IY-LOK

Always together, Always, success

Tube Fittings

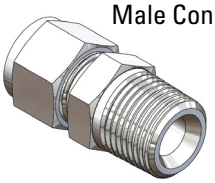
Semiconductor, Display, Solar. Oil Gas,
Power Plant, Offshore and Water Desalination

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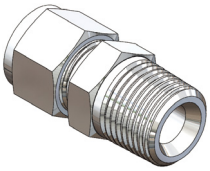
Tube to Male Pipe

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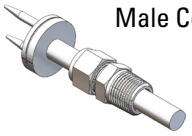
18 **IMC** (Fractional) Male Connector



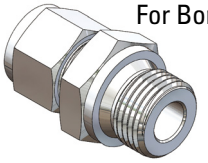
19 **IMC** (Metric)



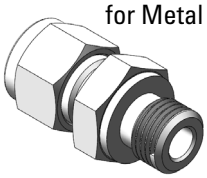
19 **IMC-T** Thermocouple Male Connector



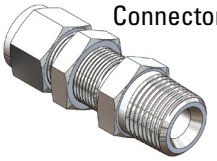
20 **IMC-G** Male Connector For Bonded Seal



21 **IOM** Male Connector for Metal Gasket



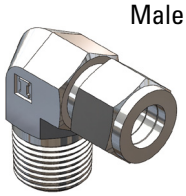
22 **IBMC** Bulkhead Male Connector



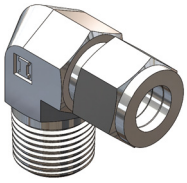
22 **IME 45D** 45° Male Elbow



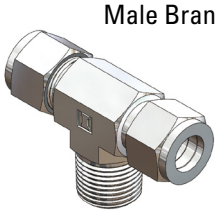
23 **IME** Male Elbow



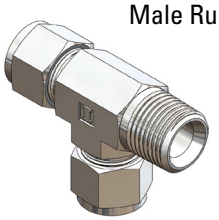
24 **IME** Male Elbow



25 **IMBT** Male Branch Tee



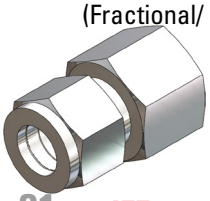
26 **IMRT** Male Run Tee



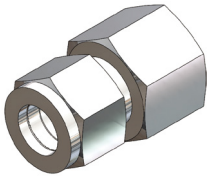
Tube to Female Pipe

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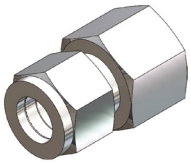
27 **IFC** Female Connector (Fractional/ Fractional to Metric)



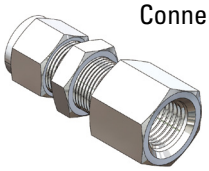
28 **IFC** Female Connector (Metric)



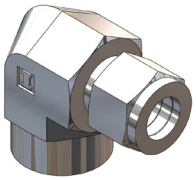
29 **IGC** Gauge Connector



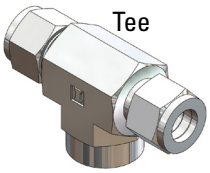
30 **IBFC** Bulkhead Female Connector



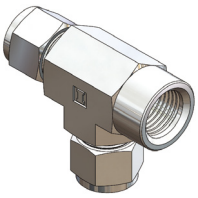
31 **IFE** Female Elbow



32 **IFBT** Female Branch Tee



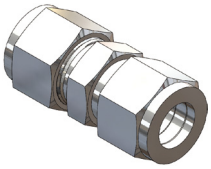
33 **IFRT** Female Run Tee



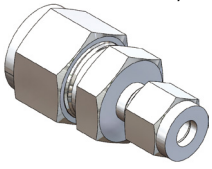
Tube to Tube

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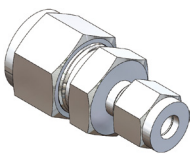
34 **IU** Union



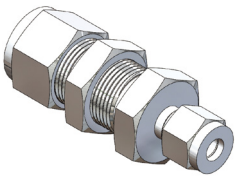
35 **IRU** Reducing Union (Fractional/Fractional to Metric)



36 **IRU** Reducing Union (Metric)



36 **IRBU** Reducing Bulkhead Union

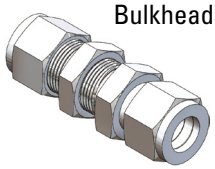


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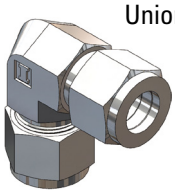
Tube to Male Pipe

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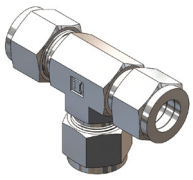
37 **IBU** Bulkhead Union



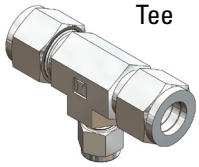
38 **IUE** Union Elbow



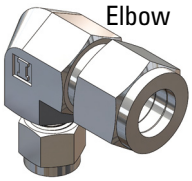
39 **IUT** Union Tee



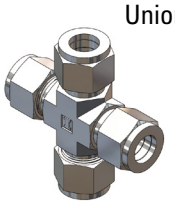
40 **IRT** Reducing Union Tee



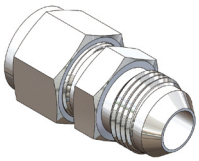
41 **IRUE** Reducing Union Elbow



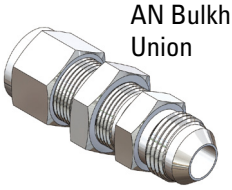
41 **IUC** Union Cross



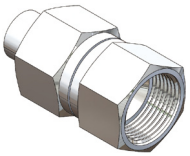
42 **IAU** AN Union



42 **IABU** AN Bulkhead Union



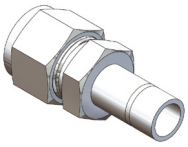
42 **IAF** An Flare



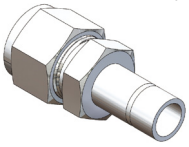
Stub Tube Connector

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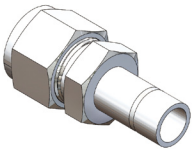
43 **IR** (Fractional) Reducer



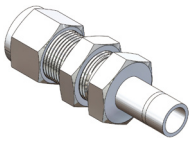
44 **IR** Reducer (Fractional/Fractional to Metric)



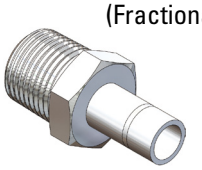
45 **IR** Reducer



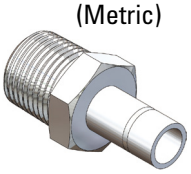
45 **IBR** Bulkhead Reducer



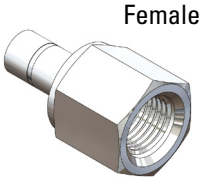
46 **IMA** Male Adapter (Fractional)



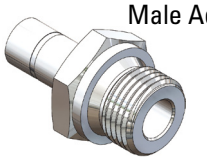
47 **IMA** Male Adapter (Metric)



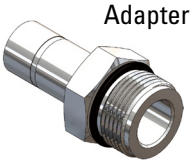
48 **IFA** Female Adapter



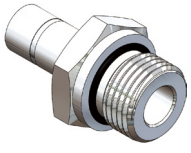
49 **IMA-G** Male Adapter



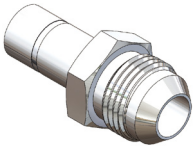
50 **ISMA** SAE/MS Male Adapter



50 **IOSA** O-Seal Straight Thread Adapter



51 **IAA** AN Adapter



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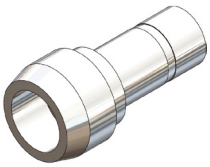
Port Connector

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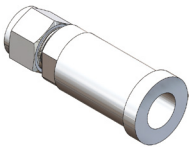
51 **IPC** Port Connector



52 **IRPC** Reducing Port Connector



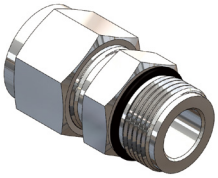
52 **ILFC** Lapped Flange Connector



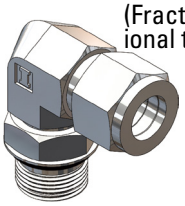
Tube to O-Ring Seal

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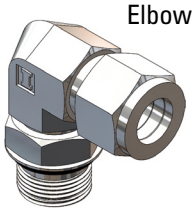
55 **ISMC** SAE/MS Male Connector



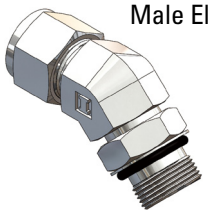
55 **ISME** Positionable SAE/MS Male Elbow (Fractional/Fractional to Metric)



56 **ISME** Positionable SAE/MS Male Elbow (Metric)



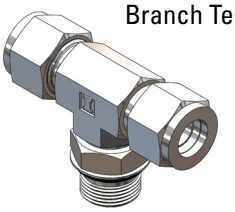
56 **ISME 45D** SAE/MS 45° Male Elbow



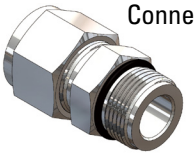
57 **ISMRT** SAE/MS Male Run Tee



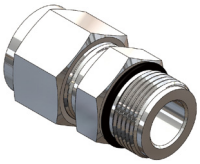
57 **ISMBT** SAE/MS Male Branch Tee



58 **IOSC** O-Seal Straight Thread Connector



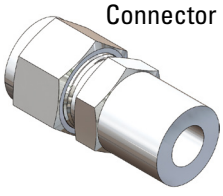
58 **IOPC** O-Seal Pipe Thread Connector



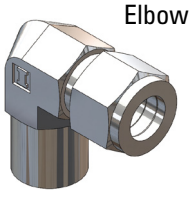
Tube to Welded System

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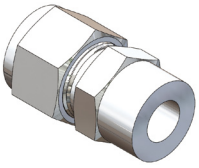
59 **IMPWC** Male Pipe Weld Connector



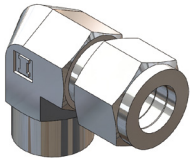
60 **IMPWE** Male Pipe Weld Elbow



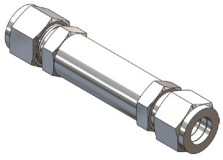
60 **ITSWC** Tube Socket Weld Connector



60 **ITSWE** Tube Socket Weld Elbow



60 **IWU** Weld Union

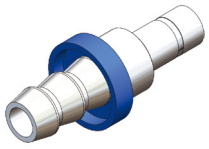


Index

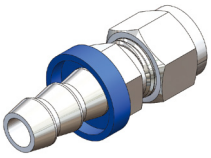
Push-On Hose Connector

Page.61~61

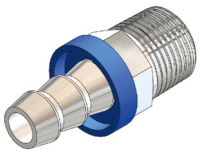
61 **ITH** Tube Adapter to Hose



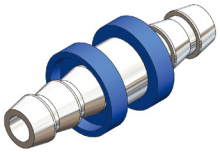
61 **ILH** Iy-Lok to Hose



61 **IMH** Hose to Male Pipe Thread



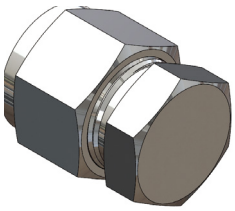
61 **IHH** Hose to Hose



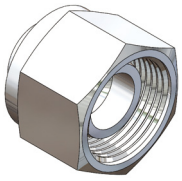
Components

Page.62~64

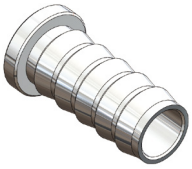
62 **IC** Cap



63 **IP** Plug



63 **ITI** Tube Insert



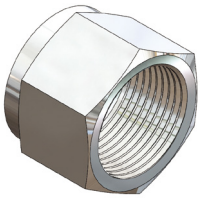
64 **IFF** Front Ferrule



64 **IBF** Back Ferrule



64 **IN** Nut

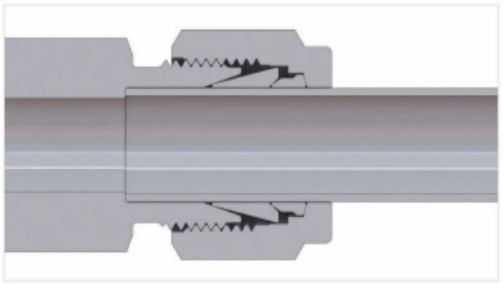


Always together, Always success Since 1993

Iy-Lok Tube Fittings

The IHSUNGTECH Iy-Lok twin tube fitting consists of four high precision engineered parts designed to provide secure leak - proof joints capable of satisfying high pressure, vaccum and vibration application





Nut : Iy - Lok's high quality, silver plated nut ensures no galling of body threads.

Body : Deep tube abutment and close tolerance of nut and body for accurate tube alignment.

Back ferrule : Iy - Lok's back ferrule provides a strong mechanical and anti - vibration hold on the tube

Front Ferrule : Critical pressure seal by front ferrule on tube and body.

Component Working action

The front ferrule swage onto the tube as it moves down the body seat creating a pressure & vacuum - tight seal on both tube and body by the interface pressure and surface finish of mating components.
The Iy - Lok back ferrule then moves inwards in the cone of the front ferrule, forming into the tube and creating a strong mechanical hold on the tube.

Installation



Size 1 thru 3 (1/16" thru 3/16") Only 3/4 turn from finger - tight position

Size 4 thru 16 (1/4" thru 1") Only 1 - 1/4 turn from finger - tight position

Assembly Instructions

Iy - Lok Tube fittings will be delivered with finger tightening state to immediate use in field. Iy - Lok tube fittings are installed in three easy steps.

1. Insert the tubing into the Iy - Lok fitting until the tubing sits on the shoulder of the body and then make sure the nut is finger - tight.
2. Set the finger - tight position, rotate the nut 3/4 turns for sizes between 1/16 inch and 3/16 inch : and 1 - 1/4 turns for the sizes between 1/4 inch and 1 inch.

Reassembly Instructions

Iy - Lok tube fittings can be assembled and disassembled repeatedly, the following instructions should be carried out to reassemble a fitting.

1. Insert the tubing with the preswaged ferrule into the Iy - Lok fitting body until front ferrule sits on the fitting body and then make sure the nut is finger - tight.
2. Rotate the nut to the original tighten position with a wrench. At the original position, the nut has to be tighten slightly more for resistance increases.

Notification

1. Make sure whether the thickness and material of tubing is proper to applicable usage.
   The material of tubing is compatible with the material of fitting and the hardness of tubing shall be less than that of fitting.
2. Do not assemble or disassemble the fitting when the pressure is holdat the system.
3. Do not turn the fitting body

Material

Table 3. Typical Material Specification

Materila	Bar Stock	Forging
Stainless Steel Type 316	ASTM A479, ASTM A276, ASTM SA479	ASTM A182, ASTM SA182
BRASS	ASTM B16 Alloy 360, ASTM B453 Alloy 345	ASTM B283 Alloy 377
Carbon Steel	ASTM A108	ASTM A576
Alloy 20	ASTM B473	ASTM B462
Alloy 400	ASTM B164, ASME SB164	ASTM B564, ASME SB564
Alloy 600	ASTM B166, ASME SB166	ASTM B564, ASME SB564

Materila	Bar Stock	Forging
Alloy 625	ASTM B466	ASTM B564, ASME SB564
Alloy 825	ASTM B425	ASTM B564 ASME SB564
Alloy C - 276	ASTM B574	ASTM B564
Titanium	ASTM B348	ASTM B381
Alumiunium	ASTM B211	ASTM B427
SAF 2570	ASTM A479	ASTM A182
Nylon	ASTM D4066	-
PTFE	ASTM D1710	ASTM D3294

※ Carbon Steel Hy - Lok tow ferrule tube fittings are supplied with 316 stainless steel back ferrule.

Iy-Lok Tube End Designator

Fractional Tube

Designator	1	2	3	4	5	6	8	10	12	14	16	20	24	32
Tube O,Q.	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"

Metric Tube

Designator	1M	3M	4M	6M	8M	10M	12M	15M	16M	20M	22M	25M	28M	32M	38M
Tube O,Q.	1mm	3mm	4mm	6mm	8mm	10mm	12mm	15mm	16mm	20mm	22mm	25mm	28mm	32mm	38mm

Pipe Thread Designator

Materila	1/16"	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	Application Specifications
NPT	1	2	4	6	8	12	16	20	24	32	ANSI B1.20.1 (NPT)
ISO Tapered	1R	2R	4R	6R	8R	12R	16R	20R	24R	32R	JIS B0203(PT) , DIN2999, IS07/1, BS 21 (BSPT)
JS0 Parallel	1G	2G	4G	6G	8G	12G	16G	20G	24G	32G	JIS B0202(PF) , DIN ISO 228/1, BS 2779(BSPT)

Tube Selection

The careful selecting, specifying, purchasing and handling of tubing are essential to the successful of Iy - Lok Tube Fittings.

1. HARDNESS RESTRICTIONS

In general, metal tubing should be fully annealed to work properly with Iy - Lok tube fittings. While most stainless steel tubing is restricted to a maximum rockwell hardness of Rb90, many users specify that this hardness be further restricted to Rb80. Such tubing lowers the installed cost because it is more easily bent and installed. While Iy - Lok stainless steel tube fittings may be used on stainless steel tube with hardness of Rb90 maximum, we suggest that whenever possible, you specify a maximum hardness of Rb80.

2. TUBING PRESSURE RATINGS BY TEMPERATURE CHANGE

Allowable Stress Factors

°F	°C	Copper	304SS	316SS	Monel
200	93	0.80	1.00	1.00	0.88
400	204	0.50	0.93	0.96	0.79
600	316	-	0.82	0.85	0.79
800	427	-	0.76	0.79	0.76
1000	538	-	0.69	0.76	-
1200	649	-	0.30	0.37	-

To determine allowable pressure at elevated temperatures, multiply the allowable working pressure in Table 2 by the factor shown in table 1.

Example

Type316SS1/2"O.D.x0.049"
wall thickness at 1000°F : 3,700psix0.76 = 2,812psi
Allowable working pressure for 1/2"O.D.×0.049"wall thickness 316SS tubing is therefore 2,812psi at 1000°F

3. Maximum Allowable Working Pressure Tables
STAINLESS STEEL TUBING

Fully annealed high quality type 304, 316, etc
Stainless steel hydraulic tubing ASTM A - 269 or A - 2213 or equivalent.
Hardness : Rb90 or less

Stainless Steel Tube Inch Size

Part No. (Inches)	Tube Wall Thickness In Inches															
	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	8,200	9,600	12,600											
1/8"						8,500	11,200									
3/16"						5,400	7,000	10,400								
1/4"						4,000	5,100	7,500	10,400							
5/16"							4,000	5,800	8,000							
3/8"							3,300	4,800	6,500							
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"	For gas service, applying tube wall thickness only on outside of shade boumdary								2,400	3,100	3,600	4,200	4,700			
1-1/4"										2,500	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

Working Pressure in Psig

Stainless Steel Tube Metric Size

Part No. (mm)	Tube Wall Thickness In Millimeter (Inches)														
	0.71 (0.028)	0.89 (0.035)	1	1.25 (0.049)	1.50	1.65	2	2.11 (0.083)	2.41 (0.095)	2.50	2.77 (0.109)	3	3.05	3.50	4	4.50
3	10,800	13,800	15,300													
4	7,900	10,100	11,500	14,400												
6	5,000	6,500	7,400	9,400	11,500	12,700										
8		4,700	5,800	6,800	8,400	9,300										
10		3,700	4,200	5,300	6,500	7,300										
12		3,000	3,400	4,400	5,300	5,900	6,600	7,000								
16			2,500	3,200	3,900	4,300	5,300	5,700	6,600	6,800						
18	For gas service, applying tube wall thickness only on outside of shade boumdary			2,800	3,400	3,800	4,700	5,000	5,800	6,000	6,700					
20				2,500	3,000	3,400	4,200	4,400	5,100	5,300	6,000					
22				2,300	2,800	3,000	3,800	4,000	4,600	4,800	5,400					
25				2,000	2,400	2,700	3,300	3,500	4,000	4,200	4,700	5,100	5,200			
38										2,300		2,900		3,400	3,900	4,400

Working Pressure in Psig

Allowable Stress

20,000psi between - 20°F and 100°F based on ultimate tensile strength 75,000psi (ANSI B31.3 code)
(Bar = psig x 0.0689, kPa = psig × 6.89)

Notification

1) All calculations are based on maximum outside diameter and minimum wall thickness without allowance for corrosion and erosion.
2) Care should be taken for temperature rating if tubing is coated or plated
3) Figures shown are not for design pupose but for reference only and the accuracy of information is not liability of Ihsung Tech Co.,Ltd.

Copper Tubing

High quality soft annealed seamless copper tube to ASTM B - 75 or equivalent.

Fractional Copper Tubing

Part No. (Inches)	Tube Wall Thickness In Inches									
	0.010	0.012	0.024	0.035	0.049	0.065	0.083	0.095	0.019	0.020
1/16"	1,652	2,124	6,742	9,871						
1/8"			2,840	3,787						
3/16"			1,810	2,343	3,615			Working Pressure in Psig		
1/4"			1,321	1,696	2,565	3,639				
5/16"				1,329	1,988	2,782				
3/8"				1,093	1,623	2,251				
1/2"				806	1,187	1,630	2,160			
5/8"					935	1,277	1,681	1,970		
3/4"					748	1,017	1,332	1,555	1,823	
7/8"					639	867	1,133	1,320	1,544	
1"					559	756	986	1,147	1,339	1,479

Metric Copper Tubing

Part No. (mm)	Tube Wall Thickness In Millimeter									
	0.8	1	1.2	1.5	1.8	2	2.2	2.5	2.8	3
3	239	326								
4	175	228	291							
6	111	142	178	237	299			Working Pressure in Bar		
8	81	103	128	168	210					
10	64	81	100	131	162	184				
12	53.	67	82	107	131	149				
14		57	70	90	111	125	139	162		
15		53	65	78	96	116	129	150		
16		49	61	78	96	108	120	139		
18		43	53	68	83	94	104	121	138	150
20		39	47	61	75	84	93	107	123	133
22		35	43	55	67	76	84	97	110	120
25		31	38	48	59	66	73	84	96	104

Allowable Stress

6,500psi between - 20°F and 100°F based on ultimate tensile strength 30,000psi (ANSI B31.3 code)
(Bar = psig x 0.0689, kPa = psig × 6.89)

MONEL TUBING

Fully annealed quality seamless MONEL 400 hydraulic tubing ASTM B - 165 or equivalent.
Hardness : Rb75 Maximum

Monel 400 Fractional Tubing

Part No. (Inches)	Tube Wall Thickness In Inches									
	0.010	0.012	0.028	0.035	0.049	0.065	0.083	0.095	0.019	0.020
1/8"			7,900	10,100						
1/4"			3,700	4,800	7,000	9,500		Working Pressure in 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

Allowable Stress

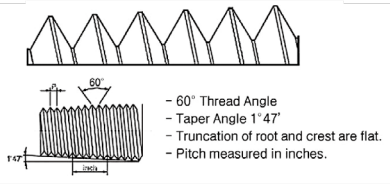
18,700psi between - 20°F and 100°F based on ultimate tensile strength 70,000psi (ANSI B31.3 code)
(Bar = psig × 0.0689, kPa = psig × 6.89)

Pipe Threads Information

Threads of many kinds are used for different purposes in small piping components. The followings are the more common types of pipe threads.

1. NPT Tapered Pipe Threads

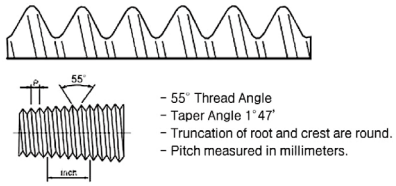
NPT(National Pipe Tapered) is made to specifications outlined in ANSI B1. 20. 1 This is the pipe thread used on the pipe end.



- 60° Thread Angle
- Taper Angle 1°47'
- Truncation of root and crest are flat.
- Pitch measured in inches.

2. ISO 7/1 Tapered Pipe Threads

International Organization for Standards(ISO 7/1) Tapered.(PT) ISO tapered threads are equivalent to DIN 2999. BSP TR, JIS B0203, R 1/8 and R 1/4 Keg.



- 55° Thread Angle
- Taper Angle 1°47'
- Truncation of root and crest are round.
- Pitch measured in millimeters.

In application ISO threads are used similar to NPT threads. However, care should be used that ISO and NPT threads are not mixed. ISO threads have a 55°angle versus 60°for NPT.

