

# O-Ring Face Seal Fittings

## Features

Superlok O-ring Face Seal Fittings are designed for rapid assembly in pipe, tube and welded systems.

- Unique design allows easy installation where space is limited.
- No axial clearance is required.
- Sealing is accomplished with a captive O-ring in the body component.
- Assemblies can be used from high pressure to critical vacuum within a wide range of temperatures (up to 550°F).

## O-ring Material

70 durometer fluorocarbon(viton) is standard on fitting bodies.

90 durometer fluorocarbon is used with SAE/MS threads.

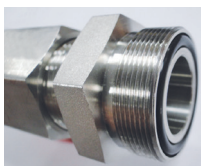
Perfluoroelastomer, BUNA-N , TFE , Ethylene-propylene are available for special applications

Component	Material
Bodies, glands, nuts	316 Stainless Steel
Automatic tube weld fittings	316L Stainless Steel
O-ring, Bodies	Fluorocarbon FKM
O-ring, SAE/MS threads	Fluorocarbon FKM
Lubricant	Silicone-based

## Testing

The O-ring Face Seal Fittings design has been helium leak tested to a maximum leak of  $4 \times 10^{-9}$  std cm<sup>3</sup>/s.

## Installation Instructions



Install Body to existing port, tubing or equipment



Assemble Body with female nut and gland. And Tighten nut 1/8 turn with a wrench after finger tight to make sure metal to metal contact.

\* When body or gland needs soldering, welding or brazing, the O-ring should be removed to prevent possible damage.

## O-ring Uniform Size Number

VCO size (in.)	O-Ring Uniform Size Number
1/8 and 1/4	I.D 6.07 X 1.78T
3/8 and 1/2	I.D 10.77 X 2.62T
3/4	I.D 18.72 X 2.62T
1	I.D 26.57 X 3.53T

SAE/MS Thread Size	O-Ring Uniform Size Number
7/16-20	I.D 8.92 X 1.83T
9/16-18	I.D 11.89 X 1.98T
3/4-16	I.D 16.36 X 2.20T
1 1/16-12	I.D 23.47 X 2.95T
1 5/16-12	I.D 29.47 X 2.95T

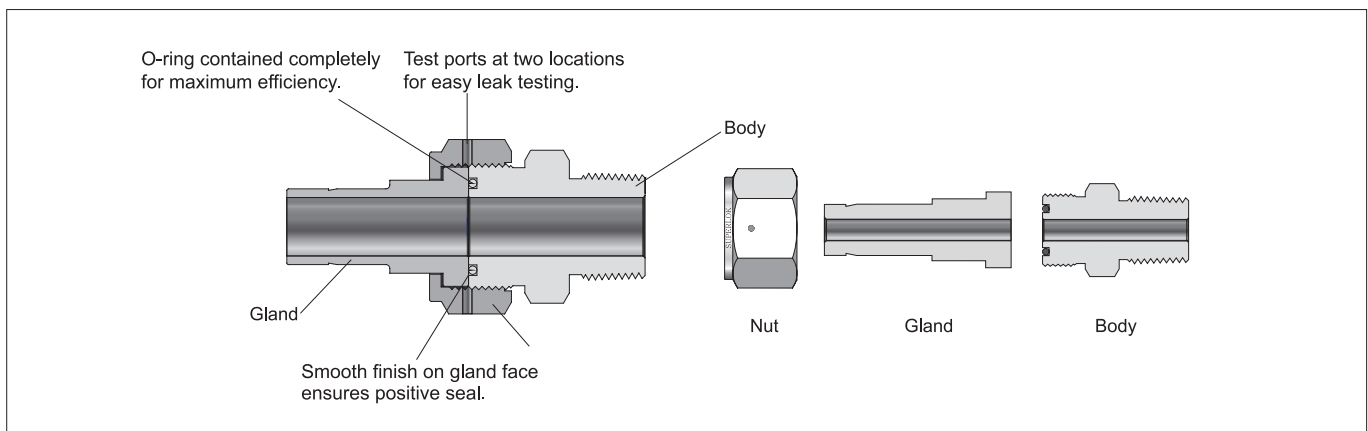
## Pressure Ratings

All ratings comply with calculations in accordance with ASME Code for Pressure Piping B31.3 (Process Piping) and Asme B31.1 (Power Piping).

