

TUBE FITTING & VALVE

# OTG *lok*

## TUBE Fittings

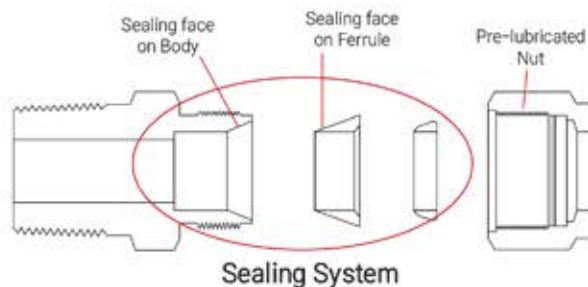
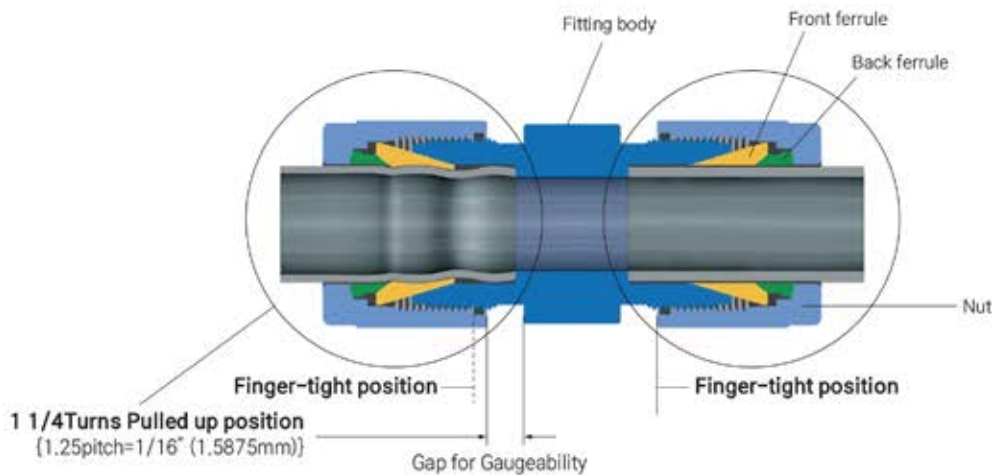


OTG-Lok Tube Fittings May 2022

## Features

- ❖ OTG-LOK Tube Fittings have been specifically designed for use on instrumentation, process and control system, equipment employed in chemical, petroleum, nuclear power generation, pulp and paper plants.
- ❖ OTG-LOK Tube Fitting has also found extensive application in other fields where a very high quality tube fitting is required.
- ❖ OTG-LOK Tube Fittings provide a highly reliable, leakproof and torque free seal on all tubing connections.
- ❖ OTG-LOK Tube Fittings are sequential phase-controlled action, sealing and gripping devices. Superior design, rigid manufacturing tolerances, and strict quality assurance programs produce an all metal sealing and holding device which performs leak-free when properly installed.
- ❖ OTG-LOK tube Fittings consist of a body, a nut, and ferrules and are constructed of the following materials: brass, 316 stainless steel, Carbon steel, nickel alloy, monel, or inconel. Straight Fittings are machined from cold finished bar stock and shaped bodies are machined from close grain forgings. The materials used, fully conform to the chemical requirements of one or more of the specifications listed in Table 6 on page. Nut internals are supplied standard with silver plating. For nuclear and other critical applications, stainless steel OTG-LOK Tube Fitting are readily available with documented heat code traceability.

## Construction of OTG-Lok® Tube Fittings



### ❖ Mechanically Outstanding for "Metal Seal" Leak-Tight Performance

OTG-LOK Tube Fittings provide metal to metal sealing and are designed to the requirements of industrial codes and standards with additional Cutting-Edge Engineering on leak-free pressure retaining performance.

❖ **Gaugeability**

It is possible to measure the state of the equipment when processing the ferrule by measuring the datum gauge and implementing strict management of 1/1000" tolerance.

❖ **Interchangeability**

OTG-LOK Tube Fittings are manufactured according to industrial codes and standards, Therefore, OTG-LOK tube Fittings are fully compatible with Swage lok tube fittings as well as other major tube fitting manufactures.

❖ **Wide range of sealing performance**

All OTG-LOK products have been verified for excellence in quality in all industries through repeated experiments. And the special heat treatment method for the back ferrule shows excellent sealing performance for all tubing from thin to thick tubing.

❖ **Consistency**

All processes, from raw material input to machining and post processing are carried out according to standardized work to maintain the highest quality and uniform product quality.

❖ **Cleaning and Surface Protection**

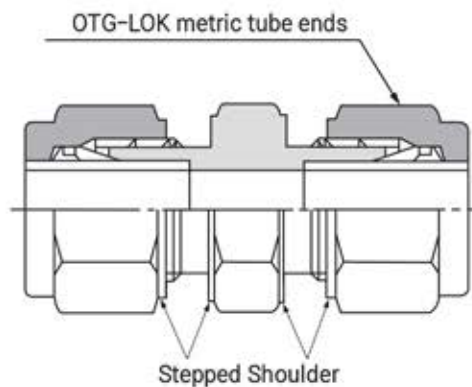
All products processed at the production site are subjected to cleaning, passivation and drying processes at high temperatures to thoroughly remove visible impurities and invisible impurities on the metal surface, thus satisfying the highest level of cleanliness required by the industry.

❖ OTG-LOK ferrule can be used for repeated sealing.

❖ OTG-LOK ferrule can be used for all levels of pressure from vacuum to low pressure to high pressure

## Identification of Metric OTG-LOK Tube Fittings

OTG-LOK metric tube fitting has stepped shoulder on body and nut hex.







# CONTENTS

## Tube to Tube Union

	<b>OU</b> — 16
	Union
	<b>ORU</b> — 17
	Reducing Union
	<b>OBU</b> — 19
	Bulkhead Union
	<b>OUE</b> — 20
	Union Elbow
	<b>ORE</b> — 21
	Reducing Union Elbow
	<b>OUT</b> — 21
	Union Tee
	<b>ORT</b> — 23
	Reducing Union Tee
	<b>OUC</b> — 25
	Union Cross

## Tube to Male Pipe

### Male Connector

	<b>OMC-N</b> — 26
	Male Connector
	<b>OMC-R</b> — 28
	ISO/BSP Tapered Thread Male Connector
	<b>OMCT</b> — 30
	Thermocouple(Bore-Thru)
	<b>OBMC</b> — 31
	Bulkhead Male Connector

	<b>OMC-G</b> — 32
	Male Connector for Bonded Gasket Seal
	<b>OMC-GB</b> — 32
	Male Connector for Metal Gasket
	<b>OMC-U</b> — 35
	SAE / MS Male Connector
	<b>OMC-UO</b> — 37
	O-Seal SAE Male Connector
	<b>OMC-NO</b> — 37
	O-Seal NPT Male Connector

### Male Elbows







	<b>OME45</b> — 38
	Male Elbow 45°
	<b>OME-N</b> — 39
	NPT Thread Male Elbow
	<b>OME-R</b> — 41
	ISO Tapered Thread Male Elbow

### Male Run / Branch Tees

	<b>OMRT-N</b> — 43
	Male Run Tee-NPT Thread
	<b>OMRT-R</b> — 44
	Male Run Tee-ISO Tapered Thread
	<b>OMBT-N/R</b> — 45
	Male Branch Tee-NPT Thread Male Branch Tee-ISO Tapered Thread

	<b>OMBT-N</b> — 46
	Male Branch Tee-NPT Thread
	<b>OMBT-R</b> — 47
	Male Branch Tee-ISO Tapered Thread

## Tube to Female Pipe

	<b>OFC-N</b> — 48
	Female Connector NPT Thread
	<b>OFC-R</b> — 50
	Female Connector ISO Tapered Thread
	<b>OGC</b> — 52
	Gauge Connector
	<b>OBFC</b> — 53
	Bulkhead Female Connector
	<b>OFE</b> — 54
	Female Elbow
	<b>OFRT</b> — 55
	Female Run Tee

	<b>OFBT</b> — 56
	Female Branch Tee

## Stub Tube Adapters

### Tube Adapter to Tube

	<b>OPC</b> — 57
	Port Connector
	<b>ORPC</b> — 58
	Reducing Port Connector



**OR** — 59  
Reducer



**OBA** — 61  
Bulkhead Adapter



**OEA** — 61  
Elbow Adapter



**ORTA** — 62  
Run Tee Adapter



**OBTA** — 62  
Branch Tee Adapter

**Tube Adapter to Male Pipe**



**OMA-N** — 63  
Male NPT Adapter



**OMA-R** — 64  
Male ISO Tapered Adapter



**OMA-G** — 65  
Male Gauge Adapter



**OMA-U** — 66  
Male SAE Tube Adapter



**OMA-UO** — 66  
Male O-seal Tube Adapter

**Tube Adapter to Female Pipe**



**OFA-N** — 67  
Male Gauge Adapter



**OFA-R** — 68  
Female ISO Tapered Adapter



**OFA-GZ** — 69  
Female ISO Parallel Thread Adapter



**OGA-GG** — 70  
Female ISO Parallel Thread Gauge Adapter

**Tube to AN Tube**



**OAU** — 71  
AN Union



**OABU** — 71  
AN Bulkhead Union



**OMAA** — 72  
Male AN Adapter



**OAA** — 72  
AN Adapter

**Tube to SAE O-Ring Seal**



**OSME45-UP** — 73  
SAE Male Elbow 45°



**OSME-GR** — 73  
Positionable Male ISO Parallel Thread Elbow



**OSME-UP** — 74  
Positionable SAE Male Elbow



**OSRT-UP** — 75  
Positionable SAE Male Run Tee



**OSBT-UP** — 75  
Positionable SAE Male Branch Tee

**Tube to Weld End**



**OBWC** — 76  
Male Pipe Butt Weld Connector



**OBWE** — 77  
Male Pipe Butt Weld Elbow



**OSWC** — 77  
Tube Socket Weld Connector



**OSWE** — 78  
Tube Socket Weld Elbow



**OWBU** — 78  
Weld Bulkhead Union

**Caps, Plugs, Tube Inserts**



**OC** — 79  
Cap



**OP** — 80  
Plug



**OI** — 80  
Tube Insert

**Spare Parts**



**ON** — 81  
Nut



**OFF** — 81  
Front Ferrule



**OBF** — 82  
Back Ferrule



**OFS** — 82  
Ferrule Set



**ONFS** — 83  
Nut-Ferrule Set

## Materials

OTG-LOK Tube Fittings are supplied in various materials to satisfy the needs of various applications including on shore oil & gas, refinery, offshore oil & gas, chemical, petrochemical, analytical instrumentation, steel mill, power plant, shipbuilding, pharmaceutical, and alternative fuel.

Material	Bar Stock	Forgings
Stainless Steel 316	ASTM A276 type 316 ASTM A479 Type 316 ASTM SA479 Type 316 JIS G4303	ASTM A182 ASME SA 182 JIS G3214
Brass	ASTM B16 UNS C36000 ASTM B453 UNS C35300 JIS H3250 Alloy C3604	ASTM B283 Alloy 37700 JIS H3250 C3771
Carbon Steel	A108 JIS G4051 S20C-S45C	ASTM A105 JIS G4051 S20C
Hastelloy C276	ASTM B574 N10276	ASTM B564 N10276
Alloy 400	ASTM B164 N04400	ASTM B564 N04400
Alloy 600	ASTM B166 N06600	ASTM B564 N06600
Alloy 625	ASTM B446 N06625	ASTM B564 N06625
Alloy 825	ASTM B425 N08825	ASTM B564 N08825
Titanium (Grade 4)	ASTM B348 Gr.4	ASTM B381 F-4
PTFE	ASTM D1710	ASTM D3294

### Stainless Steel Tube Fittings

Over 1 in. /25mm OD fittings are supplied with stainless steel ferrules coated with PFA. For applications beyond 450°F (232 °C) silver-plated front ferrule and uncoated back ferrule are supplied.

### Carbon Steel Tube Fittings

Carbon steel fittings are white Zinc plated. Every carbon Steel fitting is supplied with SS316 back ferrule and carbon steel front ferrule with black fast plated.

### Additional Surface Protection

Fitting Body Materials	Additional Processing
Stainless Steel, 6Mo	Passivation
Carbon Steel	White Zinc Electroplating
Brass	Acid Cleaning
Alloy 20, Monel 400, Alloy 600, Alloy 625, Alloy 825, C276	Hydrocarbon Film
Titanium Gr.4	Anodizing
PTFE	Cleaning

### O-Rings

O-seal fittings are supplied with O-ring: 70 durometer NBR O-ring on Brass and Carbon steel fittings, 90 durometer FKM O-ring on Stainless steel fitting. Other O-ring materials are available upon request.

## - Cryogenic Application

OTG-LOK Tube Fittings in SS316 Stainless Steel provide highly reliable performance on cryogenic application. Cryogenic temperature is considered to be temperatures below -100°F (-73°C)

## - Gas Application

OTG-LOK Tube Fittings fitting is designed for a wide range of leak-free application including gas leak proof and vacuum tight service. Gases (helium, hydrogen, nitrogen, air, etc.) can escape even the most minute leak-path due to their very small molecules. Tube therefore must be handled not to have scratches, draw mark, nicks, flat spots, dirt, and dust.

Use NOT thin wall tubing for gas applications.

Use heavier wall tubing for gas application.

Heavier wall tubing resists the ferrule action whereas thin wall tubing may collapse with little resistance to ferrule action.

For Gas service, use the tubing wall listed below table

### Fractional Tubing

Tubing OD	Nominal Min. Wall Thickness	Tubing OD	Nominal Min. Wall Thickness
1/8"	.028"	3/4"	.065"
3/16"	.028"	7/8"	.083"
1/4"	.028"	1"	.083"
5/16"	.035"	1 1/4"	.109"
3/8"	.035"	1 1/2"	.134"
1/2"	.049"	2"	.180"
5/8"	.065"		

### Metric Tubing

Tubing OD	Nominal Min. Wall Thickness	Tubing OD	Nominal Min. Wall Thickness
3mm	0.8mm	18mm	1.5mm
6mm	0.8mm	20mm	1.8mm
8mm	1.0mm	22mm	2.0mm
10mm	1.0mm	25mm	2.2mm
12mm	1.0mm	28mm	2.8mm
14mm	1.2mm	32mm	3.0mm
16mm	1.5mm	38mm	3.5mm



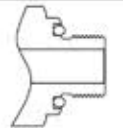

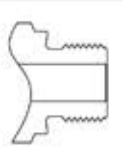
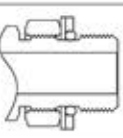
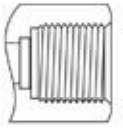


## - High Pressure Gas Application




To run flow, fluid system is pressurized. Especially a gas needs to be highly compressed to fill smaller tank or container. Pressure over 500 psig (34.5 bar) is considered high pressure. OTG-LOK Tube Fittings provide gas leak-tight performance based on the working pressure of the tubing selected.

## - Vacuum Application

**OTG-LOK Tube Fittings** have been proved to be excellent vacuum tight seal in many applications including analytical industry. Outstanding Sealing System of OTG-LOK Tube Fitting eliminates air-ingress into the tubing system at vacuum conditions. With properly selected tubing, OTG-LOK Tube Fittings perform leak-tight up to the vacuum level of  $10^{-9}$  torr.

## Thread Specifications

	OTG	Reference Specification	Thread Configuration	E
Tapered Pipe Thread	N	ASME B1.20.1(NPT)		-
	R	ISO 7-1 BS EN 10226-1(BSPT) JIS B0203 (PT)		RT
	NO	ASME B1.20.1 SAE AS71051 SAE J514 O-seal NPT Thread Seal by O-ring		OR
Parallel Pipe Thread	G	ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) DIN 3852 (FORM A) Seal by Bonded Gasket or Copper Gasket		RS
	GB	ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) DIN 3852 (FORM B) Seal by Copper Gasket Compression against Female flat face.		RP
	GR	ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) Positionable Seal by O-ring		PR
	GG	ISO 228-1, BS 2779 (BSPP) JIS B0202 (PF), EN 837-1, EN 837-3 Gauge Port Seal by copper gasket at the bottom of GG female port		RG
	GZ	ISO 228-1, BS 2779 (BSPP) JIS B0202 (PF) DIN 3852 (FORM Z) With G & GB Male thread Seal by copper gasket over the flat Face of female		RP
	GY	ISO 228-1, BS 2779 (BSPP) JIS B0202 (PF) DIN 3852 (FORM Y) With G & GB Male thread Seal by copper gasket over the flat Face of female		RJ

SAE SAE Straight Thread	U	ASME B1.1, SAE J514 ISO R725, DIN 3852(FORM F) Non-Positionable Seal by O-ring to SAE 1926/1 Straight Thread Boss		SR
	UO	ASME B1.1 SAE J514, ISO R725 O-Seal SAE straight thread Seal by O-ring to SAE J1926/1 Straight Thread Boss		OR
	UP	ASME B1.1 SAE J514, ISO R725 Positionable Seal by O-ring to SAE J1926/1 Straight Thread Boss		ST

## Pipe Thread Sealants

When assemble the tapered threads, a thread sealant should be used always to ensure leak-free thread sealing. Commonly the pipe thread sealant and PTFE tape are available. The PTFE tape fills the voids between threads and prevents galling on pipe threads. The sealant usually contains a lubricant. Wrap PTFE tape clockwise from first thread. Do not overhang the first thread; the tape may get into the fluid system.

## Tubing

For safe, reliable and leak-free **OTG-LOK Tube Fittings** system, tubing should be considered as one of fitting components. Suitable tube selection is essential in performance of tubing system. Purchasing high quality tubing, maintaining the tubing quality on the good quality tubing rack, and proper handling of the tubing are the key to leak-tight tubing system.

## - Tubing Selection

### Hardness

- Tubing must be softer than fitting material. The metal tubing must be fully annealed and suitable for bending and flaring.

### Surface

- Tubing must have a surface free from scratches, draw mark, dirt, dust and flat spots.

### Ovality

- Tubing in oval or out-of-roundness may not fit into the fitting. Do not force the tubing into the fitting; it may damage the fitting sealing system on nut, ferrules, and body.

### Wall thickness

- The table 1 to 8 list tubing working pressure ratings in a wide range of wall thickness. Do not select a too thin or too thick wall. A too thin wall may collapse and too thick wall may not properly be deformed by the ferrule action. Selection the wall's thickness should be based on the applicable pressure, temperature, shock and vibration.

- Do not use tubing wall thickness not listed in the table 1 to 8

### Weld tubing

- Welded tubing should have a not measurable bead on its outside diameter.

## - Tubing Handling

Tubing must be always carefully handled to keep the tubing surface condition.

- Do not drag tubing out of tubing racks
- Tubing should be stored to avoid collection of dirt and contamination.
- Do not drag tubing across a rough surface such as cement, asphalt, gravel or any other rough surface.
- Tubing ends should be capped so any foreign materials will not fall inside during transportation and storage.

## - Tube Cutting

- Tubing cutter wheel and hacksaw blade should always be sharp. The wrong cutter may result in excessive deformation of the tube end.
- Do not cut deep with each turn of cutting.
- Tube end should be deburred always before inserting in fittings.
- Hacksaw blades should have at least 32 teeth per inch.

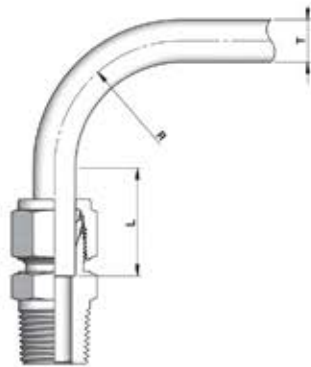
## - Tube Bending

For leak tight installation in case of bended tubing being near the fittings, tube bends must not be too close to the fitting. There should be enough lineal distance from bending point to the fittings.

When tube bend is too close to the fitting, the deformed section of the bend may enter the fitting, and it may result in leaking. Also, the bending radius should not be too short of bending radius may affect the working pressure and may cause insufficient flow. Usually, minimum bending radius is recommended by the tube bender manufacturer.

the following is the recommended minimum straight length of tube measured from the tube end to the bend.

Tube OD	Min. Length	Tube OD (mm)	Min. Length (mm)
1/8"	23/32"	3	19
3/16"	3/4"	6	21
1/4"	13/16"	8	23
5/16"	7/8"	10	25
3/8"	15/16"	12	30
1/2"	1-3/16"	14-18	32
5/8"	1-1/4"	20	32
3/4"	1-1/4"	22	34
7/8"	1-5/16"	25	40
1"	1-1/2"	28	46
1 1/4"	2"	32	52
1 1/2"	2-13/32"	38	62
2"	3-1/4"	50	83



- T : Tube O.D
- R : Radius  
Follow the bented tube vendor's recommendation
- L : Straight tubing length is required from the beginning of the bend to the tubing end.

## Pressure Ratings

The Pressure rating of **OTG-LOK Tube Fitting** is rated to the working pressure of connective tubing.

The allowable working pressure of tubing in various materials is listed in the tubing table.

### Allowable Stress

Stress values are based on ASME Code for Pressure Piping B31.3, Process Piping, at ambient temperature.

Material	Allowable Stress	
	psi	bar
316 SS	20,000	1378
Brass	10,000	689
Steel	20,000	1378

### Pressure Ratings

Pressure ratings are based on ASME B31.3 Process Piping, at ambient temperature.

NPT /ISO Pipe Size In.	Stainless Steel and Carbon Steel				Brass			
	Male		Female		Male		Female	
	psig	bar	psig	bar	psig	bar	psig	bar
1/16	11000	758	6700	462	5500	378	3300	227
1/8	10000	689	6500	448	5000	345	3200	220
1/4	8000	551	6600	455	4000	275	3300	227
3/8	7800	538	5300	365	3900	269	2600	179
1/2	7700	531	4900	338	3800	262	2400	165
3/4	7300	503	4600	317	3600	248	2300	158
1	5300	365	4400	303	2600	179	2200	152
1-1/4	6000	414	5000	345	3000	207	2500	172
1-1/2	5000	345	4600	317	2500	172	2300	152
2	3900	270	3900	269	1900	131	1900	131

### Parallel Pipe Thread End - G, and GB

Pipe Size in.	Stainless Steel and Carbon Steel	
	Male	
	psi	bar
<b>S Value</b>	<b>20ksi</b>	
1/8	16000	1103
1/4	12500	861
3/8	12000	827
1/2	11900	820
3/4	8000	551
1	5600	386
1 1/4	5400	372
1 1/2	5100	351



## SAE Straight Thread End-U, and UP

Nominal SAE Dash Size	SAE Thread Size	Stainless Steel and Carbon Steel					
		Non-Positionable "U"		Positionable "UP"			
		psi	bar	psi	bar		
2	5/16-24	4568	315	4568	315		
4	7/16-20			3626	250	3626	250
6	9/16-18					2900	200
8	3/4-16			2320	160		
10	7/8-14	1813	125			1813	125
12	1 1/16-12					1450	100
14	1 3/16-12	1450	100				
16	1 5/16-12					1450	100
20	1 5/8-12	1450	100				
24	1 7/8-12			1450	100	1450	100
32	2 1/2-12	1450	100			1450	100

Pressure ratings are based on SAE J1926/3 at ambient temperature

## Positionable ISO/BSPP Parallel Thread-GR

ISO/PSPP Male pipe size in.	Stainless Steel and Carbon Steel	
	psi	bar
1/8	4568	315
1/4		
3/8		
1/2	2320	160
3/4		
1		

Pressure ratings are at ambient temperature

## SAE J514 37° Flare AN End

Tube OD		Stainless Steel and Carbon Steel SAE J514, Table 1.	
Metro. mm	in.	psi	bar
2	1/8	5000	344
6	1/4	5000	344
8	5/16	5000	344
10	3/8	4000	275
12	1/2	3000	206
16	5/8	3000	206
20	3/4	2500	172
25	1	2000	137
32	1 1/4	1150	79.2
38	1 1/2	1000	68.9
50	2	1000	68.9

Pressure Ratings are extracted from SAE J514 Standard.

## Elevated Temperature De-rating Factors

The allowable working pressure is determined by an elevated temperatures. The working pressure is de-rated as the temperature is elevated. To determine the working pressure at an elevated temperatures, multiply the working pressure at ambient temperature and factor.

°F	Temp	°C	Stainless		C.steel A179	Copper B75	825 B423	C276 B622	625 B444	20 B729	400 B165	Super Duplex A789
			304	316								
100		38	1	1	1	1	1	1	1	1	1	1
200		93	1	1	0.96	0.8	0.92	1	1	0.9	0.88	0.9
300		149	1	1	0.9	0.78	0.87	1	1	0.86	0.79	0.85
400		204	0.94	0.97	0.86	0.5	0.83	1	1	0.83	0.79	0.82
500		260	0.88	0.9	0.82	0.13	0.79	0.98	0.97	0.79	0.79	0.81
600		316	0.82	0.85	0.77		0.76	0.93	0.95	0.77	0.79	0.8
700		371	0.8	0.82	0.73		0.74	0.87	0.93	0.76	0.79	
800		427	0.76	0.8	0.59		0.73	0.84	0.93	0.73	0.76	
900		482	0.73	0.78			0.73	0.81	0.93			
1000		538	0.69	0.77			0.71	0.79	0.93			
1200		649	0.3	0.37				0.35	0.93			

## Pipe Butt Weld End - BW

Nom. Pipe Size	Stainless Steel and Carbon Steel	
	Butt Weld End	
	psi	bar
S Value	20ksi	
1/8	5300	365
1/4	5200	358
3/8	4400	303
1/2	4100	282
3/4	3200	220
1	3100	213
1 1/4	3000	206
1 1/2	2900	199
2	1900	131

Pressure ratings are at ambient temperature

## Tube Socket Weld End - SW

Socket Weld End is rated to the working pressure of tubing connected.

## O Seal Fitting "NO" and "UO" Ends

Stainless and Carbon Steel "NO" & "UO" Ends up to 1 in. are rated to 3000 psig (206 bar) at ambient temperature.

## Temperature Ratings

The following temperature ratings are applicable.

Tubing Material	Temperature Range
316 Stainless Steel	-196°C to 649°C (-321°F to 1200°F)
Brass	-40°C to 204°C (-40°F to 400°F)
Carbon Steel	-53°C to 427°C (-65°F to 800°F)
Monel	-198°C to 427°C (-325°F to 800°F)
Alloy 600	-130°C to 649°C (-205°F to 1200°F)
Alloy C-276	-195°C to 537°C (-320°F to 1000°F)
Titanium	-195°C to 315°C (-320°F to 600°F)
PTFE	-17°C to 85°C (0°F to 150°F)

## Elastomer Seal Temperature Ratings

Elastomer Seal Material	Temperature Range
NBR	-20°C to 105°C (-4°F to 221°F)
FKM	-28°C to 204°C (-20°F to 400°F)
FFKM	-30°C to 315°C (-22°F to 600°F)
EPDM	-28°C to 148°C (-20°F to 300°F)

## Stainless Steel Tubing

**Table 1. Fractional Seamless Stainless Steel Tubing**

Fully annealed seamless stainless steel tubing ASTM A269 or A213 TP 316/316L, 304/304L or equivalent, Tubing free from scratches, draw mark, dirt, dust, flat spots, and suitable for bending and flaring. Hardness 90 HRB or less

OD in	Wall Thickness (in.)															
	0.010	0.012	0.014	0.016	0.020	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120	0.134	0.156	0.188
1/16	5,600	6,800	8,100	9,400	12,000											
1/8						8,500	10,900									
3/16						5,400	7,000	10,200								
1/4						4,000	5,100	7,500	10,200							
5/16							4,000	5,800	8,000							
3/8							3,300	4,800	6,500	7,500						
1/2							2,600	3,700	5,100	6,700						
5/8								2,900	4,000	5,200	6,000					
3/4								2,400	3,300	4,200	4,900	5,800				
7/8								2,000	2,800	3,600	4,200	4,800				
1									2,400	3,100	3,600	4,200	4,700			
1 1/4										2,400	2,800	3,300	3,600	4,100	4,900	
1 1/2											2,300	2,700	3,000	3,400	4,000	4,900
2												2,000	2,200	2,500	2,900	3,600

**Table 2. Metric Seamless Stainless Steel Tubing**

OD mm	Wall Thickness (mm.)															
	0.6	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0	3.5	4.0	4.5	5.0	
2	780	1050														
3	516	710														
4		520	660													
6		330	420	520	670											
8			310	380	490											
10			240	300	380											
12			200	240	310	380	430									
14			180	220	280	340	390	430								
15			170	200	260	320	360	400								
16				190	240	300	330	370	430							
18				170	210	260	290	320	370							
20				150	190	230	260	290	330	380						
22				140	170	210	230	260	300	340						
25						180	200	230	260	300	320					
28							180	200	230	260	280	330				
30							170	190	210	240	260	310				
32							160	170	200	230	240	290	330			
38								140	170	190	200	240	280	310		
42										170	190	210	250	290	50	
50										150	180	210	240	270		

- According to the requirements of ASME B31.3 Process Piping Code and ASME B31.1 Power Piping Code, Allowable working pressure are calculated using S value of 20,000psi (1378bar) for ASTM A269 tubing at -20 to 100°F (-28 to 37°C).
- Pressure calculations are made with maximum O.D. and minimum wall thickness No allowance is made for corrosion and erosion  
Example : ASTM A269 Type 316 Tubing 1/2 in. OD × 0.065 in. WT  
ASTM A269 standard specifies permissible O.D tolerance ± 0.005 in. (± 0.13mm), permissible WT tolerance ± 15%, Allowable working pressure is therefore calculated with maximum OD 0.505 in. and minimum WT 0.0552 in.
- Safety Factor is 3.75 to 1, considering ultimate tensile strength of 75,000 psi.
- For welded tubing, the following derating rate to be applied for weld integrity. (ASME B31.3 Code)  
for double welded tubing : 0.85  
for single welded tubing : 0.80  
Example: SS316 seamless 1/2 in. O.D. × 0.065 in. WT allowable working pressure : 4700 psi.  
To determine the work pressure of the single weld tubing, multiply 4700 psi by 0.80.  
4700 psig × 0.80 = 3760 psig at -20 to 100°F (-28 to 37°C)

## Carbon Steel Tubing

**Table 3. Fractional Seamless Carbon Steel Tubing**

Soft annealed seamless carbon steel hydraulic tubing ASTM A179 or equivalent. Tubing to be free from scratches, draw mark, dirt, dust, flat spots, and suitable for bending and flaring. Recommended hardness: 72 HRB or less.

OD	Wall Thickness (in.)												
in	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120	0.134	0.148	0.165	0.180	0.220
1/8	8,000	10,200											
3/16	5,100	6,600	9,600										
1/4	3,700	3,700	7,000	9,600									
5/16		3,800	5,500	7,600									
3/8		3,100	4,500	6,200									
1/2		2,300	3,300	4,500	5,900								
5/8		1,800	2,600	3,500	4,600	5,300							
3/4			2,100	2,900	3,700	4,300	5,100						
7/8			1,800	2,400	3,200	3,700	4,300						
1			1,500	2,100	2,700	3,200	3,700	4,100					
1 1/4				1,600	2,100	2,500	2,900	3,200	3,600	4,000	4,600	5,000	
1 1/2					1,800	2,000	2,400	2,600	3,000	3,300	3,700	4,100	5,100
2						1,500	1,700	1,900	2,200	2,400	2,700	3,000	3,700

**Table 4. Metric Seamless Carbon Steel Tubing**

OD	Wall Thickness (mm.)												
mm	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0	3.5	4.0	4.5
3	670	830											
6	310	400	490	630									
8		290	360	460									
10		230	280	360									
12		190	230	290	360	410	450						
14		160	190	250	300	340	380						
15		150	180	230	280	320	350						
16			170	210	260	290	330	380					
18			150	190	230	260	290	330					
20			130	170	200	230	250	290	330				
22			120	150	180	210	230	260	300				
25					160	180	200	230	260	280			
28						160	180	200	230	250	290		
30						150	160	190	210	230	270		
32						140	150	170	200	210	250	290	
38							130	140	160	180	210	240	280

Allowable working pressure calculated at -20 to 100°F (-28 to 37°C) using S value of 15,700 psi according to ASME B31.3 Process Piping Code.

- Safety Factor is 3 to 1, considering ultimate tensile strength of 47,000 psi.
- To determine working pressure of ASME B31.1 Power Piping Code, multiply the ASME B31.3 rating by 0.85.

## Copper Tubing

**Table 5. Fractional Seamless Copper Tubing**

Soft annealed seamless copper tubing ASME B75 or equivalent. Soft annealed copper water Tube, Type K or L to ASTM B88. Recommended hardness: 60 HRB or less.

OD	Wall Thickness (in.)									
in	0.010	0.012	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120
1/8			2,700	3,600						
3/16			1,800	2,300	3,400					
1/4			1,300	1,600	2,500	3,500				
5/16				1,300	1,900	2,700				
3/8				1,000	1,600	2,200				
1/2				800	1,100	1,600	2,100			
5/8					900	1,200	1,600	1,900		
3/4					700	1,000	1,300	1,500	1,800	
7/8					600	800	1,100	1,300	1,500	
1					500	700	900	1,100	1,300	1,500

**Table 6. Metric Seamless Copper Tubing**

OD mm	Wall Thickness (mm.)											
	0.7	0.8	1.0	1.2	1.5	1.6	1.8	2.0	2.2	2.5	2.8	3.0
3	220	260										
4	160	190	240	290								
6		120	150	190	240	260			Working pressure (bar)			
8		80	110	130	170	190						
10		70	80	100	130	150	160	190				
12		50	70	80	110	120	130	150				
14			60	70	90	100	110	130	140	160		
16			50	60	80	80	100	110	120	140		
18			40	50	70	70	80	90	100	120	140	150
20			40	50	60	60	70	80	90	100	120	130
22			30	40	50	60	70	80	80	100	110	120
25			30	40	50	50	60	70	70	80	90	100
28							50	60	60	70	80	90

According to the requirements of ASME B31.3 Process Piping Code and ASME B31.1 Power Piping Code.

Allowable working pressure are calculated using of 6,000 psi for ASTM B75 and B88 tubing at -20 to 100°F (-28 to 37°C)

- Safety Factor is 5 to 1, considering ultimate tensile strength of 30,000 psi.

## Alloy 400 (Monel) Tubing

**Table 7. Fractional Seamless Alloy 400 Tubing**

Fully annealed seamless Alloy 400 tubing ASTM B165 or equivalent. Tubing to be free from scratches, draw mark, dirt, dust, flat spots, and suitable for bending and flaring. Recommended hardness: 75HRB or less.

OD in.	Wall Thickness (in.)							
	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120
1/8	7,900	10,100						
1/4	3,700	4,800	7,000	9,500		Working pressure (psig)		
3/8		3,100	4,400	6,100				
1/2		2,300	3,200	4,400				
3/4			2,200	3,000	4,000	4,600		
1				2,200	2,900	3,400	3,900	4,300

**Table 8. Metric Seamless Alloy 400 Tubing**

OD mm.	Wall Thickness (mm.)									
	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0
6	310	390	490	620						
8		290	350	450			Working pressure (bar)			
10		220	280	350						
12		180	230	290	360	410	450			
14		160	190	240	270	340	380			
18			150	200	240	270	300	330		
20			130	180	210	240	270	290	330	
25					170	190	210	240	270	290

According to requirement of ASME B31.3 Process Piping Code and ASME B31.1 Power Piping Code, allowable working pressure calculated using S value of 18,700 psi for ASTM B165 tubing at -20 to 100°F (-28 to 37°C).

- Safety Factor is 3.74 to 1, considering ultimate tensile strength of 70,000 psi.

## Ordering Information and Dimensions

- ❖ See How to Order, below. Minimum order quantities may apply to certain materials and configurations.
- ❖ Dimensions are for reference only and are subject to change. Dimensions are shown with OTGlok nuts finger-tight.
- ❖ **OTG-LOK** tube fitting ordering numbers follow the sequence shown below

**OTG-LOK**

**OMC-8-8R-SS**

A      B      C      D      E      F

• **A : OTG-LOK Tube Fitting (double Ferrule)**

• **B : Fitting Type** (See Catalog page 4~5)

• **C : Tubing O.D**

Tube O.D Designator

OD in.	1/16	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	2
Designator	1	2	3	4	5	6	8	10	12	14	16	20	24	32
OD mm	2mm	3mm	4mm	6mm	8mm	10mm	12mm	16mm	20mm	22mm	25mm	28mm	32mm	38mm
Designator	2M	3M	4M	6M	8M	10M	12M	16M	20M	22M	25M	28M	32M	38M

• **D : End connection Pipe Thread Size**

Pipe Thread Size Designator

Nom.size in.	1/16	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Designator	1	2	4	6	8	12	16	20	24	32

• **E : End connection Thread Type**

Ex) R = PT

Type	Designator
ASME B 1.20.1 (NPT)	N
ISO 7/1, B821 (BSPT) JIS B 0203 (PT) DIN 2999	R
ISO 228/1 BS 2779 (BSPP) JIS B 0202 (PF)	G
ASME B 1.1	U

• **F : Material**

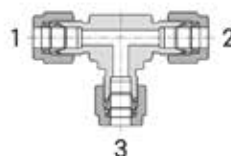
Material	Designator	Material	Designator
Stainless Steel 316	SS	Alloy 600	INC
Brass	BS	Alloy 625	A625
Carbon Steel	CS	Alloy 825	A825
Hastelloy C276	HC	Titanium (Grade 4)	TI
Alloy 400	MO	PTFE	TE

To order, select part number and suffix an applicable material designator to the part number.

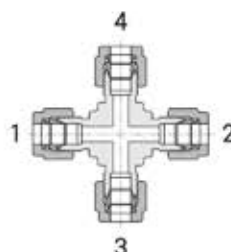
- To order complete assembly fitting, apply the material designator of complete assembly. Example: OU-8-SS
- To order component only, apply the material designator of component.

Examples: Stainless steel Nut 1/2 in. OD : ON-8-SS

Stainless steel Front Ferrule 1/2 in. OD: OFF-8-SS



Tee part number is described by first the run (1 and 2) and then the branch (3).



Cross part number is described by first the run (1 and 2) and then the branch (3 and 4).

# OTG-Lok TUBE FITTINGS INSTALLATION INSTRUCTIONS

OTG-Lok tube fittings 1 in./25 mm and smaller can be installed quickly, easily, and reliably with simple hand tools. Over 1 in./25 mm sizes require use of a hydraulic swaging unit to swage the ferrules onto the tubing.

