



# Industrial: Flare Fittings



## **SAE 45° Flare**

*Resists Mechanical Pull-out  
Meets SAE Functional  
Requirements  
Resists Vibration  
UL Listed*



## **Inverted Flare**










































*Steel Nut option  
Economical  
UL Listed*



## **Access Valves**

*Finger Tight Quick Seal Cap  
Machined to ARI Standards  
Teflon Seal on Valve core*



<p><b>Flare to Male NPT</b></p>	<p><b>48F</b> Male Connector  p. H7</p>	<p><b>145F</b> Branch Tee  p. H8</p>	<p><b>149F-249F</b> Male Elbow  p. H8</p>	<p><b>151F</b> Run Tee  p. H9</p>	<p><b>159F-259F</b> 45° Male Elbow  p. H9</p>	<p><b>256F</b> Adapter Tee  p. H10</p>
	<p><b>481FHD</b> Male Connector  p. H12</p>	<p><b>2451FHD</b> Branch Tee  p. H13</p>	<p><b>2491FHD-2491F</b> Male Elbow  p. H13</p>	<p><b>2511FHD</b> Run Tee  p. H13</p>	<p><b>2591FHD</b> 45° Male Elbow  p. H13</p>	<p><b>AVU1</b> Male Connector  p. H15</p>
<p><b>AVT3</b> Run Tee  p. H15</p>	<p><b>AVC1</b> Cross  p. H15</p>	<p><b>Flare to Straight Thread</b></p>	<p><b>485F</b> Male Connector  p. H7</p>	<p><b>1495F</b> Male Elbow  p. H9</p>	<p><b>1595F</b> 45° Male Elbow  p. H10</p>	<p><b>AVUIFI</b> Male Connector  p. H15</p>
<p><b>Flare to Metric Straight Thread</b></p>	<p><b>48F-X-MIX</b> Male Connector  p. H7</p>		<p><b>149F-X-MIX</b> Male Elbow  p. H9</p>	<p><b>159F-X-MIX</b> 45° Male Elbow  p. H10</p>	<p><b>Flare to Solder</b></p>	<p><b>US5</b> Flare Adapter  p. H5</p>
	<p><b>AVUSE</b> Extended Copper Tube  p. H15</p>	<p><b>AVTS</b> Solder Tee  p. H15</p>	<p><b>AVTSL</b> Extended Solder Tee  p. H15</p>	<p><b>AVUS3</b> 3 Way Solder  p. H16</p>		<p><b>AVUS</b> Solder Connector  p. H16</p>
<p><b>150F</b> Female Elbow  p. H9</p>	<p><b>166FSV</b> Swivel Elbow  p. H10</p>	<p><b>461FHD</b> Female Connector  p. H12</p>	<p><b>2501FHD</b> Female Elbow  p. H13</p>	<p><b>2521FHD</b> Branch Tee  p. H13</p>	<p><b>Flare to Flare</b></p>	<p><b>14FSV</b> Swivel Nut Connector  p. H5</p>
<p><b>42F</b> Union  p. H6</p>	<p><b>144F-244F</b> Union Tee  p. H8</p>	<p><b>147F</b> Cross  p. H8</p>	<p><b>155F</b> Union Elbow  p. H9</p>	<p><b>660FHD</b> Union  p. H10</p>		<p><b>421FHD</b> Union  p. H12</p>
<p><b>2551FHD</b> Branch Tee  p. H13</p>	<p><b>AVU2</b> Union  p. H15</p>	<p><b>AVT2</b> Union Tee  p. H15</p>	<p><b>AVCS4D</b> Cross  p. H16</p>	<p><b>AVUR3</b> Female Connector  p. H16</p>	<p><b>AVUS4D</b> Swivel Connector  p. H16</p>	<p><b>AVTS4</b> Run Tee  p. H16</p>



<p><b>AVTS6</b> Branch Tee</p>  <p>p. H16</p>	<p><b>Bulkhead Union</b></p>		<p><b>AVU2BH</b> Bulkhead Union</p>  <p>p. H15</p>	<p><b>AVUS3BH</b> Bulkhead Union</p>  <p>p. H15</p>	<p><b>Adapter</b></p>		<p><b>1F</b> Refrigerant Drum</p>  <p>p. H5</p>	<p><b>661FHD</b> Reducer</p>  <p>p. H10</p>
<p><b>664FHD</b> Female Flare - Pipe</p>  <p>p. H10</p>	<p><b>88AC</b> Refrigerant Adapter</p>  <p>p. H16</p>	<p><b>880AC</b> Refrigerant Adapter</p>  <p>p. H16</p>	<p><b>881AC</b> Refrigerant Adapter</p>  <p>p. H16</p>	<p><b>Auxiliary Component</b></p>		<p><b>2GF</b> Flare Gasket</p>  <p>p. H5</p>	<p><b>3GF</b> Seal Bonnet</p>  <p>p. H5</p>	
<p><b>14FL</b> Long forged Nut</p>  <p>p. H5</p>	<p><b>14FSX</b> Short Forged Nut</p>  <p>p. H5</p>	<p><b>41FL</b> Long Nut</p>  <p>p. H6</p>	<p><b>41FS</b> Short Nut</p>  <p>p. H6</p>	<p><b>639F</b> Seal Plug</p>  <p>p. H10</p>	<p><b>640F</b> Cap Nut</p>  <p>p. H10</p>	<p><b>411F</b> Inverted Flare Nut</p>  <p>p. H12</p>		
<p><b>411FS</b> Inverted Flare Nut Steel</p>  <p>p. H12</p>	<p><b>411FF</b> Inverted Flare Piloted Nut</p>  <p>p. H12</p>	<p><b>640QSF</b> Seal Cap</p>  <p>p. H16</p>	<p><b>640QSFCR</b> Seal Cap with Core Remover</p>  <p>p. H16</p>	<p><b>CR</b> Core Remover</p>  <p>p. H16</p>	<p><b>VC</b> Valve Core</p>  <p>p. H16</p>			





