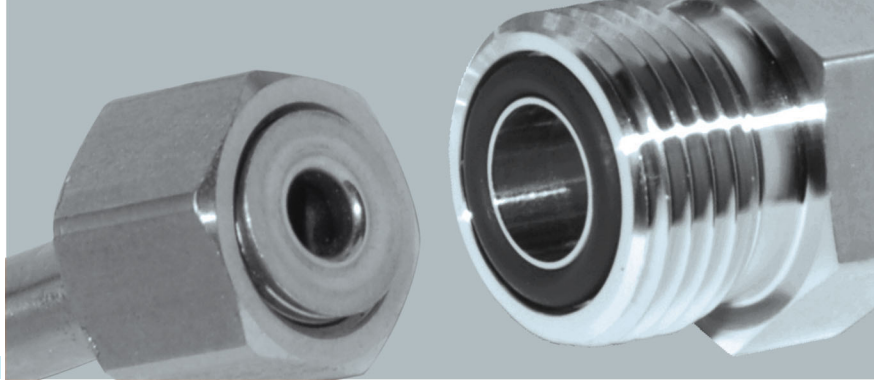


**Hy-Lok**



# O-ring Face Seal Tube Fittings

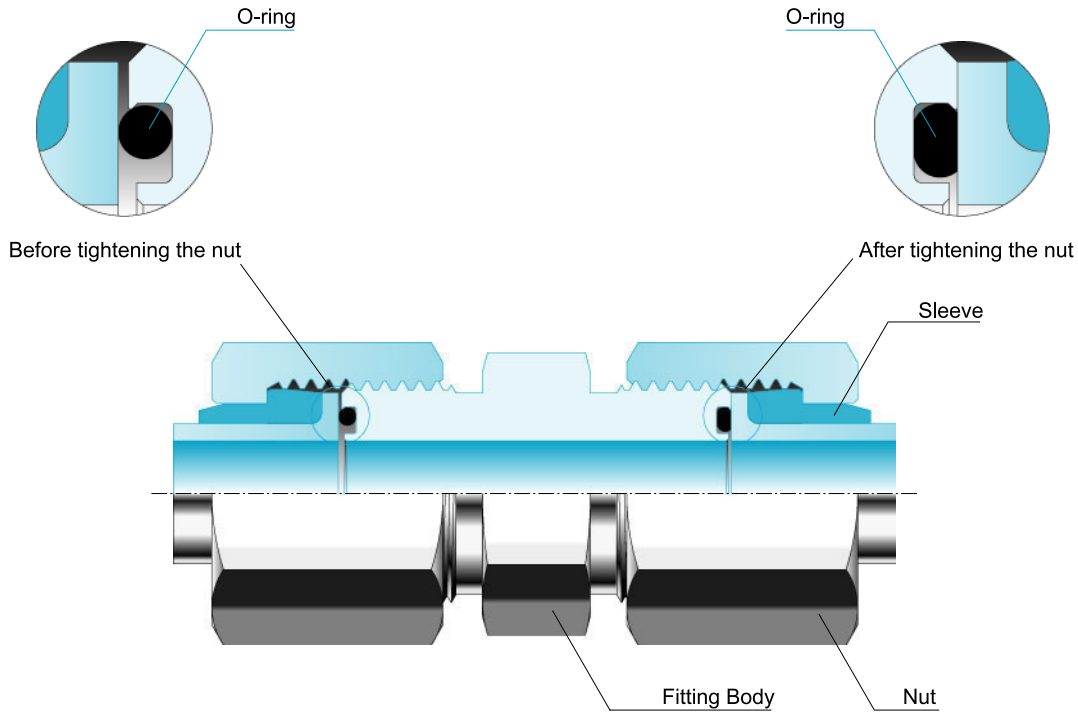
for SAE J1453 & ISO 8434 Part3



**HY-LOK CORPORATION**

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# O-ring Face Seal Tube Fittings



## Features, Advantage, Benefit

Feature	Advantage	Benefit
Conformance to SAE J1453 and ISO 8434-3	Suitable for a wider range of global markets	Global acceptance and availability
Elastomeric Seal	Tolerant of surface imperfections	Provides leak-free connection
High pressure rating	Up to 9200 psig depending on size	Good for wider range of applications
No tube entry	Easy and fast drop-in installation	Saves assembly and disassembly time
Captive O-ring groove(CORG)	Prevents O-ring fall-out	ensures positive and leak-free connection
Close to envelope size of 37° flared fitting	Minimal or no re-design hydraulic systems	Re-design costs are minimized
Resistant of overtorque	Prevents O-ring fall-out	ensures positive and leak-free connection
Unlimited reusability / remakeability	Extends the service life of the fitting	Reduces maintenance costs and component replacement costs
Forged shapes	Stronger than braze shapes	Provides the highest Quality in shaped fitting
	Higher resistance to mechanical shock and vibration	
Hyflange method of assembly	No open flame or heat source required	Improves operator safety
	No braze joint or potetial leak path	Provides consistency in quality
	Accommodates the use of plated component such as fitting and tube	Eliminates special corrosion-resistant treatment

## Application

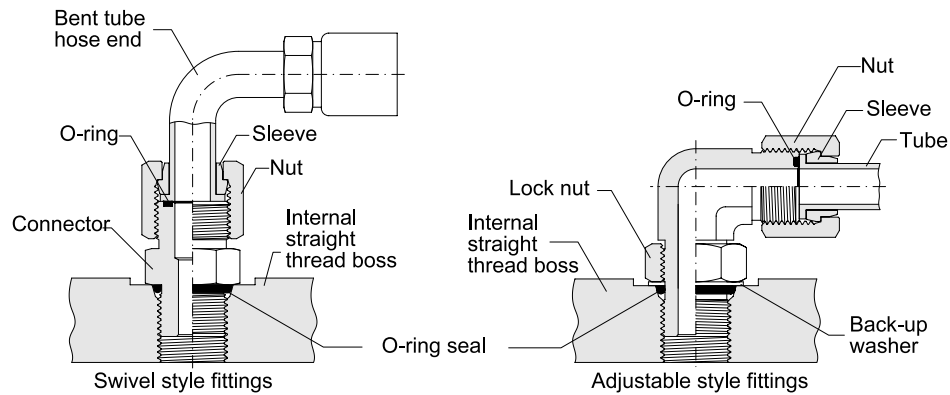


Fig. A1. Typical example of tube and/or hose connection to adapter

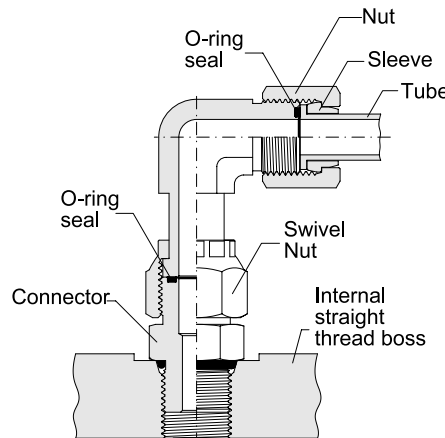


Fig. A2. Example of tube and/or hose connection to swivel elbow

## Tube Wall Thickness

Recommended min/max tube wall thickness for inch and metric ORFS fitting are provided in Table A1 and Table A2 respectively. When using the braze method, all tube wall thickness can be used.

Note : Brazing to attach the sleeve can be used for all wall thickness

Size		Steel, Alloy Steel, St. Steel, Copper, Monel
O.D Inches.	Dash Number	SAE O-Ring Face Seal
1/4	- 4	0.020 - 0.083
3/8	- 6	0.020 - 0.109
1/2	- 8	0.028 - 0.148
5/8	- 10	0.035 - 0.134
3/4	- 12	0.035 - 0.148
1	- 16	0.035 - 0.188
1 1/4	- 20	0.049 - 0.220
1 1/2	- 24	0.049 - 0.250

Table. A1. Recommended "Min./Max." Tube Wall Thickness for Inch ORFS fitting

O.D Size in mm	Steel, Alloy Steel, Stainless Steel, Copper, Monel	Used with Fitting Size
	Wall Thickness in mm	
6	0.5 - 2.25	- 4
8	1.0 - 2.5	- 6
10	1.0 - 3.0	- 6
12	1.0 - 3.5	- 8
14	1.0 - 4.0	- 10
15	1.0 - 3.0	- 10
16	1.0 - 3.0	- 10
18	1.0 - 3.0	- 12
20	1.5 - 4.0	- 12
22	1.0 - 3.0	- 16
25	2.0 - 5.0	- 16
28	1.5 - 5.0	- 20
30	2.0 - 5.0	- 20
32	2.0 - 2.5	- 20
35	2.0 - 6.0	- 24
35	2.5 - 7.0	- 24

Table. A2. Recommended Min./Max. Tube Wall Thickness for Metric ORFS fitting

## Threads

Internal and external straight threads conform to the unified national class 2A and Class 2B series respectively, with modified minor diameters where specified. Plated external threads may conform to class 3A maximum diameters after plating.

Tube To Tube Union

Union  
**OFU**



5

Bulkhead Union 45° Elbow  
**OFBLB**



8

Straight Thread 45° Male Elbow  
**OFSLB**



12

Tube to ORFS Swivel

Swivel to Tube Elbow  
**OFSSL**



17

Cap  
**OFCA**



20

Union Elbow  
**OFL**



5

Bulkhead Union Run Tee  
**OFBRT**



8

Straight Thread Male Run Tee  
**OFSRT**



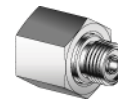
13

Tube to Branch Swivel  
**OFSSBT**



17

Tube End Reducer  
**OFTER**



20

Union Tee  
**OFT**



6

Tube To Straight Thread UNF

Straight Thread Male Connector  
**OFSC**



96

Straight Thread Male Branch Tee  
**OFSBT**



13

Tube to Run Swivel  
**OFSSRT**



18

Spare Parts

Nut  
**OFN**



21

Union Cross  
**OFC**



6

Straight Thread Hex Long Male Connector  
**OFHLSC**



10

Straight Thread Long Male Elbow  
**OFSLLA**



14

Swivel to SAE/MS Male Connector  
**OFSSC**



18

Sleeve  
**OFS**



21

Bulkhead Union  
**OFBU**



7

Straight Thread Long Male Connector  
**OFLSC**



10

Straight Thread Male Run & Branch Bulkhead Tee  
**OFSRBBT**



14

Swivel to SAE/MS Male Elbow  
**OFSSLA**



19

Bulkhead Lock Nut  
**OFLN**



23

Bulkhead Union Elbow  
**OFBL**



7

Straight Thread Male Elbow  
**OFSLA**



11

Straight Thread Male Branch Cross  
**OFSRBC**



15

Etc.

