



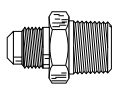
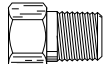
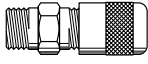


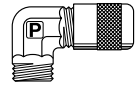
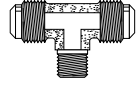

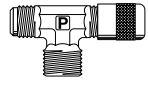
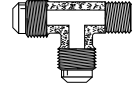
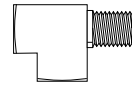
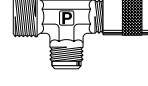
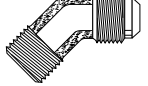
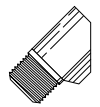
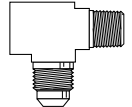
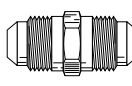

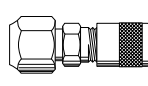
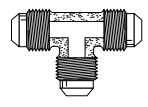

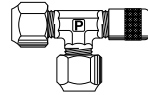
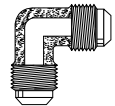


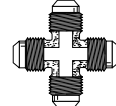
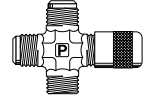
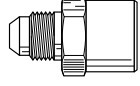

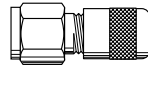
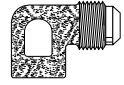

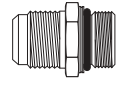
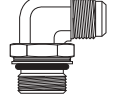
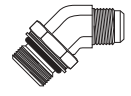
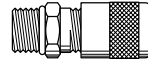
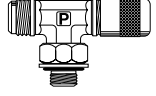
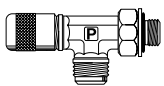
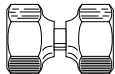
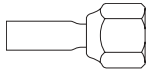
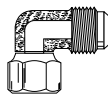
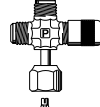

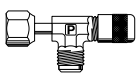
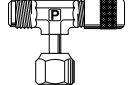

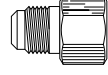
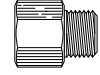
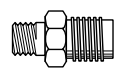
Flare Fittings



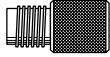
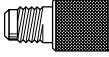
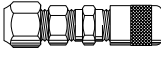
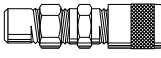
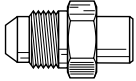

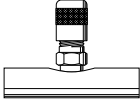
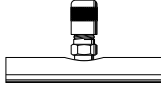





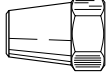







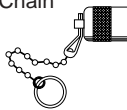
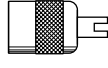
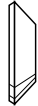

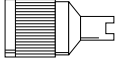

SAE 45° Flared Fittings	D4
Inverted Flared Fittings	D14
Access Valves	D18

The World Standard

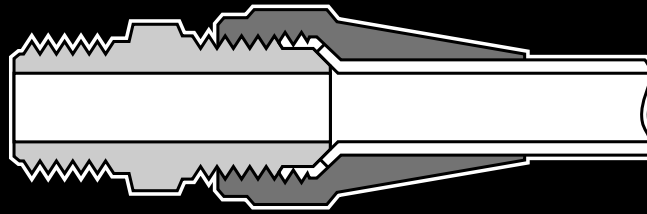
D

Flare to Male NPT	48F Male Connector  Page D8	481FHD Male Connector  Page D16	AVU1 Male Connector  Page D20	149F/249F Male Elbow  Page D9	2491FHD Male Elbow  Page D16	AVE1 Male Elbow  Page D20
145F Branch Tee  Page D9	2451FHD Branch Tee  Page D16	AVT1 Branch Tee  Page D20	151F Run Tee  Page D11	2511FHD Run Tee  Page D17	AVT3 Run Tee  Page D20	159F/259F 45° Male Elbow  Page D11
2591FHD 45° Male Elbow  Page D17	256F Adapter Tee  Page D12	Flare to Flare	42F Union  Page D7	421FHD Union  Page D15	AVU2 Union  Page D19	144F Union Tee  Page D9
2441FHD Union Tee  Page D16	AVT2 Union Tee  Page D20	155F Union Elbow  Page D11	2551FHD Union Elbow  Page D17	660FHD Flare Union  Page D12	147F Cross  Page D9	AVC1 Cross  Page D20
Flare to Female NPT	46F Female Connector  Page D8	461FHD Female Connector  Page D15	AVUR3 Female Connector  Page D21	150F Female Elbow  Page D10	2501FHD Female Elbow  Page D17	
Flare to Metric Straight Thread	48F-MI Male Connector  Page D8	149F-MI Male Elbow  Page D10	159F-MI 45° Male Elbow  Page D11	Flare to Straight Thread	AVU1F1 Male Connector  Page D20	AVT1F1 Branch Tee  Page D22
AVT3F1 Run Tee  Page D23	Swivels	14FSV Swivel Nut Connector  Page D6	US5 Flare Adapter  Page D6	166FSV Swivel Elbow  Page D12	AVCS4D Cross  Page D21	AVUS4D Swivel Connector  Page D21
AVTS4 Swivel Run Tee  Page D21	AVTS6 Swivel Branch Tee  Page D22	Adapters	1F Refrigerant Drum  Page D5	661FHD Reducer  Page D13	664FHD Female Flare to Pipe  Page D13	88AC Refrigerant Adapter  Page D23



<p>880AC Refrigerant Adapter</p>  <p>Page D23</p>	<p>881AC Refrigerant Adapter</p>  <p>Page D23</p>	<p>Bulkheads</p>	<p>AVU2BH Bulkhead Union</p>  <p>Page D19</p>	<p>AVUS3BH Solder Union</p>  <p>Page D19</p>	<p>Flare to Solder</p>	<p>43F Connector</p>  <p>Page D7</p>
<p>AVUSE Extended Copper Tube</p>  <p>Page D19</p>	<p>AVTS Solder Tee</p>  <p>Page D19</p>	<p>AVTSL Extended Solder Tee</p>  <p>Page D19</p>	<p>AVUS3 3 Way Solder</p>  <p>Page D21</p>	<p>AVUS Solder Connector</p>  <p>Page D21</p>	<p>Auxiliary</p>	<p>14FL Long Forged Nut</p>  <p>Page D5</p>
<p>14FSX Short Forged Nut</p>  <p>Page D5</p>	<p>14FS Forged Reducing Nut</p>  <p>Page D6</p>	<p>41FL Long Nut</p>  <p>Page D6</p>	<p>41FS/41FX Short Nut</p>  <p>Page D6</p>	<p>411F Inverted Flare Nut</p>  <p>Page D15</p>	<p>411FS Inverted Flare Nut Steel</p>  <p>Page D15</p>	<p>411FF Inverted Flare Piloted Nut</p>  <p>Page D15</p>
<p>639F Seal Plug</p>  <p>Page D12</p>	<p>640F Cap Nut</p>  <p>Page D12</p>	<p>640QSF Seal Cap</p>  <p>Page D22</p>	<p>640QSFC Seal Cap w/Chain</p>  <p>Page D22</p>	<p>640QSFCR Cap w/ Core Remover</p>  <p>Page D22</p>	<p>2GF Flare Gasket</p>  <p>Page D5</p>	<p>3GF Seal Bonnet</p>  <p>Page D5</p>
<p>CR Core Remover</p>  <p>Page D22</p>	<p>VC Valve Core</p>  <p>Page D22</p>					

D



SAE 45° Flared Fittings

Advantages

This economical fitting resists mechanical pullout. Can be assembled and disassembled repeatedly. Manufactured from CA 360, CA 345 or CA 377 brass.

Specifications

Listed with Underwriter's Laboratories for flammable liquid, marine, refrigeration and gas applications. Meets functional requirements of SAE J512 and J513, ASA and MS (Military Standards). Refer to list of UL listed fittings on page 8 for specific configurations.

Applications

Use with copper, brass, aluminum and welded steel hydraulic tubing that can be flared. Manufactured especially for hard-to-hold liquids and gases.

Working Pressure Ranges

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

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

Temperature Ranges

From -65° to +250°F.

Vibration

Short nut may be used when vibration is minimal. The long nut offers additional vibration capacity.

Assembly Instructions

1. Cut tubing squarely and clean tube end thoroughly to remove burrs.
2. Place nut onto tube. Place threaded end of nut toward end of tube.
3. Flare tube end with flaring tool to provide 45° flare.
4. Clamp tube flare between nut and nose of fitting body by screwing nut on finger-tight. Tighten with a wrench an additional 1/4 turn for a metal-to-metal seal.

Flare fittings are easy to disassemble and may be reassembled repeatedly, for a leak-proof connection.

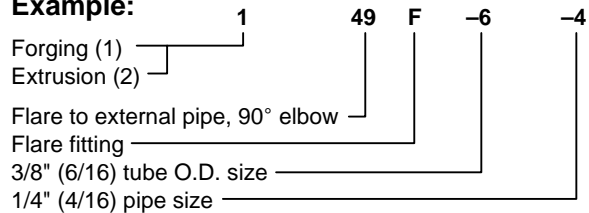
Order

By part number and name. SAE 45° flared bodies and nuts are separate items. Both numbers must be indicated when ordered.