## - Safety Precautions

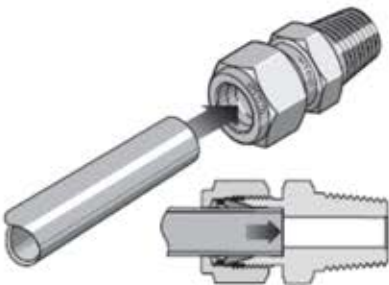
- Do not bleed system by loosening fitting nut or fitting plug.
- Do not make up and tighten fittings when system is pressurized.
- Make sure that the tubing rests firmly on the shoulder of the tube fitting body before tightening the nut.
- Always use proper thread sealants on tapered pipe threads.
- Never turn fitting body. Instead, hold fitting body and turn nut.
- Avoid unnecessary disassembly of unused fittings.

## - Preparing

1. Check the fitting and tubing size.
2. Check the tubing surface scratch or distortion.
3. Do deburr tube ends before inserting in fittings.

## - Installation Instructions

### OTG-LOK Tube Fittings Up to 1 in./25 mm



Fully Insert tubing on the OTG-LOK fitting until the tubing end bottoms on the shoulder of the fitting body. And finger-tighten the nut until dose not rotate by hand,



Mark the nut at 6 o'clock position for starting point



While holding the fitting body steady with a back up wrench, tighten the nut 1-1/4 turns to the 9 o'clock position.

**Attention** : Tighten the nut  $\frac{3}{4}$  turn to the 3 o'clock position for 1/16, 1/8, and 3/16 " ; 2MM, 3MM, and 4MM tube fittings.

- When 1 1/4 turning, it is designed to tolerate until tube breaking pressure. So, turning beyond regulation can make leakage and breakage. And too strong tightening can make it difficult to re-assembly.

## - OTG-LOK Tube Fittings Over 1 in./25 mm

1. Preswage the ferrules onto the tubing.
2. Tighten nut one-half turn past finger-tight after the ferrules are preswaged.

## - Installation in High-Pressure Applications

Even though OTG-Lok tube fittings are designed to accept the tube variations specified in ASTM or equivalent specifications, it is more desirable to have a common starting point, or snug position, for high pressure applications.

1. Fully insert the tubing into the fitting and against the shoulder; rotate the nut finger-tight.
2. Due to the variations of tubing diameters, a common starting point is desirable. Therefore, tighten the nut until the tubing will not turn by hand or move axially in the fitting.
3. Mark the nut at the 6 o'clock position.
4. While holding the fitting body steady with a back up wrench, tighten the nut 1-1/4 turns to the 9 o'clock position.

**Attention :** Tighten the nut  $\frac{3}{4}$  turn to the 3 o'clock position for 1/16, 1/8, and 3/16 " ; 2MM, 3MM, and 4MM tube fittings.

## - Re-assembly Instructions – All Sizes

OTG-Lok tube fittings can be used many times.

Prior to re-assembly, ensure the components are clean and free of defects

Fig1



Fig2

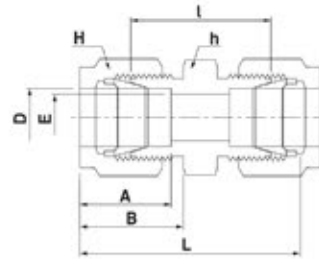


1. Insert tubing with preswaged ferrules into the fitting body until the front ferrule seats firmly. (Fig. 1).
2. Hand-tighten the nut.
3. Rotate the nut with a wrench to the previously pulled-up position: at this point, a significant increase in resistance will be encountered and a sharp rise in torque is felt.
4. Tighten slightly with a wrench. (about  $\frac{1}{4}$  turn) (Fig. 2).

Do not use the Gap inspection gauge with reassembled fittings.

# OU

Union



## Connects fractional tube

Part No.	Tube O.D		E Min	Width across flat				A	B	l	L
	D			h		H					
	in	mm		in	mm	in	mm				
OU-1	1/16	1.59	1.27	5/16	7.93	5/16	7.93	8.63	10.92	17.50	25.15
OU-2	1/8	3.17	2.28	7/16	11.11	7/16	11.11	12.70	15.24	22.35	35.56
OU-3	3/16	4.76	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.13	37.33
OU-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	26.16	40.89
OU-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	28.19	42.92
OU-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	30.22	44.95
OU-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	30.98	51.30
OU-10	5/8	15.87	12.70	15/16	23.81	1	25.40	24.38	21.84	31.75	52.07
OU-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	33.27	53.59
OU-14	7/8	22.22	18.28	1-3/16	30.16	1-1/4	31.75	25.90	21.84	35.05	55.37
OU-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	40.38	64.77
OU-20	1-1/4	31.75	27.68	1-3/4	44.45	1-7/8	47.68	41.14	38.86	48.00	92.20
OU-24	1-1/2	38.10	34.03	2-1/8	53.97	2-1/4	57.15	50.03	45.21	53.60	107.95
OU-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	74.70	149.35

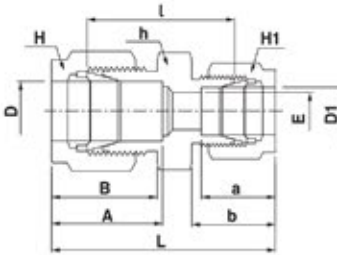
## Connects metric tube

Part No.	Tube O.D	E Min	Width across flat		A	B	l	L
			h	H				
OU-2M	2	1.7	12	12	12.9	15.3	22.4	35.6
OU-3M	3	2.4	12	12	12.9	15.3	22.1	35.3
OU-4M	4	2.4	12	12	13.7	16.1	24.1	37.3
OU-6M	6	4.8	14	14	15.3	17.7	26.2	41.0
OU-8M	8	6.4	15	16	16.2	18.6	28.2	43.2
OU-10M	10	7.9	18	19	17.2	19.5	31.0	46.2
OU-12M	12	9.5	22	22	22.8	22.0	31.0	51.2
OU-15M	15	11.9	24	25	24.4	22.0	31.8	52.0
OU-16M	16	12.7	24	25	24.4	22.0	31.8	52.0
OU-18M	18	15.1	27	30	24.4	22.0	33.3	53.5
OU-20M	20	15.9	30	32	26.0	22.0	34.8	55.0
OU-22M	22	18.3	30	32	26.0	22.0	34.8	55.0
OU-25M	25	21.8	35	38	31.3	26.5	40.4	65.0
OU-28M	28	21.8	41	46	36.6	36.6	43.4	85.0
OU-32M	32	28.6	46	50	42.0	41.6	51.3	97.3
OU-38M	38	33.7	55	60	49.4	47.9	58.4	113.6
OU-42M	42	36.8	60	65	49.3	47.8	58.4	113.4
OU-50M	50	45.2	70	76	65.0	60.2	74.7	146.0



# ORU

## Reducing Union



Connects fractional tube

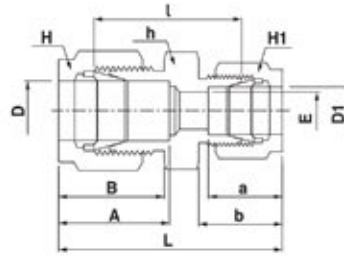
Part No.	Tube O.D				E Min	Width across flat						A	a	B	b	l	L
	D		D1			h		H		H1							
	in	mm	in	mm		in	mm	in	mm	in	mm						
ORU 2-1	1/8	3.18	1/16	1.59	1.27	7/16	11.11	7/16	11.11	5/16	7.93	12.70	8.63	15.24	10.92	20.60	30.91
ORU 3-1	3/16	4.76	1/16	1.59	1.27	7/16	11.11	1/2	12.70	5/16	7.93	13.71	8.63	16.00	10.92	21.84	32.25
ORU 3-2	3/16	4.76	1/8	3.17	2.28	7/16	11.11	1/2	12.70	7/16	11.11	13.71	12.70	16.00	15.24	23.36	36.57
ORU 4-1	1/4	6.35	1/16	1.59	1.27	1/2	12.70	9/16	14.28	5/16	7.93	15.24	8.63	17.78	10.92	23.11	34.29
ORU 4-2	1/4	6.35	1/8	3.17	2.28	1/2	12.70	9/16	14.28	7/16	11.11	15.24	12.70	17.78	15.24	24.63	38.60
ORU 4-3	1/4	6.35	3/16	4.76	3.04	1/2	12.70	9/16	14.28	1/2	12.70	15.24	13.71	17.78	16.00	25.40	39.37
ORU 5-2	5/16	7.93	1/8	3.17	2.28	9/16	14.28	5/8	15.87	7/16	11.11	16.25	12.70	18.54	15.24	25.90	39.37
ORU 5-4	5/16	7.93	1/4	6.35	4.82	9/16	14.28	5/8	15.87	9/16	14.28	16.25	15.24	18.54	17.78	27.43	42.16
ORU 6-1	5/16	9.52	1/6	1.59	1.27	5/8	15.87	11/16	17.46	5/16	7.93	16.76	8.63	19.30	10.92	25.40	36.57
ORU 6-2	3/8	9.52	1/8	3.17	2.28	5/8	15.87	11/16	17.46	7/16	11.11	16.76	12.70	19.30	15.24	26.92	40.89
ORU 6-4	3/8	9.52	1/4	6.35	4.82	5/8	15.87	11/16	17.46	9/16	14.28	16.76	15.24	19.30	17.78	28.44	43.18
ORU 6-5	3/8	9.52	5/16	7.93	6.35	5/8	15.87	11/16	17.46	5/8	15.87	16.76	16.25	19.30	18.54	29.46	44.19
ORU 8-2	1/2	12.70	1/8	3.17	2.28	13/16	20.63	7/8	22.22	7/16	11.11	22.86	12.70	21.84	15.24	28.44	45.21
ORU 8-4	1/2	12.70	1/4	6.35	4.82	13/16	20.63	7/8	22.22	9/16	14.28	22.86	15.24	21.84	17.78	29.46	46.99
ORU 8-6	1/2	12.70	3/8	9.52	7.11	13/16	20.63	7/8	22.22	11/16	17.46	22.86	16.76	21.84	19.30	30.98	48.51
ORU 10-6	5/8	15.87	3/8	9.52	7.11	15/16	23.81	1	25.40	11/16	17.46	24.38	16.76	21.84	19.30	31.75	49.27
ORU 10-8	5/8	15.87	1/2	12.70	10.41	15/16	23.81	1	25.40	7/8	22.22	24.38	22.86	21.84	21.84	31.75	52.07
ORU 12-4	3/4	19.05	1/4	6.35	4.82	1-1/16	26.98	1-1/8	28.57	9/16	14.48	24.38	15.24	21.84	17.78	31.75	49.27
ORU 12-6	3/4	19.05	3/8	9.52	7.11	1-1/16	26.98	1-1/8	28.57	11/16	17.46	24.38	16.76	21.84	19.30	33.27	50.80
ORU 12-8	3/4	19.05	1/2	12.70	10.41	1-1/16	26.98	1-1/8	28.57	7/8	22.22	24.38	22.86	21.84	21.84	33.27	53.59
ORU 12-10	3/4	19.05	5/8	15.87	12.70	1-1/16	26.98	1-1/8	28.57	1	25.40	24.38	24.38	21.84	21.84	33.27	53.59
ORU 16-8	1	25.40	1/2	12.70	10.41	1-3/8	34.92	1-1/2	38.10	7/8	22.22	31.24	22.86	26.41	21.84	40.89	63.24
ORU 16-12	1	25.40	3/4	19.05	15.74	1-3/8	34.92	1-1/2	38.10	1-1/8	28.57	31.24	24.38	26.41	21.84	40.89	62.73

Connects metric tube

Part No.	Tube O.D, D		E Min	Width across flat			A	a	B	b	l	L
	D	D1		h	H	H1						
ORU 3M-2M	3	2	1.7	12	12	12	12.9	12.9	15.3	15.3	22.1	35.3
ORU 6M-2M	6	2	1.7	14	14	12	15.3	12.9	17.7	15.3	24.6	38.6
ORU 6M-3M	6	3	2.4	14	14	12	15.3	12.9	17.7	15.3	24.6	38.6
ORU 6M-4M	6	4	2.4	14	14	12	15.3	13.7	17.7	16.1	25.4	39.4
ORU 8M-6M	8	6	4.8	15	16	14	16.2	15.3	18.6	17.7	27.4	42.3
ORU 10M-3M	10	3	2.4	18	19	12	17.2	12.9	19.5	15.3	27.7	41.9
ORU 10M-4M	10	4	2.4	18	19	12	17.2	13.7	19.5	16.1	28.7	42.9
ORU 10M-6M	10	6	4.8	18	19	14	17.2	15.3	19.5	17.7	29.5	44.5
ORU 10M-8M	10	8	6.4	18	19	16	17.2	16.2	19.5	18.6	30.0	45.1
ORU 12M-6M	12	6	4.8	22	22	14	22.8	15.3	22.0	17.7	29.5	47.0
ORU 12M-8M	12	8	6.4	22	22	16	22.8	16.2	22.0	18.6	30.2	47.8
ORU 12M-10M	12	10	7.9	22	22	19	22.8	17.2	22.0	19.5	31.0	48.7
ORU 16M-10M	16	10	7.9	24	25	19	24.4	17.2	22.0	19.5	31.8	49.5
ORU 16M-12M	16	12	9.5	24	25	22	24.4	22.8	22.0	22.0	31.8	52.0
ORU 18M-10M	18	10	7.9	27	30	19	24.4	17.2	22.0	19.5	33.0	51.0
ORU 18M-12M	18	12	9.5	27	30	22	24.4	22.8	22.0	22.0	33.3	53.5
ORU 25M-18M	25	18	15.1	35	38	30	31.3	24.4	26.5	22.0	38.6	61.0
ORU 25M-20M	25	20	15.9	35	38	32	31.3	26.0	26.5	22.0	39.9	62.3
ORU 30M-18M	30	18	15.1	46	50	30	39.7	24.4	39.3	22.0	43.7	75.4
ORU 30M-20M	30	20	15.9	46	50	32	39.7	26.0	39.3	22.0	43.7	75.4
ORU 30M-25M	30	25	21.8	46	50	38	39.7	31.3	39.3	26.5	46.2	80.1
ORU 32M-18M	32	18	15.1	46	50	30	42.0	24.4	41.6	22.0	44.7	77.8
ORU 32M-20M	32	20	15.9	46	50	32	42.0	26.0	41.6	22.0	44.7	77.8
ORU 32M-25M	32	25	21.8	46	50	38	42.0	31.3	41.6	26.5	47.0	82.3
ORU 38M-20M	38	20	15.9	55	60	32	49.4	26.0	47.9	22.0	49.8	87.5
ORU 38M-25M	38	25	21.8	55	60	38	49.4	31.3	47.9	26.5	52.1	92.0
ORU 38M-30M	38	30	26.2	55	60	50	49.4	39.7	47.9	39.3	55.4	104.6

# ORU

Reducing Union

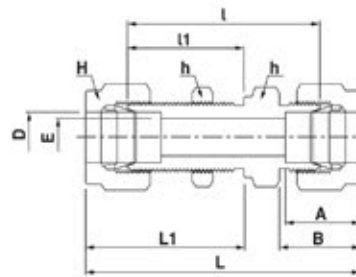


Connects metric tube to fractional tube

Part No.	Tube O.D		E Min	Width across flat			A	a	B	b	l	L	
	D	D1		h	H	H1(in.)							
		in											mm
ORU 3M-2	3	1/8	3.17	2.3	7/16 in	12	7/16	12.9	12.8	15.3	15.2	22.1	35.2
ORU 4M-2	4	1/8	3.17	2.3	7/16 in	12	7/16	13.7	12.8	16.1	15.2	23.4	36.5
ORU 4M-4	4	1/4	6.35	2.4	7/16 in	12	9/16	13.7	15.3	16.1	17.7	25.4	39.4
ORU 6M-2	6	1/8	3.17	2.3	1/2 in	14	7/16	15.3	12.8	17.7	15.2	24.6	38.5
ORU 6M-4	6	1/4	6.35	4.8	1/2 in	14	9/16	15.3	15.3	17.7	17.7	26.2	41.0
ORU 6M-5	6	5/16	7.93	4.8	14	14	5/8	15.3	16.2	17.7	18.6	27.4	42.3
ORU 8M-4	8	1/4	6.35	4.8	15	16	9/16	16.2	15.3	18.6	17.7	27.4	42.3
ORU 10M-2	10	1/8	3.17	2.3	17	19	7/16	17.2	12.8	19.5	15.2	27.7	41.8
ORU 10M-4	10	1/4	6.35	4.8	17	19	9/16	17.2	15.3	19.5	17.7	29.5	44.5
ORU 10M-5	10	1/16	7.93	6.3	17	19	5/8	17.2	16.2	19.5	18.6	30.3	45.1
ORU 10M-6	10	3/8	9.52	7.0	17	19	11/16	17.2	16.9	19.5	19.2	31.0	45.9
ORU 12M-5	12	5/16	7.93	6.3	13/16 in	22	5/8	22.8	16.2	22.0	18.6	30.3	47.8
ORU 12M-6	12	3/8	9.52	7.0	13/16 in	22	11/16	22.8	16.9	22.0	19.2	31.0	48.4
ORU 12M-8	12	1/2	12.70	9.5	13/16 in	22	7/8	22.8	22.8	22.0	22.0	31.0	51.2
ORU 15M-8	15	1/2	12.70	10.4	24	25	7/8	24.4	22.8	22.0	22.0	31.8	52.0
ORU 16M-10	16	5/8	15.87	12.7	24	25	1	24.4	24.4	22.0	22.0	31.8	52.0
ORU 18M-12	18	3/4	19.05	15.0	27	30	1-1/2	24.4	24.4	22.0	22.0	33.3	53.5
ORU 20M-12	20	3/4	19.05	15.7	30	32	1-1/8	26.0	24.4	22.0	22.0	34.8	54.9
ORU 20M-16	20	1	25.40	16.0	35	32	1-1/2	26.0	31.2	22.0	26.4	38.0	60.3
ORU 22M-16	22	1	25.40	18.3	35	32	1-1/2	26.0	31.2	22.0	26.4	38.2	60.3

# OBU

Bulkhead Union



Connects fractional tube

Part No.	Tube O.D D		E Min	Width across flat				A	B	l	l1	L	L1	Panel Hole Drill Size	Panel Max Thickness
	in	mm		h	mm	H	mm								
OBU-1	1/16	1.59	1.27	5/16	7.93	5/16	7.93	8.63	10.92	23.87	13.46	31.50	17.27	5.16	3.05
OBU-2	1/8	3.17	2.28	1/2	12.70	7/16	11.11	12.70	15.24	38.10	24.63	51.30	31.24	8.33	12.70
OBU-3	3/16	4.76	3.04	9/16	14.28	1/2	12.70	13.71	16.00	40.38	25.40	53.59	32.00	9.92	12.70
OBU-4	1/4	6.35	4.82	5/8	15.87	9/16	14.28	15.24	17.78	42.92	26.16	57.65	33.52	11.50	10.16
OBU-5	5/16	7.93	6.35	11/16	17.46	5/8	15.87	16.25	18.54	45.97	28.44	60.70	35.81	13.09	11.17
OBU-6	3/8	9.52	7.11	3/4	19.05	11/16	17.46	16.76	19.30	47.49	29.46	62.23	36.83	14.68	11.17
OBU-8	1/2	12.70	10.41	15/16	23.81	7/8	22.22	22.86	21.84	50.80	31.75	71.12	41.91	19.44	12.70
OBU-10	5/8	15.87	12.70	1-1/16	26.98	1	25.40	24.38	21.84	52.32	32.51	72.64	42.67	22.62	12.70
OBU-12	3/4	19.05	15.74	1-3/16	30.16	1-1/8	28.57	24.38	21.84	58.67	37.33	78.99	47.49	25.79	16.76
OBU-14	7/8	22.22	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	64.26	42.92	84.58	53.08	28.97	19.05
OBU-16	1	25.40	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	71.37	45.21	95.75	57.40	33.73	19.05
OBU-20	1-1/4	31.75	27.68	1-7/8	47.63	1-7/8	47.63	41.14	38.86	78.99	47.75	123.19	69.85	41.67	19.05
OBU-24	1-1/2	38.10	34.03	2-1/4	57.15	2-1/4	57.15	50.03	45.21	84.83	49.27	139.19	76.45	49.61	19.05
OBU-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	105.56	56.38	180.34	93.72	57.94	19.05

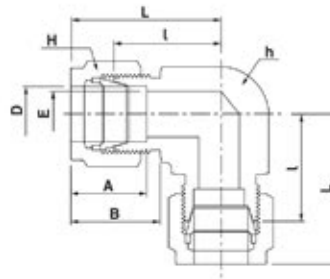
Connects metric tube

Part No.	Tube O.D D	E Min	Width across flat		A	B	l	l1	L	L1	Panel Hole Drill Size	Panel Max Thickness
			h	H								
OBU-3M	3	2.4	14.0	12	12.9	15.3	38.1	24.6	51.3	31.2	8.3	12.7
OBU-4M	4	2.4	14.0	12	13.7	16.1	40.4	25.4	53.6	32.0	9.9	12.7
OBU-6M	6	4.8	16.0	14	15.3	17.7	42.9	26.2	57.7	33.6	11.5	10.2
OBU-8M	8	6.4	18.0	16	16.2	18.6	46.0	28.6	61.0	36.1	13.1	11.2
OBU-10M	10	7.9	22.0	19	17.2	19.5	48.5	29.4	63.7	37.0	16.2	11.2
OBU-12M	12	9.5	24.0	22	22.8	22.0	50.8	31.8	71.0	41.9	19.5	12.7
OBU-15M	15	11.9	27.0	25	24.4	22.0	52.3	32.5	72.5	42.6	22.8	12.7
OBU-16M	16	12.7	27.0	25	24.4	22.0	52.3	32.5	72.5	42.6	22.8	12.7
OBU-18M	18	15.1	30.0	30	24.4	22.0	58.7	37.3	78.9	47.4	26.0	16.8
OBU-20M	20	15.9	35.0	32	26.0	22.0	64.3	42.9	84.5	53.0	29.0	17.0
OBU-22M	22	18.3	35.0	32	26.0	22.0	64.3	42.9	84.5	53.0	29.0	19.1
OBU-25M	25	21.8	41.3	38	31.3	26.5	71.4	45.2	95.9	57.5	33.7	19.1
OBU-32M	32	28.6	50.0	50	42.0	41.6	82.3	49.5	128.3	72.5	42.5	19.0
OBU-38M	38	33.7	60.0	60	49.4	47.9	89.4	51.5	144.6	79.1	50.5	19.0

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OUE

Union Elbow



Connects fractional tube

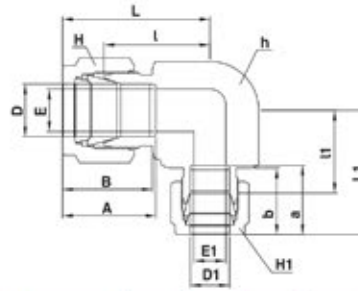
Part No.	Tube O.D D		E Min	Width across flat				A	B	l	L
	in	mm		h		H					
				in	mm	in	mm				
OUE-1	1/16	1.59	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
OUE-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
OUE-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
OUE-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
OUE-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70
OUE-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
OUE-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06
OUE-10	5/8	15.87	12.70	15/16	23.80	1	25.40	24.38	21.84	28.70	38.80
OUE-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	39.87
OUE-14	7/8	22.22	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70
OUE-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02
OUE-20	1-1/4	31.75	27.68	1-11/16	42.89	1-7/8	47.63	41.14	38.86	44.50	66.54
OUE-24	1-1/2	38.10	34.03	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97
OUE-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18

Connects metric tube

Part No.	Tube O.D D	E Min	Width across flat		A	B	l	L
			h	H				
OUE-2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
OUE-3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
OUE-4M	4	2.4	12.7	12	13.7	16.4	18.8	25.4
OUE-6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
OUE-8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8
OUE-10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
OUE-12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
OUE-15M	15	11.9	25.4	25	24.4	22.0	28.7	38.8
OUE-16M	16	12.7	25.4	25	24.4	22.0	28.7	38.8
OUE-18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
OUE-20M	20	15.9	34.92	32	26.0	22.0	34.5	44.6
OUE-22M	22	18.3	34.92	32	26.0	22.0	34.5	44.6
OUE-25M	25	21.8	34.92	38	31.3	26.5	36.8	49.1
OUE-28M	28	21.8	41.0	46	36.6	36.6	43.2	64.0
OUE-32M	32	28.6	46.0	50	42.0	41.6	49.3	72.3
OUE-38M	38	33.7	55.0	60	49.4	47.9	56.4	84.0

# ORE

Reducing Union Elbow



Connects fractional tube

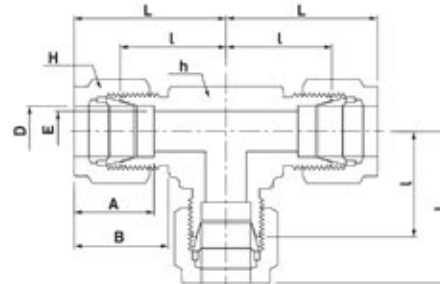
Part No.	Tube O.D				Width across flat						E	E1	A	a	B	b	l	l1	L	L1
	D		D1		h		H		H1											
	in	mm	in	mm	in	mm	in	mm	in	mm										
ORE 2-1	1/8	3.17	1/16	1.59	3/8	9.52	7/16	11.11	5/16	7.93	2.4	1.3	12.7	8.63	15.24	10.93	15.74	14.2	22.35	18.0
ORE 4-2	1/4	6.35	1/8	3.17	1/2	12.7	9/16	14.28	7/16	11.11	4.8	2.4	15.24	12.7	17.78	15.24	19.55	17.9	26.92	24.5
ORE 6-4	3/8	9.52	1/4	6.35	5/8	15.87	11/16	17.46	9/16	14.28	7.1	4.8	16.76	15.24	19.3	17.78	23.1	21.92	30.47	29.29
ORE 8-4	1/2	12.7	1/4	6.35	13/16	20.64	7/8	22.22	9/16	14.28	10.41	4.8	22.86	15.24	21.84	17.78	25.9	24.4	36.06	31.77
ORE 8-6	1/2	12.7	3/8	9.52	13/16	20.64	7/8	22.22	11/16	17.46	10.41	7.1	22.86	16.76	21.84	19.30	25.9	25.9	36.06	33.27

Connects metric tube

Part No.	Tube O.D			Width across flat						E	E1	A	a	B	b	l	l1	L	L1
	D	D1		h		H		H1											
		in	mm	in	mm	mm	in	mm											
ORE 8M-4	8	1/4	6.35	9.16	14.28	16	9/16	14.28	6.4	4.8	16.2	15.24	18.6	17.78	21.3	20.6	28.7	28.0	

# OUT

Union Tee



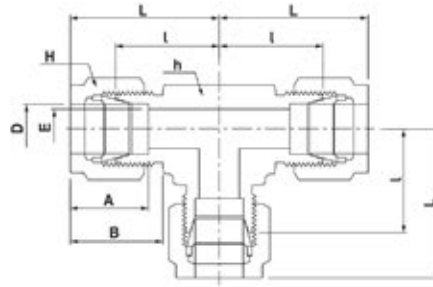
Connects fractional tube

Part No.	Tube O.D		E Min	Width across flat				A	B	l	L
	D			h		H					
	in	mm		in	mm	in	mm				
OUT-1	1/16	1.59	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
OUT-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
OUT-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
OUT-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
OUT-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70
OUT-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
OUT-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06
OUT-10	5/8	15.87	12.70	15/16	23.80	1	25.40	24.38	21.84	28.70	38.80
OUT-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	39.87
OUT-14	7/8	22.22	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70
OUT-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02
OUT-20	1-1/4	31.75	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54
OUT-24	1-1/2	38.10	34.03	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97
OUT-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OUT

Union Tee

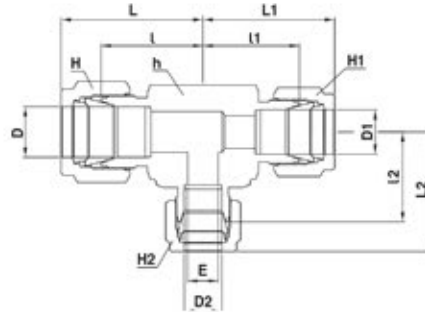


Connects metric tube

Part No.	Tube O.D D	E Min	Width across flat		A	B	l	L
			h	H				
OUT-2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
OUT-3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
OUT-4M	4	2.4	12.7	12	13.7	16.1	18.8	25.4
OUT-6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
OUT-8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8
OUT-10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
OUT-12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
OUT-15M	15	11.9	25.4	25	24.4	22.0	28.7	38.8
OUT-16M	16	12.7	25.4	25	24.4	22.0	28.7	38.8
OUT-18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
OUT-20M	20	15.9	34.92	32	26.0	22.0	34.5	44.6
OUT-22M	22	18.3	34.92	32	26.0	22.0	34.5	44.6
OUT-25M	25	21.8	34.92	38	31.3	26.5	36.8	49.1
OUT-28M	28	21.8	41.0	46	36.6	36.6	43.2	64.0
OUT-32M	32	28.6	46.0	50	42.0	41.6	49.3	72.3
OUT-38M	38	33.7	55.0	60	49.4	47.9	56.4	84.0

# ORT

## Reducing Union Tee



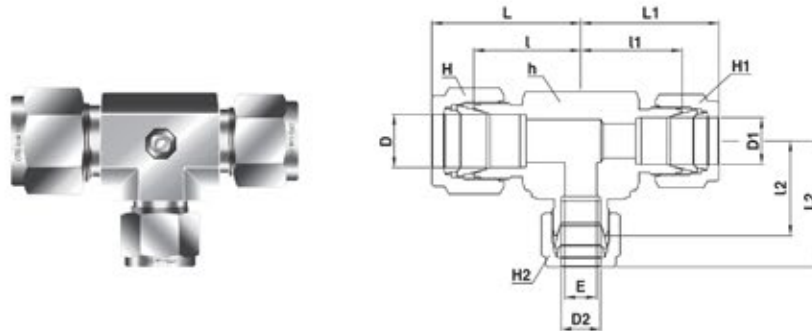
Connects fractional tube

Part No.	Port 1 D		Port 2 D1		Port 3 D2		E min	Width across flat								l	l1	l2	L	L1	L2
	in	mm	in	mm	in	mm		h		H		H1		H2							
								in	mm	in	mm	in	mm	in	mm						
ORT 4-2	1/4	6.35	1/4	6.35	1/8	3.17	2.28	1/2	12.70	9/16	14.28	9/16	14.28	7/16	11.11	19.55	19.55	17.90	26.91	26.91	24.50
ORT 4-6	1/4	6.35	1/4	6.35	3/8	9.52	4.82	5/8	15.87	9/16	14.28	9/16	14.28	11/16	17.46	21.92	21.92	23.10	29.28	29.28	30.46
ORT 4-8-8	1/4	6.35	1/2	12.70	1/2	12.70	4.82	13/16	20.64	9/16	14.28	7/8	22.22	7/8	22.22	24.40	25.90	25.90	31.76	36.06	36.06
ORT 6-4-6	3/8	9.52	1/4	6.35	3/8	9.52	4.82	5/8	15.87	11/16	17.46	9/16	14.28	11/16	17.46	23.10	21.92	23.10	30.46	29.28	30.46
ORT 6-4	3/8	9.52	3/8	9.52	1/4	6.35	4.82	5/8	15.87	11/16	17.46	11/16	17.46	9/16	14.28	23.10	23.10	21.92	30.46	30.46	29.28
ORT 6-8	3/8	9.52	3/8	9.52	1/2	12.70	7.11	13/16	20.64	11/16	17.46	11/16	17.46	7/8	22.22	25.90	25.90	25.90	33.26	33.26	36.06
ORT 8-4-6	1/2	12.70	1/4	6.35	3/8	9.52	4.82	13/16	20.64	7/8	22.22	9/16	14.28	11/16	17.46	25.90	25.90	25.90	36.06	31.76	33.26
ORT 8-4-8	1/2	12.70	1/4	6.35	1/2	12.70	4.82	13/16	20.64	7/8	22.22	9/16	14.28	7/8	22.22	25.90	24.40	25.90	36.06	31.76	36.06
ORT 8-6-6	1/2	12.70	3/8	9.52	3/8	9.52	7.11	13/16	20.64	7/8	22.22	11/16	17.46	11/16	17.46	25.90	25.90	25.90	36.06	33.26	33.26
ORT 8-4	1/2	12.07	1/2	12.70	1/4	6.35	4.82	13/16	20.64	7/8	22.22	7/8	22.22	9/16	14.28	25.90	25.90	24.40	36.06	36.06	31.76
ORT 8-6	1/2	12.70	1/2	12.70	3/8	9.52	7.11	13/16	20.64	7/8	22.22	7/8	22.22	11/16	17.46	25.90	25.90	25.90	36.06	36.06	33.26
ORT 10-6	5/8	15.87	5/8	15.87	3/8	9.52	7.11	15/16	23.81	1	25.40	1	25.40	11/16	17.46	28.70	28.70	28.70	38.86	38.86	36.06
ORT 12-8-12	3/4	19.05	1/2	12.70	3/4	19.05	10.41	1-1/16	26.98	1-1/8	28.58	7/8	22.22	1-1/8	28.58	29.71	29.71	29.71	39.87	38.37	39.87
ORT 12-4	3/4	19.05	3/4	19.05	1/4	6.35	4.82	1-1/16	26.98	1-1/8	28.58	1-1/8	28.58	9/16	14.28	29.71	29.71	28.21	39.87	39.87	35.57
ORT 12-6	3/4	19.05	3/4	19.05	3/8	9.52	7.11	1-1/16	26.98	1-1/8	28.58	1-1/8	28.58	11/16	17.46	29.71	29.71	29.71	39.87	39.87	37.1
ORT 12-8	3/4	19.05	3/4	19.05	1/2	12.70	10.41	1-1/16	26.98	1-1/8	28.58	1-1/8	28.58	7/8	22.22	29.71	29.71	29.71	39.87	39.87	38.37
ORT 12-16	3/4	19.05	3/4	19.05	1	25.40	15.74	1-3/8	34.92	1-1/8	28.58	1-1/8	28.58	1-1/2	38.10	34.43	34.43	36.83	49.02	49.02	45.70
ORT 12-20	3/4	19.05	3/4	19.05	1-1/4	31.75	15.74	1-11/16	42.86	1-1/8	28.58	1-1/8	28.58	1-7/8	47.63	39.41	39.41	44.45	49.57	49.57	66.55
ORT 14-8	7/8	22.22	7/8	22.22	1/2	12.70	10.41	1-1/4	31.75	1-1/4	31.75	1-1/4	31.75	7/8	22.22	34.54	34.54	34.54	44.70	44.70	44.70
ORT 16-12-12	1	25.40	3/4	19.05	3/4	19.05	15.74	1-3/8	34.92	1-1/2	38.10	1-1/8	28.58	1-1/8	28.58	36.83	35.54	35.54	49.02	45.70	45.70
ORT 16-4	1	25.04	1	25.40	1/4	6.35	4.82	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	9/16	14.28	36.83	36.83	33.04	49.02	49.02	40.40
ORT 16-6	1	25.40	1	25.40	3/8	9.52	7.11	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	11/16	17.46	36.83	36.83	35.54	49.02	49.02	41.90
ORT 16-8	1	25.40	1	25.40	1/2	12.70	10.41	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	7/8	22.22	36.83	36.83	35.54	49.02	49.02	44.70
ORT 16-12	1	25.40	1	25.40	3/4	19.05	15.74	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	1-1/8	28.58	36.83	36.83	35.54	49.02	49.02	45.70
ORT 20-12-12	1-1/4	31.75	3/4	19.05	3/4	19.05	15.74	1-11/16	42.86	1-7/8	47.63	1-1/8	28.58	1-1/8	28.58	44.45	39.41	39.41	66.55	49.57	49.57
ORT 20-12	1-1/4	31.75	1-1/4	31.75	3/4	19.05	15.74	1-11/16	42.86	1-7/8	47.63	1-7/8	47.63	1-1/8	28.58	44.45	44.45	39.41	66.55	66.55	49.57
ORT 24-20-20	1-1/2	38.10	1-1/4	31.75	1-1/4	31.75	27.68	2	50.8	2-1/4	57.15	1-7/8	47.63	1-7/8	47.63	50.80	49.62	46.92	77.97	71.72	71.72
ORT 24-8	1-1/2	38.10	1-1/2	38.10	1/2	12.70	10.41	2	50.8	2-1/4	57.15	2-1/4	57.15	7/8	22.22	50.80	50.8	44.58	77.97	77.97	54.74
ORT 24-12	1-1/2	38.10	1-1/2	38.10	3/4	19.05	15.74	2	50.8	2-1/4	57.15	2-1/4	57.15	1-1/8	28.58	50.80	50.8	44.58	77.97	77.97	54.74
ORT 24-16	1-1/2	38.10	1-1/2	38.10	1	25.40	22.35	2	50.8	2-1/4	57.15	2-1/4	57.15	1-1/2	38.10	50.80	50.8	47.75	77.97	77.97	59.94