# 45° Flare Fittings

MATERIALS OF CONSTRUCTION	
BODIES:	BRASS
NUTS:	BRASS
O-RINGS:	VITON

NOMENCLATURE	
EXAMPLE: 149F-6-4	ATTRIBUTE:
1 (2)	FORGING (1) EXTRUSION (2)
49	FLARE TO EXTERNAL PIPE, 90° ELBOW
F	FLARE FITTING
6	3/8 TUBE O.D..
4	1/4 PIPE THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	COPPER, BRASS, ALUMINUM, WELDED STEEL HYDRAULIC TUBING THAT CAN BE FLARED.
TUBE O.D.:	1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 7/8

PRESSURE RANGE		
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

SPECIFICATIONS	
TEMPERATURE RANGE	FROM -65° TO +250°F
OPERATING FLUID:	WATER, AIR, INERT AND NON-COMBUSTIBLE GASSES, FLAMMABLE LIQUID, FREON,
NOTE:	FOR OTHER TYPES OF FLUID OR GASSES, PLEASE CONSULT FACTORY



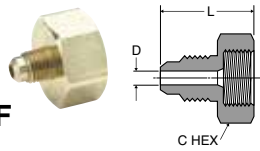
Economical fitting that resists mechanical pullout. Can be assembled and disassembled repeatedly. Listed with Underwriter's Laboratories for flammable liquid, marine and gas applications. Meets functional requirements of SAE J512 and J513.

### 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 to 1/2 turn past finger tight for a metal-to-metal seal.

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





### Refrigerant Drum Adapter 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	.189
1F-4-12*	1/4	3/4	1-1/4	1.12	.189
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

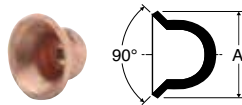
Gasket Furnished with each 1F adapter



### Copper Flare Gasket 2GF

REF. SAE 010113

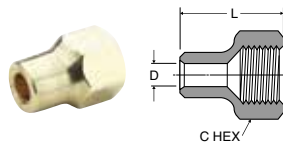
PART NO.	TUBE SIZE	A
2GF-3	3/16	.32
2GF-4	1/4	.36
2GF-5	5/16	.43
2GF-6	3/8	.56
2GF-8	1/2	.67
2GF-10	5/8	.78
2GF-12	3/4	.97



### Seal Bonnet 3GF

REF. SAE 010114

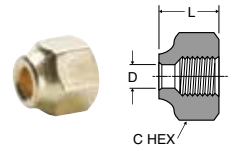
PART NO.	TUBE SIZE	A
3GF-3	3/16	.32
3GF-4	1/4	.37
3GF-5	5/16	.43
3GF-6	3/8	.56
3GF-8	1/2	.67
3GF-10	5/8	.78
3GF-12	3/4	.97



### Long Forged Nut 14FL

REF. SAE 010167

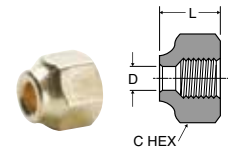
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FL-4	1/4	7/16-20	5/8	.257	.94
14FL-6	3/8	5/8-18	13/16	.382	1.06
14FL-8	1/2	3/4-16	15/16	.507	1.19
14FL-10	5/8	7/8-14	1-1/16	.632	1.44



### Short Forged Nut 14FSX

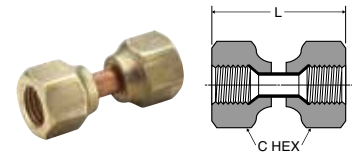
REF. SAE 010166

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	.507	.86
14FSX-10	5/8	7/8-14	1-1/16	.632	.97
14FSX-12	3/4	1-1/16-14	1-5/16	.757	1.17



### Short Forged Reducing Nuts 14FS

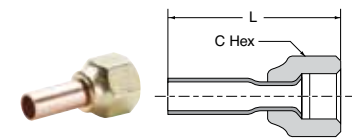
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FS-6-4	3/8 TO 1/4	5/8-18	13/16	.257	.74
14FS-8-6	1/2 TO 3/8	3/4-16	15/16	.382	.86
14FS-10-8	5/8 TO 1/2	7/8-14	1-1/16	.507	.99



### Swivel Nut Valve Connector 14FSV

REF. SAE 010108

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L MIN.
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

