1/4	1/4	1.77
1404-4-6	1/4	3/8	2.95
1404-4-8	1/4	1/2	3.58
1404-6-4	3/8	1/4	3.33
1404-6-6	3/8	3/8	3.55
1404-6-8	3/8	1/2	3.49
1404-8-4	1/2	1/4	4.29
1404-8-6	1/2	3/8	5.03
1404-8-8	1/2	1/2	3.24
1404-12-8	3/4	1/2	5.53
1404-12-12	3/4	3/4	4.72
1404-12-16	3/4	1	11.83
1404-16-12	1	3/4	11.36
1404-16-16	1	1	8.38
1404-20-16	1-1/4	1	18.92
1404-20-20	1-1/4	1-1/4	15.35
1404-24-24	1-1/2	1-1/2	22.29
1404-32-32	2	2	49.67

1404 2045R 1210 9205R 0107

FEMALE PIPE SWIVEL ADAPTER

SAE 140131



Part #	Female Pipe 1	Female NPSM 2	List Price
1405-2-2	1/8	1/8	3.00
1405-4-2	1/4	1/8	3.24
1405-4-4	1/4	1/4	2.45
1405-4-6	1/4	3/8	4.53
1405-6-4	3/8	1/4	2.90
1405-6-6	3/8	3/8	3.31
1405-6-8	3/8	1/2	3.72
1405-8-4	1/2	1/4	5.06
1405-8-6	1/2	3/8	3.72
1405-8-8	1/2	1/2	3.58
1405-12-12	3/4	3/4	5.11
1405-16-12	1	3/4	13.10
1405-16-16	1	1	7.53
1405-20-20	1-1/4	1-1/4	23.63
1405-24-24	1-1/2	1-1/2	26.38
1405-32-32	2	2	41.52

1405 2046R 1212 9255 C207

HYDRAULIC ADAPTERS**MALE PIPE ELBOW SWIVEL ADAPTER**

SAE 140230

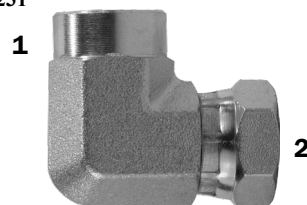


Part #	Male Pipe 1	Female NPSM 2	List Price
1501-2-2	1/8	1/8	2.69
1501-4-2	1/4	1/8	2.79
1501-4-4	1/4	1/4	2.26
1501-6-4	3/8	1/4	6.56
1501-6-6	3/8	3/8	3.45
1501-8-4	1/2	1/4	4.54
1501-8-6	1/2	3/8	4.10
1501-8-8	1/2	1/2	4.67
1501-12-8	3/4	1/2	8.39
1501-12-12	3/4	3/4	7.20
1501-16-12	1	3/4	17.20
1501-16-16	1	1	11.96
1501-20-20	1-1/4	1-1/4	26.64
1501-24-24	1-1/2	1-1/2	42.19
1501-32-32	2	2	77.49

1501 2047R 1218 9405 2107

FEMALE UNION ELBOW SWIVEL ADAPTER

SAE 140231



Part #	Female Pipe 1	Female NPSM 2	List Price
1502-2-2	1/8	1/8	4.38
1502-4-4	1/4	1/4	3.80
1502-6-4	3/8	1/4	6.45
1502-6-6	3/8	3/8	5.81
1502-6-8	3/8	1/2	13.15
1502-8-6	1/2	3/8	5.47
1502-8-8	1/2	1/2	6.00
1502-12-12	3/4	3/4	9.26
1502-16-16	1	1	26.45
1502-20-20	1-1/4	1-1/4	28.66
1502-24-24	1-1/2	1-1/2	57.61

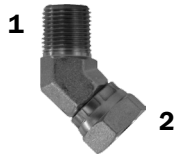
1502 2207 1216 945SR

HYDRAULIC ADAPTERS

FEMALE PIPE SWIVELS

MALE 45° PIPE ELBOW SWIVEL ADAPTER

SAE 140330



Part #	Male Pipe 1	Female NPSM 2	List Price
1503-2-2	1/8	1/8	4.10
1503-4-4	1/4	1/4	3.48
1503-6-4	3/8	1/4	3.78
1503-6-6	3/8	3/8	3.76
1503-8-6	1/2	3/8	6.11
1503-8-8	1/2	1/2	4.82
1503-12-8	3/4	1/2	10.42
1503-12-12	3/4	3/4	6.63
1503-16-12	1	3/4	13.11
1503-16-16	1	1	14.04
1503-20-20	1-1/4	1-1/4	31.39
1503-24-24	1-1/2	1-1/2	41.50
1503-32-32	2	2	110.53

1503 2049R 3107 1214 9355R

FEMALE 45° UNION ELBOW SWIVEL ADAPTER

SAE 140331



Part #	Female Pipe 1	Female NPSM 2	List Price
1504-2-2	1/8	1/8	6.81
1504-4-4	1/4	1/4	5.09
1504-6-6	3/8	3/8	5.56
1504-8-8	1/2	1/2	9.61
1504-12-12	3/4	3/4	10.67
1504-16-16	1	1	18.15
1504-20-20	1-1/4	1-1/4	43.05
1504-24-24	1-1/2	1-1/2	65.69

1504 2050R 1249 9385R

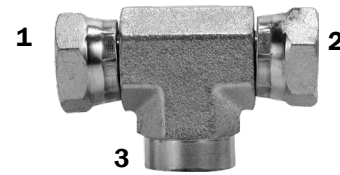
MALE SWIVEL BRANCH TEE



Part #	Female NPSM 1 & 2	Male Pipe 3	List Price
1601-2-2	1/8	1/8	8.24
1601-4-4	1/4	1/4	6.83
1601-6-6	3/8	3/8	10.35
1601-8-8	1/2	1/2	12.33
1601-12-12	3/4	3/4	26.91
1601-16-16	1	1	49.99
1601-20-20	1-1/4	1-1/4	66.62
1601-24-24	1-1/2	1-1/2	87.48

1601 2254R 1258 9406R

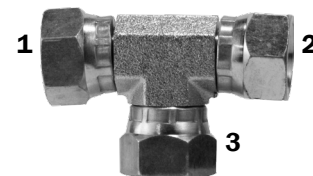
FEMALE SWIVEL TEE



Part #	Female NPSM 1 & 2	Female Pipe 3	List Price
1602-4-4	1/4	1/4	5.63
1602-6-6	3/8	3/8	9.41
1602-8-8	1/2	1/2	10.67
1602-12-12	3/4	3/4	19.37
1602-16-16	1	1	39.10
1602-20-20	1-1/4	1-1/4	77.67

1602 2253R 1259 9456R

FEMALE SWIVEL UNION TEE

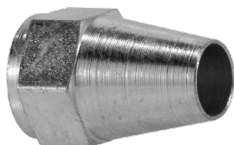


Part #	Female NPSM 1,2 & 3	List Price
1603-4-4	1/4	9.95
1603-6-6	3/8	14.46
1603-8-8	1/2	14.00
1603-12-12	3/4	19.29
1603-16-16	1	57.10
1603-20-20	1-1/4	95.53

1603 2255 1223 9705R

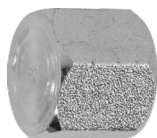
STRAIGHTS STEEL JIC FLARE 37°**LONG JIC TUBE NUT**

SAE 070111



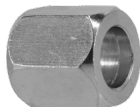
Part #	Tube O.D	JIC Thread Size	List Price
0304-4	1/4	7/16-20	2.62
0304-6	3/8	9/16-18	2.22
0304-8	1/2	3/4-16	2.99
0304-10	5/8	7/8-14	4.14
0304-12	3/4	1-1/16-12	7.61
0304-16	1	1-5/16-12	14.16

304 221000 0304 C5115

JIC CAPSAE 070112
MS 51532

Part #	Tube O.D.	JIC Thread Size	List Price
0304-C-2	1/8	5/16-24	1.48
0304-C-3	3/16	3/8-24	2.44
0304-C-4	1/4	7/16-20	0.78
0304-C-5	5/16	1/2-20	0.75
0304-C-6	3/8	9/16-18	0.97
0304-C-8	1/2	3/4-16	0.85
0304-C-10	5/8	7/8-14	1.53
0304-C-12	3/4	1-1/16-12	1.93
0304-C-14	7/8	1-3/16-12	3.33
0304-C-16	1	1-5/16-12	2.96
0304-C-20	1-1/4	1-5/8-12	6.03
0304-C-24	1-1/2	1-7/8-12	10.66
0304-C-32	2	2-1/2-12	20.83

820 304 210292 FNTX 1329 C5129

**JIC TUBE NUT
(SLEEVE REQUIRED)**SAE 070110
MS 51531

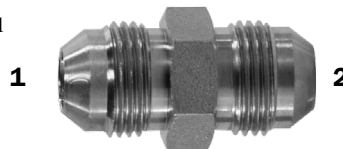
Part #	Tube O.D	JIC Thread Size	List Price
0318-2	1/8	5/16-24	0.64
0318-3	3/16	3/8-24	0.64
0318-4	1/4	7/16-20	0.44
0318-5	5/16	1/2-20	0.84
0318-6	3/8	9/16-18	0.74
0318-8	1/2	3/4-16	1.06
0318-10	5/8	7/8-14	1.39
0318-12	3/4	1-1/16-12	2.40
0318-14	7/8	1-3/16-12	3.05
0318-16	1	1-5/16-12	3.38
0318-20	1-1/4	1-5/8-12	6.99
0318-24	1-1/2	1-7/8-12	10.46
0318-32	2	2-1/2-12	29.06

318 1290 BTX 1311 C5105

HYDRAULIC ADAPTERS**JIC TUBE SLEEVE**SAE 070115
MS 51533

Part #	Tube O.D	List Price
0319-2	1/8	0.81
0319-3	3/16	0.51
0319-4	1/4	0.42
0319-5	5/16	0.42
0319-6	3/8	0.46
0319-8	1/2	0.60
0319-10	5/8	0.72
0319-12	3/4	0.95
0319-14	7/8	1.80
0319-16	1	1.94
0319-20	1-1/4	2.86
0319-24	1-1/2	5.59
0319-32	2	9.63

319 900605 TX 1253 C5165

JIC TUBE UNIONSAE 070101
MS 51501

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2403-2-2	5/16-24	5/16-24	2.06
2403-3-3	3/8-24	3/8-24	1.34
2403-4-4	7/16-20	7/16-20	1.02
2403-5-5	1/2-20	1/2-20	1.91
2403-6-6	9/16-18	9/16-18	1.99
2403-6-4	9/16-18	7/16-20	2.78
2403-8-8	3/4-16	3/4-16	1.80
2403-8-4	3/4-16	7/16-20	4.14
2403-8-6	3/4-16	9/16-18	2.00
2403-10-10	7/8-14	7/8-14	3.23
2403-10-8	7/8-14	3/4-16	2.50
2403-12-12	1-1/16-12	1-1/16-12	3.48
2403-12-8	1-1/16-12	3/4-16	4.27
2403-12-10	1-1/16-12	7/8-14	4.98
2403-14-14	1-3/16-12	1-3/16-12	8.16
2403-16-16	1-5/16-12	1-5/16-12	5.43
2403-16-12	1-5/16-12	1-1/16-12	10.48
2403-20-20	1-5/8-12	1-5/8-12	10.61
2403-24	1-7/8-12	1-7/8-12	14.35
2403-24-20	1-7/8-12	1-5/8-12	19.54
2403-32	2-1/2-12	2-1/2-12	46.62

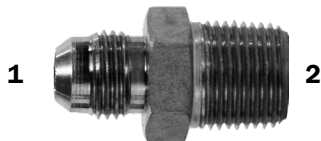
2403 2027 HTX 1204 C5305

HYDRAULIC ADAPTERS

STRAIGHTS STEEL JIC FLARE 37°

JIC MALE CONNECTOR

SAE 070102
MS 51500



Part #	JIC Thread Size 1	Male Pipe Thread 2	List Price
2404-2-2	5/16-24	1/8	2.16
2404-2-4	5/16-24	1/4	1.68
2404-4-2	7/16-20	1/8	0.99
2404-4-4	7/16-20	1/4	1.38
2404-4-6	7/16-20	3/8	1.53
2404-4-8	7/16-20	1/2	3.00
2404-6-2	9/16-18	1/8	1.65
2404-6-4	9/16-18	1/4	1.09
2404-6-6	9/16-18	3/8	1.57
2404-6-8	9/16-18	1/2	3.70
2404-8-4	3/4-16	1/4	2.48
2404-8-6	3/4-16	3/8	2.10
2404-8-8	3/4-16	1/2	1.55
2404-8-12	3/4-16	3/4	2.95
2404-8-16	3/4-16	1	6.10
2404-10-8	7/8-14	1/2	2.66
2404-10-12	7/8-14	3/4	6.73
2404-12-6	1-1/16-12	3/8	3.97
2404-12-8	1-1/16-12	1/2	2.86
2404-12-12	1-1/16-12	3/4	3.71
2404-12-16	1-1/16-12	1	5.81
2404-16-12	1-5/16-12	3/4	6.91
2404-16-16	1-5/16-12	1	5.38
2404-20-16	1-5/8-12	1	7.02
2404-20-20	1-5/8-12	1-1/4	6.23
2404-20-24	1-5/8-12	1-1/2	23.59
2404-24-16	1-7/8-12	1	45.80
2404-24-20	1-7/8-12	1-1/4	15.76
2404-24-24	1-7/8-12	1-1/2	11.00
2404-32-24	2-1/2-12	1-1/2	60.68
2404-32-32	2-1/2-12	2	33.11

2404 2021R FTX 1202R C5205 816

JIC FEMALE CONNECTOR

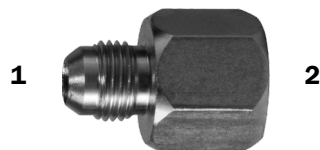
SAE 070103
MS 51503



Part #	JIC Thread Size 1	Female Pipe Size 2	List Price
2405-2-2	5/16-24	1/8	1.77
2405-4-2	7/16-20	1/8	1.48
2405-4-4	7/16-20	1/4	1.81
2405-6-4	9/16-18	1/4	1.81
2405-6-6	9/16-18	3/8	2.23
2405-6-8	9/16-18	1/2	6.13
2405-8-4	3/4-16	1/4	4.80
2405-8-6	3/4-16	3/8	4.60
2405-8-8	3/4-16	1/2	3.79
2405-10-6	7/8-14	3/8	4.99
2405-10-8	7/8-14	1/2	3.18
2405-12-8	1-1/16-12	1/2	6.05
2405-12-12	1-1/16-12	3/4	6.86
2405-16-12	1-5/16-12	3/4	18.50
2405-16-16	1-5/16-12	1	7.78
2405-20-20	1-5/8-12	1-1/4	11.95
2405-24-24	1-7/8-12	1-1/2	27.97
2405-32-32	2-1/2-12	2	72.19

2405 2022R GTX 1230R C5255

JIC REDUCER/ EXPANDER



Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2406-6-4	9/16-18	7/16-20	2.36
2406-6-8	9/16-18	3/4-16	2.93
2406-8-4	3/4-16	7/16-20	2.84
2406-8-6	3/4-16	9/16-18	2.86
2406-8-12	3/4-16	1-1/16-12	5.08
2406-10-4	7/8-14	7/16-20	5.15
2406-10-6	7/8-14	9/16-18	4.48
2406-10-8	7/8-14	3/4-16	4.43
2406-12-4	1-1/16-12	7/16-20	6.00
2406-12-6	1-1/16-12	9/16-18	5.46
2406-12-8	1-1/16-12	3/4-16	4.91
2406-12-10	1-1/16-12	7/8-14	5.93
2406-16-4	1-5/16-12	7/16-20	6.33
2406-16-12	1-5/16-12	1-1/16-12	8.55
2406-16-20	1-5/16-12	1-5/8-12	12.24
2406-20-12	1-5/8-12	1-1/16-12	15.66
2406-20-16	1-5/8-12	1-5/16-12	15.67
2406-24-16	1-7/8-12	1-5/16-12	44.19
2406-32-24	2-1/2-12	1-7/8-12	66.95

2406 C5015 2215 TRTX 1246

STRAIGHTS STEEL JIC FLARE 37°

SAE 070109
MS 51518

PLUG



Part #	Tube O.D.	JIC Thread Size	List Price
2408-2	1/8	5/16-24	2.32
2408-3	3/16	3/8-24	1.01
2408-4	1/4	7/16-20	1.06
2408-5	5/16	1/2-20	0.95
2408-6	3/8	9/16-18	0.93
2408-8	1/2	3/4-16	1.20
2408-10	5/8	7/8-14	1.58
2408-12	3/4	1-1/16-12	2.50
2408-14	7/8	1-3/16-12	4.90
2408-16	1	1-5/16-12	3.66
2408-20	1-1/4	1-5/8-12	7.82
2408-24	1-1/2	1-7/8-12	11.81
2408-32	2	2-1/2-12	25.32

2408 430549 PNTX 1254 C5229

SAE 070201
MS 51505

JIC UNION ELBOW



Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2500-2-2	5/16-24	5/16-24	4.73
2500-4-4	7/16-20	7/16-20	1.81
2500-5-5	1/2-20	1/2-20	3.15
2500-6-6	9/16-18	9/16-18	2.23
2500-6-4	9/16-18	7/16-20	3.43
2500-8-8	3/4-16	3/4-16	3.47
2500-8-6	3/4-16	9/16-18	3.68
2500-10-10	7/8-14	7/8-14	6.33
2500-12-12	1-1/16-12	1-1/16-12	6.71
2500-16-16	1-5/16-12	1-5/16-12	15.86
2500-20-20	1-5/8-12	1-5/8-12	22.96
2500-24-24	1-7/8-12	1-7/8-12	45.68
2500-32-32	2-1/2-12	2-1/2-12	78.13

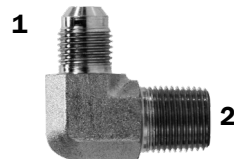
2500 2039 1234 C5505 821

HYDRAULIC ADAPTERS

STEEL 37° JIC FLARE SHAPES

SAE 070202
MS 51504

JIC MALE ELBOW

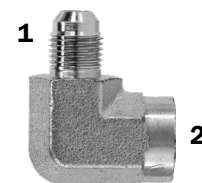


Part #	JIC Thread Size 1	Male Pipe Size 2	List Price
2501-2-2	5/16-24	1/8	4.90
2501-4-2	7/16-20	1/8	1.82
2501-4-4	7/16-20	1/4	1.95
2501-4-6	7/16-20	3/8	5.16
2501-4-8	7/16-20	1/2	5.05
2501-6-2	9/16-18	1/8	2.77
2501-6-4	9/16-18	1/4	2.62
2501-6-6	9/16-18	3/8	2.90
2501-6-8	9/16-18	1/2	3.84
2501-8-4	3/4-16	1/4	3.53
2501-8-6	3/4-16	3/8	3.95
2501-8-8	3/4-16	1/2	3.08
2501-8-12	3/4-16	3/4	6.16
2501-10-6	7/8-14	3/8	4.39
2501-10-8	7/8-14	1/2	4.33
2501-12-8	1-1/16-12	1/2	7.15
2501-12-12	1-1/16-12	3/4	5.02
2501-12-16	1-1/16-12	1	8.64
2501-16-12	1-5/16-12	3/4	9.74
2501-16-16	1-5/16-12	1	7.42
2501-16-20	1-5/16-12	1-1/4	19.21
2501-20-20	1-5/8-12	1-1/4	16.86
2501-24-24	1-7/8-12	1-1/2	26.15
2501-32-32	2-1/2-12	2	77.47

1208R C5405 2501 2024R CTX 822

SAE 070203
MS 51506

JIC FEMALE ELBOW



Part #	JIC Thread Size 1	Female Pipe Size 2	List Price
2502-4-2	7/16-20	1/8	3.63
2502-4-4	7/16-20	1/4	2.80
2502-6-4	9/16-18	1/4	4.28
2502-6-6	9/16-18	3/8	3.78
2502-6-8	9/16-18	1/2	6.62
2502-8-4	3/4-16	1/4	6.33
2502-8-6	3/4-16	3/8	6.10
2502-8-8	3/4-16	1/2	6.72
2502-10-6	7/8-14	3/8	18.00
2502-10-8	7/8-14	1/2	7.52
2502-12-8	1-1/16-12	1/2	9.21
2502-12-12	1-1/16-12	3/4	8.43
2502-16-16	1-5/16-12	1	14.60
2502-20-20	1-5/8-12	1-1/4	34.62