Thread Identification Reference Tables

Nominal Thread Size inch	Designation	Included Thread Angle	Nominal Male Thread Diameter		Pitch*
			inch	mm	
1/16	NPT	60°	0.308	7.84	27U
	ISO 7/1	55°	0.304	7.72	28W
1/8	NPT	60°	0.401	10.18	27U
	ISO 7/1	55°	0.383	9.73	28W
1/4	NPT	60°	0.533	13.54	18U
	ISO 7/1	55°	0.518	13.16	19W
3/8	NPT	60°	0.668	16.98	18U
	ISO 7/1	55°	0.656	16.86	19W
1/2	NPT	60°	0.832	21.14	14U
	ISO 7/1	55°	0.825	20.96	14W
3/4	NPT	60°	1.043	26.49	14U
	ISO 7/1	55°	1.041	26.44	14W
1	NPT	60°	1.305	33.14	11.5U
	ISO 7/1	55°	1.309	33.25	11W
1-1/4	NPT	60°	1.649	41.90	11.5U
	ISO 7/1	55°	1.650	41.91	11W
1-1/2	NPT	60°	1.888	47.97	11.5U
	ISO 7/1	55°	1.882	47.80	11W
2	NPT	60°	2.362	60.00	11.5U
	ISO 7/1	55°	2.347	59.61	11W

*U = Unified, W = Whitworth

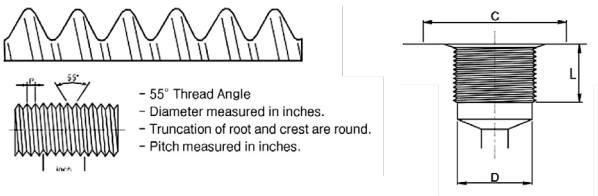
Thread pitch is usually measured in millimeters but may be expressed in inch. In many sizes the threads-per-inch are different and the root and crest configurations are different from NPT.

3. ISO 229/1 Parallel Pipe Threads

a. Bonded Washer Seal (IMC-G)
Be sealed by contacting the inclined surface of the hex body of male thread to the surface of the female thread. In case of sealing, a washer which composed of metal and elastic material is located at the center of tapered surface.

b. Metal Gasket Seal (IOM)
A Metal gasket(generally copper) is sealed between the body of male thread and the surface of female thread.

c. Metal Gasket Seal (IOM)
This is a method to insert a gasket into the flat surface of thread's inside. The sealing shall be completed with pushing the gasket by male thread surface.



- 55° Thread Angle
- Diameter measured in inches.
- Truncation of root and crest are round.
- Pitch measured in inches.

International Organization for Standards(ISO 228/1) Parallel(PF) ISO Parallel threads are equivalent to DIN ISO 228/1, BSP PL, JIS B0202, 1/8 and R 1/4. These pipe threads are similar in configuration to 7/1 threads except there is no taper. Therefore do not work by thread interference like the tapered pipe threads of ISO 7/1 or NPT. A gasket or O-Ring is normaly used to seal into the parallel female threaded component.

Iy-Lok Designator	ISO Female Parallel Pipe Size (inch)	Minimum Full Thread Depth L(inch)	Thread Minor Diameter D(inch)	Minimum Flat Diameterfor a&b C(inch)	Minimum Flat Diameter for Posi
2G	1/8	0.31	0.337/0.348	0.59	0.68
4G	1/4	0.47	0.450/0.468	0.75	0.90
6G	3/8	0.47	0.586/0.606	0.91	1.04
8G	1/2	0.55	0.733/0.755	1.06	1.26
12G	3/4	0.63	0.949/0.971	1.30	1.62
16G	1	0.71	1.193/1.218	1.57	1.91

Ordering System

ly - Lok tube fittings parts numbers are constructed
from symbols that identify the style
and size of the fitting and material used.

Fractional Tube Numbering System

I	MC	6	-	4	-	R	-	SS
ly - Lok Fitting (Brand)	Fitting Type (Male Connector)	Tube O.D. 3/8" O.D.		Pipe Thread 1/4"		Thread Type N or Blank : NPT R : ISO Tapered G: Straight Thread		Material SS : SS316 B : BRASS M : MONEL

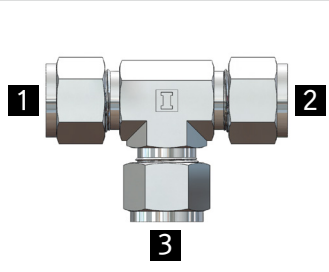
Example : Stainless steel 316 Male Connector for 3/8" O.D. tube and 1/4" male ISO Tapered thread.(IMC 6 - 4R - SS)

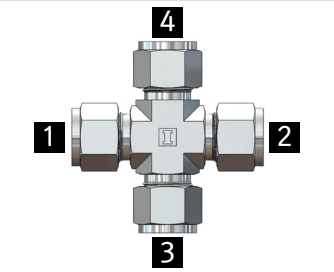
Metric Tube Numbering System

I	MC	12M	-	4	-	R	-	SS
ly - Lok (Brand)	Fitting Type (Male Connector)	Tube O.D. 12mm		Pipe Thread 1/4"		Thread Type N or Blank : NPT R : ISO Tapered G: Straight Thread		Material SS : SS316 B : BRASS M : MONEL

Example : Stainless steel 316 Male Connector for 12mm tube and 1/4" male ISO Tapered thread.(IMC 12M - 4R - SS)

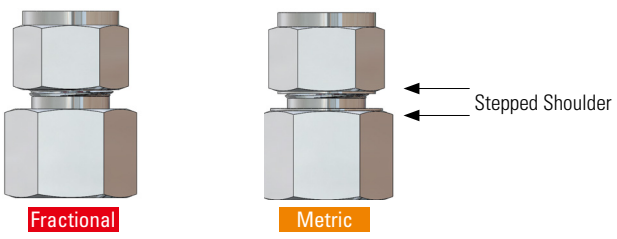
Note : Straights & Elbows : Call out largest ly - Lok tube end size first followed by the smaller ly - Lok tube end or pipe thread size.
Tees & Crosses : For drop size tees - First size the run (1 to 2) and the branch (3) . For Crosses - First size the run (1 to 2) and then the branch (3 to 4) .
For tees with all ends thesame size, use the tube end size after the style designator; i.e, Union 1/4"O.D.: IUT - 4





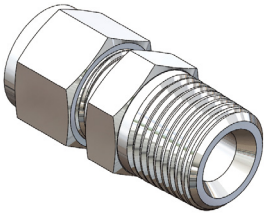
Identification of ly- Lok Metric tube fittings from Fractional

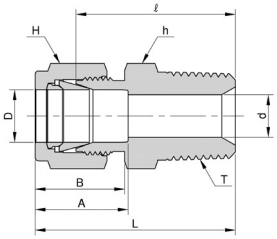
These two are similar in appearance. To avoid any confusion and for ready identification, the stepped shoulders are machined on the body and on the hex nut of metric size tube fittings as shown. The metric tube nut must not be used on fractional body, and vice versa



Color Coding For easy reference, table heads are color indicated as follows : Fractional ——— Metric ———

IMC Male Connector





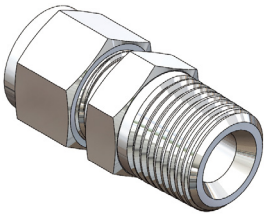
Connector Fractional Tube To Female NPT Thread

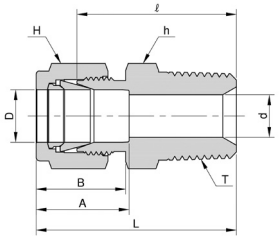
Part No.	Tube O.D. D		T* NPT	d min.	Width Across Flat				A	B	ℓ	L
					h		H					
	inch	mm			inch	mm	inch	mm				
IMC 1-1N	1/16	1.59	1/16	1.27	5/16	7.93	5/16	7.93	8.63	10.92	20.00	23.83
IMC 1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	22.35	26.23
IMC 1-4N	1/16	1.59	1/4	1.27	9/16	14.28	5/16	7.93	8.63	10.92	27.17	30.98
IMC 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
IMC 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
IMC 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
IMC 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
IMC 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
IMC 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
IMC 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
IMC 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
IMC 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
IMC 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
IMC 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
IMC 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
IMC 4-12N	1/4	6.35	3/4	4.82	1-1/16	26.98	9/16	14.28	15.24	17.78	38.86	46.22
IMC 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
IMC 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
IMC 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
IMC 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
IMC 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
IMC 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
IMC 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
IMC 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
IMC 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
IMC 6-16N	3/8	9.52	1	7.11	1-3/8	34.92	11/16	17.46	16.76	19.30	47.0	54.37
IMC 8-2N	1/2	12.7	1/8	4.82	13/16	20.64	7/8	22.22	22.86	21.84	28.70	38.86
IMC 8-4N	1/2	12.7	1/4	7.11	13/16	20.64	7/8	22.22	22.86	21.84	33.27	43.43
IMC 8-6N	1/2	12.7	3/8	9.65	13/16	20.64	7/8	22.22	22.86	21.84	33.27	43.43
IMC 8-8N	1/2	12.7	1/2	10.41	7/8	22.22	7/8	22.22	22.86	21.84	38.86	49.02
IMC 8-12N	1/2	12.7	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	40.38	50.54
IMC 8-16N	1/2	12.7	1	10.41	1-3/8	34.92	7/8	22.22	22.86	21.84	46.99	57.15
IMC 10-4N	5/8	15.87	1/4	6.35	15/16	23.81	1	25.40	24.38	21.84	33.80	43.96
IMC 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
IMC 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
IMC 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
IMC 12-6N	3/4	19.05	3/8	9.65	1-1/16	26.98	1-1/8	28.58	24.38	21.84	34.03	44.19
IMC 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
IMC 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
IMC 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
IMC 14-8N	7/8	22.22	1/2	11.9	1-3/16	30.16	1-1/4	31.75	25.90	21.84	40.38	50.54
IMC 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
IMC 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
IMC 16-6N	1	25.4	3/8	9.65	1-3/8	34.92	1-1/2	38.10	31.24	26.41	40.30	52.49
IMC 16-8N	1	25.4	1/2	11.93	1-3/8	34.92	1-1/2	38.10	31.24	26.41	45.21	57.40
IMC 16-12N	1	25.4	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	45.21	57.40
IMC 16-16N	1	25.4	1	22.35	1-3/8	34.62	1-1/2	38.10	31.24	26.41	50.03	62.23
IMC 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
IMC 20-20N	1-1/4	31.75	1-1/4	27.68	1-3/4	53.98	1-7/8	47.63	41.14	38.86	55.11	77.21
IMC 20-24N	1-1/4	31.75	1-1/2	27.68	1-3/4	53.98	1-7/8	47.63	41.14	38.86	60.54	82.64
IMC 24-20N	1-1/2	38.1	1-1/4	27.68	2-1/8	53.98	2-1/4	57.15	50.03	45.21	59.42	86.60
IMC 24-24N	1-1/2	38.1	1-1/2	33.90	2-1/8	53.98	2-1/4	57.15	50.03	45.21	61.72	88.90
IMC 32-20N	2	50.8	1-1/4	45.97	2-3/4	69.85	3	76.20	67.56	62.73	71.40	108.73
IMC 32-24N	2	50.8	1-1/2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	75.50	112.83
IMC 32-32N	2	50.8	2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	76.20	113.53

* ISO Tapered Thread, put "R" digit at the last of part number.

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

IMC Male Connector



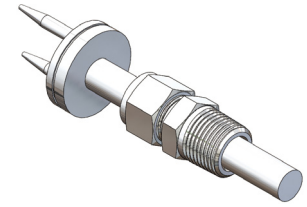


Connector Metric Tube To Female ISO Tapered Thread

Part No.	Tube O.D. D	T* NPT	d min.	Width Across Flat h	Width Across Flat H	A	B	ℓ	L
IMC 2M- 2R	2	1/8	1.7	12	12	12.9	15.3	23.9	30.5
IMC 3M- 2R	3	1/8	2.4	12	12	12.9	15.3	23.9	30.5
IMC 3M- 4R	3	1/4	2.4	14	12	12.9	15.3	29.0	35.6
IMC 4M- 2R	4	1/8	2.4	12	12	13.7	16.1	24.6	31.2
IMC 4M- 4R	4	1/4	2.4	14	12	13.7	16.1	29.7	36.3
IMC 6M- 2R	6	1/8	4.8	14	14	15.3	17.7	25.4	32.8
IMC 6M- 4R	6	1/4	4.8	14	14	15.3	17.7	30.5	37.9
IMC 6M- 6R	6	3/8	4.8	18	14	15.3	17.7	31.0	38.4
IMC 6M- 8R	6	1/2	4.8	22	14	15.3	17.7	37.3	44.7
IMC 8M- 2R	8	1/8	4.8	15	16	16.2	18.6	26.7	34.2
IMC 8M- 4R	8	1/4	6.4	15	16	16.2	18.6	31.2	38.7
IMC 8M- 6R	8	3/8	6.4	18	16	16.2	18.6	31.8	39.3
IMC 8M- 8R	8	1/2	6.4	22	19	16.2	18.6	38.1	45.6
IMC 10M-2R	10	1/8	4.8	18	19	17.2	19.5	28.7	36.3
IMC 10M-4R	10	1/4	7.9	18	19	17.2	19.5	33.3	40.9
IMC 10M-6R	10	3/8	7.9	18	19	17.2	19.5	33.3	40.9
IMC 10M-8R	10	1/2	7.9	22	22	17.2	19.5	38.9	46.5
IMC 12M-2R	12	1/8	4.8	22	22	22.8	19.5	28.7	38.8
IMC 12M-4R	12	1/4	7.1	22	22	22.8	22.0	33.3	43.4
IMC 12M-6R	12	3/8	9.5	22	22	22.8	22.0	33.3	43.4
IMC 12M-8R	12	1/2	9.5	22	22	22.8	22.0	38.9	49.0
IMC 12M-12R	12	3/4	9.5	27	22	22.8	22.0	40.4	50.5
IMC 14M-4R	14	1/4	7.1	24	25	24.4	22.0	33.3	44.1
IMC 14M-6R	14	3/8	9.5	24	25	24.4	22.0	33.3	44.1
IMC 14M-8R	14	1/2	11.1	24	25	24.4	22.0	38.9	49.0
IMC 16M-6R	16	3/8	9.5	24	25	24.4	22.0	34.0	44.1
IMC 16M-8R	16	1/2	11.9	24	25	24.4	22.0	38.9	49.0
IMC 16M-12R	16	3/4	12.7	27	25	24.4	22.0	40.4	50.5
IMC 18M-8R	18	1/2	11.9	27	30	24.4	22.0	40.4	50.5
IMC 18M-12R	18	3/4	15.1	27	30	24.4	22.0	40.4	50.5
IMC 20M-8R	20	1/2	11.9	30	32	26.0	22.0	42.2	52.3
IMC 20M-12R	20	3/4	15.9	30	32	26.0	22.0	42.2	52.3
IMC 22M-12R	22	3/4	15.9	30	32	26.0	22.0	42.2	52.3
IMC 22M-16R	22	1	18.3	35	32	26.0	22.0	47.0	57.1
IMC 25M-12R	25	3/4	15.9	35	38	31.3	26.5	45.2	57.5
IMC 25M-16R	25	1	21.8	35	38	31.3	26.5	50.0	62.3
IMC 28M-16R	28	1	21.8	41	46	36.6	36.6	51.6	72.4
IMC 28M-20R	28	1-1/4	21.8	46	46	36.6	36.6	52.3	73.1
IMC 30M-20R	30	1-1/4	26.2	46	50	39.6	39.2	55.6	77.2
IMC 32M-20R	32	1-1/4	28.6	46	50	42.0	41.6	56.6	79.6
IMC 38M-24R	38	1-1/2	33.7	55	60	49.4	47.9	64.0	91.6

*NPT Thread, put "N" digit at the last of part number.

IMC-T Thermocouple Male Connector

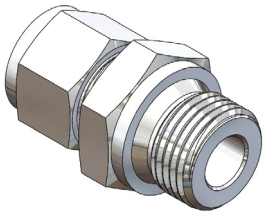


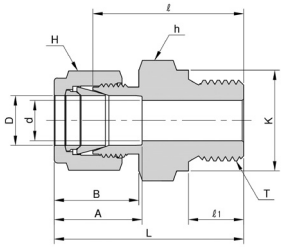
Iy-lok Bore-through Male Connector accommodate thermocouple or drip tubes. To order bored-through Male Connector(IMC).

Example : 1/2" tube O.D. x 1/2"NPT IMC 8-8TNS
6mm tube O.D. x 1/4"PT IMC 6M-4TPS

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

IMC-G Male Connector For Bonded Seal





Connector Fractional Tube To Female ISO Parallel Thread

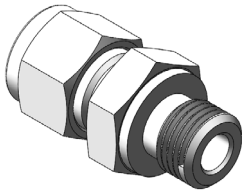
Part No.	Tube O.D. D		T G(PF)	d min.	Width Across Flat h		Width Across Flat H		A	B	ℓ	ℓ_1	L	K
	inch	mm			inch	mm	inch	mm						
IMC 2-2G	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	23.37	7.11	29.97	13.8
IMC 2-4G	1/8	3.17	1/4	2.28	3/4	19.05	7/16	11.11	12.70	15.24	28.70	11.18	35.31	18.0
IMC 2-6G	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	21.8
IMC 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	13.8
IMC 4-4G	1/4	6.35	1/4	4.8	3/4	19.05	9/16	14.28	15.24	17.78	30.23	11.18	37.59	18.0
IMC 4-6G	1/4	6.35	3/8	4.8	7/8	22.22	9/16	14.28	15.24	17.78	31.50	11.18	38.86	21.8
IMC 4-8G	1/4	6.35	1/2	4.8	1-1/16	26.98	9/16	14.28	15.24	17.78	37.34	14.22	44.7	26.0
IMC 6-2G	3/8	9.52	1/8	4.8	5/8	15.87	11/16	17.46	16.76	19.30	26.40	7.11	33.77	13.8
IMC 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	18.0
IMC 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	21.8
IMC 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	26.0
IMC 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	18.0
IMC 8-6G	1/2	12.70	3/8	7.90	7/8	22.22	7/8	22.22	22.86	21.84	33.02	11.18	43.18	21.8
IMC 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	26.0
IMC 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	26.0
IMC 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	32.0
IMC 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	26.0
IMC 16-12G	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	43.69	15.75	55.88	32.0
IMC 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	39.0
IMC 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	49.0
IMC 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	54.7

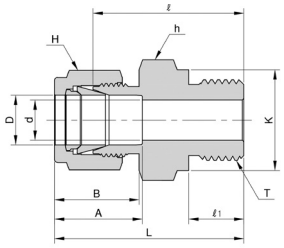
Connector Metric Tube To Female ISO Parallel Thread

Part No.	Tube O.D. D	T G(PF)	d min.	Width Across Flat h	Width Across Flat H	A	B	ℓ	ℓ_1	L	K
IMC 3M- 2G	3	1/8	2.4	14	12	12.9	15.3	23.4	7.1	30.0	13.8
IMC 3M- 4G	3	1/4	2.4	19	12	12.9	15.3	28.7	11.2	35.3	18.0
IMC 4M- 2G	4	1/8	2.4	14	12	13.7	16.1	24.1	7.1	30.7	13.8
IMC 6M- 2G	6	1/8	4.0	14	14	15.3	17.7	24.9	7.1	32.3	13.8
IMC 6M- 4G	6	1/4	4.8	19	14	15.3	17.7	30.2	11.2	37.6	18.0
IMC 6M- 6G	6	3/8	4.8	22	14	15.3	17.7	31.5	11.2	38.9	21.8
IMC 6M- 8G	6	1/2	4.8	27	14	15.3	17.7	37.3	14.2	44.7	26.0
IMC 8M- 2G	8	1/8	4.0	15	16	16.2	18.6	25.7	7.1	33.2	13.8
IMC 8M- 4G	8	1/4	6.4	19	16	16.2	18.6	31.0	11.2	38.5	18.0
IMC 8M- 6G	8	3/8	6.4	22	16	16.2	18.6	32.3	11.2	39.8	21.8
IMC 8M- 8G	8	1/2	6.4	27	16	16.2	18.6	38.1	14.2	45.6	26.0
IMC 10M- 4G	10	1/4	5.9	19	19	17.2	19.5	31.8	11.2	39.4	18.0
IMC 10M- 6G	10	3/8	7.9	22	19	17.2	19.5	33.0	11.2	40.6	21.8
IMC 10M- 8G	10	1/2	7.9	27	19	17.2	19.5	38.9	14.2	46.5	26.0
IMC 12M-4G	12	1/4	5.9	22	22	22.8	22.0	32.5	15.7	42.6	18.0
IMC 12M-6G	12	3/8	7.9	22	22	22.8	22.0	33.0	11.2	43.1	21.8
IMC 12M-8G	12	1/2	9.5	27	22	22.8	22.0	38.9	14.2	49.0	26.0
IMC 12M-12G	12	3/4	9.5	35	22	22.8	22.0	42.7	14.2	52.8	32.0
IMC 16M-6G	16	3/8	7.9	24	25	24.4	22.0	33.8	15.7	43.9	21.8
IMC 16M-8G	16	1/2	11.9	27	25	24.4	22.0	38.9	14.2	49.0	26.0
IMC 18M-8G	18	1/2	11.9	27	30	24.4	22.0	38.9	14.2	49.0	26.0
IMC 18M-12G	18	3/4	15.1	35	30	24.4	22.0	42.7	15.7	52.8	32.0
IMC 20M-8G	20	1/2	11.9	30	32	26.0	22.0	40.4	14.2	50.5	26.0
IMC 20M-12G	20	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
IMC 22M-12G	22	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
IMC 22M-16G	22	1	18.3	41	32	26.0	22.0	45.2	18.3	55.3	39.0
IMC 25M-12G	25	3/4	15.9	35	38	31.3	26.5	45.2	15.7	57.5	32.0
IMC 25M-16G	25	1	19.8	41	38	31.3	26.5	47.8	18.3	60.1	39.0

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

:: IOM Male Connector for Metal Gasket





Connector Fractional Tube To Female ISO Parallel Thread

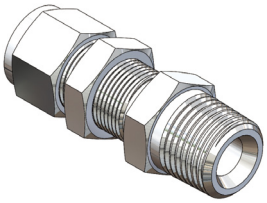
Part No.	Tube O.D. D		T G(PF)	d min.	Width Across Flat				A	B	ℓ	ℓ_1	L	K
					h		H							
	inch	mm			inch	mm	inch	mm						
IOM 2-2G	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	23.37	7.11	29.97	13.72
IOM 2-4G	1/8	3.17	1/4	2.28	3/4	19.05	7/16	11.11	12.70	15.24	28.70	11.18	35.31	18.03
IOM 2-6G	1/8	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
IOM 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
IOM 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
IOM 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
IOM 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	44.7	25.91
IOM 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
IOM 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
IOM 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
IOM 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
IOM 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
IOM 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
IOM 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
IOM 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
IOM 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
IOM 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
IOM 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
IOM 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

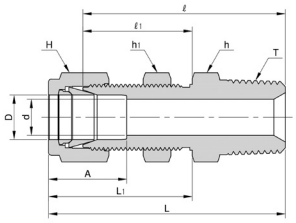
Connector Metric Tube To Female ISO Parallel Thread

Part No.	Tube O.D. D	T G(PF)	d min.	Width Across Flat		A	B	ℓ	ℓ_1	L	K
				h	H						
IOM 3M-2G	3	1/8	2.4	14	12	12.9	15.3	23.4	7.1	30.0	13.8
IOM 3M-4G	3	1/4	2.4	19	12	12.9	15.3	28.7	11.2	35.3	18.0
IOM 4M-2G	4	1/8	2.4	14	12	13.7	16.1	24.1	7.1	30.7	13.8
IOM 6M-2G	6	1/8	4.0	14	14	15.3	17.7	24.9	7.1	32.3	13.8
IOM 6M-4G	6	1/4	4.8	19	14	15.3	17.7	30.2	11.2	37.6	18.0
IOM 6M-6G	6	3/8	4.8	22	14	15.3	17.7	31.5	11.2	38.9	21.8
IOM 6M-8G	6	1/2	4.8	27	14	15.3	17.7	37.3	14.2	44.7	26.0
IOM 8M-2G	8	1/8	4.0	15	16	16.2	18.6	25.7	7.1	33.2	13.8
IOM 8M-4G	8	1/4	6.4	19	16	16.2	18.6	31.0	11.2	38.5	18.0
IOM 8M-6G	8	3/8	6.4	22	16	16.2	18.6	32.3	11.2	39.8	21.8
IOM 8M-8G	8	1/2	6.4	27	16	16.2	18.6	38.1	14.2	45.6	26.0
IOM 10M-4G	10	1/4	5.9	19	19	17.2	19.5	31.8	11.2	39.4	18.0
IOM 10M-6G	10	3/8	7.9	22	19	17.2	19.5	33.0	11.2	40.6	21.8
IOM 10M-8G	10	1/2	7.9	27	19	17.2	19.5	38.9	14.2	46.5	26.0
IOM 12M-4G	12	1/4	5.9	22	22	22.8	22.0	32.5	15.7	42.6	18.0
IOM 12M-6G	12	3/8	7.9	22	22	22.8	22.0	33.0	11.2	43.1	21.8
IOM 12M-8G	12	1/2	9.5	27	22	22.8	22.0	38.9	14.2	49.0	26.0
IOM 12M-12G	12	3/4	9.5	35	22	22.8	22.0	42.7	14.2	52.8	32.0
IOM 16M-6G	16	3/8	7.9	24	25	24.4	22.0	33.8	15.7	43.9	21.8
IOM 16M-8G	16	1/2	11.9	27	25	24.4	22.0	38.9	14.2	49.0	26.0
IOM 18M-8G	18	1/2	11.9	27	30	24.4	22.0	38.9	14.2	49.0	26.0
IOM 18M-12G	18	3/4	15.1	35	30	24.4	22.0	42.7	15.7	52.8	32.0
IOM 20M-8G	20	1/2	11.9	30	32	26.0	22.0	40.4	14.2	50.5	26.0
IOM 20M-12G	20	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
IOM 22M-12G	22	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
IOM 22M-16G	22	1	18.3	41	32	26.0	22.0	45.2	18.3	55.3	39.0
IOM 25M-12G	25	3/4	15.9	35	38	31.3	26.5	45.2	15.7	57.5	32.0
IOM 25M-16G	25	1	19.8	41	38	31.3	26.5	47.8	18.3	60.1	39.0

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

IBMC Bulkhead Male Connector



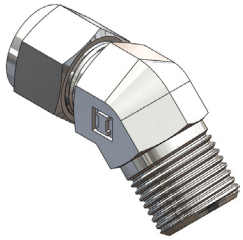


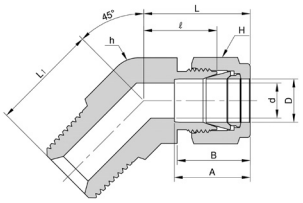
Connector Fractional Tube To Female NPT Thread

Part No.	Tube O.D. D		T* NPT	d min.	Width Across Flat						A	ℓ	ℓ1	L	L1	Panel Hole Drill Size	Panel Max Thickness
					h		h1		H								
	inch	mm			inch	mm	inch	mm	inch	mm							
IBMC 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
IBMC 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
IBMC 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
IBMC 4-6N	1/4	6.35	3/8	4.8	3/4	19.05	5/8	15.87	9/16	14.28	15.24	45.97	26.16	53.34	33.52	11.50	10.16
IBMC 4-8N	1/4	6.35	1/2	4.8	7/8	22.22	5/8	15.87	9/16	14.28	15.24	53.08	26.16	60.45	33.52	11.50	10.16
IBMC 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
IBMC 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
IBMC 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
IBMC 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
IBMC 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
IBMC 10-6N	5/8	15.87	3/8	7.93	1-1/16	26.98	1-1/16	26.98	1	25.4	24.38	54.52	32.51	64.68	42.67	22.62	12.70
IBMC 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
IBMC 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

∗ISO Tapered Thread, put "R" digit at the last of part number.

