



# 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

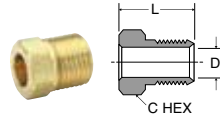
1. Cut tubing squarely and clean tube end thoroughly to remove burrs.
2. Place nut onto tube. Place threaded end of nut toward end of tube.
3. On thin wall copper, welded or brazed tubing, use double flare to prevent pinch-off or cracked flares.
4. Clamp tube flare between nut and flare seat of body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

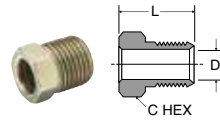
REF. SAE 040110



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

### Steel Nut-Zinc Chromate 411FS

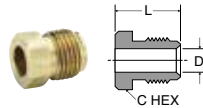
REF. SAE 040110



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

### Piloted Nut 411FF for Single Flared Tubing

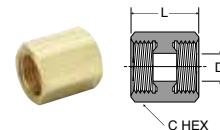
REF. SAE 040110



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 421FHD

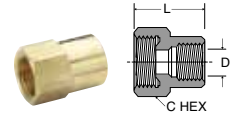
REF. SAE 040101



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

### Female Connector 461FHD

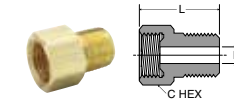
REF. SAE 040103



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

### Male Connector 481FHD

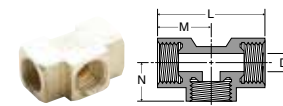
REF. SAE 040102



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

### 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	.282
2441FHD-8*	1/2	3/4-18	1.76	.88	.67	.407

\*Does not meet UL or SAE.

