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MASTER CATALOG



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Reference Information

THREAD SIZE, TUBE AND FLANGE HEAD O.D. CHART

DASH SIZE	TUBE OD	PIPE THREAD	SAE O-RING & 37° JIC FLARE	45° SAE FLARE	FLAT FACE THREAD	INVERTED FLARE	BRASS COMPRESSION	CODE 61 FLANGE	CODE 62 FLANGE
-02	1/8	1/8-27	5/16-24	5/16-24	-	5/16-28	5/16-24	-	-
-03	3/16	N/A	3/8-24	3/8-24	-	3/8-24	3/8-24	-	-
-04	1/4	1/4-18	7/16-20	7/16-20	9/16-18	7/16-24	7/16-24	-	-
-05	5/16	N/A	1/2-20	1/2-20	-	1/2-24	1/2-24	-	-
-06	3/8	3/8-18	9/16-18	5/8-18	11/16-16	9/16-24	9/16-24	-	-
-07	7/16	N/A	-	11/16-16	-	5/8-24	5/8-24	-	-
-08	1/2	1/2-14	3/4-16	3/4-16	13/16-16	11/16-20	11/16-20	1.19	1.25
-10	5/8	N/A	7/8-14	7/8-14	1-14	13/16-18	13/16-18	-	-
-12	3/4	3/4-14	1 1/16-12	1 1/16-14	1 3/16-12	1-18	1-18	1.50	1.62
-14	7/8	N/A	1 3/16-12	-	-	-	-	-	-
-16	1	1-11 1/2	1 5/16-12	-	1 7/16-12	-	-	1.75	1.88
-20	1 1/4	1 1/4-11 1/2	1 5/8-12	-	1 11/16-12	-	-	2.00	2.12
-24	1 1/2	1 1/2-11 1/2	1 7/8-12	-	2-12	-	-	2.38	2.50
-32	2	2-11 1/2	2 1/2-12	-	-	-	-	2.81	3.12

NOTE : Metric and BSPT/BSPP Thread Size Information can be found on pages 101-102.

Steel 37° JIC Adapters

CONFORMANCE

- SAE J514
- MS51500 –MS51534

MATERIALS

- Steel – Carbon steel with clear trivalent chromium zinc or yellow dichromate zinc plated per ASTM B633-98 (Type II SC-2)
- Stainless – Type 316
- Brass

ORDERING

When ordering, include the appropriate prefix to part number if material or style required is other than steel barstock.

MATERIAL/STYLE	PREFIX
Forging	FG
Brass	BR
Stainless	SS

WORKING PRESSURES

The following table lists the recommended working pressures for steel 37-deg flare hydraulic tube fittings made in accordance with SAE standard J514. Many factors such as impulsing, vibration, mechanical shock and overtightening may affect the integrity of fitting connections. Tompkins and SAE recommend sufficient testing be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using fittings with different size or type thread, use the lower pressure pressure rating of the two threads.



CAUTION: 37-deg flared fittings are not designed to provide structural support for other components.

SAE J514 37-DEG FLARED FITTINGS PRESSURE RATINGS

Dash Size	Flared Thread Size	4 to 1 Minimum Burst PSI
-02	5/16-24	5000
-03	3/8-24	5000
-04	7/16-20	5000
-05	1/2-20	5000
-06	9/16-18	5000
-08	3/4-16	4500
-10	7/8-14	3500
-12	1 1/16-12	3500
-14	1 3/16-12	3000
-16	1 5/16-12	3000
-20	1 5/8-12	2500
-24	1 7/8-12	2000
-32	2 1/2-12	1500

See SAE STRAIGHT THREAD O-RING SECTION for assembly instructions and torque values for installation of 37° FLARED FITTINGS with O-ring straight threads.

See NPTF PIPE SECTION for assembly instructions and proper thread engagement for 37° FLARED FITTINGS with pipe threads.

RECOMMENDED 37° FLARED FITTING ASSEMBLY INSTRUCTIONS

STEP 1. Inspect for possible contamination or damage from shipping or handling. Sealing surface should be smooth. Annular tool marks of (100uin) concentric with thread permissible.

STEP 2. Lubricate the threads and the entire surface of the cone with hydraulic fluid or a light lubricant.

STEP 3. Align mating components for hand connection and turn flare nut until sealing surfaces make full contact.

STEP 4. Torque nut to the values shown on the following table. If a wrench pad is provided next to nut, place a second wrench on pad to prevent flare from rotating while being torqued.

STEP 5. When torquing nut onto a straight flared fitting, it may be necessary to also place a wrench on the flared fitting wrench pad to prevent it from turning during assembly.

WHY WET TORQUE?

Due to difference in plating types and thickness, materials, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Over tightening causes threads to yield, deform and lose their ability maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which promotes possibility of leaks. Improper installation is the greatest cause for leaks in hydraulic connections. It is our firm position, that to not wet torque is to compromise consistency and quality for convenience.

TORQUE VALUES: The minimum torque values provided by Tompkins Industries are to provide a benchmark that we believe give optimum results for leak free connections. Actual torque values should be based on individual application.

Dash Size	Flared Thread Size	Torque Foot/Lbs.
-02	5/16-24	6-7
-03	3/8-24	6-9
-04	7/16-20	9-12
-05	1/2-20	14-15
-06	9/16-18	18-20
-08	3/4-16	27-39
-10	7/8-14	36-63
-12	1 1/16-12	65-88
-14	1 3/16-12	75-103
-16	1 5/16-12	85-113
-20	1 5/8-12	115-133
-24	1 7/8-12	125-167
-32	2 1/2-12	190-258

ALTERNATE ASSEMBLY METHOD

STEP 1. If torque method not possible, follow steps 1-3 above, then proceed to the steps below.

STEP 2. Lightly wrench tighten the nut until there is firm resistance.

STEP 3. Place a wrench on wrench pad next to nut as near the 6 o'clock position as possible.

STEP 4. Place second wrench on nut as near the 3 o'clock position as possible

STEP 5. Turn nut clockwise to no less than the 4 o'clock position and no more than the 6 o'clock position. Required rotation generally decreases as size increases.

Steel 37° JIC Adapters

303

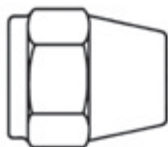
**JIC Short
Tube Nut**



Dash Size	Stock Materials S FG SS BR	Tube Size	T1 (UNF)
03	\$	3/16	3/8-24
04	\$	1/4	7/16-20
06	\$	3/8	9/16-18
08	\$	1/2	3/4-16
10	\$	5/8	7/8-14
12	\$	3/4	1 1/16-12
16	\$	1	1 5/16-12
20	\$	1 1/4	1 5/8-12
24	\$	1 1/2	1 7/8-12

304

**JIC Long
Tube Nut**



SAE 070111

Dash Size	Stock Materials S FG SS BR	Tube Size	T1 (UNF)
03	\$	3/16	3/8-24
04	\$	1/4	7/16-20
05	\$	5/16	1/2-20
06	\$	3/8	9/16-18
08	\$	1/2	3/4-16
10	\$	5/8	7/8-14
12	\$	3/4	1 1/16-12
14	\$	7/8	1 3/16-12
16	\$	1	1 5/16-12
20	\$	1 1/4	1 5/8-12
24	\$	1 1/2	1 7/8-12
32	\$	2	2 1/2-12

304-C

JIC Cap



MS 51532
SAE 070112

Dash Size	Stock Materials S FG SS BR	Tube Size	T1 (UNF)
02	\$ SS	1/8	5/16-24
03	\$ SS	3/16	3/8-24
04	\$ SS BR	1/4	7/16-20
05	\$ SS	5/16	1/2-20
06	\$ SS BR	3/8	9/16-18
08	\$ SS BR	1/2	3/4-16
10	\$ SS BR	5/8	7/8-14
12	\$ SS BR	3/4	1 1/16-12
14	\$ SS	7/8	1 3/16-12
16	\$ SS	1	1 5/16-12
20	\$ SS	1 1/4	1 5/8-12
24	\$ SS	1 1/2	1 7/8-12
32	\$ SS	2	2 1/2-12

318

**JIC Tube Nut
(Sleeve Required)**



MS 51531
SAE 070110

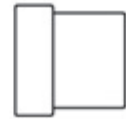
Dash Size	Stock Materials S FG SS BR	Tube Size	T1 (UNF)
02	\$ SS	1/8	5/16-24
03	\$ SS	3/16	3/8-24
04	\$ SS	1/4	7/16-20
05	\$ SS	5/16	1/2-20
06	\$ SS	3/8	9/16-18
08	\$ SS	1/2	3/4-16
10	\$ SS	5/8	7/8-14
12	\$ SS	3/4	1 1/16-12
14	\$ SS	7/8	1 3/16-12
16	\$ SS	1	1 5/16-12
20	\$ SS	1 1/4	1 5/8-12
24	\$ SS	1 1/2	1 7/8-12
32	\$ SS	2	2 1/2-12

Steel 37° JIC Adapters

Dash Size	Stock Materials				Tube Size
	S	FG	SS	BR	
02	\$		SS		1/8
03	\$		SS		3/16
04	\$		SS		1/4
05	\$		SS		5/16
06	\$		SS		3/8
08	\$		SS		1/2
10	\$		SS		5/8
12	\$		SS		3/4
14	\$		SS		7/8
16	\$		SS		1
20	\$		SS		1 1/4
24	\$		SS		1 1/2
32	\$		SS		2

319

JIC Tube Sleeve

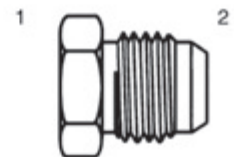


MS 51532
SAE 070115

Dash Size	Stock Materials				Braze Port	T2 (UNF)
	S	FG	SS	BR		
04	\$				1/4	7/16-20
05	\$				5/16	1/2-20
06	\$				3/8	9/16-18
08	\$				3/8	3/4-16
08-06	\$				1/2	9/16-18
08	\$				1/2	3/4-16
10-08	\$				5/8	3/4-16
10	\$				5/8	7/8-14
10-12	\$				5/8	1 1/16-12
12-08	\$				3/4	3/4-16
12-10	\$				3/4	7/8-14
12	\$				3/4	1 1/16-12
12-16	\$				3/4	1 5/16-12
14	\$				7/8	1 3/16-12
16-12	\$				1	1 1/16-12
16	\$				1	1 5/16-12
20-16	\$				1 1/4	1 5/16-12
20	\$				1 1/4	1 5/8-12
24	\$				1 1/2	1 7/8-12
32	\$				2	2 1/2-12

403

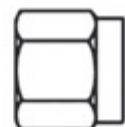
Braze-On to JIC



Dash Size	Stock Materials				Tube Size	T1 (UNF)
	S	FG	SS	BR		
03	\$				3/16	3/8-24
04	\$				1/4	7/16-20
05	\$				5/16	1/2-20
06	\$				3/8	9/16-18
08	\$				1/2	3/4-16
10	\$				5/8	7/8-14
12	\$				3/4	1 1/16-12
16	\$				1	1 5/16-12
20	\$				1 1/4	1 5/8-12
24	\$				1 1/2	1 7/8-12
32	\$				2	2 1/2-12

418

Flareless JIC Tube Nut (Sleeve Required)



Steel 37° JIC Adapters

419

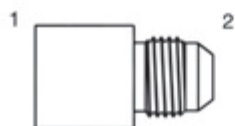
Flareless JIC Tube Sleeve



Dash Size	Stock Materials				Tube Size
	S	FG	SS	BR	
03	\$				3/16
04	\$				1/4
05	\$				5/16
06	\$				3/8
08	\$				1/2
10	\$				5/8
12	\$				3/4
16	\$				1
20	\$				1 1/4
24	\$				1 1/2
32	\$				2

500

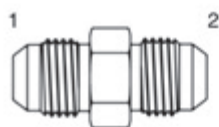
Braze Port to JIC Elbow 90°



Dash Size	Stock Materials				Braze Port	T2 (UNF)
	S	FG	SS	BR		
04-04	\$				1/4	7/16-20
06-06	\$				3/8	9/16-18
08-08	\$				1/2	3/4-16
10-10	\$				5/8	7/8-14
12-12	\$				3/4	1 1/16-12
16-16	\$				1	1 5/16-12
20-20	\$				1 1/4	1 5/8-12
24-24	\$				1 1/2	1 7/8-12

2403

JIC Union



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
02	\$		SS		5/16-24	5/16-24
03	\$		SS		3/8-24	3/8-24
04-02	\$				7/16-20	5/16-24
04-03	\$		SS		7/16-20	3/8-24
04	\$		SS	BR	7/16-20	7/16-20
05-04	\$		SS		1/2-20	7/16-20
05	\$		SS		1/2-20	1/2-20
06-04	\$		SS		9/16-18	7/16-20
06-05	\$		SS		9/16-18	1/2-20
06	\$		SS	BR	9/16-18	9/16-18
08-04	\$		SS		3/4-16	7/16-20
08-06	\$		SS		3/4-16	9/16-18
08	\$		SS	BR	3/4-16	3/4-16
10-04	\$		SS		7/8-14	7/16-20
10-06	\$		SS		7/8-14	9/16-18
10-08	\$		SS		7/8-14	3/4-16
10	\$		SS	BR	7/8-14	7/8-14
12-04	\$		SS		1 1/16-12	7/16-20
12-06	\$		SS		1 1/16-12	9/16-18
12-08	\$		SS		1 1/16-12	3/4-16
12-10	\$		SS		1 1/16-12	7/8-14
12	\$		SS	BR	1 1/16-12	1 1/16-12
14-12	\$				1 3/16-12	1 1/16-12
14	\$		SS		1 3/16-12	1 3/16-12
16-10	\$		SS		1 5/16-12	7/8-14
16-12	\$		SS		1 5/16-12	1 1/16-12
16-14	\$				1 5/16-12	1 3/16-12

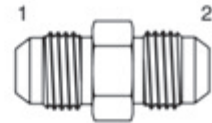
MS 51501
SAE 070101

Steel 37° JIC Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
16	\$		SS	BR	1 5/16-12	1 5/16-12
20-12	\$				1 5/8-12	1 1/16-12
20-16	\$		SS		1 5/8-12	1 5/16-12
20	\$		SS		1 5/8-12	1 5/8-12
24-16	\$		SS		1 7/8-12	1 5/16-12
24-20	\$		SS		1 7/8-12	1 5/8-12
24	\$		SS		1 7/8-12	1 7/8-12
32	\$		SS		2 1/2-12	2 1/2-12

2403

**JIC Union
(Cont'd.)**

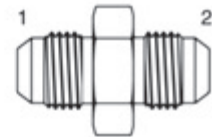


MS 51501
SAE 070101

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$		SS		7/16-20	7/16-20
06	\$		SS		9/16-18	9/16-18
08	\$		SS		3/4-16	3/4-16
10	\$		SS		7/8-14	7/8-14
12	\$		SS		1 1/16-12	1 1/16-12
16	\$		SS		1 5/16-12	1 5/16-12

2403-LH

**JIC Large
Hex Union**

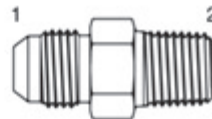


MS 51519
SAE 070119

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
02-02	\$		SS		5/16-24	1/8-27
02-04	\$		SS		5/16-24	1/4-18
03-02	\$		SS		3/8-24	1/8-27
03-04	\$		SS		3/8-24	1/4-18
04-02	\$		SS	BR	7/16-20	1/8-27
04-04	\$		SS	BR	7/16-20	1/4-18
04-06	\$		SS	BR	7/16-20	3/8-18
04-08	\$		SS		7/16-20	1/2-14
04-12	\$		SS		7/16-20	3/4-14
05-02	\$		SS	BR	1/2-20	1/8-27
05-04	\$		SS	BR	1/2-20	1/4-18
05-06	\$		SS		1/2-20	3/8-18
05-08	\$		SS		1/2-20	1/2-14
06-02	\$		SS	BR	9/16-18	1/8-27
06-04	\$		SS	BR	9/16-18	1/4-18
06-06	\$		SS	BR	9/16-18	3/8-18
06-08	\$		SS	BR	9/16-18	1/2-14
06-12	\$		SS		9/16-18	3/4-14
06-16	\$		SS		9/16-18	1-11 1/2
08-02	\$		SS		3/4-16	1/8-27
08-04	\$		SS	BR	3/4-16	1/4-18
08-06	\$		SS	BR	3/4-16	3/8-18
08-08	\$		SS	BR	3/4-16	1/2-14
08-12	\$		SS	BR	3/4-16	3/4-14
08-16	\$		SS		3/4-16	1-11 1/2
10-04	\$		SS		7/8-14	1/4-18
10-06	\$		SS	BR	7/8-14	3/8-18
10-08	\$		SS	BR	7/8-14	1/2-14
10-12	\$		SS	BR	7/8-14	3/4-14

2404

JIC to Pipe



Cont'd...

MS 51500
SAE 070102

S= Steel

FG=Forging

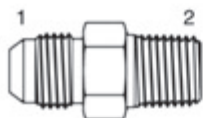
SS=Stainless Steel

BR=Brass

Steel 37° JIC Adapters

2404

JIC to Pipe (Cont'd.)

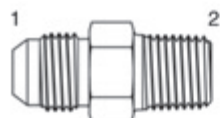


MS 51500
SAE 070102

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
10-16	\$		SS		7/8-14	1-11 1/2
12-06	\$		SS		1 1/16-12	3/8-18
12-08	\$		SS	BR	1 1/16-12	1/2-14
12-12	\$		SS	BR	1 1/16-12	3/4-14
12-16	\$		SS	BR	1 1/16-12	1-11 1/2
12-20	\$		SS		1 1/16-12	1 1/4-11 1/2
12-24	\$		SS		1 1/16-12	1 1/2-11 1/2
14-12	\$		SS		1 3/16-12	3/4-14
14-16	\$		SS		1 3/16-12	1-11 1/2
16-08	\$		SS		1 5/16-12	1/2-14
16-12	\$		SS	BR	1 5/16-12	3/4-14
16-16	\$		SS	BR	1 5/16-12	1-11 1/2
16-20	\$		SS		1 5/16-12	1 1/4-11 1/2
16-24	\$		SS		1 5/16-12	1 1/2-11 1/2
16-32	\$		SS		1 5/16-12	2-11 1/2
20-12	\$		SS		1 5/8-12	3/4-14
20-16	\$		SS		1 5/8-12	1-11 1/2
20-20	\$		SS		1 5/8-12	1 1/4-11 1/2
20-24	\$		SS		1 5/8-12	1 1/2-11 1/2
20-32	\$		SS		1 5/8-12	2-11 1/2
24-16	\$		SS		1 7/8-12	1-11 1/2
24-20	\$		SS		1 7/8-12	1 1/4-11 1/2
24-24	\$		SS		1 7/8-12	1 1/2-11 1/2
24-32	\$		SS		1 7/8-12	2-11 1/2
32-16	\$				2 1/2-12	1-11 1/2
32-20	\$				2 1/2-12	1 1/4-11 1/2
32-24	\$		SS		2 1/2-12	1 1/2-11 1/2
32-32	\$		SS		2 1/2-12	2-11 1/2
40-40	\$		SS		3-12	2 1/2-11 1/2

RST2404

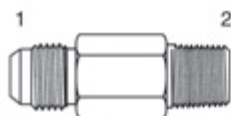
Restricted JIC to Pipe



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)	Restriction
	S	FG	SS	BR			
06-06-R.000	\$				9/16-18	3/8-18	.000
06-06-R.062	\$				9/16-18	3/8-18	.062
06-08-R.031	\$				9/16-18	1/2-14	.031
06-08-R.062	\$				9/16-18	1/2-14	.062

2404-L

JIC to Pipe Long



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)	Length*
	S	FG	SS	BR			
04-02	\$				7/16-20	1/8-27	1.81"
04-04	\$		SS		7/16-20	1/4-18	2.25"
05-02	\$				1/2-20	1/8-27	2.25"
06-04	\$		SS		9/16-18	1/4-18	2.25"
06-06	\$		SS		9/16-18	3/8-18	2.50"
08-06	\$		SS		3/4-16	3/8-18	2.75"
08-08	\$		SS		3/4-16	1/2-14	3.00"
10-08	\$				7/8-14	1/2-14	3.13"
12-12	\$		SS		1 1/16-12	3/4-14	3.50"
16-16	\$		SS		1 5/16-12	1-11 1/2	4.00"
20-20	\$		SS		1 5/8-12	1 1/4-11 1/2	4.50"
24-24	\$		SS		1 7/8-12	1 1/2-11 1/2	5.00"

*Length = Overall Length of Fitting

Steel 37° JIC Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)	Length*
	S	FG	SS	BR			
04-02	\$				7/16-20	1/8-27	2.56"
04-04	\$		SS		7/16-20	1/4-18	3.25"
06-04	\$				9/16-18	1/4-18	3.25"
06-06	\$				9/16-18	3/8-18	4.00"
08-06	\$				3/4-16	3/8-18	4.00"
08-08	\$		SS		3/4-16	1/2-14	4.25"
10-08	\$				7/8-14	1/2-14	4.37"
12-12	\$		SS		1 1/16-12	3/4-14	5.00"
16-16	\$		SS		1 5/16-12	1-11 1/2	5.75"

*Length = Overall Length of Fitting

2404-LL

**JIC to Pipe
Extra Long**

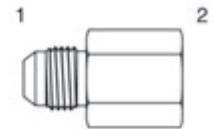


MS 51503

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
02-02	\$		SS		5/16-24	1/8-27
02-04	\$				5/16-24	1/4-18
03-02	\$		SS		3/8-24	1/8-27
03-04	\$		SS		3/8-24	1/4-18
04-02	\$		SS		7/16-20	1/8-27
04-04	\$		SS		7/16-20	1/4-18
04-06	\$		SS		7/16-20	3/8-18
04-08	\$		SS		7/16-20	1/2-14
05-02	\$		SS		1/2-20	1/8-27
05-04	\$		SS		1/2-20	1/4-18
06-02	\$		SS		9/16-18	1/8-27
06-04	\$		SS		9/16-18	1/4-18
06-06	\$		SS		9/16-18	3/8-18
06-08	\$		SS		9/16-18	1/2-14
06-12	\$		SS		9/16-18	3/4-14
08-04	\$		SS		3/4-16	1/4-18
08-06	\$		SS		3/4-16	3/8-18
08-08	\$		SS		3/4-16	1/2-14
08-12	\$		SS		3/4-16	3/4-14
10-06	\$				7/8-14	3/8-18
10-08	\$		SS		7/8-14	1/2-14
10-12	\$		SS		7/8-14	3/4-14
12-08	\$		SS		1 1/16-12	1/2-14
12-12	\$		SS		1 1/16-12	3/4-14
12-16	\$		SS		1 1/16-12	1-11 1/2
14-12	\$		SS		1 3/16-12	3/4-14
14-16	\$		SS		1 3/16-12	1-11 1/2
16-12	\$		SS		1 5/16-12	3/4-14
16-16	\$		SS		1 5/16-12	1-11 1/2
16-20	\$		SS		1 5/16-12	1 1/4-11 1/2
20-16	\$		SS		1 5/8-12	1-11 1/2
20-20	\$		SS		1 5/8-12	1 1/4-11 1/2
20-24	\$		SS		1 5/8-12	1 1/2-11 1/2
24-24	\$		SS		1 7/8-12	1 1/2-11 1/2
32-32	\$		SS		2 1/2-12	2-11 1/2

2405

JIC to Pipe



SAE 070103

S= Steel

FG=Forging

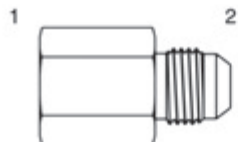
SS=Stainless Steel

BR=Brass

Steel 37° JIC Adapters

2406

JIC Reducer/ Expander



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
03-04	\$				3/8-24	7/16-20
04-03	\$				7/16-20	3/8-24
04-06	\$				7/16-20	9/16-18
05-04	\$				1/2-20	7/16-20
06-04	\$				9/16-18	7/16-20
06-05	\$				9/16-18	1/2-20
06-06	\$				9/16-18	9/16-18
06-08	\$				9/16-18	3/4-16
08-04	\$				3/4-16	7/16-20
08-05	\$				3/4-16	1/2-20
08-06	\$				3/4-16	9/16-18
08-08	\$				3/4-16	3/4-16
08-10	\$				3/4-16	7/8-14
08-12	\$				3/4-16	1 1/16-12
10-04	\$				7/8-14	7/16-20
10-06	\$				7/8-14	9/16-18
10-08	\$				7/8-14	3/4-16
10-12	\$				7/8-14	1 1/16-12
12-04	\$				1 1/16-12	7/16-20
12-06	\$				1 1/16-12	9/16-18
12-08	\$				1 1/16-12	3/4-16
12-10	\$				1 1/16-12	7/8-14
12-16	\$				1 1/16-12	1 5/16-12
14-06	\$				1 3/16-12	9/16-18
14-08	\$				1 3/16-12	3/4-16
14-10	\$				1 3/16-12	7/8-14
14-12	\$				1 3/16-12	1 1/16-12
16-04	\$				1 5/16-12	7/16-20
16-06	\$				1 5/16-12	9/16-18
16-08	\$				1 5/16-12	3/4-16
16-10	\$				1 5/16-12	7/8-14
16-12	\$				1 5/16-12	1 1/16-12
16-14	\$				1 5/16-12	1 3/16-12
16-20	\$				1 5/16-12	1 5/8-12
20-08	\$				1 5/8-12	3/4-16
20-10	\$				1 5/8-12	7/8-14
20-12	\$				1 5/8-12	1 1/16-12
20-16	\$				1 5/8-12	1 5/16-12
20-24	\$				1 5/8-12	1 7/8-12
24-08	\$				1 7/8-12	3/4-16
24-12	\$				1 7/8-12	1 1/16-12
24-16	\$				1 7/8-12	1 5/16-12
24-20	\$				1 7/8-12	1 5/8-12
32-24	\$				2 1/2-12	1 7/8-12

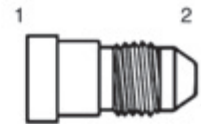
MS 51534
SAE 070123

Steel 37° JIC Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
06-04	\$		SS		9/16-18	7/16-20
08-04	\$		SS		3/4-16	7/16-20
08-06	\$		SS		3/4-16	9/16-18
10-04	\$		SS		7/8-14	7/16-20
10-06	\$		SS		7/8-14	9/16-18
10-08	\$		SS		7/8-14	3/4-16
12-04	\$		SS		1 1/16-12	7/16-20
12-06	\$		SS		1 1/16-12	9/16-18
12-08	\$		SS		1 1/16-12	3/4-16
16-04	\$		SS		1 5/16-12	7/16-20
16-06	\$		SS		1 5/16-12	9/16-18
16-08	\$		SS		1 5/16-12	3/4-16
16-10	\$				1 5/16-12	7/8-14
16-12	\$		SS		1 5/16-12	1 1/16-12
20-12	\$		SS		1 5/8-12	1 1/16-12
20-16	\$		SS		1 5/8-12	1 5/16-12
24-20	\$		SS		1 7/8-12	1 5/8-12

2407

JIC Reducer
(Requires 318*
For Assembly)

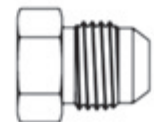


*See page 2 for 318

Dash Size	Stock Materials				T1 (UNF)
	S	FG	SS	BR	
02	\$		SS		5/16-24
03	\$		SS		3/8-24
04	\$		SS		7/16-20
05	\$		SS		1/2-20
06	\$		SS		9/16-18
08	\$		SS		3/4-16
10	\$		SS		7/8-14
12	\$		SS		1 1/16-12
14	\$		SS		1 3/16-12
16	\$		SS		1 5/16-12
20	\$		SS		1 5/8-12
24	\$		SS		1 7/8-12
32	\$		SS		2 1/2-12

2408

JIC Plug

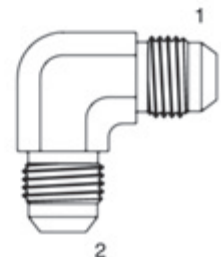


MS 51518
SAE 070109

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
02	\$				5/16-24	5/16-24
03	\$	FG	SS		3/8-24	3/8-24
04	\$	FG	SS		7/16-20	7/16-20
05-04	\$	FG			1/2-20	7/16-20
05	\$	FG	SS		1/2-20	1/2-20
06-04	\$	FG			9/16-18	7/16-20
06-05	\$	FG			9/16-18	1/2-20
06	\$	FG	SS		9/16-18	9/16-18
08-06	\$	FG			3/4-16	9/16-18
08	\$	FG	SS		3/4-16	3/4-16
10-08	\$	FG			7/8-14	3/4-16
10	\$	FG	SS		7/8-14	7/8-14
12-08	\$	FG			1 1/16-12	3/4-16
12-10	\$		SS		1 1/16-12	7/8-14
12	\$	FG	SS		1 1/16-12	1 1/16-12
14	\$	FG			1 3/16-12	1 3/16-12
16-12	\$	FG			1 5/16-12	1 1/16-12
16	\$	FG	SS		1 5/16-12	1 5/16-12
20-16	\$				1 5/8-12	1 5/16-12
20	\$	FG	SS		1 5/8-12	1 5/8-12
24	\$	FG	SS		1 7/8-12	1 7/8-12
32	\$	FG	SS		2 1/2-12	2 1/2-12

2500

JIC Union Elbow 90°



MS 51505
SAE 070201

S= Steel

FG=Forging

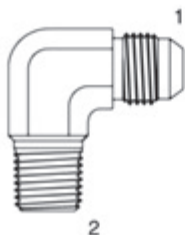
SS=Stainless Steel

BR=Brass

Steel 37° JIC Adapters

2501

JIC to Pipe Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
02-02	S	FG	SS		5/16-24	1/8-27
03-02	S	FG	SS		3/8-24	1/8-27
04-02	S	FG	SS	BR	7/16-20	1/8-27
04-04	S	FG	SS	BR	7/16-20	1/4-18
04-06	S	FG	SS	BR	7/16-20	3/8-18
04-08	S	FG	SS		7/16-20	1/2-14
05-02	S	FG	SS		1/2-20	1/8-27
05-04	S	FG	SS	BR	1/2-20	1/4-18
05-06	S	FG	SS		1/2-20	3/8-18
06-02	S	FG	SS	BR	9/16-18	1/8-27
06-04	S	FG	SS	BR	9/16-18	1/4-18
06-06	S	FG	SS	BR	9/16-18	3/8-18
06-08	S	FG	SS	BR	9/16-18	1/2-14
06-12	S	FG	SS		9/16-18	3/4-14
08-02	S	FG			3/4-16	1/8-27
08-04	S	FG	SS	BR	3/4-16	1/4-18
08-06	S	FG	SS	BR	3/4-16	3/8-18
08-08	S	FG	SS	BR	3/4-16	1/2-14
08-12	S	FG	SS	BR	3/4-16	3/4-14
08-16	S		SS		3/4-16	1-11 1/2
10-04	S				7/8-14	1/4-18
10-06	S	FG	SS	BR	7/8-14	3/8-18
10-08	S	FG	SS	BR	7/8-14	1/2-14
10-12	S	FG	SS		7/8-14	3/4-14
10-16	S	FG			7/8-14	1-11 1/2
12-06	S	FG	SS		1 1/16-12	3/8-18
12-08	S	FG	SS	BR	1 1/16-12	1/2-14
12-12	S	FG	SS	BR	1 1/16-12	3/4-14
12-16	S	FG	SS	BR	1 1/16-12	1-11 1/2
12-20	S				1 1/16-12	1 1/4-11 1/2
14-12	S	FG			1 3/16-12	3/4-14
16-08	S	FG	SS		1 5/16-12	1/2-14
16-12	S	FG	SS	BR	1 5/16-12	3/4-14
16-16	S	FG	SS	BR	1 5/16-12	1-11 1/2
16-20	S	FG	SS		1 5/16-12	1 1/4-11 1/2
16-24	S	FG			1 5/16-12	1 1/2-11 1/2
20-16	S	FG	SS		1 5/8-12	1-11 1/2
20-20	S	FG	SS		1 5/8-12	1 1/4-11 1/2
20-24	S	FG			1 5/8-12	1 1/2-11 1/2
24-16	S	FG			1 7/8-12	1-11 1/2
24-20	S	FG	SS		1 7/8-12	1 1/4-11 1/2
24-24	S	FG	SS		1 7/8-12	1 1/2-11 1/2
24-32	S				1 7/8-12	2-11 1/2
32-24	S	FG			2 1/2-12	1 1/2-11 1/2
32-32	S	FG	SS		2 1/2-12	2-11 1/2

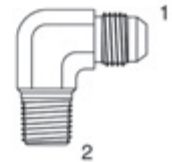
MS 51504
SAE 070202

Steel 37° JIC Adapters

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (NPTF)	Restriction
04-04 .062	\$	7/16-20	1/4-18	.062
04-06 .000	\$	7/16-20	3/8-18	.000
04-06 .031	\$	7/16-20	3/8-18	.031
04-06 .062	\$	7/16-20	3/8-18	.062
06-06 .031	\$	9/16-18	3/8-18	.031
06-06 .062	\$	9/16-18	3/8-18	.062
06-08 .031	\$	9/16-18	1/2-14	.031
06-08 .062	\$	9/16-18	1/2-14	.062

RST2501

Restricted JIC to Pipe Elbow 90°

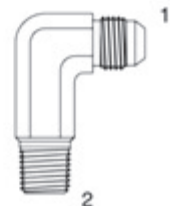


Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (NPTF)	Length*
04-02	\$ FG SS	7/16-20	1/8-27	1.17"
04-04	\$ FG SS	7/16-20	1/4-18	1.58"
05-02	\$ FG	1/2-20	1/8-27	1.20"
05-04	\$ FG	1/2-20	1/4-18	1.55"
06-04	\$ FG SS	9/16-18	1/4-18	1.58"
06-06	\$ FG SS	9/16-18	3/8-18	1.83"
06-08	\$ FG	9/16-18	1/2-14	2.17"
08-04	\$	3/4-16	1/4-18	1.67"
08-06	\$ FG	3/4-16	3/8-18	1.83"
08-08	\$ FG SS	3/4-16	1/2-14	2.17"
08-12	\$ FG	3/4-16	3/4-14	2.44"
10-08	\$ FG SS	7/8-14	1/2-14	2.17"
12-08	\$ FG	1 1/16-12	1/2-14	2.24"
12-12	\$ FG SS	1 1/16-12	3/4-14	2.44"
14-12	\$ FG	1 3/16-12	3/4-14	2.50"
16-12	\$ FG	1 5/16-12	3/4-14	2.56"
16-16	\$ FG SS	1 5/16-12	1-11 1/2	3.02"
20-20	\$ FG SS	1 5/8-12	1 1/4-11 1/2	3.69"
24-24	\$ FG	1 7/8-12	1 1/2-11 1/2	4.10"

*Length = Middle of JIC to End of Threads

2501-L

JIC to Pipe Long Elbow 90°



SAE 071502

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (NPTF)	Length*
04-02	\$ FG	7/16-20	1/8-27	1.56"
04-04	\$ FG	7/16-20	1/4-18	2.07"
05-02	\$ FG	1/2-20	1/8-27	1.59"
05-04	\$ FG	1/2-20	1/4-18	2.04"
06-04	\$ FG	9/16-18	1/4-18	2.07"
06-06	\$ FG	9/16-18	3/8-18	2.42"
06-08	\$ FG	9/16-18	1/2-14	2.92"
08-06	\$ FG	3/4-16	3/8-18	2.42"
08-08	\$ FG	3/4-16	1/2-14	2.88"
10-08	\$ FG	7/8-14	1/2-14	2.87"
12-08	\$ FG	1 1/16-12	1/2-14	2.98"
12-12	\$ FG	1 1/16-12	3/4-14	3.28"
14-12	\$ FG	1 3/16-12	3/4-14	3.39"
16-16	\$ FG	1 5/16-12	1-11 1/2	4.05"
20-20	\$ FG	1 5/8-12	1 1/4-11 1/2	5.00"

*Length = Middle of JIC to End of Threads

2501-LL

JIC to Pipe Extra Long Elbow 90°



SAE 071602

Steel 37° JIC Adapters

2501-LLL

**JIC to Pipe
Extra Extra Long
Elbow 90°**

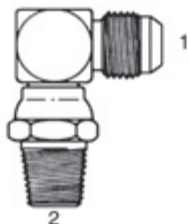


Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)	Length*
	S	FG	SS	BR			
04-02	S	FG			7/16-20	1/8-27	2.31"
04-04	S	FG			7/16-20	1/4-18	3.06"
05-02	S	FG			1/2-20	1/8-27	2.34"
06-04	S	FG			9/16-18	1/4-18	3.06"
06-06	S	FG			9/16-18	3/8-18	3.25"
08-06	S	FG			3/4-16	3/8-18	3.75"
08-08	S	FG			3/4-16	1/2-14	4.51"
10-08	S	FG			7/8-14	1/2-14	4.50"
12-12	S	FG			1 1/16-12	3/4-14	5.03"
16-16	S	FG			1 5/16-12	1-11 1/2	6.34"
20-20	S	FG			1 5/8-12	1 1/4-11 1/2	7.34"

*Length = Middle of JIC to End of Threads

2501-S

**JIC to Pipe
Swivel Elbow 90°**

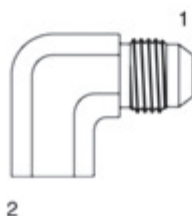


Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-04		FG			7/16-20	1/4-18
06-04		FG			9/16-18	1/4-18
06-06		FG			9/16-18	3/8-18
08-06		FG			3/4-16	3/8-18
08-08		FG			3/4-16	1/2-14
10-08		FG			7/8-14	1/2-14
12-12		FG			1 1/16-12	3/4-14

*Swivel for installation only.

2502

**JIC to Pipe
Elbow 90°**



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
02-02	S	FG			1/8-27	1/8-27
03-02	S	FG			3/8-24	1/8-27
04-02	S	FG	SS		7/16-20	1/8-27
04-04	S	FG	SS		7/16-20	1/4-18
04-06	S	FG			7/16-20	3/8-18
04-08	S				7/16-20	1/2-14
05-02	S	FG			1/2-20	1/8-27
05-04	S	FG	SS		1/2-20	1/4-18
06-02	S	FG			9/16-18	1/8-27
06-04	S	FG	SS		9/16-18	1/4-18
06-06	S	FG	SS		9/16-18	3/8-18
06-08	S	FG			9/16-18	1/2-14
08-04	S	FG	SS		3/4-16	1/4-18
08-06	S	FG	SS		3/4-16	3/8-18
08-08	S	FG	SS		3/4-16	1/2-14
08-12	S				3/4-16	3/4-14
10-06	S				7/8-14	3/8-18
10-08	S	FG	SS		7/8-14	1/2-14
12-08	S	FG	SS		1 1/16-12	1/2-14
12-12	S	FG	SS		1 1/16-12	3/4-14
14-12	S	FG			1 3/16-12	3/4-14
16-12	S	FG			1 5/16-12	3/4-14
16-16	S	FG	SS		1 5/16-12	1-11 1/2
20-20	S	FG	SS		1 5/8-12	1 1/4-11 1/2
24-24	S	FG	SS		1 7/8-12	1 1/2-11 1/2
32-32	S	FG			2 1/2-12	2-11 1/2

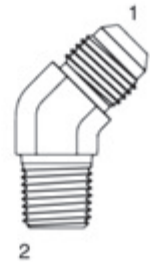
**MS 51506
SAE 070203**

Steel 37° JIC Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
02-02	\$	FG			5/16-24	1/8-27
03-02	\$	FG		BR	3/8-24	1/8-27
04-02	\$	FG	SS	BR	7/16-20	1/8-27
04-04	\$	FG	SS	BR	7/16-20	1/4-18
04-06	\$	FG			7/16-20	3/8-18
04-08	\$	FG			7/16-20	1/2-14
05-02	\$	FG	SS		1/2-20	1/8-27
05-04	\$	FG	SS	BR	1/2-20	1/4-18
06-02	\$	FG	SS	BR	9/16-18	1/8-27
06-04	\$	FG	SS	BR	9/16-18	1/4-18
06-06	\$	FG	SS	BR	9/16-18	3/8-18
06-08	\$	FG	SS	BR	9/16-18	1/2-14
06-12	\$	FG			9/16-18	3/4-14
08-04	\$	FG	SS		3/4-16	1/4-18
08-06	\$	FG	SS	BR	3/4-16	3/8-18
08-08	\$	FG	SS	BR	3/4-16	1/2-14
08-12	\$	FG	SS		3/4-16	3/4-14
10-06	\$	FG	SS		7/8-14	3/8-18
10-08	\$	FG	SS	BR	7/8-14	1/2-14
10-12	\$	FG			7/8-14	3/4-14
12-08	\$	FG	SS	BR	1 1/16-12	1/2-14
12-12	\$	FG	SS	BR	1 1/16-12	3/4-14
12-16	\$	FG			1 1/16-12	1-11 1/2
14-12	\$	FG			1 3/16-12	3/4-14
16-12	\$	FG	SS		1 5/16-12	3/4-14
16-16	\$	FG	SS		1 5/16-12	1-11 1/2
16-20	\$	FG			1 5/16-12	1 1/4-11 1/2
20-16	\$	FG			1 5/8-12	1-11 1/2
20-20	\$	FG	SS		1 5/8-12	1 1/4-11 1/2
20-24	\$	FG			1 5/8-12	1 1/2-11 1/2
24-24	\$	FG	SS		1 7/8-12	1 1/2-11 1/2
32-32	\$	FG			2 1/2-12	2-11 1/2

2503

JIC to Pipe Elbow 45°

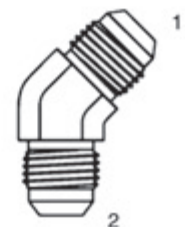


MS 51508
SAE 070302

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04-04	\$	FG			7/16-20	7/16-20
06-04	\$	FG			9/16-18	7/16-20
06-06	\$	FG			9/16-18	9/16-18
08-08	\$	FG	SS		3/4-16	3/4-16
10-10	\$	FG			7/8-14	7/8-14
12-12	\$	FG	SS		1 1/16-12	1 1/16-12
16-16	\$	FG			1 5/16-12	1 5/16-12

2504

JIC Union Elbow 45°



S= Steel

FG=Forging

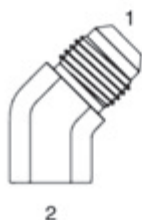
SS=Stainless Steel

BR=Brass

Steel 37° JIC Adapters

2505

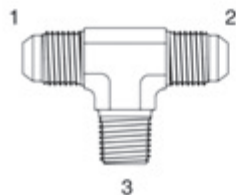
JIC to Pipe Elbow 45°



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-04	S	FG			7/16-20	1/4-18
06-04	S	FG			9/16-18	1/4-18
06-06	S	FG			9/16-18	3/8-18
08-06	S	FG			3/4-16	3/8-18
08-08	S	FG			3/4-16	1/2-14
10-08	S	FG			7/8-14	1/2-14
12-12	S	FG			1 1/16-12	3/4-14
16-16	S	FG			1 5/16-12	1-11 1/2

2601

JIC to Pipe Branch Tee



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (NPTF)
	S	FG	SS	BR			
03-03-02	S	FG	SS		3/8-24	3/8-24	1/8-27
04-04-02	S	FG	SS		7/16-20	7/16-20	1/8-27
04-04-04	S	FG	SS		7/16-20	7/16-20	1/4-18
04-04-06	S				7/16-20	7/16-20	3/8-18
05-05-02	S	FG	SS		1/2-20	1/2-20	1/8-27
05-05-04	S	FG	SS		1/2-20	1/2-20	1/4-18
06-06-04	S	FG	SS		9/16-18	9/16-18	1/4-18
06-06-06	S	FG	SS		9/16-18	9/16-18	3/8-18
06-06-08	S	FG			9/16-18	9/16-18	1/2-14
08-08-04	S				3/4-16	3/4-16	1/4-18
08-08-06	S	FG	SS		3/4-16	3/4-16	3/8-18
08-08-08	S	FG	SS		3/4-16	3/4-16	1/2-14
08-08-12	S				3/4-16	3/4-16	3/4-14
10-10-08	S	FG	SS		7/8-14	7/8-14	1/2-14
10-10-12	S				7/8-14	7/8-14	3/4-14
12-12-08	S	FG			1 1/16-12	1 1/16-12	1/2-14
12-12-12	S	FG	SS		1 1/16-12	1 1/16-12	3/4-14
14-14-12	S	FG			1 3/16-12	1 3/16-12	3/4-14
16-16-12	S	FG			1 5/16-12	1 5/16-12	3/4-14
16-16-16	S	FG	SS		1 5/16-12	1 5/16-12	1-11 1/2
20-20-20	S	FG	SS		1 5/8-12	1 5/8-12	1 1/4-11 1/2
24-24-24	S	FG	SS		1 7/8-12	1 7/8-12	1 1/2-11 1/2
32-32-32	S	FG			2 1/2-12	2 1/2-12	2-11 1/2

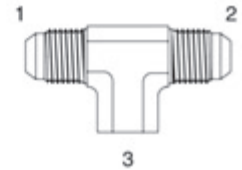
MS 51512
SAE 070425

Steel 37° JIC Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (NPTF)
	S	FG	SS	BR			
03-03-02	\$				3/8-24	3/8-24	1/8-27
04-04-02	\$	FG	SS		7/16-20	7/16-20	1/8-27
04-04-04	\$	FG	SS		7/16-20	7/16-20	1/4-18
05-05-02	\$	FG			1/2-20	1/2-20	1/8-27
06-06-04	\$	FG	SS		9/16-18	9/16-18	1/4-18
06-06-06	\$	FG	SS		9/16-18	9/16-18	3/8-18
08-08-04	\$	FG	SS		3/4-16	3/4-16	1/4-18
08-08-06	\$	FG	SS		3/4-16	3/4-16	3/8-18
08-08-08	\$	FG	SS		3/4-16	3/4-16	1/2-14
10-10-08	\$	FG	SS		7/8-14	7/8-14	1/2-14
12-12-08	\$				1 1/16-12	1 1/16-12	1/2-14
12-12-12	\$	FG	SS		1 1/16-12	1 1/16-12	3/4-14
16-16-16	\$	FG			1 5/16-12	1 5/16-12	1-11 1/2
20-20-20	\$	FG			1 5/8-12	1 5/8-12	1 1/4-11 1/2
24-24-24	\$	FG			1 7/8-12	1 7/8-12	1 1/2-11 1/2
32-32-32	\$	FG			2 1/2-12	2 1/2-12	2-11 1/2

2602

JIC to Pipe Branch Tee

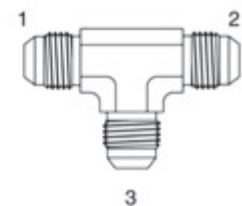


MS 51513
SAE 070427

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS	BR			
02	\$	FG	SS		5/16-24	5/16-24	5/16-24
03	\$	FG	SS		3/8-24	3/8-24	3/8-24
04	\$	FG	SS		7/16-20	7/16-20	7/16-20
05	\$	FG	SS		1/2-20	1/2-20	1/2-20
06	\$	FG	SS		9/16-18	9/16-18	9/16-18
06-06-08	\$	FG			9/16-18	9/16-18	3/4-16
08-08-06	\$				3/4-16	3/4-16	9/16-18
08-08-10	\$	FG			3/4-16	3/4-16	7/8-14
08	\$	FG	SS		3/4-16	3/4-16	3/4-16
10-10-08	\$	FG			7/8-14	7/8-14	3/4-16
10	\$	FG	SS		7/8-14	7/8-14	7/8-14
10-10-12	\$				7/8-14	7/8-14	1 1/16-12
12-12-08	\$	FG	SS		1 1/16-12	1 1/16-12	3/4-16
12	\$	FG	SS		1 1/16-12	1 1/16-12	1 1/16-12
12-12-16	\$				1 1/16-12	1 1/16-12	1 5/16-12
14	\$	FG			1 3/16-12	1 3/16-12	1 3/16-12
16	\$	FG	SS		1 5/16-12	1 5/16-12	1 5/16-12
16-16-20	\$	FG			1 5/16-12	1 5/16-12	1 5/8-12
20	\$	FG	SS		1 5/8-12	1 5/8-12	1 5/8-12
24	\$	FG	SS		1 7/8-12	1 7/8-12	1 7/8-12
32	\$	FG	SS		2 1/2-12	2 1/2-12	2 1/2-12

2603

JIC Union Tee



MS 51510
SAE 070401

S= Steel

FG=Forging

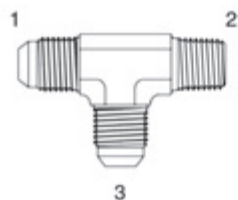
SS=Stainless Steel

BR=Brass

Steel 37° JIC Adapters

2605

JIC to Pipe Run Tee

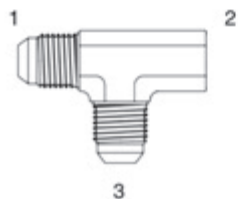


MS 5151
SAE 070424

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)	T3 (UNF)
	S	FG	SS	BR			
03-02-03	\$	FG	SS		3/8-24	1/8-27	3/8-24
04-02-04	\$	FG	SS		7/16-20	1/8-27	7/16-20
04-04-04	\$	FG	SS		7/16-20	1/4-18	7/16-20
05-02-05	\$	FG	SS		1/2-20	1/8-27	1/2-20
05-04-05	\$	FG	SS		1/2-20	1/4-18	1/2-20
06-02-06	\$	FG			9/16-18	1/8-27	9/16-18
06-04-06	\$	FG	SS		9/16-18	1/4-18	9/16-18
06-06-06	\$	FG	SS		9/16-18	3/8-18	9/16-18
08-04-08	\$	FG			3/4-16	1/4-18	3/4-16
08-06-08	\$	FG	SS		3/4-16	3/8-18	3/4-16
08-08-08	\$	FG	SS		3/4-16	1/2-14	3/4-16
08-12-08	\$	FG			3/4-16	3/4-14	3/4-16
10-08-10	\$	FG	SS		7/8-14	1/2-14	7/8-14
12-08-12	\$	FG	SS		1 1/16-12	1/2-14	1 1/16-12
12-12-12	\$	FG	SS		1 1/16-12	3/4-14	1 1/16-12
12-16-12	\$				1 1/16-12	1-11 1/2	1 1/16-12
14-12-14	\$	FG			1 3/16-12	3/4-14	1 3/16-12
16-16-16	\$	FG	SS		1 5/16-12	1-11 1/2	1 5/16-12
20-20-20	\$	FG	SS		1 5/8-12	1 1/4-11 1/2	1 5/8-12
24-24-24	\$	FG	SS		1 7/8-12	1 1/2-11 1/2	1 7/8-12
32-32-32	\$	FG			2 1/2-12	2-11 1/2	2 1/2-12

2606

JIC to Pipe Run Tee



MS 51514
SAE 070426

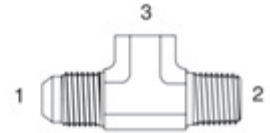
Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)	T3 (UNF)
	S	FG	SS	BR			
03-02-03	\$	FG			3/8-24	1/8-27	3/8-24
04-02-04	\$	FG	SS		7/16-20	1/8-27	7/16-20
04-04-04	\$	FG	SS		7/16-20	1/4-18	7/16-20
06-04-06	\$	FG	SS		9/16-18	1/4-18	9/16-18
06-06-06	\$	FG			9/16-18	3/8-18	9/16-18
08-06-08	\$	FG	SS		3/4-16	3/8-18	3/4-16
08-08-08	\$	FG	SS		3/4-16	1/2-14	3/4-16
10-08-10	\$	FG	SS		7/8-14	1/2-14	7/8-14
12-12-12	\$	FG	SS		1 1/16-12	3/4-14	1 1/16-12
16-16-16	\$	FG			1 5/16-12	1-11 1/2	1 5/16-12
20-20-20	\$	FG			1 5/8-12	1 1/4-11 1/2	1 5/8-12
24-24-24	\$	FG			1 7/8-12	1 1/2-11 1/2	1 7/8-12

Steel 37° JIC Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)	T3 (NPTF)
	S	FG	SS	BR			
06-06	\$				9/16-18	3/8-18	3/8-18
08-06	\$				3/4-16	3/8-18	3/8-18
08-08	\$	FG			3/4-16	1/2-14	1/2-14

2611

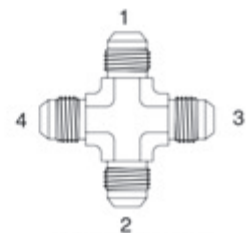
JIC to Pipe Run Tee



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 & T4 (UNF)
	S	FG	SS	BR			
02	\$	FG			5/16-24	5/16-24	5/16-24
04	\$	FG	SS		7/16-20	7/16-20	7/16-20
05	\$	FG			1/2-20	1/2-20	1/2-20
06	\$	FG	SS		9/16-18	9/16-18	9/16-18
08	\$	FG	SS		3/4-16	3/4-16	3/4-16
10	\$	FG			7/8-14	7/8-14	7/8-14
12	\$	FG			1 1/16-12	1 1/16-12	1 1/16-12
14	\$	FG			1 3/16-12	1 3/16-12	1 3/16-12
16	\$	FG			1 5/16-12	1 5/16-12	1 5/16-12
20	\$	FG			1 5/8-12	1 5/8-12	1 5/8-12

2650

JIC Union Cross



MS 51517
SAE 070501

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
03	\$				3/8-24	3/8-24
04	\$		SS		7/16-20	7/16-20
05	\$				1/2-20	1/2-20
06	\$		SS		9/16-18	9/16-18
08	\$		SS		3/4-16	3/4-16
10	\$		SS		7/8-14	7/8-14
12	\$		SS		1 1/16-12	1 1/16-12
14	\$				1 3/16-12	1 3/16-12
16	\$		SS		1 5/16-12	1 5/16-12
20	\$		SS		1 5/8-12	1 5/8-12
24	\$		SS		1 7/8-12	1 7/8-12
32	\$		SS		2 1/2-12	2 1/2-12

2700

JIC Bulkhead Union

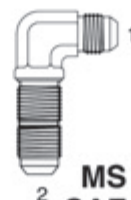


MS 51520
SAE 070601

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
03	\$	FG	SS		3/8-24	3/8-24
04	\$	FG	SS		7/16-20	7/16-20
05	\$				1/2-20	1/2-20
06	\$	FG	SS		9/16-18	9/16-18
08	\$	FG	SS		3/4-16	3/4-16
10	\$	FG	SS		7/8-14	7/8-14
12	\$	FG	SS		1 1/16-12	1 1/16-12
14	\$				1 3/16-12	1 3/16-12
16	\$	FG	SS		1 5/16-12	1 5/16-12
20	\$	FG	SS		1 5/8-12	1 5/8-12
24	\$	FG			1 7/8-12	1 7/8-12
32	\$				2 1/2-12	2 1/2-12

2701

JIC Bulkhead Union Elbow 90°



MS 51507
SAE 070701

S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Steel 37° JIC Adapters

2702

JIC Bulkhead Union Elbow 45°

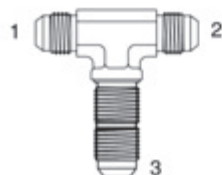


MS 51509
SAE 070801

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04		FG	SS		7/16-20	7/16-20
05	S	FG			1/2-20	1/2-20
06	S	FG	SS		9/16-18	9/16-18
08	S	FG	SS		3/4-16	3/4-16
10	S	FG			7/8-14	7/8-14
12	S	FG	SS		1 1/16-12	1 1/16-12
14	S	FG			1 3/16-12	1 3/16-12
16	S	FG	SS		1 5/16-12	1 5/16-12
20	S	FG			1 5/8-12	1 5/8-12
24	S	FG			1 7/8-12	1 7/8-12

2703

JIC Bulkhead Union Branch Tee

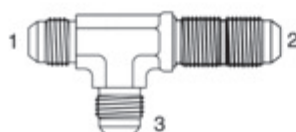


MS 51515
SAE 070959

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS	BR			
03	S	FG			3/8-24	3/8-24	3/8-24
04	S	FG	SS		7/16-20	7/16-20	7/16-20
05	S				1/2-20	1/2-20	1/2-20
06	S	FG	SS		9/16-18	9/16-18	9/16-18
08	S	FG	SS		3/4-16	3/4-16	3/4-16
10	S	FG			7/8-14	7/8-14	7/8-14
12	S	FG	SS		1 1/16-12	1 1/16-12	1 1/16-12
16	S	FG			1 5/16-12	1 5/16-12	1 5/16-12
20	S	FG			1 5/8-12	1 5/8-12	1 5/8-12
24	S	FG			1 7/8-12	1 7/8-12	1 7/8-12
32	S				2 1/2-12	2 1/2-12	2 1/2-12

2704

JIC Bulkhead Union Run Tee



MS 51516
SAE 070958

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS	BR			
03	S	FG			3/8-24	3/8-24	3/8-24
04	S	FG	SS		7/16-20	7/16-20	7/16-20
05	S				1/2-20	1/2-20	1/2-20
06	S	FG	SS		9/16-18	9/16-18	9/16-18
08	S	FG	SS		3/4-16	3/4-16	3/4-16
10	S	FG			7/8-14	7/8-14	7/8-14
12	S	FG	SS		1 1/16-12	1 1/16-12	1 1/16-12
16	S	FG			1 5/16-12	1 5/16-12	1 5/16-12
20	S	FG			1 5/8-12	1 5/8-12	1 5/8-12
24	S	FG			1 7/8-12	1 7/8-12	1 7/8-12

2705

JIC to Pipe Bulkhead



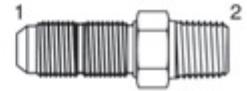
Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	S		SS		7/16-20	1/8-27
04-04	S		SS		7/16-20	1/4-18
05-02	S				1/2-20	1/8-27
06-04	S		SS		9/16-18	1/4-18
06-06	S		SS		9/16-18	3/8-18
08-06	S		SS		3/4-16	3/8-18
08-08	S		SS		3/4-16	1/2-14
10-08	S		SS		7/8-14	1/2-14
12-12	S		SS		1 1/16-12	3/4-14
16-16	S				1 5/16-12	1-11 1/2
20-20	S				1 5/8-12	1 1/4-11 1/2

Steel 37° JIC Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-27
04-04	\$				7/16-20	1/4-18
06-04	\$				9/16-18	1/4-18
06-06	\$				9/16-18	3/8-18
08-06	\$				3/4-16	3/8-18
08-08	\$				3/4-16	1/2-14
10-08	\$				7/8-14	1/2-14
12-12	\$				1 1/16-12	3/4-14
16-16	\$				1 5/16-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 1/2-11 1/2
32-32	\$				2 1/2-12	2-11 1/2

2706

JIC to Pipe Bulkhead



Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
04-04	\$				1/4-18	1/4-18
06-06	\$				3/8-18	3/8-18
08-08	\$				1/2-14	1/2-14
12-12	\$				3/4-14	3/4-14

To include locknut with bulkhead fitting; insert "LN" between base part number and dash size. (example: 2700-LN-04)

2708

Pipe Bulkhead



Dash Size	Stock Materials				T1 (UNF)
	S	FG	SS	BR	
02	\$				1/8-27
03	\$				3/8-24
04	\$				7/16-24
05	\$				1/2-20
06	\$				9/16-18
08	\$				3/4-16
10	\$				7/8-14
12	\$				1 1/16-12
14	\$				1 3/16-12
16	\$				1 5/16-12
20	\$				1 5/8-12
24	\$				1 7/8-12
32	\$				2 1/2-12

306

Bulkhead Locknut

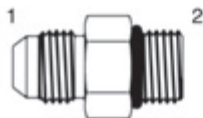


MS 51860
SAE 070118

Steel 37° JIC Adapters

6400

JIC to O-Ring



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
02	\$		SS		5/16-24	5/16-24
03	\$		SS		3/8-24	3/8-24
04-02	\$				7/16-20	5/16-24
04-03	\$		SS		7/16-20	3/8-24
04	\$		SS		7/16-20	7/16-20
04-05	\$		SS		7/16-20	1/2-20
04-06	\$		SS		7/16-20	9/16-18
04-08	\$		SS		7/16-20	3/4-16
04-10	\$				7/16-20	7/8-14
05-04	\$				1/2-20	7/16-20
05	\$		SS		1/2-20	1/2-20
05-06	\$				1/2-20	9/16-18
05-08	\$				1/2-20	3/4-16
06-04	\$		SS		9/16-18	7/16-20
06-05	\$				9/16-18	1/2-20
06	\$		SS		9/16-18	9/16-18
06-08	\$		SS		9/16-18	3/4-16
06-10	\$		SS		9/16-18	7/8-14
06-12	\$		SS		9/16-18	1 1/16-12
06-16	\$				9/16-18	1 5/16-12
08-04	\$		SS		3/4-16	7/16-20
08-06	\$		SS		3/4-16	9/16-18
08	\$		SS		3/4-16	3/4-16
08-10	\$		SS		3/4-16	7/8-14
08-12	\$		SS		3/4-16	1 1/16-12
08-16	\$		SS		3/4-16	1 5/16-12
10-04	\$				7/8-14	7/16-20
10-06	\$		SS		7/8-14	9/16-18
10-08	\$		SS		7/8-14	3/4-16
10	\$		SS		7/8-14	7/8-14
10-12	\$		SS		7/8-14	1 1/16-12
10-16	\$		SS		7/8-14	1 5/16-12
12-06	\$				1 1/16-12	9/16-18
12-08	\$		SS		1 1/16-12	3/4-16
12-10	\$		SS		1 1/16-12	7/8-14
12	\$		SS		1 1/16-12	1 1/16-12
12-14	\$				1 1/16-12	1 3/16-12
12-16	\$				1 1/16-12	1 5/16-12
12-20	\$				1 1/16-12	1 5/8-12
12-24	\$				1 1/16-12	1 7/8-12
14-10	\$				1 3/16-12	7/8-14
14-12	\$				1 3/16-12	1 1/16-12
14	\$				1 3/16-12	1 3/16-12
14-16	\$				1 3/16-12	1 5/16-12
16-10	\$		SS		1 5/16-12	7/8-14
16-12	\$		SS		1 5/16-12	1 1/16-12
16-14	\$				1 5/16-12	1 3/16-12
16	\$		SS		1 5/16-12	1 5/16-12
16-20	\$		SS		1 5/16-12	1 5/8-12
16-24	\$				1 5/16-12	1 7/8-12
20-12	\$		SS		1 5/8-12	1 1/16-12
20-16	\$		SS		1 5/8-12	1 5/16-12
20	\$		SS		1 5/8-12	1 5/8-12
20-24	\$		SS		1 5/8-12	1 7/8-12
24-16	\$				1 7/8-12	1 5/16-12
24-20	\$		SS		1 7/8-12	1 5/8-12
24	\$		SS		1 7/8-12	1 7/8-12
24-32	\$				1 7/8-12	2 1/2-12
32-24	\$				2 1/2-12	1 7/8-12
32	\$				2 1/2-12	2 1/2-12

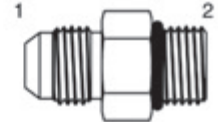
**MS 51525
SAE 070120**

Steel 37° JIC Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	Restriction
	S	FG	SS	BR			
04-04-R.000	\$				7/16-20	7/16-20	.000
04-04-R.031	\$				7/16-20	7/16-20	.031
04-04-R.062	\$				7/16-20	7/16-20	.062
04-06-R.031	\$				7/16-20	9/16-18	.031
04-06-R.062	\$				7/16-20	9/16-18	.062
06-06-R.000	\$				9/16-18	9/16-18	.000
06-06-R.031	\$				9/16-18	9/16-18	.031
06-06-R.062	\$				9/16-18	9/16-18	.062
06-08-R.000	\$				9/16-18	3/4-16	.000
06-08-R.031	\$				9/16-18	3/4-16	.031
06-08-R.062	\$				9/16-18	3/4-16	.062

RST6400

JIC to O-Ring with Restrictor



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	Length*
	S	FG	SS	BR			
04	\$		SS		7/16-20	7/16-20	2.08"
06	\$		SS		9/16-18	9/16-18	2.31"
06-08	\$				9/16-18	3/4-16	2.38"
08	\$		SS		3/4-16	3/4-16	2.70"
10	\$		SS		7/8-14	7/8-14	3.04"
12	\$		SS		1 1/16-12	1 1/16-12	3.61"
16	\$		SS		1 5/16-12	1 5/16-12	3.98"
20	\$				1 5/8-12	1 5/8-12	4.69"
24	\$				1 7/8-12	1 7/8-12	5.17"

6400-L

JIC to O-Ring Long



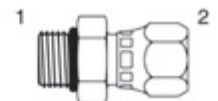
*Length = Overall Length of Fitting

MS 51526
SAE 070122

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04-04	\$		SS		7/16-20	7/16-20
06-06	\$		SS		9/16-18	9/16-18
06-08	\$				9/16-18	3/4-16
08-06	\$		SS		3/4-16	9/16-18
08-08	\$		SS		3/4-16	3/4-16
08-10	\$				3/4-16	7/8-14
10-08	\$				7/8-14	3/4-16
10-10	\$		SS		7/8-14	7/8-14
10-12	\$				7/8-14	1 1/16-12
12-12	\$		SS		1 1/16-12	1 1/16-12
12-16	\$				1 1/16-12	1 5/16-12
16-12	\$				1 5/16-12	1 1/16-12
16-16	\$		SS		1 5/16-12	1 5/16-12
16-20	\$				1 5/16-12	1 5/8-12
20-20	\$		SS		1 5/8-12	1 5/8-12
24-24	\$				1 7/8-12	1 7/8-12

6402

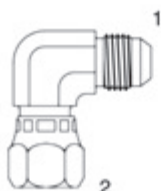
O-Ring to JIC Swivel



Steel 37° JIC Adapters

6500

JIC Swivel Elbow 90°

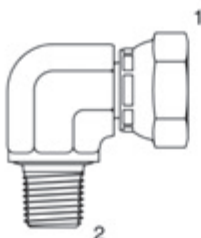


MS 51521
SAE 070221

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
03	S	FG	SS		3/8-24	3/8-24
04	S	FG	SS		7/16-20	7/16-20
04-06	S	FG			7/16-20	9/16-18
05	S	FG	SS		1/2-20	1/2-20
06-04	S	FG	SS		9/16-18	7/16-20
06	S	FG	SS		9/16-18	9/16-18
06-08	S	FG			9/16-18	3/4-16
08-06	S	FG			3/4-16	9/16-18
08	S	FG	SS		3/4-16	3/4-16
08-10	S	FG			3/4-16	7/8-14
08-12	S	FG			3/4-16	1 1/16-12
10-08	S	FG	SS		7/8-14	3/4-16
10	S	FG			7/8-14	7/8-14
10-12	S	FG			7/8-14	1 1/16-12
12-10	S	FG	SS		1 1/16-12	7/8-14
12	S	FG			1 1/16-12	1 1/16-12
12-16	S	FG			1 1/16-12	1 5/16-12
14	S	FG	SS		1 3/16-12	1 3/16-12
16	S	FG	SS		1 5/16-12	1 5/16-12
20	S	FG	SS		1 5/8-12	1 5/8-12
24	S	FG	SS		1 7/8-12	1 7/8-12

6501

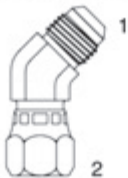
JIC Swivel to Pipe Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	S	FG	SS		7/16-20	1/8-27
04-04	S	FG	SS		7/16-20	1/4-18
04-06	S	FG			7/16-20	3/8-18
05-04	S				1/2-20	1/4-18
06-04	S	FG	SS		9/16-18	1/4-18
06-06	S	FG	SS		9/16-18	3/8-18
06-08	S	FG			9/16-18	1/2-14
08-06	S	FG	SS		3/4-16	3/8-18
08-08	S	FG	SS		3/4-16	1/2-14
08-12	S	FG			3/4-16	3/4-14
10-08	S	FG			7/8-14	1/2-14
12-08	S				1 1/16-12	1/2-14
12-12	S	FG	SS		1 1/16-12	3/4-14
16-16	S	FG	SS		1 5/16-12	1-11 1/2
20-20	S	FG			1 5/8-12	1 1/4-11 1/2
24-24	S	FG	SS		1 7/8-12	1 1/2-11 1/2
32-32	S	FG			2 1/2-12	2-11 1/2

6502

JIC Swivel Elbow 45°



MS 51522
SAE 070321

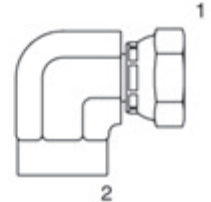
Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	S	FG	SS		7/16-20	7/16-20
05	S	FG			1/2-20	1/2-20
06	S	FG	SS		9/16-18	9/16-18
008	S	FG	SS		3/4-16	3/4-16
10	S	FG	SS		7/8-14	7/8-14
12	S	FG	SS		1 1/16-12	1 1/16-12
14	S				1 3/16-12	1 3/16-12
16	S	FG	SS		1 5/16-12	1 5/16-12
20	S	FG	SS		1 5/8-12	1 5/8-12
24	S	FG			1 7/8-12	1 7/8-12
32	S	FG	SS		2 1/2-12	2 1/2-12

Steel 37° JIC Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-04	\$	FG			7/16-20	1/4-18
06-04	\$	FG			9/16-18	1/4-18
06-06	\$				9/16-18	3/8-18
08-06	\$				3/4-16	3/8-18
08-08	\$	FG			3/4-16	1/2-14
10-08	\$				7/8-14	1/2-14
12-12	\$				1 1/16-12	3/4-14
16-16	\$				1 5/16-12	1-11 1/2

6503

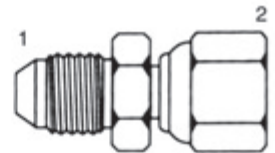
JIC Swivel to Pipe Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04-04	\$				7/16-20	7/16-20
06-04	\$				9/16-18	7/16-20
06-06	\$				9/16-18	9/16-18
08-08	\$				3/4-16	3/4-16
10-10	\$				7/8-14	7/8-14
12-12	\$				1 1/16-12	1 1/16-12
16-16	\$				1 5/8-12	1 5/8-12
20-20	\$				1 7/8-12	1 7/8-12
24-24	\$				1 7/8-12	1 7/8-12
32-32	\$				2 1/2-12	2 1/2-12

6504

JIC Swivel Extender



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$		SS		7/16-20	1/8-27
04-04	\$		SS		7/16-20	1/4-18
05-04	\$				1/2-20	1/4-18
06-04	\$		SS		9/16-18	1/4-18
06-06	\$		SS		9/16-18	3/8-18
08-06	\$		SS		3/4-16	3/8-18
08-08	\$		SS		3/4-16	1/2-14
10-06	\$				7/8-14	3/8-18
10-08	\$		SS		7/8-14	1/2-14
10-12	\$				7/8-14	3/4-14
12-08	\$		SS		1 1/16-12	1/2-14
12-12	\$		SS		1 1/16-12	3/4-14
16-12	\$				1 5/16-12	3/4-14
16-16	\$		SS		1 5/16-12	1-11 1/2
20-20	\$		SS		1 5/8-12	1 1/4-11 1/2
24-24	\$		SS		1 7/8-12	1 1/2-11 1/2
32-32	\$		SS		2 1/2-12	2-11 1/2

6505

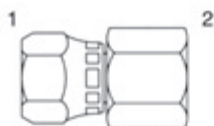
JIC Swivel to Pipe



Steel 37° JIC Adapters

6506

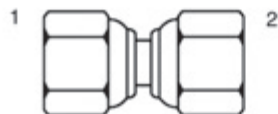
JIC Swivel to Pipe



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$		SS		7/16-20	1/8-27
04-04	\$		SS		7/16-20	1/4-18
06-04	\$		SS		9/16-18	1/4-18
06-06	\$		SS		9/16-18	3/8-18
06-08	\$		SS		9/16-18	1/2-14
08-06	\$		SS		3/4-16	3/8-18
08-08	\$		SS		3/4-16	1/2-14
10-06	\$				7/8-14	3/8-18
10-08	\$		SS		7/8-14	1/2-14
10-12	\$				7/8-14	3/4-14
12-08	\$		SS		1 1/16-12	1/2-14
12-12	\$		SS		1 1/16-12	3/4-14
14-12	\$				1 3/16-12	3/4-14
16-16	\$		SS		1 5/16-12	1-11 1/2
20-20	\$		SS		1 5/8-12	1 1/4-11 1/2
24-24	\$		SS		1 7/8-12	1 1/2-11 1/2
32-32	\$		SS		2 1/2-12	2-11 1/2

6510

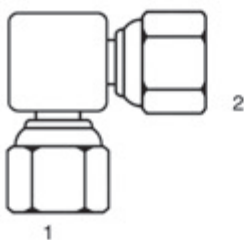
JIC Swivel Union



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04-04	\$				7/16-20	7/16-20
06-06	\$				9/16-18	9/16-18
08-08	\$				3/4-16	3/4-16
10-10	\$				7/8-14	7/8-14
12-12	\$				1 1/16-12	1 1/16-12
16-16	\$				1 5/16-12	1 5/16-12
20-20	\$				1 5/8-12	1 5/8-12

6511

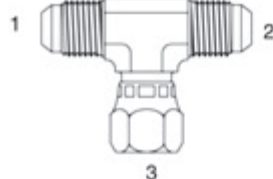
JIC Swivel Union Elbow



Dash Siz	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04-04	\$				7/16-20	7/16-20
06-06	\$				9/16-18	9/16-18
08-08	\$				3/4-16	3/4-16
10-10	\$				7/8-14	7/8-14
12-12	\$				1 1/16-12	1 1/16-12
16-16	\$				1 5/16-12	1 5/16-12

6600

JIC Swivel Branch Tee



MS 51524
SAE 070433

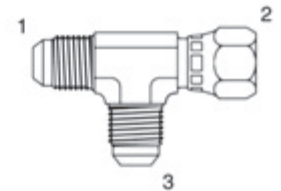
Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS	BR			
03	\$	FG			3/8-24	3/8-24	3/8-24
04	\$	FG	SS		7/16-20	7/16-20	7/16-20
05	\$	FG	SS		1/2-20	1/2-20	1/2-20
06	\$	FG	SS		9/16-18	9/16-18	9/16-18
08	\$	FG	SS		3/4-16	3/4-16	3/4-16
10	\$	FG	SS		7/8-14	7/8-14	7/8-14
12	\$	FG	SS		1 1/16-12	1 1/16-12	1 1/16-12
14	\$	FG			1 3/16-12	1 3/16-12	1 3/16-12
16	\$	FG	SS		1 5/16-12	1 5/16-12	1 5/16-12
20	\$	FG	SS		1 5/8-12	1 5/8-12	1 5/8-12
24	\$	FG	SS		1 7/8-12	1 7/8-12	1 7/8-12
32	\$		SS		2 1/2-12	2 1/2-12	2 1/2-12

Steel 37° JIC Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS	BR			
03	\$	FG			3/8-24	3/8-24	3/8-24
04	\$	FG	SS		7/16-20	7/16-20	7/16-20
05	\$	FG	SS		1/2-20	1/2-20	1/2-20
06	\$	FG	SS		9/16-18	9/16-18	9/16-18
08	\$	FG	SS		3/4-16	3/4-16	3/4-16
10	\$	FG	SS		7/8-14	7/8-14	7/8-14
12	\$	FG	SS		1 1/16-12	1 1/16-12	1 1/16-12
14	\$	FG			1 3/16-12	1 3/16-12	1 3/16-12
16	\$	FG	SS		1 5/16-12	1 5/16-12	1 5/16-12
20	\$	FG	SS		1 5/8-12	1 5/8-12	1 5/8-12
24	\$	FG	SS		1 7/8-12	1 7/8-12	1 7/8-12
32	\$	FG			2 1/2-12	2 1/2-12	2 1/2-12

6602

JIC Swivel Run Tee

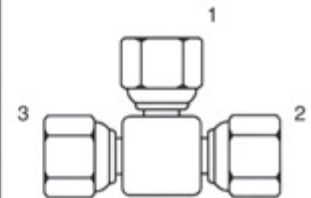


MS 51523
SAE 070432

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS	BR			
04	\$				7/16-20	7/16-20	7/16-20
06	\$				9/16-18	9/16-18	9/16-18
08	\$				3/4-16	3/4-16	3/4-16
10	\$				7/8-14	7/8-14	7/8-14
12	\$				1 1/16-12	1 1/16-12	1 1/16-12
16	\$				1 5/16-12	1 5/16-12	1 5/16-12

6606

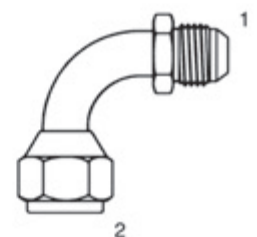
JIC Swivel Union Tee



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$				7/16-20	7/16-20
05	\$				1/2-20	1/2-20
06	\$				9/16-18	9/16-18
08	\$				3/4-16	3/4-16
10	\$				7/8-14	7/8-14
12	\$				1 1/16-12	1 1/16-12
16	\$				1 5/16-12	1 5/16-12
20	\$				1 5/8-12	1 5/8-12
24	\$				1 7/8-12	1 7/8-12

6701

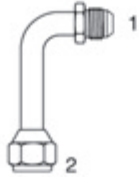
JIC Swivel Bent Tube Elbow 90°



Steel 37° JIC Adapters

6701-L

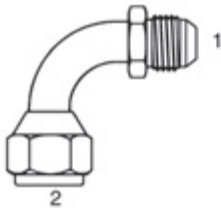
**JIC Swivel
Bent Tube Long
Elbow 90°**



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
04	\$	7/16-20	7/16-20
06	\$	9/16-18	9/16-18
08	\$	3/4-16	3/4-16
10	\$	7/8-14	7/8-14
12	\$	1 1/16-12	1 1/16-12
16	\$	1 5/16-12	1 5/16-12
20	\$	1 5/8-12	1 5/8-12

6701-XH

**JIC Swivel High
Pressure* Bent
Tube Elbow 90°**

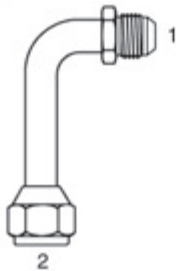


Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
08	\$	3/4-16	3/4-16
12	\$	1 1/16-12	1 1/16-12
16	\$	1 5/16-12	1 5/16-12
20	\$	1 5/8-12	1 5/8-12
24	\$	1 7/8-12	1 7/8-12

* Meets SAE 100R10 Pressures.

