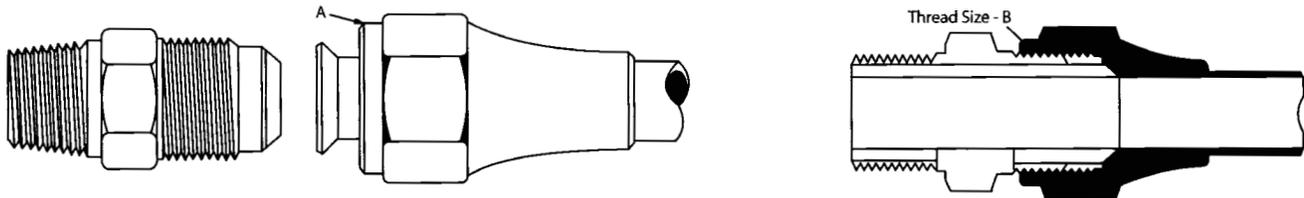


Brass

SAE 45° FLARE



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

•Typical Application

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

•Working Pressure Ranges

Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection.

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

Temperature 73°F with copper tubing:

•Vibration

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

•Temperature Range

-650F to +2500F (-530C to +1210C) range at maximum operating pressures.

•Material

CA360 Brass for Barstock fittings
CA377 Brass for forged fittings

•Used With

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

•Conformance

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

•Assembly Instructions

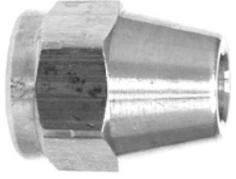
- 1- Cut tubing to desired length. Make sure all burrs are removed and ends are cut square.
- 2- Slide nut on tube. Threaded and "A" of nut must face out.
- 3- Flare end of tube with a 450 flaring tool.
 - a-Measure flare diameter
 - b-Examine flare for excessive thin out.
- 4- Lubricate threads and assemble to fitting body. Nut should be turned hand out.
- 5- Tighten assembly with wrench until a solid feeling is encountered. From that point, apply a one-sixth turn.

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

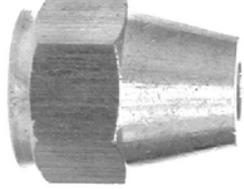
Actual O.D. of Flare Fittings



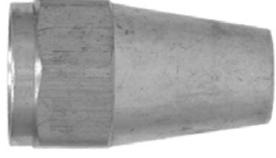
SHORT ROD NUT

SAE # 010110		20910 41FS 1110 N1 41FX 441S 'L'
Part #		Size
818F-02B		1/8
818F-03B		3/16
818F-04B		1/4
818F-05B		5/16
818F-06B		3/8
818F-07B		7/16
818F-08B		1/2
818F-10B		5/8
818F-12B		3/4
818F-14B		7/8
818F-16B		1

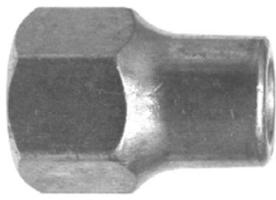
REDUCING SHORT ROD NUT

	
Part #	Size
818RF-06-04B	3/8x1/4
818RF-08-06B	1/2x3/8
818RF-10-08B	5/8x1/2

LONG ROD NUT

SAE # 010111		14FL N2 241 441 41
Part #		Size
818FL-02B		1/8
818FL-03B		3/16
818FL-04B		1/4
818FL-05B		5/16
818FL-06B		3/8
818FL-08B		1/2
818FL-10B		5/8
818FL-12B		3/4

LONG FORGED NUT

SAE # 010167		N4 14FL 641 41FF 39
Part #		Size
10-028		1/4
10-030		3/8
10-031		1/2
10-032		5/8
10-033		3/4