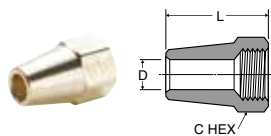


### Flare Adapter US5

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

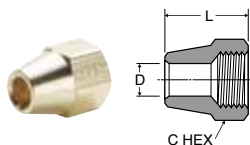
REF. SAE 010111



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	.757	2.19

### Short Nut 41FS / Shorter Nut 41FX

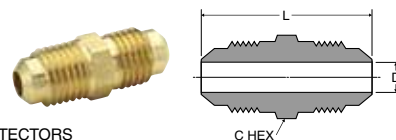
REF. SAE 010110



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-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
41FX-12	3/4	1-1/16-14	1-1/4	.757	1.17
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

### Union 42F

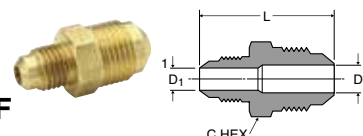
REF. SAE 010101 \*THREAD PROTECTORS



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	.189
42F-5	5/16	1/2-20	1/2	1.32	.220
42F-6	3/8	5/8-18	5/8	1.48	.282
42F-8	1/2	3/4-16	3/4	1.79	.407
42F-10	5/8	7/8-14	7/8	2.10	.501
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	.751

### Union Reducers 42F

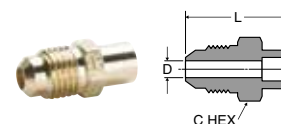
REF. SAE 010101



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	.189	.282
42F-6-5	5/16	3/8	1/2-20	5/8-18	5/8	1.42	.220	.282
42F-8-4	1/4	1/2	7/16-20	3/4-16	3/4	1.54	.189	.407
42F-8-6	3/8	1/2	5/8-18	3/4-16	3/4	1.67	.282	.407
42F-10-6	3/8	5/8	5/8-18	7/8-14	7/8	1.86	.282	.501
42F-10-8	1/2	5/8	3/4-16	7/8-14	7/8	1.98	.407	.501

### Flare to Solder 43F

REF. SAE 010104



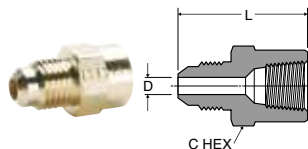
PART NO.	TUBE SIZE	SOLDER OD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
43F-4-4	1/4	1/4	7/16-20	7/16	.98	.189
43F-4-5	1/4	5/16	7/16-20	7/16	.98	.189
43F-4-6	1/4	3/8	7/16-20	1/2	.98	.189
43F-6-4	3/8	1/4	5/8-18	5/8	1.17	.189
43F-6-5	3/8	5/16	5/8-18	5/8	1.17	.252
43F-6-6	3/8	3/8	5/8-18	5/8	1.17	.282
43F-6-8	3/8	1/2	5/8-18	5/8	1.23	.282
43F-6-10	3/8	5/8	5/8-18	3/4	1.36	.282
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	.407
43F-8-10	1/2	5/8	3/4-16	3/4	1.54	.407
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	.501
43F-10-12*	5/8	3/4	7/8-14	7/8	1.86	.501
43F-12-12*	3/4	3/4	1-1/16-14	1-1/16	2.04	.626
43F-12-14*	3/4	7/8	1-1/16-14	1-1/16	2.17	.626

\*Comes standard with thread protectors



### Female Connector 46F

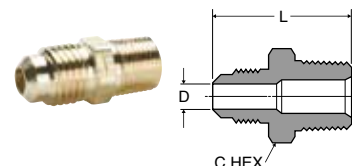
REF. SAE 010103



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	.189
46F-4-4	1/4	1/4	7/16-20	11/16	1.23	.189
46F-4-6	1/4	3/8	7/16-20	13/16	1.26	.189
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	.407
46F-8-6	1/2	3/8	3/4-16	13/16	1.48	.407
46F-8-8	1/2	1/2	3/4-16	1	1.73	.407
46F-8-12*	1/2	3/4	3/4-16	1-1/4	1.79	.407
46F-10-6	5/8	3/8	7/8-14	7/8	1.57	.501
46F-10-8	5/8	1/2	7/8-14	1	1.80	.501
46F-10-12*	5/8	3/4	7/8-14	1-1/4	1.89	.501

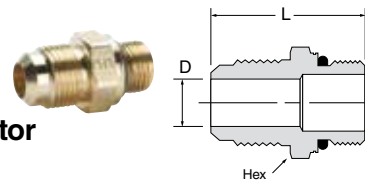
### Male Connector 48F

REF. SAE 010102



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	.407
48F-8-6	1/2	3/8	3/4-16	3/4	1.60	.407
48F-8-8	1/2	1/2	3/4-16	7/8	1.79	.407
48F-8-12	1/2	3/4	3/4-16	1-1/16	1.92	.407
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	.563
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	.751

