







The profession for best quality and best results.

TUBE FITTING

PIPE FITTING

NEEDLE VALVE

MANIFOLD VALVE

One stand instrumentation solution / control & leak solution

About the company

ICONIC ENGINEERING A fast growing manufacturing company having over 2 decades of experience and expertise in manuacturing and markeeting high quality Fittings a Valves suitable for Instrumentation, Hydraulic and Pneumatics application, used in intries like Automobile, Chemical, Petrochemical, oil & Gas, nuclear, Power Plant, Pharmaceutial, Marine, Packaging, Printing Industries etc

Manufacture

We manufacture each and every component of our products in our own manufacturing facilities using various CNC Lathes, VMC Lathes, and Auto screw machines etc. to very close tolerances by closely monitoring critial dimensions, surface finishes, run out, sharp edges etc. a er referring and meeting the equirements as per drawing, under rigid quality controlled procedures approved to ISO 9001 : 2015, which ensures consistent quality and high performance products.

Quality

Iconic Engineering has total quality management culture from the incoming high quality traceable raw material to finished products ensuring our commitment to efficient and high-quality products compatible with ISO 9001: 2015. This is achived by conntinuous imoving the products, process and systems. At every stage, we have controlled quality checks so that all our supplies reach to our customers with zero defect

Packing

All exposed threads of the products are protected with plastic aps to prevent damage, each assembly is packed in sealed and clear polyethylene bag for cleanliness and carefully packed in cardboard boxes to prevent transit damage. Each and every package is labeled for proper and easy identifacation



Pipe End Thread Information

The end connections with the lower pressure rating is the determining factor of pressure rating for the fittings with both Uni-Lok tube ends and pipe thread ends.

Pressure Rating for Pipe End Thread

Tapered Pipe Threads - NPT or ISO 7/1(BSPT)

Allowable pressure ratings for male and female threads are based on ASME B31.3 at ambient temperature.

Pipe		316	SS			Brass	
Size	М	ale	Fen	nale	Male	Fen	nale
inch	bar	psig	bar	psig	psig	bar	psig
1/16	760	11000	460	6700	5500	230	3300
1/8	690	10000	440	6500	5000	220	3200
1/4	550	8000	450	6600	4000	220	3300
3/8	540	7800	360	5300	3900	180	2600
1/2	530	7700	330	4900	3800	160	2400
3/4	500	7300	320	4600	3600	160	2300
1	370	5300	300	4400	2600	150	2200
1-1/4	410	6000	350	5000	3000	170	2500
1-1/2	340	5000	310	4600	2500	150	2300
2	270	3900	270	3900	1900	130	1900

Designator for NPT pipe thread is N, ISO/7 is R.

ISO 228/1 Parallel Thread (BSPP)

The pressure ratings are at ambient temperature.

Male	316	iss
Pipe Size	bar	psig
1/8	316	4568
1/4	315	4568
3/8	315	4568
1/2	160	2320

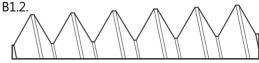
O-Seal Fittings

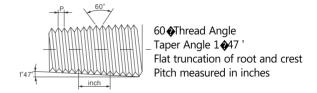
Rated to 206 bar (3000 psig) for 316SS fittings up to 1 inch and 25mm $\,$

Kinds of Pipe End Thread

NPT Pipe Thread

NPT (National Pipe Thread) is based on ANSI

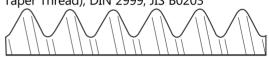


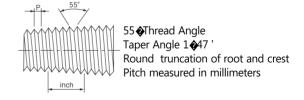


ISO 7/1 Tapered Pipe Thread

International Organization for Standard (ISO 7/1) Tapered (PT)

Equivalent to BSPT (British Standard Pipe Taper Thread), DIN 2999, JIS B0203





ISO 228/1 Parallel Pipe Thread

International Organization for Standard (ISO 228/1) Parallel(PF)

Equivalent to BSPP (British Standard Pipe Parallel Thread), DIN ISO228/1, JIS B0202

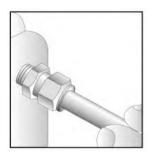
Gasket or O-ring is normally used to seal into the parallel female threaded components.







Tube Fitting Installation Instruction



- 1. Firmly insert the tubing until it bottoms in the fitting body.
- 2. Finger tighten the nut.
- 3. Mark the nut at the 6 o'clock position, with pencil or scribe.
- 4. Hold the body with a

backup wrench, or vice, then tighten nut.

5. 1-1/4 turns to the 9 o'clock position.

Reassembly - Simply insert tube assembly into fitting body, tighten nut to the original position as indicated by the previous mark, then snug up slightly with a wrench.

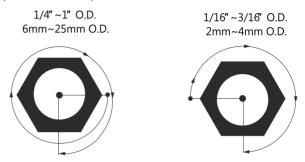
Materials

Tube Fitting are available in various kinds of materials as below. Straight fittings are machined from cold finished bar stock and shaped fittings from forgings. For more details or special application, contact your local distributors.

Materials	Bar Stock	Forgings
316 SS or 316L SS	ASTM A479 ASME SA479	ASTM A182 ASME SA182
Brass [®]	ASTM B16 ASTM B453	ASTM B283
Alloy 400 (Monel®)	ASTM B164	
Alloy 600 (Inconel®)	ASTM B166	ASTM B564
Alloy 625 (Inconel [®])	ASTM B166	ASME SB564
Alloy 825 (Incoloy®)	ASTM B425	
Alloy C-276 (Hastelloy C*)	ASTM B574	ASTM B564
PTFE	ASTM D1710	ASTM D3294
Alloy 2205 / UNS 32205(Duplex)	ASTM A479	ASTM A182
Alloy 2207 / UNS 32750(Super Duplex)	ASTM A479	AO I W A 102
UNS 31254 (Incoloy 25-6MO*)	ASTM B649	_

①Nickel plating is available as optional.

6. The above applies to all fittings from 1/4 to 1'' (6mm to 25mm).



7. Fittings from 1/8' to 3/16' (3mm to 4mm), only 3/4 turn is required.

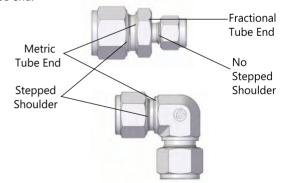
Sour Environment Services

Tube Fittings are comply with NACE MR-0175/ISO 115156 for sour oilfield application or NACE MR-0103 for petroleum refining operations.

To order, add - N to the end of part number.

Identification of Metric Tube Fittings

Every tube Fitting with metric tube end have a stepped shoulder to distinguish the fittings with fractional tube end.



Cleaning

Tube Fittings are free from machine oils,loose particles and grease throughout the close cleaning process. tube fittings for oxygen enriched systems are available by the special cleaning procedure. To order, add - SC to the part number.



^{*}Monel, Inconel, Incoloy, Incoloy 25-6MO are the trade marks of Special Metals.

^{*}Hatelloy C is the trade mark of Haynes International.

Tubing Information

The proper selection of tubing is essential to assure maximum fitting reliability and performance. When choosing tubing material, size and wall thickness, consider system's pressure, flow rate, temperature, environment and compatibility with great care.

Maximum Allowable Working Pressure

Stainless Steel Tubing

Fully annealed and seamless stainless steel tubing to comply with ASTM A269 or equivalent. Hardness should not exceed Rb 80.

Tubing should be free from scratched and suitable for bending and flaring.

				Fractio	onal(Inch) Tubing					
Tube O.D.					Tube Wa	all Thickne	ess (inch)				
(inch)	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120	0.134	0.156	0.188
1/8	8550	10950									
3/16	5500	7100	10300								
1/4	4100	5200	7600	10300					Working p	ressure in	psig
5/16		4100	5900	8100							
3/8		3350	4850	6550							
1/2		2650	3750	5150	6750						
5/8			2950	4050	5250	6050					
3/4			2450	3350	4250	4950	5850				
7/8			2050	2850	3650	4250	4850				
1				2400	3100	3600	4200	4700			
1-1/4					2400	2800	3300	3600	4100	4900	
1-1/2						2300	2700	3000	3400	4000	4900
2							2000	2200	2500	2900	3600

	Metric Tubing												
Tube O.D.					Tube Wa	all Thickne	ss (mm)						
(mm)	0.8	1.0	1.2	1.5	2.0	2.2	2.5	3.0	3.5	4.0	4.5		
3	9700												
4	7900	11500											
6	4500	6100	7850	10300					Working p	roccuro in	ncia		
8		4500	5650	7550					vvorking p	ressure in	psig		
10		3500	4350	5800	8400								
12		2900	3600	4800	6800								
14		2300	2900	4000	5500	6250							
15		2200	2750	3650	5200	5800							
16			2450	3350	4800	5350	5800						
18			2150	2950	4200	4650	5350						
20			2030	2600	3750	4200	4800						
22			1750	2300	3350	3750	4350						
25					2900	3350	3750	4650					
38						2030	2300	2900	3500	3900	4500		

For gas service application, use only tubing with wall thickness on outside of gray areas.