SHORT FORGED NUT

SAE # 010166		14FS 41FFS 40 641-S 1116 NS4
Part #		Size
818FS-03B		3/16
818FS-04B		1/4
818FS-05B		5/16
818FS-06B		3/8
818FS-08B		1/2
818FS-10B		5/8
818FS-12B		3/4
818FS-14B		7/8

EXTRA HEAVY SHORT FORGED NUT

		NSA
Part #		Size
10-046		1/4
10-047		3/8
10-048		1/2
10-049		5/8

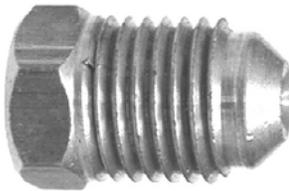
FORGED REDUCING NUT



NSR4
14FS
41FRS
40R
662-S

Part #	Size
818RF-05-04B	5/16x1/4
818RF-06-04B	3/8x1/4
818RF-06-05B	3/8x5/16
818RF-08-06B	1/2x3/8
818RF-10-08B	5/8x3/8
818RF-10-08B	5/8x1/2
818RF-12-10B	3/4x5/8

FLARED PLUG



58
639F
PF
57
57
P2
2229
439

Part #	Size
806F-03	3/16
806F-04	1/4
806F-05	5/16
806F-06	3/8
806F-08	1/2
806F-10	5/8
806F-12	

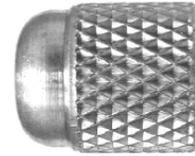
FLARED CAP



640F
41FC
56
N5
2129
54
440

Part #	Size
820F-03B	3/16
820F-04B	1/4
820F-05B	5/16
820F-06B	3/8
820F-08B	1/2
820F-10B	5/8
820F-12B	3/4

FIGHTER TIGHTENING CAP



NFT5

Part #	Size
10-081	1/4

COPPER GASKET



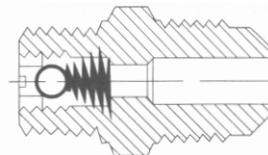
SAE #	Part #	Size
010113	10-084	3/16
	10-085	1/4
	10-086	5/16
	10-087	3/8
	10-088	1/2
	10-089	5/8
	10-90	3/4

COPPER BONNET



SAE #	Part #	Size
010113	10-094	3/16
	10-095	1/4
	10-097	3/8
	10-098	1/2
	10-099	5/8
	10-100	3/4

MALE BALL CHECK CONNECTOR



43A

Part #	Size
10-131	1/4x1/8
10-132	5/16x1/8
10-133	3/8x1/4

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



UNION

SAE #
010101



42F
U2

Part #	Size
815F-02-02B	1/8
815F-03-03B	3/16
815F-04-04B	1/4
815F-05-05B	5/16
815F-06-06B	3/8
815F-07-07B	7/16
815F-08-08B	1/2
815F-10-10B	5/8
815F-12-12B	3/4
815F-14-14B	7/8

REDUCING UNION



656F
UR2
42-R

Part #	Size
815F-05-04B	5/16x1/4
815F-06-04B	2/8x1/4
815F-06-05B	3/8x5/16
815F-08-04B	1/2x1/4
815F-08-06B	1/2x3/8
815F-10-06B	5/8x3/8
815F-10-08B	5/8x1/2
815F-12-10B	3/4x5/8

UNION TEE

SAE #
010401



244F
T2
144F

Part #	Size
824F-02B	1/8
824F-03B	3/16
824F-04B	1/4
824F-05B	5/16
824F-06B	3/8
824F-08B	1/2
824F-10B	5/8
824F-12B	3/4
824F-14B	7/8