Plug  
**OFP**

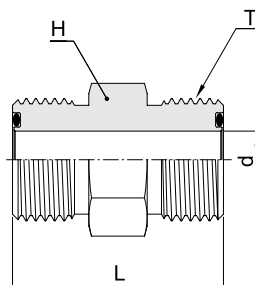


19

Union

**OFU**

SAE 520101

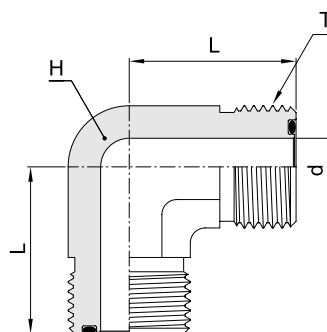


Part No.	Tube OD		H Width across flat		d	L	T Tube End UN/UNF-2A	PN(bar)	
	in	mm	in	mm				Steel	Stainless Steel
OFU - 4	1/4	6.35	5/8	15.87	4.37	27.43	9/16 - 18	630	630
OFU - 6	3/8	9.52	3/4	19.05	6.71	30.99	11/16 - 16	630	630
OFU - 8	1/2	12.70	7/8	22.22	9.60	35.31	13/16 - 16	630	630
OFU - 10	5/8	15.87	1 1/16	6.98	12.29	42.67	1 - 14	420	420
OFU - 12	3/4	19.05	1 1/4	31.75	15.47	46.99	1 3/16 - 12	420	420
OFU - 16	1	25.40	1 1/2	38.10	20.60	49.28	1 7/16 - 12	420	420
OFU - 20	1 1/4	31.75	1 3/4	44.45	26.00	51.31	1 11/16 - 12	420	280
OFU - 24	1 1/2	38.10	2 1/8	53.98	32.00	53.09	2 - 12	350	280

Union Elbow

**OFL**

SAE 520201



Part No.	Tube OD		H Width across flat		d	L	T Tube End UN/UNF-2A	PN(bar)	
	in	mm	in	mm				Steel	Stainless Steel
OFL - 4	1/4	6.35	9/16	14.28	4.37	21.59	9/16 - 18	630	630
OFL - 6	3/8	9.52	3/4	19.05	6.71	24.89	11/16 - 16	630	630
OFL - 8	1/2	12.70	3/4	19.05	9.60	27.94	13/16 - 16	630	630
OFL - 10	5/8	15.87	1 1/16	26.98	12.29	33.27	1 - 14	420	420
OFL - 12	3/4	19.05	1 3/16	30.16	15.47	37.34	1 3/16 - 12	420	420
OFL - 16	1	25.40	1 7/16	36.51	20.60	41.66	1 7/16 - 12	420	420
OFL - 20	1 1/4	31.75	1 5/8	41.27	26.00	44.70	1 11/16 - 12	350	280
OFL - 24	1 1/2	38.10	1 7/8	47.62	32.00	48.77	2 - 12	280	280

O-Ring of NBR(e.g. perbunan) standard. Other seal material can be used upon request.  
 Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

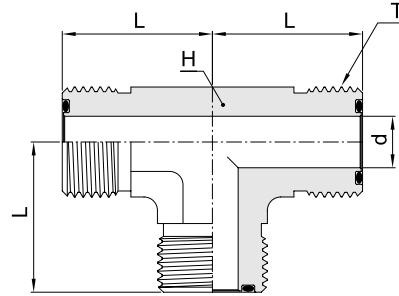
All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

## O-ring Face Seal Tube Fittings

Union Tee

**OFT**

SAE 520401

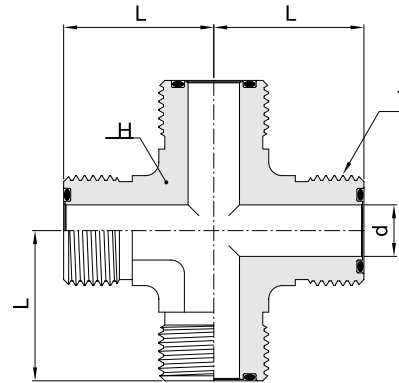


Part No.	Tube OD		H Width across flat		d	L	T Tube End UN/UNF-2A	PN(bar)	
	in	mm	in	mm				Steel	Stainless Steel
OFT - 4	1/4	6.35	9/16	14.28	4.37	27.43	9/16 - 18	630	630
OFT - 6	3/8	9.52	3/4	19.05	6.71	30.99	11/16 - 16	630	630
OFT - 8	1/2	12.70	3/4	19.05	9.60	35.31	13/16 - 16	630	630
OFT - 10	5/8	15.87	1 1/16	26.98	12.29	42.67	1 - 14	420	420
OFT - 12	3/4	19.05	1 3/16	30.16	15.47	46.99	1 3/16 - 12	420	420
OFT - 16	1	25.40	1 7/16	36.51	20.60	49.28	1 7/16 - 12	420	420
OFT - 20	1 1/4	31.75	1 5/8	41.27	26.00	51.31	1 11/16 - 12	350	280
OFT - 24	1 1/2	38.10	1 7/8	47.62	32.00	53.09	2 - 12	280	280

Union Cross

**OFX**

SAE 520501



Part No.	Tube OD		H Width across flat		d	L	T Tube End UN/UNF-2A	PN(bar)	
	in	mm	in	mm				Steel	Stainless Steel
OFX - 4	1/4	6.35	9/16	14.28	4.37	21.59	9/16 - 18	630	630
OFX - 6	3/8	9.52	3/4	19.05	6.71	24.89	11/16 - 16	630	630
OFX - 8	1/2	12.70	3/4	19.05	9.60	27.94	13/16 - 16	630	630
OFX - 10	5/8	15.87	1 1/16	26.98	12.29	33.27	1 - 14	420	420
OFX - 12	3/4	19.05	1 3/16	30.16	15.47	37.34	1 3/16 - 12	420	420
OFX - 16	1	25.40	1 7/16	36.51	20.60	41.66	1 7/16 - 12	420	420
OFX - 20	1 1/4	31.75	1 5/8	41.27	26.00	44.70	1 11/16 - 12	350	280
OFX - 24	1 1/2	38.10	1 7/8	47.62	32.00	48.77	2 - 12	280	280

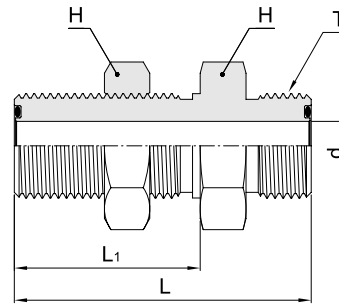
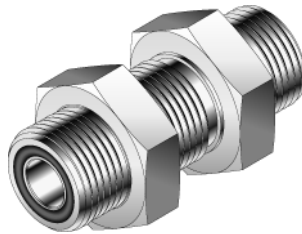
O-Ring of NBR(e.g. perbunan) standard. Other seal material can be used upon request.  
Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

Bulkhead Union

**OFBU**

SAE 520601

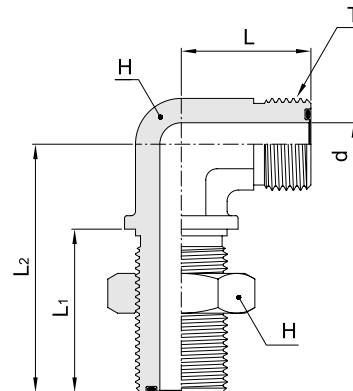
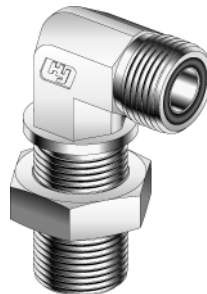


Part No.	Tube OD		H Width across flat		d	L	L <sub>1</sub>	T Tube End UN/UNF-2A	Panel Hole Drill Size	Panel Max Thickness	PN(bar)	
	in	mm	in	mm							Steel	Stainless Steel
OFBU - 4	1/4	6.35	13/16	20.64	4.37	48.26	31.50	9/16 - 18	14.22	13.46	630	630
OFBU - 6	3/8	9.52	1	25.40	6.71	53.09	34.04	11/16 - 16	17.53	13.46	630	630
OFBU - 8	1/2	12.70	1 1/8	28.58	9.60	58.42	36.58	13/16 - 16	20.57	13.46	630	630
OFBU - 10	5/8	15.87	1 5/16	33.33	12.29	66.55	40.64	1 - 14	25.40	13.21	420	420
OFBU - 12	3/4	19.05	1 1/2	38.10	15.47	69.09	41.66	1 3/16 - 12	30.23	12.70	420	420
OFBU - 16	1	25.40	1 3/4	44.45	20.60	70.10	42.16	1 7/16 - 12	36.58	12.95	420	420
OFBU - 20	1 1/4	31.75	2	50.80	26.00	70.10	42.16	1 11/16 - 12	42.93	12.95	420	280
OFBU - 24	1 1/2	38.10	2 3/8	60.33	32.00	70.10	42.16	2 - 12	50.80	12.95	350	280

Bulkhead Union Elbow

**OFBL**

SAE 520701



Part No.	Tube OD		H Width across flat		d	L	L <sub>1</sub>	L <sub>2</sub>	T Tube End UN/UNF-2A	Panel Hole Drill Size	Panel Max Thickness	PN(bar)	
	in	mm	in	mm								Steel	Stainless Steel
OFBL - 4	1/4	6.35	9/16	14.28	4.37	22.61	31.50	46.99	9/16 - 18	14.22	13.46	630	630
OFBL - 6	3/8	9.52	3/4	19.05	6.71	25.91	34.04	52.07	11/16 - 16	17.53	13.46	630	630
OFBL - 8	1/2	12.70	3/4	19.05	9.60	28.96	36.58	55.37	13/16 - 16	20.57	13.46	630	630
OFBL - 10	5/8	15.87	1 1/16	26.98	12.29	34.54	40.64	62.99	1 - 14	25.40	13.21	420	420
OFBL - 12	3/4	19.05	1 3/16	30.16	15.47	38.61	41.66	67.31	1 3/16 - 12	30.23	12.70	420	420
OFBL - 16	1	25.40	1 7/16	36.51	20.60	42.42	42.16	71.12	1 7/16 - 12	36.58	12.95	420	420
OFBL - 20	1 1/4	31.75	1 5/8	41.27	26.00	45.47	42.16	75.44	1 11/16 - 12	42.93	12.95	350	280
OFBL - 24	1 1/2	38.10	1 7/8	47.62	32.00	49.53	42.16	79.50	2 - 12	50.80	12.95	280	280

O-Ring of NBR(e.g. perbunan) standard. Other seal material can be used upon request.  
 Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

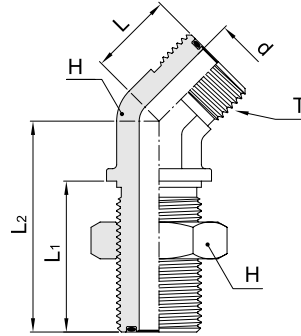
All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