Nomenclature

Part numbers are constructed from symbols that identify the style and size of the fitting. The first series of numbers and letters identifies the style and type fitting. The second series of numbers describes the size.

Example:



Sizes

Tube sizes are determined by the numbers of sixteenths of an inch in the tube O.D.

Special Fittings

Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry. Special UL stamped fittings are available. Please consult price list.

Pricing

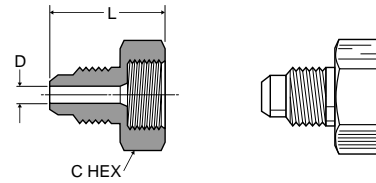
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Refrigerant Drum a Aapter 1F

Ref. SAE 010165

PART NO.	TUBE O.D.	PIPE THREAD	C HEX	L	FLOW DIA. D
1F-4-8	1/4	1/2	1-1/8	1.12	.187
1F-4-12	1/4	3/4	1-1/4	1.12	.187
1F-6-12	3/8	3/4	1-1/4	1.24	.282
1F-8-12	1/2	3/4	1-1/4	1.37	.407

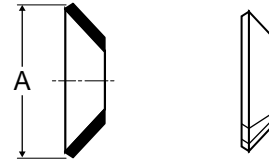
Gasket Furnished with each 1F adapter



Copper Flare Gasket 2GF

Ref. SAE 010113

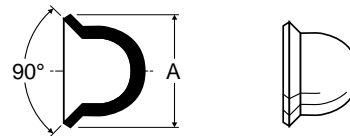
PART NO.	TUBE SIZE	A
2GF-3	3/16	.32
2GF-4	1/4	.37
2GF-5	5/16	.43
2GF-6	3/8	.56
2GF-8	1/2	.67
2GF-10	5/8	.78
2GF-12	3/4	.97



Seal Bonnet 3GF

Ref. SAE 010114

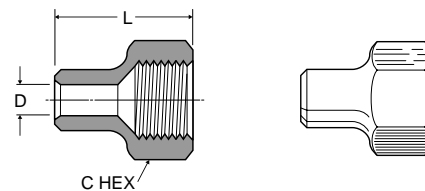
PART NO.	TUBE SIZE	A
3GF-3	3/16	.32
3GF-4	1/4	.37
3GF-5	5/16	.43
3GF-6	3/8	.56
3GF-8	1/2	.67
3GF-10	5/8	.78
3GF-12	3/4	.97



Long Forged Nut 14FL

Ref. SAE 010167

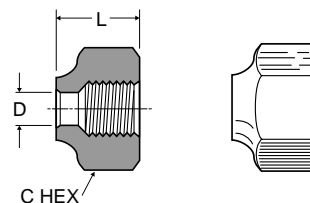
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FL-4	1/4	7/16-20	5/8	.257	.94
14FL-6	3/8	5/8-18	13/16	.382	1.06
14FL-8	1/2	3/4-16	15/16	.507	1.19
14FL-10	5/8	7/8-14	1-1/16	.632	1.44



Short Forged Nut 14FSX

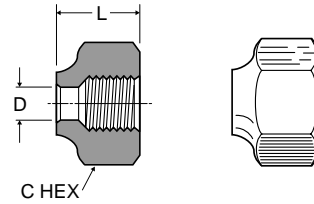
Ref. SAE 010166

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FSX-4	1/4	7/16-20	5/8	.257	.63
14FSX-5	5/16	1/2-20	11/16	.320	.67
14FSX-6	3/8	5/8-18	13/16	.382	.74
14FSX-8	1/2	3/4-16	15/16	.508	.86
14FSX-10	5/8	7/8-14	1-1/16	.632	.97
14FSX-12	3/4	1-1/16-14	1-5/16	.758	1.17



Short Forged Reducing Nuts 14FS

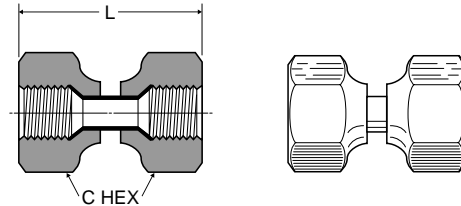
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FS-6-4	3/8 to 1/4	5/8-18	13/16	.257	.74
14FS-8-6	1/2 to 3/8	3/4-16	15/16	.382	.86
14FS-10-8	5/8 to 1/2	7/8-14	1-1/16	.507	.99



Swivel Nut Valve Connector 14FSV

Ref. SAE 010108

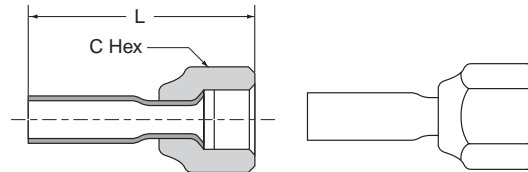
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
14FSV-4	1/4	7/16-20	5/8	1.31
14FSV-6	3/8	5/8-18	13/16	1.50
14FSV-8	1/2	3/4-16	15/16	1.75
14FSV-10	5/8	7/8-14	1-1/16	2.00



D

Flare Adapter US5

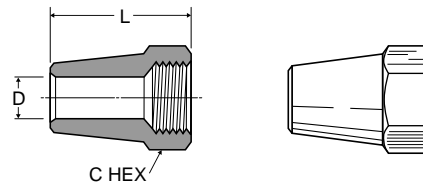
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
US5-4	1/4	7/16-20	5/8	1.50
US5-6	3/8	5/8-18	13/16	1.58
US5-8	1/2	3/4-16	15/16	1.80
US5-10	5/8	7/8-14	1-1/16	2.18



Long Nut 41FL

Ref. SAE 010111

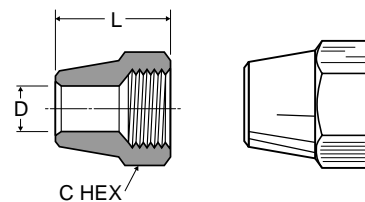
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
41FL-2	1/8	5/16-24	3/8	.133	.75
41FL-3	3/16	3/8-24	7/16	.195	.81
41FL-4	1/4	7/16-20	9/16	.257	.94
41FL-5	5/16	1/2-20	5/8	.320	1.12
41FL-6	3/8	5/8-18	3/4	.382	1.31
41FL-8	1/2	3/4-16	7/8	.507	1.62
41FL-10	5/8	7/8-14	1-1/16	.632	1.88
41FL-12	3/4	1-1/16-14	1-1/4	.758	2.19



Short Nut 41FS / Shorter Nut 41FX

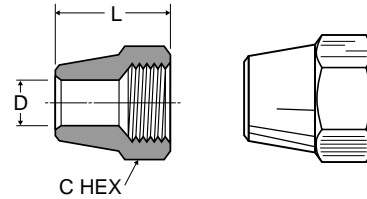
Ref. SAE 010110

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
41FS-2	1/8	5/16-24	3/8	.132	.50
41FS-3	3/16	3/8-24	7/16	.195	.62
41FS-4	1/4	7/16-20	9/16	.257	.75
41FS-5	5/16	1/2-20	5/8	.320	.88
41FS-6	3/8	5/8-18	3/4	.382	1.00
41FX-6	3/8	5/8-18	3/4	.382	.91
41FS-7	7/16	11/16-16	13/16	.445	1.06
41FS-8	1/2	3/4-16	7/8	.507	1.12
41FX-8	1/2	3/4-16	7/8	.507	1.00
41FS-10	5/8	7/8-14	1-1/16	.632	1.31
41FX-10	5/8	7/8-14	1-1/16	.632	1.06
41FS-12	3/4	1-1/16-14	1-1/4	.757	1.50
41FS-14	7/8	1-1/4-12	1-1/2	.882	1.62



Reducing Nuts 41FS

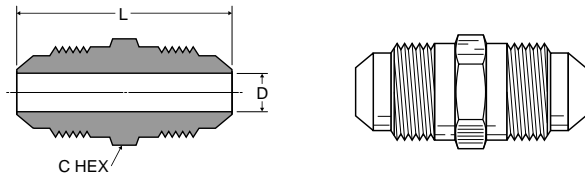
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
41FS-6-4	3/8 to 1/4	5/8-18	3/4	.257	1.00
41FS-8-6	1/2 to 3/8	3/4-16	7/8	.382	1.09
41FS-10-8	5/8 to 1/2	7/8-14	1-1/16	.507	1.25



Union 42F

Ref. SAE 010101 *Thread Protectors

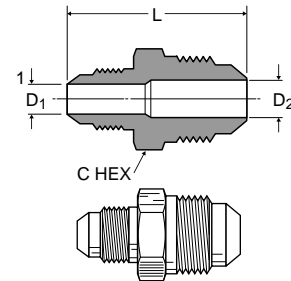
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
42F-2	1/8	5/16-24	5/16	.90	.079
42F-3	3/16	3/8-24	3/8	1.04	.125
42F-4	1/4	7/16-20	7/16	1.17	.188
42F-5	5/16	1/2-20	1/2	1.32	.219
42F-6	3/8	5/8-18	5/8	1.48	.281
42F-8	1/2	3/4-16	3/4	1.79	.408
42F-10	5/8	7/8-14	7/8	2.10	.502
42F-12*	3/4	1-1/16-14	1-1/16	2.42	.626
42F-14*	7/8	1-1/4-12	1-1/4	2.72	.752