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# ORT

## Reducing Union Tee



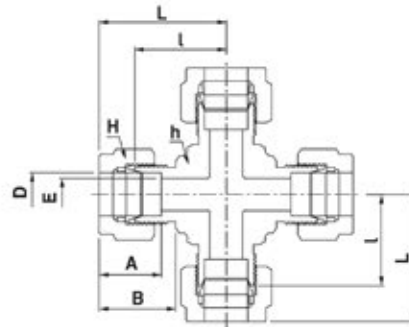
Connects metric tube

Part No.	Port 1	Port 2	Port 3	E min	Width across flat				l	l1	l2	L	L1	L2
	D	D1	D2		h	H	H1	H2						
ORT 3M-6M	3	3	6	2.4	12.7	12	12	14	18.0	18.0	19.6	24.6	24.6	27.0
ORT 8M-6M	8	8	6	4.8	15	16	16	14	21.3	21.3	20.5	28.8	28.8	28.0
ORT 10M-6M	10	10	6	4.8	17.4	19	19	14	23.9	23.9	22.4	31.5	31.5	29.8
ORT 10M-12M	10	10	12	7.9	20.6	19	19	22	25.9	25.9	25.9	33.5	33.5	36.0
ORT 12M-6M-10M	12	6	10	4.8	20.6	22	14	19	25.9	24.4	25.9	36.0	31.8	33.5
ORT 12M-6M-12M	12	6	12	4.8	20.6	22	14	22	25.9	24.4	25.9	36.0	31.8	36.0
ORT 12M-10M-10M	12	10	10	7.9	20.6	22	19	19	25.9	25.9	25.9	36.0	33.5	33.5
ORT 12M-10M	12	12	10	7.9	20.6	22	22	19	25.9	25.9	25.9	36.0	36.0	33.5
ORT 12M-6M	12	12	6	4.8	20.6	22	22	14	25.9	25.9	24.4	36.0	36.0	31.8
ORT 15M-12M	15	15	12	9.8	25.4	25	25	22	28.7	28.7	28.7	38.8	38.8	38.8
ORT 16M-12M	16	16	12	9.8	25.4	25	25	22	28.7	28.7	28.7	38.8	38.8	38.8
ORT 18M-12M	18	18	12	9.8	27	30	30	22	29.7	29.7	29.7	39.8	39.8	39.8
ORT 20M-12M-20M	20	12	20	9.8	34.9	32	22	32	32.5	32.5	32.5	42.6	42.6	42.6
ORT 20M-6M	20	20	6	4.8	34.9	32	32	14	32.5	32.5	31.0	42.6	42.6	38.4
ORT 20M-10M	20	20	10	7.9	34.9	32	32	19	32.5	32.5	32.5	42.6	42.6	40.1
ORT 20M-12M	20	20	12	9.8	34.9	32	32	22	32.5	32.5	32.5	42.6	42.6	42.6
ORT 20M-25M	20	20	25	15.9	34.9	32	32	38	34.3	34.3	36.8	44.4	44.4	49.1
ORT 20M-32M	20	20	32	15.9	46	32	32	50	42.5	42.5	49.3	52.6	52.6	72.3
ORT 22M-12M	22	20	12	9.8	34.9	32	32	22	32.5	32.5	32.5	42.6	42.6	42.6
ORT 25M-20M-20M	25	20	20	15.9	34.9	38	32	32	36.8	34.3	34.3	49.1	44.4	44.4
ORT 25M-10M	25	25	10	7.9	34.9	38	38	19	36.8	36.8	34.3	49.1	49.1	38.9
ORT 25M-12M	25	25	12	9.8	34.9	38	38	22	36.8	36.8	34.3	49.1	49.1	44.4
ORT 25M-20M	25	25	20	15.9	34.9	38	38	32	36.8	36.8	34.3	49.1	49.1	44.4
ORT 32M-20M	32	32	20	15.9	46	38	38	32	49.3	49.3	42.5	72.3	72.3	52.6
ORT 38M-32M-32M	38	32	32	28.6	50.8	60	38	38	56.4	54.7	54.7	84.0	77.7	77.7
ORT 38M-20M	38	38	20	15.9	50.8	60	60	32	56.4	56.4	47.9	84.0	84.0	58.0
ORT 38M-25M	38	38	25	21.8	50.8	60	60	38	56.4	56.4	50.4	84.0	84.0	62.7



# OUC

Union Cross



Connects fractional tube

Part No.	Tube O.D D		E Min	Width across flat				A	B	l	L
	in	mm		h		H					
				in	mm	in	mm				
OUC-1	1/16	1.59	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
OUC-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
OUC-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
OUC-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
OUC-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70
OUC-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
OUC-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06
OUC-10	5/8	15.87	12.70	15/16	23.80	1	25.40	24.38	21.84	28.70	38.80
OUC-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	39.87
OUC-14	7/8	22.22	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70
OUC-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02
OUC-20	1-1/4	31.75	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54
OUC-24	1-1/2	38.10	34.03	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97
OUC-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18

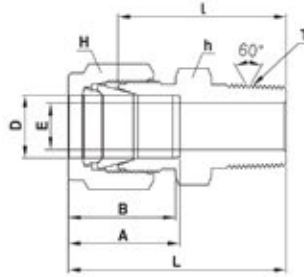
Connects metric tube

Part No.	Tube O.D D	E Min	Width across flat		A	B	l	L
			h	H				
OUC-2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
OUC-3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
OUC-4M	4	2.4	12.7	12	13.7	16.4	18.8	25.4
OUC-6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
OUC-8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8
OUC-10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
OUC-12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
OUC-15M	15	11.9	25.4	25	24.4	22.0	28.7	38.8
OUC-16M	16	12.7	25.4	25	24.4	22.0	28.7	38.8
OUC-18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
OUC-20M	20	15.9	34.92	32	26.0	22.0	34.5	44.6
OUC-22M	22	18.3	34.92	32	26.0	22.0	34.5	44.6
OUC-25M	25	21.8	34.92	38	31.3	26.5	36.8	49.1
OUC-28M	28	21.8	41.0	46	36.6	36.6	43.2	64.0
OUC-32M	32	28.6	46.0	50	42.0	41.6	49.3	72.3
OUC-38M	38	33.7	55.0	60	49.4	47.9	56.4	84.0

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# OMC-N

Male Connector

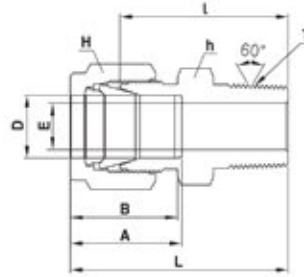


Connects fractional tube to female NPT thread

Part No.	Tube O.D		T NPT	E Min	Width across flat				A	B	l	L
	D				h		H					
	in	mm			in	mm	in	mm				
OMC 1-1N	1/16	1.59	1/16	1.27	5/16	7.93	5/16	7.93	8.63	10.92	20.00	23.83
OMC 1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	22.35	26.23
OMC 1-4N	1/16	1.59	1/4	1.27	9/16	14.28	5/16	7.93	8.63	10.92	27.17	30.98
OMC 2-1N	1/8	3.17	1/16	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.11	29.71
OMC 2-2N	1/8	3.17	1/8	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.87	30.48
OMC 2-4N	1/8	3.17	1/4	2.28	9/16	14.28	7/16	11.11	12.70	15.24	28.95	35.56
OMC 2-6N	1/8	3.17	3/8	2.28	11/16	17.46	7/16	11.11	12.70	15.24	29.21	35.81
OMC 2-8N	1/8	3.17	1/2	2.28	7/8	22.22	7/16	11.11	12.70	15.24	35.56	42.16
OMC 3-2N	3/16	4.76	1/8	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.63	31.24
OMC 3-4N	3/16	4.76	1/4	3.04	9/16	14.28	1/2	12.70	13.71	16.00	29.71	36.32
OMC 4-1N	1/4	6.35	1/16	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	32.76
OMC 4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	32.76
OMC 4-4N	1/4	6.35	1/4	4.82	9/16	14.28	9/16	14.28	15.24	17.78	30.48	37.84
OMC 4-6N	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	30.98	38.35
OMC 4-8N	1/4	6.35	1/2	4.82	7/8	22.22	9/16	14.28	15.24	17.78	37.33	44.70
OMC 4-12N	1/4	6.35	3/4	4.82	1-1/8	26.98	9/16	14.28	15.24	17.78	38.86	46.22
OMC 5-2N	5/16	7.93	1/8	4.82	9/16	14.28	5/8	15.87	16.25	18.54	26.67	34.03
OMC 5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	31.24	38.60
OMC 5-6N	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	31.75	39.11
OMC 5-8N	5/16	7.93	1/2	6.35	7/8	22.22	5/8	15.87	16.25	18.54	38.11	45.60
OMC 6-2N	3/8	9.52	1/8	4.82	5/8	15.87	11/16	17.46	16.76	19.30	27.94	35.30
OMC 6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	32.51	39.87
OMC 6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	32.51	39.87
OMC 6-8N	3/8	9.52	1/2	7.11	7/8	22.22	11/16	17.46	16.76	19.30	38.86	46.22
OMC 6-12N	3/8	9.52	3/4	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	40.38	47.75
OMC 8-2N	1/2	12.70	1/8	4.82	13/16	20.64	7/8	22.22	22.86	21.84	28.70	38.86
OMC 8-4N	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	33.27	43.43
OMC 8-6N	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	33.27	43.43
OMC 8-8N	1/2	12.70	1/2	10.41	7/8	22.22	7/8	22.22	22.86	21.84	38.86	49.02
OMC 8-12N	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	40.38	50.54
OMC 8-16N	1/2	12.70	1	10.41	1-3/8	34.92	7/8	22.22	22.86	21.84	46.99	57.15
OMC 10-6N	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	34.03	44.19
OMC 10-8N	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	38.86	49.02
OMC 10-12N	5/8	15.87	3/4	12.70	1-1/16	26.98	1	25.40	24.38	21.84	40.38	50.54
OMC 12-8N	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.58	24.38	21.84	40.38	50.54
OMC 12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	40.38	50.54
OMC 12-16N	3/4	19.05	1	15.74	1-3/8	34.92	1-1/8	28.58	24.38	21.84	46.99	57.15
OMC 14-12N	7/8	22.22	3/4	15.74	1-3/16	30.16	1-1/4	31.75	25.90	21.84	40.38	50.54
OMC 14-16N	7/8	22.22	1	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	46.99	57.15
OMC 16-8N	1	25.40	1/2	11.93	1-3/8	34.92	1-1/2	38.10	31.24	26.41	45.21	57.40
OMC 16-12N	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	45.21	57.40
OMC 16-16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	50.03	62.23
OMC 20-16N	1-1/4	31.75	1	22.35	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.11	77.21
OMC 20-20N	1-1/4	31.75	1-1/4	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.11	77.21
OMC 20-24N	1-1/4	31.75	1-1/2	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	60.54	82.64
OMC 24-20N	1-1/2	38.10	1-1/4	27.68	2-1/8	53.98	2-1/4	57.15	50.03	45.21	59.42	86.60
OMC 24-24N	1-1/2	38.10	1-1/2	34.03	2-1/8	53.98	2-1/4	57.15	50.03	45.21	61.72	88.90
OMC 24-32N	1-1/2	38.10	2	34.03	2-3/4	69.85	2-1/4	57.15	50.03	45.21	62.42	99.75
OMC 32-8N	2	50.80	1/2	11.93	2-3/4	69.85	3	76.20	67.56	62.73	68.40	105.73
OMC 32-20N	2	50.80	1-1/4	45.97	2-3/4	69.85	3	76.20	67.56	62.73	71.40	108.73
OMC 32-24N	2	50.80	1-1/2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	75.50	112.83
OMC 32-32N	2	50.80	2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	76.20	113.53

# OMC-N

Male Connector



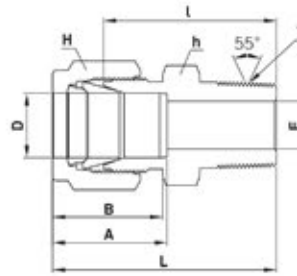
Connects metric tube to female NPT thread

Part No.	Tube O.D D	T NPT	E Min	Width across flat		A	B	l	L
				h	H				
OMC 2M-2N	2	1/8	1.7	12	12	12.9	15.3	23.9	30.5
OMC 3M-2N	3	1/8	2.4	12	12	12.9	15.3	23.1	29.7
OMC 3M-4N	3	1/4	2.4	14	12	12.9	15.3	29.0	35.6
OMC 4M-2N	4	1/8	2.4	12	12	13.7	16.1	24.6	31.2
OMC 4M-4N	4	1/4	2.4	14	12	13.7	16.1	29.7	36.3
OMC 6M-2N	6	1/8	4.8	14	14	15.3	17.7	25.4	32.8
OMC 6M-4N	6	1/4	4.8	14	14	15.3	17.7	30.2	37.6
OMC 6M-6N	6	3/8	4.8	18	14	15.3	17.7	31.0	38.4
OMC 6M-8N	6	1/2	4.8	22	14	15.3	17.7	37.3	44.0
OMC 8M-2N	8	1/8	4.8	15	16	16.2	18.6	26.7	34.2
OMC 8M-4N	8	1/4	6.4	15	16	16.2	18.6	31.2	38.7
OMC 8M-6N	8	3/8	6.4	18	16	16.2	18.6	31.8	39.2
OMC 8M-8N	8	1/2	6.4	22	16	16.2	18.6	37.3	44.8
OMC 10M-2N	10	1/8	4.8	18	19	17.2	19.5	28.7	36.3
OMC 10M-4N	10	1/4	7.1	18	19	17.2	19.5	33.3	40.9
OMC 10M-6N	10	3/8	7.9	18	19	17.2	19.5	33.3	40.9
OMC 10M-8N	10	1/2	7.9	22	19	17.2	19.5	38.1	45.7
OMC 10M-12N	10	3/4	7.9	27	19	17.2	19.5	38.9	46.5
OMC 12M-2N	12	1/8	4.8	22	22	22.8	22.0	28.7	38.8
OMC 12M-4N	12	1/4	7.1	22	22	22.8	22.0	33.3	43.4
OMC 12M-6N	12	3/8	9.5	22	22	22.8	22.0	33.3	43.4
OMC 12M-8N	12	1/2	9.5	22	22	22.8	22.0	38.1	48.2
OMC 12M-12N	12	3/4	9.5	27	22	22.8	22.0	38.9	49.0
OMC 14M-4N	14	1/4	6.4	24	25	24.4	22.0	34.0	44.1
OMC 14M-6N	14	3/8	9.5	24	25	24.4	22.0	34.0	44.1
OMC 14M-8N	14	1/2	11.1	24	25	24.4	22.0	34.0	44.1
OMC 15M-8N	15	1/2	11.9	24	25	24.4	22.0	38.9	49.0
OMC 16M-4N	16	1/4	7.1	24	25	24.4	22.0	34.0	44.1
OMC 16M-6N	16	3/8	9.5	24	25	24.4	22.0	34.0	44.1
OMC 16M-8N	16	1/2	11.9	24	25	24.4	22.0	38.9	49.0
OMC 16M-12N	16	3/4	12.7	27	25	24.4	22.0	38.9	49.0
OMC 18M-8N	18	1/2	11.9	27	30	24.4	22.0	40.4	50.5
OMC 18M-12N	18	3/4	15.1	27	30	24.4	22.0	40.4	50.5
OMC 20M-8N	20	1/2	11.9	30	32	26.0	22.0	42.2	52.3
OMC 20M-12N	20	3/4	15.9	30	32	26.0	22.0	42.2	52.3
OMC 22M-12N	22	3/4	15.9	30	32	26.0	22.0	42.2	52.3
OMC 22M-16N	22	1	18.3	35	32	26.0	22.0	47.8	57.9
OMC 25M-8N	25	1/2	11.9	35	38	31.3	26.5	45.2	57.5
OMC 25M-12N	25	3/4	15.9	35	38	31.3	26.5	45.2	57.5
OMC 25M-16N	25	1	21.8	35	38	31.3	26.5	50.0	62.3
OMC 28M-16N	28	1	21.8	41	46	36.6	36.6	51.6	72.4
OMC 28M-20N	28	1-1/4	23.0	46	46	36.6	36.6	52.3	73.1
OMC 32M-20N	32	1-1/4	28.6	46	50	42.0	41.6	56.6	76.9
OMC 32M-24N	38	1-1/2	33.7	55	60	49.4	47.9	64.0	91.6

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OMC-R

ISO/BSP Tapered Thread  
Male Connector

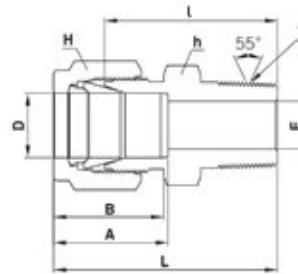


Connects fractional tube to female ISO / BSP tapered thread

Part No.	Tube O.D D		T NPT	E Min	Width across flat				A	B	l	L
	in	mm			h		H					
					in	mm	in	mm				
OMC 2-2R	1/8	3.17	1/8	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.87	30.48
OMC 2-4R	1/8	3.17	1/4	2.28	9/16	14.28	7/16	11.11	12.70	15.24	28.95	35.56
OMC 4-2R	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	32.76
OMC 4-4R	1/4	6.35	1/4	4.82	9/16	14.28	9/16	14.28	15.24	17.78	30.48	37.84
OMC 4-6R	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	30.98	38.35
OMC 4-8R	1/4	6.35	1/2	4.82	7/8	22.22	9/16	14.28	15.24	17.78	37.33	44.70
OMC 5-2R	5/16	7.93	1/8	4.82	9/16	14.28	5/8	15.87	16.25	18.54	26.67	34.03
OMC 5-4R	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	31.24	38.60
OMC 5-16R	5/16	7.93	1	6.35	1-3/8	34.92	5/8	15.87	16.25	18.54	46.2	50.0
OMC 6-2R	3/8	9.52	1/8	4.82	5/8	15.87	11/16	17.46	16.76	19.30	27.94	35.30
OMC 6-4R	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	32.51	39.87
OMC 6-6R	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	32.51	39.87
OMC 6-8R	3/8	9.52	1/2	7.11	7/8	22.22	11/16	17.46	16.76	19.30	38.86	46.22
OMC 6-12R	3/8	9.52	3/4	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	40.38	47.75
OMC 8-2R	1/2	12.70	1/8	4.82	13/16	20.64	7/8	22.22	22.86	21.84	28.70	38.86
OMC 8-4R	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	33.27	43.43
OMC 8-6R	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	33.27	43.43
OMC 8-8R	1/2	12.70	1/2	10.41	7/8	22.22	7/8	22.22	22.86	21.84	38.86	49.02
OMC 8-12R	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	40.38	50.54
OMC 8-16R	1/2	12.70	1	10.41	1-3/8	34.92	7/8	22.22	22.86	21.84	46.99	57.15
OMC 10-6R	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	34.03	44.19
OMC 10-8R	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	38.86	49.02
OMC 10-12R	5/8	15.87	3/4	12.70	1-1/16	26.98	1	25.40	24.38	21.84	40.38	50.54
OMC 12-8R	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.58	24.38	21.84	40.38	50.54
OMC 12-12R	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	40.38	50.54
OMC 12-16R	3/4	19.05	1	15.74	1-3/8	34.92	1-1/8	28.58	24.38	21.84	46.99	57.15
OMC 16-12R	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	45.21	57.40
OMC 16-16R	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	50.03	62.23
OMC 20-12R	1-1/4	31.75	3/4	15.74	1-3/4	44.45	1-7/8	47.63	41.14	38.86	50.0	72.10
OMC 20-16R	1-1/4	31.75	1	22.35	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.11	77.21
OMC 20-20R	1-1/4	31.75	1-1/4	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.11	77.21
OMC 32-32R	2	50.80	2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	76.20	113.53

# OMC-R

ISO/BSP Tapered Thread  
Male Connector



Connects metric tube to female ISO / BSP tapered thread

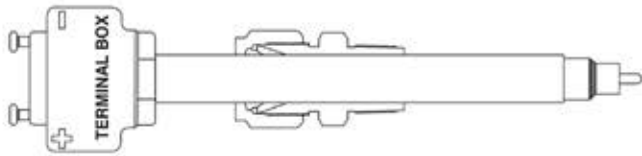
Part No.	Tube O.D D	T R(PT)	E Min	Width across flat		A	B	l	L
				h	H				
OMC 2M-2R	2	1/8	1.7	12	12	12.9	15.3	23.9	30.5
OMC 3M-2R	3	1/8	2.4	12	12	12.9	15.3	23.1	29.7
OMC 3M-4R	3	1/4	2.4	14	12	12.9	15.3	29.0	35.6
OMC 4M-2R	4	1/8	2.4	12	12	13.7	16.1	24.6	31.2
OMC 4M-4R	4	1/4	2.4	14	12	13.7	16.1	29.7	36.3
OMC 6M-2R	6	1/8	4.8	14	14	15.3	17.7	25.4	32.8
OMC 6M-4R	6	1/4	4.8	14	14	15.3	17.7	30.2	37.6
OMC 6M-6R	6	3/8	4.8	18	14	15.3	17.7	31.0	38.4
OMC 6M-8R	6	1/2	4.8	22	14	15.3	17.7	37.3	44.0
OMC 8M-2R	8	1/8	4.8	15	16	16.2	18.6	26.7	34.2
OMC 8M-4R	8	1/4	6.4	15	16	16.2	18.6	31.2	38.7
OMC 8M-6R	8	3/8	6.4	18	16	16.2	18.6	31.8	39.2
OMC 8M-8R	8	1/2	6.4	22	16	16.2	18.6	37.3	44.8
OMC 10M-2R	10	1/8	4.8	18	19	17.2	19.5	28.7	36.3
OMC 10M-4R	10	1/4	7.1	18	19	17.2	19.5	33.3	40.9
OMC 10M-6R	10	3/8	7.9	18	19	17.2	19.5	33.3	40.9
OMC 10M-8R	10	1/2	7.9	22	19	17.2	19.5	38.1	45.7
OMC 12M-4R	12	1/4	7.1	22	22	22.8	22.0	33.3	43.4
OMC 12M-6R	12	3/8	9.5	22	22	22.8	22.0	33.3	43.4
OMC 12M-8R	12	1/2	9.5	22	22	22.8	22.0	38.1	48.2
OMC 12M-12R	12	3/4	9.5	27	22	22.8	22.0	38.9	49.0
OMC 15M-8R	15	1/2	11.9	24	25	24.4	22.0	38.9	49.0
OMC 16M-4R	16	1/4	7.1	24	25	24.4	22.0	34.0	44.1
OMC 16M-6R	16	3/8	9.5	24	25	24.4	22.0	34.0	44.1
OMC 16M-8R	16	1/2	11.9	24	25	24.4	22.0	38.9	49.0
OMC 16M-12R	16	3/4	12.7	27	25	24.4	22.0	38.9	49.0
OMC 18M-8R	18	1/2	11.9	27	30	24.4	22.0	40.4	50.5
OMC 18M-12R	18	3/4	15.1	27	30	24.4	22.0	40.4	50.5
OMC 20M-8R	20	1/2	11.9	30	32	26.0	22.0	42.2	52.3
OMC 20M-12R	20	3/4	15.9	30	32	26.0	22.0	42.2	52.3
OMC 22M-12R	22	3/4	15.9	30	32	26.0	22.0	42.2	52.3
OMC 22M-16R	22	1	18.3	35	32	26.0	22.0	47.8	57.9
OMC 25M-12R	25	3/4	15.9	35	38	31.3	26.5	45.2	57.5
OMC 25M-16R	25	1	21.8	35	38	31.3	26.5	50.0	62.3
OMC 28M-16R	28	1	21.8	41	46	36.6	36.6	51.6	72.4
OMC 28M-20R	28	1-1/4	21.8	46	46	36.6	26.5	52.3	73.1
OMC 32M-20R	32	1-1/4	28.6	46	50	42.0	41.6	56.6	79.6
OMC 32M-24R	38	1-1/2	33.7	55	60	49.4	47.9	64.0	91.6

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OMCT

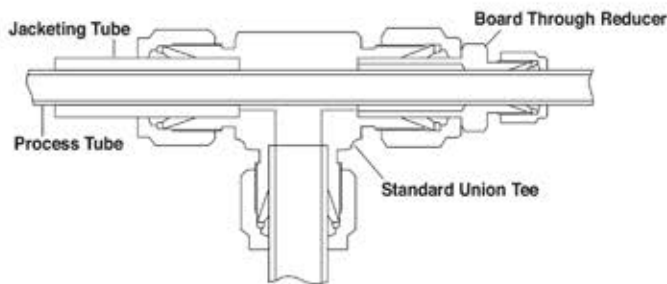
Thermocouple(Bore-Thru)

Bored-through fitting has no tube shoulder, allowing Dip tube of Thermocouple to pass through the fitting



Most male connectors – **OMC** can be bored-through except those fitting with 1/8 in. NPT or BSPT end.

To order bored-through male connectors, add **T** to the ordering number. Example : OMC **T8-8N-SSA**



The combination of standard tee and bored-through port reducer – **AR** can be used to chill or heat a process line as heat exchanger fitting.

To order bored-through port reducer, add **T** to the ordering number. Example : AR **T8-8N-SSA**

**Diagram shown :**

Jacketing tube 1/2 in. OD

Process tube : 1/4 in. OD

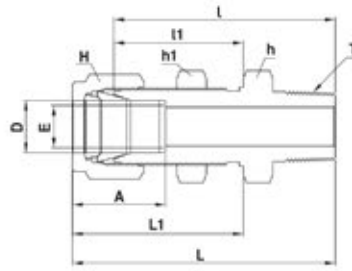
- ◆ Thermocouple is a sensor for measuring temperature.
- ◆ Dip tube is to direct the incoming cold water to the bottom of water heater tank or to use for removing debris from the bottom of water tank.

**Assembly instruction**

1. Position the length of dip tube / thermocouple passed through the fitting.
2. Once positioned, hold it to prevent from shifting during assembly.
3. Wrench tightens the nut 1 1/4 turns from finger-tight position, keeping the body steady with a backup wrench.

# OBMC

## Bulkhead Male Connector



Connects fractional tube to female NPT thread

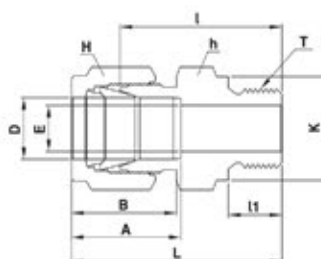
Part No.	Tube O.D D		T NPT	E Min	Width across flat						A	l	l1	L	L1	Panel Hole Drill Size	Panel Max Thickness
	in	mm			h		h1		H								
					in	mm	in	mm	in	mm							
OBMC 2-2N	1/8	3.17	1/8	2.28	1/2	12.70	1/2	12.70	7/16	11.11	12.70	39.87	24.63	46.48	31.24	8.33	12.70
OBMC 4-2N	1/4	6.35	1/8	4.82	5/8	15.87	5/8	15.87	9/16	14.28	15.24	42.16	26.16	49.53	33.52	11.50	10.16
OBMC 4-4N	1/4	6.35	1/4	4.82	5/8	15.87	5/8	15.87	9/16	14.28	15.24	45.97	26.16	53.34	33.52	11.50	10.16
OBMC 6-4N	3/8	9.52	1/4	7.11	3/4	19.05	3/4	19.05	11/16	17.46	16.76	50.03	29.46	57.40	36.83	14.68	11.17
OBMC 6-6N	3/8	9.52	3/8	7.11	3/4	19.05	3/4	19.05	11/16	17.46	16.76	50.03	29.46	57.40	36.83	14.68	11.17
OBMC 6-8N	3/8	9.52	1/2	7.11	7/8	22.22	3/4	19.05	11/16	17.46	16.76	56.38	29.46	63.75	36.83	14.68	11.17
OBMC 8-6N	1/2	12.70	3/8	9.39	15/16	23.81	15/16	23.81	7/8	22.22	22.86	53.08	31.75	63.24	41.91	19.44	12.70
OBMC 8-8N	1/2	12.70	1/2	10.41	15/16	23.81	15/16	23.81	7/8	22.22	22.86	58.67	31.75	68.83	41.91	19.44	12.70
OBMC 12-12N	3/4	19.05	3/4	15.74	1-3/16	30.16	1-3/16	30.16	1-1/8	28.58	24.38	66.04	37.33	76.20	47.49	25.76	16.76
OBMC 16-16N	1	25.40	1	22.35	1-5/8	41.28	1-5/8	41.28	1-1/2	38.10	31.24	81.02	45.21	93.21	57.40	33.73	19.05
OBMC 20-20N	1-1/4	31.75	1-1/4	27.68	1-7/8	47.63	1-7/8	47.63	1-7/8	47.63	41.14	85.97	47.75	108.07	69.85	41.67	19.05
OBMC 24-24N	1-1/2	38.10	1-1/2	34.03	2-1/4	57.15	2-1/4	57.15	2-1/4	57.15	50.03	93.03	49.27	120.21	76.45	49.61	19.05
OBMC 32-32N	2	50.80	2	45.97	2-1/4	69.85	2-3/4	69.85	3	76.20	67.56	107.29	56.38	144.62	93.71	16.27	19.05

Connects metric tube to female NPT thread

Part No.	Tube O.D D		T NPT	E Min	Width across flat			A	l	l1	L	L1	Panel Hole Drill Size	Panel Max Thickness
	in	mm			h	h1	H							
					in	mm	in							
OBMC 6M-2N		6	1/8	2.28	16	16	14	15.3	42.2	26.2	49.6	33.6	11.5	10.2
OBMC 6M-4N		6	1/4	4.82	16	16	14	15.3	46.2	26.2	53.6	33.6	11.5	10.2
OBMC 6M-6N		6	3/8	4.82	16	16	14	15.3	46.2	26.2	53.6	33.6	11.5	10.2
OBMC 6M-8N		6	1/2	4.82	16	16	14	15.3	52.6	26.2	60.0	33.6	11.5	10.2
OBMC 8M-6N		8	3/8	6.4	18	18	16	16.2	50.0	28.6	57.5	36.1	13.1	11.2
OBMC 10M-4N		10	1/4	7.11	22	22	19	17.2	50.0	29.4	57.5	37.0	16.2	11.2
OBMC 10M-6N		10	3/8	7.9	22	22	19	17.2	50.0	29.4	57.5	37.0	16.2	11.2
OBMC 10M-8N		10	1/2	7.9	22	22	19	17.2	55.9	29.4	63.5	37.0	16.2	11.2
OBMC 12M-6N		12	3/8	9.8	24	24	22	22.8	53.3	31.8	63.4	41.9	19.5	12.7
OBMC 12M-8N		12	1/2	9.8	24	24	22	22.8	58.7	31.8	68.8	41.9	19.5	12.7

# OMC-G

Male Connector for Bonded Gasket Seal

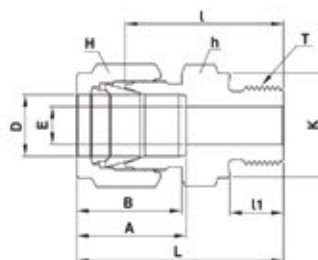


Connects fractional tube to female ISO parallel thread

Part No.	Tube O.D D		T (PF)	E Min	Width across flat				A	B	l	l1	L	K
	in	mm			h		H							
					in	mm	in	mm						
OMC 2-2G	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	23.87	7.11	29.97	13.72
OMC 2-4G	1/8	3.17	1/4	2.28	3/4	19.05	7/16	11.11	12.70	15.24	28.70	11.18	35.31	18.03
OMC 2-6G	1/8	3.17	3/8	2.28	7/8	22.22	7/16	11.11	12.70	15.24	29.72	11.18	36.21	21.84
OMC 4-2G	1/4	6.35	1/8	2.28	9/16	14.28	9/16	14.28	15.24	17.78	24.89	7.11	32.26	13.72
OMC 4-4G	1/4	6.35	1/4	4.82	3/4	19.05	9/16	14.28	15.24	17.78	30.23	11.18	37.59	18.03
OMC 4-6G	1/4	6.35	3/8	4.82	7/8	22.22	9/16	14.28	15.24	17.78	31.50	11.18	38.86	21.84
OMC 4-8G	1/4	6.35	1/2	4.82	1-1/16	26.98	9/16	14.28	15.24	17.78	37.34	14.22	44.70	25.91
OMC 6-4G	3/8	9.53	1/4	4.82	3/4	19.05	11/16	17.46	16.76	19.30	31.75	11.18	39.12	18.03
OMC 6-6G	3/8	9.53	3/8	7.11	7/8	22.22	11/16	17.46	16.76	19.30	33.02	11.18	40.39	21.84
OMC 6-8G	3/8	9.53	1/2	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	38.86	14.22	46.23	25.91
OMC 8-4G	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	32.51	11.18	42.67	18.03
OMC 8-6G	1/2	12.70	3/8	9.65	7/8	22.22	7/8	22.22	22.86	21.84	33.02	11.18	43.18	21.84
OMC 8-8G	1/2	12.70	1/2	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	38.86	14.22	49.02	25.91
OMC 12-8G	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.58	24.38	21.84	38.86	14.22	49.02	25.91
OMC 12-12G	3/4	19.05	3/4	15.74	1-5/16	33.33	1-1/8	28.58	24.38	21.84	42.67	15.75	52.83	32.00
OMC 16-8G	1	25.40	1/2	11.93	1-3/8	34.92	1-1/2	38.10	31.24	26.41	43.69	14.22	55.88	25.91
OMC 16-16G	1	25.40	1	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	47.75	18.29	59.94	39.12
OMC 20-20G	1-1/4	31.75	1-1/4	27.68	2	50.80	1-7/8	47.63	41.14	38.86	51.16	20.00	73.26	49.00
OMC 24-24G	1-1/2	38.10	1-1/2	34.03	2-1/4	57.15	2-1/4	57.15	50.03	45.21	57.57	22.00	84.75	54.70

# OMC-GB

Male Connector for Metal Gasket



Connects fractional tube to female ISO parallel thread

Part No.	Tube O.D D		T (PF)	E Min	Width across flat				A	B	l	l1	L	K
	in	mm			h		H							
					in	mm	in	mm						
OMC 2-2GB	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	23.87	7.11	29.97	13.72
OMC 2-4GB	1/8	3.17	1/4	2.28	3/4	19.05	7/16	11.11	12.70	15.24	28.70	11.18	35.31	18.03
OMC 2-6GB	1/8	3.17	3/8	2.28	7/8	22.22	7/16	11.11	12.70	15.24	29.72	11.18	36.21	21.84
OMC 4-2GB	1/4	6.35	1/8	2.28	9/16	14.28	9/16	14.28	15.24	17.78	24.89	7.11	32.26	13.72
OMC 4-4GB	1/4	6.35	1/4	4.82	3/4	19.05	9/16	14.28	15.24	17.78	30.23	11.18	37.59	18.03
OMC 4-6GB	1/4	6.35	3/8	4.82	7/8	22.22	9/16	14.28	15.24	17.78	31.50	11.18	38.86	21.84
OMC 4-8GB	1/4	6.35	1/2	4.82	1-1/16	26.98	9/16	14.28	15.24	17.78	37.34	14.22	44.70	25.91
OMC 6-4GB	3/8	9.53	1/4	4.82	3/4	19.05	11/16	17.46	16.76	19.30	31.75	11.18	39.12	18.03
OMC 6-6GB	3/8	9.53	3/8	7.11	7/8	22.22	11/16	17.46	16.76	19.30	33.02	11.18	40.39	21.84
OMC 6-8GB	3/8	9.53	1/2	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	38.86	14.22	46.23	25.91
OMC 8-4GB	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	32.51	11.18	42.67	18.03
OMC 8-6GB	1/2	12.70	3/8	9.65	7/8	22.22	7/8	22.22	22.86	21.84	33.02	11.18	43.18	21.84
OMC 8-8GB	1/2	12.70	1/2	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	38.86	14.22	49.02	25.91
OMC 12-8GB	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.58	24.38	21.84	38.86	14.22	49.02	25.91
OMC 12-12GB	3/4	19.05	3/4	15.74	1-5/16	33.33	1-1/8	28.58	24.38	21.84	42.67	15.75	52.83	32.00
OMC 16-8GB	1	25.40	1/2	11.93	1-3/8	34.92	1-1/2	38.10	31.24	26.41	43.69	14.22	55.88	25.91
OMC 16-16GB	1	25.40	1	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	47.75	18.29	59.94	39.12
OMC 20-20GB	1-1/4	31.75	1-1/4	27.68	2	50.80	1-7/8	47.63	41.14	38.86	51.16	20.00	73.26	49.00
OMC 24-24GB	1-1/2	38.10	1-1/2	34.03	2-1/4	57.15	2-1/4	57.15	50.03	45.21	57.57	22.00	84.75	54.70



## Parallel Pipe Threads - Male

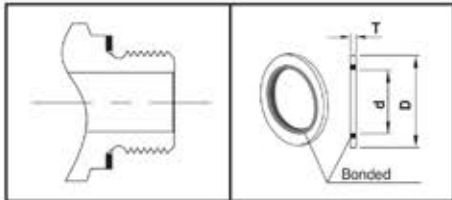
### ISO 228-1

#### Pipe threads where pressure-tight joints are not made on the threads

Either compressing two tightening surfaces (of internal and external threads) outside the threads or by interposing an appropriate gasket seal, the parallel threads make pressure-tight.

Thread Designator : **G**

Thread end form to DIN 3852 Form A  
Sealing by compression of bonded gasket



A self-centering taper is constructed at thread end. This taper centers a bonded gasket to seal up on the face of threaded female.

#### Bonded Gasket Ordering Information and Dimensions

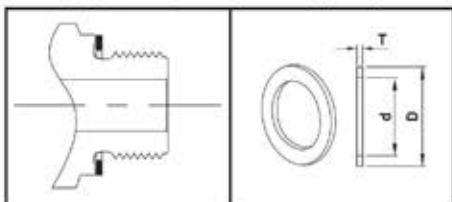
G Thread, in	Dimensions, mm(in.)			Bonded Gasket Part Number	
	D	d	T	A*	B*
1/8	16.0 (0.63)	14.4 (0.41)	2.0 (0.08)	9PBN-2G-C	9PBV-2G-SS
1/4	20.6 (0.81)	13.7 (0.54)		9PBN-4G-C	9PBV-4G-SS
3/8	23.9 (0.94)	17.3 (0.68)		9PBN-6G-C	9PBV-6G-SS
1/2	28.7 (1.13)	21.6 (0.85)	2.5 (0.1)	9PBN-8G-C	9PBV-8G-SS
3/4	35.1 (1.38)	27.2 (1.06)		9PBN-12G-C	9PBV-12G-SS
1	42.9 (1.69)	33.8 (1.33)		9PBN-16G-C	9PBV-16G-SS
1 1/4	51.05 (2.01)	42.4 (1.67)		9PBN-20G-C	9PBV-20G-SS
1 1/2	59.18 (2.33)	48.8 (1.92)		9PBN-24G-C	9PBV-24G-SS

A\* : NBR inner ring bonded to zinc plated carbon steel outer ring.

B\* : FKM inner ring bonded to stainless steel outer ring.

Thread Designator : **GB**

Thread end form to DIN 3852 Form B  
Sealing by compression of copper gasket



A copper gasket performs sealing between reversed bevel of fitting and the face of threaded female.