## O-ring Face Seal Tube Fittings

Bulkhead Union 45° Elbow

### OFBLB

SAE 520801

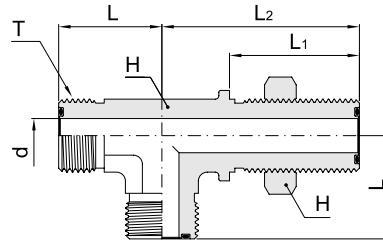


Part No.	Tube OD		H Width across flat		d	L	L <sub>1</sub>	L <sub>2</sub>	T Tube End UN/UNF-2A	Panel Hole Drill Size	Panel Max Thickness	PN(bar)
	in	mm	in	mm								
OFBLB - 4	1/4	6.35	9/16	14.28	4.37	16.00	31.50	43.94	9/16 - 18	14.22	13.46	630
OFBLB - 6	3/8	9.52	3/4	19.05	6.71	18.80	34.04	48.51	11/16 - 16	17.53	13.46	630
OFBLB - 8	1/2	12.70	3/4	19.05	9.60	20.32	36.58	51.05	13/16 - 16	20.57	13.46	630
OFBLB - 10	5/8	15.87	1 1/16	26.98	12.29	23.37	40.64	56.64	1 - 14	25.40	13.21	420
OFBLB - 12	3/4	19.05	1 3/16	30.16	15.47	25.91	41.66	60.71	1 3/16 - 12	30.23	12.70	420
OFBLB - 16	1	25.40	1 7/16	36.51	20.60	29.97	42.16	65.28	1 7/16 - 12	36.58	12.95	420
OFBLB - 20	1 1/4	31.75	1 5/8	41.27	26.00	32.00	42.16	67.06	1 11/16 - 12	42.93	12.95	350
OFBLB - 24	1 1/2	38.10	1 7/8	47.62	32.00	36.83	42.16	67.06	2 - 12	50.80	12.95	280

Bulkhead Union Run Tee

### OFBRT

SAE 520908



Part No.	Tube OD		H Width across flat		d	L	L <sub>1</sub>	L <sub>2</sub>	T Tube End UN/UNF-2A	Panel Hole Drill Size	Panel Max Thickness	PN(bar)
	in	mm	in	mm								
OFBRT - 4	1/4	6.35	9/16	14.28	4.37	22.61	31.50	46.99	9/16 - 18	14.22	13.46	630
OFBRT - 6	3/8	9.52	3/4	19.05	6.71	25.91	34.04	52.07	11/16 - 16	17.53	13.46	630
OFBRT - 8	1/2	12.70	3/4	19.05	9.60	28.96	36.58	55.37	13/16 - 16	20.57	13.46	630
OFBRT - 10	5/8	15.87	1 1/16	26.98	12.29	34.54	40.64	62.99	1 - 14	25.40	13.21	420
OFBRT - 12	3/4	19.05	1 3/16	30.16	15.47	38.61	41.66	67.31	1 3/16 - 12	30.23	12.70	420
OFBRT - 16	1	25.40	1 7/16	36.51	20.60	42.42	42.16	71.12	1 7/16 - 12	36.58	12.95	420
OFBRT - 20	1 1/4	31.75	1 5/8	41.27	26.00	45.47	42.16	75.44	1 11/16 - 12	42.93	12.95	350
OFBRT - 24	1 1/2	38.10	1 7/8	47.62	32.00	49.53	42.16	79.50	2 - 12	50.80	12.95	280

O-Ring of NBR(e.g. perbunan) standard. Other seal material can be used upon request.  
Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

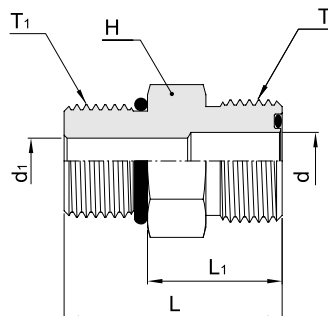
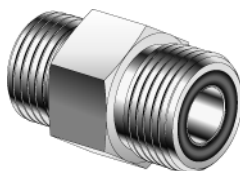
All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.



Straight Thread Male Connector

**OFSC**

SAE 520120



Part No.	Tube OD		H Width across flat		d	d <sub>1</sub>	L <sub>1</sub> After Assy	L	T Tube End UN/UNF-2A	Straight Thread T <sub>1</sub> (U)	PN(bar)	
	in	mm	in	mm							Steel	Stainless Steel
OFSC 4 - 04U	1/4	6.35	5/8	15.87	4.37	4.37	17.78	28.70	9/16 - 18	7/16 - 20	630	630
OFSC 4 - 05U	1/4	6.35	5/8	15.87	4.37	5.99	19.05	28.70	9/16 - 18	1/2 - 20	630	630
OFSC 4 - 06U	1/4	6.35	3/4	19.05	4.37	6.71	18.54	30.48	9/16 - 18	9/16 - 18	630	630
OFSC 4 - 08U	1/4	6.35	7/8	22.22	4.37	9.60	19.56	33.53	9/16 - 18	3/4 - 16	630	630
OFSC 6 - 04U	3/8	9.52	3/4	19.05	6.71	4.37	23.11	34.04	11/16 - 16	7/16 - 20	630	630
OFSC 6 - 05U	3/8	9.52	3/4	19.05	6.71	5.99	21.34	30.99	11/16 - 16	1/2 - 20	630	630
OFSC 6 - 06U	3/8	9.52	3/4	19.05	6.71	6.71	19.81	31.75	11/16 - 16	9/16 - 18	630	630
OFSC 6 - 08U	3/8	9.52	7/8	22.22	6.71	9.60	21.08	35.05	11/16 - 16	3/4 - 16	630	630
OFSC 6 - 10U	3/8	9.52	1	25.40	6.71	12.29	22.86	38.86	11/16 - 16	7/8 - 14	420	420
OFSC 8 - 06U	1/2	12.70	7/8	22.22	9.60	6.71	25.40	37.34	13/16 - 16	9/16 - 18	630	630
OFSC 8 - 08U	1/2	12.70	7/8	22.22	9.60	9.60	22.61	36.56	13/16 - 16	3/4 - 16	420	420
OFSC 8 - 10U	1/2	12.70	1	25.40	9.60	12.29	24.38	40.39	13/16 - 16	7/8 - 14	420	420
OFSC 8 - 12U	1/2	12.70	1 1/4	31.75	9.60	15.47	25.91	44.45	13/16 - 16	1 1/16 - 12	420	420
OFSC 8 - 16U	1/2	12.70	1 1/2	38.10	9.60	20.60	26.92	45.47	13/16 - 16	1 5/16 - 12	420	420
OFSC 10 - 08U	5/8	15.87	1 1/16	26.98	12.29	9.60	31.24	45.21	1 - 14	3/4 - 16	420	420
OFSC 10 - 10U	5/8	15.87	1 1/16	26.98	12.29	12.29	27.18	43.18	1 - 14	7/8 - 14	420	420
OFSC 10 - 12U	5/8	15.87	1 1/4	31.75	12.29	15.47	28.70	47.24	1 - 14	1 1/16 - 12	420	420
OFSC 12 - 08U	3/4	19.05	1 1/4	31.75	15.47	9.60	34.54	48.51	1 3/16 - 12	3/4 - 16	420	420
OFSC 12 - 10U	3/4	19.05	1 1/4	31.75	15.47	12.29	34.54	50.55	1 3/16 - 12	7/8 - 14	420	420
OFSC 12 - 12U	3/4	19.05	1 1/4	31.75	15.47	15.47	30.23	48.77	1 3/16 - 12	1 1/16 - 12	420	420
OFSC 12 - 16U	3/4	19.05	1 1/2	38.10	15.47	20.60	31.24	49.78	1 3/16 - 12	1 5/16 - 12	420	420
OFSC 16 - 12U	1	25.40	1 1/2	38.10	20.60	15.47	35.81	54.36	1 7/16 - 12	1 1/16 - 12	420	420
OFSC 16 - 16U	1	25.40	1 1/2	38.10	20.60	20.60	31.75	50.29	1 7/16 - 12	1 5/16 - 12	420	420
OFSC 16 - 20U	1	25.40	1 7/8	47.62	20.60	26.00	33.78	52.32	1 7/16 - 12	1 5/8 - 12	420	280
OFSC 20 - 16U	1 1/4	31.75	1 7/8	47.62	26.00	20.60	39.37	57.91	1 11/16 - 12	1 5/16 - 12	420	280
OFSC 20 - 20U	1 1/4	31.75	1 7/8	47.62	26.00	26.00	33.78	52.32	1 11/16 - 12	1 5/8 - 12	420	280
OFSC 20 - 24U	1 1/4	31.75	2 1/8	53.98	26.00	32.00	35.56	54.10	1 11/16 - 12	1 7/8 - 12	350	280
OFSC 24 - 20U	1 1/2	38.10	2 1/8	53.98	32.00	26.00	41.15	59.69	2 - 12	1 5/8 - 12	350	280
OFSC 24 - 24U	1 1/2	38.10	2 1/8	53.98	32.00	32.00	35.56	54.10	2 - 12	1 7/8 - 12	350	280

O-Ring of NBR(e.g. perbunan) standard. Other seal material can be used upon request.  
 Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

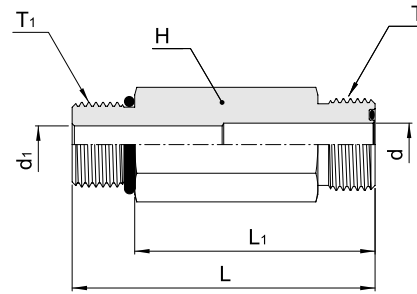
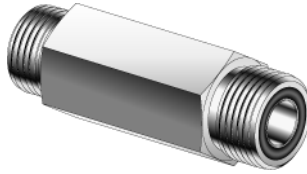
All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

## O-ring Face Seal Tube Fittings

Straight Thread Hex Long Male Connector

### OFHLS

SAE 520122

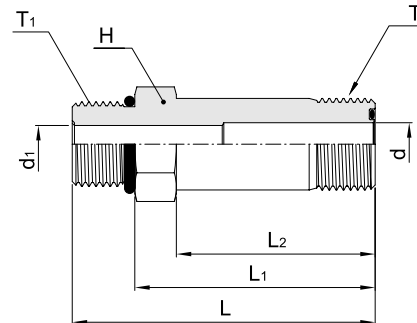
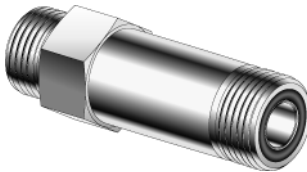