## Temperature Ratings

Temperature ratings for O-ring Face Seal fittings are determined by the O-ring materials.

Material	Max. Temperature Rating F (°C)
Fluorocarbon FKM	400(204)
Buna N	250(121)
PTFE	450(232)
Perfluoroelastomer	550(287)
Ethylene propylene	300(148)



## Ordering Information

**Example 1:**

<b>O</b>	<b>M</b>	<b>C</b>	-	<b>4</b>	-	<b>4</b>	<b>N</b>	-	<b>N</b>	-	<b>3</b>	<b>6</b>	<b>L</b>
	1			2-1		2-3		3			4		

**Example 2:**

<b>O</b>	<b>C</b>	-	<b>4</b>	-	<b>2</b>
	1		2-1		2-2

### 1. Type of Fitting

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>FN</b> = Female Nut</li> <li><input type="checkbox"/> <b>BN</b> = Blind Nut</li> <li><input type="checkbox"/> <b>GSW</b> = Tube Socket Weld Gland</li> <li><input type="checkbox"/> <b>GSWR</b> = Tube Socket Weld Reducing Gland</li> <li><input type="checkbox"/> <b>GMW</b> = Male Tube Weld Gland</li> <li><input type="checkbox"/> <b>GAW</b> = Automatic Tube Weld Gland</li> <li><input type="checkbox"/> <b>GSU</b> = Swivel Union</li> <li><input type="checkbox"/> <b>GSC</b> = Swivel Tube Fitting Connector</li> <li><input type="checkbox"/> <b>GA</b> = Tube Adapter</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>GSMC</b> = Swivel Male Connector</li> <li><input type="checkbox"/> <b>GSFC</b> = Swivel Female Connector</li> <li><input type="checkbox"/> <b>U</b> = Union</li> <li><input type="checkbox"/> <b>BHU</b> = Bulkhead Union</li> <li><input type="checkbox"/> <b>RU</b> = Reducing Union</li> <li><input type="checkbox"/> <b>E</b> = Elbow</li> <li><input type="checkbox"/> <b>T</b> = Tee</li> <li><input type="checkbox"/> <b>B</b> = Blind</li> <li><input type="checkbox"/> <b>C</b> = Tube Fitting Connector</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>BHC</b> = Tube Fitting Bulkhead Connector</li> <li><input type="checkbox"/> <b>TE</b> = Tube Fitting Elbow</li> <li><input type="checkbox"/> <b>WC</b> = Socket Weld Connector</li> <li><input type="checkbox"/> <b>AWC</b> = Automatic Tube Weld Connector</li> <li><input type="checkbox"/> <b>MC</b> = Male NPT Connector</li> <li><input type="checkbox"/> <b>FC</b> = Female NPT Connector</li> <li><input type="checkbox"/> <b>ME</b> = Male Elbow</li> <li><input type="checkbox"/> <b>SMC</b> = Male SAE/MS Connector</li> <li><input type="checkbox"/> <b>SPE</b> = Male SAE/MS Positionable Elbow</li> </ul> |
|--|---|---|

### 2. Size of Fitting

#### 2-1. VCO Size

Size (inch)	1/4	3/8	1/2	3/4	1
Designator	4	6	8	12	16

#### 2-2. Tube OD

OD (inch)	1/4	3/8	1/2	3/4	1
Designator	4	6	8	12	16

#### 2-3. Pipe Thread Size or Tube Size

Size (inch)	1/8	1/4	3/8	1/2	3/4	1	Applicable Standards
<b>NPT</b>	2N	4N	6N	8N	12N	16N	ANSI B1.20.1
<b>ISO Tapered</b>	2R	4R	6R	8R	12R	16R	JIS B0203(PT), DIN2999, BSPT
<b>ISO Parallel</b>	2G	4G	6G	8G	12G	16G	JIS B0202(PF), ISO 228/1, BSPP
<b>Unified Screw</b>	2U	4U	6U	8U	12U	16U	AMERICAN STANDARD UNIFIED SCREW THREAD