IME 45D 45° Male Elbow



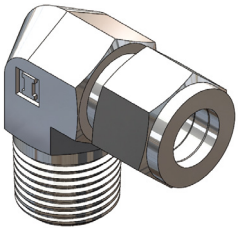


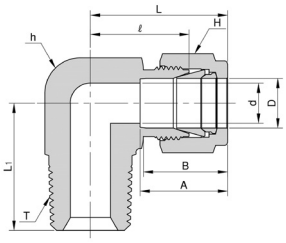
Connector Fractional Tube To Female NPT Thread

Part No.	Tube O.D. D		T* NPT	d min.	Width Across Flat				A	B	ℓ	L	L1
					h		H						
	inch	mm			inch	mm	inch	mm					
IME45D 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
IME45D 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
IME45D 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
IME45D 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
IME45D 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
IME45D 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
IME45D 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
IME45D 12-12N	3/4	19.05	3/4	15.74	1-1/8	28.58	1-1/8	28.58	24.38	21.84	23.87	34.03	30.98
IME45D 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

∗ISO Tapered Thread, put "R" digit at the last of part number.

IME Male Elbow





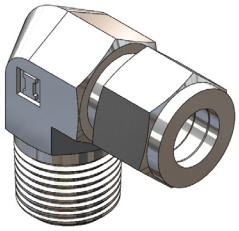
Connector Fractional Tube To Female NPT Thread

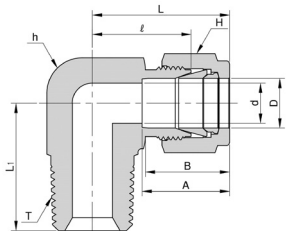
Part No.	Tube O.D. D		T* NPT	d min.	Width Across Flat				A	B	ℓ	L	L_1
					h		H						
	inch	mm			inch	mm	inch	mm					
IME 1-1N	1/16	1.59	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
IME 1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
IME 2-1N	1/8	3.17	1/16	2.28	7/16	11.11	7/16	11.11	12.70	15.24	17.02	23.63	17.78
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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	26.20
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 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
IME 24-24N	1-1/2	38.10	1-1/2	33.90	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97	60.45
IME 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

*ISO Tapered Thread, put "R" digit at the last of part number.

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

IME Male Elbow



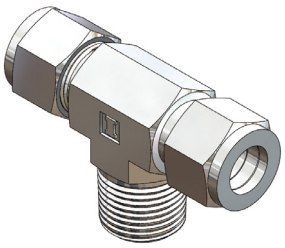


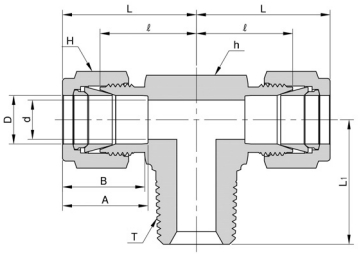
Connector Metric Tube To Female NPT Thread

Part No.	Tube O.D. D	T* PT	d min.	Width Across Flat h	Width Across Flat H	A	B	ℓ	L	L_1
IME 3M-2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
IME 3M-4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
IME 4M-2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
IME 4M-4R	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
IME 6M-2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
IME 6M-4R	6	1/4	4.8	12.7	14	15.3	17.7	19.6	27.0	23.4
IME 6M-6R	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
IME 6M-8R	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
IME 8M-2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
IME 8M-4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
IME 8M-6R	8	3/8	6.4	17.5	16	16.2	18.6	23.1	30.6	26.2
IME 8M-8R	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
IME 10M-2R	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
IME 10M-4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	26.2
IME 10M-6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	26.2
IME 10M-8R	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
IME 12M-2R	12	1/8	4.8	20.6	22	22.8	22.0	25.9	36.0	23.6
IME 12M-4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
IME 12M-6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
IME 12M-8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
IME 12M-12R	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
IME 16M-6R	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
IME 16M-8R	16	1/2	11.9	23.81	25	24.4	22.0	27.9	38.0	35.1
IME 16M-12R	16	3/4	12.7	23.81	25	24.4	22.0	29.7	39.8	36.8
IME 18M-8R	18	1/2	11.9	27.0	30	24.4	22.0	29.7	39.8	36.8
IME 18M-12R	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
IME 20M-8R	20	1/2	11.9	34.9	32	26.0	22.0	34.5	44.6	41.7
IME 20M-12R	20	3/4	15.9	34.9	32	26.0	22.0	34.5	44.6	41.7
IME 22M-8R	22	1/2	11.9	34.9	32	26.0	22.0	32.5	42.6	39.6
IME 22M-12R	22	3/4	15.9	34.9	32	26.0	22.0	34.5	44.6	41.7
IME 22M-16R	22	1	18.3	34.9	32	26.0	22.0	34.5	44.6	46.5
IME 25M-12R	25	3/4	15.9	34.9	38	31.3	26.5	36.8	49.1	41.7
IME 25M-16R	25	1	21.8	34.9	38	31.3	26.5	36.8	49.1	46.5
IME 28M-16R	28	1	21.8	41.0	46	36.6	36.6	43.2	64.0	53.7
IME 30M-20R	30	1-1/4	26.2	46.0	50	39.6	39.2	48.3	69.9	53.1
IME 32M-20R	32	1-1/4	27.8	46.0	50	42.0	41.6	49.3	72.3	53.1
IME 38M-24R	38	1-1/2	33.7	50.8	60	49.4	47.9	56.4	84.0	60.4

*NPT Thread, put "N" digit at the last of part number.

IMBT Male Branch Tee





Connector Fractional Tube To Female NPT Thread

Part No.	Tube O.D. D		T* NPT	d min.	Width Across Flat				A	B	ℓ	L	L_1
					h		H						
	inch	mm			inch	mm	inch	mm					
IMBT 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
IMBT 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	23.36
IMBT 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
IMBT 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	19.10
IMBT 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
IMBT 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
IMBT 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	20.82
IMBT 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
IMBT 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
IMBT 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
IMBT 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
IMBT 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	28.30
IMBT 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
IMBT 10-6N	5/8	15.87	3/8	9.65	15/16	23.81	111	25.40	24.38	21.84	27.90	38.10	29.40
IMBT 10-8N	5/8	15.87	1/2	11.93	15/16	23.81	1-1/8	25.40	24.38	21.84	27.90	38.10	35.05
IMBT 12-8N	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/4	28.58	24.38	21.84	29.71	39.87	37.00
IMBT 12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/2	28.58	24.38	21.84	29.71	39.87	36.83
IMBT 16-12N	1	25.40	3/4	15.74	1-3/8	34.92	1-7/8	38.10	31.24	26.41	36.83	49.02	42.20
IMBT 16-16N	1	25.40	1	22.35	1-3/8	34.92	2-1/4	38.10	31.24	26.41	36.83	49.02	46.70

* ISO Tapered Thread, put "R" digit at the last of part number.

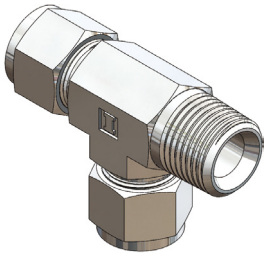
Connector Metric Tube To Female ISO Tapered Thread

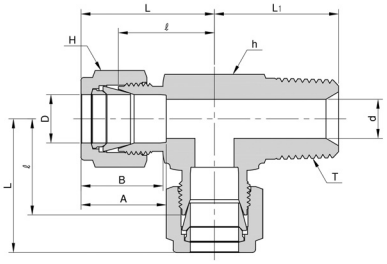
Part No.	Tube O.D. D	T* PT	d min.	Width Across Flat		A	B	ℓ	L	L_1
				h	H					
IMBT 3M-2R	3	1/8	2.4	12.7	12.0	12.9	15.3	17.0	23.6	17.8
IMBT 3M-4R	3	1/4	2.4	12.7	12.0	12.9	15.3	18.0	24.6	23.4
IMBT 4M-2R	4	1/8	2.4	12.7	12.0	13.7	16.1	18.8	25.4	18.8
IMBT 6M-2R	6	1/8	4.8	12.7	14.0	15.3	17.7	19.6	27.0	18.8
IMBT 6M-4R	6	1/4	4.8	14.3	14.0	15.3	17.7	19.6	27.0	23.4
IMBT 6M-6R	6	3/8	4.8	17.5	14.0	15.3	17.7	22.4	29.8	26.2
IMBT 8M-2R	8	1/8	4.8	14.3	16.0	16.2	18.6	21.3	28.8	19.8
IMBT 8M-4R	8	1/4	6.4	14.3	16.0	16.2	18.6	21.3	28.8	24.4
IMBT 8M-6R	8	3/8	6.4	17.5	16.0	16.2	18.6	23.1	30.6	26.2
IMBT 10M-4R	10	1/4	7.1	17.5	19.0	17.2	19.5	23.9	31.5	28.2
IMBT 10M-6R	10	3/8	7.9	17.5	19.0	17.2	19.5	23.9	31.5	28.2
IMBT 12M-4R	12	1/4	7.1	20.6	22.0	22.8	22.0	25.9	36.0	28.2
IMBT 12M-6R	12	3/8	9.5	20.6	22.0	22.8	22.0	25.9	36.0	28.2
IMBT 12M-8R	12	1/2	9.5	20.6	22.0	22.8	22.0	25.9	36.0	33.0
IMBT 16M-6R	16	3/8	9.5	25.4	25.0	24.4	22.0	27.9	38.0	30.2
IMBT 16M-8R	16	1/2	11.9	25.4	25.0	24.4	22.0	27.9	38.0	35.1
IMBT 20M-8R	20	1/2	11.9	34.9	32.0	26.0	22.0	34.5	44.6	41.7
IMBT 20M-12R	20	3/4	15.9	34.9	32.0	26.0	22.0	34.5	44.6	41.7
IMBT 25M-12R	25	3/4	15.9	34.9	38.0	31.3	26.5	36.8	49.1	41.7
IMBT 25M-16R	25	1	21.8	34.9	38.0	31.3	26.5	36.8	49.1	46.5

* NPT Thread, put "N" digit at the last of part number.

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

IMRT Male Run Tee





Connector Fractional Tube To Female NPT Thread

Part No.	Tube O.D. D		T* NPT	d min.	Width Across Flat h		Width Across Flat H		A	B	ℓ	L	L_1
	inch	mm			inch	mm	inch	mm					
IMRT 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
IMRT 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	23.36
IMRT 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
IMRT 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	19.10
IMRT 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
IMRT 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
IMRT 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	20.82
IMRT 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
IMRT 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
IMRT 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
IMRT 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
IMRT 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	28.30
IMRT 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
IMRT 10-6N	5/8	15.87	3/8	9.65	15/16	23.81	111	25.40	24.38	21.84	27.90	38.10	29.40
IMRT 10-8N	5/8	15.87	1/2	11.93	15/16	23.81	1-1/8	25.40	24.38	21.84	27.90	38.10	35.05
IMRT 12-8N	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/4	28.58	24.38	21.84	29.71	39.87	37.00
IMRT 12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/2	28.58	24.38	21.84	29.71	39.87	36.83

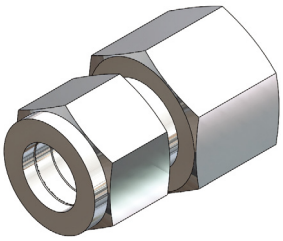
* ISO Tapered Thread, put "R" digit at the last of part number.

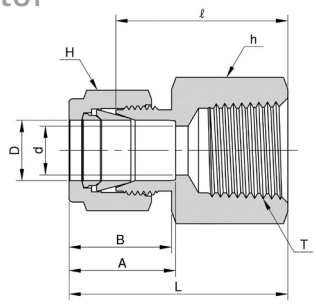
Connector Metric Tube To Female ISO Tapered Thread

Part No.	Tube O.D. D	T* PT	d min.	Width Across Flat h		A	B	ℓ	L	L_1
IMRT 3M-2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
IMRT 3M-4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
IMRT 4M-2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
IMRT 6M-2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
IMRT 6M-4R	6	1/4	4.8	14.3	14	15.3	17.7	19.6	27.0	23.4
IMRT 6M-6R	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
IMRT 8M-2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
IMRT 8M-4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
IMRT 8M-6R	8	3/8	6.4	17.5	16	16.2	18.6	23.1	30.6	26.2
IMRT 10M-4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	28.2
IMRT 10M-6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	28.2
IMRT 12M-4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
IMRT 12M-6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
IMRT 12M-8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
IMRT 16M-6R	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
IMRT 16M-8R	16	1/2	11.9	25.4	25	24.4	22.0	27.9	38.0	35.1
IMRT 20M-8R	20	1/2	11.9	34.92	32	26.0	22.0	34.5	44.6	41.7
IMRT 20M-12R	20	3/4	15.9	34.92	32	26.0	22.0	34.5	44.6	41.7
IMRT 25M-12R	25	3/4	15.9	34.92	38	31.3	26.5	36.8	49.1	41.7
IMRT 25M-16R	25	1	21.8	34.92	38	31.3	26.5	36.8	49.1	46.5

* NPT Thread, put "N" digit at the last of part number.

IFC Female Connector





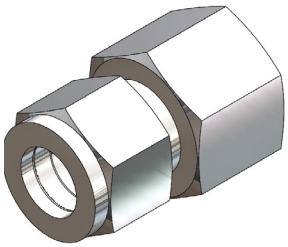
Connector Fractional Tube To Male NPT Thread

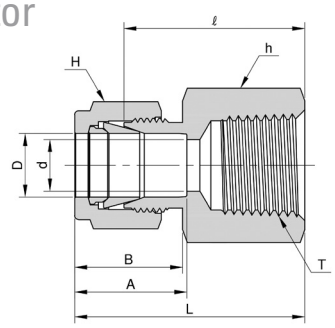
Part No.	Tube O.D. D		T* NPT	d min.	Width Across Flat				A	B	ℓ	L
					h		H					
	inch	mm			inch	mm	inch	mm				
IFC 1-1N	1/16	1.58	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	19.81	23.62
IFC 1-2N	1/16	1.58	1/8	1.27	9/16	14.28	5/16	7.93	8.63	10.92	20.57	24.38
IFC 2-2N	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	22.09	28.70
IFC 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
IFC 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
IFC 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
IFC 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
IFC 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
IFC 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
IFC 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
IFC 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
IFC 6-2N	3/8	9.52	1/8	7.11	5/8	15.87	11/16	17.46	16.76	19.30	25.40	32.76
IFC 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
IFC 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
IFC 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
IFC 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	47.75
IFC 8-4N	1/2	12.70	1/4	10.41	13/16	20.63	7/8	22.22	22.86	21.84	30.22	40.38
IFC 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
IFC 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
IFC 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
IFC 10-6N	5/8	15.87	3/8	12.70	15/16	23.80	1	25.40	24.38	21.84	31.75	41.91
IFC 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
IFC 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
IFC 12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	36.57	46.73
IFC 12-12N	3/4	19.05	3/4	15.74	1-5/16	33.33	1-1/8	28.57	24.38	21.84	38.10	48.26
IFC 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
IFC 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
IFC 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
IFC 20-20N	1-1/4	31.75	1-1/4	27.68	2-1/8	53.97	1-7/8	47.62	41.14	38.86	52.57	74.67
IFC 24-24N	1-1/2	38.10	1-1/2	34.03	2-3/8	60.32	2-1/4	57.15	50.03	45.21	56.13	83.31
IFC 32-32N	2	50.80	2	45.97	2-7/8	70.03	3	76.20	67.56	62.73	64.26	101.60

* ISO Tapered Thread, put "R" digit at the last of part number.

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

IFC Female Connector



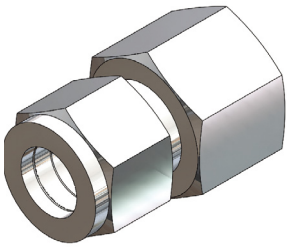


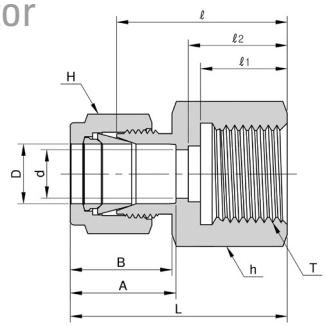
Connector Metric Tube To Female ISO Tapered Thread

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

*NPT Thread, put "N" digit at the last of part number.

IGC Gauge Connector





Connector Fractional Tube To ISO Parallel Thread (Gauge)

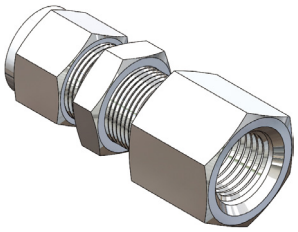
Part No.	Tube O.D. D		T G(PF)	d min.	d_1	Width Across Flat				A	B	ℓ	$ℓ_1$	$ℓ_2$	L
						h		H							
	inch	mm				inch	mm	inch	mm						
IGC 2-4G	1/8	3.17	1/4	2.4	5.5	3/4	19.05	7/16	11.11	12.70	15.24	28.70	13.00	-	35.31
IGC 4-2G	1/4	6.35	1/8	4.82	-	9/16	14.28	9/16	14.28	15.24	17.78	26.30	12.00	-	33.55
IGC 4-4G	1/4	6.35	1/4	4.82	5.58	3/4	19.05	9/16	14.28	15.24	17.78	30.22	13.00	17.00	37.59
IGC 4-6G	1/4	6.35	3/8	4.82	6.60	15/16	24.81	9/16	14.28	15.24	17.78	30.22	14.22	20.30	37.59
IGC 4-8G	1/4	6.35	1/2	4.82	6.60	11/16	26.98	9/16	14.28	15.24	17.78	30.07	18.80	24.90	43.43
IGC 5-4G	5/16	7.93	1/4	5.58	-	3/4	19.05	5/8	15.87	16.25	18.54	30.98	13.00	-	38.35
IGC 5-8G	5/16	7.93	1/2	7.11	-	1-1/16	26.98	5/8	15.87	16.25	18.54	33.02	18.80	-	40.38
IGC 6-4G	3/8	9.52	1/8	5.58	-	3/4	19.05	11/16	17.46	16.76	19.30	31.75	12.95	-	39.12
IGC 6-6G	3/8	9.52	3/8	6.60	-	15/16	24.81	11/16	17.46	16.76	19.30	31.24	14.22	-	38.61
IGC 6-8G	3/8	9.52	1/2	7.11	-	1-1/16	26.98	11/16	17.46	16.76	19.30	34.54	18.80	-	41.91
IGC 8-4G	1/2	12.70	1/4	5.5	-	7/8	22.22	7/8	22.22	22.86	21.84	31.80	13.00	-	41.95
IGC 8-6G	1/2	12.70	3/8	6.60	-	15/16	23.81	7/8	22.22	22.86	21.84	34.29	14.24	-	44.45
IGC 8-8G	1/2	12.70	1/2	7.11	7.11	1-1/16	26.98	7/8	22.22	22.86	21.84	38.10	18.80	-	48.26

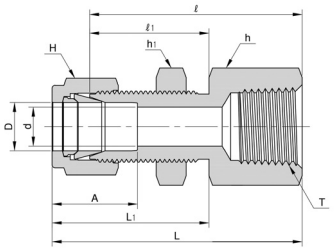
Connector Metric Tube To ISO Parallel Thread (Gauge)

Part No.	Tube O.D. D	T G(PF)	d min.	d_1	Width Across Flat		A	B	ℓ	$ℓ_1$	$ℓ_2$	L
					h	H						
IGC 3M-4G	3	1/4	2.4	5.5	19	12	12.9	15.3	28.7	13	17	35.3
IGC 6M-4G	6	1/4	4.8	5.5	19	14	15.3	17.7	30.2	13	17	37.6
IGC 6M-6G	6	3/8	4.8	6.5	24	14	15.3	17.7	30.2	14	20	37.6
IGC 6M-8G	6	1/2	4.8	7.0	27	14	15.3	17.7	36.3	19	25	43.0
IGC 8M-4G	8	1/4	5.5	-	19	16	16.2	18.6	31.0	13	-	38.5
IGC 8M-6G	8	3/8	6.5	-	24	16	16.2	18.6	28.7	14	-	36.2
IGC 8M-8G	8	1/2	7.0	-	27	16	16.2	18.6	33.0	19	-	40.5
IGC 10M-4G	10	1/4	5.5	-	19	19	17.2	19.5	31.8	13	-	39.4
IGC 10M-6G	10	3/8	6.5	-	24	19	17.2	19.5	31.2	14	-	38.8
IGC 10M-8G	10	1/2	7.0	-	27	19	17.2	19.5	34.5	19	-	41.4
IGC 12M-4G	12	1/4	5.5	-	22	22	22.8	22.0	31.8	13	-	41.9
IGC 12M-6G	12	3/8	6.5	-	24	22	22.8	22.0	34.3	14	-	44.4
IGC 12M-8G	12	1/2	7.0	-	27	22	22.8	22.0	38.1	19	-	48.2
IGC 20M-8G	20	1/2	7.0	-	30	32	26.0	22.0	44.2	19	-	54.3
IGC 22M-8G	22	1/2	7.0	-	30	32	26.0	22.0	44.2	19	-	54.3

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

IBFC Bulkhead Female Connector





Connector Fractional Tube To Male NPT Thread

Part No.	Tube O.D. D		T* NPT	d min.	Width Across Flat						A	ℓ	ℓ_1	L	L_1	Panel Hole Drill Size	Panel Max. Thickness
					h		h_1		H								
	inch	mm			inch	mm	inch	mm	inch	mm							
IBFC 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	8.38	12.70
IBFC 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
IBFC 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
IBFC 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
IBFC 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
IBFC 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
IBFC 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
IBFC 16-16N	1	25.40	1	22.35	1-5/8	41.27	1-5/8	41.27	1-1/2	38.01	31.24	81.04	45.21	93.23	57.40	33.73	19.05
IBFC 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
IBFC 24-24N	1-1/2	38.10	1-1/2	33.90	1-1/4	57.15	2-1/4	57-15	2-1/4	57-15	50.03	87.39	49.27	114.57	76.45	49.61	19.05
IBFC 32-32N	2	50.80	2	45.97	1-3/4	69.85	2-3/4	76.20	3	76..20	67.56	95.30	56.38	132.63	93.71	57.94	19.05

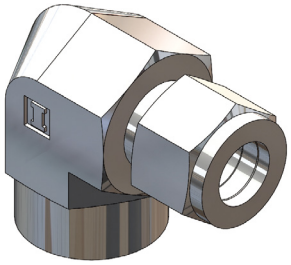
∗ISO Tapered Thread, put "R" digit at the last of part number.

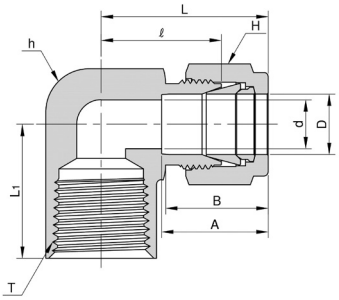
Connector Metric Tube To Female ISO Tapered Thread

Part No.	Tube O.D. D	T* PT	d min.	Width Across Flat			A	ℓ	ℓ_1	L	L_2	Panel Hole Drill Size	Panel Max. Thickness
				h	h_1	H							
IBFC 6M-2R	6	1/8	4.8	15.8	15.8	14	15.3	39.6	27.7	46.90	35.00	11.5	10.2
IBFC 6M-4R	6	1/4	4.8	19.0	16.0	14	15.3	44.4	26.2	51.80	33.60	11.5	10.2
IBFC 8M-4R	8	1/4	6.3	19.0	17.4	16	16.2	46.7	28.4	53.85	35.55	13.1	11.2
IBFC 12M-8R	12	1/2	9.5	27.0	24.0	22	22.8	56.4	31.8	66.50	41.90	19.5	12.7

∗NPT Thread, put "N" digit at the last of part number.