Part No.	Tube OD		H Width across flat		d	d <sub>1</sub>	L <sub>1</sub> After Assy	L	T Tube End UN/UNF-2A	Straight Thread T <sub>1</sub> (U)	PN(bar)	
	in	mm	in	mm							Steel	Stainless Steel
OFHLS 4 - 04U	1/4	6.35	5/8	15.87	4.37	4.37	41.66	52.58	9/16 - 18	7/16 - 20	630	630
OFHLS 6 - 06U	3/8	9.52	3/4	19.05	6.71	6.71	45.72	57.66	11/16 - 16	9/16 - 18	630	630
OFHLS 8 - 08U	1/2	12.70	7/8	22.22	9.60	9.60	54.10	68.07	13/16 - 16	3/4 - 16	630	630
OFHLS 10 - 10U	5/8	15.87	1 1/16	26.98	12.29	12.29	63.50	79.50	1 - 14	7/8 - 14	420	420
OFHLS 12 - 12U	3/4	19.05	1 1/4	31.75	15.47	15.47	76.96	95.50	1 3/16 - 12	1 1/16 - 12	420	420
OFHLS 16 - 16U	1	25.40	1 1/2	38.10	20.60	20.60	86.61	105.16	1 7/16 - 12	1 5/16 - 12	420	420
OFHLS 20 - 20U	1 1/4	31.75	1 7/8	47.62	26.00	26.00	102.36	120.90	1 11/16 - 12	1 5/8 - 12	420	280
OFHLS 24 - 24U	1 1/2	38.10	2 1/8	53.98	32.00	32.00	115.06	133.60	2 - 12	1 7/8 - 12	350	280

Straight Thread Long Male Connector

### OFLS

SAE 520122



Part No.	Tube OD		H Width across flat		d	d <sub>1</sub>	L <sub>1</sub> After Assy	L <sub>2</sub>	L	T Tube End UN/UNF-2A	Straight Thread T <sub>1</sub> (U)	PN(bar)	
	in	mm	in	mm								Steel	Stainless Steel
OFLS 4 - 04U	1/4	6.35	5/8	15.87	4.37	4.37	41.66	33.78	52.58	9/16 - 18	7/16 - 20	630	630
OFLS 6 - 06U	3/8	9.52	3/4	19.05	6.71	6.71	45.72	36.83	57.66	11/16 - 16	9/16 - 18	630	630
OFLS 8 - 08U	1/2	12.70	7/8	22.22	9.60	9.60	54.10	44.20	68.07	13/16 - 16	3/4 - 16	630	630
OFLS 10 - 10U	5/8	15.87	1 1/16	26.98	12.29	12.29	63.50	51.82	79.50	1 - 14	7/8 - 14	420	420
OFLS 12 - 12U	3/4	19.05	1 1/4	31.75	15.47	15.47	76.96	52.07	95.50	1 3/16 - 12	1 1/16 - 12	420	420
OFLS 16 - 16U	1	25.40	1 1/2	38.10	20.60	20.60	86.61	72.39	105.16	1 7/16 - 12	1 5/16 - 12	420	420
OFLS 20 - 20U	1 1/4	31.75	1 7/8	47.62	26.00	26.00	102.36	86.11	120.90	1 11/16 - 12	1 5/8 - 12	420	280
OFLS 24 - 24U	1 1/2	38.10	2 1/8	53.98	32.00	32.00	115.06	97.03	133.60	2 - 12	1 7/8 - 12	350	280

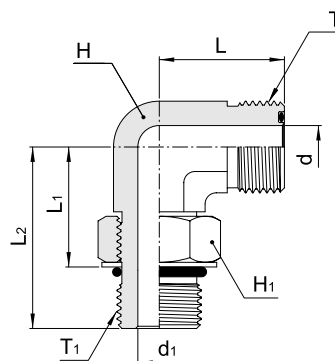
O-Ring of NBR(e.g. perbunan) standard. Other seal material can be used upon request.  
Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

Straight Thread Male Elbow

**OFSLA**

SAE 520220



Part No.	Tube OD		Width across flat				d	d <sub>1</sub>	L <sub>1</sub> After Assy	L	L <sub>2</sub>	T Tube End UN/UNF-2A	Straight Thread T <sub>1</sub> (U)	PN(bar)	
			H		H <sub>1</sub>									Steel	Stainless Steel
	in	mm	in	mm	in	mm									
OFSLA 4 - 04U	1/4	6.35	9/16	14.28	5/8	15.88	4.37	4.37	21.84	21.59	32.77	9/16 - 18	7/16 - 20	420	420
OFSLA 4 - 06U	1/4	6.35	9/16	14.28	3/4	19.05	4.37	6.71	24.89	23.37	36.83	9/16 - 18	9/16 - 18	420	420
OFSLA 4 - 08U	1/4	6.35	3/4	19.05	15/16	23.81	4.37	9.60	26.92	24.64	40.64	9/16 - 18	3/4 - 16	420	420
OFSLA 6 - 04U	3/8	9.52	3/4	19.05	5/8	15.88	6.71	4.37	23.88	24.89	34.80	11/16 - 16	7/16 - 20	420	420
OFSLA 6 - 06U	3/8	9.52	3/4	19.05	3/4	19.05	6.71	6.71	24.89	24.89	36.83	11/16 - 16	9/16 - 18	420	420
OFSLA 6 - 08U	3/8	9.52	3/4	19.05	15/16	23.81	6.71	9.60	26.92	26.42	40.64	11/16 - 16	3/4 - 16	420	420
OFSLA 6 - 10U	3/8	9.52	7/8	22.22	1 1/16	26.98	6.71	12.29	34.04	29.21	50.04	11/16 - 16	7/8 - 14	420	420
OFSLA 6 - 12U	3/8	9.52	1 1/16	26.98	1 3/8	34.92	6.71	12.29	36.58	32.51	55.12	11/16 - 16	7/8 - 14	420	420
OFSLA 8 - 06U	1/2	12.70	3/4	19.05	3/4	19.05	9.60	6.71	24.64	27.94	36.58	13/16 - 16	9/16 - 18	420	420
OFSLA 8 - 08U	1/2	12.70	3/4	19.05	15/16	23.81	9.60	9.60	26.92	27.94	40.64	13/16 - 16	3/4 - 16	420	420
OFSLA 8 - 10U	1/2	12.70	7/8	22.22	1 1/16	26.98	9.60	12.29	34.04	30.73	50.04	13/16 - 16	7/8 - 14	420	420
OFSLA 8 - 12U	1/2	12.70	1 3/16	30.16	1 3/8	34.92	9.60	15.47	36.58	33.53	55.12	13/16 - 16	1 1/16 - 12	420	420
OFSLA 10 - 08U	5/8	15.87	1 1/16	26.98	15/16	23.81	12.29	9.60	32.00	33.27	45.72	1 - 14	3/4 - 16	420	420
OFSLA 10 - 10U	5/8	15.87	1 1/16	26.98	1 1/16	26.98	12.29	12.29	34.04	33.27	50.04	1 - 14	7/8 - 14	420	420
OFSLA 10 - 12U	5/8	15.87	1 3/16	30.16	1 3/8	34.92	12.29	15.47	36.58	35.81	55.12	1 - 14	1 1/16 - 12	420	420
OFSLA 12 - 08U	3/4	19.05	1 3/16	30.16	15/16	23.81	15.47	9.60	33.02	37.34	46.74	1 3/16 - 12	3/4 - 16	420	420
OFSLA 12 - 10U	3/4	19.05	1 3/16	30.16	1 1/16	26.98	15.47	12.29	35.05	37.34	51.05	1 3/16 - 12	7/8 - 14	420	420
OFSLA 12 - 12U	3/4	19.05	1 3/16	30.16	1 3/8	34.92	15.47	15.47	36.58	37.34	55.12	1 3/16 - 12	1 1/16 - 12	420	420
OFSLA 12 - 16U	3/4	19.05	1 7/16	36.51	1 5/8	41.27	15.47	20.60	41.15	41.15	59.69	1 3/16 - 12	1 5/16 - 12	380	380
OFSLA 16 - 12U	1	25.40	1 7/16	36.51	1 3/8	34.92	20.60	15.47	40.39	41.66	58.93	1 7/16 - 12	1 1/16 - 12	420	420
OFSLA 16 - 16U	1	25.40	1 7/16	36.51	1 5/8	41.27	20.60	20.60	41.15	41.66	59.69	1 7/16 - 12	1 5/16 - 12	380	380
OFSLA 16 - 20U	1	25.40	1 5/8	41.27	1 7/8	47.62	20.60	26.00	43.69	44.70	62.23	1 7/16 - 12	1 5/8 - 12	280	280
OFSLA 20 - 16U	1 1/4	31.75	1 5/8	41.27	1 5/8	41.27	26.00	20.60	42.93	44.70	61.47	1 11/16 - 12	1 5/16 - 12	380	280
OFSLA 20 - 20U	1 1/4	31.75	1 5/8	41.27	1 7/8	47.62	26.00	26.00	43.69	44.70	62.23	1 11/16 - 12	1 5/8 - 12	280	280
OFSLA 20 - 24U	1 1/4	31.75	1 7/8	47.62	2 1/8	53.97	26.00	32.00	47.24	48.77	65.79	1 11/16 - 12	1 7/8 - 12	280	280
OFSLA 24 - 20U	1 1/2	38.10	1 7/8	47.62	1 7/8	47.62	32.00	26.00	47.24	48.77	65.79	2 - 12	1 5/8 - 12	280	280
OFSLA 24 - 24U	1 1/2	38.10	1 7/8	47.62	2 1/8	53.97	32.00	32.00	47.24	48.77	65.79	2 - 12	1 7/8 - 12	280	280

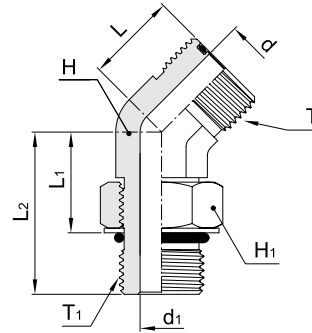
O-Ring of NBR(e.g. perbunan) standard. Other seal material can be used upon request.  
 Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

