

## Flare Fittings

**Use:** For use with fuel, oil, liquid petroleum (LP), and natural gas lines. Designed for use with aluminum, copper, brass, and welded steel tubing that can be flared.

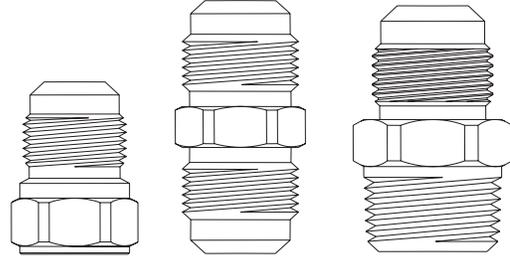
### Design Features:

- Recommended for higher pressure than those covered by compression fittings
- Resist mechanical pull out
- Available in a broad range of sizes
- Lead free product available

### Operating Specifications:

- Temperature: -65° - 250°F at max operating pressure
- Working Pressure: See chart below
- Vibration: Good vibration resistance\*

\*Recommend long flare nuts when greater vibration resistance is required



### Standard Product

#### MATERIAL SPECIFICATIONS

Fitting Body Brass

### Assembly Instructions

1. Cut tubing to required length, making sure that the ends are square and all burrs are removed.
2. Slide nut onto tubing. Threaded end of nut must face out.
3. Flare tubing end with a 45° flaring tool: **A.** Measure flare diameter. **B.** Check flare for excessive thin out.
4. Lubricate threads with a drop of oil and assemble nut onto body, hand tighten.
5. Tighten with wrench until assembly feels "solid". Then apply a one-sixth turn.

**WARNING:** Do not over torque. May damage the fitting and split the tubing at the flare.

### Maximum Working Pressure

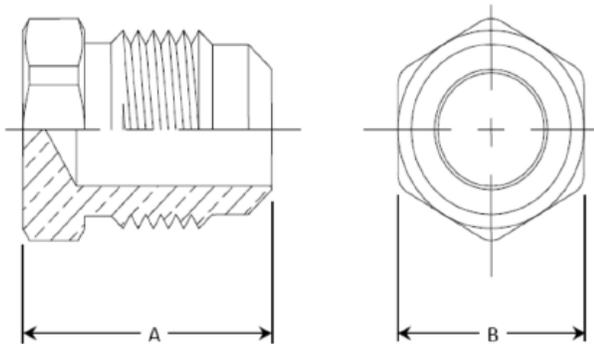
SERVICE CONDITIONS	TUBE OD	TYPE OF TUBING AND WALL THICKNESS (INCHES)									
		COPPER - DEAD SOFT (SEAMLESS)					COPPER - HALF HARD (SEAMLESS)				
		.030"	.032"	.035"	.049"	.065"	.032"	.035"	.042"	.049"	.065"
Safety Factor 4-1	1/8	4300		5000			5000				
	3/16	2850		3300			3400				
	1/4	2100	2250	2500			2500				
	5/16		1800	2000			2000				
	3/8		1500	1650			1700	1850			
	1/2		1100	1250		2000	1250	1400			2600
	5/8			1000	1400	1800	1000			1500	2000
	3/4			850	1150	1500			1100		1700
	7/8									1100	1500
	Safety Factor 6-1	1/8	2800		3350			3400			
3/16		1900		2200			2250				
1/4		1430	1500	1650			1700				
5/16			1200	1300			1350				
3/8			100	1100			1100	1200			
1/2			750	825		1550	850	925			1750
5/8				650	930	1200	675			1000	1350
3/4				550	775	1000			725		1100
7/8										750	1000

## Features

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- Available in a broad range of sizes
- Good vibration resistance

## Specifications & Approvals

Temperature: -65° - 250°F at max operating pressure



## Dimensions

Part#	Size	A (mm)	B (mm)	Thread Size UNF
F39-14	1/4" OD FLARE	15.50	11.11	7/16-20
F39-38	3/8" OD FLARE	22.35	15.87	5/8-18
F39-12	1/2" OD FLARE	26.90	19.05	3/4-16
F39-58	5/8" OD FLARE	30.20	22.22	7/8-14