Union Reducers 42F

Ref. SAE 010101

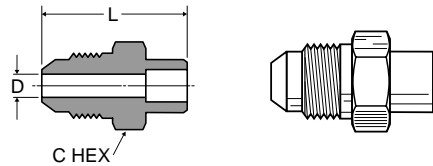
PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	FLOW DIA. D1	FLOW DIA. D2
42F-6-4	1/4	3/8	7/16-20	5/8-18	5/8	1.36	.188	.281
42F-6-5	5/16	3/8	1/2-20	5/8-18	5/8	1.42	.219	.281
42F-8-4	1/4	1/2	7/16-20	3/4-16	3/4	1.54	.188	.408
42F-8-6	3/8	1/2	5/8-18	3/4-16	3/4	1.67	.281	.408
42F-10-6	3/8	5/8	5/8-18	7/8-14	7/8	1.86	.281	.502
42F-10-8	1/2	5/8	3/4-16	7/8-14	7/8	1.98	.408	.502



Flare to Solder 43F

Ref. SAE 010104

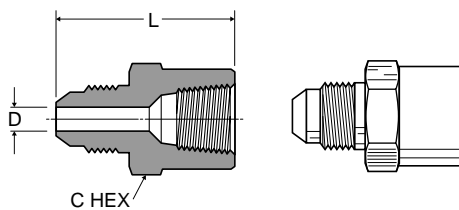
PART NO.	TUBE SIZE	SOLDER OD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
43F-4-4	1/4	1/4	7/16-20	7/16	.98	.189
43F-4-5	1/4	5/16	7/16-20	7/16	.98	.189
43F-4-6	1/4	3/8	7/16-20	1/2	.98	.189
43F-6-4	3/8	1/4	5/8-18	5/8	1.17	.189
43F-6-5	3/8	5/16	5/8-18	5/8	1.17	.252
43F-6-6	3/8	3/8	5/8-18	5/8	1.17	.283
43F-6-8	3/8	1/2	5/8-18	5/8	1.23	.283
43F-6-10	3/8	5/8	5/8-18	3/4	1.36	.283
43F-8-6	1/2	3/8	3/4-16	3/4	1.36	.314
43F-8-8	1/2	1/2	3/4-16	3/4	1.42	.408
43F-8-10	1/2	5/8	3/4-16	3/4	1.54	.408
43F-10-8	5/8	1/2	7/8-14	7/8	1.60	.440
43F-10-10	5/8	5/8	7/8-14	7/8	1.73	.502
43F-10-12	5/8	3/4	7/8-14	7/8	1.86	.502
43F-10-14	5/8	7/8	7/8-14	1	1.98	.502
43F-12-12	3/4	3/4	1-1/16-14	1-1/16	2.04	.627
43F-12-14	3/4	7/8	1-1/16-14	1-1/16	2.17	.627



Female Connector 46F

Ref. SAE 010103

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
46F-2-2	1/8	1/8	5/16-24	9/16	.91	.078
46F-3-2	3/16	1/8	3/8-24	9/16	.95	.125
46F-4-2	1/4	1/8	7/16-20	9/16	1.01	.188
46F-4-4	1/4	1/4	7/16-20	11/16	1.23	.188
46F-4-6	1/4	3/8	7/16-20	13/16	1.26	.188
46F-5-2	5/16	1/8	1/2-20	9/16	1.05	.220
46F-5-4	5/16	1/4	1/2-20	11/16	1.26	.220
46F-6-2	3/8	1/8	5/8-18	5/8	1.10	.282
46F-6-4	3/8	1/4	5/8-18	11/16	1.29	.282
46F-6-6	3/8	3/8	5/8-18	13/16	1.36	.282
46F-6-8	3/8	1/2	5/8-18	1	1.60	.282
46F-8-4	1/2	1/4	3/4-16	3/4	1.39	.408
46F-8-6	1/2	3/8	3/4-16	13/16	1.48	.408
46F-8-8	1/2	1/2	3/4-16	1	1.73	.408
46F-8-12	1/2	3/4	3/4-16	1-1/4	1.79	.408
46F-10-6	5/8	3/8	7/8-14	7/8	1.57	.502
46F-10-8	5/8	1/2	7/8-14	1	1.80	.502
46F-10-12	5/8	3/4	7/8-14	1-1/4	1.89	.502

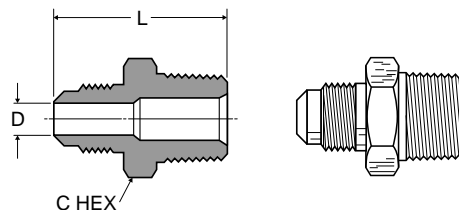


D

Male Connector 48F

Ref. SAE 010102 *Thread Protectors

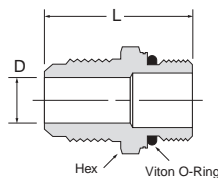
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
48F-2-2	1/8	1/8	5/16-24	7/16	.91	.078
48F-3-2	3/16	1/8	3/8-24	7/16	.98	.125
48F-3-4	3/16	1/4	3/8-24	9/16	1.17	.125
48F-4-2	1/4	1/8	7/16-20	7/16	1.04	.189
48F-4-4	1/4	1/4	7/16-20	9/16	1.23	.189
48F-4-6	1/4	3/8	7/16-20	11/16	1.29	.189
48F-4-8	1/4	1/2	7/16-20	7/8	1.54	.189
48F-5-2	5/16	1/8	1/2-20	1/2	1.14	.220
48F-5-4	5/16	1/4	1/2-20	9/16	1.32	.220
48F-5-6	5/16	3/8	1/2-20	11/16	1.36	.220
48F-6-2	3/8	1/8	5/8-18	5/8	1.23	.220
48F-6-4	3/8	1/4	5/8-18	5/8	1.42	.282
48F-6-6	3/8	3/8	5/8-18	11/16	1.42	.282
48F-6-8	3/8	1/2	5/8-18	7/8	1.67	.282
48F-6-12	3/8	3/4	5/8-18	1-1/16	1.79	.282
48F-8-4	1/2	1/4	3/4-16	3/4	1.60	.408
48F-8-6	1/2	3/8	3/4-16	3/4	1.60	.408
48F-8-8	1/2	1/2	3/4-16	7/8	1.79	.408
48F-8-12	1/2	3/4	3/4-16	1-1/16	1.92	.408
48F-10-4	5/8	1/4	7/8-14	7/8	1.79	.313
48F-10-6	5/8	3/8	7/8-14	7/8	1.79	.408
48F-10-8	5/8	1/2	7/8-14	7/8	1.98	.501
48F-10-12	5/8	3/4	7/8-14	1-1/16	2.04	.501
48F-12-8*	3/4	1/2	1-1/16-14	1-1/16	2.17	.562
48F-12-12*	3/4	3/4	1-1/16-14	1-1/16	2.17	.626
48F-14-12*	7/8	3/4	1-1/4-12	1-1/4	2.35	.752



Flare to Metric Adaptor 48F-X-MIX

PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	D
48F-8-MI16	1/2	M16 X 1.5	7/8	1.60	.35
48F-10-MI27	5/8	M27 x 2.0	1 1/4	1.87	.50
48F-12-MI27	3/4	M27 x 2.0	1 1/4	1.99	.63

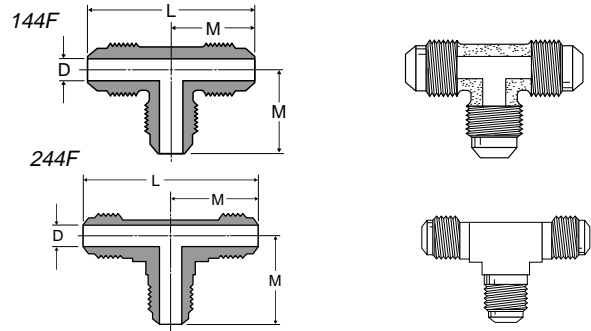
Note: Viton o-ring is standard



Union Tee 144F-244F

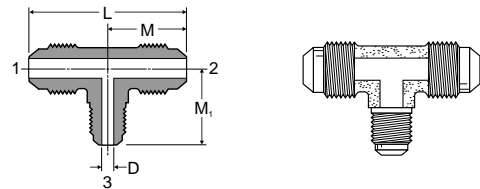
Ref. SAE 010401

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
144F-3	3/16	3/8-24	1.46	.73	.125
144F-4	1/4	7/16-20	1.72	.86	.189
244F-4	1/4	7/16-20	1.72	.86	.189
144F-5	5/16	1/2-20	1.82	.91	.220
144F-6	3/8	5/8-18	2.08	1.04	.283
144F-8	1/2	3/4-16	2.46	1.23	.408
144F-10	5/8	7/8-14	2.78	1.39	.503