REDUCING TEE



144F
TR2
659F
684F
44R

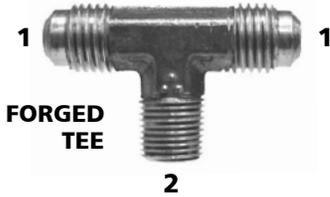
1 X 2 X 3

Part #	Size
824F-04-06B	1/4x1/4x3/8
824F-05-04B	5/16x5/16x1/4
824F-06-04-04B	3/8x1/4x1/4
824F-06-04-06B	3/8x1/4x3/8
824F-06-04B	3/8x3/8x1/4
824F-06-08B	3/8x3/8x1/2
824F-06-10B	3/8x3/8x5/8
824F-08-06-06B	1/2x3/8x3/8
824F-08-06-08B	1/2x3/8x1/2
824F-08-04B	1/2x1/2x1/4
824F-08-06B	1/2x1/2x3/8
824F-10-08-10B	5/8x1/2x5/8
824F-10-06B	5/8x5/8x3/8
824F-10-08B	5/8x5/8x1/2
824F-12-10B	3/4x3/4x5/8



MALE BRANCH TEE

SAE #
010425



T1
145F
45

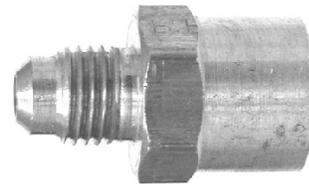
FORGED
TEE

FLARE X MALE PIPE
1 X 2

Part #	Size
825F-02-02B	1/8x1/8
825F-04-02B	1/4x1/8
825F-04-04B	1/4x1/4
825F-04-06B	1/4x3/8
825F-05-02B	5/16x1/8
825F-05-04B	5/16x1/4
825F-06-02B	3/8x1/8
825F-06-06B	3/8x3/8
825F-06-08B	3/8x1/2
825F-08-04B	1/2x1/4
825F-08-06B	1/2x3/8
825F-08-08B	1/2x1/2
825F-10-06B	5/8x3/8
825F-10-08B	5/8x1/2
825F-10-12B	5/8x3/4
825F-12-08B	3/4x1/2
825F-12-12B	3/4x3/4

FEMALE ADAPTER

SAE #
010103



46
U3

FLARE X FEMALE PIPE

Part #	Size
854F-02-02B	1/8x1/8
854F-03-02B	3/16x1/8
854F-04-02B	1/4x1/8
854F-04-04B	1/4x1/4
854F-04-06B	1/4x3/8
854F-04-08B	1/4x1/2
854F-05-02B	5/16x1/8
854F-05-04B	5/16x1/4
854F-05-06B	5/16x3/8
854F-06-02B	3/8x1/8
854F-06-04B	3/8x1/4
854F-06-06B	3/8x3/8
854F-06-08B	3/8x1/2
854F-06-12B	3/8x3/4
854F-08-04B	1/2x1/4
854F-08-06B	1/2x3/8
854F-08-08B	1/2x1/2
854F-08-12B	1/2x3/4
854F-10-06B	5/8x3/4
854F-10-08B	5/8x1/2
854F-10-12B	5/8x3/4
854F-12-08B	3/4x1/2
854F-12-12B	3/4x3/4
854F-14-12B	7/8x3/4

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all your high volume quotes!



MALE ADAPTER

SAE #
010102



U1
48

FLARE X MALE PIPE

Part #	Size
816F-02-02B	1/8x1/8
816F-03-02B	3/16x1/8
816F-04-02B	1/4x1/8
816F-04-04B	1/4x1/4
816F-04-06B	1/4x3/8
816F-04-08B	1/4x1/2
816F-05-02B	5/16x1/8
816F-05-04B	5/16x1/4
816F-05-06B	5/16x3/8
816F-06-02B	3/8x1/8
816F-06-04B	3/8x1/4
816F-06-06B	3/8x3/8
816F-06-08B	3/8x1/2
816F-06-12B	3/8x3/4
816F-08-04B	1/2x1/4
816F-08-06B	1/2x3/8
816F-08-08B	1/2x1/2
816F-08-12B	1/2x3/4
816F-10-04B	5/8x1/4
816F-10-06B	5/8x3/4
816F-10-08B	5/8x1/2
816F-10-12B	5/8x3/4
816F-12-08B	3/4x1/2
816F-12-12B	3/4x3/4
816F-14-08B	7/8x1/2
816F-14-12B	7/8x3/4
816F-16-12B	1x3/4
816F-16-16B	1x1