#### Copper Gasket Ordering Information and Dimensions

G Thread, in	Dimensions, mm(in.)			Part Number
	D	d	T	
1/8	18.0 (0.71)	10.0 (0.39)	2.3 (0.09)	9PP-2G-CU
1/4	22.1 (0.87)	14.0 (0.55)		9PP-4G-CU
3/8	24.0 (0.94)	17.0 (0.67)		9PP-6G-CU
1/2	30.0 (1.18)	22.0 (0.67)		9PP-8G-CU
3/4	35.0 (1.38)	27.0 (1.06)		9PP-12G-CU
1	42.0 (1.65)	34.0 (1.34)		9PP-16G-CU
1 1/4	49.8 (1.96)	42.2 (1.66)		9PP-20G-CU
1 1/2	58.4 (2.30)	48.0 (1.89)		9PP-24G-CU

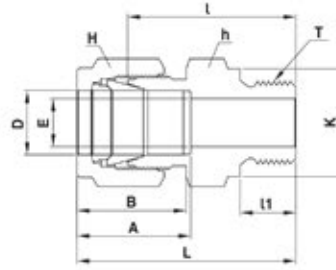
#### Copper Gasket Ordering Information and Dimensions

Gasket	Temperature, °F (°C)
Copper	325 to 400 (-198 to 204)
NBR bonded carbon steel outer ring	-13 to 230 (-25 to 110)
FKM bonded stainless steel outer ring	-20 to 400 (-28 to 204)
Kalrez® bonded stainless steel outer ring	-22 to 600 (-30 to 315)

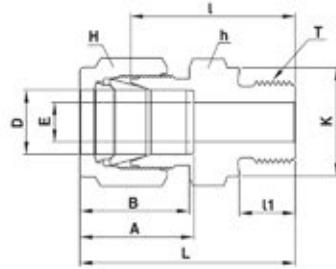


Image Shown  
-GB End

OMC-G



OMC-GB

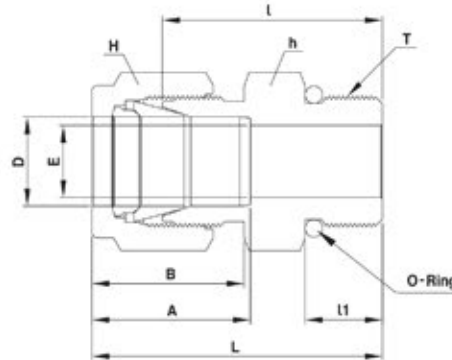


Connects metric tube to female ISO parallel thread

Part No.	Tube O.D D	G (PF)	E Min	Width across flat		A	B	l	l1	L	K
				h	H						
OMC 3M-2G(-2GB)	3	1/8	2.4	14	12	12.9	15.3	23.4	7.1	30.0	13.8
OMC 3M-4G(-4GB)	3	1/4	2.4	19	12	12.9	15.3	28.7	11.2	35.3	18.0
OMC 4M-2G(-2GB)	4	1/8	2.4	14	12	13.7	16.1	24.1	7.1	30.7	13.8
OMC 4M-4G(-4GB)	4	1/4	2.4	19	12	13.7	16.1	29.4	11.2	36.0	18.0
OMC 6M-2G(-2GB)	6	1/8	4.0	14	14	15.3	17.7	24.9	7.1	32.3	13.8
OMC 6M-4G(-4GB)	6	1/4	4.8	19	14	15.3	17.7	30.2	11.2	37.6	18.0
OMC 6M-6G(-6GB)	6	3/8	4.8	22	14	15.3	17.7	31.5	11.2	38.9	21.8
OMC 6M-8G(-8GB)	6	1/2	4.8	27	14	15.3	17.7	37.3	14.2	44.7	26.0
OMC 8M-2G(-2GB)	8	1/8	4.0	15	16	16.2	18.6	25.7	7.1	33.2	13.8
OMC 8M-4G(-4GB)	8	1/4	6.4	19	16	16.2	18.6	31.0	11.2	38.5	13.8
OMC 8M-6G(-6GB)	8	3/8	6.4	22	16	16.2	18.6	32.3	11.2	39.8	21.8
OMC 8M-8G(-8GB)	8	1/2	6.4	27	16	16.2	18.6	38.1	14.2	45.6	26.0
OMC 10M-4G(-4GB)	10	1/4	6.4	19	19	17.2	19.5	31.8	11.2	39.4	18.0
OMC 10M-6G(-6GB)	10	3/8	7.9	22	19	17.2	19.5	33.0	11.2	40.6	21.8
OMC 10M-8G(-8GB)	10	1/2	7.9	27	19	17.2	19.5	38.9	14.2	46.5	26.0
OMC 12M-4G(-4GB)	12	1/4	5.9	22	22	22.8	22.0	32.5	11.2	42.6	18.0
OMC 12M-6G(-6GB)	12	3/8	7.9	22	22	22.8	22.0	33.0	11.2	43.1	21.8
OMC 12M-8G(-8GB)	12	1/2	9.5	27	22	22.8	22.0	38.9	14.2	49.0	26.0
OMC 12M-12G(-12GB)	12	3/4	9.5	35	22	22.8	22.0	42.7	15.2	52.8	32.0
OMC 16M-6G(-6GB)	16	3/8	7.9	24	25	24.4	22.0	33.8	11.2	43.9	21.8
OMC 16M-8G(-8GB)	16	1/2	11.9	27	25	24.4	22.0	38.9	14.2	49.0	26.0
OMC 18M-8G(-8GB)	18	1/2	11.9	27	30	24.4	22.0	38.9	14.2	49.0	26.0
OMC 18M-12G(-12GB)	18	3/4	15.1	35	30	24.4	22.0	42.7	15.7	52.8	32.0
OMC 20M-8G(-8GB)	20	1/2	11.9	30	32	26.0	22.0	40.4	14.2	50.5	26.0
OMC 20M-12G(-12GB)	20	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
OMC 22M-12G(-12GB)	22	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
OMC 22M-16G(-16GB)	22	1	18.3	41	32	26.0	22.0	45.2	18.3	55.3	39.0
OMC 25M-12G(-12GB)	25	3/4	15.9	35	38	31.3	26.5	45.2	15.7	57.5	32.0
OMC 25M-16G(-16GB)	25	1	19.8	41	38	31.3	26.5	47.8	18.3	60.1	39.0
OMC 28M-16G(-16GB)	28	1	19.8	41	46	36.6	36.6	49.3	18.3	70.1	39.0
OMC 28M-20G(-20GB)	28	1-1/4	21.8	50	46	36.6	36.6	53.1	19.8	73.9	49.0
OMC 32M-20G(-20GB)	32	1-1/4	25.0	50	50	42.0	41.6	55.9	19.8	78.9	49.0
OMC 38M-24G(-24GB)	38	1-1/2	31.8	55	60	49.4	47.9	63.2	22.1	90.8	54.7

# OMC-U

SAE / MS Male Connector



Connects fractional tube to SAE staight thread boss

Part No.	Tube O.D D		Straight Thread T(U)	E Min	Width across flat				A	B	l	l1	L	O-Ring Uniform Size Number
	in	mm			h	H	in	mm						
OMC 2-2U	1/8	3.17	5/16-24	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.26	7.62	29.97	-902
OMC 4-4U	1/4	6.35	7/16-20	4.82	9/16	14.28	9/16	14.28	15.24	17.78	26.67	9.14	34.03	-904
OMC 4-6U	1/4	6.35	9/16-18	4.82	11/16	17.46	9/16	14.28	15.24	17.78	28.19	9.90	35.56	-906
OMC 4-8U	1/4	6.35	3/4-16	4.82	7/8	22.22	9/16	14.28	15.24	17.78	30.22	11.17	37.59	-908
OMC 4-10U	1/4	6.35	7/8-14	4.82	1	25.40	9/16	14.28	15.24	17.78	33.27	12.70	40.64	-910
OMC 5-5U	5/16	7.93	1/2-20	5.84	5/8	15.87	5/8	15.87	16.25	18.54	27.43	9.14	34.79	-905
OMC 6-4U	3/8	9.52	7/16-20	5.08	5/8	15.87	11/16	17.46	16.76	19.30	28.19	9.14	35.56	-904
OMC 6-6U	3/8	9.52	9/16-18	7.11	11/16	17.46	11/16	17.46	16.76	19.30	29.71	9.90	37.08	-906
OMC 6-8U	3/8	9.52	3/4-16	7.11	7/8	22.22	11/16	17.46	16.76	19.30	31.75	11.17	39.11	-908
OMC 6-10U	3/8	9.52	7/8-14	7.11	1	25.40	11/16	17.46	16.76	19.30	34.79	12.70	42.16	-910
OMC 8-6U	1/2	12.70	9/16-18	7.11	13/16	20.64	7/8	22.22	22.86	21.84	28.95	9.90	39.11	-906
OMC 8-8U	1/2	12.70	3/4-16	10.41	7/8	22.22	7/8	22.22	22.86	21.84	31.75	11.17	41.91	-908
OMC 8-10U	1/2	12.70	7/8-14	10.41	1	25.40	7/8	22.22	22.86	21.84	34.79	12.70	44.95	-910
OMC 8-12U	1/2	12.70	1-1/16-12	10.41	1-1/4	31.75	7/8	22.22	22.86	21.84	38.86	14.98	49.02	-912
OMC 10-8U	5/8	15.87	3/4-16	10.66	15/16	23.81	1	25.40	24.38	21.84	31.75	11.17	41.91	-908
OMC 10-10U	5/8	15.87	7/8-14	12.70	1	25.40	1	25.40	24.38	21.84	35.05	12.70	45.21	-910
OMC 12-8U	3/4	19.05	3/4-16	10.66	1-1/16	26.98	1-1/8	28.57	24.38	21.84	35.81	11.17	45.97	-908
OMC 12-12U	3/4	19.05	1-1/16-12	15.74	1-1/4	31.75	1-1/8	28.57	24.38	21.84	38.86	14.98	49.02	-912
OMC 14-14U	7/8	22.22	1-3/16-12	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	38.86	14.98	49.02	-914
OMC 16-12U	1	25.40	1-1/16-12	16.76	1-3/8	34.92	1-1/2	38.10	31.24	26.41	41.14	14.98	53.54	-912
OMC 16-16U	1	25.40	1-5/16-12	22.35	1-1/2	38.10	1-1/2	38.10	31.24	26.41	42.16	14.98	54.35	-916
OMC 20-20U	1-1/4	31.75	1-5/8-12	27.68	1-7/8	47.63	1-7/8	47.63	41.14	38.86	46.22	14.98	68.32	-920
OMC 24-24U	1-1/2	38.10	1-7/8-12	34.03	2-1/8	53.98	2-1/4	57.15	50.03	45.21	50.54	14.98	77.72	-924
OMC 32-32U	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	67.56	62.73	64.26	14.98	101.60	-932

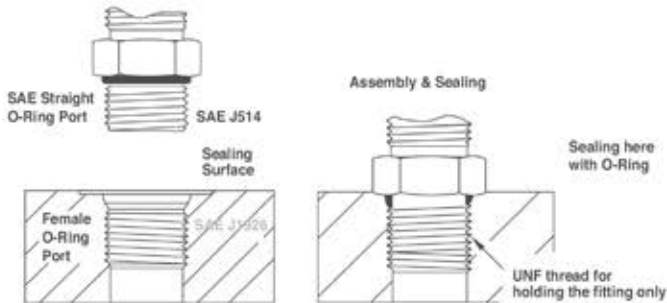
Connects metric tube to SAE staight thread boss

Part No.	Tube O.D D	Straight Thread T(U)	E Min	Width across flat		A	B	l	l1	L	O-Ring Uniform Size Number
				h	H						
OMC 6M-6U	6	9/16-18	4.8	18	14	15.3	17.7	28.2	9.90	36.5	-906
OMC 10M-6U	10	9/16-18	7.9	18	19	17.2	19.5	29.7	9.90	37.3	-906
OMC 10M-8U	10	3/4-16	7.9	22	19	17.2	19.5	31.8	11.17	39.4	-908
OMC 12M-4U	12	7/16-20	5.2	22	22	22.8	22.0	28.2	9.14	38.3	-904
OMC 12M-6U	12	9/16-18	7.5	22	22	22.8	22.0	29.0	9.90	39.1	-906

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

## SAE Straight Thread Mounting to SAE J1926

Thread Designator : U



The sealing and holding function are separated in SAE Straight Thread with O-ring.

UNF threads have only the holding function and sealing is achieved with a high durometer O-ring seated in a chamber at the top of the female port.

### Installation Instruction

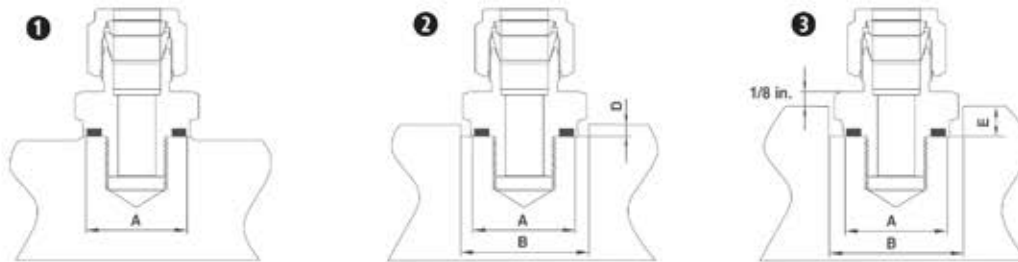
1. Lubricate the O-ring compatible with system fluid.
2. Finger-tighten the fitting in the port
3. Hand-tighten the fitting until the O-ring is compressed in the chamber at the top of the female port.
4. Tighten slightly further with wrench to compress the O-ring completely.

## Mounting Dimension for O-Seal Male Connector

UO : SAE straight with O-ring in groove

NO : NPT thread with O-ring in groove

O-ring is contained in a precision groove that prevents O-ring extrusion at pressure and vacuum.



SAE Thread, Size	NPT Size	A Min. Flat Dia.	B Min Clearance Dia	C Min Clearance Dia	D Max Depth	D Max Depth
Dimensions, in						
5/16-24	-	0.50	0.59	0.66	0.09	0.16
5/16-24	-					0.22
3/8-24	-	0.56	0.66	0.75	0.09	0.22
7/16-20	-	0.69	0.78	0.88	0.16	0.28
1/2-20	-	0.75	0.91	1.03	0.16	0.31
9/16-18	-	0.81	0.97	1.09	0.16	0.31
3/4-16	-	1.00	1.16	1.31	0.16	0.34
11/16-12	-	1.41	1.53	1.75	0.22	0.50
15/16-12	-	1.69	1.78	2.03	0.22	0.56
-	1/8	0.69	0.78	0.88	0.16	0.28
-	1/4	0.87	0.97	1.09	0.16	0.31
-	3/8	1.00	1.16	1.31	0.16	0.34
-	1/2	1.22	1.34	1.53	0.22	0.44

### 1. Raised Port

The minimum diameter A allows metal-to-metal contact outside of O-ring that prevents O-ring extrusion.

### 2. Counter-Bored Port

The round shoulder of O-Seal fitting is recessed into counter-bored port.

### 3. Recessed Port

The Hex O-Seal fitting is recessed into the recessed port.

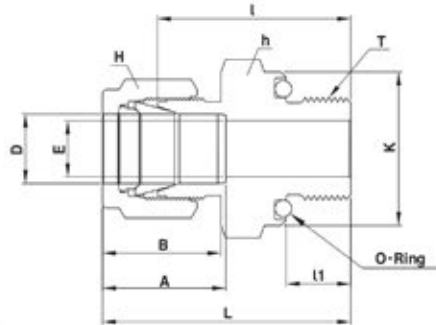
Port should have a smooth, flat surface perpendicular to the port. NPT thread in short length ensures thread interference.

### Installation Instruction

1. Lubricate the O-ring compatible with system fluid.
2. Finger-tighten the O-seal fitting in the port.
3. Hand-tighten the fitting until squeezing of O-ring is felt during the last 1/4 turn.
4. Gently wrench-tighten the fitting until the round shoulder outside of O-ring achieves metal contact against the flat face of female port. This compresses O-ring completely for leak-tight.

# OMC-UO

O-Seal SAE Male Connector

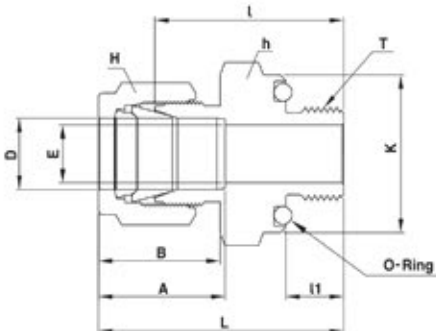


Connects fractional tube to female SAE straight thread

Part No.	Tube O.D D		Straight Thread T(U)	E Min	Width across flat				A	B	l	l1	L	O-Ring Uniform Size Number
	in	mm			h		H							
					in	mm	in	mm						
OMC 2-2UO	1/8	3.17	5/16-24	2.28	9/16	14.28	7/16	11.11	12.70	15.24	26.16	8.63	23.76	-011
OMC 3-3UO	3/16	4.76	3/8-24	3.04	5/8	15.87	1/2	12.70	13.71	16.00	27.68	9.65	34.29	-012
OMC 4-4UO	1/4	6.35	7/16-20	4.82	3/4	19.05	9/16	14.28	15.24	17.78	30.98	10.41	38.35	-013
OMC 5-5UO	5/16	7.93	1/2-20	6.35	7/8	22.22	5/8	15.87	16.25	18.54	33.27	11.17	40.64	-112
OMC 6-6UO	3/8	9.52	9/16-18	7.11	15/16	23.81	11/16	17.46	16.76	19.30	35.05	11.93	42.41	-113
OMC 8-8UO	1/2	12.70	3/4-16	10.41	1-1/8	28.57	7/8	22.22	22.86	21.84	35.81	11.93	45.97	-116
OMC 12-12UO	3/4	19.05	1-1/16-12	15.74	1-1/2	38.10	1-1/8	28.58	24.38	21.84	42.16	14.22	52.32	-121
OMC 16-16UO	1	25.40	1-5/16-12	22.35	1-3/4	44.45	1-1/2	38.10	31.24	26.41	45.97	14.22	58.16	-125

# OMC-NO

O-Seal NPT Male Connector

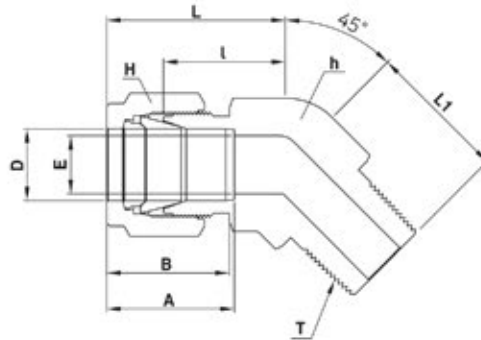


Connects fractional tube to female NPT thread

Part No.	Tube O.D D		Straight Thread T(U)	E Min	Width across flat				A	B	l	l1	L	O-Ring Uniform Size Number
	in	mm			h		H							
					in	mm	in	mm						
OMC 2-2NO	1/8	3.17	1/8	2.28	3/4	19.05	7/16	11.11	12.70	15.24	26.16	7.11	32.76	-013
OMC 4-2NO	1/4	6.35	1/8	4.82	3/4	19.05	9/16	14.28	15.24	17.78	27.68	7.11	35.05	-013
OMC 4-4NO	1/4	6.35	1/4	4.82	15/16	23.81	9/16	14.28	15.24	17.78	30.98	9.65	38.35	-113
OMC 6-4NO	3/8	9.52	1/4	7.11	15/16	23.81	11/16	17.46	16.76	19.30	32.51	9.65	39.87	-113
OMC 6-6NO	3/8	9.52	3/8	7.11	1-1/8	28.58	11/16	17.46	16.76	19.30	34.03	10.41	41.40	-116
OMC 6-8NO	3/8	9.52	1/2	7.11	1-5/16	33.33	11/16	17.46	16.76	19.30	39.62	13.46	46.99	-118
OMC 8-8NO	1/2	12.70	1/2	10.41	1-5/16	33.33	7/8	22.22	22.86	21.84	39.62	13.46	49.78	-118

# OME45

Male Elbow 45°



Connects fractional tube to female NPT thread

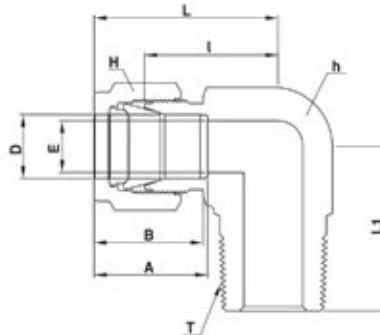
Part No.	Tube O.D D		T NPT	E Min	Width across flat				A	B	l	L	L1
	in	mm			h		H						
					in	mm	in	mm					
OME45-2-2N	1/8	3.17	1/8	2.4	1/2	12.70	7/16	11.11	12.70	15.24	15.77	22.38	16.51
OME45-4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	17.27	24.63	16.51
OME45-4-4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	17.27	24.63	21.08
OME45-6-2N	3/8	9.52	1/8	4.82	5/8	15.87	11/16	17.46	16.76	19.30	20.57	27.94	18.28
OME45-6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	20.57	27.94	22.86
OME45-6-6N	3/8	9.52	3/8	7.11	13/16	20.64	11/16	17.46	16.76	19.30	21.84	29.21	24.13
OME45-8-6N	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	21.84	32.00	24.13
OME45-8-8N	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	21.84	32.00	28.95
OME45-12-12N	3/4	12.70	3/4	15.74	1-1/8	28.58	1-1/8	28.58	24.38	21.84	23.87	34.03	30.98
OME45-16-16N	1	25.40	1	22.35	1-3/8	34.93	1-1/2	38.10	31.24	26.41	28.19	40.38	37.84

Connects metric tube to female NPT thread

Part No.	Tube O.D D	T NPT	E Min	Width across flat		A	B	l	L	L1
				h	H					
OME45-6M-4N	6	1/4	4.8	12.7	14.0	15.3	17.7	21.8	29.4	22.9
OME45-12M-8N	12	1/2	9.5	20.64	22.0	22.8	22.0	21.8	31.9	29.0

# OME-N

NPT Thread Male Elbow



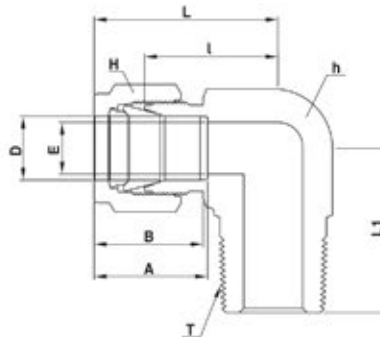
Connects fractional tube to female NPT thread

Part No.	Tube O.D		T NPT	E Min	Width across flat				A	B	l	L	L1
	in	mm			h		H						
					in	mm	in	mm					
OME 1-1N	1/16	1.59	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
OME 1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
OME 2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	18.90
OME 2-4N	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	23.26
OME 3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	18.79
OME 3-4N	3/16	4.76	1/4	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	23.36
OME 4-1N	1/4	6.35	1/16	3.04	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.90	18.79
OME 4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.47	18.79
OME 4-4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.81	27.18	23.87
OME 4-6N	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	26.20
OME 4-8N	1/4	6.35	1/2	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.60	31.97	33.02
OME 5-2N	5/16	7.93	1/8	4.82	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.81
OME 5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	29.77	24.50
OME 5-6N	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	26.20
OME 6-2N	3/8	9.52	1/8	4.82	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	20.60
OME 6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	25.40
OME 6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.42	26.20
OME 6-8N	3/8	9.52	1/2	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	31.42	33.02
OME 6-12N	3/8	9.52	3/4	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	29.71	37.08	36.83
OME 8-4N	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
OME 8-6N	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
OME 8-8N	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
OME 8-12N	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	29.71	39.87	36.83
OME 10-6N	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	30.22
OME 10-8N	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	35.10
OME 10-12N	5/8	15.87	3/4	12.70	1-1/16	26.98	1	25.40	24.38	21.84	29.71	39.87	36.83
OME 12-8N	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	39.87	37.00
OME 12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	39.87	36.83
OME 14-12N	7/8	22.22	3/4	15.74	1-3/8	34.92	1-1/4	31.75	25.90	21.84	34.54	44.70	41.65
OME 16-12N	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	42.20
OME 16-16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	46.70
OME 20-20N	1-1/4	31.75	1-1/4	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54	47.75
OME 24-24N	1-1/4	38.10	1-1/2	34.03	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97	60.45
OME 32-32N	2	50.80	2	45.97	2-3/4	69.85	3	76.20	62.73	63.73	69.80	107.18	70.61

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OME-N

## NPT Thread Male Elbow



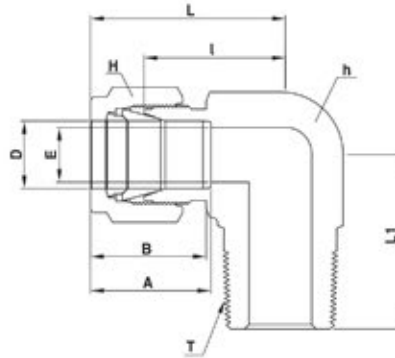
Connects metric tube to female NPT thread

Part No.	Tube O.D D	T R(PT)	E Min	Width across flat		A	B	l	L	L1
				h	H					
OME 3M-1N	3	1/16	2.4	11.1	12	12.9	15.3	17.0	23.6	17.8
OME 3M-2N	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
OME 3M-4N	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
OME 4M-2N	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
OME 4M-4N	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
OME 6M-2N	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
OME 6M-4N	6	1/4	4.8	12.7	14	15.3	17.7	19.6	27.0	23.4
OME 6M-6N	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
OME 6M-8N	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
OME 8M-2N	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
OME 8M-4N	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
OME 8M-6N	8	3/8	6.4	17.5	16	16.2	18.6	23.1	30.6	26.2
OME 8M-8N	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
OME 10M-2N	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
OME 10M-4N	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	26.2
OME 10M-6N	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	26.2
OME 10M-8N	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
OME 12M-2N	12	1/8	4.8	20.6	22	22.8	22.0	25.9	36.0	23.6
OME 12M-4N	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
OME 12M-6N	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
OME 12M-8N	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
OME 12M-12N	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
OME 16M-6N	16	3/8	9.5	23.81	25	24.4	22.0	27.9	38.0	30.2
OME 16M-8N	16	1/2	11.9	23.81	25	24.4	22.0	27.9	38.0	35.1
OME 16M-12N	16	3/4	12.7	23.81	25	24.4	22.0	29.7	39.8	36.8
OME 18M-8N	18	1/2	11.9	27.0	30	24.4	22.0	29.7	39.8	36.8
OME 18M-12N	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
OME 20M-8N	20	1/2	11.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OME 20M-12N	20	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OME 22M-12N	22	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OME 22M-16N	22	1	18.3	34.92	32	26.0	22.0	34.5	44.6	46.5
OME 25M-12N	25	3/4	15.9	34.92	38	31.3	26.5	36.8	49.1	41.7
OME 25M-16N	25	1	21.8	34.92	38	31.3	26.5	36.8	49.1	46.5
OME 28M-16N	28	1	21.8	41.0	46	36.6	36.6	43.2	64.0	53.7
OME 30M-20N	30	1-1/4	26.2	46.0	50	39.6	39.2	48.3	69.9	53.1
OME 32M-20N	32	1-1/4	27.8	46.0	50	42.0	41.6	49.3	72.3	53.1
OME 38M-24N	38	1-1/4	33.7	50.8	60	49.4	47.9	56.4	84.0	60.4



# OME-R

ISO Tapered Thread Male Elbow



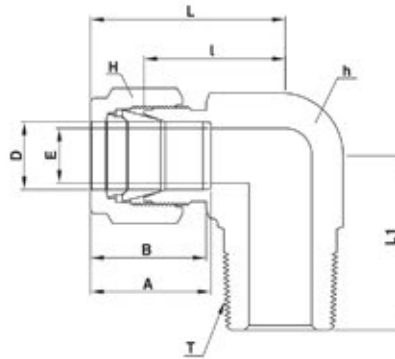
Connects fractional tube to female ISO tapered thread

Part No.	Tube O.D D		T NPT	E Min	Width across flat				A	B	l	L	L1
	in	mm			h		H						
					in	mm	in	mm					
OME 2-2R	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	18.90
OME 2-4R	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	23.26
OME 3-4R	3/16	4.76	1/4	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	23.36
OME 4-2R	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.47	18.79
OME 4-4R	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.81	27.18	23.87
OME 4-6R	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	23.35	29.71	26.20
OME 4-8R	1/4	6.35	1/2	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.60	31.97	33.02
OME 5-4R	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	29.77	24.50
OME 5-6R	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	26.20
OME 6-2R	3/8	9.52	1/8	4.82	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	20.60
OME 6-4R	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	25.40
OME 6-6R	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	26.20
OME 6-8R	3/8	9.52	1/2	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	37.08	33.02
OME 6-12R	3/8	9.52	3/4	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	29.71	37.08	36.83
OME 8-4R	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
OME 8-6R	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
OME 8-8R	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
OME 8-12R	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	29.71	39.87	36.83
OME 10-6R	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	30.22
OME 10-8R	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	35.10
OME 10-12R	5/8	15.87	3/4	12.70	1-1/16	26.98	1	25.40	24.38	21.84	29.71	39.87	36.83
OME 12-8R	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	39.87	37.00
OME 12-12R	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	39.87	36.83
OME 12-16R	3/4	19.05	1	16.0	1-3/8	34.92	1-1/8	28.57	24.38	21.84	34.54	44.59	46.48
OME 16-12R	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	42.20
OME 16-16R	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	46.70
OME 20-12R	1-1/4	31.75	3/4	15.74	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54	42.95
OME 20-20R	1-1/4	31.75	1-1/4	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54	47.75

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OME-R

ISO Tapered Thread Male Elbow

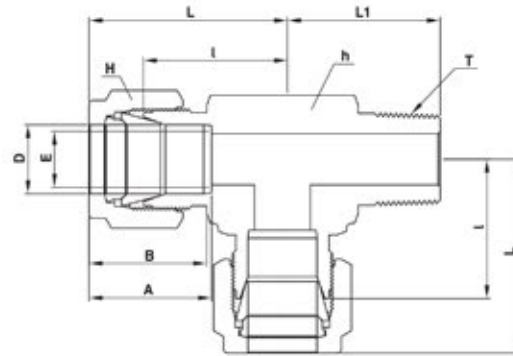


Connects metric tube to female ISO tapered thread

Part No.	Tube O.D D	T R(PT)	E Min	Width across flat		A	B	l	L	L1
				h	H					
OME 3M-1R	3	1/16	2.4	11.1	12	12.9	15.3	17.0	23.6	17.8
OME 3M-2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
OME 3M-4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
OME 4M-2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
OME 4M-4R	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
OME 6M-2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
OME 6M-4R	6	1/4	4.8	12.7	14	15.3	17.7	19.6	27.0	23.4
OME 6M-6R	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
OME 6M-8R	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
OME 8M-2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
OME 8M-4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
OME 8M-6R	8	3/8	6.4	17.5	16	16.2	18.6	23.1	30.6	26.2
OME 8M-8R	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
OME 10M-2R	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
OME 10M-4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	26.2
OME 10M-6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	26.2
OME 10M-8R	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
OME 12M-2R	12	1/8	4.8	20.6	22	22.8	22.0	25.9	36.0	23.6
OME 12M-4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
OME 12M-6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
OME 12M-8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
OME 12M-12R	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
OME 14M-8R	14	1/2	11.1	23.81	25	24.4	22.0	27.9	38.0	30.2
OME 15M-6R	15	3/8	9.5	23.81	25	24.4	22.0	27.9	38.0	30.2
OME 15M-8R	15	1/2	11.9	23.81	25	24.4	22.0	27.9	38.0	35.1
OME 16M-6R	16	3/8	9.5	23.81	25	24.4	22.0	27.9	38.0	30.2
OME 16M-8R	16	1/2	11.9	23.81	25	24.4	22.0	27.9	38.0	35.1
OME 18M-8R	18	1/2	11.9	27.0	30	24.4	22.0	29.7	39.8	36.8
OME 18M-12R	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
OME 20M-8R	20	1/2	11.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OME 20M-12R	20	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OME 22M-8R	22	1/2	11.9	34.92	32	26.0	22.0	32.5	42.6	39.6
OME 22M-12R	22	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OME 22M-16R	22	1	18.3	34.92	32	26.0	22.0	34.5	44.6	46.5
OME 25M-8R	25	1/2	11.9	34.92	38	31.3	26.5	36.8	49.1	41.7
OME 25M-12R	25	3/4	15.9	34.92	38	31.3	26.5	36.8	49.1	41.7
OME 25M-16R	25	1	21.8	34.92	38	31.3	26.5	36.8	49.1	46.5
OME 28M-16R	28	1	21.8	41.0	46	36.6	36.6	43.2	64.0	53.7

# OMRT-N

Male Run Tee-NPT Thread



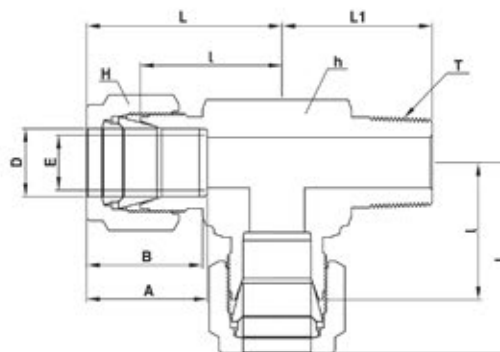
Connects fractional tube to female NPT thread

Part No.	Tube O.D		T NPT	E Min	Width across flat				A	B	I	L	L1
	D				h		H						
	in	mm			in	mm	in	mm					
OMRT 1-1N	1/16	1.59	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
OMRT 1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
OMRT 2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	18.90
OMRT 2-4N	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	23.26
OMRT 3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	24.38	18.79
OMRT 3-4N	3/16	4.76	1/4	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	23.26
OMRT 4-1N	1/4	6.35	1/16	3.04	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.90	18.79
OMRT 4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	18.79
OMRT 4-4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	27.08	23.87
OMRT 4-6N	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	28.40
OMRT 4-8N	1/4	6.35	1/2	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.60	31.97	35.10
OMRT 5-2N	5/16	7.93	1/8	4.82	9/16	14.28	5/8	15.87	16.25	18.54	22.35	29.71	19.81
OMRT 5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	22.35	29.77	24.50
OMRT 5-6N	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	28.40
OMRT 6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	25.40
OMRT 6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	28.44
OMRT 6-8N	3/8	9.52	1/2	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	33.27	33.02
OMRT 6-12N	3/8	9.52	3/4	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	29.71	37.08	36.83
OMRT 8-4N	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
OMRT 8-6N	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
OMRT 8-8N	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
OMRT 8-12N	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	29.71	39.84	36.83
OMRT 10-6N	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	27.90	38.10	29.40
OMRT 10-8N	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	27.90	38.10	34.00
OMRT 10-12N	5/8	15.87	3/4	12.70	1-1/16	26.98	1	25.40	24.38	21.84	29.71	39.87	36.83
OMRT 12-8N	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	37.00
OMRT 12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.81	36.83
OMRT 14-12N	7/8	22.23	3/4	15.74	1-3/8	34.92	1-1/4	31.75	25.90	21.84	34.54	44.70	41.65
OMRT 16-12N	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	42.20
OMRT 16-16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	46.70
OMRT 20-20N	1-1/4	31.75	1-1/4	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54	47.75
OMRT 24-24N	1-1/2	38.10	1-1/2	34.03	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97	60.45
OMRT 32-32N	2	50.80	2	45.91	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18	70.61

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OMRT-R

Male Run Tee-ISO Tapered Thread



Connects fractional tube to female ISO tapered thread

Part No.	Tube O.D D		T NPT	E Min	Width across flat				A	B	l	L	L1
	in	mm			h		H						
					in	mm							
OMRT 6-4R	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	25.40
OMRT 8-6R	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
OMRT 8-8R	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
OMRT 10-8R	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	27.90	38.10	34.00

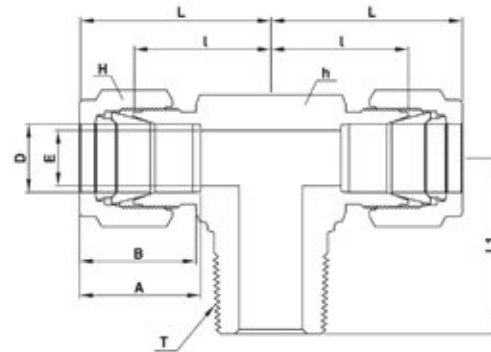
Connects metric tube to female ISO tapered thread

Part No.	Tube O.D D	T R(PT)	E Min	Width across flat		A	B	l	L	L1
				h	H					
OMRT 3M-2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
OMRT 3M-4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
OMRT 4M-2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
OMRT 4M-4R	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
OMRT 6M-2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
OMRT 6M-4R	6	1/4	4.8	14.2	14	15.3	17.7	19.6	27.0	23.4
OMRT 6M-6R	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
OMRT 6M-8R	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
OMRT 8M-2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
OMRT 8M-4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
OMRT 8M-6R	8	3/8	6.4	17.5	16	16.2	18.6	23.1	30.6	26.2
OMRT 8M-8R	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
OMRT 10M-2R	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
OMRT 10M-4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	26.2
OMRT 10M-6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	26.2
OMRT 10M-8R	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
OMRT 12M-2R	12	1/8	4.8	20.6	22	22.8	22.0	25.9	36.0	23.6
OMRT 12M-4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
OMRT 12M-6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
OMRT 12M-8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
OMRT 12M-12R	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
OMRT 16M-6R	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
OMRT 16M-8R	16	1/2	11.9	25.4	25	24.4	22.0	27.9	38.0	35.1
OMRT 16M-12R	16	3/4	12.7	27.0	25	24.4	22.0	29.7	39.8	36.8
OMRT 18M-8R	18	1/2	11.9	27.0	30	24.4	22.0	29.7	39.8	36.8
OMRT 18M-12R	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
OMRT 20M-8R	20	1/2	11.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OMRT 20M-12R	20	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OMRT 22M-12R	22	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OMRT 22M-16R	22	1	18.3	34.92	32	26.0	22.0	34.5	44.6	46.5
OMRT 25M-12R	25	3/4	15.9	34.92	38	31.3	26.5	36.8	49.1	41.7
OMRT 25M-16R	25	1	21.8	34.92	38	31.3	26.5	36.8	49.1	46.5