### 3. O-ring Material

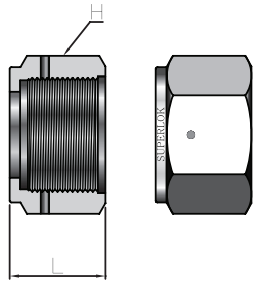
- (Blank)** = VITON
- N** = Buna N
- PT** = PTFE
- EP** = Ethylene propylene

### 4. Material

- (Blank)** = 316 Stainless Steel
- 36L** = 316L Stainless Steel

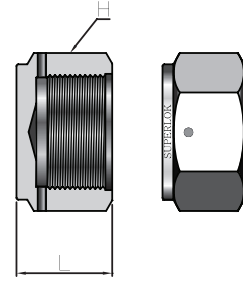
## NUTS

Female Nut



Part No.	Size (inch)	H (HEX)	L
OFN-4	1/8 and 1/4	11/16	16.8
OFN-8	3/8 and 1/2	1	17.5
OFN-12	3/4	1-1/2	20.6
OFN-16	1	1-3/4	20.6

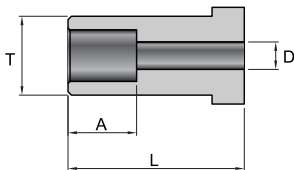
Blind Nut



Part No.	Size (inch)	H (HEX)	L
OBN-4	1/8 and 1/4	11/16	11.2
OBN-8	3/8 and 1/2	1	14.2
OBN-12	3/4	1-1/2	19.1
OBN-16	1	1-3/4	20.6

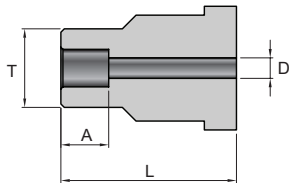
## GLANDS

Tube Socket Weld Gland



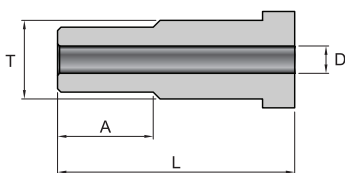
Part No.	Size (inch)	Tube size (inch)	L	A	D	T	Working pressure psig (bar)
OGSW-2-2	1/8	1/8	19.6	2.5	2.3	9.7	15400 (1060)
OGSW-4-4	1/4	1/4	19.6	7.1	4.6	9.7	6800 (460)
OGSW-6-6	3/8	3/8	20.6	7.9	7.1	15.2	8100 (560)
OGSW-8-8	1/2	1/2	20.6	9.7	10.2	15.2	3000 (200)
OGSW-12-12	3/4	3/4	23.9	11.2	15.7	23.4	3700 (250)
OGSW-16-16	1	1	24.9	15.7	22.1	30.2	3000 (200)

Tube Socket Weld Reducing Gland



Part No.	Size (inch)	Tube size (inch)	L	A	D	T	Working pressure psig (bar)
OGSWR-2-2	1/4	1/8	19.6	2.5	2.3	7.4	12600 (860)
OGSWR-4-4	1/2	1/4	20.6	7.1	4.6	12.2	10700 (730)

Male Tube Weld Gland

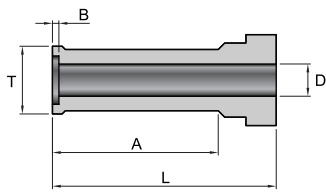


Part No.	Size (inch)	Tube size (inch)	L	A	D	T	Working pressure psig (bar)
OGMW-4-2	1/4	1/8	19.6	7.1	1.5	9.7	11200 (770)
OGMW-4-4	1/4	1/4	28.4	10.4	3.0	9.7	11200 (770)
OGMW-8-4	1/2	1/4	23.1	10.4	3.0	15.2	11200 (770)
OGMW-8-6	1/2	3/8	21.3	10.4	5.8	15.2	8200 (560)
OGMW-8-8	1/2	1/2	26.9	12.7	8.4	15.2	7500 (510)