6701-LXH

**JIC Swivel High
Pressure*
Bent
Tube
Long
Elbow
90°**



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
08	\$	3/4-16	3/4-16
12	\$	1 1/16-12	1 1/16-12
16	\$	1 5/16-12	1 5/16-12
20	\$	1 5/8-12	1 5/8-12

* Meets SAE 100R10 Pressures.

6702

**JIC Swivel Bent
Tube Elbow 45°**



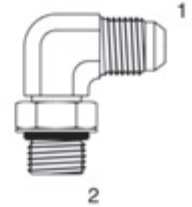
Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
06	\$	9/16-18	9/16-18
08	\$	3/4-16	3/4-16
10	\$	7/8-14	7/8-14
12	\$	1 1/16-12	1 1/16-12
16	\$	1 5/16-12	1 5/16-12

Steel 37° JIC Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
02	\$	FG	SS		5/16-24	5/16-24
03	\$	FG	SS		3/8-24	3/8-24
04-02	\$	FG			7/16-20	5/16-24
04-03	\$				7/16-20	3/8-24
04	\$	FG	SS		7/16-20	7/16-20
04-05	\$	FG			7/16-20	1/2-20
04-06	\$	FG	SS		7/16-20	9/16-18
04-08	\$	FG			7/16-20	3/4-16
04-10	\$				7/16-20	7/8-14
05-04	\$	FG			1/2-20	7/16-20
05	\$	FG	SS		1/2-20	1/2-20
05-06	\$	FG			1/2-20	9/16-18
05-08	\$	FG			1/2-20	3/4-16
06-04	\$	FG	SS		9/16-18	7/16-20
06-05	\$	FG			9/16-18	1/2-20
06	\$	FG	SS		9/16-18	9/16-18
06-08	\$	FG	SS		9/16-18	3/4-16
06-10	\$	FG			9/16-18	7/8-14
06-12	\$	FG			9/16-18	1 1/16-12
08-04	\$	FG	SS		3/4-16	7/16-20
08-06	\$	FG	SS		3/4-16	9/16-18
08	\$	FG	SS		3/4-16	3/4-16
08-10	\$	FG	SS		3/4-16	7/8-14
08-12	\$	FG	SS		3/4-16	1 1/16-12
08-16	\$	FG	SS		3/4-16	1 5/16-12
10-06	\$	FG			7/8-14	9/16-18
10-08	\$	FG	SS		7/8-14	3/4-16
10	\$	FG	SS		7/8-14	7/8-14
10-12	\$	FG			7/8-14	1 1/16-12
10-16	\$	FG			7/8-14	1 5/16-12
12-06	\$				1 1/16-12	9/16-18
12-08	\$	FG	SS		1 1/16-12	3/4-16
12-10	\$	FG	SS		1 1/16-12	7/8-14
12	\$	FG	SS		1 1/16-12	1 1/16-12
12-14	\$	FG			1 1/16-12	1 3/16-12
12-16	\$	FG	SS		1 1/16-12	1 5/16-12
12-20	\$	FG			1 1/16-12	1 5/8-12
14-12	\$				1 3/16-12	1 1/16-12
14	\$	FG			1 3/16-12	1 3/16-12
14-16	\$				1 3/16-12	1 5/16-12
16-08	\$	FG			1 5/16-12	3/4-16
16-10	\$				1 5/16-12	7/8-14
16-12	\$	FG	SS		1 5/16-12	1 1/16-12
16-14	\$	FG			1 5/16-12	1 3/16-12
16	\$	FG	SS		1 5/16-12	1 5/16-12
16-20	\$	FG	SS		1 5/16-12	1 5/8-12
16-24	\$				1 5/16-12	1 7/8-12
20-12	\$	FG	SS		1 5/8-12	1 1/16-12
20-16	\$	FG	SS		1 5/8-12	1 5/16-12
20	\$	FG			1 5/8-12	1 5/8-12
20-24	\$	FG	SS		1 5/8-12	1 7/8-12
24-20	\$	FG	SS		1 7/8-12	1 5/8-12
24	\$	FG			1 7/8-12	1 7/8-12
32-24	\$	FG			2 1/2-12	1 7/8-12

6801

JIC to O-Ring Elbow 90°



MS 51527
SAE 070220

S= Steel

FG=Forging

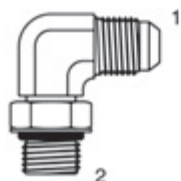
SS=Stainless Steel

BR=Brass

Steel 37° JIC Adapters

RST6801

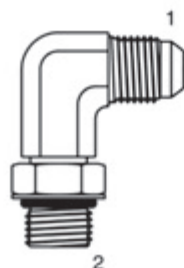
Restricted JIC to O-Ring Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	Restriction
	S	FG	SS	BR			
04-04-R.031	\$				7/16-20	7/16-20	.031
04-04-R.045	\$				7/16-20	7/16-20	.045
04-04-R.062	\$				7/16-20	7/16-20	.062
04-06-R.031	\$				7/16-20	9/16-18	.031
04-06-R.062	\$				7/16-20	9/16-18	.062
06-06-R.000	\$				9/16-18	9/16-18	.000
06-06-R.031	\$				9/16-18	9/16-18	.031
06-06-R.062	\$				9/16-18	9/16-18	.062
06-08-R.000	\$				9/16-18	3/4-16	.000
06-08-R.031	\$				9/16-18	3/4-16	.031
06-08-R.062	\$				9/16-18	3/4-16	.062
08-08-R.000	\$				3/4-16	3/4-16	.000
08-08-R.031	\$				3/4-16	3/4-16	.031
08-08-R.045	\$				3/4-16	3/4-16	.045
08-08-R.062	\$				3/4-16	3/4-16	.062

6801-L

JIC to O-Ring Long Elbow 90°

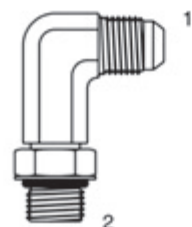


Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	Length*
	S	FG	SS	BR			
04	\$	FG			7/16-20	7/16-20	1.19"
04-06	\$				7/16-20	9/16-18	1.66"
06	\$	FG			9/16-18	9/16-18	1.66"
06-08	\$				9/16-18	3/4-16	1.81"
08	\$	FG			3/4-16	3/4-16	1.81"
08-10	\$	FG			3/4-16	7/8-14	2.16"
10-08	\$	FG			7/8-14	3/4-16	1.88"
10	\$				7/8-14	7/8-14	2.16"
12	\$	FG			1 1/16-12	1 1/16-12	2.47"
16	\$	FG			1 5/16-12	1 5/16-12	3.06"
20	\$				1 5/8-12	1 5/8-12	3.48"

*Length = Middle of JIC to End of Threads

6801-LL

JIC to O-Ring Extra Long Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	Length*
	S	FG	SS	BR			
04	\$	FG			7/16-20	7/16-20	1.73"
04-06	\$				7/16-20	9/16-18	2.08"
06	\$	FG			9/16-18	9/16-18	2.08"
06-08	\$	FG			9/16-18	3/4-16	2.50"
08-06	\$				3/4-16	9/16-18	2.17"
08	\$	FG			3/4-16	3/4-16	2.50"
08-10	\$	FG			3/4-16	7/8-14	3.25"
10-08	\$	FG			7/8-14	3/4-16	2.56"
10	\$	FG			7/8-14	7/8-14	3.25"
12	\$	FG			1 1/16-12	1 1/16-12	3.34"
16-12	\$	FG			1 5/16-12	1 1/16-12	3.47"
16	\$	FG			1 5/16-12	1 5/16-12	3.72"
20	\$	FG			1 5/8-12	1 5/8-12	4.41"

*Length = Middle of JIC to End of Threads

Steel 37° JIC Adapters

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)	Length*
06	\$	9/16-18	9/16-18	3.06"
08	\$ FG	3/4-16	3/4-16	3.53"
10	\$	7/8-14	7/8-14	3.69"

*Length = Middle of JIC to End of Threads

6801-LLL



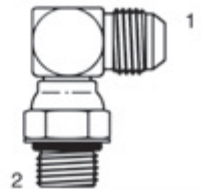
**JIC to O-Ring
XX-Long
Elbow 90°**

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
06	FG	9/16-18	9/16-18
08	FG	3/4-16	3/4-16
10	FG	7/8-14	7/8-14

*Swivel for installation only.

6801-S

**JIC to O-Ring
Swivel* Elbow 90°**



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
04	\$ FG SS	7/16-20	7/16-20
04-05	\$ FG	7/16-20	1/2-20
04-06	\$ FG	7/16-20	9/16-18
04-08	\$	7/16-20	3/4-16
05-04	\$ FG	1/2-20	7/16-20
05	\$ FG	1/2-20	1/2-20
06-04	\$ FG	9/16-18	7/16-20
06-05	\$ FG	9/16-18	1/2-20
06	\$ FG SS	9/16-18	9/16-18
06-08	\$ FG	9/16-18	3/4-16
06-10	\$ FG	9/16-18	7/8-14
08-06	\$ FG SS	3/4-16	9/16-18
08	\$ FG SS	3/4-16	3/4-16
08-10	\$ FG SS	3/4-16	7/8-14
08-12	\$ FG	3/4-16	1 1/16-12
10-08	\$ FG	7/8-14	3/4-16
10	\$ FG SS	7/8-14	7/8-14
10-12	\$ FG	7/8-14	1 1/16-12
12-08	\$ FG	1 1/16-12	3/4-16
12-10	\$ FG SS	1 1/16-12	7/8-14
12	\$ FG SS	1 1/16-12	1 1/16-12
12-16	\$ FG	1 1/16-12	1 5/16-12
14	\$ FG	1 3/16-12	1 3/16-12
16-12	\$ FG	1 5/16-12	1 1/16-12
16	\$ FG SS	1 5/16-12	1 5/16-12
16-20	\$ FG	1 5/16-12	1 5/8-12
20-16	\$ FG	1 5/8-12	1 5/16-12
20	\$ FG SS	1 5/8-12	1 5/8-12
20-24	\$ FG	1 5/8-12	1 7/8-12
24	\$ FG	1 7/8-12	1 7/8-12
32	\$ FG	2 1/2-12	2 1/2-12

6802

**JIC to O-Ring
Elbow 45°**

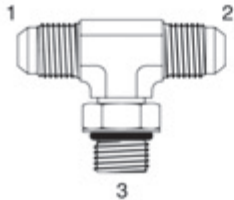


MS 51528
SAE 070320

Steel 37° JIC Adapters

6803

JIC to O-Ring Branch Tee

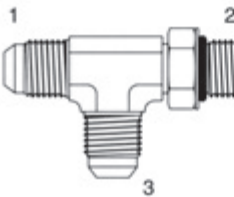


MS 51529
SAE 070429

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS	BR			
04	S	FG	SS		7/16-20	7/16-20	7/16-20
05	S	FG			1/2-20	1/2-20	1/2-20
06	S	FG	SS		9/16-18	9/16-18	9/16-18
06-06-08	S	FG			9/16-18	9/16-18	3/4-16
08	S	FG	SS		3/4-16	3/4-16	3/4-16
08-08-10	S	FG			3/4-16	3/4-16	7/8-14
10-10-08	S				7/8-14	7/8-14	3/4-16
10	S	FG	SS		7/8-14	7/8-14	7/8-14
12-12-10	S	FG			1 1/16-12	1 1/16-12	7/8-14
12	S	FG	SS		1 1/16-12	1 1/16-12	1 1/16-12
12-12-16	S	FG			1 1/16-12	1 1/16-12	1 5/16-12
14	S				1 3/16-12	1 3/16-12	1 3/16-12
16-16-12	S	FG			1 5/16-12	1 5/16-12	1 1/16-12
16	S	FG	SS		1 5/16-12	1 5/16-12	1 5/16-12
20	S	FG			1 5/8-12	1 5/8-12	1 5/8-12
24	S				1 7/8-12	1 7/8-12	1 7/8-12
32	S				2 1/2-12	2 1/2-12	2 1/2-12

6804

JIC to O-Ring Run Tee



MS 51530
SAE 070428

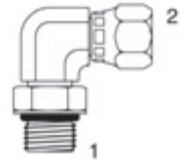
Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS	BR			
04	S	FG	SS		7/16-20	7/16-20	7/16-20
04-06-04	S	FG			7/16-20	9/16-18	7/16-20
05	S	FG			1/2-20	1/2-20	1/2-20
06-04-06	S	FG			9/16-18	7/16-20	9/16-18
06	S	FG	SS		9/16-18	9/16-18	9/16-18
06-08-06	S	FG			9/16-18	3/4-16	9/16-18
08-06-08	S	FG			3/4-16	9/16-18	3/4-16
08	S	FG	SS		3/4-16	3/4-16	3/4-16
08-10-08	S	FG			3/4-16	7/8-14	3/4-16
10-08-10	S	FG			7/8-14	3/4-16	7/8-14
10	S	FG	SS		7/8-14	7/8-14	7/8-14
10-12-10	S	FG			7/8-14	1 1/16-12	7/8-14
12-10-12	S	FG			1 1/16-12	7/8-14	1 1/16-12
12	S	FG	SS		1 1/16-12	1 1/16-12	1 1/16-12
12-16-12	S				1 1/16-12	1 5/16-12	1 1/16-12
14	S	FG			1 3/16-12	1 3/16-12	1 3/16-12
16-12-16	S	FG			1 5/16-12	1 1/16-12	1 5/16-12
16	S	FG	SS		1 5/16-12	1 5/16-12	1 5/16-12
20	S	FG			1 5/8-12	1 5/8-12	1 5/8-12
24	S	FG			1 7/8-12	1 7/8-12	1 7/8-12
32	S	FG			2 1/2-12	2 1/2-12	2 1/2-12

Steel 37° JIC Adapters

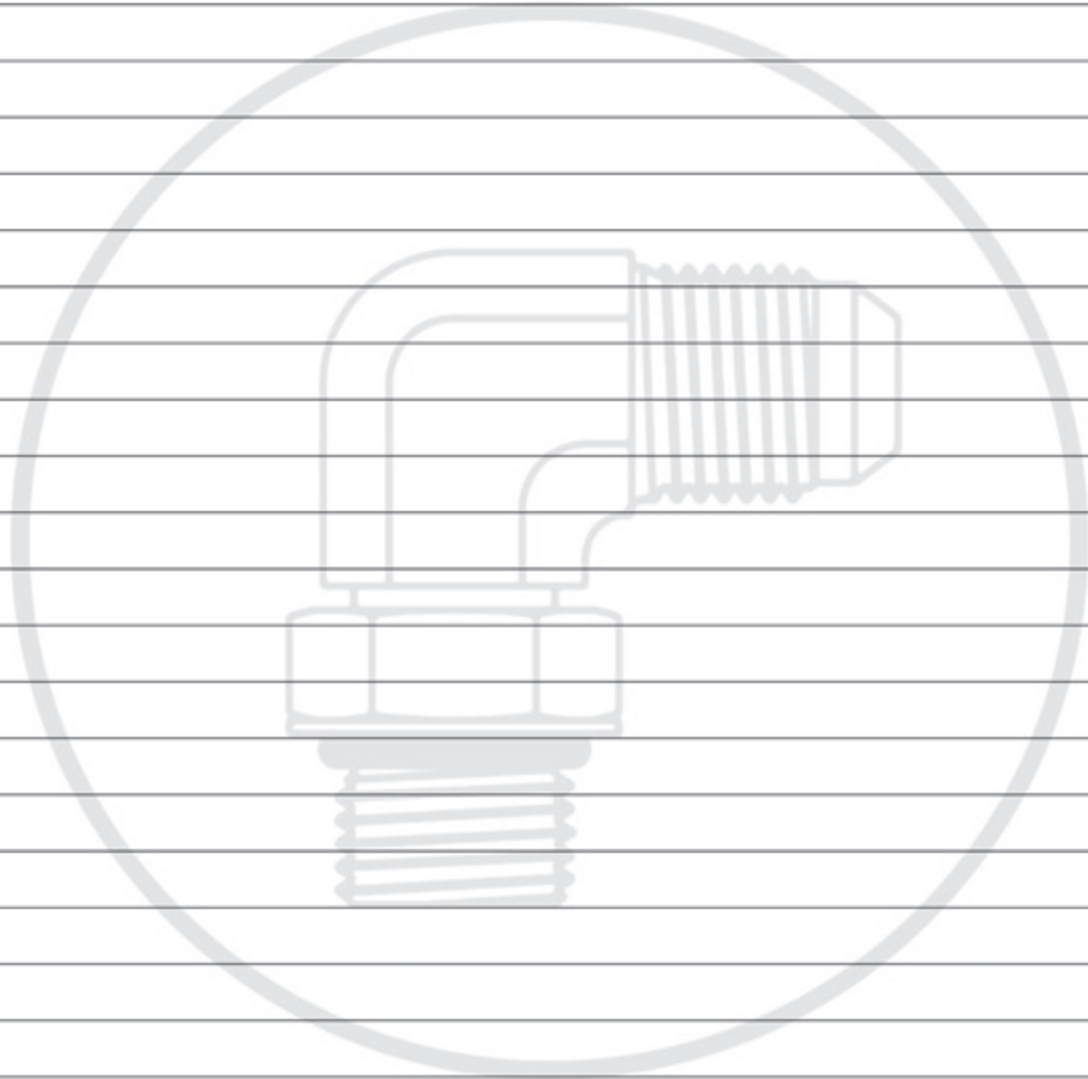
Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04-04		FG			7/16-20	7/16-20
06-04		FG			9/16-18	7/16-20
06-06		FG			9/16-18	9/16-18
08-08		FG			3/4-16	3/4-16
10-10		FG			7/8-14	7/8-14
12-08		FG			1 1/16-12	3/4-16
12-12		FG			1 1/16-12	1 1/16-12
16-16		FG			1 5/16-12	1 5/16-12
20-20		FG			1 5/8-12	1 5/8-12

6809

**O-Ring to
JIC Swivel
Elbow 90°**



Notes



Steel SAE O-Ring Adapters

CONFORMANCE

- SAE J514
- SAE J1926/1, SAE J1926/3
- ISO 11926-1, ISO 11926-3

MATERIALS

- Steel – Carbon steel clear trivalent chromium zinc or yellow dichromate zinc plated per ASTM B33-98 (Type II SC-2)
- Stainless – Type 316 (Use SS prefix when ordering).

WORKING PRESSURES

The following table lists the recommended working pressures for steel O-ring Straight Thread fittings made in accordance with SAE standard J514. Many factors such as surging, vibration, mechanical shock and over tightening may affect the integrity of fitting connections. Tompkins and SAE recommend sufficient testing be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using fittings with different size or thread type, use the lower pressure rating of the two threads.



CAUTION: Although most O-ring Straight Thread Fittings have sufficient structural integrity to support the weight of many components, Tompkins recommends consulting with our technical support department for guidance in selection of parts for this purpose.

SAE J514 O-RING STRAIGHT THREAD FITTINGS PRESSURE RATINGS FOR STRAIGHT AND ADJUSTABLE THREAD PORT STUDS

DASH SIZE	STRAIGHT THREAD SIZE	4 TO 1 MINIMUM BURST PSI STRAIGHT BOSS O-RING STUDS	4 TO 1 MINIMUM BURST PSI ADJUSTABLE BOSS O-RING STUDS
-02	5/16-24	5000	5000
-03	3/8-24	5000	5000
-04	7/16-20	5000	4500
-05	1/2-20	5000	4000
-06	9/16-18	5000	4000
-08	3/4-16	4500	4000
-10	7/8-14	3500	3000
-12	1 1/16-12	3500	3000
-14	1 3/16-12	3000	2500
-16	1 5/16-12	3000	2500
-20	1 5/8-12	2500	2000
-24	1 7/8-12	2000	1500
-32	2 1/2-12	1500	1125

TORQUE VALUES: The minimum torque values provided by Tompkins Industries are to provide benchmarks that give optimum results for leak free connections. Actual torque values should be based on individual applications.

RECOMMENDED STRAIGHT THREAD O-RING NON-ADJUSTABLE STUD ASSEMBLY INSTRUCTIONS

- STEP 1.** Inspect all components for damage or contamination.
- STEP 2.** Lubricate o-ring and threads on fitting.
- STEP 3.** Turn fitting into port until finger tight, then torque to the value shown in the following tables.

RECOMMENDED STRAIGHT THREAD O-RING ADJUSTABLE STUD ASSEMBLY INSTRUCTIONS

- STEP 1.** Follow steps 1 and 2 from the foregoing instructions, then proceed to the following steps below.
- STEP 2.** Looking at fitting from end with nut/washer/o-ring assembly, turn nut clockwise as far as possible.
- STEP 3.** Using wrench, turn fitting into port until the washer touches the port spot face. Continue turning fitting until washer touches thread nearest wrench pad.
- STEP 4.** Back off fitting counterclockwise not exceeding one revolution until it is oriented in the correct position.
- STEP 5.** Place wrench on the wrench pad of fitting to prevent fitting from turning, and torque nut to the value shown in the following table.

J514 & J1926/3 TORQUE VALUES

DASH SIZE	STRAIGHT THREAD SIZE	STRAIGHT STUD TORQUE FOOT/LBS	ADJUSTABLE STUD TORQUE FOOT/LBS
-02	5/16-24	6-7	6-8
-03	3/8-24	6-9	6-8
-04	7/16-20	9-15	8-10
-05	1/2-20	14-19	9-12
-06	9/16-18	18-24	12-16
-08	3/4-16	27-43	20-30
-10	7/8-14	36-48	30-36
-12	1 1/16-12	65-75	44-54
-14	1 3/16-12	75-99	53-70
-16	1 5/16-12	85-123	59-80
-20	1 5/8-12	115-161	75-100
-24	1 7/8-12	125-170	105-125
-32	2 1/2-12	180-240	140-180

J1453 & J1926/2 TORQUE VALUES

DASH SIZE	STRAIGHT THREAD SIZE	STRAIGHT STUD TORQUE FOOT/LBS	ADJUSTABLE STUD TORQUE FOOT/LBS
-02	5/16-24	NA	NA
-03	3/8-24	8-10	NA
-04	7/16-20	14-16	11-13
-05	1/2-20	18-20	14-16
-06	9/16-18	24-26	18-21
-08	3/4-16	40-60	28-38
-10	7/8-14	55-80	44-60
-12	1 1/16-12	95-135	65-95
-14	1 3/16-12	105-190	75-125
-16	1 5/16-12	120-220	85-150
-20	1 5/8-12	160-280	115-170
-24	1 7/8-12	175-360	125-225

WHY WET TORQUE?

Due to differences in materials, plating types and thickness, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Over tightening causes threads to yield, deform, and therefore lose their ability to maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. **It is our firm position that to not wet torque is to compromise consistency and quality for convenience.**

S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Steel SAE O-Ring Adapters

6403

O-Ring Union



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$				7/16-20	7/16-20
06-04	\$				9/16-18	7/16-20
06	\$				9/16-18	9/16-18
08	\$				3/4-16	3/4-16
10-08	\$				7/8-14	3/4-16
10	\$				7/8-14	7/8-14
12-08	\$				1 1/16-12	3/4-16
12-10	\$				1 1/16-12	7/8-14
12	\$				1 1/16-12	1 1/16-12
16-12	\$				1 5/16-12	1 1/16-12
16	\$				1 5/16-12	1 5/16-12
20-16	\$				1 5/8-12	1 5/16-12
20	\$				1 5/8-12	1 5/8-12

6403-NWO

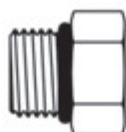
O-Ring Adjustable Union



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$		SS		7/16-20	7/16-20
06	\$		SS		9/16-18	9/16-18
08-06	\$				3/4-16	9/16-18
08	\$		SS		3/4-16	3/4-16
10-08	\$				7/8-14	3/4-16
10	\$		SS		7/8-14	7/8-14
12-08	\$				1 1/16-12	3/4-16
12-10	\$				1 1/16-12	7/8-14
12	\$		SS		1 1/16-12	1 1/16-12
16-12	\$				1 5/16-12	1 1/16-12
16	\$		SS		1 5/16-12	1 5/16-12
20	\$		SS		1 5/8-12	1 5/8-12
24	\$		SS		1 7/8-12	1 7/8-12
32	\$		SS		2 1/2-12	2 1/2-12

6408

O-Ring Hex Plug



Dash Size	Stock Materials				T1 (UNF)
	S	FG	SS	BR	
02	\$		SS		5/16-24
03	\$		SS		3/8-24
04	\$		SS		7/16-20
05	\$		SS		1/2-20
06	\$		SS		9/16-18
08	\$		SS		3/4-16
10	\$		SS		7/8-14
12	\$		SS		1 1/16-12
14	\$				1 3/16-12
16	\$		SS		1 5/16-12
20	\$		SS		1 5/8-12
24	\$		SS		1 7/8-12
32	\$		SS		2 1/2-12

SAE 090109A

Steel SAE O-Ring Adapters

Dash Size	Stock Materials				T1 (UNF)
	S	FG	SS	BR	
02	\$		SS		5/16-24
03	\$		SS		3/8-24
04	\$		SS		7/16-20
05	\$		SS		1/2-20
06	\$		SS		9/16-18
08	\$		SS		3/4-16
10	\$		SS		7/8-14
12	\$		SS		1 1/16-12
14	\$		SS		1 3/16-12
16	\$		SS		1 5/16-12
20	\$		SS		1 5/8-12
24	\$		SS		1 7/8-12
32	\$		SS		2 1/2-12

6408-HHP

O-Ring Hollow Hex Plug

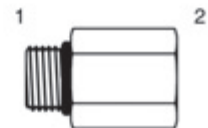


SAE 090109B

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
02-04	\$				5/16-24	7/16-20
04-06	\$		SS		7/16-20	9/16-18
05-06	\$		SS		1/2-20	9/16-18
06-04	\$				9/16-18	7/16-20
06-06	\$				9/16-18	9/16-18
06-08	\$		SS		9/16-18	3/4-16
08-04	\$				3/4-16	7/16-20
08-06	\$				3/4-16	9/16-18
08-10	\$		SS		3/4-16	7/8-14
08-12	\$		SS		3/4-16	1 1/16-12
10-04	\$				7/8-14	7/16-20
10-06	\$				7/8-14	9/16-18
10-08	\$				7/8-14	3/4-16
10-12	\$		SS		7/8-14	1 1/16-12
12-04	\$		SS		1 1/16-12	7/16-20
12-06	\$		SS		1 1/16-12	9/16-18
12-08	\$				1 1/16-12	3/4-16
12-10	\$				1 1/16-12	7/8-14
12-12	\$				1 1/16-12	1 1/16-12
12-14	\$		SS		1 1/16-12	1 3/16-12
12-16	\$		SS		1 1/16-12	1 5/16-12
14-08	\$				1 3/16-12	3/4-16
14-12	\$				1 3/16-12	1 1/16-12
16-04	\$		SS		1 5/16-12	7/16-20
16-06	\$				1 5/16-12	9/16-18
16-08	\$				1 5/16-12	3/4-16
16-10	\$				1 5/16-12	7/8-14
16-12	\$				1 5/16-12	1 1/16-12
16-14	\$				1 5/16-12	1 3/16-12
16-20	\$		SS		1 5/16-12	1 5/8-12
20-10	\$				1 5/8-12	7/8-14
20-12	\$		SS		1 5/8-12	1 1/16-12
20-16	\$				1 5/8-12	1 5/16-12
20-24	\$		SS		1 5/8-12	1 7/8-12
24-12	\$		SS		1 7/8-12	1 1/16-12
24-16	\$		SS		1 7/8-12	1 5/16-12
24-20	\$		SS		1 7/8-12	1 5/8-12
32-16	\$				2 1/2-12	1 5/16-12
32-20	\$				2 1/2-12	1 5/8-12
32-24	\$		SS		2 1/2-12	1 7/8-12

6410

O-Ring Reducer/Expander



S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Steel SAE O-Ring Adapters

6410-L

O-Ring Extender

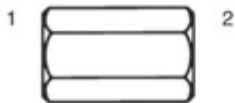


Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)	Length*
04-04	\$	7/16-20	7/16-20	1.25"
06-06	\$	9/16-18	9/16-18	1.50"
08-08	\$	3/4-16	3/4-16	1.75"
10-10	\$	7/8-14	7/8-14	2.00"
12-12	\$	1 1/16-12	1 1/16-12	2.38"

*Length = Overall Length of Fitting

6425

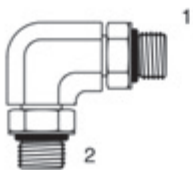
O-Ring Coupling



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
04-04	\$	7/16-20	7/16-20
06-06	\$	9/16-18	9/16-18
08-08	\$	3/4-16	3/4-16
10-10	\$	7/8-14	7/8-14
12-12	\$	1 1/16-12	1 1/16-12

6807

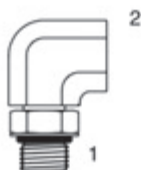
O-Ring Adjustable Union Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
04-04	\$ FG	7/16-20	7/16-20
06-06	\$ FG	9/16-18	9/16-18
08-06	\$ FG	3/4-16	9/16-18
08-08	\$ FG	3/4-16	3/4-16
10-08	\$ FG	7/8-14	3/4-16
10-10	\$ FG	7/8-14	7/8-14
12-12	\$ FG	1 1/16-12	1 1/16-12
16-16	\$ FG	1 5/16-12	1 5/16-12
20-20	\$ FG	1 5/8-12	1 5/8-12
24-24	\$ FG	1 7/8-12	1 7/8-12

6815

O-Ring Adjustable Street Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
04-04	\$ FG	7/16-20	7/16-20
04-06	FG	7/16-20	9/16-18
06-04	\$	9/16-18	7/16-20
06-06	\$ FG	9/16-18	9/16-18
06-08	\$ FG	9/16-18	3/4-16
08-08	\$ FG	3/4-16	3/4-16
10-10	\$ FG	7/8-14	7/8-14
12-12	\$ FG	1 1/16-12	1 1/16-12
16-16	\$ FG	1 5/16-12	1 5/16-12

Steel SAE O-Ring Adapters

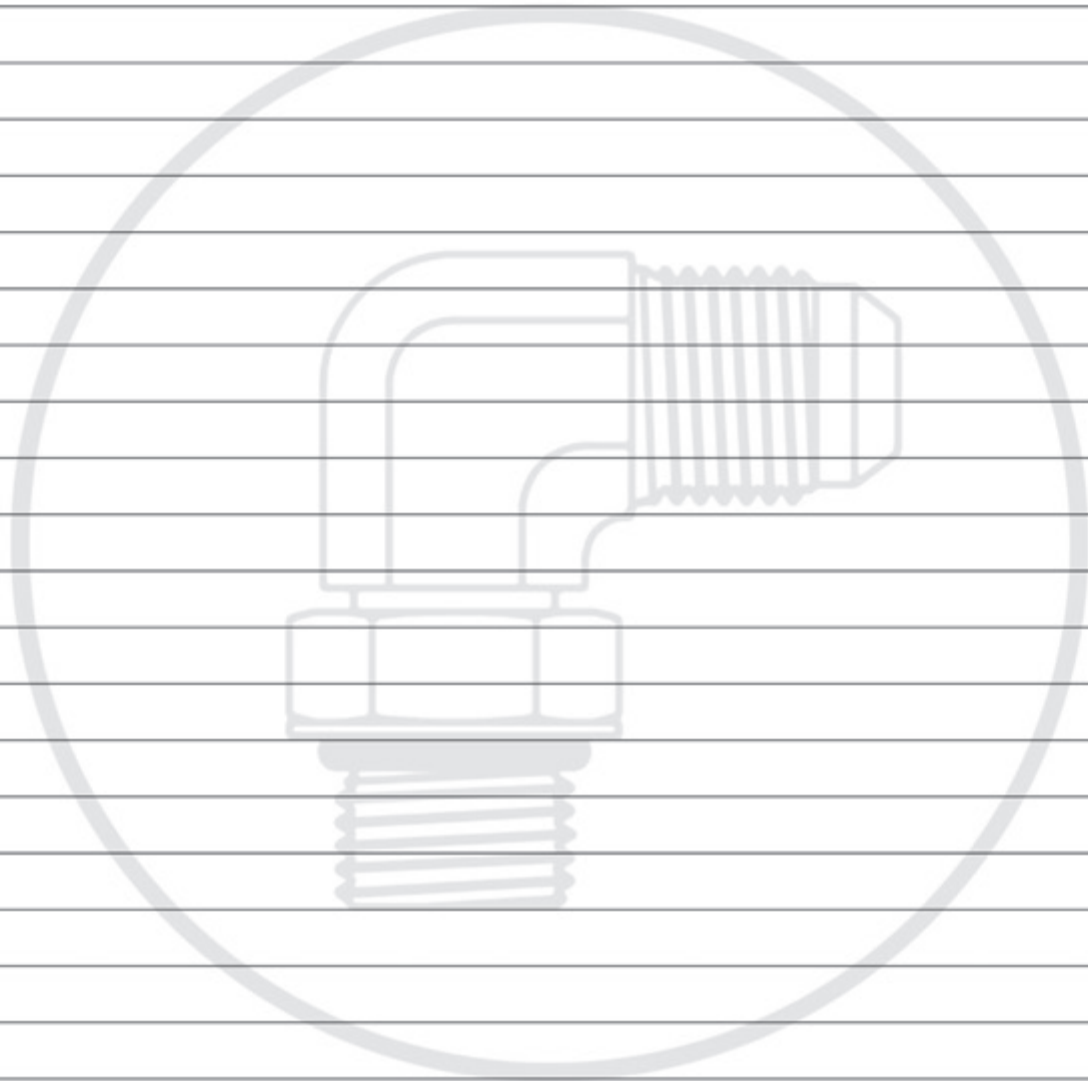
Dash Size	T1 (UNF)	I.D.	90 DB Nitrile 90 Durometer SAE Boss O-Ring
02	5/16-24	.239"	
03	3/8-24	.301"	
04	7/16-20	.351"	
05	1/2-20	.414"	
06	9/16-18	.468"	
08	3/4-16	.644"	
10	7/8-14	.755"	
12	1 1/16-12	.924"	
14	1 3/16-12	1.048"	
16	1 5/16-12	1.171"	
20	1 5/8-12	1.475"	
24	1 7/8-12	1.720"	
32	2 1/2-12	2.337"	



Dash Size	T1 (UNF)	I.D.	75DB-Viton Viton 75 Durometer SAE Boss O-Ring
02	5/16-24	.239"	
03	3/8-24	.301"	
04	7/16-20	.351"	
05	9/16-18	.468"	
08	3/4-16	.644"	
10	7/8-14	.755"	
12	1 1/16-12	.924"	
14	1 3/16-12	1.048"	
16	1 5/16-12	1.171"	
20	1 5/8-12	1.475"	
24	1 7/8-12	1.720"	
32	2 1/2-12	2.337"	



Notes



Steel Pipe Adapters

CONFORMANCE

- SAE J514 for hex nipples, expanders, elbows, tees and crosses. SAE J514, J530 and J531 for bushings and plugs.

MATERIALS

- Steel – Carbon steel with clear trivalent chromium zinc or yellow dichromate zinc plated per ASTM B33-98 (Type II SC-2)
- Stainless – Type 316 for all except 5400-N and 5400-CL which are Type 304 or 316.

STYLES

- Barstock
- Forging
- Chamfered – male ends have an internal 30-degree chamfer to mate with NPSM female swivel union connections. Many pipe fittings do not have this chamfer, as it is not required per SAE J514 standard.

ORDERING

When ordering, include the appropriate prefix to part number if material required is other than steel barstock without a chamfer.

MATERIAL/STYLE	PREFIX
Forging	FG
Chamfered	CH
Stainless	SS

WORKING PRESSURES

The following table lists the recommended working pressures for steel NPTF hydraulic pipe fittings manufactured in accordance with SAE standard J514. Many factors such as number of threads engaged, impulsing, vibration, mechanical shock, removal and reassembly, thermal expansion and contraction may affect the integrity of the fitting, or fitting connection.

Tompkins and SAE recommend sufficient testing be conducted to assure that performance levels will be safe and satisfactory on all NPTF pipe fittings, especially if installed in systems operating at elevated pressures or in severe conditions.



CAUTION: Although most pipe fittings have sufficient structural integrity to support the weight of many components, Tompkins recommends consulting with our technical support department for guidance in selection of parts used in this type of application.

SAE J514 NPTF PIPE WORKING PRESSURES

DASH SIZE	NPTF THREAD SIZE	4 TO 1 MINIMUM BURST PSI
-01	1/16-27	5000
-02	1/8-27	5000
-04	1/4-18	5000
-06	3/8-18	4000
-08	1/2-14	3000
-12	3/4-14	2500
-16	1-11 1/2	2000
-20	1 1/4-11 1/2	1150
-24	1 1/2-11 1/2	1000
-32	2-11 1/2	1000

NPTF DRY SEAL PIPE ASSEMBLY INSTRUCTIONS

STEP 1. Inspect port and fitting to ensure that both are free of contaminants and excessive burrs and nicks.

STEP 2. Apply a stripe of an anaerobic liquid pipe sealant around the male threads leaving the first two threads uncovered. If no liquid sealant is available, wrap Teflon tape 1 1/2 to 2 turns in a clockwise direction, viewed from the pipe end, leaving the first two threads uncovered.

CAUTION: Teflon tape and some pipe sealants are destructive to hydraulic components. Always use extreme caution and follow manufacturer's recommendations for proper application of any sealant in order to prevent contamination.

STEP 3. Screw finger tight into the port.

STEP 4. Wrench tighten the fitting to the correct Turns Past Finger Tight position. (See following table.) When installing elbows or tees, consider final orientation position as to not exceed the recommended TPFT. A properly assembled fittings total thread engagement should be 3.5-6 turns.

CAUTION: Never back off an installed pipe fitting to achieve proper alignment. Loosening installed pipe fittings will corrupt the seal and contribute to leakage and failure.

DASH SIZE	NPSM THREAD SIZE	TURNS PAST FINGER TIGHT
-01	1/16-27	1.5 – 3.0
-02	1/8-27	1.5 – 3.0
-04	1/4-18	1.5 – 3.0
-06	3/8-18	1.5 – 3.0
-08	1/2-14	1.5 – 3.0
-12	3/4-14	1.5 – 3.0
-16	1-11 1/2	1 – 2.5
-20	1 1/4-11 1/2	1 – 2.5
-24	1 1/2-11 1/2	1 – 2.5
-32	2-11 1/2	1 – 2.5

Torque installation of pipe fittings is not a recommended practice. Thread taper and quality, different port and fitting materials, plating thickness and types, varying thread sealants, orientation, and other factors reduce the reliability of a torqued connection. If torque installation is required, refer to the following table for suggested torque values.

DASH SIZE	NPSM THREAD SIZE	TORQUE FOOT/LBS
-02	1/8-27	12
-04	1/4-18	25
-06	3/8-18	40
-08	1/2-14	54
-12	3/4-14	78
-16	1-11 1/2	112
-20	1 1/4-11 1/2	154
-24	1 1/2-11 1/2	211
-32	2-11 1/2	300

See **STRAIGHT THREAD O-RING FITTING SECTION** for assembly instructions and torque values for pipe fittings with o-ring straight threads.

S= Steel

FG=Forging

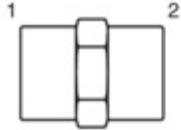
SS=Stainless Steel

BR=Brass

Steel Pipe Adapters

5000

Pipe Coupling

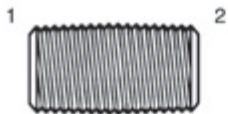


SAE 140138

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
02	\$		SS		1/8-27	1/8-27
04-02	\$		SS		1/4-18	1/8-27
04	\$		SS		1/4-18	1/4-18
06-02	\$		SS		3/8-18	1/8-27
06-04	\$		SS		3/8-18	1/4-18
06	\$		SS		3/8-18	3/8-18
08-04	\$		SS		1/2-14	1/4-18
08-06	\$		SS		1/2-14	3/8-18
08	\$		SS		1/2-14	1/2-14
12-04	\$		SS		3/4-14	1/4-18
12-06	\$		SS		3/4-14	3/8-18
12-08	\$		SS		3/4-14	1/2-14
12	\$		SS		3/4-14	3/4-14
16-08	\$		SS		1-11 1/2	1/2-14
16-12	\$		SS		1-11 1/2	3/4-14
16	\$		SS		1-11 1/2	1-11 1/2
20-12	\$				1 1/4-11 1/2	3/4-14
20-16	\$		SS		1 1/4-11 1/2	1-11 1/2
20	\$		SS		1 1/4-11 1/2	1 1/4-11 1/2
24-20	\$		SS		1 1/2-11 1/2	1 1/4-11 1/2
24	\$		SS		1 1/2-11 1/2	1 1/2-11 1/2
32	\$		SS		2-11 1/2	2-11 1/2

5400-CL

Close Nipple GALVANIZED



3000 psi

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	Length*
	S	FG	SS	BR			
02	\$		SS		1/8-27	1/8-27	.81"
04	\$		SS		1/4-18	1/4-18	.94"
06	\$		SS		3/8-18	3/8-18	1.00"
08	\$		SS		1/2-14	1/2-14	1.19"
12	\$		SS		3/4-14	3/4-14	1.50"
16	\$		SS		1-11 1/2	1-11 1/2	1.63"
20	\$		SS		1 1/4-11 1/2	1 1/4-11 1/2	1.63"
24	\$		SS		1 1/2-11 1/2	1 1/2-11 1/2	1.81"
32	\$		SS		2-11 1/2	2-11 1/2	2.00"

*Length = Overall Length of Fitting

Galvanized

Steel Pipe Adapters

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	Length*
	S	FG	SS	BR			
02-1.5"	\$		SS		1/8-27	1/8-27	1.50"
02-2.0"	\$		SS		1/8-27	1/8-27	2.00"
02-2.5"	\$		SS		1/8-27	1/8-27	2.50"
02-3.0"	\$		SS		1/8-27	1/8-27	3.00"
02-3.5"	\$		SS		1/8-27	1/8-27	3.50"
02-4.0"	\$		SS		1/8-27	1/8-27	4.00"
02-5.0"	\$		SS		1/8-27	1/8-27	5.00"
02-6.0"	\$		SS		1/8-27	1/8-27	6.00"
04-2.0"	\$		SS		1/4-18	1/4-18	2.00"
04-2.5"	\$		SS		1/4-18	1/4-18	2.50"
04-3.0"	\$		SS		1/4-18	1/4-18	3.00"
04-3.5"	\$		SS		1/4-18	1/4-18	3.50"
04-4.0"	\$		SS		1/4-18	1/4-18	4.00"
04-5.0"	\$		SS		1/4-18	1/4-18	5.00"
04-6.0"	\$		SS		1/4-18	1/4-18	6.00"
06-2.0"	\$		SS		3/8-18	3/8-18	2.00"
06-2.5"	\$		SS		3/8-18	3/8-18	2.50"
06-3.0"	\$		SS		3/8-18	3/8-18	3.00"
06-3.5"	\$		SS		3/8-18	3/8-18	3.50"
06-4.0"	\$		SS		3/8-18	3/8-18	4.00"
06-5.0"	\$		SS		3/8-18	3/8-18	5.00"
06-5.5"	\$		SS		3/8-18	3/8-18	5.50"
06-6.0"	\$		SS		3/8-18	3/8-18	6.00"
06-7.0"	\$		SS		3/8-18	3/8-18	7.00"
06-8.0"	\$		SS		3/8-18	3/8-18	8.00"
08-2.0"	\$		SS		1/2-14	1/2-14	2.00"
08-2.5"	\$		SS		1/2-14	1/2-14	2.50"
08-3.0"	\$		SS		1/2-14	1/2-14	3.00"
08-4.0"	\$		SS		1/2-14	1/2-14	4.00"
08-4.5"	\$		SS		1/2-14	1/2-14	4.50"
08-5.0"	\$		SS		1/2-14	1/2-14	5.00"
08-6.0"	\$		SS		1/2-14	1/2-14	6.00"
08-8.0"	\$		SS		1/2-14	1/2-14	8.00"
12-2.0"	\$		SS		3/4-14	3/4-14	2.00"
12-2.5"	\$		SS		3/4-14	3/4-14	2.50"
12-3.0"	\$		SS		3/4-14	3/4-14	3.00"
12-3.5"	\$				3/4-14	3/4-14	3.50"
12-4.0"	\$		SS		3/4-14	3/4-14	4.00"
12-5.0"	\$		SS		3/4-14	3/4-14	5.00"
12-5.5"	\$		SS		3/4-14	3/4-14	5.50"
12-6.0"	\$		SS		3/4-14	3/4-14	6.00"
16-3.0"	\$		SS		1-11 1/2	1-11 1/2	3.00"
16-4.0"	\$		SS		1-11 1/2	1-11 1/2	4.00"
16-5.0"	\$		SS		1-11 1/2	1-11 1/2	5.00"
16-6.0"	\$		SS		1-11 1/2	1-11 1/2	6.00"
20-3.0"	\$		SS		1 1/4-11 1/2	1 1/4-11 1/2	3.00"
20-4.0"	\$		SS		1 1/4-11 1/2	1 1/4-11 1/2	4.00"
20-6.0"	\$		SS		1 1/4-11 1/2	1 1/4-11 1/2	6.00"
24-4.0"	\$		SS		1 1/2-11 1/2	1 1/2-11 1/2	4.00"
24-6.0"	\$		SS		1 1/2-11 1/2	1 1/2-11 1/2	6.00"
32-4.0"	\$		SS		2-11 1/2	2-11 1/2	4.00"
32-5.0"	\$				2-11 1/2	2-11 1/2	5.00"
32-6.0"	\$		SS		2-11 1/2	2-11 1/2	6.00"

5400-N

Long Pipe Nipple



*Length = Overall Length of Fitting

3000 psi

S= Steel

FG=Forging

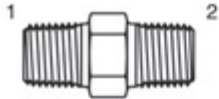
SS=Stainless Steel

BR=Brass

Steel Pipe Adapters

5404

Hex Pipe Nipple



Dash Size	Stock Materials			T1 (NPTF)	T2 (NPTF)
	S	FG	SS BR		
02-01	\$			1/8-27	1/16-27
02	\$		SS	1/8-27	1/8-27
04-02	\$		SS	1/4-18	1/8-27
04	\$		SS	1/4-18	1/4-18
06-02	\$		SS	3/8-18	1/8-27
06-04	\$		SS	3/8-18	1/4-18
06	\$		SS	3/8-18	3/8-18
08-04	\$		SS	1/2-14	1/4-18
08-06	\$		SS	1/2-14	3/8-18
08	\$		SS	1/2-14	1/2-14
12-04	\$		SS	3/4-14	1/4-18
12-06	\$		SS	3/4-14	3/8-18
12-08	\$		SS	3/4-14	1/2-14
12	\$		SS	3/4-14	3/4-14
16-06	\$		SS	1-11 1/2	3/8-18
16-08	\$		SS	1-11 1/2	1/2-14
16-12	\$		SS	1-11 1/2	3/4-14
16	\$		SS	1-11 1/2	1-11 1/2
20-12	\$			1 1/4-11 1/2	3/4-14
20-16	\$		SS	1 1/4-11 1/2	1-11 1/2
20	\$		SS	1 1/4-11 1/2	1 1/4-11 1/2
24-12	\$			1 1/2-11 1/2	3/4-14
24-16	\$			1 1/2-11 1/2	1-11 1/2
24-20	\$			1 1/2-11 1/2	1 1/4-11 1/2
24	\$		SS	1 1/2-11 1/2	1 1/2-11 1/2
32-20	\$			2-11 1/2	1 1/4-11 1/2
32-24	\$		SS	2-11 1/2	1 1/2-11 1/2
32	\$		SS	2-11 1/2	2-11 1/2

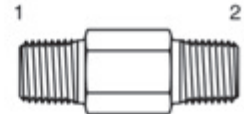
SAE 140137

Steel Pipe Adapters

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	Length*
	S	FG	SS	BR			
02-1.5"	\$		SS		1/8-27	1/8-27	1.50"
02-2.0"	\$		SS		1/8-27	1/8-27	2.00"
02-2.5"	\$		SS		1/8-27	1/8-27	2.50"
02-3.0"	\$		SS		1/8-27	1/8-27	3.00"
02-3.5"	\$				1/8-27	1/8-27	3.50"
04-2.0"	\$		SS		1/4-18	1/4-18	2.00"
04-2.5"	\$		SS		1/4-18	1/4-18	2.50"
04-3.0"	\$		SS		1/4-18	1/4-18	3.00"
04-4.0"	\$		SS		1/4-18	1/4-18	4.00"
04-6.0"	\$				1/4-18	1/4-18	6.00"
06-2.0"	\$		SS		3/8-18	3/8-18	2.00"
06-2.5"	\$				3/8-18	3/8-18	2.50"
06-3.0"	\$		SS		3/8-18	3/8-18	3.00"
06-4.0"	\$				3/8-18	3/8-18	4.00"
06-6.0"	\$				3/8-18	3/8-18	6.00"
06-7.0"	\$				3/8-18	3/8-18	7.00"
08-2.5"	\$		SS		1/2-14	1/2-14	2.50"
08-3.0"	\$		SS		1/2-14	1/2-14	3.00"
08-4.0"	\$		SS		1/2-14	1/2-14	4.00"
08-6.0"	\$		SS		1/2-14	1/2-14	6.00"
12-3.0"	\$		SS		3/4-14	3/4-14	3.00"
12-4.0"	\$				3/4-14	3/4-14	4.00"
12-6.0"	\$				3/4-14	3/4-14	6.00"
16-3.0"	\$		SS		1-11 1/2	1-11 1/2	3.00"
16-6.0"	\$				1-11 1/2	1-11 1/2	6.00"
20-4.0"	\$				1 1/4-11 1/2	1 1/4-11 1/2	4.00"
20-6.0"	\$				1 1/4-11 1/2	1 1/4-11 1/2	6.00"
24-4.0"	\$				1 1/2-11 1/2	1 1/2-11 1/2	4.00"
24-6.0"	\$				1 1/2-11 1/2	1 1/2-11 1/2	6.00"
32-4.0"	\$				2-11 1/2	2-11 1/2	4.00"
32-6.0"	\$				2-11 1/2	2-11 1/2	6.00"

5404-L

Long Hex Pipe Nipple

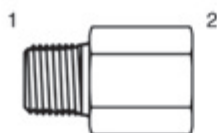


*Length = Overall Length of Fitting

Steel Pipe Adapters

5405

Expanding Pipe Adapter

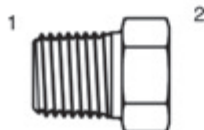


SAE 140139

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
01-02	\$				1/16-27	1/8-27
02-02	\$		SS		1/8-27	1/8-27
02-04	\$		SS		1/8-27	1/4-18
02-06	\$		SS		1/8-27	3/8-18
02-08	\$		SS		1/8-27	1/2-14
4/28-2	\$				1/4-28	1/8-27
04-04	\$		SS		1/4-18	1/4-18
04-06	\$		SS		1/4-18	3/8-18
04-08	\$		SS		1/4-18	1/2-14
04-12	\$		SS		1/4-18	3/4-14
06-06	\$		SS		3/8-18	3/8-18
06-08	\$		SS		3/8-18	1/2-14
06-12	\$		SS		3/8-18	3/4-14
08-08	\$		SS		1/2-14	1/2-14
08-12	\$		SS		1/2-14	3/4-14
08-16	\$		SS		1/2-14	1-11 1/2
12-08	\$				3/4-14	1/2-14
12-12	\$		SS		3/4-14	3/4-14
12-16	\$		SS		3/4-14	1-11 1/2
12-20	\$				3/4-14	1 1/4-11 1/2
16-16	\$		SS		1-11 1/2	1-11 1/2
16-20	\$		SS		1-11 1/2	1 1/4-11 1/2
16-24	\$				1-11 1/2	1 1/2-11 1/2
20-20	\$				1 1/4-11 1/2	1 1/4-11 1/2
20-24	\$				1 1/4-11 1/2	1 1/2-11 1/2
24-32	\$				1 1/2-11 1/2	2-11 1/2

5406-E

Short Hex Reducer Bushing



AUTOMOTIVE PIPE

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	Length*
	S	FG	SS	BR			
04-02	\$				1/4-18	1/8-27	.63"
06-02	\$				3/8-18	1/8-27	.67"
06-04	\$				3/8-18	1/4-18	.67"
08-02	\$				1/2-14	1/8-27	.88"
08-04	\$				1/2-14	1/4-18	.88"
08-06	\$				1/2-14	3/8-18	.88"
12-02	\$				3/4-14	1/8-27	.98"
12-04	\$				3/4-14	1/4-18	.98"
12-06	\$				3/4-14	3/8-18	.98"
12-08	\$				3/4-14	1/2-14	.98"
16-02	\$				1-11 1/2	1/8-27	1.12"
16-04	\$				1-11 1/2	1/4-18	1.12"
16-06	\$				1-11 1/2	3/8-18	1.12"
16-08	\$				1-11 1/2	1/2-14	1.12"
16-12	\$				1-11 1/2	3/4-14	1.18"
20-04	\$				1 1/4-11 1/2	1/4-18	1.18"
20-06	\$				1 1/4-11 1/2	3/8-18	1.18"
20-08	\$				1 1/4-11 1/2	1/2-14	1.18"
20-12	\$				1 1/4-11 1/2	3/4-14	1.18"
20-16	\$				1 1/4-11 1/2	1-11 1/2	1.18"

*Length = Length of Hex

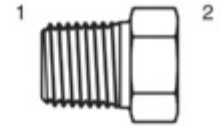
Steel Pipe Adapters

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	Length*
	S	FG	SS	BR			
02-01	\$				1/8-27	1/16-27	
04-02	\$		SS		1/4-18	1/8-27	.85"
06-02	\$		SS		3/8-18	1/8-27	.85"
06-04	\$		SS		3/8-18	1/4-18	.85"
08-02	\$		SS		1/2-14	1/8-27	.85"
08-04	\$		SS		1/2-14	1/4-18	.85"
08-06	\$		SS		1/2-14	3/8-18	.85"
12-02	\$		SS		3/4-14	1/8-27	1.17"
12-04	\$		SS		3/4-14	1/4-18	1.17"
12-06	\$		SS		3/4-14	3/8-18	1.17"
12-08	\$		SS		3/4-14	1/2-14	1.17"
16-02	\$		SS		1-11 1/2	1/8-27	1.36"
16-04	\$		SS		1-11 1/2	1/4-18	1.36"
16-06	\$		SS		1-11 1/2	3/8-18	1.36"
16-08	\$		SS		1-11 1/2	1/2-14	1.36"
16-12	\$		SS		1-11 1/2	3/4-14	1.36"
20-04	\$		SS		1 1/4-11 1/2	1/4-18	1.47"
20-06	\$		SS		1 1/4-11 1/2	3/8-18	1.47"
20-08	\$		SS		1 1/4-11 1/2	1/2-14	1.47"
20-12	\$		SS		1 1/4-11 1/2	3/4-14	1.47"
20-16	\$		SS		1 1/4-11 1/2	1-11 1/2	1.47"
24-04	\$		SS		1 1/2-11 1/2	1/4-18	1.57"
24-06	\$		SS		1 1/2-11 1/2	3/8-18	1.57"
24-08	\$		SS		1 1/2-11 1/2	1/2-14	1.57"
24-12	\$		SS		1 1/2-11 1/2	3/4-14	1.57"
24-16	\$		SS		1 1/2-11 1/2	1-11 1/2	1.57"
24-20	\$		SS		1 1/2-11 1/2	1 1/4-11 1/2	1.57"
32-08	\$		SS		2-11 1/2	1/2-14	1.75"
32-12	\$		SS		2-11 1/2	3/4-14	1.75"
32-16	\$		SS		2-11 1/2	1-11 1/2	1.75"
32-20	\$		SS		2-11 1/2	1 1/4-11 1/2	1.75"
32-24	\$		SS		2-11 1/2	1 1/2-11 1/2	1.75"
40-32	\$				2 1/2-11 1/2	2-11 1/2	2.35"
48-32	\$				3-11 1/2	2-11 1/2	2.50"

*Length = Length of Hex

5406

Hex Reducer Bushing

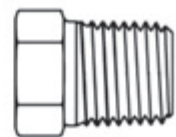


HYDRAULIC PIPE
SAE 140140

Dash Size	Stock Materials				T1 (NPTF)
	S	FG	SS	BR	
02	\$		SS		1/8-27
04	\$		SS		1/4-18
06	\$		SS		3/8-18
08	\$		SS		1/2-14
12	\$		SS		3/4-14
16	\$		SS		1-11 1/2
20	\$				1 1/4-11 1/2
24	\$				1 1/2-11 1/2
32	\$				2-11 1/2

5406-P

Hex Head Plug



SAE 130109E

S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Steel Pipe Adapters

5406-HHP

Hollow Hex Plug



SAE 130109

Dash Size	Stock Materials*				T1 (NPTF)
	S	FG	SS	BR	
01	\$				1/16-27
02	\$		SS		1/8-27
04	\$		SS		1/4-18
06	\$		SS		3/8-18
08	\$		SS		1/2-14
12	\$		SS		3/4-14
16	\$		SS		1-11 1/2
20	\$				1 1/4-11 1/2
24	\$				1 1/2-11 1/2
32	\$				2-11 1/2

*Also available in aluminum and magnetic styles. Call for availability.