# OMBT-N/R

Male Branch Tee-NPT Thread

Male Branch Tee-ISO Tapered Thread



Connects fractional tube to female NPT thread

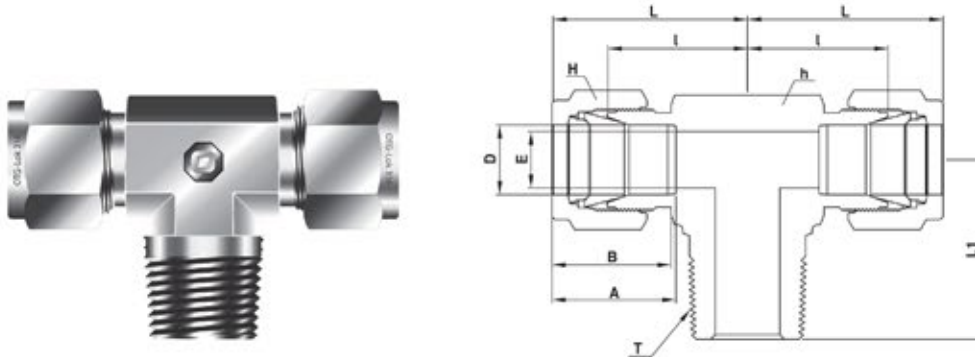
Part No.	Tube O.D D		T NPT	E Min	Width across flat				A	B	l	L	L1
	in	mm			h		H						
					in	mm	in	mm					
OMBT 1-1N	1/16	1.59	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
OMBT 1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
OMBT 2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	18.90
OMBT 2-4N	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	23.26
OMBT 3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	24.38	18.79
OMBT 3-4N	3/16	4.76	1/4	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	23.26
OMBT 4-1N	1/4	6.35	1/16	3.04	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.90	18.79
OMBT 4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	18.79
OMBT 4-4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	27.08	23.87
OMBT 4-6N	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	28.40
OMBT 4-8N	1/4	6.35	1/2	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.60	31.97	35.10
OMBT 5-2N	5/16	7.93	1/8	4.82	9/16	14.28	5/8	15.87	16.25	18.54	22.35	29.71	19.81
OMBT 5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	22.35	29.77	24.50
OMBT 5-6N	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	28.40
OMBT 6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	25.40
OMBT 6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	28.19
OMBT 6-8N	3/8	9.52	1/2	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	33.27	33.02
OMBT 6-12N	3/8	9.52	3/4	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	29.71	37.08	36.83
OMBT 8-4N	1/2	12.70	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
OMBT 8-6N	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
OMBT 8-8N	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
OMBT 8-12N	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	29.71	39.84	36.83
OMBT 10-6N	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	27.90	38.10	29.40
OMBT 10-8N	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	27.90	38.10	34.00
OMBT 10-12N	5/8	15.87	3/4	12.70	1-1/16	26.98	1	25.40	24.38	21.84	29.71	39.87	36.83
OMBT 12-8N	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	37.00
OMBT 12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.81	36.83
OMBT 14-12N	7/8	22.22	3/4	15.74	1-3/8	34.92	1-1/4	31.75	25.90	21.84	34.54	44.70	41.65
OMBT 16-12N	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	42.20
OMBT 16-16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	46.70
OMBT 20-20N	1-1/4	31.75	1-1/4	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54	47.75
OMBT 24-24N	1-1/2	38.10	1-1/2	34.03	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97	60.45
OMBT 32-32N	2	50.80	2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18	70.61

Connects fractional tube to female ISO tapered thread

Part No.	Tube O.D D		T R(PT)	E Min	Width across flat				A	B	l	L	L1
	in	mm			h		H						
					in	mm	in	mm					
OMBT 6-4R	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	25.40
OMBT 8-6R	1/2	12.70	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
OMBT 8-8R	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
OMBT 10-8R	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	27.90	38.10	34.00

# OMBT-N

Male Branch Tee-NPT Thread

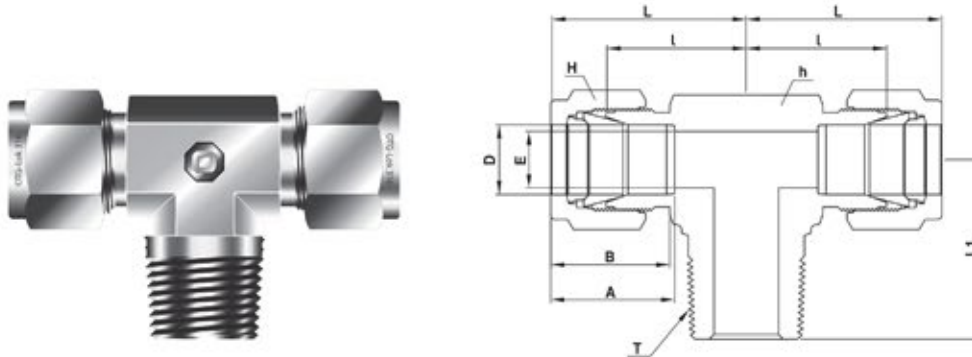


Connects metric tube to female NPT thread

Part No.	Tube O.D D	T NPT	E Min	Width across flat		A	B	l	L	L1
				h	H					
OMBT 3M-2N	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
OMBT 3M-4N	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
OMBT 4M-2N	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
OMBT 4M-4N	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
OMBT 6M-2N	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
OMBT 6M-4N	6	1/4	4.8	14.2	14	15.3	17.7	19.6	27.0	23.4
OMBT 6M-6N	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
OMBT 6M-8N	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
OMBT 8M-2N	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
OMBT 8M-4N	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
OMBT 8M-6N	8	3/8	6.4	17.5	16	16.2	18.6	23.1	30.6	26.2
OMBT 8M-8N	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
OMBT 10M-2N	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
OMBT 10M-4N	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	26.2
OMBT 10M-6N	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	26.2
OMBT 10M-8N	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
OMBT 12M-2N	12	1/8	4.8	20.6	22	22.8	22.0	25.9	36.0	23.6
OMBT 12M-4N	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
OMBT 12M-6N	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
OMBT 12M-8N	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
OMBT 12M-12N	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
OMBT 16M-6N	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
OMBT 16M-8N	16	1/2	11.9	25.4	25	24.4	22.0	27.9	38.0	35.1
OMBT 16M-12N	16	3/4	12.7	27.0	25	24.4	22.0	29.7	39.8	36.8
OMBT 18M-8N	18	1/2	11.9	27.0	30	24.4	22.0	29.7	39.8	36.8
OMBT 18M-12N	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
OMBT 20M-8N	20	1/2	11.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OMBT 20M-12N	20	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OMBT 22M-12N	22	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OMBT 22M-16N	22	1	18.3	34.92	32	26.0	22.0	34.5	44.6	46.5
OMBT 25M-12N	25	3/4	15.9	34.92	38	31.3	26.5	36.8	49.1	41.7
OMBT 25M-16N	25	1	21.8	34.92	38	31.3	26.5	36.8	49.1	46.5

# OMBT-R

Male Branch Tee-ISO Tapered Thread



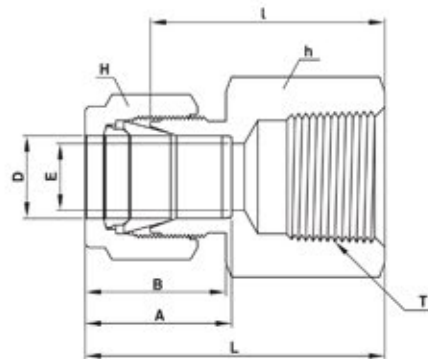
Connects metric tube to female ISO tapered thread

Part No.	Tube O.D D	T R(PT)	E Min	Width across flat		A	B	l	L	L1
				h	H					
OMBT 3M-2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
OMBT 3M-4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
OMBT 4M-2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
OMBT 4M-4R	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
OMBT 6M-2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
OMBT 6M-4R	6	1/4	4.8	14.2	14	15.3	17.7	19.6	27.0	23.4
OMBT 6M-6R	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
OMBT 6M-8R	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
OMBT 8M-2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
OMBT 8M-4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
OMBT 8M-6R	8	3/8	6.4	17.5	16	16.2	18.6	23.1	30.6	26.2
OMBT 8M-8R	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
OMBT 10M-2R	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
OMBT 10M-4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	26.2
OMBT 10M-6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	26.2
OMBT 10M-8R	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
OMBT 12M-2R	12	1/8	4.8	20.6	22	22.8	22.0	25.9	36.0	23.6
OMBT 12M-4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
OMBT 12M-6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
OMBT 12M-8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
OMBT 12M-12R	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
OMBT 16M-6R	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
OMBT 16M-8R	16	1/2	11.9	25.4	25	24.4	22.0	27.9	38.0	35.1
OMBT 16M-12R	16	3/4	12.7	27.0	25	24.4	22.0	29.7	39.8	36.8
OMBT 18M-8R	18	1/2	11.9	27.0	30	24.4	22.0	29.7	39.8	36.8
OMBT 18M-12R	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
OMBT 20M-8R	20	1/2	11.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OMBT 20M-12R	20	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OMBT 22M-12R	22	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
OMBT 22M-16R	22	1	18.3	34.92	32	26.0	22.0	34.5	44.6	46.5
OMBT 25M-12R	25	3/4	15.9	34.92	38	31.3	26.5	36.8	49.1	41.7
OMBT 25M-16R	25	1	21.8	34.92	38	31.3	26.5	36.8	49.1	46.5

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OFC-N

Female Connector NPT Thread



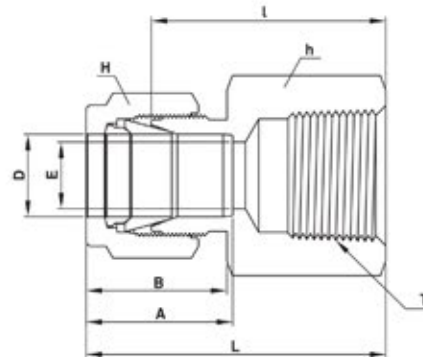
Connects fractional tube to male NPT thread

Part No.	Tube O.D D		T NPT	E Min	Width across flat				A	B	l	L
	in	mm			h		H					
					in	mm	in	mm				
OFC 1-1N	1/16	1.59	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	19.81	23.62
OFC 1-2N	1/16	1.59	1/8	1.27	9/16	14.28	5/16	7.93	8.63	10.92	20.57	24.38
OFC 2-2N	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	22.09	28.70
OFC 2-4N	1/8	3.17	1/4	2.28	3/4	19.05	7/16	11.11	12.70	15.24	26.92	33.52
OFC 3-2N	3/16	4.76	1/8	3.04	9/16	14.28	1/2	12.70	13.71	16.00	23.11	29.71
OFC 4-2N	1/4	6.35	1/8	4.82	9/16	14.28	9/16	14.28	15.24	17.78	23.87	31.24
OFC 4-4N	1/4	6.35	1/4	4.82	3/4	19.05	9/16	14.28	15.24	17.78	28.44	35.81
OFC 4-6N	1/4	6.35	3/8	4.82	7/8	22.22	9/16	14.28	15.24	17.78	30.22	37.59
OFC 4-8N	1/4	6.35	1/2	4.82	1-1/16	26.98	9/16	14.28	15.24	17.78	35.05	42.41
OFC 5-2N	5/16	7.93	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	24.63	32.00
OFC 5-4N	5/16	7.93	1/4	6.35	3/4	19.05	5/8	15.87	16.25	18.54	29.46	36.83
OFC 6-2N	3/8	9.52	1/8	7.11	5/8	15.87	11/16	17.46	16.76	19.3	25.40	32.76
OFC 6-4N	3/8	9.52	1/4	7.11	3/4	19.05	11/16	17.46	16.76	19.30	30.22	37.59
OFC 6-6N	3/8	9.52	3/8	7.11	7/8	22.22	11/16	17.46	16.76	19.30	31.75	39.11
OFC 6-8N	3/8	9.52	1/2	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	36.57	43.94
OFC 6-12N	3/8	9.52	3/4	7.11	1-5/16	33.33	11/16	17.46	16.76	19.30	40.38	47.45
OFC 8-4N	1/2	12.70	1/4	10.41	1-3/16	20.64	7/8	22.22	22.86	21.84	30.22	40.38
OFC 8-6N	1/2	12.70	3/8	10.41	7/8	22.22	7/8	22.22	22.86	21.84	31.75	41.91
OFC 8-8N	1/2	12.70	1/2	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	36.57	46.73
OFC 8-12N	1/2	12.70	3/4	10.41	1-5/16	33.33	7/8	22.22	22.86	21.84	38.10	48.26
OFC 10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	31.75	41.91
OFC 10-8N	5/8	15.87	1/2	12.70	1-1/16	26.98	1	25.40	24.38	21.84	36.57	46.73
OFC 10-12N	5/8	15.87	3/4	12.70	1-5/16	33.33	1	25.40	24.38	21.84	38.10	48.26
OFC 12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	36.57	46.73
OFC 12-12N	3/4	19.05	3/4	15.74	1-5/16	33.33	1-1/8	28.58	24.38	21.84	38.10	48.26
OFC 14-12N	7/8	22.22	3/4	18.28	1-5/16	33.33	1-1/4	31.75	25.90	21.84	39.62	49.78
OFC 16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	41.14	53.34
OFC 16-16N	1	25.40	1	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	50.03	62.23
OFC 20-20N	1-1/4	31.75	1-1/4	27.68	2-1/8	53.98	1-7/8	47.63	41.14	38.86	52.57	74.67
OFC 24-24N	1-1/2	38.10	1-1/2	34.03	2-3/8	60.33	2-1/4	57.15	50.03	45.21	56.13	83.31
OFC 32-32N	2	50.80	2	45.97	2-1/8	73.03	3	76.20	67.56	62.73	62.26	101.60



# OFC-N

Female Connector NPT Thread



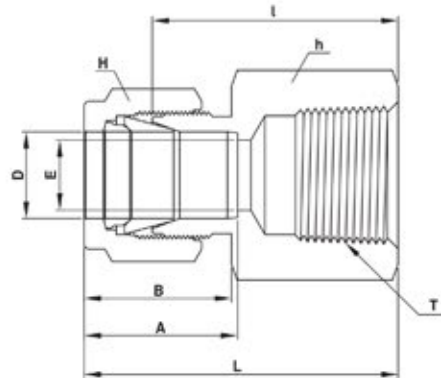
Connects metric tube to female NPT thread

Part No.	Tube O.D D	T NPT	E Min	Width across flat		A	B	l	L
				h	H				
OFC 3M-2N	3	1/8	2.4	14	12	12.9	15.3	22.1	28.7
OFC 3M-4N	3	1/4	2.4	19	12	12.9	15.3	26.9	33.5
OFC 4M-2N	4	1/8	2.4	14	12	13.7	16.1	23.1	29.7
OFC 6M-2N	6	1/8	4.8	14	14	15.3	17.7	23.9	31.3
OFC 6M-4N	6	1/4	4.8	19	14	15.3	17.7	28.4	35.8
OFC 6M-6N	6	3/8	4.8	22	14	15.3	17.7	29.5	36.9
OFC 6M-8N	6	1/2	4.8	27	14	15.3	17.7	35.1	42.5
OFC 8M-2N	8	1/8	6.4	15	16	16.2	18.6	24.6	32.1
OFC 8M-4N	8	1/4	6.4	19	16	16.2	18.6	29.5	37.0
OFC 8M-6N	8	3/8	6.4	22	16	16.2	18.6	30.2	37.7
OFC 8M-8N	8	1/2	6.4	27	16	16.2	18.6	35.8	43.3
OFC 10M-2N	10	1/8	7.9	18	19	17.2	19.5	25.4	33.0
OFC 10M-4N	10	1/4	7.9	19	19	17.2	19.5	30.2	37.8
OFC 10M-6N	10	3/8	7.9	22	19	17.2	19.5	31.0	38.6
OFC 10M-8N	10	1/2	7.9	27	19	17.2	19.5	36.6	44.2
OFC 12M-2N	12	1/8	8.3	22	22	22.8	22.0	28.4	38.5
OFC 12M-4N	12	1/4	9.5	22	22	22.8	22.0	30.2	40.3
OFC 12M-6N	12	3/8	9.5	22	22	22.8	22.0	31.0	41.1
OFC 12M-8N	12	1/2	9.5	27	22	22.8	22.0	36.6	46.7
OFC 12M-12N	12	3/4	9.5	35	22	22.8	22.0	38.9	49.0
OFC 15M-8N	15	1/2	11.9	27	25	24.4	22.0	36.6	46.7
OFC 16M-8N	16	1/2	12.7	27	25	24.4	22.0	36.8	46.9
OFC 20M-8N	20	1/2	15.9	30	32	26.0	22.0	37.8	47.9
OFC 20M-12N	20	3/4	15.9	35	32	26.0	22.0	39.6	49.7
OFC 22M-12N	22	3/4	18.3	35	32	26.0	22.0	39.6	49.7
OFC 22M-16N	22	1	18.3	41	32	26.0	22.0	47.8	57.9
OFC 25M-12N	25	3/4	21.8	35	38	31.3	26.5	41.1	53.4
OFC 25M-16N	25	1	21.8	41	38	31.3	26.5	50.0	62.3

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OFC-R

Female Connector ISO Tapered Thread

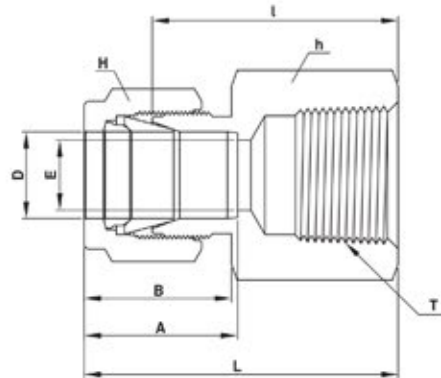


Connects fractional tube to male ISO tapered thread

Part No.	Tube O.D D		T NPT	E Min	Width across flat				A	B	l	L
	in	mm			h		H					
					in	mm	in	mm				
OFC 2-2R	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	22.09	28.70
OFC 4-2R	1/4	6.35	1/8	4.82	9/16	14.28	9/16	14.28	15.24	17.78	23.87	31.24
OFC 4-4R	1/4	6.35	1/4	4.82	3/4	19.05	9/16	14.28	15.24	17.78	28.44	35.81
OFC 4-6R	1/4	6.35	3/8	4.82	7/8	22.22	9/16	14.28	15.24	17.78	30.22	37.59
OFC 4-8R	1/4	6.35	1/2	4.82	1-1/16	26.98	9/16	14.28	15.24	17.78	35.05	42.41
OFC 6-4R	3/8	9.52	1/4	7.11	3/4	19.05	11/16	17.46	16.76	19.3	30.22	37.59
OFC 6-6R	3/8	9.52	3/8	7.11	7/8	22.22	11/16	17.46	16.76	19.3	31.75	39.11
OFC 6-8R	3/8	9.52	1/2	7.11	1-1/16	26.98	11/16	17.46	16.76	19.3	36.57	43.94
OFC 8-2R	1/2	12.70	1/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.40	35.56
OFC 8-4R	1/2	12.70	1/4	10.41	1-3/16	20.64	7/8	22.22	22.86	21.84	30.22	40.38
OFC 8-6R	1/2	12.70	3/8	10.41	7/8	22.22	7/8	22.22	22.86	21.84	31.75	41.91
OFC 8-8R	1/2	12.70	1/2	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	36.57	46.73
OFC 8-12R	1/2	12.70	3/4	10.41	1-5/16	33.33	7/8	22.22	22.86	21.84	38.10	48.26
OFC 10-6R	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	31.75	41.91
OFC 10-8R	5/8	15.87	1/2	12.70	1-1/16	26.98	1	25.40	24.38	21.84	36.57	46.73
OFC 10-12R	5/8	15.87	3/4	12.70	1-5/16	33.33	1	25.40	24.38	21.84	38.10	48.26
OFC 12-8R	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	36.57	46.73
OFC 12-12R	3/4	19.05	3/4	15.74	1-5/16	33.33	1-1/8	28.58	24.38	21.84	38.10	48.26
OFC 16-12R	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	41.14	53.34
OFC 16-16R	1	25.40	1	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	50.03	62.23
OFC 20-16R	1-1/4	31.75	1	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	52.57	74.67
OFC 20-20R	1-1/4	31.75	1-1/4	27.68	2-1/8	53.98	1-7/8	47.63	41.14	38.86	52.57	74.67
OFC 24-24R	1-1/2	38.10	1-1/2	34.03	2-3/8	60.33	2-1/4	57.15	50.03	45.21	56.13	83.81

# OFC-R

Female Connector ISO Tapered Thread

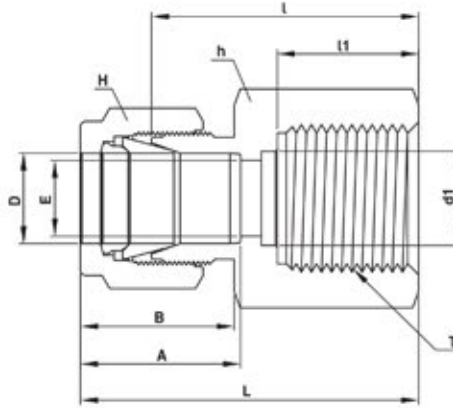


Connects metric tube to male ISO tapered thread

Part No.	Tube O.D D	T NPT	E Min	Width across flat		A	B	l	L
				h	H				
OFC 3M-2R	3	1/8	2.4	14	12	12.9	15.3	22.1	28.7
OFC 3M-4R	3	1/4	2.4	19	12	12.9	15.3	26.9	33.5
OFC 4M-2R	4	1/8	2.4	14	12	13.7	16.1	23.1	29.7
OFC 6M-2R	6	1/8	4.8	14	14	15.3	17.7	23.9	31.3
OFC 6M-4R	6	1/4	4.8	19	14	15.3	17.7	28.4	35.8
OFC 6M-6R	6	3/8	4.8	22	14	15.3	17.7	29.5	36.9
OFC 6M-8R	6	1/2	4.8	27	14	15.3	17.7	35.1	42.5
OFC 8M-2R	8	1/8	6.4	15	16	16.2	18.6	24.6	32.1
OFC 8M-4R	8	1/4	6.4	19	16	16.2	18.6	29.5	37.0
OFC 8M-6R	8	3/8	6.4	22	16	16.2	18.6	30.2	37.7
OFC 8M-8R	8	1/2	6.4	27	16	16.2	18.6	35.8	43.3
OFC 10M-2R	10	1/8	7.9	18	19	17.2	19.5	25.4	33.0
OFC 10M-4R	10	1/4	7.9	19	19	17.2	19.5	30.2	37.8
OFC 10M-6R	10	3/8	7.9	22	19	17.2	19.5	31.0	38.6
OFC 10M-8R	10	1/2	7.9	27	19	17.2	19.5	36.6	44.2
OFC 12M-2R	12	1/8	8.3	22	22	22.8	22.0	28.4	38.5
OFC 12M-4R	12	1/4	9.5	22	22	22.8	22.0	30.2	40.3
OFC 12M-6R	12	3/8	9.5	22	22	22.8	22.0	31.0	41.1
OFC 12M-8R	12	1/2	9.5	27	22	22.8	22.0	36.6	46.7
OFC 12M-12R	12	3/4	9.5	35	22	22.8	22.0	38.9	49.0
OFC 15M-8R	15	1/2	11.9	27	25	24.4	22.0	36.6	46.7
OFC 16M-8R	16	1/2	12.7	27	25	24.4	22.0	36.8	46.9
OFC 20M-8R	20	1/2	15.9	30	32	26.0	22.0	37.8	47.9
OFC 20M-12R	20	3/4	15.9	35	32	26.0	22.0	39.6	49.7
OFC 22M-12R	22	3/4	18.3	35	32	26.0	22.0	39.6	49.7
OFC 22M-16R	22	1	18.3	41	32	26.0	22.0	47.8	57.9
OFC 25M-12R	25	3/4	21.8	35	38	31.3	26.5	41.1	53.4
OFC 25M-16R	25	1	21.8	41	38	31.3	26.5	50.0	62.3

# OGC

## Gauge Connector



Connects fractional tube to Gauge(male ISO parallel thread)

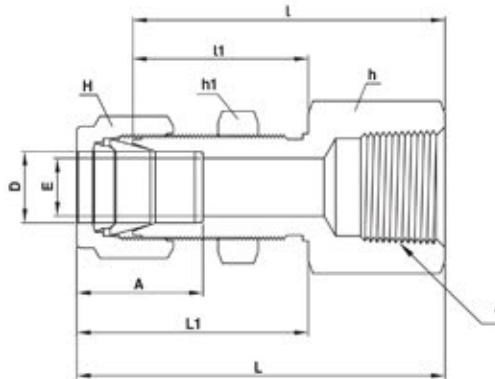
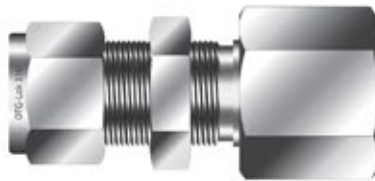
Part No.	Tube O.D D		T (PF)	E Min	d1	Width across flat				A	B	l	l1	L
	in	mm				h		H						
						in	mm	in	mm					
OGC 2-4GG	1/8	3.17	1/4	2.4	5.5	3/4	19.05	7/16	11.11	12.70	15.24	28.70	13.00	35.31
OGC 4-2GG	1/4	6.35	1/8	4.82	-	9/16	14.28	9/16	14.28	15.24	17.78	26.30	12.00	33.55
OGC 4-4GG	1/4	6.35	1/4	4.82	5.5	3/4	19.05	9/16	14.28	15.24	17.78	30.22	13.00	37.59
OGC 4-6GG	1/4	6.35	3/8	4.82	6.5	15/16	23.81	9/16	14.28	15.24	17.78	30.22	14.22	37.59
OGC 4-8GG	1/4	6.35	1/2	4.82	7.0	1-1/16	26.98	9/16	14.28	15.24	17.78	30.07	18.80	43.43
OGC 5-4GG	5/6	7.93	1/4	5.58	5.5	3/4	19.05	5/8	15.87	16.25	18.54	30.98	13.00	38.35
OGC 5-8GG	5/6	7.93	1/2	7.11	7.0	1-1/16	26.98	5/8	15.87	16.25	18.54	33.02	18.00	40.38
OGC 6-4GG	3/8	9.52	1/4	5.58	5.5	3/4	19.05	11/16	17.46	16.76	19.30	31.75	12.95	39.12
OGC 6-6GG	3/8	9.52	3/8	6.60	6.5	15/16	23.81	11/16	17.46	16.76	19.30	31.24	14.22	38.61
OGC 6-8GG	3/8	9.52	1/2	7.11	7.0	1-1/16	26.98	11/16	17.46	16.76	19.30	34.54	18.80	41.91
OGC 8-4GG	1/2	12.70	1/4	5.50	5.5	7/8	22.22	7/8	22.22	22.86	21.84	31.80	13.00	41.95
OGC 8-6GG	1/2	12.70	3/8	6.60	6.5	15/16	23.81	7/8	22.22	22.86	21.84	34.29	14.24	44.45
OGC 8-8GG	1/2	12.70	1/2	7.11	7.0	1-1/16	26.98	7/8	22.22	22.86	21.84	38.10	18.80	48.26

Connects metric tube to Gauge(male ISO parallel thread)

Part No.	Tube O.D D	T (PF)	E Min	d1	Width across flat		A	B	l	L1	L
					h	H					
OGC 3M-4GG	3	1/4	2.4	5.5	19	12	12.9	15.3	28.7	13	35.3
OGC 6M-4GG	6	1/4	4.8	5.5	19	14	15.3	17.7	30.2	13	37.6
OGC 6M-6GG	6	3/8	4.8	6.5	24	14	15.3	17.7	30.2	14	37.6
OFC 6M-8GG	6	1/2	4.8	7.0	27	14	15.3	17.7	36.3	19	43.0
OFC 8M-4GG	8	1/4	5.5	5.5	19	16	16.2	18.6	31.0	13	38.5
OFC 8M-6GG	8	3/8	6.5	6.5	24	16	16.2	18.6	28.7	14	36.2
OFC 8M-8GG	8	1/2	7.0	7.0	27	16	16.2	18.6	33.0	19	40.5
OFC 10M-4GG	10	1/4	5.5	5.5	19	19	17.2	19.5	31.8	13	39.4
OFC 10M-6GG	10	3/8	6.5	6.5	24	19	17.2	19.5	31.2	14	38.8
OFC 10M-8GG	10	1/2	7.0	7.0	27	19	17.2	19.5	33.8	19	41.4
OFC 12M-4GG	12	1/4	5.5	5.5	22	22	22.8	22.0	31.8	13	41.9
OFC 12M-6GG	12	3/8	6.5	6.5	24	22	22.8	22.0	34.3	14	44.4
OFC 12M-8GG	12	1/2	7.0	7.0	27	22	22.8	22.0	38.1	19	48.2
OFC 20M-8GG	20	1/2	7.0	7.0	30	32	26.0	22.0	44.2	19	54.3
OFC 22M-8GG	22	1/2	7.0	7.0	30	32	26.0	22.0	44.2	19	54.3

# OBFC

## Bulkhead Female Connector



Connects fractional tube to male NPT thread

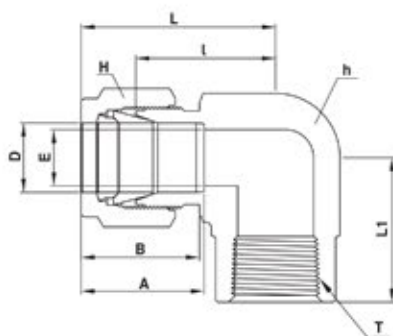
Part No.	Tube O.D		T NPT	E Min	Width across flat						A	l	l1	L	L1	Panel Hole Drill size	Panel Max Thickness
	in	mm			h		h1		H								
					in	mm	in	mm	in	mm							
OBFC 2-2N	1/8	3.17	1/8	2.28	9/16	14.28	1/2	12.70	7/16	11.11	12.70	38.10	24.63	44.70	31.24	8.33	12.70
OBFC 4-2N	1/4	6.35	1/8	4.82	5/8	15.87	5/8	15.87	9/16	14.28	15.24	39.62	26.16	46.99	33.52	11.50	10.16
OBFC 4-4N	1/4	6.35	1/4	4.82	3/4	19.05	5/8	15.87	9/16	14.28	15.24	44.45	26.16	51.81	33.52	11.50	10.16
OBFC 6-4N	3/8	9.52	1/4	7.11	3/4	19.05	3/4	19.05	11/16	17.46	16.76	47.75	29.46	55.11	36.83	14.68	11.17
OBFC 6-6N	3/8	9.52	3/8	7.11	7/8	22.22	3/4	19.05	11/16	17.46	16.76	49.41	29.46	56.77	36.83	14.68	11.17
OBFC 8-6N	1/2	12.70	3/8	10.41	15/16	23.81	15/16	23.81	7/8	22.22	22.86	51.56	31.75	61.72	41.91	19.44	12.70
OBFC 8-8N	1/2	12.70	1/2	10.41	1-1/16	26.98	15/16	23.81	7/8	22.22	22.86	56.38	31.75	66.54	41.91	19.44	12.70
OBFC 12-12N	3/4	19.05	3/4	15.74	1-1/4	31.75	1-3/16	30.16	1-1/8	28.57	24.38	63.60	38.30	73.51	47.21	25.79	16.76
OBFC 16-16N	1	25.40	1	22.35	1-5/8	41.27	1-5/8	41.27	1-1/2	38.10	31.24	81.04	45.21	93.23	57.40	33.73	19.05
OBFC 20-20N	1-1/4	31.75	1-1/4	27.68	1-7/8	47.63	1-7/8	47.63	1-7/8	47.63	41.14	83.49	47.75	105.59	69.85	41.67	19.05
OBFC 24-24N	1-1/2	38.10	1-1/2	34.03	1-1/4	57.15	2-1/4	57.15	2-1/4	57.15	50.03	87.93	49.27	114.57	76.45	49.61	19.05
OBFC 32-32N	2	50.80	2	45.97	1-3/4	69.85	2-3/4	69.85	3	76.20	67.56	95.30	56.38	132.63	93.71	57.94	19.05

Connects metric tube to male NPT thread

Part No.	Tube O.D D	T NPT	E Min	Width across flat			A	l	l1	L	L1	Panel Hole Drill size	Panel Max Thickness
				h	h1	H							
				OBFC 6M-2N	6	1/8							
OBFC 6M-4N	6	1/4	4.8	19.0	16.0	14	15.3	44.4	26.2	51.80	33.60	11.5	10.2
OBFC 8M-4N	8	1/4	6.3	19.0	17.4	16	16.2	46.7	28.6	53.85	35.55	13.1	11.2
OBFC 12M-8N	12	1/2	9.5	27.0	24.0	22	22.8	31.8	31.8	66.50	41.90	19.5	12.7

# OFE

## Female Elbow



Connects fractional tube to male NPT thread

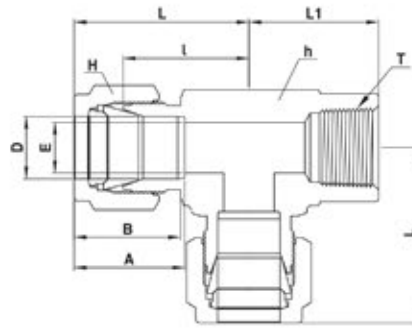
Part No.	Tube O.D D		T NPT	E Min	Width across flat				A	B	l	L	L1
	in	mm			h		H						
					in	mm	in	mm					
OFE 2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.03	24.63	19.05
OFE 2-4N	1/8	3.17	1/4	2.28	11/16	17.46	7/16	11.11	12.70	15.24	20.82	27.43	22.35
OFE 3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	19.05
OFE 4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	19.05
OFE 4-4N	1/4	6.35	1/4	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	22.35
OFE 4-6N	1/4	6.35	3/8	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.38	31.75	22.35
OFE 4-8N	1/4	6.35	1/2	4.82	1	25.40	9/16	14.28	15.24	17.78	27.17	34.54	28.44
OFE 5-2N	5/16	7.93	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.05
OFE 5-4N	5/16	7.93	1/4	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	22.35
OFE 6-2N	3/8	9.52	1/8	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	19.05
OFE 6-4N	3/8	9.52	1/4	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	22.35
OFE 6-6N	3/8	9.52	3/8	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	33.27	22.35
OFE 6-8N	3/8	9.52	1/2	7.11	1	25.40	11/16	17.46	16.76	19.30	28.70	36.06	28.44
OFE 8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
OFE 8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
OFE 8-8N	1/2	12.70	1/2	10.41	1	25.40	7/8	22.22	22.86	21.84	28.70	38.86	28.44
OFE 10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	27.94	38.10	22.35
OFE 10-8N	5/8	15.87	1/2	12.70	1	25.40	1	25.40	24.38	21.84	29.71	39.87	28.44
OFE 12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	28.44
OFE 12-12N	3/4	19.05	3/4	15.74	1-3/8	34.92	1-1/8	28.58	24.38	21.84	34.54	44.70	31.75
OFE 14-12N	7/8	22.22	3/4	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	34.54	44.70	31.75
OFE 16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	31.75
OFE 16-16N	1	25.40	1	22.35	1-11/16	42.86	1-1/2	38.10	31.24	26.41	41.40	50.29	38.10

Connects metric tube to male NPT thread

Part No.	Tube O.D D	T NPT	E Min	Width across flat		A	B	l	L	L1
				h	H					
OFE 6M-2N	6	1/8	4.8	12.70	14	15.3	17.7	19.6	27.0	19.00
OFE 6M-4N	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
OFE 6M-6N	6	3/8	4.8	20.64	14	15.3	17.7	24.4	31.7	22.40
OFE 6M-8N	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.6	28.40
OFE 8M-2N	8	1/8	6.4	15.87	16	16.2	18.6	23.1	29.9	19.00
OFE 8M-4N	8	1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
OFE 8M-8N	8	1/2	6.4	25.40	16	16.2	18.6	28.0	35.2	28.40
OFE 10M-2N	10	1/8	7.9	17.46	19	17.2	19.5	23.9	31.5	19.00
OFE 10M-4N	10	1/4	7.9	17.46	19	17.2	19.5	25.9	33.5	22.35
OFE 10M-6N	10	3/8	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
OFE 10M-8N	10	1/2	7.9	25.40	19	17.2	19.5	28.7	36.1	28.40
OFE 12M-4N	12	1/4	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
OFE 12M-6N	12	3/8	9.5	20.64	22	22.8	22.0	25.9	36.2	22.35
OFE 12M-8N	12	1/2	9.5	25.40	22	22.8	22.0	28.7	38.8	28.40
OFC 16M-8N	16	1/2	12.7	26.98	25	24.4	22.0	29.7	39.5	28.40

# OFRT

Female Run Tee



Connects fractional tube to male NPT thread

Part No.	Tube O.D D		T NPT	E Min	Width across flat				A	B	l	L	L1
	in	mm			h		H						
					in	mm	in	mm					
OFRT 2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.03	24.63	19.05
OFRT 2-4N	1/8	3.17	1/4	2.28	11/16	17.46	7/16	11.11	12.70	15.24	20.82	27.43	22.35
OFRT 3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	19.05
OFRT 4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	19.05
OFRT 4-4N	1/4	6.35	1/4	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.86	29.71	22.35
OFRT 4-6N	1/4	6.35	3/8	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.38	31.75	22.35
OFRT 4-8N	1/4	6.35	1/2	4.82	1	25.40	9/16	14.28	15.24	17.78	27.17	34.54	28.44
OFRT 5-2N	5/16	7.94	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.05
OFRT 5-4N	5/16	7.94	1/4	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	22.35
OFRT 6-2N	3/8	9.52	1/8	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	19.05
OFRT 6-4N	3/8	9.52	1/4	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	22.35
OFRT 6-6N	3/8	9.52	3/8	6.35	13/16	20.64	11/16	17.46	16.76	19.30	25.90	33.27	22.35
OFRT 6-8N	3/8	9.52	1/2	7.11	1	25.40	11/16	17.46	16.76	19.30	28.70	36.06	28.44
OFRT 8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
OFRT 8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
OFRT 8-8N	1/2	12.70	1/2	10.41	1	25.40	7/8	22.22	22.86	21.84	29.71	39.78	28.44
OFRT 10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	27.94	38.10	22.35
OFRT 10-8N	5/8	15.87	1/2	12.70	1	25.40	1	25.40	24.38	21.84	29.71	39.87	28.44
OFRT 12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	28.44
OFRT 12-12N	3/4	19.05	3/4	15.74	1-3/8	34.92	1-1/8	28.58	24.38	21.84	34.54	44.70	31.75
OFRT 14-12N	7/8	22.22	3/4	18.28	1-3/8	34.92	1-1/4	31.75	25.9	21.84	34.54	44.70	31.75
OFRT 16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	31.75
OFRT 16-16N	1	25.40	1	22.35	1-11/16	42.86	1-1/2	38.10	31.24	26.41	41.40	50.29	38.10