- Dimensions and Drawings are for reference only and are subject to change without prior notice.
- Unless otherwise specified, all dimensions are in millimeters.
- Sizes, pressure classes, and end connections not listed are available upon request.
- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

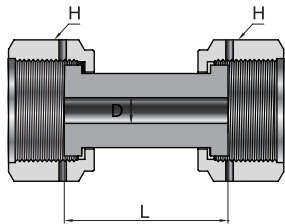
## GLANDS

### Automatic Tube Weld Gland



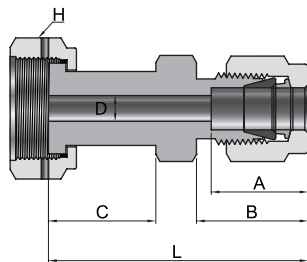
Part No.	Size (inch)	Tube size (inch)	L	A	B	D	T	Wall Thickness	Working pressure psig (bar)
OGAW-4-4	1/4	1/4	28.4	19.8	0.51	4.6	7.4	0.9	5100 (350)
OGAW-8-6	1/2	3/8	28.7	20.0	0.76	7.9	10.4	0.9	3300 (220)
OGAW-8-8	1/2	1/2	29.0	20.3	1.0	10.2	14.0	1.2	3500 (240)
OGAW-12-12	3/4	3/4	30.5	20.3	1.0	16.5	20.3	1.2	2100 (150)
OGAW-16-16	1	1	35.8	25.4	1.0	22.1	26.9	1.7	2100 (150)

### Swivel Union



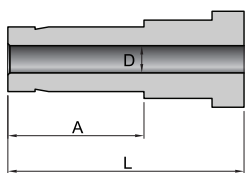
Part No.	Size (inch)	H (HEX)	L	D	Working pressure psig (bar)
OGSU-4	1/4	11/16	36.1	4.6	10200 (700)
OGSU-8	1/2	1	40.9	10.2	5800 (390)

### Swivel Tube Fitting Connector



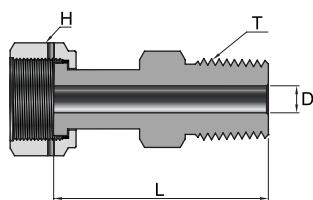
Part No.	Size (inch)	Tube size (inch)	H (HEX)	L	A	B	C	D	Working pressure psig (bar)
OGSC-4-4	1/4	1/4	11/16	44.2	15.2	17.8	19.6	4.6	10200 (700)
OGSC-8-6	1/2	3/8	1	47.5	16.8	19.3	20.6	7.1	5800 (390)
OGSC-8-8	1/2	1/2	1	51.1	22.9	22.1	20.6	10.2	5800 (390)
OGSC-12-12	3/4	3/4	1-1/2	54.4	24.4	22.1	23.9	15.7	4000 (270)
OGSC-16-16	1	1	1-3/4	62.2	31.2	26.4	24.9	22.1	3000 (200)

### Tube Adapter



Part No.	Size (inch)	Tube size (inch)	L	A	D	Working pressure psig (bar)
OGA-4-4	1/4	1/4	44.2	15.2	4.6	10200 (700)
OGA-8-6	1/2	3/8	47.5	16.8	7.1	5800 (390)
OGA-8-8	1/2	1/2	51.1	22.9	10.2	5800 (390)
OGA-12-12	3/4	3/4	54.4	24.4	15.7	4000 (270)
OGA-16-16	1	1	62.2	31.2	22.1	3000 (200)

### Swivel Male Connector

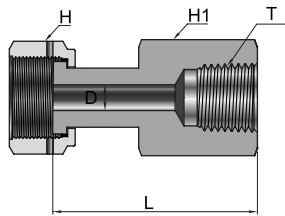


Part No.	Size (inch)	T (NPT size) (inch)	L	D	H (HEX)	Working pressure psig (bar)
OGSMC-4-4N	1/4	1/4	40.4	4.6	11/16	9800 (670)
OGSMC-8-6N	1/2	3/8	42.4	10.2	1	5600 (380)
OGSMC-8-8N	1/2	1/2	47.5	10.2	1	5600 (380)
OGSMC-12-12N	3/4	3/4	51.6	15.7	1-1/2	3900 (260)
OGSMC-16-16N	1	1	59.9	22.1	1-3/4	2900 (190)