## Materials

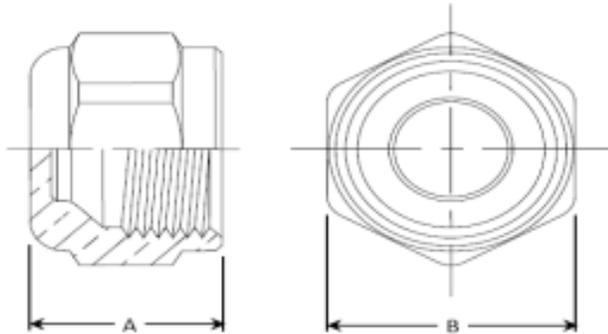
Part Name	Material
Fitting Body	Brass

## Features

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## Specifications & Approvals

Temperature: -65° - 250°F at max operating pressure



## Dimensions

Part#	Size	A (mm)	B (mm)	Thread Size UNF
<b>F40-14</b>	1/4" OD FLARE	12.00	14.29	7/16-20
<b>F40-516</b>	5/16" OD FLARE	15.30	15.87	1/2-20
<b>F40-38</b>	3/8" OD FLARE	15.30	17.45	5/8-18
<b>F40-12</b>	1/2" OD FLARE	17.15	20.65	3/4-16
<b>F40-58</b>	5/8" OD FLARE	20.50	23.85	7/8-14

## Materials

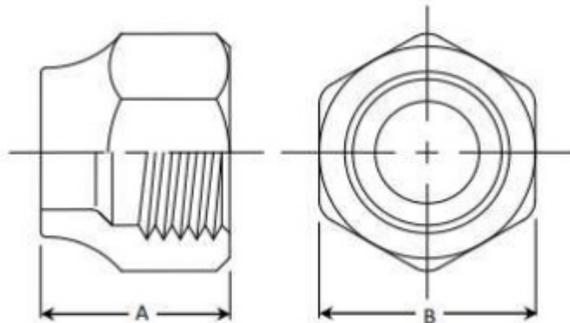
Part Name	Material
<b>Fitting Body</b>	Brass

## Features

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## Specifications & Approvals

Temperature: -65° - 250°F at max operating pressure



## Dimensions

Part#	Size	A (mm)	B (mm)	Thread Size UNF
F41FS-14	1/4" OD FLARE	15.25	15.87	7/16-20
F41FS-38	3/8" OD FLARE	17.50	20.65	5/8-18
F41FS-12	1/2" OD FLARE	20.95	23.80	3/4-16
F41FS-58	5/8" OD FLARE	23.50	26.90	7/8-14

## Materials

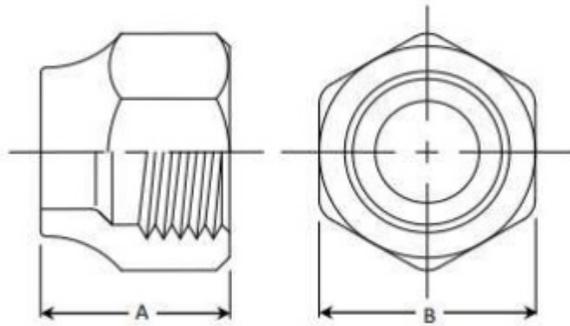
Part Name	Material
Fitting Body	Brass

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## Specifications & Approvals

Temperature: -65° - 250°F at max operating pressure



## Dimensions

Part#	Size	A (mm)	B (mm)	Thread Size UNF
F41FSR-3814	3/8" x 1/4"	19.02	20.64	5/8-18
F41FSR-1238	1/2" x 3/8"	22.00	23.75	3/4-16
F41FSR-5812	5/8" x 1/2"	23.08	26.90	7/8-14