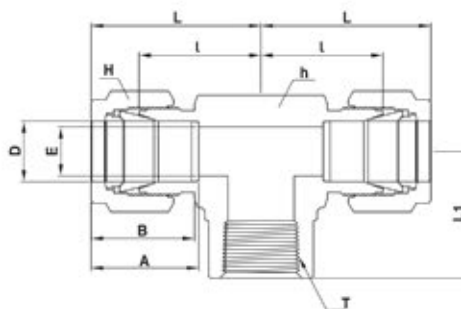
Connects metric tube to male NPT thread

Part No.	Tube O.D D	T NPT	E Min	Width across flat		A	B	l	L	L1
				h	H					
OFRT 6M-2N	6	1/8	4.8	12.70	14	15.3	17.7	19.6	27.0	19.00
OFRT 6M-4N	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
OFRT 6M-6N	6	3/8	4.8	20.64	14	15.3	17.7	24.4	31.7	22.40
OFRT 6M-8N	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.5	28.40
OFRT 8M-2N	8	1/8	6.4	15.87	16	16.2	18.6	23.1	29.9	19.00
OFRT 8M-4N	8	1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
OFRT 8M-6N	8	3/8	6.4	20.64	16	16.2	18.6	25.2	32.4	22.40
OFRT 8M-8N	8	1/2	6.4	25.40	16	16.2	18.6	28.0	35.2	28.40
OFRT 10M-2N	10	1/8	7.9	17.46	19	17.2	19.5	23.9	31.5	19.00
OFRT 10M-4N	10	1/4	7.9	20.64	19	17.2	19.5	25.9	33.6	22.40
OFRT 10M-6N	10	3/8	7.9	20.64	19	17.2	19.5	25.9	33.6	22.40
OFRT 10M-8N	10	1/2	7.9	25.40	19	17.2	19.5	26.2	33.6	28.40
OFRT 12M-4N	12	1/4	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
OFRT 12M-6N	12	3/8	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
OFRT 12M-8N	12	1/2	9.5	25.40	22	22.8	22.0	29.7	40.0	28.40
OFRT 16M-8N	16	1/2	12.7	25.40	25	24.4	22.0	29.7	40.0	28.40

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OFBT

## Female Branch Tee



Connects fractional tube to male NPT thread

Part No.	Tube O.D D		T NPT	E Min	Width across flat				A	B	l	L	L1
	in	mm			h		H						
					in	mm	in	mm					
OFBT 2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.03	24.38	19.05
OFBT 2-4N	1/8	3.17	1/4	2.28	11/16	17.46	7/16	11.11	12.70	15.24	20.82	27.43	22.35
OFBT 3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	19.05
OFBT 4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	19.05
OFBT 4-4N	1/4	6.35	1/4	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	22.35
OFBT 4-6N	1/4	6.35	3/8	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.38	31.75	22.35
OFBT 4-8N	1/4	6.35	1/2	4.82	1	25.40	9/16	14.28	15.24	17.78	27.17	34.54	28.44
OFBT 5-2N	5/16	7.94	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.05
OFBT 5-4N	5/16	7.94	1/4	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	22.35
OFBT 6-2N	3/8	9.52	1/8	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	19.05
OFBT 6-4N	3/8	9.52	1/4	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	22.35
OFBT 6-6N	3/8	9.52	3/8	6.35	13/16	20.64	11/16	17.46	16.76	19.30	25.90	33.27	22.35
OFBT 6-8N	3/8	9.52	1/2	7.11	1	25.40	11/16	17.46	16.76	19.30	28.70	36.06	28.44
OFBT 8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
OFBT 8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
OFBT 8-8N	1/2	12.70	1/2	10.41	1	25.40	7/8	22.22	22.86	21.84	29.71	39.87	28.44
OFBT 10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	27.94	38.10	22.35
OFBT 10-8N	5/8	15.87	1/2	12.70	1	25.40	1	25.40	24.38	21.84	29.71	39.87	28.44
OFBT 12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	28.44
OFBT 12-12N	3/4	19.05	3/4	15.74	1-3/8	34.92	1-1/8	28.58	24.38	21.84	34.54	44.70	31.75
OFBT 14-12N	7/8	22.22	3/4	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	34.54	44.70	31.75
OFBT 16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	31.75
OFBT 16-16N	1	25.40	1	22.35	1-11/16	42.86	1-1/2	38.10	31.24	26.41	41.40	50.29	38.10

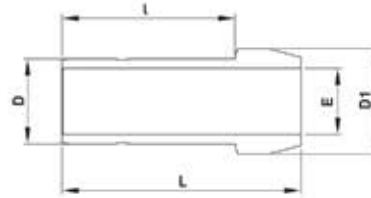
Connects metric tube to male NPT thread

Part No.	Tube O.D D	T NPT	E Min	Width across flat		A	B	l	L	L1
				h	H					
OFBT 6M-2N	6	1/8	4.8	12.70	14	15.3	17.7	19.6	27.0	19.00
OFBT 6M-4N	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
OFBT 6M-6N	6	3/8	4.8	20.64	14	15.3	17.7	24.4	31.7	22.40
OFBT 6M-8N	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.5	28.40
OFBT 8M-2N	8	1/8	6.4	15.87	16	16.2	18.6	23.1	29.9	19.00
OFBT 8M-4N	8	1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
OFBT 8M-6N	8	3/8	6.4	20.64	16	16.2	18.6	25.2	32.4	22.40
OFBT 8M-8N	8	1/2	6.4	25.40	16	16.2	18.6	28.0	35.2	28.40
OFBT 10M-2N	10	1/8	7.9	17.46	19	17.2	19.5	23.9	31.5	19.00
OFBT 10M-4N	10	1/4	7.9	20.64	19	17.2	19.5	25.9	33.6	22.40
OFBT 10M-6N	10	3/8	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
OFBT 10M-8N	10	1/2	9.5	25.40	19	17.2	19.5	26.2	33.6	22.40
OFBT 12M-4N	12	1/4	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
OFBT 12M-6N	12	3/8	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
OFBT 12M-8N	12	1/2	9.5	25.40	22	22.8	22.0	29.7	40.0	28.40
OFBT 16M-8N	16	1/2	12.7	25.40	25	24.4	22.0	29.7	40.0	28.70



# OPC

Port Connector



Connects fractional OTG-LOK tube fitting ports

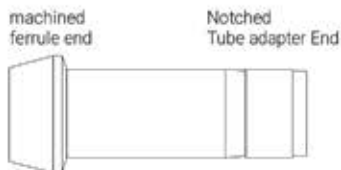
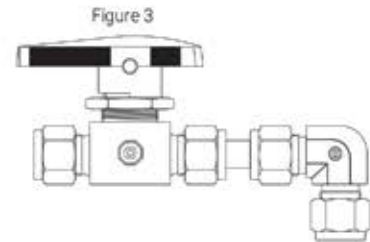
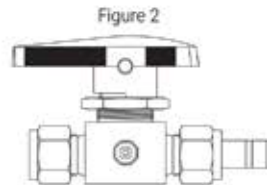
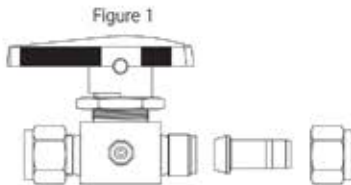
Part No.	Tube O.D D		E Min	D1	l	L
	in	mm				
OPC-1	1/16	1.59	1.00	3.30	10.66	13.72
OPC-2	1/8	3.17	1.77	6.09	15.75	22.35
OPC-4	1/4	6.35	4.57	9.39	18.79	24.64
OPC-5	5/16	7.93	6.35	10.92	20.06	25.90
OPC-6	3/8	9.52	7.11	12.70	20.32	26.16
OPC-8	1/2	12.70	9.90	15.74	25.90	35.81
OPC-12	3/4	19.05	14.98	22.09	27.68	37.33
OPC-16	1	25.40	20.06	28.44	34.54	48.00

Connects metri OTG-LOK tube fitting ports

Part No.	Tube O.D D	E Min	D1	l	L
OPC-3M	3	2.1	6.0	15.70	22.20
OPC-4M	4	2.2	7.0	16.67	25.81
OPC-6M	6	4.4	9.0	18.70	24.60
OPC-8M	8	6.2	11.0	20.00	25.90
OPC-10M	10	8.2	13.1	20.20	26.10
OPC-12M	12	9.1	15.0	26.00	35.80
OPC-15M	15	12.7	19.0	27.78	37.40
OPC-16M	16	12.7	19.0	27.60	37.40
OPC-18M	18	13.9	21.0	27.91	37.40
OPC-20M	20	15.1	23.0	29.20	38.90
OPC-22M	22	17.9	24.97	29.30	39.20
OPC-25M	25	19.8	28.0	34.50	48.00
OPC-28M	28	23.8	34.3	48.30	63.50
OPC-32M	32	27.4	39.5	52.40	69.70
OPC-38M	38	33.3	47.1	61.40	81.90

## Port Connector

Apply port connector where two tube ports are required close connection.



Port connectors are designed with two different ends. These two ends require different installation

## Installation Instruction

### Machined Ferrule End

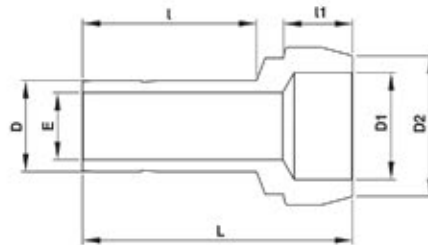
1. Gently insert machined ferrule end into tube port. (Figure 1)
2. Place nut only over the machined ferrule. (Figure 1)
3. Finger tighten the nut. (Figure 2)
4. Wrench-tighten the nut 1/4 turn beyond the finger-tighten position. (Figure 2)

### Notched Tube Adapter End

1. Insert tube adapter end into the OTG-LOK Tube fitting. (Figure 3)
2. Follow OTG-LOK tube fitting's standard installation instruction. (Figure 3)

# ORPC

Reducing Port Connector



Connects fractional OTG-LOK tube fitting ports

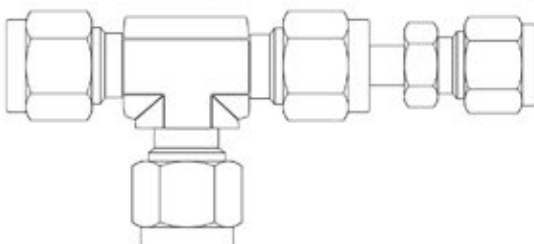
Part No.	Tube O.D				E Min	D2	l	l1	L
	D1		D						
	in	mm	in	mm					
ORPC 2-1	1/8	3.17	1/16	1.59	1.00	6.10	8.64	2.03	17.27
ORPC 4-2	1/4	6.35	1/8	3.17	2.28	9.39	13.45	3.30	22.60
ORPC 6-2	3/8	9.52	1/8	3.17	2.28	12.70	13.45	3.81	23.11
ORPC 6-4	3/8	9.52	1/4	6.35	4.82	12.70	15.75	3.30	24.89
ORPC 8-4	1/2	12.70	1/4	6.35	4.82	15.74	15.75	3.81	29.21
ORPC 8-6	1/2	12.70	3/8	9.52	7.11	15.74	17.67	3.30	30.48
ORPC 12-8	3/4	19.05	1/2	12.70	9.90	22.09	23.20	3.81	37.85
ORPC 16-8	1	25.40	1/2	12.70	9.90	28.40	24.47	4.82	42.67
ORPC 16-12	1	25.40	3/4	19.05	14.98	28.40	25.90	4.06	43.43

Connects metric OTG-LOK tube fitting ports

Part No.	Tube O.D		E Min	D2	l	l1	L
	D1	D					
ORPC 6M-3M	6	3	2.2	9.0	13.50	3.2	22.60
ORPC 8M-6M	8	6	4.6	11.0	15.70	3.1	24.70
ORPC 10M-6M	10	6	4.6	13.1	15.70	3.4	25.00
ORPC 10M-8M	10	8	6.4	13.1	16.80	3.1	26.00
ORPC 12M-6M	12	6	4.6	15.0	15.70	3.6	29.10
ORPC 12M-8M	12	8	6.4	15.0	16.80	3.4	29.80
ORPC 12M-10M	12	10	7.7	15.0	15.70	3.1	30.40
ORPC 16M-6M	16	6	4.6	19.0	15.75	3.6	30.40
ORPC 16M-12M	16	12	9.1	19.0	23.10	3.4	36.20
ORPC 28M-25M	28	25	19.8	34.3	33.00	8.2	56.50
ORPC 32M-25M	32	25	19.8	39.5	33.00	9.9	60.30
ORPC 38M-25M	38	25	19.8	47.1	33.00	12.3	65.80

## Port Reducer

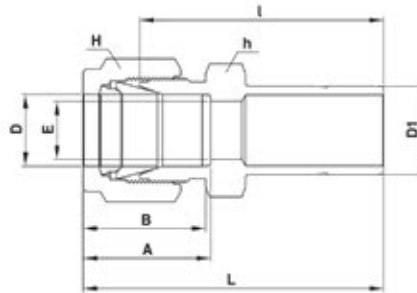
Solution for reducing the Port OD size of an existing port



By using the port reducer, you may reduce an existing OTG-LOK Tube Fitting Port OD size

# OR

Reducer



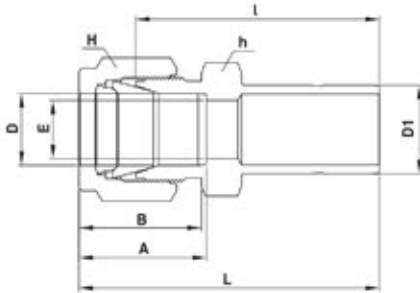
Connects fractional tube to fractional OTG-LOK tube fitting ports

Part No.	Tube O.D				E Min	Width across flat				A	B	L	L
	D		D1			h		H					
	in	mm	in	mm		in	mm	in	mm				
OR 1-2	1/16	1.59	1/8	3.17	1.27	5/16	7.93	5/16	7.93	8.63	10.92	25.40	29.21
OR 1-4	1/16	1.59	1/4	6.35	1.27	5/16	7.93	5/16	7.93	8.63	10.92	27.68	31.49
OR 2-1	1/8	3.17	1/16	1.59	1.76	7/16	11.11	7/16	11.11	12.70	15.24	22.35	28.95
OR 2-2	1/8	3.17	1/8	3.17	2.03	7/16	11.11	7/16	11.11	12.70	15.24	26.92	33.52
OR 2-3	1/8	3.17	3/16	4.76	2.28	7/16	11.11	7/16	11.11	12.70	15.24	27.68	34.29
OR 2-4	1/8	3.17	1/4	6.35	2.28	7/16	11.11	7/16	11.11	12.70	15.24	29.46	36.06
OR 2-6	1/8	3.17	3/8	9.52	2.28	7/16	11.11	7/16	11.11	12.70	15.24	30.98	37.59
OR 2-8	1/8	3.17	1/2	12.70	2.28	9/16	14.28	7/16	11.11	12.70	15.24	37.59	44.19
OR 3-2	3/16	4.76	1/8	3.17	2.03	7/16	11.11	1/2	12.70	13.71	16.00	28.19	34.79
OR 3-4	3/16	4.76	1/4	6.35	3.04	7/16	11.11	1/2	12.70	13.71	16.00	30.48	37.08
OR 4-2	1/4	6.35	1/8	3.17	2.03	1/2	12.70	9/16	14.28	15.24	17.78	29.46	36.83
OR 4-3	1/4	6.35	3/16	4.76	3.04	1/2	12.70	9/16	14.28	15.24	17.78	30.22	37.59
OR 4-4	1/4	6.35	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	31.75	39.11
OR 4-5	1/4	6.35	5/16	7.93	4.82	1/2	12.70	9/16	14.28	15.24	17.78	32.51	39.87
OR 4-6	1/4	6.35	3/8	9.52	4.82	1/2	12.70	9/16	14.28	15.24	17.78	33.27	40.64
OR 4-8	1/4	6.35	1/2	12.70	4.82	9/16	14.28	9/16	14.28	15.24	17.78	38.86	46.22
OR 4-10	1/4	6.35	5/8	15.87	4.82	11/16	17.46	9/16	14.28	15.24	17.78	40.64	48.00
OR 4-12	1/4	6.35	3/4	19.05	4.82	13/16	20.64	9/16	14.28	15.24	17.78	40.38	47.75
OR 5-6	5/16	7.93	3/8	9.52	6.35	9/16	14.28	5/8	15.87	16.25	18.54	34.54	41.91
OR 5-8	5/16	7.93	1/2	12.70	6.35	9/16	14.28	5/8	15.87	16.25	18.54	40.13	47.49
OR 6-4	3/8	9.52	1/4	6.35	4.82	5/8	15.87	11/16	17.46	16.76	19.30	34.03	41.40
OR 6-6	3/8	9.52	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	35.81	43.18
OR 6-8	3/8	9.52	1/2	12.70	7.11	5/8	15.87	11/16	17.46	16.76	19.30	41.14	45.81
OR 6-10	3/8	9.52	5/8	15.87	7.11	11/16	17.46	11/16	17.46	16.76	19.30	42.92	50.29
OR 6-12	3/8	9.52	3/4	19.05	7.11	13/16	20.64	11/16	17.46	16.76	19.30	42.92	50.29
OR 8-4	1/2	12.70	1/4	6.35	4.82	13/16	20.64	7/8	22.22	22.86	21.84	34.79	44.95
OR 8-6	1/2	12.70	3/8	9.52	7.11	13/16	20.64	7/8	22.22	22.86	21.84	36.57	46.73
OR 8-8	1/2	12.70	1/2	12.70	9.90	13/16	20.64	7/8	22.22	22.86	21.84	42.16	52.32
OR 8-10	1/2	12.70	5/8	15.87	10.41	13/16	20.64	7/8	22.22	22.86	21.84	43.68	53.84
OR 8-12	1/2	12.70	3/4	19.05	10.41	13/16	20.64	7/8	22.22	22.86	21.84	43.68	53.84
OR 8-16	1/2	12.70	1	25.40	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	50.03	60.19
OR 10-12	5/8	15.87	3/4	19.05	12.70	15/16	23.81	1	25.40	24.38	21.84	44.45	54.61
OR 10-14	5/8	15.87	7/8	22.22	12.70	15/16	23.81	1	25.40	24.38	21.84	45.97	56.13
OR 10-16	5/8	15.87	1	25.40	12.70	1-1/16	26.98	1	25.40	24.38	21.84	50.80	60.96
OR 12-8	3/4	19.05	1/2	12.70	9.90	1-1/16	26.98	1-1/8	28.57	24.38	21.84	44.45	54.61
OR 12-16	3/4	19.05	1	25.40	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	52.32	62.48
OR 16-20	1	25.40	1-1/4	31.75	22.35	1-3/8	34.93	1-1/2	38.10	31.24	26.41	68.32	80.51
OR 16-24	1	25.40	1-1/2	38.10	22.35	1-5/8	41.28	1-1/2	38.10	31.24	26.41	76.96	89.51
OR 16-32	1	25.40	2	50.80	22.35	2-1/8	53.98	1-1/2	38.10	31.24	26.41	100.33	112.52
OR 20-24	1-1/4	31.75	1-1/2	38.10	27.68	1-7/8	47.63	1-7/8	57.15	41.14	38.86	82.04	104.14
OR 20-32	1-1/4	31.75	2	50.80	27.68	1-7/8	47.63	1-7/8	76.20	41.14	38.86	103.12	125.22
OR 24-32	1-1/2	38.10	2	50.80	34.03	2-1/4	57.15	2-1/4	76.20	50.03	45.21	104.14	131.31

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OR

Reducer



Connects metric tube to fractional OTG-LOK tube fitting port

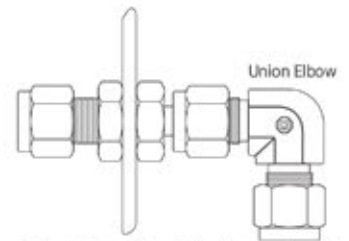
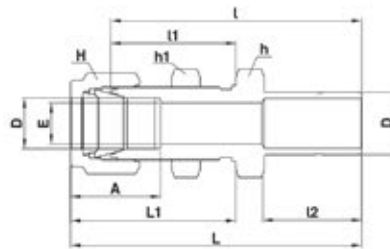
Part No.	Tube O.D			E Min	Width across flat		A	B	l	L
	D	D1			h	H				
		in	mm							
OR 2M-2	2	1/8	3.17	1.7	12	12	12.9	15.3	26.9	33.5
OR 3M-2										
OR 3M-4	3	1/4	6.35	2.4	12	12	12.9	15.3	29.5	36.1
OR 4M-4										
OR 6M-2	6	1/8	3.17	2.0	14	14	15.3	17.7	29.5	36.9
OR 6M-4										
OR 6M-5	6	5/16	7.93	4.8	14	14	15.3	17.7	32.5	39.9
OR 6M-6										
OR 6M-8	6	1/2	12.70	4.8	14	14	15.3	17.7	38.9	46.3
OR 8M-6										
OR 8M-8	8	1/2	12.70	6.4	15	16	16.2	18.6	40.1	47.6
OR 10M-6										
OR 10M-8	10	1/2	12.70	7.9	18	19	17.2	19.5	42.2	49.8
OR 12M-8										
OR 12M-12	12	3/4	19.05	9.5	22	22	22.8	22.0	43.7	53.8
OR 18M-12										
OR 18M-16	18	1	25.40	15.1	27	30	24.4	22.0	52.3	62.4
OR 25M-16	25	1	25.40	20.2	35	38	31.3	26.5	57.2	69.5

Connects metric tube to metric OTG-LOK tube fitting port

Part No.	Tube O.D		E Min	Width across flat		A	B	l	L
	D1	D		h	H				
OR 2M-3M	2	3	1.7	12	12	12.9	15.3	26.9	35.3
OR 3M-4M	3	4	2.4	12	12	12.9	15.3	28.4	35.0
OR 3M-6M	3	6	2.4	12	12	12.9	15.3	29.5	36.1
OR 3M-10M	3	10	2.4	12	12	12.9	15.3	31.8	38.4
OR 4M-6M	4	6	2.4	12	12	13.7	16.1	30.5	37.1
OR 6M-3M	6	3	1.8	14	14	15.3	17.7	29.5	36.9
OR 6M-8M	6	8	4.8	14	14	15.3	17.7	32.5	39.9
OR 6M-10M	6	10	4.8	14	14	15.3	17.7	33.3	40.7
OR 6M-12M	6	12	4.8	14	14	15.3	17.7	38.9	46.3
OR 8M-6M	8	6	4.6	15	16	16.2	18.6	32.8	40.3
OR 8M-10M	8	10	6.4	15	16	16.2	18.6	34.5	42.0
OR 8M-12M	8	12	6.4	15	16	16.2	18.6	40.1	47.6
OR 10M-6M	10	6	4.6	18	19	17.2	19.5	34.8	42.4
OR 10M-12M	10	12	7.9	18	19	17.2	19.5	42.2	49.8
OR 10M-15M	10	15	7.9	18	19	17.2	19.5	43.7	51.3
OR 10M-18M	10	18	7.9	19	19	17.2	19.5	43.7	51.3
OR 12M-6M	12	6	4.6	22	22	22.8	22.0	34.8	44.9
OR 12M-10M	12	10	7.7	22	22	22.8	22.0	36.6	46.7
OR 12M-16M	12	16	9.5	22	22	22.8	22.0	43.7	53.8
OR 12M-18M	12	18	9.5	22	22	22.8	22.0	43.7	53.8
OR 12M-20M	12	20	9.5	22	22	22.8	22.0	46.0	56.1
OR 12M-22M	12	22	9.5	24	22	22.8	22.0	46.0	56.1
OR 12M-25M	12	25	9.5	27	22	22.8	22.0	52.3	62.4
OR 16M-12M	16	12	9.1	24	25	24.4	22.0	42.9	53.0
OR 18M-12M	18	12	9.1	27	30	24.4	22.0	44.5	54.6
OR 18M-16M	18	16	12.7	27	30	24.4	22.0	46.0	56.1
OR 18M-20M	18	20	15.1	27	30	24.4	22.0	47.5	57.6
OR 18M-22M	18	22	15.1	27	30	24.4	22.0	47.5	57.6
OR 18M-25M	18	25	15.1	27	30	24.4	22.0	52.3	62.4
OR 20M-16M	20	16	12.7	30	32	26.0	22.0	47.8	57.9
OR 20M-18M	20	18	13.9	30	32	26.0	22.0	47.8	57.9
OR 20M-22M	20	22	15.8	30	32	26.0	22.0	49.3	59.4
OR 20M-25M	20	25	15.8	30	32	26.0	22.0	54.1	64.2
OR 22M-18M	22	18	13.9	30	32	26.0	22.0	47.8	57.9
OR 22M-20M	22	20	15.1	30	32	26.0	22.0	49.3	59.4
OR 22M-25M	22	25	18.3	30	32	26.0	22.0	54.1	64.2
OR 25M-18M	25	18	13.9	35	38	31.3	26.5	50.8	63.1
OR 25M-20M	25	20	15.1	35	38	31.3	26.5	52.3	64.6

# OBA

## Bulkhead Adapter



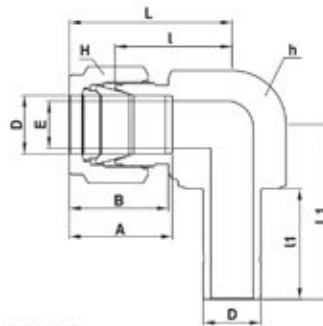
Bulkhead adapter helps set a direction through panel

Connects fractional tube to fractional OTG-LOK tube fitting port

Part No.	Tube O.D D		E Min	Width across flat				A	l	l1	l2	L	L1	Panel Hole Drill size	Panel Max Thickness
	in	mm		h		H									
				in	mm	in	mm								
OBA 2-2	1/8	3.17	2.03	1/2	12.70	7/16	11.11	12.70	42.92	24.63	13.45	49.53	31.24	8.33	12.70
OBA 4-4	1/4	6.35	4.82	5/8	15.87	9/16	14.28	15.24	48.51	26.16	15.74	55.88	33.52	11.50	10.16
OBA 6-6	3/8	9.52	7.11	3/4	19.05	11/16	17.46	16.76	53.84	29.46	17.50	61.21	36.83	14.68	11.17
OBA 8-8	1/2	12.70	10.41	15/16	23.81	7/8	22.22	22.86	62.73	31.75	23.11	72.89	41.91	19.44	12.70
OBA 10-10	5/8	15.87	12.70	1-1/16	26.98	1	25.40	24.38	65.02	32.51	24.70	75.18	42.67	22.62	12.70
OBA 16-16	1	25.40	20.32	1-5/8	41.28	1-1/2	38.10	31.24	88.13	45.21	31.70	100.33	57.40	33.73	19.05
OBA 20-20	1-1/4	31.75	27.68	1-7/8	47.63	1-7/8	47.63	41.14	102.07	47.75	40.00	124.17	69.85	41.67	19.05
OBA 24-24	1-1/2	38.10	34.03	2-1/4	57.15	2-1/4	57.15	50.03	118.33	49.27	51.50	145.51	76.45	49.61	19.05
OBA 32-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	148.79	56.38	68.40	185.82	93.71	57.94	19.05

# OEA

## Elbow Adapter



Connects fractional tube to fractional OTG-LOK tube fitting port

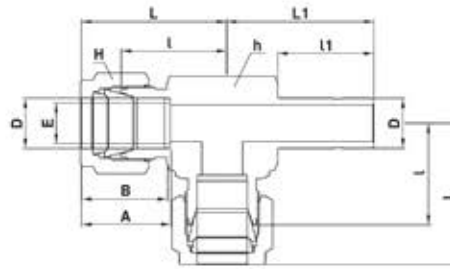
Part No.	Tube O.D D		E Min	Width across flat				A	B	l	l1	L	L1
	in	mm		h		H							
				in	mm	in	mm						
OEA-4	1/4	6.35	4.8	1/2	12.70	9/16	14.28	15.24	17.78	19.55	15.75	27.0	25.00
OEA-6	3/8	9.52	7.10	5/8	15.87	11/16	17.46	16.76	19.30	23.11	17.50	31.5	29.10
OEA-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	23.10	36.0	37.3
OEA-12	3/4	19.05	16.00	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	24.70	38.8	42.6
OEA-16	1	25.40	22.30	1-3/8	34.92	1-1/2	38.10	31.24	26.41	46.83	31.70	42.6	54.40

Connects metric tube to metric OTG-LOK tube fitting port

Part No.	Tube O.D D	E Min	Width across flat		A	B	l	l1	L	L1
			h	H						
OEA-6M	6	4.6	12.7	14	15.3	17.7	19.6	15.7	27.0	25.0
OEA-8M	8	6.4	15.8	16	16.2	18.6	21.3	16.8	28.8	27.05
OEA-10M	10	7.7	17.4	19	17.2	19.5	23.9	17.5	31.5	30.0
OEA-12M	12	9.1	20.6	22	22.8	22.0	25.9	23.1	36.0	37.3
OEA-14M	14	11.1	25.4	25	24.4	22.0	28.7	24.6	38.8	41.5
OEA-15M	15	11.9	25.4	25	24.4	22.0	28.7	24.65	38.8	41.55
OEA-16M	16	12.7	25.4	25	24.4	22.0	28.7	24.6	38.8	41.5
OEA-18M	18	13.9	26.9	30	24.4	22.0	29.7	24.6	39.8	42.5
OEA-20M	20	15.1	31.8	32	26.0	22.0	32.5	26.2	42.6	47.0
OEA-22M	22	18.3	31.8	32	26.0	22.0	32.5	26.6	42.6	47.15
OEA-25M	25	19.8	34.9	38	31.3	26.5	36.8	31.7	49.1	55.2
OEA-28M	28	21.8	41.0	46	36.6	36.6	43.2	37.5	64.0	64.9

# ORTA

Run Tee Adapter



Connects fractional tube to fractional OTG-LOK tube fitting port

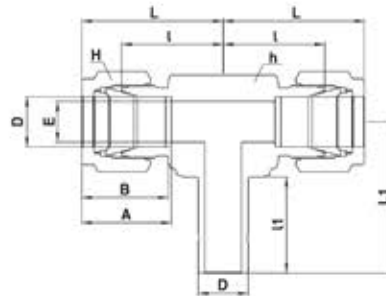
Part No.	Tube O.D		E Min	Width across flat				A	B	l	l1	L	L1
	D			h		H							
	in	mm		in	mm	in	mm						
ORTA-4	1/4	6.35	4.8	1/2	12.70	9/16	14.28	15.24	17.78	19.55	15.75	27.0	25.00
ORTA-6	3/8	9.52	7.10	5/8	15.87	11/16	17.46	16.76	19.30	23.11	17.50	31.5	29.10
ORTA-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	23.10	36.0	37.3
ORTA-12	3/4	19.05	16.00	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	24.70	38.8	42.6
ORTA-16	1	25.40	22.30	1-3/8	34.92	1-1/2	38.10	31.24	26.41	46.83	31.70	42.6	54.40

Connects metric tube to metric OTG-LOK tube fitting port

Part No.	Tube O.D D	E Min	Width across flat		A	B	l	l1	L	L1
			h	H						
ORTA-8M	8	6.4	15.8	16	16.2	18.6	21.3	16.8	28.8	27.5
ORTA-10M	10	7.9	17.4	19	17.2	19.5	23.9	17.5	31.5	30.0

# OBTA

Branch Tee Adapter



Connects fractional tube to fractional OTG-LOK tube fitting port

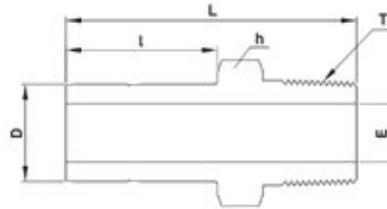
Part No.	Tube O.D		E Min	Width across flat				A	B	l	l1	L	L1
	D			h		H							
	in	mm		in	mm	in	mm						
OBTA-4	1/4	6.35	4.8	1/2	12.70	9/16	14.28	15.24	17.78	19.55	15.75	27.0	25.00
OBTA-6	3/8	9.52	7.10	5/8	15.87	11/16	17.46	16.76	19.30	23.11	17.50	31.5	29.10
OBTA-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	23.10	36.0	37.3
OBTA-12	3/4	19.05	16.00	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	24.70	38.8	42.6
OBTA-16	1	25.40	22.30	1-3/8	34.92	1-1/2	38.10	31.24	26.41	46.83	31.70	42.6	54.40

Connects metric tube to metric OTG-LOK tube fitting port

Part No.	Tube O.D D	E Min	Width across flat		A	B	l	l1	L	L1
			h	H						
ORTA-8M	8	6.4	15.8	16	16.2	18.6	21.3	16.8	28.8	27.5

# OMA-N

Male NPT Adapter



Connects fractional tube to fractional OTG-LOK tube fitting ports to female NPT thread

Part No.	Tube O.D D		T NPT	E Min	Width across flat		l	L	
	in	mm			h	in			mm
OMA 2-2N	1/8	3.17	1/8	2.03	7/16	11.11	13.45	29.50	
OMA 2-4N	1/8	3.17	1/4	2.03	9/16	14.28	13.45	34.80	
OMA 3-2N	3/16	4.76	1/8	3.04	7/16	11.11	14.20	30.22	
OMA 3-4N	3/16	4.76	1/4	3.04	9/16	14.28	14.20	35.56	
OMA 4-2N	1/4	6.35	1/8	4.31	7/16	11.11	15.75	31.80	
OMA 4-4N	1/4	6.35	1/4	4.31	9/16	14.28	15.75	37.08	
OMA 4-6N	1/4	6.35	3/8	4.31	11/16	17.46	15.75	37.84	
OMA 4-8N	1/4	6.35	1/2	4.31	7/8	22.22	15.75	43.43	
OMA 5-2N	5/16	7.93	1/8	5.58	7/16	11.11	16.80	32.76	
OMA 5-4N	5/16	7.93	1/4	5.58	9/16	14.28	16.80	38.10	
OMA 6-2N	3/8	9.52	1/8	4.80	7/16	11.11	17.50	33.50	
OMA 6-4N	3/8	9.52	1/4	6.86	9/16	14.28	17.50	38.90	
OMA 6-6N	3/8	9.52	3/8	6.86	11/16	17.46	17.50	39.60	
OMA 6-8N	3/8	9.52	1/2	6.86	7/8	22.22	17.50	45.20	
OMA 8-4N	1/2	12.70	1/4	7.11	9/16	14.28	23.20	44.50	
OMA 8-6N	1/2	12.70	3/8	9.4	11/16	17.46	23.20	45.20	
OMA 8-8N	1/2	12.70	1/2	9.4	7/8	22.22	23.20	50.50	
OMA 10-6N	5/8	15.87	3/8	9.6	11/16	17.46	24.70	47.40	
OMA 10-8N	5/8	15.87	1/2	11.9	7/8	22.22	24.70	52.30	
OMA 10-12N	5/8	15.87	3/4	12.7	1-1/16	26.98	24.70	52.30	
OMA 12-8N	3/4	19.05	1/2	11.9	7/8	22.22	24.70	52.30	
OMA 12-12N	3/4	19.05	3/4	14.73	1-1/16	26.98	24.70	52.30	
OMA 12-16N	3/4	19.05	1	14.73	1-3/8	34.92	24.70	57.91	
OMA 14-12N	7/8	22.22	3/4	15.8	1-1/16	26.98	26.70	54.30	
OMA 16-12N	1	25.40	3/4	15.8	1-1/16	26.98	31.70	58.70	
OMA 16-16N	1	25.40	1	20.3	1-3/8	34.92	31.70	66.00	
OMA 20-20N	1-1/4	31.75	1-1/4	25.9	1-3/4	44.45	40.00	80.26	
OMA 24-24N	1-1/2	38.10	1-1/2	31.75	2-1/8	53.98	51.50	94.48	
OMA 32-32N	2	50.80	2	43.7	2-3/4	69.85	68.40	119.38	

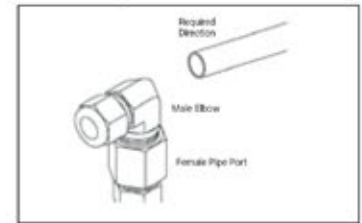
Connects metric OTG-LOK tube fitting port to female NPT thread

Part No.	Tube O.D D	T NPT	E Min	Width across flat		l	L
				h			
OMA 3M-2N	3	1/8	1.8	12		13.15	29.4
OMA 6M-2N	6	1/8	4.1	12		15.75	32.8
OMA 6M-4N	6	1/4	4.1	14		15.75	38.1
OMA 8M-4N	8	1/4	5.6	14		16.50	39.1
OMA 10M-4N	10	1/4	7.1	14		17.50	39.9
OMA 10M-6N	10	3/8	7.1	17		17.50	40.6
OMA 10M-8N	10	1/2	7.1	22		17.50	45.2
OMA 12M-4N	12	1/4	7.1	14		23.50	46.5
OMA 12M-6N	12	3/8	8.8	17		23.50	46.5
OMA 12M-8N	12	1/2	8.8	22		23.50	51.8
OMA 18M-8N	18	1/2	11.9	22		24.90	53.2
OMA 18M-12N	18	3/4	13.9	27		24.90	53.2
OMA 28M-16N	28	1	22.2	35		31.70	74.7
OMA 28M-20N	28	1-1/4	24.3	46		31.70	76.2
OMA 32M-20N	32	1-1/4	26.5	46		40.00	81.0
OMA 38M-24N	38	1-1/2	31.6	55		51.50	92.2

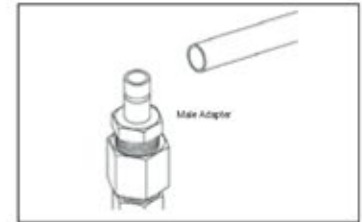
The E dimension is the minimum nominal opening. These fittings may have a larger opening at the pipe/straight thread end.

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

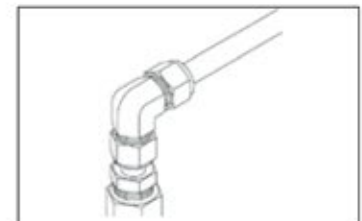
## Male Adapter



Male elbow is tightened in the wrong direction.