# O-ring Face Seal Tube Fittings

Straight Thread Male 45° Elbow

**OFSLB**

SAE 520320



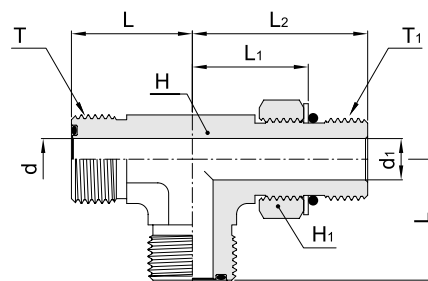
Part No.	Tube OD		Width across flat				d	d <sub>1</sub>	L <sub>1</sub> After Assy	L	L <sub>2</sub>	T Tube End UN/UNF-2A	Straight Thread T <sub>1</sub> (U)	PN(bar)	
	in	mm	H		H <sub>1</sub>									Steel	Stainless Steel
OFSLB 4 - 04U	1/4	6.35	9/16	14.28	5/8	15.88	4.37	4.37	19.05	16.00	29.97	9/16 - 18	7/16 - 20	630	420
OFSLB 4 - 06U	1/4	6.35	3/4	19.05	3/4	19.05	4.37	6.71	21.08	17.27	33.02	9/16 - 18	9/16 - 18	630	420
OFSLB 6 - 04U	3/8	9.52	3/4	19.05	5/8	15.88	6.71	4.37	20.07	18.80	30.99	11/16 - 16	7/16 - 20	630	420
OFSLB 6 - 06U	3/8	9.52	3/4	19.05	3/4	19.05	6.71	6.71	21.08	18.80	33.02	11/16 - 16	9/16 - 18	630	420
OFSLB 6 - 08U	3/8	9.52	3/4	19.05	15/16	23.81	6.71	9.60	22.61	18.80	36.32	11/16 - 16	3/4 - 16	630	420
OFSLB 8 - 06U	1/2	12.70	3/4	19.05	3/4	19.05	9.60	6.71	20.32	20.32	32.26	13/16 - 16	9/16 - 18	630	420
OFSLB 8 - 08U	1/2	12.70	3/4	19.05	15/16	23.81	9.60	9.60	22.61	20.32	36.32	13/16 - 16	3/4 - 16	630	420
OFSLB 8 - 10U	1/2	12.70	7/8	22.22	1 1/16	26.98	9.60	12.29	28.70	20.83	44.70	13/16 - 16	7/8 - 14	420	420
OFSLB 10 - 08U	5/8	15.87	1 1/16	26.98	15/16	23.81	12.29	9.60	26.67	23.37	40.39	1 - 14	3/4 - 16	420	420
OFSLB 10 - 10U	5/8	15.87	1 1/16	26.98	1 1/16	26.98	12.29	12.29	28.70	23.37	44.70	1 - 14	7/8 - 14	420	420
OFSLB 10 - 12U	5/8	15.87	1 3/16	30.16	1 3/8	34.92	12.29	15.47	31.50	24.38	50.04	1 - 14	1 1/16 - 12	420	420
OFSLB 12 - 10U	3/4	19.05	1 3/16	30.16	1 1/16	26.98	15.47	12.29	29.97	25.91	45.97	1 3/16 - 12	7/8 - 14	420	420
OFSLB 12 - 12U	3/4	19.05	1 3/16	30.16	1 3/8	34.92	15.47	15.47	31.50	25.91	50.04	1 3/16 - 12	1 1/16 - 12	420	420
OFSLB 12 - 16U	3/4	19.05	1 7/16	36.51	1 5/8	41.27	15.47	20.60	33.78	29.46	52.32	1 3/16 - 12	1 5/16 - 12	420	380
OFSLB 16 - 12U	1	25.40	1 7/16	36.51	1 3/8	34.92	20.60	15.47	33.02	29.97	51.56	1 7/16 - 12	1 1/16 - 12	420	420
OFSLB 16 - 16U	1	25.40	1 7/16	36.51	1 5/8	41.27	20.60	20.60	33.78	29.97	52.32	1 7/16 - 12	1 5/16 - 12	420	380
OFSLB 16 - 20U	1	25.40	1 5/8	41.27	1 7/8	47.62	20.60	26.00	35.05	32.00	53.59	1 7/16 - 12	1 5/8 - 12	420	280
OFSLB 20 - 20U	1 1/4	31.75	1 5/8	41.27	1 7/8	47.62	26.00	26.00	35.05	32.00	53.59	1 11/16 - 12	1 5/8 - 12	350	280
OFSLB 24 - 24U	1 1/2	38.10	1 7/8	47.62	2 1/8	53.97	32.00	32.00	35.05	36.83	53.59	2 - 12	1 7/8 - 12	280	280

O-Ring of NBR(e.g. perbunan) standard. Other seal material can be used upon request.  
 Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

Straight Thread Male Run Tee

**OFSRT**

SAE 520428

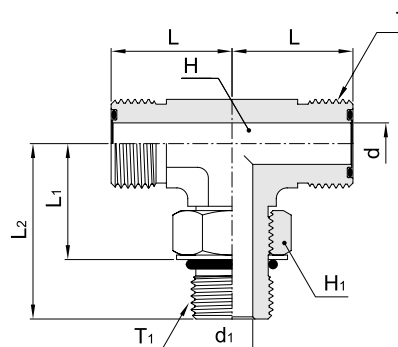


Part No.	Tube OD		Width across flat				d	d <sub>1</sub>	L <sub>1</sub> After Assy	L	L <sub>2</sub>	T Tube End UN/UNF-2A	Straight Thread T <sub>1</sub> (U)	PN(bar)	
			H		H <sub>1</sub>									Steel	Stainless Steel
	in	mm	in	mm	in	mm									
OFSRT 4 - 04U	1/4	6.35	9/16	14.28	5/8	15.88	4.37	4.37	21.84	21.59	32.77	9/16 - 18	7/16 - 20	420	420
OFSRT 6 - 06U	3/8	9.52	3/4	19.05	3/4	19.05	6.71	6.71	24.89	24.89	36.83	11/16 - 16	9/16 - 18	420	420
OFSRT 6 - 08U	3/8	9.52	3/4	19.05	15/16	23.81	6.71	9.60	26.92	26.42	40.64	11/16 - 16	3/4 - 16	420	420
OFSRT 8 - 08U	1/2	12.70	3/4	19.05	15/16	23.81	9.60	9.60	26.92	27.94	40.64	13/16 - 16	3/4 - 16	420	420
OFSRT 10 - 10U	5/8	15.87	1 1/16	26.98	1 1/16	26.98	12.29	12.29	34.04	33.27	50.04	1 - 14	7/8 - 14	420	420
OFSRT 12 - 12U	3/4	19.05	1 3/16	30.16	1 3/8	34.92	15.47	15.47	36.58	37.34	55.12	1 3/16 - 12	1 1/16 - 12	420	420
OFSRT 16 - 16U	1	25.40	1 7/16	36.51	1 5/8	41.27	20.60	20.60	41.15	41.66	59.69	1 7/16 - 12	1 5/16 - 12	380	380
OFSRT 20 - 20U	1 1/4	31.75	1 5/8	41.27	1 7/8	47.62	26.00	26.00	43.69	44.70	62.23	1 11/16 - 12	1 5/8 - 12	280	280
OFSRT 24 - 24U	1 1/2	38.10	1 7/8	47.62	2 1/8	53.97	32.00	32.00	47.24	48.77	65.79	2 - 12	1 7/8 - 12	280	280

Straight Thread Male Branch Tee

**OFSBT**

SAE 520429



Part NO.	Tube OD		Width across flat				d	d <sub>1</sub>	L <sub>1</sub> After Assy	L	L <sub>2</sub>	T Tube End UN/UNF-2A	Straight Thread T <sub>1</sub> (U)	PN(bar)	
			H		H <sub>1</sub>									Steel	Stainless Steel
	in	mm	in	mm	in	mm									
OFSBT 4 - 04U	1/4	6.35	9/16	14.28	5/8	15.88	4.37	4.37	21.84	21.59	32.77	9/16 - 18	7/16 - 20	420	420
OFSBT 6 - 06U	3/8	9.52	3/4	19.05	3/4	19.05	6.71	6.71	24.89	24.89	36.83	11/16 - 16	9/16 - 18	420	420
OFSBT 6 - 08U	3/8	9.52	3/4	19.05	15/16	23.81	6.71	9.60	26.92	26.42	40.64	11/16 - 16	3/4 - 16	420	420
OFSBT 8 - 08U	1/2	12.70	3/4	19.05	15/16	23.81	9.60	9.60	26.92	27.94	40.64	13/16 - 16	3/4 - 16	420	420
OFSBT 10 - 10U	5/8	15.87	1 1/16	26.98	1 1/16	26.98	12.29	12.29	34.04	33.27	50.04	1 - 14	7/8 - 14	420	420
OFSBT 12 - 12U	3/4	19.05	1 3/16	30.16	1 3/8	34.92	15.47	15.47	36.58	37.34	55.12	1 3/16 - 12	1 1/16 - 12	420	420
OFSBT 16 - 16U	1	25.40	1 7/16	36.51	1 5/8	41.27	20.60	20.60	41.15	41.66	59.69	1 7/16 - 12	1 5/16 - 12	380	380
OFSBT 20 - 20U	1 1/4	31.75	1 5/8	41.27	1 7/8	47.62	26.00	26.00	43.69	44.70	62.23	1 11/16 - 12	1 5/8 - 12	280	280
OFSBT 24 - 24U	1 1/2	38.10	1 7/8	47.62	2 1/8	53.97	32.00	32.00	47.24	48.77	65.79	2 - 12	1 7/8 - 12	280	280

O-Ring of NBR(e.g. perbunan) standard. Other seal material can be used upon request.  
 Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

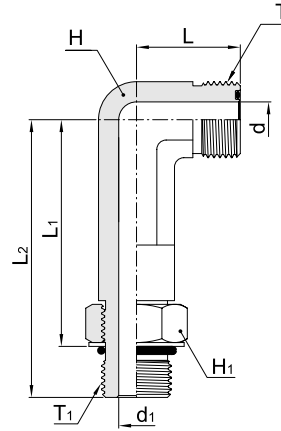
All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

## O-ring Face Seal Tube Fittings

Straight Thread Long Male Elbow

### OFSLLA

SAE 521520

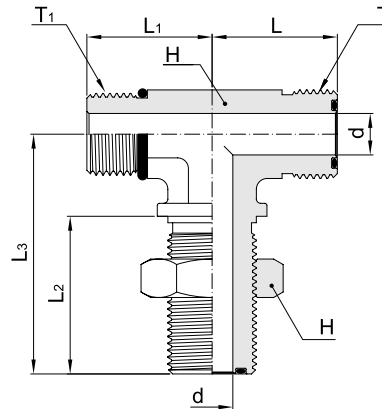


Part No.	Tube OD		Width across flat				d	d <sub>1</sub>	L <sub>1</sub> After Assy	L	L <sub>2</sub>	T Tube End UN/UNF-2A	Straight Thread T <sub>1</sub> (U)	PN (bar)
	in	mm	H		H <sub>1</sub>									
OFSLLA 4 - 04U	1/4	6.35	9/16	14.28	5/8	15.88	4.37	4.37	45.72	21.59	56.64	9/16 - 18	7/16 - 20	420
OFSLLA 6 - 06U	3/8	9.52	3/4	19.05	3/4	19.05	6.71	6.71	54.36	24.89	66.29	11/16 - 16	9/16 - 18	420
OFSLLA 8 - 08U	1/2	12.70	3/4	19.05	15/16	23.81	9.60	9.60	61.21	27.94	74.93	13/16 - 16	3/4 - 16	420
OFSLLA 10 - 10U	5/8	15.87	1 1/16	26.98	1 1/16	26.98	12.29	12.29	73.15	33.27	89.15	1 - 14	7/8 - 14	420
OFSLLA 12 - 12U	3/4	19.05	1 3/16	30.16	1 3/8	34.92	15.47	15.47	82.30	37.34	100.84	1 3/16 - 12	1 1/16 - 12	420
OFSLLA 16 - 16U	1	25.40	1 7/16	36.51	1 5/8	41.27	20.60	20.60	96.01	41.66	114.55	1 7/16 - 12	1 5/16 - 12	380