5406-FLP

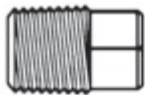
Flush Hollow Hex Plug 7/8 Taper



Dash Size	Stock Materials				T1 (NPTF)
	S	FG	SS	BR	
01	\$				1/16-27
02	\$				1/8-27
04	\$				1/4-18
06	\$				3/8-18
08	\$				1/2-14
12	\$				3/4-14

5406-SHP

Square Head Plug

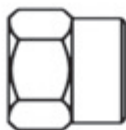


SAE 130109A

Dash Size	Stock Materials				T1 (NPTF)
	S	FG	SS	BR	
01	\$				1/16-27
02	\$				1/8-27
04	\$				1/4-18
06	\$				3/8-18
08	\$				1/2-14
12	\$				3/4-14
16	\$				1-11 1/2
20	\$				1 1/4-11 1/2
24	\$				1 1/2-11 1/2
32	\$				2-11 1/2

5406-CAP

Pipe Cap



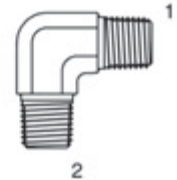
Dash Size	Stock Materials				T1 (NPTF)
	S	FG	SS	BR	
02	\$		SS		1/8-27
04	\$		SS		1/4-18
06	\$		SS		3/8-18
08	\$		SS		1/2-14
12	\$		SS		3/4-14
16	\$		SS		1-11 1/2

Steel Pipe Adapters

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
02	\$	FG	SS		1/8-27	1/8-27
04-02	\$	FG			1/4-18	1/8-27
04	\$	FG	SS		1/4-18	1/4-18
06-04	\$	FG	SS		3/8-18	1/4-18
06	\$	FG	SS		3/8-18	3/8-18
08-04	\$	FG			1/2-14	1/4-18
08-06	\$	FG	SS		1/2-14	3/8-18
08	\$	FG	SS		1/2-14	1/2-14
12-08	\$	FG			3/4-14	1/2-14
12	\$	FG	SS		3/4-14	3/4-14
16-12	\$	FG			1-11 1/2	3/4-14
16	\$	FG	SS		1-11 1/2	1-11 1/2
20-16	\$				1 1/4-11 1/2	1-11 1/2
20	\$	FG	SS		1 1/4-11 1/2	1 1/4-11 1/2
24-20	\$				1 1/2-11 1/2	1 1/4-11 1/2
24	\$	FG			1 1/2-11 1/2	1 1/2-11 1/2
32	\$				2-11 1/2	2-11 1/2

5500

Pipe Elbow 90°



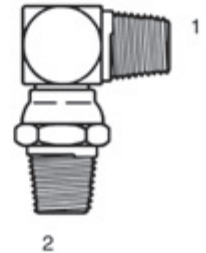
SAE 140237

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
04-04		FG			1/4-18	1/4-18
06-06		FG			3/8-18	3/8-18
08-08		FG			1/2-14	1/2-14
12-12		FG			3/4-14	3/4-14

*Swivel For Installation Only

5500-S

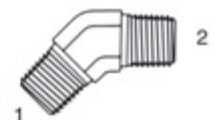
Pipe Swivel* Elbow 90°



Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
02-02	\$	FG			1/8-27	1/8-27
04-04	\$	FG			1/4-18	1/4-18
06-06	\$	FG			3/8-18	3/8-18
08-08	\$	FG			1/2-14	1/2-14
12-12	\$	FG			3/4-14	3/4-14
16-16	\$	FG			1-11 1/2	1-11 1/2
20-20	\$	FG			1 1/4-11 1/2	1 1/4-11 1/2

5501

Pipe Elbow 45°



S= Steel

FG=Forging

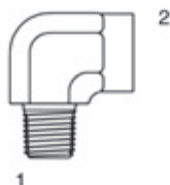
SS=Stainless Steel

BR=Brass

Steel Pipe Adapters

5502

Street Elbow 90°

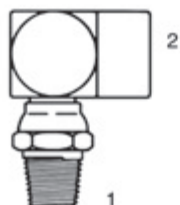


Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
02	S	FG	SS		1/8-27	1/8-27
02-04	S	FG	SS		1/8-27	1/4-18
4/28-02	S				1/4-28	1/8-27
04-02	S	FG	SS		1/4-18	1/8-27
04	S	FG	SS		1/4-18	1/4-18
04-06	S	FG	SS		1/4-18	3/8-18
04-08	S		SS		1/4-18	1/2-14
06-02	S	FG	SS		3/8-18	1/8-27
06-04	S	FG	SS		3/8-18	1/4-18
06	S	FG	SS		3/8-18	3/8-18
06-08	S	FG	SS		3/8-18	1/2-14
08-04	S	FG			1/2-14	1/4-18
08-06	S	FG	SS		1/2-14	3/8-18
08	S	FG	SS		1/2-14	1/2-14
08-12	S	FG			1/2-14	3/4-14
12-08	S	FG	SS		3/4-14	1/2-14
12	S	FG	SS		3/4-14	3/4-14
12-16	S				3/4-14	1-11 1/2
16-08	S				1-11 1/2	1/2-14
16-12	S	FG			1-11 1/2	3/4-14
16	S	FG	SS		1-11 1/2	1-11 1/2
16-20	S				1-11 1/2	1 1/4-11 1/2
20-16	S	FG			1 1/4-11 1/2	1-11 1/2
20	S	FG	SS		1 1/4-11 1/2	1 1/4-11 1/2
20-24	S				1 1/4-11 1/2	1 1/2-11 1/2
24-20	S	FG			1 1/2-11 1/2	1 1/4-11 1/2
24	S	FG	SS		1 1/2-11 1/2	1 1/2-11 1/2
32	S	FG			2-11 1/2	2-11 1/2

SAE 140239

5502-S

Street Elbow Pipe Swivel* 90°



Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
04-04		FG			1/4-18	1/4-18
06-06		FG			3/8-18	3/8-18
08-08		FG			1/2-14	1/2-14
12-12		FG			3/4-14	3/4-14

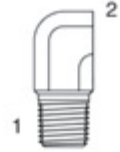
*Swivel For Installation Only

Steel Pipe Adapters

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
02	\$				1/8-27	1/8-27
04	\$				1/4-18	1/4-18
06	\$				3/8-18	3/8-18
08	\$				1/2-14	1/2-14

5502-X

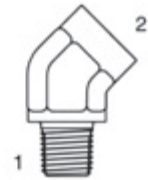
Short Body Street Elbow 90°



Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
02	\$	FG	SS		1/8-27	1/8-27
4/28-02	\$				1/4-28	1/8-27
04	\$	FG	SS		1/4-18	1/4-18
06	\$	FG	SS		3/8-18	3/8-18
08	\$	FG	SS		1/2-14	1/2-14
12	\$	FG	SS		3/4-14	3/4-14
16	\$	FG	SS		1-11 1/2	1-11 1/2
20	\$	FG	SS		1 1/4-11 1/2	1 1/4-11 1/2
24	\$	FG			1 1/2-11 1/2	1 1/2-11 1/2
32	\$				2-11 1/2	2-11 1/2

5503

Street Elbow 45°

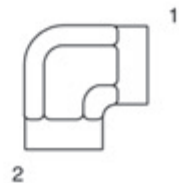


SAE 140339

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
02	\$	FG	SS		1/8-27	1/8-27
04-02	\$	FG	SS		1/4-18	1/8-27
04	\$	FG	SS		1/4-18	1/4-18
06-04	\$	FG			3/8-18	1/4-18
06	\$	FG	SS		3/8-18	3/8-18
08-04	\$	FG	SS		1/2-14	1/4-18
08-06	\$	FG	SS		1/2-14	3/8-18
08	\$	FG	SS		1/2-14	1/2-14
12-08	\$	FG	SS		3/4-14	1/2-14
12	\$	FG	SS		3/4-14	3/4-14
16-12	\$	FG	SS		1-11 1/2	3/4-14
16	\$	FG	SS		1-11 1/2	1-11 1/2
20	\$	FG	SS		1 1/4-11 1/2	1 1/4-11 1/2
24	\$	FG	SS		1 1/2-11 1/2	1 1/2-11 1/2
32	\$				2-11 1/2	2-11 1/2

5504

Pipe Elbow 90°



SAE 140238

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
02	\$	FG			1/8-27	1/8-27
04	\$	FG			1/4-18	1/4-18
06	\$	FG			3/8-18	3/8-18
08	\$	FG			1/2-14	1/2-14
12	\$	FG			3/4-14	3/4-14
16	\$	FG			1-11 1/2	1-11 1/2
20	\$	FG			1 1/4-11 1/2	1 1/4-11 1/2

5505

Pipe Elbow 45°



SAE 140338

S= Steel

FG=Forging

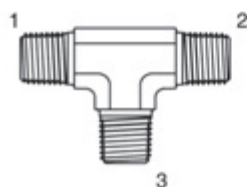
SS=Stainless Steel

BR=Brass

Steel Pipe Adapters

5600

Pipe Tee

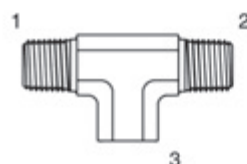


SAE 140437

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	T3 (NPTF)
	S	FG	SS	BR			
02	\$	FG	SS		1/8-27	1/8-27	1/8-27
04	\$	FG	SS		1/4-18	1/4-18	1/4-18
06	\$	FG	SS		3/8-18	3/8-18	3/8-18
08	\$	FG	SS		1/2-14	1/2-14	1/2-14
12	\$	FG	SS		3/4-14	3/4-14	3/4-14
16	\$	FG			1-11 1/2	1-11 1/2	1-11 1/2
20	\$				1 1/4-11 1/2	1 1/4-11 1/2	1 1/4-11 1/2
24	\$				1 1/2-11 1/2	1 1/2-11 1/2	1 1/2-11 1/2

5601

Pipe Tee

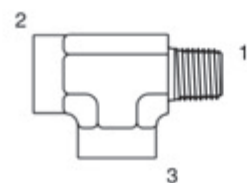


SAE 140427

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	T3 (NPTF)
	S	FG	SS	BR			
02	\$	FG			1/8-27	1/8-27	1/8-27
04	\$	FG	SS		1/4-18	1/4-18	1/4-18
06	\$	FG			3/8-18	3/8-18	3/8-18
08	\$	FG	SS		1/2-14	1/2-14	1/2-14
12	\$	FG	SS		3/4-14	3/4-14	3/4-14
16	\$	FG	SS		1-11 1/2	1-11 1/2	1-11 1/2
20	\$	FG			1 1/4-11 1/2	1 1/4-11 1/2	1 1/4-11 1/2
24	\$	FG			1 1/2-11 1/2	1 1/2-11 1/2	1 1/2-11 1/2

5602

Street Tee

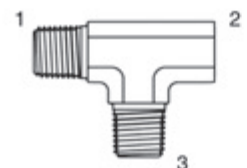


SAE 140424

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	T3 (NPTF)
	S	FG	SS	BR			
02	\$	FG	SS		1/8-27	1/8-27	1/8-27
04	\$	FG	SS		1/4-18	1/4-18	1/4-18
06	\$	FG	SS		3/8-18	3/8-18	3/8-18
08	\$	FG	SS		1/2-14	1/2-14	1/2-14
12	\$	FG	SS		3/4-14	3/4-14	3/4-14
16	\$	FG	SS		1-11 1/2	1-11 1/2	1-11 1/2
20	\$	FG	SS		1 1/4-11 1/2	1 1/4-11 1/2	1 1/4-11 1/2
24	\$	FG	SS		1 1/2-11 1/2	1 1/2-11 1/2	1 1/2-11 1/2
32	\$				2-11 1/2	2-11 1/2	2-11 1/2

5603

Pipe Tee



SAE 140426

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	T3 (NPTF)
	S	FG	SS	BR			
02	\$	FG			1/8-27	1/8-27	1/8-27
04	\$	FG	SS		1/4-18	1/4-18	1/4-18
06	\$	FG			3/8-18	3/8-18	3/8-18
08	\$	FG	SS		1/2-14	1/2-14	1/2-14
12	\$	FG	SS		3/4-14	3/4-14	3/4-14
16	\$	FG	SS		1-11 1/2	1-11 1/2	1-11 1/2
20	\$	FG			1 1/4-11 1/2	1 1/4-11 1/2	1 1/4-11 1/2
24	\$	FG			1 1/2-11 1/2	1 1/2-11 1/2	1 1/2-11 1/2
32	\$				2-11 1/2	2-11 1/2	2-11 1/2

Steel Pipe Adapters

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	T3 (NPTF)
	S	FG	SS	BR			
02	\$	FG	SS		1/8-27	1/8-27	1/8-27
04	\$	FG	SS		1/4-18	1/4-18	1/4-18
06	\$	FG	SS		3/8-18	3/8-18	3/8-18
08	\$	FG	SS		1/2-14	1/2-14	1/2-14
12	\$	FG	SS		3/4-14	3/4-14	3/4-14
16	\$	FG	SS		1-11 1/2	1-11 1/2	1-11 1/2
20	\$	FG			1 1/4-11 1/2	1 1/4-11 1/2	1 1/4-11 1/2
24	\$	FG			1 1/2-11 1/2	1 1/2-11 1/2	1 1/2-11 1/2
32	\$				2-11 1/2	2-11 1/2	2-11 1/2

5604

Branch Tee

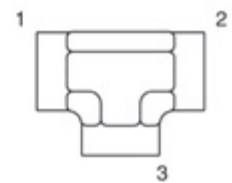


SAE 14042S

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	T3 (NPTF)
	S	FG	SS	BR			
02	\$	FG	SS		1/8-27	1/8-27	1/8-27
04	\$	FG	SS		1/4-18	1/4-18	1/4-18
06	\$	FG	SS		3/8-18	3/8-18	3/8-18
08	\$	FG	SS		1/2-14	1/2-14	1/2-14
12	\$	FG	SS		3/4-14	3/4-14	3/4-14
16	\$	FG	SS		1-11 1/2	1-11 1/2	1-11 1/2
20	\$	FG	SS		1 1/4-11 1/2	1 1/4-11 1/2	1 1/4-11 1/2
24	\$	FG	SS		1 1/2-11 1/2	1 1/2-11 1/2	1 1/2-11 1/2
32	\$	FG			2-11 1/2	2-11 1/2	2-11 1/2

5605

Pipe Tee

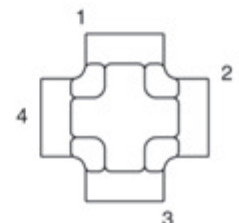


SAE 140438

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	T3 & T4 (NPTF)
	S	FG	SS	BR			
02	\$	FG	SS		1/8-27	1/8-27	1/8-27
04	\$	FG	SS		1/4-18	1/4-18	1/4-18
06	\$	FG	SS		3/8-18	3/8-18	3/8-18
08	\$	FG	SS		1/2-14	1/2-14	1/2-14
12	\$	FG			3/4-14	3/4-14	3/4-14
16	\$	FG			1-11 1/2	1-11 1/2	1-11 1/2
20	\$	FG			1 1/4-11 1/2	1 1/4-11 1/2	1 1/4-11 1/2
24	\$	FG			1 1/2-11 1/2	1 1/2-11 1/2	1 1/2-11 1/2
32	\$	FG			2-11 1/2	2-11 1/2	2-11 1/2

5652

Pipe Cross

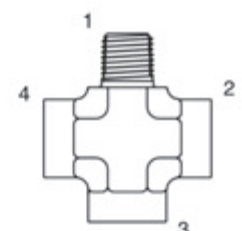


SAE 140538

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	T3 & T4 (NPTF)
	S	FG	SS	BR			
04	\$	FG			1/4-18	1/4-18	1/4-18
06	\$	FG			3/8-18	3/8-18	3/8-18
08	\$	FG			1/2-14	1/2-14	1/2-14
12	\$	FG			3/4-14	3/4-14	3/4-14

5655

Pipe Cross



S= Steel

FG=Forging

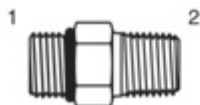
SS=Stainless Steel

BR=Brass

Steel Pipe Adapters

6401

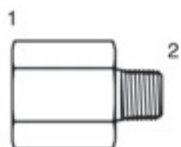
O-Ring to Pipe



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
03-02	\$				3/8-27	1/8-27
04-02	\$		SS		7/16-20	1/8-27
04-04	\$		SS		7/16-20	1/4-18
04-06	\$				7/16-20	3/8-18
05-02	\$				1/2-20	1/8-27
06-04	\$		SS		9/16-18	1/4-18
06-06	\$		SS		9/16-18	3/8-18
06-08	\$				9/16-18	1/2-14
08-04	\$				3/4-16	1/4-18
08-06	\$		SS		3/4-16	3/8-18
08-08	\$		SS		3/4-16	1/2-14
08-12	\$				3/4-16	3/4-14
10-06	\$				7/8-14	3/8-18
10-08	\$		SS		7/8-14	1/2-14
10-12	\$				7/8-14	3/4-14
12-08	\$				1 1/16-12	1/2-14
12-12	\$		SS		1 1/16-12	3/4-14
12-16	\$				1 1/16-12	1-11 1/2
16-12	\$		SS		1 5/16-12	3/4-14
16-16	\$		SS		1 5/16-12	1-11 1/2
16-20	\$				1 5/16-12	1 1/4-11 1/2
20-20	\$		SS		1 5/8-12	1 1/4-11 1/2
24-16	\$				1 7/8-12	1-11 1/2
24-20	\$				1 7/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 1/2-11 1/2
32-32	\$				2 1/2-12	2-11 1/2

6404

O-Ring to Pipe



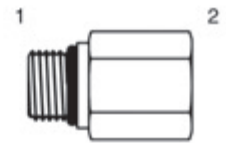
Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-27
04-04	\$				7/16-20	1/4-18
05-02	\$				1/2-20	1/8-27
06-04	\$				9/16-18	1/4-18
06-06	\$				9/16-18	3/8-18
06-08	\$				9/16-18	1/2-14
08-04	\$				3/4-16	1/4-18
08-06	\$				3/4-16	3/8-18
08-08	\$				3/4-16	1/2-14
08-12	\$				3/4-16	3/4-14
10-06	\$				7/8-14	3/8-18
10-08	\$				7/8-14	1/2-14
10-12	\$				7/8-14	3/4-14
12-12	\$				1 1/16-12	3/4-14
12-16	\$				1 1/16-12	1-11 1/2
16-16	\$				1 5/16-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 1/2-11 1/2

Steel Pipe Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
02-02	\$		SS		5/16-24	1/8-27
02-04	\$				5/16-24	1/4-18
03-04	\$				3/8-24	1/4-18
04-02	\$		SS		7/16-20	1/8-27
04-04	\$		SS		7/16-20	1/4-18
04-06	\$				7/16-20	3/8-18
05-02	\$				1/2-20	1/8-27
05-04	\$				1/2-20	1/4-18
06-02	\$				9/16-18	1/8-27
06-04	\$		SS		9/16-18	1/4-18
06-06	\$		SS		9/16-18	3/8-18
06-08	\$		SS		9/16-18	1/2-14
06-12	\$				9/16-18	3/4-14
08-02	\$		SS		3/4-16	1/8-27
08-04	\$		SS		3/4-16	1/4-18
08-06	\$		SS		3/4-16	3/8-18
08-08	\$		SS		3/4-16	1/2-14
08-12	\$				3/4-16	3/4-14
10-04	\$				7/8-14	1/4-18
10-06	\$		SS		7/8-14	3/8-18
10-08	\$		SS		7/8-14	1/2-14
10-12	\$				7/8-14	3/4-14
12-04	\$		SS		1 1/16-12	1/4-18
12-06	\$		SS		1 1/16-12	3/8-18
12-08	\$		SS		1 1/16-12	1/2-14
12-12	\$		SS		1 1/16-12	3/4-14
12-16	\$				1 1/16-12	1-11 1/2
12-20	\$				1 1/16-12	1 1/4-11 1/2
12-24	\$				1 1/16-12	1 1/2-11 1/2
14-12	\$				1 3/16-12	3/4-14
14-16	\$				1 3/16-12	1-11 1/2
16-06	\$				1 5/16-12	3/8-18
16-08	\$		SS		1 5/16-12	1/2-14
16-12	\$		SS		1 5/16-12	3/4-14
16-16	\$		SS		1 5/16-12	1-11 1/2
16-20	\$				1 5/16-12	1 1/4-11 1/2
20-08	\$				1 5/8-12	1/2-14
20-12	\$				1 5/8-12	3/4-14
20-16	\$		SS		1 5/8-12	1-11 1/2
20-20	\$		SS		1 5/8-12	1 1/4-11 1/2
20-24	\$		SS		1 5/8-12	1 1/2-11 1/2
24-12	\$				1 7/8-12	3/4-14
24-16	\$		SS		1 7/8-12	1-11 1/2
24-20	\$		SS		1 7/8-12	1 1/4-11 1/2
24-24	\$		SS		1 7/8-12	1 1/2-11 1/2
32-20	\$				2 1/2-12	1 1/4-11 1/2
32-24	\$				2 1/2-12	1 1/2-11 1/2
32-32	\$		SS		2 1/2-12	2-11 1/2

6405

O-Ring to Pipe



S= Steel

FG=Forging

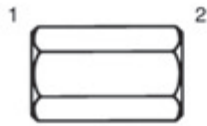
SS=Stainless Steel

BR=Brass

Steel Pipe Adapters

6420

O-Ring to Pipe



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
06-06	\$				9/16-18	3/8-18
08-08	\$				3/4-16	1/2-14
10-08	\$				7/8-14	1/2-14

6805

O-Ring to Pipe Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$	FG			7/16-20	1/8-27
04-04	\$	FG			7/16-20	1/4-18
05-02	\$				1/2-20	1/8-27
06-04	\$	FG			9/16-18	1/4-18
06-06	\$	FG			9/16-18	3/8-18
08-06	\$	FG			3/4-16	3/8-18
08-08	\$	FG			3/4-16	1/2-14
10-06	\$	FG			7/8-14	3/8-18
10-08	\$	FG			7/8-14	1/2-14
12-08	\$	FG			1 1/16-12	1/2-14
12-12	\$	FG			1 1/16-12	3/4-14
14-12	\$	FG			1 3/16-12	3/4-14
16-12	\$	FG			1 5/16-12	3/4-14
16-16	\$	FG			1 5/16-12	1-11 1/2
20-20	\$	FG			1 5/8-12	1 1/4-11 1/2
24-24	\$	FG			1 7/8-12	1 1/2-11 1/2
32-32	\$				2 1/2-12	2-11 1/2

6805-L

Extra Long O-Ring to Pipe Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)	Length*
	S	FG	SS	BR			
08-06	\$	FG			3/4-16	3/8-18	2.94"
10-08	\$	FG			7/8-14	1/2-14	3.56"
12-12	\$	FG			1 1/16-12	3/4-14	4.13"
16-16	\$	FG			1 5/16-12	1-11 1/2	4.63"

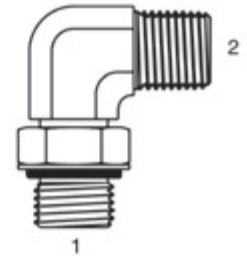
*Length = Middle of NPTF to End of Threads

Steel Pipe Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$	FG			7/16-20	1/8-27
04-04	\$	FG			7/16-20	1/4-18
06-04	\$	FG			9/16-18	1/4-18
06-06	\$	FG			9/16-18	3/8-18
06-08	\$				9/16-18	1/2-14
08-06	\$	FG			3/4-16	3/8-18
08-08	\$	FG			3/4-16	1/2-14
10-08	\$	FG			7/8-14	1/2-14
12-12	\$	FG			1 1/16-12	3/4-14
16-12	\$	FG			1 5/16-12	3/4-14
16-16	\$	FG			1 5/16-12	1-11 1/2
20-20	\$	FG			1 5/8-12	1 1/4-11 1/2
24-24	\$	FG			1 7/8-12	1 1/2-11 1/2
32-32	\$	FG			2 1/2-12	2-11 1/2

6806

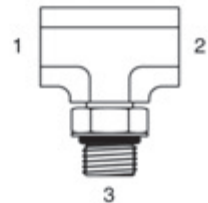
O-Ring to Pipe Elbow 90°



Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)	T3 (UNF)
	S	FG	SS	BR			
04-04-06	\$				1/4-18	1/4-18	9/16-18
06-06-06	\$				3/8-18	3/8-18	9/16-18
06-08-08	\$				3/8-18	1/2-14	3/4-16

6855

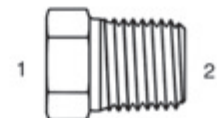
Pipe to O-Ring Branch Tee



Dash Size	Stock Materials				Braze Port	T2 (NPTF)
	S	FG	SS	BR		
06-04	\$				3/8	1/4-18
08-06	\$				1/2	3/8-18
10-08	\$				5/8	1/2-14
12-08	\$				3/4	1/2-14
12-12	\$				3/4	3/4-14
16-16	\$				1	1-11 1/2
20-16	\$				1 1/4	1-11 1/2
20-20	\$				1 1/4	1 1/4-11 1/2
24-24	\$				1 1/2	1 1/2-11 1/2

404

Braze Port to Pipe



Notes



Steel Pipe Swivel Adapters

CONFORMANCE

- SAE J514
- 30-Degree Chamfers – Most of Tompkins NPSM pipe swivel union fittings have 30-degree chamfers on NPTF male end of fittings. This chamfer is optional per SAE J514. If chamfer is mandatory, consult with our customer service department to verify chamfer exists on item you are requesting.

MATERIALS

- Steel – Carbon steel clear trivalent chromium zinc or yellow dichromate zinc plated per ASTM B633-98 (Type II SC-2)
- Stainless – Type 316 (When ordering stainless, include the prefix SS at the beginning of the part number)

WORKING PRESSURES

The following table lists the recommended working pressures for steel NPSM pipe swivel union hydraulic fittings made in accordance with SAE standard J514. Many factors such as impulsing, vibration, mechanical shock and overtightening may affect the integrity of the fitting and swivel union connection. Tompkins and SAE recommend sufficient testing be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using fittings with different size or thread type, use the lower pressure rating of the two threads.



CAUTION: NPSM pipe swivel unions are not designed to provide structural support for other components.

SAE J514 NPSM PRESSURE RATINGS

DASH SIZE	NPSM THREAD SIZE	4 TO 1 MINIMUM BURST PSI
-02	1/8-27	5000
-04	1/4-18	5000
-06	3/8-18	4000
-08	1/2-14	3500
-12	3/4-14	2250
-16	1-11 1/2	2000
-20	1 1/4-11 1/2	1625
-24	1 1/2-11 1/2	1250
-32	2-11 1/2	1125

See **SAE STRAIGHT THREAD O-RING SECTION** for assembly instructions and torque values for installation of **NPSM SWIVEL UNIONS** with O-ring straight threads.

See **NPTF PIPE SECTION** for assembly instructions and proper thread engagement for **NPSM SWIVEL UNIONS** with pipe threads.

TORQUE VALUES: The torque values provided by Tompkins Industries are to provide benchmarks that we believe give optimum results for leak free connections. Actual torque values should be based on individual applications.

RECOMMENDED NPSM SWIVEL UNION ASSEMBLY INSTRUCTIONS

STEP 1. Inspect male pipe fitting connecting to swivel and confirm that it has an internal 30-degree chamfer. Do not install into union if chamfer is missing.

STEP 2. Lubricate the threads and the entire chamfered area of male fitting with hydraulic fluid or other light weight lubricant.

STEP 3. Install lubricated pipe fitting into swivel nut and turn nut until finger tight.

STEP 4. Place wrench on hex of male fitting to prevent male fitting from turning, and torque swivel nut to the values in the following table.

CAUTION: When torquing swivel nut on straight swivel union fittings, it may be necessary to also place a third wrench on the fitting wrench pad to prevent the fitting from backing out of its port while torquing the swivel nut.

DASH SIZE	NPSM THREAD SIZE	TORQUE FOOT/LBS
-02	1/8-27	13
-04	1/4-18	20
-06	3/8-18	25
-08	1/2-14	47
-12	3/4-14	84
-16	1-11 1/2	129
-20	1 1/4-11 1/2	152
-24	1 1/2-11 1/2	152
-32	2-11 1/2	300

ALTERNATE ASSEMBLY METHOD

STEP 1. If torque method not possible, follow steps 1-3 above, then proceed to the steps below.

STEP 2. Place wrench on hex of male pipe fitting and consider this wrench in the 12 o'clock position.

STEP 3. Lightly wrench tighten the swivel union nut until there is firm resistance.

STEP 4. Place second wrench on swivel union nut so that the wrench is as near the 3 o'clock position as possible.

STEP 5. Rotate wrench in 3 o'clock position counter-clockwise to no less than the 1 o'clock position, but no more than the 12 o'clock position.

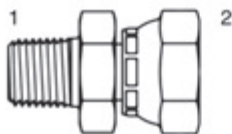
WHY WET TORQUE?

Due to differences in materials, plating types and thickness, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Over tightening causes threads to yield, deform, and therefore lose their ability to maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. **It is our firm position that to not wet torque is to compromise consistency and quality for convenience.**

Steel Pipe Swivel Adapters

1404

Pipe Swivel Union

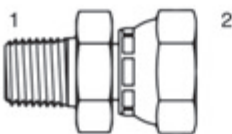


SAE 140130

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPSM)
	S	FG	SS	BR		
02-02	\$		SS		1/8-27	1/8-27
02-04	\$		SS		1/8-27	1/4-18
04-02	\$		SS		1/4-18	1/8-27
04-04	\$		SS		1/4-18	1/4-18
04-06	\$		SS		1/4-18	3/8-18
04-08	\$				1/4-18	1/2-14
06-04	\$		SS		3/8-18	1/4-18
06-06	\$		SS		3/8-18	3/8-18
06-08	\$		SS		3/8-18	1/2-14
08-04	\$		SS		1/2-14	1/4-18
08-06	\$		SS		1/2-14	3/8-18
08-08	\$		SS		1/2-14	1/2-14
08-12	\$				1/2-14	3/4-14
12-06	\$				3/4-14	3/8-18
12-08	\$		SS		3/4-14	1/2-14
12-12	\$		SS		3/4-14	3/4-14
12-16	\$		SS		3/4-14	1-11 1/2
16-06	\$				1-11 1/2	3/8-18
16-12	\$		SS		1-11 1/2	3/4-14
16-16	\$		SS		1-11 1/2	1-11 1/2
16-20	\$				1-11 1/2	1 1/4-11 1/2
16-24	\$				1-11 1/2	1 1/2-11 1/2
20-16	\$				1 1/4-11 1/2	1-11 1/2
20-20	\$		SS		1 1/4-11 1/2	1 1/4-11 1/2
20-24	\$		SS		1 1/4-11 1/2	1 1/2-11 1/2
24-20	\$				1 1/2-11 1/2	1 1/4-11 1/2
24-24	\$		SS		1 1/2-11 1/2	1 1/2-11 1/2
32-32	\$		SS		2-11 1/2	2-11 1/2

RST1404

Restricted Pipe Swivel Union



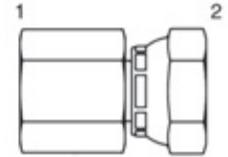
Dash Size	Stock Materials				T1 (NPTF)	T2 (NPSM)	Restriction
	S	FG	SS	BR			
04-04-R.000	\$				1/4-18	1/4-18	.000
04-04-R.031	\$				1/4-18	1/4-18	.031
04-04-R.062	\$				1/4-18	1/4-18	.062
06-04-R.000	\$				3/8-18	1/4-18	.000
06-04-R.031	\$				3/8-18	1/4-18	.031
06-04-R.062	\$				3/8-18	1/4-18	.062
06-06-R.000	\$				3/8-18	3/8-18	.000
06-06-R.031	\$				3/8-18	3/8-18	.031
06-06-R.047	\$				3/8-18	3/8-18	.047
06-06-R.062	\$				3/8-18	3/8-18	.062
08-06-R.000	\$				1/2-14	3/8-18	.000
08-06-R.062	\$				1/2-14	3/8-18	.062
08-08-R.000	\$				1/2-14	1/2-14	.000
08-08-R.031	\$				1/2-14	1/2-14	.031
08-08-R.045	\$				1/2-14	1/2-14	.045
08-08-R.062	\$				1/2-14	1/2-14	.062
08-08-R.094	\$				1/2-14	1/2-14	.094
08-08-R.109	\$				1/2-14	1/2-14	.109

Steel Pipe Swivel Adapters

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPSM)
	S	FG	SS	BR		
02-02	\$		SS		1/8-27	1/8-27
02-04	\$				1/8-27	1/4-18
04-02	\$				1/4-18	1/8-27
04-04	\$		SS		1/4-18	1/4-18
04-06	\$		SS		1/4-18	3/8-18
04-08	\$				1/4-18	1/2-14
06-04	\$		SS		3/8-18	1/4-18
06-06	\$		SS		3/8-18	3/8-18
06-08	\$		SS		3/8-18	1/2-14
08-04	\$				1/2-14	1/4-18
08-06	\$				1/2-14	3/8-18
08-08	\$		SS		1/2-14	1/2-14
08-12	\$				1/2-14	3/4-14
12-06	\$				3/4-14	3/8-18
12-08	\$				3/4-14	1/2-14
12-12	\$		SS		3/4-14	3/4-14
12-16	\$				3/4-14	1-11 1/2
16-12	\$				1-11 1/2	3/4-14
16-16	\$		SS		1-11 1/2	1-11 1/2
20-20	\$		SS		1 1/4-11 1/2	1 1/4-11 1/2
24-24	\$		SS		1 1/2-11 1/2	1 1/2-11 1/2
32-32	\$		SS		2-11 1/2	2-11 1/2

1405

Pipe Swivel Union

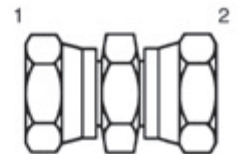


SAE 140131

Dash Size	Stock Materials				T1 (NPSM)	T2 (NPSM)
	S	FG	SS	BR		
04-04	\$				1/4-18	1/4-18
06-06	\$				3/8-18	3/8-18
08-08	\$				1/2-14	1/2-14
12-12	\$				3/4-14	3/4-14
16-16	\$				1-11 1/2	1-11 1/2
20-20	\$				1 1/4-11 1/2	1 1/4-11 1/2

1406

Pipe Dual Swivel Union



S= Steel

FG=Forging

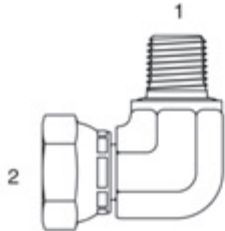
SS=Stainless Steel

BR=Brass

Steel Pipe Swivel Adapters

1501

Pipe Swivel Elbow 90°

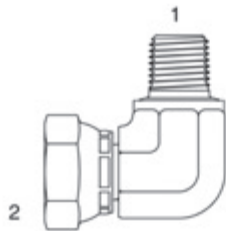


Dash Size	Stock Materials				T1 (NPTF)	T2 (NPSM)
	S	FG	SS	BR		
02-02	S	FG	SS		1/8-27	1/8-27
02-04	S	FG			1/8-27	1/4-18
04-02	S	FG			1/4-18	1/8-27
04-04	S	FG	SS		1/4-18	1/4-18
04-06	S	FG	SS		1/4-18	3/8-18
04-08	S	FG			1/4-18	1/2-14
06-04	S		SS		3/8-18	1/4-18
06-06	S	FG	SS		3/8-18	3/8-18
06-08	S	FG			3/8-18	1/2-14
06-12	S				3/8-18	3/4-14
08-04	S	FG			1/2-14	1/4-18
08-06	S	FG	SS		1/2-14	3/8-18
08-08	S	FG	SS		1/2-14	1/2-14
08-12	S	FG			1/2-14	3/4-14
12-04	S				3/4-14	1/4-18
12-06	S	FG			3/4-14	3/8-18
12-08	S	FG			3/4-14	1/2-14
12-12	S	FG	SS		3/4-14	3/4-14
12-16	S	FG			3/4-14	1-11 1/2
16-08	S				1-11 1/2	1/2-14
16-12	S	FG			1-11 1/2	3/4-14
16-16	S	FG	SS		1-11 1/2	1-11 1/2
16-20	S	FG			1-11 1/2	1 1/4-11 1/2
20-12	S	FG			1 1/4-11 1/2	3/4-14
20-16	S	FG			1 1/4-11 1/2	1-11 1/2
20-20	S	FG	SS		1 1/4-11 1/2	1 1/4-11 1/2
20-24	S				1 1/4-11 1/2	1 1/2-11 1/2
24-20	S	FG			1 1/2-11 1/2	1 1/4-11 1/2
24-24	S	FG	SS		1 1/2-11 1/2	1 1/2-11 1/2
32-32	S	FG	SS		2-11 1/2	2-11 1/2

SAE 140230

RST1501

Restricted Pipe Swivel Elbow 90°



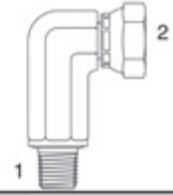
Dash Size	Stock Materials				T1 (NPTF)	T2 (NPSM)	Restriction
	S	FG	SS	BR			
04-04-R.000	S				1/4-18	1/4-18	.000
04-04-R.031	S				1/4-18	1/4-18	.031
04-04-R.062	S				1/4-18	1/4-18	.062
06-04-R.000	S				3/8-18	1/4-18	.000
06-04-R.031	S				3/8-18	1/4-18	.031
06-04-R.062	S				3/8-18	1/4-18	.062
06-06-R.000	S				3/8-18	3/8-18	.000
06-06-R.031	S				3/8-18	3/8-18	.031
06-06-R.047	S				3/8-18	3/8-18	.047
06-06-R.062	S				3/8-18	3/8-18	.062
06-08-R.031	S				3/8-18	1/2-14	.031
08-06-R.000	S				1/2-14	3/8-18	.000
08-06-R.031	S				1/2-14	3/8-18	.031
08-06-R.062	S				1/2-14	3/8-18	.062
08-08-R.000	S				1/2-14	1/2-14	.000
08-08-R.031	S				1/2-14	1/2-14	.031
08-08-R.062	S				1/2-14	1/2-14	.062

Steel Pipe Swivel Adapters

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPSM)	Length*
	S	FG	SS	BR			
02-02	\$				1/8-27	1/8-27	1.68"
04-04	\$				1/4-18	1/4-18	2.37"
06-06	\$				3/8-18	3/8-18	2.81"
08-08	\$				1/2-14	1/2-14	3.25"
12-12	\$				3/4-14	3/4-14	3.60"
16-16	\$				1-11 1/2	1-11 1/2	4.25"

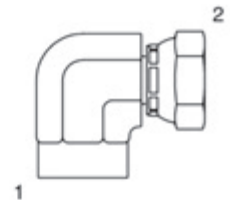
*Length = Middle of NPSM to End of Threads

1501-LL Pipe Swivel Elbow Long 90°



Dash Size	Stock Materials				T1 (NPTF)	T2 (NPSM)
	S	FG	SS	BR		
02-02	\$	FG			1/8-27	1/8-27
04-02	\$				1/4-18	1/8-27
04-04	\$	FG	SS		1/4-18	1/4-18
04-06	\$				1/4-18	3/8-18
06-04	\$				3/8-18	1/4-18
06-06	\$	FG	SS		3/8-18	3/8-18
06-08	\$				3/8-18	1/2-14
08-04	\$				1/2-14	1/4-18
08-06	\$				1/2-14	3/8-18
08-08	\$	FG	SS		1/2-14	1/2-14
08-12	\$				1/2-14	3/4-14
12-08	\$				3/4-14	1/2-14
12-12	\$	FG	SS		3/4-14	3/4-14
12-16	\$				3/4-14	1-11 1/2
16-12	\$				1-11 1/2	3/4-14
16-16	\$	FG			1-11 1/2	1-11 1/2
20-20	\$	FG			1 1/4-11 1/2	1 1/4-11 1/2
24-24	\$	FG			1 1/2-11 1/2	1 1/2-11 1/2
32-32	\$	FG			2-11 1/2	2-11 1/2

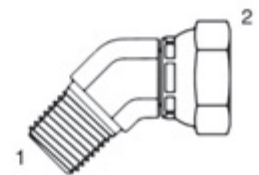
1502 Pipe Swivel Elbow 90°



SAE 140231

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPSM)
	S	FG	SS	BR		
02-02	\$	FG			1/8-27	1/8-27
02-04	\$				1/8-27	1/4-18
04-02	\$				1/4-18	1/8-27
04-04	\$	FG	SS		1/4-18	1/4-18
04-06	\$				1/4-18	3/8-18
06-04	\$	FG			3/8-18	1/4-18
06-06	\$	FG	SS		3/8-18	3/8-18
06-08	\$	FG			3/8-18	1/2-14
08-04	\$				1/2-14	1/4-18
08-06	\$	FG			1/2-14	3/8-18
08-08	\$	FG	SS		1/2-14	1/2-14
08-12	\$	FG			1/2-14	3/4-14
12-06	\$				3/4-14	3/8-18
12-08	\$	FG			3/4-14	1/2-14
12-12	\$	FG	SS		3/4-14	3/4-14
12-16	\$	FG			3/4-14	1-11 1/2
16-12	\$	FG			1-11 1/2	3/4-14
16-16	\$	FG	SS		1-11 1/2	1-11 1/2
16-20	\$	FG			1-11 1/2	1 1/4-11 1/2
20-16	\$	FG			1 1/4-11 1/2	1-11 1/2
20-20	\$	FG	SS		1 1/4-11 1/2	1 1/4-11 1/2
24-24	\$	FG	SS		1 1/2-11 1/2	1 1/2-11 1/2
32-32	\$	FG			2-11 1/2	2-11 1/2

1503 Pipe Swivel Elbow 45°



SAE 140330

S= Steel

FG=Forging

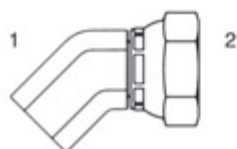
SS=Stainless Steel

BR=Brass

Steel Pipe Swivel Adapters

1504

Pipe Swivel Elbow 45°

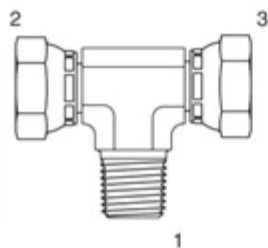


SAE 140331

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPSM)
	S	FG	SS	BR		
02-02	S				1/8-27	1/8-27
04-02	S				1/4-18	1/8-27
04-04	S	FG	SS		1/4-18	1/4-18
06-04	S	FG			3/8-18	1/4-18
06-06	S	FG	SS		3/8-18	3/8-18
08-06	S				1/2-14	3/8-18
08-08	S	FG	SS		1/2-14	1/2-14
12-08	S				3/4-14	1/2-14
12-12	S	FG	SS		3/4-14	3/4-14
16-16	S	FG	SS		1-11 1/2	1-11 1/2
20-20	S	FG			1 1/4-11 1/2	1 1/4-11 1/2
24-24	S				1 1/2-11 1/2	1 1/2-11 1/2

1601

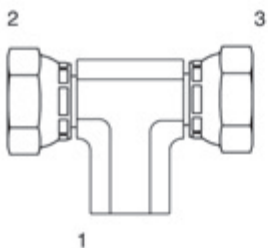
Pipe Branch Tee Swivel Union



Dash Size	Stock Materials				T1 (NPTF)	T2 (NPSM)	T3 (NPSM)
	S	FG	SS	BR			
02-02-02	S	FG			1/8-27	1/8-27	1/8-27
04-04-04	S	FG			1/4-18	1/4-18	1/4-18
04-06-06	S	FG			1/4-18	3/8-18	3/8-18
06-04-04	S	FG			3/8-18	1/4-18	1/4-18
06-08-08	S	FG			3/8-18	1/2-14	1/2-14
08-04-04	S	FG			1/2-14	1/4-18	1/4-18
08-06-06	S	FG			1/2-14	3/8-18	3/8-18
08-08-08	S	FG			1/2-14	1/2-14	1/2-14
12-08-08	S	FG			3/4-14	1/2-14	1/2-14
12-12-12	S				3/4-14	3/4-14	3/4-14
16-12-12	S				1-11 1/2	3/4-14	3/4-14
16-16-12	S	FG			1-11 1/2	1-11 1/2	3/4-14
16-16-16	S	FG			1-11 1/2	1-11 1/2	1-11 1/2
20-20-20	S	FG			1 1/4-11 1/2	1 1/4-11 1/2	1 1/4-11 1/2
24-24-24	S				1 1/2-11 1/2	1 1/2-11 1/2	1 1/2-11 1/2

1602

Pipe Branch Tee Swivel Union



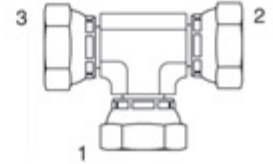
Dash Size	Stock Materials				T1 (NPTF)	T2 (NPSM)	T3 (NPSM)
	S	FG	SS	BR			
02-02-02	S	FG			1/8-27	1/8-27	1/8-27
04-04-04	S	FG			1/4-18	1/4-18	1/4-18
06-04-04	S				3/8-18	1/4-18	1/4-18
06-06-06	S	FG			3/8-18	3/8-18	3/8-18
06-08-08	S				3/8-18	1/2-14	1/2-14
08-06-06	S	FG			1/2-14	3/8-18	3/8-18
08-08-08	S	FG			1/2-14	1/2-14	1/2-14
12-08-08	S	FG			3/4-14	1/2-14	1/2-14
12-12-12	S	FG			3/4-14	3/4-14	3/4-14
16-12-12	S				1-11 1/2	3/4-14	3/4-14
16-16-16	S	FG			1-11 1/2	1-11 1/2	1-11 1/2
20-20-20	S	FG			1 1/4-11 1/2	1 1/4-11 1/2	1 1/4-11 1/2
24-24-24	S				1 1/2-11 1/2	1 1/2-11 1/2	1 1/2-11 1/2

Steel Pipe Swivel Adapters

Dash Size	Stock Materials				T1 (NPSM)	T2 (NPSM)	T3 (NPSM)
	S	FG	SS	BR			
02-02-02	\$	FG			1/8-27	1/8-27	1/8-27
04-04-04	\$	FG			1/4-18	1/4-18	1/4-18
06-06-06	\$	FG			3/8-18	3/8-18	3/8-18
08-08-08	\$	FG			1/2-14	1/2-14	1/2-14
12-12-12	\$				3/4-14	3/4-14	3/4-14
16-16-16	\$	FG			1-11 1/2	1-11 1/2	1-11 1/2
20-20-20	\$	FG			1 1/4-11 1/2	1 1/4-11 1/2	1 1/4-11 1/2

1603

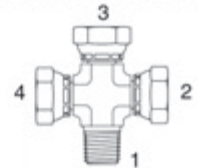
Pipe Swivel Union Tee



Dash Size	Stock Materials				T1 (NPTF)	T2 (NPSM)	T3 & T4 (NPSM)
	S	FG	SS	BR			
06-06	\$				3/8-18	3/8-18	3/8-18
08-08	\$				1/2-14	1/2-14	1/2-14

1604

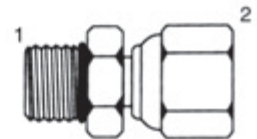
Pipe Swivel Union Cross



Dash Size	Stock Materials				T1 (UNF)	T2 (NPSM)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-27
04-04	\$				7/16-20	1/4-18
04-06	\$				7/16-20	3/8-18
04-08	\$				7/16-20	1/2-14
05-04	\$				1/2-20	1/4-18
06-04	\$				9/16-18	1/4-18
06-06	\$				9/16-18	3/8-18
06-08	\$				9/16-18	1/2-14
08-04	\$				3/4-16	1/4-18
08-06	\$				3/4-16	3/8-18
08-08	\$		SS		3/4-16	1/2-14
08-12	\$				3/4-16	3/4-14
10-06	\$				7/8-14	3/8-18
10-08	\$				7/8-14	1/2-14
10-12	\$				7/8-14	3/4-14
12-06	\$				1 1/16-12	3/8-18
12-08	\$				1 1/16-12	1/2-14
12-12	\$		SS		1 1/16-12	3/4-14
12-16	\$				1 1/16-12	1-11 1/2
14-12	\$				1 3/16-12	3/4-14
16-12	\$				1 5/16-12	3/4-14
16-16	\$				1 5/16-12	1-11 1/2
16-20	\$				1 5/16-12	1 1/4-11 1/2
20-12	\$				1 5/8-12	3/4-14
20-16	\$				1 5/8-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2
24-20	\$				1 7/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 1/2-11 1/2
32-32	\$				2 1/2-12	2-11 1/2

6900

O-Ring to Pipe Swivel Union



SAE 140157

S= Steel

FG=Forging

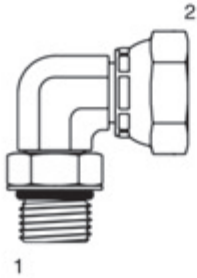
SS=Stainless Steel

BR=Brass

Steel Pipe Swivel Adapters

6901

O-Ring to Pipe Swivel Elbow 90°

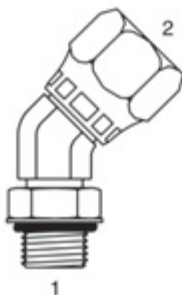


SAE 140257

Dash Size	Stock Materials				T1 (UNF)	T2 (NPSM)
	S	FG	SS	BR		
04-02	S				7/16-20	1/8-27
04-04	S	FG			7/16-20	1/4-18
04-06	S				7/16-20	3/8-18
06-04	S	FG			9/16-18	1/4-18
06-06	S	FG			9/16-18	3/8-18
06-08	S	FG			9/16-18	1/2-14
08-04	S				3/4-16	1/4-18
08-06	S	FG			3/4-16	3/8-18
08-08	S	FG			3/4-16	1/2-14
08-12	S	FG			3/4-16	3/4-14
10-06	S	FG			7/8-14	3/8-18
10-08	S	FG			7/8-14	1/2-14
10-12	S	FG			7/8-14	3/4-14
12-06	S				1 1/16-12	3/8-18
12-08	S	FG			1 1/16-12	1/2-14
12-12	S	FG			1 1/16-12	3/4-14
12-16	S				1 1/16-12	1-11 1/2
14-12	S				1 3/16-12	3/4-14
16-12	S				1 5/16-12	3/4-14
16-16	S	FG			1 5/16-12	1-11 1/2
16-20	S				1 5/16-12	1 1/4-11 1/2
20-12	S				1 5/8-12	3/4-14
20-16	S	FG			1 5/8-12	1-11 1/2
20-20	S	FG			1 5/8-12	1 1/4-11 1/2
24-24	S				1 7/8-12	1 1/2-11 1/2

6902

O-Ring to Pipe Swivel Elbow 45°



SAE 140357

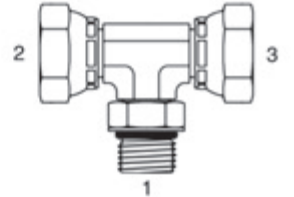
Dash Size	Stock Materials				T1 (UNF)	T2 (NPSM)
	S	FG	SS	BR		
04-04	S	FG			7/16-20	1/4-18
06-04	S				9/16-18	1/4-18
06-06	S	FG			9/16-18	3/8-18
06-08	S				9/16-18	1/2-14
08-06	S	FG			3/4-16	3/8-18
08-08	S	FG			3/4-16	1/2-14
08-12	S				3/4-16	3/4-14
10-06	S				7/8-14	3/8-18
10-08	S	FG			7/8-14	1/2-14
10-12	S				7/8-14	3/4-14
12-08	S				1 1/16-12	1/2-14
12-12	S	FG			1 1/16-12	3/4-14
16-12	S				1 5/16-12	3/4-14
16-16	S	FG			1 5/16-12	1-11 1/2
20-20	S	FG			1 5/8-12	1 1/4-11 1/2
24-24	S				1 7/8-12	1 1/2-11 1/2

Steel Pipe Swivel Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (NPSM)	T3 (NPSM)
	S	FG	SS	BR			
04-04-04	\$				7/16-20	1/4-18	1/4-18
06-06-06	\$				9/16-18	3/8-18	3/8-18
08-06-06	\$				3/4-16	3/8-18	3/8-18
08-08-08	\$				3/4-16	1/2-14	1/2-14

6911

O-Ring Branch Tee Swivel Union



Notes



Steel O-Ring Face Seal Adapters

CONFORMANCE

- SAE J1453

MATERIALS

- Steel – Carbon steel with clear trivalent chromium zinc or yellow dichromate zinc plated per ASTM B6533-98 (Type II SC-2)
- Stainless – Type 316

ORDERING

When ordering, include the appropriate prefix to part number if material or style required is other than steel barstock.

MATERIAL/STYLE	PREFIX
Forging	FG
Stainless	SS

WORKING PRESSURES

The following table lists the recommended working pressures for steel O-ring Face Seal tube fittings made in accordance with SAE standard J1943. Many factors such as impulsing, vibration, mechanical shock and overtightening may affect the integrity of fitting connections. Tompkins and SAE recommend sufficient testing be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using fittings with different size or thread type, use the lower pressure rating of the two threads.



CAUTION: O-ring Face Seal fittings are not designed to provide structural support for other components.

SAE J1453 O-RING FACE SEAL FITTINGS PRESSURE RATINGS

Dash Size	Flared Thread Size	4 to 1 Minimum Burst PSI
-04	9/16-18	6000
-06	11/16-16	6000
-08	13/16-16	6000
-10	1-14	6000
-12	1 3/16-12	6000
-16	1 7/16-12	6000
-20	1 11/16-12	4000
-24	2-12	4000

SAE J1453 O-RING FACE SEAL PRESSURE RATINGS FOR STRAIGHT THREAD PORT STUDS

Dash Size	Face Seal Thread Size	4 to 1 Minimum Burst PSI Straight	4 to 1 Minimum Burst PSI Adjustable
-04	9/16-18	6000	6000
-06	11/16-16	6000	6000
-08	13/16-16	6000	6000
-10	1-14	6000	6000
-12	1 3/16-12	6000	6000
-16	1 7/16-12	6000	5000
-20	1 11/16-12	4000	4000
-24	2-12	4000	3000

RECOMMENDED O-RING FACE SEAL ASSEMBLY INSTRUCTIONS

STEP 1. Inspect for contamination or damage. Confirm face seal o-ring is properly installed.

STEP 2. Lubricate the threads and the o-ring.

STEP 3. Align mating face seal flange against o-ring and finger tighten face seal flange nut.

STEP 4. Torque flange nut to the value in the following table.

WHY WET TORQUE?

Due to difference in plating types and thickness, materials, and the thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Over tightening causes threads to yield, deform and lose their ability maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which promotes possibility of leaks. Improper installation is the greatest cause for leaks in hydraulic connections. **It is our firm position that to not wet torque is to compromise consistency and quality for convenience.**

TORQUE VALUES: The torque values provided by Tompkins Industries are to provide benchmarks that we believe give optimum results for leak free connections. Actual torque values should be based on individual applications.

Dash Size	Face Seal Thread Size	Torque Foot/Lbs.
-04	9/16-20	10-12
-06	11/16-16	18-20
-08	13/16-16	32-35
-10	1-14	45-50
-12	1 3/16-12	65-70
-16	1 7/16-12	92-100
-20	1 7/8-12	125-140
-24	2-12	150-165

ALTERNATE ASSEMBLY METHOD

STEP 1. If torque method not possible, follow steps 1-3 above, then proceed to the steps below.

STEP 2. Lightly wrench tighten the nut until there is firm resistance.

STEP 3. Place a wrench on wrench pad next to nut as near the 6 o'clock position as possible.

STEP 4. Place second wrench on nut as near the 3 o'clock position as possible.

STEP 5. Turn nut clockwise to no less than half way to the 4 o'clock position, but no more than the 4 o'clock position.

See **SAE STRAIGHT THREAD O-RING SECTION** for assembly instructions for installation of **O-RING FACE SEAL FITTINGS** with O-ring straight thread port studs.

See **NPTF SECTION** for assembly instructions and proper thread engagement for **O-RING FACE SEAL FITTINGS** with pipe threads.

Steel O-Ring Face Seal Adapters

FF304-C

ORFS Cap



SAE 520112

Dash Size	Stock Materials				Tube O.D.	T1 (UNF)
	S	FG	SS	BR		
04	\$				1/4	9/16-18
06	\$				3/8	11/16-16
08	\$				1/2	13/16-16
10	\$				5/8	1-14
12	\$				3/4	1 3/16-12
16	\$				1	1 7/16-12
20	\$				1 1/4	1 11/16-12
24	\$				1 1/2	2-12

FF306

ORFS Bulkhead Locknut



SAE 520118

Dash Size	Stock Materials				T1 (UNF)
	S	FG	SS	BR	
04	\$		SS		9/16-18
06	\$		SS		11/16-16
08	\$		SS		13/16-16
10	\$		SS		1-14
12	\$		SS		1 3/16-12
16	\$		SS		1 7/16-12
20	\$		SS		1 11/16-12
24	\$		SS		2-12

*To include lock nut with bulkhead fitting add "LN" after base part number. Example: FF2700-LN-04

FF318

ORFS Tube Nut



SAE 520110

Dash Size	Stock Materials				Tube O.D.	T1 (UNF)
	S	FG	SS	BR		
04	\$		SS		.25	9/16-18
06	\$		SS		.38	11/16-16
08	\$		SS		.50	13/16-16
10	\$		SS		.62	1-14
12	\$		SS		.75	1 3/16-12
16	\$		SS		1.00	1 7/16-12
20	\$		SS		1.25	1 11/16-12
24	\$		SS		1.50	2-12

FF319

ORFS Braze-On Sleeve



SAE 520115

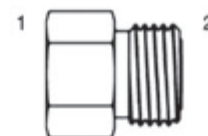
Dash Size	Stock Materials				Tube O.D.
	S	FG	SS	BR	
04	\$		SS		.25
06	\$		SS		.38
08	\$		SS		.50
10	\$		SS		.62
12	\$		SS		.75
16	\$		SS		1.00
20	\$		SS		1.25
24	\$		SS		1.50

Steel O-Ring Face Seal Adapters

Dash Size	Stock Materials				Braze Port	T2 (UNF)
	S	FG	SS	BR		
04	\$				1/4	9/16-18
06-04	\$				3/8	9/16-18
06	\$				3/8	11/16-16
08-06	\$				1/2	11/16-16
08-08	\$				1/2	13/16-16
10-08	\$				5/8	13/16-16
10	\$				5/8	1-14
12-08	\$				3/4	13/16-16
12	\$				3/4	1 3/16-12
16-12	\$				1	1 3/16-12
16	\$				1	1 7/16-12
20-16	\$				1 1/4	1 7/16-12
20	\$				1 1/4	1 11/16-12
24-20	\$				1 1/2	1 11/16-12
24	\$				1 1/2	2-12

FF403

Braze-On ORFS Connector

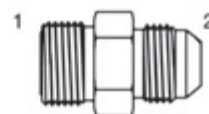


SAE 520104

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04-04	\$				9/16-18	7/16-20
06-06	\$				11/16-16	9/16-18
08-08	\$				13/16-16	3/4-16
10-10	\$				1-14	7/8-14
12-12	\$				1 3/16-12	1 1/16-12
16-16	\$				1 7/16-12	1 5/16-12
20-20	\$				1 11/16-12	1 5/8-12
24-24	\$				2-12	1 7/8-12

FF2402

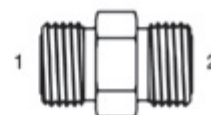
ORFS to JIC



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$		SS		9/16-18	9/16-18
06-04	\$				11/16-16	9/16-18
06	\$		SS		11/16-16	11/16-16
08-06	\$				13/16-16	11/16-16
08	\$		SS		13/16-16	13/16-16
10-08	\$				1-14	13/16-16
10	\$		SS		1-14	1-14
12-08	\$				1 3/16-12	13/16-16
12-10	\$				1 3/16-12	1-14
12	\$		SS		1 3/16-12	1 3/16-12
16-12	\$				1 7/16-12	1 3/16-12
16	\$		SS		1 7/16-12	1 7/16-12
20-16	\$				1 11/16-12	1 7/16-12
20	\$				1 11/16-12	1 11/16-12
24-20	\$				2-12	1 11/16-12
24	\$		SS		2-12	2-12

FF2403

ORFS Union



SAE 520101

S= Steel

FG=Forging

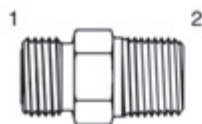
SS=Stainless Steel

BR=Brass

Steel O-Ring Face Seal Adapters

FF2404

ORFS to Pipe

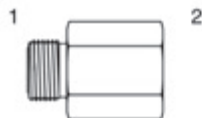


Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$		SS		9/16-18	1/8-27
04-04	\$		SS		9/16-18	1/4-18
04-06	\$		SS		9/16-18	3/8-18
04-08	\$				9/16-18	1/2-14
06-02	\$				11/16-16	1/8-27
06-04	\$		SS		11/16-16	1/4-18
06-06	\$		SS		11/16-16	3/8-18
06-08	\$		SS		11/16-16	1/2-14
08-04	\$				13/16-16	1/4-18
08-06	\$		SS		13/16-16	3/8-18
08-08	\$		SS		13/16-16	1/2-14
08-12	\$		SS		13/16-16	3/4-14
08-16	\$				13/16-16	1-11 1/2
10-08	\$		SS		1-14	1/2-14
10-12	\$				1-14	3/4-14
10-16	\$				1-14	1-11 1/2
12-08	\$				1 3/16-12	1/2-14
12-12	\$		SS		1 3/16-12	3/4-14
12-16	\$				1 3/16-12	1-11 1/2
16-12	\$				1 7/16-12	3/4-14
16-16	\$		SS		1 7/16-12	1-11 1/2
16-20	\$				1 7/16-12	1 1/4-11 1/2
20-16	\$				1 11/16-12	1-11 1/2
20-20	\$				1 11/16-12	1 1/4-11 1/2
24-24	\$				2-12	1 1/2-11 1/2

SAE 520102

FF2405

ORFS to Pipe



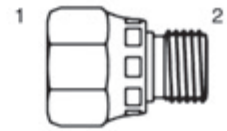
Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-04	\$				9/18-18	1/4-18
06-04	\$				11/16-16	1/4-18
06-06	\$				11/16-16	3/8-18
06-08	\$				11/16-16	1/2-14
08-06	\$				13/16-16	3/8-18
08-08	\$				13/16-16	1/2-14
12-12	\$				1 3/16-12	3/4-14
16-16	\$				1 7/16-12	1-11 1/2
20-20	\$				1 11/16-12	1 1/4-11 1/2

Steel O-Ring Face Seal Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
06-04	\$				11/16-16	9/16-18
08-04	\$				13/16-16	9/16-18
08-06	\$				13/16-16	11/16-16
10-06	\$				1-14	11/16-16
10-08	\$				1-14	13/16-16
12-06	\$				1 3/16-12	11/16-16
12-08	\$				1 3/16-12	13/16-16
12-10	\$				1 3/16-12	1-14
16-08	\$				1 7/16-12	13/16-16
16-12	\$				1 7/16-12	1 3/16-12
20-12	\$				1 11/16-12	1 3/16-12
20-16	\$				1 11/16-12	1 7/16-12
24-20	\$				2-12	1 11/16-12

FF2406

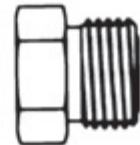
ORFS Reducer



Dash Size	Stock Materials				T1 (UNF)
	S	FG	SS	BR	
04	\$				9/16-18
06	\$				11/16-16
08	\$				13/16-16
10	\$				1-14
12	\$				1 3/16-12
16	\$				1 7/16-12
20	\$				1 11/16-12
24	\$				2-12

FF2408

ORFS Plug

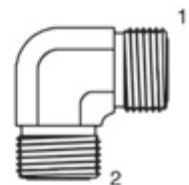


SAE 520109

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04		FG	SS		9/16-18	9/16-18
06		FG	SS		11/16-16	11/16-16
08		FG	SS		13/16-16	13/16-16
10		FG			1-14	1-14
12		FG	SS		1 3/16-12	1 3/16-12
16		FG			1 7/16-12	1 7/16-12
20		FG			1 11/16-12	1 11/16-12
24		FG	SS		2-12	2-12

FF2500

ORFS Union Elbow 90°



SAE 520201

S= Steel

FG=Forging

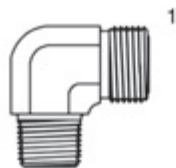
SS=Stainless Steel

BR=Brass

Steel O-Ring Face Seal Adapters

FF2501

ORFS to Pipe
Elbow 90°



SAE 520202

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	S	FG	SS		9/16-18	1/8-27
04-04	S	FG	SS		9/16-18	1/4-18
04-06	S	FG			9/16-18	3/8-18
04-08	S	FG			9/16-18	1/2-14
06-04	S	FG	SS		11/16-16	1/4-18
06-06	S	FG	SS		11/16-16	3/8-18
06-08	S	FG	SS		11/16-16	1/2-14
08-04	S	FG			13/16-16	1/4-18
08-06	S	FG	SS		13/16-16	3/8-18
08-08	S	FG	SS		13/16-16	1/2-14
08-12	S	FG			13/16-16	3/4-14
10-08	S	FG	SS		1-14	1/2-14
10-12	S	FG			1-14	3/4-14
10-16	S	FG			1-14	1-11 1/2
12-08	S	FG			1 3/16-12	1/2-14
12-12	S	FG	SS		1 3/16-12	3/4-14
12-16	S	FG			1 3/16-12	1-11 1/2
16-12	S	FG			1 7/16-12	3/4-14
16-16	S	FG	SS		1 7/16-12	1-11 1/2
20-16	S	FG			1 11/16-12	1-11 1/2
20-20	S	FG			1 11/16-12	1 1/4-11 1/2
24-24	S				2-12	1 1/2-11 1/2

FF2503

ORFS to Pipe
Elbow 45°

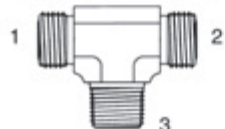


SAE 520302

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02		FG			9/16-18	1/8-27
04-04		FG			9/16-18	1/4-18
06-04		FG			11/16-16	1/4-18
06-06		FG			11/16-16	3/8-18
08-06					13/16-16	3/8-18
08-08		FG			13/16-16	1/2-14
10-08		FG			1-14	1/2-14
12-12		FG			1 3/16-12	3/4-14
16-12		FG			1 7/16-12	3/4-14
16-16		FG			1 7/16-12	1-11 1/2

FF2601

ORFS to Pipe
Branch Tee



SAE 520425

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3(NPTF)
	S	FG	SS	BR			
04-04		FG			9/16-18	9/16-18	1/4-18
06-04		FG			11/16-16	11/16-16	1/4-18
06-06		FG			11/16-16	11/16-16	3/8-18
08-06		FG			13/16-16	13/16-16	3/8-18
08-08		FG			13/16-16	13/16-16	1/2-14
12-12		FG			1 3/16-12	1 3/16-12	3/4-14
16-16		FG			1 7/16-12	1 7/16-12	1-11 1/2
20-20					1 11/16-12	1 11/16-12	1 1/4-11 1/2

FF2603

ORFS Union
Tee



SAE 520401

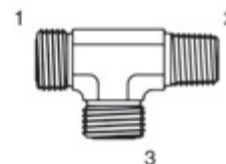
Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3(UNF)
	S	FG	SS	BR			
04		FG	SS		9/16-18	9/16-18	9/16-18
06		FG	SS		11/16-16	11/16-16	11/16-16
08		FG	SS		13/16-16	13/16-16	13/16-16
10		FG	SS		1-14	1-14	1-14
12		FG	SS		1 3/16-12	1 3/16-12	1 3/16-12
16		FG	SS		1 7/16-12	1 7/16-12	1 7/16-12
20		FG	SS		1 11/16-12	1 11/16-12	1 11/16-12
24		FG	SS		2-12	2-12	2-12

Steel O-Ring Face Seal Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)	T3 (UNF)
	S	FG	SS	BR			
04-04	\$	FG			9/16-18	1/4-18	9/16-18
06-06	\$	FG			11/16-16	3/8-18	3/8-18
08-08	\$	FG			13/16-16	1/2-14	13/16-16

FF2605

ORFS Run Tee

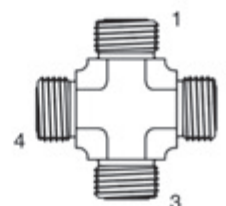


SAE 520424

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 & T4 (UNF)
	S	FG	SS	BR			
04	\$	FG			9/16-18	9/16-18	9/16-18
06	\$	FG			11/16-16	11/16-16	11/16-16
08	\$	FG			13/16-16	13/16-16	13/16-16
10	\$	FG			1-14	1-14	1-14
12	\$	FG			1 3/16-12	1 3/16-12	1 3/16-12
16	\$	FG			1 7/16-12	1 7/16-12	1 7/16-12
20	\$	FG			1 11/16-12	1 11/16-12	1 11/16-12
24	\$	FG			2-12	2-12	2-12

FF2650

ORFS Union Cross

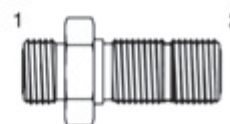


SAE 520501

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$				9/16-18	9/16-18
06	\$				11/16-16	11/16-16
08	\$				13/16-16	13/16-16
10	\$				1-14	1-14
12	\$				1 3/16-12	1 3/16-12
16	\$				1 7/16-12	1 7/16-12
20	\$				1 11/16-12	1 11/16-12
24	\$				2-12	2-12

FF2700

ORFS Bulkhead Union



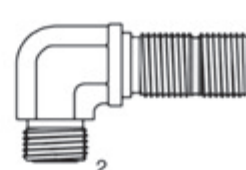
SAE 520601

*To include lock nut with bulkhead fitting add "LN" after base part number. Example: FF2700-LN-04

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04		FG			9/16-18	9/16-18
06		FG			11/16-16	11/16-16
08		FG			13/16-16	13/16-16
10		FG			1-14	1-14
12		FG			1 3/16-12	1 3/16-12
16		FG			1 7/16-12	1 7/16-12
20		FG			1 11/16-12	1 11/16-12
24		FG			2-12	2-12

FF2701

ORFS Bulkhead Union 90°



SAE 520701

*To include lock nut with bulkhead fitting add "LN" after base part number. Example: FF2700-LN-04

S= Steel

FG=Forging

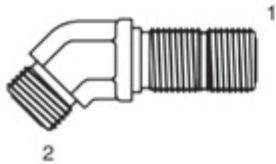
SS=Stainless Steel

BR=Brass

Steel O-Ring Face Seal Adapters

FF2702

ORFS Bulkhead Union 45°



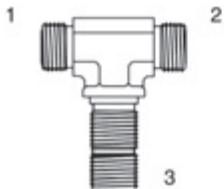
SAE 520801

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
04	FG	9/16-18	9/16-18
06	FG	11/16-16	11/16-16
08	FG	13/16-16	13/16-16
10	FG	1-14	1-14
12	FG	1 3/16-12	1 3/16-12
16	FG	1 7/16-12	1 7/16-12
20	FG	1 11/16-12	1 11/16-12
24	FG	2-12	2-12

*To include lock nut with bulkhead fitting add "LN" after base part number. Example: FF2700-LN-04

FF2703

ORFS Bulkhead Union Branch Tee

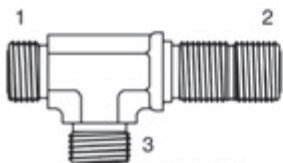


Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)	T3(UNF)
04	FG	9/16-18	9/16-18	9/16-18
06	FG	11/16-16	11/16-16	11/16-16
08	FG	13/16-16	13/16-16	13/16-16
10	FG	1-14	1-14	1-14
12	FG	1 3/16-12	1 3/16-12	1 3/16-12
16	FG	1 7/16-12	1 7/16-12	1 7/16-12
20	FG	1 11/16-12	1 11/16-12	1 11/16-12
24	FG	2-12	2-12	2-12

*To include lock nut with bulkhead fitting add "LN" after base part number. Example: FF2700-LN-04

FF2704

ORFS Bulkhead Union Run Tee



SAE 520958

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)	T3(UNF)
04	FG	9/16-18	9/16-18	9/16-18
06	FG	11/16-16	11/16-16	11/16-16
08	FG	13/16-16	13/16-16	13/16-16
10	FG	1-14	1-14	1-14
12	FG	1 3/16-12	1 3/16-12	1 3/16-12
16	FG	1 7/16-12	1 7/16-12	1 7/16-12
20	FG	1 11/16-12	1 11/16-12	1 11/16-12
24	FG	2-12	2-12	2-12

*To include lock nut with bulkhead fitting add "LN" after base part number. Example: FF2700-LN-04

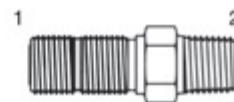
Steel O-Ring Face Seal Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04-04	\$				9/16-18	1/4-18
06-06	\$				11/16-16	3/8-18
08-08	\$				13/16-16	1/2-14
12-12	\$				1 3/16-12	3/4-14
16-16	\$				1 7/16-12	1-11 1/2

To include lock nut with bulkhead fitting add "LN" after base part number. Example: FF2700-LN-04

FF2706

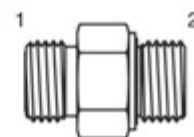
ORFS to Pipe Bulkhead



Dash Size	Stock Materials				T1 (UNF)	T2 (BSPP)
	S	FG	SS	BR		
04-02	\$				9/16-18	1/8-28
04-04	\$				9/16-18	1/4-19
04-06	\$				9/16-18	3/8-19
06-04	\$				11/16-16	1/4-19
06-06	\$				11/16-16	3/8-19
06-08	\$				11/16-16	1/2-14
08-04	\$				13/16-16	1/4-19
08-06	\$				13/16-16	3/8-19
08-08	\$				13/16-16	1/2-14
10-06	\$				1-14	3/8-19
10-08	\$				1-14	1/2-14
10-12	\$				1-14	3/4-14
12-08	\$				1 3/16-12	1/2-14
12-12	\$				1 3/16-12	3/4-14
12-16	\$				1 3/16-12	1-11
16-12	\$				1 7/16-12	3/4-14
16-16	\$				1 7/16-12	1-11
16-20	\$				1 7/16-12	1 1/4-11
20-16	\$				1 11/16-12	1-11
20-20	\$				1 11/16-12	1 1/4-11
20-24	\$				1 11/16-12	1 1/2-11
24-24	\$				2-12	1 1/2-11

FF3800

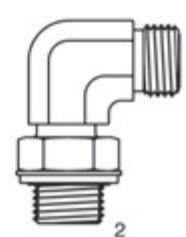
ORFS to BSPP



Dash Size	Stock Materials				T1 (UNF)	T2 (BSPP)
	S	FG	SS	BR		
04-02		FG			9/16-18	1/8-28
04-04		FG			9/16-18	1/4-19
04-06		FG			9/16-18	3/8-19
06-04		FG			11/16-16	1/4-19
06-06		FG			11/16-16	3/8-19
06-08		FG			11/16-16	1/2-14
08-04		FG			13/16-16	1/4-19
08-06		FG			13/16-16	3/8-19
08-08		FG			13/16-16	1/2-14
10-06		FG			1-14	3/8-19
10-08		FG			1-14	1/2-14
10-12		FG			1-14	3/4-14
12-08		FG			1 3/16-12	1/2-14
12-12		FG			1 3/16-12	3/4-14
12-16		FG			1 3/16-12	1-11
16-12		FG			1 7/16-12	3/4-14
16-16		FG			1 7/16-12	1-11
16-20		FG			1 7/16-12	1 1/4-11
20-16		FG			1 11/16-12	1-11
20-20		FG			1 11/16-12	1 1/4-11
20-24		FG			1 11/16-16	1 1/2-11
24-24		FG			2-12	1 1/2-11

FF3801

ORFS to BSPP Elbow 90°



S= Steel

FG=Forging

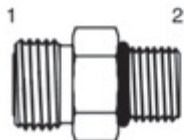
SS=Stainless Steel

BR=Brass

Steel O-Ring Face Seal Adapters

FF6400

ORFS to O-Ring



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$		SS		9/16-18	7/16-20
04-06	\$		SS		9/16-18	9/16-18
04-08	\$				9/16-18	3/4-16
06-04	\$		SS		11/16-16	7/16-20
06	\$		SS		11/16-16	9/16-18
06-08	\$		SS		11/16-16	3/4-16
06-10	\$				11/16-16	7/8-14
08-06	\$		SS		13/16-16	9/16-18
08	\$		SS		13/16-16	3/4-16
08-10	\$				13/16-16	7/8-14
08-12	\$				13/16-16	1 1/16-12
10-08	\$				1-14	3/4-16
10	\$		SS		1-14	7/8-14
10-12	\$				1-14	1 1/16-12
12-08	\$				1 3/16-12	3/4-16
12-10	\$				1 3/16-12	7/8-14
12	\$		SS		1 3/16-12	1 1/16-12
12-16	\$				1 3/16-12	1 5/16-12
16-12	\$				1 7/16-12	1 1/16-12
16	\$				1 7/16-12	1 5/16-12
16-20	\$				1 7/16-12	1 5/8-12
20-16	\$				1 11/16-12	1 5/16-12
20	\$		SS		1 11/16-12	1 5/8-12
20-24	\$				1 11/16-12	1 7/8-12
24-20	\$				2-12	1 5/8-12
24	\$		SS		2-12	1 7/8-12

SAE 520120

FF6400-L

ORFS to O-Ring Long



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	Length*
	S	FG	SS	BR			
04	\$				9/16-18	7/16-20	2.00"
06	\$				11/16-16	9/16-18	2.25"
08	\$				13/16-16	3/4-16	2.75"
10	\$				1-14	7/8-14	3.00"
12	\$				1 3/16-12	1 1/16-12	3.60"
16	\$				1 7/16-12	1 5/16-12	4.00"
20	\$				1 11/16-12	1 5/8-12	4.50"
24	\$				2-12	1 7/8-12	5.00"

SAE 520122

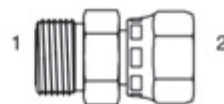
*Length = Overall Length of Fitting

Steel O-Ring Face Seal Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04-04	\$				9/16-18	7/16-20
06-06	\$				11/16-16	9/16-18
08-08	\$				13/16-16	3/4-16
10-10	\$				1-14	7/8-14
12-12	\$				1 3/16-12	1 1/16-12
16-16	\$				1 7/16-12	1 5/16-12
20-20	\$				1 11/16-12	1 5/8-12
24-24	\$				2-12	1 7/8-12

FF6402

ORFS to JIC Swivel

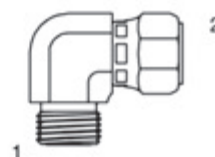


SAE 520181

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04		FG	SS		9/16-18	9/16-18
04-06		FG			9/16-18	11/16-16
06		FG	SS		11/16-16	11/16-16
08-06		FG			13/16-16	11/16-16
08		FG	SS		13/16-16	13/16-16
08-12		FG			13/16-16	1 1/16-12
10		FG	SS		1-14	1-14
12		FG	SS		1 3/16-12	1 3/16-12
16		FG	SS		1 7/16-12	1 7/16-12
20		FG			1 11/16-12	1 11/16-12
24		FG			2-12	2-12