## Materials

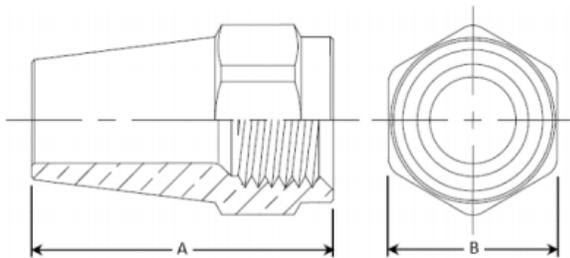
Part Name	Material
Fitting Body	Brass

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## Specifications & Approvals

Temperature: -65° - 250°F at max operating pressure



## Dimensions

Part#	Size	A (mm)	B (mm)	Thread Size UNF
F41L-14	1/4" OD	23.75	14.29	7/16-20
F41L-38	3/8" OD	33.25	19.05	5/8-18

## Materials

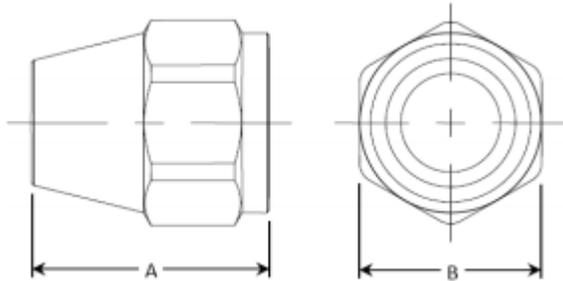
Part Name	Material
Fitting Body	Brass

## Features

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## Specifications & Approvals

Temperature: -65° - 250°F at max operating pressure



## Dimensions

Part#	Size	A (mm)	B (mm)	Thread Size UNF
F41S-316	3/16"	15.70	11.10	3/8-24
F41S-14	1/4"	19.05	14.29	7/16-20
F41S-516	5/16"	22.00	15.84	1/2-20
F41S-38	3/8"	22.00	19.05	5/8-18
F41S-12	1/2"	23.35	22.22	3/4-16
F41S-34	3/4"	28.40	27.00	7/8-14
F41S-58	5/8"	38.10	31.75	1/16-14

## Materials

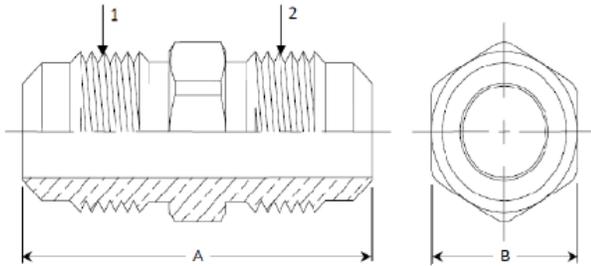
Part Name	Material
Fitting Body	Brass

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## Specifications & Approvals

Temperature: -65° - 250°F at max operating pressure



## Dimensions

Part#	Size	A (mm)	B (mm)	Thread Size UNF
<b>F42-14</b>	1/4"	30.40	11.2	7/16-20
<b>F42-38</b>	3/8"	37.85	15.87	5/8-18
<b>F42-12</b>	1/2"	45.00	19.05	3/4-16
<b>F42-58</b>	5/8"	51.20	22.25	7/8-14
<b>F42R-121214</b>	1/2" x 1/4"	38.45	19.05	3/4-16 x 7/16-20
<b>F42R-121238</b>	1/2" x 3/8"	42.90	19.05	3/4-16 x 5/8-18
<b>F42R-383814</b>	3/8" x 1/4"	34.80	15.87	5/8-18 x 7/16-20
<b>F42R-585812</b>	5/8" x 1/2"	50.60	22.25	7/8-14 x 3/4-16
<b>F42R-585838</b>	5/8" x 3/8"	47.3	22.25	7/8-14 x 5/8-18