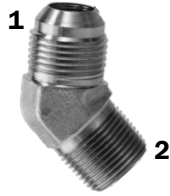
2502 2025R DTX 1240R C5455

HYDRAULIC ADAPTERS

SHAPES STEEL JIC FLARE 37°

SAE 070302
MS 51508

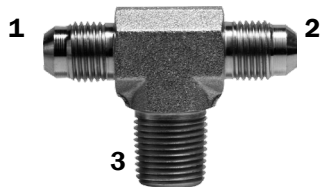
JIC MALE 45° ELBOW



Part #	JIC Thread Size 1	Male Pipe Size 2	List Price
2503-2-2	5/16-24	1/8	5.43
2503-4-4	7/16-20	1/4	2.64
2503-6-4	9/16-18	1/4	2.70
2503-6-6	9/16-18	3/8	3.34
2503-6-8	9/16-18	1/2	3.99
2503-8-4	3/4-16	1/4	9.05
2503-8-6	3/4-16	3/8	3.43
2503-8-8	3/4-16	1/2	4.59
2503-10-6	7/8-14	3/8	6.33
2503-10-8	7/8-14	1/2	6.20
2503-12-8	1-1/16-12	1/2	6.62
2503-12-12	1-1/16-12	3/4	6.44
2503-12-16	1-1/16-12	1	11.14
2503-16-16	1-5/16-12	1	12.50
2503-16-20	1-5/16-12	1-1/4	24.91
2503-20-16	1-5/8-12	1	30.79
2503-20-20	1-5/8-12	1-1/4	23.80

2503 2023R VTX 1206R C5355 823

JIC MALE BRANCH TEE

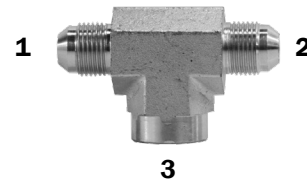


Part #	JIC Thread Size 1&2	Pipe Thread Size 3	List Price
2601-4-4	7/16-20	1/4	4.38
2601-6-4	9/16-18	1/4	4.62
2601-6-6	9/16-18	3/8	6.29
2601-8-8	3/4-16	1/2	6.00
2601-12-12	1-1/16-12	3/4	11.15
2601-16-16	1-5/16-12	1	18.52

2601 2030R STX 1221R C5605

JIC FEMALE BRANCH TEE

SAE 070427
MS 51513



Part #	JIC Thread Size 1 & 2	Female Pipe Size 3	List Price
2602-4-4	7/16-20	1/4	5.61
2602-6-6	9/16-18	3/8	5.94
2602-8-8	3/4-16	1/2	8.21
2602-12-12	1-1/16-12	3/4	19.39
2602-16-16	1-5/16-12	1	25.79
2602-20-20	1-5/8-12	1-1/4	38.70

2602 2031R OTX 1228R C6566

JIC UNION TEE

SAE 070401
MS 51510



Part #	JIC Thread Size 1 & 2	JIC Thread Size 3	List Price
2603-2-2	5/16-24	5/16-24	3.97
2603-3-3	3/8-24	3/8-24	6.77
2603-4-4	7/16-20	7/16-20	3.24
2603-6-6	9/16-18	9/16-18	3.21
2603-8-8	3/4-16	3/4-16	5.45
2603-10-10	7/8-14	7/8-14	6.67
2603-12-12	1-1/16-12	1-1/16-12	9.57
2603-16-16	1-5/16-12	1-5/16-12	11.57
2603-20-20	1-5/8-12	1-5/8-12	40.32

2603 2033 JTX 1220 C5705

STEEL BULKHEAD FITTINGS

SAE 070118
MS 51860

LOCK NUT



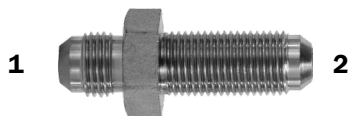
* Lock Nut no longer included on fittings

Part #	Thread Size	List Price
0306-2	5/16-24	0.48
0306-4	7/16-20	0.65
0306-5	1/2-20	0.81
0306-6	9/16-18	0.56
0306-8	3/4-16	1.05
0306-10	7/8-14	1.02
0306-12	1-1/16-12	2.14
0306-14	1-3/16-12	3.18
0306-16	1-5/16-12	2.35
0306-20	1-5/8-12	2.78
0306-24	1-7/8-12	7.58
0306-32	2-1/2-12	7.08

1306 894 210212 WLN 1332 C5624

SAE 070601
MS 51520

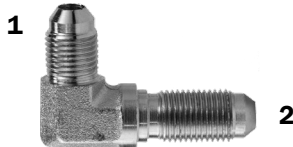
JIC BULKHEAD UNION



Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
2700-2-2	5/16-24	5/16-24	2.95
2700-4-4	7/16-20	7/16-20	2.54
2700-5-5	1/2-20	1/2-20	3.32
2700-6-6	9/16-18	9/16-18	2.67
2700-8	3/4-16	3/4-16	4.28
2700-10	7/8-14	7/8-14	4.70
2700-12	1-1/16-12	1-1/16-12	5.29
2700-14	1-3/16-12	1-3/16-12	38.42
2700-16	1-5/16-12	1-5/16-12	10.88
2700-20	1-5/8-12	1-5/8-12	22.14
2700-24	1-7/8-12	1-7/8-12	24.20
2700-32	2-1/2-12	2-1/2-12	92.39

2700 2041R WTX 1260 C5325

JIC BULKHEAD UNION ELBOW

SAE 070701
MS 51507

Part #	JIC Thread Size 1	JIC Bulkhead Thread 2	List Price
2701-4	7/16-20	7/16-20	3.44
2701-5	1/2-20	1/2-20	5.49
2701-6	9/16-18	9/16-18	4.89
2701-8	3/4-16	3/4-16	5.73
2701-10	7/8-14	7/8-14	8.95
2701-12	1-1/16-12	1-1/16-12	14.60
2701-16	1-5/16-12	1-5/16-12	17.12
2701-20	1-5/8-12	1-5/8-12	38.53
2701-24	1-7/8-12	1-7/8-12	53.21

2701 2043R WETX 1262 C5525

HYDRAULIC ADAPTERS

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	3.30
2702-6	9/16-18	9/16-18	6.18
2702-8	3/4-16	3/4-16	5.78
2702-10	7/8-14	7/8-14	8.57
2702-12	1-1/16-12	1-1/16-12	12.48
2702-16	1-5/16-12	1-5/16-12	16.86
2702-20	1-5/8-12	1-5/8-12	34.58

2702 2042 WNTX 1261 C5375

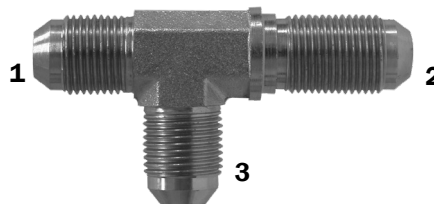
JIC BULKHEAD BRANCH TEE

SAE 070959
MS 51515

Part #	JIC Thread Size 1&2	JIC Thread Size 3	List Price
2703-4	7/16-20	7/16-20	6.43
2703-6	9/16-18	9/16-18	6.52
2703-8	3/4-16	3/4-16	11.46
2703-10	7/8-14	7/8-14	13.78
2703-12	1-1/16-12	1-1/16-12	20.62
2703-16	1-5/16-12	1-5/16-12	33.05
2703-20	1-5/8-12	1-5/8-12	169.19

2703 203002 WJT 1283 C5725

JIC BULKHEAD RUN TEE

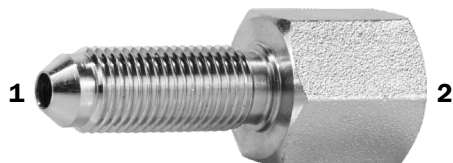
SAE 070958
MS 51516

Part #	JIC Thread Size 1&3	JIC Thread Size 2	List Price
2704-4	7/16-20	7/16-20	6.62
2704-6	9/16-18	9/16-18	6.14
2704-8	3/4-16	3/4-16	14.22
2704-10	7/8-14	7/8-14	18.14
2704-12	1-1/16-12	1-1/16-12	20.70
2704-16	1-5/16-12	1-5/16-12	25.72

2704 203008 WJTT 1284 C5726

* Lock Nuts sold separately

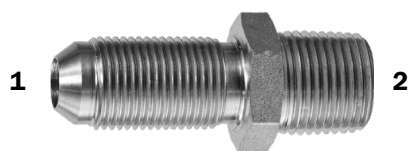
JIC TO FEMALE PIPE BULKHEAD



Part #	JIC Thread Size 1	Female Pipe Size 2	List Price
2705-4-4	7/16-20	1/4	3.43
2705-6-6	9/16-18	3/8	5.52
2705-8-8	3/4-16	1/2	7.40
2705-12-12	1-1/16-12	3/4	16.33
2705-16-16	1-5/16-12	1	20.37
2705-20-20	1-5/8-12	1-1/4	28.45

2705 2239 WGTX C5275

JIC TO MALE PIPE BULKHEAD



Part #	JIC Thread Size 1	Pipe Thread Size 2	List Price
2706-4-4	7/16-20	1/4	2.98
2706-6-6	9/16-18	3/8	4.50
2706-8-8	3/4-16	1/2	5.84
2706-12-12	1-1/16-12	3/4	13.40
2706-16-16	1-5/16-12	1	19.47
2706-20-20	1-5/8-12	1-1/4	55.45

2706 2240

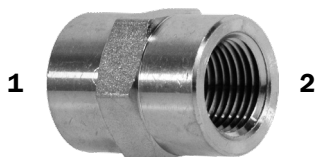
* Lock Nuts sold separately - pg. 408

STEEL PIPE FITTINGS

PIPE COUPLING

910

SAE 140138

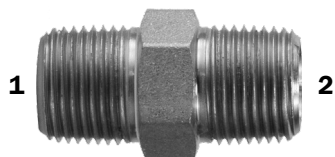


Part #	Female Pipe 1	Female Pipe 2	List Price
5000-2	1/8	1/8	1.81
5000-4-2	1/4	1/8	3.28
5000-4	1/4	1/4	1.66
5000-6-4	3/8	1/4	2.45
5000-6-6	3/8	3/8	1.93
5000-8-4	1/2	1/4	4.45
5000-8-6	1/2	3/8	3.16
5000-8	1/2	1/2	3.30
5000-12-12	3/4	3/4	3.90
5000-16-12	1	3/4	13.45
5000-16	1	1	6.25
5000-20-20	1-1/4	1-1/4	15.48
5000-24	1-1/2	1-1/2	29.61
5000-32	2	2	43.45

5000 2096 GG 1273 C3309

HEX PIPE NIPPLES

SAE 140137



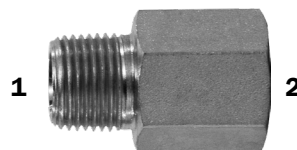
Part #	Male Pipe 1	Male Pipe 2	List Price
5404-2	1/8	1/8	0.93
5404-4-2	1/4	1/8	1.30
5404-4	1/4	1/4	1.34
5404-6-2	3/8	1/8	4.24
5404-6-4	3/8	1/4	1.69
5404-6	3/8	3/8	1.56
5404-8-4	1/2	1/4	2.43
5404-8-6	1/2	3/8	2.22
5404-8	1/2	1/2	1.91
5404-12-6	3/4	3/8	4.88
5404-12-8	3/4	1/2	3.14
5404-12	3/4	3/4	3.28
5404-16-12	1	3/4	10.90
5404-16	1	1	5.79
5404-20-16	1-1/4	1	11.60
5404-20	1-1/4	1-1/4	10.33
5404-24-20	1-1/2	1-1/4	27.22
5404-24	1-1/2	1-1/2	16.96
5404-32-24	2	1-1/2	52.56
5404-32	2	2	39.87

5404 2083 FF 1252 C3069 911

HYDRAULIC ADAPTERS

EXPANDING PIPE ADAPTER

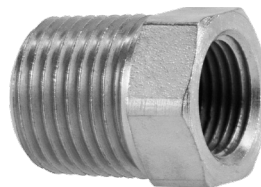
SAE 140139



Part #	Male Pipe 1	Female Pipe 2	List Price
5405-2-2	1/8	1/8	6.38
5405-2-4	1/8	1/4	1.84
5405-4-2	1/4	1/8	2.39
5405-4-4	1/4	1/4	1.71
5405-6-4	3/8	1/4	3.67
5405-6-6	3/8	3/8	4.13
5405-6-8	3/8	1/2	4.13
5405-8-8	1/2	1/2	5.59
5405-8-12	1/2	3/4	5.73
5405-12-12	3/4	3/4	13.87
5405-16-16	1	1	15.96
5405-16-20	1	1-1/4	20.71
5405-20-20	1-1/4	1-1/4	26.64
5405-20-24	1-1/4	1-1/2	26.58
5405-24-24	1-1/2	1-1/2	34.05

920 5405 2040 FG-(R) 1274 C3209(R)

HEX REDUCER BUSHING

SAEF1
140140

Part #	Male Pipe	Female Pipe	List Price
5406-4-2	1/4	1/8	0.92
5406-6-2	3/8	1/8	1.84
5406-6-4	3/8	1/4	2.25
5406-8-2	1/2	1/8	2.10
5406-8-4	1/2	1/4	1.40
5406-8-6	1/2	3/8	2.52
5406-12-2	3/4	1/8	3.02
5406-12-4	3/4	1/4	4.36
5406-12-6	3/4	3/8	3.95
5406-12-8	3/4	1/2	3.99
5406-16-4	1	1/4	6.00
5406-16-6	1	3/8	10.98
5406-16-8	1	1/2	5.89
5406-16-12	1	3/4	6.18
5406-24-20	1-1/2	1-1/4	17.90
5406-32-20	2	1-1/4	27.25
5406-32-24	2	1-1/2	28.59

5406 2081 PTR 1250 C3109 912

HYDRAULIC ADAPTERS

STEEL PIPE FITTINGS

HEX HEAD PLUG

SAE 130109E



Part #	Male Pipe	List Price
5406-P-2	1/8	0.64
5406-P-4	1/4	0.96
5406-P-6	3/8	0.93
5406-P-8	1/2	1.53
5406-P-12	3/4	3.00
5406-P-16	1	4.44
5406-P-20	1-1/4	8.75
5406-P-24	1-1/2	15.03
5406-P-32	2	24.61

933 5406P 2082 HP 1251 C3159

HOLLOW HEX PLUG

SAE 130109



Part #	Male Pipe	List Price
5406-HHP-2	1/8	0.41
5406-HHP-4	1/4	0.32
5406-HHP-6	3/8	0.43
5406-HHP-8	1/2	0.74
5406-HHP-12	3/4	1.27
5406-HHP-16	1	3.78
5406-HHP-20	1-1/4	7.20
5406-HHP-24	1-1/2	18.47

C3169 2222

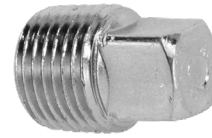
FLUSH HOLLOW HEX PLUG W/ 7/8 TAPER



Part #	Male Pipe	List Price
5406-FLP-2	1/8	0.42
5406-FLP-4	1/4	0.65
5406-FLP-6	3/8	0.98
5406-FLP-8	1/2	1.27
5406-FLP-12	3/4	3.54

SQUARE HEAD PLUG

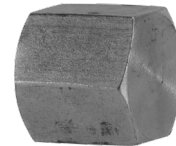
SAE 130109A



Part #	Male Pipe	List Price
5406-SHP-2	1/8	0.50
5406-SHP-4	1/4	0.52
5406-SHP-6	3/8	0.81
5406-SHP-8	1/2	1.32
5406-SHP-12	3/4	1.41
5406-SHP-16	1	5.63
5406-SHP-20	1-1/4	24.19
5406-SHP-24	1-1/2	24.98
5406-SHP-32	2	31.79

C3179

PIPE CAP



Part #	Female Pipe	List Price
5406-C-2	1/8	1.51
5406-C-4	1/4	1.30
5406-C-6	3/8	1.99
5406-C-8	1/2	2.56
5406-C-12	3/4	5.71
5406-C-16	1	9.31

HPC

MALE ELBOW

SAE 140237

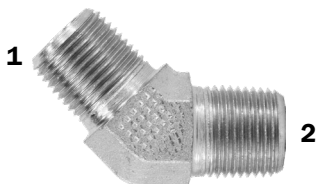


Part #	Male Pipe 1	Male Pipe 2	List Price
5500-2	1/8	1/8	2.73
5500-4	1/4	1/4	2.45
5500-6	3/8	3/8	3.19
5500-8-4	1/2	1/4	7.65
5500-8-6	1/2	3/8	6.25
5500-8	1/2	1/2	4.37
5500-12-8	3/4	1/2	9.65
5500-12-12	3/4	3/4	7.15
5500-16	1	1	10.60
5500-16-12	1	3/4	14.78
5500-20-20	1-1/4	1-1/4	21.70
5500-24	1-1/2	1-1/2	33.98

919 5500 2085 CR 1275 C3529

STEEL PIPE FITTINGS

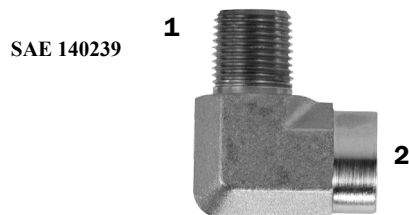
45° MALE ELBOW



Part #	Male Pipe 1	Male Pipe 2	List Price
5501-2-2	1/8	1/8	4.73
5501-4-4	1/4	1/4	3.39
5501-6-6	3/8	3/8	4.65
5501-8	1/2	1/2	6.61
5501-12-12	3/4	3/4	8.98
5501-16-16	1	1	25.09

5501 2247

90° STREET ELBOW



SAE 140239

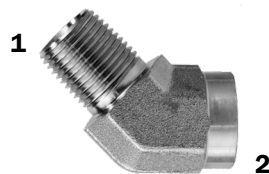
Part #	Male Pipe 1	Female Pipe 2	List Price
5502-2	1/8	1/8	2.12
5502-4	1/4	1/4	2.75
5502-4-6	1/4	3/8	4.72
5502-6-2	3/8	1/8	7.98
5502-6-4	3/8	1/4	3.72
5502-6	3/8	3/8	3.84
5502-6-8	3/8	1/2	6.25
5502-8-4	1/2	1/4	7.50
5502-8-6	1/2	3/8	6.00
5502-8-8	1/2	1/2	5.74
5502-12-8	3/4	1/2	10.43
5502-12	3/4	3/4	6.63
5502-16-12	1	3/4	11.77
5502-16-16	1	1	13.76
5502-20	1-1/4	1-1/4	25.55
5502-24	1-1/2	1-1/2	73.55

5502 2089 CD 1234R C3409 914

HYDRAULIC ADAPTERS

45° STREET ELBOW

SAE 140339



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	3.06
5503-8	1/2	1/2	5.42
5503-12-12	3/4	3/4	6.54
5503-16	1	1	16.57
5503-20	1-1/4	1-1/4	33.49
5503-24	1-1/2	1-1/2	46.48

5503 CD45 1244

FEMALE ELBOW

SAE 140238

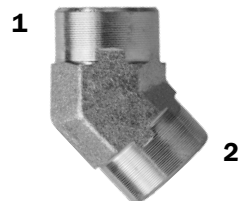


Part #	Female Pipe 1	Female Pipe 2	List Price
5504-2	1/8	1/8	2.59
5504-4-2	1/4	1/8	4.00
5504-4	1/4	1/4	3.18
5504-6-4	3/8	1/4	4.28
5504-6	3/8	3/8	3.93
5504-8-6	1/2	3/8	5.97
5504-8	1/2	1/2	6.41
5504-12	3/4	3/4	8.17
5504-16	1	1	13.14
5504-20	1-1/4	1-1/4	30.59
5504-24	1-1/2	1-1/2	69.76

5504 2087 DD 1245 C3509 916

45° FEMALE ELBOW

SAE 140338



Part #	Female Pipe 1	Female Pipe 2	List Price
5505-4	1/4	1/4	4.31
5505-6	3/8	3/8	6.06
5505-8	1/2	1/2	9.23
5505-12	3/4	3/4	10.94
5505-16	1	1	17.53
5505-20	1-1/4	1-1/4	27.20

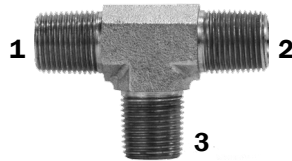
5505 DD45 1241 C3559

HYDRAULIC ADAPTERS

STEEL PIPE FITTINGS

MALE PIPE TEE

SAE 140437

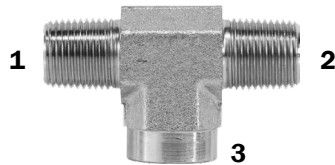


Part #	Male Pipe 1 & 2	Male Pipe 3	List Price
5600-2-2	1/8	1/8	10.39
5600-4-4	1/4	1/4	4.47
5600-6-6	3/8	3/8	6.54
5600-8-8	1/2	1/2	12.38
5600-12	3/4	3/4	14.78
5600-16	1	1	24.23
5600-20	1-1/4	1-1/4	57.84
5600-24	1-1/2	1-1/2	115.95

5600 2257 RRS

FEMALE BRANCH PIPE TEE

SAE 140427

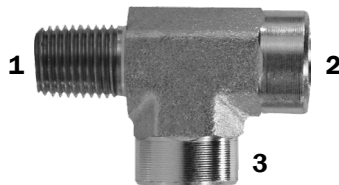


Part #	Male Pipe 1 & 2	Female Pipe 3	List Price
5601-2-2	1/8	1/8	7.52
5601-4-4	1/4	1/4	7.05
5601-6-6	3/8	3/8	7.81
5601-8	1/2	1/2	10.19
5601-12	3/4	3/4	25.22
5601-16	1	1	33.19
5601-20	1-1/4	1-1/4	82.00
5601-24	1-1/2	1-1/2	125.56