Allowable stress of 20000 psig between -30°C(-22°F) and 40° C(104°F) based on ultimate tensile strength to be 74000 psig.



TUBE FITTING

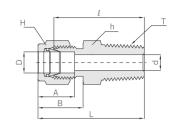




TUBE FITTING



Male Connector IEMA



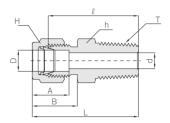
Connects Fractional Tube To Female NPT Thread

	Tube	e O.D.				Width a	ross flat					
Part No.	I	D	T* (NPT)	d Min.		h	ŀ	1	Α	В	l	L
	in	mm	(NPI)	IVIIII.	in	mm	in	mm				
1-IEMC 1N	1/16	1.58	1/16	1.27	5/16	7.93	5/16	7.93	8.63	10.92	20.00	23.83
1-IEMC 2N	1/16	1.58	1/8	1.27	7/16	11.11	7/16	11.11	8.63	10.92	22.35	26.23
1-IEMC 4N	1/16	1.58	1/4	1.27	9/16	14.28	5/16	7.93	8.63	10.92	27.17	30.98
2-IEMC 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
2-IEMC 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
2-IEMC 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
2-IEMC 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
2-IEMC 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
3-IEMC 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
3-IEMC 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
4-IEMC 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
4-IEMC 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
4-IEMC 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
4-IEMC 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
4-IEMC 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
4-IEMC 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
5-IEMC 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
5-IEMC 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
5-IEMC 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
6-IEMC 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
6-IEMC 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
6-IEMC 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
6-IEMC 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
6-IEMC 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
8-IEMC 2N	1/2	12.70	1/8	4.82	13/16	20.63	7/8	22.22	22.86	21.84	28.70	38.86
8-IEMC 4N	1/2	12.70	1/4	7.11	13/16	20.63	7/8	22.22	22.86	21.84	33.27	43.43
8-IEMC 6N	1/2	12.70	3/8	9.65	13/16	20.63	7/8	22.22	22.86	21.84	33.27	43.43
8-IEMC 8N	1/2	12.70	1/2	10.41	7/8	22.22	7/8	22.22	22.86	21.84	38.86	49.02
8-IEMC 12N	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	40.38	50.54
8-IEMC 16N	1/2	12.70	1	10.41	1-3/8	34.92	7/8	22.22	22.86	21.84	46.99	57.15
10-IEMC 6N	5/8	15.87	3/8	9.65	15/16	23.81	1	25.40	24.38	21.84	34.03	44.19
10-IEMC 8N	5/8	15.87	1/2	11.93	15/16	23.81	1	25.40	24.38	21.84	38.86	49.02
10-IEMC 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
12-IEMC 8N	3/4	19.05	1/2	11.93	1-1/16	26.98	1-1/8	28.57	24.38	21.84	40.38	50.54
12-IEMC 12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	40.38	50.54
12-IEMC 16N	3/4	19.05	1	15.74	1-3/8	34.92	1-1/8	28.57	24.38	21.84	46.99	57.15
14-IEMC 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
14-IEMC 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
16-IEMC 8N	1	25.40	1/2	11.93	1-3/8	34.92	1-1/2	38.10	31.24	26.41	45.21	57.40
16-IEMC 12N	1	25.40	3/4	15.74	1-3/8	34.92	1-1/2	38.10	31.24	26.41	45.21	57.40
16-IEMC 16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	50.03	62.23



Male Connector IEMC





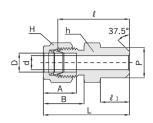
Connects Metric Tube To Female ISO Tapered Thread

Part No.	Tube O.D.	T*	d	Width a	cross flat	A	В	Į.	L
i ait iio.	D	R(PT)	Min	h	Н	_ ^		*	_
IEMC 2M-2R	2	1/8	1.7	12	12	12.9	15.3	23.9	30.5
IEMC 3M-2R	3	1/8	2.4	12	12	12.9	15.3	23.9	30.5
IEMC 3M-4R	3	1/4	2.4	14	12	12.9	15.3	29.0	35.6
IEMC 4M-2R	4	1/8	2.4	12	12	13.7	16.1	24.6	31.2
IEMC 4M-4R	4	1/4	2.4	14	12	13.7	16.1	29.7	36.3
IEMC 6M-2R	6	1/8	4.8	14	14	15.3	17.7	25.4	32.8
IEMC 6M-4R	6	1/4	4.8	14	14	15.3	17.7	30.5	37.9
IEMC 6M-6R	6	3/8	4.8	18	14	15.3	17.7	31.0	38.4
IEMC 6M-8R	6	1/2	4.8	22	14	15.3	17.7	37.3	44.7
IEMC 8M-2R	8	1/8	4.8	15	16	16.2	18.6	26.7	34.2
IEMC 8M-4R	8	1/4	6.4	15	16	16.2	18.6	31.2	38.7
IEMC 8M-6R	8	3/8	6.4	18	16	16.2	18.6	31.8	39.2
IEMC 8M-8R	8	1/2	6.4	22	16	16.2	18.6	38.1	45.6
IEMC 10M-2R	10	1/8	4.8	18	19	17.2	19.5	28.7	36.3
IEMC 10M-4R	10	1/4	7.1	18	19	17.2	19.5	33.3	40.9
IEMC 10M-6R	10	3/8	7.9	18	19	17.2	19.5	33.3	40.9
IEMC 10M-8R	10	1/2	7.9	22	19	17.2	19.5	38.9	46.5
IEMC 12M-2R	12	1/4	7.1	22	22	22.8	22.0	33.3	43.4
IEMC 12M-4R	12	3/8	9.5	22	22	22.8	22.0	33.3	43.4
IEMC 12M-6R	12	1/2	9.5	22	22	22.8	22.0	38.9	49.0
IEMC 12M-8R	12	3/4	9.5	27	22	22.8	22.0	40.4	50.5
IEMC 15M-8R	15	1/2	11.9	24	25	24.4	22.0	38.9	49.0
IEMC 16M-4R	16	1/4	7.1	24	25	24.4	22.0	34.0	44.1
IEMC 16M-6R	16	3/8	9.5	24	25	24.4	22.0	34.0	44.1
IEMC 16M-8R	16	1/2	11.9	24	25	24.4	22.0	38.9	49.0
IEMC 16M-12R	16	3/4	12.7	27	25	24.4	22.0	38.9	49.0
IEMC 18M-8R	18	1/2	11.9	27	30	24.4	22.0	40.4	50.5
IEMC 18M-12R	18	3/4	15.1	27	30	24.4	22.0	40.4	50.5
IEMC 20M-8R	20	1/2	11.9	30	32	26.0	22.0	42.2	52.3
IEMC 20M-12R	20	3/4	15.9	30	32	26.0	22.0	42.2	52.3
IEMC 22M-12R	22	3/4	15.9	30	32	26.0	22.0	42.2	52.3
IEMC 22M-16R	22	1	18.3	35	32	26.0	22.0	47.0	57.0
IEMC 25M-12R	25	3/4	15.9	35	38	31.3	26.5	45.2	57.5
IEMC 25M-16R	25	1	21.8	35	38	31,3	26,5	50,0	62,3