FF6500

ORFS to ORFS Swivel Nut Elbow 90°



SAE 520221

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04-04	\$				7/16-20	9/16-18
06-06	\$				9/16-18	11/16-16
08-08	\$				3/4-16	13/16-16
10-10	\$				7/8-14	1-14
12-12	\$				1 1/16-12	1 3/16-12
16-16	\$				1 5/16-12	1 7/16-12
20-20	\$				1 5/8-12	1 11/16-12
24-24	\$				1 7/8-12	2-12

FF6504

JIC to ORFS Swivel

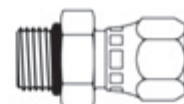


SAE 520801

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04-04	\$				7/16-20	9/16-18
06-06	\$				9/16-18	11/16-16
08-08	\$				3/4-16	13/16-16
10-10	\$				7/8-14	1-14
12-12	\$				1 1/16-12	1 3/16-12
16-16	\$				1 5/16-12	1 7/16-12
20-20	\$				1 5/8-12	1 11/16-12

FF6507

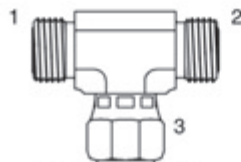
JIC to ORFS Swivel



Steel O-Ring Face Seal Adapters

FF6600

ORFS to Swivel Branch Tee

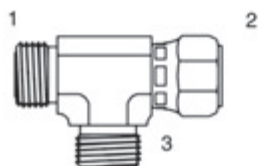


SAE 520433

Dash Size	Stock Materials			T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS BR			
04	FG	SS		9/16-18	9/16-18	9/16-18
06	FG	SS		11/16-16	11/16-16	11/16-16
08	FG	SS		13/16-16	13/16-16	13/16-16
10	FG	SS		1-14	1-14	1-14
12	FG	SS		1 3/16-12	1 3/16-12	1 3/16-12
16	FG			1 7/16-12	1 7/16-12	1 7/16-12
20	FG			1 11/16-12	1 11/16-12	1 11/16-12
24	FG			2-12	2-12	2-12

FF6602

ORFS to Swivel Run Tee

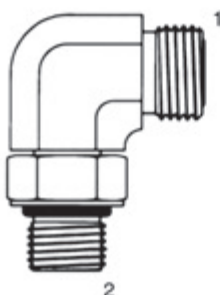


SAE 520432

Dash Size	Stock Materials			T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS BR			
04	FG			9/16-18	9/16-18	9/16-18
06	FG			11/16-16	11/16-16	11/16-16
08	FG			13/16-16	13/16-16	13/16-16
10	FG			1-14	1-14	1-14
12	FG			1 3/16-12	1 3/16-12	1 3/16-12
16	FG			1 7/16-12	1 7/16-12	1 7/16-12
20	FG			1 11/16-12	1 11/16-12	1 11/16-12
24	FG			2-12	2-12	2-12

FF6801

ORFS to O-Ring Elbow 90°



SAE 520220

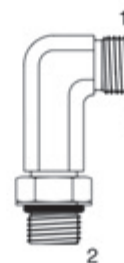
Dash Size	Stock Materials			T1 (UNF)	T2 (UNF)
	S	FG	SS BR		
04	FG	SS		9/16-18	7/16-20
04-06	FG	SS		9/16-18	9/16-18
04-08	FG			9/16-18	3/4-16
06-04	FG	SS		11/16-16	7/16-20
06-05	FG			11/16-16	1/2-20
06	FG	SS		11/16-16	9/16-18
06-08	FG	SS		11/16-16	3/4-16
06-10	FG			11/16-16	7/8-14
06-12	FG			11/16-16	1 1/16-12
06-16	FG			11/16-16	1 5/16-12
08-06	FG	SS		13/16-16	9/16-18
08	FG	SS		13/16-16	3/4-16
08-10	FG			13/16-16	7/8-14
08-12	FG			13/16-16	1 1/16-12
10-08	FG			1-14	3/4-16
10	FG	SS		1-14	7/8-14
10-12	FG			1-14	1 1/16-12
12-08	FG			1 3/16-12	3/4-16
12-10	FG			1 3/16-12	7/8-14
12	FG	SS		1 3/16-12	1 1/16-12
12-16	FG			1 3/16-12	1 5/16-12
16-12	FG			1 7/16-12	1 1/16-12
16-14	FG			1 7/16-12	1 3/16-12
16	FG	SS		1 7/16-12	1 5/16-12
16-20	FG			1 7/16-12	1 5/8-12
20-12	FG			1 11/16-12	1 1/16-12
20-16	FG			1 11/16-12	1 5/16-12
20	FG	SS		1 11/16-12	1 5/8-12
20-24	FG			1 11/16-12	1 7/8-12
24-20	FG			2-12	1 5/8-12
24	FG	SS		2-12	1 7/8-12

Steel O-Ring Face Seal Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
08-08	\$				13/16-16	13/16-16
12	\$	FG			1 3/16-12	1 1/16-12

FF6801-L

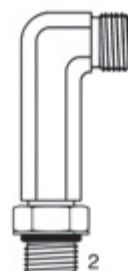
ORFS to
O-Ring
Long
Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04		FG			9/16-18	7/16-20
06		FG			11/16-16	9/16-18
08		FG			13/16-16	3/4-16
10		FG			1-14	7/8-14
12		FG			1 3/16-12	1 1/16-12
16		FG			1 7/16-12	1 5/16-12

FF6801-LL

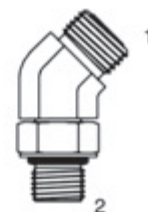
ORFS to
O-Ring
Extra
Long
Elbow
90°



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04		FG	SS		9/16-18	7/16-20
04-06		FG			9/16-18	9/16-18
06-04		FG			11/16-16	7/16-20
06		FG	SS		11/16-16	9/16-18
06-08		FG			11/16-16	3/4-16
08-06		FG			13/16-16	9/16-18
08		FG			13/16-16	3/4-16
08-10		FG	SS		13/16-16	7/8-14
08-12		FG			13/16-16	1 1/16-12
10-08		FG			1-14	3/4-16
10		FG	SS		1-14	7/8-14
10-12		FG			1-14	1 1/16-12
12-08		FG			1 3/16-12	3/4-16
12-10		FG			1 3/16-12	7/8-14
12		FG	SS		1 3/16-12	1 1/16-12
12-16		FG			1 3/16-12	1 5/16-12
16-12		FG			1 7/16-12	1 1/16-12
16		FG			1 7/16-12	1 5/16-12
16-20		FG			1 7/16-12	1 5/8-12
20		FG			1 11/16-12	1 5/8-12
24		FG			2-12	1 7/8-12

FF6802

ORFS to O-Ring
Elbow 45°



SAE 520320

S= Steel

FG=Forging

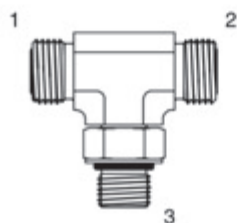
SS=Stainless Steel

BR=Brass

Steel O-Ring Face Seal Adapters

FF6803

ORFS to O-Ring Branch Tee

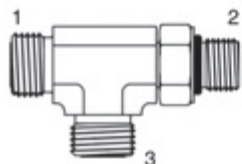


SAE 520429

Dash Size	Stock Materials			T1 (UNF)	T2 (UNF)	T3(UNF)
	S	FG	SS BR			
04	FG	SS		9/16-18	9/16-18	7/16-20
06	FG	SS		11/16-16	11/16-16	9/16-18
06-08	FG			11/16-16	11/16-16	3/4-16
08-06	FG			13/16-16	13/16-16	9/16-18
08	FG	SS		13/16-16	13/16-16	3/4-16
10	FG			1-14	1-14	7/8-14
12	FG	SS		1 3/16-12	1 3/16-12	1 1/16-12
16	FG	SS		1 7/16-12	1 7/16-12	1 5/16-12 16
20	FG			1 11/16-12	1 11/16-12	1 5/8-12
24	FG			2-12	2-12	1 7/8-12

FF6804

ORFS to O-Ring Run Tee

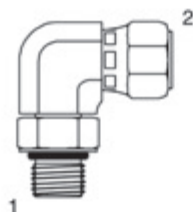


SAE 520428

Dash Size	Stock Materials			T1 (UNF)	T2 (UNF)	T3(UNF)
	S	FG	SS BR			
04	FG	SS		9/16-18	7/16-20	9/16-18
06-04-06	FG			11/16-16	7/16-20	11/16-16
06	FG	SS		11/16-16	9/16-18	11/16-16
08-06-08	FG			13/16-16	9/16-18	13/16-16
08	FG	SS		13/16-16	3/4-16	13/16-16
08-10-08	FG			13/16-16	7/8-14	13/16-16
08-12-08	FG			13/16-16	1 1/16-12	13/16-16
10	FG	SS		1-14	7/8-14	1-14
10-12-10	FG			1-14	1 1/16-12	1-14
12	FG	SS		1 3/16-12	1 1/16-12	1 3/16-12
12-16-12	FG			1 3/16-12	1 5/16-12	1 3/16-12
16	FG	SS		1 7/16-12	1 5/16-12	1 7/16-12
20	FG			1 11/16-12	1 5/8-12	1 11/16-12
24	FG			2-12	1 7/8-12	2-12

FF6809

O-Ring to ORFS Swivel Elbow 90°



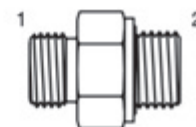
Dash Size	Stock Materials			T1 (UNF)	T2 (UNF)
	S	FG	SS BR		
04-04	FG			7/16-20	9/16-18
06-06	FG			9/16-18	11/16-16
08-08	FG			3/4-16	13/16-16
10-10	FG			7/8-14	1-14
12-12	FG			1 1/16-12	1 3/16-12
16-16	FG			1 5/16-12	1 7/16-12
20-20	FG			1 5/8-12	1 11/16-12
24-24	FG			1 7/8-12	2-12

Steel O-Ring Face Seal Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (MM)
	S	FG	SS	BR		
04-10	\$				9/16-18	10X1.0
04-12	\$				9/16-18	12X1.5
06-14	\$				11/16-16	14X1.5
06-16	\$				11/16-16	16X1.5
08-18	\$				13/16-16	18X1.5
08-22	\$				13/16-16	22X1.5
10-22	\$				1-14	22X1.5
12-33	\$				1 3/16-12	33X2.0
16-27	\$				1 7/16-12	27X2.0
16-33	\$				1 7/16-12	33X2.0
16-42	\$				1 7/16-12	42X2.0
20-42	\$				1 11/16-12	42X2.0
20-48	\$				1 11/16-12	48X2.0
24-48	\$				2-12	48X2.0

FF7400

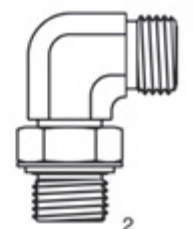
ORFS to Metric



Dash Size	Stock Materials				T1 (UNF)	T2 (MM)
	S	FG	SS	BR		
04-10		FG			9/16-18	10X1.0
04-12		FG			9/16-18	12X1.5
06-14		FG			11/16-16	14X1.5
06-16		FG			11/16-16	16X1.5
08-18		FG			13/16-16	18X1.5
10-22		FG			1-14	22X1.5
10-27		FG			1-14	27X2.0
12-27		FG			1 3/16-12	27X2.0
12-33		FG			1 3/16-12	33X2.0
16-33		FG			1 7/16-12	33X2.0
16-42		FG			1 7/16-12	42X2.0
20-42		FG			1 11/16-12	42X2.0
20-48		FG			1 11/16-12	48X2.0
24-48		FG			2-12	48X2.0

FF7801

ORFS to Metric Elbow 90°



Dash Size	ORFS Size
04	1/4
06	3/8
08	1/2
10	5/8
12	3/4
16	1
20	1 1/4
24	1 1/2

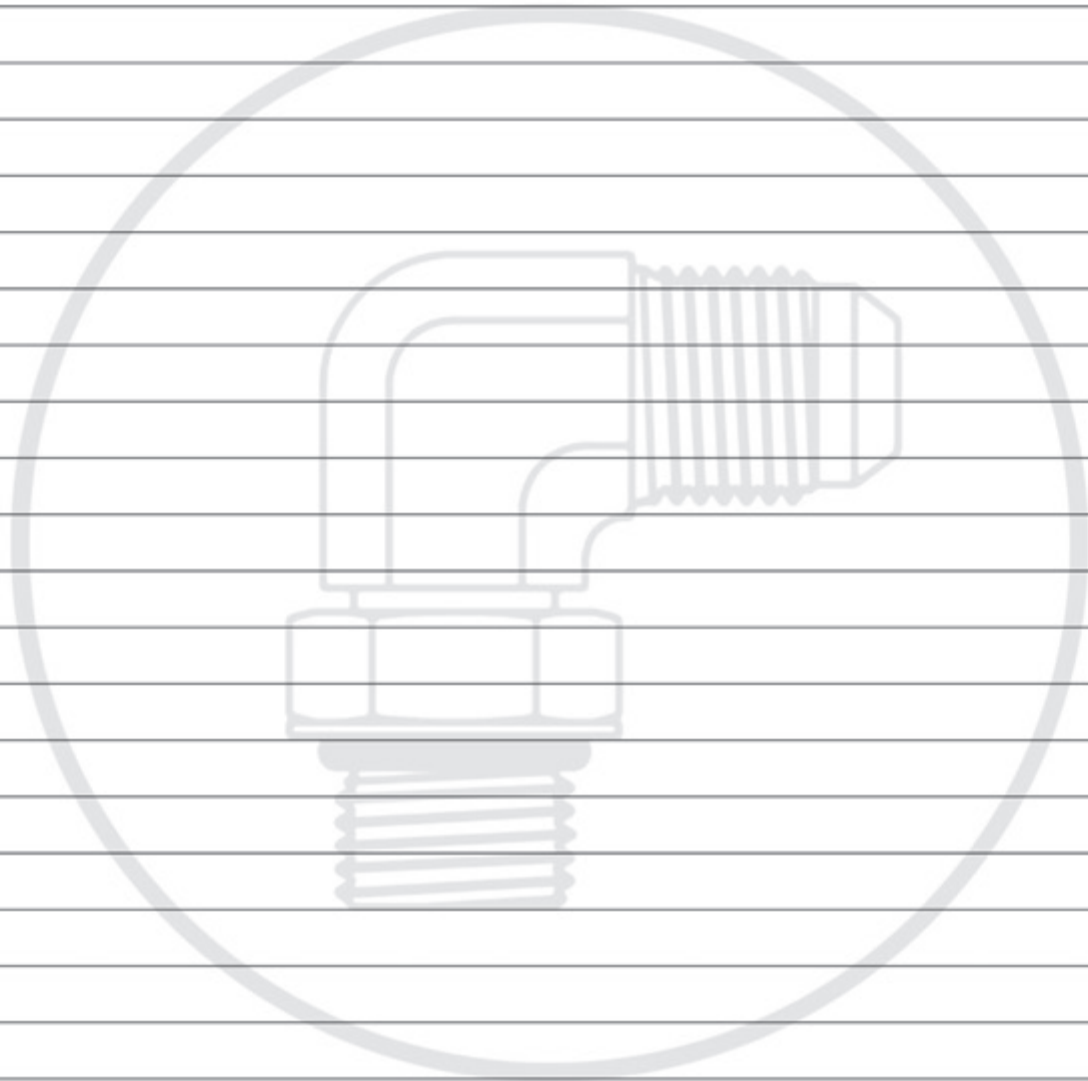
90DFF

Buna-N Durometer ORFS O-Ring



*** Viton available upon request.**

Notes

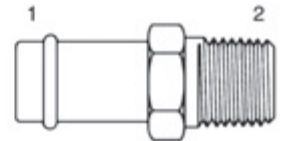


Steel Beaded Hose Fittings

Dash Size	Stock Materials				Hose I.D.	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$				1/4	1/8-27
04-04	\$				1/4	1/4-18
05-02	\$				5/16	1/8-27
06-04	\$				3/8	1/4-18
06-06	\$				3/8	3/8-18
08-06	\$				1/2	3/8-18
08-08	\$				1/2	1/2-14
08-12	\$				1/2	3/4-14
10-06	\$				5/8	3/8-18
10-08	\$				5/8	1/2-14
12-08	\$				3/4	1/2-14
12-12	\$				3/4	3/4-14
12-16	\$				3/4	1-11 1/2
16-12	\$				1	3/4-14
16-16	\$				1	1-11 1/2
20-16	\$				1 1/4	1-11 1/2
20-20	\$				1 1/4	1 1/4-11 1/2
24-20	\$				1 1/2	1 1/4-11 1/2
24-24	\$				1 1/2	1 1/2-11 1/2
32-32	\$				2	2-11 1/2

4404

Beaded Hose to Pipe

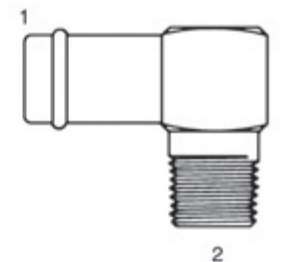


SAE 430160

Dash Size	Stock Materials				Hose I.D.	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$				1/4	1/8-27
04-04	\$				1/4	1/4-18
05-02	\$				5/16	1/8-27
05-04	\$				5/16	1/4-18
06-04	\$				3/8	1/4-18
06-06	\$	FG			3/8	3/8-18
08-06	\$	FG			1/2	3/8-18
08-08	\$	FG			1/2	1/2-14
08-12	\$				1/2	3/4-14
10-06	\$				5/8	3/8-18
10-08	\$				5/8	1/2-14
12-08	\$				3/4	1/2-14
12-12	\$	FG			3/4	3/4-14
12-16	\$	FG			3/4	1-11 1/2
16-12	\$	FG			1	3/4-14
16-16	\$	FG			1	1-11 1/2
20-16	\$				1 1/4	1-11 1/2
20-20	\$	FG			1 1/4	1 1/4-11 1/2
24-24	\$				1 1/2	1 1/2-11 1/2
32-32	\$				2	2-11 1/2

4501

Beaded Hose to Pipe Elbow 90°

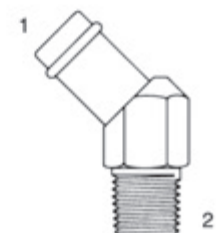


SAE 430260

Dash Size	Stock Materials				Hose I.D.	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$				1/4	1/8-27
04-04	\$				1/4	1/4-18
06-04	\$				3/8	1/4-18
06-06	\$				3/8	3/8-18
08-06	\$				1/2	3/8-18
08-08	\$				1/2	1/2-14
10-08	\$				5/8	1/2-14
12-08	\$				3/4	1/2-14
12-12	\$				3/4	3/4-14
16-12	\$				1	3/4-14
16-16	\$				1	1-11 1/2
16-20	\$				1	1 1/4-11 1/2
20-20	\$				1 1/4	1 1/4-11 1/2
24-24	\$				1 1/2	1 1/2-11 1/2

4503

Beaded Hose to Pipe Elbow 45°



SAE 430360

S= Steel

FG=Forging

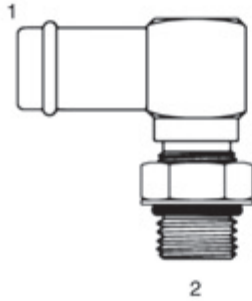
SS=Stainless Steel

BR=Brass

Steel Beaded Hose Fittings

4601

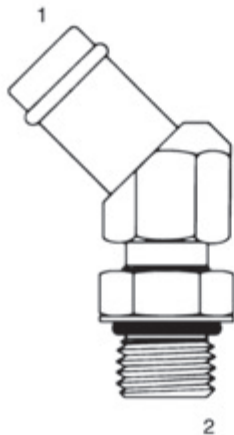
Beaded Hose to O-Ring Elbow 90°



Dash Size	Stock Materials				Hose I.D.	T2 (UNF)
	S	FG	SS	BR		
04	S	FG			1/4	7/16-20
05-04	S				5/16	7/16-20
05	S				5/16	1/2-20
06	S	FG			3/8	9/16-18
06-08	S				3/8	3/4-16
08	S	FG			1/2	3/4-16
08-10	S				1/2	7/8-14
10-08	S	FG			5/8	3/4-16
10	S	FG			5/8	7/8-14
10-12	S				5/8	1 1/16-12
12-08	S	FG			3/4	3/4-16
12-10	S	FG			3/4	7/8-14
12	S	FG			3/4	1 1/16-12
12-16	S	FG			3/4	1 5/16-12
16-12	S	FG			1	1 1/16-12
16	S	FG			1	1 5/16-12
16-20	S	FG			1	1 5/8-12
20-12	S	FG			1 1/4	1 1/16-12
20-16	S	FG			1 1/4	1 5/16-12
20	S	FG			1 1/4	1 5/8-12
20-24	S				1 1/4	1 7/8-12
24-20	S				1 1/2	1 5/8-12
24	S	FG			1 1/2	1 7/8-12
32-20	S				2	1 5/8-12
32-24	S				2	1 7/8-12
32	S				2	2 1/2-12

4603

Beaded Hose to O-Ring Elbow 45°



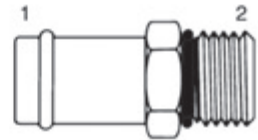
Dash Size	Stock Materials				Hose I.D.	T2 (UNF)
	S	FG	SS	BR		
04	S	FG			1/4	7/16-20
04-06	S	FG			1/4	9/16-18
06	S	FG			3/8	9/16-18
08-06	S	FG			1/2	9/16-18
08	S	FG			1/2	3/4-16
10-08	S				5/8	3/4-16
10	S	FG			5/8	7/8-14
10-12	S				5/8	1 1/16-12
12-08	S				3/4	3/4-16
12-10	S				3/4	7/8-14
12	S	FG			3/4	1 1/16-12
12-16	S				3/4	1 5/16-12
16-12	S	FG			1	1 1/16-12
16	S	FG			1	1 5/16-12
20-16	S	FG			1 1/4	1 5/16-12
20	S	FG			1 1/4	1 5/8-12
20-24	S				1 1/4	1 7/8-12
24-16	S	FG			1 1/2	1 5/16-12
24-20	S	FG			1 1/2	1 5/8-12
24	S	FG			1 1/2	1 7/8-12

Steel Beaded Hose Fittings

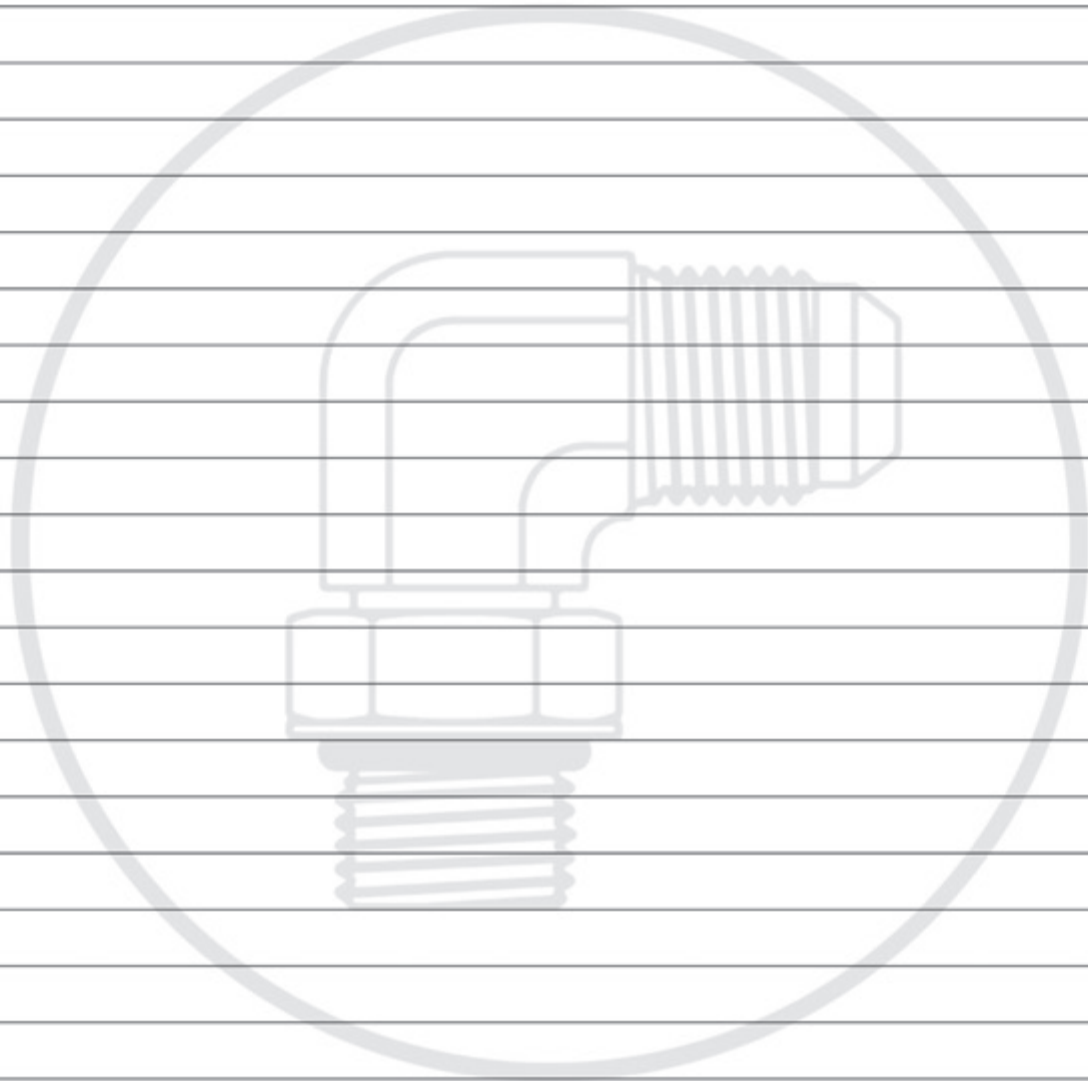
Dash Size	Stock Materials				Hose I.D.	T2 (UNF)
	S	FG	SS	BR		
04	\$				1/4	7/16-20
05	\$				5/16	1/2-20
06	\$				3/8	9/16-18
06-08	\$				3/8	3/4-16
06-10	\$				3/8	7/8-14
08	\$				1/2	3/4-16
08-10	\$				1/2	7/8-14
10-08	\$				5/8	3/4-16
10	\$				5/8	7/8-14
12-08	\$				3/4	3/4-16
12	\$				3/4	1 1/16-12
16-12	\$				1	1 1/16-12
16	\$				1	1 5/16-12
16-20	\$				1	1 5/8-12
20-16	\$				1 1/4	1 5/16-12
20	\$				1 1/4	1 5/8-12
20-24	\$				1 1/4	1 7/8-12
24-20	\$				1 1/2	1 5/8-12
24	\$				1 1/2	1 7/8-12
32-24	\$				2	1 7/8-12
32	\$				2	2 1/2-12

4604

Beaded Hose to O-Ring



Notes



Steel Flange Components

CONFORMANCE

- SAE J518

MATERIALS

- Steel per SAE J518 with either black phosphate finish, or plated zinc with yellow dicromate or iridite dip. Stainless available on request.

WORKING PRESSURES

The following table lists the recommended working pressures for steel Four-bolt Solid and Split Flange Fittings and Hose Ends made in accordance with SAE standard J518 and J517. Tompkins and SAE recommend sufficient testing be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions. When using Flanged Fittings that have a threaded connection on one end, use the lower pressure rating of the two.



CAUTION: Although many Four-bolt Flanged Fittings have sufficient structural integrity to support the weight of other components, Tompkins recommends consulting with our technical support department for guidance in selection of parts for this purpose.

SAE J518 FOUR-BOLT CODE 61 FLANGE PRESSURE RATINGS

DASH SIZE	FLANGE HEAD OD INCHES	4 TO 1 MINIMUM BURST PSI
-08	1 3/16 – 1.188	5000
-12	1 1/2 – 1.500	5000
-16	1 3/4 – 1.750	5000
-20	2 – 2.000	4000
-24	2 3/8 – 2.375	3000
-32	2 13/16 – 2.812	3000
-40	3 5/16 – 3.312	2500
-48	4 – 4.000	2000
-56	4 1/2 – 4.500	500
-64	5 – 5.000	500
-80	6 – 6.000	500

SAE J518 FOUR-BOLT CODE 62 FLANGE PRESSURE RATINGS

DASH SIZE	FLANGE HEAD OD INCHES	4 TO 1 MINIMUM BURST PSI
-08	1 1/4 – 1.250	6000
-12	1 5/8 – 1.625	6000
-16	1 7/8 – 1.875	6000
-20	2 1/8 – 2.125	6000
-24	2 1/2 – 2.500	6000
-32	3 1/8 – 3.125	6000

TORQUE VALUES

The minimum torque values provided by Tompkins Industries are to provide benchmarks that give optimum results for leak free connections. Actual torque values should be based on individual applications.

RECOMMENDED SOLID FOUR-BOLT FLANGE ASSEMBLY INSTRUCTIONS

- STEP 1.** Inspect port area to be smooth and free of nicks, burrs, scratches, or contaminants.
- STEP 2.** Lubricate the o-ring and place in flange head groove.
- STEP 3.** Lubricate screw threads, slip lock washers onto screws, and insert screws into flange.
- STEP 4.** Position flange on port and finger tighten all screws.
- STEP 5.** Torque the screws in a figure eight sequence, incrementally until the appropriate torque value in the following table is achieved.

RECOMMENDED FOUR-BOLT SPLIT FLANGE ASSEMBLY INSTRUCTIONS

- STEP 1.** Follow steps 1 through 3 above, then proceed to the following steps.
- STEP 2.** Position both flange halves on port and turn one screw in each flange half about three turns.
- STEP 3.** Rotate each flange half away from port for sufficient clearance to position hose or fitting flange head on port.
- STEP 4.** Close each flange half until it properly captures flange head. Insert remaining screws and finger tighten.
- STEP 5.** Torque the screws in a figure eight sequence incrementally until the appropriate torque value in the following table is achieved.

J518 CODE 61 AND CODE 62 FLANGE MINIMUM TORQUE VALUES

DASH SIZE	PORT SIZE	CODE 61 TORQUE FOOT/LBS	CODE 62 TORQUE FOOT/LBS
-08	1/2"	15-19	15-19
-12	3/4"	20-29	25-33
-16	1"	27-35	41-50
-20	1 1/4"	35-46	62-75
-24	1 1/2"	46-58	116-133
-32	2"	53-67	200-217
-40	2 1/2"	79	NA
-48	3"	137	NA
-56	3 1/2"	116	NA
-64	4"	116	NA
-80	5"	116	NA

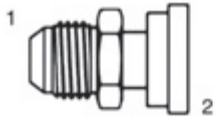
WHY WET TORQUE?

Due to difference in plating types and thickness, materials, and thread tolerances of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on the threads. Over tightening causes threads to yield, deform and lose their ability maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. **It is our firm position that to not wet torque is to compromise consistency and quality for convenience.**

Steel Flange Components CODE 61

6840

JIC to Flange

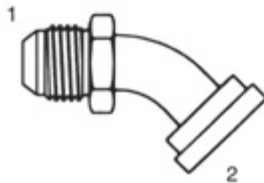


CODE 61

Dash Size	Stock Materials				T1 (UNF)	Flange Size	Flange Head O.D.
	S	FG	SS	BR			
08-08	\$				3/4-16	1/2	1.18"
08-12	\$	FG			3/4-16	3/4	1.50"
10-10 Komatsu	\$				7/8-14	16MM	34MM
10-16	\$				7/8-14	1	1.75"
12-12	\$	FG			1 1/16-12	3/4	1.50"
12-16	\$	FG			1 1/16-12	1	1.75"
14-12	\$				1 3/16-12	3/4	1.50"
16-12	\$	FG			1 5/16-12	3/4	1.50"
16-16	\$	FG			1 5/16-12	1	1.75"
16-20	\$	FG			1 5/16-12	1 1/4	2.00"
16-24	\$				1 5/16-12	1 1/2	2.37"
20-16	\$	FG			1 5/8-12	1	1.75"
20-20	\$	FG			1 5/8-12	1 1/4	2.00"
20-24	\$	FG			1 5/8-12	1 1/2	2.37"
20-32	\$				1 5/8-12	2	2.81"
24-20	\$	FG			1 7/8-12	1 1/4	2.00"
24-24	\$	FG			1 7/8-12	1 1/2	2.37"
24-32	\$	FG			1 7/8-12	2	2.81"
32-24	\$	FG			2 1/2-12	1 1/2	2.37"
32-32	\$	FG			2 1/2-12	2	2.81"
32-40	\$				2 1/2-12	2 1/2	3.31"
40-40	\$				3-12	2 1/2	3.31"

6845

JIC to Flange Elbow 45°



CODE 61

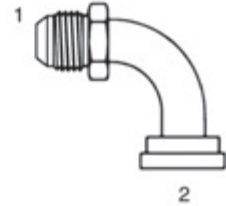
Dash Size	Stock Materials				T1 (UNF)	Flange Size	Flange Head O.D.
	S	FG	SS	BR			
08-08	\$				3/4-16	1/2	1.18"
08-12	\$				3/4-16	3/4	1.50"
10-10 Komatsu	\$				7/8-14	16mm	34mm
12-12	\$				1 1/16-12	3/4	1.50"
12-16	\$				1 1/16-12	1	1.75"
12-20	\$				1 1/16-12	1 1/4	2.00"
16-12	\$				1 5/16-12	3/4	1.50"
16-16	\$				1 5/16-12	1	1.75"
16-20	\$				1 5/16-12	1 1/4	2.00"
16-24	\$				1 5/16-12	1 1/2	2.37"
20-12	\$				1 5/8-12	3/4	1.50"
20-16	\$				1 5/8-12	1	1.75"
20-20	\$				1 5/8-12	1 1/4	2.00"
20-24	\$				1 5/8-12	1 1/2	2.37"
24-20	\$				1 7/8-12	1 1/4	2.00"
24-24	\$				1 7/8-12	1 1/2	2.37"
24-32	\$				1 7/8-12	2	2.81"
24-40	\$				1 7/8-12	2 1/2	3.31"
32-24	\$				2 1/2-12	1 1/2	2.37"
32-32	\$				2 1/2-12	2	2.81"

Steel Flange Components CODE 61

Dash Size	Stock Materials				T1 (UNF)	Flange Size	Flange Head O.D.
	S	FG	SS	BR			
08-08	\$				3/4-16	1/2	1.18"
08-12	\$	FG			3/4-16	3/4	1.50"
10-10 Komatsu	\$				7/8-14	16MM	34MM
10-16	\$				7/8-14	1	1.75"
12-12	\$	FG			1 1/16-12	3/4	1.50"
12-16	\$	FG			1 1/16-12	1	1.75"
12-20	\$				1 1/16-12	1 1/4	2.00"
12-24	\$				1 1/16-12	1 1/2	2.37"
16-12	\$	FG			1 5/16-12	3/4	1.50"
16-16	\$	FG			1 5/16-12	1	1.75"
16-20	\$	FG			1 5/16-12	1 1/4	2.00"
16-24	\$				1 5/16-12	1 1/2	2.37"
20-12	\$				1 5/8-12	3/4	1.50"
20-16	\$	FG			1 5/8-12	1	1.75"
20-20	\$	FG			1 5/8-12	1 1/4	2.00"
20-24	\$	FG			1 5/8-12	1 1/2	2.37"
24-16	\$				1 7/8-12	1	1.75"
24-20	\$	FG			1 7/8-12	1 1/4	2.00"
24-24	\$	FG			1 7/8-12	1 1/2	2.37"
24-32	\$	FG			1 7/8-12	2	2.81"
24-40	\$				1 7/8-12	2 1/2	3.31"
32-24	\$	FG			2 1/2-12	1 1/2	2.37"
32-32	\$	FG			2 1/2-12	2	2.81"
32-40	\$				2 1/2-12	2 1/2	3.31"

6890

JIC to Flange Elbow 90°

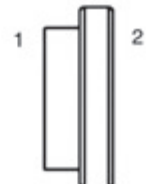


CODE 61

Dash Size	Stock Materials				Tube Size	Flange Size
	S	FG	SS	BR		
08-08	\$				1/2	1/2
12-12	\$				3/4	3/4
16-16	\$				1	1
20-20	\$				1 1/4	1 1/4
24-24	\$				1 1/2	1 1/2
32-32	\$				2	2
32-40	\$				2	2 1/2
40-40	\$				2 1/2	2 1/2
48-48	\$				3	3

6861

Braze to Split Flange



CODE 61

Dash Size	Stock Materials				Flange Size
	S	FG	SS	BR	
08	\$				1/2
12	\$				3/4
16	\$				1
20	\$				1 1/4
24	\$				1 1/2
32	\$				2
40	\$				2 1/2

6861-P

Split Flange Plug



CODE 61

S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Steel Flange Components CODE 61

CP

**Flange
Connector
Plate**



CODE 61

Dash Size	Stock Materials				Flange Size
	S	FG	SS	BR	
08	\$				1/2
12	\$				3/4
16	\$				1
20	\$				1 1/4
24	\$				1 1/2
32	\$				2
40	\$				2 1/2

90 DF

**Nitrile 90
Durometer
Flange O-Ring**



CODE 61

Dash Size	Split Flange Size	O-Ring Number
08	1/2	210
12	3/4	214
16	1	219
20	1 1/4	222
24	1 1/2	225
32	2	228
40	2 1/2	232
48	3	237

SF

Split Flange Half



CODE 61

Dash Size	Stock Materials				Flange Size	Flange Head Diameter
	S	FG	SS	BR		
08	\$				1/2	1.18"
12	\$				3/4	1.50"
16	\$				1	1.75"
20	\$				1 1/4	2.00"
24	\$				1 1/2	2.37"
32	\$				2	2.81"
40	\$				2 1/2	3.31"
48	\$				3	4.00"

To order flanges as a kit that includes two flange halves, four grade 5 hex head cap screws, four spring lock washers, and one nitrile o-ring, add the suffix "K" to the base component part number. (Example: SFK-12)

Steel Flange Components CODE 61

Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	Pad Size
08-08	\$	1/2-14	1/2
12-12	\$	3/4-14	3/4
16-16	\$	1-11 1/2	1
20-20	\$	1 1/4-11 1/2	1 1/4
24-24	\$	1 1/2-11 1/2	1 1/2
32-32	\$	2-11 1/2	2
40-40	\$	2 1/2-11 1/2	2 1/2
48-48	\$	3-11 1/2	3

W4

Pipe Weld Flange Pad



CODE 61

Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	Pad Size
08-08	\$	1/2-14	1/2
12-12	\$	3/4-14	3/4
16-16	\$	1-11 1/2	1
20-20	\$	1 1/4-11 1/2	1 1/4
24-24	\$	1 1/2-11 1/2	1 1/2
32-32	\$	2-11 1/2	2
40-40	\$	2 1/2-11 1/2	2 1/2
48-48	\$	3-11 1/2	3

W43

Pipe Thread Flange Pad



CODE 61

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	Pad Size
08-08	\$	3/4-16	1/2
12-12	\$	1 1/16-12	3/4
16-16	\$	1 5/16-12	1
20-20	\$	1 5/8-12	1 1/4
24-24	\$	1 7/8-12	1 1/2
32-32	\$	2 1/2-12	2

W46

O-Ring Flange Pad



CODE 61

Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	Pad Size
08-08	\$	1/2-14	1/2
12-12	\$	3/4-14	3/4
16-16	\$	1-11 1/2	1
20-20	\$	1 1/4-11 1/2	1 1/4
24-24	\$	1 1/2-11 1/2	1 1/2
32-32	\$	2-11 1/2	2
40-40	\$	2 1/2-11 1/2	2 1/2
48-48	\$	3-11 1/2	3

WC4

Pipe Weld Companion Flange Pad



CODE 61

S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Steel Flange Components CODE 61

WC43

Pipe Companion Flange Pad



CODE 61

Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	Pad Size
08-08	\$	1/2-14	1/2
12-12	\$	3/4-14	3/4
16-16	\$	1-11 1/2	1
20-20	\$	1 1/4-11 1/2	1 1/4
24-24	\$	1 1/2-11 1/2	1 1/2
32-32	\$	2-11 1/2	2
40-40	\$	2 1/2-11 1/2	2 1/2
48-48	\$	3-11 1/2	3

WC46

O-Ring Companion Flange Pad



CODE 61

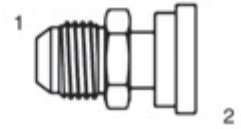
Dash Size	Stock Materials S FG SS BR	T1 (UNF)	Pad Size
08-08	\$	3/4-16	1/2
12-12	\$	1 1/16-12	3/4
16-16	\$	1 5/16-12	1
20-20	\$	1 5/8-12	1 1/4
24-24	\$	1 7/8-12	1 1/2
32-32	\$	2 1/2-12	2

Steel Flange Components CODE 62

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	Flange Size	Flange Head O.D.
08-08	\$	3/4-16	1/2	1.25"
12-12	\$ FG	1 1/16-12	3/4	1.62"
12-16	\$ FG	1 1/16-12	1	1.88"
16-12	\$ FG	1 5/16-12	3/4	1.62"
16-16	\$ FG	1 5/16-12	1	1.88"
16-20	\$ FG	1 5/16-12	1 1/4	2.12"
16-24	\$	1 5/16-12	1 1/2	2.50"
20-16	\$ FG	1 5/8-12	1	1.88"
20-20	\$ FG	1 5/8-12	1 1/4	2.12"
20-24	\$ FG	1 5/8-12	1 1/2	2.50"
24-20	\$	1 7/8-12	1 1/4	2.12"
24-24	\$ FG	1 7/8-12	1 1/2	2.50"
24-32	\$ FG	1 7/8-12	2	3.12"
32-24	\$ FG	2 1/2-12	1 1/2	2.50"
32-32	\$ FG	2 1/2-12	2	3.12"

6842

JIC to Flange

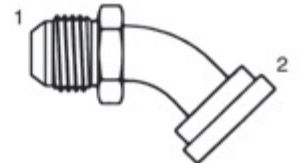


CODE 62

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	Flange Size	Flange Head O.D.
12-12	\$	1 1/16-12	3/4	1.62"
12-16	\$	1 1/16-12	1	1.88"
12-20	\$	1 1/16-12	1 1/4	2.12"
16-12	\$	1 5/16-12	3/4	1.62"
16-16	\$	1 5/16-12	1	1.88"
16-20	\$	1 5/16-12	1 1/4	2.12"
16-24	\$	1 5/16-12	1 1/2	2.50"
20-12	\$	1 5/8-12	3/4	1.62"
20-16	\$	1 5/8-12	1	1.88"
20-20	\$	1 5/8-12	1 1/4	2.12"
20-24	\$	1 5/8-12	1 1/2	2.50"
24-20	\$	1 7/8-12	1 1/4	2.12"
24-24	\$	1 7/8-12	1 1/2	2.50"
32-32	\$	2 1/2-12	2	3.12"

6847

JIC to Flange Elbow 45°

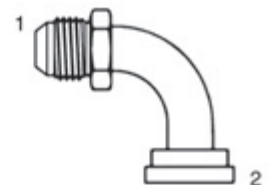


CODE 62

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	Flange Size	Flange Head O.D.
08-08	\$	3/4-16	1/2	1.25"
12-08	\$	1 1/16-12	1/2	1.25"
12-12	\$ FG	1 1/16-12	3/4	1.62"
12-16	\$ FG	1 1/16-12	1	1.88"
12-20	\$	1 1/16-12	1 1/4	2.12"
16-12	\$ FG	1 5/16-12	3/4	1.62"
16-16	\$ FG	1 5/16-12	1	1.88"
16-20	\$ FG	1 5/16-12	1 1/4	2.12"
16-24	\$	1 5/16-12	1 1/2	2.50"
20-16	\$ FG	1 5/8-12	1	1.88"
20-20	\$ FG	1 5/8-12	1 1/4	2.12"
20-24	\$ FG	1 5/8-12	1 1/2	2.50"
24-16	\$	1 7/8-12	1	1.88"
24-20	\$	1 7/8-12	1 1/4	2.12"
24-24	\$ FG	1 7/8-12	1 1/2	2.50"
24-32	\$ FG	1 7/8-12	2	3.12"
32-32	\$ FG	2 1/2-12	2	3.12"

6892

JIC to Flange Elbow 90°



CODE 62

S= Steel

FG=Forging

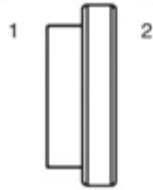
SS=Stainless Steel

BR=Brass

Steel Flange Components CODE 62

6862

Braze to Split Flange



CODE 62

Dash Size	Stock Materials S FG SS BR	Tube Size	Flange Size
08-08	\$	1/2	1/2
12-12	\$	3/4	3/4
16-16	\$	1	1
20-20	\$	1 1/4	1 1/4
24-24	\$	1 1/2	1 1/2
32-32	\$	2	2

6862-P

Split Flange Plug



CODE 62

Dash Size	Stock Materials S FG SS BR	Tube Size
08	\$	1/2
12	\$	3/4
16	\$	1
20	\$	1 1/4
24	\$	1 1/2
32	\$	2

90 DF

Nitrile 90 Durometer Flange O-Ring



CODE 62

Dash Size	Split Flange Size	O-Ring Number
08	1/2	210
12	3/4	214
16	1	219
20	1 1/4	222
24	1 1/2	225
32	2	228
40	2 1/2	232
48	3	237

SFX

Split Flange Half



CODE 62

Dash Size	Stock Materials S FG SS BR	Flange Size	Flange Head Diameter
08	\$	1/2	1.25"
12	\$	3/4	1.62"
16	\$	1	1.88"
20	\$	1 1/4	2.12"
24	\$	1 1/2	2.50"
32	\$	2	3.12"

To order flanges as a kit that includes two flange halves, four grade 5 hex head cap screws, four spring lock washers, and one nitrile o-ring, add the suffix "K" to the base component part number. (Example: SFXK-12)

Steel Flange Components CODE 62

Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	Pad Size
08-08	\$	1/2-14	1/2
12-12	\$	3/4-14	3/4
16-16	\$	1-11 1/2	1
20-20	\$	1 1/4-11 1/2	1 1/4
24-24	\$	1 1/2-11 1/2	1 1/2
32-32	\$	2-11 1/2	2
40-40	\$	2 1/2-1 1/2	2 1/2
48-48	\$	3-1 1/2	3

W42

**Pipe Weld
Flange Pad**



CODE 62

Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	Pad Size
08-08	\$	1/2-14	1/2
12-12	\$	3/4-14	3/4
16-16	\$	1-11 1/2	1
20-20	\$	1 1/4-11 1/2	1 1/4
24-24	\$	1 1/2-11 1/2	1 1/2
32-32	\$	2-11 1/2	2

W44

**Female Pipe
Flange Pad**



CODE 62

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	Pad Size
08-08	\$	3/4-16	1/2
12-12	\$	1 1/16-12	3/4
16-16	\$	1 5/16-12	1
20-20	\$	1 5/8-12	1 1/4
24-24	\$	1 7/8-12	1 1/2
32-32	\$	2 1/2-12	2

W48

**O-Ring Flange
Pad**



CODE 62

Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	Pad Size
08-08	\$	1/2-14	1/2
12-12	\$	3/4-14	3/4
16-16	\$	1-11 1/2	1
20-20	\$	1 1/4-11 1/2	1 1/4
24-24	\$	1 1/2-11 1/2	1 1/2
32-32	\$	2-11 1/2	2

WC42

**Pipe Weld
Companion
Flange Pad**



CODE 62

S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Steel Flange Components CODE 62

WC44

Pipe Companion Flange Pad



CODE 62

Dash Size	Stock Materials				T1 (NPTF)	Pad Size
	S	FG	SS	BR		
08-08	§				1/2-14	1/2
12-12	§				3/4-14	3/4
16-16	§				1-11 1/2	1
20-20	§				1 1/4-11 1/2	1 1/4
24-24	§				1 1/2-11 1/2	1 1/2
32-32	§				2-11 1/2	2

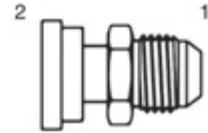
To order companion flange, (mating flange with flat surface and threaded screw holes), add the suffix "C" after the base component part number. (Example [W43C-12-12](#))

No Braze Flange Adapters

Dash Size	Stock Materials				T1 (UNF)	Flange Size	Flange Head O.D.
	S	FG	SS	BR			
12-12	\$				1 1/16-12	3/4	1.62"
16-12	\$				1 5/16-12	3/4	1.62"

NB6842

JIC to No Braze Flange

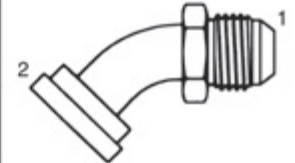


CODE 62

Dash Size	Stock Materials				T1 (UNF)	Flange Size	Flange Head O.D.
	S	FG	SS	BR			
12-12	\$				1 1/16-12	3/4	1.62"
16-12	\$				1 5/16-12	3/4	1.62"

NB6847

JIC to No Braze Flange Elbow 45°

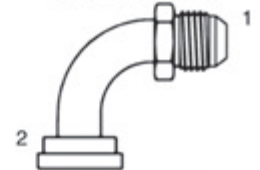


CODE 62

Dash Size	Stock Materials				T1 (UNF)	Flange Size	Flange Head O.D.
	S	FG	SS	BR			
12-12	\$				1 1/16-12	3/4	1.62"
16-12	\$				1 5/16-12	3/4	1.62"

NB6892

JIC to No Braze Flange Elbow 90°

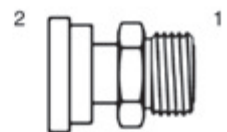


CODE 62

Dash Size	Stock Materials				T1 (UNF)	Flange Size	Flange Head O.D.
	S	FG	SS	BR			
12-12	\$				1 3/16-12	3/4	1.62"
16-12	\$				1 7/16-12	3/4	1.62"

NBFF6842

ORFS to No Braze Flange



CODE 62

S= Steel

FG=Forging

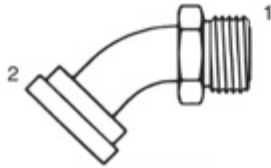
SS=Stainless Steel

BR=Brass

No Braze Flange Adapters

NBFF6847

**ORFS to No
Braze Flange
Elbow 45°**



CODE 62

Dash Size	Stock Materials				T1 (UNF)	Flange Size	Flange Head O.D.
	S	FG	SS	BR			
12-12	\$				1 3/16-12	3/4	1.62"
16-12	\$				1 7/16-12	3/4	1.62"

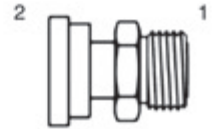
Note: The no braze flange adapters are designed with a larger through hole than standard flange adapters and manufactured as a one-piece design. This is designed to reduce pressure drop and heat.

O-Ring Face Seal Flange Adapters

Dash Size	Stock Materials				T1 (UNF)	Flange Size	Flange Head O.D.
	S	FG	SS	BR			
12-12	\$				1 3/16-12	3/4	1.50"
12-16	\$				1 3/16-12	1	1.75"
16-12	\$				1 7/16-12	3/4	1.50"
16-16	\$				1 7/16-12	1	1.75"
16-20	\$				1 7/16-12	1 1/4	2.00"
20-16	\$				1 11/16-12	1	1.75"
20-20	\$				1 11/16-12	1 1/4	2.00"
20-24	\$				1 11/16-12	1 1/2	2.38"
24-20	\$				2-12	1 1/4	2.00"
24-24	\$				2-12	1 1/2	2.38"

FF6840

ORFS to Flange

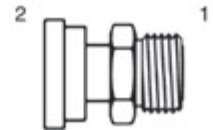


CODE 61

Dash Size	Stock Materials				T1 (UNF)	Flange Size	Flange Head O.D.
	S	FG	SS	BR			
12-12	\$				1 3/16-12	3/4	1.62"
12-16	\$				1 3/16-12	1	1.88"
16-12	\$				1 7/16-12	3/4	1.62"
16-16	\$				1 7/16-12	1	1.88"
16-20	\$				1 7/16-12	1 1/4	2.12"
20-16	\$				1 11/16-12	1	1.88"
20-20	\$				1 11/16-12	1 1/4	2.12"
20-24	\$				1 11/16-12	1 1/2	2.50"
24-20	\$				2-12	1 1/4	2.12"
24-24	\$				2-12	1 1/2	2.50"
24-32	\$				2-12	2	3.12"

FF6842

ORFS to Flange

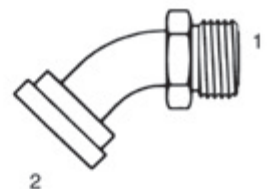


CODE 62

Dash Size	Stock Materials				T1 (UNF)	Flange Size	Flange Head O.D.
	S	FG	SS	BR			
12-12	\$				1 3/16-12	3/4	1.50"
12-16	\$				1 3/16-12	1	1.75"
16-16	\$				1 7/16-12	1	1.75"
16-20	\$				1 7/16-12	1 1/4	2.00"
20-24	\$				1 11/16-12	1 1/2	2.37"

FF6845

ORFS to Flange Elbow 45°



CODE 61

S= Steel

FG=Forging

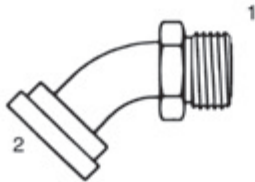
SS=Stainless Steel

BR=Brass

O-Ring Face Seal Flange Adapters

FF6847

**ORFS to Flange
Elbow 45°**

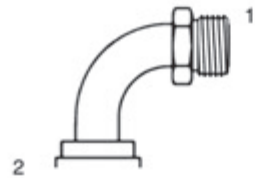


CODE 62

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	Flange Size	Flange Head O.D.
12-12	\$	1 3/16-12	3/4	1.62"
16-16	\$	1 7/16-12	1	1.88"
20-20	\$	1 11/16-12	1 1/4	2.12"

FF6890

**ORFS to Flange
Elbow 90°**

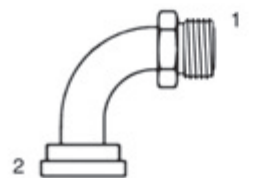


CODE 61

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	Flange Size	Flange Head O.D.
12-12	\$	1 3/16-12	3/4	1.50"
12-16	\$	1 3/16-12	1	1.75"
16-12	\$	1 7/16-12	3/4	1.50"
16-16	\$	1 7/16-12	1	1.75"
16-20	\$	1 7/16-12	1 1/4	2.00"
20-16	\$	1 11/16-12	1	1.75"
20-20	\$	1 11/16-12	1 1/4	2.00"
20-24	\$	1 11/16-12	1 1/2	2.37"
24-20	\$	2-12	1 1/4	2.00"
24-24	\$	2-12	1 1/2	2.37"

FF6892

**ORFS to Flange
Elbow 90°**



CODE 62

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	Flange Size	Flange Head O.D.
12-12	\$	1 3/16-12	3/4	1.62"
12-16	\$	1 3/16-12	1	1.88"
16-12	\$	1 7/16-12	3/4	1.62"
16-16	\$	1 7/16-12	1	1.88"
16-20	\$	1 7/16-12	1 1/4	2.12"
20-16	\$	1 11/16-12	1	1.88"
20-20	\$	1 11/16-12	1 1/4	2.12"
20-24	\$	1 11/16-12	1 1/2	3.12"
24-20	\$	2-12	1 1/4	2.12"
24-24	\$	2-12	1 1/2	3.12"

Metric General Information

Dash Size	BSPP/BSPT	BSPP/BSPT Thread Identification Chart
02	1/8-28	
03	—	
04	1/4-19	
05	—	
06	3/8-19	
08	1/2-14	
10	—	
12	3/4-14	
14	—	
16	1-11	
20	1 1/4-11	
24	1 1/2-11	
32	2-11	

Dash Size	Metric Port Threads	Metric Thread Identification Chart
10	10X1.0	
12	12X1.5	
14	14X1.5	
16	16X1.5	
18	18X1.5	
20	20X1.5	
22	22X1.5	
24	24X1.5	
26	26X1.5	
27	27X2.0	
30	30X2.0	
33	33X2.0	
34	34X1.5	
36	36X1.5	
40	40X1.5	
42	42X2.0	
45	45X1.5	
48	48X2.0	
52	52X2.0	

Tube O.D.	Metric Thread	LL Extra Light Series for Metric Compression
4MM	8MM X 1.0	
6MM	10MM X 1.0	
8MM	12MM X 1.0	
10MM	14MM X 1.0	
12MM	16MM X 1.0	

S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Metric General Information

L Light Series for Metric Compression	Tube O.D.	Metric Thread
	6 MM	12 MM X 1.5
	8 MM	14 MM X 1.5
	10 MM	16 MM X 1.5
	12 MM	18 MM X 1.5
	15 MM	22 MM X 1.5
	18 MM	26 MM X 1.5
	22 MM	30 MM X 2.0
	28 MM	36 MM X 2.0
	35 MM	45 MM X 2.0
42 MM	52 MM X 2.0	

S Heavy Series for Metric Compression	Tube O.D.	Metric Thread
	6 MM	14 MM X 1.5
	8 MM	16 MM X 1.5
	10 MM	18 MM X 1.5
	12 MM	20 MM X 1.5
	14 MM	22 MM X 1.5
	16 MM	24 MM X 1.5
	20 MM	30 MM X 2.0
	25 MM	36 MM X 2.0
	30 MM	42 MM X 2.0
38 MM	52 MM X 2.0	

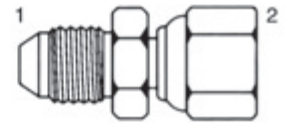
Metric compression fittings are available in other sizes and configurations in steel and stainless steel. Please call customer service for additional information.

BSPB Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (BSPP)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-28
04-04	\$				7/16-20	1/4-19
04-06	\$				7/16-20	3/8-19
06-04	\$				9/16-18	1/4-19
06-06	\$				9/16-18	3/8-19
06-08	\$				9/16-18	1/2-14
08-06	\$				3/4-16	3/8-19
08-08	\$				3/4-16	1/2-14
08-10	\$				3/4-16	5/8-14
08-12	\$				3/4-16	3/4-14
10-08	\$				7/8-14	1/2-14
10-10	\$				7/8-14	5/8-14
10-12	\$				7/8-14	3/4-14
12-12	\$				1 1/16-12	3/4-14
12-16	\$				1 1/16-12	1-11
16-16	\$				1 5/16-12	1-11
20-20	\$				1 5/8-12	1 1/4-11

3240

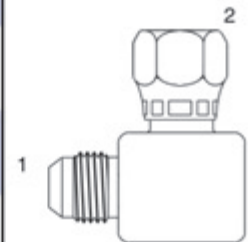
JIC to BSPP Swivel



Dash Size	Stock Materials				T1 (UNF)	T2 (BSPP)
	S	FG	SS	BR		
06-06	\$				9/16-18	3/8-19
08-08	\$				3/4-16	1/2-14
12-12	\$				1 1/16-12	3/4-14

3401

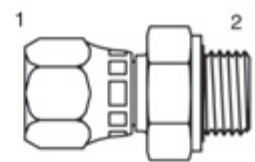
JIC to BSPP Swivel Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (BSPP)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-28
04-04	\$				7/16-20	1/4-19
06-04	\$				9/16-18	1/4-19
06-06	\$				9/16-18	3/8-19
08-06	\$				3/4-16	3/8-19
08-08	\$				3/4-16	1/2-14
10-08	\$				7/8-14	1/2-14
12-12	\$				1 1/16-12	3/4-14
16-12	\$				1 5/16-12	3/4-14
16-16	\$				1 5/16-12	1-11
20-20	\$				1 5/8-12	1 1/4-11
24-24	\$				1 7/8-12	1 1/2-11

3402

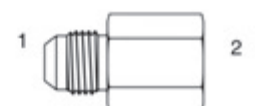
JIC to BSPP



Dash Size	Stock Materials				T1 (UNF)	T2 (BSPP)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-28
04-04	\$				7/16-20	1/4-19
06-04	\$				9/16-18	1/4-19
06-06	\$				9/16-18	3/8-19
08-06	\$				3/4-16	3/8-19
08-08	\$				3/4-16	1/2-14
10-08	\$				7/8-14	1/2-14
12-12	\$				1 1/16-12	3/4-14
16-12	\$				1 5/16-12	3/4-14
16-16	\$				1 5/16-12	1-11

3405

JIC to BSPP



(Cont'd.)

S= Steel

FG=Forging

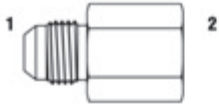
SS=Stainless Steel

BR=Brass

BSPP Adapters

3405

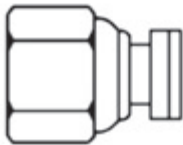
JIC to BSPP



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (BSPP)
20-16	§	1 5/8-12	1-11
20-20	§	1 5/8-12	1 1/4-11
24-20	§	1 7/8-12	1 1/4-11
24-24	§	1 7/8-12	1 1/2-11

3406

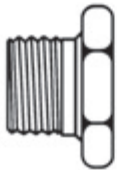
Swivel BSPP Cap



Dash Size	Stock Materials S FG SS BR	T1 (BSPP)
02	§	1/8-28
04	§	1/4-19
06	§	3/8-19
08	§	1/2-14
10	§	5/8-14
12	§	3/4-14
16	§	1-11
20	§	1 1/4-11
24	§	1 1/2-11
32	§	2-11

3408

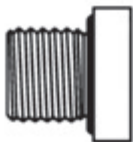
BSPP Plug



Dash Size	Stock Materials S FG SS BR	T1 (BSPP)
02	§	1/8-28
04	§	1/4-19
06	§	3/8-19
08	§	1/2-14
12	§	3/4-14
16	§	1-11
20	§	1 1/4-11
24	§	1 1/2-11

3408-HHP

Hollow Hex BSPP Plug



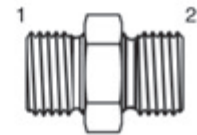
Dash Size	Stock Materials S FG SS BR	T1 (BSPP)
02	§	1/8-28
04	§	1/4-19
06	§	3/8-19
08	§	1/2-14
12	§	3/4-14
16	§	1-11
20	§	1 1/4-11
24	§	1 1/2-11

BSPB Adapters

Dash Size	Stock Materials S FG SS BR	T1 (BSPB)	T2 (BSPB)
02-02	\$	1/8-28	1/8-28
04-02	\$	1/4-19	1/8-28
04-04	\$	1/4-19	1/4-19
06-02	\$	3/8-19	1/8-28
06-04	\$	3/8-19	1/4-19
06-06	\$	3/8-19	3/8-19
08-02	\$	1/2-14	1/8-28
08-04	\$	1/2-14	1/4-19
08-06	\$	1/2-14	3/8-19
08-08	\$	1/2-14	1/2-14
10-04	\$	5/8-14	1/4-19
10-06	\$	5/8-14	3/8-19
10-08	\$	5/8-14	1/2-14
10-10	\$	5/8-14	5/8-14
12-04	\$	3/4-14	1/4-19
12-06	\$	3/4-14	3/8-19
12-08	\$	3/4-14	1/2-14
12-10	\$	3/4-14	5/8-14
12-12	\$	3/4-14	3/4-14
16-04	\$	1-11	1/4-19
16-06	\$	1-11	3/8-19
16-08	\$	1-11	1/2-14
16-10	\$	1-11	5/8-14
16-12	\$	1-11	3/4-14
16-16	\$	1-11	1-11
20-06	\$	1 1/4-11	3/8-19
20-08	\$	1 1/4-11	1/2-14
20-10	\$	1 1/4-11	5/8-14
20-12	\$	1 1/4-11	3/4-14
20-16	\$	1 1/4-11	1-11
20-20	\$	1 1/4-11	1 1/4-11
24-08	\$	1 1/2-11	1/2-14
24-12	\$	1 1/2-11	3/4-14
24-16	\$	1 1/2-11	1-11
24-20	\$	1 1/2-11	1 1/4-11
24-24	\$	1 1/2-11	1 1/2-11
32-16	\$	2-11	1-11
32-20	\$	2-11	1 1/4-11
32-24	\$	2-11	1 1/2-11
32-32	\$	2-11	2-11
40-24	\$	2 1/2-11	1 1/2-11
40-32	\$	2 1/2-11	2-11
40-40	\$	2 1/2-11	2 1/2-11
48-32	\$	3-11	2-11
48-40	\$	3-11	2 1/2-11
48-48	\$	3-11	3-11

3420

BSPB Nipple



S= Steel

FG=Forging

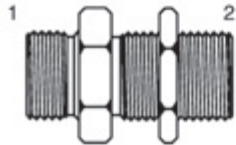
SS=Stainless Steel

BR=Brass

BSPP Adapters

3421

BSPP Bulkhead Union



Dash Size	Stock Materials S FG SS BR	T1 (BSPP)	T2 (BSPP)
04-04	\$	1/4-19	1/4-19
04-06	\$	1/4-19	3/8-19
06-06	\$	3/8-19	3/8-19
06-08	\$	3/8-19	1/2-14
08-06	\$	1/2-14	3/8-19
08-08	\$	1/2-14	1/2-14
08-12	\$	1/2-14	3/4-14
10-10	\$	5/8-14	5/8-14
12-08	\$	3/4-14	1/2-14
12-12	\$	3/4-14	3/4-14
12-16	\$	3/4-14	1-11
16-16	\$	1-11	1-11
20-20	\$	1 1/4-11	1 1/4-11
24-24	\$	1 1/2-11	1 1/2-11
32-32	\$	2-11	2-11

3422

BSPP Bulkhead Locknut



Dash Size	Stock Materials S FG SS BR	T1 (BSPP)
04	\$	1/4-19
06	\$	3/8-19
08	\$	1/2-14
10	\$	5/8-14
12	\$	3/4-14
16	\$	1-11
20	\$	1 1/4-11
24	\$	1 1/2-11
32	\$	2-11

3425

BSPP Coupling



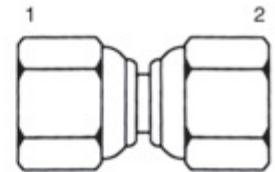
Dash Size	Stock Materials S FG SS BR	T1 (BSPP)	T2 (BSPP)
02-02	\$	1/8-28	1/8-28
04-02	\$	1/4-19	1/8-28
04-04	\$	1/4-19	1/4-19
06-02	\$	3/8-19	1/8-28
06-04	\$	3/8-19	1/4-19
06-06	\$	3/8-19	3/8-19
08-06	\$	1/2-14	3/8-19
08-08	\$	1/2-14	1/2-14
10-08	\$	5/8-14	1/2-14
10-10	\$	5/8-14	5/8-14
12-08	\$	3/4-14	1/2-14
12-10	\$	3/4-14	5/8-14
12-12	\$	3/4-14	3/4-14
16-12	\$	1-11	3/4-14
16-16	\$	1-11	1-11
20-20	\$	1 1/4-11	1 1/4-11
24-24	\$	1 1/2-11	1 1/2-11
32-32	\$	2-11	2-11

BSPB Adapters

Dash Size	Stock Materials S FG SS BR	T1 (BSPB)	T2 (BSPB)
02-02	\$	1/8-28	1/8-28
04-04	\$	1/4-19	1/4-19
06-04	\$	3/8-19	1/4-19
06-06	\$	3/8-19	3/8-19
08-04	\$	1/2-14	1/4-19
08-06	\$	1/2-14	3/8-19
08-08	\$	1/2-14	1/2-14
10-08	\$	5/8-14	1/2-14
10-10	\$	5/8-14	5/8-14
12-08	\$	3/4-14	1/2-14
12-10	\$	3/4-14	5/8-14
12-12	\$	3/4-14	3/4-14
16-08	\$	1-11	1/2-14
16-10	\$	1-11	5/8-14
16-12	\$	1-11	3/4-14
16-16	\$	1-11	1-11
20-20	\$	1 1/4-11	1 1/4-11
24-24	\$	1 1/2-11	1 1/2-11
32-32	\$	2-11	2-11

3426

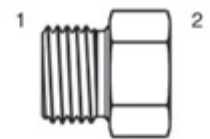
BSPB Swivel Union



Dash Size	Stock Materials S FG SS BR	T1 (BSPB)	T2 (BSPB)
06-02	\$	3/8-19	1/8-28
08-04	\$	1/2-14	1/4-19
12-04	\$	3/4-14	1/4-19
12-06	\$	3/4-14	3/8-19
16-06	\$	1-11	3/8-19
16-08	\$	1-11	1/2-14
20-08	\$	1 1/4-11	1/2-14
20-12	\$	1 1/4-11	3/4-14
20-16	\$	1 1/4-11	1-11
24-08	\$	1 1/2-11	1/2-14
24-12	\$	1 1/2-11	3/4-14
24-16	\$	1 1/2-11	1-11
32-12	\$	2-11	3/4-14
32-16	\$	2-11	1-11
32-20	\$	2-11	1 1/4-11
32-24	\$	2-11	1 1/2-11

3430

BSPB Reducer Bushing



S= Steel

FG=Forging

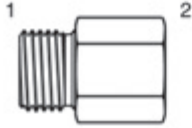
SS=Stainless Steel

BR=Brass

BSPP Adapters

3435

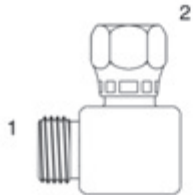
BSPP to BSPP Extended Bushing



Dash Size	Stock Materials S FG SS BR	T1 (BSPP)	T2 (BSPP)
02-04	\$	1/8-28	1/4-19
04-02	\$	1/4-19	1/8-28
04-04	\$	1/4-19	1/4-19
04-06	\$	1/4-19	3/8-19
06-04	\$	3/8-19	1/4-19
06-06	\$	3/8-19	3/8-19
06-08	\$	3/8-19	1/2-14
08-06	\$	1/2-14	3/8-19
08-08	\$	1/2-14	1/2-14
08-12	\$	1/2-14	3/4-14
10-08	\$	5/8-14	1/2-14
12-08	\$	3/4-14	1/2-14
12-12	\$	3/4-14	3/4-14
12-16	\$	3/4-14	1-11
16-12	\$	1-11	3/4-14
16-16	\$	1-11	1-11
20-20	\$	1 1/4-11	1 1/4-11
24-20	\$	1 1/2-11	1 1/4-11
24-24	\$	1 1/2-11	1 1/2-11
32-32	\$	2-11	2-11

3436

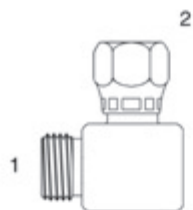
BSPP to BSPP Swivel Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (BSPP)	T2 (BSPP)
02-02	\$	1/8-28	1/8-28
04-04	\$	1/4-19	1/4-19
04-06	\$	1/4-19	3/8-19
06-04	\$	3/8-19	1/4-19
06-06	\$	3/8-19	3/8-19
06-08	\$	3/8-19	1/2-14
08-06	\$	1/2-14	3/8-19
08-08	\$	1/2-14	1/2-14
08-10	\$	1/2-14	5/8-14
10-10	\$	5/8-14	5/8-14
12-12	\$	3/4-14	3/4-14
16-12	\$	1-11	3/4-14
16-16	\$	1-11	1-11
20-20	\$	1 1/4-11	1 1/4-11
24-24	\$	1 1/2-11	1 1/2-11
32-32	\$	2-11	2-11