IFE Female Elbow





Connector Fractional Tube To Male NPT Thread

Part No.	Tube O.D. D		T G(PF)	d min.	Width Across Flat				A	B	ℓ	ℓ_1	L
					h		H						
	inch	mm			inch	mm	inch	mm					
IFE 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
IFE 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
IFE 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
IFE 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
IFE 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
IFE 4-6N	1/4	6.35	3/8	4.82	13/16	20.63	9/16	14.28	15.24	17.78	24.38	31.75	22.35
IFE 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
IFE 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
IFE 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
IFE 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
IFE 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
IFE 6-6N	3/8	9.52	3/8	7.11	13/16	20.63	11/16	17.46	16.76	19.30	25.90	33.27	22.35
IFE 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
IFE 8-4N	1/2	12.70	1/4	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	22.35
IFE 8-6N	1/2	12.70	3/8	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	22.35
IFE 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
IFE 10-6N	5/8	15.87	3/8	12.70	15/16	23.80	1	25.40	24.38	21.84	27.94	38.10	22.35
IFE 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
IFE 12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	29.71	39.87	28.44
IFE 12-12N	3/4	19.05	3/4	15.74	1-3/8	34.92	1-1/8	28.57	24.38	21.84	34.54	44.70	31.75
IFE 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
IFE 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
IFE 16-16N	1	25.40	1	22.35	1-11/16	42.86	1-1/2	38.10	31.24	26.41	38.10	50.29	38.10

*ISO Tapered Thread, put "R" digit at the last of part number.

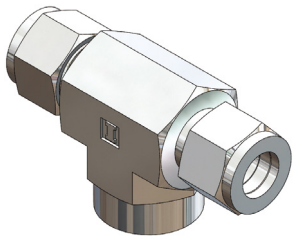
Connector Mertic Tube to Female ISO Tapered Thread

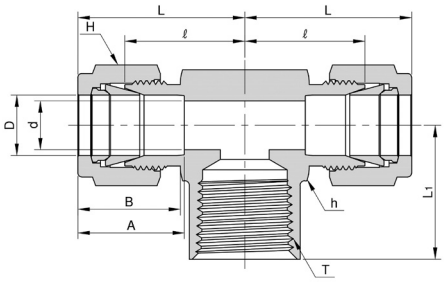
Part No.	Tube O.D. D	T* PT	d min.	Width Across Flat		A	B	ℓ	L	L_1
				h	H					
IFE 6M-2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	19.00
IFE 6M-4R	6	1/4	4.8	17.5	14	15.3	17.7	22.4	29.8	22.40
IFE 6M-6R	6	3/8	4.8	20.6	14	15.3	17.7	24.4	31.7	22.40
IFE 6M-8R	6	1/2	4.8	25.4	14	15.3	17.7	27.2	34.6	28.40
IFE 8M-4R	8	1/4	6.4	17.5	16	16.2	18.6	23.1	30.6	22.40
IFE 8M-8R	8	1/2	6.4	20.6	16	16.2	18.6	28.0	35.2	28.40
IFE 10M-2R	10	1/8	7.9	17.5	19	17.2	19.5	23.9	31.5	19.00
IFE 10M-4R	10	1/4	7.9	17.5	19	17.2	19.5	25.9	33.5	22.40
IFE 10M-6R	10	3/8	7.9	20.6	19	17.2	19.5	25.9	33.5	22.40
IFE 10M-8R	10	1/2	7.9	25.4	19	17.2	19.5	28.7	36.1	28.40
IFE 12M-4R	12	1/4	9.5	20.6	22	22.8	22.0	25.9	36.0	22.40
IFE 12M-6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	22.40
IFE 12M-8R	12	1/2	9.5	25.4	22	22.8	22.0	28.7	38.8	28.40
IFE 16M-8R	16	1/2	12.7	27.0	25	24.4	22.0	29.7	39.5	28.40

*NPT Thread, put "N" digit at the last of part number.

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

IFBT Female Branch Tee





Connector Fractional Tube To Male NPT Thread

Part No.	Tube O.D. D		T* NPT	d min.	Width Across Flat				A	B	ℓ	L	L_1
					h		H						
	inch	mm			inch	mm	inch	mm					
IFBT 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
IFBT 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
IFBT 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
IFBT 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
IFBT 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
IFBT 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
IFBT 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
IFBT 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
IFBT 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
IFBT 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
IFBT 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
IFBT 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
IFBT 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
IFBT 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
IFBT 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
IFBT 10-8N	5/8	15.87	1/2	12.70	1	25.40	1	25.40	24.38	21.84	28.70	38.86	28.44
IFBT 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
IFBT 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
IFBT 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
IFBT 16-16N	1	25.40	1	22.35	1-11/16	42.86	1-1/2	38.10	31.24	26.41	41.40	53.59	38.10

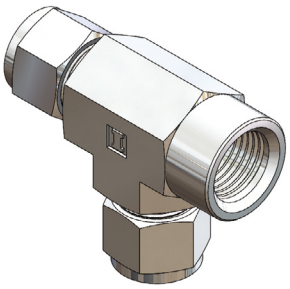
*ISO Tapered Thread, put "R" digit at the last of part number.

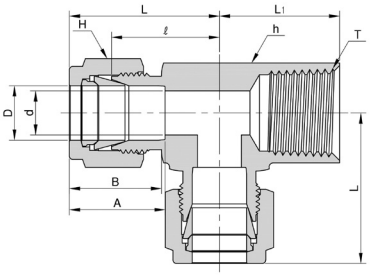
Connector Metric Tube To Female ISO Tapered Thread

Part No.	Tube O.D. D	T* R(PT)	d min.	Width Across Flat		A	B	ℓ	L	L_1
				h	H					
IFBT 6M-2R	6	1/8	4.8	12.70	14	15.3	17.7	19.6	27.0	19.00
IFBT 6M-4R	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
IFBT 6M-6R	6	3/8	4.8	20.64	14	15.3	17.7	24.4	31.7	22.40
IFBT 6M-8R	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.5	28.40
IFBT 8M-2R	8	1/8	6.4	15.87	16	16.2	18.6	23.1	29.9	19.00
IFBT 8M-4R	8	1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
IFBT 8M-6R	8	3/8	6.4	20.64	16	16.2	18.6	25.2	32.4	22.40
IFBT 8M-8R	8	1/2	6.4	25.40	16	16.2	18.6	28.0	35.2	28.40
IFBT 10M-2R	10	1/8	7.9	17.50	19	17.2	19.5	23.9	31.5	19.00
IFBT 10M-4R	10	1/4	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
IFBT 10M-6R	10	3/8	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
IFBT 10M-8R	10	1/2	9.5	25.40	19	17.2	19.5	26.2	33.6	22.40
IFBT 12M-4R	12	1/4	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
IFBT 12M-6R	12	3/8	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
IFBT 12M-8R	12	1/2	9.5	25.40	22	22.8	22.0	29.7	40.0	28.40
IFBT 16M-8R	16	1/2	12.7	25.40	25	24.4	22.0	29.7	40.0	28.70

*NPT Thread, put "N" digit at the last of part number.

IFRT Female Run Tee





Connector Fractional Tube To Male NPT Thread

Part No.	Tube O.D. D		T G(PF)	d min.	Width Across Flat				A	B	ℓ	L	L_1
					h		H						
	inch	mm			inch	mm	inch	mm					
IFRT 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
IFRT 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
IFRT 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
IFRT 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
IFRT 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
IFRT 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
IFRT 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
IFRT 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
IFRT 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
IFRT 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
IFRT 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
IFRT 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
IFRT 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
IFRT 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
IFRT 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
IFRT 10-8N	5/8	15.87	1/2	12.70	1	25.40	1	25.40	24.38	21.84	28.70	38.86	28.44
IFRT 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
IFRT 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
IFRT 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
IFRT 16-16N	1	25.40	1	22.35	1-11/16	42.86	1-1/2	38.10	31.24	26.41	41.40	53.59	38.10

*ISO Tapered Thread, put "R" digit at the last of part number.

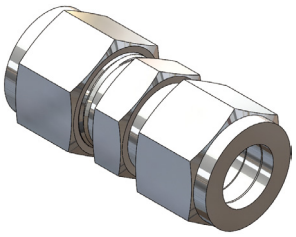
Connector Metric Tube To Female ISO Tapered Thread

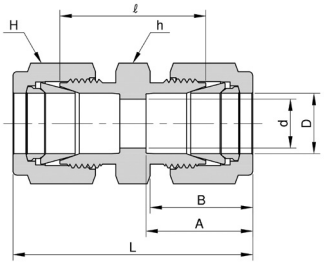
Part No.	Tube O.D. D	T* R(PT)	d min.	Width Across Flat		A	B	ℓ	L	L_1
				h	H					
IFRT 6M-2R	6	1/8	4.8	12.70	14	15.3	17.7	19.6	27.0	19.00
IFRT 6M-4R	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
IFRT 6M-6R	6	3/8	4.8	20.64	14	15.3	17.7	24.4	31.7	22.40
IFRT 6M-8R	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.5	28.40
IFRT 8M-2R	8	1/8	6.4	15.87	16	16.2	18.6	23.1	29.9	19.00
IFRT 8M-4R	8	1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
IFRT 8M-6R	8	3/8	6.4	20.64	16	16.2	18.6	25.2	32.4	22.40
IFRT 8M-8R	8	1/2	6.4	25.40	16	16.2	18.6	28.0	35.2	28.40
IFRT 10M-2R	10	1/8	7.9	17.50	19	17.2	19.5	23.9	31.5	19.00
IFRT 10M-4R	10	1/4	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
IFRT 10M-6R	10	3/8	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
IFRT 10M-8R	10	1/2	9.5	25.40	19	17.2	19.5	26.2	33.6	22.40
IFRT 12M-4R	12	1/4	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
IFRT 12M-6R	12	3/8	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
IFRT 12M-8R	12	1/2	9.5	25.40	22	22.8	22.0	29.7	40.0	28.40
IFRT 16M-8R	16	1/2	12.7	25.40	25	24.4	22.0	29.7	40.0	28.70

*NPT Thread, put "N" digit at the last of part number.

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

IU Union





Connector Fractional Tubes

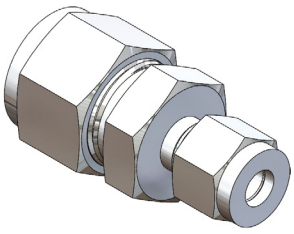
Part No.	Tube O.D. D		d min.	Width Across Flat				A	B	ℓ	L
				h		H					
	inch	mm		inch	mm	inch	mm				
IU-1	1/16	1.58	1.27	5/16	7.93	5/16	7.93	8.63	10.92	19.00	25.15
IU-2	1/8	3.17	2.28	7/16	11.11	7/16	11.11	12.7	15.24	22.35	35.56
IU-3	3/16	4.76	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.13	37.33
IU-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	26.16	40.89
IU-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	28.19	42.92
IU-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	30.22	44.95
IU-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	30.98	51.30
IU-10	5/8	15.87	12.70	15/16	23.81	1	25.40	24.38	21.84	31.75	52.07
IU-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
IU-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
IU-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	36.41	40.38	64.77
IU-20	1-1/4	31.75	27.68	1-3/4	44.45	1-7/8	47.62	41.14	38.86	48.00	92.20
IU-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
IU-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	74.70	149.35

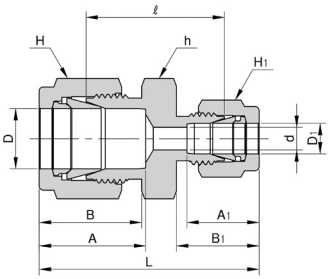
Connector Metric Tubes

Part No.	Tube O.D. D	d min.	Width Across Flat		A	B	ℓ	L
			h	H				
IU-2M	2	1.7	12	12	12.9	15.3	22.4	35.6
IU-3M	3	2.4	12	12	12.9	15.3	22.1	35.3
IU-4M	4	2.4	12	12	13.7	16.1	24.1	37.3
IU-6M	6	4.8	14	14	15.3	17.7	26.2	41.0
IU-8M	8	6.4	15	16	16.2	18.6	28.2	43.2
IU-10M	10	7.9	18	19	17.2	19.5	31.0	46.2
IU-12M	12	9.8	22	22	22.8	22.0	31.0	51.2
IU-15M	15	11.9	24	25	24.4	22.0	31.8	52.0
IU-16M	16	12.7	24	25	24.4	22.0	31.8	52.0
IU-18M	18	15.1	27	30	24.4	22.0	33.3	53.5
IU-20M	20	15.9	30	32	26.0	22.0	34.8	55.0
IU-22M	22	18.3	30	32	26.0	22.0	34.8	55.0
IU-25M	25	21.8	35	38	31.3	26.5	40.4	65.0
IU-28M	28	21.8	41	46	36.6	36.6	43.4	85.0
IU-32M	32	28.6	46	50	42.0	41.6	51.3	97.3
IU-38M	38	33.7	55	60	49.4	47.9	58.4	113.6
IU-42M	42	36.0	55	65	55.1	53.6	64.0	126.2

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

IRU Reducing Union





Connector Fractional Tubes

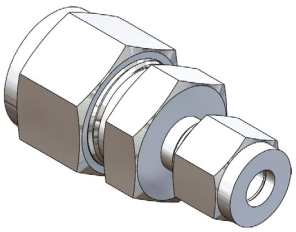
Part No.	Tube O.D. D				d min.	Width Across Flat						A	A_1	B	B_1	ℓ	L
	D		D_1			h		H		H_1							
	inch	mm	inch	mm		inch	mm	inch	mm	inch	mm						
IRU 2-1	1/8	3.16	1/16	1.58	1.27	7/16	11.11	7/16	11.11	5/16	7.93	12.70	8.63	15.24	10.92	20.60	30.91
IRU 3-1	3/16	4.76	1/16	1.58	1.27	7/16	11/11	1/2	12.70	5/16	7.93	13.71	8.63	16.00	10.92	21.84	32.25
IRU 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
IRU 4-1	1/4	6.35	1/16	1.58	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
IRU 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
IRU 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
IRU 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	39.87
IRU 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
IRU 6-1	3/8	9.52	1/16	1.58	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
IRU 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
IRU 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
IRU 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
IRU 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
IRU 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
IRU 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
IRU 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
IRU 10-8	5/8	15.87	1/2	12.7	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
IRU 12-4	3/4	19.05	1/4	6.35	4.82	1-1/16	26.98	1-1/8	28.57	9/16	14.28	24.38	15.24	21.84	17.78	31.75	49.27
IRU 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
IRU 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
IRU 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
IRU 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
IRU 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	40.38	62.73

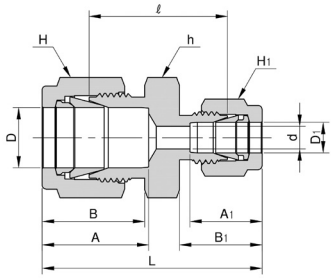
Connector Metric Tubes

Part No.	Tube O.D. D		d min.	Width Across Flat			A	A_1	B	B_1	ℓ	L
	D	D_1		h	H	H_1						
IRU 3M-2M	3	2	1.7	12	12	12	12.9	12.9	15.3	15.3	22.1	35.3
IRU 6M-2M	6	2	1.7	14	14	12	15.3	12.9	17.7	15.3	24.6	38.6
IRU 6M-3M	6	3	2.4	14	14	12	15.3	12.9	17.7	15.3	24.6	38.6
IRU 6M-4M	6	4	2.4	14	14	12	15.3	13.7	17.7	16.1	25.4	39.4
IRU 8M-6M	8	6	4.8	15	16	14	16.2	15.3	18.6	17.7	27.4	42.3
IRU 10M-6M	10	6	4.8	18	19	14	17.2	15.3	19.5	17.7	29.5	44.5
IRU 10M-8M	10	8	6.4	18	19	16	17.2	16.2	19.5	18.6	30.0	45.1
IRU 12M-6M	12	6	4.8	22	22	14	22.8	15.3	22.0	17.7	29.5	47.0
IRU 12M-8M	12	8	6.4	22	22	16	22.8	16.2	22.0	18.6	30.2	47.8
IRU 12M-10M	12	10	7.9	22	22	19	22.8	17.2	22.0	19.5	31.0	48.7
IRU 16M-10M	16	10	7.9	24	25	19	24.4	17.2	22.0	19.5	31.8	49.5
IRU 16M-12M	16	12	9.5	24	25	22	24.4	22.8	22.0	22.0	31.8	52.0
IRU 18M-12M	18	12	9.5	27	30	22	24.4	22.8	22.0	22.0	33.3	53.5
IRU 25M-18M	25	18	15.1	35	38	30	31.3	24.4	26.5	22.0	38.6	61.0
IRU 25M-20M	25	20	15.1	35	38	32	31.3	26.0	26.5	22.0	39.9	62.3

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

IRU Reducing Union

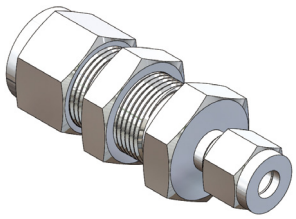


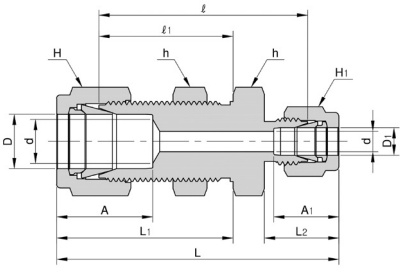


Connector Metric Tubes To Fractional Tubes

Part No.	Tube O.D. D			d min.	Width Across Flat			A	A_1	B	B_1	ℓ	L
	D	D_1			h	H	H_1						
		inch	mm										
IRU 3M-2	3	1/8	3.17	2.4	12.0	12	11.1	12.9	12.8	15.3	15.2	22.1	35.2
IRU 4M-2	4	1/8	3.17	2.4	12.0	12	11.1	13.7	12.8	16.1	15.2	23.4	36.5
IRU 4M-4	4	1/4	6.35	2.4	14.0	12	14.3	13.7	15.3	16.1	17.7	25.4	39.4
IRU 6M-2	6	1/8	3.17	2.4	14.0	14	11.1	15.3	12.8	17.7	15.2	24.6	38.5
IRU 6M-4	6	1/4	6.35	4.8	14.0	14	14.3	15.3	15.3	17.7	17.7	26.2	41.0
IRU 6M-5	6	5/16	7.93	4.8	14.0	14	15.9	15.3	16.2	17.7	18.6	27.4	42.3
IRU 8M-4	8	1/4	6.35	4.8	15.0	16	14.3	16.2	15.3	18.6	17.7	27.4	42.3
IRU 10M-2	10	1/8	3.17	2.4	18.0	19	11.1	17.2	12.8	19.5	15.2	27.7	41.8
IRU 10M-4	10	1/4	6.35	4.8	18.0	19	14.3	17.2	15.3	19.5	17.7	29.5	44.5
IRU 10M-5	10	5/16	7.93	6.4	18.0	19	15.9	17.2	16.2	19.5	18.6	30.3	45.1
IRU 10M-6	10	3/8	9.52	7.1	18.0	19	17.5	17.2	16.9	19.5	19.2	31.0	45.9
IRU 12M-5	12	5/16	7.93	6.4	22.0	22	15.9	22.8	16.2	22.0	18.6	30.2	47.8
IRU 12M-6	12	3/8	9.52	7.1	22.0	22	17.5	22.8	16.9	22.0	19.2	31.0	48.4
IRU 12M-8	12	1/2	12.70	9.5	22.0	22	22.2	22.8	22.8	22.0	22.0	31.0	51.2
IRU 15M-8	15	1/2	12.70	10.3	24.0	25	22.2	24.4	22.8	22.0	22.0	31.8	52.0
IRU 16M-10	16	5/8	15.87	12.7	24.0	25	25.4	24.4	24.4	22.0	22.0	31.8	52.0
IRU 18M-12	18	3/4	19.05	15.1	27.0	30	28.6	24.4	24.4	22.0	22.0	33.3	53.5
IRU 20M-12	20	3/4	19.05	15.9	30.0	32	28.6	26.0	24.4	22.0	22.0	34.8	54.9
IRU 20M-16	20	1	25.40	15.9	34.9	32	38.1	26.0	31.2	22.0	26.4	38.0	60.3
IRU 22M-16	22	1	25.40	15.9	34.9	32	38.1	26.0	31.2	22.0	26.4	38.2	60.3

IRBU Reducing Bulkhead Union



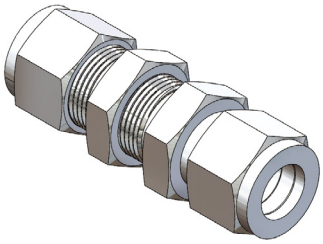


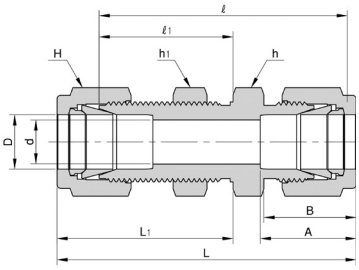
Connector Fractional Tubes

Part No.	Tube O.D. D				d min.	Width Across Flat						A	A_1	L	L_1	L	L_1	L_2	Panel Hole Drill Size	Panel Max Thickness
	D		D_1			h		H		H_1										
	inch	mm	inch	mm		inch	mm	inch	mm	inch	mm									
IRBU 4-2	1/4	6.35	1/8	3.17	2.28	5/8	15.87	9/16	14.28	7/16	11.11	15.24	12.70	41.14	26.16	55.11	33.52	15.24	11.50	10.16
IRBU 6-4	3/8	9.52	1/4	6.35	4.82	3/4	19.05	11/16	17.46	9/16	14.28	16.76	15.24	45.97	29.46	60.70	36.57	17.78	14.68	11.17
IRBU 8-4	1/2	12.70	1/4	6.35	4.82	15/16	23.80	7/8	22.22	9/16	14.28	22.86	15.24	49.27	31.75	66.80	41.91	17.78	19.44	12.70

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

IBU Bulkhead Union





Connector Fractional Tubes

Part No.	Tube O.D. D		d min.	Width Across Flat				A	B	ℓ	ℓ1	L	ℓ1	Panel Hole Drill Size	Panel Max Thickness
	D			h		H									
	inch	mm		inch	mm	inch	mm								
IBU-1	1/16	1.58	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
IBU-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
IBU-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
IBU-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
IBU-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
IBU-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
IBU-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
IBU-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
IBU-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	25.78	16.76
IBU-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
IBU-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
IBU-20	1-1/4	31.75	27.68	1-7/8	47.62	1-7/8	47.62	41.14	38.86	78.99	47.75	123.19	69.85	41.67	19.05
IBU-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
IBU-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	105.66	56.38	180.34	93.72	67.07	19.05

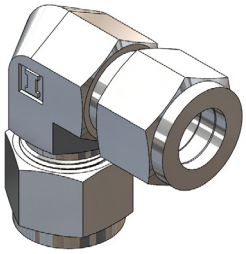
Connector Metric Tubes

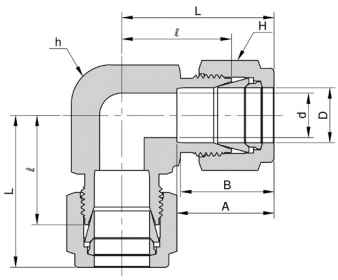
Part No.	Tube O.D. D	d min.	Width Across Flat			A	B	ℓ	ℓ1	L	L1	Panel Hole Drill Size	Panel Max Thickness
			h	h1*	H1								
IBU-3M	3	2.4	14	12.7	12	12.9	15.3	38.1	24.6	51.3	31.2	8.3	12.7
IBU - 4M	4	2.4	14	14.3	12	13.7	16.1	40.4	25.4	53.6	32.0	9.9	12.7
IBU - 6M	6	4.8	16	15.9	14	15.3	17.7	42.9	26.2	57.7	33.6	11.5	10.2
IBU - 8M	8	6.4	18	17.5	16	16.2	18.6	46.0	28.6	61.0	36.1	13.1	11.2
IBU-10M	10	7.9	22	22.0	19	17.2	19.5	48.5	29.4	63.7	37.0	16.2	11.2
IBU-12M	12	9.5	24	23.8	22	22.8	22.0	50.8	31.8	71.0	41.9	19.5	12.7
IBU-15M	15	11.9	27	27.0	25	24.4	22.0	52.3	32.5	72.5	42.6	22.8	12.7
IBU-16M	16	12.7	27	27.0	25	24.4	22.0	52.3	32.5	72.5	42.6	22.8	12.7
IBU-18M	18	15.1	30	30.0	30	24.4	22.0	58.7	37.3	78.9	47.4	26.0	16.8
IBU-20M	20	15.9	35	35.0	32	26.0	22.0	64.3	42.9	84.5	53.0	29.0	17.0
IBU-22M	22	18.3	35	35.0	32	26.0	22.0	64.3	42.9	84.5	53.0	29.0	19.1
IBU-25M	25	21.8	41.3	41.3	38	31.3	26.5	71.4	45.2	95.9	57.5	33.7	19.1
IBU-32M	32	28.6	50	50.0	50	42.0	41.6	82.3	49.5	128.3	72.5	42.5	19.0
IBU-38M	38	33.7	60	60.0	60	49.4	47.9	89.4	51.5	144.6	79.1	50.5	19.0