Union Tee 144F-244F combination sizes

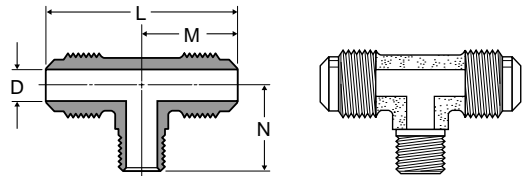
PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L	M	M1	FLOW DIA. D
144F-6-6-4	3/8	3/8	1/4	2.08	1.04	.89	.189
144F-8-8-6	1/2	1/2	3/8	2.40	1.20	1.10	.283



Male Branch Tee 145F

Ref. SAE 010425

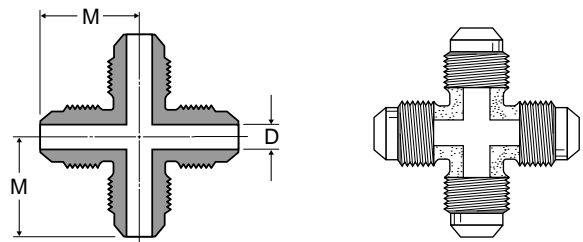
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
145F-2-2	1/8	1/8	5/16-24	1.26	.63	.69	.079
145F-4-2	1/4	1/8	7/16-20	1.58	.79	.76	.189
145F-4-4	1/4	1/4	7/16-20	1.78	.89	.92	.188
145F-5-4	5/16	1/4	1/2-20	1.90	.95	.96	.220
145F-6-4	3/8	1/4	5/8-18	1.96	.98	1.05	.281
145F-6-6	3/8	3/8	5/8-18	2.00	1.00	.98	.283
145F-6-8	3/8	1/2	5/8-18	2.28	1.14	1.26	.281
145F-8-6	1/2	3/8	3/4-16	2.40	1.20	1.10	.408
145F-8-8	1/2	1/2	3/4-16	2.46	1.23	1.36	.408
145F-10-8	5/8	1/2	7/8-14	2.78	1.39	1.36	.501



Cross 147F

Ref. SAE 010501

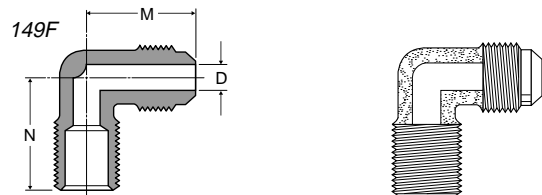
PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
147F-6	3/8	5/8-18	1.04	.283



Male Elbow 149F-249F

Ref. SAE 010202 *Thread Protectors

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
149F-2-2	1/8	1/8	5/16-24	.63	.73	.079
149F-3-2	3/16	1/8	3/8-24	.75	.75	.126
249F-3-2	3/16	1/8	3/8-24	.73	.73	.126
149F-4-2	1/4	1/8	7/16-20	.79	.76	.189
249F-4-2	1/4	1/8	7/16-20	.79	.76	.189
149F-4-4	1/4	1/4	7/16-20	.89	.92	.189
249F-4-4	1/4	1/4	7/16-20	.89	.92	.189
149F-4-6	1/4	3/8	7/16-20	.92	1.01	.189
249F-4-6	1/4	3/8	7/16-20	.92	1.01	.189



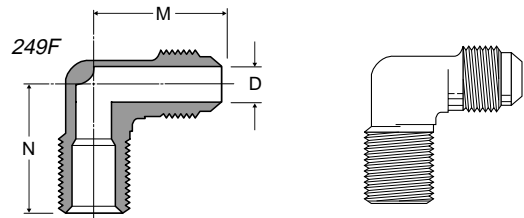
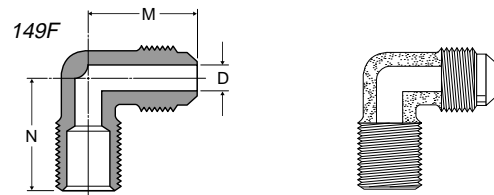
Continued next page



Male Elbow 149F-249F *Continued from previous page*

Ref. SAE 010202 *Thread Protectors

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
149F-5-2	5/16	1/8	1/2-20	.90	.79	.220
249F-5-2	5/16	1/8	1/2-20	.89	.77	.220
149F-5-4	5/16	1/4	1/2-20	.92	.95	.220
249F-5-4	5/16	1/4	1/2-20	.95	.92	.220
149F-5-6	5/16	3/8	1/2-20	.98	1.01	.219
149F-6-2	3/8	1/8	5/8-18	1.01	.90	.220
249F-6-2	3/8	1/8	5/8-18	1.01	.89	.220
149F-6-4	3/8	1/4	5/8-18	1.01	1.05	.283
249F-6-4	3/8	1/4	5/8-18	.98	1.04	.283
149F-6-6	3/8	3/8	5/8-18	1.04	1.07	.281
249F-6-6	3/8	3/8	5/8-18	1.04	1.07	.283
149F-6-8	3/8	1/2	5/8-18	1.15	1.27	.281
249F-6-8	3/8	1/2	5/8-18	1.14	1.26	.283
149F-6-12	3/8	3/4	5/8-18	1.25	1.38	.283
149F-8-4	1/2	1/4	3/4-16	1.20	1.17	.312
149F-8-6	1/2	3/8	3/4-16	1.20	1.09	.408
249F-8-6	1/2	3/8	3/4-16	1.20	1.10	.408
149F-8-8	1/2	1/2	3/4-16	1.28	1.38	.408
249F-8-8	1/2	1/2	3/4-16	1.26	1.36	.408
149F-8-12	1/2	3/4	3/4-16	1.38	1.38	.408
149F-10-6	5/8	3/8	7/8-14	1.41	1.25	.408
149F-10-8	5/8	1/2	7/8-14	1.40	1.39	.502
249F-10-8	5/8	1/2	7/8-14	1.39	1.36	.502
149F-10-12	5/8	3/4	7/8-14	1.42	1.48	.502
149F-12-8*	3/4	1/2	1-1/16-14	1.60	1.48	.564
149F-12-12*	3/4	3/4	1-1/16-14	1.59	1.62	.625
149F-14-12	7/8	3/4	1-1/4-12	1.73	1.67	.751

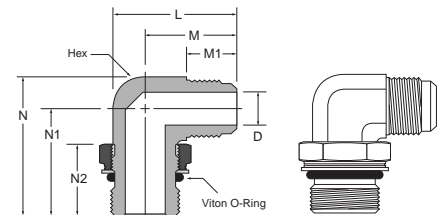


D

Flare Elbow to Metric Adaptor 149F-X-MIX

PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	M	M1	N	N1	N2	D
149F-10-MI27	5/8	M27 x 2.0	7/8	1.95	1.46	.88	2.12	1.63	1.09	.50

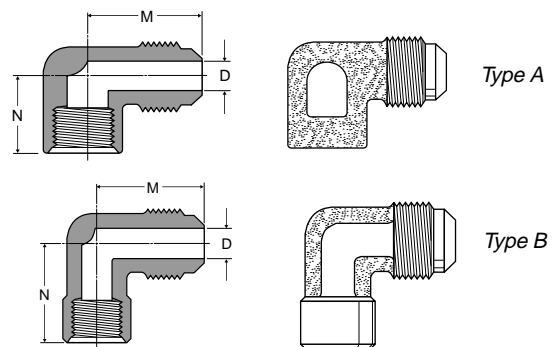
Note: Viton o-ring is standard



Female Elbow 150F

Ref. SAE 010203

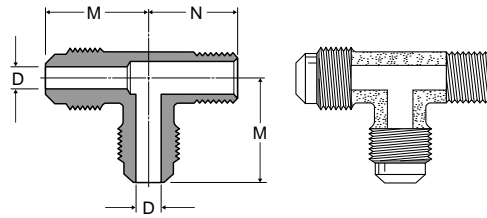
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D	TYPE
150F-4-2	1/4	1/8	7/16-20	.86	.50	.189	A
150F-4-4	1/4	1/4	7/16-20	.95	.64	.189	A
150F-5-4	5/16	1/4	1/2-20	1.01	.64	.220	A
150F-6-2	3/8	1/8	5/8-18	1.08	.48	.283	B
150F-6-4	3/8	1/4	5/8-18	1.07	.67	.283	A
150F-6-6	3/8	3/8	5/8-18	1.14	.67	.283	A
150F-6-8	3/8	1/2	5/8-18	1.23	.86	.283	A
150F-8-6	1/2	3/8	3/4-16	1.25	.69	.408	A
150F-8-8	1/2	1/2	3/4-16	1.36	.94	.408	A
150F-8-12	1/2	3/4	3/4-16	1.41	.94	.408	A
150F-10-8	5/8	1/2	7/8-14	1.48	1.01	.502	A
150F-10-12	5/8	3/4	7/8-14	1.64	.98	.502	A