Straight Thread Run & Bulkhead Branch Tee

### OFSRBBT

SAE 520959



Part No.	Tube OD		H Width across flat		d	L	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	T Tube End UN/UNF-2A	Straight Thread T <sub>1</sub> (U)	Panel Hole Drill Size	Panel Max Thickness	PN(bar)	
	in	mm	in	mm										Steel	Stainless Steel
OFSRBBT 4 - 04U	1/4	6.35	13/16	20.64	4.37	22.61	22.61	31.50	46.99	9/16-18	7/16 - 20	14.22	13.46	630	630
OFSRBBT 6 - 06U	3/8	9.52	1	25.40	6.71	25.91	25.91	34.04	52.07	11/16-16	9/16 - 18	17.53	13.46	630	630
OFSRBBT 8 - 08U	1/2	12.70	1 1/8	28.58	9.60	28.96	28.96	36.58	55.37	13/16-16	3/4 - 16	20.57	13.46	420	420
OFSRBBT 10 - 10U	5/8	15.87	1 5/16	33.33	12.29	34.54	34.54	40.64	62.99	1 - 14	7/8 - 14	25.40	13.21	420	420
OFSRBBT 12 - 12U	3/4	19.05	1 1/2	38.10	15.47	38.61	38.61	41.66	67.31	1 3/16-12	1 1/16 - 12	30.23	12.70	420	420
OFSRBBT 16 - 16U	1	25.40	1 3/4	44.45	20.60	42.42	42.42	42.16	71.12	1 7/16-12	1 5/16 - 12	36.58	12.95	420	420
OFSRBBT 20 - 20U	1 1/4	31.75	2	50.80	26.00	45.47	45.47	42.16	75.44	1 11/16-12	1 11/16 - 12	42.93	12.95	420	280
OFSRBBT 24 - 24U	1 1/2	38.10	2 3/8	60.33	32.00	49.53	49.53	42.16	79.50	2 - 12	2 - 12	50.80	12.95	350	280

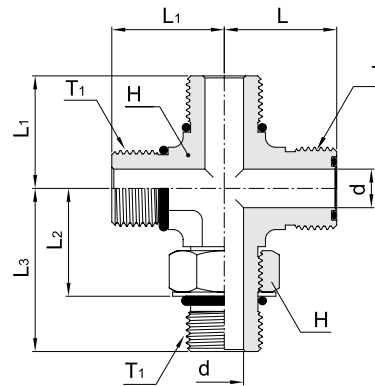
O-Ring of NBR(e.g. perbunan) standard. Other seal material can be used upon request.  
Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

Straight Thread Cross

**OFSRSBC**

SAE 520520



Part No.	Tube OD		H Width across flat		d	L	L <sub>1</sub>	L <sub>2</sub> After Assy	L <sub>3</sub>	T Tube End UN/UNF-2A	Straight Thread T <sub>1</sub> (U)	PN(bar)	
	in	mm	in	mm								Steel	Stainless Steel
OFSRSBC 4 - 04U	1/4	6.35	13/16	20.64	4.37	22.61	22.61	21.84	32.77	9/16 - 18	7/16 - 20	420	420
OFSRSBC 6 - 06U	3/8	9.52	1	25.40	6.71	25.91	25.91	24.89	36.83	11/16 - 16	9/16 - 18	420	420
OFSRSBC 8 - 08U	1/2	12.70	1 1/8	28.58	9.60	28.96	28.96	26.92	40.64	13/16 - 16	3/4 - 16	420	420
OFSRSBC 10 - 10U	5/8	15.87	1 5/16	33.33	12.29	34.54	34.54	34.04	50.04	1 - 14	7/8 - 14	420	420
OFSRSBC 12 - 12U	3/4	19.05	1 1/2	38.10	15.47	38.61	38.61	36.58	55.12	1 3/16 - 12	1 1/16 - 12	420	420
OFSRSBC 16 - 16U	1	25.40	1 3/4	44.45	20.60	42.42	42.42	41.15	59.69	1 7/16 - 12	1 5/16 - 12	380	380
OFSRSBC 20 - 20U	1 1/4	31.75	2	50.80	26.00	45.47	45.47	43.69	62.23	1 11/16 - 12	1 11/16 - 12	280	280
OFSRSBC 24 - 24U	1 1/2	38.10	2 3/8	60.33	32.00	49.53	49.53	47.24	65.79	2 - 12	2 - 12	280	280

O-Ring of NBR(e.g. perbunan) standard. Other seal material can be used upon request.  
 Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

## Assembly Instructions for Adjustable Style Fittings in Straight Thread O-ring Port

1. Lubricate o-ring by coating with system fluid or compatible lubricant and install in the groove adjacent to the face of the metal back-up washer which is assembled at the extreme end of the thread undercut as shown in figure E2.
2. Install the fitting into the SAE / MS straight thread port until the metal back-up washer contacts the face of the port as shown in figure E3.
3. Position the fitting by turning out (counterclockwise) up to a maximum of one turn as shown in figure E4. Holding the pad of the fitting with a wrench, tighten the locknut and washer against the face as shown in figure E5: torque the nut to the manufacturer's recommendation.

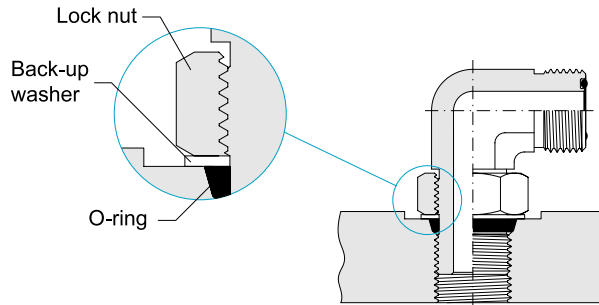


Figure E1-Final assembly of adjustable stud end

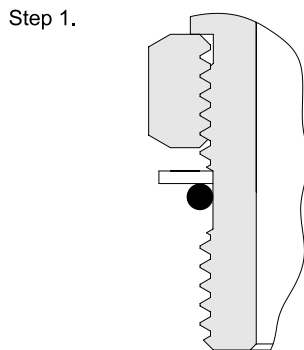


Figure E2 - Locknut backed off

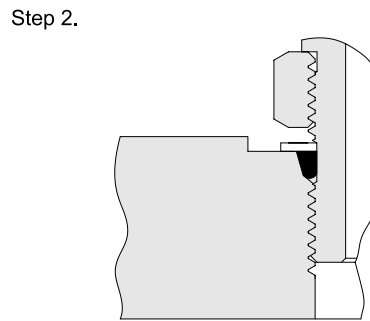


Figure E3 - Fitting installed hand tight

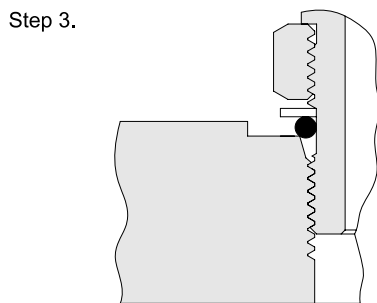


Figure E4 - Fitting backed-off for alignment (1 turn maximum)

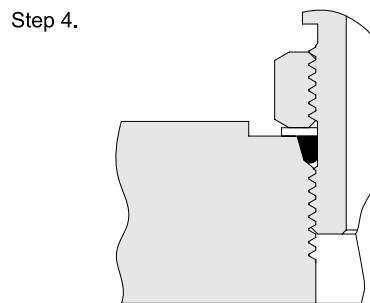
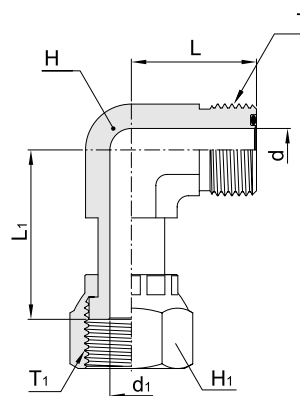


Figure E5 - Fitting locknut tightened to appropriate torque

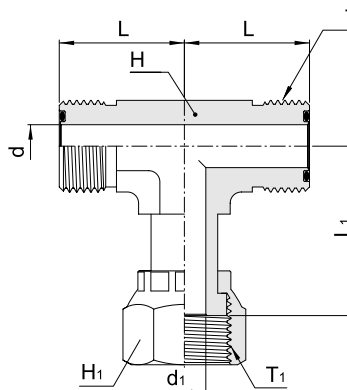


Swivel Elbow  
**OFSSL**  
 SAE 520221



Part No.	Tube OD		Width across flat				d	d <sub>1</sub>	L	L <sub>1</sub>	T Tube End UN/UNF-2A	PN(bar)	
			H		H <sub>1</sub>							Steel	Stainless Steel
	in	mm	in	mm	in	mm							
OFSSL - 4	1/4	6.35	9/16	14.28	11/16	17.46	4.37	4.22	21.59	27.18	9/16 - 18	500	420
OFSSL - 6	3/8	9.52	3/4	19.05	13/16	19.05	6.71	6.71	24.89	29.72	11/16 - 16	630	420
OFSSL - 8	1/2	12.70	3/4	19.05	15/16	20.63	9.60	9.09	27.94	37.85	13/16 - 16	630	420
OFSSL - 10	5/8	15.87	1 1/16	26.98	1 1/8	28.57	12.29	11.51	33.27	41.91	1 - 14	420	420
OFSSL - 12	3/4	19.05	1 3/16	30.16	1 3/8	34.92	15.47	13.89	37.34	46.23	1 3/16 - 12	420	420
OFSSL - 16	1	25.40	1 7/16	36.51	1 5/8	41.27	20.60	19.89	41.66	53.34	1 7/16 - 12	420	420
OFSSL - 20	1 1/4	31.75	1 5/8	41.27	1 7/8	47.62	26.00	26.00	44.70	58.17	1 11/16 - 12	350	280
OFSSL - 24	1 1/2	38.10	1 7/8	47.62	2 1/4	57.15	32.00	32.00	48.77	61.21	2 - 12	280	280