Male Pipe Weld Connector IEPWC





Connects Fractional Tube To Pipe

	Tube	O.D.	Male Pi	Male Pipe Size		٧	Vidth ac	ross flat						
Part No.)	P	5	d Min.	h		H		Α	В	l	l 1	L
	in	mm	Nom.	O.D.	IVIIII.	in	mm	in	mm					
IEPWC 2M- 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
IEPWC 3M- 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
IEPWC 4M- 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
IEPWC 4M- 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
IEPWC 5M- 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
IEPWC 5M- 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
IEPWC 6M- 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
IEPWC 6M- 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
IEPWC 6M-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	43.23
IEPWC 6M- 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
IEPWC 8M- 6P	1/2	12.70	3/8	17.10	10.41	13/16	20.63	7/8	22.22	22.86	21.84	33.27	14.22	43.43
IEPWC 8M- 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
IEPWC 8M- 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
IEPWC10M-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
IEPWC12M-12P	3/4	19.05	3/4	26.67	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	40.38	19.05	50.54
IEPWC16M-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

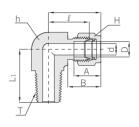
Connects Metric Tube To Pipe

Part No .		Male P	ipe Size P	d	Width a	cross flat	Α	В	l l	l 1	L
	D	Nom.	O.D.	Min.	h	Н					
IEPWC 3M- 2P	3	1/8	10.3	2.4	12	12	12.9	15.3	23.1	9.7	29.7
IEPWC 4M- 2P	4	1/8	10.3	2.4	12	12	13.7	16.1	24.1	9.7	30.7
IEPWC 6M- 2P	6	1/8	10.3	4.8	14	14	15.3	17.7	25.4	9.7	32.8
IEPWC 6M- 4P	6	1/4	13.7	4.8	14	14	15.3	17.7	30.2	14.2	37.6
IEPWC 8M- 2P	8	1/8	10.3	5.1	15	16	16.2	18.6	26.7	9.7	34.2
IEPWC 8M- 4P	8	1/4	13.7	6.4	15	16	16.2	18.6	31.2	14.2	38.7
IEPWC 8M-8P	8	1/2	21.3	6.4	22	16	16.2	18.6	37.3	19.0	44.8
IEPWC 10M-4P	10	1/4	13.7	7.1	18	19	17.2	19.5	33.3	14.2	40.9
IEPWC 10M-6P	10	3/8	17.1	7.9	18	19	17.2	19.5	33.3	14.2	40.1
IEPWC 10M-8P	10	1/2	21.3	7.9	22	19	17.2	19.5	38.1	19.0	45.7
IEPWC 12M- 4P	12	1/4	13.7	7.1	22	22	22.8	22.0	33.3	14.2	43.4
IEPWC 12M- 6P	12	3/8	17.1	9.5	22	22	22.8	22.0	33.3	14.2	43.4
IEPWC 12M-8P	12	1/2	21.3	9.5	22	22	22.8	22.0	38.1	19.0	48.2
IEPWC 14M- 6P	14	3/8	17.1	10.3	24	25	24.4	22.0	34.0	14.2	44.1
IEPWC 15M-8P	15	1/2	21.3	11.9	24	25	24.4	22.0	38.9	19.0	49.0
IEPWC 16M-8P	16	1/2	21.3	12.7	24	25	24.4	22.0	38.9	19.0	49.0
IEPWC 18M-8P	18	1/2	21.3	13.5	27	30	24 4	22 0	40 4	19 0	50 5



Male Elbow IEME





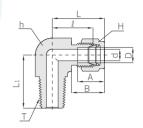
Connects Fractional Tube To Female NPT Thread

	Tube	O.D.	T			Width a	cross flat						
Part No.		D D	T*	d	h			Н	Α	В	l	L	L ₁
	in	mm	(NPT)	Min.	in	mm	in	mm					
IEME 1-1N	1/16	1.58	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
IEME 1-2N	1/16	1.58	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
IEME 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
IEME 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
IEME 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
IEME 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
IEME 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
IEME 4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.10	26.47	19.10
IEME 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
IEME 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
IEME 4-8N	1/4	6.35	1/2	4.82	13/16	20.63	9/16	14.28	15.24	17.78	24.60	31.97	33.00
IEME 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
IEME 5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	22.40	29.77	24.50
IEME 5-6N	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	28.40
IEME 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	20.80
IEME 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
IEME 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
IEME 6-8N	3/8	9.52	1/2	7.11	13/16	20.63	11/16	17.46	16.76	19.30	23.80	31.42	33.02
IEME 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
IEME 8-4N	1/2	12.70	1/4	7.11	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	28.30
IEME 8-6N	1/2	12.70	3/8	9.65	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	28.30
IEME 8-8N	1/2	12.70	1/2	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	33.02
IEME 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
IEME10-6N	5/8	15.87	3/8	9.65	15/16	23.80	1	25.40	24.38	21.84	27.90	37.06	30.20
IEME10-8N	5/8	15.87	1/2	11.93	15/16	23.80	1	25.40	24.38	21.84	27.90	37.06	35.00
IEME10-12N	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
IEME12-8N	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	36.83
IEME12-12N	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
IEME14-12N	7/8	22.22	3/4	15.74	1-3/16	30.00	1-1/4	31.75	25.90	21.84	34.54	44.70	41.65
IEME16-12N	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
IEME16-16N	1 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









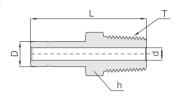
Connects Metric Tube To Female ISO Tapered Thread

					···a··o		Idpo	100		
Part No.	Tube O.D.	T* R(PT)	d Min.		across at	Α	В	l	L	L ₁
	D	K(F I)		h	H					
IEME 3M- 2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
IEME 3M- 4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
IEME 4M- 2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
IEME 4M- 4R	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
IEME 6M- 2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
IEME 6M- 4R	6	1/4	4.8	12.7	14	15.3	17.7	19.6	27.0	23.4
IEME 6M- 6R	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
IEME 6M- 8R	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
IEME 8M- 2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
IEME 8M- 4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
IEME 8M- 6R	8	3/8	6.4	17.5	16	16.2	18.6	23.9	31.4	28.5
IEME 8M- 8R	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
IEME 10M-2R	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
IEME 10M-4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	26.2
IEME 10M-6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	26.2
IEME 10M-8R	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
IEME 12M- 2R	12	1/8	4.8	20.6	22	22.8	22.0	25.9	36.0	23.6
IEME 12M-4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	26.2
IEME 12M- 6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	26.2
IEME 12M-8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
IEME 12M- 12R	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
IEME 16M- 6R	16	3/8	9.5	23.8	25	24.4	22.0	27.9	38.0	30.2
IEME 16M-8R	16	1/2	11.9	23.8	25	24.4	22.0	27.9	38.0	35.1
IEME 16M- 12R	16	3/4	12.7	27.0	25	24.4	22.0	29.7	39.8	36.8
IEME 18M-8R	18	1/2	11.9	27.0	30	24.4	22.0	29.7	39.8	36.8
IEME 18M- 12R	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
IEME 20M-8R	20	1/2	11.9	34.9	32	26.0	22.0	34.5	44.6	41.7
IEME 20M- 12R	20	3/4	15.9	30.0	32	26.0	22.0	34.5	44.6	41.7
IEME 22M- 12R	22	3/4	15.9	30.0	32	26.0	22.0	34.5	44.6	41.7
IEME 22M- 16R	22	1	18.3	34.9	32	26.0	22.0	34.5	44.6	46.5
IEME 25M- 12R	25	3/4	15.9	34.9	38	31.3	26.5	36.8	49.1	41.7
IEME 25M- 16R	25	1	21.8	34.9	38	31.3	26.5	36.8	49.1	46.5