- Dimensions and Drawings are for reference only and are subject to change without prior notice.
- Unless otherwise specified, all dimensions are in millimeters.
- Sizes, pressure classes, and end connections not listed are available upon request.
- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

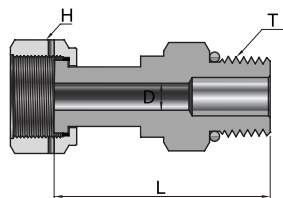
## GLANDS

### Swivel Female Connector



Part No.	Size (inch)	T (NPT size) (inch)	L	D	H (HEX)	H1 (HEX)	Working pressure psig (bar)
OGSFC-4-4N	1/4	3/8	39.9	4.6	11/16	3/4	9800 (670)
OGSFC-8-6N	1/2	1/2	43.9	10.2	1	7/8	5600 (380)
OGSFC-8-8N	1/2	3/4	49.8	10.2	1	1-1/16	5600 (380)
OGSFC-12-12N	3/4	1	53.8	15.7	1-1/2	1-5/16	3900 (260)
OGSFC-16-16N	1	62.2	58.2	22.1	1-3/4	1-5/8	2900 (190)

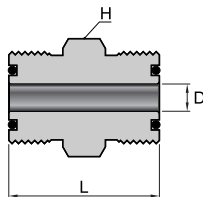
### Swivel SAE/MS Connector



Part No.	Size (inch)	T (NPT size) (inch)	L	D	H (HEX)	Working pressure psig (bar)
OGSMC-4-4U	1/4	7/16-20	39.1	4.6	11/16	4500 (310)
OGSMC-8-6U	1/2	9/16-18	41.7	10.2	1	4500 (310)
OGSMC-8-6U	1/2	3/4-16	43.4	10.2	1	4500 (310)
OGSMC-12-12U	3/4	1-1/16-12	52.6	15.7	1-1/2	3600 (240)
OGSMC-16-16U	1	1-5/16-12	55.1	22.1	1-3/4	2900 (190)

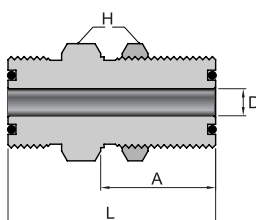
## BODIES

### Union



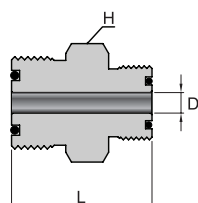
Part No.	Size (inch)	H (HEX)	L	D	Working pressure psig (bar)
OU-4	1/4	5/8	31.8	4.6	14300 (980)
OU-8	1/2	15/16	38.1	10.2	11100 (760)

### Bulkhead Union



Part No.	Size (inch)	L	A	D	H (HEX)	Panel Drill Size	Max Panel Thickness	Working pressure psig (bar)
OBHU-4	1/4	47.8	26.9	4.6	3/4	14.7	9.1	14300 (980)
OBHU-8	1/2	53.1	30.2	10.2	1-1/16	22.6	10.2	11100 (760)

### Reducing Union

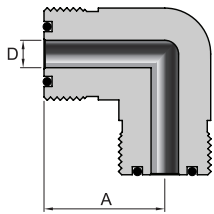


Part No.	Size (inch)	H (HEX)	L	D	Working pressure psig (bar)
ORU-8-4	1/2x1/4	15/16	36.3	4.6	11100 (760)

- Dimensions and Drawings are for reference only and are subject to change without prior notice.
- Unless otherwise specified, all dimensions are in millimeters.
- Sizes, pressure classes, and end connections not listed are available upon request.
- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