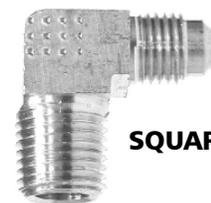
The will to win is not nearly as important as the will to prepare to win.
- Bobby Knight

90° MALE ELBOW

SAE #
010202



FORGED



SQUARE

249F
49
E1
149F

FLARE X MALE PIPE

Part #	Size
822F-02-02B	1/8x1/8
BS822F-02-02B	BARSTOCK 1/8x1/8
822F-03-02B	3/16x1/8
BS822F-03-02B	BARSTOCK 3/16x1/8
822F-03-04B	3/16x1/4
822F-04-02B	1/4x1/8
BS822-04-02B	BARSTOCK 1/4x1/8
822F-04-04B	1/4x1/4
BS822F-04-04B	BARSTOCK 1/4x1/4
822F-04-06B	1/4x3/8
822F-04-08B	1/4x1/2
822F-05-02B	5/16x1/8
BS822F-05-02B	BARSTOCK 5/16x1/8
822F-05-04B	5/16x1/4
BS822F-05-04	BARSTOCK 5/16x1/4
822F-05-06B	5/16x3/8
822F-06-02B	3/8x1/8
BS822F-06-02B	BARSTOCK 3/8x1/8
822F-06-04B	3/8x1/4
BS822F-06-04B	BARSTOCK 3/8x1/4
822F-06-06B	3/8x3/8
BS822F-06-06B	BARSTOCK 3/8x3/8
822F-06-08B	3/8x1/2
822F-06-12B	3/8x3/4
822F-08-04B	1/2x1/4
BS822F-08-04B	BARSTOCK 1/2x1/4
822F-08-06B	1/2x3/8
BS822F-08-06B	BARSTOCK 1/2x3/8
822F-08-08B	1/2x1/2
BS822F-08-08B	BARSTOCK 1/2x1/2
822F-08-12B	1/2x3/4
822F-10-04B	5/8x1/4
822F-10-06B	5/8x3/8
BS822-10-06B	BARSTOCK 5/8x3/8
822F-10-08B	5/8x1/2
BS822F-10-08B	BARSTOCK 5/8x1/2
822F-12-12B	5/8x3/4
822F-12-08B	3/4x1/2
822F-12-12B	3/4x3/4
BS822F-12-12B	BARSTOCK 3/4x3/4
822F-12-12B	7/8x3/4
822F-16-12B	1x3/4
822F-16-16B	1x1

Brass



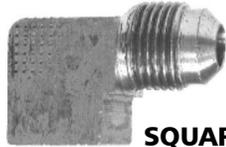
90° FEMALE ELBOW

SAE #
010203

E3
50
150F



FORGED ELBOW



SQUARE BARSTOCK

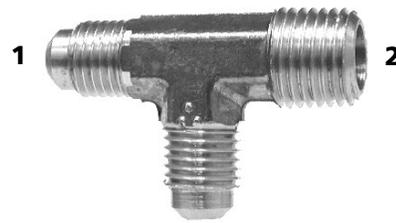
FLARE X FEMALE PIPE

Part #	Size
855F-03-02B	3/16x1/8
855F-04-02B	1/4x1/8
BS855F-04-02B	BARSTOCK 1/4x1/8
855F-04-04B	1/4x1/4
855F-04-06B	1/4x3/8
855F-04-08B	1/4x1/2
855F-05-02B	5/16x1/8
BS855F-05-02B	BARSTOCK 5/15x1/8
855F-05-04B	5/16x1/4
855F-06-02B	3/8x1/8
855F-06-04B	3/8x1/4
BS855F-06-04B	BARSTOCK 3/8x1/4
855F-06-06B	3/8x3/8
855F-06-08B	3/8x1/2
855F-06-12B	3/8x3/4
855F-08-04B	1/2x1/4
855F-08-06B	1/2x3/8
BS855F-08-06B	BARSTOCK 1/2x3/8
855F-08-08B	1/2x1/2
855F-08-12B	1/2x3/4
855F-10-06B	5/8x3/8
855F-10-08B	5/8x1/2
855F-10-12B	5/8x3/4
855F-12-08B	3/4x1/2
855F-12-12B	3/4x3/4