Male Adapter IEMA





Connects Fractional Port To Female NPT Thread

Part No.	Tube [T*	d (mm)	Width ac	L	
	in	mm	(NPT)	(mm)	in	mm	
IEMA 2- 2N	1/8	3.17	1/8	2.03	7/16	11.11	29.50
IEMA 2- 2N	1/8	3.17	1/4	2.03	9/16	14.28	34.80
IEMA 2- 2N	3/16	4.76	1/8	3.04	7/16	11.11	30.22
IEMA 2- 2N	3/16	4.76	1/4	3.04	9/16	14.28	35.56
IEMA 2- 2N	1/4	6.35	1/8	4.32	7/16	11.11	31.80
IEMA 2- 2N	1/4	6.35	1/4	4.32	9/16	14.28	37.08
IEMA 2- 2N	1/4	6.35	3/8	4.32	11/16	17.46	37.84
IEMA 2- 2N	1/4	6.35	1/2	4.32	7/8	22.22	43.43
IEMA 2- 2N	5/16	7.93	1/8	4.57	7/16	11.11	32.76
IEMA 2- 2N	5/16	7.93	1/4	5.59	9/16	14.28	38.10
IEMA 2- 2N	3/8	9.52	1/8	4.83	7/16	11.11	33.50
IEMA 2- 2N	3/8	9.52	1/4	6.86	9/16	14.28	38.90
IEMA 2- 2N	3/8	9.52	3/8	6.86	11/16	17.46	39.60
IEMA 2- 2N	3/8	9.52	1/2	6.86	7/8	22,22	45.20
IEMA 2- 2N	1/2	12.70	1/4	7.11	9/16	14.28	44.50
IEMA 2- 2N	1/2	12.70	3/8	9.40	11/16	17.46	45.20
IEMA 2- 2N	1/2	12.70	1/2	9.40	7/8	22.22	50.50
IEMA 2- 2N	5/8	15.87	3/8	9.65	11/16	17.46	47.40
IEMA 2- 2N	5/8	15.87	1/2	11.94	7/8	22.22	52.30
IEMA 2- 2N	5/8	15.87	3/4	11.94	1-1/16	26.98	52.30
IEMA 2- 2N	3/4	19.05	1/2	11.94	7/8	22.22	52.30
IEMA 2- 2N	3/4	19.05	3/4	14.73	1-1/16	26.98	52.30
IEMA 2- 2N	3/4	19.05	1	14.73	1-3/8	34.92	57.91
IEMA 2- 2N	7/8	22.22	3/4	15.75	1-1/16	26.98	54.30
IEMA 2- 2N	1	25.40	3/4	15.75	1-1/16	26.98	58.70
IEMA 2- 2N	1	25.40	1	20.32	1-3/8	34.92	66.00

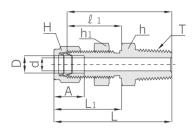
Connects Metric Port To Female ISO Taperad Thread

				. apolaa		
Part No.	Tube O.D. D	T* R(PT)	d Min.	Width across flat h	l	L
IEMA 2- 2N	6	1/8	4.1	12	15.75	32.8
IEMA 2- 2N	6	1/4	4.1	14	15.75	38.1
IEMA 2- 2N	8	1/4	5.6	14	16.50	39.1
IEMA 2- 2N	10	1/4	7.1	14	17.50	39.9
IEMA 2- 2N	10	3/8	7.1	18	17.50	40.6
IEMA 2- 2N	10	1/2	7.1	22	17.50	45.2
IEMA 2- 2N	12	1/4	7.1	14	23.50	46.5
IEMA 2- 2N	12	3/8	8.8	17	23.50	46.2
IEMA 2- 2N	12	1/2	8.8	22	23.50	51.8
IEMA 2- 2N	18	1/2	11.9	22	24.90	53.2
IEMA 2- 2N	18	3/4	13.9	27	24.90	53.2





Bulkhead Male Connector IEBMC

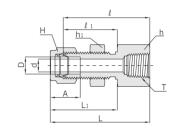


Connects Fractional Tube To Female NPT Thread

	Tube O.D. T*	T			W	idth ac	ross f	at							Panel	Panel	
Part No.)	(NPT)	d Min		1	ŀ	1		-	Α	l	l 1	L	Lı	Hole	Max.
	in	mm	(INF I)	IVIIII.	in	mm	in	mm	in	mm						Drill Size	Thickness
IEBMC 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	12.20
IEBMC 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
IEBMC 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
IEBMC 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
IEBMC 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
IEBMC 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
IEBMC 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
IEBMC 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
IEBMC12 -12N	3/4	19.05	3/4	15.74	1-3/16	30.16	1-3/16	30.16	1-1/8	28.57	24.38	66.04	37.33	76.20	47.49	25.76	16.76
IEBMC16 -16N	1	25.40	1	22.35	1-5/8	41.27	1-5/8	41.27	1-1/2	38.10	31.24	81.02	45.21	93.21	57.40	33.73	19.05



Bulkhead Female Connector IEBFC



Connects Fractional Tube To Male NPT Thread

	Tube	be O.D. T* d	a a		W	idth a	cross f	lat							Panel	Panel	
Part No.		D	(NPT)	Min		h	l	11	ŀ	-	Α	l	l 1	L	L ₁	Hole	Max.
	in	mm	(NFI)		in	mm	in	mm	in	mm						Drill Size	Thickness
IEBFC 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
IEBFC 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
IEBFC 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
IEBFC 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
IEBFC 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
IEBFC 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
IEBFC12 -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

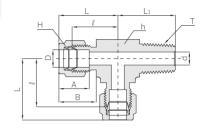
Connects Metric Tube To Male NPT Thread

Part No.	Tube T* d Width across flat		Α	l	l 1	L	L ₁	Panel Hole	Panel Max.				
	D	(111.1)		h	h₁†	Н						Drill Size	Thickness
IEBFC 6M - 2N	6	1/8	4.8	16.0	15.8	14	15.3	39.6	26.2	46.90	35.00	11.5	10.2
IEBFC 6M - 4N	6	1/4	4.8	19.0	16.0	14	15.3	44.4	26.2	51.80	33.60	11.5	10.2
IEBFC 8M - 4N	8	1/4	6.3	19.0	17.4	16	16.2	46.7	28.6	53.85	35.55	13.1	11.2
IEBFC12M - 8N	12	1/2	9.5	27.0	24.0	22	22.8	56.4	31.8	66.50	41.90	19.5	12.7





Male Run Tee IEMRT



Connects Fractional Tube To Female NPT Thread

	Tube	O.D.				Width ac	ross flat						
Part No.	I)	T*	T* d NPT) Min.		h		1	Α	В	l	L	Li
	in	mm	(INFI)	IVIIII.	in	mm	in	mm					
IEMRT 2 - 2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	17.00	24.91	17.80
IEMRT 2 - 4N	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.03	24.91	23.36
IEMRT 3 - 2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38	17.78
IEMRT 4 - 2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	18.79
IEMRT 4 - 4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.71	27.38	23.87
IEMRT 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
IEMRT 6 - 4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.75	19.30	23.11	30.48	25.40
IEMRT 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
IEMRT 8 - 6N	1/2	12.70	3/8	9.65	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	28.19
IEMRT 8 - 8N	1/2	12.70	1/2	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	33.02
IEMRT10 - 8N	5/8	15.87	1/2	11.93	15/16	23.80	1	25.40	24.38	21.84	27.94	38.10	35.05
IEMRT12- 12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	28.19	38.35	36.83

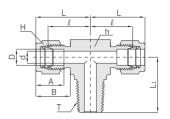
Connects Metric Tube To Female ISO Tapered Thread

OUTILICATE MICE	TIC TUR	CIOIC	Jillaic I	SO Tak	/CICUI	HIGH				
Part No.	Tube O.D.	T* R(PT)	d Min.	Width ac	ross flat	A	В	l	L	L ₁
	D	'((')	''''	h	H					
IEMRT 3M - 2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
IEMRT 3M - 4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
IEMRT 4M - 2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
IEMRT 6M - 2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
IEMRT 6M - 4R	6	1/4	4.8	14.2	14	15.3	17.7	19.6	27.0	23.4
IEMRT 8M - 2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
IEMRT 8M - 4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
IEMRT 10M - 4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	28.2
IEMRT 10M - 6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	28.2
IEMRT 12M - 4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
IEMRT 12M - 6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
IEMRT 12M - 8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
IEMRT 16M - 6R	16	3/8	9.5	23.8	25	24.4	22.0	27.9	38.0	30.2
IEMRT 16M - 8R	16	1/2	11.9	23.8	25	24.4	22.0	27.9	38.0	35.1
IEMRT 20M - 12R	20	3/4	15.9	30.0	32	26.0	22.0	34.5	44.6	41.7





Male Branch Tee IEMBT



Connects Fractional Tube To Female NPT Thread

	Tube	O.D.				Width ac	ross flat	:					
Part No.		D	T* (NPT)	d Min.	I	1	ŀ	1	Α	В	l	L	L ₁
	in	mm	(NFI)		in	mm	in	mm					
IEMBT 2 - 2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	17.00	24.91	17.80
IEMBT 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
IEMBT 3 - 2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38	17.78
IEMBT 4 - 2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	18.79
IEMBT 4 - 4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.71	27.08	23.87
IEMBT 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
IEMBT 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
IEMBT 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
IEMBT 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	28.19
IEMBT 8 - 8N	1/2	12.70	1/2	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06	33.02
IEMBT10 - 8N	5/8	15.87	1/2	11.93	15/16	23.80	1	25.40	24.38	21.84	27.94	38.10	35.05
IEMBT12 - 12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	28.19	38.35	36.83