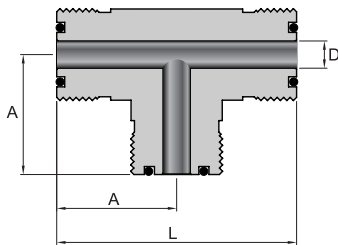
## BODIES

### Elbow



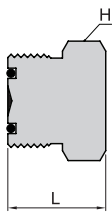
Part No.	Size (inch)	L	D	Working pressure psig (bar)
OE-4	1/4	24.4	4.6	14300 (980)
OE-8	1/2	32.0	10.2	11100 (760)
OE-12	3/4	37.6	15.7	10900 (750)
OE-16	1	39.6	22.1	8800 (600)

### Tee



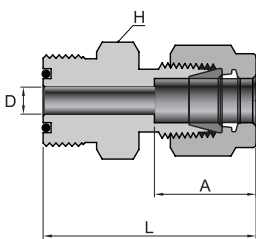
Part No.	Size (inch)	L	A	D	Working pressure psig (bar)
OT-4	1/4	48.8	24.4	4.6	14300 (980)
OT-8	1/2	64.0	32.0	10.2	11100 (760)
OT-12	3/4	75.2	37.6	15.7	10900 (750)
OT-16	1	79.2	39.6	22.1	8800 (600)

### Blind



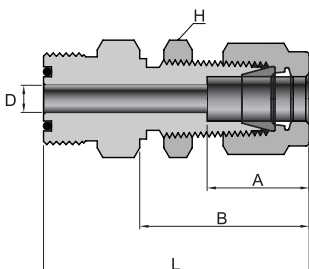
Part No.	Size (inch)	L	H (HEX)
OB-4	1/4	19.6	5/8
OB-8	1/2	22.6	15/16
OB-12	3/4	25.1	1-5/16
OB-16	1	25.9	1-5/8

### Tube Fitting Connector



Part No.	Size (inch)	T (NPT size) (inch)	L	A	D	H (HEX)	Working pressure psig (bar)
OC-4-2	1/4	1/8	35.1	13.0	2.3	5/8	10900 (750)
OC-4-4	1/4	1/4	37.3	15.2	4.6	5/8	10200 (700)
OC-8-6	1/2	3/8	41.9	16.8	7.1	15/16	6500 (440)
OC-8-8	1/2	1/2	45.2	22.9	10.2	15/16	6700 (460)
OC-12-12	3/4	3/4	47.2	24.4	15.7	1-5/16	5800 (580)
OC-16-16	1	1	52.3	31.2	22.1	1-5/8	4700 (320)

### Tube Fitting Bulkhead Connector

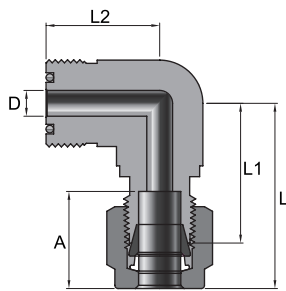


Part No.	Size (inch)	Tube size (inch)	L	A	B	D	H (HEX)	Panel Drill Size	Max Panel Thickness	Working pressure psig (bar)
OBHC-4-4N	1/4	1/4	53.3	15.2	33.5	4.6	5/8	11.5	10.2	10200 (700)
OBHC-8-6N	1/2	3/8	59.4	16.8	36.8	7.1	15/16	14.7	11.2	6500 (440)
OBHC-8-8N	1/2	1/2	64.8	22.9	41.9	10.2	15/16	19.4	12.7	6700 (460)
OBHC-12-12N	3/4	3/4	72.6	24.4	47.5	15.7	1-5/16	25.8	16.8	5800 (390)
OBHC-16-16N	1	1	83.6	31.2	57.4	22.1	1-5/8	33.7	19.1	4700 (320)

- Dimensions and Drawings are for reference only and are subject to change without prior notice.
- Unless otherwise specified, all dimensions are in millimeters.
- Sizes, pressure classes, and end connections not listed are available upon request.
- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