901 5601 2256

STREET PIPE TEE

SAE 140424

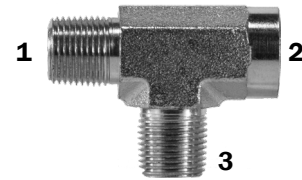


Part #	Male Pipe 1	Female Pipe 2 & 3	List Price
5602-2-2	1/8	1/8	3.61
5602-4-4	1/4	1/4	5.44
5602-6-6	3/8	3/8	6.85
5602-8-8	1/2	1/2	8.62
5602-12	3/4	3/4	12.30
5602-16	1	1	22.55
5602-20	1-1/4	1-1/4	36.12
5602-24	1-1/2	1-1/2	108.52

902 5602 2092 MRO 1276 C3759

FEMALE RUN PIPE TEE

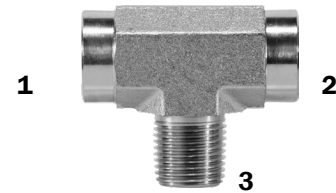
SAE 1404276



Part #	Male Pipe 1 & 3	Female Pipe 2	List Price
5603-2-2	1/8	1/8	5.82
5603-4-4	1/4	1/4	5.11
5603-6-6	3/8	3/8	7.06
5603-8-8	1/2	1/2	9.12
5603-12	3/4	3/4	16.73
5603-16	1	1	21.65
5603-20	1-1/4	1-1/4	103.66
5603-24	1-1/2	1-1/2	79.17

5603 2093 MMO 1277

MALE BRANCH PIPE TEE

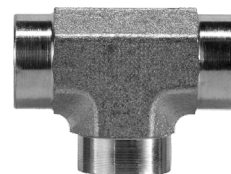


Part #	Female Pipe 1 & 2	Male Pipe 3	List Price
5604-2-2	1/8	1/8	4.54
5604-4-4	1/4	1/4	6.80
5604-6-6	3/8	3/8	7.52
5604-8-8	1/2	1/2	9.47
5604-12	3/4	3/4	12.91
5604-16	1	1	24.39
5604-20	1-1/4	1-1/4	48.34
5604-24	1-1/2	1-1/2	75.45

904 5604 2091 MMS 1278 C3609

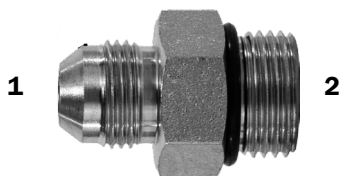
FEMALE PIPE TEE

SAE 140438



Part #	Female Pipe	List Price
5605-2-2	1/8	7.71
5605-4-4	1/4	5.24
5605-6-6	3/8	6.02
5605-8	1/2	6.83
5605-12	3/4	11.09
5605-16	1	23.28
5605-20	1-1/4	41.44
5605-24	1-1/2	113.83

917 5605 2090 1225 C3709

STEEL O-RING ADAPTERS**JIC TO O-RING CONNECTOR**SAE 070120
MS 51525

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	1.19
6400-4-2	7/16-20	5/16-24	1.83
6400-4-3	7/16-20	3/8-24	1.89
6400-4-5	7/16-20	1/2-20	2.18
6400-4-6	7/16-20	9/16-18	1.38
6400-4-8	7/16-20	3/4-16	3.31
6400-5	1/2-20	1/2-20	1.74
6400-6	9/16-18	9/16-18	1.43
6400-6-4	9/16-18	7/16-20	1.51
6400-6-5	9/16-18	1/2-20	1.90
6400-6-8	9/16-18	3/4-16	1.76
6400-6-10	9/16-18	7/8-14	2.98
6400-6-12	9/16-18	1-1/16-12	4.62
6400-8	3/4-16	3/4-16	1.57
6400-8-4	3/4-16	7/16-20	3.30
6400-8-6	3/4-16	9/16-18	1.76
6400-8-10	3/4-16	7/8-14	2.25
6400-8-12	3/4-16	1-1/16-12	3.06
6400-10	7/8-14	7/8-14	2.48
6400-10-6	7/8-14	9/16-18	3.45
6400-10-8	7/8-14	3/4-16	3.19
6400-10-12	7/8-14	1-1/16-12	3.80
6400-10-16	7/8-14	1-5/16-12	5.89
6400-12	1-1/16-12	1-1/16-12	3.08
6400-12-6	1-1/16-12	3/8	4.39
6400-12-8	1-1/16-12	3/4-16	5.12
6400-12-10	1-1/16-12	7/8-14	4.64
6400-12-14	1-1/16-12	1-3/16-12	5.86
6400-12-16	1-1/16-12	1-5/16-12	5.32
6400-14	1-3/16-12	1-3/16-12	9.00
6400-16	1-5/16-12	1-5/16-12	4.67
6400-16-12	1-5/16-12	1-1/16-12	11.07
6400-16-20	1-5/16-12	1-5/8-12	10.28
6400-16-24	1-5/16-12	1-7/8-12	17.31
6400-20	1-5/8-12	1-5/8-12	10.62
6400-20-24	1-5/8-12	1-7/8-12	20.38
6400-24	1-7/8-12	1-7/8-12	17.18
6400-24-32	1-7/8-12	2-1/2-12	74.91

6400 202702R F50X 1231 C5315

O-RING HEX NIPPLE UNION

Part #	O-Ring Thread 1	O-Ring Thread 2	List Price
6403-O-6	9/16-18	9/16-18	5.12
6403-O-8	3/4-16	3/4-16	4.87
6403-O-10	7/8-14	7/8-14	7.62
6403-O-12	1-1/16-12	1-1/16-12	8.49
6403-O-16	1-5/16-12	1-5/16-12	18.19

HYDRAULIC ADAPTERS**O-RING TO PIPE ADAPTER**

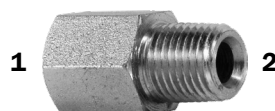
Part #	O-Ring Thread 1	Male Pipe Thread 2	List Price
6401-4-2	7/16-20	1/8	1.59
6401-4-4	7/16-20	1/4	1.56
6401-6-4	9/16-18	1/4	2.00
6401-6-6	9/16-18	3/8	2.00
6401-6-8	9/16-18	1/2	3.14
6401-8-6	3/4-16	3/8	3.11
6401-8-8	3/4-16	1/2	2.69
6401-10-6	7/8-14	3/8	5.00
6401-10-8	7/8-14	1/2	2.96
6401-12-8	1-1/16-12	1/2	4.10
6401-12-12	1-1/16-12	3/4	4.90
6401-16-16	1-5/16-12	1	8.41
6401-20-20	1-5/8-12	1-1/4	16.13

6401 F5X 1264R C3249

O-RING TO 37° JIC - SWIVEL ADAPTER

Part #	O-Ring Thread 1	JIC Thread Size 2	List Price
6402-O-4-4	7/16-20	7/16-20	3.31
6402-O-6-6	9/16-18	9/16-18	2.77
6402-O-8-8	3/4-16	3/4-16	3.88
6402-O-10-10	7/8-14	7/8-14	7.82
6402-O-12-12	1-1/16-12	1-1/16-12	7.05
6402-O-16-16	1-5/16-12	1-5/16-12	10.33
6402-O-20-20	1-5/8-12	1-5/8-12	45.61
6402-O-24-24	1-7/8-12	1-7/8-12	38.83

6402 2266 F65X 1213 9316

FEMALE O-RING TO MALE PIPE ADAPTER

Part #	O-Ring Thread 1	Male Pipe Thread 2	List Price
6404-4-2	7/16-20	1/8	6.41
6404-4-4	7/16-20	1/4	3.35
6404-6-4	9/16-18	1/4	6.64
6404-6-6	9/16-18	3/8	2.95
6404-6-8	9/16-18	1/2	3.92
6404-8-8	3/4-16	1/2	3.81
6404-10-8	7/8-14	1/2	5.46
6404-12-12	1-1/16-12	3/4	7.13
6404-16-16	1-5/16-12	1	21.73
6404-20-20	1-5/8-12	1-1/4	17.96

6404 2246R 1267R C3239 FHG5

HYDRAULIC ADAPTERS

O-RING TO FEMALE PIPE ADAPTER



Part #	O-Ring Thread 1	Female Pipe Thread 2	List Price
6405-O-4-2	7/16-20	1/8	1.86
6405-O-4-4	7/16-20	1/4	2.67
6405-O-6-4	9/16-18	1/4	2.60
6405-O-6-6	9/16-18	3/8	2.82
6405-O-8-4	3/4-16	1/4	4.33
6405-O-8-6	3/4-16	3/8	2.59
6405-O-8-8	3/4-16	1/2	4.46
6405-O-10-6	7/8-14	3/8	3.81
6405-O-10-8	7/8-14	1/2	5.69
6405-O-12-6	1-1/16-12	3/8	12.63
6405-O-12-8	1-1/16-12	1/2	7.97
6405-O-12-12	1-1/16-12	3/4	6.37
6405-O-16-8	1-5/16-12	1/2	10.43
6405-O-16-12	1-5/16-12	3/4	8.41
6405-O-16-16	1-5/16-12	1	12.05
6405-O-20-20	1-5/8-12	1-1/4	15.66
6405-O-24-24	1-7/8-12	1-1/2	30.31
6405-O-32-32	2-1/2-12	2	43.21

6405 2216R F50G 1268R C3269

O-RING HEX HEAD PLUG

SAE 090109A



* Not all sizes are solid

Part #	O-Ring Thread	List Price
6408-O-2	5/16-24	0.78
6408-O-4	7/16-20	0.74
6408-O-5	1/2-20	1.13
6408-O-6	9/16-18	0.88
6408-O-8	3/4-16	1.10
6408-O-10	7/8-14	1.54
6408-O-12	1-1/16-12	2.39
6408-O-14	1-3/16-20	4.40
6408-O-16	1-5/16-12	3.27
6408-O-20	1-5/8-12	6.67
6408-O-24	1-7/8-12	9.39
6408-O-32	2-1/2-12	39.26

6408 900598 P50N 1265 7237

STEEL O-RING ADAPTERS

O-RING HOLLOW - HEX HEAD PLUG

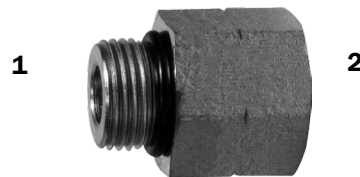
SAE 090109B



Part #	O-Ring Thread	List Price
6408-H-O-2	5/16-24	1.10
6408-H-O-4	7/16-20	0.70
6408-H-O-5	1/2-20	1.01
6408-H-O-6	9/16-18	0.74
6408-H-O-8	3/4-16	1.28
6408-H-O-10	7/8-14	2.09
6408-H-O-12	1-1/16-12	3.94
6408-H-O-14	1-3/16-20	5.81
6408-H-O-16	1-5/16-12	3.95
6408-H-O-20	1-5/8-12	8.64
6408-H-O-24	1-7/8-12	10.55
6408-H-O-32	2-1/2-12	30.92

6408HHP FF2138 HP50N 1256 7238 6409

O-RING PORT REDUCER/EXPANDER

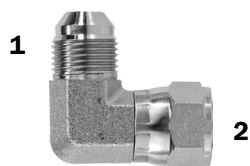


Part #	O-Ring Thread 1	O-Ring Thread 2	List Price
6410-O-4-4	7/16-20	7/16-20	6.89
6410-O-8-4	3/4-16	7/16-20	2.75
6410-O-8-6	3/4-16	9/16-18	4.11
6410-O-8-8	3/4-16	3/4-16	3.84
6410-O-12-6	1-1/16-12	9/16-18	10.44
6410-O-12-8	1-1/16-12	3/4-16	5.89
6410-O-12-12	1-1/16-12	1-1/16-12	8.84
6410-O-16-12	1-5/16-12	1-1/16-12	7.91
6410-O-24-16	1-7/8-12	1-5/16-12	15.35

6410 FF1010 F50G5 1270 7033

FEMALE SWIVELS JIC

JIC SWIVEL NUT ELBOW

SAE 070221
MS 51521

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
6500-4	7/16-20	7/16-20	2.67
6500-5	1/2-20	1/2-20	4.56
6500-6	9/16-18	9/16-18	3.56
6500-8	3/4-16	3/4-16	4.30
6500-10	7/8-14	7/8-14	7.34
6500-10-8	7/8-14	3/4-16	11.42
6500-12	1-1/16-12	1-1/16-12	7.59
6500-12-8	1-1/16-12	3/4-16	13.39
6500-14	1-3/16-12	1-3/16-12	22.29
6500-16	1-5/16-12	1-5/16-12	14.82
6500-20	1-5/8-12	1-5/8-12	29.30
6500-24	1-7/8-12	1-7/8-12	50.75

6500 2071R C6X 1236 G5506

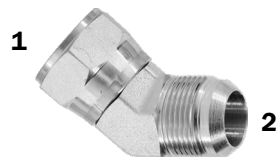
JIC SWIVEL TO MALE PIPE ELBOW



Part #	JIC Thread Size 1	Male Pipe Thread 2	List Price
6501-4-2	7/16-20	1/8	4.24
6501-4-4	7/16-20	1/4	3.96
6501-6-4	9/16-18	1/4	4.76
6501-6-6	9/16-18	3/8	5.84
6501-8-8	3/4-16	1/2	7.23
6501-10-8	7/8-14	1/2	7.57
6501-12-12	1-1/16-12	3/4	8.99
6501-16-16	1-5/16-12	1	12.91
6501-20-20	1-5/8-12	1-1/4	38.57
6501-24-24	1-7/8-12	1-1/2	59.41

6501 2250 1247R TF5406

JIC SWIVEL 45° ELBOW

SAE 070321
MS 51522

Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
6502-4	7/16-20	7/16-20	3.10
6502-6	9/16-18	9/16-18	4.45
6502-8	3/4-16	3/4-16	5.01
6502-10	7/8-14	7/8-14	5.93
6502-12	1-1/16-12	1-1/16-12	6.91
6502-16	1-5/16-12	1-5/16-12	14.40
6502-20	1-5/8-12	1-5/8-12	27.19
6502-24	1-7/8-12	1-7/8-12	43.61

6502 2070R V6X 1237 C5356

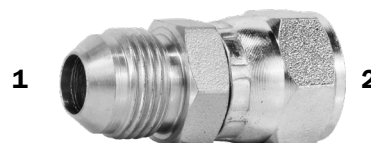
HYDRAULIC ADAPTERS

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
6503-6-6	9/16-18	3/8	10.56
6503-8-8	3/4-16	1/2	11.86
6503-12-12	1-1/16-12	3/4	22.68

JIC SWIVEL CONNECTOR



Part #	JIC Thread Size 1	JIC Thread Size 2	List Price
6504-4-4	7/16-20	7/16-20	3.81
6504-6-4	9/16-18	7/16-20	3.70
6504-6-6	9/16-18	9/16-18	3.81
6504-8-8	3/4-16	3/4-16	4.59
6504-10-10	7/8-14	7/8-14	6.18
6504-12-12	1-1/16-12	1-1/16-12	6.98
6504-16-16	1-5/16-12	1-5/16-12	10.27
6504-20-20	1-5/8-12	1-5/8-12	29.05
6504-24-24	1-7/8-12	1-7/8-12	40.22

6504 1205

JIC SWIVEL TO MALE - PIPE ADAPTER



Part #	JIC Thread Size 1	Male Pipe Thread 2	List Price
6505-4-2	7/16-20	1/8	3.71
6505-4-4	7/16-20	1/4	2.32
6505-4-6	7/16-20	3/8	2.31
6505-6-4	9/16-18	1/4	2.70
6505-6-6	9/16-18	3/8	3.32
6505-8-6	3/4-16	3/8	4.91
6505-8-8	3/4-16	1/2	4.26
6505-10-8	7/8-14	1/2	4.51
6505-12-8	1-1/16-12	1/2	6.93
6505-12-12	1-1/16-12	3/4	6.55
6505-16-16	1-5/16-12	1	10.61
6505-20-20	1-5/8-12	1-1/4	32.18
6505-24-24	1-7/8-12	1-1/2	60.11

6505 2018 F6X 1211 9100R

HYDRAULIC ADAPTERS

JIC SWIVEL TO FEMALE PIPE ADAPTER

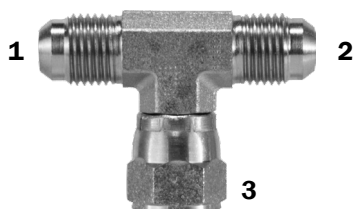


Part #	JIC Thread Size 1	Female Pipe Thread 2	List Price
6506-4-2	7/16-20	1/8	4.81
6506-4-4	7/16-20	1/4	3.89
6506-4-6	7/16-20	3/8	4.56
6506-6-4	9/16-18	1/4	4.22
6506-6-6	9/16-18	3/8	4.40
6506-6-8	9/16-18	1/2	7.44
6506-8-6	3/4-16	3/8	4.94
6506-8-8	3/4-16	1/2	4.53
6506-10-6	7/8-14	3/8	7.21
6506-10-8	7/8-14	1/2	5.97
6506-12-12	1-1/16-12	3/4	9.67
6506-16-16	1-5/16-12	1	13.96
6506-20-20	1-5/8-12	1-1/4	25.31
6506-24-24	1-7/8-12	1-1/2	62.17

6506 2242 1215

JIC SWIVEL BRANCH TEE

SAE 070433
MS 51524



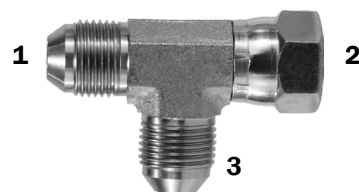
Part #	JIC Thread Size 1 & 2	JIC Female Thread 3	List Price
6600-4-4	7/16-20	7/16-20	4.16
6600-5-5	1/2-20	1/2-20	8.41
6600-6-6	9/16-18	9/16-18	6.19
6600-8-8	3/4-16	3/4-16	6.14
6600-10	7/8-14	7/8-14	9.69
6600-12	1-1/16-12	1-1/16-12	15.29
6600-16	1-5/16-12	1-5/16-12	27.18
6600-20	1-5/8-12	1-5/8-12	35.17
6600-24	1-7/8-12	1-7/8-12	54.71

6600 203101R 65X 1227 C5707

FEMALE SWIVELS

JIC SWIVEL RUN TEE

SAE 070432
MS 51523



Part #	JIC Thread Size 1 & 3	JIC Female Thread 2	List Price
6602-4	7/16-20	7/16-20	3.46
6602-5	1/2-20	1/2-20	5.01
6602-6	9/16-18	9/16-18	4.00
6602-8	3/4-16	3/4-16	5.81
6602-10	7/8-14	7/8-14	10.69
6602-12	1-1/16-12	1-1/16-12	13.07
6602-14	1-3/16-12	1-3/16-12	30.29
6602-16	1-5/16-12	1-5/16-12	24.26
6602-20	1-5/8-12	1-5/8-12	38.13
6602-24	1-7/8-12	1-7/8-12	54.52

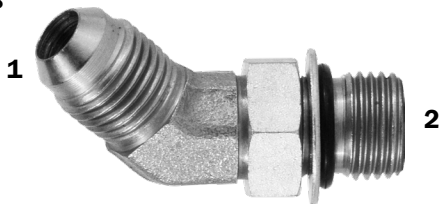
6602 203102R R6X 1248 C5706

NWO = Nut, Washer & O-Ring

STEEL SAE O-RING ADAPTERS**JIC TO O-RING ELBOW CONNECTOR**SAE 070220
MS 51527

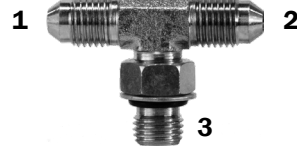
Part #	JIC Thread	O-Ring Thread	List Price
	Size 1	Size 2	
6801-NWO-4	7/16-20	7/16-20	2.35
6801-NWO-4-6	7/16-20	9/16-18	3.33
6801-NWO-4-8	7/16-20	3/4-16	4.44
6801-NWO-5	1/2-20	1/2-20	3.40
6801-NWO-6	9/16-18	9/16-18	2.19
6801-NWO-6-4	9/16-18	7/16-20	3.56
6801-NWO-6-5	9/16-18	1/2-20	3.81
6801-NWO-6-8	9/16-18	3/4-16	4.56
6801-NWO-6-10	9/16-18	7/8-14	7.54
6801-NWO-8	3/4-16	3/4-16	4.15
6801-NWO-8-6	3/4-16	9/16-18	3.70
6801-NWO-8-10	3/4-16	7/8-14	6.73
6801-NWO-8-12	3/4-16	1-1/16-12	9.66
6801-NWO-10	7/8-14	7/8-14	6.13
6801-NWO-10-8	7/8-14	3/4-16	5.34
6801-NWO-10-12	7/8-14	1-1/16-12	7.42
6801-NWO-12	1-1/16-12	1-1/16-12	7.37
6801-NWO-12-10	1-1/16-12	7/8-14	8.22
6801-NWO-12-16	1-1/16-12	1-5/16-12	12.31
6801-NWO-16	1-5/16-12	1-5/16-12	12.98
6801-NWO-16-12	1-5/16-12	1-1/16-12	11.69
6801-NWO-16-14	1-5/16-12	1-3/16-12	12.55
6801-NWO-16-20	1-5/16-12	1-5/8-12	39.62
6801-NWO-20	1-5/8-12	1-5/8-12	22.82
6801-NWO-20-16	1-5/8-12	1-5/16-12	35.67
6801-NWO-24	1-7/8-12	1-7/8-12	40.30