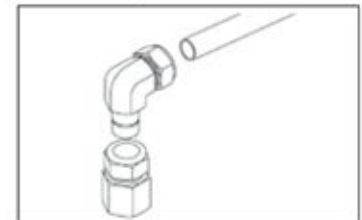


As a solution, Male adapter is tightened into female port.



Connect union elbow to the male adapter, and set the direction. Follow OTG-LOK tube fitting's standard installation instruction.

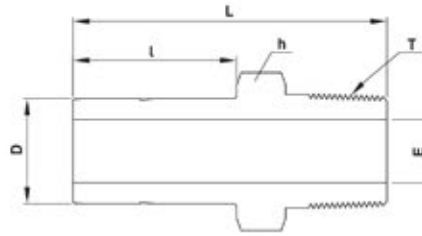
## Elbow Adapter Another Solution



Elbow adapter on OTG-LOK Tube Fitting Port eliminates alignment problem.

# OMA-R

Male ISO Tapered Adapter



Connects fractional OTG-LOK tube fitting port to female ISO tapered thread

Part No.	Tube O.D D		T (PT)	E Min	Width across flat		l	L	
	in	mm			h	in			mm
OMA 2-2R	1/8	3.17	1/8	2.03	7/16	11.11	13.45	29.50	
OMA 2-4R	1/8	3.17	1/4	2.03	9/16	14.28	13.45	34.80	
OMA 4-2R	1/4	6.35	1/8	4.31	7/16	11.11	15.75	31.80	
OMA 4-4R	1/4	6.35	1/4	4.31	9/16	14.28	15.75	37.08	
OMA 4-6R	1/4	6.35	3/8	4.31	11/16	17.46	15.75	37.84	
OMA 6-4R	3/8	9.52	1/4	6.86	9/16	14.28	17.50	38.90	
OMA 6-6R	3/8	9.52	3/8	6.86	11/16	17.46	17.50	39.60	
OMA 6-8R	3/8	9.52	1/2	6.86	7/8	22.22	17.50	45.20	
OMA 8-4R	1/2	12.70	1/4	7.11	9/16	14.28	23.20	44.50	
OMA 8-6R	1/2	12.70	3/8	9.4	11/16	17.46	23.20	45.20	
OMA 8-8R	1/2	12.70	1/2	9.4	7/8	22.22	23.20	50.50	
OMA 8-12R	1/2	12.70	3/4	9.4	1-1/16	26.98	23.10	50.70	
OMA 12-8R	3/4	19.05	1/2	11.9	7/8	22.22	24.70	52.30	
OMA 12-12R	3/4	19.05	3/4	14.73	1-1/16	26.98	24.70	52.30	

Connects metric OTG-LOK tube fitting port to female ISO tapered thread

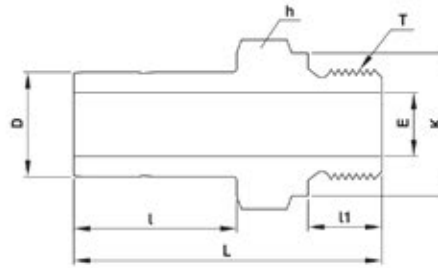
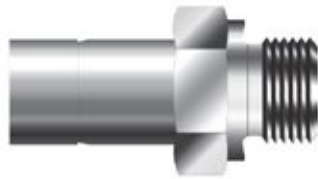
Part No.	Tube O.D D	T (PT)	E Min	Width across flat	l	L
				h		
OMA 3M-2R	3	1/8	1.8	12	13.15	29.4
OMA 6M-2R	6	1/8	4.1	12	15.75	32.8
OMA 6M-4R	6	1/4	4.1	14	15.75	38.1
OMA 8M-4R	8	1/4	5.6	14	16.50	39.1
OMA 10M-4R	10	1/4	7.1	14	17.50	39.9
OMA 10M-6R	10	3/8	7.1	17	17.50	40.6
OMA 10M-8R	10	1/2	7.1	22	17.50	45.2
OMA 12M-4R	12	1/4	7.1	14	23.50	46.5
OMA 12M-6R	12	3/8	8.8	17	23.50	46.5
OMA 12M-8R	12	1/2	8.8	22	23.50	51.8
OMA 18M-8R	18	1/2	11.9	22	24.90	53.2
OMA 18M-12R	18	3/4	13.9	27	24.90	53.2
OMA 25M-16R	25	1	19.8	35	31.70	66.0
OMA 28M-16R	28	1	22.2	35	31.70	74.7
OMA 28M-20R	28	1-1/4	24.3	46	31.70	76.2
OMA 30M-20R	30	1-1/4	24.6	46	40.60	80.0
OMA 32M-20N	32	1-1/4	26.5	46	40.6	81.0
OMA 38M-24R	38	1-1/2	31.6	55	51.50	92.2

The E dimension is the minimum nominal opening.  
These fittings may have a larger opening at the pipe/straight thread end.



# OMA-G

## Male Gauge Adapter



Connects fractional OTG-LOK tube fitting port to female ISO tapered thread

Part No.	Tube O.D D		T (PF)	E Min	Width across flat h		l	l1	L	K
	in	mm			in	mm				
	OMA 2-2G	1/8			3.17	1/8				
OMA 2-4G	1/8	3.17	1/4	2.03	3/4	19.05	13.45	11.2	35.8	18.0
OMA 4-2G	1/4	6.35	1/8	4.1	9/16	14.28	15.75	7.10	33.27	13.8
OMA 4-4G	1/4	6.35	1/4	4.3	3/4	19.05	15.75	11.2	38.1	18.0
OMA 6-4G	3/8	9.52	1/4	5.9	3/4	19.05	17.50	11.2	39.8	18.0
OMA 6-6G	3/8	9.52	3/8	6.9	7/8	22.22	17.50	11.2	40.64	21.8
OMA 8-4G	1/2	12.70	1/4	5.9	3/4	19.05	23.10	11.2	45.5	18.0
OMA 8-6G	1/2	12.70	3/8	7.9	7/8	22.22	23.10	11.2	46.2	21.8
OMA 8-8G	1/2	12.70	1/2	9.4	1-1/16	26.98	23.10	14.2	49.3	26.0
OMA 12-12G	3/4	19.05	3/4	14.7	1-5/16	33.33	24.70	15.7	54.86	32.0
OMA 16-16G	1	25.40	1	20.3	1-5/8	41.28	31.7	18.3	64.5	39.0

Connects metric OTG-LOK tube fitting port to female ISO tapered thread

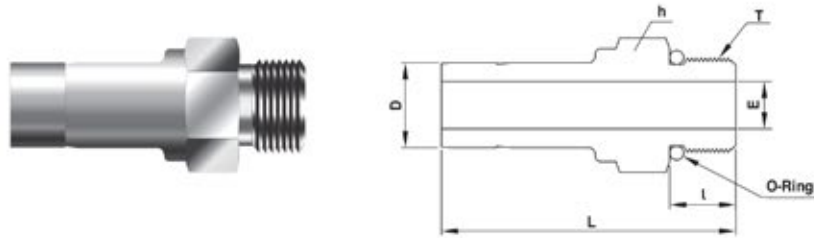
Part No.	Tube O.D D	T (PF)	E Min	Width across flat h		l	l1	L	K
				in	mm				
OMA 6M-2G	6	1/8	4.0	14		15.7	7.1	34.3	13.8
OMA 6M-4G	6	1/4	4.1	19		15.7	11.2	39.1	18.0
OMA 8M-4G	8	1/4	5.6	19		16.8	11.2	40.1	18.0
OMA 10M-4G	10	1/4	5.9	19		17.5	11.2	40.9	18.0
OMA 10M-6G	10	3/8	7.1	22		17.5	11.2	41.7	21.8
OMA 10M-8G	10	1/2	7.1	27		17.5	14.2	44.7	26.0
OMA 12M-4G	12	1/4	5.9	19		23.1	11.2	46.7	18.0
OMA 12M-6G	12	3/8	7.9	22		23.1	11.2	47.2	21.8
OMA 12M-8G	12	1/2	8.8	27		23.1	14.2	50.5	26.0
OMA 18M-8G	18	1/2	11.9	27		24.6	14.2	52.1	26.0
OMA 18M-12G	18	3/4	13.9	35		24.6	15.7	56.1	32.0
OMA 22M-12G	22	3/4	15.9	35		26.6	15.7	57.4	32.0
OMA 25M-16G	25	1	19.8	41		31.7	18.3	67.1	39.0
OMA 28M-16G	28	1	19.8	41		37.5	18.3	72.9	39.0
OMA 28M-20G	28	1-1/4	22.5	50		37.5	19.8	77.0	49.0
OMA 30M-20G	30	1-1/4	24.3	50		40.66	19.8	80.8	49.0
OMA 32M-20G	32	1-1/4	26.5	50		40.0	19.8	81.8	49.0
OMA 38M-24G	38	1-1/2	31.6	55		50.4	22.1	94.5	54.7

The E dimension is the minimum nominal opening.  
These fittings may have a larger opening at the pipe/straight thread end.

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OMA-U

Male SAE Tube Adapter



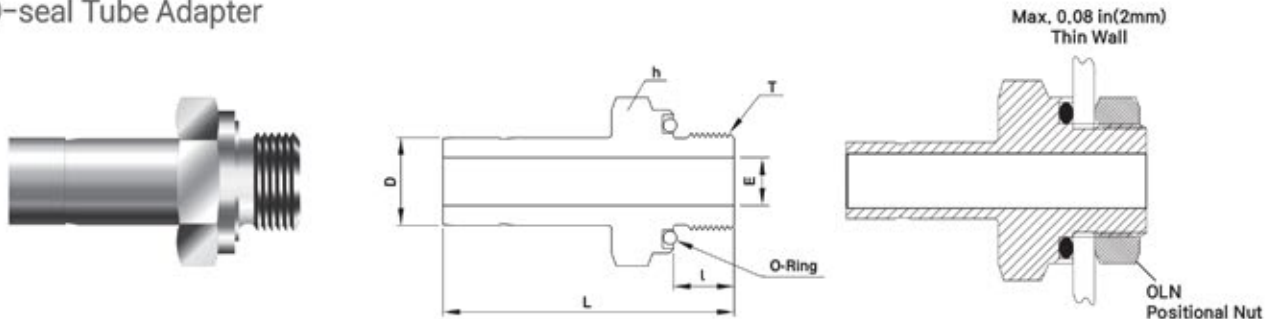
Connects fractional OTG-LOK tube fitting port to SAE staight thread boss

Part No.	Tube O.D D		T (U)	E Min	Width across flat h		l	L	O-Ring Uniform Size Number
	in	mm			in	mm			
OMA 2-2U	1/8	3.17	5/16-24	2.03	7/16	11.11	7.62	30.48	-902
OMA 4-4U	1/4	6.35	7/16-20	4.31	9/16	14.28	9.14	35.30	-904
OMA 6-4U	3/8	9.52	7/16-20	5.08	9/16	14.28	9.14	37.08	-904
OMA 6-6U	3/8	9.52	9/16-18	6.85	11/16	17.46	9.90	38.60	-906
OMA 6-8U	3/8	9.52	3/4-16	6.85	7/8	22.22	11.17	40.64	-908
OMA 8-6U	1/2	12.70	9/16-18	7.11	11/16	17.46	9.90	44.20	-906
OMA 8-8U	1/2	12.70	3/4-16	9.4	7/8	22.22	11.17	46.22	-908
OMA 12-12U	3/4	19.05	1-1/16-12	14.7	1-1/4	31.75	14.98	53.35	-912
OMA 16-16U	1	25.40	1-5/16-12	20.31	1-1/2	38.1	14.98	61.21	-916

The E dimension is the minimum nominal opening.  
These fittings may have a larger opening at the pipe/straight thread end.

# OMA-UO

Male O-seal Tube Adapter



**Unique Application**  
On thin wall tanks or vessels or vessels, O-Seal fitting work as a leak-tight bulkhead fitting along with a positionable nut-OLN without brazing welding

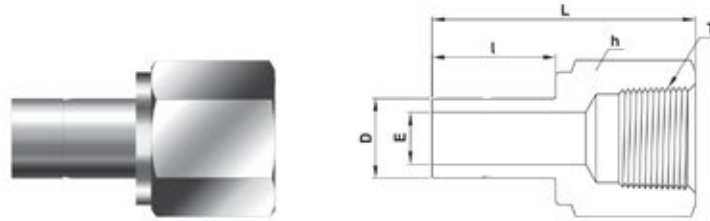
Connects fractional OTG-LOK tube fitting port to female SAE staight thread boss

Part No.	Tube O.D D		T (U)	E Min	Width across flat h		l	L	O-Ring Uniform Size Number
	in	mm			in	mm			
OMA 2-2UO	1/8	3.17	5/16-24	2.03	9/16	14.28	8.63	32.51	-011
OMA 3-3UO	3/16	4.76	3/8-24	3.05	5/8	15.87	9.65	35.05	-012
OMA 4-4UO	1/4	6.35	7/16-20	4.32	3/4	19.05	10.41	39.11	-013
OMA 5-5UO	5/16	7.52	1/2-20	5.59	7/8	22.22	11.17	41.65	-112
OMA 6-6UO	3/8	9.52	9/16-18	6.85	15/16	23.81	11.93	43.18	-113
OMA 8-8UO	1/2	12.70	3/4-16	9.40	1-1/8	28.57	11.93	49.53	-116

The E dimension is the minimum nominal opening.  
These fittings may have a larger opening at the pipe/straight thread end.

# OFA-N

## Male Gauge Adapter



Connects fractional OTG-LOK tube fitting port to male NPT thread

Part No.	Tube O.D D		T NPT	E Min	Width across flat		l	L	
	in	mm			h	in			mm
OFA 2-2N	1/8	3.17	1/8	1.77	9/16	14.28	13.45	31.50	
OFA 2-4N	1/8	3.17	1/4	1.77	3/4	19.05	13.45	35.30	
OFA 3-2N	3/16	4.76	1/8	3.04	9/16	14.28	14.20	32.00	
OFA 3-4N	3/16	4.76	1/4	3.04	3/4	19.05	14.20	35.81	
OFA 4-2N	1/4	6.35	1/8	4.57	9/16	14.28	15.75	33.02	
OFA 4-4N	1/4	6.35	1/4	4.57	3/4	19.05	15.75	37.10	
OFA 4-6N	1/4	6.35	3/8	4.57	7/8	22.22	15.75	39.37	
OFA 4-8N	1/4	6.35	1/2	4.57	1-1/16	26.98	15.75	45.40	
OFA 5-2N	5/16	7.93	1/8	6.35	9/16	14.28	16.80	34.29	
OFA 5-4N	5/16	7.93	1/4	6.35	3/4	19.05	16.80	37.59	
OFA 6-2N	3/8	9.52	1/8	7.11	9/16	14.28	17.50	34.29	
OFA 6-4N	3/8	9.52	1/4	7.11	3/4	19.05	17.50	38.10	
OFA 6-6N	3/8	9.52	3/8	7.11	7/8	22.22	17.50	40.38	
OFA 6-8N	3/8	9.52	1/2	7.11	1-1/16	26.98	17.50	46.73	
OFA 8-4N	1/2	12.70	1/4	9.90	3/4	19.05	23.20	43.43	
OFA 8-6N	1/2	12.70	3/8	9.90	7/8	22.22	23.20	45.46	
OFA 8-8N	1/2	12.70	1/2	9.90	1-1/16	26.98	23.20	51.80	
OFA 10-6N	5/8	15.87	3/8	12.70	7/8	22.22	24.70	48.26	
OFA 10-8N	5/8	15.87	1/2	12.70	1-1/16	26.98	24.70	53.84	
OFA 10-12N	5/8	15.87	3/4	12.70	1-5/16	33.33	24.70	55.37	
OFA 12-8N	3/4	19.05	1/2	14.98	1-1/16	26.98	24.70	52.83	
OFA 12-12N	3/4	19.05	3/4	14.98	1-5/16	33.33	24.70	54.86	
OFA 12-16N	3/4	19.05	1	14.98	1-5/8	41.27	24.70	58.42	
OFA 14-12N	7/8	22.22	3/4	17.27	1-5/16	33.33	26.70	57.15	
OFA 16-12N	1	25.40	3/4	20.06	1-5/16	33.33	31.70	60.70	
OFA 16-16N	1	25.40	1	20.06	1-5/8	41.27	31.70	64.26	
OFA 20-20N	1-1/4	31.75	1-1/4	27.68	2-1/8	53.98	40.00	77.27	
OFA 24-24N	1-1/2	38.10	1-1/2	33.27	2-3/8	60.33	51.50	88.90	
OFA 32-32N	2	50.80	2	44.45	2-7/8	73.03	68.40	107.44	

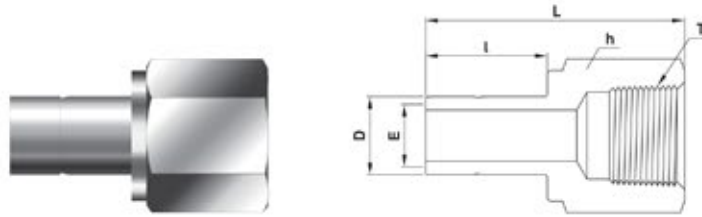
Connects metric OTG-LOK tube fitting port to male NPT thread

Part No.	Tube O.D D	T NPT	E Min	Width across flat		l	L
				h	in		
OFA 6M-2N	6	1/8	4.1	14	15.70	32.50	
OFA 6M-4N	6	1/4	4.1	19	15.70	37.10	
OFA 8M-4N	8	1/4	5.6	19	16.80	37.60	
OFA 10M-4N	10	1/4	7.1	19	17.50	38.10	
OFA 10M-6N	10	3/8	7.1	22	17.50	40.10	
OFA 10M-8N	10	1/2	7.1	27	17.50	46.50	
OFA 12M-4N	12	1/4	8.8	19	23.10	43.70	
OFA 12M-6N	12	3/8	8.8	22	23.10	46.00	
OFA 12M-8N	12	1/2	8.8	27	23.10	52.30	

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OFA-R

Female ISO Tapered Adapter



Connects fractional OTG-LOK tube fitting port to male ISO tapered thread

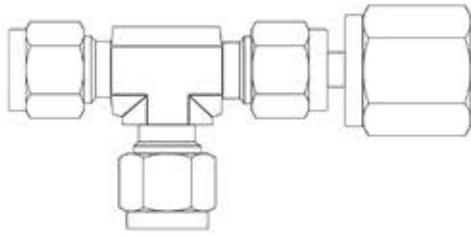
Part No.	Tube O.D D		T (PT)	E Min	Width across flat h		l	L
	in	mm			in	mm		
OFA 4-4R	1/4	6.35	1/4	4.57	3/4	19.05	15.75	37.10
OFA 6-4R	3/8	9.52	1/4	7.11	3/4	19.05	17.50	38.10
OFA 6-6R	3/8	9.52	3/8	7.11	7/8	22.22	17.50	40.38
OFA 8-4R	1/2	12.70	1/4	9.90	3/4	19.05	23.20	43.43
OFA 8-6R	1/2	12.70	3/8	9.90	7/8	22.22	23.20	45.46
OFA 8-8R	1/2	12.70	1/2	9.90	1-1/16	26.98	23.20	51.80
OFA 10-8R	5/8	15.87	1/2	12.70	1-1/16	26.98	24.70	53.84
OFA 12-8R	3/4	19.05	1/2	14.98	1-1/16	26.98	24.70	52.83
OFA 12-12R	3/4	19.05	3/4	14.98	1-5/16	33.33	24.70	54.86
OFA 16-16R	1	25.40	1	20.06	1-5/8	41.27	31.70	64.26

Connects metric OTG-LOK tube fitting port to male ISO tapered thread

Part No.	Tube O.D D	T (PT)	E Min	Width across flat h		l	L
				in	mm		
OFA 6M-2R	6	1/8	4.1	14	15.70	32.50	
OFA 6M-4R	6	1/4	4.1	19	15.70	37.10	
OFA 8M-4R	8	1/4	5.6	19	16.80	37.60	
OFA 10M-4R	10	1/4	7.1	19	17.50	38.10	
OFA 10M-6R	10	3/8	7.1	22	17.50	40.10	
OFA 12M-4R	12	1/4	8.8	19	23.10	43.70	
OFA 12M-6R	12	3/8	8.8	22	23.10	46.00	
OFA 12M-8R	12	1/2	8.8	27	23.10	52.30	

## Female Tube Adapter

Adapters help reduce inventories

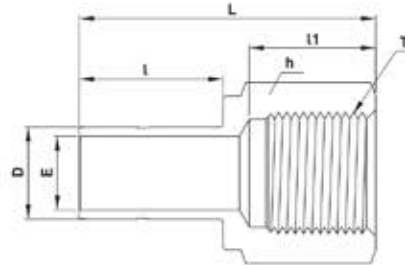


Female and Male Tube adapter convert Union Tee to Female Run Tee or Male Run Tee. Tube Adapters eliminate the need for stocking pipe thread tees.

Tube Adapter also converts Male or Female End to a tube adapter end.

## OFA-GZ

Female ISO Parallel Thread Adapter

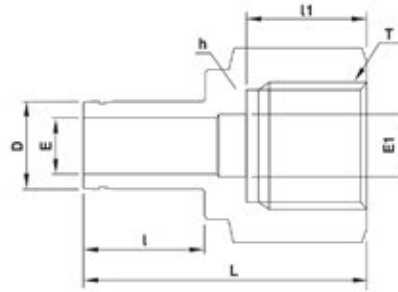


Connects fractional OTG-LOK tube fitting port to male ISO parallel thread

Part No.	Tube O.D D		T G(PF)	E Min	Width across flat h		l	t1	L
	in	mm			in	mm			
OFA 4-2GZ	1/4	6.35	1/8	4.32	9/16	14.28	15.75	13.0	31.75
OFA 4-4GZ	1/4	6.35	1/4	4.32	3/4	19.05	15.75	18.5	38.10
OFA 6-4GZ	3/8	9.52	1/4	6.86	3/4	19.05	17.50	18.5	39.40
OFA 6-6GZ	3/8	9.52	3/8	6.86	15/16	23.81	17.50	18.5	39.40
OFA 8-8GZ	1/2	12.70	1/2	9.65	1-1/16	26.98	23.20	22.1	49.50

# OGA-GG

Female ISO Parallel Thread Gauge Adapter

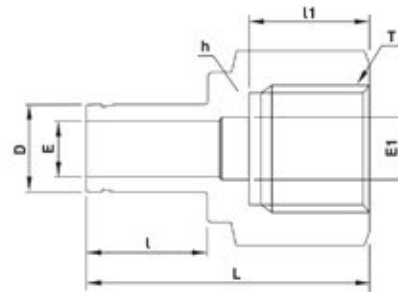
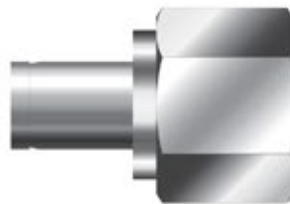


Connects fractional OTG-LOK tube fitting port to Gauge (male ISO parallel thread)

Part No.	Tube O.D D		T G(PF)	E Min	E1	Width across flat h		l	l1	L
	in	mm				h				
						in	mm			
OGA 4-2GG	1/4	6.35	1/8	4.32	4.32	9/16	14.28	15.75	12.0	32.00
OGA 4-4GG	1/4	6.35	1/4	4.32	5.5	3/4	19.05	15.75	12.9	35.30
OGA 6-6GG	3/8	9.52	3/8	6.6	6.5	15/16	23.81	17.50	14.1	39.37
OGA 8-8GG	1/2	12.70	1/2	9.65	7.0	1-1/16	26.98	23.10	18.9	45.72

# OGA-GG

Female ISO Parallel Thread Gauge Adapter



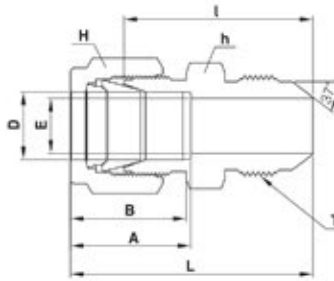
Gauge Adapter helps set a gauge-facing direction.

Connects metric OTG-LOK tube fitting port to female ISO parallel thread

Part No.	Tube O.D D	T G(PF)	E Min	E1	Width across flat h		l	l1	L
					h				
					in	mm			
OGA 6M-2GG	6M	1/8	4.1	4.1	14	15.7	12.0	32.0	
OGA 6M-4GG	6M	1/4	4.1	5.5	19	15.7	13.0	35.3	
OGA 6M-6GG	6M	3/8	4.1	6.5	24	15.7	14.22	38.4	
OGA 6M-8GG	6M	1/2	4.1	7.0	27	15.7	18.9	42.9	
OGA 8M-4GG	8M	1/4	5.5	5.5	19	16.8	13.0	33.0	
OGA 8M-6GG	8M	3/8	5.5	6.5	24	16.8	14.22	39.3	
OGA 8M-8GG	8M	1/2	5.5	7.0	27	16.8	18.9	43.7	
OGA 10M-4GG	10M	1/4	7.7	5.5	19	17.5	13.0	34.5	
OGA 10M-6GG	10M	3/8	7.7	6.5	24	17.5	14.22	39.3	
OGA 10M-8GG	10M	1/2	7.7	7.0	27	17.5	18.9	40.1	
OGA 12M-4GG	12M	1/4	9.1	5.5	19	23.1	13.0	40.1	
OGA 12M-6GG	12M	3/8	9.1	6.5	24	23.1	14.22	44.9	
OGA 12M-8GG	12M	1/2	9.1	7.0	27	23.1	18.9	48.8	
OGA 15M-8GG	15M	1/2	12.0	7.0	27	24.65	18.9	49.0	
OGA 16M-8GG	16M	1/2	12.0	7.0	27	24.6	18.9	49.0	
OGA 18M-8GG	18M	1/2	13.9	7.0	27	24.9	18.9	49.3	
OGA 22M-8GG	22M	1/2	18.3	7.0	27	26.6	18.9	52.0	
OGA 25M-8GG	25M	1/2	19.8	7.0	30	31.7	18.9	56.1	

# OAU

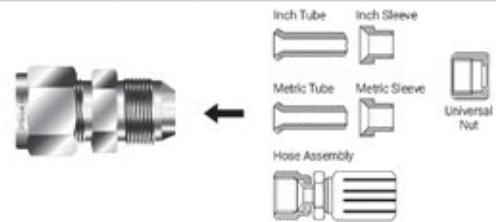
AN Union



Connects fractional tube to AN flare tube

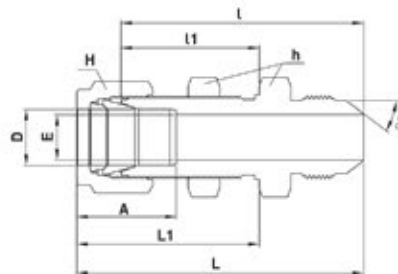
Part No.	Tube O.D D		AN Tube Flare Size		Straight Thread T(U)	E Min	Width across flat				A	B	l	L
	in	mm	in	mm			h		H					
							in	mm	in	mm				
OAU 1-2	1/16	1.59	1/8	3.17	5/16-24	1.27	7/16	11.11	5/16	7.93	8.63	10.92	23.36	27.17
OAU 2-2	1/8	3.17	1/8	3.17	5/16-24	1.52	7/16	11.11	7/16	11.11	12.70	15.24	24.89	31.49
OAU 2-4	1/8	3.17	1/4	6.35	7/16-20	2.28	1/2	12.70	7/16	11.11	12.70	15.24	28.44	35.05
OAU 4-4	1/4	6.35	1/4	6.35	7/16-20	4.31	1/2	12.70	9/16	14.28	15.24	17.78	30.22	37.59
OAU 5-5	5/16	7.93	5/16	7.93	1/2-20	5.84	9/16	14.28	5/8	15.87	16.25	18.54	30.98	38.35
OAU 6-4	3/8	9.52	1/4	6.35	7/16-20	4.31	5/8	15.87	11/16	17.46	16.76	19.30	32.25	39.62
OAU 6-6	3/8	9.52	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	16.76	19.30	32.25	39.62
OAU 8-8	1/2	12.70	1/2	12.70	3/4-16	9.90	13/16	20.64	7/8	22.22	22.86	21.84	35.81	45.97
OAU 12-12	3/4	19.05	3/4	19.05	1-1/16-12	15.49	1-1/8	28.58	1-1/8	28.58	24.38	21.84	43.18	53.34
OAU 16-16	1	25.40	1	25.40	1-5/16-12	21.33	1-3/8	34.92	1-1/2	38.10	31.24	26.41	49.27	61.46
OAU 20-20	1-1/4	31.75	1-1/4	31.75	1-5/8-12	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.46	77.56
OAU 24-24	1-1/2	38.10	1-1/2	38.10	1-7/8-12	34.03	2-1/8	53.97	2-1/4	57.15	50.03	45.21	63.07	90.25
OAU 32-32	2	50.80	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	67.56	62.73	83.24	120.57

37° Flare AN End is designed to SAE J514 and ISO 8434-2 standards.  
**AN** is derived from Air Force and Nave 37° flare fitting standards.  
 On **AN** port, you can build up fluid power tubing system.



# OABU

AN Bulkhead Union



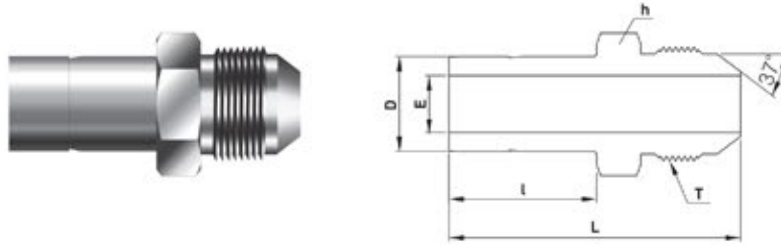
Connects fractional tube to AN flare tube

Part No.	Tube O.D D		AN Tube Flare Size		Straight Thread T(U)	E Min	Width across flat				A	l	l1	L	L1	Panel Hole Drill Size	Panel Max Thickness
	in	mm	in	mm			h		H								
							in	mm	in	mm							
OABU 2-2	1/8	3.17	1/8	3.17	5/16-24	1.77	1/2	12.70	7/16	11.11	13.71	40.85	24.63	47.45	31.23	8.33	12.70
OABU 4-4	1/4	6.35	1/4	6.35	7/16-20	4.31	5/8	15.87	9/16	14.28	15.24	46.48	26.16	53.84	33.52	11.50	10.16
OABU 6-6	3/8	9.52	3/8	9.52	9/16-18	7.11	3/4	19.05	11/16	17.46	16.76	49.78	29.46	57.15	36.83	14.68	11.17
OABU 8-8	1/2	12.70	1/2	12.70	3/4-16	9.90	5/16	23.81	7/8	22.22	22.86	55.62	31.75	65.78	41.91	19.44	12.70
OABU 12-12	3/4	19.05	3/4	19.05	1-1/16-12	15.49	1-3/16	30.16	1-1/8	28.58	24.38	68.83	37.33	78.99	47.49	25.79	16.76
OABU 16-16	1	25.40	1	25.40	1-5/16-12	21.33	1-5/8	41.27	1-1/2	38.10	31.24	80.26	45.21	92.45	57.40	33.73	19.05
OABU 20-20	1-1/4	31.75	1-1/4	31.75	1-5/8-12	27.68	1-7/8	47.63	1-7/8	47.63	41.14	86.37	47.75	108.47	69.85	41.67	19.05
OABU 24-24	1-1/2	38.10	1-1/2	38.10	1-7/8-12	34.03	2-1/4	57.15	2-1/4	57.15	50.03	94.33	49.27	121.51	76.45	49.61	19.05
OABU 32-32	2	50.80	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	67.56	114.29	56.38	151.62	93.71	16.27	19.05

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OMAA

Male AN Adapter

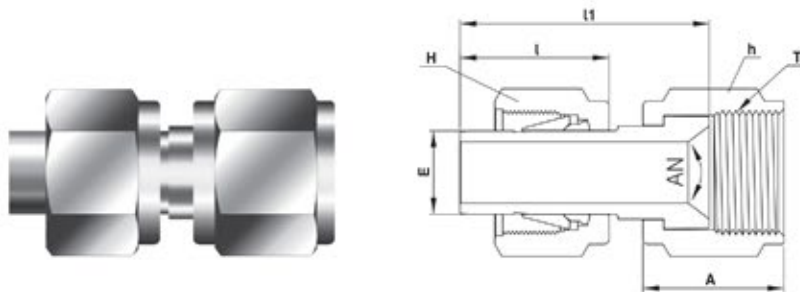


Connects fractional OTG-LOK port to AN flare tube

Part No.	Tube O.D D		AN Tube Flare Size		Straight Thread T(U)	E Min	Width across flat		l	L
	in	mm	in	mm			h			
							in	mm		
OMAA 4-4	1/4	6.35	1/4	6.35	7/16-20	4.32	1/2	12.7	15.75	37.1
OMAA 6-6	3/8	9.52	3/8	9.52	9/16-18	6.86	5/8	15.87	17.5	39.63
OMAA 8-6	1/2	12.70	3/8	9.52	9/16-18	6.86	5/8	15.87	23.1	45.7
OMAA 8-8	1/2	12.70	1/2	12.70	3/4-16	9.4	13/16	20.64	23.1	48.52
OMAA 8-10	1/2	12.70	5/8	15.87	7/8-14	9.4	15/16	23.81	23.1	52.0
OMAA 10-10	5/8	15.87	5/8	15.87	7/8-14	12.3	15/16	23.81	27.68	56.13
OMAA 12-12	3/4	19.05	3/4	19.05	1-1/16-12	14.73	1-1/8	28.58	24.7	56.13
OMAA 16-16	1	25.40	1	25.40	1-5/16-12	20.3	1-3/8	34.92	31.7	65.33

# OAA

AN Adapter



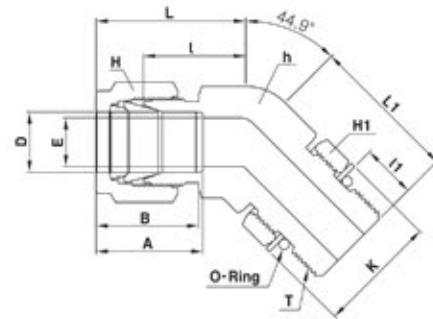
Connects fractional OTG-LOK tube fitting port to AN male

Part No.	Tube O.D D		AN Tube Flare Size		Straight Thread T(U)	Width across flat				A	l	l1
	in	mm	in	mm		h		H				
						in	mm	in	mm			
OAA 2-2	1/8	3.17	1/8	3.17	5/16-24	3/8	9.52	7/16	11.11	13.71	13.46	18.54
OAA 2-4	1/8	3.17	1/4	6.35	7/16-20	9/16	14.28	7/16	11.11	15.74	13.46	19.05
OAA 4-4	1/4	6.35	1/4	6.35	7/16-20	9/16	14.28	9/16	14.28	15.74	15.74	21.33
OAA 6-6	3/8	9.52	3/8	9.52	9/16-18	11/16	17.46	11/16	17.46	18.28	17.52	24.89
OAA 8-8	1/2	12.70	1/2	12.70	3/4-16	7/8	22.22	7/8	22.22	21.59	23.11	31.75



# OSME45-UP

SAE Male Elbow 45°

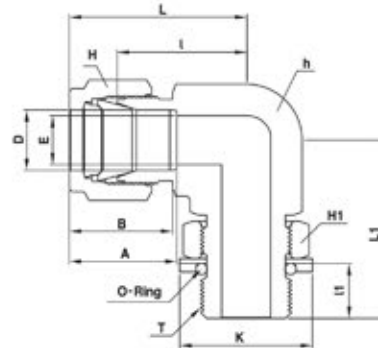


Connects fractional tube to female SAE straight thread boss

Part No.	Tube O.D D		Straight Thread T(U)	E Min	Width across flat						A	B	l	l1	L	L1	K	O-Ring Uniform Size Number
	in	mm			h		H		H1									
					in	mm	in	mm	in	mm								
OSME45-4-4UP	1/4	6.35	7/16-20	4.82	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	18.28	9.90	25.65	25.65	16.51	-904
OSME45-6-6UP	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	11/16	17.46	16.76	19.30	20.57	11.17	27.94	28.19	20.06	-906
OSME45-8-8UP	1/2	12.70	3/4-16	10.41	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	21.84	12.70	32.00	32.25	25.65	-908
OSME45-12-12UP	3/4	19.05	1-1/16-12	15.74	1-1/8	28.58	1-1/8	28.58	1-1/4	31.75	24.38	21.84	29.71	16.76	39.87	47.24	36.57	-912
OSME45-16-16UP	1	25.40	1-5/16-12	22.35	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	31.24	26.41	35.30	16.76	47.49	50.54	43.94	-916

# OSME-GR

Positionable Male ISO Parallel Thread Elbow



Connects fractional tube to ISO parallel thread

Part No.	Tube O.D D		T G(PF)	E Min	Width across flat						A	B	l	l1	L	L1	K	O-Ring Uniform Size Number
	in	mm			h		H		H1									
					in	mm	in	mm	in	mm								
OSME 4-2GR	1/4	6.35	1/8	4.06	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	19.6	8.12	26.92	26.42	15.20	P8
OSME 4-4GR	1/4	6.35	1/4	4.82	5/8	15.87	11/16	17.46	3/4	19.05	15.24	17.78	21.6	9.14	28.95	32.30	20.30	-111
OSME 6-4GR	3/8	9.52	1/4	5.84	5/8	15.87	11/16	17.46	3/4	19.05	16.76	19.30	23.1	9.14	30.48	32.30	20.30	-111
OSME 6-6GR	3/8	9.52	3/8	7.11	13/16	20.64	11/16	17.46	3/4	19.05	16.76	19.30	25.9	9.39	33.27	37.10	24.40	-113
OSME 8-4GR	1/2	12.70	1/4	5.84	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	25.9	9.14	36.06	35.10	20.30	-111
OSME 8-6GR	1/2	12.70	3/8	7.87	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	25.9	9.39	36.06	37.10	24.40	-113
OSME 8-8GR	1/2	12.70	1/2	10.41	15/16	23.81	7/8	22.22	1-1/16	26.98	22.86	21.84	27.9	12.95	38.10	43.40	29.50	P18
OSME 12-8GR	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.57	1-1/16	26.98	24.38	21.84	29.7	12.95	39.87	42.51	29.50	P18
OSME 12-12GR	3/4	19.05	3/4	15.74	1-1/16	26.93	1-1/8	28.57	1-3/8	34.92	24.38	21.84	29.7	12.95	39.87	48.77	36.30	-119
OSME 16-16GR	1	25.40	1	19.81	1-3/8	34.92	1-1/2	38.10	1-5/8	41.28	31.24	26.41	36.8	13.97	49.02	53.60	46.20	-217

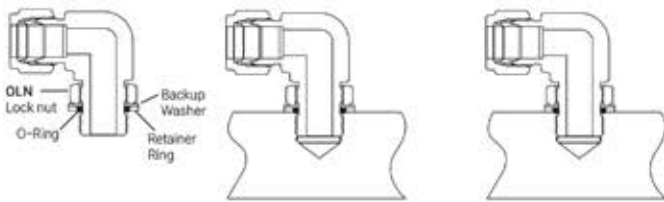
Connects metric tube to ISO parallel thread

Part No.	Tube O.D D	T G(PF)	E Min	Width across flat			A	B	l	l1	L	L1	K	O-Ring Uniform Size Number
				h	H	H1								
				mm	mm	mm								
OSME 6M-2GR	6	1/8	4.0	12.7	14	14.28	15.3	17.7	19.6	8.1	27.0	26.4	15.20	P8
OSME 6M-4GR	6	1/4	4.8	15.8	14	19.05	15.3	17.7	21.6	9.1	29.0	32.3	20.30	-111
OSME 6M-6GR	6	3/8	4.8	20.6	14	22.22	15.3	17.7	24.4	9.4	31.8	37.1	24.40	-113
OSME 8M-2GR	8	1/8	4.0	14.2	16	14.28	16.2	18.6	21.3	8.1	28.8	27.4	15.20	P8
OSME 8M-4GR	8	1/4	5.9	15.8	16	19.05	16.2	18.6	22.4	9.1	29.9	32.2	20.30	-111
OSME 10M-4GR	10	1/4	5.9	20.6	19	19.05	17.2	19.5	25.9	9.1	33.5	35.0	20.30	-113
OSME 10M-6GR	10	3/8	7.9	20.6	19	22.22	17.2	19.5	25.9	9.4	33.5	37.1	24.40	-111
OSME 12M-4GR	12	1/4	5.9	20.6	22	19.05	22.8	22.0	25.9	9.1	36.0	35.0	20.30	-113
OSME 12M-6GR	12	3/8	7.9	20.6	22	22.22	22.8	22.0	25.9	9.4	36.0	37.1	24.40	-113
OSME 12M-8GR	12	1/2	9.5	23.8	22	26.98	22.8	22.0	27.9	13.0	38.0	43.3	29.50	P18

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

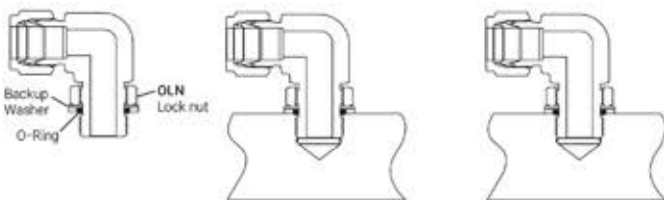
## Installation Instruction for Positionable Fittings

### Thread Designator “GR”- ISO parallel pipe thread with O-ring



1. Lubricate O-ring compatible with system fluid.
2. Slip retainer ring over the O-ring.
3. Screw fitting in the port until retainer ring bottoms.
4. To adjust direction, turn the fitting back to a maximum of one full turn.
5. Position the direction and hand-tighten locknut.
6. Holding the fitting in the desired direction and wrench-tight the locknut.