Male Run Tee 151F

Ref. SAE 010424

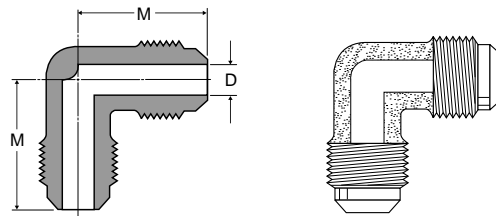
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
151F-4-2	1/4	1/8	7/16-20	.86	.76	.189
151F-4-4	1/4	1/4	7/16-20	.92	.89	.189
151F-5-4	5/16	1/4	1/2-20	.92	.95	.220
151F-6-4	3/8	1/4	5/8-18	1.04	1.04	.283
151F-6-6	3/8	3/8	5/8-18	.98	1.00	.283
151F-6-8	3/8	1/2	5/8-18	1.26	1.16	.283
151F-8-6	1/2	3/8	3/4-16	1.20	1.10	.406
151F-8-8	1/2	1/2	3/4-16	1.35	1.23	.408
151F-10-8	5/8	1/2	7/8-14	1.36	1.39	.500



Union Elbow 155F

Ref. SAE 010201 *Thread Protectors

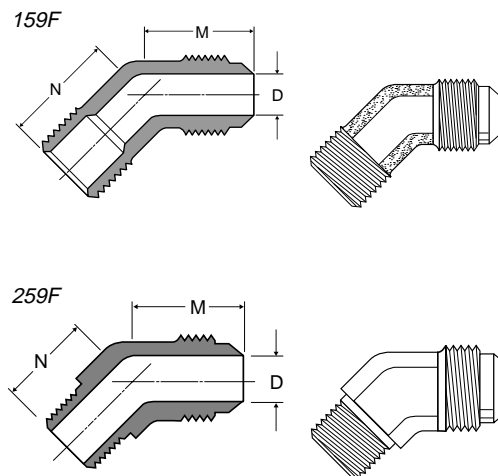
PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
155F-2	1/8	5/16-24	.64	.079
155F-3	3/16	3/8-24	.73	.126
155F-4	1/4	7/16-20	.86	.189
155F-5	5/16	1/2-20	.92	.220
155F-6	3/8	5/8-18	1.04	.283
155F-8	1/2	3/4-16	1.31	.408
155F-10	5/8	7/8-14	1.39	.502
155F-12*	3/4	1-1/16-14	1.63	.625



45° Elbow 159F-259F

Ref. SAE 010302 *Thread Protectors

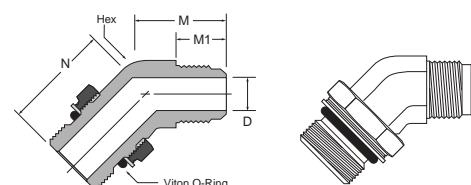
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
159F-4-2	1/4	1/8	7/16-20	.78	.56	.188
259F-4-2	1/4	1/8	7/16-20	.65	.62	.188
159F-4-4	1/4	1/4	7/16-20	.75	.84	.188
259F-4-4	1/4	1/4	7/16-20	.73	.84	.188
159F-5-2	5/16	1/8	1/2-20	.75	.65	.220
159F-5-4	5/16	1/4	1/2-20	.75	.81	.220
159F-6-2	3/8	1/8	5/8-18	.89	.67	.220
159F-6-4	3/8	1/4	5/8-18	.89	.86	.283
259F-6-4	3/8	1/4	5/8-18	.91	.86	.283
159F-6-6	3/8	3/8	5/8-18	.91	.93	.283
259F-6-6	3/8	3/8	5/8-18	.91	.93	.283
159F-8-4	1/2	1/4	3/4-16	1.06	.95	.408
159F-8-6	1/2	3/8	3/4-16	1.06	.95	.408
259F-8-6	1/2	3/8	3/4-16	1.04	.93	.408
159F-8-8	1/2	1/2	3/4-16	1.00	.87	.406
259F-8-8	1/2	1/2	3/4-16	1.10	1.15	.408
159F-10-6	5/8	3/8	7/8-14	1.13	.95	.406
259F-10-6	5/8	3/8	7/8-14	1.20	1.15	.503
159F-10-8	5/8	1/2	7/8-14	1.21	1.16	.503
259F-10-8	5/8	1/2	7/8-14	1.21	.98	.503
159F-12-8*	3/4	1/2	1-1/16-14	1.28	1.16	.560



45° Flare Elbow to Metric Adaptor 159F-X-MIX

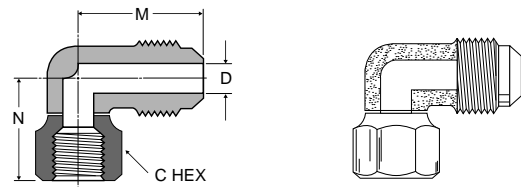
PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	M	M1	N	D
159F-8-M116	1/2	M16 X 1.5	13/16	1.10	.75	1.16	.36
159F-10-M127	5/8	M27 x 2.0	1 1/8	1.21	.88	1.50	.50

Note: Viton o-ring is standard



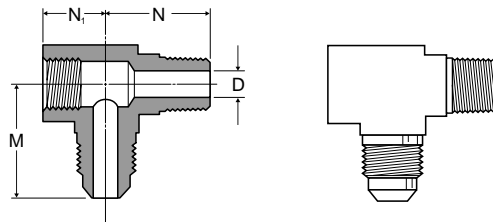
90° Swivel Elbow 166FSV

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	M	N	FLOW DIA. D
166FSV-4-4	1/4	7/16-20	5/8	.86	.93	.189
166FSV-6-6	3/8	5/8-18	13/16	1.04	1.12	.282
166FSV-8-8	1/2	3/4-16	15/16	1.23	1.31	.408
166FSV-10-10	5/8	7/8-14	1-1/16	1.39	1.50	.502
166FSV-12-12	3/4	1-1/16-14	1-5/16	1.60	1.79	.627



Adapter Tee 256F

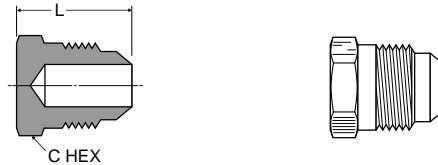
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	N1	FLOW DIA. D
256F-4-2	1/4	1/8	7/16-20	.86	.76	.47	.188



Flared Seal Plug 639F

Ref. SAE 010109

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
639F-4	1/4	7/16-20	7/16	.69
639F-5	5/16	1/2-20	1/2	.78
639F-6	3/8	5/8-18	5/8	.88
639F-8	1/2	3/4-16	3/4	1.06
639F-10	5/8	7/8-14	7/8	1.19



Cap Nut 640F

Ref. SAE 010112

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
640F-3*	3/16	3/8-24	1/2	.47
640F-4*	1/4	7/16-20	9/16	.53
640F-5*	5/16	1/2-20	5/8	.62
640F-6*	3/8	5/8-18	3/4	.69
640F-8*	1/2	3/4-16	7/8	.84
640F-10*	5/8	7/8-14	1-1/16	.97

*Should be used with 2GF copper gasket.

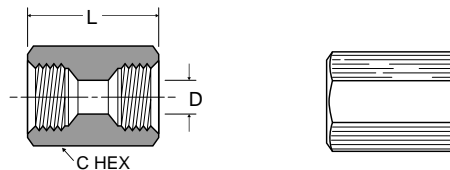


Flared Union—Female Flare to Female Flare 660FHD

Ref. SAE 010107

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
660FHD-4*	1/4	7/16-20	5/8	1.03	.250
660FHD-6*	3/8	5/8-18	13/16	1.26	.375
660FHD-8*	1/2	3/4-16	15/16	1.43	.500
660FHD-10*	5/8	7/8-14	1-1/16	1.69	.626

*Should be used with 2GF copper gasket.



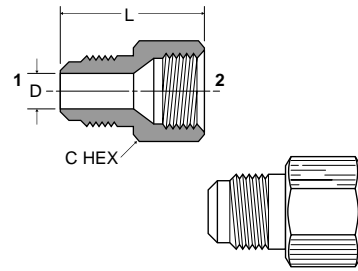
D

Reducer–Male Flare to Female Flare 661FHD

Ref. SAE 010105

PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	FLOW DIA. D
661FHD-4-6*	1/4	3/8	7/16-20	5/8-18	13/16	1.20	.189
661FHD-4-8*	1/4	1/2	7/16-20	3/4-16	15/16	1.36	.189
661FHD-6-4*	3/8	1/4	5/8-18	7/16-20	5/8	1.10	.283
661FHD-6-8*	3/8	1/2	5/8-18	3/4-16	15/16	1.42	.283
661FHD-8-6*	1/2	3/8	3/4-16	5/8-18	13/16	1.39	.377
661FHD-8-10*	1/2	5/8	3/4-16	7/8-14	1-1/16	1.67	.408
661FHD-10-8*	5/8	1/2	7/8-14	3/4-16	15/16	1.60	.502
661FHD-10-12*	5/8	3/4	7/8-14	1-1/16-14	1-5/16	1.95	.502
661FHD-12-10*	3/4	5/8	1-1/16-14	7/8-14	1-1/16	1.86	.626

*Should be used with 2GF copper gasket.