6801 2062R C50X 1238L C5515

JIC TO O-RING 45° ELBOWSAE 070320
MS 51528

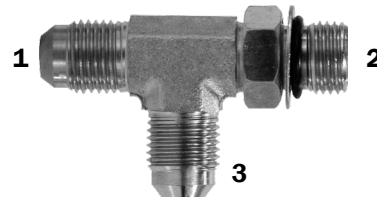
Part #	JIC	O-Ring	List Price
	Thread Size 1	Thread Size 2	
6802-NWO-2	5/16-24	5/16-24	5.45
6802-NWO-4	7/16-20	7/16-20	3.33
6802-NWO-6	9/16-18	9/16-18	3.41
6802-NWO-8	3/4-16	3/4-16	4.74
6802-NWO-8-6	3/4-16	9/16-18	5.16
6802-NWO-8-10	3/4-16	7/8-14	6.78
6802-NWO-10	7/8-14	7/8-14	7.07
6802-NWO-10-8	7/8-14	3/4-16	6.82
6802-NWO-12	1-1/16-12	1-1/16-12	12.83
6802-NWO-16	1-5/16-12	1-5/16-12	16.14
6802-NWO-20	1-5/8-12	1-5/8-12	30.16
6802-NWO-24	1-7/8-12	1-7/8-12	38.23

6802 2061 V50X 1240R C5365

HYDRAULIC ADAPTERS**JIC TO O-RING - BRANCH TEE**SAE 070429
MS 51529

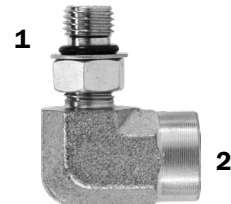
Part #	JIC Thread	O-Ring	List Price
	Size 1 & 2	Thread Size 3	
6803-NWO-4	7/16-20	7/16-20	5.30
6803-NWO-6	9/16-18	9/16-18	5.64
6803-NWO-8	3/4-16	3/4-16	7.35
6803-NWO-10	7/8-14	7/8-14	10.57
6803-NWO-12	1-1/16-12	1-1/16-12	12.61
6803-NWO-16	1-5/16-12	1-5/16-12	22.68
6803-NWO-20	1-5/8-12	1-5/8-12	41.98
6803-NWO-24	1-7/8-12	1-7/8-12	106.37

6803 203003X S50X 1265R C5715

JIC TO O-RING RUN TEESAE 070428
MS 51530

Part #	JIC Thread	O-Ring	List Price
	Size 1 & 3	Thread Size 2	
6804-NWO-4	7/16-20	7/16-20	5.17
6804-NWO-6	9/16-18	9/16-18	7.00
6804-NWO-8	3/4-16	3/4-16	8.29
6804-NWO-10	7/8-14	7/8-14	14.64
6804-NWO-12	1-1/16-12	1-1/16-12	25.89
6804-NWO-16	1-5/16-12	1-5/16-12	23.81
6804-NWO-20	1-5/8-12	1-5/8-12	51.65
6804-NWO-24	1-7/8-12	1-7/8-12	77.14

6804 203005R R50X 1266R C5716

O-RING TO - FEMALE PIPE ELBOW

Part #	O-Ring	Pipe Thread	List Price
	Thread Size 1	Size 2	
6805-NWO-4-4	7/16-20	1/4	4.62
6805-NWO-6-6	9/16-18	3/8	5.63
6805-NWO-8-6	3/4-16	3/8	8.18
6805-NWO-8-8	3/4-16	1/2	8.55
6805-NWO-10-8	7/8-14	1/2	8.63
6805-NWO-12-8	1-1/16-12	1/2	17.37
6805-NWO-12-12	1-1/16-12	3/4	28.38
6805-NWO-16-16	1-5/16-12	1	21.59
6805-NWO-20-20	1-5/8-12	1-1/4	42.42
6805-NWO-24-24	1-7/8-12	1-1/2	90.37

6805 206801R AE0G 1264 C3459

HYDRAULIC ADAPTERS

STEEL O-RING

O-RING TO MALE PIPE ELBOW



Part #	O-Ring Thread Size 1	Pipe Thread Size 2	List Price
6806-NWO-4-4	7/16-20	1/4	3.59
6806-NWO-6-6	9/16-18	3/8	6.90
6806-NWO-8-8	3/4-16	1/2	5.47
6806-NWO-12-12	1-1/16-12	3/4	13.48
6806-NWO-16-16	1-5/16-12	1	23.28
6806-NWO-20-20	1-5/8-12	1-1/4	41.81
6806-NWO-24-24	1-7/8-12	1-1/2	70.12

6806 1263 TF3569

O-RING TO 37° JIC SWIVEL NUT TO O-RING ELBOW



Part #	O-Ring Thread Size 1	JIC Thread Size 2	List Price
6809-NWO-4-4	7/16-20	7/16-20	4.46
6809-NWO-6-6	9/16-18	9/16-18	5.79
6809-NWO-8-8	3/4-16	3/4-16	9.62
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	55.65
6809-NWO-24-24	1-7/8-12	1-7/8-12	76.77

FEMALE O-RING TO MALE O-RING ELBOW



Part #	O-Ring Thread Size 1	O-Ring Thread Size 2	List Price
6815-NWO-4-4	7/16-20	7/16-20	4.77
6815-NWO-6-6	9/16-18	9/16-18	5.42
6815-NWO-6-8	9/16-18	3/4-16	11.62
6815-NWO-8-8	3/4-16	3/4-16	10.00
6815-NWO-10-10	7/8-14	7/8-14	22.20
6815-NWO-12-12	1-1/16-12	1-1/16-12	15.56

MALE O-RING SWIVEL ADAPTER

SAE 140157

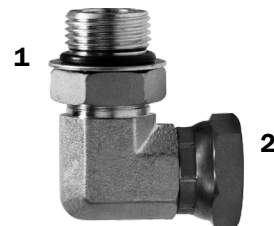


Part #	O-Ring Thread Size 1	Female NPSM Size 2	List Price
6900-O-4-2	7/16-20	1/8	5.08
6900-O-4-4	7/16-20	1/4	1.98
6900-O-6-4	9/16-18	1/4	2.55
6900-O-6-6	9/16-18	3/8	2.60
6900-O-6-8	9/16-18	1/2	4.59
6900-O-8-6	3/4-16	3/8	3.24
6900-O-8-8	3/4-16	1/2	2.84
6900-O-8-12	3/4-16	3/4	5.52
6900-O-10-8	7/8-14	1/2	4.22
6900-O-10-12	7/8-14	3/4	8.40
6900-O-12-8	1-1/16-12	1/2	6.11
6900-O-12-12	1-1/16-12	3/4	5.49
6900-O-16-16	1-5/16-12	1	13.07
6900-O-20-20	1-5/8-12	1-1/4	22.06
6900-O-24-20	1-7/8-12	1-1/4	22.05
6900-O-24-24	1-7/8-12	1-1/2	64.05

6900 2066R 1235 9315

90° O-RING SWIVEL ADAPTER

SAE 140257

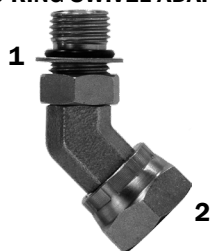


Part #	O-Ring Thread Size 1	Female NPSM Size 2	List Price
6901-NWO-4-4	7/16-20	1/4	3.49
6901-NWO-6-4	9/16-18	1/4	4.97
6901-NWO-6-6	9/16-18	3/8	4.87
6901-NWO-6-8	9/16-18	1/2	7.53
6901-NWO-8-4	3/4-16	1/4	7.14
6901-NWO-8-6	3/4-16	3/8	4.71
6901-NWO-8-8	3/4-16	1/2	5.90
6901-NWO-8-12	3/4-16	3/4	11.31
6901-NWO-10-6	7/8-14	3/8	6.34
6901-NWO-10-8	7/8-14	1/2	7.08
6901-NWO-12-6	1-1/16-12	3/8	12.22
6901-NWO-12-8	1-1/16-12	1/2	14.86
6901-NWO-12-12	1-1/16-12	3/4	13.38
6901-NWO-16-12	1-5/16-12	3/4	19.44
6901-NWO-16-16	1-5/16-12	1	20.63
6901-NWO-20-20	1-5/8-12	1-1/4	38.89
6901-NWO-24-24	1-7/8-12	1-1/2	111.33

6401 2068R 1271 9515

STEEL SAE O-RING**45° O-RING SWIVEL ADAPTER**

SAE 140357



Part #	O-Ring Thread Size 1	Female NPSM Size 2	List Price
6902-NWO-4-4	7/16-20	1/4	8.03
6902-NWO-6-4	9/16-18	1/4	7.48
6902-NWO-6-6	9/16-18	3/8	6.37
6902-NWO-8-6	3/4-16	3/8	8.36
6902-NWO-8-8	3/4-16	1/2	9.33
6902-NWO-10-8	7/8-14	1/2	12.17
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-16-16	1-5/16-12	1	20.00
6902-NWO-20-20	1-5/8-12	1-1/4	94.43

6902 2067R 1272 9365

HYDRAULIC ADAPTERS**NITRILE 90 SAE BOSS O-RING**

Part #	O-Ring Thread	List Price
4000-2-2	5/16-24	0.26
4000-3-3	3/8-24	0.24
4000-4-4	7/16-20	0.27
4000-5-5	1/2-20	0.34
4000-6-6	9/16-18	0.34
4000-8-8	3/4-16	0.34
4000-10	7/8-14	0.42
4000-12	1-1/16-12	1.54
4000-14	1-3/16-12	0.57
4000-16	1-5/16-12	0.77
4000-20	1-5/8-12	1.04
4000-24	1-7/8-12	1.08
4000-32	2-1/2-12	1.47

O-RINGS**VITON 75 SAE BOSS O-RING**

Fluorocarbon



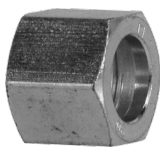
Part #	O-Ring Thread	List Price
4001-2-2	5/16-24	0.78
4001-3-3	3/8-24	0.92
4001-4-4	7/16-20	1.02
4001-5-5	1/2-20	1.02
4001-6-6	9/16-18	0.89
4001-8-8	3/4-16	1.17
4001-10	7/8-14	1.41
4001-12	1-1/16-12	1.86
4001-16	1-5/16-12	2.15
4001-20	1-5/8-12	3.86
4001-24	1-7/8-12	9.89
4001-32	2-1/2-12	13.65

HYDRAULIC ADAPTERS

O-RING FACE SEAL ADAPTERS

BRAZE TUBE NUT (SLEEVE REQUIRED)

SAE 520110



Part #	Tube O.D.	Braze Tube O.D.	List Price
FSO318-4	1/4	.25	0.83
FSO318-6	3/8	.38	1.45
FSO318-8	1/2	.50	1.28
FSO318-10	5/8	.62	3.25
FSO318-12	3/4	.72	4.56
FSO318-16	1	1.00	7.09
FSO318-20	1 1/4	1.25	5.98
FSO318-24	1 1/2	1.50	9.37

FF318 FF1311

BRAZE TUBE SLEEVE

SAE 520115



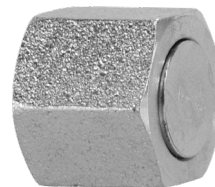
Part #	Tube O.D.	List Price
FSO319-4	1/4	0.95
FSO319-6	3/8	0.83
FSO319-8	1/2	1.00
FSO319-10	5/8	1.82
FSO319-12	3/4	1.68
FSO319-16	1	3.66
FSO319-20	1-1/4	3.76
FSO319-24	1-1/2	4.58

FF319 FF3019

See Page 414 for JIC Nut and Sleeve

CAP

SAE 520112



• Two Piece
Nut/ Insert

Part #	Tube O.D.	Face Seal Thread	List Price
FSO304-C-4	1/4	9/16-18	1.87
FSO304-C-6	3/8	11/16-16	2.04
FSO304-C-8	1/2	13/16-16	3.52
FSO304-C-10	5/8	1-14	3.80
FSO304-C-12	3/4	1-3/16-12	4.63
FSO304-C-16	1	1-7/16-12	7.16
FSO304-C-20	1-1/4	1-11/16-12	15.52
FSO304-C-24	1-1/2	2-12	13.43

FF304C

BULKHEAD LOCKNUT

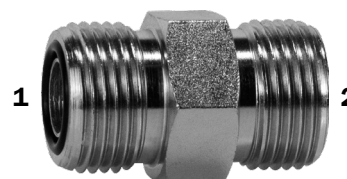
SAE 520118



Part #	Thread Size	List Price
FSO306-4	9/16-18	1.22
FSO306-6	11/16-16	2.17
FSO306-8	13/16-16	2.49
FSO306-10	1-14	4.00
FSO306-12	1-3/16-12	4.92
FSO306-16	1-7/16-12	5.92
FSO306-20	1-11/16-12	15.58
FSO306-24	2-12	6.17

MALE UNION CONNECTOR

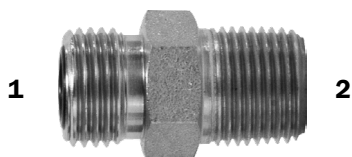
SAE 520102



Part #	Tube O.D.	Face Seal Thread 1&2	List Price
FSO2403-4-4	1/4	9/16-18	2.71
FSO2403-6-6	3/8	11/16-16	3.86
FSO2403-8-8	1/2	13/16-16	4.13
FSO2403-12-12	3/4	1-3/16-12	9.22
FSO2403-16-16	1	1-7/16-12	11.96
FSO2403-20-20	1-1/4	1-11/16-12	15.56
FSO2403-24-24	1-1/2	2-12	26.45

FF403

FF2403 FF1203

O-RING FACE SEAL ADAPTERS**MALE O-RING FACE SEAL ADAPTER**

Part #	Face Seal Thread 1	Male Pipe Size 2	List Price
FSO2404-4-4	9/16-18	1/4-18	1.81
FSO2404-6-2	11/16-16	1/8-27	2.33
FSO2404-6-4	11/16-16	1/4-18	2.52
FSO2404-6-6	11/16-16	3/8-18	2.94
FSO2404-8-4	13/16-16	1/4-18	3.38
FSO2404-8-8	13/16-16	1/2-14	4.23
FSO2404-10-8	1-14	1/2-14	7.76
FSO2404-12-8	1-3/16-12	1/2-14	5.99
FSO2404-12-12	1-3/16-12	3/4-14	7.76
FSO2404-16-12	1-7/16-12	3/4-14	6.10
FSO2404-16-16	1-7/16-12	1-11-1/2	9.09
FSO2404-20-20	1-11/16-12	1-1/4-11-1/2	10.38

FF2404 4205 FLO

FEMALE ORFS TO MALE ORFS REDUCER

Part #	Female Face Seal Size 1	Male Face Seal Thread 2	List Price
FSO2406-6-4	11/16-16	9/16-18	9.15
FSO2406-8-4	13/16-16	9/16-18	19.38
FSO2406-10-6	1-14	11/16-16	24.00
FSO2406-10-8	1-14	13/16-16	7.25
FSO2406-12-6	1-3/16-12	11/16-16	8.33
FSO2406-12-8	1-3/16-12	13/16-16	24.63
FSO2406-16-12	1-7/16-12	1-3/16-12	12.86
FSO2406-20-12	1-11/16-12	1-3/16-12	21.00
FSO2406-20-16	1-11/16-12	1-7/16-12	23.33
FSO2406-24-20	2-12	1-11/16-12	32.01

FF2406 TRLON

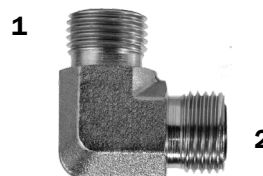
HYDRAULIC ADAPTERS**PLUG**

SAE 520109



Part #	Tube O.D.	Face Seal Thread	List Price
FSO2408-4	1/4	9/16-18	1.88
FSO2408-6	3/8	11/16-16	1.59
FSO2408-8	1/2	13/16-16	1.67
FSO2408-10	5/8	1-14	2.46
FSO2408-12	3/4	1-3/8-12	3.49
FSO2408-16	1	1-7/16-12	5.90
FSO2408-20	1-1/4	1-11/16-12	9.07
FSO2408-24	1-1/2	2-12	10.00

FF2408 FF1254 4229 PNLO

ORFS UNION ELBOW 90°

Part #	Face Seal Thread 1	Face Seal Thread 2	List Price
FS2500-4-4	9/16-18	9/16-18	3.34
FS2500-6-6	11/16-16	11/16-16	4.24
FS2500-10-10	1-14	1-14	6.86
FS2500-12-12	1-3/16-12	1-3/16-12	14.39
FS2500-16-16	1-7/16-12	1-7/16-12	13.00
FS2500-20-20	1-11/16-12	1-11/16-12	25.29
FS2500-24-24	2-12	2-12	62.75

FF2500 4505 ELO

ORFS TO MALE ELBOW

SAE 520202

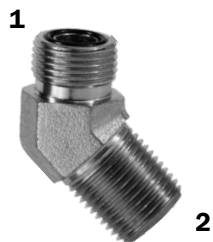


Part #	Face Seal Thread 1	Male Pipe Thread 2	List Price
FS2501-4-4	9/16-18	1/4	4.07
FS2501-6-4	11/16-16	1/4	5.95
FS2501-6-6	11/16-16	3/8	4.21
FS2501-8-6	13/16-16	3/8	5.14
FS2501-8-8	13/16-16	1/2	7.08
FS2501-10-8	1-14	1/2	7.39
FS2501-12-8	1-3/8-12	1/2	9.56
FS2501-12-12	1-3/8-12	3/4	10.39
FS2501-16-12	1-7/16-12	3/4	12.41
FS2501-16-16	1-7/16-12	1	15.22
FS2501-20-20	1-11/16-12	1-1/4	25.83
FS2501-24-24	2-12	1-1/2	35.97

FF2501 FF1208 4405 CLO

HYDRAULIC ADAPTERS

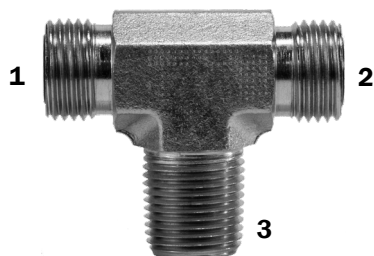
ORFS TO PIPE ELBOW 45°



Part #	Face Seal Thread 1	Male Pipe Thread 2	List Price
FS2503-4-4	9/16-18	1/4	4.87
FS2503-6-6	11/16-16	3/8	6.94
FS2503-8-8	13/16-16	1/2	5.05
FS2503-12-12	1-3/16-12	3/4	8.84
FS2503-16-16	1-7/16-12	1	17.14

FF2503 4355 VLO

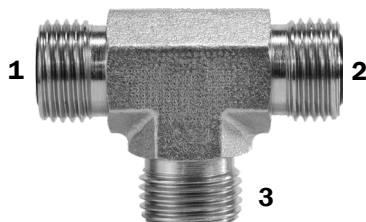
ORFS TO PIPE BRANCH TEE



Part #	Face Seal Thread 1+2	Male Pipe Thread 3	List Price
FS2601-4-4	9/16-18	1/4-18	10.53
FS2601-6-6	11/16-16	3/8-18	9.15
FS2601-8-8	13/16-16	1/2-14	12.48
FS2601-12-12	1-3/16-12	3/4-14	24.15
FS2601-16-16	1-7/16-12	1-11-1/2	44.43

FF2601

ORFS UNION TEE

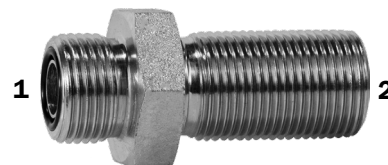


Part #	Face Seal Thread 1+2+3	List Price
FS2603-4-4	9/16-18	5.14
FS2603-6-6	11/16-16	7.05
FS2603-8-8	13/16-16	7.43
FS2603-12-12	1-3/16-12	16.14
FS2603-16-16	1-7/16-12	21.14
FS2603-20-20	1-11/16-12	32.29
FS2603-24-24	2-12	70.45