## Materials

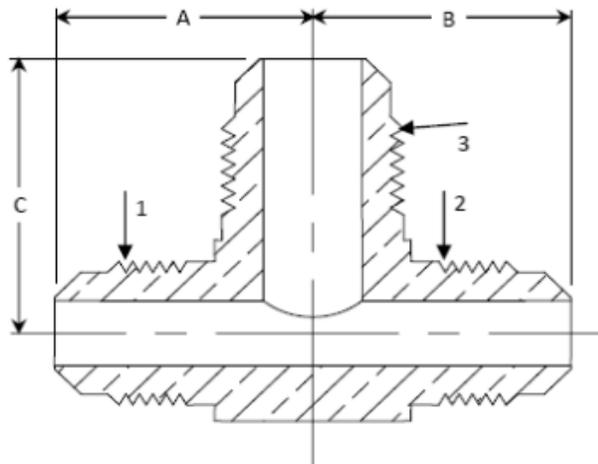
Part Name	Material
<b>Fitting Body</b>	Brass

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**Specifications & Approvals**

Temperature: -65° - 250°F at max operating pressure



**Dimensions**

Part#	Size	A (mm)	B (mm)	C (mm)	Thread Size UNF
F44-14	1/4"	19.75	19.75	19.75	7/16-20
F44-38	3/8"	25.50	25.50	25.50	5/8-18
F44-12	1/2"	30.40	30.40	30.40	3/4-16
F44-58	5/8"	35.25	35.25	35.25	7/8-14
F44R-383814	3/8" x 1/4"	26.0	26.0	23.80	5/8-18 x 7/16-20
F44R-121238	1/2" x 3/8"	30.35	30.35	27.05	3/4-16 x 5/8-18
F44R-585812	5/8" x 1/2"	35.25	35.25	34.15	7/8-14 x 3/4-16

**Materials**

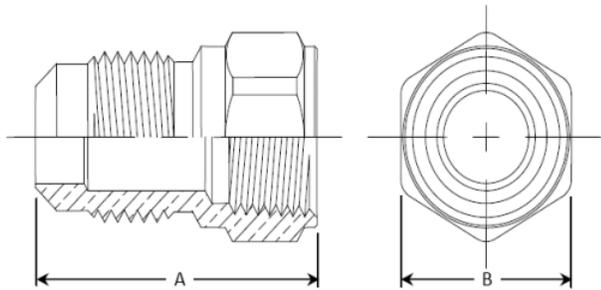
Part Name	Material
Fitting Body	Brass

## Features

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## Specifications & Approvals

Temperature: -65° - 250°F at max operating pressure



## Dimensions

Part#	Size	A (mm)	B (mm)	Thread Size UNF	Thread Size NPT
<b>F46-14</b>	1/4"	28.10	15.87	7/16-20	1/4-18
<b>F46-12</b>	1/2"	36.90	22.22	3/4-16	1/2-14
<b>F46-34</b>	3/4"	43.20	28.57	1-1/16-20	3/4-14
<b>F46-38</b>	3/8"	31.80	19.05	5/8-18	3/8-18
<b>F46R-1418</b>	1/4" x 1/8" FIP	25.60	12.70	7/16-20	1/8-27
<b>F46R-1438</b>	1/4" x 3/8" FIP	27.85	19.05	7/16-20	3/8-18
<b>F46R-1412</b>	1/4" x 1/2" FIP	30.10	22.22	7/16-20	1/2-14
<b>F46R-3814</b>	3/8" x 1/4" FIP	28.50	15.87	5/8-18	1/4-18
<b>F46R-3812</b>	3/8" x 1/2" FIP	33.25	22.22	5/8-18	1/2-14
<b>F46R-3834</b>	3/8" x 3/4" FIP	35.85	28.57	5/8-18	3/4-14
<b>F46R-1238</b>	1/2" x 3/8" FIP	36.30	19.05	3/4-16	3/8-18
<b>F46R-1214</b>	1/2" x 1/4" FIP	35.00	19.05	3/4-16	1/4-18
<b>F46R-1234</b>	1/2" x 3/4" FIP	40.50	28.57	3/4-16	3/4-14
<b>F46R-5812</b>	5/8" x 1/2" FIP	39.75	23.81	7/8-14	1/2-14
<b>F46R-5834</b>	5/8" x 3/4" FIP	42.10	28.57	7/8-14	3/4-14