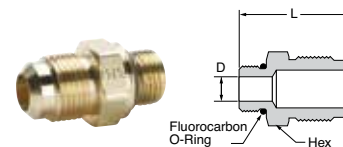
### Flare to Metric Adaptor 48F-X-MIX



PART NUMBER	TUBE SIZE	METRIC THREAD	STRAIGHT THREAD TUBE	HEX	L	D
48F-8-M16	1/2	M16 X 1.5	3/4-16	7/8	1.60	.35
48F-10-MI27	5/8	M27 X 2.0	7/8-14	1 1/4	1.87	.50
48F-12-MI27*	3/4	M27 X 2.0	1 1/16-14	1 1/4	1.99	.63

Note: Fluorocarbon o-ring is standard

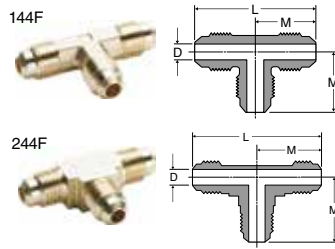
### Flare to SAE Straight Thread 485F



PART NO.	TUBE SIZE	STRAIGHT THREAD	STRAIGHT THREAD TUBE	HEX	L	FLOW DIA. D
485F-12-8*	3/4	3/4-16	1 1/16-14	1 1/16	1.80	.397
485F-12-12*	3/4	1 1/16-12	1 1/16-14	1 1/4	2.03	.615

\*Comes standard with thread protectors

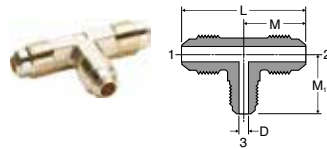




**Union Tee 144F-244F**

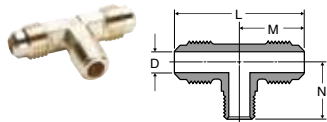
REF. SAE 010401

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	.282
144F-8	1/2	3/4-16	2.46	1.23	.407
144F-10	5/8	7/8-14	2.78	1.39	.501



**Union Tee 144F combination sizes**

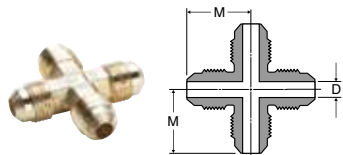
PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L	M	M1	FLOW DIA. D
144F-6-6-4	3/8	3/8	1/4	2.08	1.04	.89	.189
144F-8-8-6	1/2	1/2	3/8	2.40	1.20	1.10	.282



**Male Branch Tee 145F**

REF. SAE 010425

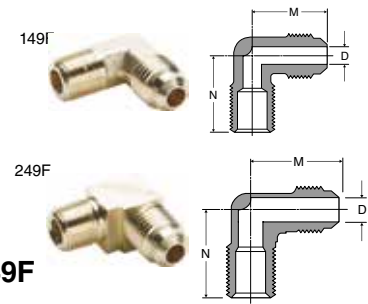
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
145F-2-2	1/8	1/8	5/16-24	1.26	.63	.69	.079
145F-4-2	1/4	1/8	7/16-20	1.58	.79	.76	.189
145F-4-4	1/4	1/4	7/16-20	1.78	.89	.92	.189
145F-5-4	5/16	1/4	1/2-20	1.90	.95	.96	.220
145F-6-4	3/8	1/4	5/8-18	1.96	.98	1.05	.282
145F-6-6	3/8	3/8	5/8-18	2.00	1.00	.98	.282
145F-6-8	3/8	1/2	5/8-18	2.28	1.14	1.26	.282
145F-8-6	1/2	3/8	3/4-16	2.40	1.20	1.10	.407
145F-8-8	1/2	1/2	3/4-16	2.46	1.23	1.36	.407
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	.282



**Male Elbow 149F-249F**

REF. SAE 010202

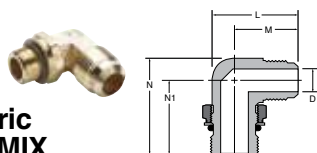
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
149F-2-2	1/8	1/8	5/16-24	.63	.69	.079
149F-3-2	3/16	1/8	3/8-24	.75	.75	.125
249F-3-2	3/16	1/8	3/8-24	.73	.73	.125
149F-4-2	1/4	1/8	7/16-20	.79	.76	.189
249F-4-2	1/4	1/8	7/16-20	.79	.76	.189
149F-4-4	1/4	1/4	7/16-20	.89	.92	.189
249F-4-4	1/4	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
149F-4-8	1/4	1/2	7/16-20	1.02	1.26	.189
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	.95	.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	.220
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	.282
249F-6-4	3/8	1/4	5/8-18	.98	1.04	.282
149F-6-6	3/8	3/8	5/8-18	1.04	1.07	.282
249F-6-6	3/8	3/8	5/8-18	1.04	1.07	.282
149F-6-8	3/8	1/2	5/8-18	1.15	1.26	.282
249F-6-8	3/8	1/2	5/8-18	1.14	1.26	.282
149F-6-12*	3/8	3/4	5/8-18	1.25	1.38	.282
149F-8-4*	1/2	1/4	3/4-16	1.20	1.17	.314
149F-8-6	1/2	3/8	3/4-16	1.20	1.10	.407
249F-8-6	1/2	3/8	3/4-16	1.20	1.10	.407
149F-8-8	1/2	1/2	3/4-16	1.28	1.38	.407
249F-8-8	1/2	1/2	3/4-16	1.26	1.36	.407
149F-8-12*	1/2	3/4	3/4-16	1.38	1.38	.407
149F-10-4*	5/8	1/4	7/8-14	1.41	1.25	.314
149F-10-6*	5/8	3/8	7/8-14	1.41	1.25	.407
149F-10-8	5/8	1/2	7/8-14	1.40	1.39	.501
249F-10-8	5/8	1/2	7/8-14	1.39	1.36	.501
149F-10-12*	5/8	3/4	7/8-14	1.42	1.48	.501
149F-12-8**	3/4	1/2	1-1/16-14	1.60	1.48	.563
149F-12-12*	3/4	3/4	1-1/16-14	1.60	1.62	.626
149F-14-12*	7/8	3/4	1-1/4-12	1.73	1.67	.751