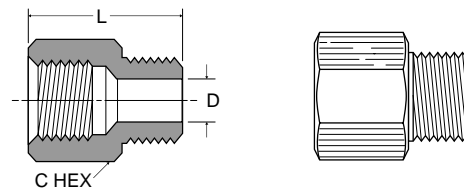


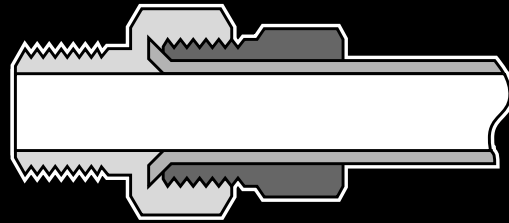
Female Flare to Male Pipe Thread 664FHD

Ref. SAE 010106

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
664FHD-4-2*	1/4	1/8	7/16-20	5/8	.91	.219
664FHD-4-4*	1/4	1/4	7/16-20	5/8	1.01	.250
664FHD-6-4*	3/8	1/4	5/8-18	13/16	1.28	.344
664FHD-8-6*	1/2	3/8	3/4-16	15/16	1.36	.406

*Should be used with 2GF copper flare gasket.





Inverted Flared Fittings

Advantages

Built to resist mechanical pullout. This economical fitting can be assembled and disassembled repeatedly. Readily available in a broad selection of styles to fill your specific needs. Manufactured from CA 360 or CA 345 brass.

Specifications

Listed with Underwriter's Laboratories for flammable liquid and gas. Meets functional requirements of SAE, J512, ASA and MS (Military Standards). Refer to list of UL listed fittings on page 6 for specific configurations.

Applications

Use with copper, brass, aluminum and welded steel hydraulic tubing that can be flared. Manufactured especially for hard-to-hold liquids and gases.

Working Pressure Ranges

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

PSI	TUBE O.D. (IN.)	TUBE WALL (IN.)
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035

Temperature Ranges

From -65° to +250°F.

Vibration

Will withstand minimal vibration movements.

Assembly Instructions

1. Cut tubing squarely and clean tube end thoroughly to remove burrs.
2. Place nut onto tube. Place threaded end of nut toward end of tube.
3. On thin wall copper, welded or brazed tubing, use double flare to prevent pinch-off or cracked flares.
4. Clamp tube flare between nut and flare seat of body by screwing nut on finger-tight. Tighten with a wrench an additional 1/4 turn for a metal-to-metal seal.

Note: The seat dimensions are predicated on practical threading limitations and use of these fittings with double flared tubing.

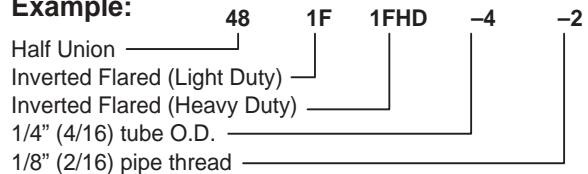
Order

By part number and name. Bodies and nuts are separate items and individual part numbers must be indicated when ordered.

Nomenclature

Part numbers are constructed from symbols that identify the style and size of the fitting. The first series of numbers and letters identifies the style and type fitting. The second series of numbers describes the size.

Example:



Sizes

Tube sizes are determined by the numbers of sixteenths of an inch in the tube O.D.

Special Fittings

Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry. Special UL stamped fittings are available. Please consult price list.

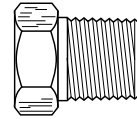
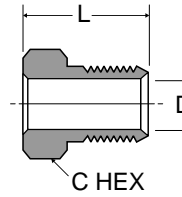
Pricing

Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Nut 411F

Ref. SAE 040110

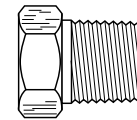
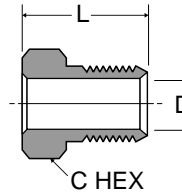
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
411F-2	1/8	5/16-28	5/16	.52	.133
411F-3	3/16	3/8-24	3/8	.56	.197
411F-4	1/4	7/16-24	7/16	.56	.259
411F-5	5/16	1/2-20	1/2	.62	.321
411F-6	3/8	5/8-18	5/8	.66	.384
411F-8	1/2	3/4-18	3/4	.74	.508



Steel Nut-Zinc Chromate 411FS

Ref. SAE 040110

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
411FS-3	3/16	3/8-24	3/8	.56	.196
411FS-4	1/4	7/16-24	7/16	.56	.259
411FS-5	5/16	1/2-20	1/2	.62	.321
411FS-6	3/8	5/8-18	5/8	.66	.384
411FS-8	1/2	3/4-18	3/4	.74	.508
411FS-10	5/8	7/8-18	7/8	.80	.633
411FS-12	3/4	1-1/16-16	1-1/16	.88	.759
411FS-14	7/8	1-3/16-16	1-3/16	1.06	.890

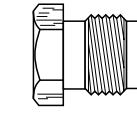
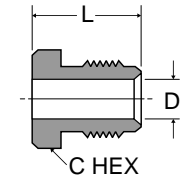


D

Piloted Nut 411FF for Single Flared Tubing

Ref. SAE 040110

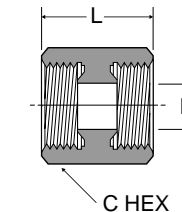
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
411FF-2	1/8	5/16-28	5/16	.52	.133
411FF-3	3/16	3/8-24	3/8	.56	.197
411FF-4	1/4	7/16-24	7/16	.56	.259
411FF-5	5/16	1/2-20	1/2	.62	.321
411FF-6	3/8	5/8-18	5/8	.66	.384
411FF-8	1/2	3/4-18	3/4	.74	.508



Union 421FHD

Ref. SAE 040101

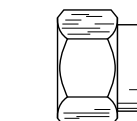
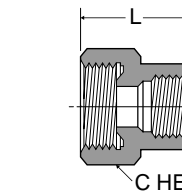
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
421FHD-2	1/8	5/16-28	13/32	.60	.078
421FHD-3	3/16	3/8-24	15/32	.65	.125
421FHD-4	1/4	7/16-24	17/32	.63	.189
421FHD-5	5/16	1/2-20	19/32	.71	.220
421FHD-6	3/8	5/8-18	3/4	.81	.283
421FHD-8	1/2	3/4-18	29/32	.92	.408



Female Connector 461FHD

Ref. SAE 040103

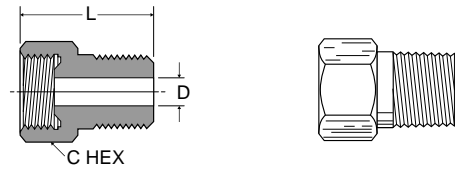
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
461FHD-3-2	3/16	1/8	3/8-24	1/2	.76	.125
461FHD-4-2	1/4	1/8	7/16-24	17/32	.76	.189
461FHD-5-2	5/16	1/8	1/2-20	19/32	.79	.220
461FHD-6-4	3/8	1/4	5/8-18	3/4	1.04	.283
461FHD-8-6	1/2	3/8	3/4-18	29/32	1.10	.408



Male Connector 481FHD

Ref. SAE 040102

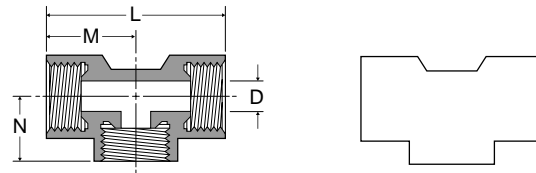
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
481FHD-2-2	1/8	1/8	5/16-28	13/32	.63	.078
481FHD-3-2	3/16	1/8	3/8-24	15/32	.70	.125
481FHD-4-2	1/4	1/8	7/16-24	17/32	.74	.188
481FHD-4-4	1/4	1/4	7/16-24	9/16	.89	.189
481FHD-5-2	5/16	1/8	1/2-20	19/32	.79	.219
481FHD-5-4	5/16	1/4	1/2-20	19/32	.98	.220
481FHD-6-2	3/8	1/8	5/8-18	3/4	.89	.220
481FHD-6-4	3/8	1/4	5/8-18	3/4	1.03	.283
481FHD-6-6	3/8	3/8	5/8-18	3/4	1.03	.283
481FHD-8-4	1/2	1/4	3/4-18	29/32	1.07	.346
481FHD-8-6	1/2	3/8	3/4-18	29/32	1.07	.408
481FHD-8-8	1/2	1/2	3/4-18	29/32	1.26	.408
481FHD-10-8	5/8	1/2	7/8-18	1-1/16	1.32	.533
481FHD-12-12	3/4	3/4	1-1/16-16	1 1/4	1.38	.625
481FHD-14-12	7/8	3/4	1-3/16-16	1 5/16	1.30	.750



Union Tee 2441FHD

Ref. SAE 040401

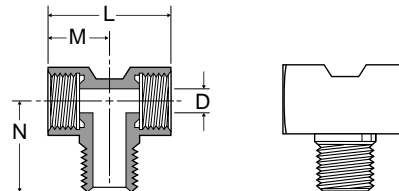
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	N	FLOW DIA. D
2441FHD-3	3/16	3/8-24	1.10	.55	.39	.125
2441FHD-4	1/4	7/16-24	1.13	.56	.42	.189
2441FHD-5	5/16	1/2-20	1.26	.63	.45	.220
2441FHD-6	3/8	5/8-18	1.48	.74	.56	.283
2441FHD-8	1/2	3/4-18	1.76	.88	.67	.408