FF2603 4705 JLO

O-RING FACE SEAL ADAPTERS

ORFS BULKHEAD UNION

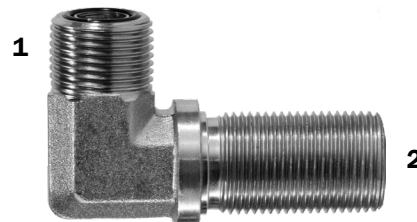


Part #	Face Seal Thread 1+2	List Price
FS2700-4-4	9/16-18	2.68
FS2700-6-6	11/16-16	3.43
FS2700-8-8	13/16-16	6.43
FS2700-12-12	1-3/16-12	9.56
FS2700-16-16	1-7/16-12	16.75
FS2700-20-20	1-11/16-12	18.90
FS2700-24-24	2-12	28.10

• Locknut not included on Bulkhead fittings

FF2700 WLO

ORFS BULKHEAD UNION 90°

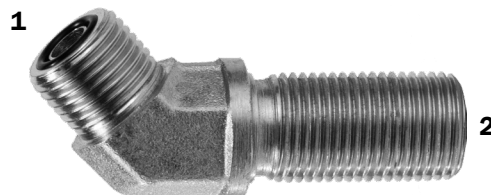


Part #	Face Seal Thread 1+2	List Price
FS2701-4-4	9/16-18	4.71
FS2701-6-6	11/16-16	6.96
FS2701-8-8	13/16-16	7.86
FS2701-12-12	1-3/16-12	15.58
FS2701-16-16	1-7/16-12	20.53
FS2701-20-20	1-11/16-12	28.05
FS2701-24-24	2-12	45.29

• Locknut not included on Bulkhead fittings

FF2701 4525 WELO

ORFS BULKHEAD UNION 45°



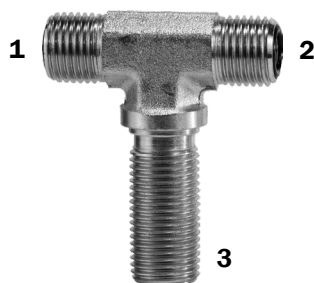
Part #	Face Seal Thread 1+2	List Price
FS2702-4-4	9/16-18	5.29
FS2702-6-6	11/16-16	7.00
FS2702-16-16	1-7/16-12	33.56
FS2702-20-20	1-11/16-12	28.05

• Locknut not included on Bulkhead fittings

FF2702 4375 WNLO

O-RING FACE SEAL ADAPTERS

ORFS BULKHEAD UNION BRANCH TEE



Part #	Face Seal Thread 1+2+3	List Price
FS2703-4	9/16-18	8.77
FS2703-6	11/16-16	12.05
FS2703-8	13/16-16	13.09
FS2703-12	1-3/16-12	19.95
FS2703-16	1-7/16-12	26.57
FS2703-20	1-11/16-12	44.95

• Locknut not included on Bulkhead Fittings

FF2703 WJLO

ORFS BULKHEAD UNION RUN TEE

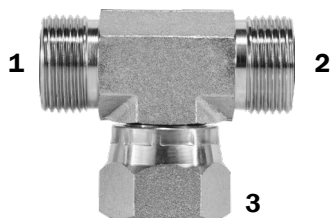


Part #	Face Seal Thread 1+2+3	List Price
FS2704-4-4	9/16-18	8.58
FS2704-6-6	11/16-16	22.56
FS2704-8-8	13/16-16	10.86
FS2704-12-12	1-3/16-12	26.91
FS2704-16-16	1-7/16-12	27.95
FS2704-20-20	1-11/16-12	44.95

• Locknut not included on Bulkhead Fittings

FF2704 WJLO

ORFS TO FEMALE SWIVEL BRANCH TEE



Part #	Face Seal Thread 1+2	Female JIC 3	List Price
FS6600-4-4	9/16-18	9/16-18	7.05
FS6600-6-6	11/16-16	11/16-16	8.38
FS6600-8-8	13/16-16	13/16-16	25.17
FS6600-12-12	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

FF6600 S6LO

HYDRAULIC ADAPTERS

ORFS TO JIC SWIVEL RUN TEE

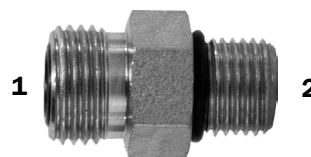


Part #	Face Seal Thread 1+3	Female Face Seal 2	List Price
FS6602-4-4	9/16-18	9/16-18	6.81
FS6602-6-6	11/16-16	11/16-16	10.11
FS6602-8-8	13/16-16	13/16-16	14.12
FS6602-12-12	1-3/16-12	1-3/16-12	31.31
FS6602-16-16	1-7/16-12	1-7/16-12	31.05
FS6602-20-20	1-11/16-12	1-11/16-12	44.90
FS6602-24-24	2-12	2-12	75.81

FF6602 R6LO

MALE ORFS TO ORB CONNECTOR

SAE 520120



Part #	Face Seal Thread 1	O-Ring Thread 2	List Price
FS6400-O-4-4	9/16-18	7/16-20	1.93
FS6400-O-4-6	9/16-18	9/16-18	1.99
FS6400-O-6-4	11/16-16	7/16-20	4.03
FS6400-O-6-6	11/16-16	9/16-18	1.72
FS6400-O-6-8	11/16-16	3/4-16	2.95
FS6400-O-8-6	13/16-16	9/16-18	3.62
FS6400-O-8-8	13/16-16	3/4-16	3.41
FS6400-O-8-10	13/16-16	7/8-14	4.02
FS6400-O-10-8	1-14	3/4-16	4.95
FS6400-O-10-10	1-14	7/8-14	5.76
FS6400-O-12-8	1-3/16-12	3/4-16	5.93
FS6400-O-12-10	1-3/16-12	7/8-14	6.62
FS6400-O-12-12	1-3/16-12	1-1/16-12	4.35
FS6400-O-12-16	1-3/16-12	1-5/16-12	8.71
FS6400-O-16-12	1-7/16-12	1-1/16-12	8.97
FS6400-O-16-16	1-7/16-12	1-5/16-12	9.19
FS6400-O-20-20	1-11/16-12	1-5/8-12	15.35
FS6400-O-24-24	2-12	1-7/8-12	20.74

4315 FF6400 FF1231

MALE FLAT FACE TO FEMALE 37 ° SWIVEL



Part #	Face Seal Thread 1	JIC Thread 2	List Price
FS6402-4-4	9/16-18	7/16-20	3.81
FS6402-6-6	11/16-16	9/16-18	7.05
FS6402-8-8	13/16-16	3/4-16	5.61
FS6402-10-10	1-14	7/8-14	7.10
FS6402-12-12	1-3/16-12	1-1/16-12	49.52
FS6402-16-16	1-7/16-12	1-5/16-12	29.58

FF6402 FF1294

HYDRAULIC ADAPTERS

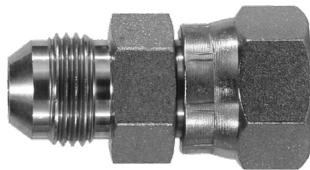
SWIVEL NUT ELBOW



Part #	Face Seal Thread 1	Face Seal Thread 2	List Price
FS6500-4-4	9/16-18	9/16-18	6.24
FS6500-6-6	11/16-16	11/16-16	6.24
FS6500-8-8	13/16-16	13/16-16	9.48
FS6500-10-10	1-14	1-14	11.43
FS6500-12-12	1-3/16-12	1-3/16-12	16.53
FS6500-16-16	1-7/16-12	1-7/16-12	24.23
FS6500-20-20	1-11/16-12	1-11/16-12	34.66
FS6500-24-24	2-12	2-12	50.22

FF6500 FF1236

MALE JIC 37° FLARE TO FEMALE FLAT FACE SWIVEL



Part #	JIC Thread Size 1	Face Seal Thread 2	List Price
FS6504-4-4	7/16-20	9/16-18	6.60
FS6504-6-6	9/16-18	11/16-16	6.69
FS6504-8-8	3/4-16	13/16-16	6.66
FS6504-10-10	7/8-14	1-14	30.70
FS6504-12-12	1-1/16-12	1-3/16-12	11.07
FS6504-16-16	1-5/16-12	1-7/16-12	53.74

FF6504 FF1296

O-RING ELBOW CONNECTOR

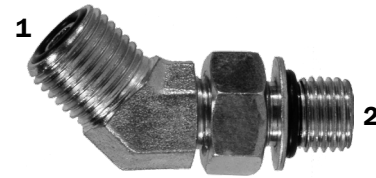


Part #	Face Seal Thread 1	O-Ring Thread 2	List Price
FS6801-4-4	9/16-18	7/16-20	4.23
FS6801-6-4	11/16-16	7/16-20	4.86
FS6801-6-6	11/16-16	9/16-18	5.44
FS6801-8-6	13/16-16	9/16-18	5.44
FS6801-8-8	13/16-16	3/4-16	5.58
FS6801-8-10	13/16-16	7/8-14	9.44
FS6801-10-8	1-14	3/4-16	9.00
FS6801-10-10	1-14	7/8-14	10.21
FS6801-12-12	1-3/16-12	1-1/16-12	15.39
FS6801-16-16	1-7/16-12	1-5/16-12	23.43
FS6801-20-20	1-11/16-12	1-5/8-12	25.85
FS6801-24-24	2-12	1-7/8-12	34.58

FF6801 FF1238 4515

O-RING FACE SEAL ADAPTERS

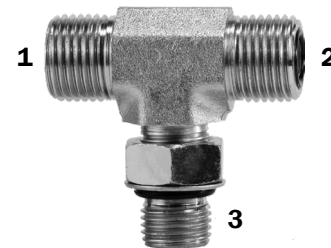
ORFS TO O-RING ELBOW 45°



Part #	Face Seal Thread 1	O-Ring Size 2	List Price
FS6802-4-4	9/16-18	7/16-20	4.18
FS6802-6-6	11/16-16	9/16-18	6.24
FS6802-8-8	13/16-16	3/4-16	7.43
FS6802-10-10	1-14	7/8-14	10.48
FS6802-12-12	1-3/16-12	1-1/16-12	13.34
FS6802-16-16	1-7/16-12	1-5/16-12	22.29
FS6802-20-20	1-11/16-12	1-5/8-12	23.76
FS6802-24-24	2-12	1-7/8-12	38.76

FF6802 4365 V5OLO

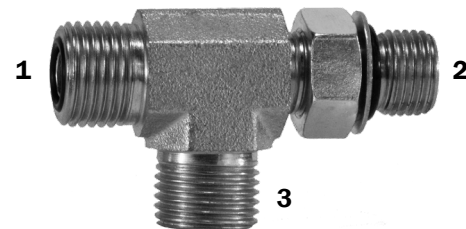
ORFS TO O-RING BRANCH TEE



Part #	Face Seal Thread 1 + 2	O-Ring Size 3	List Price
FS6803-4-4	9/16-18	7/16-20	7.62
FS6803-6-6	11/16-16	9/16-18	10.05
FS6803-8-8	13/16-16	3/4-16	11.62
FS6803-12-12	1-3/16-12	1-1/16-12	20.13
FS6803-16-16	1-7/16-12	1-5/16-12	28.52
FS6803-20-20	1-11/16-12	1-5/8-12	46.52
FS6803-24-24	2-12	1-7/8-12	70.48

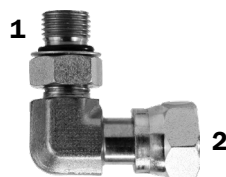
FF6803 4715 SJOLO

ORFS TO O-RING RUN TEE



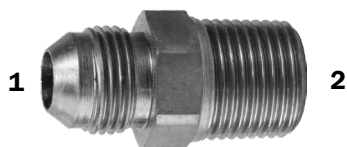
Part #	Face Seal Size 1	O-Ring Size 2	Face Seal Size 3	List Price
FS6804-4-4	9/16-18	7/16-20	9/16-18	7.86
FS6804-6-6	11/16-16	9/16-18	11/16-16	18.61
FS6804-8-8	13/16-16	3/4-16	13/16-16	12.05
FS6804-12-12	1-3/16-12	1-1/16-12	1-3/16-12	21.05
FS6804-16-16	1-7/16-12	1-5/16-12	1-7/16-12	28.52
FS6804-20-20	1-11/16-12	1-5/8-12	1-11/16-12	46.52
FS6804-24-24	2-12	1-7/8-12	2-12	70.40

FF6804 4716 KJOLO

STEEL BSPT ADAPTERS**STRAIGHT THREAD SWIVEL NUT ELBOW**

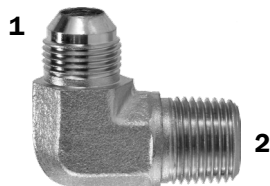
Part #	O-Ring Thread 1	Face Seal Thread 2	List Price
FS6809-4-4	7/16-20	9/16-18	7.81
FS6809-6-6	9/16-18	11/16-16	8.24
FS6809-8-8	3/4-16	13/16-16	9.72
FS6809-12-12	1-1/16-12	1-3/16-12	22.52
FS6809-16-16	1-5/16-12	1-7/16-12	25.13

FF6809 FF1239 4535 AOELC

STEEL BSPT ADAPTERS**JIC MALE CONNECTOR BSPT**

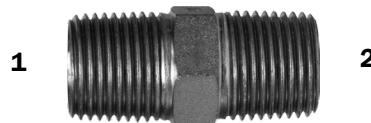
Part #	JIC Thread Size 1	Male BSPT 2	List Price
7000-4-2	7/16-20	1/8-28	7.86
7000-4-4	7/16-20	1/4-19	8.09
7000-6-4	9/16-18	1/4-19	12.26
7000-6-6	9/16-18	3/8-19	9.55
7000-6-8	9/16-18	1/2-14	22.55
7000-8-6	3/4-16	3/8-19	9.67
7000-8-8	3/4-16	1/2-14	10.33
7000-8-12	3/4-16	3/4-14	24.60
7000-10-8	7/8-14	1/2-14	18.10
7000-10-12	7/8-14	3/4-14	21.77
7000-12-8	1-1/16-12	1/2-14	31.96
7000-12-12	1-1/16-12	3/4-14	15.63
7000-16-16	1-5/16-12	1-11	45.75
7000-20-20	1-5/8-12	1-1/4-11	150.48

3404 305

JIC MALE ELBOW BSPT

Part #	JIC Thread Size 1	Male BSPT 2	List Price
7200-4-2	7/16-20	1/8-28	20.35
7200-4-4	7/16-20	1/4-19	14.54
7200-6-4	9/16-18	1/4-19	18.52
7200-6-6	9/16-18	3/8-19	22.76
7200-6-8	9/16-18	1/2-14	41.73
7200-8-6	3/4-16	3/8-19	28.53
7200-8-8	3/4-16	1/2-14	20.37
7200-12-12	1-1/16-12	3/4-14	28.00
7200-16-16	1-5/16-12	1-11	80.86

3501 315

HYDRAULIC ADAPTERS**BSPT HEX NIPPLE**

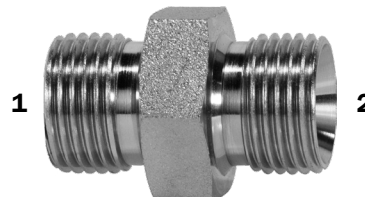
Part #	Male BSPT 1	Male BSPT 2	List Price
7520-2-2	1/8-28	1/8-28	17.08
7520-4-4	1/4-19	1/4-19	4.80
7520-6-6	3/8-19	3/8-19	13.74
7520-8-8	1/2-14	1/2-14	15.24
7520-10-10	5/8-14	5/8-14	39.46
7520-12-12	3/4-14	3/4-14	23.74

3520 MBT

BSPT PLUG

Part #	BSPT	List Price
9508-2	1/8-28	8.26
9508-4	1/4-19	5.95
9508-6	3/8-19	6.37
9508-8	1/2-14	11.11
9508-12	3/4-14	24.18
9508-16	1-11	27.33

100B-Y KA-RM MHL 296

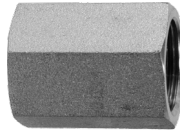
STEEL BSPP ADAPTERS**BSPP HEX NIPPLE**

Part #	Male BSPP 1	Male BSPP 2	List Price
7420-2-2	1/8-28	1/8-28	14.64
7420-4-2	1/4-19	1/8-28	11.43
7420-6-4	3/8-19	1/4-19	10.88
7420-6-6	3/8-19	3/8-19	14.22
7420-8-6	1/2-14	3/8-19	14.29
7420-8-8	1/2-14	1/2-14	18.19
7420-10-8	5/8-14	1/2-14	24.49
7420-12-8	3/4-14	1/2-14	24.04
7420-12-12	3/4-14	3/4-14	31.42
7420-16-12	1-11	3/4-14	36.04
7420-16-16	1-11	1-11	53.56

3420 MB 9022

HYDRAULIC ADAPTERS

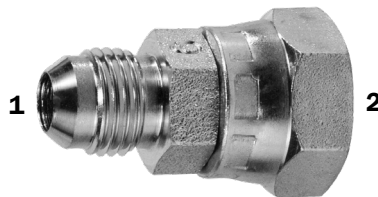
BSPP COUPLING



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

3425 FB

JIC TO FEMALE BSPP STRAIGHT SWIVEL



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

3240 MJFBS

JIC TO BSPP MALE ELBOW



Part #	JIC Thread Size 1	Male BSPP 2	List Price
7202-NWO-4-2	7/16-20	1/8-28	40.67
7202-NWO-4-4	7/16-20	1/4-19	31.93
7202-NWO-6-4	9/16-18	1/4-19	16.17
7202-NWO-6-6	9/16-18	3/8-19	24.10
7202-NWO-6-8	9/16-18	1/2-14	32.25
7202-NWO-8-6	3/4-16	3/8-19	24.79
7202-NWO-8-8	3/4-16	1/2-14	35.14
7202-NWO-8-12	3/4-16	3/4-14	47.60
7202-NWO-10-8	7/8-14	1/2-14	40.04
7202-NWO-12-12	1-1/16-12	3/4-14	31.07
7202-NWO-12-16	1-1/16-12	1-11	91.43
7202-NWO-16-16	1-5/16-12	1-11	56.92

3801 315

STEEL BSPP ADAPTERS

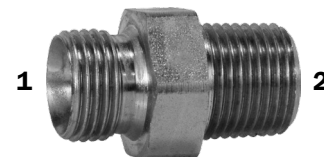
JIC TO BSPP 45° ELBOW



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

3802 35J

BSPP TO MALE PIPE NIPPLE



Part #	Male BSPP Size 1	Male Pipe Thread Size 2	List Price
7825-2	1/8-28	1/8	10.15
7825-4	1/4-19	1/4	5.66
7825-6	3/8-19	3/8	11.02
7825-8	1/2-14	1/2	12.67
7825-12	3/4-14	3/4	11.70
7825-16	1-11	1	21.83

MBMP 3825

JIC TO BSPP MALE CONNECTOR



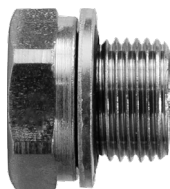
Part #	JIC Thread Size 1	Male BSPP 2	List Price
7002-4-2	7/16-20	1/8-28	7.14
7002-4-4	7/16-20	1/4-19	8.33
7002-4-6	7/16-20	3/8-19	8.08
7002-4-8	7/16-20	1/2-14	31.74
7002-6-4	9/16-18	1/4-19	6.00
7002-6-6	9/16-18	3/8-19	9.50
7002-6-8	9/16-18	1/2-14	7.86
7002-8-6	3/4-16	3/8-19	7.47
7002-8-8	3/4-16	1/2-14	10.10
7002-8-12	3/4-16	3/4-14	21.37
7002-10-8	7/8-14	1/2-14	19.11
7002-12-12	1-1/16-12	3/4-14	11.57
7002-12-16	1-1/16-12	1-11	31.84
7002-16-16	1-5/16-12	1-11	30.10

30J 3800

STEEL BSPP 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	20.42
7022-6-4	9/16-18	1/4-19	24.27
7022-6-6	9/16-18	3/8-19	17.67
7022-8-6	3/4-16	3/8-19	21.70
7022-8-8	3/4-16	1/2-14	17.91
7022-10-8	7/8-14	1/2-14	20.18
7022-12-12	1-1/16-12	3/4-14	50.15
7022-16-16	1-5/16-12	1-11	89.94

3402 3055

HEX HEAD PLUG BSPP

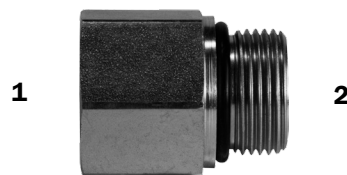
Part #	Male BSPP	List Price
9522-P-2	1/8-28	4.23
9522-P-4	1/4-19	3.60
9522-P-6	3/8-19	5.24
9522-P-8	1/2-14	6.17
9522-P-12	3/4-14	9.80
9522-P-16	1-11	20.39

3408

HOLLOW HEX PLUG BSPP

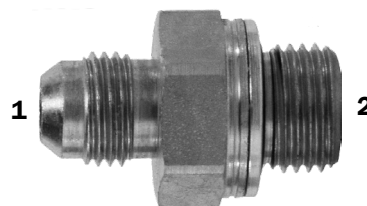
Part #	Male BSPP	List Price
9522-H-2	1/8-28	4.07
9522-H-4	1/4-19	4.57
9522-H-6	3/8-19	7.30
9522-H-8	1/2-14	11.17
9522-H-12	3/4-14	16.77
9522-H-16	1-11	43.58