\* For these parts the pipe thread through hole is smaller than the through hole on the flare end.

\*Comes standard with thread protectors



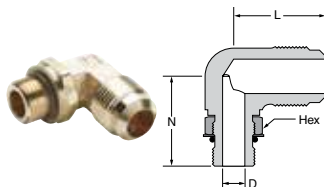




**Flare Elbow to SAE Metric Straight Thread 149F-X-MIX**

PART NUMBER	TUBE SIZE	METRIC THREAD	STRAIGHT THREAD TUBE	L	M	N	N1	D
149F-10-MI27	5/8	M27 X 2.0	7/8-14	1.95	1.46	2.12	1.63	.501

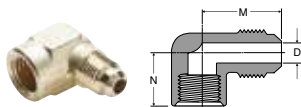
Note: Fluorocarbon o-ring is standard



**Flare Elbow to SAE Straight Thread 1495F**

PART NO.	TUBE SIZE	STRAIGHT THREAD	STRAIGHT THREAD TUBE	HEX	L	N	FLOW DIA. D
1495F-12-8*	3/4	3/4-16	1 1/16-14	7/8	1.60	1.60	.398
1495F-12-12*	3/4	1-1/16-12	1 1/16-14	1 1/4	1.59	2.12	.616

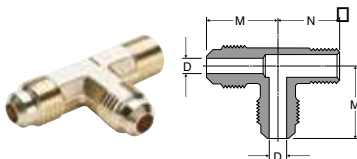
Note: Fluorocarbon o-ring is standard



**Female Elbow 150F**

REF. SAE 010203

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
150F-4-2	1/4	1/8	7/16-20	.86	.50	.189
150F-4-4	1/4	1/4	7/16-20	.95	.67	.189
150F-5-4	5/16	1/4	1/2-20	1.01	.67	.220
150F-6-2	3/8	1/8	5/8-18	1.08	.48	.282
150F-6-4	3/8	1/4	5/8-18	1.07	.67	.282
150F-6-6	3/8	3/8	5/8-18	1.14	.67	.282
150F-6-8	3/8	1/2	5/8-18	1.23	.86	.282
150F-8-6	1/2	3/8	3/4-16	1.25	.69	.407
150F-8-8	1/2	1/2	3/4-16	1.36	.92	.407
150F-8-12	1/2	3/4	3/4-16	1.51	.92	.407
150F-10-8*	5/8	1/2	7/8-14	1.48	.98	.501
150F-10-12*	5/8	3/4	7/8-14	1.64	.98	.501

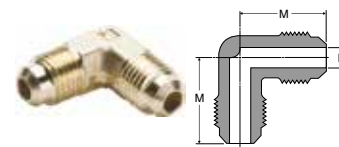


**Male Run Tee 151F**

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	.89	.92	.189
151F-5-4	5/16	1/4	1/2-20	.95	.92	.220
151F-6-4	3/8	1/4	5/8-18	1.04	1.04	.282
151F-6-6	3/8	3/8	5/8-18	1.00	.98	.282
151F-6-8	3/8	1/2	5/8-18	1.16	1.26	.282
151F-8-6	1/2	3/8	3/4-16	1.20	1.10	.407
151F-8-8	1/2	1/2	3/4-16	1.23	1.36	.407
151F-10-8	5/8	1/2	7/8-14	1.39	1.36	.501

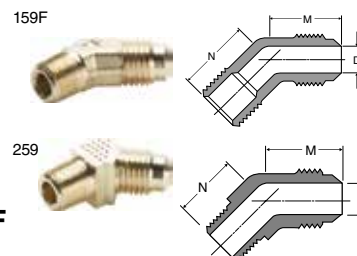
\*Comes standard with thread protectors



**Union Elbow 155F**

REF. SAE 010201

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	.125
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	.282
155F-8	1/2	3/4-16	1.20	.407
155F-10	5/8	7/8-14	1.39	.501
155F-12*	3/4	1-1/16-14	1.64	.626