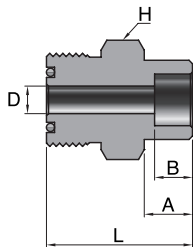
## BODIES

### Tube Fitting Elbow



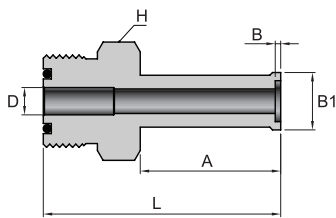
Part No.	Size (inch)	Tube size (inch)	L	L1	L2	A	D	Working pressure psig (bar)
OTE-4-4	1/4	1/4	30.2	22.9	24.4	15.2	4.6	10200 (700)
OTE-8-6	1/2	3/8	35.3	27.9	32.0	16.8	7.1	6500 (440)
OTE-8-8	1/2	1/2	38.1	27.9	32.0	22.9	10.2	6700 (460)
OTE-12-12	3/4	3/4	45.7	35.6	37.6	24.4	15.7	5800 (390)
OTE-16-16	1	1	51.8	39.6	39.6	31.2	22.1	4700 (320)

### Socket Weld Connector



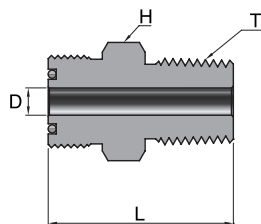
Part No.	Size (inch)	Tube size (inch)	L	A	D	B	H (HEX)	Working pressure psig (bar)
OWC-2-2	1/8	1/8	22.4	2.5	2.3	7.4	5/8	12600 (860)
OWC-4-4	1/4	1/4	27.7	7.1	4.6	9.7	5/8	6800 (460)
OWC-6-6	3/8	3/8	32.5	7.9	7.1	15.2	15/16	8100 (550)
OWC-8-8	1/2	1/2	34.0	9.7	10.2	15.2	15/16	3000 (200)
OWC-12-12	3/4	3/4	38.1	11.2	15.7	23.4	1-5/16	3700 (250)
OWC-16-16	1	1	43.7	15.7	22.1	30.2	1-5/8	3000 (200)

### Automatic Tube Weld Connector



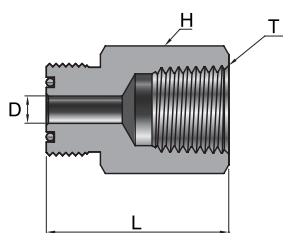
Part No.	Size (inch)	Tube size (inch)	L	A	B	D	B1	H (HEX)	Wall Thickness	Working pressure psig (bar)
OAWC-4-4	1/4	1/4	40.4	19.8	0.51	4.6	7.4	5/8	0.9	5100 (350)
OAWC-8-6	1/2	3/8	44.2	20.0	0.76	7.9	10.4	15/16	0.9	3300 (220)
OAWC-8-8	1/2	1/2	44.4	20.3	1.0	10.2	14.0	15/16	1.2	3500 (240)
OAWC-12-12	3/4	3/4	45.2	20.3	1.0	16.5	20.3	1-5/16	1.2	2200 (150)
OAWC-16-16	1	1	51.6	25.4	1.0	22.1	26.9	1-5/8	1.7	2200 (150)

### Male NPT Connector



Part No.	Size (inch)	T (NPT size) (inch)	L	D	H (HEX)	Working pressure psig (bar)
OMC-4-2N	1/4	1/8	29.5	4.6	5/8	10000 (680)
OMC-4-4N	1/4	1/4	34.0	4.6	5/8	13400 (920)
OMC-8-6N	1/2	3/8	37.1	9.7	15/16	7800 (530)
OMC-8-8N	1/2	1/2	41.9	10.2	15/16	10000 (680)
OMC-12-12N	3/4	3/4	44.4	15.7	1-5/16	7300 (500)
OMC-16-16N	1	1	50.0	22.1	1-5/8	5300 (360)