3408 HHP

HYDRAULIC ADAPTERS**FEMALE ADAPTER BSPP**

Part #	Female Pipe 1	Male BSPP 2	List Price
7042-2-2	1/8	1/8-28	7.87
7042-4-2	1/4	1/8-28	20.95
7042-4-4	1/4	1/4-19	12.76
7042-6-6	3/8	3/8-19	16.43
7042-8-8	1/2	1/2-14	28.57
7042-12-12	3/4	3/4-14	31.43
7042-16-16	1	1-11	38.94

3455 MMFP

STEEL METRIC ADAPTERS**MALE CONNECTOR**

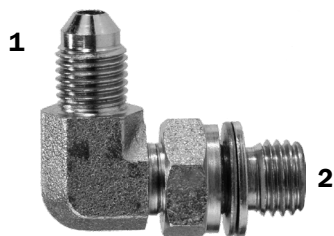
Part #	JIC Thread Size 1	Metric Thread 2	List Price
7005-4-10	7/16-20	10x1.0	7.14
7005-4-12	7/16-20	12x1.5	8.23
7005-4-14	7/16-20	14x1.5	8.47
7005-4-18	7/16-20	18x1.5	12.10
7005-5-12	1/2-20	12x1.5	12.38
7005-5-14	1/2-20	14x1.5	70.07
7005-6-14	9/16-18	14x1.5	7.30
7005-6-16	9/16-18	16x1.5	10.27
7005-6-18	9/16-18	18x1.5	13.07
7005-8-16	3/4-16	16x1.5	8.44
7005-8-18	3/4-16	18x1.5	10.27
7005-8-22	3/4-16	22x1.5	13.77
7005-10-18	7/8-14	18x1.5	13.54
7005-10-20	7/8-14	20x1.5	15.40
7005-10-22	7/8-14	22x1.5	17.61
7005-12-22	1-1/16-12	22x1.5	30.77
7005-12-27	1-1/16-12	27x1.5	47.00

Port-seal crush washer and O-ring included

7400 30J (R) 7011

HYDRAULIC ADAPTERS

MALE ELBOW



Part #	JIC Thread Size 1	Metric Thread 2	List Price
7205-NWO-4-10	7/16-20	10x1.0	29.93
7205-NWO-4-12	7/16-20	12x1.5	36.38
7205-NWO-4-14	7/16-20	14x1.5	23.13
7205NWO-5-12	1/2-20	12x1.5	59.81
7205-NWO-6-14	9/16-18	14x1.5	44.76
7205-NWO-6-16	9/16-18	16x1.5	33.91
7205-NWO-8-16	3/4-16	16x1.5	39.69
7205-NWO-8-18	3/4-16	18x1.5	13.10
7205-NWO-8-22	3/4-16	22x1.5	24.00
7205-NWO-10-18	7/8-14	18x1.5	20.80

Port-seal crush washer and O-ring included

7801 315 (R)

STRAIGHT SWIVEL



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	57.45
7025-5-12	1/2-20	12x1.5	29.75
7025-6-14	9/16-18	14x1.5	29.36
7025-6-16	9/16-18	16x1.5	27.21
7025-8-16	3/4-16	16x1.5	79.72
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

7402 30JS (R)

HEX HEAD PLUG METRIC PARALLEL



Part #	Metric Thread	List Price
8555-P-10	10x1.0	1.93
8555-P-12	12x1.5	8.69
8555-P-14	14x1.5	12.11
8555-P-16	16x1.5	2.46
8555-P-18	18x1.5	20.64
8555-P-20	20x1.5	4.00
8555-P-22	22x1.5	4.66
8555-P-26	26x1.5	20.72
8555-P-30	30x1.5	56.01

7408

STEEL METRIC ADAPTERS

HOLLOW HEX HEAD PLUG
METRIC PARALLEL

Part #	Metric Thread	List Price
8555-H-10	10x1.0	4.23
8555-H-12	12x1.5	3.50
8555-H-14	14x1.5	6.41
8555-H-16	16x1.5	10.60
8555-H-18	18x1.5	12.23
8555-H-20	20x1.5	17.95
8555-H-22	22x1.5	10.56
8555-H-26	26x1.5	55.65
8555-H-30	30x1.5	35.78

7408 HHP

FEMALE ADAPTER



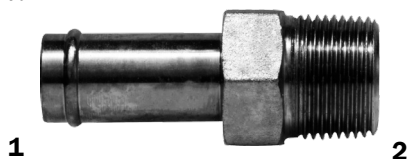
Part #	Female Pipe Thread 1	Metric Thread 2	List Price
7045-2-10	1/8	10x1.0	9.23
7045-4-12	1/4	12x1.5	19.89
7045-4-14	1/4	14x1.5	21.77
7045-6-12	3/8	12x1.5	33.06
7045-6-16	3/8	16x1.5	27.21
7045-6-18	3/8	18x1.5	18.74
7045-8-16	1/2	16x1.5	52.96
7045-8-18	1/2	18x1.5	27.65
7045-8-22	1/2	22x1.5	20.77
7045-12-27	3/4	27x2.0	51.88
7045-16-33	1	33x2.0	76.98

MMFP (R)

STEEL BEADED HOSE INSERTS

MALE PIPE HOSE INSERT

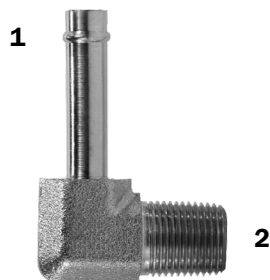
SAE 430160



Part #	Hose I.D. 1	Pipe Thread 2	List Price
4404-4-4	1/4	1/4	2.89
4404-6-6	3/8	3/8	3.44
4404-8-8	1/2	1/2	3.14
4404-12-12	3/4	3/4	6.72
4404-16-16	1	1	10.26
4404-20-16	1-1/4	1	20.19
4404-20-20	1-1/4	1-1/4	18.83
4404-24-24	1-1/2	1-1/2	26.67

90° PIPE HOSE INSERT

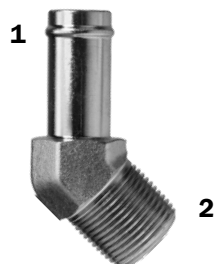
SAE 430260



Part #	Hose I.D. 1	Pipe Thread 2	List Price
4501-4-4	1/4	1/4	5.24
4501-6-6	3/8	3/8	4.76
4501-8-6	1/2	3/8	5.02
4501-8-8	1/2	1/2	7.04
4501-10-8	5/8	1/2	6.25
4501-12-12	3/4	3/4	6.33
4501-16-12	1	3/4	11.26
4501-16-16	1	1	9.11
4501-20-20	1-1/4	1-1/4	24.88
4501-24-24	1-1/2	1-1/2	45.15

45° PIPE HOSE INSERT

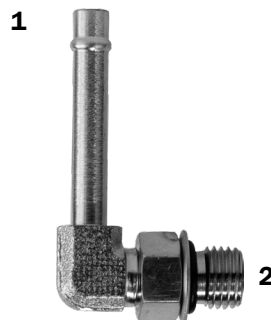
SAE 430360



Part #	Hose I.D. 1	Pipe Thread 2	List Price
4503-12-12	3/4	3/4	9.07
4503-16-16	1	1	18.49
4503-20-20	1-1/4	1-1/4	35.79

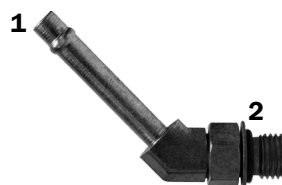
HYDRAULIC ADAPTERS

90° O-RING HOSE INSERT



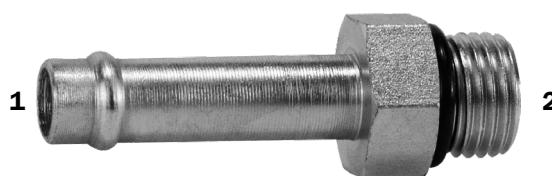
Part #	Hose I.D. 1	O-Ring Thread 2	List Price
4601-NWO-4	1/4	7/16-20	4.00
4601-NWO-6	3/8	9/16-18	5.59
4601-NWO-8	1/2	3/4-16	6.57
4601-NWO-12	3/4	1-1/16-12	10.83
4601-NWO-16	1	1-5/16-12	16.62
4601-NWO-20	1-1/4	1-5/8-12	26.92
4601-NWO-24	1-1/2	1-7/8-12	48.47

45° O-RING HOSE INSERT



Part #	Hose I.D. 1	O-Ring Thread 2	List Price
4603-NWO-4	1/4	7/16-20	8.43
4603-NWO-6	3/8	9/16-18	6.39
4603-NWO-8	1/2	3/4-16	10.25
4603-NWO-10	5/8	7/8-14	9.55
4603-NWO-12	3/4	1-1/12-12	10.56
4603-NWO-16	1	1-5/16-12	15.25
4603-NWO-20	1-1/4	1-5/8-12	32.14
4603-NWO-24	1-1/2	1-7/8-12	39.21

O-RING HOSE INSERT



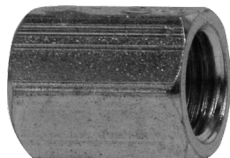
Part #	Hose I.D. 1	O-Ring Thread 2	List Price
4604-O-4	1/4	7/16-20	3.92
4604-O-6	3/8	9/16-18	4.39
4604-O-8	1/2	3/4-16	5.33
4604-O-12	3/4	1-1/16-12	12.70
4604-O-16	1	1-5/16-12	10.29
4604-O-20	1-1/4	1-5/8-12	19.38
4604-O-24	1-1/2	1-7/8-12	38.52

HYDRAULIC ADAPTERS

FLARELESS BITE-TYPE STEEL

TUBE NUT

SAE 080110



Part #	Tube O.D	JIC Thread Size	List Price
C318-2	1/8	5/16-24	2.45
C318-4	1/4	7/16-20	4.20
C318-6	3/8	9/16-18	1.52
C318-8	1/2	3/4-16	2.99
C318-12	3/4	1-1/16-12	5.72
C318-16	1	1-5/16-12	11.80

7105 BU-S

TUBE SLEEVE

SAE 08011SA



Part #	Tube O.D	List Price
C319-2	1/8	3.19
C319-4	1/4	3.92
C319-6	3/8	10.24
C319-8	1/2	3.08
C319-12	3/4	21.63
C319-16	1	8.40

TU-S 7165

UNION

SAE 080101



Part #	Tube Size	List Price
C2403-2-2	1/8	58.74
C2403-4-4	1/4	13.15
C2403-6-6	3/8	29.89
C2403-8-8	1/2	19.18
C2403-12-12	3/4	34.71
C2403-16-16	1	52.90

7305 HBU-S

• Fittings are single ferrule

MALE CONNECTOR

SAE 080102

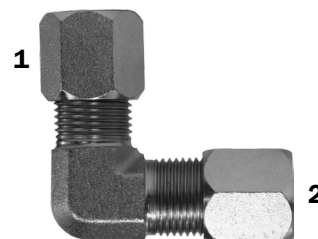


Part #	Tube Size 1	Male Pipe Thread 2	List Price
C2404-2-2	1/8	1/8	10.64
C2404-4-4	1/4	1/4	4.93
C2404-6-4	3/8	1/4	10.43
C2404-6-6	3/8	3/8	22.82
C2404-8-6	1/2	3/8	12.56
C2404-8-8	1/2	1/2	7.50
C2404-12-12	3/4	3/4	28.92
C2404-16-16	1	1	40.63

FBU-S 7205

UNION ELBOW

SAE 080201

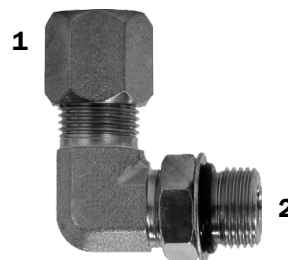


Part #	Tube Size	List Price
C2500-2-2	1/8	26.48
C2500-4-4	1/4	12.95
C2500-6-6	3/8	18.57
C2500-8-8	1/2	49.91
C2500-12-12	3/4	49.31
C2500-16-16	1	65.96

7505 EBU-S

MALE ELBOW

SAE 080202
ms 51504



Part #	Tube Size 1	Male Pipe Size 2	List Price
C2501-4-2	1/4	1/8	10.31
C2501-4-4	1/4	1/4	12.73
C2501-6-4	3/8	1/4	11.27
C2501-6-6	3/8	3/8	15.75
C2501-6-8	3/8	1/2	23.39
C2501-8-8	1/2	1/2	23.59
C2501-12-12	3/4	3/4	38.61
C2501-16-16	1	1	48.42

7405 CBU-S

FLARELESS BITE-TYPE STEEL

FEMALE ELBOW

SAE 080203

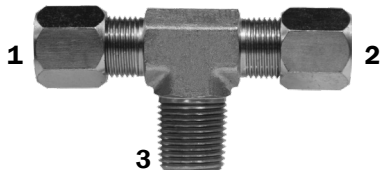


Part #	Tube Size 1	Female Pipe Size 2	List Price
C2502-4-4	1/4	1/4	18.90
C2502-6-4	3/8	1/4	18.57
C2502-6-6	3/8	3/8	21.60
C2502-8-8	1/2	1/2	27.30
C2502-12-12	3/4	3/4	41.83
C2502-16-16	1	1	77.88

7455 DBU-S

MALE BRANCH TEE

SAE 080425

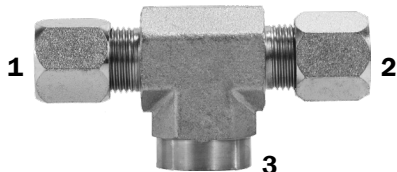


Part #	Tube Size 1&2	Pipe Thread Size 3	List Price
C2601-2-2	1/8	1/8	33.78
C2601-4-2	1/4	1/8	18.16
C2601-4-4	1/4	1/4	27.48
C2601-8-8	1/2	1/2	39.36
C2601-12-12	3/4	3/4	55.93
C2601-16-16	1	1	133.53

SBU-S 7605

FEMALE BRANCH TEE

SAE 080427



Part #	Tube Size 1+2	Female Pipe Size 3	List Price
C2602-4-4	1/4	1/4	28.25
C2602-6-4	3/8	1/4	30.21
C2602-6-6	3/8	3/8	47.48
C2602-8-8	1/2	1/2	35.00
C2602-12-12	3/4	3/4	60.73
C2602-16-16	1	1	200.25

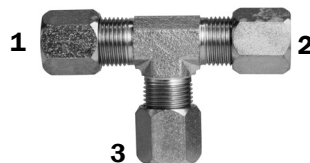
7655 OBU-S

• Fittings are single ferrule

HYDRAULIC ADAPTERS

UNION TEE

SAE 080401

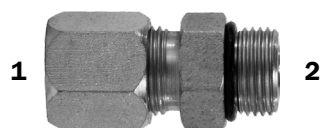


Part #	Tube Size	List Price
C2603-2-2	1/8	55.65
C2603-4-4	1/4	21.86
C2603-6-6	3/8	28.47
C2603-8-8	1/2	34.18
C2603-12-12	3/4	61.78
C2603-16-16	1	119.19

7705 JBU-S

MALE O-RING CONNECTOR

SAE 080120

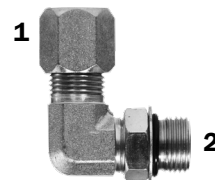


Part #	Tube Size	O-Ring Thread 2	List Price
C6400-4-4	1/4	7/16-20	8.82
C6400-6-6	3/8	9/16-18	11.22
C6400-8-8	1/2	3/4-16	19.96
C6400-8-10	1/2	7/8-14	16.10
C6400-12-12	3/4	1-1/16-12	31.62
C6400-16-16	1	1-5/16-12	63.52

7315 F5B-J

O-RING ELBOW CONNECTOR

SAE 080220

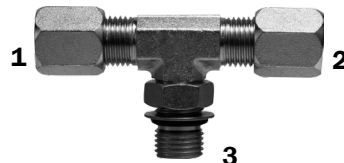


Part #	Tube Size 1	O-Ring Thread Size 2	List Price
C6801-4-4	1/4	7/16-20	15.34
C6801-6-6	3/8	9/16-18	20.59
C6801-8-8	1/2	3/4-16	20.84
C6801-12-12	3/4	1-1/16-12	34.05
C6801-16-16	1	1-5/16-12	45.80

7515 C5BU-S

MALE O-RING BRANCH TEE

SAE 080429



Part #	Tube Size Size 1 & 2	O-Ring Thread Size 3	List Price
C6803-4-4	1/4	7/16-20	33.48
C6803-6-6	3/8	9/16-18	30.93
C6803-8-8	1/2	3/4-16	41.83

7715 S5BU-S

HYDRAULIC ADAPTERS

- Double Ferule bite-type
- Material 316SS
- Metal to Metal

TUBE NUT



STAINLESS
STEEL

Part #	Tube O.D	Thread Size	List Price
SSC318-2	1/8	5/16-24	6.56
SSC318-4	1/4	7/16-20	4.83
SSC318-6	3/8	9/16-18	8.29
SSC318-8	1/2	3/4-16	12.97
SSC318-12	3/4	1-1/16-12	18.15
SSC318-16	1	1-5/16-12	34.61

SLEEVE SET



STAINLESS
STEEL

- Front and Back sold as a set

Part #	Tube O.D	List Price
SSC320-2	1/8	9.37
SSC320-4	1/4	5.91
SSC320-6	3/8	5.98
SSC320-8	1/2	10.38
SSC320-12	3/4	14.68
SSC320-16	1	29.33

TUBE UNION



STAINLESS
STEEL

Part #	Tube Size	List Price
SSC2403-4-4	1/4	31.60
SSC2403-6-6	3/8	42.72
SSC2403-8-8	1/2	92.13
SSC2403-12-12	3/4	102.77
SSC2403-16-16	1	143.95

- Reducers available upon request

SS = Stainless Steel (316)

STAINLESS STEEL FLARELESS BITE-TYPE

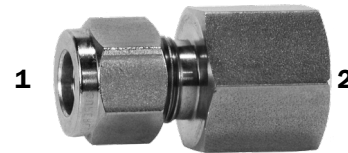
MALE CONNECTOR



STAINLESS
STEEL

Part #	Tube Size 1	Male Pipe Thread 2	List Price
SSC2404-4-2	1/4	1/8	14.97
SSC2404-4-4	1/4	1/4	22.91
SSC2404-4-8	1/4	1/2	31.55
SSC2404-6-4	3/8	1/4	33.40
SSC2404-6-6	3/8	3/8	48.84
SSC2404-6-8	3/8	1/2	49.48
SSC2404-8-8	1/2	1/2	44.29
SSC2404-12-12	3/4	3/4	54.38
SSC2404-16-16	1	1	95.58

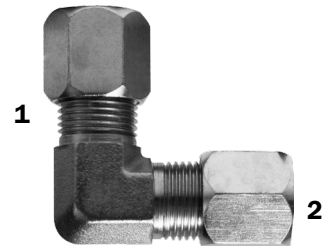
FEMALE CONNECTOR



STAINLESS
STEEL

Part #	Tube O.D. 1	Thread Size 2	List Price
SSC2405-4-2	1/4	1/8	24.77
SSC2405-4-4	1/4	1/4	25.22
SSC2405-6-2	3/8	1/8	31.25
SSC2405-6-6	3/8	3/8	49.50
SSC2405-6-8	3/8	1/2	53.06
SSC2405-8-4	1/2	1/4	83.99
SSC2405-8-6	1/2	3/8	82.18
SSC2405-8-8	1/2	1/2	124.23
SSC2405-12-12	3/4	3/4	207.27
SSC2405-16-16	1	1	170.12

UNION ELBOW

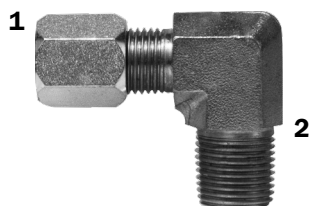


STAINLESS
STEEL

Part #	Tube Size	List Price
SSC2500-2-2	1/8	32.70
SSC2500-4-4	1/4	69.10
SSC2500-6-6	3/8	42.91
SSC2500-8-8	1/2	126.33
SSC2500-12-12	3/4	154.15
SSC2500-16-16	1	237.74

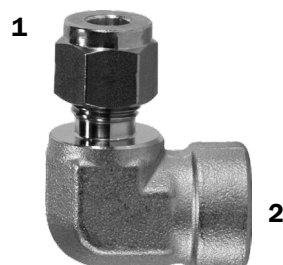
STAINLESS STEEL BITE-TYPE

MALE ELBOW

STAINLESS
STEEL

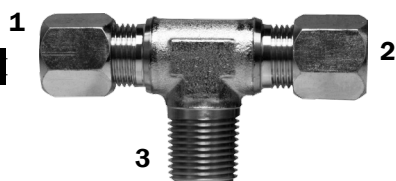
Part #	Tube Size 1	Male Pipe Size 2	List Price
SSC2501-4-2	1/4	1/8	37.84
SSC2501-4-4	1/4	1/4	38.62
SSC2501-6-2	3/8	1/8	37.92
SSC2501-6-4	3/8	1/4	36.92
SSC2501-6-6	3/8	3/8	54.65
SSC2501-6-8	3/8	1/2	56.88
SSC2501-8-4	1/2	1/4	52.16
SSC2501-8-6	1/2	3/8	52.16
SSC2501-8-8	1/2	1/2	75.60
SSC2501-12-12	3/4	3/4	79.14
SSC2501-16-16	1	1	154.15