3437

BSPP to JIC Swivel Elbow 90°



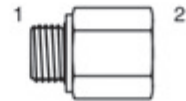
Dash Size	Stock Materials S FG SS BR	T1 (BSPP)	T2 (UNF)
04-04	\$	1/4-19	7/16-20
06-06	\$	3/8-19	9/16-18
06-08	\$	3/8-19	3/4-16
08-06	\$	1/2-14	9/16-18
08-08	\$	1/2-14	3/4-16
08-10	\$	1/2-14	7/8-14
12-12	\$	3/4-14	1 1/16-12

BSPB Adapters

Dash Size	Stock Materials S FG SS BR	T1 (BSPB)	T2 (NPTF)
02-02	\$	1/8-28	1/8-27
02-04	\$	1/8-28	1/4-18
04-02	\$	1/4-19	1/8-27
04-04	\$	1/4-19	1/4-18
06-02	\$	3/8-18	1/8-27
06-04	\$	3/8-18	1/4-18
06-06	\$	3/8-19	3/8-18
08-02	\$	1/2-14	1/8-27
08-04	\$	1/2-14	1/4-18
08-06	\$	1/2-14	3/8-18
08-08	\$	1/2-14	1/2-14
12-04	\$	3/4-14	1/4-18
12-06	\$	3/4-14	3/8-18
12-08	\$	3/4-14	1/2-14
12-12	\$	3/4-14	3/4-14
16-16	\$	1-11	1-11 1/2
20-20	\$	1 1/4-11	1 1/4-11 1/2
24-24	\$	1 1/2-11	1 1/2-11 1/2

3455

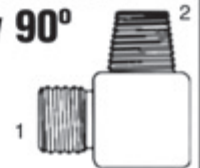
BSPB to Pipe



Dash Size	Stock Materials S FG SS BR	T1 (BSPB)	T2 (BSPT)
02-02	\$	1/8-28	1/8-28
04-04	\$	1/4-19	1/4-19
06-04	\$	3/8-19	1/4-19
06-06	\$	3/8-19	3/8-19
08-06	\$	1/2-14	3/8-19
08-08	\$	1/2-14	1/2-14
12-12	\$	3/4-14	3/4-14
16-16	\$	1-11	1-11

3540

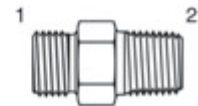
BSPB to BSPT Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (BSPB)	T2 (BSPT)
02-02	\$	1/8-28	1/8-28
02-04	\$	1/8-28	1/4-19
02-06	\$	1/8-28	3/8-19
04-02	\$	1/4-19	1/8-28
04-04	\$	1/4-19	1/4-19
04-06	\$	1/4-19	3/8-19
04-08	\$	1/4-19	1/2-14
06-02	\$	3/8-19	1/8-28
06-04	\$	3/8-19	1/4-19
06-06	\$	3/8-19	3/8-19
06-08	\$	3/8-19	1/2-14
06-12	\$	3/8-19	3/4-14
06-16	\$	3/8-19	1-11
08-04	\$	1/2-14	1/4-19
08-06	\$	1/2-14	3/8-19
08-08	\$	1/2-14	1/2-14
10-08	\$	5/8-14	1/2-14
10-10	\$	5/8-14	5/8-14
12-08	\$	3/4-14	1/2-14
12-12	\$	3/4-14	3/4-14
16-12	\$	1-11	3/4-14
16-16	\$	1-11	1-11
20-16	\$	1 1/4-11	1-11
20-20	\$	1 1/4-11	1 1/4-11
20-24	\$	1 1/4-11	1 1/2-11
24-20	\$	1 1/2-11	1 1/4-11
24-24	\$	1 1/2-11	1 1/2-11
32-32	\$	2-11	2-11

3544

BSPB to BSPT



S= Steel

FG=Forging

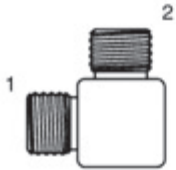
SS=Stainless Steel

BR=Brass

BSPP Adapters

3601

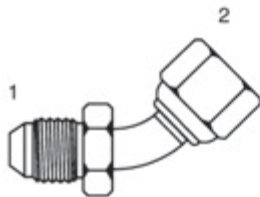
BSPP to BSPP Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (BSPP)	T2 (BSPP)
04-04	\$	1/4-19	1/4-19
06-04	\$	3/8-19	1/4-19
06-06	\$	3/8-19	3/8-19
08-06	\$	1/2-14	3/8-19
08-08	\$	1/2-14	1/2-14
12-12	\$	3/4-14	3/4-14

3602

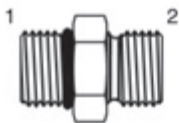
JIC to BSPP bent Tube Swivel Elbow 45°



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (BSPP)
04-04	\$	7/16-20	1/4-19
06-06	\$	9/16-18	3/8-19
08-08	\$	3/4-16	1/2-14
10-10	\$	7/8-14	5/8-14
12-12	\$	1 1/16-12	3/4-14
16-16	\$	1 5/16-12	1-11

3620

SAE O-Ring to BSPP



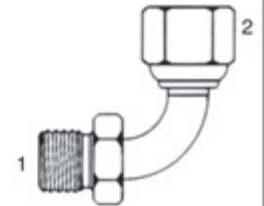
Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (BSPP)
04-04	\$	7/16-20	1/4-19
04-06	\$	7/16-20	3/8-19
06-04	\$	9/16-18	1/4-19
06-06	\$	9/16-18	3/8-19
06-08	\$	9/16-18	1/2-14
08-06	\$	3/4-16	3/8-19
08-08	\$	3/4-16	1/2-14
10-06	\$	7/8-14	3/8-19
10-08	\$	7/8-14	1/2-14
12-08	\$	1 1/16-12	1/2-14
12-12	\$	1 1/16-12	3/4-14
12-16	\$	1 1/16-12	1-11
16-12	\$	1 5/16-12	3/4-14
16-16	\$	1 5/16-12	1-11
16-20	\$	1 5/16-12	1 1/4-11
20-16	\$	1 5/8-12	1-11
20-20	\$	1 5/8-12	1 1/4-11
24-24	\$	1 7/8-12	1 1/2-11

BSPB Adapters

Dash Size	Stock Materials				T1 (BSPB)	T2 (BSPB)
	S	FG	SS	BR		
04-04	\$				1/4-19	1/4-19
06-06	\$				3/8-19	3/8-19
08-08	\$				1/2-14	1/2-14
10-10	\$				5/8-14	5/8-14
12-12	\$				3/4-14	3/4-14
16-16	\$				1-11	1-11
20-20	\$				1 1/4-11	1 1/4-11
24-24	\$				1 1/2-11	1 1/2-11
32-32	\$				2-11	2-11

3701

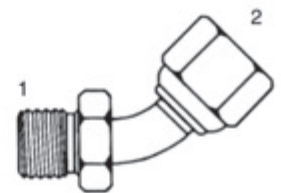
**BSPB to BSPB
Bent Tube Swivel
Elbow 90°**



Dash Size	Stock Materials				T1 (BSPB)	T2 (BSPB)
	S	FG	SS	BR		
04-04	\$				1/4-19	1/4-19
06-06	\$				3/8-19	3/8-19
08-08	\$				1/2-14	1/2-14
10-10	\$				5/8-14	5/8-14
12-12	\$				3/4-14	3/4-14
16-16	\$				1-11	1-11
20-20	\$				1 1/4-11	1 1/4-11

3702

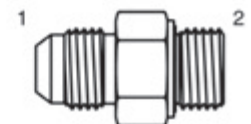
**BSPB to BSPB
Bent Tube Swivel
Elbow 45°**



Dash Size	Stock Materials				T1 (UNF)	T2 (BSPB)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-28
04-04	\$				7/16-20	1/4-19
04-06	\$				7/16-20	3/8-19
04-08	\$				7/16-20	1/2-14
05-02	\$				1/2-20	1/8-28
05-04	\$				1/2-20	1/4-19
05-06	\$				1/2-20	3/8-19
06-04	\$				9/16-18	1/4-19
06-06	\$				9/16-18	3/8-19
06-08	\$				9/16-18	1/2-14
08-04	\$				3/4-16	1/4-19
08-06	\$				3/4-16	3/8-19
08-08	\$				3/4-16	1/2-14
08-12	\$				3/4-16	3/4-14
10-06	\$				7/8-14	3/8-19
10-08	\$				7/8-14	1/2-14
10-12	\$				7/8-14	3/4-14
12-08	\$				1 1/16-12	1/2-14
12-12	\$				1 1/16-12	3/4-14
12-16	\$				1 1/16-12	1-11
16-12	\$				1 5/16-12	3/4-14
16-16	\$				1 5/16-12	1-11
16-20	\$				1 5/16-12	1 1/4-11
20-16	\$				1 5/8-12	1-11
20-20	\$				1 5/8-12	1 1/4-11
20-24	\$				1 5/8-12	1 1/2-11
24-20	\$				1 7/8-12	1 1/4-11
24-24	\$				1 7/8-12	1 1/2-11

3800

JIC to BSPB



Port Seal-Crush Washer And O-Ring Included

S= Steel

FG=Forging

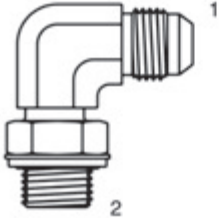
SS=Stainless Steel

BR=Brass

BSPB Adapters

3801

JIC to BSPB Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (BSPB)
	S	FG	SS	BR		
04-02	S	FG			7/16-20	1/8-28
04-04	S	FG			7/16-20	1/4-19
05-02	S	FG			1/2-20	1/8-28
06-04	S	FG			9/16-18	1/4-19
06-06	S	FG			9/16-18	3/8-19
06-08	S	FG			9/16-18	1/2-14
08-04	S	FG			3/4-16	1/4-19
08-06	S	FG			3/4-16	3/8-19
08-08	S	FG			3/4-16	1/2-14
08-12	S	FG			3/4-16	3/4-14
10-06	S	FG			7/8-14	3/8-19
10-08	S	FG			7/8-14	1/2-14
10-12	S	FG			7/8-14	3/4-14
12-08	S	FG			1 1/16-12	1/2-14
12-12	S	FG			1 1/16-12	3/4-14
12-16	S	FG			1 1/16-12	1-11
16-12	S	FG			1 5/16-12	3/4-14
16-16	S	FG			1 5/16-12	1-11
16-20	S	FG			1 5/16-12	1 1/4-11
20-16	S	FG			1 5/8-12	1-11
20-20	S	FG			1 5/8-12	1 1/4-11
24-20	S	FG			1 7/8-12	1 1/4-11
24-24	S	FG			1 7/8-12	1 1/2-11

Port Seal-Crush Washer And O-Ring Included

3802

JIC to BSPB Elbow 45°



Dash Size	Stock Materials				T1 (UNF)	T2 (BSPB)
	S	FG	SS	BR		
04-02	S	FG			7/16-20	1/8-28
04-04	S	FG			7/16-20	1/4-19
06-04	S	FG			9/16-18	1/4-19
06-06	S	FG			9/16-18	3/8-19
08-06	S	FG			3/4-16	3/8-19
08-08	S	FG			3/4-16	1/2-14
12-12	S	FG			1 1/16-12	3/4-14
16-16	S	FG			1 5/16-12	1-11

3807

BSPB to BSPT Elbow 45°



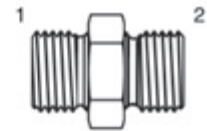
Dash Size	Stock Materials				T1 (BSPB)	T2 (BSPT)
	S	FG	SS	BR		
04-02	S				1/4-19	1/8-28
04-04	S				1/4-19	1/4-19
04-06	S				1/4-19	3/8-19
06-04	S				3/8-19	1/4-19
06-06	S				3/8-19	3/8-19
08-06	S				1/2-14	3/8-19
08-08	S				1/2-14	1/2-14
12-12	S				3/4-14	3/4-14

BSPB Adapters

Dash Size	Stock Materials S FG SS BR	T1 (BSPB)	T2 (MM)
02-12	\$	1/8-28	12X1.5
02-14	\$	1/8-28	14X1.5
04-10	\$	1/4-19	10X1.5
04-12	\$	1/4-19	12X1.5
04-14	\$	1/4-19	14X1.5
04-16	\$	1/4-19	16X1.5
04-18	\$	1/4-19	18X1.5
04-22	\$	1/4-19	22X1.5
06-12	\$	3/8-19	12X1.5
06-14	\$	3/8-19	14X1.5
06-16	\$	3/8-19	16X1.5
06-18	\$	3/8-19	18X1.5
06-20	\$	3/8-19	20X1.5
08-12	\$	1/2-14	12X1.5
08-14	\$	1/2-14	14X1.5
08-16	\$	1/2-14	16X1.5
08-18	\$	1/2-14	18X1.5
08-20	\$	1/2-14	20X1.5
08-22	\$	1/2-14	22X1.5
08-24	\$	1/2-14	24X1.5
08-26	\$	1/2-14	26X1.5
10-22	\$	5/8-14	22X1.5
10-26	\$	5/8-14	26X1.5
12-16	\$	3/4-14	16X1.5
12-18	\$	3/4-14	18X1.5
12-20	\$	3/4-14	20X1.5
12-22	\$	3/4-14	22X1.5
12-24	\$	3/4-14	24X1.5
12-26	\$	3/4-14	26X1.5
12-30	\$	3/4-14	30X2.0
16-18	\$	1-11	18X1.5
16-22	\$	1-11	22X1.5

3810

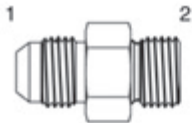
BSPB to Metric (1.5 MM Pitch)



BSPB Adapters

3820

JIC to BSPB Dual Port*



Dash Size	Stock Materials				T1 (UNF)	T2 (BSPB)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-28
04-04	\$				7/16-20	1/4-19
04-06	\$				7/16-20	3/8-19
04-08	\$				7/16-20	1/2-14
04-12	\$				7/16-20	3/4-14
05-02	\$				1/2-20	1/8-28
05-04	\$				1/2-20	1/4-19
05-06	\$				1/2-20	3/8-19
05-08	\$				1/2-20	1/2-14
06-02	\$				9/16-18	1/8-28
06-04	\$				9/16-18	1/4-19
06-06	\$				9/16-18	3/8-19
06-08	\$				9/16-18	1/2-14
06-10	\$				9/16-18	5/8-14
06-12	\$				9/16-18	3/4-14
08-04	\$				3/4-16	1/4-19
08-06	\$				3/4-16	3/8-19
08-08	\$				3/4-16	1/2-14
08-10	\$				3/4-16	5/8-14
08-12	\$				3/4-16	3/4-14
08-16	\$				3/4-16	1-11
10-04	\$				7/8-14	1/4-19
10-06	\$				7/8-14	3/8-19
10-08	\$				7/8-14	1/2-14
10-10	\$				7/8-14	5/8-14
10-12	\$				7/8-14	3/4-14
10-16	\$				7/8-14	1-11
12-06	\$				1 1/16-12	3/8-19
12-08	\$				1 1/16-12	1/2-14
12-10	\$				1 1/16-12	5/8-14
12-12	\$				1 1/16-12	3/4-14
12-16	\$				1 1/16-12	1-11
12-20	\$				1 1/16-12	1 1/4-11
14-12	\$				1 3/16-12	3/4-14
14-16	\$				1 3/16-12	1-11
16-08	\$				1 5/16-12	1/2-14
16-12	\$				1 5/16-12	3/4-14
16-16	\$				1 5/16-12	1-11
16-20	\$				1 5/16-12	1 1/4-11
16-24	\$				1 5/16-12	1 1/2-11
20-12	\$				1 5/8-12	3/4-14
20-20	\$				1 5/8-12	1 1/4-11
20-24	\$				1 5/8-12	1 1/2-11
24-16	\$				1 7/8-12	1-11
24-24	\$				1 7/8-12	1 1/2-11
24-32	\$				1 7/8-12	2-11
32-16	\$				2 1/2-12	1-11
32-20	\$				2 1/2-12	1 1/4-11
32-24	\$				2 1/2-12	1 1/2-11
32-32	\$				2 1/2-12	2-11

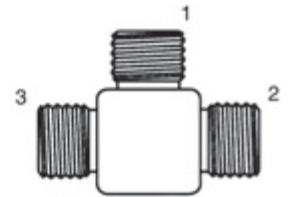
* For Port Seal Applications a DS-BSP Is Required.

BSPB Adapters

Dash Size	Stock Materials				T1 (BSPB)	T2 (BSPB)	T3 (BSPB)
	S	FG	SS	BR			
02	\$				1/8-28	1/8-28	1/8-28
04	\$				1/4-19	1/4-19	1/4-19
06	\$				3/8-19	3/8-19	3/8-19
08	\$				1/2-14	1/2-14	1/2-14
10	\$				5/8-14	5/8-14	5/8-14
12	\$				3/4-14	3/4-14	3/4-14
16	\$				1-11	1-11	1-11
20	\$				1 1/4-11	1 1/4-11	1 1/4-11
24	\$				1 1/2-11	1 1/2-11	1 1/2-11
32	\$				2-11	2-11	2-11

3823

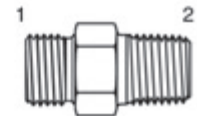
BSPB Tee



Dash Size	Stock Materials				T1 (BSPB)	T2 (NPTF)
	S	FG	SS	BR		
02-02	\$				1/8-28	1/8-27
02-04	\$				1/8-28	1/4-18
04-02	\$				1/4-19	1/8-27
04-04	\$				1/4-19	1/4-18
04-06	\$				1/4-19	3/8-18
04-08	\$				1/4-19	1/2-14
06-02	\$				3/8-19	1/8-27
06-04	\$				3/8-19	1/4-18
06-06	\$				3/8-19	3/8-18
06-08	\$				3/8-19	1/2-14
06-12	\$				3/8-19	3/4-14
06-16	\$				3/8-19	1-11 1/2
08-04	\$				1/2-14	1/4-18
08-06	\$				1/2-14	3/8-18
08-08	\$				1/2-14	1/2-14
08-12	\$				1/2-14	3/4-14
08-16	\$				1/2-14	1-11 1/2
10-08	\$				5/8-14	1/2-14
10-12	\$				5/8-14	3/4-14
12-04	\$				3/4-14	1/4-18
12-06	\$				3/4-14	3/8-18
12-08	\$				3/4-14	1/2-14
12-12	\$				3/4-14	3/4-14
12-16	\$				3/4-14	1-11 1/2
12-20	\$				3/4-14	1 1/4-11 1/2
16-08	\$				1-11	1/2-14
16-12	\$				1-11	3/4-14
16-16	\$				1-11	1-11 1/2
16-20	\$				1-11	1 1/4-11 1/2
16-24	\$				1-11	1 1/2-11 1/2
20-16	\$				1 1/4-11	1-11 1/2
20-20	\$				1 1/4-11	1 1/4-11 1/2
20-24	\$				1 1/4-11	1 1/2-11 1/2
24-12	\$				1 1/2-11	3/4-14
24-16	\$				1 1/2-11	1-11 1/2
24-20	\$				1 1/2-11	1 1/4-11 1/2
24-24	\$				1 1/2-11	1 1/2-11 1/2
24-32	\$				1 1/2-11	2-11 1/2
32-20	\$				2-11	1 1/4-11 1/2
32-24	\$				2-11	1 1/2-11 1/2
32-32	\$				2-11	2-11 1/2
40-32	\$				2 1/2-11	2-11 1/2
40-40	\$				2 1/2-11	2 1/2-11 1/2
48-48	\$				3-11	3-11 1/2

3825

BSPB to Pipe



* For Port Seal Applications a DS-BSP is Required

S= Steel

FG=Forging

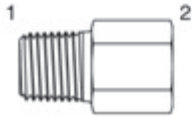
SS=Stainless Steel

BR=Brass

BSPB Adapters

3826

Pipe to BSPB



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (BSPB)
04-04	\$	1/4-18	1/4-19
06-04	\$	3/8-18	1/4-19
06-06	\$	3/8-18	3/8-19
08-04	\$	1/2-14	1/4-19
08-06	\$	1/2-14	3/8-19
08-08	\$	1/2-14	1/2-14
12-08	\$	3/4-14	1/2-14
12-12	\$	3/4-14	3/4-14
16-12	\$	1-11 1/2	3/4-14
16-16	\$	1-11 1/2	1-11
20-20	\$	1 1/4-11 1/2	1 1/4-11
24-24	\$	1 1/2-11 1/2	1 1/2-11
32-32	\$	2-11 1/2	2-11

3828

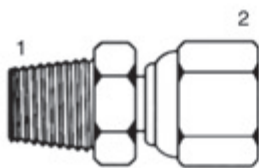
BSPB to Pipe Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (BSPB)	T2 (NPTF)
02-02	\$	1/8-28	1/8-27
04-04	\$	1/4-19	1/4-18
06-06	\$	3/8-19	3/8-18
08-08	\$	1/2-14	1/2-14
12-12	\$	3/4-14	3/4-14
16-16	\$	1-11	1-11 1/2

3832

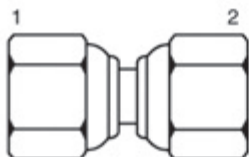
Pipe to BSPB Swivel



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (BSPB)
02-02	\$	1/8-27	1/8-28
02-04	\$	1/8-27	1/4-19
04-04	\$	1/4-18	1/4-19
06-04	\$	3/8-18	1/4-19
06-06	\$	3/8-18	3/8-19
06-08	\$	3/8-18	1/2-14
08-06	\$	1/2-14	3/8-19
08-08	\$	1/2-14	1/2-14
12-08	\$	3/4-14	1/2-14
12-12	\$	3/4-14	3/4-14
16-12	\$	1-11 1/2	3/4-14
16-16	\$	1-11 1/2	1-11

3835

BSPB to JIC Swivel



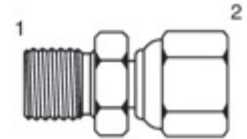
Dash Size	Stock Materials S FG SS BR	T1 (BSPB)	T2 (UNF)
04-04	\$	1/4-19	7/16-20
06-06	\$	3/8-19	9/16-18
06-08	\$	3/8-19	3/4-16
08-06	\$	1/2-14	9/16-18
08-08	\$	1/2-14	3/4-16
10-10	\$	5/8-14	7/8-14
12-12	\$	3/4-14	1 1/16-12
16-16	\$	1-11	1 5/16-12
20-20	\$	1 1/4-11	1 5/8-12

BSPB Adapters

Dash Size	Stock Materials S FG SS BR	T1 (BSPB)	T2 (BSPB)
02-02	\$	1/8-28	1/8-28
02-04	\$	1/8-28	1/4-19
04-02	\$	1/4-19	1/8-28
04-04	\$	1/4-19	1/4-19
04-06	\$	1/4-19	3/8-19
04-08	\$	1/4-19	1/2-14
06-04	\$	3/8-19	1/4-19
06-06	\$	3/8-19	3/8-19
06-08	\$	3/8-19	1/2-14
06-12	\$	3/8-19	3/4-14
08-04	\$	1/2-14	1/4-19
08-06	\$	1/2-14	3/8-19
08-08	\$	1/2-14	1/2-14
08-10	\$	1/2-14	5/8-14
08-12	\$	1/2-14	3/4-14
08-16	\$	1/2-14	1-11
10-08	\$	5/8-14	1/2-14
10-10	\$	5/8-14	5/8-14
10-12	\$	5/8-14	3/4-14
12-06	\$	3/4-14	3/8-19
12-08	\$	3/4-14	1/2-14
12-10	\$	3/4-14	5/8-14
12-12	\$	3/4-14	3/4-14
12-16	\$	3/4-14	1-11
12-20	\$	3/4-14	1 1/4-11
16-08	\$	1-11	1/2-14
16-10	\$	1-11	5/8-14
16-12	\$	1-11	3/4-14
16-16	\$	1-11	1-11
16-20	\$	1-11	1 1/4-11
20-12	\$	1 1/4-11	3/4-14
20-16	\$	1 1/4-11	1-11
20-20	\$	1 1/4-11	1 1/4-11
24-16	\$	1 1/2-11	1-11
24-20	\$	1 1/2-11	1 1/4-11
24-24	\$	1 1/2-11	1 1/2-11
32-32	\$	2-11	2-11

3840

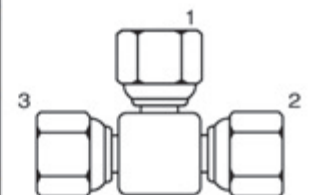
BSPB to BSPB Swivel



Dash Size	Stock Materials S FG SS BR	T1 (BSPB)	T2 (BSPB)	T3 (BSPB)
02	\$	1/8-28	1/8-28	1/8-28
04	\$	1/4-19	1/4-19	1/4-19
06	\$	3/8-19	3/8-19	3/8-19
08	\$	1/2-14	1/2-14	1/2-14
10	\$	5/8-14	5/8-14	5/8-14
12	\$	3/4-14	3/4-14	3/4-14
16	\$	1-11	1-11	1-11
20	\$	1 1/4-11	1 1/4-11	1 1/4-11
24	\$	1 1/2-11	1 1/2-11	1 1/2-11
32	\$	2-11	2-11	2-11

3853

BSPB Swivel Union Tee



S= Steel

FG=Forging

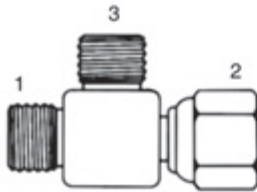
SS=Stainless Steel

BR=Brass

BSPP Adapters

3854

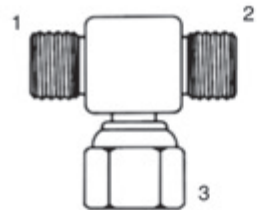
BSPP Run Tee



Dash Size	Stock Materials S FG SS BR	T1 (BSPP)	T2 (BSPP)	T3 (BSPP)
02	\$	1/8-28	1/8-28	1/8-28
04	\$	1/4-19	1/4-19	1/4-19
06	\$	3/8-19	3/8-19	3/8-19
08	\$	1/2-14	1/2-14	1/2-14
10	\$	5/8-14	5/8-14	5/8-14
12	\$	3/4-14	3/4-14	3/4-14
16	\$	1-11	1-11	1-11

3855

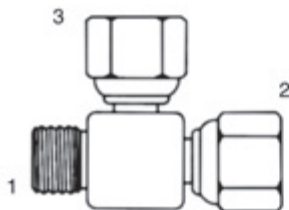
BSPP Branch Tee



Dash Size	Stock Materials S FG SS BR	T1 (BSPP)	T2 (BSPP)	T3 (BSPP)
02	\$	1/8-28	1/8-28	1/8-28
04	\$	1/4-19	1/4-19	1/4-19
06	\$	3/8-19	3/8-19	3/8-19
08	\$	1/2-14	1/2-14	1/2-14
10	\$	5/8-14	5/8-14	5/8-14
12	\$	3/4-14	3/4-14	3/4-14
16	\$	1-11	1-11	1-11
20	\$	1 1/4-11	1 1/4-11	1 1/4-11

3856

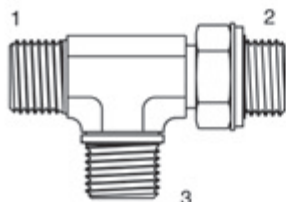
BSPP Swivel Run Tee



Dash Size	Stock Materials S FG SS BR	T1 (BSPP)	T2 (BSPP)	T3 (BSPP)
02	\$	1/8-28	1/8-28	1/8-28
04	\$	1/4-19	1/4-19	1/4-19
06	\$	3/8-19	3/8-19	3/8-19
08	\$	1/2-14	1/2-14	1/2-14
10	\$	5/8-14	5/8-14	5/8-14
12	\$	3/4-14	3/4-14	3/4-14
16	\$	1-11	1-11	1-11

3857

BSPP Adjustable Run Tee



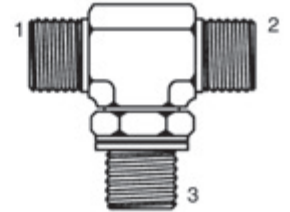
Dash Size	Stock Materials S FG SS BR	T1 (BSPP)	T2 (BSPP)	T3 (BSPP)
04	\$ FG	1/4-19	1/4-19	1/4-19
06-04	\$ FG	3/8-19	3/8-19	1/4-19
06	\$ FG	3/8-19	3/8-19	3/8-19
08-06	\$ FG	1/2-14	1/2-14	3/8-19
08	\$ FG	1/2-14	1/2-14	1/2-14
12	\$ FG	3/4-14	3/4-14	3/4-14

BSPB Adapters

Dash Size	Stock Materials				T1 (BSPB)	T2 (BSPB)	T3 (BSPB)
	S	FG	SS	BR			
04	\$	FG			1/4-19	1/4-19	1/4-19
06-06-04	\$	FG			3/8-19	3/8-19	1/4-19
06	\$	FG			3/8-19	3/8-19	3/8-19
08-08-06	\$	FG			1/2-14	1/2-14	3/8-19
08	\$	FG			1/2-14	1/2-14	1/2-14
12	\$	FG			3/4-14	3/4-14	3/4-14

3858

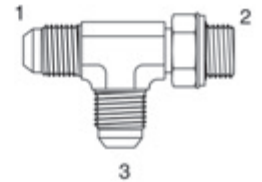
BSPB Adjustable Branch Tee



Dash Size	Stock Materials				T1 (UNF)	T2 (BSPB)	T3 (UNF)
	S	FG	SS	BR			
04	\$	FG			7/16-20	1/4-19	7/16-20
06-06-04	\$	FG			9/16-18	1/4-19	9/16-18
06	\$	FG			9/16-18	3/8-19	9/16-18
08-08-06	\$	FG			3/4-16	3/8-19	3/4-16
08	\$	FG			3/4-16	1/2-14	3/4-16
12	\$	FG			1 1/16-12	3/4-14	1 1/16-12
16	\$	FG			1 5/16-12	1-11	1 5/16-12

3859

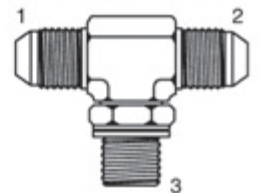
JIC to BSPB Adjustable Run Tee



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (BSPB)
	S	FG	SS	BR			
04	\$	FG			7/16-20	7/16-20	1/4-19
06-04	\$	FG			9/16-18	9/16-18	1/4-19
06	\$	FG			9/16-18	9/16-18	3/8-19
08-06	\$	FG			3/4-16	3/4-16	3/8-19
08	\$	FG			3/4-16	3/4-16	1/2-14
12	\$	FG			1 1/16-12	1 1/16-12	3/4-14
16	\$	FG			1 5/16-12	1 5/16-12	1-11

3860

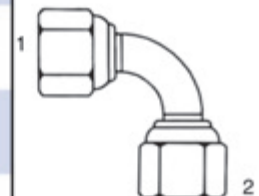
JIC to BSPB Adjustable Branch Tee



Dash Size	Stock Materials				T1 (BSPB)	T2 (BSPB)
	S	FG	SS	BR		
04-04	\$				1/4-19	1/4-19
06-06	\$				3/8-19	3/8-19
08-08	\$				1/2-14	1/2-14
10-10	\$				5/8-14	5/8-14
12-12	\$				3/4-14	3/4-14
16-16	\$				1-11	1-11
20-20	\$				1 1/4-11	1 1/4-11

3901

BSPB to BSPB Bent Tube Swivel Elbow 90°



S= Steel

FG=Forging

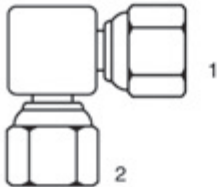
SS=Stainless Steel

BR=Brass

BSPP Adapters

3904

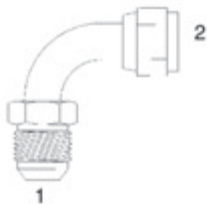
BSPP Swivel Union Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (BSPP)	T2 (BSPP)
02-02	\$	1/8-28	1/8-28
04-04	\$	1/4-19	1/4-19
06-06	\$	3/8-19	3/8-19
08-08	\$	1/2-14	1/2-14
10-10	\$	5/8-14	5/8-14
12-12	\$	3/4-14	3/4-14
16-16	\$	1-11	1-11
20-20	\$	1 1/4-11	1 1/4-11
24-24	\$	1 1/2-11	1 1/2-11
32-32	\$	2-11	2-11

3905

JIC to BSPP Swivel Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (BSPP)
04-04	\$	7/16-20	1/4-19
06-06	\$	9/16-18	3/8-19
08-08	\$	3/4-16	1/2-14
10-10	\$	7/8-14	5/8-14
12-12	\$	1 1/16-12	3/4-14
16-16	\$	1 5/16-12	1-11

DS-BSP

Bonded Seal For British Pipe



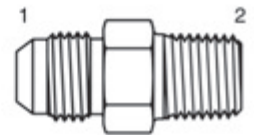
Dash Size	Stock Materials S FG SS BR	BSPP Size
02	\$	1/8-28
04	\$	1/4-19
06	\$	3/8-19
08	\$	1/2-14
10	\$	5/8-14
12	\$	3/4-14
16	\$	1-11
20	\$	1 1/4-11
24	\$	1 1/2-11
32	\$	2-11
40	\$	2 1/2-11
48	\$	3-11

BSPT Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (BSPT)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-28
04-04	\$				7/16-20	1/4-19
04-06	\$				7/16-20	3/8-19
05-02	\$				1/2-20	1/8-28
05-04	\$				1/2-20	1/4-19
06-02	\$				9/16-18	1/8-28
06-04	\$				9/16-18	1/4-19
06-06	\$				9/16-18	3/8-19
06-08	\$				9/16-18	1/2-14
08-04	\$				3/4-16	1/4-19
08-06	\$				3/4-16	3/8-19
08-08	\$				3/4-16	1/2-14
08-12	\$				3/4-16	3/4-14
10-06	\$				7/8-14	3/8-19
10-08	\$				7/8-14	1/2-14
10-12	\$				7/8-14	3/4-14
12-08	\$				1 1/16-12	1/2-14
12-12	\$				1 1/16-12	3/4-14
12-16	\$				1 1/16-12	1-11
16-12	\$				1 5/16-12	3/4-14
16-16	\$				1 5/16-12	1-11
16-20	\$				1 5/16-12	1 1/4-11
20-16	\$				1 5/8-12	1-11
20-20	\$				1 5/8-12	1 1/4-11
24-24	\$				1 7/8-12	1 1/2-11

3404

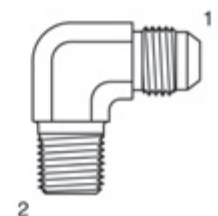
JIC to BSPT



Dash Size	Stock Materials				T1 (UNF)	T2 (BSPT)
	S	FG	SS	BR		
04-02	\$	FG			7/16-20	1/8-28
04-04	\$	FG			7/16-20	1/4-19
05-02	\$	FG			1/2-20	1/8-28
05-04	\$	FG			1/2-20	1/4-19
06-04	\$	FG			9/16-18	1/4-19
06-06	\$	FG			9/16-18	3/8-19
06-08	\$	FG			9/16-18	1/2-14
08-04	\$	FG			3/4-16	1/4-19
08-06	\$	FG			3/4-16	3/8-19
08-08	\$	FG			3/4-16	1/2-14
08-12	\$	FG			3/4-16	3/4-14
10-06	\$	FG			7/8-14	3/8-19
10-08	\$	FG			7/8-14	1/2-14
10-12	\$	FG			7/8-14	3/4-14
12-08	\$	FG			1 1/16-12	1/2-14
12-12	\$	FG			1 1/16-12	3/4-14
16-12	\$	FG			1 5/16-12	3/4-14
16-16	\$	FG			1 5/16-12	1-11
20-16	\$	FG			1 5/8-12	1-11
20-20	\$	FG			1 5/8-12	1 1/4-11
24-24	\$	FG			1 7/8-12	1 1/2-11

3501

JIC to BSPT Elbow 90°



S= Steel

FG=Forging

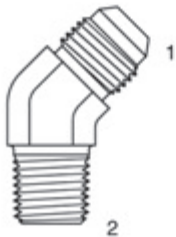
SS=Stainless Steel

BR=Brass

BSPT Adapters

3503

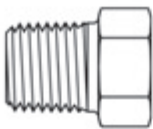
JIC to BSPT Elbow 45°



Dash Size	Stock Materials				T1 (UNF)	T2 (BSPT)
	S	FG	SS	BR		
04-04	\$	FG			7/16-20	1/4-19
05-04	\$	FG			1/2-20	1/4-19
06-04	\$	FG			9/16-18	1/4-19
06-06	\$	FG			9/16-18	3/8-19
06-08	\$	FG			9/16-18	1/2-14
08-06	\$	FG			3/4-16	3/8-19
08-08	\$	FG			3/4-16	1/2-14
10-06	\$	FG			7/8-14	3/8-19
10-08	\$	FG			7/8-14	1/2-14
10-12	\$	FG			7/8-14	3/4-14
12-08	\$	FG			1 1/16-12	1/2-14
12-12	\$	FG			1 1/16-12	3/4-14
12-16	\$	FG			1 1/16-12	1-11
16-12	\$	FG			1 5/16-12	3/4-14
16-16	\$	FG			1 5/16-12	1-11
20-20	\$	FG			1 5/8-12	1 1/4-11
24-24	\$	FG			1 7/8-12	1 1/2-11

3508

BSPT Plug



Dash Size	Stock Materials				T1 (BSPT)
	S	FG	SS	BR	
02	\$				1/8-28
04	\$				1/4-19
06	\$				3/8-19
08	\$				1/2-14
10	\$				5/8-14
12	\$				3/4-14
16	\$				1-11
20	\$				1 1/4-11
24	\$				1 1/2-11
32	\$				2-11

3508-HHP

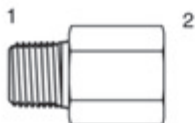
BSPT Countersunk Plug



Dash Size	Stock Materials				T1 (BSPT)
	S	FG	SS	BR	
02	\$				1/8-28
04	\$				1/4-19
06	\$				3/8-19
08	\$				1/2-14
12	\$				3/4-14
16	\$				1-11

3506

BSPT Hex Reducer Bushing



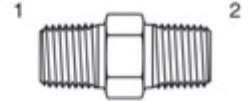
Dash Size	Stock Materials				T1 (BSPT)	T2 (BSPT)
	S	FG	SS	BR		
04-02	\$				1/4-19	1/8-28
06-02	\$				3/8-19	1/8-28
06-04	\$				3/8-19	1/4-19
08-04	\$				1/2-14	1/4-19
08-06	\$				1/2-14	3/8-19
12-06	\$				3/4-14	3/8-19
12-08	\$				3/4-14	1/2-14
16-08	\$				1-11	1/2-14
16-12	\$				1-11	3/4-14

BSPT Adapters

Dash Size	Stock Materials				T1 (BSPT)	T2 (BSPT)
	S	FG	SS	BR		
02-02	\$				1/8-28	1/8-28
04-02	\$				1/4-19	1/8-28
04-04	\$				1/4-19	1/4-19
06-02	\$				3/8-19	1/8-28
06-04	\$				3/8-19	1/4-19
06-06	\$				3/8-19	3/8-19
08-04	\$				1/2-14	1/4-19
08-06	\$				1/2-14	3/8-19
08-08	\$				1/2-14	1/2-14
10-10	\$				5/8-14	5/8-14
12-08	\$				3/4-14	1/2-14
12-12	\$				3/4-14	3/4-14
16-12	\$				1-11	3/4-14
16-16	\$				1-11	1-11
20-20	\$				1 1/4-11	1 1/4-11
24-24	\$				1 1/2-11	1 1/2-11
32-32	\$				2-11	2-11
48-48	\$				3-11	3-11

3520

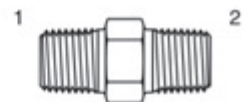
BSPT Hex Nipple



Dash Size	Stock Materials				T1 (BSPT)	T2 (NPTF)
	S	FG	SS	BR		
04-04	\$				1/4-19	1/4-18
04-06	\$				1/4-19	3/8-18
06-04	\$				3/8-19	1/4-18
06-06	\$				3/8-19	3/8-18
08-08	\$				1/2-14	1/2-14
12-12	\$				3/4-14	3/4-14
16-16	\$				1-11	1-11 1/2
20-20	\$				1 1/4-11	1 1/4-11 1/2
24-24	\$				1 1/2-11	1 1/2-11 1/2
32-32	\$				2-11	2-11 1/2

3524

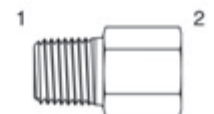
BSPT to Pipe



Dash Size	Stock Materials				T1 (BSPT)	T2 (BSPP)
	S	FG	SS	BR		
04-04	\$				1/4-19	1/4-19
06-02	\$				3/8-19	1/8-28
06-04	\$				3/8-19	1/4-19
12-04	\$				3/4-14	1/4-19
12-06	\$				3/4-14	3/8-19

3545

BSPT to BSPP



S= Steel

FG=Forging

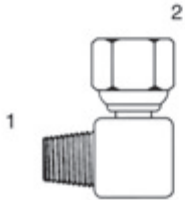
SS=Stainless Steel

BR=Brass

BSPT Adapters

3827

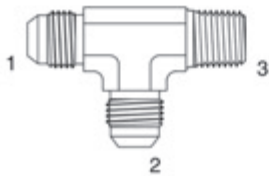
**BSPT to BSPP
Swivel Elbow 90°**



Dash Size	Stock Materials				T1 (BSPT)	T2 (BSPP)
	S	FG	SS	BR		
04-04	\$				1/4-19	1/4-19
06-06	\$				3/8-19	3/8-19
08-08	\$				1/2-14	1/2-14
12-12	\$				3/4-14	3/4-14
16-16	\$				1-11	1-11

3656

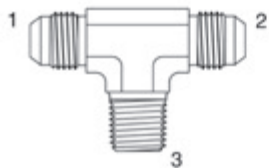
**JIC to BSPT
Run Tee**



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (BSPT)
	S	FG	SS	BR			
04-04	\$	FG			7/16-20	7/16-20	1/4-19
06-04	\$	FG			9/16-18	9/16-18	1/4-19
08-06	\$	FG			3/4-16	3/4-16	3/8-19
10-08	\$	FG			7/8-14	7/8-14	1/2-14
12-12	\$	FG			1 1/16-12	1 1/16-12	3/4-14

3657

**JIC to BSPT
Branch Tee**



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (BSPT)
	S	FG	SS	BR			
04-04	\$	FG			7/16-20	7/16-20	1/4-19
06-04	\$	FG			9/16-18	9/16-18	1/4-19
08-06	\$	FG			3/4-16	3/4-16	3/8-19
10-08	\$	FG			7/8-14	7/8-14	1/2-14
12-12	\$	FG			1 1/16-12	1 1/16-12	3/4-14

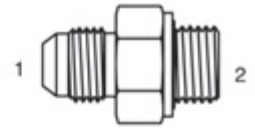
Metric Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (MM)
	S	FG	SS	BR		
04-10	\$				7/16-20	10X1.0
04-12	\$				7/16-20	12X1.5
04-14	\$				7/16-20	14X1.5
04-18	\$				7/16-20	18X1.5
05-12	\$				1/2-20	12X1.5
05-14	\$				1/2-20	14X1.5
06-12	\$				9/16-18	12X1.5
06-14	\$				9/16-18	14X1.5
06-16	\$				9/16-18	16X1.5
06-18	\$				9/16-18	18X1.5
08-16	\$				3/4-16	16X1.5
08-18	\$				3/4-16	18X1.5
08-22	\$				3/4-16	22X1.5
10-16	\$				7/8-14	16X1.5
10-18	\$				7/8-14	18X1.5
10-20	\$				7/8-14	20X1.5
10-22	\$				7/8-14	22X1.5
12-22	\$				1 1/16-12	22X1.5
12-27x1.5	\$				1 1/16-12	27X1.5
12-27x2.0	\$				1 1/16-12	27X2.0
14-26	\$				1 3/16-12	26X1.5
16-27	\$				1 5/16-12	27X2.0
16-33	\$				1 5/16-12	33X2.0
20-42	\$				1 5/8-12	42X2.0
24-48	\$				1 7/8-12	48X2.0

*Port seal-crush washer and O-ring included.

7400

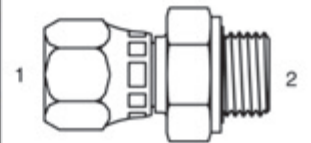
JIC to Metric



Dash Size	Stock Materials				T1 (UNF)	T2 (MM)
	S	FG	SS	BR		
04-10	\$				7/16-20	10X1.0
04-12	\$				7/16-20	12X1.5
05-12	\$				1/2-20	12X1.5
06-14	\$				9/16-18	14X1.5
06-16	\$				9/16-18	16X1.5
08-16	\$				3/4-16	16X1.5
10-22	\$				7/8-14	22X1.5
12-27	\$				1 1/16-12	27X2.0
16-33	\$				1 5/16-12	33X2.0

7402

JIC to Metric



S= Steel

FG=Forging

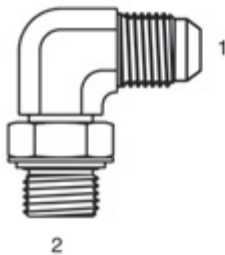
SS=Stainless Steel

BR=Brass

Metric Adapters

7801

JIC to Metric Elbow 90°

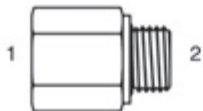


Dash Size	Stock Materials				T1 (UNF)	T2 (MM)
	S	FG	SS	BR		
04-10	\$	FG			7/16-20	10X1.0
04-12	\$	FG			7/16-20	12X1.5
04-14	\$	FG			7/16-20	14X1.5
05-10	\$	FG			1/2-20	10X1.0
05-12	\$	FG			1/2-20	12X1.5
05-14	\$	FG			1/2-20	14X1.5
06-12	\$	FG			9/16-18	12X1.5
06-14	\$	FG			9/16-18	14X1.5
06-16	\$	FG			9/16-18	16X1.5
08-16	\$	FG			3/4-16	16X1.5
08-18	\$	FG			3/4-16	18X1.5
08-22	\$	FG			3/4-16	22X1.5
10-18	\$	FG			7/8-14	18X1.5
10-20	\$	FG			7/8-14	20X1.5
10-22	\$	FG			7/8-14	22X1.5
12-22	\$	FG			1 1/16-12	22X1.5
12-27	\$	FG			1 1/16-12	27X2.0
14-26	\$	FG			1 3/16-12	26X1.5
16-27	\$	FG			1 5/16-12	27X2.0
16-33	\$	FG			1 5/16-12	33X2.0
20-42	\$	FG			1 5/8-12	42X2.0

*Port seal-crush washer and O-ring included.

7455

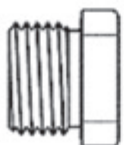
Pipe to Metric



Dash Size	Stock Materials				T1 (NPTF)	T2 (MM)
	S	FG	SS	BR		
02-10	\$				1/8-27	10X1.0
02-14	\$				1/8-27	14X1.5
04-12	\$				1/4-18	12X1.5
04-14	\$				1/4-18	14X1.5
04-20	\$				1/4-18	20X1.5
06-16	\$				3/8-18	16X1.5
06-18	\$				3/8-18	18X1.5
08-16	\$				1/2-14	16X1.5
08-18	\$				1/2-14	18X1.5
08-22	\$				1/2-14	22X1.5
12-27	\$				3/4-14	27X2.0
16-33	\$				1-11 1/2	33X2.0
20-42	\$				1 1/4-11 1/2	42X2.0

7408

Metric Hex Head Plug



Dash Size	Stock Materials				T1 (MM)
	S	FG	SS	BR	
08	\$				8X1.0
10	\$				10X1.0
10-1.5	\$				10X1.5
12-1.0	\$				12X1.0
12	\$				12X1.5
14	\$				14X1.5
16	\$				16X1.5
18	\$				18X1.5
20	\$				20X1.5
22	\$				22X1.5
24	\$				24X1.5
26	\$				26X1.5
30	\$				30X1.5

Metric Adapters

Dash Size	Stock Materials				T1 (MM)
	S	FG	SS	BR	
10	\$				10X1.0
12	\$				12X1.5
14	\$				14X1.5
16	\$				16X1.5
18	\$				18X1.5
20	\$				20X1.5
22	\$				22X1.5
24	\$				24X1.5
26	\$				26X1.5
27	\$				27X2.0
30	\$				30X1.5
33	\$				33X2.0
42	\$				42X2.0
48	\$				48X2.0

7408-HHP

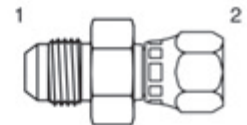
Metric Hollow Hex Plug



Dash Size	Stock Materials				T1 (UNF)	T2 (THREAD)
	S	FG	SS	BR		
05-L06-12	\$				1/2-20	12X1.5
06-L08-14	\$				9/16-18	14X1.5
06-L10-16	\$				9/16-18	16X1.5
06-L12-18	\$				9/16-18	18X1.5
06-S12-20	\$				9/16-18	20X1.5
06-L15-22	\$				9/16-18	22X1.5
08-L10-16	\$				3/4-16	16X1.5
08-L12-18	\$				3/4-16	18X1.5
08-S12-20	\$				3/4-16	20X1.5
08-L15-22	\$				3/4-16	22X1.5
10-L12-18	\$				7/8-14	18X1.5
10-S12-20	\$				7/8-14	20X1.5
10-L15-22	\$				7/8-14	22X1.5

7430

JIC to Metric (Light & Heavy Series)

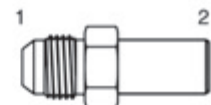


L=LIGHT S=HEAVY

Dash Size	Stock Materials				T1 (UNF)	T2 (DIAMETER)
	S	FG	SS	BR		
04-06	\$				7/16-20	6
04-08	\$				7/16-20	8
04-10	\$				7/16-20	10
06-08	\$				9/16-18	8
06-10	\$				9/16-18	10
06-12	\$				9/16-18	12
06-14	\$				9/16-18	14
08-10	\$				3/4-16	10
08-12	\$				3/4-16	12
08-14	\$				3/4-16	14
08-15	\$				3/4-16	15
08-16	\$				3/4-16	16
10-18	\$				7/8-14	18
10-20	\$				7/8-14	20
12-18	\$				1 1/16-12	18
12-20	\$				1 1/16-12	20
12-22	\$				1 1/16-12	22
12-25	\$				1 1/16-12	25
16-25	\$				1 5/16-12	25
16-28	\$				1 5/16-12	28
16-30	\$				1 5/16-12	30
20-28	\$				1 5/8-12	28
20-35	\$				1 5/8-12	35
20-38	\$				1 5/8-12	38
24-42	\$				1 7/8-12	42

7625

JIC to Metric Standpipe



S= Steel

FG=Forging

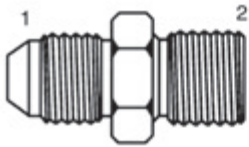
SS=Stainless Steel

BR=Brass

Metric Adapters

7420-L

**JIC to Metric
Dual Purpose***



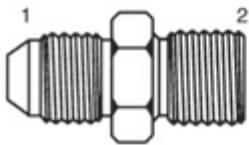
LIGHT SERIES

Dash Size	Stock Materials				T1 (UNF)	T2 (MM)
	S	FG	SS	BR		
04-L06-12	\$				7/16-20	12X1.5
04-L08-14	\$				7/16-20	14X1.5
06-L08-14	\$				9/16-18	14X1.5
06-L10-16	\$				9/16-18	16X1.5
06-L12-18	\$				9/16-18	18X1.5
08-L10-16	\$				3/4-16	16X1.5
08-L12-18	\$				3/4-16	18X1.5
08-L15-22	\$				3/4-18	22X1.5
10-L15-22	\$				7/8-14	22X1.5
10-L18-26	\$				7/8-14	26X1.5
12-L15-22	\$				1 1/16-12	22X2.0
12-L18-26	\$				1 1/16-12	26X2.0
12-L22-30	\$				1 1/16-12	45X2.0
16-L28-36	\$				1 5/16-12	36X2.0
20-L35-45	\$				1 5/8-12	45X2.0

*For port seal applications a DS-MM is required.

7420-S

**JIC to Metric
Dual Purpose***



HEAVY SERIES

Dash Size	Stock Materials				T1 (UNF)	T2 (MM)
	S	FG	SS	BR		
04-S06-14	\$				7/16-20	14X1.5
04-S08-16	\$				7/16-20	16X1.5
06-S08-16	\$				9/16-18	16X1.5
06-S10-18	\$				9/16-18	18X1.5
06-S12-20	\$				9/16-18	20X1.5
08-S10-18	\$				3/4-16	18X1.5
08-S12-20	\$				3/4-16	20X1.5
08-S14-22	\$				3/4-16	22X1.5
10-S12-20	\$				7/8-14	20X1.5
10-S16-24	\$				7/8-14	24X1.5
12-S20-30	\$				1 1/16-12	30X2.0
12-S25-36	\$				1 1/16-12	36X2.0
16-S30-42	\$				1 5/16-12	42X2.0
20-S38-52	\$				1 5/8-12	52X2.0
24-S38-52	\$				1 7/8-12	52X2.0

*For port seal applications a DS-MM is required.


7802


**JIC to Metric
Elbow 45°**



Dash Size	Stock Materials				T1 (UNF)	T2 (MM)
	S	FG	SS	BR		
04-10	\$				7/16-20	10X1.0
05-12	\$				1/2-20	12X1.5
06-16	\$				9/16-18	16X1.5
08-18	\$				3/4-16	18X1.5
10-18	\$				7/8-14	18X1.5
10-22	\$				7/8-14	22X1.5
12-22	\$				1 1/16-12	22X1.5
12-27	\$				1 1/16-12	27X2.0
16-27	\$				1 5/16-12	27X2.0
16-33	\$				1 5/16-12	33X2.0

Metric Adapters

Dash Size	Stock Materials				Metric Dash Size	DS-MM
	S	FG	SS	BR		
06	\$				6	Bonded Seal for Metric Parallel Thread 
08	\$				8	
10	\$				10	
12	\$				12	
14	\$				14	
16	\$				16	
18	\$				18	
20	\$				20	
22	\$				22	
26	\$				26	
27	\$				27	
30	\$				30	
33	\$				33	
36	\$				36	
42	\$				42	
52	\$				52	

Dash Size	Stock Materials				Metric Dash Size	M7629
	S	FG	SS	BR		
10					10	Metric O-Ring 
12					12	
14					14	
16					16	
18					18	
20					20	
22					22	
27					27	
33					33	
42					42	

Metric Compression

7105-L

Metric Light Series Tube Nut



Dash Size	Stock Materials				T1 (MM)
	S	FG	SS	BR	
06	\$				12X1.5
08	\$				14X1.5
10	\$				16X1.5
12	\$				18X1.5
15	\$				22X1.5
18	\$				26X1.5
22	\$				30X2.0
28	\$				36X2.0
35	\$				45X2.0
42	\$				52X2.0

7105-LL

Metric Extra Light Series Tube Nut



Dash Size	Stock Materials				T1 (MM)
	S	FG	SS	BR	
04	\$				8X1.0
06	\$				10X1.0
08	\$				12X1.0
10	\$				14X1.0
12	\$				16X1.0

7105-S

Metric Heavy Series Tube Nut



Dash Size	Stock Materials				T1 (MM)
	S	FG	SS	BR	
06	\$				14X1.5
08	\$				16X1.5
10	\$				18X1.5
12	\$				20X1.5
14	\$				22X1.5
16	\$				24X1.5
20	\$				30X2.0
25	\$				36X2.0
30	\$				42X2.0
38	\$				52X2.0

7195

Metric Series Cutting Ring



Dash Size	Stock Materials				TUBE O.D.
	S	FG	SS	BR	
06	\$				6
08	\$				8
10	\$				10
12	\$				12
14	\$				14
15	\$				15
16	\$				16
18	\$				18
20	\$				20
22	\$				22
25	\$				25
28	\$				28
30	\$				30
35	\$				35
38	\$				38
42	\$				42

7195 Series is compatible with both of the 7105-L and 7105-S series.

Metric Compression

Dash Size	Stock Materials				T1 (MM)
	S	FG	SS	BR	
04	\$				4
06	\$				6
08	\$				8
10	\$				10
12	\$				12

7195-LL

Metric Extra Light Series Cutting Ring



7195-LL Series is compatible with the 7105-LL series only.

Dash Size	Stock Materials				Tube O.D. (MM)	Tube O.D. (MM)
	S	FG	SS	BR		
06-06	\$				6	6
08-06	\$				8	6
08-08	\$				8	8
10-06	\$				10	6
10-08	\$				10	8
10-10	\$				10	10
12-06	\$				12	6
12-08	\$				12	8
12-10	\$				12	10
12-12	\$				12	12
15-10	\$				15	10
15-12	\$				15	12
15-15	\$				15	15
18-10	\$				18	10
18-12	\$				18	12
18-15	\$				18	15
18-18	\$				18	18
22-12	\$				22	12
22-15	\$				22	15
22-18	\$				22	18
22-22	\$				22	22
28-18	\$				28	18
28-22	\$				28	22
28-28	\$				28	28
35-22	\$				35	22
35-28	\$				35	28
35-35	\$				35	35
42-42	\$				42	42

8000-L

Light Series Straight Coupling



* For metric thread sizes refer to chart on pages 101-102.

EO SERIES - G & GR

S= Steel

FG=Forging

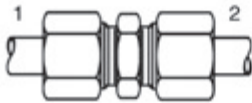
SS=Stainless Steel

BR=Brass

Metric Compression

8000-S

Heavy Series Straight Coupling

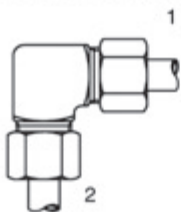


Dash Size	Stock Materials				Tube O.D. (MM)	Tube O.D. (MM)
	S	FG	SS	BR		
06-06	\$				6	6
08-06	\$				8	6
08-08	\$				8	8
10-06	\$				10	6
10-08	\$				10	8
10-10	\$				10	10
12-06	\$				12	6
12-08	\$				12	8
12-10	\$				12	10
12-12	\$				12	12
14-10	\$				14	10
14-12	\$				14	12
14-14	\$				14	14
16-12	\$				16	12
16-14	\$				16	14
16-16	\$				16	16
20-10	\$				20	10
20-12	\$				20	12
20-16	\$				20	16
20-20	\$				20	20
25-16	\$				25	16
25-20	\$				25	20
25-25	\$				25	25
30-20	\$				30	20
30-25	\$				30	25
30-30	\$				30	30
38-30	\$				38	30
38-38	\$				38	38

EO SERIES - G & GR

8500-L

Light Series Equal Elbows 90°

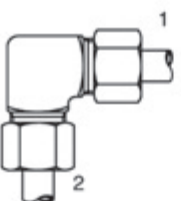


EO SERIES - W

Dash Size	Stock Materials				Tube O.D. (MM)	Tube O.D. (MM)
	S	FG	SS	BR		
06	\$				6	6
08	\$				8	8
10	\$				10	10
12	\$				12	12
15	\$				15	15
18	\$				18	18
22	\$				22	22
28	\$				28	28
35	\$				35	35
42	\$				42	42

8500-S

Heavy Series Equal Elbows 90°



EO SERIES - W

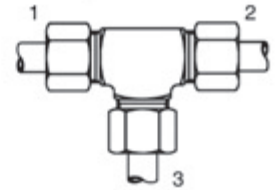
Dash Size	Stock Materials				Tube O.D. (MM)	Tube O.D. (MM)
	S	FG	SS	BR		
06	\$				6	6
08	\$				8	8
10	\$				10	10
12	\$				12	12
14	\$				14	14
16	\$				16	16
20	\$				20	20
25	\$				25	25
30	\$				30	30
38	\$				38	38

Metric Compression

Dash Size	Stock Materials S FG SS BR	Tube O.D. (MM)	Tube O.D. (MM)	Tube O.D. (MM)
06	\$	6	6	6
08	\$	8	8	8
10	\$	10	10	10
12	\$	12	12	12
15	\$	15	15	15
18	\$	18	18	18
22	\$	22	22	22
28	\$	28	28	28
35	\$	35	35	35
42	\$	42	42	42

8603-L

Light Series Equal Tee

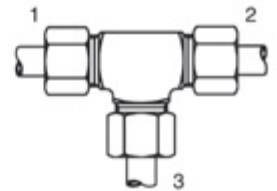


EO SERIES - T

Dash Size	Stock Materials S FG SS BR	Tube O.D. (MM)	Tube O.D. (MM)	Tube O.D. (MM)
06	\$	6	6	6
08	\$	8	8	8
10	\$	10	10	10
12	\$	12	12	12
14	\$	14	14	14
16	\$	16	16	16
20	\$	20	20	20
25	\$	25	25	25
30	\$	30	30	30
38	\$	38	38	38

8603-S

Heavy Series Equal Tee

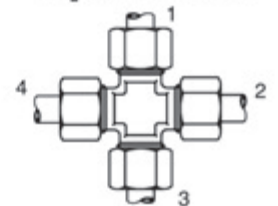


EO SERIES - T

Dash Size	Stock Materials S FG SS BR	Tube O.D. (MM)	Tube O.D. (MM)	Tube O.D. (MM)
06	\$	6	6	6
08	\$	8	8	8
10	\$	10	10	10
12	\$	12	12	12
15	\$	15	15	15
18	\$	18	18	18
22	\$	22	22	22
28	\$	28	28	28
35	\$	35	35	35
42	\$	42	42	42

8650-L

Light Series Equal Cross

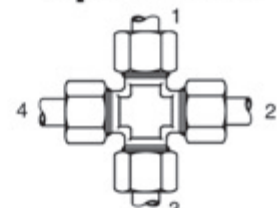


EO SERIES - K

Dash Size	Stock Materials S FG SS BR	Tube O.D. (MM)	Tube O.D. (MM)	Tube O.D. (MM)
06	\$	6	6	6
08	\$	8	8	8
10	\$	10	10	10
12	\$	12	12	12
14	\$	14	14	14
16	\$	16	16	16
20	\$	20	20	20
25	\$	25	25	25
30	\$	30	30	30
38	\$	38	38	38

8650-S

Heavy Series Equal Cross



EO SERIES - K

S= Steel

FG=Forging

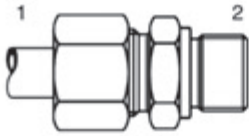
SS=Stainless Steel

BR=Brass

Metric Compression

8100-L

Light Series Stud Coupling (BSPP)

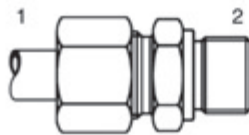


EO SERIES - GE-LR

Dash Size	Stock Materials S FG SS BR	Tube O.D. (MM)	T2 (BSPP)
06-02	\$	6	1/8-28
08-04	\$	8	1/4-19
10-04	\$	10	1/4-19
12-06	\$	12	3/8-19
15-08	\$	15	1/2-14
18-08	\$	18	1/2-14
22-12	\$	22	3/4-14
28-16	\$	28	1-11
35-20	\$	35	1 1/4-11
42-24	\$	42	1 1/2-11

8100-S

Heavy Series Stud Coupling (BSPP)

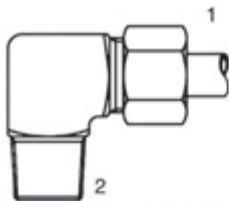


EO SERIES - GE-SR

Dash Size	Stock Materials S FG SS BR	Tube O.D. (MM)	T2 (BSPP)
06-04	\$	6	1/4-19
08-04	\$	8	1/4-19
10-06	\$	10	3/8-19
12-06	\$	12	3/8-19
14-08	\$	14	1/2-14
16-08	\$	16	1/2-14
20-12	\$	20	3/4-14
25-16	\$	25	1-11
30-20	\$	30	1 1/4-11
38-24	\$	38	1 1/2-11

8101-L

Light Series Stud Elbow 90° (BSPT)

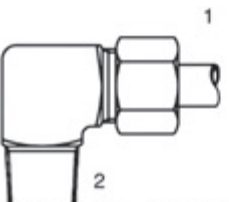


EO SERIES - WE-R/M

Dash Size	Stock Materials S FG SS BR	Tube O.D. (MM)	T2 (BSPP)
06-02	\$	6	1/8-28
08-04	\$	8	1/4-19
10-04	\$	10	1/4-19
12-06	\$	12	3/8-19
15-08	\$	15	1/2-14
18-08	\$	18	1/2-14

8101-S

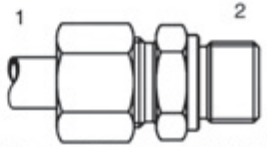
Heavy Series Stud Elbow 90° (BSPT)

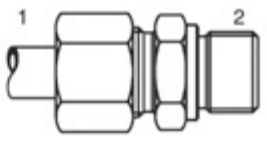


EO SERIES - WE-R/M

Dash Size	Stock Materials S FG SS BR	Tube O.D. (MM)	T2 (BSPP)
06-04	\$	6	1/4-19
08-04	\$	8	1/4-19
10-06	\$	10	3/8-19
12-06	\$	12	3/8-19
14-08	\$	14	1/2-14
16-08	\$	16	1/2-14

Metric Compression

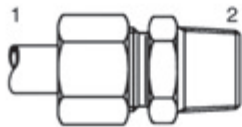
Dash Size	Stock Materials				Tube O.D. (MM)	T2 (MM)	8200-L
	S	FG	SS	BR			
06-10	\$				6	10X1.0	Light Series Stud Coupling (Metric Parallel)  EO SERIES - GE-LM
08-12	\$				8	12X1.5	
10-14	\$				10	14X1.5	
12-16	\$				12	16X1.5	
15-18	\$				15	18X1.5	
18-22	\$				18	22X1.5	
22-26	\$				22	26X1.5	
28-33	\$				28	33X2.0	
35-42	\$				35	42X2.0	
42-48	\$				42	48X2.0	

Dash Size	Stock Materials				Tube O.D. (MM)	T1 (MM)	8200-S
	S	FG	SS	BR			
06-12	\$				6	12X1.5	Heavy Series Stud Coupling (Metric Parallel)  EO SERIES - GE-SM
08-14	\$				8	14X1.5	
10-16	\$				10	16X1.5	
12-18	\$				12	18X1.5	
14-20	\$				14	20X1.5	
16-22	\$				16	22X1.5	
20-27	\$				20	27X2.0	
25-33	\$				25	33X2.0	
30-42	\$				30	42X2.0	
38-42	\$				38	42X2.0	

Metric Compression

8300-L

Light Series Stud Coupling (NPTF)

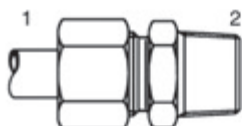


EO SERIES - GE-NPT

Dash Size	Stock Materials S FG SS BR	Tube O.D. (MM)	T2 (NPTF)
06-02	§	6	1/8-27
08-04	§	8	1/4-18
10-04	§	10	1/4-18
10-06	§	10	3/8-18
12-04	§	12	1/4-18
12-06	§	12	3/8-18
12-08	§	12	1/2-14
15-08	§	15	1/2-14
18-08	§	18	1/2-14
22-12	§	22	3/4-14
28-16	§	28	1-11 1/2
35-20	§	35	1 1/4-11 1/2
42-24	§	42	1 1/2-11 1/2

8300-S

Heavy Series Stud Coupling (NPTF)

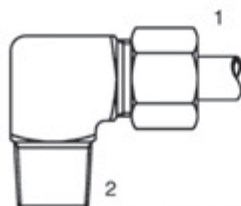


EO SERIES - GE-NPT

Dash Size	Stock Materials S FG SS BR	Tube O.D. (MM)	T2 (NPTF)
06-04	§	6	1/4-18
08-04	§	8	1/4-18
10-04	§	10	1/4-18
10-06	§	10	3/8-18
12-04	§	12	1/4-18
12-06	§	12	3/8-18
12-08	§	12	1/2-14
14-08	§	14	1/2-14
16-08	§	16	1/2-14
20-12	§	20	3/4-14
25-16	§	25	1-11 1/2
30-20	§	30	1 1/4-11 1/2
38-24	§	38	1 1/2-11 1/2

8301-L

Light Series Stud Elbow 90° (NPTF)

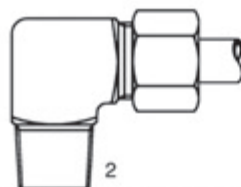


EO SERIES - WE-NPT

Dash Size	Stock Materials S FG SS BR	Tube O.D. (MM)	T2 (NPTF)
06-02	§	6	1/8-27
08-04	§	8	1/4-18
10-04	§	10	1/4-18
12-06	§	12	3/8-18
15-08	§	15	1/2-14
18-08	§	18	1/2-14
22-12	§	22	3/4-14
28-16	§	28	1-11 1/2
35-20	§	35	1 1/4-11 1/2
42-24	§	42	1 1/2-11 1/2

8301-S

Heavy Series Stud Elbow 90° (NPTF)



EO SERIES - WE-NPT

Dash Size	Stock Materials S FG SS BR	Tube O.D. (MM)	T2 (NPTF)
06-04	§	6	1/4-18
08-04	§	8	1/4-18
10-06	§	10	3/8-18
12-06	§	12	3/8-18
14-08	§	14	1/2-14
16-08	§	16	1/2-14
20-12	§	20	3/4-14
25-16	§	25	1-11 1/2
30-20	§	30	1 1/4-11 1/2
38-24	§	38	1 1/2-11 1/2

30° Seat Adapters

Dash Size	Stock Materials				T1 (BSPP)
	S	FG	SS	BR	
04	\$				1/4-19
06	\$				3/8-19
08	\$				1/2-14
12	\$				3/4-14
16	\$				1-11

3861

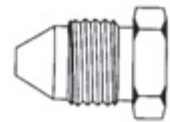
**JIS Cap
(30° Seat BSPP Thread)**



Dash Size	Stock Materials				T1 (BSPP)
	S	FG	SS	BR	
04	\$				1/4-19
06	\$				3/8-19
08	\$				1/2-14
12	\$				3/4-14
16	\$				1-11

3862

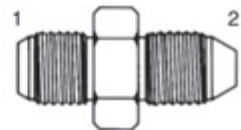
**JIS Plug
(30° Seat BSPP Thread)**



Dash Size	Stock Materials				T1 (UNF)	T2 (BSPP)
	S	FG	SS	BR		
04-04	\$				7/16-20	1/4-19
06-06	\$				9/16-18	3/8-19
08-08	\$				3/4-16	1/2-14

3864

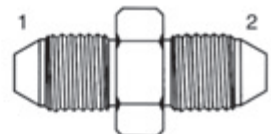
**JIC - JIS Union
(30° Seat BSPP Thread)**



Dash Size	Stock Materials				T1 (BSPP)	T2 (BSPP)
	S	FG	SS	BR		
04-04	\$				1/4-19	1/4-19
06-06	\$				3/8-19	3/8-19
08-08	\$				1/2-14	1/2-14
12-12	\$				3/4-14	3/4-14

3866

**JIS Union
(30° Seat BSPP Thread)**



S= Steel

FG=Forging

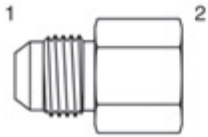
SS=Stainless Steel

BR=Brass

30° Seat Adapters

3871

JIC - JIS Solid (30° Seat BSPP Thread)



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (BSPP)
04-04	\$	7/16-20	1/4-19
06-04	\$	9/16-18	1/4-19
06-06	\$	9/16-18	3/8-19
08-06	\$	3/4-16	3/8-19
08-08	\$	3/4-16	1/2-14
12-12	\$	1 1/16-12	3/4-14
16-16	\$	1 5/16-12	1-11

7861

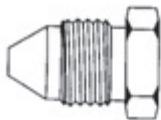
Komatsu Cap (30° Seat Metric Thread)



Dash Size	Stock Materials S FG SS BR	T1 (MM)
14	\$	14x1.5
18	\$	18x1.5
22	\$	22x1.5
24	\$	24x1.5
30	\$	30x1.5
33	\$	33x1.5

7862

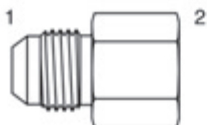
Komatsu Plug (30° Seat Metric Thread)



Dash Size	Stock Materials S FG SS BR	T1 (MM)
14	\$	14x1.5
18	\$	18x1.5
22	\$	22x1.5
24	\$	24x1.5
30	\$	30x1.5
33	\$	33x1.5

7865

JIC - Komatsu (30° Seat Metric Thread)



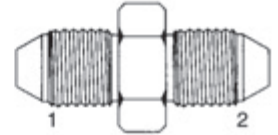
Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (MM)
04-14	\$	7/16-20	14x1.5
06-18	\$	9/16-18	18x1.5
08-22	\$	3/4-16	22x1.5
10-24	\$	7/8-14	24x1.5
12-30	\$	1 1/16-12	30x1.5

30° Seat Adapters

Dash Size	Stock Materials S FG SS BR	T1 (MM)	T2 (MM)
14	\$	14x1.5	14x1.5
18	\$	18x1.5	18x1.5
22	\$	22x1.5	22x1.5
24	\$	24x1.5	24x1.5
30	\$	30x2.0	30x1.5
33	\$	33x2.0	33x1.5

7868

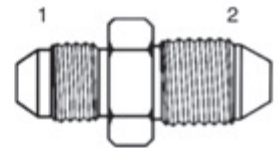
**Komatsu Union
(30° Seat
Metric Thread)**



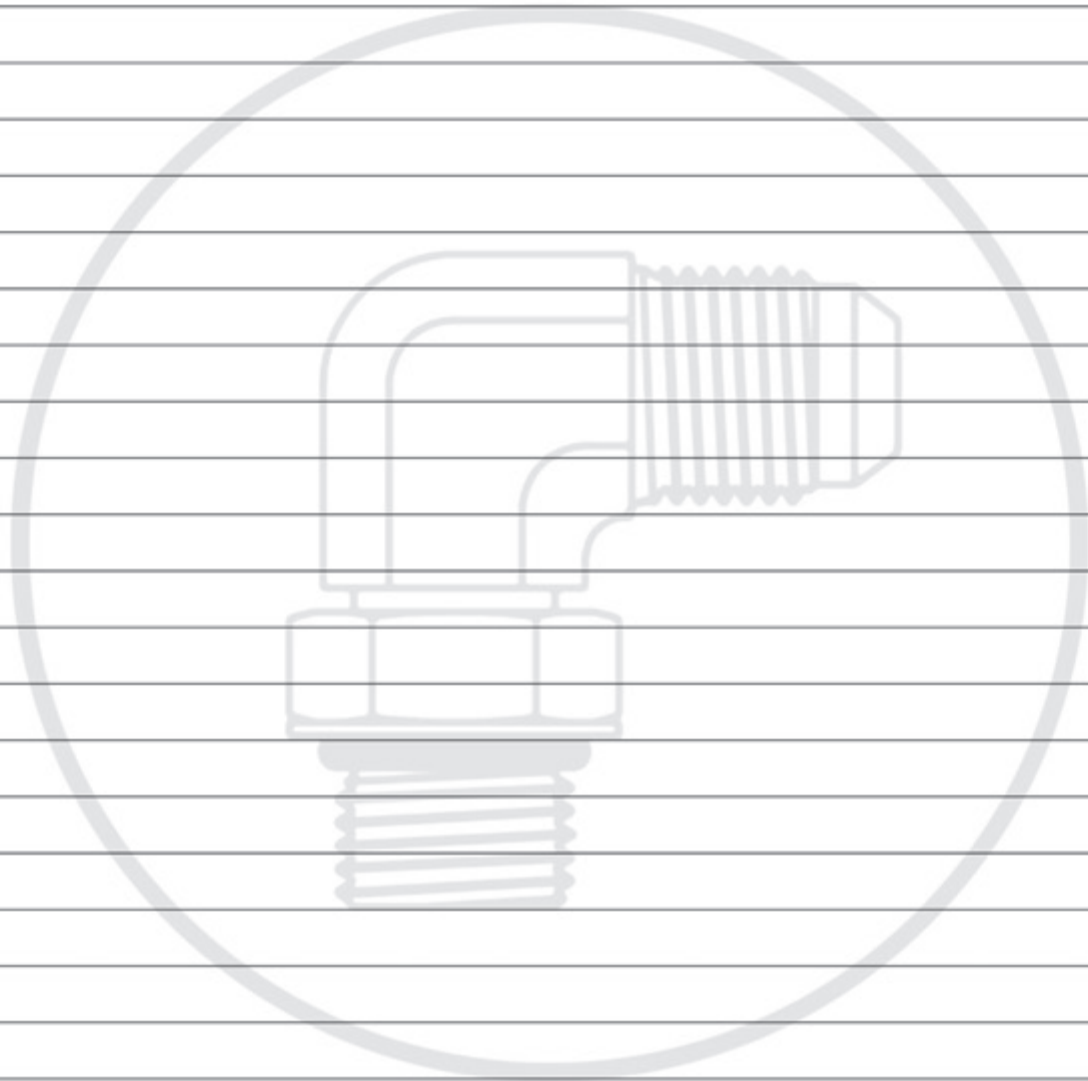
Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2(MM)
04-14	\$	7/16-20	14x1.5
06-18	\$	9/16-18	18x1.5
08-22	\$	3/4-16	22x1.5
10-24	\$	7/8-14	24x1.5
12-30	\$	1 1/16-12	30x1.5
16-33	\$	1 5/16-12	33x1.5

7869

**JIC - Komatsu
Union (30° Seat
Metric Thread)**



Notes



CONFORMANCE

- SAE J514
- MS 51811-MS51843

MATERIALS

- Steel – Carbon steel with black phosphate finish or plated zinc with yellow Dichromate per ASTM B633-98 (Type II SC-2). Sleeves are heat-treated carbon steel to sufficient hardness to insure proper bite in stainless as well as carbon steel tubing.
- Stainless – Type 316, sleeves are 17-4PH stainless.