## Materials

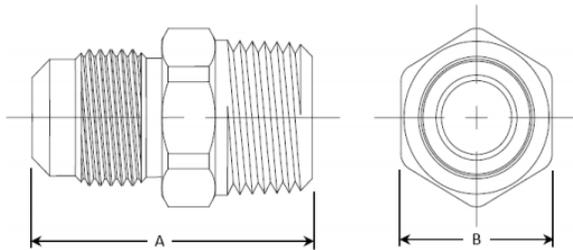
Part Name	Material
<b>Fitting Body</b>	Brass

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## Specifications & Approvals

Temperature: -65° - 250°F at max operating pressure



## Dimensions

Part#	Size	A (mm)	B (mm)	Thread Size UNF	Thread Size NPT
F48-14	1/4"	29.00	14.29	7/16-20	1/4-18
F48-38	3/8"	33.65	15.50	5/8-18	3/8-18
F48-12	1/2"	39.50	22.22	3/4-16	1/2-14
F48-34	3/4"	50.00	26.98	1-1/16-14	3/4-14
F48R-1214	1/2" x 1/4" MIP	36.25	19.05	3/4-16	1/4-18
F48R-1238	1/2" x 3/8" MIP	37.50	19.05	3/4-16	3/8-18
F48R-1234	1/2" x 3/4" MIP	43.50	21.00	3/4-16	3/4-14
F48R-1418	1/4" x 1/8" MIP	26.70	11.10	7/16-20	1/8-27
F48R-1438	1/4" x 3/8" MIP	-	-	-	-
F48R-1412	1/4" x 1/2" MIP	-	-	-	-
F48R-3818	3/8" x 1/8" MIP	30.60	15.87	5/8-18	1/8-27
F48R-3814	3/8" x 1/4" MIP	33.53	15.87	5/8-18	1/4-18
F48R-3812	3/8" x 1/2" MIP	36.35	22.22	5/8-18	1/2-14
F48R-3834	3/8" x 3/4" MIP	39.25	26.98	5/8-18	3/4-14
F48R-3412	3/4" x 1/2" MIP	46.50	26.98	1-1/16-14	1/2-14
F48R-5838	5/8" x 3/8" MIP	41.15	22.25	7/8-14	3/8-18
F48R-5812	5/8" x 1/2" MIP	42.35	22.22	7/8-14	1/2-14
F48R-5834	5/8" x 3/4" MIP	45.10	26.98	7/8-14	3/4-14

## Materials

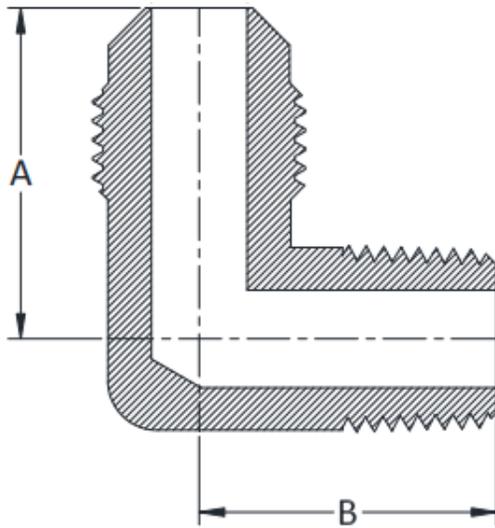
Part Name	Material
Fitting Body	Brass

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## Specifications & Approvals