**45° Elbow 159F-259F**

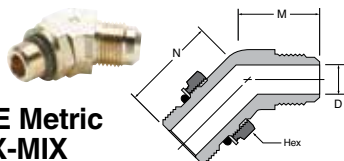
REF. SAE 010302

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	.189
259F-4-2	1/4	1/8	7/16-20	.65	.62	.189
159F-4-4	1/4	1/4	7/16-20	.75	.84	.189
259F-4-4	1/4	1/4	7/16-20	.73	.84	.189
159F-5-2	5/16	1/8	1/2-20	.76	.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	.282
259F-6-4	3/8	1/4	5/8-18	.91	.86	.282
159F-6-6	3/8	3/8	5/8-18	.91	.93	.282
259F-6-6	3/8	3/8	5/8-18	.91	.93	.282
159F-8-4*	1/2	1/4	3/4-16	1.06	.95	.314
159F-8-6	1/2	3/8	3/4-16	1.06	.95	.407
259F-8-6	1/2	3/8	3/4-16	1.04	.93	.407
159F-8-8	1/2	1/2	3/4-16	1.12	1.16	.407
159F-10-6*	5/8	3/8	7/8-14	1.13	.95	.407
159F-10-8	5/8	1/2	7/8-14	1.21	1.16	.501
159F-12-8**	3/4	1/2	1-1/16-14	1.28	1.16	.560

\* For these parts the pipe thread through hole is smaller than the through hole on the flare end.



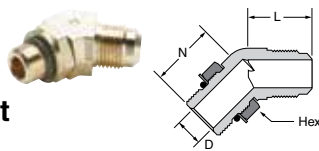
### 45° Flare Elbow to SAE Metric Straight Thread 159F-X-MIX



PART NUMBER	TUBE SIZE	METRIC THREAD	STRAIGHT THREAD TUBE	HEX	M	N	D
159F-8-M16	1/2	M16 X 1.5	3/4-16	22MM	1.10	1.16	.36
159F-10-M127	5/8	M27 X 2.0	7/8-14	1 1/4	1.21	1.50	.50

Note: Fluorocarbon o-ring is standard

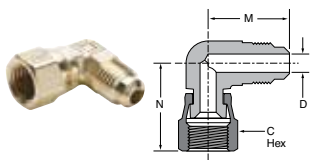
### 45° Flare to SAE Straight Thread 1595F



PART NO.	TUBE SIZE	STRAIGHT THREAD	STRAIGHT THREAD TUBE	HEX	L	N	FLOW DIA. D
1595F-8-8	1/2	3/4-16	3/4-16	7/8	1.00	1.16	.398
1595F-12-8*	3/4	3/4-16	1 1/16-14	7/8	1.41	1.30	.398
1595F-12-12*	3/4	1 1/16-12	1 1/16-14	1 1/4	1.41	1.45	.615

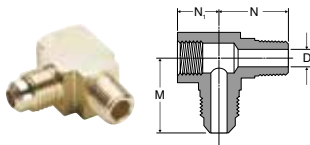
Note: Fluorocarbon o-ring is standard

### 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	9/16	.86	.93	.189
166FSV-6-6	3/8	5/8-18	3/4	1.04	1.12	.282
166FSV-8-8	1/2	3/4-16	7/8	1.20	1.29	.407
166FSV-10-10	5/8	7/8-14	1	1.39	1.50	.501
166FSV-12-12*	3/4	1-1/16-14	1-1/4	1.60	1.83	.626

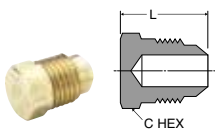
### Adapter Tee 256F



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	.77	.47	.220

### Flared Seal Plug 639F

REF. SAE 010109



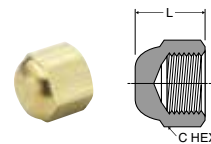
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
639F-4	1/4	7/16-20	7/16	.69
639F-5	5/16	1/2-20	1/2	.78
639F-6	3/8	5/8-18	5/8	.88
639F-8	1/2	3/4-16	3/4	1.06
639F-10	5/8	7/8-14	7/8	1.19

\*Comes standard with thread protectors

†Should be used with 2GF flare gasket

### Cap Nut 640F

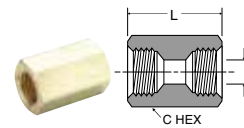
REF. SAE 010112



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

### Flared Union-Female Flare to Female Flare 660FHD

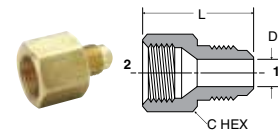
REF. SAE 010107



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
660FHD-4†	1/4	7/16-20	5/8	.98	.251
660FHD-6†	3/8	5/8-18	13/16	1.24	.376
660FHD-8†	1/2	3/4-16	15/16	1.43	.501
660FHD-10†	5/8	7/8-14	1-1/16	1.67	.626

### Male Flare to Female Flare 661FHD

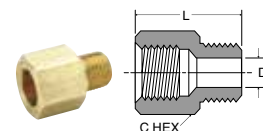
REF. SAE 010105



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	.282
661FHD-6-8†	3/8	1/2	5/8-18	3/4-16	15/16	1.42	.282
661FHD-8-6†	1/2	3/8	3/4-16	5/8-18	13/16	1.39	.407
661FHD-8-10†	1/2	5/8	3/4-16	7/8-14	1-1/16	1.67	.407
661FHD-10-8†	5/8	1/2	7/8-14	3/4-16	15/16	1.60	.501
661FHD-10-12††	5/8	3/4	7/8-14	1-1/16-14	1-5/16	1.95	.501
661FHD-12-10††	3/4	5/8	1-1/16-14	7/8-14	1-1/16	1.86	.626