*h_1: Application to metric Tube bulkhead Hexagon only

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

IUE Union Elbow





Connector Fractional Tubes

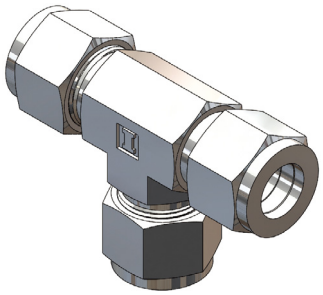
Part No.	Tube O.D. D		d min.	Width Across Flat				A	B	ℓ	L
				h		H					
	inch	mm		inch	mm	inch	mm				
IUE-1	1/16	1.58	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
IUE-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
IUE-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
IUE-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
IUE-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70
IUE-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
IUE-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06
IUE-10	5/8	15.87	12.70	15/16	23.80	1	25.40	24.38	21.84	28.70	38.80
IUE-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
IUE-14	7/8	22.22	18.28	1-3/16	30.00	1-1/4	31.75	25.90	21.84	34.54	44.70
IUE-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	26.83	49.02
IUE-20	1-1/4	31.75	27.68	1-11/16	42.86	1-7/8	47.62	41.14	28.86	44.50	66.54
IUE-24	1-1/2	38.10	34.03	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97
IUE-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18

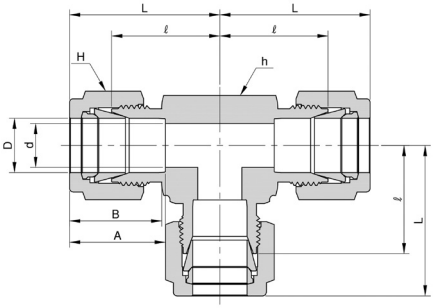
Connector Metric Tubes

Part No.	Tube O.D. D	d min.	Width Across Flat		A	B	ℓ	L
			h	H				
IUE-2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
IUE-3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
IUE-4M	4	2.4	12.7	12	13.7	16.4	18.8	25.4
IUE-6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
IUE-8M	8	6.4	14.3	16	16.2	18.6	21.9	28.8
IUE-10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
IUE-12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
IUE-15M	15	11.9	23.8	25	24.4	22.0	28.7	38.8
IUE-16M	16	12.7	23.8	25	24.4	22.0	28.7	38.8
IUE-18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
IUE-20M	20	15.9	34.9	32	26.0	22.0	32.5	42.6
IUE-22M	22	18.3	34.9	32	26.0	22.0	32.5	42.6
IUE-25M	25	21.8	34.9	38	31.3	22.0	36.8	49.1
IUE-28M	28	21.8	41.0	46	36.6	36.6	43.2	64.0
IUE-32M	32	28.6	46.0	50	42.0	41.6	49.3	72.3
IUE-38M	38	33.7	55.0	60	49.4	47.9	56.4	84.0
IUE-42M	42	36.0	55.0	65	55.1	53.6	58.0	89.1

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

:: IUT Union Tee





Connector Fractional Tubes

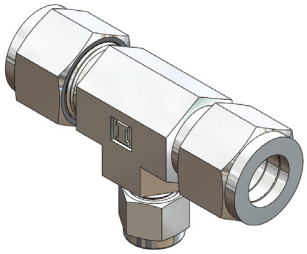
Part No.	Tube O.D. D		d min.	Width Across Flat				A	B	ℓ	L
				h		H					
	inch	mm		inch	mm	inch	mm				
IUT-1	1/16	1.58	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.00	17.88
IUT-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
IUT-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
IUT-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
IUT-5	5/16	7.93	6.35	5/8	15.87	5/8	15.87	16.25	18.54	21.33	28.70
IUT-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
IUT-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06
IUT-10	5/8	15.87	12.70	15/16	23.80	1	25.40	24.38	21.84	28.70	38.80
IUT-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
IUT-14	7/8	22.22	18.28	1-3/16	30.00	1-1/4	31.75	25.90	21.84	34.54	44.70
IUT-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02
IUT-20	1-1/4	31.75	27.68	1-11/16	42.86	1-7/8	47.62	41.14	38.86	44.50	66.54
IUT-24	1-1/2	38.10	34.03	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97
IUT-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18

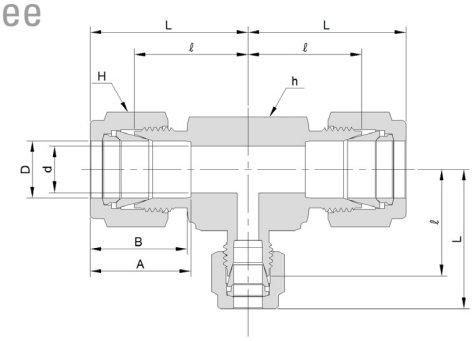
Connector Metric Tubes

Part No.	Tube O.D. D	d min.	Width Across Flat		A	B	ℓ	L
			h	H				
IUT-2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
IUT-3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
IUT-4M	4	2.4	12.7	12	13.7	16.1	18.8	25.4
IUT-6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
IUT-8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8
IUT-10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
IUT-12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
IUT-15M	15	11.9	23.8	25	24.4	22.0	28.7	38.8
IUT-16M	16	12.7	23.8	25	24.4	22.0	28.7	38.8
IUT-18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
IUT-20M	20	15.9	30.0	32	26.0	22.0	32.5	42.6
IUT-22M	22	18.3	30.0	32	26.0	22.0	32.5	42.6
IUT-25M	25	21.8	34.9	38	31.3	26.5	36.8	49.1
IUT-28M	28	21.8	41.0	46	36.6	36.6	43.2	64.0
IUT-32M	32	28.6	46.0	50	42.0	41.6	49.3	72.3
IUT-38M	38	33.7	55.0	60	49.4	47.9	56.4	84.0
IUT-42M	42	36.0	55.0	65	55.1	53.6	58.0	89.1

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IRT Reducing Union Tee



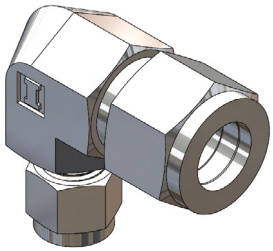


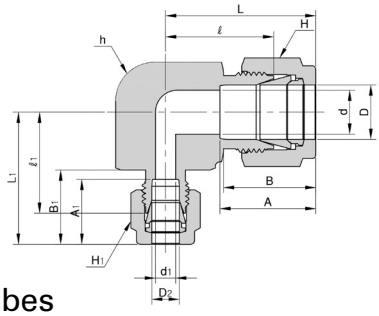
Connector Fractional Tubes

Part No.	Tube O.D. D						d min.	Width Across Flat								ℓ	ℓ_1	ℓ_2	L	L_1	L_2
	D		D_1		D_2			h		H		H_1		H_2							
	inch	mm	inch	mm	inch	mm		inch	mm	inch	mm	inch	mm	inch	mm						
IRT 4-4-2	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	17.9	26.91	26.91	24.50
IRT 4-4-6	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
IRT 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
IRT 6-6-4	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
IRT 6-6-8	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
IRT 8-4-4	1/2	12.70	1/4	6.35	1/4	6.35	4.82	13/16	20.64	7/8	22.22	9/16	14.28	9/16	14.28	25.90	24.40	24.40	36.06	31.76	31.76
IRT 8-4-8	1/2	12.70	1/4	6.35	1/2	12.70	7.11	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
IRT 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
IRT 8-8-4	1/2	12.70	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
IRT 8-8-6	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
IRT 10-10-6	5/8	15.87	5/8	15.87	3/8	9.52	7.11	15/16	23.81	1	25.4	1	25.40	11/16	17.46	28.70	28.70	28.70	38.86	38.86	36.06
IRT 12-8-8	3/4	19.05	1/2	12.70	1/2	12.70	10.41	1-1/16	26.98	1-1/8	28.57	7/8	22.22	7/8	22.22	29.71	29.71	29.71	39.87	39.87	38.37
IRT 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	28.57	7/8	22.22	1-1/8	28.57	29.71	29.71	29.71	39.87	39.87	39.87
IRT 12-12-4	3/4	19.05	3/4	19.05	1/4	6.35	4.82	1-1/16	26.98	1-1/8	28.57	1-1/8	28.57	9/16	14.28	29.71	29.71	28.21	39.87	39.87	35.57
IRT 12-12-6	3/4	19.05	3/4	19.05	3/8	9.52	7.11	1-1/16	26.98	1-1/8	28.57	1-1/8	28.57	11/16	17.46	29.71	29.71	29.71	39.87	39.87	35.57
IRT 12-12-8	3/4	19.05	3/4	19.05	1/2	12.70	10.41	1-1/16	26.98	1-1/8	28.57	1-1/8	28.57	7/8	22.22	29.71	29.71	29.71	39.87	39.87	38.37
IRT 12-12-16	3/4	19.05	3/4	19.05	1	25.40	15.74	1-3/8	34.92	1-1/8	28.57	1-1/8	28.57	1-1/2	38.10	34.43	34.43	36.83	49.02	49.02	45.70
IRT 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	28.57	1-1/8	28.57	36.83	35.54	35.54	49.02	45.70	45.70
IRT 16-16-4	1	25.40	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
IRT 16-16-6	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	34.54	49.02	49.02	41.90
IRT 16-16-8	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	34.54	49.02	49.02	44.70
IRT 16-16-12	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	28.57	36.83	36.83	35.54	49.02	49.02	45.70
IRT 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	28.57	1-1/8	28.57	44.45	39.41	39.41	66.55	49.57	49.57
IRT 20-20-12	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	28.57	44.45	44.45	39.41	66.55	66.55	49.57
IRT 24-20-20	1-1/2	38.10	1-1/4	31.75	1-1/4	31.75	27.69	2	50.80	2-1/4	57.15	1-7/8	47.63	1-7/8	47.63	50.80	49.62	49.62	77.97	71.72	71.72
IRT 24-24-8	1-1/2	38.10	1-1/2	38.10	1/2	12.70	10.41	2	50.80	2-1/4	57.15	2-1/4	57.15	7/8	22.22	50.80	50.80	44.58	77.97	77.97	54.74
IRT 24-24-12	1-1/2	38.10	1-1/2	38.10	3/4	19.05	15.74	2	50.80	2-1/4	57.15	2-1/4	57.15	1-1/8	28.57	50.80	50.80	44.58	77.97	77.97	54.74
IRT 24-24-16	1-1/2	38.10	1-1/2	38.10	1	25.40	22.35	2	50.80	2-1/4	57.15	2-1/4	57.15	1-1/2	38.10	50.80	50.80	47.75	77.97	77.97	59.94

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

IRUE Reducing Union Elbow

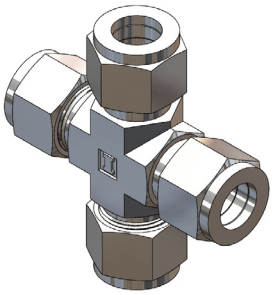


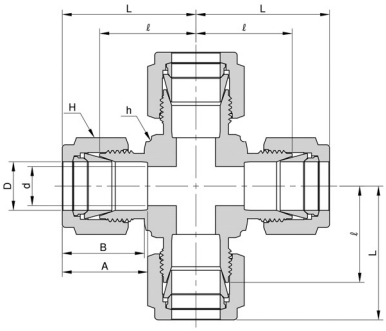


Connector Fractional Tubes

Part No.	Tube O.D. D		d min.	d min.	Width Across Flat						A	A_1	B	B_1	ℓ_1	ℓ_2	L_1	L_2
	D		D_1		h		H		H_1									
	inch	mm	inch	mm			inch	mm	inch	mm	inch	mm																
IRUE 4-2	1/4	6.35	1/8	3.17	4.82	2.28	1/2	12.70	9/16	14.28	7/6	11.11	15.24	12.7	17.78	15.24	19.55	17.9	26.92	24.50
IRUE 6-4	3/8	9.52	1/4	6.35	7.11	4.82	5/8	15.87	11/16	17.46	9/16	14.28	16.76	15.24	19.30	17.78	23.10	21.92	30.47	29.29
IRUE 8-4	1/2	12.70	1/4	6.35	10.41	4.82	13/16	20.64	7/8	22.22	9/16	14.28	22.86	15.24	21.84	17.78	25.90	24.38	36.06	31.77
IRUE 8-6	1/2	12.70	3/8	9.52	10.41	7.11	13/16	20.64	7/8	22.22	11/16	17.46	22.86	16.76	21.84	19.30	25.90	25.90	36.06	33.27
IRUE 12-6	3/4	19.05	3/8	9.52	15.74	7.11	1-1/16	26.98	1-1/8	28.57	11/16	17.46	24.38	16.76	21.84	19.30	29.46	29.46	39.62	36.83
IRUE 12-8	3/4	19.05	1/2	12.70	15.74	10.41	1-1/16	26.98	1-1/8	28.57	7/8	22.22	24.38	22.86	21.84	21.84	29.46	29.46	39.62	39.62
IRUE 16-8	1	25.40	1/2	12.70	22.35	10.41	1-3/8	34.92	1-1/2	38.10	7/8	22.22	31.24	22.86	26.41	21.84	36.83	34.54	49.27	44.70
IRUE 16-12	1	25.40	3/4	19.05	22.35	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	36.83	34.54	49.27	44.70

IUC Union Cross





Connector Fractional Tubes

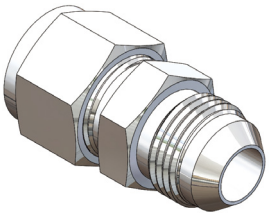
Part No.	Tube O.D. D		d min.	Width Across Flat				A	B	ℓ	L
				h		H					
	inch	mm		inch	mm	inch	mm				
IUC-1	1/16	1.58	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
IUC-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
IUC-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.79	24.38
IUC-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
IUC-5	5/16	7.93	6.35	5/8	15.87	5/8	15.87	16.25	18.54	21.33	28.70
IUC-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
IUC-8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06
IUC-10	5/8	15.87	12.70	13/16	20.63	1	25.40	24.38	21.84	28.70	38.80
IUC-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
IUC-14	7/8	22.22	18.28	1-3/16	30.00	1-1/4	31.75	25.90	21.84	34.54	44.70
IUC-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02

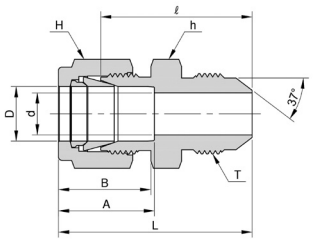
Connector Metric Tubes

Part No.	Tube O.D. D	d min.	Width Across Flat		A	B	ℓ	L
			h	H				
IUC-3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
IUC-6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
IUC-8M	8	6.4	15.8	16	16.2	18.6	21.3	28.8
IUC-10M	10	7.9	20.6	19	17.2	19.5	23.9	31.5
IUC-12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
IUC-16M	16	12.7	23.8	25	24.4	22.0	28.7	38.8
IUC-18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
IUC-20M	20	15.9	30.0	32	26.0	22.0	32.5	42.6
IUC-25M	25	21.8	34.9	38	31.3	22.0	36.8	49.1

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

IAU An Union

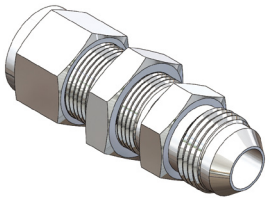


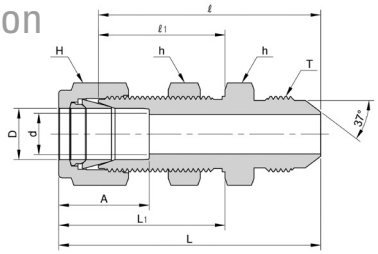


Connector Fractional Tube To AN Flared Tube

Part No.	Tube O.D. D		AN Tube Flare Size		Straight Thread T(U)	d min.	Width Across Flat				A	B	ℓ	L
							h		H					
	inch	mm	inch	mm			inch	mm	inch	mm				
IAU 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
IAU 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
IAU 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
IAU 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
IAU 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
IAU 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
IAU 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
IAU 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
IAU 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
IAU 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

IABU An Bulkhead Union

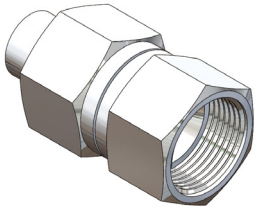


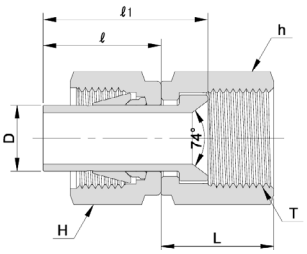


Connector Fractional Tube To AN Flared Tube

Part No.	Tube O.D. D		AN Tube Flare Size		Straight Thread T(U)	d min.	Width Across Flat				A	ℓ	ℓ_1	L	L	Panel Hole Drill Size	Panel Max Thickness
							h		H								
	inch	mm	inch	mm			inch	mm	inch	mm							
IABU 2-2	1/8	3.17	1/8	3.17	5/16-24	1.52	1/2	12.70	7/16	11.11	13.71	40.85	24.63	47.45	31.23	8.33	12.70
IABU 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
IABU 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
IABU 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
IABU 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
IABU 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

IAF An Flare



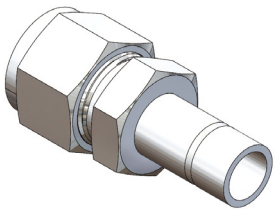


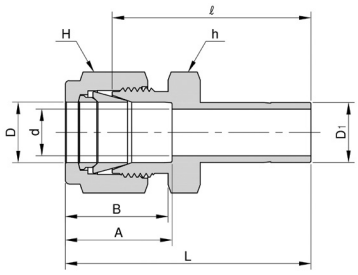
Connector Fractional Tube To AN Flared Tube

Part No.	Tube O.D. D		AN Tube Flare Size		Straight Thread T(U)	Width Across Flat				A	ℓ	ℓ_1
						h		H				
	inch	mm	inch	mm		inch	mm	inch	mm			
IAF 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
IAF 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
IAF 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
IAF 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
IAF 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

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

IR Reducer





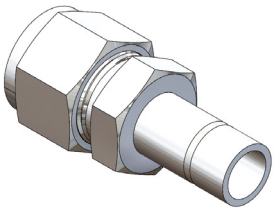
Connector Fractional Tube To Fractional Iy-Lok Port

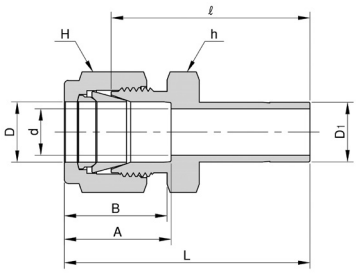
Part No.	Tube O.D .D				d min.	Width Across Flat				A	B	ℓ	L
	D		D_1			h		H					
	inch	mm	inch	mm		inch	mm	inch	mm				
IR 1-2	1/16	1.59	1/8	3.17	1.27	5/16	7.93	5/16	7.93	8.63	10.92	25.40	29.21
IR 1-4	1/16	1.59	1/4	6.35	1.27	5/16	7.93	5/16	7.93	8.63	10.92	27.68	31.49
IR 2-1	1/8	3.17	1/16	1.59	0.76	7/16	11.11	7/16	11.11	12.70	15.24	22.35	28.95
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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	48.51
IR 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
IR 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
IR 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
IR 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
IR 8-8	1/2	12.70	1/2	12.70	9.40	13/16	20.64	7/8	22.22	22.86	21.84	42.16	52.32
IR 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
IR 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
IR 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
IR 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
IR 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
IR 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
IR 12-8	3/4	19.05	1/2	12.70	9.40	1-1/16	26.98	1-1/8	28.57	24.38	21.84	44.45	54.61
IR 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
IR 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
IR 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	89.15
IR 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
IR 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
IR 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
IR 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

∗Connector Fractional Tube to Metric Iy-Lok port are available upon request.

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

IR Reducer



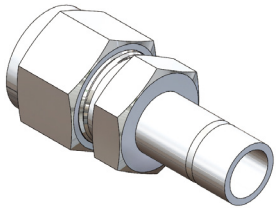


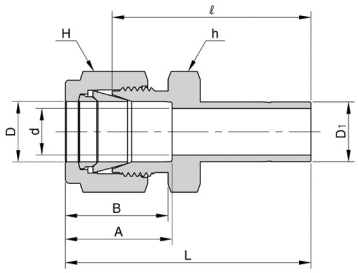
Connector Metric Tube To Metric Iy-Lok Port

Part No.	Tube O.D. D		d min.	Width Across Flat		A	B	ℓ	L
	D	D_1		h	H				
IR 2M-3M	2	3	1.7	12	12	12.9	15.3	26.9	35.3
IR 3M-4M	3	4	2.2	12	12	12.9	15.3	28.4	35.0
IR 3M-6M	3	6	2.4	12	12	12.9	15.3	29.5	36.1
IR 3M-10M	3	10	2.4	12	12	12.9	15.3	31.8	38.4
IR 4M-6M	4	6	2.4	12	12	13.7	16.1	30.5	37.1
IR 6M-3M	6	3	1.8	14	14	15.3	17.7	29.5	36.9
IR 6M-8M	6	8	4.8	14	14	15.3	17.7	32.5	39.9
IR 6M-10M	6	10	4.8	14	14	15.3	17.7	33.3	40.7
IR 6M-12M	6	12	4.8	14	14	15.3	17.7	38.9	46.3
IR 8M-6M	8	6	4.1	15	16	16.2	18.6	32.8	40.3
IR 8M-10M	8	10	6.4	15	16	16.2	18.6	34.5	42.0
IR 8M-12M	8	12	6.4	15	16	16.2	18.6	40.1	47.6
IR 10M-6M	10	6	4.1	18	19	17.2	19.5	34.8	42.4
IR 10M-12M	10	12	7.9	18	19	17.2	19.5	42.2	49.8
IR 10M-15M	10	15	7.9	18	19	17.2	19.5	43.7	51.3
IR 10M-18M	10	18	7.9	19	19	17.2	19.5	43.7	51.3
IR 12M-6M	12	6	4.1	22	22	22.8	22.0	34.8	44.9
IR 12M-10M	12	10	7.1	22	22	22.8	22.0	36.6	46.7
IR 12M-16M	12	16	9.5	22	22	22.8	22.0	43.7	53.8
IR 12M-18M	12	18	9.5	22	22	22.8	22.0	43.7	53.8
IR 12M-20M	12	20	9.5	22	22	22.8	22.0	46.0	56.1
IR 12M-22M	12	22	9.5	24	22	22.8	22.0	46.0	56.1
IR 12M-25M	12	25	9.5	27	22	22.8	22.0	52.3	62.4
IR 16M-12M	16	12	8.8	24	25	24.4	22.0	42.9	53.0
IR 18M-12M	18	12	8.8	27	30	24.4	22.0	44.5	54.6
IR 18M-16M	18	16	12.0	27	30	24.4	22.0	46.0	56.1
IR 18M-20M	18	20	15.1	27	30	24.4	22.0	47.5	57.6
IR 18M-22M	18	22	15.1	27	30	24.4	22.0	47.5	57.6
IR 18M-25M	18	25	15.1	27	30	24.4	22.0	52.3	62.4
IR 20M-16M	20	16	12.0	30	32	26.0	22.0	47.8	57.9
IR 20M-18M	20	18	13.9	30	32	26.0	22.0	47.8	57.9
IR 20M-22M	20	22	15.8	30	32	26.0	22.0	49.3	59.4
IR 20M-25M	20	25	15.8	30	32	26.0	22.0	54.1	64.2
IR 22M-18M	22	18	13.9	30	32	26.0	22.0	47.8	57.9
IR 22M-20M	22	20	15.1	30	32	26.0	22.0	49.3	59.4
IR 22M-25M	22	25	18.3	30	32	26.0	22.0	54.1	64.2
IR 25M-18M	25	18	13.9	35	38	31.3	26.5	50.8	63.1
IR 25M-20M	25	20	15.5	35	38	31.3	26.5	52.3	64.6