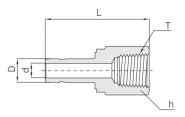
Connects Metric Tube To Female ISO Tapered Thread

				_	_					
Part No.	Tube O.D.	T*	d Min.	Width ac	ross flat	Α	В	l	L	L ₁
	D	R(PT)	IVIIII.	h	Н					
IEMBT 3M - 2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
IEMBT 3M - 4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
IEMBT 4M - 2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
IEMBT 6M - 2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
IEMBT 6M - 4R	6	1/4	4.8	14.2	14	15.3	17.7	19.6	27.0	23.4
IEMBT 8M - 2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
IEMBT 8M - 4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
IEMBT10M - 4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	28.2
IEMBT10M - 6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	28.2
IEMBT12M - 4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
IEMBT12M - 6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
IEMBT12M - 8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
IEMBT16M - 6R	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
IEMBT16M - 8R	16	1/2	11.9	25.4	25	24.4	22.0	27.9	38.0	35.1
IEMBT 20M - 12R	20	3/4	15.9	30.0	32	26.0	22.0	34.5	44.6	41.7





Female Adapter IEFA



Connects Fractional Port To Male NPT Thread

Part No.		O.D.)	T* (NPT)	d Min.		ross flat 1	L
	in	mm	(141-1)	171111.	in	mm	
IEFA 2 - 2N	1/8	3.17	1/8	2.03	9/16	14.28	31.50
IEFA 2 - 4N	1/8	3.17	1/4	2.03	3/4	19.05	35.30
IEFA 3 - 2N	3/16	4.76	1/8	3.04	9/16	14.28	32.00
IEFA 3 - 4N	3/16	4.76	1/4	3.04	3/4	19.05	35.81
IEFA 4 - 2N	1/4	6.35	1/8	4.32	9/16	14.28	33.02
IEFA 4 - 4N	1/4	6.35	1/4	4.32	3/4	19.05	37.10
IEFA 4 - 6N	1/4	6.35	3/8	4.32	7/8	22.22	39.37
IEFA 4 - 8N	1/4	6.35	1/2	4.32	1-1/16	26.98	45.50
IEFA 5 - 2N	5/16	7.93	1/8	5.59	9/16	14.28	34.29
IEFA 5 - 4N	5/16	7.93	1/4	5.59	3/4	19.05	37.59
IEFA 6 - 2N	3/8	9.52	1/8	6.86	9/16	14.28	34.29
IEFA 6 - 4N	3/8	9.52	1/4	6.86	3/4	19.05	38.10
IEFA 6 - 6N	3/8	9.52	3/8	6.86	7/8	22.22	40.38
IEFA 6 - 8N	3/8	9.52	1/2	6.86	1-1/16	26.98	46.73
IEFA 8 - 4N	1/2	12.70	1/4	9.40	3/4	19.05	43.43
IEFA 8 - 6N	1/2	12.70	3/8	9.40	7/8	22.22	45.46
IEFA 8 - 8N	1/2	12.70	1/2	9.40	1-1/16	26.98	51.80
IEFA10 - 6N	5/8	15.87	3/8	11.94	7/8	22.22	48.26
IEFA10 - 8N	5/8	15.87	1/2	11.94	1-1/16	26.98	53.84
IEFA10 - 12N	5/8	15.87	3/4	11.94	1-5/16	33.33	55.37
IEFA12 - 8N	3/4	19.05	1/2	14.73	1-1/16	26.98	52.83
IEFA12 - 12N	3/4	19.05	3/4	14.73	1-5/16	33.33	54.86
IEFA12 - 16N	3/4	19.05	1	14.73	1-5/8	41.27	58.42
IEFA14 - 12N	7/8	22.22	3/4	15.75	1-5/16	33.33	57.15
IEFA16 - 12N	1	25.40	3/4	20.32	1-5/16	33.33	60.70
IEFA16 - 16N	1	25.40	1	20.32	1-5/8	41.27	64.26

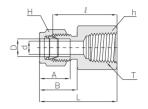
Connects Metric Port To Male ISO Tapered Thread

Part No.	Tube O.D. D	T* R(PT)	d Min.	Width across flat h	L
IEFA 3M - 2R	3	1/8	1.9	14	31.15
IEFA 6M - 2R	6	1/8	4.1	14	32.50
IEFA 6M - 4R	6	1/4	4.1	19	37.10
IEFA 8M - 4R	8	1/4	5.6	19	37.60
IEFA10M - 4R	10	1/4	7.1	19	38.10
IEFA10M - 6R	10	3/8	7.1	22	40.10
IEFA10M - 8R	10	1/2	7.1	27	46.50
IEFA12M - 4R	12	1/4	8.8	19	43.70
IEFA12M - 6R	12	3/8	8.8	22	46.00
IEFA12M - 8R	12	1/2	8.8	27	52.30
IEFA18M - 12R	18	3/4	13.9	35	54.80





Female Connector IEFC



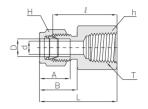
onnects Fractional Tube To Male NPT Thread

	Tube	O.D.				Width ac	ross flat					
Part No.	I	D	T* (NPT)	d Min.	ŀ	1		-	Α	В	l	L
	in	mm	(NFI)	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	in	mm	in	mm				
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC 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
IEFC10 - 6N	5/8	15.87	3/8	12.70	15/16	23.80	1	25.40	24.38	21.84	31.75	41.91
IEFC10 - 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
IEFC10 - 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
IEFC12 - 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
IEFC12 - 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
IEFC14 - 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
IEFC16 - 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
IEFC16 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





Female Connector IEFC



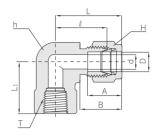
Connects Metric Tube To Male ISO Tapered Thread

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





Female Elbow IEFE



Connects Fractional Tube To Male NPT Thread

	Tube	O.D.	T*			Width ac	ross flat						
Part No.)	(NPT)	d Min.	ŀ	1		H	Α	В	l	L	Lı
	in	mm	(111.1)		in	mm	in	mm					
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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
IEFE - 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

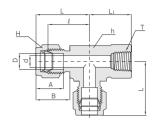
Connects Metric Tube To Male NPT Thread

Part No.	Tube O.D.	T*	d	Width ac	ross flat	A	В	l	L	L ₁
	D	(NPT)	Min.	h	Н					
IEFE 6M - 2N	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	19.00
IEFE 6M - 4N	6	1/4	4.8	17.5	14	15.3	17.7	22.4	29.8	22.40
IEFE 6M - 6N	6	3/8	4.8	20.6	14	15.3	17.7	24.4	31.7	22.40
IEFE 6M - 8N	6	1/2	4.8	25.4	14	15.3	17.7	27.2	34.6	28.40
IEFE 8M - 4N	8	1/4	6.4	17.5	16	16.2	18.6	23.1	30.6	22.40
IEFE 8M - 8N	8	1/2	6.4	20.6	16	16.2	18.6	28.0	35.2	28.40
IEFE10M - 2N	10	1/8	7.9	17.5	19	17.2	19.5	23.9	31.5	19.00
IEFE10M - 4N	10	1/4	7.9	17.5	19	17.2	19.5	25.9	33.5	22.40
IEFE10M - 6N	10	3/8	7.9	20.6	19	17.2	19.5	25.9	33.5	22.40
IEFE10M - 8N	10	1/2	7.9	25.4	19	17.2	19.5	28.7	36.1	28.40
IEFE12M - 4N	12	1/4	9.5	20.6	22	22.8	22.0	25.9	36.0	22.40
IEFE12M - 6N	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	22.40
IEFE12M - 8N	12	1/2	9.5	25.4	22	22.8	22.0	28.7	38.8	28.40
IEFE16M - 8N	16	1/2	12.7	27.0	25	24.4	22.0	29.7	39.5	28.40