### Female NPT Connector

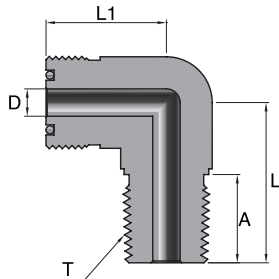


Part No.	Size (inch)	T (NPT size) (inch)	L	D	H (HEX)	Working pressure psig (bar)
OFC-4-2N	1/4	1/8	31.8	4.6	5/8	8400 (570)
OFC-4-4N	1/4	1/4	35.3	4.6	3/4	6600 (450)
OFC-8-6N	1/2	3/8	39.9	10.2	15/16	6600 (450)
OFC-8-8N	1/2	1/2	45.0	10.2	1-1/16	4900 (330)
OFC-12-12N	3/4	3/4	49.0	15.7	1-5/16	4600 (310)
OFC-16-16N	1	1	51.3	22.1	1-5/8	4400 (300)

- Dimensions and Drawings are for reference only and are subject to change without prior notice.
- Unless otherwise specified, all dimensions are in millimeters.
- Sizes, pressure classes, and end connections not listed are available upon request.
- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

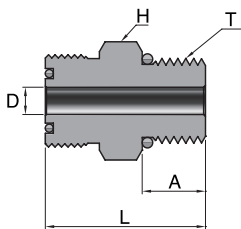
## BODIES

### Male Elbow



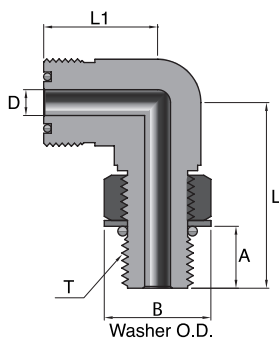
Part No.	Size (inch)	T (NPT size) (inch)	L	L1	A	D	Working pressure psig (bar)
OME-4-2N	1/4	1/8	22.1	24.4	9.7	4.6	10000 (680)
OME-4-4N	1/4	1/4	26.7	24.4	14.2	4.6	8000 (550)
OME-8-6N	1/2	3/8	32.0	32.0	14.2	9.7	7800 (530)
OME-8-8N	1/2	1/2	36.8	32.0	19.1	10.2	7700 (530)
OME-12-12N	3/4	3/4	42.4	37.6	19.1	15.7	7300 (500)
OME-16-16N	1	1	49.3	39.6	23.9	22.1	5300 (360)

### Male SAE/MS Connector



Part No.	Size (inch)	T (Straight Thread Size)	L	A	D	H (HEX)	Working pressure psig (bar)
OSMC- 4 - 4U	1/4	7/16-20	31.5	9.1	4.6	11/16	4500 (310)
OSMC- 4 - 6U	1/4	9/16-18	29.7	9.9	4.6	11/16	4500 (310)
OSMC- 8 - 4U	1/2	7/16-20	34.5	9.1	4.6	15/16	4500 (310)
OSMC- 8 - 6U	1/2	9/16-18	35.3	9.9	7.6	15/16	4500 (310)
OSMC- 8 - 8U	1/2	3/4-16	37.3	11.2	10.2	1	4500 (310)
OSMC-12-12U	3/4	1-1/16-12	43.9	15.0	15.7	1-3/8	3600 (240)
OSMC-16-16U	1	1-5/16-12	45.5	15.0	21.6	1-5/8	2900 (190)

### Male SAE/MS Positionable Elbow



Part No.	Size (inch)	T (Straight Thread Size)	L	L1	A	B	D	Working pressure psig (bar)
OSPE - 4 - 4U	1/4	7/16-20	30.2	24.4	9.9	16.5	4.6	4500 (310)
OSPE - 8 - 6U	1/2	9/16-18	39.1	33.8	11.2	20.1	7.6	3600 (240)
OSPE - 8 - 8U	1/2	3/4-16	41.9	33.8	12.7	25.7	10.2	3600 (240)
OSPE-12-12U	3/4	1-1/16-12	54.1	38.9	16.8	36.6	15.7	2900 (190)
OSPE-16-16U	1	1-5/16-12	58.7	43.7	16.8	43.9	22.1	2300 (150)

- Dimensions and Drawings are for reference only and are subject to change without prior notice.
- Unless otherwise specified, all dimensions are in millimeters.
- Sizes, pressure classes, and end connections not listed are available upon request.
- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.