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

IR Reducer

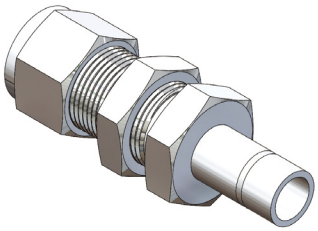


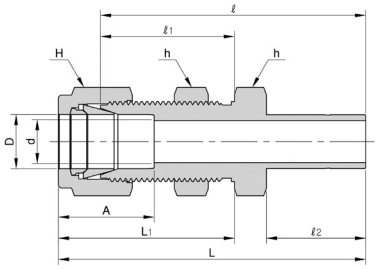


Connector Metric Tube To Fractional Iy-Lok Port

Part No.	Tube O.D. D			d min.	Width Across Flat		A	B	ℓ	L
	D	D_1			h	H				
		inch	mm							
IR 2M-2	2	1/8	3.17	1.7	12	12	12.9	15.3	26.9	33.5
IR 3M-2	3	1/8	3.17	2.0	12	12	12.9	15.3	26.9	33.5
IR 3M-4	3	1/4	6.35	2.4	12	12	12.9	15.3	29.5	36.1
IR 4M-4	4	1/4	6.35	2.4	12	12	13.7	16.1	30.5	37.1
IR 6M-2	6	1/8	3.18	2.0	14	14	15.3	17.7	29.5	36.9
IR 6M-4	6	1/4	6.35	4.8	14	14	15.3	17.7	31.8	39.2
IR 6M-5	6	5/16	7.93	4.8	14	14	15.3	17.7	32.5	39.9
IR 6M-6	6	3/8	9.52	4.8	14	14	15.3	17.7	33.3	40.7
IR 6M-8	6	1/2	12.70	4.8	14	14	15.3	17.7	38.9	46.3
IR 8M-6	8	3/8	9.52	6.4	15	16	16.2	18.6	34.5	42.0
IR 8M-8	8	1/2	12.70	6.4	15	16	16.2	18.6	40.1	47.6
IR 10M-6	10	3/8	9.52	6.9	18	19	17.2	19.5	36.6	44.2
IR 10M-8	10	1/2	12.70	7.9	18	19	17.2	19.5	42.2	49.8
IR 12M-8	12	1/2	12.70	9.4	22	22	22.8	22.0	42.2	52.3
IR 12M-12	12	3/4	19.05	9.5	22	22	22.8	22.0	43.7	53.8
IR 18M-12	18	3/4	19.05	14.7	27	30	24.4	22.0	46.0	56.1
IR 18M-16	18	1	25.40	15.1	27	30	24.4	22.0	52.3	62.4
IR 25M-16	25	1	25.40	20.2	35	38	31.3	26.5	57.2	69.5

IBR Bulkhead Reducer



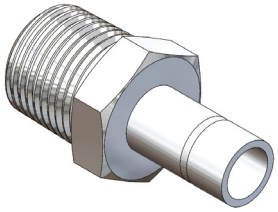


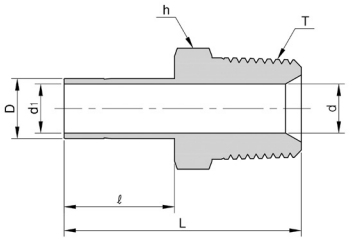
Connector Fractional Tube To Fractional Iy-Lok Port

Part No.	Tube O.D. D		d min.	Width Across Flat				A	A	B	A	ℓ	A	Panel Hole Drill Size	Panel Max. Thickness
				h		H									
	inch	mm		inch	mm	inch	mm								
IBR 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
IBR 4-4	1/4	6.35	4.32	5/8	15.87	9/16	14.28	15.24	48.51	26.16	15.74	55.88	33.52	11.50	10.16
IBR 6-6	3/8	9.52	6.86	3/4	19.05	11/16	17.46	16.76	53.84	29.46	17.50	61.21	36.83	14.68	11.17
IBR 8-8	1/2	12.70	9.40	15/16	23.81	7/8	22.22	22.86	62.73	31.75	23.11	72.89	41.91	19.44	12.70
IBR 10-10	5/8	15.87	11.94	1-1/16	26.98	1	25.40	24.38	65.02	32.51	24.70	75.18	42.67	22.62	12.70
IBR 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

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

IMA Male Adapter



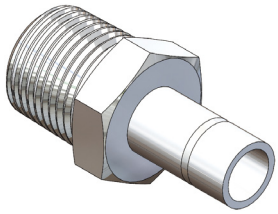


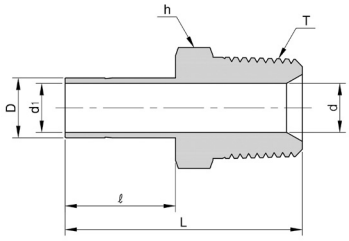
Connector Fractional Iy-Lok Port To Female NPT Thread

Part No.	Tube O.D. D		T* NPT	d min.	d_1	Width Across Flat h		ℓ	L
	inch	mm				inch	mm		
IMA 2-2N	1/8	3.17	1/8	4.82	2.03	7/16	11.11	13.45	29.50
IMA 2-4N	1/8	3.17	1/4	7.11	2.03	9/16	14.28	13.45	34.80
IMA 3-2N	3/16	4.76	1/8	4.82	3.04	7/16	11.11	14.20	30.22
IMA 3-4N	3/16	4.76	1/4	7.11	3.04	9/16	14.28	14.20	35.56
IMA 4-2N	1/4	6.35	1/8	4.32	4.32	7/16	11.11	15.75	31.80
IMA 4-4N	1/4	6.35	1/4	4.32	4.32	9/16	14.28	15.75	37.08
IMA 4-6N	1/4	6.35	3/8	4.32	4.32	11/16	17.46	15.75	37.84
IMA 4-8N	1/4	6.35	1/2	4.32	4.32	7/8	22.22	15.75	43.43
IMA 5-2N	5/16	7.93	1/8	4.82	5.58	7/16	11.11	16.80	32.76
IMA 5-4N	5/16	7.93	1/4	6.35	5.58	9/16	14.28	16.80	38.10
IMA 6-2N	3/8	9.52	1/8	4.82	6.85	7/16	11.11	17.50	33.50
IMA 6-4N	3/8	9.52	1/4	6.85	6.85	9/16	14.28	17.50	38.90
IMA 6-6N	3/8	9.52	3/8	6.85	6.85	11/16	17.46	17.50	39.60
IMA 6-8N	3/8	9.52	1/2	6.85	6.85	7/8	22.22	17.50	45.20
IMA 8-4N	1/2	12.70	1/4	7.11	9.39	9/16	14.28	23.20	44.50
IMA 8-6N	1/2	12.70	3/8	9.39	9.39	11/16	17.46	23.20	45.20
IMA 8-8N	1/2	12.70	1/2	9.39	9.39	7/8	22.22	23.20	50.50
IMA 10-6N	5/8	15.87	3/8	9.39	11.93	11/16	17.46	24.70	47.40
IMA 10-8N	5/8	15.87	1/2	11.93	11.93	7/8	22.22	24.70	52.30
IMA 10-12N	5/8	15.87	3/4	14.73	11.93	1-1/16	26.98	24.70	52.30
IMA 12-8N	3/4	19.05	1/2	11.93	14.73	7/8	22.22	24.70	52.30
IMA 12-12N	3/4	19.05	3/4	14.73	14.73	1-1/16	26.98	24.70	52.30
IMA 12-16N	3/4	19.05	1	20.32	14.73	1-3/8	34.92	24.70	57.91
IMA 14-12N	7/8	22.22	3/4	14.73	17.27	1-1/16	26.98	26.70	54.30
IMA 16-12N	1	25.40	3/4	15.74	20.32	1-1/16	26.98	31.70	58.70
IMA 16-16N	1	25.40	1	20.32	20.32	1-3/8	34.92	31.70	66.00
IMA 20-20N	1-1/4	31.75	1-1/4	25.91	-	1-3/4	44.45	40.00	80.26
IMA 24-24N	1-1/2	38.10	1-1/2	31.75	-	2-1/8	53.98	51.50	94.48
IMA 32-32N	2	50.80	2	43.69	-	2-3/4	69.85	68.40	119.38

*ISO Tapered Thread, put "R" digit at the last of part number.

IMA Male Adapter





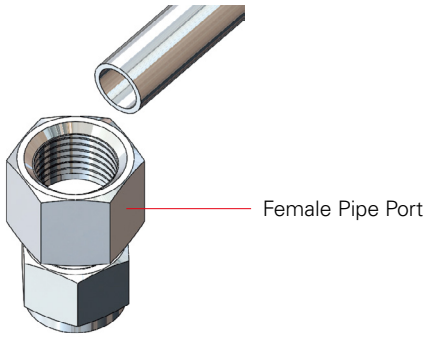
Connector Metric Iy-Lok Port To Female ISO Tapered Thread

Part No.	Tube O.D. D	T* PT	d min	d_1	Width Across Flat h	ℓ	L
IMA 6M-2R	6	1/8	4.6	4.6	12	15.75	32.8
IMA 6M-4R	6	1/4	4.6	4.6	14	15.75	38.1
IMA 8M-4R	8	1/4	6.3	6.3	14	16.50	39.1
IMA 10M-4R	10	1/4	7.7	7.7	14	17.50	39.9
IMA 10M-6R	10	3/8	7.7	7.7	18	17.50	40.6
IMA 10M-8R	10	1/2	11.9	7.7	22	17.50	45.2
IMA 12M-4R	12	1/4	7.1	8.8	14	23.50	46.5
IMA 12M-6R	12	3/8	8.8	8.8	17	23.50	46.5
IMA 12M-8R	12	1/2	11.9	8.8	22	23.50	51.8
IMA 18M-8R	18	1/2	11.9	13.9	22	24.90	53.2
IMA 18M-12R	18	3/4	15.9	13.9	27	24.90	53.2
IMA 28M-16R	28	1	22.2	-	35	31.70	74.7
IMA 28M-20R	28	1-1/4	22.5	-	46	31.70	76.2
IMA 32M-20R	32	1-1/4	27.4	-	46	40.00	81.0
IMA 38M-24R	38	1-1/2	33.3	-	55	51.50	92.2

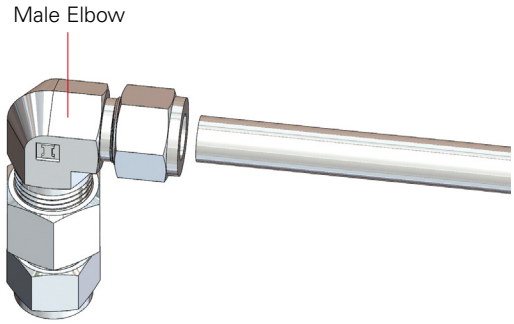
∗NPT Thread, put "N" digit at the last of part number.

Iy-Lok Adapter eliminates alignment problems

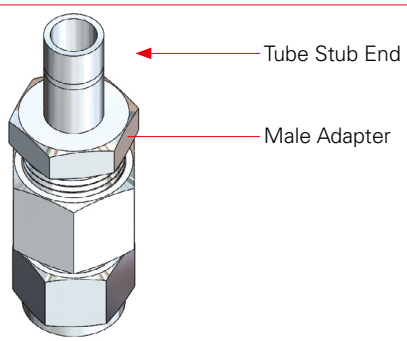
A. It is required to install tubing to a Female Port in a certain direction as shown.



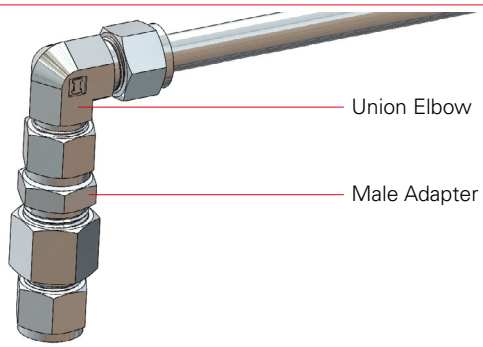
B. With pipe connection tight, the Male Elbow is directed to wrong direction.



C. To avoid this, simply tighten the pipe thread of Male Adapter into Female Port.

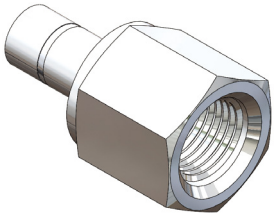


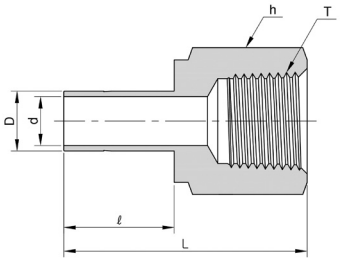
D. Connect Union Elbow to Male Adapter by tightening the Iy-Lok nut while keeping the elbow in the desired direction, Then install the tubing into the other end of Elbow.



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

IFA Female Adapter





Connector Fractional Iy-Lok Port To Male NPT Thread

Part No.	Tube O.D. D		T* NPT	d min.	Width Across Flat h		ℓ	L
	inch	mm			inch	mm		
IFA 2-2N	1/8	3.17	1/8	2.03	9/16	14.28	13.45	31.50
IFA 2-4N	1/8	3.17	1/4	2.03	3/4	19.05	13.45	35.30
IFA 3-2N	3/16	4.76	1/8	3.04	9/16	14.28	14.20	32.00
IFA 3-4N	3/16	4.76	1/4	3.04	3/4	19.05	14.20	35.81
IFA 4-2N	1/4	6.35	1/8	4.32	9/16	14.28	15.75	33.02
IFA 4-4N	1/4	6.35	1/4	4.32	3/4	19.05	15.75	37.10
IFA 4-6N	1/4	6.35	3/8	4.32	7/8	22.22	15.75	39.37
IFA 4-8N	1/4	6.35	1/2	4.32	1-1/16	26.98	15.75	45.50
IFA 5-2N	5/16	7.93	1/8	5.59	9/16	14.28	16.80	34.29
IFA 5-4N	5/16	7.93	1/4	5.59	3/4	19.05	16.80	37.59
IFA 6-2N	3/8	9.52	1/8	6.86	9/16	14.28	17.50	34.29
IFA 6-4N	3/8	9.52	1/4	6.86	3/4	19.05	17.50	38.10
IFA 6-6N	3/8	9.52	3/8	6.86	7/8	22.22	17.50	40.38
IFA 6-8N	3/8	9.52	1/2	6.86	1-1/16	26.98	17.50	46.73
IFA 8-4N	1/2	12.70	1/4	9.40	3/4	19.05	23.20	43.43
IFA 8-6N	1/2	12.70	3/8	9.40	7/8	22.22	23.20	45.46
IFA 8-8N	1/2	12.70	1/2	9.40	1-1/16	26.98	23.20	51.80
IFA 10-6N	5/8	15.87	3/8	11.94	7/8	22.22	24.70	48.26
IFA 10-8N	5/8	15.87	1/2	11.94	1-1/16	26.98	24.70	53.84
IFA 10-12N	5/8	15.87	3/4	11.94	1-5/16	33.33	24.70	55.37
IFA 12-8N	3/4	19.05	1/2	14.73	1-1/16	26.98	24.70	52.83
IFA 12-12N	3/4	19.05	3/4	14.73	1-5/16	33.33	24.70	54.86
IFA 12-16N	3/4	19.05	1	14.73	1-5/8	41.27	24.70	58.42
IFA 14-12N	7/8	22.22	3/4	15.75	1-5/16	33.33	26.70	57.15
IFA 16-12N	1	25.40	3/4	20.32	1-5/16	33.33	31.70	60.70
IFA 16-16N	1	25.40	1	20.32	1-5/8	41.27	31.70	64.26
IFA 20-20N	1-1/4	31.75	1-1/4	25.91	2-1/8	53.97	40.00	77.72
IFA 24-24N	1-1/2	38.10	1-1/2	31.75	2-3/8	60.32	51.50	88.90
IFA 32-32N	2	50.80	2	43.69	2-7/8	73.02	68.40	107.44

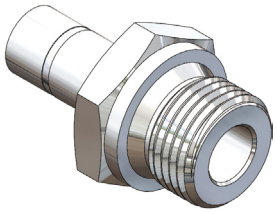
*ISO Tapered Thread, put "R" digit at the last of part number.

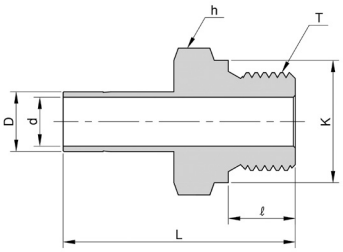
Connector Metric IY-LOK Port to ISO Tapered Thread

Part No.	Tube O.D. D	T* R(PT)	d min.	Width Across Flat h	ℓ	L
IFA 3M-2R	3	1/8	1.9	14	13.15	31.2
IFA 6M-2R	6	1/8	4.1	14	15.75	32.5
IFA 6M-4R	6	1/4	4.1	19	15.75	37.1
IFA 8M-4R	8	1/4	5.6	19	16.50	37.6
IFA 10M-4R	10	1/4	7.1	19	17.50	38.1
IFA 10M-6R	10	3/8	7.1	22	17.50	40.1
IFA 10M-8R	10	1/2	7.1	27	17.50	46.5
IFA 12M-4R	12	1/4	8.8	19	23.50	43.7
IFA 12M-6R	12	3/8	8.8	22	23.50	46.0
IFA 12M-8R	12	1/2	8.8	27	23.50	52.3
IFA 18M-12R	18	3/4	13.9	32	24.90	54.8

*NPT Thread, put "N" digit at the last of part number.

IMA-G Male Adapter





Connector Fractional Iy-Lok Port To Female ISO Parallel Thread

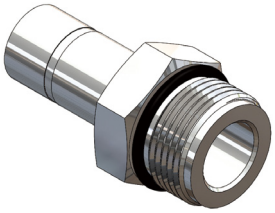
Part No.	Tube O.D. D		T G(PF)	d min.	Width Across Flat h		ℓ	L	K
	inch	mm			h	H			
IMA 2-2G	1/8	3.17	1/8	2.03	9/16	14.28	7.11	30.99	13.72
IMA 2-4G	1/8	3.17	1/4	2.03	3/4	19.05	11.17	35.81	17.78
IMA 4-2G	1/4	6.35	1/8	4.06	9/16	14.28	7.11	33.27	13.72
IMA 4-4G	1/4	6.35	1/4	4.32	3/4	19.05	11.17	38.10	17.78
IMA 6-4G	3/8	9.52	1/4	5.84	3/4	19.05	11.17	39.88	17.78
IMA 6-6G	3/8	9.52	3/8	6.86	7/8	22.22	11.17	40.64	21.59
IMA 8-4G	1/2	12.70	1/4	5.84	3/4	19.05	11.17	45.47	17.78
IMA 8-6G	1/2	12.70	3/8	7.88	7/8	22.22	11.17	46.23	21.59
IMA 8-8G	1/2	12.70	1/2	9.40	1-1/16	26.98	14.22	49.28	25.91
IMA 12-12G	3/4	19.05	3/4	14.73	1-5/16	33.33	15.75	54.88	31.75
IMA 16-16G	1	25.40	1	20.32	1-5/8	41.27	18.29	64.52	38.86

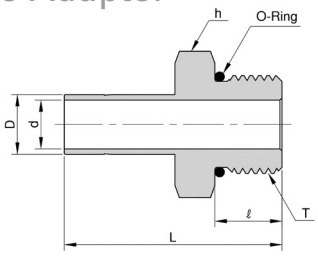
Connector Metric IY-LOK Port to ISO Parallel Thread

Part No.	Tube O.D. D	T* R(PT)	d min.	Width Across Flat h	ℓ	L	K
IMA 6M-2G	6	1/8	4.0	14	7.1	34.3	13.7
IMA 6M-4G	6	1/4	4.1	19	11.2	39.1	17.9
IMA 8M-4G	8	1/4	5.6	19	11.2	40.1	17.9
IMA 10M-4G	10	1/4	5.9	19	11.2	40.9	17.9
IMA 10M-6G	10	3/8	7.1	22	11.2	41.7	21.7
IMA 10M-8G	10	1/2	7.1	27	14.2	44.7	25.9
IMA 12M-4G	12	1/4	5.9	19	11.2	46.7	17.9
IMA 12M-6G	12	3/8	7.9	22	11.2	47.2	21.7
IMA 12M-8G	12	1/2	8.8	27	14.2	50.5	25.9
IMA 18M-8G	18	1/2	11.9	27	14.2	52.1	25.9
IMA 18M-12G	18	3/4	13.9	35	15.7	56.1	31.9
IMA 28M-16G	28	1	19.8	41	18.3	72.9	39.0
IMA 28M-20G	28	1-1/4	22.5	50	19.8	77.0	49.0
IMA 30M-20G	30	1-1/4	24.3	50	19.8	80.8	49.0
IMA 32M-20G	32	1-1/4	26.5	50	19.8	81.8	49.0
IMA 38M-24G	38	1-1/2	31.6	55	22.1	94.5	54.7

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

ISMA SAE/MS Male Adapter

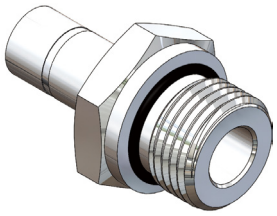


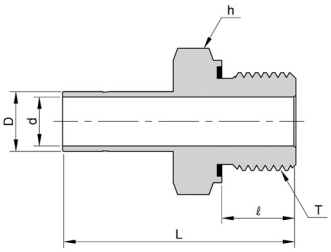


Connector Fractional Iy-Lok Port To SAE/MS Straight Thread Boss

Part No.	Tube O.D. D		Straight Thread T(U)	d min.	Width Across Flat h		ℓ	L	O-ring Uniform Size Number
	inch	mm			inch	mm			
ISMA 2-2U	1/8	3.17	5/16-24	2.03	7/16	11.11	7.62	30.48	-902
ISMA 4-4U	1/4	6.35	7/16-20	4.32	9/16	14.28	9.14	35.30	-904
ISMA 6-4U	3/8	9.52	7/16-20	5.08	9/16	14.28	9.14	37.08	-904
ISMA 6-6U	3/8	9.52	9/16-18	6.86	11/16	17.46	9.90	38.60	-906
ISMA 6-8U	3/8	9.52	3/4-16	6.86	7/8	22.22	11.17	40.64	-908
ISMA 8-6U	1/2	12.70	9/16-18	7.11	11/16	17.46	9.90	44.20	-906
ISMA 8-8U	1/2	12.70	3/4-16	9.40	7/8	22.22	11.17	46.22	-908
ISMA 10-10U	5/8	15.87	7/8-14	11.94	1	25.40	12.70	49.27	-910
ISMA 12-12U	3/4	19.05	1-1/16-12	14.73	1-1/4	31.75	14.98	53.34	-912
ISMA 16-16U	1	25.40	1-5/16-12	20.32	1-1/2	38.10	14.98	61.21	-916
ISMA 20-20U	1-1/4	31.75	1-5/8-12	25.91	1-7/8	47.62	14.98	71.37	-920
ISMA 24-24U	1-1/2	38.10	1-7/8-12	31.75	2-1/8	53.97	14.98	83.31	-924
ISMA 32-32U	2	50.80	2-1/2-12	43.69	2-3/4	69.85	14.98	107.44	-932

IOSA O-Seal Straight Thread Adapter



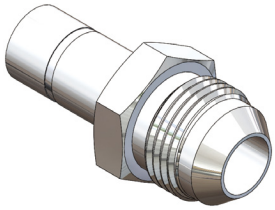


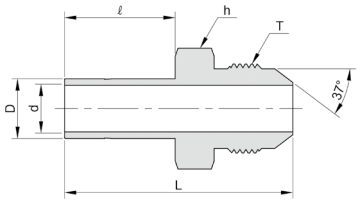
Connector Fractional Iy-Lok Port To O-Seal Female Straight Thread

Part No.	Tube O.D. D		Straight Thread T(U)	d min.	Width Across Flat h		ℓ	L	O-ring Uniform Size Number
	inch	mm			inch	mm			
IOSA 2-2U	1/8	3.17	5/16-24	2.03	9/16	14.28	8.63	32.51	-011
IOSA 3-3U	3/16	4.76	3/8-24	3.05	5/8	15.87	9.65	35.05	-012
IOSA 4-4U	1/4	6.35	7/16-20	4.32	3/4	19.05	10.41	39.11	-013
IOSA 5-5U	5/16	7.93	1/2-20	5.59	7/8	22.22	11.18	41.65	-112
IOSA 6-6U	3/8	9.52	9/16-18	6.85	15/16	23.81	11.94	43.18	-113
IOSA 8-8U	1/2	12.7	3/4-16	9.40	1-1/8	28.57	11.94	49.53	-116
IOSA 8-8U	1/2	12.7	3/4-16	9.40	1-1/8	28.57	11.94	49.53	-116

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

IAA AN Adapter

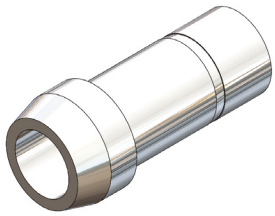


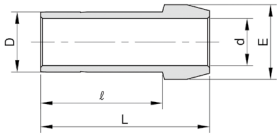


Connector Fractional Iy-Lok Port To AN Flared Tube

Part No.	Tube O.D. D		AN Tube O.D. D		Straight Thread T(U)	d min.	Width Across Flat h		L
	inch	mm	inch	mm			inch	mm	
IAA 4-4	1/4	6.35	1/4	6.35	7/16-20	4.32	1/2	12.7	37.08
IAA 6-4	3/8	9.52	1/4	9.52	7/16-20	4.32	1/2	12.7	38.86
IAA 6-6	3/8	9.52	3/8	9.52	9/16-18	6.86	5/8	15.87	39.62
IAA 8-8	1/2	12.70	1/2	12.70	3/4-16	9.40	13/16	20.64	48.51
IAA 12-12	3/4	19.05	3/4	19.05	1-1/16-12	14.73	1-1/8	28.57	56.13
IAA 16-16	1	25.4	1	25.4	1-5/16-12	20.32	1-3/8	34.92	65.53

IPC Port Connector





Connector Two Fractional Iy-Lok Ports

Part No.	Tube O.D. D		d min.	E	ℓ	L
	inch	mm				
IPC-1	1/16	1.58	0.76	3.30	10.66	13.72
IPC-2	1/8	3.17	2.03	6.09	15.75	22.35
IPC-4	1/4	6.35	4.32	9.39	18.79	24.89
IPC-5	5/16	7.93	5.59	10.92	20.06	25.91
IPC-6	3/8	9.52	6.86	12.70	20.32	26.67
IPC-8	1/2	12.70	9.40	15.74	25.90	36.32
IPC-12	3/4	19.05	14.73	22.09	27.68	37.85
IPC-16	1	25.40	20.32	28.44	34.54	49.28

Connector Two Metric Iy-Lok Ports

Part No.	Tube O.D. D	d min.	E	ℓ	L
IPC-3M	3	1.9	6.0	15.70	22.20
IPC-4M	4	2.2	7.0	16.67	23.21
IPC-6M	6	4.4	9.0	18.70	25.00
IPC-8M	8	5.6	11.0	20.00	26.00
IPC-10M	10	7.1	13.1	20.20	27.10
IPC-12M	12	8.8	15.0	26.70	36.20
IPC-15M	15	11.2	19.0	28.3	37.80
IPC-16M	16	12.0	19.0	28.3	37.80
IPC-18M	18	13.9	21.0	28.3	37.80
IPC-20M	20	15.5	23.0	29.20	39.40
IPC-22M	22	17.9	24.97	29.30	38.97
IPC-25M	25	19.9	28.0	35.70	49.30
IPC-28M	28	22.5	34.3	48.60	63.50
IPC-32M	32	26.5	39.5	52.80	69.70
IPC-38M	38	31.6	47.1	61.90	81.90

Installation Instruction

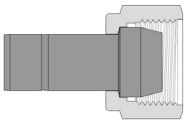


Fig. 1

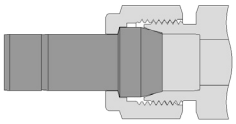


Fig. 2 (1/4 tum)

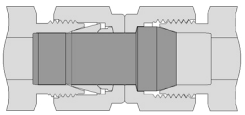


Fig. 3 (1-1/4 tum)

Machined Ferrule End

While holding fitting body steady, tighten the port Connector one-quarter turn from the finger-tight position.
For 1/16, 1/8, and 3/16 in.; 2, 3, and 4 mm tube fittings, tighten the port Connector one-eighth turn.
For over 1 in. and over 25 mm tube fittings, tighten the port Connector one-quarter turn.