Male Branch Tee 2451FHD

Ref. SAE 040425

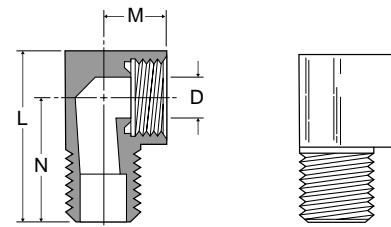
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
2451FHD-4-2	1/4	1/8	7/16-24	.85	.43	.64	.189
2451FHD-6-4	3/8	1/4	5/8-18	1.17	.58	.94	.283



Male Elbow 2491FHD-2491F

Ref. SAE 040202

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
2491FHD-2-2	1/8	1/8	5/16-28	.79	.25	.58	.078
2491FHD-3-2	3/16	1/8	3/8-24	.85	.27	.61	.125
2491FHD-4-2	1/4	1/8	7/16-24	.92	.33	.65	.189
2491FHD-4-4	1/4	1/4	7/16-24	1.10	.27	.83	.189
2491FHD-5-2	5/16	1/8	1/2-20	.98	.47	.68	.219
2491FHD-5-4	5/16	1/4	1/2-20	1.16	.46	.86	.220
2491FHD-6-2	3/8	1/8	5/8-18	1.13	.53	.76	.220
2491F-6-4†	3/8	1/4	5/8-18	1.26	.45	.92	.281
2491FHD-6-4	3/8	1/4	5/8-18	1.32	.53	.95	.283
2491FHD-6-6	3/8	3/8	5/8-18	1.32	.50	.94	.283
2491FHD-8-4	1/2	1/4	3/4-18	1.48	.59	1.02	.408
2491F-8-6+	1/2	3/8	3/4-18	1.42	.53	.99	.406
2491FHD-8-6	1/2	3/8	3/4-18	1.48	.59	1.02	.408
2491FHD-8-8	1/2	1/2	3/4-18	1.67	.66	1.22	.408
2491FHD-10-6	5/8	3/8	7/8-18	1.62	.67	1.09	.533
2491FHD-10-8	5/8	1/2	7/8-18	1.82	.67	1.29	.533
2491FHD-14-12	7/8	3/4	1-3/16-16	2.12	.91	1.44	.750



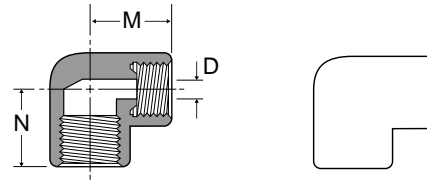
†Light Duty Series

D

Female Elbow 2501FHD

Ref. SAE 040203

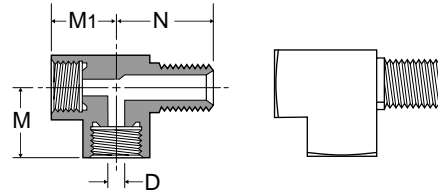
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
2501FHD-3-2	3/16	1/8	3/8-24	.50	.49	.125
2501FHD-4-2	1/4	1/8	7/16-24	.53	.53	.189
2501FHD-5-2	5/16	1/8	1/2-20	.59	.59	.220
2501FHD-6-4	3/8	1/4	5/8-18	.67	.68	.283



Male Run Tee 2511FHD

Ref. SAE 040424

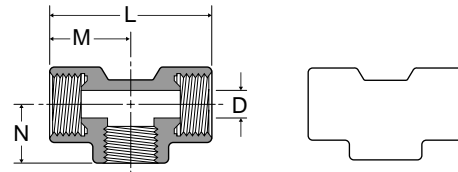
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	M1	N	FLOW DIA. D
2511FHD-3-2	3/16	1/8	3/8-24	.39	.53	.72	.125
2511FHD-5-2	5/16	1/8	1/2-20	.45	.62	.85	.220
2511FHD-6-4	3/8	1/4	5/8-18	.56	.75	1.08	.283



Female Branch Tee 2521FHD

Ref. SAE 040427

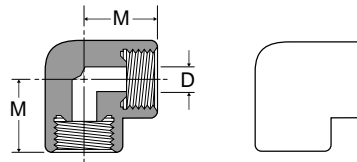
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
2521FHD-5-2	5/16	1/8	1/2-20	1.26	.63	.45	.220
2521FHD-6-4	3/8	1/4	5/8-18	1.48	.74	.56	.283



Union Elbow 2551FHD

Ref. SAE 040201

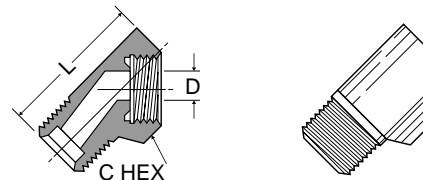
PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
2551FHD-4	1/4	7/16-24	.55	.189

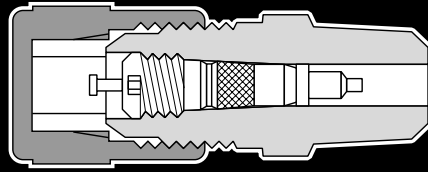


45° Elbow 2591FHD

Ref. SAE 040302

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
2591FHD-3-2	3/16	1/8	3/8-24	17/32	.88	.125
2591FHD-4-2	1/4	1/8	7/16-24	9/16	.94	.187
2591FHD-5-2	5/16	1/8	1/2-20	5/8	1.00	.220
2591FHD-5-4	5/16	1/4	1/2-20	5/8	1.16	.220
2591FHD-6-4	3/8	1/4	5/8-18	25/32	1.34	.283
2591FHD-8-6	1/2	3/8	3/4-18	7/8	1.44	.375
2591FHD-10-8	5/8	1/2	7/8-18	1-1/16	1.75	.533





Access Valves

Advantages

Access Valves are designed to offer convenient low cost access ports for Refrigeration service. All Access Valves feature 1/4" SAE male flare access ports and are furnished with a finger tight quick seal cap. For greater flexibility, all Tees and Crosses are machined to receive an access core in all 1/4" SAE flare ends. This allows for 2 or more access connections in one fitting plus greater flexibility in the positioning of the valves. All Access Valves with pipe connections have internal ODS solder cups so that these valves may be installed in either of 2 ways.

Applications

Access Valves may be installed in any position on either high or low side for quick testing, pressure checking, purging or charging.

Valve Bodies

Straight Access Valve bodies are manufactured from brass rod CA360 or CA345. Shaped Access Valve bodies are manufactured from brass forge rod CA377. All Access Valve bodies are machined in accordance with ARI standard 720.

Valve Core

Parker valve cores meet ARI standard 720 and are designed for use with all fluorocarbon refrigerants such as R-12, R-22 and R-502, R-134a and are resistant to oils, alkalies and dilute mineral acids.

Working Pressure and Temperature Ranges

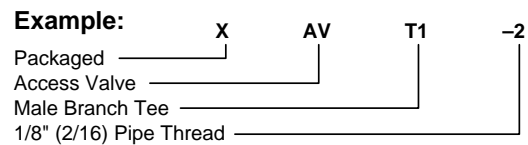
Up to 500 PSI
-20°F to +220°F

Order

By part number and name.

Nomenclature

Part numbers are constructed from symbols that identify the style and size of the valve. The first series of letters identifies the style and type valve. The second series of numbers describes the size.



Sizes

Tube sized are determined by the number of sixteenths of an inch in the tube O.D.

Special Fittings

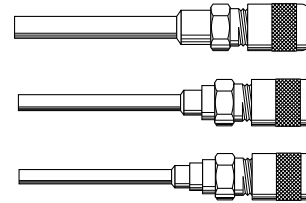
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing

Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

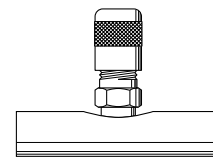
Extended Copper Tube AVUSE

PART NO.	CONNECTION SIZE
AVUSE-2	1/8" O.D. Tube
AVUSE-3	3/16" O.D. Tube
AVUSE-4	1/4" O.D. Tube
AVUSE-5	5/16" O.D. Tube
AVUSE-6	3/8" O.D. Tube
AVUSE-8	1/2" O.D. Tube
AVUSE-9	1/8" O.D. Tube; Additional steps on body for 3/16", 1/4", 5/16", 3/8" O.D. Tube. 3/16", 1/4", or 5/16" Solder Fitting/Swaged Tube.
AVUSE-11	3/16" O.D. Tube; Additional steps on body for 1/4" or 3/8" Solder Fittings/Swaged Tubes 5/16" O.D. Tube.