FEMALE ELBOW

STAINLESS
STEEL

Part #	Tube Size 1	Female Pipe Size 2	List Price
SSC2502-4-4	1/4	1/4	45.19
SSC2502-6-4	3/8	1/4	42.91
SSC2502-6-6	3/8	3/8	42.18
SSC2502-8-8	1/2	1/2	78.33
SSC2502-12-12	3/4	3/4	136.97
SSC2502-16-16	1	1	154.63

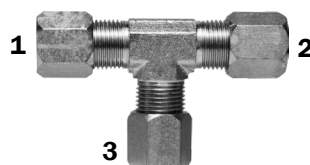
MALE BRANCH TEE

STAINLESS
STEEL

Part #	Tube Size 1&2	Pipe Thread Size 3	List Price
SSC2601-2-2	1/8	1/8	52.88
SSC2601-4-4	1/4	1/4	60.86
SSC2601-6-4	3/8	1/4	64.36
SSC2601-6-6	3/8	3/8	69.12
SSC2601-8-8	1/2	1/2	104.54

HYDRAULIC ADAPTERS

UNION TEE

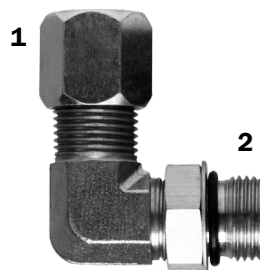
STAINLESS
STEEL

Part #	Tube Size	List Price
SSC2603-2-2	1/8	52.88
SSC2603-4-4	1/4	105.06
SSC2603-6-6	3/8	64.36
SSC2603-8-8	1/2	224.42
SSC2603-12-12	3/4	146.44
SSC2603-16-16	1	313.79

O-RING ELBOW CONNECTOR

SAE 080220

C5BU-SS

STAINLESS
STEEL

Part #	Tube Size 1	O-Ring Thread Size 2	List Price
SSC6801-4-4	1/4	7/16-20	145.91
SSC6801-6-6	3/8	9/16-18	63.86
SSC6801-8-8	1/2	3/4-16	130.11
SSC6801-12-12	3/4	1-1/16-12	166.90
SSC6801-16-16	1	1-5/16-12	287.59

HYDRAULIC ADAPTERS

QUICK DISCONNECT



- Brass Body
- Steel Wing Nut
- Buna-Seal (-40° to +250°F)

Aeroquip 5100
Parker 6100
Snaptite B78



- Bonded Face Seal
- External ORing Alleviates Full Connection

Part #	Body Size	Female NPT	Max PSI	List Price
61-150	3/4	1/2	3000	56.45
61-152	3/4	3/4	3000	56.45
61-153	1	1	3000	71.16
61-154	1-1/4	1-1/4	2750	98.74
61-155	1-1/2	1-1/2	2500	151.28

Part #	Body Size	Female NPT	Max PSI	List Price
61-050	3/4	1/2	3000	56.45
61-052	3/4	3/4	3000	56.45
61-053	1	1	3000	67.61
61-054	1-1/4	1-1/4	2750	98.74
61-055	1-1/2	1-1/2	2500	151.28

FEATURES - ISO A and ISO B

- Poppet valves to prevent uncoupled leakage
- Critical parts are induction hardened for durability
- Dependable ball-locking mechanism holds the mating halves together
- Socket and plug are precision machined from solid barstock
- Standard nitrile seals temp range -40°F to +250°F

ISO 7241-1 ISO-A Interchange (Connected)				
Body Size	Steel Coupler/ Plug			
	Maximum Working		Burst	
	PSI	Bar	PSI	Bar
1/4"	5,000	345	18,270	1,200
3/8"	4,000	275	18,270	1,200
1/2"	4,000	275	16,500	1,100
3/4"	4,000	275	14,800	1,000
1"	4,000	275	12,400	850

INTERCHANGE DATA:

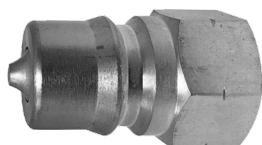
- Parker 6600, Aeroquip/ Eaton FD56, Dixon 'K' Series.
- Hansen HA 15000, Safeway S56

ISO 7241-1 Series B ISO-B Interchange (Connected)								
Body Size	Steel Coupler/ Plug				Brass Coupler/ Plug			
	Max. Working		Burst		Max. Working		Burst	
	PSI	Bar	PSI	Bar	PSI	Bar	PSI	Bar
1/4"	5,000	345	22,500	1,550	3,000	200	15,000	1,000
3/8"	4,000	275	16,500	1,150	2,500	175	12,000	800
1/2"	4,000	275	16,000	1,100	2,500	175	11,500	750
3/4"	4,000	275	16,500	1,150	2,000	150	12,000	800
1"	4,000	275	16,000	1,100	1,500	100	8,500	800

INTERCHANGE DATA:

- Parker 60 Series, Snap-tite 72 series, Dixon 'H' series
- Hansen HK - series, Aeroquip/ Eaton FDH5

B=BRASS



BRASS - HNV SERIES PLUG



BRASS - HNV SERIES COUPLER

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-A FEMALE PIPE PLUG

Part #	Body Size	NPT	List Price
ANV-14-M	1/4"	1/4"	4.53
ANV-38-M	3/8"	3/8"	6.38
ANV-12-M	1/2"	1/2"	7.34
ANV-34-M	3/4"	3/4"	10.95
ANV-1-M	1"	1"	18.65

ISO-B FEMALE PIPE COUPLER

Part #	Body Size	NPT	List Price
HNV-14-F	1/4"	1/4"	11.46
HNV-14-F-B	1/4"	1/4"	19.05
HNV-38-F	3/8"	3/8"	12.00
HNV-38-F-B	3/8"	3/8"	30.48
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"	72.06
HNV-1-F	1"	1"	44.73
HNV-1-F-B	1"	1"	112.92

ISO-B FEMALE PIPE PLUG

Part #	Body Size	NPT	List Price
HNV-14-M	1/4"	1/4"	5.40
HNV-14-M-B	1/4"	1/4"	9.01
HNV-38-M	3/8"	3/8"	6.64
HNV-38-M-B	3/8"	3/8"	13.33
HNV-12-M	1/2"	1/2"	7.81
HNV-12-M-B	1/2"	1/2"	22.61
HNV-34-M	3/4"	3/4"	13.75
HNV-34-M-B	3/4"	3/4"	27.05
HNV-1-M	1"	1"	23.63
HNV-1-M-B	1"	1"	40.95

QUICK DISCONNECT**HYDRAULIC ADAPTERS****FEATURES**

- Steel construction, zinc plated trivalent finish. Hardened Nipples and sleeves and solid barstock construction for maximum resistance to damage from hydraulic and mechanical shock.
- This Anti-Blowout Nitrile/ PTFE bonded seal is designed to prevent blow out or damage during severe service conditions.
- Durable ball-locking mechanism assures reliable connection everytime.
- Temp Range -65° to +250°

ISO 16028

Body Size	FLUSH FACE			
	<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

FF Series
HTMC
74C

**FEMALE PIPE COUPLER**

Part #	Body Size	NPT	List Price
FF-14-F	1/4"	1/4"	34.15
FF-38-F	3/8"	3/8"	45.53
FF-12-F	1/2"	1/2"	50.27
FF-3812-F	3/8"	1/2"	42.60
FF-1234-F	1/2"	3/4"	60.63
FF-3416-F	3/4"	1"	78.86
FF-34-F	3/4"	3/4"	61.11
FF-1-F	1"	1"	96.61

FF Series
HTMN
74N

**FEMALE PIPE PLUG**

Part #	Body Size	NPT	List Price
FF-14-M	1/4"	1/4"	20.31
FF-38-M	3/8"	3/8"	22.97
FF-12-M	1/2"	1/2"	24.86
FF-3812-M	3/8"	1/2"	18.93
FF-1234-M	1/2"	3/4"	30.27
FF-3416-M	3/4"	1"	41.50
FF-34-M	3/4"	3/4"	25.62
FF-1-M	1"	1"	49.67

FLAT FACE THREAD LOCK - VEP QUICK COUPLING**APPLICATIONS**

- Widely used in public equipment
- Portable construction equipment.
- Hydraulic tools
- Vehicles

FEATURES

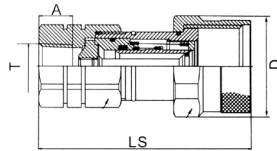
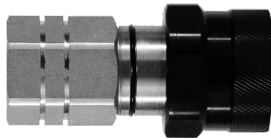
- New valve design provides better resistance from high flow and the pressure of impulse, thus providing advanced performance.
- Special nipple design for connecting under pressure, allows connection and disconnection with high residual pressures.
- The LSQ-VEP series employs a threaded sleeve locking mechanism, mates with matching male threads on the coupler.
- New plating treatment provides advanced anti-rust performance.
- LSQ-VEP series couplings employ flush valving when connecting or disconnecting, therefore only a small amount of fluid can be lost during disconnecting or air inclusion during reconnection.
- The Anti-Blowout bonded seal is designed to prevent blow-out or damage during severe service conditions.
- Machined form solid steel barstock for durability. Compatible with most other VEP series.
- **O-Ring SAE Boss Thread available with import lead time (same list price)**

SPECIFICATIONS

Body Size (in)	1/2(12)	3/4(34)	1(1)	1-1/2(24)
Rated Pressure (PSI)	7000	7000	6000	5000
Rated Flow (GPM)	12	50	88	152
Temperature Range	-20°C +120°C			

Standard seal material is **NBR**

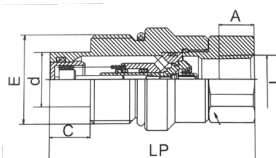
Test Fluid-Oil = 200 SUS

**FEMALE COUPLER**

Part #	LS	D	A	NPT	List Price
LSQ-VEP-12-SF	4.09	1.13	0.67	1/2	168.37
LSQ-VEP-34-SF	4.49	2.13	0.79	3/4	218.97
LSQ-VEP-1-SF	5.28	2.33	0.83	1	277.48
LSQ-VEP-20-SF	5.71	2.72	0.83	1-1/4	320.85
LSQ-VEP-24-SF	7.41	3.63	0.83	1-1/2	682.91

FEMALE PLUG

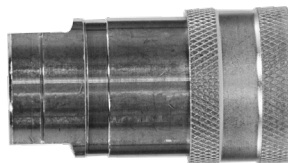
Part #	LS	D	A	NPT	List Price
LSQ-VEP-12-PF	4.09	1.13	0.67	1/2	168.37
LSQ-VEP-34-PF	4.49	2.13	0.79	3/4	197.30
LSQ-VEP-1-PF	5.28	2.33	0.83	1	227.63
LSQ-VEP-20-PF	5.71	2.72	0.83	1-1/4	320.85
LSQ-VEP-24-PF	7.41	3.63	0.83	1-1/2	652.73



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"	10.43
NV-38-F	3/8"	3/8"	11.75
NV-12-F	1/2"	1/2"	32.14
NV-34-F	3/4"	3/4"	53.57
NV-1-F	1"	1"	72.07

FEMALE PIPE PLUG

Part #	Body Size	NPT	List Price
NV-14-M	1/4"	1/4"	3.76
NV-38-M	3/8"	3/8"	9.75
NV-12-M	1/2"	1/2"	14.62
NV-34-M	3/4"	3/4"	27.10
NV-1-M	1"	1"	40.13

FEATURES

- Heavy duty heat treated poppet: valves are standard with rugged, specially-designed seals made of nitrite for leak-free performance in the toughest application.
- High-strength steel valve guides designed for high flow rates and made extra tough for agricultural service.
- Dependable hardened chrome alloy steel locking balls. Heat treated plugs and sleeves.
- Standard seals temp range -40°F to +250°F

THREAD LOCK HYDRAULIC JACK COUPLING

SPECIFICATIONS

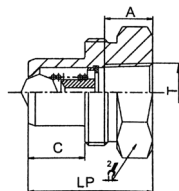
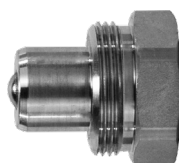
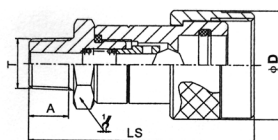
Body Size	1/4(14)	3/8(38)
Rated Pressure	10,000	
Rated Flow (GPM)	3	6
Temperature Range	-20°C +120°C	

Standard seal material is **NBR**

APPLICATIONS

- Thread lock couplings with their threaded union locking system and precision ball-type check valves are designed for extreme high pressure applications such as portable hydraulic jacks.

• Ball Type.

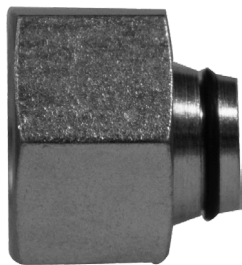


MALE COUPLER

Part #	LS	D	Hex	A	NPT	List Price
KZE-B-14-SM	2.40	1.14	0.87	0.55	1/4	22.60
KZE-B-38-SM	2.91	1.38	0.98	0.57	3/8	23.74

FEMALE COUPLER

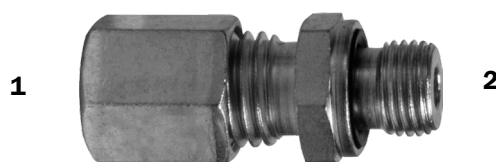
Part #	LS	D	Hex	A	NPT	List Price
KZE-B-14-PF	1.30	0.44	0.75	0.51	1/4	10.74
KZE-B-38-PF	1.38	0.63	1.26	0.55	3/8	11.34

DIN 2353 METRIC**TUBE PLUG - INSERT/NUT**

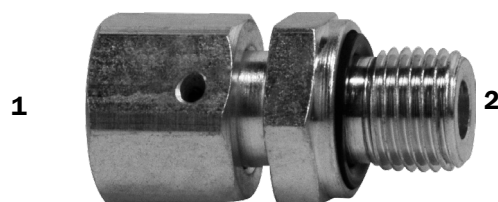
Part #	Tube 1 - MM	Size 2	List Price
8003-L06	6	M12 X 1.5	4.70
8003-L08	8	M14 X 1.5	7.66
8003-L10	10	M16 X 1.5	5.40
8003-L12	12	M18 X 1.5	5.67
8003-L15	15	M22 X 1.5	8.91
8003-L18	18	M26 X 1.5	16.68
8003-L22	22	M30 X 2.0	21.12
8003-L28	28	M36 X 2.0	27.46
8003-L35	35	M45 X 2.0	54.43
8003-L42	42	M52 X 2.0	70.84
8003-S06	6	M14 X 1.5	4.67
8003-S08	8	M16 X 1.5	5.67
8003-S10	10	M18 X 1.5	7.22
8003-S12	12	M22 X 1.5	7.93
8008-S16	16	M26 X 1.5	7.54
8003-S20	20	M30 X 2.0	18.92
8003-S25	25	M36 X 2.0	29.38
8003-S30	30	M45 X 2.0	48.90
8003-S38	38	M52 X 2.0	80.29

TUBE CAP 24° INNER CORE

Part #	Tube 1 - MM	Size 2	List Price
8004-L08	8	M14 X 1.5	9.60
8004-L10	10	M16 X 1.5	10.60
8004-L12	12	M18 X 1.5	10.55
8004-L15	15	M22 X 1.5	18.40
8004-L18	18	M26 X 1.5	25.72
8004-L22	22	M30 X 2.0	34.64
8004-L28	28	M36 X 2.0	52.91
8004-S06	6	M14 X 1.5	10.04
8004-S08	8	M16 X 1.5	11.32
8004-S10	10	M18 X 1.5	13.16
8004-S12	12	M22 X 1.5	16.18
8004-S16	16	M26 X 1.5	24.16
8004-S20	20	M30 X 2.0	31.08

HYDRAULIC ADAPTERS**PARALLELL MALE STUD COUPLING**

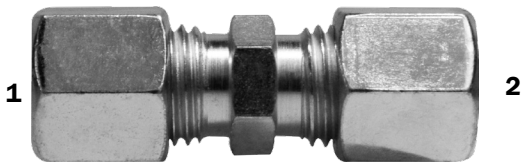
Part #	Tube 1 - MM	Size 2	List Price
8031-L06-10	6	M10 X 1.0	7.30
8031-L08-12	8	M12 X 1.5	7.43
8031-L10-14	10	M14 X 1.5	8.68
8031-L12-16	12	M16 X 1.5	10.32
8031-L15-18	15	M18 X 1.5	13.98
8031-L18-22	18	M22 X 1.5	18.40
8031-L22-26	22	M26 X 1.5	25.43
8031-L28-33	28	M33 X 2.0	44.65
8031-L35-42	35	M42 X 2.0	83.25
8031-L42-48	42	M48 X 2.0	120.33
8031-S06-12	6	M12 X 1.5	8.12
8031-S08-14	8	M14 X 1.5	8.55
8031-S10-16	10	M16 X 1.5	12.88
8031-S12-18	12	M18 X 1.5	12.15
8031-S16-22	16	M22 X 1.5	18.64
8031-S20-27	20	M27 X 2.0	25.43
8031-S25-33	25	M33 X 2.0	52.01
8031-S30-42	30	M42 X 2.0	100.49
8031-S38-48	38	M48 X 2.0	91.07

DIN MALE STUD BSPP

Part #	Tube 1 - MM	Size 2 BSPP	List Price
8046-L08-04	8	1/4	8.17
8046-L10-04	10	1/4	8.94
8046-L12-06	12	3/8	9.45
8046-L15-08	15	1/2	14.61
8046-L22-12	22	3/4	42.59
8046-L28-16	28	1-1/8	57.81
8046-L35-20	35	1-1/4	118.53
8046-L42-24	42	1-1/2	147.23
8046-S10-06	10	1/4	11.27
8046-S12-06	12	3/8	12.15
8046-S16-08	16	1/2	20.74
8046-S20-12	20	3/4	36.09

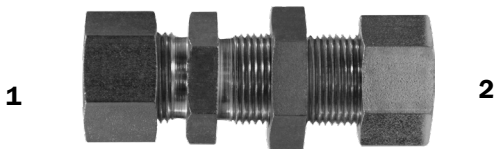
L = LIGHT PATTERN S = HEAVY PATTERN

UNION COUPLING



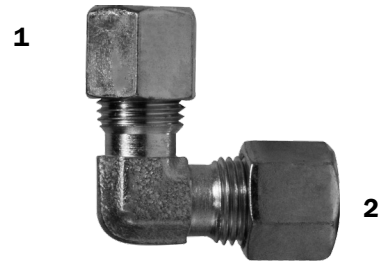
Part #	Tube 1 - MM	Tube 2 - MM	List Price
8060-L08-08	8	8	7.78
8060-L10-10	10	10	9.33
8060-L12-12	12	12	11.05
8060-L15-15	15	15	16.54
8060-L18-18	18	18	22.94
8060-L22-22	22	22	31.99
8060-L28-28	28	28	45.97
8060-L35-35	35	35	71.15
8060-L42-42	42	42	97.06
8060-S06-06	6	6	10.23
8060-S08-08	8	8	9.92
8060-S10-10	10	10	11.84
8060-S12-12	12	12	13.84
8060-S16-16	16	16	25.72
8060-S20-20	20	20	36.56
8060-S25-25	25	25	56.72
8060-S30-30	30	30	80.02

BULKHEAD STRAIGHT COUPLING



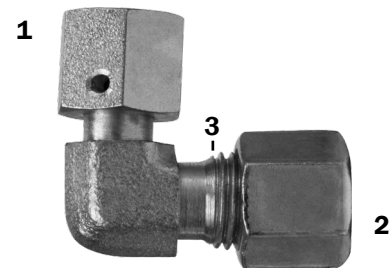
Part #	Tube 1 - MM	Tube 2 - MM	List Price
8061-LN-L08-08	8	8	11.48
8061-LN-L10-10	10	10	13.70
8061-LN-L12-12	12	12	17.36
8061-LN-L15-15	15	15	23.89
8061-LN-L18-18	18	18	36.87
8061-LN-L22-22	22	22	81.84
8061-LN-L28-28	28	28	110.11
8061-LN-L35-35	35	35	153.08
8061-LN-L42-42	42	42	214.68
8061-LN-S06-06	6	6	25.95
8061-LN-S08-08	8	8	29.70
8061-LN-S10-10	10	10	17.23
8061-LN-S12-12	12	12	21.62
8061-LN-S16-16	16	16	35.78
8061-LN-S20-20	20	20	88.61
8061-LN-S25-25	25	25	112.36
8061-LN-S30-30	30	30	165.09
8061-LN-S38-38	38	38	216.68