TEMPERATURE

- Carbon steel - 800°
- Stainless steel - 1000°

WORKING PRESSURES

The following table lists the recommended maximum working pressures for steel flareless tube fittings manufactured in accordance with SAE J514. Other factors such as thickness of tube, tube material, and port thread type and size must also be considered to determine the maximum pressure for the fitting. **Use the pressure rating of the lowest rated material or component thread.** Tompkins and SAE recommend sufficient testing be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions.

MAXIMUM WORKING PRESSURE FOR FLARELESS TUBE CONNECTIONS

Dash Size	Flared Thread Size	4 to 1 Minimum Burst PSI
-02	5/16-24	6000
-03	3/8-24	6000
-04	7/16-20	6000
-05	1/2-20	6000
-06	9/16-16	6000
-08	3/4-16	5000
-10	7/8-14	5000
-12	1 1/16-12	4500
-14	1 3/16-12	4000
-16	1 5/16-12	4000
-20	1 5/8-12	3000
-24	1 7/8-12	2000
-32	2 1/2-12	1500

RECOMMENDED J514 FLARELESS TUBE ASSEMBLY INSTRUCTIONS

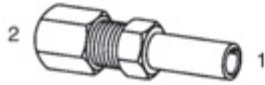
- STEP 1.** Cut tube square and debur inside and outside. Flush away any contaminants.
- STEP 2.** Inspect components for damage or contamination.
- STEP 3.** Lubricate the inside of nut and all surfaces of the sleeve, slide nut onto tube with smaller opening first. Slide sleeve onto tube with the largest end first.
- STEP 4.** Insert tube into fitting pilot and finger tighten nut and sleeve onto fitting.
- STEP 5.** Wrench tighten nut until sleeve just begins to grip the tube. A significant increase in resistance will occur.
- STEP 6.** Tighten one full revolution.

RECOMMENDED NO-FLARE JIC TUBE ASSEMBLY INSTRUCTIONS

- STEP 1.** Cut tube square and debur inside and outside. Flush away any contaminants.
- STEP 2.** Inspect all components for damage or contamination.
- STEP 3.** Lubricate nut, sleeve and fitting threads.
- STEP 4.** Slide nut and sleeve onto tube with the small side of sleeve inside the nut.
- STEP 5.** Place end of tube against JIC cone of fitting.
- STEP 6.** Finger tighten nut, then wrench tighten nut 1 1/4 revolutions beyond finger tight for sizes -3 through -10, and 1 1/2 turns beyond fingertight sizes -12 through -32.

7015

Reducer

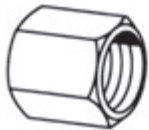


SAE 080123

Dash Size	Stock Materials				Body	Tube
	S	FG	SS	BR		
06X04	§				3/8	1/4
08X04	§				1/2	1/4
08X06	§				1/2	3/8
10X08	§				5/8	1/2
12X06	§				3/4	3/8
12X08	§				3/4	1/2
16X12	§				1	3/4
20X16	§				1-1/4	1

7105

Nut

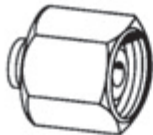


MS51823
SAE 080110

Dash Size	Stock Materials				Tube O.D.
	S	FG	SS	BR	
02	§				1/8
03	§				3/16
04	§				1/4
05	§				5/16
06	§				3/8
08	§				1/2
10	§				5/8
12	§				3/4
16	§				1
20	§				1 1/4
24	§				1 1/2
32	§				2

7129

Cap



MS51890
SAE 080112

Dash Size	Stock Materials				Tube O.D.
	S	FG	SS	BR	
04	§				1/4
06	§				3/8
08	§				1/2
10	§				5/8
12	§				3/4
16	§				1
20	§				1-1/4

7165

Sleeve

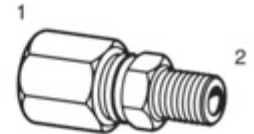


MS51825
SAE 080115A

Dash Size	Stock Materials				Tube O.D.
	S	FG	SS	BR	
02	§				1/8
03	§				3/16
04	§				1/4
05	§				5/16
06	§				3/8
08	§				1/2
10	§				5/8
12	§				3/4
14	§				7/8
16	§				1
20	§				1 1/4
24	§				1 1/2
32	§				2

Dash Size	Stock Materials				T1 (Tube O.D.)	T2 (NPTF)
	S	FG	SS	BR		
02	\$				1/8	1/8-27
02X04	\$				1/8	1/4-18
03	\$				3/16	1/8-27
04	\$				1/4	1/8-27
04X04	\$				1/4	1/4-18
04X06	\$				1/4	3/8-18
04X08	\$				1/4	1/2-14
05	\$				5/16	1/8-27
05X04	\$				5/16	1/4-18
06X02	\$				3/8	1/8-27
06	\$				3/8	1/4-18
06X06	\$				3/8	3/8-18
06X08	\$				3/8	1/2-14
08X04	\$				1/2	1/4-18
08	\$				1/2	3/8-18
08X08	\$				1/2	1/2-14
08X12	\$				1/2	3/4-14
10X06	\$				5/8	3/8-18
10	\$				5/8	1/2-14
12X08	\$				3/4	1/2-14
12	\$				3/4	3/4-14
14	\$				7/8	3/4-14
16X12	\$				1	3/4-14
16	\$				1	1-11 1/2
20	\$				1-1/4	1-1/4
24	\$				1-1/2	1-1/2
32	\$				2	2-11 1/2

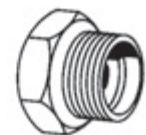
7205 Pipe Connector



MS51819
SAE 080102

Dash Size	Stock Materials				Tube O.D.
	S	FG	SS	BR	
02	\$				1/8
04	\$				1/4
05	\$				5/16
06	\$				3/8
08	\$				1/2
10	\$				5/8
12	\$				3/4
16	\$				1

7229 Plug



MS51891
SAE 080109

Dash Size	Stock Materials				T1 (Tube O.D.)	T2 (NPTF)
	S	FG	SS	BR		
03	\$				3/16	1/8-27
04	\$				1/4	1/8-27
04X04	\$				1/4	1/4-18
05	\$				5/16	1/8-27
06	\$				3/8	1/4-18
06X06	\$				3/8	3/8-18
08X04	\$				1/2	1/4-18
08	\$				1/2	3/8-18
08X08	\$				1/2	1/2-14
10	\$				5/8	1/2-14
12	\$				3/4	3/4-14
14	\$				7/8	3/4-14
16	\$				1	1-11 1/2
20	\$				1-1/4	1 1/4-11 1/2

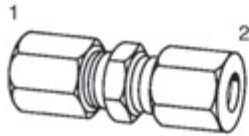
7255 Pipe Connector



MS51816
SAE 080103

7305

Small Hex Union

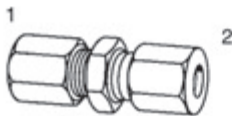


MS51814
SAE 080101

Dash Size	Stock Materials				T1 (Tube O.D.)	T2 (Tube O.D.)
	S	FG	SS	BR		
02	\$				1/8	1/8
03	\$				3/16	3/16
04	\$				1/4	1/4
05	\$				5/16	5/16
06X04	\$				3/8	1/4
06	\$				3/8	3/8
08X06	\$				1/2	3/8
08	\$				1/2	1/2
10	\$				5/8	5/8
12	\$				3/4	3/4
14	\$				7/8	7/8
16	\$				1	1
20	\$				1-1/4	1-1/4
24	\$				1-1/2	1-1/2
32	\$				2	2

7306

Large Hex Union

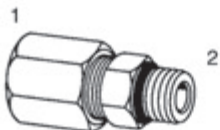


MS518156
SAE 080119

Dash Size	Stock Materials				T1 (Tube O.D.)	T2 (Tube O.D.)
	S	FG	SS	BR		
04	\$				1/4	1/4
06	\$				3/8	3/8
08X06	\$				1/2	3/8
08	\$				1/2	1/2
12	\$				3/4	3/4
16	\$				1	1

7315

O-Ring Connector



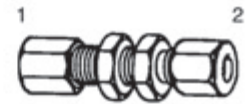
MS51843
SAE 080120

Dash Size	Stock Materials				T1 (Tube O.D.)	T2 (UNF)
	S	FG	SS	BR		
03	\$				3/16	5/16-24
04	\$				1/4	7/16-20
04X05	\$				1/4	1/2-20
04X06	\$				1/4	9/16-18
05	\$				5/16	1/2-20
06	\$				3/8	9/16-18
06X08	\$				3/8	3/4-16
08	\$				1/2	3/4-16
08X10	\$				1/2	7/8-14
08X12	\$				1/2	1 1/16-12
10	\$				5/8	7/8-14
12	\$				3/4	1 1/16-12
12X16	\$				3/4	1 5/16-12
14	\$				7/8	1 3/16-12
16X12	\$				1	1 1/16-12
16	\$				1	1 5/16-12
20	\$				1-1/4	1 5/8-12
24	\$				1-1/2	1 7/8-12
32	\$				2	2 1/2-12

Dash Size	Stock Materials				T1 (Tube O.D.)	T2 (Tube O.D.)
	S	FG	SS	BR		
04	\$				1/4	1/4
06	\$				3/8	3/8
08	\$				1/2	1/2
12	\$				3/4	3/4
16	\$				1	1

7325

Bulkhead Union



MS51812
SAE 080601

Dash Size	Stock Materials				T1 (Tube O.D.)	T2 (NPTF)
	S	FG	SS	BR		
04	\$				1/4	1/8-27
04X04	\$				1/4	1/4-18
05	\$				5/16	1/8-27
06	\$				3/8	1/4-18
08	\$				1/2	3/8-18
10	\$				5/8	1/2-14
12	\$				3/4	3/4-14
16	\$				1	1-11 1/2

7355

Pipe Elbow 45°

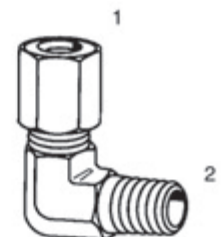


MS51817
SAE 080302

Dash Size	Stock Materials				T1 (Tube O.D.)	T2 (NPTF)
	S	FG	SS	BR		
02	\$				1/8	1/8-27
03	\$				3/16	1/8-27
04	\$				1/4	1/8-27
04X04	\$				1/4	1/4-18
05	\$				5/16	1/8-27
05X04	\$				5/16	1/4-18
06X02	\$				3/8	1/8-27
06	\$				3/8	1/4-18
06X06	\$				3/8	3/8-18
06X08	\$				3/8	1/2-14
08X04	\$				1/2	1/4-18
08	\$				1/2	3/8-18
08X08	\$				1/2	1/2-14
10X06	\$				5/8	3/8-18
10	\$				5/8	1/2-14
12X8	\$				3/4	1/2-14
12	\$				3/4	3/4-14
14	\$				7/8	3/4-14
16X12	\$				1	3/4-14
16	\$				1	1-11 1/2
20	\$				1-1/4	1 1/4-11 1/2
24	\$				1-1/2	1 1/2-11 1/2
32	\$				2	2-11 1/2

7405

Pipe Elbow 90°



MS51815
SAE 080202

7455-E

Pipe Elbow 90°

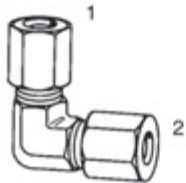


MS51813
SAE 080203

Dash Size	Stock Materials S FG SS BR	T1 (Tube O.D.)	T2 (NPTF)
04	\$	1/4	1/8-27
04-04	\$	1/4	1/4-18
06	\$	3/8	1/4-18
06-06	\$	3/8	3/8-18
08	\$	1/2	3/8-18
08-08	\$	1/2	1/2-14
10	\$	5/8	1/2-14
12	\$	3/4	3/4-14
14	\$	7/8	3/4-14
16	\$	1	1-11 1/2

7505

Union Elbow 90°

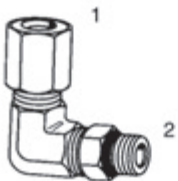


MS51820
SAE 080201

Dash Size	Stock Materials S FG SS BR	T1 (Tube O.D.)	T2 (Tube O.D.)
04	\$	1/4	1/4
05	\$	5/16	5/16
06	\$	3/8	3/8
08	\$	1/2	1/2
10	\$	5/8	5/8
12	\$	3/4	3/4
14	\$	7/8	7/8
16	\$	1	1
20	\$	1-1/4	1-1/4
24	\$	1-1/2	1-1/2

7515

O-Ring Elbow 90°

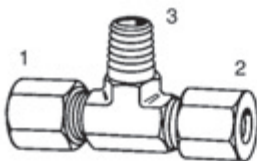


MS51839
SAE 080220

Dash Size	Stock Materials S FG SS BR	T1 (Tube O.D.)	T2 (UNF)
04	\$	1/4	7/16-20
05	\$	5/16	1/2-20
06	\$	3/8	9/16-18
08	\$	1/2	3/4-16
10	\$	5/8	7/8-14
12	\$	3/4	1 1/16-12
16	\$	1	1 5/16-12
16X12	\$	1	1 1/16-12
20	\$	1-1/4	1 5/8-12

7605

Pipe Branch Tee



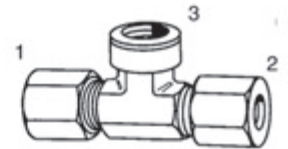
MS51818
SAE 080425

Dash Size	Stock Materials S FG SS BR	T1 (Tube O.D.)	T2 (Tube O.D.)	T3 (NPTF)
04	\$	1/4	1/4	1/8-27
04X04X04	\$	1/4	1/4	1/4-18
05	\$	5/16	5/16	1/8-27
06	\$	3/8	3/8	1/4-18
08	\$	1/2	1/2	3/8-18
08X08X08	\$	1/2	1/2	1/2-14
10	\$	5/8	5/8	1/2-14
12	\$	3/4	3/4	3/4-14
16	\$	1	1	1-11 1/2

Dash Size	Stock Materials S FG SS BR	T1 (Tube O.D.)	T2 (Tube O.D.)	T3 (NPTF)
04	\$	1/4	1/4	1/8-27
04X04X04	\$	1/4	1/4	1/4-18
06	\$	3/8	3/8	1/4-18
08	\$	1/2	1/2	3/8-18
10	\$	5/8	5/8	1/2-14
12	\$	3/4	3/4	3/4-14
14	\$	7/8	7/8	3/4-14
16	\$	1	1	1-11 1/2
20	\$	1-1/4	1-1/4	1 1/4-11 1/2

7655

Pipe Branch Tee

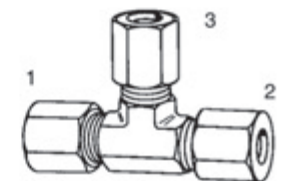


MS51821
SAE 080427

Dash Size	Stock Materials S FG SS BR	T1 (Tube O.D.)	T2 (Tube O.D.)	T3 (Tube O.D.)
03	\$	3/16	3/16	3/16
04	\$	1/4	1/4	1/4
05	\$	5/16	5/16	5/16
06	\$	3/8	3/8	3/8
08	\$	1/2	1/2	1/2
10	\$	5/8	5/8	5/8
12	\$	3/4	3/4	3/4
14	\$	7/8	7/8	7/8
16	\$	1	1	1

7705

Union Tee

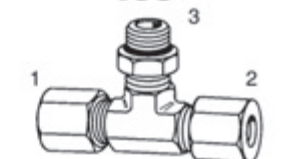


MS51811
SAE 080401

Dash Size	Stock Materials S FG SS BR	T1 (Tube O.D.)	T2 (Tube O.D.)	T3 (UNF)
04	\$	1/4	1/4	7/16-20
06	\$	3/8	3/8	9/16-12
08	\$	1/2	1/2	3/4-16

7715

O-Ring Branch Tee

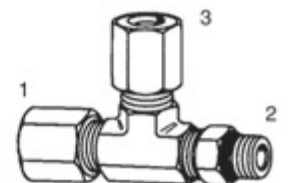


MS51841
SAE 080429

Dash Size	Stock Materials S FG SS BR	T1 (Tube O.D.)	T2 (UNF)	T3 (Tube O.D.)
04	\$	1/4	7/16-20	1/4
06	\$	3/8	9/16-12	3/8
08	\$	1/2	3/4-16	1/2

7716

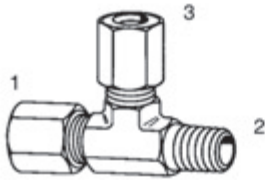
O-Ring Run Tee



MS51892
SAE 080428

7755

Pipe Run Tee

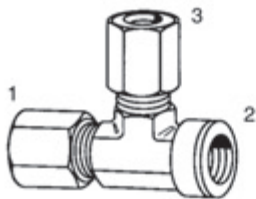


MS51824
SAE 080424

Dash Size	Stock Materials				T1 (Tube O.D.)	T2 (NPTF)	T3 (Tube O.D.)
	S	FG	SS	BR			
04	§				1/4	1/8-27	1/4
04X04X04	§				1/4	1/4-18	1/4
06	§				3/8	1/4-18	3/8
08	§				1/2	3/8-18	1/2
08X08X08	§				1/2	1/2-14	1/2
10	§				5/8	1/2-14	5/8
12	§				3/4	3/4-14	3/4
16	§				1	1-11 1/2	1

7805

Pipe Run Tee



MS51822
SAE 080426

Dash Size	Stock Materials				T1 (Tube O.D.)	T2 (NPTF)	T3 (Tube O.D.)
	S	FG	SS	BR			
04	§				1/4	1/8-27	1/4
04X04X04	§				1/4	1/4-18	1/4
06	§				3/8	1/4-18	3/8
08	§				1/2	3/8-18	1/2
10	§				5/8	1/2-14	5/8
12	§				3/4	3/4-14	3/4

7924

Bulkhead Nut

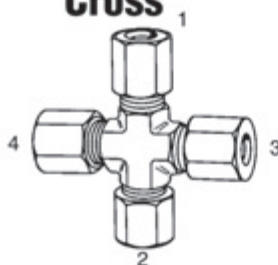


MS51860
SAE 080118

Dash Size	Stock Materials				Tube O.D.
	S	FG	SS	BR	
04	§				1/4
06	§				3/8
08	§				1/2
10	§				5/8
12	§				3/4
14	§				7/8
16	§				1
18	§				1 1/4

7955

Cross



MS51894
SAE 080501

Dash Size	Stock Materials				T1 (Tube O.D.)	T2 (Tube O.D.)	T3 & T4 (Tube O.D.)
	S	FG	SS	BR			
04	§				1/4	1/4	1/4
06	§				3/8	3/8	3/8
08	§				1/2	1/2	1/2

3000 PSI Live Swivels

- **MATERIAL** – Zinc Plated Steel, 316 Stainless
- **SEALS** – Nitrile; Viton available on request
- **TEMPERATURE** – -40F to +200F

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
04-04	\$				1/4-18	1/4-18
06-06	\$				3/8-18	3/8-18
08-08	\$				1/2-14	1/2-14
12-12	\$				3/4-14	3/4-14
16-16	\$				1-11 1/2	1-11 1/2
20-20	\$				1 1/4-11 1/2	1 1/4-11 1/2
24-24	\$				1 1/2-11 1/2	1 1/2-11 1/2
32-32	\$				2-11 1/2	2-11 1/2

LS 5000

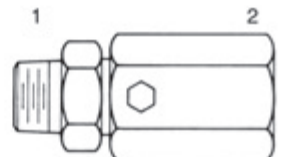
Pipe Coupling



Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
04-04	\$			BR	1/4-18	1/4-18
06-06	\$			BR	3/8-18	3/8-18
08-08	\$				1/2-14	1/2-14
12-12	\$				3/4-14	3/4-14
16-16	\$				1-11 1/2	1-11 1/2
20-20	\$				1 1/4-11 1/2	1 1/4-11 1/2
24-24	\$				1 1/2-11 1/2	1 1/2-11 1/2
32-32	\$				2-11 1/2	2-11 1/2

LS 5405

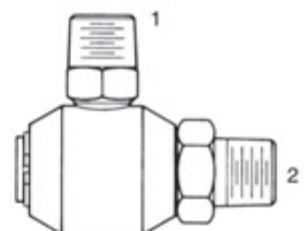
Pipe to Pipe



Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
04-04	\$				1/4-18	1/4-18
06-06	\$				3/8-18	3/8-18
08-08	\$				1/2-14	1/2-14
12-12	\$				3/4-14	3/4-14
16-16	\$				1-11 1/2	1-11 1/2
20-20	\$				1 1/4-11 1/2	1 1/4-11 1/2
24-24	\$				1 1/2-11 1/2	1 1/2-11 1/2
32-32	\$				2-11 1/2	2-11 1/2

LS 5500

Pipe to Pipe Elbow 90°



S= Steel

FG=Forging

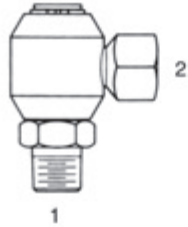
SS=Stainless Steel

BR=Brass

3000 PSI Live Swivels

LS 5502

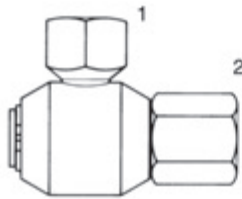
Pipe to Pipe
Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)
04-04	\$	1/4-18	1/4-18
04-06	\$	1/4-18	3/8-18
06-04	\$	3/8-18	1/4-18
06-06	\$	3/8-18	3/8-18
08-08	\$	1/2-14	1/2-14
12-12	\$	3/4-14	3/4-14
16-16	\$	1-11 1/2	1-11 1/2
20-20	\$	1 1/4-11 1/2	1 1/4-11 1/2
24-24	\$	1 1/2-11 1/2	1 1/2-11 1/2
32-32	\$	2-11 1/2	2-11 1/2

LS 5504

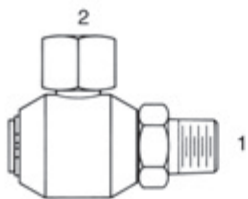
Pipe to Pipe
Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)
04-04	\$	1/4-18	1/4-18
06-06	\$	3/8-18	3/8-18
08-08	\$	1/2-14	1/2-14
12-12	\$	3/4-14	3/4-14
16-16	\$	1-11 1/2	1-11 1/2
20-20	\$	1 1/4-11 1/2	1 1/4-11 1/2
24-24	\$	1 1/2-11 1/2	1 1/2-11 1/2
32-32	\$	2-11 1/2	2-11 1/2

LS 1501

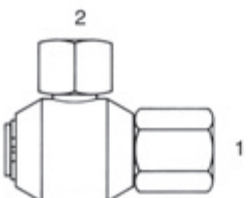
Pipe to NPSM
Swivel Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPSM)
04-04	\$	1/4-18	1/4-18
04-06	\$	1/4-18	3/8-18
06-04	\$	3/8-18	1/4-18
06-06	\$	3/8-18	3/8-18
08-08	\$	1/2-14	1/2-14
12-12	\$	3/4-14	3/4-14
16-16	\$	1-11 1/2	1-11 1/2
20-20	\$	1 1/4-11 1/2	1 1/4-11 1/2
24-24	\$	1 1/2-11 1/2	1 1/2-11 1/2
32-32	\$	2-11 1/2	2-11 1/2

LS 1502

Pipe to NPSM
Swivel Elbow 90°



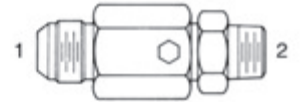
Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPSM)
04-04	\$	1/4-18	1/4-18
06-04	\$	3/8-18	1/4-18
06-06	\$	3/8-18	3/8-18
08-08	\$	1/2-14	1/2-14
12-12	\$	3/4-14	3/4-14
16-16	\$	1-11 1/2	1-11 1/2
20-20	\$	1 1/4-11 1/2	1 1/4-11 1/2
24-24	\$	1 1/2-11 1/2	1 1/2-11 1/2
32-32	\$	2-11 1/2	2-11 1/2

3000 PSI Live Swivels

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
06-04	\$				9/16-18	1/4-18
06-06	\$				9/16-18	3/8-18
08-06	\$				3/4-16	3/8-18
08-08	\$				3/4-16	1/2-14
10-08	\$				7/8-14	1/2-14
12-12	\$				1 1/16-12	3/4-14
16-16	\$				1 5/16-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 1/2-11 1/2
32-32	\$				2 1/2-12	2-11 1/2

LS 2404

JIC to Pipe



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
06-04	\$				9/16-18	1/4-18
08-06	\$				3/4-16	3/8-18
10-08	\$				7/8-14	1/2-14
12-12	\$				1 1/16-12	3/4-14
16-16	\$				1 5/16-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 1/2-11 1/2
32-32	\$				2 1/2-12	2-11 1/2

LS 2405

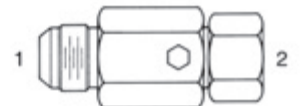
JIC to Pipe



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
06-06	\$				9/16-18	9/16-18
08-08	\$				3/4-16	3/4-16
10-10	\$				7/8-14	7/8-14
12-12	\$				1 1/16-12	1 1/16-12
14-14	\$				1 3/16-12	1 3/16-12
16-16	\$				1 5/16-12	1 5/16-12
20-20	\$				1 5/8-12	1 5/8-12
24-24	\$				1 7/8-12	1 7/8-12
32-32	\$				2 1/2-12	2 1/2-12

LS 2406

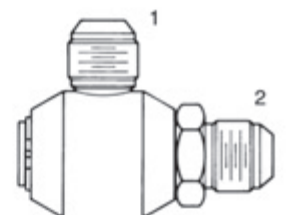
JIC to JIC



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
06-06	\$				9/16-18	9/16-18
08-08	\$				3/4-16	3/4-16
10-10	\$				7/8-14	7/8-14
12-12	\$				1 1/16-12	1 1/16-12
16-16	\$				1 5/16-12	1 5/16-12
20-20	\$				1 5/8-12	1 5/8-12
24-24	\$				1 7/8-12	1 7/8-12
32-32	\$				2 1/2-12	2 1/2-12

LS 2500

**JIC to JIC
Elbow 90°**



S= Steel

FG=Forging

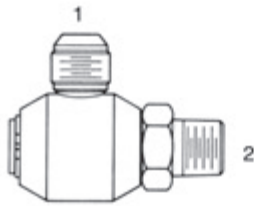
SS=Stainless Steel

BR=Brass

3000 PSI Live Swivels

LS 2501

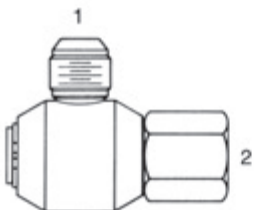
**JIC to Pipe
Elbow 90°**



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (NPTF)
06-04	\$	9/16-18	1/4-18
06-06	\$	9/16-18	3/8-18
08-06	\$	3/4-16	3/8-18
08-08	\$	3/4-16	1/2-14
10-08	\$	7/8-14	1/2-14
12-12	\$	1 1/16-12	3/4-14
16-16	\$	1 5/16-12	1-11 1/2
20-20	\$	1 5/8-12	1 1/4-11 1/2
24-24	\$	1 7/8-12	1 1/2-11 1/2
32-32	\$	2 1/2-12	2-11 1/2

LS 2502

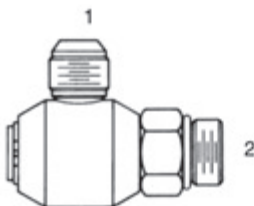
**JIC to Pipe
Elbow 90°**



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (NPTF)
06-04	\$	9/16-18	1/4-18
06-06	\$	9/16-18	3/8-18
08-06	\$	3/4-16	3/8-18
08-08	\$	3/4-16	1/2-14
10-08	\$	7/8-14	1/2-14
12-12	\$	1 1/16-12	3/4-14
16-16	\$	1 5/16-12	1-11 1/2
20-20	\$	1 5/8-12	1 1/4-11 1/2
24-24	\$	1 7/8-12	1 1/2-11 1/2
32-32	\$	2 1/2-12	2-11 1/2

LS 6801

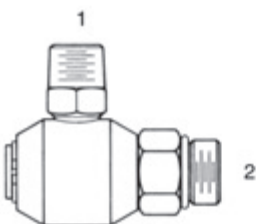
**JIC to O-Ring
Elbow 90°**



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
06-06	\$	9/16-18	9/16-18
06-08	\$	9/16-18	3/4-16
08-08	\$	3/4-16	3/4-16
10-10	\$	7/8-14	7/8-14
12-12	\$	1 1/16-12	1 1/16-12
16-16	\$	1 5/16-12	1 5/16-12
20-20	\$	1 5/8-12	1 5/8-12
24-24	\$	1 7/8-12	1 7/8-12
32-32	\$	2 1/2-12	2 1/2-12

LS 6806

**Pipe to O-Ring
Elbow 90°**



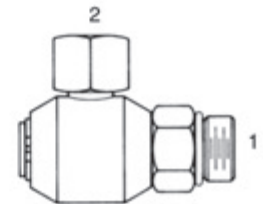
Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (UNF)
04-06	\$	1/4-18	9/16-18
06-06	\$	3/8-18	9/16-18
08-10	\$	1/2-14	7/8-14
12-12	\$	3/4-14	1 1/16-12
16-16	\$	1-11 1/2	1 5/16-12
20-20	\$	1 1/4-11 1/2	1 5/8-12
24-24	\$	1 1/2-11 1/2	1 7/8-12

3000 PSI Live Swivels

Dash Size	Stock Materials				T1 (UNF)	T2 (NPSM)
	S	FG	SS	BR		
06-04	\$				9/16-18	1/4-18
06-06	\$				9/16-18	3/8-18
08-06	\$				3/4-16	3/8-18
08-08	\$				3/4-16	1/2-14
10-08	\$				7/8-14	1/2-14
12-12	\$				1 1/16-12	3/4-14
16-16	\$				1 5/16-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 1/2-11 1/2
32-32	\$				2 1/2-12	2-11 1/2

LS 6901

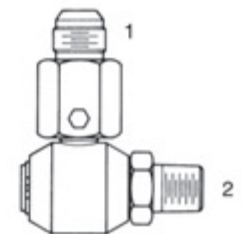
O-Ring to Pipe Swivel Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
06-04	\$				9/16-18	1/4-18
08-06	\$				3/4-16	3/8-18
10-08	\$				7/8-14	1/2-14
12-12	\$				1 1/16-12	3/4-14
16-16	\$				1 5/16-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 7/8-12

LSS 2501

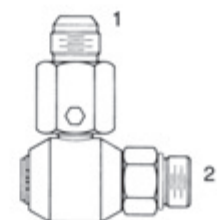
JIC to Pipe Elbow 90°-Dual Plane Swivel



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
06-06	\$				9/16-18	9/16-18
08-08	\$				3/4-16	3/4-16
10-10	\$				7/8-14	7/8-14
12-12	\$				1 1/16-12	1 1/16-12
16-16	\$				1 5/16-12	1 5/16-12
20-20	\$				1 5/8-12	1 5/8-12
24-24	\$				1 7/8-12	1 7/8-12

LSS 6801

JIC to O-Ring Elbow 90°-Dual Plane Swivel



Other sizes and configurations are available upon request.

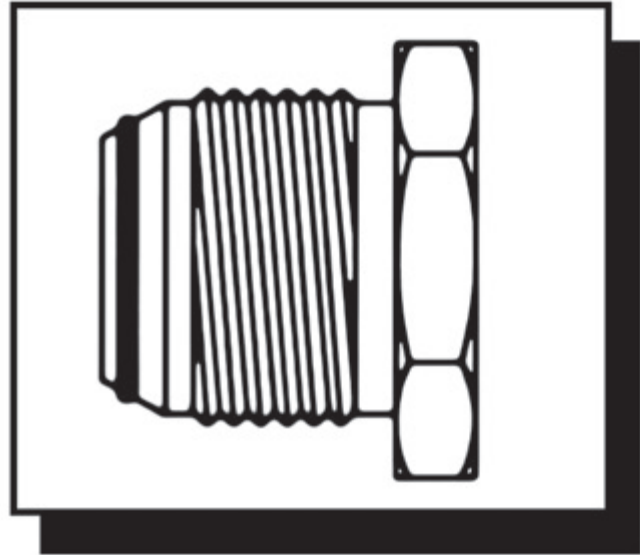
FLARE-O®

BENEFITS

- Twin seals for no-weep, no-leak protection
- Permits wide range of assembly torques to obtain a seal
- Design dampens effect of vibration
- Not affected by temperature change
- Ease of assembly using standard tooling and methods
- Utilizes standard machining surface finishes
- Increases variety of material selection for specific applications, since high torque is not a primary requirement
- Fittings can reassemble and reseal repeatedly
- Reduces scrap and overall system costs
- Interchangeable with existing standard fittings
- Reduces total mass of components

APPLICATIONS

- Tapered Fittings (SAE 37°, 45°, and All Others)
- Fittings for Standard Port Entries
- Adjustable/Indexable Fittings
- Tube-to-Port Connectors
- Flange Applications
- Low Torque Banjo Fittings (With Primary and Secondary Seals at Each Interface)
- Use in retrofit applications to eliminate leaks, weeps, and associated maintenance costs
- Interchangeable with existing tube and port fittings at the OEM level
- Reduce maintenance and warranty costs... increase profitability...enhance reliability...with FLARE-O®



DESIGN NOTES

Geometry of the taper results in unit loading of mating faces significantly higher than that of standard fitting designs. The design also minimizes any gap which may occur at the interface due to pressures in excess of design limits. Unit loading of the sealing surfaces is made even greater by the existence of the groove in the male surface. Even if no O-ring were present, the groove design alone permits assembly torques to be substantially reduced.

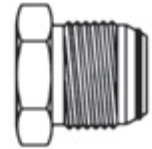
The cross-sectional area of the O-ring groove is larger than the cross-sectional area of the O-ring. This allows the O-ring to move in response to pressure differentials. The O-ring is not extruded during assembly into the area between the mating surfaces to behave like a gasket. Instead, the O-ring essentially behaves like a super-viscous fluid, which takes the shape of the cavity that holds it, enhancing the seal. The O-ring acts as the back-up seal should the metal-to-metal seals on both sides of the O-ring groove fail.

Flare-O® Adapters

Dash Size	Stock Materials				Bore	T1 (UNF)
	S	FG	SS	BR		
04	\$				1/4	7/16-20
06	\$				3/8	9/16-18
08	\$				1/2	3/4-16
10	\$				5/8	7/8-14
12	\$				3/4	1 1/16-12
14	\$				7/8	1 3/16-12
16	\$				1	1 5/16-12
20	\$				1 1/4	1 5/8-12
24	\$				1 1/2	1 7/8-12
32	\$				2	2 1/2-12

F403

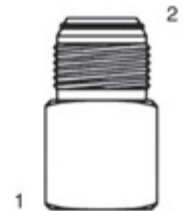
Flare-O Braze Tube Union



Dash Size	Stock Materials				T1 (Bore)	T2 (UNF)
	S	FG	SS	BR		
04	\$				1/4	7/16-20
05	\$				5/16	1/2-20
06	\$				3/8	9/16-18
08	\$				1/2	3/4-16
10	\$				5/8	7/8-14
12	\$				3/4	1 1/16-12
14	\$				7/8	1 3/16-12
16	\$				1	1 5/16-12
20	\$				1 1/4	1 5/8-12
24	\$				1 1/2	1 7/8-12
32	\$				2	2 1/2-12

F500

Flare-O Braze Tube Union Elbow 90°



Dash Size	Stock Materials				T1 & T2 (Bore)	T3 (UNF)
	S	FG	SS	BR		
04	\$				1/4	7/16-20
05	\$				5/16	1/2-20
06	\$				3/8	9/16-18
08	\$				5/8	7/8-14
12	\$				3/4	1 1/16-12
14	\$				7/8	1 3/16-12
16	\$				1	1 5/16-12
20	\$				1 1/4	1 5/8-12
24	\$				1 1/2	1 7/8-12

F600

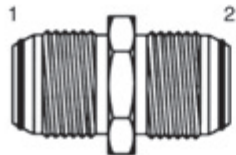
Flare-O Braze Tube Union Tee



Flare-O® Adapters

F2403

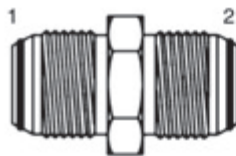
Flare-O Tube Union



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$				7/16-20	7/16-20
05	\$				1/2-20	1/2-20
06-04	\$				9/16-18	7/16-20
06-05	\$				9/16-18	1/2-20
06	\$				9/16-18	9/16-18
08-06	\$				3/4-16	9/16-18
08	\$				3/4-16	3/4-16
10-06	\$				7/8-14	9/16-18
10-08	\$				7/8-14	3/4-16
10	\$				7/8-14	7/8-14
12-08	\$				1 1/16-12	3/4-16
12-10	\$				1 1/16-12	7/8-14
12	\$				1 1/16-12	1 1/16-12
14	\$				1 3/16-12	1 3/16-12
16-12	\$				1 5/16-12	1 1/16-12
16	\$				1 5/16-12	1 5/16-12
20-16	\$				1 5/8-12	1 5/16-12
20	\$				1 5/8-12	1 5/8-12
24-16	\$				1 7/8-12	1 5/16-12
24	\$				1 7/8-12	1 7/8-12
32	\$				2 1/2-12	2 1/2-12

F2403-LH

Flare-O Large Hex Tube Union



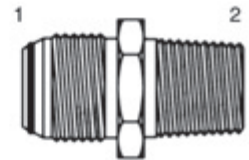
Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$				7/16-20	7/16-20
06	\$				9/16-18	9/16-18
08	\$				3/4-16	3/4-16
10	\$				7/8-14	7/8-14
12	\$				1 1/16-12	1 1/16-12
16	\$				1 5/16-12	1 5/16-12
20	\$				1 5/8-12	1 5/8-12
24	\$				1 7/8-12	1 7/8-12

Flare-O® Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-27
04-04	\$				7/16-20	1/4-18
04-06	\$				7/16-20	3/8-18
04-08	\$				7/16-20	1/2-14
05-02	\$				1/2-20	1/8-27
05-04	\$				1/2-20	1/4-18
05-06	\$				1/2-20	3/8-18
06-02	\$				9/16-18	1/8-27
06-04	\$				9/16-18	1/4-18
06-06	\$				9/16-18	3/8-18
06-08	\$				9/16-18	1/2-14
06-12	\$				9/16-18	3/4-14
08-04	\$				3/4-16	1/4-18
08-06	\$				3/4-16	3/8-18
08-08	\$				3/4-16	1/2-14
08-12	\$				3/4-16	3/4-14
08-16	\$				3/4-16	1-11 1/2
10-06	\$				7/8-14	3/8-18
10-08	\$				7/8-14	1/2-14
10-12	\$				7/8-14	3/4-14
12-08	\$				1 1/16-12	1/2-14
12-12	\$				1 1/16-12	3/4-14
12-16	\$				1 1/16-12	1-11 1/2
14-12	\$				1 3/16-12	3/4-14
16-12	\$				1 5/16-12	1/2-14
16-16	\$				1 5/16-12	1-11 1/2
16-20	\$				1 5/16-12	1 1/4-11 1/2
20-16	\$				1 5/8-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2
20-24	\$				1 5/8-12	1 1/2-11 1/2
24-20	\$				1 7/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 1/2-11 1/2
32-32	\$				2 1/2-12	2- 11 1/2

F2404

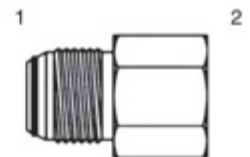
Flare-O to Pipe



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-27
04-04	\$				7/16-20	1/4-18
04-06	\$				7/16-20	3/8-18
05-02	\$				1/2-20	1/8-27
05-04	\$				1/2-20	1/4-18
06-04	\$				9/16-18	1/4-18
06-06	\$				9/16-18	3/8-18
08-04	\$				3/4-16	1/4-18
08-06	\$				3/4-16	3/8-18
08-08	\$				3/4-16	1/2-14
08-12	\$				3/4-16	3/4-14
10-04	\$				7/8-14	1/4-18
10-06	\$				7/8-14	3/8-18
10-08	\$				7/8-14	1/2-14
12-08	\$				1 1/16-12	1/2-14
12-12	\$				1 1/16-12	3/4-14
14-12	\$				1 3/16-12	3/4-14
16-12	\$				1 5/16-12	3/4-14
16-16	\$				1 5/16-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 1/2-11 1/2
32-32	\$				2 1/2-12	2-11 1/2

F2405

Flare-O to Pipe



S= Steel

FG=Forging

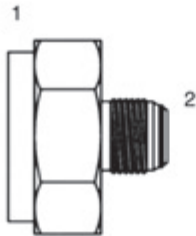
SS=Stainless Steel

BR=Brass

Flare-O® Adapters

F2406

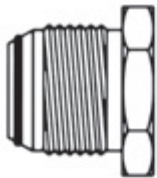
Flare-O Tube Reducer Expander



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
06-04	\$				9/16-18	7/16-20
08-04	\$				3/4-16	7/16-20
08-06	\$				3/4-16	9/16-18
10-04	\$				7/8-14	7/16-20
10-06	\$				7/8-14	9/16-18
10-08	\$				7/8-14	3/4-16
12-04	\$				1 1/16-12	7/16-20
12-06	\$				1 1/16-12	9/16-18
12-08	\$				1 1/16-12	3/4-16
12-10	\$				1 1/16-12	7/8-14
12-16	\$				1 1/16-12	1 5/16-12
14-06	\$				1 3/16-12	9/16-18
14-08	\$				1 3/16-12	3/4-16
14-10	\$				1 3/16-12	7/8-14
14-12	\$				1 3/16-12	1 1/16-12
16-04	\$				1 5/16-12	7/16-20
16-08	\$				1 5/16-12	3/4-16
16-10	\$				1 5/16-12	7/8-14
16-12	\$				1 5/16-12	1 1/16-12
16-14	\$				1 5/16-12	1 3/16-12
16-20	\$				1 5/16-12	1 5/8-12
20-12	\$				1 5/8-12	1 1/16-12
20-16	\$				1 5/8-12	1 5/16-12
20-24	\$				1 5/8-12	1 7/8-12
24-16	\$				1 7/8-12	1 5/16-12
24-20	\$				1 7/8-12	1 5/8-12
32-24	\$				2 1/2-12	1 7/8-12

F2408

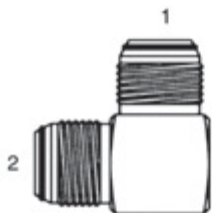
Flare-O Plug



Dash Size	Stock Materials				T1 (UNF)
	S	FG	SS	BR	
04	\$				7/16-20
05	\$				1/2-20
06	\$				9/16-18
08	\$				3/4-16
10	\$				7/8-14
12	\$				1 1/16-12
14	\$				1 3/16-12
16	\$				1 5/16-12
20	\$				1 5/8-12
24	\$				1 7/8-12
32	\$				2 1/2-12

F2500

Flare-O Tube Union Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$				7/16-20	7/16-20
05	\$				1/2-20	1/2-20
06	\$				9/16-20	9/16-20
08-06	\$				3/4-16	9/16-18
08	\$				3/4-16	3/4-16
10-08	\$				7/8-14	3/4-16
10	\$				7/8-14	7/8-14
12	\$				1 1/16-12	1 1/16-12
14	\$				1 3/16-12	1 3/16-12
16	\$				1 5/16-12	1 5/16-12
20	\$				1 5/8-12	1 5/8-12
24	\$				1 7/8-12	1 7/8-12
32	\$				2 1/2-12	2 1/2-12

Flare-O® Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-27
04-04	\$				7/16-20	1/4-18
04-06	\$				7/16-20	3/8-18
04-08	\$				7/16-20	1/2-14
04-12	\$				7/16-20	3/4-14
05-02	\$				1/2-20	1/8-27
05-04	\$				1/2-20	1/4-18
05-06	\$				1/2-20	3/8-18
06-02	\$				9/16-18	1/8-27
06-04	\$				9/16-18	1/4-18
06-06	\$				9/16-18	3/8-18
06-08	\$				9/16-18	1/2-14
06-12	\$				9/16-18	3/4-14
08-04	\$				3/4-16	1/4-18
08-06	\$				3/4-16	3/8-18
08-08	\$				3/4-16	1/2-14
08-12	\$				3/4-16	3/4-14
08-16	\$				3/4-16	1-11 1/2
10-06	\$				7/8-14	3/8-18
10-08	\$				7/8-14	1/2-14
10-12	\$				7/8-14	3/4-14
10-16	\$				7/8-14	1-11 1/2
12-08	\$				1 1/16-12	1/2-14
12-12	\$				1 1/16-12	3/4-14
12-16	\$				1 1/16-12	1-11 1/2
14-12	\$				1 3/16-12	3/4-14
16-12	\$				1 5/16-12	3/4-14
16-16	\$				1 5/16-12	1-11 1/2
16-20	\$				1 5/16-12	1 1/4-11 1/2
20-16	\$				1 5/8-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2
20-24	\$				1 5/8-12	1 1/2-11 1/2
24-20	\$				1 7/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 1/2-11 1/2
32-32	\$				2 1/2-12	2-11 1/2

F2501

Flare-O to Pipe Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-27
04-04	\$				7/16-20	1/4-18
05-02	\$				1/2-20	1/8-27
05-04	\$				1/2-20	1/4-18
06-04	\$				9/16-18	1/4-18
06-06	\$				9/16-18	3/8-16
08-06	\$				3/4-16	3/8-16
08-08	\$				3/4-16	1/2-14
08-12	\$				3/4-16	3/4-14
10-08	\$				7/8-14	1/2-14
12-12	\$				1 1/16-12	3/4-14
14-12	\$				1 3/16-12	3/4-14
16-16	\$				1 5/16-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 1/2-11 1/2

F2501-L

Flare-O to Pipe Long Elbow 90°



Flare-O® Adapters

F2501-LL

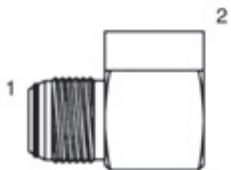
**Flare-O to Pipe
Extra Long
Elbow 90°**



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-27
04-04	\$				7/16-20	1/4-18
05-02	\$				1/2-20	1/8-27
05-04	\$				1/2-20	1/4-18
06-04	\$				9/16-18	1/4-18
06-06	\$				9/16-18	3/8-18
08-06	\$				3/4-16	3/8-18
08-08	\$				3/4-16	1/2-14
10-08	\$				7/8-14	1/2-14
12-12	\$				1 1/16-12	3/4-14
14-12	\$				1 3/16-12	3/4-14
16-16	\$				1 5/16-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2

F2502

**Flare-O to Pipe
Elbow 90°**



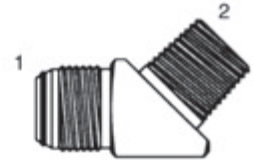
Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-27
04-04	\$				7/16-20	1/4-18
05-02	\$				1/2-20	1/8-27
05-04	\$				1/2-20	1/4-18
06-04	\$				9/16-18	1/4-18
06-06	\$				9/16-18	3/8-18
06-08	\$				9/16-18	1/2-14
08-06	\$				3/4-16	3/8-18
08-08	\$				3/4-16	1/2-14
10-08	\$				7/8-14	1/2-14
12-12	\$				1 1/16-12	3/4-14
14-12	\$				1 3/16-12	3/4-14
16-16	\$				1 5/16-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 1/2-11 1/2
32-32	\$				2 1/2-12	2-11 1/2

Flare-O® Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02	\$				7/16-20	1/8-27
04-04	\$				7/16-20	1/4-18
05-02	\$				1/2-20	1/8-27
05-04	\$				1/2-20	1/4-18
06-02	\$				9/16-18	1/8-27
06-04	\$				9/16-18	1/4-18
06-06	\$				9/16-18	3/8-18
06-08	\$				9/16-18	1/2-14
08-04	\$				3/4-16	1/4-18
08-06	\$				3/4-16	3/8-18
08-08	\$				3/4-16	1/2-14
08-12	\$				3/4-16	3/4-14
10-06	\$				7/8-14	3/8-18
10-08	\$				7/8-14	1/2-14
10-12	\$				7/8-14	3/4-14
12-08	\$				1 1/16-12	1/2-14
12-12	\$				1 1/16-12	3/4-14
12-16	\$				1 1/16-12	1-11 1/2
14-12	\$				1 3/16-12	3/4-14
16-12	\$				1 5/16-12	3/4-14
16-16	\$				1 5/16-12	1-11 1/2
20-20	\$				1 5/8-12	1 1/4-11 1/2
20-24	\$				1 5/8-12	1 1/2-11 1/2
24-24	\$				1 7/8-12	1 1/2-11 1/2
32-32	\$				2 1/2-12	2-11 1/2

F2503

Flare-O to Pipe Elbow 45°



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (NPTF)
	S	FG	SS	BR			
04-02	\$				7/16-20	7/16-20	1/8-27
04-04	\$				7/16-20	7/16-20	1/4-18
05-02	\$				1/2-20	1/2-20	1/8-27
05-04	\$				1/2-20	1/2-20	1/4-18
06-04	\$				9/16-18	9/16-18	1/4-18
06-06	\$				9/16-18	9/16-18	3/8-18
08-06	\$				3/4-16	3/4-16	3/8-18
08-08	\$				3/4-16	3/4-16	1/2-14
10-08	\$				7/8-14	7/8-14	1/2-14
12-12	\$				1 1/16-12	1 1/16-12	3/4-14
14-12	\$				1 3/16-12	1 3/16-12	3/4-14
16-16	\$				1 5/16-12	1 5/16-12	1-11 1/2
20-20	\$				1 5/8-12	1 5/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 7/8-12	1 1/2-11 1/2

F2601

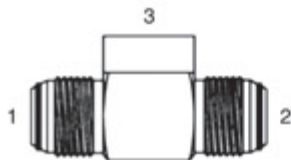
Flare-O to Pipe Branch Tee



Flare-O® Adapters

F2602

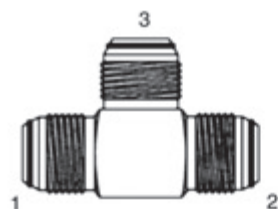
Flare-O to Pipe Branch Tee



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (NPTF)
	S	FG	SS	BR			
04-02	\$				7/16-20	7/16-20	1/8-27
04-04	\$				7/16-20	7/16-20	1/4-18
05-02	\$				1/2-20	1/2-20	1/8-27
06-04	\$				9/16-18	9/16-18	1/4-18
06-06	\$				9/16-18	9/16-18	3/8-18
08-06	\$				3/4-16	3/4-16	3/8-18
08-08	\$				3/4-16	3/4-16	1/2-14
10-08	\$				7/8-14	7/8-14	1/2-14
12-12	\$				1 1/16-12	1 1/16-12	3/4-14
14-12	\$				1 3/16-12	1 3/16-12	3/4-14
16-16	\$				1 5/16-12	1 5/16-12	1-11 1/2
20-20	\$				1 5/8-12	1 5/8-12	1 1/4-11 1/2
24-24	\$				1 7/8-12	1 7/8-12	1 1/2-11 1/2
32-32	\$				2 1/2-12	2 1/2-12	2-11 1/2

F2603

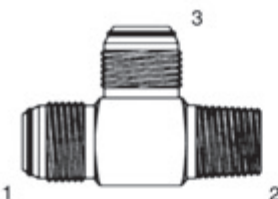
Flare-O Tube Union Tee



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS	BR			
04	\$				7/16-20	7/16-20	7/16-20
05	\$				1/2-20	1/2-20	1/2-20
06	\$				9/16-18	9/16-18	9/16-18
08	\$				3/4-16	3/4-16	3/4-16
08-12	\$				3/4-16	3/4-16	1 1/16-12
10-08-08	\$				7/8-14	3/4-16	3/4-16
10-08	\$				7/8-14	7/8-14	3/4-16
10	\$				7/8-14	7/8-14	7/8-14
10-12	\$				7/8-14	7/8-14	1 1/16-12
12	\$				1 1/16-12	1 1/16-12	1 1/16-12
14	\$				1 3/16-12	1 3/16-12	1 3/16-12
16	\$				1 5/16-12	1 5/16-12	1 5/16-12
20-16	\$				1 5/8-12	1 5/8-12	1 5/16-12
20	\$				1 5/8-12	1 5/8-12	1 5/8-12
24	\$				1 7/8-12	1 7/8-12	1 7/8-12
32	\$				2 1/2-12	2 1/2-12	2 1/2-12

F2605

Flare-O to Pipe Run Tee



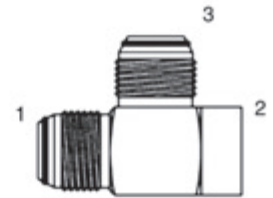
Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)	T3 (UNF)
	S	FG	SS	BR			
04-02	\$				7/16-20	1/8-27	7/16-20
04-04	\$				7/16-20	1/4-18	7/16-20
05-02	\$				1/2-20	1/8-27	1/2-20
06-04	\$				9/16-18	1/4-18	9/16-18
06-06	\$				9/16-18	3/8-18	9/16-18
06-08	\$				9/16-18	1/2-14	9/16-18
08-06	\$				3/4-16	3/8-18	3/4-16
08-08	\$				3/4-16	1/2-14	3/4-16
10-08	\$				7/8-14	1/2-14	7/8-14
12-08	\$				1 1/16-12	1/2-14	1 1/16-12
12-12	\$				1 1/16-12	3/4-14	1 1/16-12
14-12	\$				1 3/16-12	3/4-14	1 3/16-12
16-16	\$				1 5/16-12	1-11 1/2	1 5/16-12
20-20	\$				1 5/8-12	1 1/4-11 1/2	1 5/8-12
24-24	\$				1 7/8-12	1 1/2-11 1/2	1 7/8-12
32-32	\$				2 1/2-12	2-11 1/2	2 1/2-12

Flare-O® Adapters

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (NPTF)	T3 (UNF)
04-02	\$	7/16-20	1/8-27	7/16-20
04-04	\$	7/16-20	1/4-18	7/16-20
06-04	\$	9/16-18	1/4-18	9/16-18
06-06	\$	9/16-18	3/8-18	9/16-18
08-06	\$	3/4-16	3/8-18	3/4-16
08-08	\$	3/4-16	1/2-14	3/4-16
10-08	\$	7/8-14	1/2-14	7/8-14
12-12	\$	1 1/16-12	3/4-14	1 1/16-12
14-12	\$	1 3/16-12	3/4-14	1 3/16-12
16-16	\$	1 5/16-12	1-11 1/2	1 5/16-12
24-24	\$	1 7/8-12	1 1/2-11 1/2	1 7/8-12

F2606

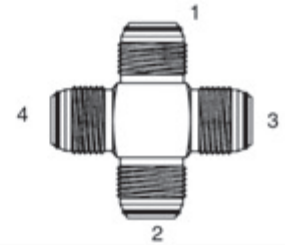
Flare-O to Pipe Run Tee



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)	T3 & T4 (UNF)
04	\$	7/16-20	7/16-20	7/16-20
05	\$	1/2-20	1/2-20	1/2-20
06	\$	9/16-18	9/16-18	9/16-18
08	\$	3/4-16	3/4-16	3/4-16
10	\$	7/8-14	7/8-14	7/8-14
12	\$	1 1/16-12	1 1/16-12	1 1/16-12
14	\$	1 3/16-12	1 3/16-12	1 3/16-12
16	\$	1 5/16-12	1 5/16-12	1 5/16-12
20	\$	1 5/8-12	1 5/8-12	1 5/8-12
24	\$	1 7/8-12	1 7/8-12	1 7/8-12

F2650

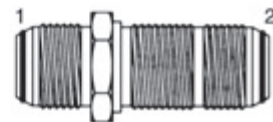
Flare-O Tube Union Cross



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
04	\$	7/16-20	7/16-20
05	\$	1/2-20	1/2-20
06	\$	9/16-18	9/16-18
08	\$	3/4-16	3/4-16
10	\$	7/8-14	7/8-14
12	\$	1 1/16-12	1 1/16-12
16	\$	1 5/16-12	1 5/16-12
20	\$	1 5/8-12	1 5/8-12
24	\$	1 7/8-12	1 7/8-12
32	\$	2 1/2-12	2 1/2-12

F2700

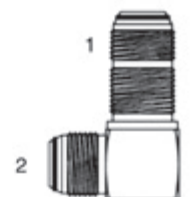
Flare-O Bulkhead Tube Union



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
04	\$	7/16-20	7/16-20
05	\$	1/2-20	1/2-20
06	\$	9/16-18	9/16-18
08	\$	3/4-16	3/4-16
10	\$	7/8-14	7/8-14
12	\$	1 1/16-12	1 1/16-12
16	\$	1 5/16-12	1 5/16-12

F2701

Flare-O Bulkhead Tube Union Elbow 90°



Flare-O® Adapters

F2702

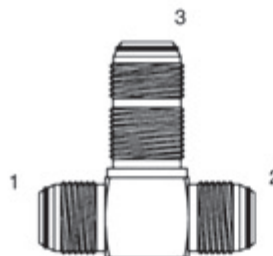
Flare-O Bulkhead Tube Union Elbow 45°



Dash Size	Stock Materials			T1 (UNF)	T2 (UNF)
	S	FG	SS BR		
04	\$			7/16-20	7/16-20
05	\$			1/2-20	1/2-20
06	\$			9/16-18	9/16-18
08	\$			3/4-16	3/4-16
10	\$			7/8-14	7/8-14
12	\$			1 1/16-12	1 1/16-12
16	\$			1 5/16-12	1 5/16-12

F2703

Flare-O Bulkhead Tube Union Branch Tee



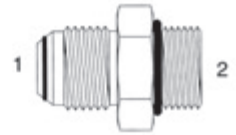
Dash Size	Stock Materials			T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS BR			
04	\$			7/16-20	7/16-20	7/16-20
06	\$			9/16-18	9/16-18	9/16-18
08	\$			3/4-16	3/4-16	3/4-16
10	\$			7/8-14	7/8-14	7/8-14
12	\$			1 1/16-12	1 1/16-12	1 1/16-12
16	\$			1 5/16-12	1 5/16-12	1 5/16-12

Flare-O® Adapters

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
04-02	\$	7/16-20	5/16-24
04	\$	7/16-20	7/16-20
04-05	\$	7/16-20	1/2-20
04-06	\$	7/16-20	9/16-18
04-08	\$	7/16-20	3/4-16
04-10	\$	7/16-20	7/8-14
04-12	\$	7/16-20	1 1/16-12
05-04	\$	1/2-20	7/16-20
05	\$	1/2-20	1/2-20
05-06	\$	1/2-20	9/16-18
06-04	\$	9/16-18	7/16-20
06-05	\$	9/16-18	1/2-20
06	\$	9/16-18	9/16-18
06-08	\$	9/16-18	3/4-16
06-10	\$	9/16-18	7/8-14
06-12	\$	9/16-18	1 1/16-12
08-04	\$	3/4-16	7/16-20
08-06	\$	3/4-16	9/16-18
08	\$	3/4-16	3/4-16
08-10	\$	3/4-16	7/8-14
08-12	\$	3/4-16	1 1/16-12
08-16	\$	3/4-16	1 5/16-12
10-06	\$	7/8-14	9/16-18
10-08	\$	7/8-14	3/4-16
10	\$	7/8-14	7/8-14
10-12	\$	7/8-14	1 1/16-12
10-16	\$	7/8-14	1 5/16-12
12-8	\$	1 1/16-12	3/4-16
12-10	\$	1 1/16-12	7/8-14
12	\$	1 1/16-12	1 1/16-12
12-14	\$	1 1/16-12	1 3/16-12
12-16	\$	1 1/16-12	1 5/16-12
12-20	\$	1 1/16-12	1 5/8-12
14-12	\$	1 3/16-12	1 1/16-12
14	\$	1 3/16-12	1 3/16-12
14-16	\$	1 3/16-12	1 5/16-12
16-10	\$	1 5/16-20	7/8-14
16-12	\$	1 5/16-20	1 1/16-12
16	\$	1 5/16-20	1 5/16-12
16-20	\$	1 5/16-20	1 5/8-12
16-24	\$	1 5/16-20	1 7/8-12
20-16	\$	1 5/8-12	1 5/16-12
20	\$	1 5/8-12	1 5/8-12
20-24	\$	1 5/8-12	1 7/8-12
24-20	\$	1 7/8-12	1 5/8-12
24	\$	1 7/8-12	1 7/8-12
24-32	\$	1 7/8-12	2 1/2-12
32-24	\$	2 1/2-12	1 7/8-12
32	\$	2 1/2-12	2 1/2-12

F6400

Flare-O to O-Ring



Flare-O® Adapters

F6400-L

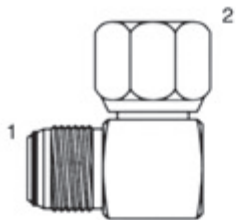
**Flare-O to
O-Ring Long**



Dash Size	Stock Materials			T1 (UNF)	T2 (UNF)
	S	FG	SS BR		
04	\$			7/16-20	7/16-20
08	\$			3/4-16	3/4-16
10	\$			7/8-14	7/8-14
12	\$			1 1/16-12	1 1/16-12
16	\$			1 5/16-12	1 5/16-12

F6500

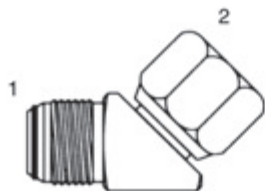
**Flare-O to
JIC Swivel
Elbow 90°**



Dash Size	Stock Materials			T1 (UNF)	T2 (UNF)
	S	FG	SS BR		
04	\$			7/16-20	7/16-20
05	\$			1/2-20	1/2-20
06	\$			9/16-18	9/16-18
08	\$			3/4-16	3/4-16
10	\$			7/8-14	7/8-14
12	\$			1 1/16-12	1 1/16-12
14	\$			1 3/16-12	1 3/16-12
16	\$			1 5/16-12	1 5/16-12
20	\$			1 5/8-12	1 5/8-12
24	\$			1 7/8-12	1 7/8-12
32	\$			2 1/2-12	2 1/2-12

F6502

**Flare-O to
JIC Swivel
Elbow 45°**



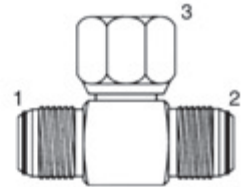
Dash Size	Stock Materials			T1 (UNF)	T2 (UNF)
	S	FG	SS BR		
04	\$			7/16-20	7/16-20
06	\$			9/16-18	9/16-18
08	\$			3/4-16	3/4-16
10	\$			7/8-14	7/8-14
12	\$			1 1/16-12	1 1/16-12
16	\$			1 5/16-12	1 5/16-12
20	\$			1 5/8-12	1 5/8-12
24	\$			1 7/8-12	1 7/8-12
32	\$			2 1/2-12	2 1/2-12

Flare-O® Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS	BR			
04	\$				7/16-20	7/16-20	7/16-20
05	\$				1/2-20	1/2-20	1/2-20
06	\$				9/16-18	9/16-18	9/16-18
08	\$				3/4-16	3/4-16	3/4-16
10	\$				7/8-14	7/8-14	7/8-14
12	\$				1 1/16-12	1 1/16-12	1 1/16-12
14	\$				1 3/16-12	1 3/16-12	1 3/16-12
16	\$				1 5/16-12	1 5/16-12	1 5/16-12
20	\$				1 5/8-12	1 5/8-12	1 5/8-12
24	\$				1 7/8-12	1 7/8-12	1 7/8-12
32	\$				2 1/2-12	2 1/2-12	2 1/2-12

F6600

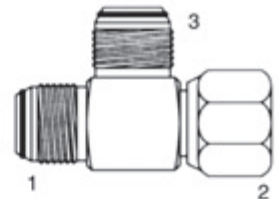
Flare-O to JIC Swivel Branch Tee



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS	BR			
04	\$				7/16-20	7/16-20	7/16-20
05	\$				1/2-20	1/2-20	1/2-20
06	\$				9/16-18	9/16-18	9/16-18
08	\$				3/4-16	3/4-16	3/4-16
10	\$				7/8-14	7/8-14	7/8-14
12	\$				1 1/16-12	1 1/16-12	1 1/16-12
14	\$				1 3/16-12	1 3/16-12	1 3/16-12
16	\$				1 5/16-12	1 5/16-12	1 5/16-12
20	\$				1 5/8-12	1 5/8-12	1 5/8-12
24	\$				1 7/8-12	1 7/8-12	1 7/8-12
32	\$				2 1/2-12	2 1/2-12	2 1/2-12

F6602

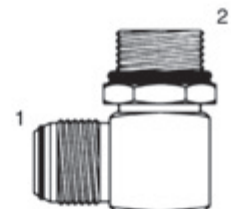
Flare-O to JIC Swivel Run Tee



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$				7/16-20	7/16-20
04-05	\$				7/16-20	1/2-20
04-06	\$				7/16-20	9/16-18
04-08	\$				7/16-20	3/4-16
05-04	\$				1/2-20	7/16-20
05	\$				1/2-20	1/2-20
05-06	\$				1/2-20	9/16-18
05-08	\$				1/2-20	3/4-16
06-04	\$				9/16-18	7/16-20
06-05	\$				9/16-18	1/2-20
06	\$				9/16-18	9/16-18
06-08	\$				9/16-18	3/4-16
06-10	\$				9/16-18	7/8-14
08-04	\$				3/4-16	7/16-20
08-06	\$				3/4-16	9/16-18
08	\$				3/4-16	3/4-16
08-10	\$				3/4-16	7/8-14
08-12	\$				3/4-16	1 1/16-12
10-06	\$				7/8-14	9/16-18
10-08	\$				7/8-14	3/4-16
10	\$				7/8-14	7/8-14
10-12	\$				7/8-14	1 1/16-12
12-08	\$				1 1/16-12	3/4-16
12-10	\$				1 1/16-12	7/8-14
12	\$				1 1/16-12	1 1/16-12
12-14	\$				1 1/16-12	1 3/16-12
12-16	\$				1 1/16-12	1 5/16-12
12-20	\$				1 1/16-12	1 5/8-12
14-12	\$				1 3/16-12	1 1/16-12

F6801

Flare-O to O-Ring Elbow 90°

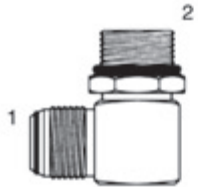


*Cont'd..