Female Run Tee IEFRT



Connects Fractional Tube To Male NPT Thread

	Tube	O.D.			,	Width ac	ross flat						
Part No.		D	T* (NPT)	d Min.	h	l e	ŀ	1	A	В	l	L	L ₁
	in	mm	(NFI)	IVIIII.	in	mm	in	mm					
IEFRT - 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
IEFRT - 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
IEFRT - 4N	1/4	6.35	1/4	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.86	29.71	22.35
IEFRT - 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
IEFRT - 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
IEFRT - 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
IEFRT-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
IEFRT-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
IEFRT -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

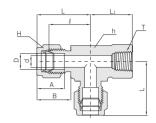
Connects Metric Tube To Male NPT Thread

Part No.	Tube O.D. D	T*	d Min.	Width ac	cross flat	Α	В	l	L	L ₁
		(NPT)	IVIIII.	h	Н					
IEFRT 6M - 2N	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	19.0
IEFRT 6M - 4N	6	1/4	4.8	17.5	14	15.3	17.7	22.4	29.8	22.4
IEFRT 6M - 8N	6	1/2	4.8	25.4	14	15.3	17.7	27.2	34.5	28.4
IEFRT 8M - 2N	8	1/8	6.4	15.8	16	16.2	18.6	22.4	29.9	19.0
IEFRT 8M - 4N	8	1/4	6.4	17.5	16	16.2	18.6	23.1	30.6	22.4
IEFRT 8M - 6N	8	3/8	6.4	20.6	16	16.2	18.6	25.2	32.4	22.4
IEFRT 8M - 8N	8	1/2	6.4	25.4	16	16.2	18.6	28.0	35.2	28.4
IEFRT10M - 4N	10	1/4	7.9	20.6	19	17.2	19.5	25.9	33.5	22.4
IEFRT12M - 4N	12	1/4	9.5	20.6	22	22.8	22.0	25.9	36.0	22.4
IEFRT12M - 6N	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	22.4
IEFRT12M - 8N	12	1/2	9.5	25.4	22	22.8	22.0	28.7	38.8	28.4
IEFRT16M - 8N	16	1/2	12.7	25.4	25	24.4	22.0	29.7	39.5	28.4





Female Branch Tee IEFBT



Connects Fractional Tube To Male NPT Thread

	Tube	O.D.				Width ac	ross flat						
Part No.			T* (NPT)	d Min.	ŀ	1	ŀ	1	Α	В	l	L	L ₁
	in	mm	(NET)	IVIII.	in	mm	in	mm					
IEFBT - 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
IEFBT - 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
IEFBT - 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
IEFBT - 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
IEFBT - 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
IEFBT - 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
IEFBT - 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
IEFBT - 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
IEFBT -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
IEFBT -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
IEFBT-16N	1	25.40	1	22.35	1-11/16	42.86	1-1/2	38.10	31.24	26.41	44.20	53.59	38.10

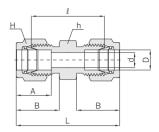
Connects Metric Tube To Male NPT Thread

Part No.	Tube O.D.	T* (NPT)	d Min.	Width ac	ross flat	A	В	l	L	Lı
		(NPT)	IVIIII.	h	Н					
IEFBT 6M - 2N	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	19.0
IEFBT 6M - 4N	6	1/4	4.8	17.5	14	15.3	17.7	22.4	29.8	22.4
IEFBT 6M - 6N	6	3/8	4.8	20.6	14	15.3	17.7	24.4	31.7	22.4
IEFBT 6M - 8N	6	1/2	4.8	25.4	14	15.3	17.7	27.2	34.5	28.4
IEFBT 8M - 2N	8	1/8	6.4	15.8	16	16.2	18.6	23.1	29.9	19.0
IEFBT 8M - 4N	8	1/4	6.4	17.5	16	16.2	18.6	23.1	30.6	22.4
IEFBT 8M - 6N	8	3/8	6.4	20.6	16	16.2	18.6	25.2	32.4	22.4
IEFBT 8M - 8N	8	1/2	6.4	25.4	16	16.2	18.6	28.0	35.2	28.4
IEFBT 10M - 4N	10	1/4	7.9	20.6	19	17.2	19.5	25.9	33.5	22.4
IEFBT 10M - 6N	10	3/8	7.9	20.6	19	17.2	19.5	25.9	33.3	22.4
IEFBT 10M - 8N	10	1/2	9.5	25.4	19	17.2	19.5	26.2	33.6	22.4
IEFBT 12M - 4N	12	1/4	9.5	20.6	22	22.8	22.0	25.9	36.0	22.4
IEFBT 12M - 6N	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	22.4
IEFBT 12M - 8N	12	1/2	9.5	25.4	22	22.8	22.0	28.7	38.8	28.4
IEFBT 16M - 8N	16	1/2	12.7	25.4	25	24.4	22.0	29.7	39.5	28.7





Union IEU



Connects Fractional Tubes

	Tube	O.D.			Width a	cross flat					
Part No.)	d Min.	ŀ	1		Н	A	В	l	L
	in	mm	141111.	in	mm	in	mm				
IEU - 1	1/16	1.58	1.27	5/16	7.93	5/16	7.93	8.63	10.92	17.50	25.15
IEU- 2	1/8	3.17	2.28	7/16	11.11	7/16	11.11	12.70	15.24	22.35	35.56
IEU- 3	3/16	4.76	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.13	37.33
IEU - 4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	26.16	40.89
IEU- 5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	28.19	42.92
IEU- 6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	30.22	44.95
IEU- 8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	30.98	51.30
IEU - 10	5/8	15.87	12.70	15/16	23,81	1	25.40	24.38	21.84	31.75	52.07
IEU - 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
IEU - 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
IEU - 16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	40.38	64.77

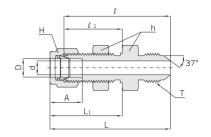
Connects Metric Tubes

Part No.	Tube O.D.	d	Width ac	cross flat	A	В	l	L
	D	Min.	h	Н				
IEU- 2M	2	1.7	12	12	12.9	15.3	22.4	35.6
IEU- 3M	3	2.4	12	12	12.9	15.3	22.1	35.3
IEU- 4M	4	2.4	12	12	13.7	16.1	24.1	37.3
IEU- 6M	6	4.8	12	14	15.3	17.7	26.2	41.0
IEU- 8M	8	6.4	14	16	16.2	18.6	28.2	43.2
IEU-10M	10	7.9	17.5	19	17.2	19.5	31.0	46.2
IEU-12M	12	9.5	20.5	22	22.8	22.0	31.0	51.2
IEU-15M	15	11.9	24	25	24.4	22.0	31.8	52.0
IEU-16M	16	12.7	24	25	24.4	22.0	31.8	52.0
IEU-18M	18	15.1	27	30	24.4	22.0	33.3	53.5
IEU-20M	20	15.9	30	32	26.0	22.0	34.8	55.0
IEU-22M	22	18.3	30	32	26.0	22.0	34.8	55.0
IELL- 25M	25	21.8	35	38	31.3	26.5	40.4	65.0





Bulkhead Union IEBU



Connects Fractional Tubes

	Tube	O.D.		٧	Vidth ac	ross fla	t							Panel	Panel
Part No.	I)	Min.	h,	h ₁	ŀ	1	Α	В	l	l 1	L	Lı	Hole	Max.
	in	mm	IVIIII.	in	mm	in	mm							Drill Size	Thickness
IEBU - 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
IEBU - 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
IEBU - 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
IEBU - 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
IEBU - 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
IEBU - 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
IEBU - 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
IEBU -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
IEBU -12	3/4	19.05	15.74	1-3/16	30.16	1-1/8	28.57	24.38	21.84	58.67	37.33	78.99	47.49	25.79	16.76
IEBU -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
IEBU -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