UNION ELBOW



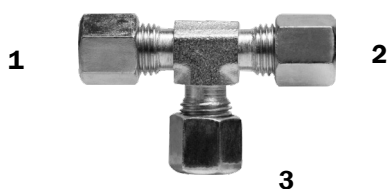
Part #	Tube 1 - MM	Tube 2 - MM	List Price
8260-L08-08	8	8	15.36
8260-L10-10	10	10	17.50
8260-L12-12	12	12	20.34
8260-L15-15	15	15	26.54
8260-L18-18	18	18	52.73
8260-L22-22	22	22	50.46
8260-L28-28	28	28	74.12
8260-L35-35	35	35	111.68
8260-L42-42	42	42	151.95
8260-S06-06	6	6	16.14
8260-S08-08	8	8	17.83
8260-S10-10	10	10	19.92
8260-S12-12	12	12	23.30
8260-S16-16	16	16	37.01
8260-S20-20	20	20	54.14
8260-S25-25	25	25	78.42
8260-S30-30	30	30	113.24
8260-S38-38	38	38	161.25

DIN SWIVEL NUT ELBOW

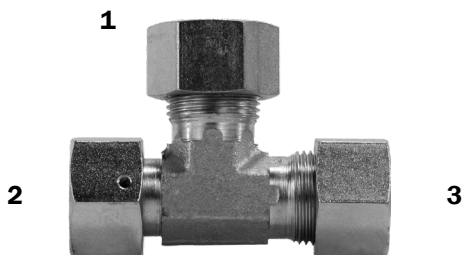


Part #	Tube 1 - MM	Tube 2 - MM	DIN 3	List Price
8263-L08-08	8	8	M14 X 1.5	29.79
8263-L12-12	12	12	M18 X 1.5	36.82
8263-L15-15	15	15	M22 X 1.5	44.58
8263-L22-22	22	22	M30 X 2.0	44.38
8263-L28-28	28	28	M36 X 2.0	118.71
8263-L35-35	35	35	M45 X 2.0	98.11
8263-S08-08	8	8	M16 X 1.5	36.82
8263-S12-12	12	12	M20 X 1.5	40.32
8263-S16-16	16	16	M24 X 1.5	58.35
8263-S20-20	20	20	M30 X 2.0	85.40
8263-S25-25	25	25	M36 X 2.0	132.23
8263-S30-30	30	30	M42 X 2.0	104.19
8263-S38-38	38	38	M52 X 2.0	167.50

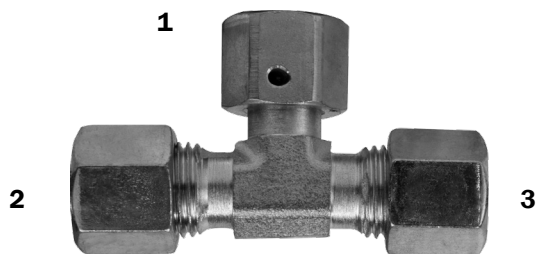
L = LIGHT PATTERN S = HEAVY PATTERN

DIN 2353 METRIC**UNION TEE**

Part #	Tube 1 - MM	Tube 2 - MM	Tube 3 - MM	List Price
8360-L06-06-06	6	6	6	19.65
8360-L08-08-08	8	8	8	20.34
8360-L10-10-10	10	10	10	23.03
8360-L12-12-12	12	12	12	27.14
8360-L15-15-15	15	15	15	37.46
8360-L18-18-18	18	18	18	49.30
8360-L22-22-22	22	22	22	66.30
8360-L28-28-28	28	28	28	104.60
8360-L35-35-35	35	35	35	153.73
8360-L42-42-42	42	42	42	210.74
8360-S06-06-06	6	6	6	21.35
8360-S08-08-08	8	8	8	25.00
8360-S10-10-10	10	10	10	26.73
8360-S12-12-12	12	12	12	41.00
8360-S16-16-16	16	16	16	53.10
8360-S20-20-20	20	20	20	74.22
8360-S25-25-25	25	25	25	111.41
8360-S30-30-30	30	30	30	155.60
8360-S38-38-38	38	38	38	224.32

DIN SWIVEL NUT BRANCH TEE

Part #	Tube 1, 3 THREAD	DIN - 2	List Price
8563-L08-08-08	8	M14 X 1.5	22.48
8563-L10-10-10	10	M16 X 1.5	23.62
8563-L12-12-12	12	M18 X 1.5	28.29
8563-L15-15-15	15	M22 X 1.5	35.32
8563-L18-18-18	18	M26 X 1.5	48.86
8563-L22-22-22	22	M30 X 2.0	65.87
8563-L28-28-28	28	M36 X 2.0	101.63
8563-L35-35-35	35	M45 X 2.0	171.92
8563-S08-08-08	8	M16 X 1.5	23.89
8563-S10-10-10	10	M18 X 1.5	29.67
8563-S12-12-12	12	M20 X 1.5	35.05
8563-S16-16-16	16	M24 X 1.5	47.99
8563-S25-25-25	25	M36 X 2.0	110.58
8563-S30-30-30	30	M42 X 2.0	152.90
8563-S38-38-38	38	M52 X 2.0	323.37

HYDRAULIC ADAPTERS**DIN SWIVEL NUT RUN TEE**

Part #	Tube 1, 2, 3 - MM	DIN THREAD	List Price
8469-L08-08-08	8	M14 X 1.5	37.01
8469-L10-10-10	10	M16 X 1.5	40.86
8469-L12-12-12	12	M18 X 1.5	29.98
8469-L15-15-15	15	M22 X 1.5	50.46
8469-L18-18-18	18	M26 X 1.5	54.14
8469-L22-22-22	22	M30 X 2.0	77.09
8469-L28-28-28	28	M36 X 2.0	122.23
8469-L35-35-35	35	M45 X 2.0	177.05
8469-L42-42-42	42	M52 X 2.0	283.19
8469-S08-08-08	8	M16 X 1.5	43.09
8469-S10-10-10	10	M18 X 1.5	44.83
8469-S12-12-12	12	M20 X 1.5	50.03
8469-S16-16-16	16	M24 X 1.5	55.06
8469-S20-20-20	20	M30 X 2.0	87.92
8469-S25-25-25	25	M36 X 2.0	134.44
8469-S30-30-30	30	M42 X 2.0	177.52
8469-S38-38-38	38	M52 X 2.0	300.36

L = LIGHT PATTERN S = HEAVY PATTERN

(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 cm3/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	FRAME SIZE	MOUNTING FLANGE TYPE	DRIVE SHAFT	PORT SIZE
MMPH (GEROTOR)	(cu.in/rev)		K - 1 Inch Woodruff Key	P - 1/2 NPTF
MMRS (GEROTOR)	MMPH MMRS	H4 - 4 Bolt	S - SAE - 6B Spline	S - 7/8-14 SAE "O" Ring
	50 (3.15) 50 (3.13)	H2 - SAE "A" 2 Bolt	H - 1 Inch parallel	F - Manifold
	80 (4.74) 80 (4.92)	H6 - Magneto	0.40 dia. crosshole	
	100 (5.87) 100 (6.15)		H1 - 1 Inch parallel	
	125 (7.19) 125 (7.62)		0.31 dia. crosshole	
	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)			

(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 cm3/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

HYDRAULIC GEAR PUMP**HYDRAULIC ADAPTERS****MODEL # MGP-F10**

- All Aluminium construction.
- 7 Displacement sizes from 0.07 to 0.37 cu. in/rev.
- Mounting flange is SAE AA-2 bolt.
- Ports are SAE-8 inlet and SAE-6 outlet.
- Drive shaft is a 1/2 inch straight shaft with 1/8 key.

Recommended working conditions:

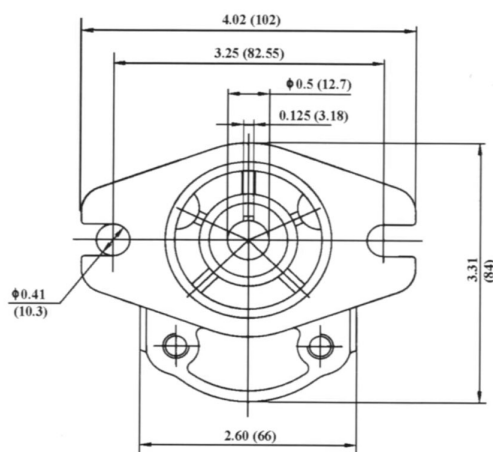
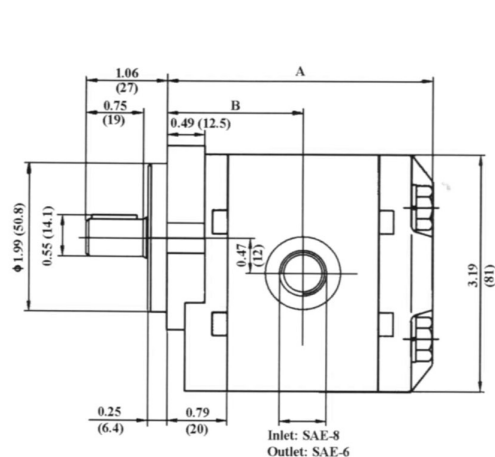
- Filtration 25 micron or better.
- Oil Viscosity 6 to 200 cSt.
- Inlet pressure 12 to 32 psi abs.
- Oil Temperature -25 to 55 degrees C (-12 to 175 F°).
- Ambient -22 to 55 C° (-8 to 130 F°).



Part #	Displacement cu.in/rev	PSI	Speed RPM		Weight Lbs	List Price
			Rated	Max		
MGP-F10-13	0.07	3625	2000	5000	2.02	223.30
MGP-F10-20	0.12	3625	2000	5000	2.31	232.86
MGP-F10-27	0.16	3625	2000	5000	2.68	232.86
MGP-F10-34	0.20	3625	2000	5000	2.99	232.86
MGP-F10-41	0.25	3625	2000	4000	3.34	291.08
MGP-F10-51	0.31	3625	2000	4000	3.78	291.08
MGP-F10-61	0.37	3625	2000	4000	4.18	291.08

• Displacement (cu.in/ rev) x speed (RPM)/ 231 Volumetric efficiency % $\geq$ 93

• GPM X 231/ RPM = CU.IN

INSTALLATION DATA

Port Sizes
Inlet - SAE-8 (3/4-16)
Outlet - SAE-6 (9/16-18)

Part #	A		B	
	Millimeters	Inches	Millimeters	Inches
MGP-F10-13	82	3.23	42	1.65
MGP-F10-20	84	3.3	43	1.69
MGP-F10-27	86	3.39	44	1.73
MGP-F10-34	88	3.46	45	1.77

Part #	A		B	
	Millimeters	Inches	Millimeters	Inches
MGP-F10-41	90	3.54	46	1.81
MGP-F10-51	93	3.66	47.5	1.87
MGP-F10-61	96	3.78	49	1.93

ORDERING INFORMATION**MGP**

Aluminum
Gear Pump

F10

High
Pressure
Series

16

Displacement
cm³/rev
(see chart)
13/20/27/34
41/51/61

P

Drive
Shaft
P-1/2 Dia

C

Rotation
Direction
C-Clockwise
A-Counter Clockwise
(viewed from drive shaft
end)

MODEL # MGP-F20

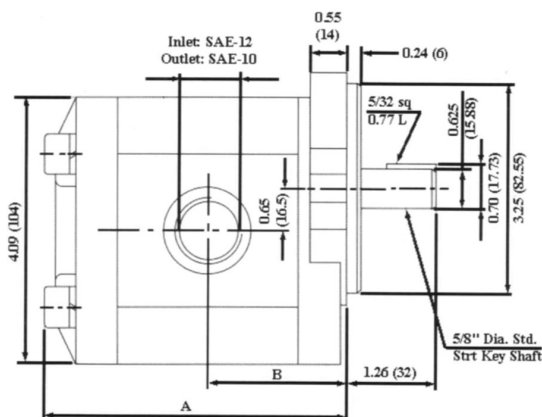
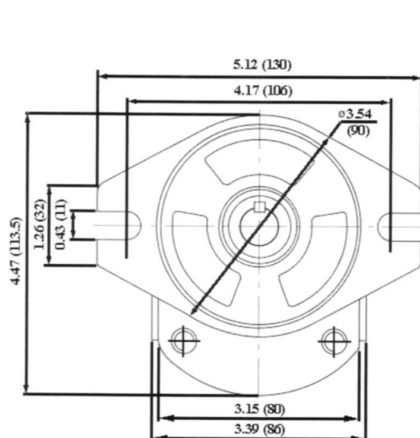
- Aluminium construction.
- 8 Displacement sizes from 0.36 to 1.52 cu. in/rev.
- Mounting flange is SAE A-2 bolt.
- Ports are SAE-12 inlet and SAE-10 outlet.
- Drive shaft is a 5/8 inch diameter straight with 5/32 straight key.

Recommended working conditions:

- Filtration 25 micron or better.
- Oil Viscosity 6 to 200 cSt.
- Inlet pressure 12 to 32 psi abs.
- Oil Temperature -25 to 55 degrees C (-12 to 175 F°).
- Ambient -22 to 55 C° (-8 to 130 F°).



Part #	Displacement cu.in/rev	PSI	Speed RPM		Weight Lbs	List Price
			Rated	Max		
MGP-F20-06	0.36	3650	2000	3000	5.35	291.60
MGP-F20-08	0.48	3650	2000	3600	5.61	291.60
MGP-F20-10	0.61	3650	2000	3600	5.72	291.60
MGP-F20-12	0.73	3650	2000	3600	5.91	291.60
MGP-F20-14	0.85	3650	2000	3600	6.00	308.34
MGP-F20-16	0.97	2900	2000	3600	6.27	308.34
MGP-F20-20	1.22	2900	2000	3600	6.73	308.34
MGP-F20-25	1.52	2900	2000	3600	7.19	277.50

INSTALLATION DATA

Port Sizes
Inlet - SAE-12 (1 1/16-12)
Outlet - SAE-10 (7/8-14)

Part #	A		B	
	Millimeters	Inches	Millimeters	Inches
MGP-F20-06	98	3.87	45	1.77
MGP-F20-08	100	3.95	47	1.85
MGP-F20-10	104	4.12	48	1.89
MGP-F20-12	108	4.25	50	1.97

Part #	A		B	
	Millimeters	Inches	Millimeters	Inches
MGP-F20-14	110	4.35	51	2
MGP-F20-16	114	4.50	52.5	2.07
MGP-F20-20	120	4.72	56	2.2
MGP-F20-25	128	5.05	60	2.36

ORDERING INFORMATION**MGP**

Aluminum
Gear Pump

F20

High
Pressure
Series

16

Displacement
cm³/rev
(see chart)
06/08/10/12/14/16
20/25

P

Drive
Shaft
P-5/8 Dia
Straight
P1-3/4 Dia
Straight
S9-Spline 9 tooth

C

Rotation
Direction
C-Clockwise
A-Counter Clockwise
(viewed from drive shaft
end)

HYDRAULIC FLOW CONTROL/NEEDLE VALVES**HYDRAULIC ADAPTERS****MM-FC SERIES FLOW CONTROL VALVES****FEATURES:**

- Micrometer adjustment knob for accurate valve setting.
- Rugged construction.

TECHNICAL DATA:• **Materials**

Body: Carbon steel w/ black oxide plating

Handle: Zinc Alloy

Set Screw: Steel

Packing: Buna O-Ring/ PTFE stem packing

Maximum Pressure: 5000PSI

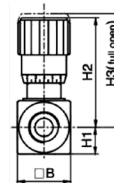
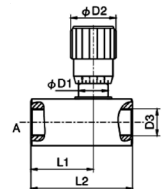
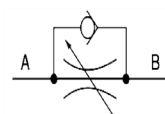
Temperature Ratings: -4°F to 176°F (-20°C to 80°C)

Flow Rate: 0-42 GPM



INLET

<< FREE FLOW



Part#	B	D1	D2	D3	H1	H2	H3	L1	L2	WEIGHT (lbs)	List Price
MMFC4NPT	1.10	0.76	1.18	1/4 NPT	0.55	2.41	2.67	1.54	2.52	0.90	65.09
MMFC6NPT	1.10	0.76	1.18	3/8 NPT	0.55	2.41	2.67	1.69	2.75	0.90	61.90
MMFC8NPT	1.50	0.95	1.46	1/2 NPT	0.75	3.07	3.41	2.05	3.27	2.00	65.99
MMFC12NPT	1.50	0.95	1.46	3/4 NPT	0.75	3.08	3.41	2.19	3.50	2.00	76.19
MMFC16NPT	1.89	1.38	1.89	1 NPT	0.94	4.03	4.50	2.79	4.60	4.20	143.52
MMFC20NPT	2.38	1.96	2.28	1-1/4 NPT	1.18	5.25	5.88	3.39	6.07	9.55	249.44

MM-NV SERIES NEEDLE VALVES**FEATURES:**

- Micrometer adjustment knob for accurate valve setting.
- Rugged construction.

TECHNICAL DATA:• **Materials**

Body: Carbon steel w/ black oxide plating

Handle: Zinc Alloy

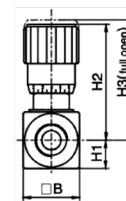
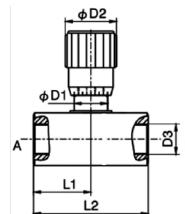
Set Screw: Steel

Packing: Buna O-Ring/ PTFE stem packing

Maximum Pressure: 5000PSI

Temperature Ratings: -4°F to 176°F (-20°C to 80°C)

Flow Rate: 0-42 GPM

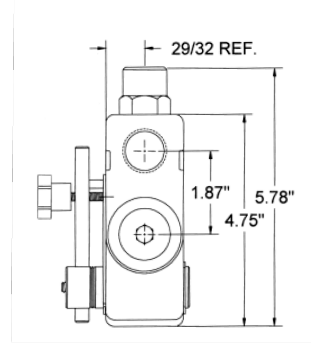
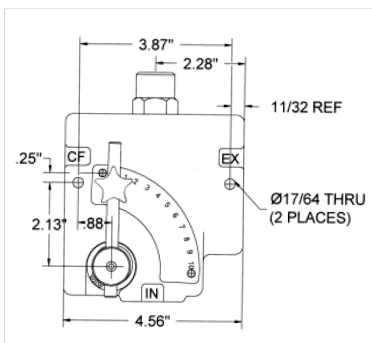


Part#	B	D1	D2	D3	H1	H2	H3	L1	L2	WEIGHT (lbs)	List Price
MMNV4NPT	1.10	0.76	1.18	1/4 NPT	0.55	2.41	2.67	1.07	2.13	0.90	54.88
MMNV6NPT	1.10	0.76	1.18	3/8 NPT	0.55	2.41	2.67	1.07	2.13	0.90	72.22
MMNV8NPT	1.50	0.95	1.46	1/2 NPT	0.75	3.07	3.41	1.34	2.38	2.00	83.06
MMNV12NPT	1.50	0.95	1.46	3/4 NPT	0.75	3.08	3.41	1.54	3.09	2.00	77.39
MMNV16NPT	1.89	1.38	1.89	1 NPT	0.94	4.03	4.50	1.81	3.62	4.20	117.24

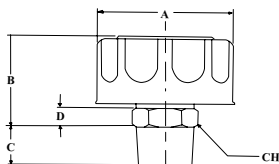
HYDRAULIC ADAPTERS**HYDRAULIC FLOW CONTROL/ BREATHERS****PRESSURE COMPENSATING VARIABLE FLOW CONTROL****FEATURES:**

MFC-51 model is a full range pressure compensating variable flow control. It is designed so that the orifice area varies as the lever is rotated. The outlet flow is smooth and constant regardless of the pressure on the control flow or excess flow ports. An adjustable ball spring relief allows for pressure compensated flow up to the pressure setting on the relief. Relief valves are preset at 1500 PSI and field adjustable from 750 to 3000 PSI.

- Materials: Cast Iron Body, Heat Treated Compensator Spool, Stainless Steel Rotary Spool, Buna N "O" Rings (Standard)
- **ALL ARE STANDARD FLOW CONTROL**
- **ALL HAVE ADJUSTABLE BALL SPRING RELIEF**
- **SAE PORT AVAILABLE. MINIMUM ORDER REQUIRED**



Part#	Size	Flow	List Price
MFC-38-N	3/8" - NPT	0-8 gpm	194.11
MFC-12-N	1/2" - NPT	0-16 gpm	194.11
MFC-34-N	3/4" - NPT	0-30 gpm	194.11

SCREW-ON TYPE AIR BREATHERS

- **Chrome Plated Steel**
- **1/4 To 1 Inch NPT**
- **40 Micron Breather**

Part Number	Flow cfm	NPT	A	B	C	D	CH	Micron	List Price
MB40-04	10	1/4	1.85	1.60	.50	.30	.63	40	16.96
MB40-06	10	3/8	1.85	1.70	.50	.30	.75	40	22.68
MB40-08	10	1/2	2.54	1.88	.68	.29	.95	40	23.78
MB40-12	25	3/4	3.13	2.00	.82	.35	1.12	40	27.77
MB40-16	25	1	3.13	2.11	.90	.42	1.35	40	36.11