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FORGED MALE RUN TEE

T3
151F
51



1

**FLARE X MALE PIPE
1 X 2**

Part #	Size
826F-03-02B	3/16x1/8
826F-04-02B	1/4x1/8
826F-04-04B	1/4x1/4
826F-05-02B	5/16x1/8
826F-05-04B	5/16x1/4
826F-06-04B	3/8x1/4
826F-06-06B	3/8x3/8
826F-06-08-06B	3/8x1/2x3/8
826F-06-08B	3/8x1/2
826F-08-06-08B	1/2x3/8x1/2
826F-08-06B	1/2x3/8
826F-08-08B	1/2x1/2
826F-10-08B	5/8x1/2
826F-12-08B	3/4x1/2
826F-12-12B	3/4x3/4
826F-03-02-05B	3/16x1/8x5/16

More sizes available



FORGED CROSS FLARE

SAE #
010501



455
C1
147F
52

Part #	Size
827F-04B	1/4
827F-05B	5/16
827F-06B	3/8
827F-08B	1/2

FORGED REDUCING ELBOW



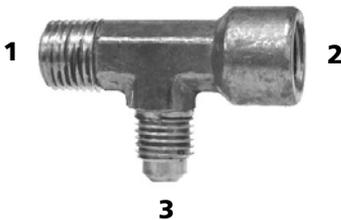
ER2
657F
55R

FLARE X FLARE

Part #	Size
821F-06-04B	3/8x1/4
821F-06-05B	3/8x5/16
821F-08-06B	1/2x3/8
821F-10-08B	5/8x1/2

FORGED ADAPTER TEE

SERVICE TEE

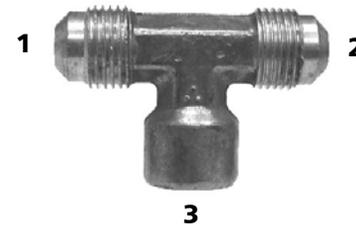


T17
53

MALE PIPE X FEMALE PIPE X FLARE

Part #	Size
10-382	1/8x1/8x1/4
10-383	1/4x1/4x1/4

FORGED FEMALE BRANCH TEE



TF1
136
T4
36
58FP

**FLARE X FEMALE PIPE
1 & 2 X 3**

Part #	Size
856F-04-04B	1/4x1/4
856F-06-04B	3/8x1/4
856F-06-06B	3/8x3/8
856F-06-08B	3/8x1/2
856F-08-08B	1/2x1/2
856F-10-08B	5/8x1/2

FORGED 90° FLARE ELBOW



E2
155F

Part #	Size
821F-02-02B	1/8
821F-03-03B	3/16
821F-04-04B	1/4
821F-05-05B	5/16
821F-06-06B	3/8
821F-08-08B	1/2
821F-10-10B	5/8
821F-12-12B	3/4
821F-14-14B	7/8

More sizes available

45° ELBOW

SAE # 010302



FORGED **BARSTOCK**

FLARE X MALE PIPE

E145
54
159F
654F
59FF
254
47
4945

Part #	Size
823F-04-02B	1/4x1/8
BS823F-04-02B	1/4x1/8
823F-04-04B	1/4x1/4
823F-05-02B	5/16x1/8
823F-05-04B	5/16x1/4
823F-06-04B	3/8x1/4
BS823F-06-04B	3/8x1/4
823F-06-06B	3/8x3/8
823F-06-08B	3/8x1/2
823F-08-06B	1/2x3/8
BS823F-08-06B	1/2x3/8
823F-08-08B	1/2x1/2
823F-10-06B	5/8x3/8
823F-10-08B	5/8x1/2
823F-12-08B	3/4x1/2
823F-12-12B	3/4x3/4