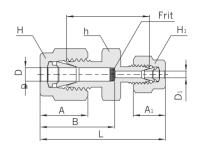
Connects Metric Tubes

Part No.	Tube O.D.	d Min.	Wid	th across	flat	A	В	l	l 1	L	L ₁	Panel Hole	Panel Max.
	D	'''''	h	hı*	Н							Drill Size	Thickness
IEBU - 3M	3	2.4	14.0	12.7	12	12.9	15.3	38.1	24.6	51.3	31.2	8.3	12.7
IEBU - 4M	4	2.4	14.0	14.3	12	13.7	16.1	40.4	25.4	53.6	32.0	9.9	12.7
IEBU - 6M	6	4.8	16.0	15.9	14	15.3	17.7	42.9	26.2	57.7	33.6	11.5	10.2
IEBU - 8M	8	6.4	18.0	17.5	16	16.2	18.6	46.0	28.6	61.0	36.1	13.1	11.2
IEBU -10M	10	7.9	22.0	22.0	19	17.2	19.5	48.5	29.4	63.7	37.0	16.2	11.2
IEBU -12M	12	9.5	24.0	23.8	22	22.8	22.0	50.8	31.8	71.0	41.9	19.5	12.7
IEBU -15M	15	11.9	27.0	27.0	25	24.4	22.0	52.3	32.5	72.5	42.6	22.8	12.7
IEBU -16M	16	12.7	27.0	27.0	25	24.4	22.0	52.3	32.5	72.5	42.6	22.8	12.7
IEBU -18M	18	15.1	30.0	30.0	30	24.4	22.0	58.7	37.3	78.9	47.4	26.0	16.8
IEBU -20M	20	15.9	35.0	35.0	32	26.0	22.0	64.3	42.9	84.5	53.0	29.0	17.0
IEBU -22M	22	18.3	35.0	35.0	32	26.0	22.0	64.3	42.9	84.5	53.0	29.0	19.1
IEBU -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





Reducing Union IERU



onnects Fractional Tubes

		Tube	O.D.				W	idth ac	ross fl	at							
art No.)	[) 1	d Min.	ŀ	1	ŀ	1	ŀ	1	Α	A ₁	В	Bı	l	L
	in	mm	in	mm	IVIIII.	in	mm	in	mm	in	mm						
IERU 2 - 1	1/8	3.17	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
IERU 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
IERU 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
IERU 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
IERU 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
IERU 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
IERU 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
IERU 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
IERU 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
IERU 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
IERU 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
IERU 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
IERU 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
IERU 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
IERU 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
IERU10 - 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
IERU10 - 8	5/8	15.87	1/2	12.70	10.41	15/16	23.81	1	25.40	7/8	22.22	24.38	22.86	21.84	21.84	31.75	52.07
IERU12 - 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
IERU12 - 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
IERU12 - 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
IERU12 -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
IERU16 - 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
IERU16 - 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

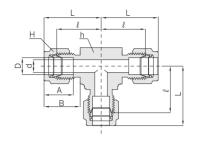
Connects Metric Tubes

Part No.	Tube	O.D.	d Min.	Wid	th across	flat	A	A 1	В	Bı	l	L
	D	D ₁	IVIIII.	h	Н	Hı						
IERU 3M - 2M	3	2	1.7	12	12	12	12.9	12.9	15.3	15.3	22,1	35.3
IERU 6M - 2M	6	2	1.7	14	14	12	15.3	12.9	17.7	15.3	24.6	38.6
IERU 6M - 3M	6	3	2.4	14	14	12	15.3	12.9	17.7	15.3	24.6	38.6
IERU 6M - 4M	6	4	2.4	14	14	12	15.3	13.7	17.7	16.1	25.4	39.4
IERU 8M - 6M	8	6	4.8	15	16	14	16.2	15.3	18.6	17.7	27.4	42.3
IERU 10M - 6M	10	6	4.8	18	19	14	17.2	15.3	19.5	17.7	29.5	44.5
IERU 10M - 8M	10	8	6.4	18	19	16	17.2	16.2	19.5	18.6	30.0	45.1
IERU 12M - 6M	12	6	4.8	22	22	14	22.8	15.3	22.0	17.7	29.5	47.0
IERU 12M - 8M	12	8	6.4	22	22	16	22.8	16.2	22.0	18.6	30.2	47.8
IERU 12M -10M	12	10	7.9	22	22	19	22.8	17.2	22.0	19.5	31.0	48.7
IERU 16M -10M	16	10	7.9	24	25	19	24.4	17.2	22.0	19.5	31.8	49.5
IERU 16M -12M	16	12	9.5	24	25	22	24.4	22,8	22.0	22.0	31.8	52.0
IERU 18M -12M	18	12	9.5	27	30	22	24.4	22.8	22.0	22.0	33.3	53.5
IERU 25M -18M	25	18	15.1	35	38	30	31.3	24.4	26.5	22.0	38.6	61.0
IERU 25M -20M	25	20	15.9	35	38	32	31.3	26.0	26.5	22.0	39.9	62.3





Union Tee



Connects Fractional Tubes

	Tube	O.D.			Width a	cross flat					
Part No.	[d Min.	ı	1		-1	Α	В	l	L
	in	mm		in	mm	in	mm				
IEUT - 1	1/16	1.58	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
IEUT - 2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
IEUT - 3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
IEUT - 4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
IEUT - 5	5/16	7.93	6.35	5/8	15.87	5/8	15.87	16.25	18.54	21.33	28.70
IEUT - 6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
IEUT - 8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06
IEUT -10	5/8	15.87	12.70	15/16	23.80	1	25.40	24.38	21.84	28.70	38.80
IEUT -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
IEUT -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
IEUT -16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02

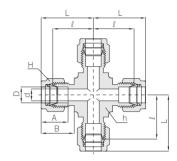
Connects Metric Tubes

Part No.	Tube O.D.	d	Width a	cross flat	A	В	Į.	L
	D	Min.	h	Н				
IEUT - 2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
IEUT - 3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
IEUT - 4M	4	2.4	12.7	12	13.7	16.1	18.8	25.4
IEUT - 6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
IEUT - 8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8
IEUT -10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
IEUT -12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
IEUT -15M	15	11.9	23.8	25	24.4	22.0	28.7	38.8
IEUT -16M	16	12.7	23.8	25	24.4	22.0	28.7	38.8
IEUT -18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
IEUT -20M	20	15.9	30.0	32	26.0	22.0	32.5	42.6
IEUT -22M	22	18.3	30.0	32	26.0	22.0	32.5	42.6
IFUT -25M	25	21.8	34.9	38	31.3	26.5	36.8	49 1





Union Cross IEUC



Connects Fractional Tubes

	Tube				Width a	cross flat					
Part No.	Į.)	d Min.		1	ŀ	1	Α	В	l	L
	in	mm	IVIIII.	in	mm	in	mm				
IEUC - 1	1/16	1.58	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
IEUC - 2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
IEUC - 3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
IEUC - 4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
IEUC - 5	5/16	7.93	6.35	5/8	15.87	5/8	15.87	16.25	18.54	21.33	28.70
IEUC - 6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
IEUC - 8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06
IEUC -10	5/8	15.87	12.70	13/16	20.63	1	25.40	24.38	21.84	28.70	38.80
IEUC -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
IEUC -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
IEUC -16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02

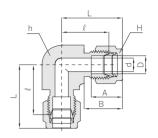
Connects Metric Tubes

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





Union Elbow IEUE



onnects Fractional Tubes

	Tube	Tube O.D.			Width a	cross flat					
Part No.			d Min.	ŀ	1	ŀ	-	Α	В	l	L
	in	mm	IVIII.	in	mm	in	mm				
IEUE - 1	1/16	1.58	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
IEUE - 2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
IEUE - 3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.38
IEUE - 4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
IEUE - 5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70
IEUE - 6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
IEUE - 8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	25.90	36.06
IEUE -10	5/8	15.87	12.70	15/16	23.80	1	25.40	24.38	21.84	28.70	38.80
IEUE -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
IEUE -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
IEUE -16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02

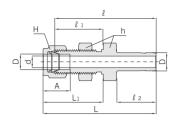
Connects Metric Tubes

Part No.	Tube O.D.	d Min.	Width ac	ross flat	A	В	e	L	
	D	IVIIII.	h	Н					
IEUE - 2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3	
IEUE - 3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3	
IEUE - 4M	4	2.4	12.7	12	13.7	16.4	18.8	25.4	
IEUE - 6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0	
IEUE - 8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8	
IEUE -10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5	
IEUE -12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0	
IEUE -15M	15	11.9	23.8	25	24.4	22.0	28.7	38.8	
IEUE -16M	16	12.7	23.8	25	24.4	22.0	28.7	38.8	
IEUE -18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8	
IEUE -20M	20	15.9	30.0	32	26.0	22.0	32.5	42.6	
IEUE -22M	22	18.3	30.0	32	26.0	22.0	32.5	42.6	
IEUE -25M	25	21.8	34.9	38	31.3	26.5	36.8	49.1	