Swivel Branch Tee  
**OFSSBT**  
 SAE 520433



Part No.	Tube OD		Width across flat				d	d <sub>1</sub>	L	L <sub>1</sub>	T Tube End UN/UNF-2A	PN(bar)	
			H		H <sub>1</sub>							Steel	Stainless Steel
	in	mm	in	mm	in	mm							
OFSSBT - 4	1/4	6.35	9/16	14.28	11/16	17.46	4.37	4.22	21.59	27.18	9/16 - 18	500	420
OFSSBT - 6	3/8	9.52	3/4	19.05	13/16	19.05	6.71	6.71	24.89	29.72	11/16 - 16	630	420
OFSSBT - 8	1/2	12.70	3/4	19.05	15/16	20.63	9.60	9.09	27.94	37.85	13/16 - 16	630	420
OFSSBT - 10	5/8	15.87	1 1/16	26.98	1 1/8	28.57	12.29	11.51	33.27	41.91	1 - 14	420	420
OFSSBT - 12	3/4	19.05	1 3/16	30.16	1 3/8	34.92	15.47	13.89	37.34	46.23	1 3/16 - 12	420	420
OFSSBT - 16	1	25.40	1 7/16	36.51	1 5/8	41.27	20.60	19.89	41.66	53.34	1 7/16 - 12	420	420
OFSSBT - 20	1 1/4	31.75	1 5/8	41.27	1 7/8	47.62	26.00	26.00	44.70	58.17	1 11/16 - 12	350	280
OFSSBT - 24	1 1/2	38.10	1 7/8	47.62	2 1/4	57.15	32.00	32.00	48.77	61.21	2 - 12	280	280

O-Ring of NBR(e.g. perbunan) standard. Other seal material can be used upon request.  
 Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

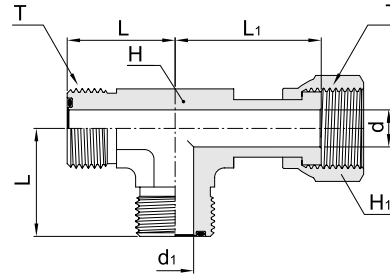
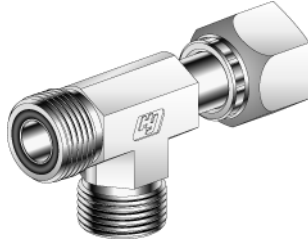
All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

# O-ring Face Seal Tube Fittings

Swivel Run Tee

## OFSSRT

SAE 520432

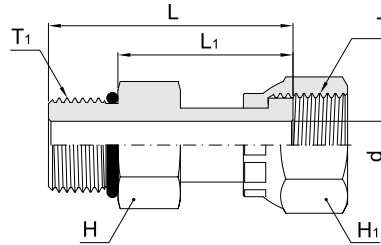
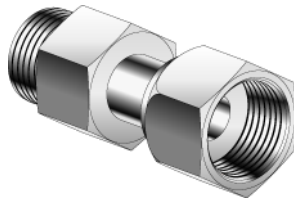


Part No.	Tube OD		Width across flat				d	d <sub>1</sub>	L	L <sub>1</sub>	T Tube End UN/UNF-2A	PN(bar)	
			H		H <sub>1</sub>							Steel	Stainless Steel
	in	mm	in	mm	in	mm							
OFSSRT - 4	1/4	6.35	9/16	14.28	11/16	17.46	4.37	4.22	21.59	27.18	9/16 - 18	500	420
OFSSRT - 6	3/8	9.52	3/4	19.05	13/16	19.05	6.71	6.71	24.89	29.72	11/16 - 16	630	420
OFSSRT - 8	1/2	12.70	3/4	19.05	15/16	20.63	9.60	9.09	27.94	37.85	13/16 - 16	630	420
OFSSRT - 10	5/8	15.87	1 1/16	26.98	1 1/8	28.57	12.29	11.51	33.27	41.91	1 - 14	420	420
OFSSRT - 12	3/4	19.05	1 3/16	30.16	1 3/8	34.92	15.47	13.89	37.34	46.23	1 3/16 - 12	420	420
OFSSRT - 16	1	25.40	1 7/16	36.51	1 5/8	41.27	20.60	19.89	41.66	53.34	1 7/16 - 12	420	420
OFSSRT - 20	1 1/4	31.75	1 5/8	41.27	1 7/8	47.62	26.00	26.00	44.70	58.17	1 11/16 - 12	350	280
OFSSRT - 24	1 1/2	38.10	1 7/8	47.62	2 1/4	57.15	32.00	32.00	48.77	61.21	2 - 12	280	280

Straight Thread Swivel Connector

## OFSSC

SAE 520181



Part No.	Tube OD		Width across flat				d	L <sub>1</sub> After Assy	L	T Tube End UN/UNF-2A	Straight Thread T1(U)	PN (bar)
			H		H <sub>1</sub>							
	in	mm	in	mm	in	mm						
OFSSC 4 - 04U	1/4	6.35	9/16	14.28	11/16	17.46	4.37	26.16	37.08	9/16 - 18	7/16 - 20	500
OFSSC 6 - 06U	3/8	9.52	3/4	19.05	13/16	19.05	6.71	28.19	40.13	11/16 - 16	9/16 - 18	630
OFSSC 8 - 08U	1/2	12.70	3/4	19.05	15/16	20.63	9.60	35.31	49.53	13/16 - 16	3/4 - 16	630
OFSSC 10 - 10U	5/8	15.87	1 1/16	26.98	1 1/8	28.57	12.29	37.85	54.10	1 - 14	7/8 - 14	420
OFSSC 12 - 12U	3/4	19.05	1 3/16	30.16	1 3/8	34.92	15.47	41.15	59.44	1 3/16 - 12	1 1/16 - 12	420
OFSSC 16 - 16U	1	25.40	1 7/16	36.51	1 5/8	41.27	20.60	49.02	67.56	1 7/16 - 12	1 5/16 - 12	420
OFSSC 20 - 20U	1 1/4	31.75	1 5/8	41.27	1 7/8	47.62	26.00	-	-	1 11/16 - 12	1 5/8 - 12	350
OFSSC 24 - 24U	1 1/2	38.10	1 7/8	47.62	2 1/4	57.15	32.00	-	-	2 - 12	1 7/8 - 12	-

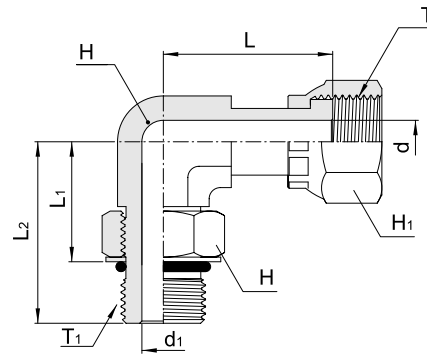
O-Ring of NBR(e.g. perbunan) standard. Other seal material on request.  
Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

Straight Thread Swivel Elbow

**OFSSLA**

SAE 520281

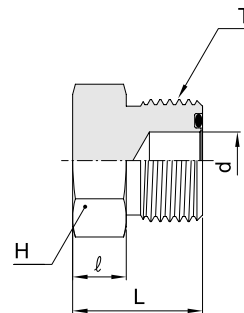


Part No.	Tube OD		Width across flat				d	d <sub>1</sub>	L <sub>1</sub> After Assy	L	L <sub>2</sub>	T Tube End UN/UNF-2A	Straight Thread T <sub>1</sub> (U)	PN(bar)	
			H		H <sub>1</sub>									Steel	Stainless Steel
	in	mm	in	mm	in	mm									
OFSSLA 4 - 04U	1/4	6.35	9/16	14.28	11/16	17.46	4.22	4.37	21.84	21.59	32.77	9/16 - 18	7/16 - 20	420	420
OFSSLA 6 - 06U	3/8	9.52	3/4	19.05	13/16	19.05	6.71	6.71	24.89	24.89	36.83	11/16 - 16	9/16 - 18	420	420
OFSSLA 8 - 08U	1/2	12.70	3/4	19.05	15/16	20.63	9.09	9.60	26.92	27.94	40.64	13/16 - 16	3/4 - 16	420	420
OFSSLA 10 - 10U	5/8	15.87	1 1/16	26.98	1 1/8	28.57	11.51	12.29	34.04	33.27	50.04	1 - 14	7/8 - 14	420	420
OFSSLA 12 - 12U	3/4	19.05	1 3/16	30.16	1 3/8	34.92	13.89	15.47	36.58	37.34	55.12	1 3/16 - 12	1 1/16 - 12	420	420
OFSSLA 16 - 16U	1	25.40	1 7/16	36.51	1 5/8	41.27	19.89	20.60	41.15	41.66	59.69	1 7/16 - 12	1 5/16 - 12	380	380
OFSSLA 20 - 20U	1 1/4	31.75	1 5/8	41.27	1 7/8	47.62	26.00	26.00	43.69	44.70	62.23	1 11/16 - 12	1 5/8 - 12	280	280
OFSSLA 24 - 24U	1 1/2	38.10	1 7/8	47.62	2 1/4	57.15	32.00	32.00	47.24	48.77	65.79	2 - 12	1 7/8 - 12	280	280

Plug

**OFF**

SAE 520109



Part No.	Tube OD		H		d	l	L	T Tube End UN/UNF-2A	PN(bar)	
	in	mm	in	mm					Steel	Stainless Steel
OFF - 4	1/4	6.35	5/8	15.87	4.37	5.08	16.76	9/16 - 18	630	630
OFF - 6	3/8	9.52	3/4	19.05	6.71	8.13	19.30	11/16 - 16	630	630
OFF - 8	1/2	12.70	7/8	22.22	9.60	8.89	21.84	13/16 - 16	630	630
OFF - 10	5/8	15.87	1 1/16	6.98	12.29	10.41	25.91	1 - 14	420	420
OFF - 12	3/4	19.05	1 1/4	31.75	15.47	10.41	27.43	1 3/16 - 12	420	420
OFF - 16	1	25.40	1 1/2	38.10	20.60	10.41	27.94	1 7/16 - 12	420	420
OFF - 20	1 1/4	31.75	1 3/4	44.45	26.00	10.41	27.94	1 11/16 - 12	420	280
OFF - 24	1 1/2	38.10	2 1/8	53.98	32.00	12.70	34.80	2 - 12	350	280

O-Ring of NBR(e.g. perbunan) standard. Other seal material can be used upon request.  
Pressure ratings - PN shown apply to steel and stainless steel versions of the product.