### 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	.220
664FHD-4-4†	1/4	1/4	7/16-20	5/8	1.01	.252
664FHD-6-4†	3/8	1/4	5/8-18	13/16	1.28	.345
664FHD-8-6†	1/2	3/8	3/4-16	15/16	1.31	.407



# Inverted Flared Fittings

MATERIALS OF CONSTRUCTION	
FITTINGS:	BRASS
NUTS:	BRASS AND ZINC CHROMATE STEEL

NOMENCLATURE	
EXAMPLE: 48IFHD-4-2	ATTRIBUTE:
48	HALF UNION
IF	INVERTED FLARE
HD	HEAVY DUTY
6	3/8 TUBE O.D..
4	1/4 PIPE THREAD

APPLICABLE TUBE	
TUBE MATERIAL:	COPPER, BRASS, ALUMINUM, WELDED STEEL HYDRAULIC TUBING THAT CAN BE FLARED.
TUBE O.D.:	1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8, 3/4

PRESSURE RANGE		
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

SPECIFICATIONS	
TEMPERATURE RANGE	FROM -65° TO +250°F
OPERATING FLUID:	WATER, AIR, INERT AND NON-COMBUSTIBLE GASSES COMPATIBLE WITH MATERIALS OF CONSTRUCTION
NOTE:	FOR OTHER TYPES OF FLUIDS OR GASSES, PLEASE CONSULT FACTORY



Built to resist mechanical pullout this fitting can be assembled and disassembled repeatedly. Listed with Underwriter's Laboratories for flammable liquid and gas. Meets functional requirements of SAE J512.

## Assembly Instructions

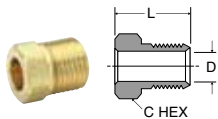
1. Cut tubing squarely and clean tube end thoroughly to remove burrs.
2. Place nut onto tube. Place threaded end of nut toward end of tube.
3. On thin wall copper, welded or brazed tubing, use double flare to prevent pinch-off or cracked flares.
4. Clamp tube flare between nut and flare seat of body 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.



### Nut 411F

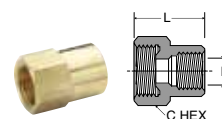
REF. SAE 040110



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	.196
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

### Female Connector 461FHD

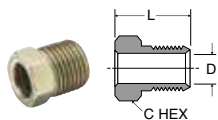
REF. SAE 040103



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	.78	.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	.282
461FHD-8-6	1/2	3/8	3/4-18	29/32	1.10	.407

### Steel Nut-Zinc Chromate 411FS

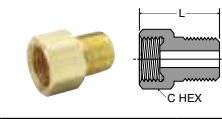
REF. SAE 040110



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

### Male Connector 481FHD

REF. SAE 040102

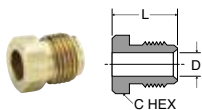


PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
481FHD-2-2	1/8	1/8	5/16-28	13/32	.63	.078
481FHD-3-2	3/16	1/8	3/8-24	15/32	.70	.125
481FHD-4-2	1/4	1/8	7/16-24	17/32	.74	.189
481FHD-4-4	1/4	1/4	7/16-24	9/16	.89	.189
481FHD-5-2	5/16	1/8	1/2-20	19/32	.79	.220
481FHD-5-4	5/16	1/4	1/2-20	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	.282
481FHD-6-6	3/8	3/8	5/8-18	3/4	1.03	.282
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	.407
481FHD-8-8	1/2	1/2	3/4-18	29/32	1.26	.407
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	.626



### Piloted Nut 411FF for Single Flared Tubing

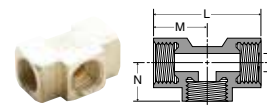
REF. SAE 040110



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	.196
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 Tee 244IFHD

REF. SAE 040401

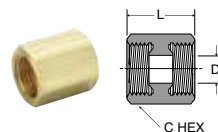


PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	N	FLOW DIA. D
244IFHD-3	3/16	3/8-24	1.10	.55	.39	.125
244IFHD-4	1/4	7/16-24	1.13	.56	.42	.189
244IFHD-5	5/16	1/2-20	1.26	.63	.45	.220
244IFHD-6	3/8	5/8-18	1.48	.74	.56	.282
244IFHD-8*	1/2	3/4-18	1.76	.88	.67	.407

\*Does not meet UL or SAE.