Temperature: -65° - 250°F at max operating pressure



## Dimensions

Part#	Size	A (mm)	B (mm)	Thread Size UNF	Thread Size NPT
F49-14	1/4"	19.80	22.35	7/16-20	1/4-18
F49-38	3/8"	25.45	23.20	5/8-18	3/8-18
F49-12	1/2"	28.60	28.85	3/4-16	1/2-14
F49R-1418	1/4" x 1/8" MIP	19.80	20.35	7/16-20	1/8-18
F49R-1438	1/4" x 3/8" MIP	21.60	23.05	7/16-20	3/8-18
F49R-3818	3/8" x 1/8" MIP	24.70	20.35	5/8-18	1/8-27
F49R-3814	3/8" x 1/4" MIP	24.70	22.20	5/8-18	1/4-18
F49R-3812	3/8" x 1/2" MIP	26.95	25.50	5/8-18	1/2-14
F49R-1214	1/2" x 1/4" MIP	30.10	22.20	3/4-16	1/4-18
F49R-1238	1/2" x 3/8" MIP	30.10	25.34	3/4-16	3/8-18
F49R-1234	1/2" x 3/4" MIP	34.00	31.85	3/4-16	3/4-14
F49R-5812	5/8" x 1/2" MIP	34.00	31.00	7/8-14	1/2-14
F49R-5834	5/8" x 3/4" MIP	36.50	32.00	7/8-14	3/4-14

## Materials

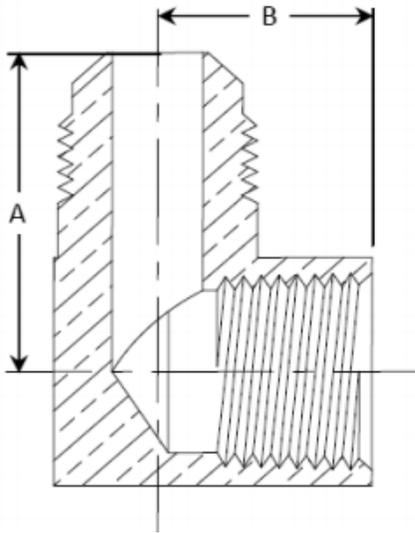
Part Name	Material
Fitting Body	Brass

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**Specifications & Approvals**

Temperature: -65° - 250°F at max operating pressure



**Dimensions**

Part#	Size	A (mm)	B (mm)	Thread Size UNF	Thread Size NPT
F50-14	1/4"	-	-	-	-
F50-38	3/8"	28.90	17.00	5/8-18	3/8-18
F50-12	1/2"	32.15	18.65	3/4-16	1/2-14
F50R-1438	1/4" x 3/8" FIP	26.95	15.95	7/16-20	3/8-18
F50R-1238	1/2" x 3/8" FIP	29.70	18.60	3/4-16	3/8-18
F50R-3814	3/8" x 1/4" FIP	-	-	-	-
F50R-3812	3/8" x 1/2" FIP	31	21.85	5/8-18	1/2-14
F50R-5812	5/8" x 1/2" FIP	41.65	24.90	7/8-14	1/2-14

**Materials**

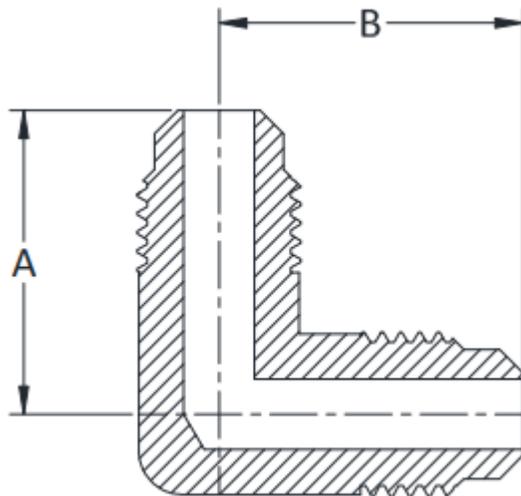
Part Name	Material
Fitting Body	Brass

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**Specifications & Approvals**

Temperature: -65° - 250°F at max operating pressure



**Dimensions**

Part#	Size	A (mm)	B (mm)	Thread Size UNF
F55-14	1/4"	20.55	20.55	7/16-20
F55-38	3/8"	25.18	25.18	5/8-18
F55-12	1/2"	29.35		

**Materials**

Part Name	Material
Fitting Body	Brass