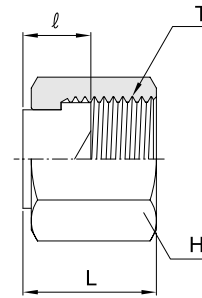
All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

# O-ring Face Seal Tube Fittings

CAP

## OFCA

SAE 520112

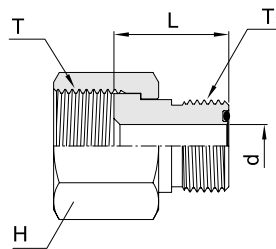
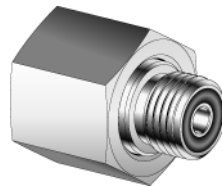


Part No.	Tube OD		H Width across flat		l	L	T Tube End UN/UNF-2A	PN(bar)	
	in	mm	in	mm				Steel	Stainless Steel
OFCA - 4	1/4	6.35	11/16	17.46	8.64	16.51	9/16 - 18	630	630
OFCA - 6	3/8	9.52	13/16	20.63	9.40	18.80	11/16 - 16	630	630
OFCA - 8	1/2	12.70	15/16	23.81	11.94	22.86	13/16 - 16	630	630
OFCA - 10	5/8	15.87	1 1/8	28.57	11.94	25.40	1 - 14	420	420
OFCA - 12	3/4	19.05	1 3/8	34.92	13.46	27.94	1 3/16 - 12	420	420
OFCA - 16	1	25.40	1 5/8	41.27	14.99	29.46	1 7/16 - 12	420	420
OFCA - 20	1 1/4	31.75	1 7/8	47.62	14.99	29.46	1 11/16 - 12	280	280
OFCA - 24	1 1/2	38.10	2 1/4	57.15	14.99	29.46	2 - 12	280	280

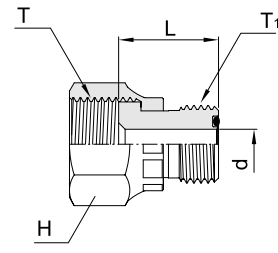
Tube End Reducer

## OFTER

SAE 520123



Assembled with  
Large OFN Nut



Assembled with  
Crimp Nut

Part No.	Tube OD		H Width across flat		d	L	Tube End UN/UNF-2A		PN(bar)	
	in	mm	in	mm			T	T <sub>1</sub>	Steel	Stainless Steel
OFTER 6 - 4 *	3/8 to 1/4	9.52 to 6.35	13/16	20.63	4.37	19.56	11/16 - 16	9/16 - 18	630	420
OFTER 8 - 4	1/2 to 1/4	12.70 to 6.35	15/16	23.81	4.37	21.84	13/16 - 16	9/16 - 18	630	420
OFTER 8 - 6 *	1/2 to 3/8	12.70 to 9.52	15/16	23.81	6.71	22.35	13/16 - 16	11/16 - 16	630	420
OFTER 10 - 4	5/8 to 1/4	15.87 to 6.35	1 1/8	28.57	4.37	22.86	1 - 14	9/16 - 18	420	420
OFTER 10 - 6	5/8 to 3/8	15.87 to 9.52	1 1/8	28.57	6.71	24.13	1 - 14	11/16 - 16	420	420
OFTER 10 - 8	5/8 to 1/2	15.87 to 12.70	1 1/8	28.57	9.60	25.91	1 - 14	13/16 - 16	420	420
OFTER 12 - 4	3/4 to 1/4	19.05 to 6.35	1 3/8	34.92	4.37	24.89	1 3/16 - 12	9/16 - 18	420	420
OFTER 12 - 6	3/4 to 3/8	19.05 to 9.52	1 3/8	34.92	6.71	26.16	1 3/16 - 12	11/16 - 16	420	420
OFTER 12 - 8	3/4 to 1/2	19.05 to 12.70	1 3/8	34.92	9.60	27.69	1 3/16 - 12	13/16 - 16	420	420
OFTER 12 - 10 *	3/4 to 5/8	19.05 to 15.87	1 3/8	34.92	12.29	29.46	1 3/16 - 12	1 - 14	420	420
OFTER 16 - 8	1 to 1/2	25.40 to 12.70	1 5/8	41.27	9.60	29.21	1 7/16 - 12	13/16 - 16	420	420
OFTER 16 - 10	1 to 5/8	25.40 to 15.87	1 5/8	41.27	12.29	32.00	1 7/16 - 12	1 - 14	420	420
OFTER 16 - 12 *	1 to 3/4	25.40 to 19.05	1 5/8	41.27	15.47	33.02	1 7/16 - 12	1 3/16 - 12	420	420
OFTER 20 - 12	1 1/4 to 3/4	31.75 to 19.05	1 7/8	47.62	15.47	33.53	1 11/16 - 12	1 3/16 - 12	420	280
OFTER 20 - 16 *	1 1/4 to 1	31.75 to 25.40	1 7/8	47.62	20.60	38.35	1 11/16 - 12	1 7/16 - 12	350	280
OFTER 24 - 16	1 1/2 to 1	38.10 to 25.40	2 1/4	57.15	20.60	31.24	1 11/16 - 12	1 7/16 - 12	350	280
OFTER 24 - 20	1 1/2 to 1 1/4	38.10 to 15.87	2 1/4	57.15	26.00	34.29	2 - 12	1 11/16 - 12	350	280

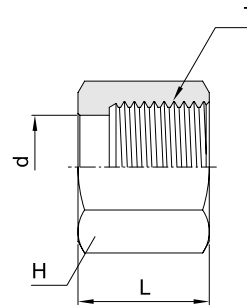
\* These sizes come manufactured with a crimp style nut on the large end.

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

Nut

**OFN**

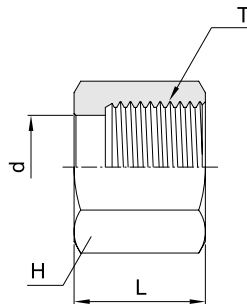
SAE 520110



Part No.	Tube OD		H Width across flat		d	L	T Tube End UN/UNF-2A
	in	mm	in	mm			
OFN - 4	1/4	6.35	11/16	17.46	10.41	14.73	9/16 - 18
OFN - 6	3/8	9.52	13/16	20.63	13.46	17.02	11/16 - 16
OFN - 8	1/2	12.70	15/16	23.81	16.51	21.08	13/16 - 16
OFN - 10	5/8	15.87	1 1/8	28.57	21.08	23.62	1 - 14
OFN - 12	3/4	19.05	1 3/8	34.92	24.13	25.91	1 3/16 - 12
OFN - 16	1	25.40	1 5/8	41.27	28.96	27.94	1 7/16 - 12
OFN - 20	1 1/4	31.75	1 7/8	47.62	36.07	27.94	1 11/16 - 12
OFN - 24	1 1/2	38.10	2 1/4	57.15	43.94	27.94	2 - 12

Nut - Metric Sizes

**OFN**



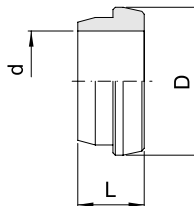
Part No.	Tube OD	H Width across flat	d	L	T Tube End UN/UNF-2A
OFN - 6M	6.0	17.0	10.50	15.0	9/16 - 18
OFN - 8M	8.0	17.0	10.50	15.0	9/16 - 18
OFN - 10M	10.0	22.0	13.55	17.0	11/16 - 16
OFN - 12M	12.0	24.0	16.60	20.0	13/16 - 16
OFN - 16M	16.0	30.0	21.10	24.0	1 - 14
OFN - 20M	20.0	36.0	24.15	26.5	1 3/16 - 12
OFN - 25M	25.0	41.0	29.10	27.5	1 7/16 - 12
OFN - 30M	30.0	50.0	36.00	27.5	1 11/16 - 12
OFN - 38M	38.0	60.0	44.00	27.5	2 - 12

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# O-ring Face Seal Tube Fittings

Hyflange Sleeve

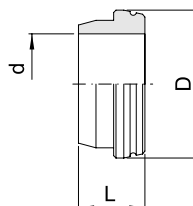
**OFS**



Part No.	d Tube OD		D	L
	in	mm		
OFS - 4	1/4	6.35	12.70	7.62
OFS - 6	3/8	9.52	15.75	8.64
OFS - 8	1/2	12.70	18.80	10.67
OFS - 10	5/8	15.87	23.37	10.67
OFS - 12	3/4	19.05	27.69	11.94
OFS - 16	1	25.40	34.04	13.46
OFS - 20	1 1/4	31.75	40.39	13.21
OFS - 24	1 1/2	38.10	48.51	12.45

Hyflange Sleeve - Metric Sizes

**OFS**



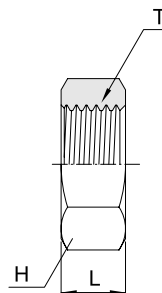
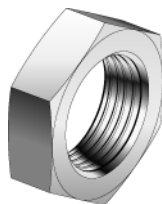
Part No.	d Tube OD	D	L	Part No.	d Tube OD	D	L
OFS - 6M	6.0	13.0	7.5	OFS - 20M	20.0	28.0	12.0
OFS - 8M	8.0	16.0	8.5	OFS - 22M	22.0	34.0	13.5
OFS - 10M	10.0	16.0	8.5	OFS - 25M	25.0	34.0	13.5
OFS - 12M	12.0	19.0	10.5	OFS - 28M	28.0	40.5	13.0
OFS - 14M	14.0	21.0	10.5	OFS - 30M	30.0	40.5	13.0
OFS - 15M	15.0	23.5	10.5	OFS - 32M	32.0	40.5	13.0
OFS - 16M	16.0	23.5	10.5	OFS - 35M	35.0	40.5	12.5
OFS - 18M	18.0	28.0	12.0	OFS - 38M	38.0	48.5	12.5

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

Nut

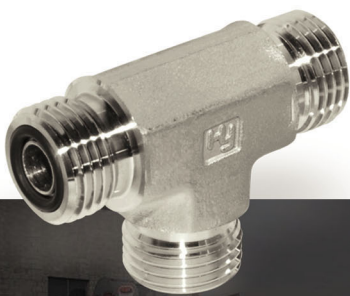
**OFLN**

SAE 520118



Part No.	Tube OD		H Width across flat		L	T Tube End UN/UNF-2A
	in	mm	in	mm		
OFLN - 4	1/4	6.35	13/16	20.63	6.86	9/16 - 18
OFLN - 6	3/8	9.52	1	25.40	8.13	11/16 - 16
OFLN - 8	1/2	12.70	1 1/8	28.57	8.89	13/16 - 16
OFLN - 10	5/8	15.87	1 5/16	33.33	10.41	1 - 14
OFLN - 12	3/4	19.05	1 1/2	38.10	10.41	1 3/16 - 12
OFLN - 16	1	25.40	1 3/4	44.45	10.41	1 7/16 - 12
OFLN - 20	1 1/4	31.75	2	50.80	10.41	1 11/16 - 12
OFLN - 24	1 1/2	38.10	2 3/8	60.32	10.41	2 - 12

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.



## SAFETY IN FITTING SELECTION

Proper installation, materials compatibility, operation and maintenance of the ORFS fittings are the responsibility of the user. The total system design must be taken into consideration to ensure optimal performance and safety

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