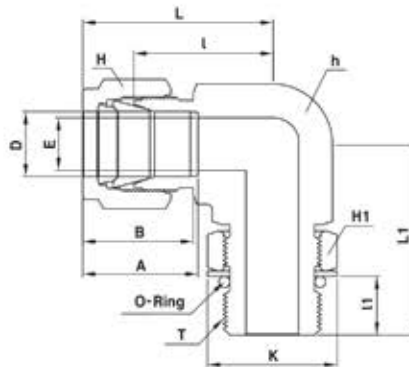
### Thread Designator “UP”- Unified thread with O-ring



1. Lubricate O-ring compatible with system fluid.
2. Move back locknut to a maximum position.
3. Screw fitting in the port until O-ring is compressed in the chamber at the top of the port.
4. To adjust direction, turn the fitting back to a maximum of one full turn.
5. Position the direction and hand-tighten locknut.
6. Holding the fitting in the desired direction and wrench-tight the locknut until washer contacts the face of the port.

## OSME-UP

Positionable SAE Male Elbow

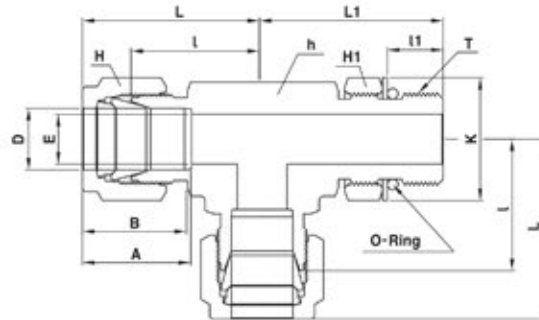


Connects fractional tube to SAE straight thread boss

Part No.	Tube O.D		Straight Thread T(U)	E Min	Width across flat						A	B	l	l1	L	L1	K	O-Ring Uniform Size Number
	in	mm			h		H		H1									
					in	mm	in	mm	in	mm								
OSME 4-4UP	1/4	6.35	7/16-20	4.82	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	21.08	9.90	28.44	28.44	16.51	-904
OSME 5-5UP	5/16	7.93	1/2-20	5.84	9/16	14.28	5/8	15.87	5/8	15.87	16.25	18.54	22.86	9.90	30.22	29.46	18.28	-905
OSME 6-6UP	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	11/16	17.46	16.76	19.30	24.63	11.17	32.00	32.25	20.06	-906
OSME 6-8UP	3/8	9.52	3/4-16	7.11	13/16	20.64	11/16	17.46	7/8	22.22	16.76	19.30	27.43	12.70	34.79	37.84	25.65	-908
OSME 8-8UP	1/2	12.70	3/4-16	10.41	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	27.43	12.70	37.59	37.84	25.65	-908
OSME 10-10UP	5/8	15.87	7/8-14	12.70	1	25.40	1	25.40	1	25.40	24.38	21.84	29.46	14.22	39.62	43.43	29.46	-910
OSME 12-12UP	3/4	19.05	1-1/16-12	15.74	1-1/16	26.98	1-1/8	28.57	1-1/4	31.75	24.38	21.84	31.24	16.76	41.40	48.76	36.57	-912
OSME 14-14UP	7/8	22.22	1-3/16-12	18.28	1-1/4	31.75	1-1/4	31.75	1-3/8	34.92	25.90	21.84	33.02	16.76	43.18	50.54	40.38	-914
OSME 16-16UP	1	25.40	1-5/16-12	22.35	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	31.24	26.41	38.35	16.76	50.54	53.59	43.94	-916
OSME 20-20UP	1-1/4	31.75	1-5/8-12	27.68	1-11/16	42.76	1-7/8	47.63	1-7/8	47.63	41.14	38.86	45.72	16.76	67.81	58.16	54.86	-920
OSME 24-24UP	1-1/2	38.10	1-7/8-12	34.03	2	50.80	2-1/4	57.15	2-1/8	53.98	50.03	45.21	50.80	16.76	77.97	60.45	62.23	-924
OSME 32-32UP	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	2-3/4	69.85	67.56	62.73	69.85	16.76	107.18	71.62	80.26	-932

# OSRT-UP

Positionable SAE Male Run Tee

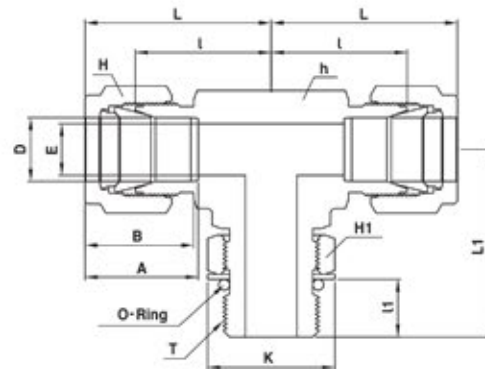


Connects fractional tube to SAE straight thread boss

Part No.	Tube O.D D		Straight Thread T(U)	E Min	Width across flat						A	B	l	l1	L	L1	K	O-Ring Uniform Size Number
	in	mm			h	H	H1	in	mm	in								
OSRT 4-4UP	1/4	6.35	7/16-20	4.82	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	21.08	9.90	28.44	28.44	16.51	-904
OSRT 6-6UP	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	11/16	17.46	16.76	19.30	24.63	11.17	32.00	32.25	20.06	-906
OSRT 8-8UP	1/2	12.70	3/4-16	10.41	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	27.43	12.70	37.59	37.84	25.65	-908
OSRT 12-12UP	3/4	19.05	1-1/16-12	15.74	1-1/16	26.98	1-1/8	28.58	1-1/4	31.75	24.38	21.84	31.24	16.76	41.40	48.76	36.57	-912
OSRT 16-16UP	1	25.40	1-5/16-12	22.35	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	31.24	26.41	38.35	16.76	50.54	53.59	43.94	-916
OSRT 20-20UP	1-1/4	31.75	1-5/8-12	27.68	1-11/16	42.86	1-7/8	47.63	1-7/8	47.63	41.14	38.86	45.72	16.76	67.81	58.16	54.86	-920
OSRT 24-24UP	1-1/2	38.10	1-7/8-12	34.03	2	50.80	2-1/4	57.15	2-1/8	53.98	50.03	45.21	50.80	16.76	77.97	60.45	62.23	-924
OSRT 32-32UP	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	2-3/4	69.85	67.56	62.73	69.85	16.76	107.18	71.62	80.26	-932

# OSBT-UP

Positionable SAE Male Branch Tee



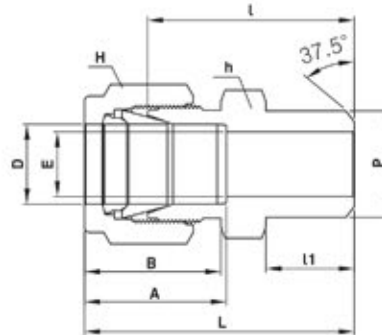
Connects fractional tube to SAE straight thread boss

Part No.	Tube O.D D		Straight Thread T(U)	E Min	Width across flat						A	B	l	l1	L	L1	K	O-Ring Uniform Size Number
	in	mm			h	H	H1	in	mm	in								
OSBT 4-4UP	1/4	6.35	7/16-20	4.82	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	21.08	9.90	28.44	28.44	16.51	-904
OSBT 6-6UP	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	11/16	17.46	16.76	19.30	24.63	11.17	32.00	32.25	20.06	-906
OSBT 8-8UP	1/2	12.70	3/4-16	10.41	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	27.43	12.70	37.59	37.84	25.65	-908
OSBT 12-12UP	3/4	19.05	1-1/16-12	15.74	1-1/16	26.98	1-1/8	28.58	1-1/4	31.75	24.38	21.84	31.24	16.76	41.40	48.76	36.57	-912
OSBT 16-16UP	1	25.40	1-5/16-12	22.35	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	31.24	26.41	38.35	16.76	50.54	53.59	43.94	-916
OSBT 20-20UP	1-1/4	31.75	1-5/8-12	27.68	1-11/16	42.86	1-7/8	47.63	1-7/8	47.63	41.14	38.86	45.72	16.76	67.81	58.16	54.86	-920
OSBT 24-24UP	1-1/2	38.10	1-7/8-12	34.03	2	50.80	2-1/4	57.15	2-1/8	53.98	50.03	45.21	50.80	16.76	77.97	60.45	62.23	-924
OSBT 32-32UP	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	2-3/4	69.85	67.56	62.73	69.85	16.76	107.18	71.62	80.26	-932

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

# OBWC

## Male Pipe Butt Weld Connector



### Connects fractional tube to pipe

Part No.	Tube O.D		Male Pipe Size		E Min	Width across flat				A	B	l	l1	L
	D		P			h		H						
	in	mm	Nom	O.D		in	mm	in	mm					
OBWC 2-2P	1/8	3.17	1/8	10.29	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.87	9.65	31.24
OBWC 3-2P	3/16	4.76	1/8	10.29	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.63	9.65	31.24
OBWC 4-2P	1/4	6.35	1/8	10.29	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	9.65	32.76
OBWC 4-4P	1/4	6.35	1/4	13.72	4.82	9/16	14.28	9/16	14.28	15.24	17.78	30.48	14.22	37.84
OBWC 5-2P	5/16	7.93	1/8	10.29	5.08	9/16	14.28	5/8	15.87	16.25	18.54	26.67	9.65	34.03
OBWC 5-4P	5/16	7.93	1/4	13.72	6.35	9/16	14.28	5/8	15.87	16.25	18.54	31.24	14.22	38.60
OBWC 6-4P	3/8	9.52	1/4	13.72	7.11	5/8	15.87	11/16	17.46	16.76	19.30	32.51	14.22	39.87
OBWC 6-6P	3/8	9.52	3/8	17.15	7.11	11/16	17.46	11/16	17.46	16.76	19.30	32.51	14.22	39.87
OBWC 6-8P	3/8	9.52	1/2	21.34	7.11	7/8	22.22	11/16	17.46	16.76	19.30	38.86	11.05	43.23
OBWC 8-6P	1/2	12.70	3/8	17.15	10.41	13/16	20.64	7/8	22.22	22.86	21.84	33.27	14.22	43.43
OBWC 8-8P	1/2	12.70	1/2	21.34	10.41	7/8	22.22	7/8	22.22	22.86	21.84	38.86	19.05	49.02
OBWC 8-12P	1/2	12.70	3/4	26.67	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	40.38	19.05	50.54
OBWC 10-8P	5/8	15.87	1/2	21.34	12.70	15/16	23.81	1	25.40	24.38	21.84	38.86	19.05	49.02
OBWC 12-12P	3/4	19.05	3/4	26.67	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	40.38	19.05	50.54
OBWC 16-16P	1	25.40	1	33.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	50.03	23.87	62.23
OBWC 20-20P	1-1/4	31.75	1-1/4	42.16	27.68	1-3/4	44.45	2	50.80	41.14	38.86	55.11	23.87	77.21
OBWC 24-24P	1-1/2	38.10	1-1/2	48.26	34.03	2-1/8	53.98	2-1/4	57.15	50.03	45.21	61.72	26.16	88.90
OBWC 32-32P	2	50.80	2	60.33	47.75	2-3/4	69.85	3	76.20	67.56	62.73	76.20	26.92	113.53

### Connects metric tube to pipe

♦ These figures are for reference purposes only

Part No.	Tube O.D	Male Pipe Size P		E Min	Width across flat		A	B	l	l1	L
		Nom	O.D		h						
					h	H					
OBWC 3M-2P	3	1/8	10.29	2.4	12	12	12.9	15.3	23.1	9.7	29.7
OBWC 4M-2P	4	1/8	10.29	2.4	12	12	13.7	16.1	24.1	9.7	30.7
OBWC 6M-2P	6	1/8	10.29	4.8	14	14	15.3	17.7	25.4	9.7	32.8
OBWC 6M-4P	6	1/4	13.72	4.8	14	14	15.3	17.7	30.2	14.2	37.6
OBWC 8M-2P	8	1/8	10.29	5.1	15	16	16.2	18.6	26.7	9.7	34.2
OBWC 8M-4P	8	1/4	13.72	6.4	15	16	16.2	18.6	31.2	14.2	38.7
OBWC 8M-8P	8	1/2	21.34	6.4	22	16	16.2	18.6	37.3	19.0	44.8
OBWC 10M-4P	10	1/4	13.72	7.1	18	19	17.2	19.5	33.3	14.2	40.9
OBWC 10M-6P	10	3/8	17.15	7.9	18	19	17.2	19.5	32.5	14.2	40.1
OBWC 10M-8P	10	1/2	21.34	7.9	22	19	17.2	19.5	38.1	19.0	45.7
OBWC 12M-4P	12	1/4	13.72	7.1	22	22	22.8	22.0	33.3	14.2	43.4
OBWC 12M-6P	12	3/8	17.15	9.5	22	22	22.8	22.0	33.3	14.2	43.4
OBWC 12M-8P	12	1/2	21.34	9.5	22	22	22.8	22.0	38.1	19.0	48.2
OBWC 14M-6P	14	3/8	17.15	10.3	24	25	24.4	22.0	34.0	14.2	44.1
OBWC 15M-8P	15	1/2	21.34	11.9	24	25	24.4	22.0	38.9	19.0	49.0
OBWC 16M-8P	16	1/2	21.34	12.7	24	25	24.4	22.0	38.9	19.0	49.0
OBWC 18M-8P	18	1/2	21.34	13.5	27	30	24.4	22.0	40.4	19.0	50.5
OBWC 32M-20P	32	1-1/4	42.16	28.6	46	50	42.0	41.6	56.6	23.9	79.6
OBWC 38M-24P	38	1-1/2	48.26	33.7	55	60	49.4	47.9	64.0	26.2	91.6

## Welding Information

OTG-LOK Tube Fitting butt weld ends are constructed to SCH 80 or greater.

Prior to weld, remove nut and ferrules from OTG-LOK Tube Fitting.

- This protects the nut and ferrules from weld heat.

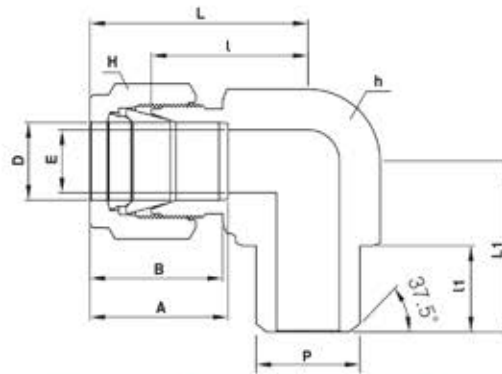
Cover the OTG-LOK Tube Fitting Port with a protective device such as port plug.

- This protects threads and sealing surface of fitting port from weld splatter.
- Finger-tighten the port plug so that it can be used many times.

After welding, replace the port plug with the nut and ferrules.

## OBWE

### Male Pipe Butt Weld Elbow



Connects fractional tube to pipe

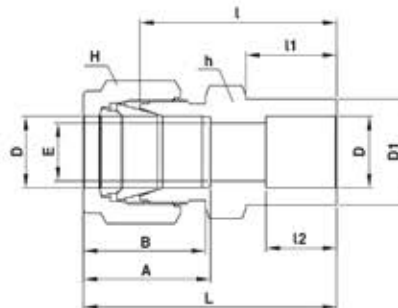
Part No.	Tube O.D D		Male Pipe Size P		E Min	Width across flat				A	B	l	l1	L	L1
	in	mm	Nom	O.D		h		H							
						in	mm	in	mm						
OBWE 2-2P	1/8	3.17	1/8	10.29	2.28	1/2	12.70	7/16	11.11	12.7	15.24	18.30	9.65	24.63	18.79
OBWE 4-4P	1/4	6.35	1/4	13.72	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	14.22	26.92	23.36
OBWE 6-4P	3/8	9.52	1/4	13.72	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	14.22	30.48	25.40
OBWE 8-8P	1/2	12.70	1/2	21.34	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	19.05	36.06	33.02
OBWE 12-12P	3/4	19.05	3/4	26.67	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	19.05	39.87	36.83

## OSWC

### Tube Socket Weld Connector



Tube Socket Weld Port designed to ASME B16.11.

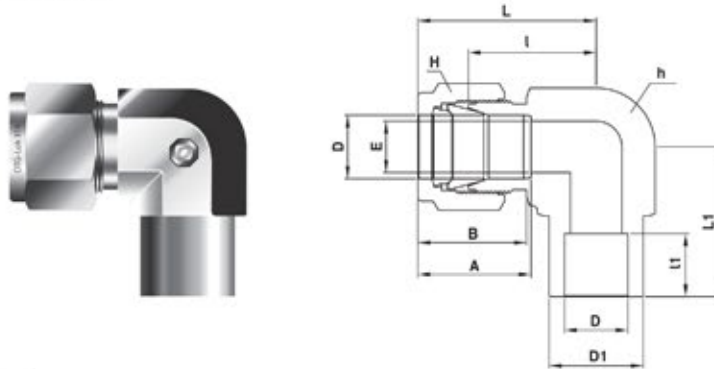


Connects fractional tubes

Part No.	Tube O.D D		E Min	D1	Width across flat				A	B	l	l1	l2	L
	in	mm			h		H							
					in	mm	in	mm						
OSWC 2-2P	1/8	3.17	2.28	7.87	7/16	11.11	7/16	11.11	12.70	15.24	22.35	8.63	6.35	28.95
OSWC 4-4P	1/4	6.35	4.82	11.17	1/2	12.70	9/16	14.28	15.24	17.78	26.16	10.41	7.87	33.52
OSWC 6-6P	3/8	9.52	7.11	15.74	5/8	15.87	11/16	17.46	16.76	19.30	30.22	11.93	9.65	37.59
OSWC 8-8P	1/2	12.70	10.41	19.05	13/16	20.64	7/8	22.22	22.86	21.84	30.98	11.93	12.70	41.14
OSWC 12-12P	3/4	19.05	15.74	26.67	1-1/16	26.98	1-1/8	28.58	24.38	21.84	33.27	11.93	14.22	43.43
OSWC 16-16P	1	25.40	22.35	33.27	1-3/8	34.92	1-1/2	38.10	31.24	26.41	40.38	14.22	19.05	52.57

# OSWE

Tube Socket Weld Elbow

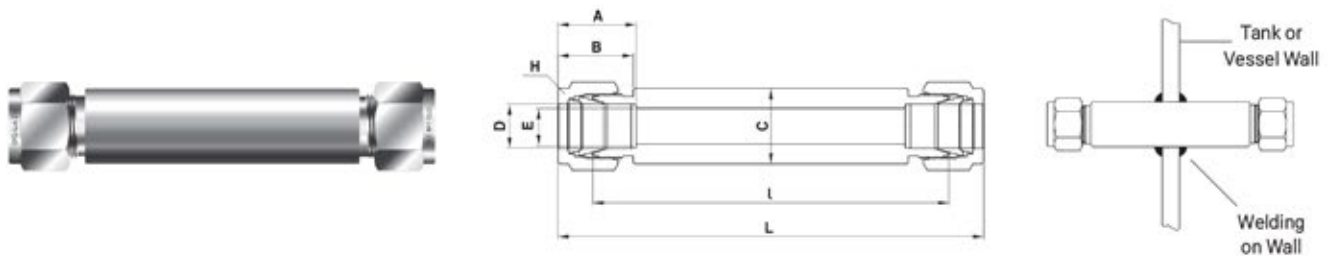


Connects fractional tubes

Part No.	Tube O.D D		E Min	D1	Width across flat				A	B	l	l1	l2	L
	in	mm			h		H							
					in	mm	in	mm						
OSWE 4-4	1/4	6.35	4.82	12.70	1/2	12.70	9/16	14.28	15.24	17.78	19.55	7.87	26.92	19.55
OSWE 6-6	3/8	9.52	7.11	15.74	5/8	15.87	11/16	17.46	16.76	19.30	23.11	9.65	30.48	23.11
OSWE 8-8	1/2	12.70	10.41	20.57	13/16	20.64	7/8	22.22	22.86	21.84	25.90	12.70	36.06	25.90
OSWE 12-12	3/4	19.05	15.74	26.92	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	14.22	39.87	29.71
OSWE 16-16	1	25.40	22.35	35.05	1-3/8	34.93	1-1/2	38.10	31.24	26.41	36.83	19.05	49.02	36.83

# OWBU

Weld Bulkhead Union

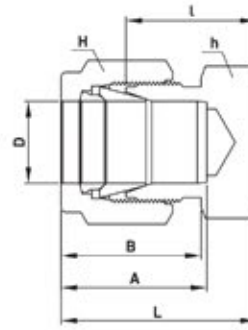


Connects fractional tubes

Part No.	Tube O.D D		E Min	A Diameter	Width across flat		l	L
	in	mm			H			
					in	mm		
OWBU-4	1/4	6.35	4.8	14.0	9/16	14.28	80.0	115.4
OWBU-6	3/8	9.52	7.1	19.0	11/16	17.46	80.0	118.4
OWBU-8	1/2	12.70	10.41	23.0	7/8	22.22	80.0	124.0

# OC

Cap



Connects fractional tube end

Part No.	Tube O,D		Width across flat				A	B	l	L
	D		h		H					
	in	mm	in	mm	in	mm				
OC-1	1/16	1.59	5/16	7.93	5/16	7.93	8.63	10.92	11.20	14.18
OC-2	1/8	3.17	7/16	11.11	7/16	11.11	12.70	15.24	13.46	20.06
OC-3	3/16	4.76	7/16	11.11	1/2	12.70	13.71	16.00	14.73	21.33
OC-4	1/4	6.35	1/2	12.70	9/16	14.28	15.24	17.78	16.00	23.26
OC-5	5/16	7.93	9/16	14.28	5/8	15.87	16.25	18.54	17.01	24.38
OC-6	3/8	9.52	5/8	15.87	11/16	17.46	16.76	19.30	18.28	25.65
OC-8	1/2	12.70	13/16	20.63	7/8	22.22	22.86	21.84	19.05	29.21
OC-10	5/8	15.87	15/16	23.81	1	25.40	24.38	21.84	19.81	29.97
OC-12	3/4	19.05	1-1/16	26.98	1-1/8	28.57	24.38	21.84	21.33	31.49
OC-14	7/8	22.22	1-3/16	30.16	1-1/4	31.75	25.90	21.84	23.87	34.03
OC-16	1	25.40	1-3/8	34.92	1-1/2	38.10	31.24	26.41	26.16	38.35
OC-20	1-1/4	31.75	1-3/4	44.45	1-7/8	47.68	41.14	38.86	31.24	53.34
OC-24	1-1/2	38.10	2-1/8	53.97	2-1/4	57.15	50.15	45.21	37.33	64.51
OC-32	2	50.80	2-3/4	69.85	3	76.20	67.56	62.73	49.27	86.61

Connects metric tube end

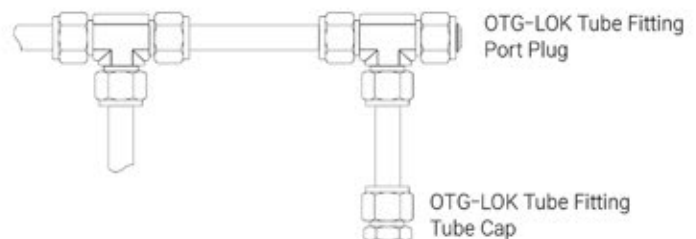
Part No.	Tube O,D	Width across flat		A	B	l	L
		h	H				
OC-2M	2	12	12	12.9	15.3	13.5	20.1
OC-3M	3	12	12	12.9	15.3	13.5	20.1
OC-4M	4	12	12	13.7	16.1	14.7	21.3
OC-6M	6	14	14	15.3	17.7	15.7	23.1
OC-8M	8	15	16	16.2	18.6	17.0	24.5
OC-10M	10	18	19	17.2	19.5	19.0	26.6
OC-12M	12	22	22	22.8	22.0	19.0	29.1
OC-15M	15	24	25	24.4	22.0	19.8	29.9
OC-16M	16	24	25	24.4	22.0	19.8	29.9
OC-18M	18	27	30	24.4	22.0	21.3	31.4
OC-20M	20	30	32	26.0	22.0	23.9	34.0
OC-22M	22	30	32	26.0	22.0	23.9	34.0
OC-25M	25	35	38	31.3	26.5	26.2	38.5
OC-28M	28	41	46	36.6	36.6	27.7	48.5
OC-32M	32	46	50	42.0	41.6	32.8	55.8
OC-38M	38	55	60	49.4	47.9	37.8	65.4

- For installation, follow the standard OTG-LOK Tube Fitting installation instruction.

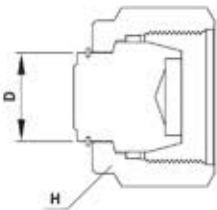
**Application :** Tube Cap & Port Plug

In tubing system, it is necessary to install either port plugs or tube caps for test ports or future runs.

- Tube cap for closing off tube end.
- Port plug for closing off an existing fitting port



# OP Plug



Plugs fractional OTG-LOK Tube fitting Port

Part No.	Tube O.D D		Width across flat H	
	in	mm	in	mm
OP-1	1/16	1.59	5/16	7.93
OP-2	1/8	3.17	7/16	11.11
OP-3	3/16	4.76	1/2	12.70
OP-4	1/4	6.35	9/16	14.28
OP-5	5/16	7.93	5/8	15.87
OP-6	3/8	9.52	11/16	17.46
OP-8	1/2	12.70	7/8	22.22
OP-10	5/8	15.87	1	25.40
OP-12	3/4	19.05	1-1/8	28.58
OP-14	7/8	22.22	1-1/4	31.75
OP-16	1	25.40	1-1/2	38.10
OP-20	1-1/4	31.75	1-7/8	47.63
OP-24	1-1/2	38.10	2-1/4	57.15
OP-32	2	50.80	3	76.20

Plugs metric OTG-LOK Tube fitting Port

Part No.	Tube O.D D	Width across flat H	
		in	mm
OP-2M	2		12
OP-3M	3		12
OP-4M	4		12
OP-6M	6		14
OP-8M	8		16
OP-10M	10		19
OP-12M	12		22
OP-15M	15		25
OP-16M	16		25
OP-18M	18		30
OP-20M	20		32
OP-22M	22		32
OP-25M	25		38
OP-28M	28		46
OP-32M	32		50
OP-38M	38		60

## Port Plug Installation Instructions

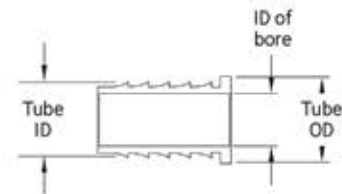
1. Remove the nut and ferrules from the existing OTG-LOK Tube Fitting port.
  2. Finger-tighten the port plug on to the OTG-LOK Tube Fitting port.
  3. Wrench-tighten the port plug 1/4 turn beyond the finger-tight position, keeping the fitting body steady a backup wrench.
- Do not tighten 1 1/4 turns. Be aware that plug has the machined ferrule not the standard ferrule.  
 - Fittings for smaller than 1/4 in. OD (6mm OD), tighten 1/8 turn.

# OI

## Tube Insert

Fractional Nylon or Soft Plastic Tubing

Part No.	Tube O.D OD		Tube O.D ID		Bore ID
	in	mm	in	mm	
OI 3-2	3/16	4.76	1/8	3.17	2.28
OI 4-2	1/4	6.35	1/8	3.17	2.28
OI 4-3	1/4	6.35	3/16	4.76	3.55
OI 5-2	5/16	7.93	1/8	3.17	2.28
OI 5-3	5/16	7.93	3/16	4.76	3.04
OI 5-4	5/16	7.93	1/4	6.35	4.82
OI 6-3	3/8	9.52	3/16	4.76	3.04
OI 6-4	3/8	9.52	1/4	6.35	4.82
OI 8-4	1/2	12.7	1/4	6.35	4.82
OI 8-6	1/2	12.7	3/8	9.52	7.87
OI 10-6	5/8	15.87	3/8	9.52	7.87
OI 10-8	5/8	15.87	1/2	12.70	11.17
OI 12-8	3/4	19.05	1/2	12.70	11.17
OI 12-10	3/4	19.05	5/8	15.87	14.22
OI 16-12	1	25.4	3/4	19.05	17.52



Metric Nylon or Soft Plastic Tubing

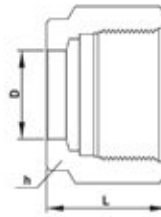
Part No.	Tube O.D OD	Tube O.D ID	Bore ID
OI 6M-4M	6	4	2.8
OI 8M-6M	8	6	4.4
OI 10M-8M	10	8	6.4
OI 12M-8M	12	8	6.4
OI 12M-10M	12	10	8.3

Nylon or soft plastic tubing is pliable. They require tube insert to prevent the tubing from collapsing. For installation, follow the standard OTG-LOK Tube Fitting installation instruction.



# ON

Nut



## Fractional

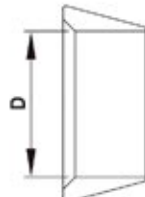
Part No.	Tube O.D		Width across flat		L
	D		h		
	in	mm	in	mm	
ON-1	1/16	1.59	5/16	9.73	7.90
ON-2	1/8	3.17	7/16	11.11	11.93
ON-3	3/16	4.76	1/2	12.70	11.93
ON-4	1/4	6.35	9/16	14.28	12.70
ON-5	5/16	7.93	5/8	15.87	13.46
ON-6	3/8	9.52	11/16	17.46	14.22
ON-8	1/2	12.70	7/8	22.22	17.52
ON-10	5/8	15.87	1	25.40	17.52
ON-12	3/4	19.05	1-1/8	28.57	17.52
ON-14	7/8	22.22	1-1/4	31.75	17.52
ON-16	1	25.40	1-1/2	38.10	20.57
ON-20	1-1/4	31.75	1-7/8	47.63	31.75
ON-24	1-1/2	38.10	2-1/4	57.15	38.10
ON-32	2	50.80	3	76.20	52.32

## Metric

Part No.	Tube O.D		L
	D		
	h		
ON-2M	2	12	11.90
ON-3M	3	12	11.90
ON-4M	4	12	11.90
ON-6M	6	14	12.70
ON-8M	8	16	13.50
ON-10M	10	19	15.10
ON-12M	12	22	17.40
ON-15M	15	25	17.40
ON-16M	16	25	17.40
ON-18M	18	30	17.40
ON-20M	20	32	17.40
ON-22M	22	32	17.40
ON-25M	25	38	20.60
ON-28M	28	46	30.60
ON-32M	32	50	34.40
ON-38M	38	60	40.60

# OFF

Front Ferrule



## Fractional

Part No.	Tube O.D	
	D	
	in	mm
OFF-1	1/16	1.59
OFF-2	1/8	3.17
OFF-3	3/16	4.76
OFF-4	1/4	6.35
OFF-5	5/16	7.93
OFF-6	3/8	9.52
OFF-8	1/2	12.70
OFF-10	5/8	15.87
OFF-12	3/4	19.05
OFF-14	7/8	22.22
OFF-16	1	25.40
OFF-20	1-1/4	31.75
OFF-24	1-1/2	38.10
OFF-32	2	50.80

## Metric

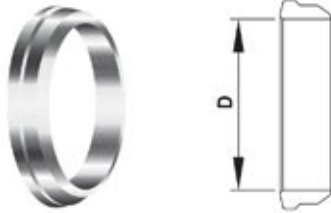
Part No.	Tube O.D
	D
OFF-2M	2
OFF-3M	3
OFF-4M	4
OFF-6M	6
OFF-8M	8
OFF-10M	10
OFF-12M	12
OFF-15M	15
OFF-16M	16
OFF-18M	18
OFF-20M	20
OFF-22M	22
OFF-25M	25
OFF-28M	28
OFF-32M	32
OFF-38M	38

### NOTE :

Stainless Steel over 1 in. and 25mm OD fittings are supplied with stainless steel ferrules coated with PFA. For application beyond 450 °F (232 °C) silver-plated front ferrule are supplied.

# OBF

Back Ferrule



## Fractional

Part No.	Tube O.D	
	D	
	in	mm
OBF-1	1/16	1.59
OBF-2	1/8	3.17
OBF-3	3/16	4.76
OBF-4	1/4	6.35
OBF-5	5/16	7.93
OBF-6	3/8	9.52
OBF-8	1/2	12.70
OBF-10	5/8	15.87
OBF-12	3/4	19.05
OBF-14	7/8	22.22
OBF-16	1	25.40
OBF-20	1-1/4	31.75
OBF-24	1-1/2	38.10
OBF-32	2	50.80

## Metric

Part No.	Tube O.D
	D
OBF-2M	2
OBF-3M	3
OBF-4M	4
OBF-6M	6
OBF-8M	8
OBF-10M	10
OBF-12M	12
OBF-15M	15
OBF-16M	16
OBF-18M	18
OBF-20M	20
OBF-22M	22
OBF-25M	25
OBF-28M	28
OBF-32M	32
OBF-38M	38

### NOTE :

Stainless Steel over 1 in. and 25mm OD fittings are supplied with stainless steel ferrules coated with PFA. For application beyond 450°F (232 °C) uncoated back ferrule are supplied.

# OFS

Ferrule Set



## Fractional

Part No.	Tube O.D	
	D	
	in	mm
OFS-1	1/16	1.59
OFS-2	1/8	3.17
OFS-3	3/16	4.76
OFS-4	1/4	6.35
OFS-5	5/16	7.93
OFS-6	3/8	9.52
OFS-8	1/2	12.70
OFS-10	5/8	15.87
OFS-12	3/4	19.05
OFS-14	7/8	22.22
OFS-16	1	25.40
OFS-20	1-1/4	31.75
OFS-24	1-1/2	38.10
OFS-32	2	50.80

## Metric

Part No.	Tube O.D
	D
OFS-2M	2
OFS-3M	3
OFS-4M	4
OFS-6M	6
OFS-8M	8
OFS-10M	10
OFS-12M	12
OFS-15M	15
OFS-16M	16
OFS-18M	18
OFS-20M	20
OFS-22M	22
OFS-25M	25
OFS-28M	28
OFS-30M	30
OFS-32M	32
OFS-38M	38

# ONFS

## Nut-Ferrule Set



### Fractional

Part No.	Tube O.D
	(in)
ONFS-1	1/16
ONFS-2	1/8
ONFS-3	3/16
ONFS-4	1/4
ONFS-5	5/16
ONFS-6	3/8
ONFS-8	1/2
ONFS-10	5/8
ONFS-12	3/4
ONFS-14	7/8
ONFS-16	1
ONFS-20	1-1/4
ONFS-24	1-1/2
ONFS-32	2

### Metric

Part No.	Tube O.D
	D
ONFS-2M	2
ONFS-3M	3
ONFS-4M	4
ONFS-6M	6
ONFS-8M	8
ONFS-10M	10
ONFS-12M	12
ONFS-15M	15
ONFS-16M	16
ONFS-18M	18
ONFS-20M	20
ONFS-22M	22
ONFS-25M	25
ONFS-28M	28
ONFS-30M	30
ONFS-32M	32
ONFS-38M	38



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