Flare-O® Adapters

F6801

**Flare-O to
O-Ring Elbow 90°
(Cont'd.)**



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
14	\$				1 3/16-12	1 3/16-12
16-10	\$				1 5/16-12	7/8-14
16-12	\$				1 5/16-12	1 1/16-12
16-14	\$				1 5/16-12	1 3/16-12
16	\$				1 5/16-12	1 5/16-12
16-20	\$				1 5/16-12	1 5/8-12
20-14	\$				1 5/8-12	1 3/16-12
20-16	\$				1 5/8-12	1 5/16-12
20	\$				1 5/8-12	1 5/8-12
20-24	\$				1 5/8-12	1 7/8-12
24-20	\$				1 7/8-12	1 5/8-12
24	\$				1 7/8-12	1 7/8-12
32	\$				2 1/2-12	2 1/2-12

F6801-L

**Flare-O to
O-Ring
Elbow 90°**



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$				7/16-20	7/16-20
06	\$				9/16-18	9/16-18
08	\$				3/4-16	3/4-16
10	\$				7/8-14	7/8-14
12	\$				1 1/16-12	1 1/16-12
16	\$				1 5/16-12	1 5/16-12

F6801-LL

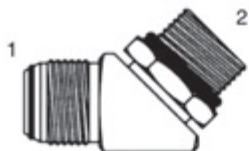
**Flare-O to
O-Ring
Extra Long
Elbow 90°**



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$				7/16-20	7/16-20
06	\$				9/16-18	9/16-18
06-08	\$				9/16-18	3/4-16
08	\$				3/4-16	3/4-16
10	\$				7/8-14	7/8-14
12	\$				1 1/16-12	1 1/16-12
16	\$				1 5/16-12	1 5/16-12

F6802

**Flare-O to
O-Ring
Elbow 45°**



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04	\$				7/16-20	7/16-20
05	\$				1/2-20	1/2-20
06	\$				9/16-18	9/16-18
06-08	\$				9/16-18	3/4-16
08-06	\$				3/4-16	9/16-18
08	\$				3/4-16	3/4-16
08-10	\$				3/4-16	7/8-14
10-8	\$				7/8-14	3/4-16
10	\$				7/8-14	7/8-14
12-10	\$				1 1/16-12	7/8-14
12	\$				1 1/16-12	1 1/16-12
12-16	\$				1 1/16-12	1 5/16-12
14	\$				1 3/16-12	1 3/16-12
16-12	\$				1 5/16-12	1 1/16-12
16	\$				1 5/16-12	1 5/16-12
16-20	\$				1 5/16-12	1 5/8-12
20	\$				1 5/8-12	1 5/8-12
24	\$				1 7/8-12	1 7/8-12
32	\$				2 1/2-12	2 1/2-12

Flare-O® Adapters

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)	T3 (UNF)
04	\$	7/16-20	7/16-20	7/16-20
05	\$	1/2-20	1/2-20	1/2-20
06	\$	9/16-18	9/16-18	9/16-18
08	\$	3/4-16	3/4-16	3/4-16
10	\$	7/8-14	7/8-14	7/8-14
12	\$	1 1/16-12	1 1/16-12	1 1/16-12
14	\$	1 3/16-12	1 3/16-12	1 3/16-12
16	\$	1 5/16-12	1 5/16-12	1 5/16-12
20	\$	1 5/8-12	1 5/8-12	1 5/8-12
24	\$	1 7/8-12	1 7/8-12	1 7/8-12

F6803

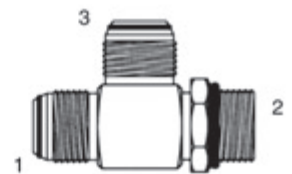
**Flare-O to
O-Ring
Branch Tee**



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)	T3 (UNF)
04	\$	7/16-20	7/16-20	7/16-20
05	\$	1/2-20	1/2-20	1/2-20
06	\$	9/16-18	9/16-18	9/16-18
08	\$	3/4-16	3/4-16	3/4-16
10	\$	7/8-14	7/8-14	7/8-14
12	\$	1 1/16-12	1 1/16-12	1 1/16-12
14	\$	1 3/16-12	1 3/16-12	1 3/16-12
16	\$	1 5/16-12	1 5/16-12	1 5/16-12
20	\$	1 5/8-12	1 5/8-12	1 5/8-12
24	\$	1 7/8-12	1 7/8-12	1 7/8-12

F6804

**Flare-O to
O-Ring
Run Tee**



Dash Size	Tube O.D.
04	1/4
05	5/16
06	3/8
08	1/2
10	5/8
12	3/4
14	7/8
16	1
20	1 1/4
24	1 1/2
32	2

F90DB

**Flare-O Buna
O-Ring**



Dash Size	Tube O.D.
04	1/4
05	5/16
06	3/8
08	1/2
10	5/8
12	3/4
14	7/8
16	1
20	1 1/4
24	1 1/2
32	2

F75DB-VITON

**Flare-O Viton
O-Ring**



S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Accessories

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Think Tank

HYDRAULIC TANK ACCESS AND SEALING HAS NEVER BEEN EASIER.



Tompkins Industries has finally taken the thoughtlessness out of hydraulic tank access systems with a new, patent pending design that requires no parts fabrication, machining or welding. And that means big cost savings.

This is a fast, simple, rugged and field-service friendly way to create tank access for cleaning and inspection. When you think about it, there's really no better way to seal your hydraulic and fuel tanks.

Give our hydraulic specialists at Tompkins a call today for details about your specific clean-out cover application.

FEATURES INCLUDE:

- Positive O-ring bolt seal
- Full bolt torque load rated
- Heavy-duty Grade 50 steel construction
- Designed for air impact gun installation
- Installation above and below fluid level
- 6", 8", 10", 12" and 14" sizes
- Pressure tested up to 35 PSI
- 500 degree powder coat o-rings and gaskets available
- Self-centering anti-rotation inner plate does not drop during disassembly

ORDERING INSTRUCTIONS ON FOLLOWING PAGE

Accessories Hydraulic Tank Access and Sealing

FCC SYSTEM ORDER CODES

Example ; FCC-08-YZ-SC

8-inch cover assembly with yellow zinc coating and high temperature gasket and o'ring

	FCC	- XX	- XX	- XX
COVER SIZE				
06 = 6-inch diameter				
08 = 8-inch diameter				
10 = 10-inch diameter				
12 = 12-inch diameter				
14 = 14-inch diameter				
PLATING OPTION				
YZ = Yellow Zinc				
UP = Unplated and unpainted				
GASKET and O'RING OPTION				
BN = Buna N nitrile sheet rubber				
CN* = Cork/Nitrile sheet				
SC = High temp cork/V48 sheet (500 F. for powder coat paint)				
NP* = Neoprene				

* Not stocked. Please consult factory for gasket availability and minimum quantity orders.

TANK HOLE PATTERN
FCC-06 uses a 4.25-inch diameter hole minimum Assembly drawing FCC06Assembly Tab bender and hole pattern drawing 6holeOptions
FCC-08 uses a 6-inch diameter hole Assembly drawing FCC08Assembly Tab bender and hole pattern drawing 8holeOptions
FCC-10 uses a 8-inch diameter hole Assembly drawing FCC10Assembly Tab bender and hole pattern drawing 10holeOptions
FCC-12 uses a 10-inch diameter hole Assembly drawing FCC12Assembly Tab bender and hole pattern drawing 12holeOptions
FCC-14 uses a 12-inch diameter hole Assembly drawing FCC14Assembly Tab bender and hole pattern drawing 14holeOptions

Part Numbers

FCC-06-UP-BN
 FCC-06-YZ-BN
 FCC-06-YZ-SC
 FCC-08-UP-BN
 FCC-08-YZ-BN
 FCC-08-YZ-SC
 FCC-10-0
 Reservoir Clean Out Cover Assembly
 FCC-10-UP-BN
 FCC-10-YZ-BN
 FCC-12-UP-BN
 FCC-12-YZ-BN
 FCC-14-UP-BN
 FCC-14-YZ-BN

Technical Help Available Upon Request
1-800-255-1008

Accessories

Part Number	Stock Materials				Clamping Diameter	Bolt Hole
	S	FG	SS	BR		
HK0313	\$				1/8"	1/4
HK0413	\$				3/16"	1/4
HK0709	\$				3/8"	9/32
HK0809	\$				7/16"	9/32
HK0913	\$				1/2"	13/32
HK1013	\$				9/16"	13/32
HK1113	\$				5/8"	13/32
HK1213	\$				11/16"	13/32
HK1313	\$				3/4"	13/32
HK1413	\$				13/16"	13/32
HK1513	\$				7/8"	13/32
HK1613	\$				15/16"	13/32
HK1713	\$				1"	13/32
HK1813	\$				1 1/16"	13/32
HK1913	\$				1 1/8"	13/32
HK2017	\$				1 3/16"	17/32
HK2117	\$				1 1/4"	17/32
HK2317	\$				1 3/8"	17/32
HK2517	\$				1 1/2"	17/32
HK2617	\$				1 9/16"	17/32
HK2917	\$				1 3/4"	17/32
HK3117	\$				1 7/8"	17/32
HK3217	\$				1 15/16"	17/32
HK3317	\$				2"	17/32
HK3417	\$				2 5/32"	17/32
HK3817	\$				2 21/32"	17/32

*Used for support for long hose lengths. Also aids proper hose routing where abrasion or heat exists. Material: Steel with 1/32" thick black vinyl cushion

HK

Hose Clamp*



Part Number	Stock Materials				Clamping Diameter
	S	FG	SS	BR	
WGC-4	SS				7/32-5/8"
WGC-6	SS				5/16-7/8"
WGC-8	SS				7/16-1"
WGC-10	SS				7/16-1 1/16"
WGC-12	SS				9/16-1 1/4"
WGC-16	SS				11/16-1 1/2"
WGC-20	SS				13/16-1 3/4"
WGC-24	SS				1 1/16-2"
WGC-28	SS				1 5/16-2 1/4"
WGC-32	SS				1 9/16-2 1/2"
WGC-36	SS				1 13/16-2 3/4"
WGC-40	SS				2 1/16-3"
WGC-48	SS				2 9/16-3 1/2"
WGC-56	SS				3 1/16-4"
WGC-60	SS				3 5/16-4 1/4"
WGC-64	SS				3 9/16-4 1/2"
WGC-80	SS				2 1/2-5 1/2"

*Used in automotive, heavy-duty equipment and several industries.

WGC

Worm Gear Clamp*

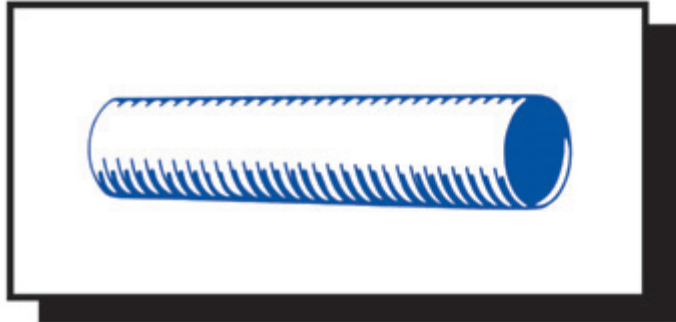


PROTEC

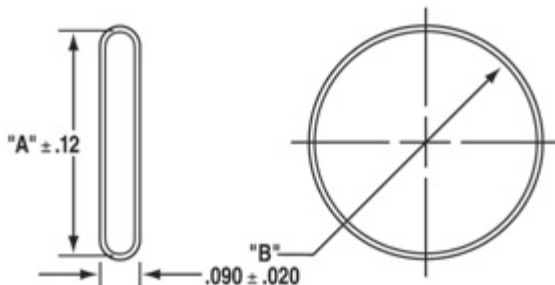
NYLON HOSE SLEEVE

PROTEC PHYSICAL DATA

PROTEC Sleeve Product No.	Outside Flat "A" (In.)	Nom. I.D. "B" (In.)
NHS-071	1.19	.71
NHS-077	1.25	.77
NHS-090	1.50	.90
NHS-100	1.66	1.00
NHS-114	1.88	1.14
NHS-125	2.03	1.25
NHS-130	2.13	1.30
NHS-138	2.25	1.38
NHS-153	2.50	1.53
NHS-159	2.56	1.59
NHS-175	2.81	1.75
NHS-185	3.00	1.85
NHS-207	3.31	2.07
NHS-225	3.63	2.25
NHS-238	3.81	2.38
NHS-254	4.06	2.54
NHS-264	4.25	2.64
NHS-286	4.56	2.86
NHS-296	4.75	2.96
NHS-334	5.31	3.34
NHS-366	5.81	3.66



- Protec is woven from thousands of nylon filaments into a self-renewing, abrasion-resistant fabric sleeve. As it is scuffed and worn, its filaments friz forming an even thicker more protective shield. This smooth-bore sleeve is easily installed over hose, chains, cables, or springs and may be secured with nylon cable ties or band-clamps.
- As a hose cover, it provides outstanding personal injury protection to equipment operators by deflecting the spray of hot hydraulic fluids in the event of a hose failure.
- It also extends individual hose life in severe abrasive environments.
- It is an excellent product for holding two or more hoses in a single bundle.
- For hose groups that must follow the same flex pattern, bundling will provide identical flex memory to all hoses in group bundle.
- In some cases, it eliminates the need for bulkhead couplings by shielding hoses that must pass through metal openings.
- It protects painted finishes when used as a flexible cover for chains, cables, and springs.



PROTEC HOSE SLEEVE TECHNICAL DATA

MATERIAL

- Cordura or Anso-tex bulk nylon fiber yarn. Cordura is a registered trademark of DuPont. Anso-tex is a registered trademark of Allied Fibers.

THICKNESS

- .090" ± .020", DOUBLED FLAT

COLOR

- Black

FLAMMABILITY

- Passes FMVSS 302 horizontal flame test, MSHA accepted.

TEMPERATURE

- Maximum ambient temperature 250°F.

PACKAGING

- 100 and 300 foot rolls. Pieces cut to length with ends heat sealed are available on request.

TOMPKINS **PROWRAP**®

Extreme Duty Hose and Cable Protection

INSTALLATION

- Install without disconnecting any lines
- Tight grip prevents sliding or leap-frogging
- Complete coverage with proper installation
- Bundled hoses may exit at any point

AVAILABILITY

- Sizes to fit 1/4" hose to 11" bundles
- Thickness from .095" to .290".

MATERIAL

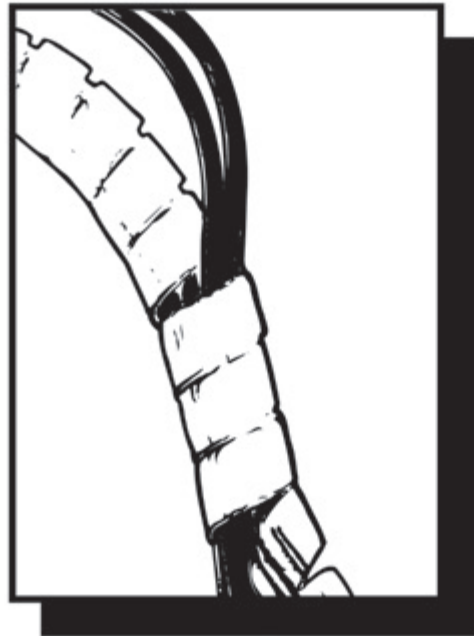
- UV Resistant 100% Polyethylene

TEMPERATURE

- -70°F to 180°F

FLAMMABILITY

- More resistant to fire hazard than woven sleeve protectors that retain oil and sawdust.



LIGHT DUTY					
Part #	Recommended Hose Size (In.)	Maximum Bundle Diameter (In.)	Wall Thickness (In.)	Weight Per Foot (oz.)	Standard Package
PWLD-16	1	2	.110	.18	50'
PWLD-20	1.25	2.50	.135	.26	100'
PWLD-24	1.5	3	.145	.36	100'
PWLD-32	2	4	.175	.64	50'
PWLD-56	3.5	7	.190	.96	50'
PWLD-96	6	11	.185	1.75	20'

HEAVY DUTY					
Part #	Recommended Hose Size (In.)	Maximum Bundle Diameter (In.)	Wall Thickness (In.)	Weight Per Foot (oz.)	Standard Package
PWHD-08	.50	1	.095	.11	100'
PWHD-12	.75	1.50	.125	.15	100'
PWHD-16	1	2	.170	.24	50'
PWHD-20	1.25	2.50	.200	.40	100'
PWHD-24	1.5	3	.230	.65	100'
PWHD-32	2	4	.260	.80	50'
PWHD-48	3	6	.240	1.24	50'
PWHD-64	4	8	.290	1.48	44'
PWHD-96	6	11	.270	2.20	20'

S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Accessories

TOMPKINS **PROWRAP PLUS**+

Extreme Duty Hose and Cable Protection

INSTALLATION

- Install without disconnecting any lines
- Tight grip prevents sliding or leap-frogging
- Complete coverage with proper installation
- Bundled hoses may exit at any point
- Dual-beveled edges ease installation

AVAILABILITY

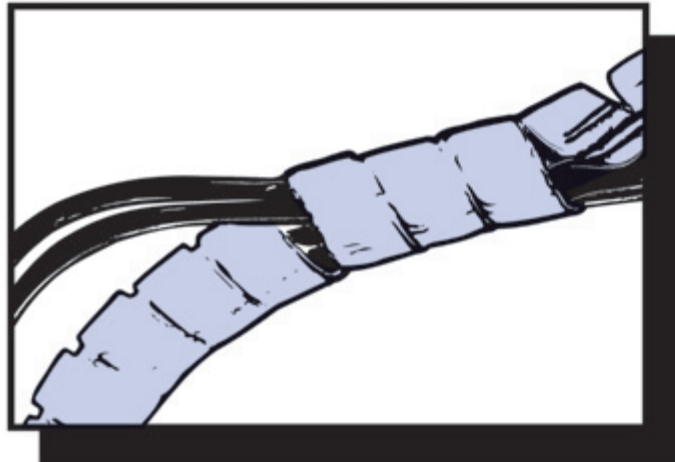
- Four colors to help match & identify
*Black, Yellow, Red, Blue
- Sizes to fit 1/4" hose to 8" bundles

MATERIAL

- UV Resistant 100% Polyethylene

TEMPERATURE

- Temperature range -40°F to 300°F



FLAMMABILITY

- Available in Flame Resistant/Anti-Static

PROWRAP PLUS

Part #	Recommended Hose Size (In.)	Wall Thickness (In.)	Weight Per Foot (oz.)	Colors* Available BK, Y, R, BL	Standard Package
PWP-12	3/8 – 7/16	.06	.4	BK	164'
PWP-16	7/16 – 5/8	.07	.8	BK,Y,R,BL	66'
PWP-20	5/8 – 7/8	.08	1.2	BK,Y,R,BL	66'
PWP-25	1 5/16 – 1 7/16	.08	2.0	BK,Y,R,BL	66'
PWP-32	1 1/8 – 1 3/8	.10	2.5	BK,Y,R,BL	66'
PWP-40	1 1/2 – 1 5/8	.12	3.3	BK	66'
PWP-50	1 3/4 – 2 1/8	.12	4.5	BK,Y,R,BL	66'
PWP-63	2 1/4 – 2 1/2	.16	6.8	BK	66'
PWP-75	2 5/8 – 2 7/8	.18	9.6	BK	66'
PWP-90	3 – 3 1/2	.22	12.8	BK	66'
PWP-110	3 1/2 – 4 1/4	.22	15.8	BK	40'

* BK=Black Y=Yellow R=Red BL=Blue

FIRE RESISTANT/ANTI-STATIC

Part #	Inner Diameter (In.)	Outer Diameter (In.)	Wall Thickness (In.)
FRAS-16	.49	.63	.069
FRAS-20	.63	.79	.0785
FRAS-32	1.06	1.26	.0985
FRAS-50	1.73	1.97	.1185
FRAS-75	2.59	2.97	.1775
FRAS-90	3.11	3.54	.2165

Pro Test

The PRO TEST System

The PRO TEST System consists of a test point with a spring-load check valve along with a microbore high pressure hose that connects to a pressure gauge. The purpose of the system is to allow pressure testing of equipment without the use of tools and enabling the system to be running during the time of testing. A single gauge can be used to check an unlimited number of test points on a system even in hard-to-reach areas because of the flexibility of the hose.

Applications for PRO TEST System

- Construction Equipment
- Agricultural Equipment
- Mining Equipment
- Test Stands
- Plant Maintenance
- Trouble-Shooting

PRO TEST Point Material Data

- All have M16x2.0 Threads
- Made of Carbon Steel and Zinc Plated
- Internal Seals are Viton / External Seals are Buna
- Available in Stainless Steel

Microbore Hose Assemblies Data

- Minimum Burst pressure of 27,000 PSI
- Hose cover and core made of polyamide with Kevlar fiber reinforcement
- Nominal hose bore is 2mm
- Bend radius is 20mm
- Temperature range is -75° to 212° F



Interchangeability

PRO TEST Points and Hoses interchange with other brands. Please contact a Tompkins customer service representative for more details.

Limited Warranty

All PRO TEST parts are warranted for dimensional accuracy only. Catalog dimensions are for reference purposes and are subject to change without notice.

Liability extends to repair or replacement of a defective part only. Replacement of the defective part shall be the buyer's sole remedy and Tompkins Industries, Inc. shall not be liable for any consequential damages.

Pro Test Cross-Over

Tompkins Part Number	PCI Part Number	Stauff Part Number	Thread
TPP-02	H900-20	TCM20-1/8NPT-V	1/8 NPT M
TPP-04	H900-21	TCM20-1/4NPT-V	1/4 NPT M
TPO-02	H900-10	TCM20-5/16UNF-V	5/16-24 UNF
TPO-04	H900-11	TCM20-7/16UNF-V	7/16-20 UNF
TPO-05		TCM20-1/2UNF-V	1/2-20 UNF
TPO-06	H900-12	TCM20-9/16UNF-V	9/16-18 UNF
TPBP-02	H900-30	TCM20-G1/8-VC	1/8 BSPP M
TPBP-04	H900-31	TCM20-G1/4-VB	1/4 BSPP M
TPBP-06	H900-32	TCM20-G3/8-VB	3/8 BSPP M
TPBT-02		TCM20-R1/8K-V	1/8 BSPT M
TPBT-04		TCM20-R1/4K-V	1/4 BSPT M
TPM-08	H900-15	TCM20-M08x1.0-V	M08 x 1.0
TPM-10	H900-25	TCM20-M10x1.0-V	M10 x 1.0
TPM-12	H900-26	TCM20-M12x1.5-V	M12 x 1.5
TPM-14	H900-27	TCM20-M14x1.5-V	M14 x 1.5
TPM-16	H900-28	TCM20-M16x1.5-V	M16 x 1.5
TPFJ-04		TCM20-1/4-JIC-V	7/16-20 UNF
TPFJ-05		TCM20-5/16-JIC-V	1/2-20 UNF
TPFJ-06		TCM20-3/8-JIC-V	9/16-18 UNF
TPFJ-08		TCM20-1/2-JIC-V	3/4-16 UNF
TPFJ-10		TCM20-5/8-JIC-V	7/8-14 UNF
TPFJ-12		TCM20-3/4-JIC-V	1 1/16-12 UNF
TPFJ-16		TCM20-1-JIC-V	1 5/16-12 UNF
TPFJ-20		TCM20-1 1/4-JIC-V	1 5/8-12 UNF
TPFJ-24		TCM20-1 1/2-JIC-V	1 7/8-12 UNF
HGCP-04	H900-82	GAH20-1/4 NPT-V	1/4 NPT
HGCBP-04	H900-80	GAH20-G1/4-V	1/4 BSPP
HGCBP-08	H900-81	GAH20-G1/2-V	1/2 BSPP
GCP-04	H900-86	DGA20-1/4 NPT	1/4 NPT
GCBP-04	H900-84	DGA20-G1/4	1/4 BSPP
GCBP-08	H900-85	DGA20-G1/2	1/2 BSPP
MBH-162-12	H900-92.12	HFF20-012	M16 x 2.0 (Both Ends)
MBH-162-18	H900-92.16	HFF20-016	M16 x 2.0 (Both Ends)
MBH-162-24	H900-92.24	HFF20-024	M16 x 2.0 (Both Ends)
MBH-162-32	H900-92.32	HFF20-032	M16 x 2.0 (Both Ends)
MBH-162-40	H900-92.40	HFF20-040	M16 x 2.0 (Both Ends)
MBH-162-60	H900-92.60	HFF20-060	M16 x 2.0 (Both Ends)
MBH-162-80	H900-92.80	HFF20-080	M16 x 2.0 (Both Ends)
MBH-162-144			M16 x 2.0 (Both Ends)
MBH-44-12	H900-94.12		7/16-20 UNF (Both Ends)
MBH-44-18	H900-94.18		7/16-20 UNF (Both Ends)
MBH-44-24	H900-94.24		7/16-20 UNF (Both Ends)
MBH-44-40	H900-94.40		7/16-20 UNF (Both Ends)
MBH-44-60	H900-94.60		7/16-20 UNF (Both Ends)
MBH-44-72			7/16-20 UNF (Both Ends)
MBH-44-96			7/16-20 UNF (Both Ends)

Part Number	Stock Materials				Thread	Seal Type	PSI/Bar	Hex (MM)
	S	FG	SS	BR				
TPP-02	\$				1/8-27 NPTF	Taper	5800/400	.67 (17)
TPP-04	\$				1/4-18 NPTF	Taper	9135/630	.67 (17)
TPO-04	\$				7/16-20 UNF	O-ring	9135/630	.67 (17)
TPO-05	\$				1/2-20 UNF	O-ring	9135/630	.67 (17)
TPO-06	\$				9/16-18 UNF	O-ring	9135/630	.67 (17)
TPBP-02	\$				1/8-28 BSPP	Soft	5800/400	.67 (17)
TPBP-04	\$				1/4-19 BSPP	Soft	9135/630	.75 (19)
TPBP-06	\$				3/8-19 BSPP	Soft	9135/630	.94 (24)
TPBT-02	\$				1/8-28 BSPT	Taper	5800/400	.67 (17)
TPBT-04	\$				1/4-19 BSPT	Taper	9135/630	.67 (17)
TPM-08	\$				8X1.0 Metric	O-ring	5800/400	.67 (17)
TPM-10	\$				10X1.0 Metric	O-ring	5800/400	.67 (17)
TPM-12	\$				12X1.5 Metric	Soft	9135/630	.67 (17)
TPM-14	\$				14X1.5 Metric	Soft	9135/630	.75 (19)
TPM-16	\$				16X1.5 Metric	Soft	9135/630	.87 (22)
TPBH	\$				7/16-20 UNF	37° Bulkhead	9135/630	.67 (17)

TP

Pro Test Points with Metal Safety Cap and Chain (Male Threads)



Part Number	Stock Materials				Thread	Seal Type	PSI/Bar	Hex (MM)
	S	FG	SS	BR				
TPFF-04	\$				9/16-18 UNF	ORFS Swivel	9135/630	.67 (17)
TPFF-06	\$				11/16-16 UNF	ORFS Swivel	9135/630	.67 (17)
TPFJ-04	\$				7/16-20 UNF	37° JIC		
TPFJ-04	\$				1/2-20 UNF	37° JIC		
TPFJ-06	\$				9/16-18 UNF	37° JIC		
TPFJ-08	\$				3/4-16 UNF	37° JIC		
TPFJ-10	\$				7/8-14 UNF	37° JIC		
TPFJ-12	\$				1 1/16-12 UNF	37° JIC		
TPFJ-16	\$				1 5/16-12 UNF	37° JIC		
TPFJ-20	\$				1 5/8-12 UNF	37° JIC		
TPFJ-24	\$				1 7/8-12 UNF	37° JIC		

TP

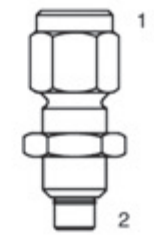
Pro Test Points With Metal Cap and Chain (Female Threads)



Part Number	Stock Materials				T1	T2 (Male)	PSI/Bar	Hex (MM)
	S	FG	SS	BR				
HGCP-04	\$				1/4-18 NPTF	16x20 Metric	5800/400	.75 (19)
HGCBP-04	\$				1/4-19 BSPP	16x20 Metric	5800/400	.75 (19)
HGCBP-08	\$				1/2-14 BSPP	16x20 Metric	5800/400	.75 (19)

HGCP

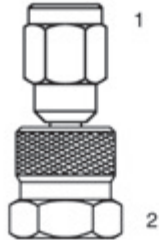
Hose Gauge Connectors



Pro Test

GCP

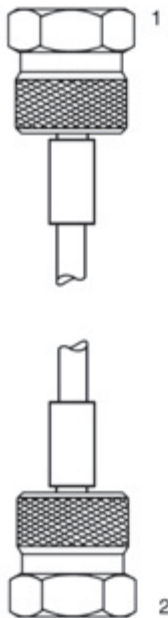
Gauge Connectors



Part Number	Stock Materials				T1	T2 (Female)	PSI/Bar	Hex (MM)
	S	FG	SS	BR				
GCP-4	\$				1/4-18 NPTF	16x20 Metric	5800/400	.75 (19)
GCBP-4	\$				1/4-19 BSPP	16x20 Metric	5800/400	.75 (19)
GCBP-8	\$				1/2-14 BSPP	16x20 Metric	5800/400	.75 (19)

MBH

Micro Bore Hose Assemblies



Part Number	Ends 1 & 2	Length (MM)	PSI/Bar
MBH-162-12	M16X2.0	12" (305)	9135/630
MBH-162-16	M16X2.0	16" (404)	9135/630
MBH-162-18	M16X2.0	18" (458)	9135/630
MBH-162-24	M16X2.0	24" (610)	9135/630
MBH-162-32	M16X2.0	32" (815)	9135/630
MBH-162-40	M16X2.0	40" (1020)	9135/630
MBH-162-60	M16X2.0	60" (1500)	9135/630
MBH-162-80	M16X2.0	80" (2033)	9135/630
MBH-162-144	M16X2.0	144" (3659)	9135/630
MBH-44-12	7/16-20 FJIC	12" (305)	9135/630
MBH-44-18	7/16-20 FJIC	18" (458)	9135/630
MBH-44-24	7/16-20 FJIC	24" (610)	9135/630
MBH-44-40	7/16-20 FJIC	40" (1020)	9135/630
MBH-44-60	7/16-20 FJIC	60" (1500)	9135/630
MBH-44-72	7/16-20 FJIC	72" (1830)	9135/630
MBH-44-96	7/16-20 FJIC	96" (2440)	9135/630

Other lengths of hoses and different crimped ends are available upon request.

To order a custom length: MBH-162-48 EX: 48 denotes 48 inches.
Call customer service for a quote on custom lengths.

Tompkins Pro Test System can also be purchased as a kit with the following components enclosed in a black plastic suitcase with foam inlays.

The kits contain the following:

- 3 Pressure Gauges With Varying PSI Ratings
- 1 Gauge Adapter
- 1 Hose Gauge Adapter
- 3 Test Points
- 2 Hose Assemblies

- PART #**
- GLS-1000
 - GCP-4
 - HGCP-4
 - TPP-4,TPO-4,TPO-6
 - MBH-162-60

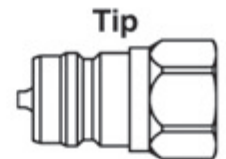
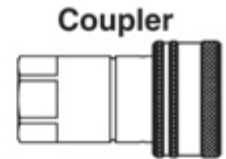
Complete kit part # -- TP KIT

Kits can be customized with different components

Quick Disconnects

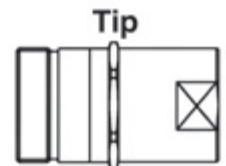
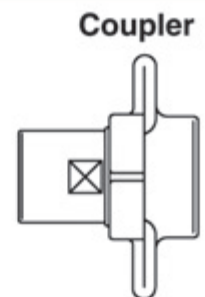
Dash Size	Body Size	T1 (NPT)	Cap #/Plug #	WP PSI
ANV-14-F	1/4	1/4	TMA-14	5075
ANV-14-M	1/4	1/4	TFA-14	5075
ANV-38-F	3/8	3/8	TMA-38	4550
ANV-38-M	3/8	3/8	TFA-38	4550
ANV-34-F	3/4	3/4	TMA-34	3625
ANV-34-M	3/4	3/4	TFA-34	3625
ANV-1-F	1	1	TMA-1	3335
ANV-1-M	1	1	TFA-1	3335
Interchanges with: ISO 7241-A Parker 6600 Aeroquip 5600				

ANV Series



Dash Size	Body Size	T1 (NPT)	Cap #/Plug #	WP PSI
FB-12-F	3/4	3/4	TMFB-12S	3625
FB-12-M	3/4	3/4	TFFB-12S	3625
FB-16-F	1	1	TMFB-16S	3335
FB-16-M	1	1	TFFB-16S	3335
FB-20-F	1 1/4	1 1/4	TMFB-20S	3045
FB-20-M	1 1/4	1 1/4	TFFB-20S	3045
Interchanges with: Parker 6100 Aeroquip 5100				

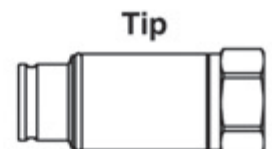
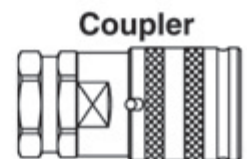
FB Series



Dash Size	Body Size	T1 (NPT)	Cap #/Plug #	WP PSI
FF-38-F*	3/8	3/8	TMF-38	4350
FF-38-M*	3/8	3/8	TFF-38	4350
FF-38-12-F*	3/8	1/2	TMF-38	4350
FF-38-12-M*	3/8	1/2	TFF-38	4350
FF-12-F	1/2	1/2		3650
FF-12-M	1/2	1/2		3650
FF-34-F	3/4	3/4		3650
FF-34-M	3/4	3/4		3650
*Complies with: HTMA Standards ISO 16028				

FF Series

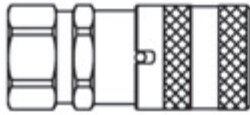
Flush Face



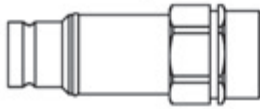
Quick Disconnects

FFI Series

Coupler



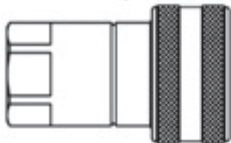
Tip



Dash Size	Body Size	Thread (NPT)	WP PSI
FFI-12-F	1/2	1/2	3625
FFI-12-M	1/2	1/2	3625
FFI-34-F	3/4	3/4	3625
FFI-34-M	3/4	3/4	3625
Interchanges with: ISO 16028			

HNV Series

Coupler



Tip



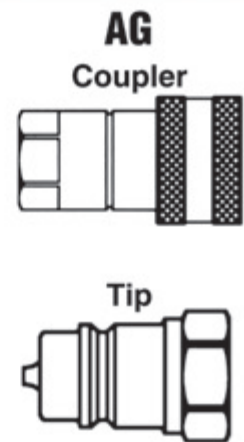
Dash Size	Body Size	T1 (NPT)	Cap #/Plug #	WP PSI
HNV-18-F	1/8	1/8		5800
HNV-18-M	1/8	1/8		5800
HNV-14-F	1/4	1/4	TMH-14	5075
HNV-14-M	1/4	1/4	TFH-14	5075
HNV-38-F	3/8	3/8	TMH-38	4350
HNV-38-M	3/8	3/8	TFH-38	4350
HNV-12-F	1/2	1/2	TMH-12	4060
HNV-12-M	1/2	1/2	TFH-12	4060
HNV-34-F	3/4	3/4	TMH-34	2610
HNV-34-M	3/4	3/4	TFH-34	2610
HNV-1-F	1	1	TMH-1	2175
HNV-1-M	1	1	TFH-1	2175
Also available in brass and stainless on request. Interchanges with: ISO 7241-B Parker 60 Aeroquip FD45				

Quick Disconnects

Dash Size	Body Size	T1 (NPT)	Cap #/Plug #	WP PSI
NV-14-F	1/4	1/4	TM-14	5075
NV-14-M	1/4	1/4	TF-14	5075
NV-38-F	3/8	3/8	TM-38	4550
NV-38-M	3/8	3/8	TF-38	4550
NV-12-F*	1/2	1/2	TM-12	3625
NV-12-M*	1/2	1/2	TF-12	3625
NV-34-UNF-F*	1/2	3/4-16 (UNF)	TM-12	3625
NV-34-UNF-M*	1/2	3/4-16 (UNF)	TF-12	3625
NV-34-F	1/2	3/4	TM-12	3625
NV-34-M	1/2	3/4	TF-12	3625
NV-34-F	3/4	3/4	TM-34	3625
NV-34-M	3/4	3/4	TF-34	3625
NV-1-F	1	1	TM-1	3335
NV-1-M	1	1	TF-1	3335

Interchanges with:
Pioneer 4000
*ISO 7241-A

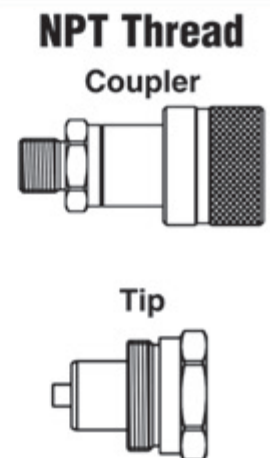
NV Series



Dash Size	Body Size	T1 (NPT)	WP PSI
PVVM-1/14-F	1/4	1/4	10000
PVVM-14-M	1/4	1/4	10000
PVVM-1/38-F	3/8	3/8	10000
PVVM-38-M	3/8	3/8	10000

Screw to Connect - High Pressure
Interchanges with:
Parker 3000

PVVM Series

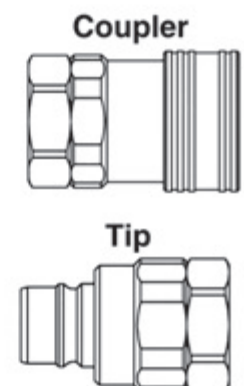


Dash Size	Body Size	T1 (NPT)	WP PSI
TNV-4-F	1/4	1/4	4000
TNV-4-M	1/4	1/4	4000
TNV-6-F	3/8	3/8	4350
TNV-6-M	3/8	3/8	4350
TNV-8-F	1/2	1/2	3200
TNV-8-M	1/2	1/2	3200
TNV-12-F	3/4	3/4	2750
TNV-12-M	3/4	3/4	2750
TNV-16-F	1	1	2175
TNV-16-M	1	1	2175

Interchanges with:
Snaptite H Series

TNV Series

Quick Connect



Brass

STEEL1-169

ACCESSORIES170-183

BRASS184-238

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Push-On Hose Barb189-192

SAE 45° Adapters193-197

Compression Adapters198-203

Pipe Adapters204-210

Poly Push Fittings211-215

Poly Flow Fittings216-219

Push-In D.O.T.220-222

Air Brake Fittings223-226

Needle Valves/Drain227-230

Inverted Flare Adapt231-234

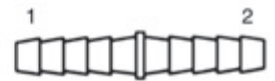
Garden Hose Fittings235-238

Brass Hose Barb Fittings

Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (Hose I.D.)
	S	FG	SS	BR		
02				BR	1/8	1/8
03				BR	3/16	3/16
04				BR	1/4	1/4
05				BR	5/16	5/16
06				BR	3/8	3/8
08				BR	1/2	1/2
10				BR	5/8	5/8
12				BR	3/4	3/4
16				BR	1	1

4200

Hose Splicer



Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (NPTF)
	S	FG	SS	BR		
02-01				BR	1/8	1/16-27
02-02			SS	BR	1/8	1/8-27
02-04			SS	BR	1/8	1/4-18
03-02				BR	3/16	1/8-27
03-04				BR	3/16	1/4-18
04-02			SS	BR	1/4	1/8-27
04-04			SS	BR	1/4	1/4-18
04-06			SS	BR	1/4	3/8-18
04-08			SS	BR	1/4	1/2-14
05-02				BR	5/16	1/8-27
05-04				BR	5/16	1/4-18
05-06				BR	5/16	3/8-18
06-02				BR	3/8	1/8-27
06-04			SS	BR	3/8	1/4-18
06-06			SS	BR	3/8	3/8-18
06-08			SS	BR	3/8	1/2-14
06-12				BR	3/8	3/4-14
08-04			SS	BR	1/2	1/4-18
08-06			SS	BR	1/2	3/8-18
08-08			SS	BR	1/2	1/2-14
08-12			SS	BR	1/2	3/4-14
10-06				BR	5/8	3/8-18
10-08			SS	BR	5/8	1/2-14
10-12				BR	5/8	3/4-14
12-06				BR	3/4	3/8-18
12-08			SS	BR	3/4	1/2-14
12-12			SS	BR	3/4	3/4-14
16-12			SS	BR	1	3/4-14
16-16			SS	BR	1	1-11 1/2
20-16				BR	1 1/4	1-11 1/2

4244

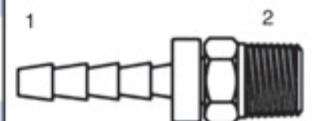
Hose Barb to Pipe



Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (NPTF)
	S	FG	SS	BR		
04-04				BR	1/4	1/4-18
06-04				BR	3/8	1/4-18
06-06				BR	3/8	3/8-18
08-06				BR	1/2	3/8-18
08-08				BR	1/2	1/2-14
12-12				BR	3/4	3/4-14

LS-4244

Hose Barb to Pipe Swivel



S= Steel

FG=Forging

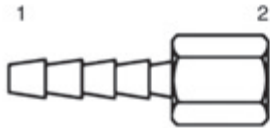
SS=Stainless Steel

BR=Brass

Brass Hose Barb Fittings

4245

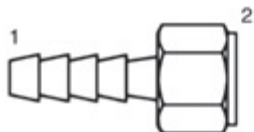
Hose Barb to Pipe (RIGID)



Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (NPTF)
	S	FG	SS	BR		
02-02				BR	1/8	1/8-27
02-04				BR	1/8	1/4-18
03-02				BR	3/16	1/8-27
03-04				BR	3/16	1/4-18
04-02				BR	1/4	1/8-27
04-04				BR	1/4	1/4-18
04-06				BR	1/4	3/8-18
05-02				BR	5/16	1/8-27
05-04				BR	5/16	1/4-18
05-06				BR	5/16	3/8-18
06-02				BR	3/8	1/8-27
06-04				BR	3/8	1/4-18
06-06				BR	3/8	3/8-18
06-08				BR	3/8	1/2-14
08-04				BR	1/2	1/4-18
08-06				BR	1/2	3/8-18
08-08				BR	1/2	1/2-14
12-12				BR	3/4	3/4-14
16-12				BR	1	3/4-14

4245-S

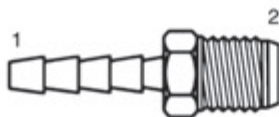
Hose Barb to Ball Seat Pipe Swivel



Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (NPTF)
	S	FG	SS	BR		
04-04				BR	1/4	1/4-18
04-06				BR	1/4	3/8-18
06-04				BR	3/8	1/4-18
06-06				BR	3/8	3/8-18
08-06				BR	1/2	3/8-18
08-08				BR	1/2	1/2-14
12-12				BR	3/4	3/4-14

4250

Hose Barb to SAE 45° Flare



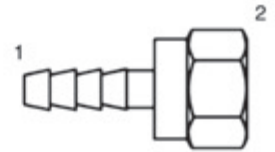
Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (UNF)
	S	FG	SS	BR		
04-04				BR	1/4	7/16-20
04-06				BR	1/4	5/8-18
05-05				BR	5/16	1/2-20
06-06				BR	3/8	5/8-18
08-08				BR	1/2	3/4-16

Brass Hose Barb Fittings

Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (UNF)
	S	FG	SS	BR		
04-04				BR	1/4	7/16-20
04-06				BR	1/4	9/16-18
04-06 SAE				BR	1/4	5/8-18
06-06				BR	3/8	9/16-18
06-06 SAE				BR	3/8	5/8-18
08-08				BR	1/2	3/4-16
10-10				BR	5/8	7/8-14
12-12				BR	3/4	1 1/16-12
12-12 SAE				BR	3/4	1 1/16-14

4255

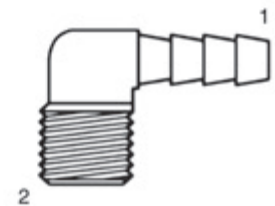
Hose Barb to JIC Swivel



Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (NPTF)
	S	FG	SS	BR		
02-04		FG		BR	1/8	1/4-18
03-02		FG		BR	3/16	1/8-27
04-02		FG		BR	1/4	1/8-27
04-04		FG		BR	1/4	1/4-18
04-06		FG		BR	1/4	3/8-18
05-02		FG		BR	5/16	1/8-27
05-04		FG		BR	5/16	1/4-18
05-06		FG		BR	5/16	3/8-18
06-02		FG		BR	3/8	1/8-27
06-04		FG		BR	3/8	1/4-18
06-06		FG		BR	3/8	3/8-18
06-08		FG		BR	3/8	1/2-14
08-04		FG		BR	1/2	1/4-18
08-06		FG		BR	1/2	3/8-18
08-08		FG		BR	1/2	1/2-14
10-06		FG		BR	5/8	3/8-18
10-08		FG		BR	5/8	1/2-14
12-08		FG		BR	3/4	1/2-14
12-12		FG		BR	3/4	3/4-14
16-12		FG		BR	1	3/4-14

4290

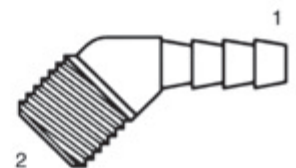
Hose Barb to Pipe Elbow 90°



Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (NPTF)
	S	FG	SS	BR		
04-02				BR	1/4	1/8-27
04-04				BR	1/4	1/4-18
06-02				BR	3/8	1/8-27
06-04				BR	3/8	1/4-18
06-06				BR	3/8	3/8-18
08-06				BR	1/2	3/8-18
10-06				BR	5/8	3/8-18

4295

Hose Barb to Pipe Elbow 45°



S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Brass Hose Barb Fittings

BFL

Brass Ferrule



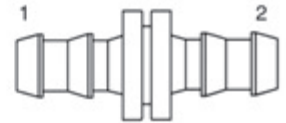
Dash Size	Stock Materials				Ferrule I.D.
	S	FG	SS	BR	
450				BR	.450
475				BR	.475
500				BR	.500
525				BR	.525
550				BR	.550
575				BR	.575
600				BR	.600
625				BR	.625
650				BR	.650
675				BR	.675
700				BR	.700
725				BR	.725
750				BR	.750
775				BR	.775
800				BR	.800
850				BR	.850
900				BR	.900
925				BR	.925
950				BR	.950
975				BR	.975
1000				BR	1.000
1025				BR	1.025
1100				BR	1.100
1225				BR	1.225
1350				BR	1.350

Brass Push-On Hose Barb Fittings

Dash Size	Stock Materials S FG SS BR	T1 (Hose I.D.)	T2 (Hose I.D.)
04	BR	1/4	1/4
05	BR	5/16	5/16
06	BR	3/8	3/8
08	BR	1/2	1/2
10	BR	5/8	5/8
12	BR	3/4	3/4

4300

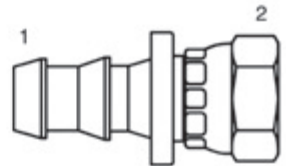
Hose Splicer



Dash Size	Stock Materials S FG SS BR	T1 (Hose I.D.)	T2 (UNF)
04-04	BR	1/4	7/16-20
04-05	BR	1/4	1/2-20
04-06	BR	1/4	5/8-18
05-06	BR	5/16	5/8-18
06-06	BR	3/8	5/8-18
06-08	BR	3/8	3/4-16
08-06	BR	1/2	5/8-18
08-08	BR	1/2	3/4-16
08-10	BR	1/2	7/8-14
10-08	BR	5/8	3/4-16
10-10	BR	5/8	7/8-14
12-12	BR	3/4	1 1/16-14

4301

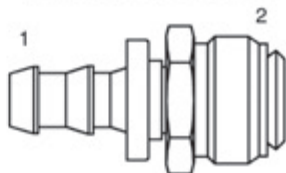
Hose Barb to SAE 45° Swivel



Dash Size	Stock Materials S FG SS BR	T1 (Hose I.D.)	T2 (UNF)
04-03	BR	1/4	3/8-24
04-04	BR	1/4	7/16-20
04-05	BR	1/4	1/2-20
05-04	BR	5/16	7/16-20
05-05	BR	5/16	1/2-20
05-06	BR	5/16	5/8-18
06-05	BR	3/8	1/2-20
06-06	BR	3/8	5/8-18
06-08	BR	3/8	3/4-16
08-08	BR	1/2	3/4-16
10-10	BR	5/8	7/8-14

4303

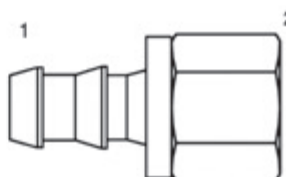
Hose Barb to SAE 45° Inverted Flare



Dash Size	Stock Materials S FG SS BR	T1 (Hose I.D.)	T2 (UNF)
04-03	BR	1/4	3/8-24
04-04	BR	1/4	7/16-20
04-05	BR	1/4	1/2-20
06-05	BR	3/8	1/2-20
06-06	BR	3/8	5/8-18
08-08	BR	1/2	3/4-16

4305

Hose Barb to SAE 45° Inverted Flare Swivel



S= Steel

FG=Forging

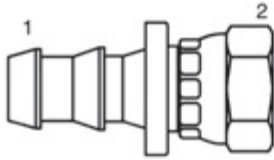
SS=Stainless Steel

BR=Brass

Brass Push-On Hose Barb Fittings

4311

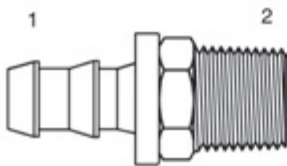
Hose Barb to JIC Swivel



Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (UNF)
	S	FG	SS	BR		
04-04				BR	1/4	7/16-20
04-05				BR	1/4	1/2-20
04-06				BR	1/4	9/16-18
06-05				BR	3/8	1/2-20
06-06				BR	3/8	9/16-18
06-08				BR	3/8	3/4-16
08-08				BR	1/2	3/4-16
08-10				BR	1/2	7/8-14
10-08				BR	5/8	3/4-16
10-10				BR	5/8	7/8-14
12-10				BR	3/4	7/8-14
12-12				BR	3/4	1 1/16-12

4312

Hose Barb to Pipe



Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (NPTF)
	S	FG	SS	BR		
04-02				BR	1/4	1/8-27
04-04				BR	1/4	1/4-18
04-06				BR	1/4	3/8-18
05-02				BR	5/16	1/8-27
05-04				BR	5/16	1/4-18
06-02				BR	3/8	1/8-27
06-04				BR	3/8	1/4-18
06-06				BR	3/8	3/8-18
06-08				BR	3/8	1/2-14
08-04				BR	1/2	1/4-18
08-06				BR	1/2	3/8-18
08-08				BR	1/2	1/2-14
08-12				BR	1/2	3/4-14
10-06				BR	5/8	3/8-18
10-08				BR	5/8	1/2-14
10-12				BR	5/8	3/4-14
12-08				BR	3/4	1/2-14
12-12				BR	3/4	3/4-14

LS-4312

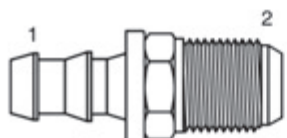
Hose Barb to Pipe Swivel



Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (NPTF)
	S	FG	SS	BR		
04-04				BR	1/4	1/4-18
06-04				BR	3/8	1/4-18
06-06				BR	3/8	3/8-18
08-06				BR	1/2	3/8-18
08-08				BR	1/2	1/2-14
12-12				BR	3/4	3/4-14

4313

Hose Barb to JIC



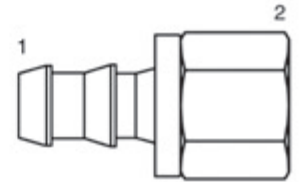
Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (UNF)
	S	FG	SS	BR		
04-04				BR	1/4	7/16-20
04-06				BR	1/4	9/16-18
06-06 SAE				BR	3/8	5/8-18
06-06				BR	3/8	9/16-18
06-08				BR	3/8	3/4-16
08-08				BR	1/2	3/4-16

Brass Push-On Hose Barb Fittings

Dash Size	Stock Materials S FG SS BR	T1 (Hose I.D.)	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
05-04	BR	5/16	1/4-18
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14

4315

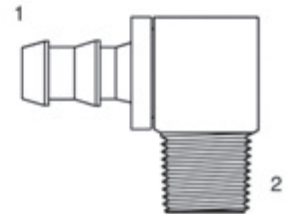
Hose Barb to Pipe



Dash Size	Stock Materials S FG SS BR	T1 (Hose I.D.)	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
06-08	BR	3/8	1/2-14
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14
10-08	BR	5/8	1/2-14
10-12	BR	5/8	3/4-14
12-12	BR	3/4	3/4-14

4390

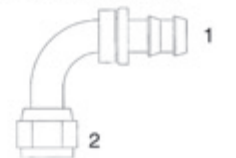
Hose Barb to Pipe Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (Hose I.D.)	T2 (UNF)
04-04	S	1/4	7/16-20
06-06	S	3/8	9/16-18
08-08	S	1/2	3/4-16

4330


Hose Barb to JIC Swivel 90° Bent Tube

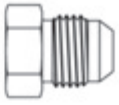


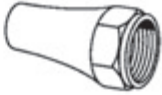
Notes




Brass SAE 45° Adapters

Dash Size	Stock Materials				T1 (UNF)	40C SAE Cap
	S	FG	SS	BR		
03				BR	3/8-24	
04				BR	7/16-20	
05				BR	1/2-20	
06				BR	5/8-18	
08				BR	3/4-16	
10				BR	7/8-14	
12				BR	1 1/16-14	

Dash Size	Stock Materials				T1 (UNF)	40P SAE Plug
	S	FG	SS	BR		
03				BR	3/8-24	
04				BR	7/16-20	
05				BR	1/2-20	
06				BR	5/8-18	
08				BR	3/4-16	
10				BR	7/8-14	
12				BR	1 1/16-14	

Dash Size	Stock Materials				T1 (UNF)	41 SAE Long Nut
	S	FG	SS	BR		
02				BR	5/16-24	
03				BR	3/8-24	
04				BR	7/16-20	
05				BR	1/2-20	
06				BR	5/8-18	
08				BR	3/4-16	
10				BR	7/8-14	
12				BR	1 1/16-14	

Dash Size	Stock Materials				T1 (UNF)	41S SAE Short Nut
	S	FG	SS	BR		
02				BR	5/16-24	
03				BR	3/8-24	
04				BR	7/16-20	
05				BR	1/2-20	
06				BR	5/8-18	
07				BR	11/16-16	
08				BR	3/4-16	
10				BR	7/8-14	
12				BR	1 1/16-14	

S= Steel

FG=Forging

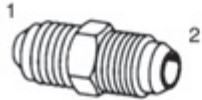
SS=Stainless Steel

BR=Brass

Brass SAE 45° Adapters

42

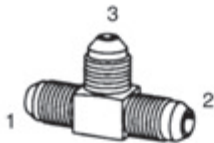
SAE Tube Union



Dash Size	Stock Materials S FG SS BR				T1 (UNF)	T2 (UNF)
02				BR	5/16-24	5/16-24
03				BR	3/8-24	3/8-24
04				BR	7/16-20	7/16-20
05-04				BR	1/2-20	7/16-20
05				BR	1/2-20	1/2-20
06-04				BR	5/8-18	7/16-20
06-05				BR	5/8-18	1/2-20
06				BR	5/8-18	5/8-18
08-06				BR	3/4-16	5/8-18
08				BR	3/4-16	3/4-16
10-06				BR	7/8-14	5/8-18
10-08				BR	7/8-14	3/4-16
10				BR	7/8-14	7/8-14
12-08				BR	1 1/16-14	3/4-16
12				BR	1 1/16-14	1 1/16-14

44

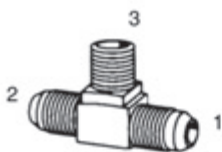
SAE Tube Union Tee



Dash Size	Stock Materials S FG SS BR				T1 (UNF)	T2 (UNF)	T3 (UNF)
02				BR	5/16-24	5/16-24	5/16-24
03				BR	3/8-24	3/8-24	3/8-24
04				BR	7/16-20	7/16-20	7/16-20
05				BR	1/2-20	1/2-20	1/2-20
06-06-04				BR	5/8-18	5/8-18	7/16-20
06				BR	5/8-18	5/8-18	5/8-18
06-06-08				BR	5/8-18	5/8-18	3/4-16
08-08-06				BR	3/4-16	3/4-16	5/8-18
08				BR	3/4-16	3/4-16	3/4-16
10-10-06				BR	7/8-14	7/8-14	5/8-18
10-10-08				BR	7/8-14	7/8-14	3/4-16
10				BR	7/8-14	7/8-14	7/8-14
12				BR	1 1/16-14	1 1/16-14	1 1/16-14

45

SAE Tube to Pipe Branch Tee



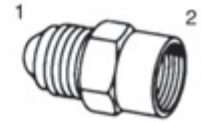
Dash Size	Stock Materials S FG SS BR				T1 (UNF)	T2 (UNF)	T3 (NPTF)
02-02-02				BR	5/16-24	5/16-24	1/8-27
03-03-02				BR	3/8-24	3/8-24	1/8-27
04-04-02				BR	7/16-20	7/16-20	1/8-27
04-04-04				BR	7/16-20	7/16-20	1/4-18
04-04-06				BR	7/16-20	7/16-20	3/8-18
05-05-02				BR	1/2-20	1/2-20	1/8-27
05-05-04				BR	1/2-20	1/2-20	1/4-18
06-06-02				BR	5/8-18	5/8-18	1/8-27
06-06-04				BR	5/8-18	5/8-18	1/4-18
06-06-06				BR	5/8-18	5/8-18	3/8-18
06-06-08				BR	5/8-18	5/8-18	1/2-14
08-08-04				BR	3/4-16	3/4-16	1/4-18
08-08-06				BR	3/4-16	3/4-16	3/8-18
08-08-08				BR	3/4-16	3/4-16	1/2-14
10-10-06				BR	7/8-14	7/8-14	3/8-18
10-10-08				BR	7/8-14	7/8-14	1/2-14
12-12-08				BR	1 1/16-14	1 1/16-14	1/2-14
12-12-12				BR	1 1/16-14	1 1/16-14	3/4-14

Brass SAE 45° Adapters

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (NPTF)
02-02	BR	5/16-24	1/8-27
03-02	BR	3/8-24	1/8-27
03-04	BR	3/8-24	1/4-18
04-02	BR	7/16-20	1/8-27
04-04	BR	7/16-20	1/4-18
04-06	BR	7/16-20	3/8-18
04-08	BR	7/16-20	1/2-14
05-02	BR	1/2-20	1/8-27
05-04	BR	1/2-20	1/4-18
06-02	BR	5/8-18	1/8-27
06-04	BR	5/8-18	1/4-18
06-06	BR	5/8-18	3/8-18
06-08	BR	5/8-18	1/2-14
06-12	BR	5/8-18	3/4-14
08-04	BR	3/4-16	1/4-18
08-06	BR	3/4-16	3/8-18
08-08	BR	3/4-16	1/2-14
08-12	BR	3/4-16	3/4-14
10-06	BR	7/8-14	3/8-18
10-08	BR	7/8-14	1/2-14
10-12	BR	7/8-14	3/4-14
12-08	BR	1 1/16-14	1/2-14
12-12	BR	1 1/16-14	3/4-14

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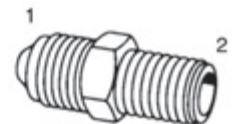
SAE Tube to Pipe



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (NPTF)
02-02	BR	5/16-24	1/8-27
03-02	BR	3/8-24	1/8-27
03-04	BR	3/8-24	1/4-18
04-02	BR	7/16-20	1/8-27
04-04	BR	7/16-20	1/4-18
04-06	BR	7/16-20	3/8-18
04-08	BR	7/16-20	1/2-14
05-02	BR	1/2-20	1/8-27
05-04	BR	1/2-20	1/4-18
05-06	BR	1/2-20	3/8-18
05-08	BR	1/2-20	1/2-14
06-02	BR	5/8-18	1/8-27
06-04	BR	5/8-18	1/4-18
06-06	BR	5/8-18	3/8-18
06-08	BR	5/8-18	1/2-14
06-12	BR	5/8-18	3/4-14
08-04	BR	3/4-16	1/4-18
08-06	BR	3/4-16	3/8-18
08-08	BR	3/4-16	1/2-14
08-12	BR	3/4-16	3/4-14
10-04	BR	7/8-14	1/4-18
10-06	BR	7/8-14	3/8-18
10-08	BR	7/8-14	1/2-14
10-12	BR	7/8-14	3/4-14
12-08	BR	1 1/16-14	1/2-14
12-12	BR	1 1/16-14	3/4-14
14-12	BR	1 1/4-12	3/4-14
16-12	BR	1 3/8-12	3/4-14
16-16	BR	1 3/8-12	1-11 1/2

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SAE Tube to Pipe



S= Steel

FG=Forging

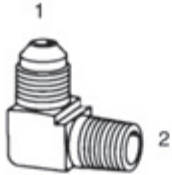
SS=Stainless Steel

BR=Brass

Brass SAE 45° Adapters

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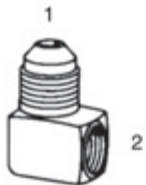
SAE Tube to Pipe Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
02-02				BR	5/16-24	1/8-27
03-02				BR	3/8-24	1/8-27
03-04				BR	3/8-24	1/4-18
04-02				BR	7/16-20	1/8-27
04-04				BR	7/16-20	1/4-18
04-06				BR	7/16-20	3/8-18
04-08				BR	7/16-20	1/2-14
05-02				BR	1/2-20	1/8-27
05-04				BR	1/2-20	1/4-18
05-06				BR	1/2-20	3/8-18
05-08				BR	1/2-20	1/2-14
06-02				BR	5/8-18	1/8-27
06-04				BR	5/8-18	1/4-18
06-06				BR	5/8-18	3/8-18
06-08				BR	5/8-18	1/2-14
06-12				BR	5/8-18	3/4-14
08-04				BR	3/4-16	1/4-18
08-06				BR	3/4-16	3/8-18
08-08				BR	3/4-16	1/2-14
08-12				BR	3/4-16	3/4-14
10-04				BR	7/8-14	1/4-18
10-06				BR	7/8-14	3/8-18
10-08				BR	7/8-14	1/2-14
10-12				BR	7/8-14	3/4-14
12-08				BR	1 1/16-14	1/2-14
12-12				BR	1 1/16-14	3/4-14
14-12				BR	1 1/4-12	3/4-14

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SAE Tube to Pipe Elbow 90°



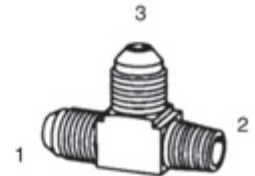
Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
03-02				BR	3/8-24	1/8-27
04-02				BR	7/16-20	1/8-27
04-04				BR	7/16-20	1/4-18
04-06				BR	7/16-20	3/8-18
05-02				BR	1/2-20	1/8-27
05-04				BR	1/2-20	1/4-18
06-02				BR	5/8-18	1/8-27
06-04				BR	5/8-18	1/4-18
06-06				BR	5/8-18	3/8-18
06-08				BR	5/8-18	1/2-14
06-12				BR	5/8-18	3/4-14
08-04				BR	3/4-16	1/4-18
08-06				BR	3/4-16	3/8-18
08-08				BR	3/4-16	1/2-14
08-12				BR	3/4-16	3/4-14
10-06				BR	7/8-14	3/8-18
10-08				BR	7/8-14	1/2-14
10-12				BR	7/8-14	3/4-14
12-08				BR	1 1/16-14	1/2-14
12-12				BR	1 1/16-14	3/4-14
14-12				BR	1 1/4-12	3/4-14

Brass SAE 45° Adapters

Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (NPTF)	T3 (UNF)
03-02-03	BR	3/8-24	1/8-27	3/8-24
04-02-04	BR	7/16-20	1/8-27	7/16-20
04-04-04	BR	7/16-20	1/4-18	7/16-20
05-02-05	BR	1/2-20	1/8-27	1/2-20
05-04-05	BR	1/2-20	1/4-18	1/2-20
06-02-06	BR	5/8-18	1/8-27	5/8-18
06-04-06	BR	5/8-18	1/4-18	5/8-18
06-06-06	BR	5/8-18	3/8-18	5/8-18
06-08-06	BR	5/8-18	1/2-14	5/8-18
08-04-08	BR	3/4-16	1/4-18	3/4-16
08-06-08	BR	3/4-16	3/8-18	3/4-16
08-08-08	BR	3/4-16	1/2-14	3/4-16
10-06-10	BR	7/8-14	3/8-18	7/8-14
10-08-10	BR	7/8-14	1/2-14	7/8-14
10-12-12	BR	7/8-14	3/4-14	7/8-14
12-08-12	BR	1 1/16-14	1/2-14	1 1/16-14
12-12-12	BR	1 1/16-14	3/4-14	1 1/16-14

51

SAE Tube to Pipe Run Tee



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (NPTF)
04-02	BR	7/16-20	1/8-27
04-04	BR	7/16-20	1/4-18
05-02	BR	1/2-20	1/8-27
05-04	BR	1/2-20	1/4-18
06-04	BR	5/8-18	1/4-18
06-06	BR	5/8-18	3/8-18
06-08	BR	5/8-18	1/2-14
08-06	BR	3/4-16	3/8-18
08-08	BR	3/4-16	1/2-14
10-08	BR	7/8-14	1/2-14
12-08	BR	1 1/16-14	1/2-14
12-12	BR	1 1/16-14	3/4-14

54

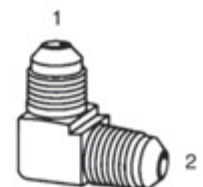
SAE Tube to Pipe Elbow 45°



Dash Size	Stock Materials S FG SS BR	T1 (UNF)	T2 (UNF)
02	BR	5/16-24	5/16-24
03	BR	3/8-24	3/8-24
04	BR	7/16-20	7/16-20
05	BR	1/2-20	1/2-20
06-04	BR	5/8-18	7/16-20
06	BR	5/8-18	5/8-18
08-06	BR	3/4-16	5/8-18
08	BR	3/4-16	3/4-16
10-08	BR	7/8-14	3/4-16
10	BR	7/8-14	7/8-14
12-08	BR	1 1/16-14	3/4-16
12	BR	1 1/16-14	1 1/16-14
14	BR	1 1/4-12	1 1/4-12

55

SAE Tube Union Elbow 90°



S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Brass Compression Adapters

60

Tube Sleeve



Dash Size	Stock Materials S FG SS BR	Tube Size
02	BR	1/8
03	BR	3/16
04	BR	1/4
05	BR	5/16
06	BR	3/8
08	BR	1/2
10	BR	5/8
12	BR	3/4
14	BR	7/8

60P

Delrin Tube Sleeve (NYLON)



Dash Size	Stock Materials S FG SS BR	Tube Size
04	BR	1/4
05	BR	5/16
06	BR	3/8
08	BR	1/2
10	BR	5/8
12	BR	3/4

60SA

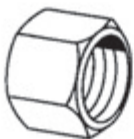
Self-Align Tube Sleeve



Dash Size	Stock Materials S FG SS BR	Tube Size
02	BR	1/8
03	BR	3/16
04	BR	1/4
06	BR	3/8
08	BR	1/2


61

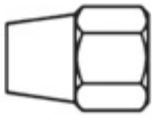
Tube Nut

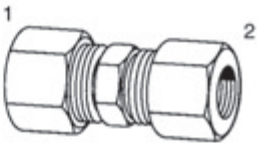


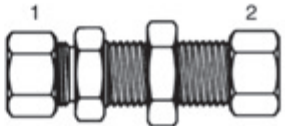
Dash Size	Stock Materials S FG SS BR	T1 (Tube Size)
02	BR	1/8
03	BR	3/16
04	BR	1/4
05	BR	5/16
06	BR	3/8
08	BR	1/2
10	BR	5/8
12	BR	3/4
14	BR	7/8

Brass Compression Adapters

Dash Size	Stock Materials S FG SS BR	T1 (Tube Size)	61C Tube Cap
03	BR	3/16	
04	BR	1/4	
06	BR	3/8	
08	BR	1/2	
10	BR	5/8	

Dash Size	Stock Materials S FG SS BR	T1 (Tube Size)	61L Long Tube Nut
03	BR	3/16	
04	BR	1/4	
05	BR	5/16	
06	BR	3/8	
08	BR	1/2	
10	BR	5/8	
12	BR	3/4	

Dash Size	Stock Materials S FG SS BR	T1 (Tube Size)	T2 (Tube Size)	62 Tube Union
02	BR	1/4	1/4	
03	BR	3/16	3/16	
04-02	BR	1/4	1/8	
04	BR	1/4	1/4	
05	BR	5/16	5/16	
06-04	BR	3/8	1/4	
06	BR	3/8	3/8	
08-06	BR	1/2	3/8	
08	BR	1/2	1/2	
10-08	BR	5/8	1/2	
10	BR	5/8	5/8	
12	BR	3/4	3/4	
14	BR	7/8	7/8	

Dash Size	Stock Materials S FG SS BR	T1 (Tube Size)	T2 (Tube Size)	62-BH Bulkhead Tube Union
04	BR	1/4	1/4	
05	BR	5/16	5/16	
06	BR	3/8	3/8	
08	BR	1/2	1/2	

S= Steel

FG=Forging

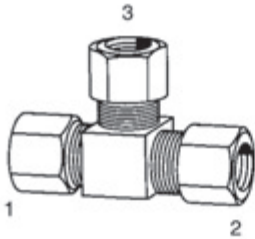
SS=Stainless Steel

BR=Brass

Brass Compression Adapters

64

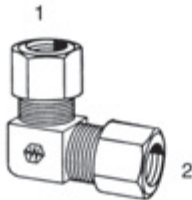
Tube Union Tee



Dash Size	Stock Materials S FG SS BR	T1 (Tube Size)	T2 (Tube Size)	T3 (Tube Size)
02-02-02	BR	1/8	1/8	1/8
03-03-03	BR	3/16	3/16	3/16
04-04-04	BR	1/4	1/4	1/4
05-05-05	BR	5/16	5/16	5/16
06-06-04	BR	3/8	3/8	1/4
06-06-06	BR	3/8	3/8	3/8
08-08-06	BR	1/2	1/2	3/8
08-08-08	BR	1/2	1/2	1/2
10-10-10	BR	5/8	5/8	5/8
12-12-12	BR	3/4	3/4	3/4

65

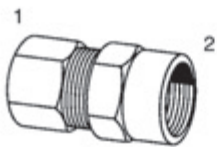
Tube Union Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (Tube Size)	T2 (Tube Size)
02	BR	1/8	1/8
03	BR	3/16	3/16
04	BR	1/4	1/4
05	BR	5/16	5/16
06-04	BR	3/8	1/4
06	BR	3/8	3/8
08-06	BR	1/2	3/8
08	BR	1/2	1/2
10-08	BR	5/8	1/2
10	BR	5/8	5/8
12	BR	3/4	3/4