### Union 421FHD

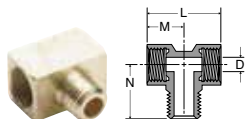
REF. SAE 040101



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	.63	.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	.282
421FHD-8	1/2	3/4-18	29/32	.92	.407

### Male Branch Tee 245IFHD

REF. SAE 040425



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
245IFHD-4-2	1/4	1/8	7/16-24	.85	.43	.64	.189
245IFHD-6-4	3/8	1/4	5/8-18	1.17	.58	.94	.282

### Female Elbow 250IFHD

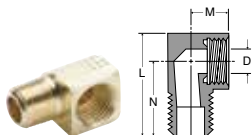
REF. SAE 040203



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
250IFHD-3-2	3/16	1/8	3/8-24	.50	.49	.125
250IFHD-4-2	1/4	1/8	7/16-24	.53	.53	.189
250IFHD-5-2	5/16	1/8	1/2-20	.59	.59	.220
250IFHD-6-4	3/8	1/4	5/8-18	.67	.68	.282

### Male Elbow 249IFHD-249IF

REF. SAE 040202

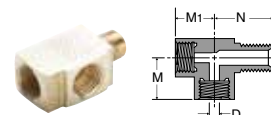


PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
249IFHD-2-2	1/8	1/8	5/16-28	.79	.27	.58	.078
249IFHD-3-2	3/16	1/8	3/8-24	.85	.27	.61	.125
249IFHD-4-2	1/4	1/8	7/16-24	.92	.33	.65	.189
249IFHD-4-4	1/4	1/4	7/16-24	1.10	.28	.82	.189
249IFHD-5-4	5/16	1/4	1/2-20	1.16	.45	.86	.220
249IFHD-6-2	3/8	1/8	5/8-18	1.13	.53	.76	.220
249IF-6-4†	3/8	1/4	5/8-18	1.26	.45	.92	.282
249IFHD-6-4	3/8	1/4	5/8-18	1.32	.53	.95	.282
249IFHD-6-6	3/8	3/8	5/8-18	1.32	.50	.94	.282
249IFHD-8-4	1/2	1/4	3/4-18	1.48	.59	1.02	.407
249IF-8-6+	1/2	3/8	3/4-18	1.42	.53	.99	.407
249IFHD-8-6	1/2	3/8	3/4-18	1.48	.59	1.02	.407
249IFHD-8-8	1/2	1/2	3/4-18	1.67	.66	1.22	.407
249IFHD-10-6	5/8	3/8	7/8-18	1.62	.67	1.09	.531
249IFHD-10-8	5/8	1/2	7/8-18	1.82	.67	1.29	.533

†Light Duty Series

### Male Run Tee 251IFHD

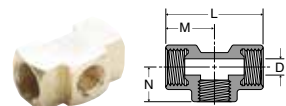
REF. SAE 040424



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	M1	N	FLOW DIA. D
251IFHD-3-2	3/16	1/8	3/8-24	.39	.53	.72	.125
251IFHD-5-2	5/16	1/8	1/2-20	.45	.62	.85	.220
251IFHD-6-4	3/8	1/4	5/8-18	.56	.75	1.08	.282

### Female Branch Tee 252IFHD

REF. SAE 040427



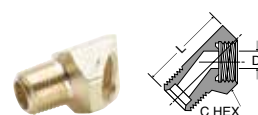
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
252IFHD-5-2	5/16	1/8	1/2-20	1.26	.63	.45	.220
252IFHD-6-4	3/8	1/4	5/8-18	1.48	.74	.56	.282

### Union Elbow 255IFHD

PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
255IFHD-4	1/4	7/16-24	.55	.189

### 45° Elbow 259IFHD

REF. SAE 040302



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
259IFHD-3-2	3/16	1/8	3/8-24	17/32	.88	.125
259IFHD-4-2	1/4	1/8	7/16-24	9/16	.94	.189
259IFHD-5-2	5/16	1/8	1/2-20	5/8	1.00	.220
259IFHD-5-4	5/16	1/4	1/2-20	5/8	1.16	.220
259IFHD-6-4*	3/8	1/4	5/8-18	13/16	1.34	.282
259IFHD-8-6	1/2	3/8	3/4-18	7/8	1.44	.407
259IFHD-10-8	5/8	1/2	7/8-18	1-1/16	1.75	.533

\*DOES NOT MEET SAE OR UL



# Access Valves

MATERIALS OF CONSTRUCTION	
STRAIGHT BODIES:	CA360, CA345
SHAPE BODIES:	CA377

NOMENCLATURE	
EXAMPLE: XAVT1-2	ATTRIBUTE:
X	PACKAGED
AV	ACCESS VALVE
T1	MALE BRANCH TEE
-2	1/8 PIPE THREAD

SPECIFICATIONS	
PRESSURE RANGE:	UP TO 500 PSI
TEMPERATURE RANGES:	-20° TO +220°F
OPERATING FLUID:	FLOROCARBON REFRIGERANTS
VALVE CORE:	MEETS ARI STANDARD 720



Designed to offer convenient low cost access ports for refrigeration service. All fittings feature 1/4" SAE male flare access ports and are furnished with a finger tight quick seal cap. Access valves with pipe connections have internal ODS solder cups.

Access valve products with a solder cup are shipped with the valve core loose. Valve cores should be torqued after brazing to ARI 720 Standard.

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



### 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.

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

### 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

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

### Extended Solder Tee AVTSL



PART NO.	CONNECTION SIZE
AVTSL-6	3/8" O.D. TUBE/SOLDER 5/16", 3/8" & 7/16" TUBE

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

### 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

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

### 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

### 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

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

### 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

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

### 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

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

### Forged Male Cross AVC1



PART NO.	CONNECTION SIZE
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

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.



### 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

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

### 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

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

### 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

### 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 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

### 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