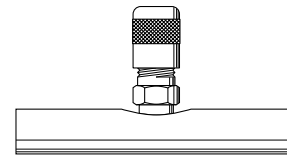
Solder Tee AVTS

PART NO.	CONNECTION SIZE
AVTS-4	1/4" O.D. Tube or 3/8" Solder Fitting/Swaged Tube
AVTS-5	5/16" O.D. Tube or 3/8" Solder Fitting/Swaged Tube
AVTS-6	3/8" O.D. Tube or 1/2" Solder Fitting/Swaged Tube
AVTS-8	1/2" O.D. Tube or 5/8" Solder Fitting/Swaged Tube



Extended Solder Tee AVTSL

PART NO.	CONNECTION SIZE
AVTSL-4	1/4" O.D. Tube/Solder 3/16", 1/4" & 5/16" Tube
AVTSL-5	5/16" O.D. Tube/Solder 1/4", 5/16" & 3/8" Tube
AVTSL-6	3/8" O.D. Tube/Solder 5/16", 3/8" & 7/16" Tube



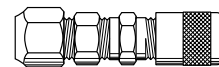
Full Union AVU2

PART NO.	CONNECTION SIZE
AVU2-4	1/4" O.D. Flare Tube With Forged Flare Nut



Bulkhead Union AVU2BH

PART NO.	CONNECTION SIZE
AVU2BH-4	1/4" Bulkhead Access X 1/4" SAE With Forged Nut



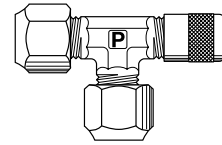
Bulkhead Solder Union AVUS3BH

PART NO.	CONNECTION SIZE
AVUS3BH-4	1/4" Bulkhead Access X 3 Way ODS



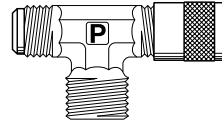
Forged Union Tee AVT2

PART NO.	CONNECTION SIZE
AVT2-4	1/4" Access All Ends With 2 Forged Flare Nuts and One Core and Cap



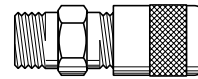
Forged Branch Tee AVT1

PART NO.	CONNECTION SIZE
AVT1-2	1/8" Male Pipe or 1/4" O.D. Solder on Branch x 1/4" Access Both Ends With One Core and Cap
AVT1-4	1/4" Male Pipe or 5/16" O.D. Solder on Branch x 1/4" Access Both Ends With One Core and Cap



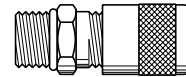
Male Connector AVU1

PART NO.	CONNECTION SIZE
AVU1-2	1/8" Male Pipe or 1/4" O.D. Solder
AVU1-4	1/4" Male Pipe or 5/16" O.D. Solder



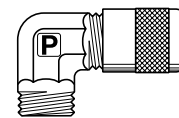
Access Valve Assembly AVUIFI

PART NO.	CONNECTION SIZE
AVUIFI-4	7/16-20 SAE Straight thread O-Ring Port Note: Standard o-ring is neoprene. Consult Brass Products Division for optional o-rings



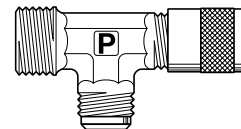
Forged Male Elbow AVE1

PART NO.	CONNECTION SIZE
AVE1-2	1/8" Male Pipe or 1/4" O.D. Solder



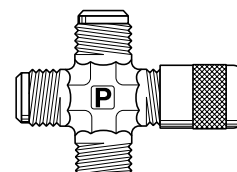
Forged Male Run Tee AVT3

PART NO.	CONNECTION SIZE
AVT3-2	1/8" Male Pipe or 1/4" O.D. Solder on Run x 1/4" Access on Run and Branch With One Core and Cap
AVT3-4	1/4" Male Pipe or 5/16" O.D. Solder on Run x 1/4" Access on Run and Branch With One Core and Cap



Forged Male Cross AVC1

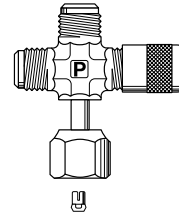
PART NO.	CONNECTION SIZE
AVC1-2	1/8" Male Pipe or 1/4" O.D. Solder x 1/4" Access on all Flare Ends With One Core and Cap
AVC1-4	1/4" Male Pipe or 5/16" O.D. Solder x 1/4" Access on all Flare Ends With One Core and Cap



D

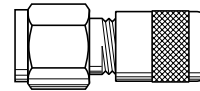
Swivel Cross AVCS4D-4

PART NO.	CONNECTION SIZE
AVCS4D-4	1/4" Forged Female Flare Swivel With Depressor x 1/4" Access on all Flare Ends with One Core and Cap



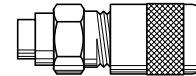
Female Connector AVUR3

PART NO.	CONNECTION SIZE
AVUR3-4	1/4" Female Flare with Copper Gasket



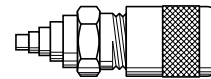
3 Way Solder Connector AVUS3

PART NO.	CONNECTION SIZE
AVUS3-40	For 3/16" O.D. Tube or 1/4" and 3/8" Solder Fitting/Swaged Tube



9 Way Solder Connector AVUS3

PART NO.	CONNECTION SIZE
AVUS3-49	For 3/16", 1/4", 5/16", 3/8" or 1/2" O.D. Tube. Also Fits 3/16", 1/4" and 5/16" Solder Fitting/Swaged Tube or 1/8" Hole May Be Punched in Larger Size Tube



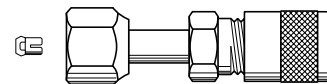
Straight Solder Connector AVUS

PART NO.	CONNECTION SIZE
AVUS-42	1/8" O.D. Tube or 1/4" Solder Fitting/Swaged Tube
AVUS-43	3/16" O.D. Tube or 1/4" Solder Fitting/Swaged Tube
AVUS-44	1/4" O.D. Tube or 3/8" Solder Fitting/Swaged Tube
AVUS-45	5/16" O.D. Tube or 1/2" Solder Fitting/Swaged Tube
AVUS-46	3/8" O.D. Tube or 1/2" Solder Fitting/Swaged Tube



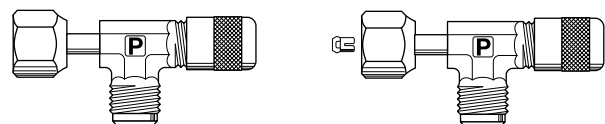
Swivel Connector AVUS4D

PART NO.	CONNECTION SIZE
AVUS4D-4	1/4" Forged Female Flare Swivel Nut with Depressor



Forged Female Run Swivel Tee AVTS4

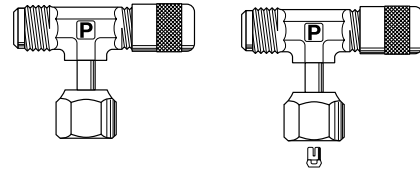
PART NO.	CONNECTION SIZE
AVTS4-4	1/4" Female Flare Swivel x 1/4" Access on Both Run and Branch
AVTS4D-4	1/4" Female Flare Swivel on Run with Depressor x 1/4" Access on Both Run and Branch



D

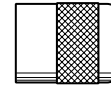
Forged Female Branch Tee AVTS6

PART NO.	CONNECTION SIZE
AVTS6-4	1/4" Female Flare Swivel x 1/4" Access on Both Ends
AVTS6D-4	1/4" Female Flare Swivel on Branch with Depressor x 1/4" Access on Both Ends



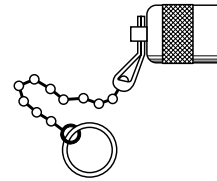
Quick Seal Caps 640QSF

PART NO.	CONNECTION SIZE
640QSF-4	1/4" SAE Seal Cap with Seal Gasket
640QSF-6	3/8" SAE Seal Cap with Seal Gasket



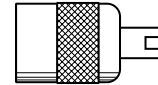
Quick Seal Caps 640QSFC

PART NO.	CONNECTION SIZE
640QSFC-4	1/4" SAE Seal Cap with Chain and Ring Assembly Seal Gasket



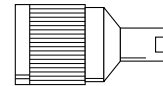
Quick Seal Cap with Core Remover 640QSFCR

PART NO.	CONNECTION SIZE
640QSFCR-4	1/4" SAE Seal Cap Core Remover with internal Seal Gasket



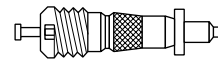
Core Remover CR

PART NO.	CONNECTION SIZE
CR-001	Standard Core Remover



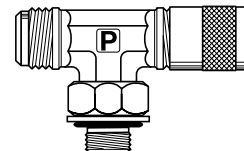
Valve Cores VC

PART NO.	CONNECTION SIZE
VC-001	Replacement Valve Cores For all 1/4" Access Valves



Forged Male Straight Thread O-Ring Port Male Branch Tee AVT1F1

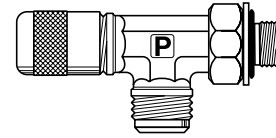
PART NO.	CONNECTION SIZE
AVT1F1-4	1/4" forged male straight thread o-ring port male branch tee



D

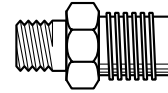
Forged Male Straight Thread O-Ring Port Male Run Tee AVT3F1

PART NO.	CONNECTION SIZE
AVT3FI-4	1/4" forged male straight thread o-ring port male run tee



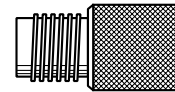
Refrigerant adapter 88AC

PART NO.	CONNECTION SIZE
88AC-8-2	1/8" male pipe to SAE J2197 Acme threaded male connector



Refrigerant adapter 880AC

PART NO.	CONNECTION SIZE
880AC-8-4	1/4" female SAE flare to SAE J2197 Acme threaded male connector



Refrigerant adapter 881AC

PART NO.	CONNECTION SIZE
881AC-8-4	1/4" SAE male flare to SAE J2197 Acme threaded female connector