66

Tube to Pipe



Dash Size	Stock Materials S FG SS BR	T1 (Tube Size)	T2 (NPTF)
02-02	BR	1/8	1/8-27
03-02	BR	3/16	1/8-27
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
04-06	BR	1/4	3/8-18
04-08	BR	1/4	1/2-14
05-02	BR	5/16	1/8-27
05-04	BR	5/16	1/4-18
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
06-08	BR	3/8	1/2-14
06-12	BR	3/8	3/4-14
08-04	BR	1/2	1/4-18
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14
08-12	BR	1/2	3/4-14
10-06	BR	5/8	3/8-18
10-08	BR	5/8	1/2-14
10-12	BR	5/8	3/4-14
12-08	BR	3/4	1/2-14
12-12	BR	3/4	3/4-14

Brass Compression Adapters

Dash Size	Stock Materials S FG SS BR	T1 (Tube Size)	T2 (NPTF)
03-02	BR	3/16	1/8-27
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
05-02	BR	5/16	1/8-27
05-04	BR	5/16	1/4-18
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14
10-08	BR	5/8	1/2-14

67

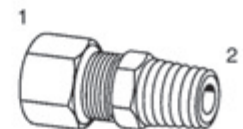
**Tube to Pipe
Elbow 45°**



Dash Size	Stock Materials S FG SS BR	T1 (Tube Size)	T2 (NPTF)
02-02	BR	1/8	1/8-27
03-02	BR	3/16	1/8-27
03-04	BR	3/16	1/4-18
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
04-06	BR	1/4	3/8-18
04-08	BR	1/4	1/2-14
05-02	BR	5/16	1/8-27
05-04	BR	5/16	1/4-18
05-06	BR	5/16	3/8-18
05-08	BR	5/16	1/2-14
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
06-08	BR	3/8	1/2-14
06-12	BR	3/8	3/4-14
08-04	BR	1/2	1/4-18
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14
08-12	BR	1/2	3/4-14
10-06	BR	5/8	3/8-18
10-08	BR	5/8	1/2-14
10-12	BR	5/8	3/4-14
12-08	BR	3/4	1/2-14
12-12	BR	3/4	3/4-14
14-12	BR	7/8	3/4-14

68

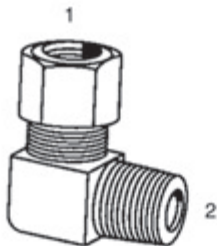
Tube to Pipe



Brass Compression Adapters

69

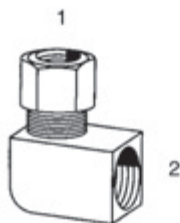
Tube to Pipe Elbow 90°



Dash Size	Stock Materials				T1 (Tube Size)	T2 (NPTF)
	S	FG	SS	BR		
02-02				BR	5/8	1/8-27
03-02				BR	3/16	1/8-27
03-04				BR	3/16	1/4-18
04-02				BR	1/4	1/8-27
04-04				BR	1/4	1/4-18
04-06				BR	1/4	3/8-18
04-08				BR	1/4	1/2-14
05-02				BR	5/16	1/8-27
05-04				BR	5/16	1/4-18
05-06				BR	5/16	3/8-18
06-02				BR	3/8	1/8-27
06-04				BR	3/8	1/4-18
06-06				BR	3/8	3/8-18
06-08				BR	3/8	1/2-14
06-12				BR	3/8	3/4-14
08-04				BR	1/2	1/4-18
08-06				BR	1/2	3/8-18
08-08				BR	1/2	1/2-14
08-12				BR	1/2	3/4-14
10-06				BR	5/8	3/8-18
10-08				BR	5/8	1/2-14
10-12				BR	5/8	3/4-14
12-08				BR	3/4	1/2-14
12-12				BR	3/4	3/4-14
14-12				BR	7/8	3/4-14

70

Tube to Pipe Elbow 90°



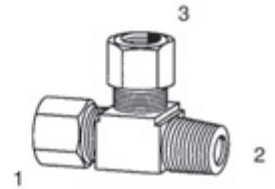
Dash Size	Stock Materials				T1 (Tube Size)	T2 (NPTF)
	S	FG	SS	BR		
02-02				BR	1/8	1/8-27
03-02				BR	3/16	1/8-27
04-02				BR	1/4	1/8-27
04-04				BR	1/4	1/4-18
04-06				BR	1/4	3/8-18
04-08				BR	1/4	1/2-14
05-02				BR	5/16	1/8-27
06-02				BR	3/8	1/8-27
06-04				BR	3/8	1/4-18
06-06				BR	3/8	3/8-18
08-04				BR	1/2	1/4-18
08-06				BR	1/2	3/8-18
08-08				BR	1/2	1/2-14
10-06				BR	5/8	3/8-18
10-08				BR	5/8	1/2-14
10-12				BR	5/8	3/4-14
12-08				BR	3/4	1/2-14
12-12				BR	3/4	3/4-14

Brass Compression Adapters

Dash Size	Stock Materials S FG SS BR	T1 (Tube Size)	T2 (NPTF)	T3 (Tube Size)
02-02-02	BR	1/8	1/8-27	1/8
03-02-03	BR	3/16	1/8-27	3/16
04-02-04	BR	1/4	1/8-27	1/4
04-04-04	BR	1/4	1/4-18	1/4
05-02-05	BR	5/16	1/8-27	5/16
05-04-05	BR	5/16	1/4-18	5/16
06-02-06	BR	3/8	1/8-27	3/8
06-04-06	BR	3/8	1/4-18	3/8
06-06-06	BR	3/8	3/8-18	3/8
08-06-08	BR	1/2	3/8-18	1/2
08-08-08	BR	1/2	1/2-14	1/2
10-08-10	BR	5/8	1/2-14	5/8
12-08-12	BR	3/4	1/2-14	3/4
12-12-12	BR	3/4	3/4-14	3/4

71

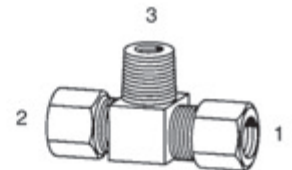
Tube to Pipe Run Tee



Dash Size	Stock Materials S FG SS BR	T1 (Tube Size)	T2 (Tube Size)	T3 (NPTF)
02-02-02	BR	1/8	1/8	1/8-27
03-03-02	BR	3/16	3/16	1/8-27
04-04-02	BR	1/4	1/4	1/8-27
04-04-04	BR	1/4	1/4	1/4-18
05-05-02	BR	5/16	5/16	1/8-27
06-06-02	BR	3/8	3/8	1/8-27
06-06-04	BR	3/8	3/8	1/4-18
06-06-06	BR	3/8	3/8	3/8-18
08-08-04	BR	1/2	1/2	1/4-18
08-08-06	BR	1/2	1/2	3/8-18
08-08-08	BR	1/2	1/2	1/2-14
10-10-08	BR	5/8	5/8	1/2-14
12-12-08	BR	3/4	3/4	1/2-14
12-12-12	BR	3/4	3/4	3/4-14

72

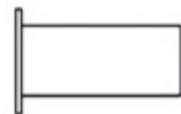
Tube to Pipe Branch Tee



Dash Size	Stock Materials S FG SS BR	Tube Size	O.D.
02	BR	1/8	.08
03	BR	3/16	.135
04	BR	1/4	.163
05	BR	5/16	.215
06	BR	3/8	.250
08	BR	1/2	.372
10	BR	5/8	.483
12	BR	3/4	.563

73

Tube Insert



NOTE: All brass compression fittings are available with a self-align nut and sleeve. To order add "SA" after the base number. (Example 68-SA-2-2)

Brass Pipe Adapters

3129

Pipe Cap



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)
02	BR	1/8-27
04	BR	1/4-18
06	BR	3/8-18
08	BR	1/2-14
12	BR	3/4-14

3149

Hollow Hex Plug



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)
01	BR	1/16-27
02	BR	1/8-27
04	BR	1/4-18
06	BR	3/8-18
08	BR	1/2-14
12	BR	3/4-14

3150

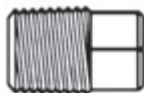
Slotted Plug



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)
02	BR	1/8-27
04	BR	1/4-18
06	BR	3/8-18

3151

Square Head Plug



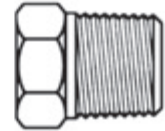
Dash Size	Stock Materials S FG SS BR	T1 (NPTF)
02	BR	1/8-27
04	BR	1/4-18
06	BR	3/8-18
08	BR	1/2-14
12	BR	3/4-14
16	BR	1-11 1/2

Brass Pipe Adapters

Dash Size	Stock Materials				T1 (NPTF)
	S	FG	SS	BR	
01				BR	1/16-27
02				BR	1/8-27
04				BR	1/4-18
06				BR	3/8-18
08				BR	1/2-14
12				BR	3/4-14
16				BR	1-11 1/2

3152

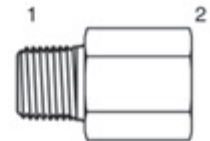
Hex Head Plug



Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
02-02				BR	1/8-27	1/8-27
02-04				BR	1/8-27	1/4-18
02-06				BR	1/8-27	3/8-18
04-04				BR	1/4-18	1/4-18
04-06				BR	1/4-18	3/8-18
04-08				BR	1/4-18	1/2-14
06-06				BR	3/8-18	3/8-18
06-08				BR	3/8-18	1/2-14
08-08				BR	1/2-14	1/2-14
08-12				BR	1/2-14	3/4-14
12-12				BR	3/4-14	3/4-14

3200

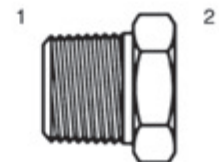
Pipe Expander/Extender



Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
04-02				BR	1/4-18	1/8-27
06-02				BR	3/8-18	1/8-27
06-04				BR	3/8-18	1/4-18
08-02				BR	1/2-14	1/8-27
08-04				BR	1/2-14	1/4-18
08-06				BR	1/2-14	3/8-18
12-02				BR	3/4-14	1/8-27
12-04				BR	3/4-14	1/4-18
12-06				BR	3/4-14	3/8-18
12-08				BR	3/4-14	1/2-14
16-04				BR	1-11 1/2	1/4-18
16-06				BR	1-11 1/2	3/8-18
16-08				BR	1-11 1/2	1/2-14
16-12				BR	1-11 1/2	3/4-14

3220

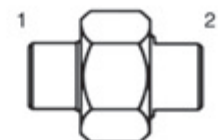
Hex Reducer Bushing



Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
02-02				BR	1/8-27	1/8-27
04-04				BR	1/4-18	1/4-18
06-06				BR	3/8-18	3/8-18
08-08				BR	1/2-14	1/2-14
12-12				BR	3/4-14	3/4-14

3250

Pipe Swivel Union



S= Steel

FG=Forging

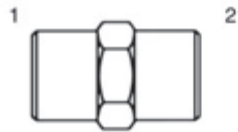
SS=Stainless Steel

BR=Brass

Brass Pipe Adapters

3300

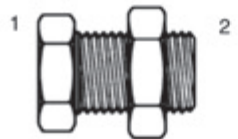
Pipe Coupling



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)
02	BR	1/8-27	1/8-27
04-02	BR	1/4-18	1/8-27
04	BR	1/4-18	1/4-18
06-02	BR	3/8-18	1/8-27
06-04	BR	3/8-18	1/4-18
06	BR	3/8-18	3/8-18
08-04	BR	1/2-14	1/4-18
08-06	BR	1/2-14	3/8-18
08	BR	1/2-14	1/2-14
12-06	BR	3/4-14	3/8-18
12-08	BR	3/4-14	1/2-14
12	BR	3/4-14	3/4-14

3300-BH

Pipe Bulkhead Coupling

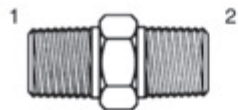


Dash Size	Stock Materials S FG SS BR	T1&T2 (NPTF)	BULKHEAD THREAD	Length*
02x1.5	BR	1/8-27	5/8-18	1.50"
04x.94	BR	1/4-18	3/4-16	.94"
04x1.5	BR	1/4-18	3/4-16	1.50"
06x1.3	BR	3/8-18	1-14	1.31"
08x1.5	BR	1/2-14	1-1/8-14	1.50"

*Length = Overall Length of Fitting

3325

Hex Nipple



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)
02	BR	1/8-27	1/8-27
04-02	BR	1/4-18	1/8-27
04	BR	1/4-18	1/4-18
06-02	BR	3/8-18	1/8-27
06-04	BR	3/8-18	1/4-18
06	BR	3/8-18	3/8-18
08-04	BR	1/2-14	1/4-18
08-06	BR	1/2-14	3/8-18
08	BR	1/2-14	1/2-14
12-06	BR	3/4-14	3/8-18
12-08	BR	3/4-14	1/2-14
12	BR	3/4-14	3/4-14
16-12	BR	1-11 1/2	3/4-14
16	BR	1-11 1/2	1-11 1/2

3326

Close Nipple



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)
02	BR	1/8-27	1/8-27
04	BR	1/4-18	1/4-18
06	BR	3/8-18	3/8-18
08	BR	1/2-14	1/2-14
12	BR	3/4-14	3/4-14
16	BR	1-11 1/2	1-11 1/2
20	BR	1 1/4-11 1/2	1 1/4-11 1/2

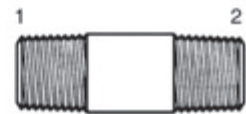
Brass Pipe Adapters

Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)	Length*
02-1.5"	BR	1/8-27	1/8-27	1.5"
02-2"	BR	1/8-27	1/8-27	2.0"
02-2.5"	BR	1/8-27	1/8-27	2.5"
02-3"	BR	1/8-27	1/8-27	3.0"
02-4"	BR	1/8-27	1/8-27	4.0"
02-6"	BR	1/8-27	1/8-27	6.0"
04-1.5"	BR	1/4-18	1/4-18	1.5"
04-2"	BR	1/4-18	1/4-18	2.0"
04-2.5"	BR	1/4-18	1/4-18	2.5"
04-3"	BR	1/4-18	1/4-18	3.0"
04-4"	BR	1/4-18	1/4-18	4.0"
04-6"	BR	1/4-18	1/4-18	6.0"
04-8"	BR	1/4-18	1/4-18	8.0"
06-1.5"	BR	3/8-18	3/8-18	1.5"
06-2"	BR	3/8-18	3/8-18	2.0"
06-2.5"	BR	3/8-18	3/8-18	2.5"
06-3"	BR	3/8-18	3/8-18	3.0"
06-4"	BR	3/8-18	3/8-18	4.0"
06-6"	BR	3/8-18	3/8-18	6.0"
08-1.5"	BR	1/2-14	1/2-14	1.5"
08-2"	BR	1/2-14	1/2-14	2.0"
08-2.5"	BR	1/2-14	1/2-14	2.5"
08-3"	BR	1/2-14	1/2-14	3.0"
08-4"	BR	1/2-14	1/2-14	4.0"
08-6"	BR	1/2-14	1/2-14	6.0"
12-2"	BR	3/4-14	3/4-14	2.0"
12-2.5"	BR	3/4-14	3/4-14	2.5"
12-3"	BR	3/4-14	3/4-14	3.0"

*Length = Overall Length of Fitting

3327

Long Nipple



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)
02	BR	1/8-27	1/8-27
04	BR	1/4-18	1/4-18
06	BR	3/8-18	3/8-18
08	BR	1/2-14	1/2-14
12	BR	3/4-14	3/4-14
16	BR	1-11 1/2	1-11 1/2

3350

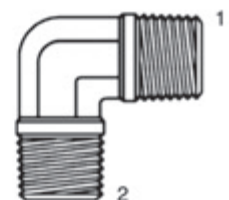
Street Elbow 45°



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)
02	BR	1/8-27	1/8-27
04	BR	1/4-18	1/4-18
06-04	BR	3/8-18	1/4-18
06	BR	3/8-18	3/8-18
08	BR	1/2-14	1/2-14

3390

Pipe Elbow 90°



S= Steel

FG=Forging

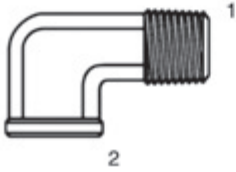
SS=Stainless Steel

BR=Brass

Brass Pipe Adapters

3400

Street Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)
02W (Compact)	BR	1/8-27	1/8-27
04W (Compact)	BR	1/4-18	1/4-18
02	BR	1/8-27	1/8-27
02-04	BR	1/8-27	1/4-18
04-02	BR	1/4-18	1/8-27
04	BR	1/4-18	1/4-18
06-04	BR	3/8-18	1/4-18
06	BR	3/8-18	3/8-18
08	BR	1/2-14	1/2-14
12	BR	3/4-14	3/4-14

3500

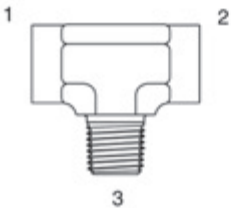
Pipe Elbow 90°



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)
02	BR	1/8-27	1/8-27
04-02	BR	1/4-18	1/8-27
04	BR	1/4-18	1/4-18
06-04	BR	3/8-18	1/4-18
06	BR	3/8-18	3/8-18
08	BR	1/2-14	1/2-14
12	BR	3/4-14	3/4-14

3600

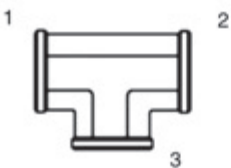
Pipe Branch Tee



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)	T3 (NPTF)
02	BR	1/8-27	1/8-27	1/8-27
04	BR	1/4-18	1/4-18	1/4-18
06	BR	3/8-18	3/8-18	3/8-18
08	BR	1/2-14	1/2-14	1/2-14
12	BR	3/4-14	3/4-14	3/4-14

3700

Pipe Tee



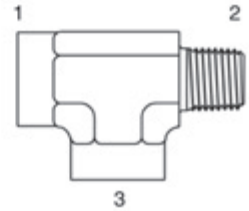
Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)	T3 (NPTF)
02	BR	1/8-27	1/8-27	1/8-27
04	BR	1/4-18	1/4-18	1/4-18
06	BR	3/8-18	3/8-18	3/8-18
08	BR	1/2-14	1/2-14	1/2-14
12	BR	3/4-14	3/4-14	3/4-14

Brass Pipe Adapters

Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)	T3 (NPTF)
02	BR	1/8-27	1/8-27	1/8-27
04	BR	1/4-18	1/4-18	1/4-18
06	BR	3/8-18	3/8-18	3/8-18
08	BR	1/2-14	1/2-14	1/2-14
12	BR	3/4-14	3/4-14	3/4-14

3750

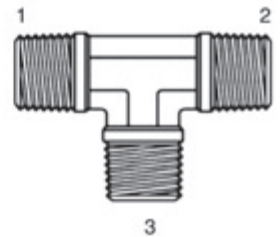
Street Tee



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)	T3 (NPTF)
02	BR	1/8-27	1/8-27	1/8-27
04	BR	1/4-18	1/4-18	1/4-18
06	BR	3/8-18	3/8-18	3/8-18
08	BR	1/2-14	1/2-14	1/2-14
12	BR	3/4-14	3/4-14	3/4-14

3900

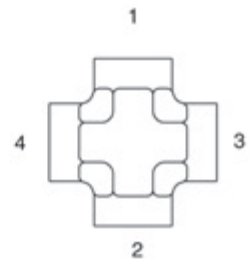
Pipe Tee



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)	T3 & T4 (NPTF)
02	BR	1/8-27	1/8-27	1/8-27
04	BR	1/4-18	1/4-18	1/4-18
06	BR	3/8-18	3/8-18	3/8-18
08	BR	1/2-14	1/2-14	1/2-14
12	BR	3/4-14	3/4-14	3/4-14

3950

Pipe Cross



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)
01	BR	1/8-27
02	BR	1/4-18
03	BR	3/8-18
04	BR	1/2-14

BV

Breather Vent Plug



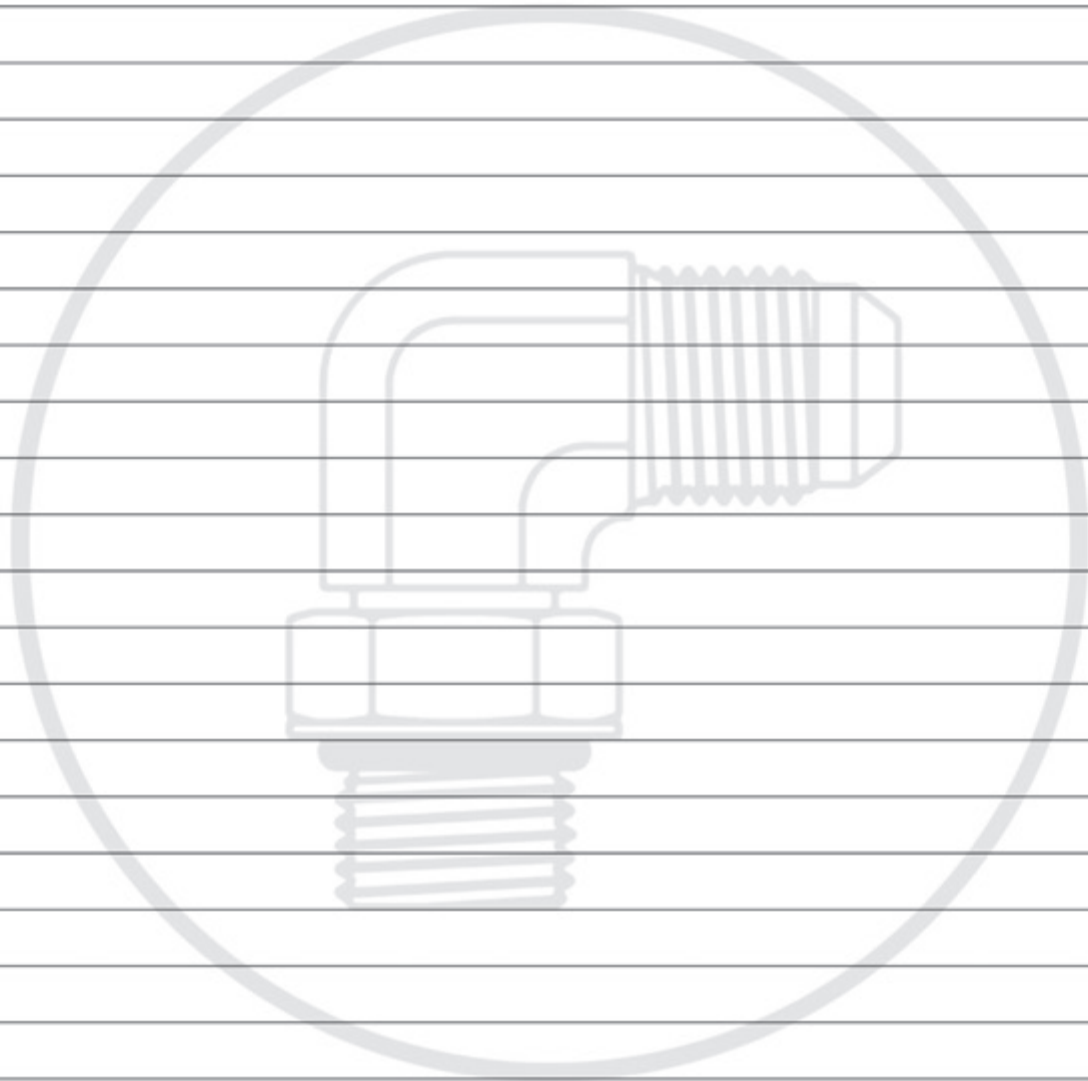
S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Notes



Brass Poly Push Fittings

Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size
02	BR	1/8	1/8
02.5	BR	5/32	5/32
04	BR	1/4	1/4
05	BR	5/16	5/16
06	BR	3/8	3/8
08	BR	1/2	1/2

Also available with nickel plating.

262PP

Tube Union



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size
04-02	BR	1/4	1/8
04-02.5	BR	1/4	5/32
05-02.5	BR	5/16	5/32
05-04	BR	5/16	1/4
06-02	BR	3/8	1/8
06-02.5	BR	3/8	5/32
06-04	BR	3/8	1/4
06-05	BR	3/8	5/16
08-04	BR	1/2	1/4
08-06	BR	1/2	3/8

Also available with nickel plating.

263PP

Tube Union Reducer

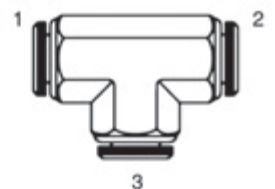


Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size	Tube Size
02	BR	1/8	1/8	1/8
02.5	BR	5/32	5/32	5/32
04	BR	1/4	1/4	1/4
05	BR	5/16	5/16	5/16
06	BR	3/8	3/8	3/8
08	BR	1/2	1/2	1/2

Also available with nickel plating.

264PP

Tube Union Tee

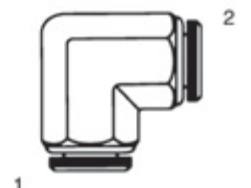


Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size
02.5	BR	5/32	5/32
04	BR	1/4	1/4
05	BR	5/16	5/16
06	BR	3/8	3/8
08	BR	1/2	1/2

Also available with nickel plating.

265PP

Tube Union Elbow 90°



S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Brass Poly Push Fittings

266PP

Tube to Pipe

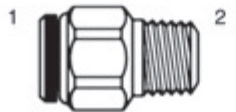


Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
02-02	BR	1/8	1/8-27
02.5-02	BR	5/32	1/8-27
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18

Also available with nickel plating.

268PP

Tube to Pipe

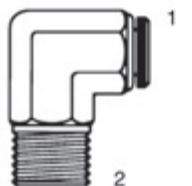


Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
02-01	BR	1/8	1/16-27
02-02	BR	1/8	1/8-27
02.5-02	BR	5/32	1/8-27
02.5-04	BR	5/32	1/4-18
02.5-10/32	BR	5/32	10/32 UNF
03-02	BR	3/16	1/8-27
04-10/32	BR	1/4	10/32 UNF
04-01	BR	1/4	1/16-27
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
04-06	BR	1/4	3/8-18
05-02	BR	5/16	1/8-27
05-04	BR	5/16	1/4-18
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
06-08	BR	3/8	1/2-14
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14

Also available with nickel plating.

269PP

Tube to Pipe Elbow 90°



Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
02-01	BR	1/8	1/16-27
02-02	BR	1/8	1/8-27
02.5-02	BR	5/32	1/8-27
02.5-04	BR	5/32	1/4-18
03-02	BR	3/16	1/8-27
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
04-06	BR	1/4	3/8-18
05-02	BR	5/16	1/8-27
05-04	BR	5/16	1/4-18
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14

Also available with nickel plating.

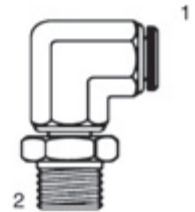
Brass Poly Push Fittings

Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
02-02	BR	1/8	1/8-27
02-04	BR	1/8	1/4-18
02.5-02	BR	5/32	1/8-27
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
06-08	BR	3/8	1/2-14
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14

Also available with nickel plating.

279PP

Tube to Pipe Swivel Elbow 90°

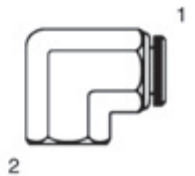


Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
02.5-02	BR	5/32	1/8-27
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
06-04	BR	3/8	1/4-18

Also available with nickel plating.

270PP

Tube to Pipe Elbow 90°

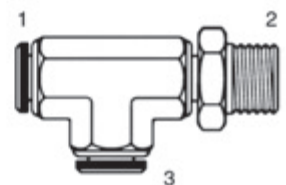


Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)	Tube Size
02.5-02-02.5	BR	5/32	1/8-27	5/32
04-02-04	BR	1/4	1/8-27	1/4
04-04-04	BR	1/4	1/4-18	1/4
05-02-05	BR	5/16	1/8-27	5/16
06-04-06	BR	3/8	1/4-18	3/8
08-06-08	BR	1/2	3/8-18	1/2
08-08-08	BR	1/2	1/2-14	1/2

Also available with nickel plating.

271PP

Tube to Pipe Swivel Run Tee

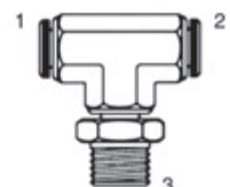


Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size	T3 (NPTF)
02.5-02.5-02	BR	5/32	5/32	1/8-27
04-04-02	BR	1/4	1/4	1/8-27
04-04-04	BR	1/4	1/4	1/4-18
05-05-02	BR	5/16	5/16	1/8-27
06-06-04	BR	3/8	3/8	1/4-18
06-06-06	BR	3/8	3/8	3/8-18
08-08-06	BR	1/2	1/2	3/8-18
08-08-08	BR	1/2	1/2	1/2-14

Also available with nickel plating.

272PP

Tube to Pipe Swivel Branch Tee



S= Steel

FG=Forging

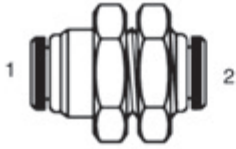
SS=Stainless Steel

BR=Brass

Brass Poly Push Fittings

282PP

Tube Bulkhead Union



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size
02	BR	1/8	1/8
02.5	BR	5/32	5/32
04	BR	1/4	1/4
05	BR	5/16	5/16
06	BR	3/8	3/8
08	BR	1/2	1/2

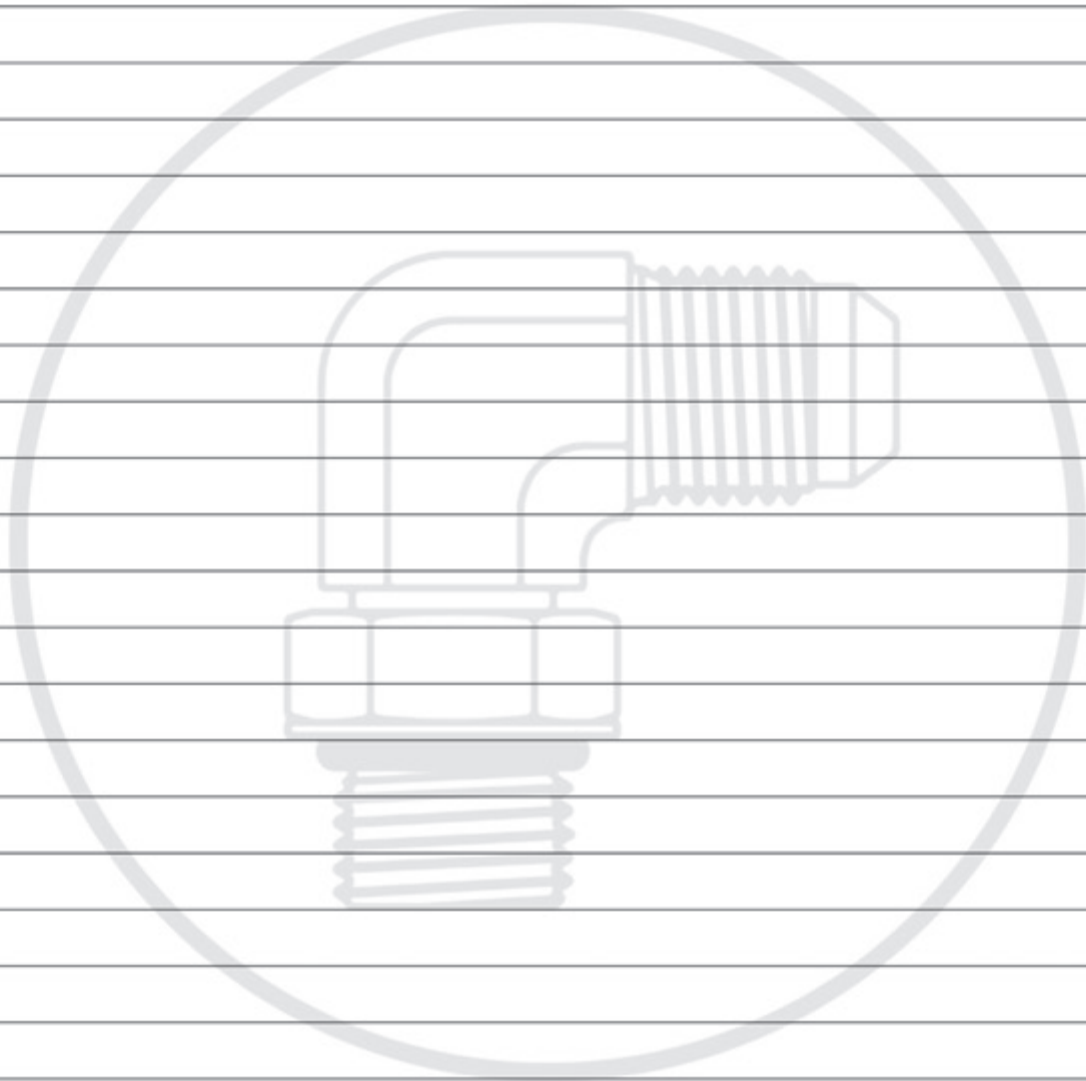
Also available with nickel plating.

284PP

Tube Plug



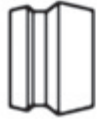
Dash Size	Stock Materials S FG SS BR	Tube Size
02	BR	1/8
02.5	BR	5/32
04	BR	1/4
05	BR	5/16
06	BR	3/8
08	BR	1/2



Brass Poly Flow Fittings

260P

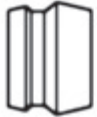
Nylon Sleeve



Dash Size	Tube Size
04	1/4
05	5/16
06	3/8
08	1/2

260PB

Brass Sleeve



Dash Size	Stock Materials S FG SS BR	Tube Size
02	BR	1/8
04	BR	1/4
05	BR	5/16
06	BR	3/8
08	BR	1/2

261U

Brass Nut



Dash Size	Stock Materials S FG SS BR	Tube Size
02	BR	1/8
03	BR	3/16
04	BR	1/4
05	BR	5/16
06	BR	3/8
08	BR	1/2

261P

Brass Nut And Nylon Sleeve Assembly



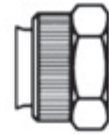
Dash Size	Stock Materials S FG SS BR	Tube Size
04	BR	1/4
05	BR	5/16
06	BR	3/8
08	BR	1/2

Brass Poly Flow Fittings

Dash Size	Stock Materials S FG SS BR	Tube Size
02	BR	1/8
04	BR	1/4
06	BR	3/8
08	BR	1/2

261PB

Brass Nut And Brass Sleeve



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size
02	BR	1/8	1/8
03	BR	3/16	3/16
04	BR	1/4	1/4
05	BR	5/16	5/16
06	BR	3/8	3/8
08	BR	1/2	1/2

262P

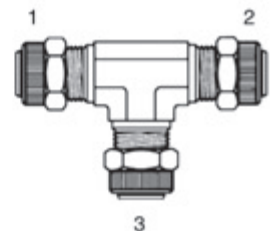
Tube Union



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size	Tube Size
02	BR	1/8	1/8	1/8
03	BR	3/16	3/16	3/16
04	BR	1/4	1/4	1/4
05	BR	5/16	5/16	5/16
06	BR	3/8	3/8	3/8
08	BR	1/2	1/2	1/2

264P

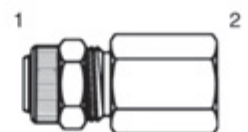
Tube Union Tee



Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
02-02	BR	1/8	1/8-27
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
05-02	BR	5/16	1/8-27
06-04	BR	3/8	1/4-18
08-06	BR	1/2	3/8-18

266P

Tube to Pipe



S= Steel

FG=Forging

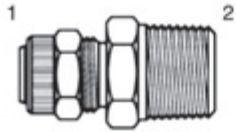
SS=Stainless Steel

BR=Brass

Brass Poly Flow Fittings

268P

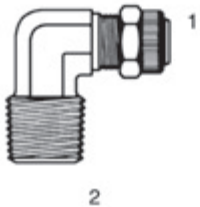
Tube to Pipe



Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
02-10/32	BR	1/8	10/32 UNF
02-01	BR	1/8	1/16-27
02-02	BR	1/8	1/8-27
03-02	BR	3/16	1/8-27
04-10/32	BR	1/4	10/32 UNF
04-01	BR	1/4	1/16-27
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
04-06	BR	1/4	3/8-18
05-02	BR	5/16	1/8-27
05-04	BR	5/16	1/4-18
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14

269P

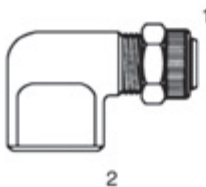
Tube to Pipe Elbow 90°



Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
02-02	BR	1/8	1/8-27
03-02	BR	3/16	1/8-27
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
04-06	BR	1/4	3/8-18
05-02	BR	5/16	1/8-27
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
08-06	BR	1/2	3/8-18

270P

Tube to Pipe Elbow 90°



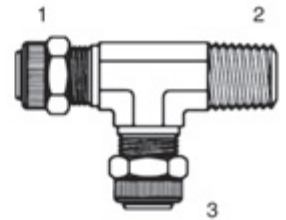
Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
06-04	BR	3/8	1/4-18
08-06	BR	1/2	3/8-18

Brass Poly Flow Fittings

Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)	Tube Size
02-02-02	BR	1/8	1/8-27	1/8
04-02-04	BR	1/4	1/8-27	1/4
04-04-04	BR	1/4	1/4-18	1/4
05-02-05	BR	5/16	1/8-27	5/16
06-02-06	BR	3/8	1/8-27	3/8
06-04-06	BR	3/8	1/4-18	3/8
08-06-08	BR	1/2	3/8-18	1/2

271P

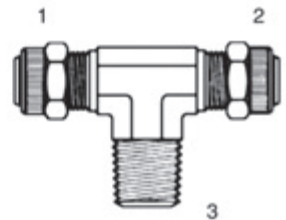
Tube to Pipe Run Tee



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size	T3 (NPTF)
02-02-02	BR	1/8	1/8	1/8-27
04-04-02	BR	1/4	1/4	1/8-27
04-04-04	BR	1/4	1/4	1/4-18
05-05-02	BR	5/16	5/16	1/8-27
06-06-02	BR	3/8	3/8	1/8-27
06-06-04	BR	3/8	3/8	1/4-18
08-08-06	BR	1/2	1/2	3/8-18

272P

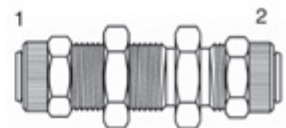
Tube to Pipe Branch Tee



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size
04	BR	1/4	1/4
05	BR	5/16	5/16
06	BR	3/8	3/8
08	BR	1/2	1/2

282P

Tube Bulkhead Union



Brass Push-In D.O.T. Fittings

1562

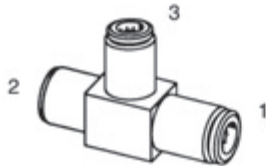
Tube Union



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size
04	BR	1/4	1/4
5/32	BR	5/32	5/32
06	BR	3/8	3/8
08	BR	1/2	1/2

1564

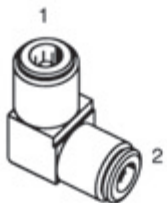
Tube Union Tee



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size	Tube Size
04	BR	1/4	1/4	1/4
06	BR	3/8	3/8	3/8
08	BR	1/2	1/2	1/2

1565

Tube Union Elbow 90°



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size
04	BR	1/4	1/4
06	BR	3/8	3/8
08	BR	1/2	1/2

1566

Tube to Pipe



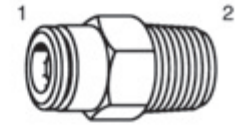
Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
08-08	BR	1/2	1/2-14

Brass Push-In D.O.T. Fittings

Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
04-06	BR	1/4	3/8-18
5/32-01	BR	5/32	1/16-27
5/32-02	BR	5/32	1/8-27
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
06-08	BR	3/8	1/2-14
08-04	BR	1/2	1/4-18
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14
10-06	BR	5/8	3/8-18
10-08	BR	5/8	1/2-14

1568

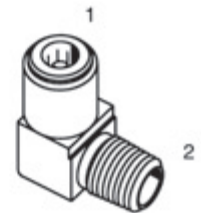
Tube to Pipe



Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
04-06	BR	1/4	3/8-18
5/32-02	BR	5/32	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
06-08	BR	3/8	1/2-14
08-04	BR	1/2	1/4-18
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14
10-06	BR	5/8	3/8-18
10-08	BR	5/8	1/2-14

1569

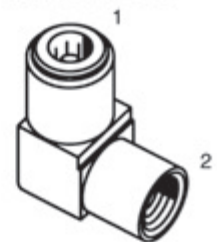
Tube to Pipe Elbow 90°



Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
04-06	BR	1/4	3/8-18
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
08-08	BR	1/2	1/2-14

1570

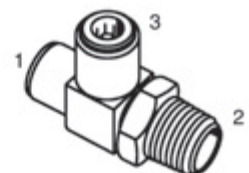
Tube to Pipe Elbow 90°



Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)	Tube Size
04-02	BR	1/4	1/8-27	1/4
04-04	BR	1/4	1/4-18	1/4
06-04	BR	3/8	1/4-18	3/8
06-06	BR	3/8	3/8-18	3/8
08-06	BR	1/2	3/8-18	1/2

1571

Tube to Pipe Swivel Run Tee



S= Steel

FG=Forging

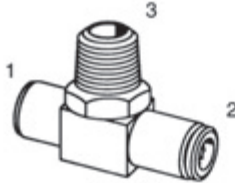
SS=Stainless Steel

BR=Brass

Brass Push-In D.O.T. Fittings

1572

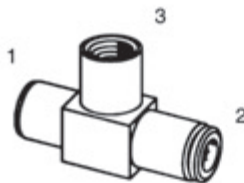
**Tube to Pipe
Swivel
Branch Tee**



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size	T3 (NPTF)
03-03-02	BR	3/16	3/16	1/8-27
04-04-02	BR	1/4	1/4	1/8-27
04-04-04	BR	1/4	1/4	1/4-18
06-06-04	BR	3/8	3/8	1/4-18
06-06-06	BR	3/8	3/8	3/8-18
08-08-04	BR	1/2	1/2	1/4-18
08-08-06	BR	1/2	1/2	3/8-18

1577

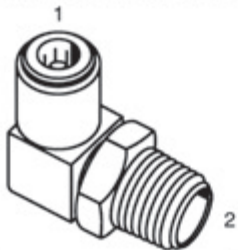
**Tube to Pipe
Branch Tee**



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size	T3 (NPTF)
04-02	BR	1/4	1/4	1/8-27
04-04	BR	1/4	1/4	1/4-18
06-04	BR	3/8	3/8	1/4-18

1579

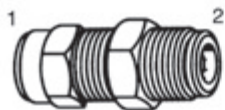
**Tube to Pipe
Swivel Elbow 90°**



Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
04-06	BR	1/4	3/8-18
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
06-08	BR	3/8	1/2-14
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14
10-06	BR	5/8	3/8-18
10-08	BR	5/8	1/2-14

1582

**Tube Bulkhead
Union**



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size
04	BR	1/4	1/4
06	BR	3/8	3/8
08	BR	1/2	1/2
10	BR	5/8	5/8

Dash Size	Stock Materials S FG SS BR	Tube Size
04	BR	1/4
06	BR	3/8
08	BR	1/2
10	BR	5/8
12	BR	3/4

1460

Tube Sleeve



Dash Size	Stock Materials S FG SS BR	Tube Size
04	BR	1/4
06	BR	3/8
08	BR	1/2
10	BR	5/8
12	BR	3/4

1461

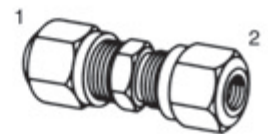
Tube Nut



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size
04	BR	1/4	1/4
06	BR	3/8	3/8
08-06	BR	1/2	3/8
08	BR	1/2	1/2
10	BR	5/8	5/8
12	BR	3/4	3/4

1462

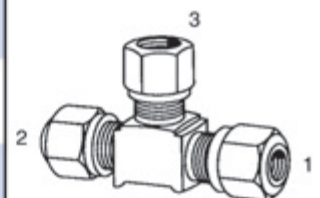
Tube Union



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size	Tube Size
04	BR	1/4	1/4	1/4
06	BR	3/8	3/8	3/8
08	BR	1/2	1/2	1/2
10	BR	5/8	5/8	5/8

1464

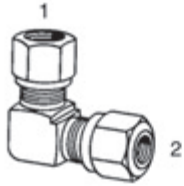
Tube Union Tee



Brass Air Brake Fittings

1465

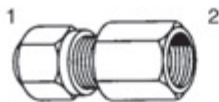
Tube Union Elbow 90°



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size
04	BR	1/4	1/4
06	BR	3/8	3/8
08	BR	1/2	1/2
10	BR	5/8	5/8

1466

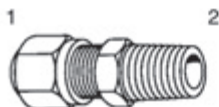
Tube to Pipe



Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14
10-06	BR	5/8	3/8-18
10-08	BR	5/8	1/2-14

1468

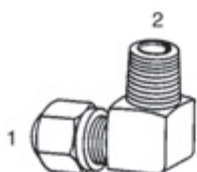
Tube to Pipe



Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
04-06	BR	1/4	3/8-18
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
06-08	BR	3/8	1/2-14
08-04	BR	1/2	1/4-18
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14
10-06	BR	5/8	3/8-18
10-08	BR	5/8	1/2-14
12-08	BR	3/4	1/2-14
12-12	BR	3/4	3/4-14

1469

Tube to Pipe Elbow 90°



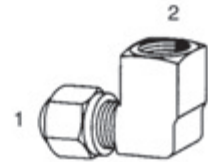
Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
04-06	BR	1/4	3/8-18
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
06-08	BR	3/8	1/2-14
08-04	BR	1/2	1/4-18
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14
10-06	BR	5/8	3/8-18
10-08	BR	5/8	1/2-14
10-12	BR	5/8	3/4-14
12-08	BR	3/4	1/2-14

Brass Air Brake Fittings

Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14
10-08	BR	5/8	1/2-14

1470

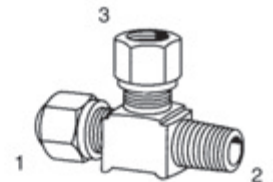
Tube to Pipe Elbow 90°



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size	T2 (NPTF)
04-02-04	BR	1/4	1/4	1/8-27
04-04-04	BR	1/4	1/4	1/4-18
06-04-06	BR	3/8	3/8	1/4-18
06-06-06	BR	3/8	3/8	3/8-18
08-06-08	BR	1/2	1/2	3/8-18
08-08-08	BR	1/2	1/2	1/2-14
10-08-10	BR	5/8	5/8	1/2-14

1471

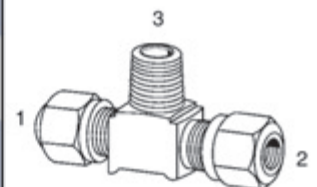
Tube to Pipe Run Tee



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size	T3 (NPTF)
04-02	BR	1/4	1/4	1/8-27
04-04	BR	1/4	1/4	1/4-18
06-02	BR	3/8	3/8	1/8-27
06-04	BR	3/8	3/8	1/4-18
06-06	BR	3/8	3/8	3/8-18
08-06	BR	1/2	1/2	3/8-18
08-08	BR	1/2	1/2	1/2-14
10-08	BR	5/8	5/8	1/2-14

1472

Tube to Pipe Branch Tee



Dash Size	Stock Materials S FG SS BR	Tube Size
04	BR	1/4
06	BR	3/8
08	BR	1/2
10	BR	5/8
12	BR	3/4

1473

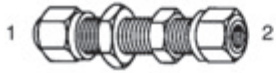
Tube Insert



Brass Air Brake Fittings

1474

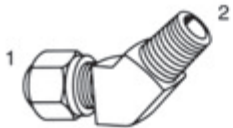
Tube Bulkhead Union



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size
04	BR	1/4	1/4
06	BR	3/8	3/8
08	BR	1/2	1/2

1480

Tube to Pipe Elbow 45°



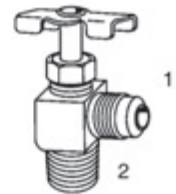
Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
06-02	BR	3/8	1/8-27
06-04	BR	3/8	1/4-18
06-06	BR	3/8	3/8-18
08-06	BR	1/2	3/8-18
08-08	BR	1/2	1/2-14
10-08	BR	5/8	1/2-14

Brass Needle Valves and Drain Cocks

Dash Size	Stock Materials S FG SS BR	Tube O.D.	T2 (NPTF)
04-02	BR	1/4	1/8-27
05-02	BR	5/16	1/8-27
05-04	BR	5/16	1/4-18
06-04	BR	3/8	1/4-18

NV101

SAE 45° to Pipe
Elbow 90°



Dash Size	Stock Materials S FG SS BR	Tube O.D.	Tube O.D.
04-04	BR	1/4	1/4
06-06	BR	3/8	3/8

NV102

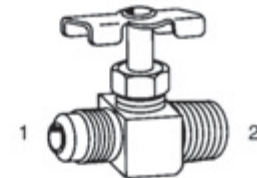
SAE 45° Union



Dash Size	Stock Materials S FG SS BR	Tube O.D.	T2 (NPTF)
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
05-02	BR	5/16	1/8-27
06-04	BR	3/8	1/4-18

NV103

SAE 45° to Pipe



Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
03-02	BR	3/16	1/8-27
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
06-04	BR	3/8	1/4-18

NV104

Compression to
Pipe Elbow 90°



S= Steel

FG=Forging

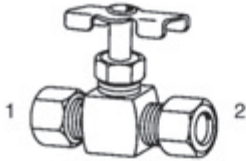
SS=Stainless Steel

BR=Brass

Brass Needle Valves and Drain Cocks

NV105

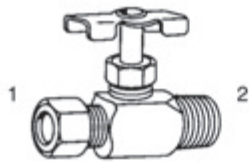
Compression Union



Dash Size	Stock Materials S FG SS BR	Tube Size	Tube Size
03	BR	3/16	3/16
04	BR	1/4	1/4
05	BR	5/16	5/16
06	BR	3/8	3/8

NV106

Compression to Pipe



Dash Size	Stock Materials S FG SS BR	Tube Size	T2 (NPTF)
03-02	BR	3/16	1/8-27
04-02	BR	1/4	1/8-27
04-04	BR	1/4	1/4-18
05-02	BR	5/16	1/8-27
06-04	BR	3/8	1/4-18

NV107

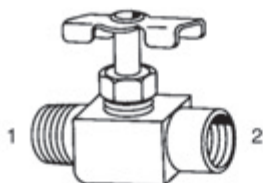
Pipe Union



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)
02-02	BR	1/8-27	1/8-27
04-04	BR	1/4-18	1/4-18

NV108

Pipe to Pipe



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)	T2 (NPTF)
02-02	BR	1/8-27	1/8-27
04-04	BR	1/4-18	1/4-18

Brass Needle Valves and Drain Cocks

Dash Size	Stock Materials				T1 (NPTF)	T2 (NPTF)
	S	FG	SS	BR		
02-02				BR	1/8-27	1/8-27
04-04				BR	1/4-18	1/4-18

NV109

Pipe Union



Dash Size	Stock Materials				T1 (NPTF)
	S	FG	SS	BR	
02				BR	1/8-27
04				BR	1/4-18
06				BR	3/8-18

DC602

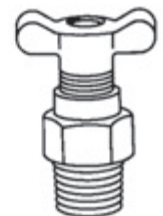
Internal Seat



Dash Size	Stock Materials				T1 (NPTF)
	S	FG	SS	BR	
02				BR	1/8-27
04				BR	1/4-18
06				BR	3/8-18
08				BR	1/2-14

DC603

Tee Handle Internal Seat



Dash Size	Stock Materials				T1 (NPTF)
	S	FG	SS	BR	
02				BR	1/8-27
04				BR	1/4-18
06				BR	3/8-18
08				BR	1/2-14

DC604

External Seat



S= Steel

FG=Forging

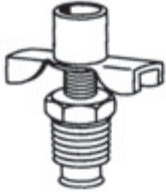
SS=Stainless Steel

BR=Brass

Brass Needle Valves and Drain Cocks

DC606

External Seat



Dash Size	Stock Materials S FG SS BR	T1 (NPTF)
04	BR	1/4-18


DC607


Angle BIB Drain Cock

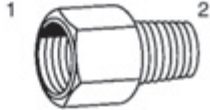


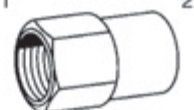
Dash Size	Stock Materials S FG SS BR	T1 (NPTF)
02	BR	1/8-27
04	BR	1/4-18

Brass Inverted Flare Adapters

Dash Size	Stock Materials				T1 (UNF)	100
	S	FG	SS	BR		
02				BR	5/16-24	Flare Nut 
03				BR	3/8-24	
04				BR	7/16-24	
05				BR	1/2-20	
06				BR	5/8-18	
08				BR	3/4-18	

Dash Size	Stock Materials				T1 (UNF)	105
	S	FG	SS	BR		
02	\$				5/16-24	Steel Nut 
03	\$				3/8-24	
04	\$				7/16-24	
05	\$				1/2-20	
06	\$				5/8-18	
08	\$				3/4-18	
10	\$				7/8-18	
12	\$				1 1/16-16	

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)	202
	S	FG	SS	BR			
02-02				BR	5/16-24	1/8-27	Tube to Pipe 
03-02				BR	3/8-24	1/8-27	
04-02				BR	7/16-24	1/8-27	
04-04				BR	7/16-24	1/4-18	
05-02				BR	1/2-20	1/8-27	
05-04				BR	1/2-20	1/4-18	
06-02				BR	5/8-18	1/8-27	
06-04				BR	5/8-18	1/4-18	
06-06				BR	5/8-18	3/8-18	
08-04				BR	3/4-18	1/4-18	
08-06				BR	3/4-18	3/8-18	
08-08				BR	3/4-18	1/2-14	
10-08				BR	7/8-18	1/2-14	
12-12				BR	1 1/16-16	3/4-14	

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)	252
	S	FG	SS	BR			
03-02				BR	3/8-24	1/8-27	Tube to Pipe 
04-02				BR	7/16-24	1/8-27	
04-04				BR	7/16-24	1/4-18	
05-02				BR	1/2-20	1/8-27	
06-04				BR	5/8-18	1/4-18	
08-06				BR	3/4-18	3/8-18	
10-08				BR	7/8-18	1/2-14	
10-12				BR	7/8-18	3/4-14	

S= Steel

FG=Forging

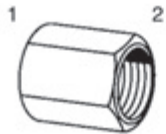
SS=Stainless Steel

BR=Brass

Brass Inverted Flare Adapters

302

Tube Union



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
02				BR	5/16-24	5/16-24
03				BR	3/8-24	3/8-24
04				BR	7/16-24	7/16-24
05				BR	1/2-20	1/2-20
06				BR	5/8-18	5/8-18
08				BR	3/4-18	3/4-18
10				BR	7/8-18	7/8-18

352

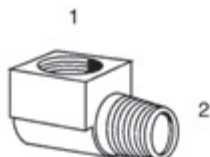
Tube to Pipe Elbow 45°



Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
03-02				BR	3/8-24	1/8-27
04-02				BR	7/16-24	1/8-27
05-02				BR	1/2-20	1/8-27
05-04				BR	1/2-20	1/4-18
06-02				BR	5/8-18	1/8-27
06-04				BR	5/8-18	1/4-18
08-06				BR	3/4-18	3/8-18

402

Tube to Pipe Elbow 90°



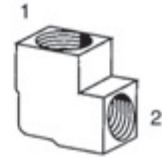
Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
02-02				BR	5/16-24	1/8-27
03-02				BR	3/8-24	1/8-27
04-02				BR	7/16-24	1/8-27
04-04				BR	7/16-24	1/4-18
05-02				BR	1/2-20	1/8-27
05-04				BR	1/2-20	1/4-18
06-02				BR	5/8-18	1/8-27
06-04				BR	5/8-18	1/4-18
06-06				BR	5/8-18	3/8-18
08-06				BR	3/4-18	3/8-18
08-08				BR	3/4-18	1/2-14
10-08				BR	7/8-18	1/2-14
12-12				BR	1 1/16-16	3/4-14

Brass Inverted Flare Adapters

Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)
	S	FG	SS	BR		
04-02				BR	7/16-24	1/8-27
05-02				BR	1/2-20	1/8-27
06-04				BR	5/8-18	1/4-18
08-06				BR	3/4-18	3/8-18
10-08				BR	7/8-18	1/2-14

452

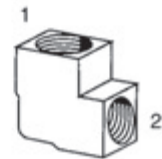
Tube to Pipe Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)
	S	FG	SS	BR		
04				BR	7/16-24	7/16-24
05				BR	1/2-20	1/2-20
06				BR	5/8-18	5/8-18
08				BR	3/4-18	3/4-18

502

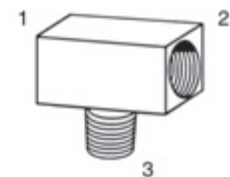
Tube Union Elbow 90°



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (NPTF)
	S	FG	SS	BR			
03-02				BR	3/8-24	3/8-24	1/8-27
04-02				BR	7/16-20	7/16-20	1/8-27
05-02				BR	1/2-20	1/2-20	1/8-27
06-04				BR	5/8-18	5/8-18	1/4-18
08-06				BR	3/4-18	3/4-18	3/8-18

602

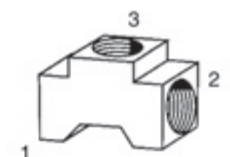
Tube to Pipe Branch Tee



Dash Size	Stock Materials				T1 (UNF)	T2 (UNF)	T3 (UNF)
	S	FG	SS	BR			
03				BR	3/8-24	3/8-24	3/8-24
04				BR	7/16-24	7/16-24	7/16-24
05				BR	1/2-20	1/2-20	1/2-20
06				BR	5/8-18	5/8-18	5/8-18
08				BR	3/4-18	3/4-18	3/4-18

702

Tube Union Tee



S= Steel

FG=Forging

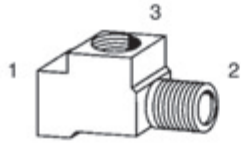
SS=Stainless Steel

BR=Brass

Brass Inverted Flare Adapters

752

**Tube to Pipe
Run Tee**



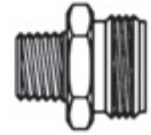
Dash Size	Stock Materials				T1 (UNF)	T2 (NPTF)	T3 (UNF)
	S	FG	SS	BR			
03-02				BR	3/8-24	1/8-27	3/8-24
04-02				BR	7/16-24	1/8-27	7/16-24
05-02				BR	1/2-20	1/8-27	1/2-20
06-04				BR	5/8-18	1/4-18	5/8-18
08-06				BR	3/4-18	3/8-18	3/4-18

Brass Garden Hose Fittings

Dash Size	Stock Materials S FG SS BR	T1 (GH) Thread	T2 (NPTF)
12-06	BR	3/4	3/8-18
12-08	BR	3/4	1/2-14
12-12	BR	3/4	3/4-14

4024

Male GHT to Pipe

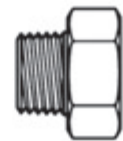


2 1

Dash Size	Stock Materials S FG SS BR	T1 (GH) Thread	T2 (NPTF)
12-06	BR	3/4	3/8-18
12-08	BR	3/4	1/2-14
12-12	BR	3/4	3/4-14

4025

Female GHT to Pipe

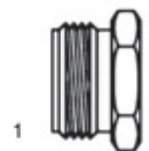


2 1

Dash Size	Stock Materials S FG SS BR	T1 (GH) Thread	T2 (NPTF)
12-04	BR	3/4	1/4-18
12-06	BR	3/4	3/8-18
12-08	BR	3/4	1/2-14
12-12	BR	3/4	3/4-14

4026

Male GHT to Pipe

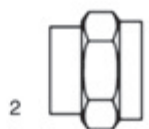


1 2

Dash Size	Stock Materials S FG SS BR	T1 (GH) Thread	T2 (NPTF)
12-04	BR	3/4	1/4-18
12-06	BR	3/4	3/8-18
12-08	BR	3/4	1/2-14
12-12	BR	3/4	3/4-14

4030

Female GHT to Pipe



2 1

S= Steel

FG=Forging

SS=Stainless Steel

BR=Brass

Brass Garden Hose Fittings

4040

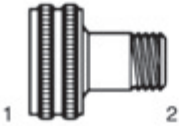
Female GHT Swivel Union



Dash Size	Stock Materials S FG SS BR	T1 (GH) Thread	T2 (GH) Thread
12-12	BR	3/4	3/4

4044

Female GHT Swivel to Pipe



Dash Size	Stock Materials S FG SS BR	T1 (GH) Thread	T2 (NPTF)
12-04	BR	3/4	1/4-18
12-06	BR	3/4	3/8-18
12-08	BR	3/4	1/2-14

4045

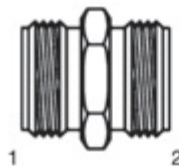
Female GHT Swivel to Pipe



Dash Size	Stock Materials S FG SS BR	T1 (GH) Thread	T2 (NPTF)
12-04	BR	3/4	1/4-18
12-08	BR	3/4	1/2-14
12-12	BR	3/4	3/4-14

4050

Male GHT Union



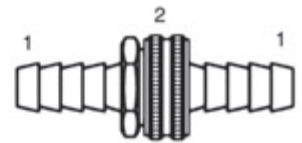
Dash Size	Stock Materials S FG SS BR	T1 (GH) Thread	T2 (GH) Thread
12-12	BR	3/4	3/4

Brass Garden Hose Fittings

Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (GH) Thread
	S	FG	SS	BR		
06-12				BR	3/8	3/4
08-12				BR	1/2	3/4
10-12				BR	5/8	3/4
12-12				BR	3/4	3/4
16-16				BR	1	1

4100

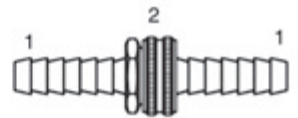
GHT Hose Barb Assembly



Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (GH) Thread
	S	FG	SS	BR		
10-12				BR	5/8	3/4
12-12				BR	3/4	3/4

4100-L

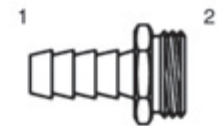
Long Shank GHT Hose Barb Assembly



Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (GH) Thread
	S	FG	SS	BR		
06-12				BR	3/8	3/4
08-12				BR	1/2	3/4
10-12				BR	5/8	3/4
12-12				BR	3/4	3/4
16-16				BR	1	1

4144

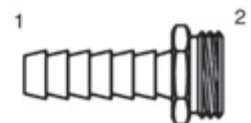
Hose Barb to Male GHT



Dash Size	Stock Materials				T1 (Hose I.D.)	T2 (GH) Thread
	S	FG	SS	BR		
08-12				BR	1/2	3/4
10-12				BR	5/8	3/4
12-12				BR	3/4	3/4

4144-L

Long Shank Hose Barb to Male GHT



S= Steel

FG=Forging

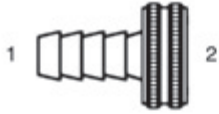
SS=Stainless Steel

BR=Brass

Brass Garden Hose Fittings

4145

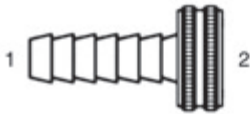
Hose Barb to Female GHT Swivel



Dash Size	Stock Materials S FG SS BR	T1 (Hose I.D.)	T2 (GH) Thread
06-12	BR	3/8	3/4
08-12	BR	1/2	3/4
10-12	BR	5/8	3/4
12-12	BR	3/4	3/4
16-16	BR	1	1

4145-L

Long Shank Hose Barb to Female GHT Swivel



Dash Size	Stock Materials S FG SS BR	T1 (Hose I.D.)	T2 (GH) Thread
10-12	BR	5/8	3/4
12-12	BR	3/4	3/4

GHW

Garden Hose Washer*



Dash Size	T1 (GH) Thread
10	5/8

*Available in black or red.

Cross Reference

TOMPKINS	AEROQUIP	DAYCO EASTMAN	PARKER TUBE	PARKER HOSE	TRIDENT	WEATHERHEAD	GATES
302					1326		
304	221000				1327	C5115	
304-C	210292	830-FS	FNTX	06CP	1329	C5129	
306	210212	711BH-FS	WLN	53N	1332	C5924	
306-N	210295	711-FSO			1330		
318	1290	841-FS	BTX	06B	1311	C5105	
319	900605	840-FS	TX	06S	1253	C5165	
403	73014				1403		
1404	2045 (R)	60SA	0107	0107	1210	9205 (R)	MP-FPX
1405	2046 (R)	60SG	0207	0207	1212	9255 (R)	FP-FPX
1406					1222		
1501	2047 (R)	60UA	2107	2107	1218	9405 (R)	MP-FPX-90
1502	2048 (R)	60UG	2207	2207	1216	9455 (R)	FP-FPX-90
1503	2049 (R)	60TA	3107	3107	1214	9355 (R)	MP-FPX-45
1504	2050 (R)	60TG			1249	9385 (R)	FP-FPX-45
1601	2254 (R)	60VC			1258	9406 (R)	MP-FPXT
1602	2253 (R)	60VH			1259	9456 (R)	
1603	2255	60VJ			1223		
2403	2027	842-FS	HTX	0303	1204	C5305	MJ-MJ
2403-LH	202712	842H-FS	LHTX	03L3	1204-LH	C5306	
2404	2021 (R)	848-FS	FTX	0103 (R)	1202	C5205	MJ-MP
2404-L	202113 (R)	848L-FS			1202LO (R)		
2404-LL	202114 (R)				1202LL (R)		
2405	2022 (R)	846-FS	GTX	0203 (R)	1230 (R)	C5255	MJ-FP
2406	2215	883-FS	TRTX	0603	1246	C5015	
2408	900599	839-FS	PNTX	03CP	1254	C5229	
2500	2039	855-FS	ETX	2303	1234	C5505	
2501	2024 (R)	849-FS	CTX	2103 (R)	1208 (R)	C5405	MJ-MP-90
2501-L	202411 (R)	849L-FS	CCTX	5603 (R)	1208-L (R)	C5425	
2501-LL	202413 (R)	849LL-FS	CCCTX	5703 (R)	1208-LL (R)	C5435	
2501-LLL	202414 (R)						
2502	2025 (R)	850-FS	DTX	2203 (R)	1242 (R)	C5455	
2503	2023 (R)	854-FS	VTX	3103 (R)	1206 (R)	C5355	MJ-MP-45
2504							
2505	2044 (R)						
2601	2030 (R)	845-FS	STX	213T (R)	1221 (R)	C5605	
2602	2031 (R)	858-FS	OTX	223T (R)	1228 (R)	C5655	
2603	2033	844-FS	JTX	033T	1220	C5705	
2605	2028 (R)	851-FS	RTX	013T (R)	1224	C5755	
2606	2029 (R)	857-FS	MTX	023T (R)	1226 (R)	TF5805	
2650	2020		KTX	033X	1229	TF5955	
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2701	2043	855BH-FS	WETX	2353	1262	C5525	
2702	2042	854BH-FS	WNTX	3353	1261	TF5375	
2703	203002	870-FS	WJTX	543T	1283	TF5725	
2704	203008		WJJTX	533T	1284	C5726	
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2706	2240 (R)						
4404					1041 (R)		
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4503					1043 (R)		
4601	FF1167 (R)				1046 (R)		
4603					1040 (R)		
4604					1044 (R)		
5000	2096	24SJ	GG	0202	1273	C3309	

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TOMPKINS	AEROQUIP	DAYCO EASTMAN	PARKER TUBE	PARKER HOSE	TRIDENT	WEATHERHEAD	GATES
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5406-P	2082		HP	01CP	1251	C3159	
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5601	2256						
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5603	2093				1277		
5604	2091	25VC		212T	1278	C3609	
5605	2090	25VJ	MMO	022T	1225	C3709	
5651							
5652	2080	25WJ	KMMOO	022X	1279	C3959	
5655	208007						
6400	202702 (R)	848-FSO	F50X	0503 (R)	1231	C5315	MB-MJ (R)
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6401	FF1093 (R)		F5F		1264 (R)	C3249	
6402	2266		F65X		1213	C5216 (R)	
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6408-HHP	FF2138		HP50N	05HP	1256	7238	
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6500	2071 (R)	879-FS	C6X	3903	1236	C5506	
6501	2250 (R)				1247 (R)	TF5406	
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6505	2018 (R)	881-FS	F6X		1211	9100	
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6801	2062 (R)	849-FS	C50X	2503 (R)	1238 (R)	C5515	MB-MJ-90
(R)							
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6801-LL	206209 (R)				1238LL (R)		
6802	2061 (R)	854-FSO	V50X	3503 (R)	1240 (R)	C5365	MB-MJ-45
(R)							
6803	203003 (R)	845-FSO	S50X	253T	1265 (R)	C5715	
6804	203005 (R)	851-FSO	R50X	053T	1266 (R)	C5716	
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6901	2068 (R)	60UB		2507	1271	9515	MB-FPX-90
6902	2067 (R)	60TB		3507	1272	9365	MB-FPX-45

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070115	319
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BP= PHOSPHATE FINISHED STEEL FITTING ONLY
BS= STAINLESS STEEL FITTING ONLY
A=CADMIUM PLATED STEEL WITH NUTS AND SLEEVES
AZ= ZINC PLATED STEEL WITH NUTS AND SLEEVES
AP= PHOSPHATE FINISHED STEEL WITH NUTS AND SLEEVES
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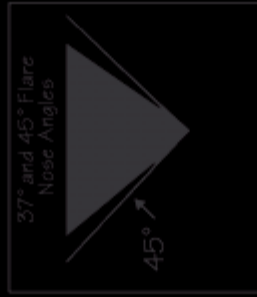
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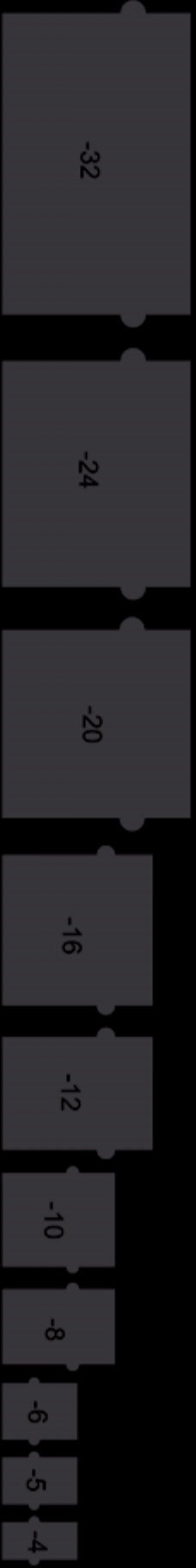
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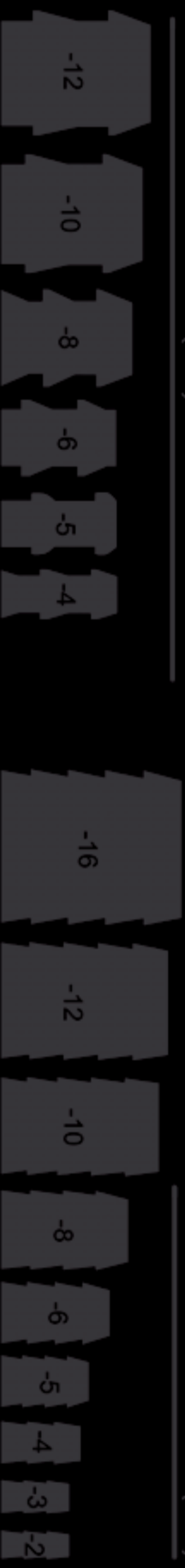
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