BRASS GAS RANGE FITTINGS

BRASS MALE ADAPTERS



FLARE X MALE PIPE

Part #	Size
35-132	1/2x1/2(3/8FIPTAP)
35-134	516x12

DRUM ADAPTERS

SAE # 010165



RD
IF
K1

• STRAIGHT
THREAD

FLARE X FIP

Part #	Size
50-011	1/4x1/2
50-001	1/4x3/4

FEMALE 45° FLARE FITTINGS

• Use with Copper Gasket
UNION

SAE # 010107



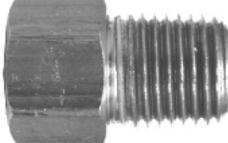
2310
U4
660HD
32

FEMALE FLARE X FEMALE FLARE

Part #	Size
10-135	1/4
10-136	3/8
10-137	1/2

FEMALE FLARE ADAPTER

SAE # 010106



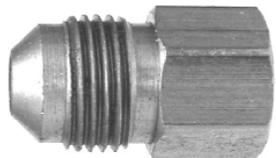
U5
664FHD
33
48-FF

FEMALE FLARE X MALE PIPE

Part #	Size
10-440	1/4x1/8
10-441	1/4x1/4
10-442	3/8x1/4
10-443	1/2x3/8
10-444	1/2x1/2

FLARE REDUCER

SAE # 010105



UR3
661FHD
227
46-FF

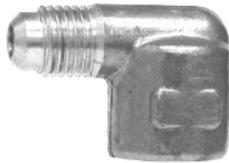
MALE FLARE X FEMALE FLARE

Part #	Size
10-462	1/4x3/8
10-461	1/4x1/2
10-463	3/8x1/4
10-464	3/8x1/2
10-473	3/8x5/8
10-467	1/2x3/8
10-468	1/2x5/8
10-469	5/8x1/2
10-470	5/8x3/4
10-471	3/4x5/8



FEMALE 45° FLARE FITTINGS

•Use with Copper Gasket
90° ELBOW



E4
669F

MALE FLARE X FEMALE FLARE

Part #	Size
10-500	1/4x1/4
10-495	1/2x1/2

BRASS FLARE SWIVEL FITTINGS

FORGED SWIVEL

SAE # 010108		1350 US4 14FSV 34
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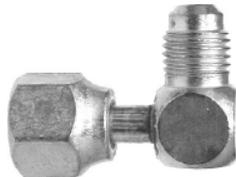
Part #	Size
10-481	1/4
10-482	5/16
10-483	3/8
10-484	1/2
10-485	5/8
10-486	3/4

REDUCING SWIVELS



Part #	Size
10-487	3/8x1/4
10-488	1/2x3/8
10-489	5/8x1/2

FORGED SWIVEL ELBOWS



MALE FLARE X FEMALE FLARE SWIVEL

Part #	Size
10-493	1/4
10-494	3/8
10-495*	1/2

*No Swivel

BRASS SOLDER FITTINGS

FEMALE TO SWT UNION

SAE #
010104



4085
US3
672FS
46FS
277

FLARE X SWT

Part #	Size
10-600	1/4x1/4
10-602	1/4x3/8
10-610	1/2x1/2
10-611	1/2x5/8
10-615	3/4x3/4

FORGED 90° SOLDER ELBOWS



ES2
SOLE1

FLARE X SOLDER

Part #	Size
10-620	1/4x1/4

Many, Many More Sizes Available! Just Ask!
See 37° flare brass fittings.