Reassembly

You may disassemble and reassemble Iy-Lok port Connectors many times. Make subsequent connections by slightly tightening with a wrench after snugging the nut by hand.

Tube Adapter End

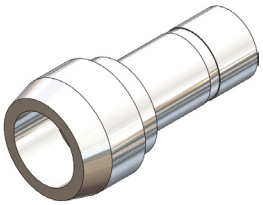
1. Insert the tube adapter into the Iy-Lok tube fitting.
   Make sure that the tube adapter rests firmly on the shoulder of the tube fitting body and that the nut is finger-tight (Fig. 3).
2. Mark the nut at the 6 o'clock position.
3. While holding fitting body steady, tighten the nut one and 1-1/4 turns to the 9 o'clock position. For 1/16, 1/8, and 3/16 in.; 2, 3, and 4 mm tube fittings, tighten the nut only 3/4 turn to the 3 o'clock position.

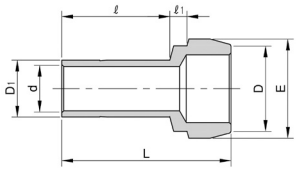
Reassembly

See Iy-Lok tube fitting reassembly, page 12.

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

IRPC Reducing Port Connector





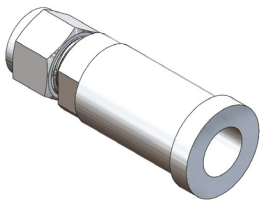
Connector Two Fractional Iy-Lok Ports

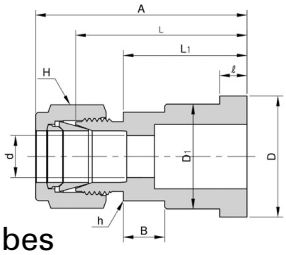
Part No.	Tube O.D. D		Reduced O.D. D_1		d min.	E	ℓ	$ℓ_1$	L
	inch	mm	inch	mm					
IRPC 2-1	1/8	3.17	1/16	1.59	0.76	6.09	9.14	2.03	18.30
IRPC 4-1	1/4	6.35	1/16	1.59	0.76	9.36	9.65	3.55	19.05
IRPC 4-2	1/4	6.35	1/8	3.17	2.28	9.36	13.71	3.30	22.86
IRPC 6-2	3/8	9.52	1/8	3.17	2.28	12.7	13.71	3.81	23.37
IRPC 6-4	3/8	9.52	1/4	6.35	4.82	12.7	16.25	3.30	25.40
IRPC 8-4	1/2	12.70	1/4	6.35	4.82	15.74	16.25	3.81	29.72
IRPC 8-6	1/2	12.70	3/8	9.52	7.11	15.74	17.78	3.30	30.73
IRPC 12-8	3/4	19.05	1/2	12.70	9.90	22.09	24.38	3.81	37.85
IRPC 16-8	1	25.40	1/2	12.70	9.90	28.44	24.38	4.82	42.93
IRPC 16-12	1	25.40	3/4	19.05	14.98	28.44	26.16	4.06	43.69

Connector Two Metric Iy-Lok Ports

Part No.	Tube O.D. D	Reduced O.D. D_1	d min.	E	ℓ	$ℓ_1$	L
IRPC 6M-3M	6	3	1.9	9.0	13.80	3.2	22.90
IRPC 8M-6M	8	6	4.1	11.0	16.30	3.2	25.40
IRPC 10M-6M	10	6	4.1	13.1	16.30	3.6	25.80
IRPC 10M-8M	10	8	5.6	13.1	17.00	3.4	26.30
IRPC 12M-6M	12	6	4.1	15.0	16.30	3.8	29.60
IRPC 12M-8M	12	8	5.6	15.0	17.00	3.6	30.10
IRPC 12M-10M	12	10	7.1	15.0	17.80	3.3	30.60
IRPC 16M-6M	16	6	4.1	19.0	15.75	3.6	29.37
IRPC 16M-12M	16	12	8.8	19.0	24.40	3.6	37.50
IRPC 28M-25M	28	25	19.9	34.3	33.00	8.2	56.50
IRPC 32M-25M	32	25	19.9	39.5	33.00	9.9	60.30
IRPC 38M-25M	38	25	19.9	47.1	33.00	12.3	65.80

ILFC Lapped Flange Connector





Connector Fractional Tubes

Part No.	Tube Size	Flange Seat	Dimensions												Flange Surface Finish (Ra)
			A	B	L	L_1	ℓ	H		h		D	D1	d min	
								inch	mm	inch	mm				
ILFC 4 -SM	1/4	SM	80.8	8.9	74.9	56.5	6.5	9/16	14.28	11/16	17.46	35	22.2	4.8	3.2 - 6.3 Micrometer
ILFC 4 -SR	1/4	SR	80.8	8.9	74.9	56.5	6.5	9/16	14.28	11/16	17.46	35	22.2	4.8	6.3 - 12.5 Micrometer
ILFC 6 -SM	3/8	SM	82.3	8.9	74.9	56.5	6.5	11/16	17.46	11/16	17.46	35	22.2	7.1	3.2 - 6.3 Micrometer
ILFC 6 -SR	3/8	SR	82.3	8.9	74.9	56.5	6.5	11/16	17.46	11/16	17.46	35	22.2	7.1	6.3 - 12.5 Micrometer
ILFC 8 -SM	1/2	SM	85.1	8.9	74.9	56.5	6.5	7/8	22.22	3/4	19.05	35	22.2	10.4	3.2 - 6.3 Micrometer
ILFC 8 -SR	1/2	SR	85.1	8.9	74.9	56.5	6.5	7/8	22.22	3/4	19.05	35	22.2	10.4	6.3 - 12.5 Micrometer

Lapped Flange Connector tube Connector provieds easy joint between process lines and instruments designed for use with lap joint flanges to ANSI B 16.5 or BS 1560. Both "smooth(SM)" and "serrated(SE)" surface finishes are available. For identification of serrated surface finish, groove is provided.

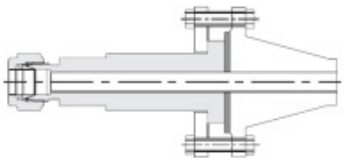
Flange Seal Finish


Smooth Identifier : SM


Serrated Identifier : SR

Installation Instruction

Lapped Flange Connector installation with slip-on and welding neck flanges, using sealing gasket on the flange seal face.



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

SAE/MS Internal Straight Thread Boss

These Fitting are useful in that the direction of tube end can be oriented info desired direction with ease.
They can be installed on tanks or vessels without welding or brazing.

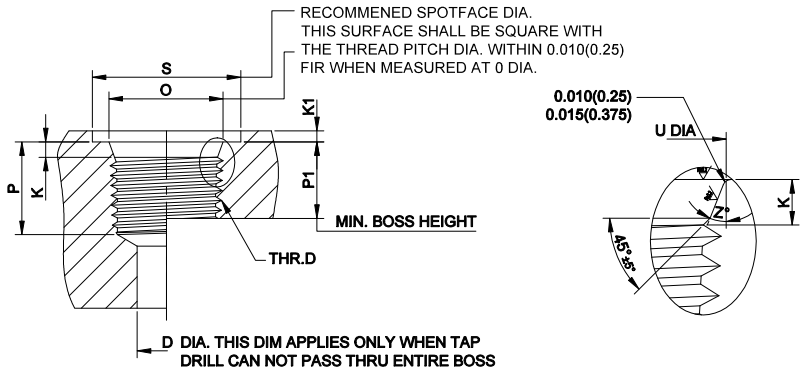


Table for SAE/MS Straight Thread Boss

〈Reprinted from "Hydraulic Tube Fitting-SAE J1926 / 1 Port Dimensions of SAE Standard."〉

Tube O.D.	Thread Size	D Min.	P_1 Min.	K	O Min.	P Min.	U	S	K_1 Max.	Y
1/8	5/16 - 24	1.6	10.0	1.9	11	12.0	9.1	17	1.6	12°
3/16	3/8 - 24	3.2	10.0	1.9	13	12.0	10.7	19	1.6	12°
1/4	7/16 - 20	4.4	11.5	2.4	15	14.0	12.4	21	1.6	12°
5/16	1/2 - 20	6.0	11.5	2.4	16	14.0	14.0	23	1.6	12°
3/8	9/16 - 18	7.5	12.7	2.5	18	15.6	15.6	25	1.6	12°
1/2	3/4 - 16	10.0	14.3	2.5	22	17.5	20.6	30	2.4	15°
5/8	7/8 - 14	12.5	16.7	3.3	26	20.0	23.9	34	2.4	15°
3/4	1-1/16 - 12	16.0	19.0	3.3	32	23.0	29.2	41	2.4	15°
7/8	1-3/16 - 12	18.0	19.0	3.3	35	23.0	32.3	45	2.4	15°
1	1-5/16 - 12	21.0	19.0	3.3	38	23.0	35.5	49	3.2	15°
1-1/4	1-5/8 - 12	27.0	19.0	3.3	48	23.0	43.5	58	3.2	15°
1-1/2	1-7/8 - 12	33.0	19.0	3.3	54	23.0	49.8	65	3.2	15°
2	2-1/2 - 12	70.0	19.0	3.3	70	23.0	65.7	88	3.2	15°

a. Diameter U shall be concentric with thread pitch diameter within 0.13 full indicator reading(FIR), and shall be free from longitudinal and spiral tool marks. Angular tool marks up to 2.5 Micro meter max. shall be permissible.

b. Maximum recommended spotface depth to permit sufficient wrench grip for proper tightening of the fitting or locknut If the surface of boss surface is machined, dimensions Y and S does not need to be apply as long as R0.25/0.375 is maintained to avoid damage to the O-Ring during installation.

c. Tap drill depth given require use of a bottoming taps to produce the specified full thread lengths.
Where standard taps are used, the tap drill depths must be increased accordingly.

d. Figures are for reference only, as any boss can be used for a tubing size depending upon other design criteria.

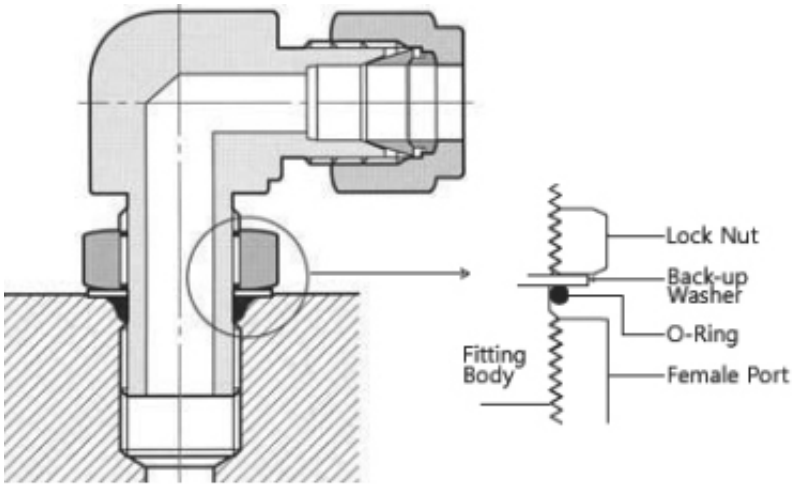
Connector Two Metric Iy-Lok Ports

Part No.	Tube O.D.	Thread Size	O-Ring Size No.	Dimension	
				I.D. mm	Cross Section mm
2	1/8	5/16 - 24	902	6.07	1.63
3	3/16	3/8 - 24	903	7.65	1.63
4	1/4	7/16 - 20	904	8.92	1.83
5	5/16	1/2 - 20	905	10.52	1.83
6	3/8	9/16 - 18	906	11.89	1.98
8	1/2	3/4 - 16	908	16.36	2.21
10	5/8	7/8- 14	910	19.18	2.46
12	3/4	1-1/16 - 12	912	23.47	2.95
14	7/8	1-3/16 - 12	914	26.59	2.95
16	1	1-5/16 - 12	916	29.74	2.95
20	1-1/4	1-5/8 - 12	920	37.47	3.00
24	1-1/2	1-7/8 - 12	924	43.69	3.00
32	2	2-1/2 - 12	932	59.36	3.00

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

Adjustable **SAE/MS** Straight Thread Fittings

These adjustable or positionable fittings are useful in that the direction of Iy-Lok two ferrule tube fittings end can be oriented into desired direction with ease.
They can be installed on tanks or vessels without welding or brazing.
Viton O-Ring is standard, and other materials are available upon request.



Inatallation Instruction

a. Lubricate O-ring with a lubricant that is compatible with the system.
O-Ring material and place it over the groove close to metal back-up washer.

b Screw fitting into the SAE straight thread port until the back-up washer contacts the face of the boss.

c. Position the fitting by backing it out no more than one turn. (No more than one turn backing out.)

d. Hold the fitting in position and tighten the lock nut until the washer contacts the face of the boss. (See torque chart.)

Part No.	Straight Port		Adjustable Port	
	Torque (in-lbs)	(F.F.F.T.)	Torque (in-lbs)	(F.F.F.T.)
4	245 ± 10	1.0 ± .25	200 ± 10	1.5 ± 25
6	630 ± 25	1.5 ± .25	400 ± 10	1.5 ± 25
8	1150 ± 50	1.5 ± .25	640 ± 10	1.5 ± 25
10	1550 ± 50	1.5 ± .25	1125 ± 50	1.5 ± 25
12	2050 ± 50	1.5 ± .25	1450 ± 50	1.5 ± 25
16	3000 ± 50	1.5 ± .25	2150 ± 50	1.5 ± 25
20	3400 ± 100	1.5 ± .25	2800 ± 100	2.0 ± 25
24	4500 ± 100	1.5 ± .25	3450 ± 100	2.0 ± 25

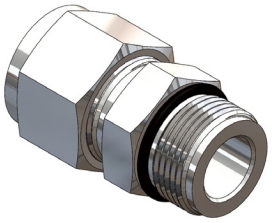
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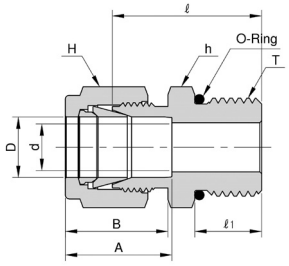
a. Restrain fitting body on adjustable if necessary in installation.

b.Values in charts are for assemblies with O-ring lubricated.

c. Use upper limits of torque ranges for stainless steel fittings.

ISMC SAE/MS Male Connector

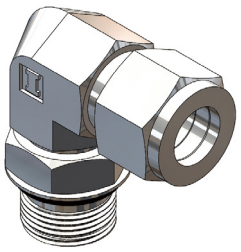


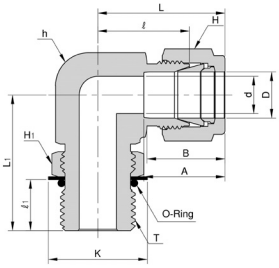


Connector Fractional Tube To SAE / MS Straight Thread Boss

Part No.	Tube O.D. D		Straight Thread T(U)	d min.	Width Across Flat				A	B	ℓ	ℓ_1	L	O-Ring Uniform Size Number
					H		h							
	inch	mm			inch	mm	inch	mm						
ISMC 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
ISMC 2-4U	1/8	3.17	7/16-20	2.28	9/16	14.28	7/16	11.11	12.70	15.24	24.89	9.14	31.49	-904
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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
ISMC 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	53.34	-912
ISMC 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
ISMC 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
ISMC 24-24U	1-1/2	38.10	1-7/8-12	33.90	2-1/8	53.98	2-1/4	57.15	50.03	45.21	50.54	14.98	77.72	-924
ISMC 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

ISME Positionable SAE/MS Male Elbow



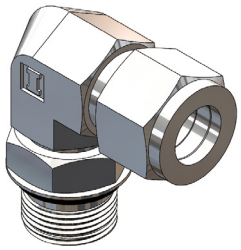


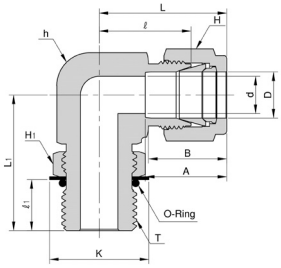
Connector Fractional Tube To SAE / MS Straight Thread Boss

Part No.	Tube O.D. D		Straight Thread T(U)	d min.	Width Across Flat						A	B	ℓ	ℓ_1	L	L_1	K	O-Ring Uniform Size Number
					h		H		H_1									
	inch	mm			inch	mm	inch	mm	inch	mm								
ISME 4-4U	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
ISME 4-6U	1/4	6.35	9/16-18	4.82	5/8	15.87	9/16	14.28	9/16	14.28	15.24	17.78	23.11	11.17	30.48	32.25	20.06	-906
ISME 5-5U	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
ISME 6-6U	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
ISME 6-8U	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
ISME 8-8U	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
ISME 10-10U	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
ISME 12-12U	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
ISME 14-14U	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
ISME 16-16U	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
ISME 20-20U	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
ISME 24-24U	1-1/2	38.10	1-7/8-12	33.90	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
ISME 32-32U	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. Dimensions are for reference only, subject to change.

ISME Positionable SAE/MS Male Elbow





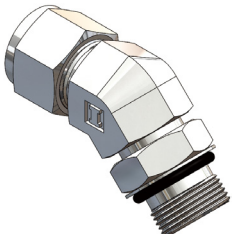
Connector Fractional Tube To ISO Parallel Thread

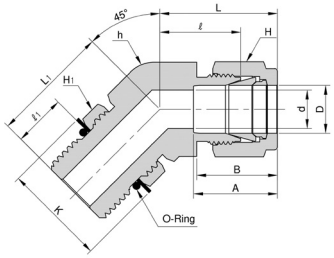
Part No.	Tube O.D. D		Straight Thread T(U)	d min.	Width Across Flat						A	B	ℓ	ℓ1	L	L1	K	O-Ring Uniform Size Number
					h		H		H1									
	inch	mm			inch	mm	inch	mm	inch	mm								
ISME 4-2G	1/4	6.35	1/8	4.06	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	19.6	8.12	26.92	26.42	15.24	P8
ISME 4-4G	1/4	6.35	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	20.32	-111
ISME 6-4G	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	20.32	-111
ISME 6-6G	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	24.38	-113
ISME 8-4G	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	20.32	-111
ISME 8-6G	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	24.38	-113
ISME 8-8G	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	29.46	P18
ISME 12-8G	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	45.21	29.46	P18
ISME 12-12G	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.57	1-3/8	34.92	24.38	21.84	29.7	12.95	39.87	48.77	36.32	-119
ISME 16-16G	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	46.22	-217

Connector Metric Tube To ISO Parallel Thread

Part No.	Tube O.D. D	T G(PF)	d min.	Width Across Flat			A	B	ℓ	ℓ1	L	L1	K	LO-Ring Uniform Size Number
				h	H	H1								
ISME 6M-2G	6	1/8	4.0	12.7	14	14.28	15.3	17.7	19.6	8.1	27.0	26.4	15.2	P8
ISME 6M-4G	6	1/4	4.8	15.8	14	19.05	15.3	17.7	21.6	9.1	29.0	32.3	20.3	-111
ISME 8M-2G	8	1/8	4.0	14.2	16	14.28	16.2	18.6	21.3	8.1	28.8	27.4	15.2	P8
ISME 8M-4G	8	1/4	5.9	15.8	16	19.05	16.2	18.6	22.4	9.1	29.9	32.2	20.3	-111
ISME 10M-4G	10	1/4	5.9	20.6	19	19.05	17.2	19.5	25.9	9.1	33.5	35.0	24.4	-113
ISME 10M-6G	10	3/8	7.9	20.6	19	22.22	17.2	19.5	25.9	9.4	33.5	37.1	20.3	-111
ISME 12M-4G	12	1/4	5.9	20.6	22	19.05	22.8	22.0	25.9	9.1	36.0	35.0	24.4	-113
ISME 12M-6G	12	3/8	7.9	20.6	22	22.22	22.8	22.0	25.9	9.4	36.0	37.1	32.0	-113
ISME 12M-8G	12	1/2	9.5	23.8	22	26.98	22.8	22.0	27.9	13.0	38.0	43.4	36.3	P18

ISME 45D SAE/MS 45° Male Elbow



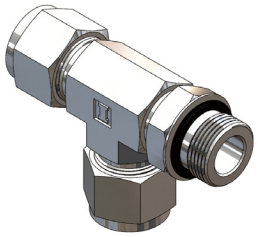


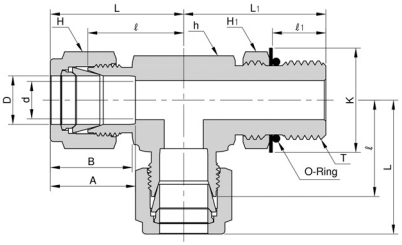
Connector Fractional Tube To SAE / MS Straight Thread Boss

Part No.	Tube O.D. D		Straight Thread T(U)	d min.	Width Across Flat						A	B	ℓ	ℓ1	L	L1	K	O-Ring Uniform Size Number
					h		H		H1									
	inch	mm			inch	mm	inch	mm	inch	mm								
ISME45D 4-4U	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
ISME45D 6-6U	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
ISME45D 8-8U	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
ISME45D 12-12U	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
ISME45D 16-16U	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

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

ISMRT SAE/MS Male Run Tee

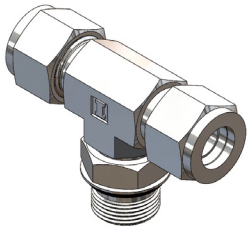


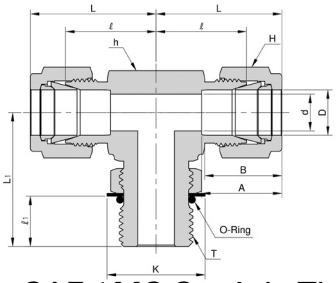


Connector Fractional Tube To SAE / MS Straight Thread Boss

Part No.	Tube O.D. D		Straight Thread T(U)	d min.	Width Across Flat						A	B	ℓ	ℓ_1	L	L_1	K	O-Ring Uniform Size Number
					h		H		H_1									
	inch	mm			inch	mm	inch	mm	inch	mm								
ISMRT 4-4U	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
ISMRT 6-6U	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
ISMRT 8-8U	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
ISMRT 12-12U	3/4	19.05	1-1/16-12	15.74	1-1/8	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
ISMRT 16-16U	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	50.54	43.94	-916
ISMRT 20-20U	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
ISMRT 24-24U	1-1/2	38.10	1-7/8-12	33.90	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
ISMRT 32-32U	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

ISMBT SAE/MS Male Branch Tee





Connector Fractional Tube To SAE / MS Straight Thread Boss

Part No.	Tube O.D. D		Straight Thread T(U)	d min.	Width Across Flat						A	B	ℓ	ℓ_1	L	L_1	K	O-Ring Uniform Size Number
					h		H		H_1									
	inch	mm			inch	mm	inch	mm	inch	mm								
ISMBT 4-4U	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
ISMBT 6-6U	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
ISMBT 8-8U	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
ISMBT 12-12U	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
ISMBT 16-16U	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
ISMBT 20-20U	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
ISMBT 24-24U	1-1/2	38.10	1-7/8-12	33.90	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
ISMBT 32-32U	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. Dimensions are for reference only, subject to change.

Mounting Dimensions For O-Seal Fitting

O-Seal Connector

O-Seal Connector can be directly installed into existing pipe thread or straight thread port.The standard Viton O-ring is contained in a precision groove to prevent O-ring extrusion at high pressure and for a controlled squeeze in a vaccum service.

Installation Instruction

1. Turn it until finger-tight. (The squeeze on O-Ring can be felt during the last 1/4 turn)
2. After finger-tight installation, snug lightly with a wrench.

NOTES

Always use a back-up wrench on the O-Seal fitting hex so it does not turn while the nut is being tightened. Also use a back-up wrench when disconnectiong a tubing connection.

Figure 1. it is recommended that the flat surface have a diameter at least as large as dimension A for the various size O-Seal fittings.
This diameter is sufficient to allow metal-to-metal contact outside of the O-Ring sealing diameter and to prevent O-Ring extrusion at high pressure.

Figure 2. is an O-Seal fitting using with a counter bored or recessed hole.
In this case, the diameter B is sufficient to allow the round shoulder of the O-seal to clear for proper installation.
D gives the maximum depth that can be used with this diameter.

Figure 3. shows the usage at deeper grooved or concaved area and E is the maximum depth that will allow a thin wrench(1/8)to hold the O-Seal fitting while the Iy-Lok connection is made to the tubing.
The diameter C is sufficient to allow the hex of the fitting to turn in the recessed hole.

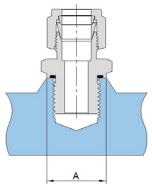


Fig. 1

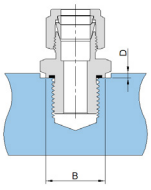


Fig. 2

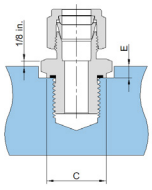
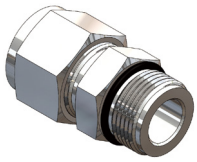
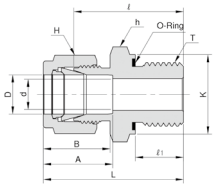


Fig. 3

Part No.	Straight Thread	Pipe Thread	A Min. Dia.	B Min. Dia.	C Min. Dia.	D Min. Dia.	D Min. Dia.
IOSC 2-2U	5/16-24	-	12.7	15.0	16.8	2.3	5.6
IOPC 2-2N	-	1/8 NPT	17.5	19.8	22.4	4.1	7.1
IOSC 3-3U	3/8-24	-	14.2	16.8	19.1	2.3	5.6
IOSC 4-4U	7/16-20	-	17.5	19.8	22.4	4.1	7.1
IOPC 4-2N	-	1/8 NPT	17.5	19.8	22.4	4.1	7.1
IOPC 4-4N	-	1/4 NPT	22.1	24.6	27.7	4.1	7.9
IOSC 5-5U	1/2-20	-	19.1	23.1	26.2	4.1	7.9
IOSC 6-6U	9/16-18	-	20.6	24.6	27.7	4.1	7.9
IOPC 6-4N	-	1/4 NPT	22.1	24.6	27.7	4.1	7.9
IOPC 6-6N	-	3/8 NPT	25.4	29.5	33.3	4.1	8.6
IOPC 6-8N	-	1/2 NPT	31.0	34.0	38.9	5.6	11.2
IOSC 8-8U	3/4-16	-	25.4	29.5	33.3	4.1	8.6
IOPC 8-8N	-	1/2 NPT	31.0	34.0	38.9	5.6	11.2
IOSC 12-12U	1-1/16-12	-	35.8	38.9	44.5	5.6	12.7
IOSC 16-16U	1-5/16-12	-	42.9	45.2	51.6	5.6	14.2

IOSC O-Seal Straight Thread Connector

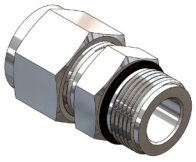


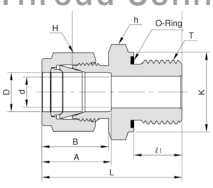


Connector Fractional Tube To Female Straight Thread.

Part No.	Tube O.D. D		Straight Thread T(U)	d min.	Width Across Flat h		Width Across Flat H		A	B	ℓ	ℓ_1	L	K	O-Ring Uniform Size Number
	inch	mm			inch	mm	inch	mm							
IOSC 2-2U	1/8	3.17	5/16-20	2.28	9/16	14.28	7/16	11.11	12.70	15.24	26.16	8.63	32.76	13.97	-011
IOSC 3-3U	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	15.75	-012
IOSC 4-4U	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	18.80	-013
IOSC 5-5U	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	21.84	-112
IOSC 6-6U	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	23.62	-113
IOSC 8-8U	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	28.45	-116
IOSC 12-12U	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	37.85	-121
IOSC 16-16U	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	44.20	-125

IOPC O-Seal Pipe Thread Connector





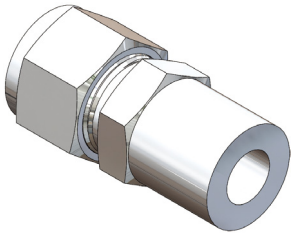
Connector Fractional Tube To Female Straight Thread.

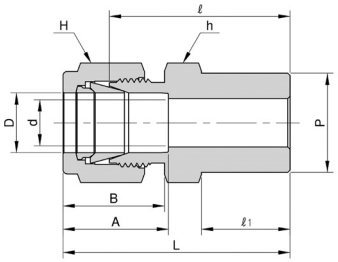
Part No.	Tube O.D. D		T* NPT	d min.	Width Across Flat h		Width Across Flat H		A	B	ℓ	ℓ_1	L	K	O-Ring Uniform Size Number
	inch	mm			inch	mm	inch	mm							
IOPC 2-2N	1/8	3.17	1/8	2.28	3/4	19.05	7/16	11.11	12.70	15.24	26.16	7.11	32.76	18.80	-111
IOPC 4-2N	1/4	6.35	1/8	4.82	3/4	19.05	9/16	14.28	15.24	17.78	27.68	7.11	35.05	18.80	-111
IOPC 4-4N	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	23.62	-113
IOPC 6-4N	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	23.62	-113
IOPC 6-6N	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	28.45	-116
IOPC 6-8N	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	33.02	-212
IOPC 8-8N	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	33.02	-212

∗ISO Tapered Thread, put "R" digit at the last of part number.

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

IMPWC Male Pipe Weld Connector





Connector Fractional Tubes To Pipe

Part No.	Tube O.D. D		Male Pipe Size P		d min.	Width Across Flat				A	B	ℓ	ℓ1	L
						h		H						
	inch	mm	Nom.	O.D.		inch	mm	inch	mm					
IMPWC 2-2P	1/8	3.17	1/8	10.30	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.87	9.65	31.24
IMPWC 3-2P	3/16	4.76	1/8	10.30	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.63	9.65	31.24
IMPWC 4-2P	1/4	6.35	1/8	10.30	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	9.65	32.76
IMPWC 4-4P	1/4	6.35	1/4	13.70	4.82	9/16	14.28	9/16	14.28	15.24	17.78	30.48	14.22	37.84
IMPWC 5-2P	5/16	7.93	1/8	10.30	5.08	9/16	14.28	5/8	15.87	16.25	18.54	26.67	9.65	34.03
IMPWC 5-4P	5/16	7.93	1/4	13.70	6.35	9/16	14.28	5/8	15.87	16.25	18.54	31.24	14.22	38.60
IMPWC 6-4P	3/8	9.52	1/4	13.70	7.11	5/8	15.87	11/16	17.46	16.76	19.30	32.51	14.22	39.87
IMPWC 6-6P	3/8	9.52	3/8	17.10	7.11	11/16	17.46	11/16	17.46	16.76	19.30	32.51	14.22	39.87
IMPWC 6-8P	3/8	9.52	1/2	21.30	7.11	7/8	22.22	11/16	17.46	16.76	19.30	38.86	19.05	46.23
IMPWC 6-12P	3/8	9.52	3/4	26.67	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	40.38	19.05	47.75
IMPWC 8-6P	1/2	12.70	3/8	17.10	10.41	13/16	20.64	7/8	22.22	22.86	21.84	33.27	14.22	43.43
IMPWC 8-8P	1/2	12.70	1/2	21.30	10.41	7/8	22.22	7/8	22.22	22.86	21.84	38.86	19.05	49.02
IMPWC 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
IMPWC 10-8P	5/8	15.87	1/2	21.30	12.70	15/16	23.81	1	25.40	24.38	21.84	38.86	19.05	49.02
IMPWC 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
IMPWC 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
IMPWC 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
IMPWC 24-24P	1-1/2	38.10	1-1/2	48.26	33.90	2-1/8	53.98	2-1/4	57.15	50.03	45.21	61.72	26.16	88.90
IMPWC 32-32P	2	50.80	2	60.32	47.75	2-3/4	69.85	3	76.20	67.56	62.73	76.20	26.92	113.53

Connector Metric Tube To Pipe

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

NOTES : All ly-Lok pipe weld ends have schedule 80 wall thickness or greater. **Weld End** : ANSI B31.1 and B31.3

Welding Information

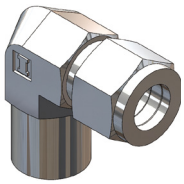
a. If you weld the fully assembled fittings, the assembly can be distored and the lubricant on the nut can be removed, which is not desirable.

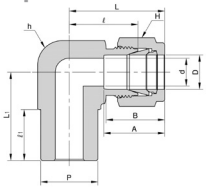
b. To avoid this, remove nut and ferrules from the body and cover thread and seat area with another nut or a plug in order to protect them from weld splatter. (Just finger tighten easy removal)

c. Provide a proper heat sink for heat dissipation. After welding, replace the nut and ferrule.

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

IMPWE Male Pipe Weld Elbow

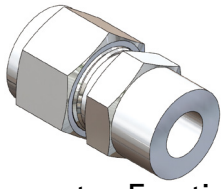


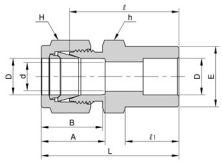


Connector Fractional Tubes To Pipe

Part No.	Tube O.D. D		Male Pipe Size P		d min.	Width Across Flat				A	B	ℓ	ℓ_1	L	L_1
						h		H							
	inch	mm	inch	mm		inch	mm	inch	mm						
IMPWE 2-2P	1/8	3.17	1/8	10.29	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	9.65	26.92	18.79
IMPWE 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
IMPWE 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
IMPWE 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
IMPWE 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
IMPWE 16-16P	1	25.40	1	33.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	23.87	49.02	46.70

ITSWC Tube Socket Weld Connector

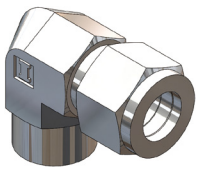


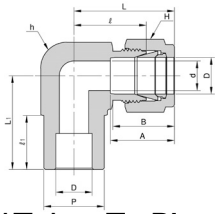


Connector Fractional Tubes To Pipe

Part No.	Tube O.D. D		d min.	E	Width Across Flat				A	B	ℓ	ℓ_1	ℓ_2	L
					h		H							
	inch	mm			inch	mm	inch	mm						
ITSWC 2-2	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
ITSWC 4-4	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
ITSWC 6-6	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
ITSWC 8-8	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
ITSWC 12-12	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
ITSWC 16-16	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

ITSWE Tube Socket Weld Elbow



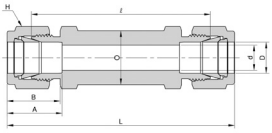


Connector Fractional Tubes To Pipe

Part No.	Tube O.D. D		d min.	E	Width Across Flat				A	B	ℓ	ℓ_1	ℓ_2	L
					h		H							
	inch	mm			inch	mm	inch	mm						
ITSWE 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
ITSWE 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
ITSWE 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
ITSWE 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
ITSWE 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

IWU Weld Union



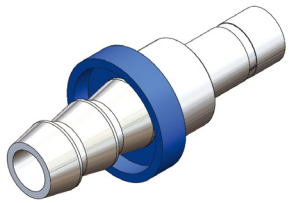


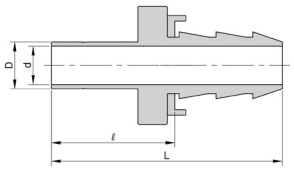
Connector Fractional Tubes To Pipe

Part No.	Tube O.D. D		d min.	Width Across Flat H		A	B	ℓ	L	O
	inch	mm		inch	mm					
IWU-4	1/4	6.35	4.82	9/16	14.28	15.24	17.78	70.4	85.56	14.00
IWU-6	3/8	9.52	7.11	11/16	17.46	16.76	19.30	73.7	88.60	19.00
IWU-8	1/2	12.70	10.41	7/8	22.22	22.86	21.84	73.7	93.68	23.00

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

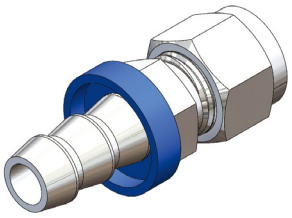
ITH Tube Adapter to Hose

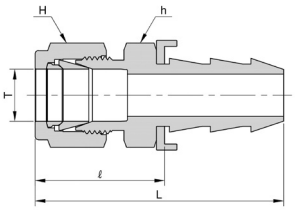




Part No.	T (Tube O.D)	Nominal Hose Size	Dimension, inch. (mm)	
			L	ℓ
ITH 4-4	1/4	1/4	1.93 (49.0)	1.17 (29.7)
ITH 6-6	3/8	3/8	2.03 (51.6)	1.16 (29.5)
ITH 8-8	1/2	1/2	2.47 (62.7)	1.42 (36.1)
ITH 12-12	3/4	3/4	3.14 (79.8)	1.47 (37.3)
ITH 16-16	1	1	4.13 (105.0)	1.91 (48.5)

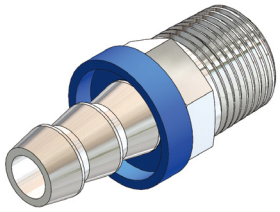
ILH Iy-Lok to Hose

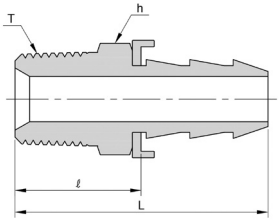




Part No.	T (Tube O.D)	Nominal Hose Size	Dimension, inch. (mm)			
			Hex		L	ℓ
			h	H		
ILH 4-4	1/4	1/4	1/2 (12.70)	9/16 (14.28)	1.97 (50.0)	1.21 (30.7)
ILH 6-6	3/8	3/8	5/8 (15.87)	11/16 (17.46)	2.11 (53.6)	1.24 (31.5)
ILH 8-8	1/2	1/2	13/16 (20.63)	7/8 (22.22)	2.47 (62.7)	1.42 (36.1)
ILH 12-12	3/4	3/4	1-1/16 (26.98)	1-1/8 (28.57)	3.15 (80.0)	1.45 (36.8)

IMH Hose to Male Pipe Thread

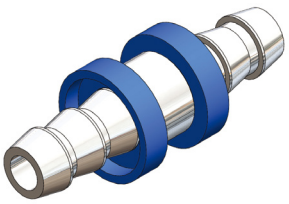


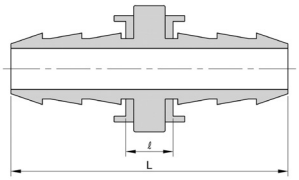


Part No.	T* Pipe Thread (NPT)	Nominal Hose Size	Dimension, inch. (mm)		
			H(Hex)	L	ℓ
ITH 4N-4	1/4	1/4	9/16 (14.28)	1.68 (42.7)	0.92 (23.4)
ITH 6N-6	3/8	3/8	11/16 (17.46)	1.80 (45.7)	0.93 (23.6)
ITH 8N-8	1/2	1/2	7/8 (22.22)	2.19 (55.6)	1.14 (29.0)
ITH 12N-12	3/4	3/4	1-1/16 (26.98)	2.81 (71.4)	1.14 (29.0)
ITH 16N-16	1	1	1-3/8 (34.92)	3.78 (96.0)	1.55 (39.4)

*SO Tapered Thread, put "R" digit at the last of part number.

IHH Hose to Hose





Part No.	Nominal Hose Size	Dimension, inch. (mm)	
		L	ℓ
IHH 4-4	1/4	2.07 (52.6)	0.55 (14.0)
IHH 6-6	3/8	2.25 (57.2)	0.52 (13.2)
IHH 8-8	1/2	2.61 (66.3)	0.52 (13.2)
IHH 12-12	3/4	3.85 (97.8)	0.52 (13.2)

Push-On Hose Assembly Instruction

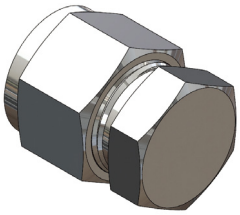
a. Cut a clean, square edge on end of hose.
b. Cover first barb of end connection with hose. (Lubrication fitting stem with light oil may ease assembly)
c. Hold end connection against flat surface,
Grip hose and push with a steady force until hose seats into blue finishing.

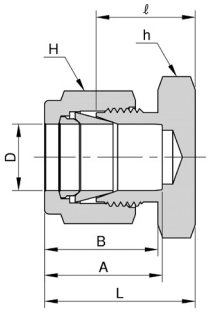
Push-On Hose Disassembly Instruction

a. Slit hose lengthwise from blue finishing cap to end of barb. Do not damage barbs.
b. Bend hose to expose barbs, then remove hose with a quick pull.

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

IC Cap





Connector Cap End of Fractional Tube End

Part No.	Tube O.D. D		Width Across Flat h		Width Across Flat H		A	B	ℓ	L
	inch	mm	inch	mm	inch	mm				
IC-1	1/16	1.59	5/16	7.93	5/16	7.93	8.63	10.92	11.20	14.18
IC-2	1/8	3.17	7/16	11.11	7/16	11.11	12.70	15.24	13.46	20.06
IC-3	3/16	4.76	7/16	11.11	1/2	12.70	13.71	16.00	14.73	21.33
IC-4	1/4	6.35	1/2	12.70	9/16	14.28	15.24	17.78	16.00	23.26
IC-5	5/16	7.93	9/16	14.28	5/8	15.87	16.25	18.54	17.01	24.38
IC-6	3/8	9.52	5/8	15.87	11/16	17.46	16.76	19.30	18.28	25.65
IC-8	1/2	12.70	13/16	20.63	7/8	22.22	22.86	21.84	19.05	29.21
IC-10	5/8	15.87	15/16	23.81	1	25.40	24.38	21.84	19.81	29.97
IC-12	3/4	19.05	1-1/16	26.98	1-1/8	28.57	24.38	21.84	21.33	31.49
IC-14	7/8	22.22	1-3/16	30.16	1-1/4	31.75	25.90	21.84	23.87	34.03
IC-16	1	25.40	1-3/8	34.92	1-1/2	38.10	31.24	26.41	26.16	38.35
IC-20	1-1/4	31.75	1-3/4	44.45	1-7/8	47.63	41.14	38.86	31.24	53.34
IC-24	1-1/2	38.10	2-1/8	53.98	2-1/4	57.15	50.15	45.21	37.33	64.51
IC-32	2	50.80	2-3/4	69.85	3	76.20	67.56	62.73	49.27	86.61

Connector Cap End of Metric Tube End

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

Installation Instruction - Cap is for capping tubing end.

a. Insert tube end into the cap. (Make sure tube end bottoms on the shoulder of the cap.)

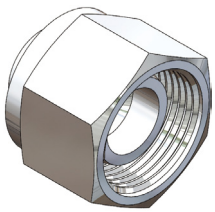
b. Finger-tighten the nut.

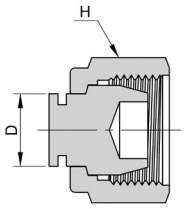
c. Wrench-tighten the nut 1-1/4 turns beyond the finger tight position, keeping the body steady with a backup wrench.
(Tightens 3/4 turns for 1/16, 1/8, and 3/16 in. | 2,3, and 4mm fittings.)

* For re-use, see re-assembly instruction.

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

IP Plug





Connector Fractional ly-Lok Port

Part No.	Tube O.D. D		Width Across Flat h	
	inch	mm	inch	mm
IP-1	1/16	1.59	5/16	7.93
IP-2	1/8	3.17	7/16	11.11
IP-3	3/16	4.76	1/2	12.70
IP-4	1/4	6.35	9/16	14.28
IP-5	5/16	7.93	5/8	15.87
IP-6	3/8	9.52	11/16	17.46
IP-8	1/2	12.70	7/8	22.22

Part No.	Tube O.D. D		Width Across Flat h	
	inch	mm	inch	mm
IP-10	5/8	15.87	1	25.40
IP-12	3/4	19.05	1-1/8	28.58
IP-14	7/8	22.22	1-1/4	31.75
IP-16	1	25.40	1-1/2	38.10
IP-20	1-1/4	31.75	1-7/8	47.63
IP-24	1-1/2	38.10	2-1/4	57.15
IP-32	2	50.80	3	76.20

Plugs Unused port of Metric ly-Lok fittings.

Connector Metric ly-Lok Port

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

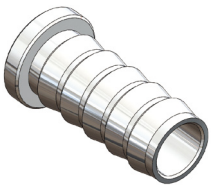
Plugs Unused port of Fractional ly-Lok fittings.

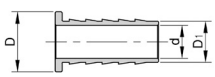
Installation Instruction
- Plug is for plugging un-used ly-Lok port.

a. Remove the nut and ferrules from the ly-Lok fitting body.
b. Finger-tighten the plug.
c. Tighten the plug 1/4 turn beyond the finger-tight position, keeping the fitting body steady with a backup wrench.

* Do not tighten 1-1/4 turns as this has machined ferrule not the standard ferrules.
* Tighten 1/8 turn for 1/16, 1/8, and 3/16 in. 1 2, 3, and 4mm tube Fittings.

ITI Tube Insert





Installation Instruction
- For Nylon or Soft Plastic Tubing

ly-Lok tube insert supports the soft plastic tube internally.
This helps the soft tube to connect to ly-Lok port with no collapse.

a. Fully insert the tube insert into the soft tube end.
b. Insert the soft tube end into the ly-Lok port.
c. Finger-tighten the nut.

* Tighten 3/4 turn for 3/16 in. tube fittings.

Fractional

Part No.	Tube O.D.D		Tube I.D.D_1		Bore I.D.d
	inch	mm	inch	mm	
ITI 3-2	3/16	4.76	1/8	3.17	2.28
ITI 4-2	1/4	6.35	1/8	3.17	2.28
ITI 4-3	1/4	6.35	3/16	4.76	3.55
ITI 5-2	5/16	7.93	1/8	3.17	2.28
ITI 5-3	5/16	7.93	3/16	4.76	3.04
ITI 5-4	5/16	7.93	1/4	6.35	4.82
ITI 6-3	3/8	9.52	3/16	4.76	3.04
ITI 6-4	3/8	9.52	1/4	6.35	4.82
ITI 8-4	1/2	12.7	1/4	6.35	4.82
ITI 8-6	1/2	12.7	3/8	9.52	7.87
ITI 10-6	5/8	15.87	3/8	9.52	7.87
ITI 10-8	5/8	15.87	1/2	12.70	11.17
ITI 12-8	3/4	19.05	1/2	12.70	11.17
ITI 12-10	3/4	19.05	5/8	15.87	14.22
ITI 16-12	1	25.4	3/4	19.05	17.52

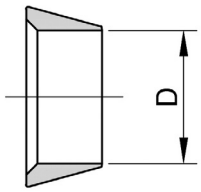
Metric

Part No.	Tube O.D.D	Tube I.D.D_1	Bore I.D.d
ITI 6M-4M	6	4	2.8
ITI 8M-6M	8	6	4.4
ITI 10M-8M	10	8	6.4
ITI 12M-8M	12	8	6.4
ITI 12M-10M	12	10	8.3

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

IFF Front Ferrule





Fractional

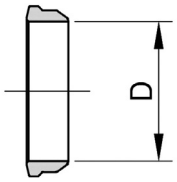
Part No.	Tube O.D D	
	inch	mm
IFF-1	1/16	1.58
IFF-2	1/8	3.17
IFF-3	3/16	4.76
IFF-4	1/4	6.35
IFF-5	5/16	7.93
IFF-6	3/8	9.52
IFF-8	1/2	12.70
IFF-10	5/8	15.87
IFF-12	3/4	19.05
IFF-14	7/8	22.22
IFF-16	1	25.40
IFF-20 *	1-1/4	31.75
IFF-24 *	1-1/2	38.10
IFF-32 *	2	50.80

Metric

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

IBF Back Ferrule





Fractional

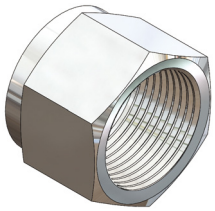
Part No.	Tube O.D D	
	inch	mm
IBF-1	1/16	1.59
IBF-2	1/8	3.17
IBF-3	3/16	4.76
IBF-4	1/4	6.35
IBF-5	5/16	7.93
IBF-6	3/8	9.52
IBF-8	1/2	12.70
IBF-10	5/8	15.87
IBF-12	3/4	19.05
IBF-14	7/8	22.22
IBF-16	1	25.40
IBF-20 *	1-1/4	31.75
IBF-24 *	1-1/2	38.10
IBF-32 *	2	50.80

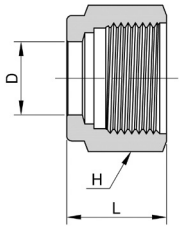
Metric

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

NOTES : "*" Over 1", and 25mm stainless steel fittings use stainless steel ferrule with a PFA coating.

IN Nut





Fractional

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

Metric

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

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