Reducer IEBR

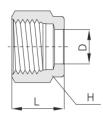


Connects Fractional Tube To Fractional Port

	Tube O.D. d		ч	Width across flat									Panel	Panel	
Part No.		D	Min.		h	ŀ	ł	Α	l	l 1	l 2	L	L ₁	Hole	Max.
	in	mm		in	mm	in	mm							Dril Size	Thickness
IEBR 2 - 2	1/8	3.17	2.03	1/2	12.70	7/16	11.11	12.70	42.92	24.63	13.46	49.53	31.24	8.33	12.70
IEBR 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
IEBR 6 - 6	3/8	9.52	6.86	3/4	19.05	11/16	17.46	16.76	53.84	29.46	17.52	61.21	36.83	14.68	11.17
IEBR 8 - 8	1/2	12.70	9.40	15/16	23.81	7/8	22.22	22. 6	62.73	31.75	23.11	72.89	41.91	19.44	12.70
IEBR10 - 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
IEBR16 - 16	1	25.40	20.32	1-5/8	41.27	1-1/2	38.10	31.24	88.13	45.21	31.70	100.33	57.40	33.73	19.05







Fractional

Part No.	Tube	e O.D. D	Width ac		L	
	in	mm	in	mm		
IEN 1	1/16	1.58	5/16	7.94	7.90	
IEN - 2	1/8	3.17	7/16	11.11	11.93	
IEN - 3	3/16	4.76	1/2	12.70	11.93	
IEN- 4	1/4	6.35	9/16	14.28	12.70	
IEN-5	5/16	7.93	5/8	15.87	13.46	
IEN- 6	3/8	9.52	11/16	17.46	14.22	
IEN - 8	1/2	12.70	7/8	22.22	17.52	
IEN - 10	5/8	15.87	1	25.40	17.52	
IEN - 12	3/4	19.05	1-1/8	28.57	17.52	
IEN - 14	7/8	22.22	1-1/4	31.75	17.52	
IEN - 16	1	25.40	1-1/2	38.10	20.57	
IEN - 20	1-1/4	31.75	1-7/8	47.62	31.75	
IEN - 24	1-1/2	38.10	2-1/4	57.15	38.10	
IEN - 32	2	50.80	3	76.20	52.32	

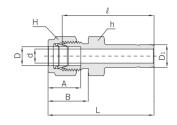
Metric

Part No.	Tube O.D. D	Width across flat H	L
IEN- 2M	2	12	11.9
IEN- 3M	3	12	11.9
IEN- 4M	4	12	11.9
IEN- 6M	6	14	12.7
IEN- 8M	8	16	13.5
IEN-10M	10	19	15.1
IEN- 12M	12	22	17.4
IEN- 15M	15	25	17.4
IEN-16M	16	25	17.4
IEN - 18M	18	30	17.4
IEN - 20M	20	32	17.4
IEN-22M	22	32	17.4
IEN - 25M	25	38	20.6
IEN-28M	28	46	30.6
IEN - 32M	32	50	34.4
IEN - 38M	38	60	40.6
IEN- 42M	42	65	44.7





Reducer IER



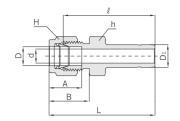
Connects Fractional Tube To Fractional Port

Connect	is rra			10	ггасц	oliai							
			O.D.		d			cross flat					
Part No.		D		\mathbf{O}_1	Min.		h		1	Α	В		L
	in	mm	in	mm		in	mm	in	mm				
IER 1 - 2	1/16	1.58	1/8	3.17	1.27	5/16	7.93	5/16	7.93	8.63	10.92	25.40	29.21
IER 1 - 4	1/16	1.58	1/4	6.35	1.27	5/16	7.93	5/16	7.93	8.63	10.92	27.68	31.49
IER 2 - 1	1/8	3.17	1/16	1,58	0.76	7/16	11,11	7/16	11,11	12.70	15.24	22.35	28.95
IER 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
IER 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
IER 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
IER 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
IER 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
IER 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
IER 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
IER 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
IER 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
IER 4 - 4	1/4	6.35	1/4	6.35	4.32	1/2	12.70	9/16	14.28	15.24	17.78	31.75	39.11
IER 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
IER 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
IER 4 - 8	1/4	6.65	1/2	12.70	4.82	9/16	14.28	9/16	14.28	15.24	17.78	38.86	46.22
IER 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
IER 4-12	1/4	6.35	3/4	19.05	4.82	13/16	20.63	9/16	14.28	15.24	17.78	40.38	47.75
IER 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
IER 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
IER 6 - 4	3/8	9.52	1/4	6.32	4.32	5/8	15.87	11/16	17.46	16.76	19.30	34.03	41.40
IER 6 - 6	3/8	9.52	3/8	6.86	6.86	5/8	15.87	11/16	17.46	16.76	19.30	35.81	43.18
IER 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
IER 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
IER 6 - 12	3/8	9.52	3/4	19.05	7.11	13/16	20.63	11/16	17.46	16.76	19.30	42.92	50.29
IER 8 - 4	1/2	12.70	1/4	6.35	4.32	13/16	20.63	7/8	22,22	22.86	21.84	34.79	44.95
IER 8 - 6	1/2	12.70	3/8	9,52	6.86	13/16	20.63	7/8	22,22	22.86	21.84	36.57	46.73
IER 8 - 8	1/2	12.70	1/2	12.70	9.40	13/16	20.63	7/8	22.22	22.86	21.84	42.16	52.32
IER 8 - 10	1/2	12.70	5/8	15.87	10.41	13/16	20.63	7/8	22.22	22.86	21.84	43.68	53.84
IER 8 - 12	1/2	12.70	3/4	19.05	10.41	13/16	20.63	7/8	22.22	22.86	21.84	43.68	53.84
IER 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
IER 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
IER 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
IER 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
IER 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
IER 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
IER 16 - 20	1	25.40	1-1/4	31.75	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	68.32	80.51
IER 16 - 24	1	25.40	1-1/2	38.10	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26,41	76.96	89.15
IER 16 - 32	1	25.40	2	50.80	22.35	2-1/8	53.97	1-1/2	38.10	31.24	26.41	100.33	112.52





Reducer IER



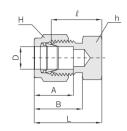
Connects Metric Tube To Metric Port

Part No.	Tube	O.D.	d	Width across flat		A	В	l l	L
	D	D 1	Min.	h	Н				
IER 2M - 3M	2	3	1.7	12	12	12.9	15.3	26.9	33.5
IER 3M - 4M	3	4	2.2	12	12	12.9	15.3	28.4	35.0
IER 3M - 6M	3	6	2.4	12	12	12.9	15.3	29.5	36.1
IER 3M - 10M	3	10	2.4	12	12	12.9	15.3	31.8	38.4
IER 4M - 6M	4	6	2.4	12	12	13.7	16.1	30.5	37.1
IER 6M - 3M	6	3	1.9	14	14	15.3	17.7	29.5	36.9
IER 6M - 8M	6	8	4.8	14	14	15 . 3	17.7	32.5	39.9
IER 6M - 10M	6	10	4.8	14	14	15.3	17.7	33.3	40.7
IER 6M - 12M	6	12	4.8	14	14	15.3	17.7	38.9	46.3
IER 8M - 6M	8	6	4.1	15	16	16.2	18.6	32.8	40.3
IER 8M - 10M	8	10	6.4	15	16	16.2	18.6	34.5	42.0
IER 8M - 12M	8	12	6.4	15	16	16.2	18.6	40.1	47.6
IER 10M - 6M	10	6	4.1	18	19	17.2	19.5	34.8	42.4
IER 10M - 12M	10	12	7.9	18	19	17.2	19.5	42,2	49.8
IER 10M - 15M	10	15	7.9	18	19	17.2	19.5	43.7	51.3
IER 10M - 18M	10	18	7.9	19	19	17.2	19.5	43.7	51.3
IER 12M - 6M	12	6	4.1	22	22	22.8	22.0	34.8	44.9
IER 12M - 10M	12	10	7.1	22	22	22.8	22.0	36.6	46.7
IER 12M - 16M	12	16	9.5	22	22	22.8	22.0	43.7	53.8
IER 12M - 18M	12	18	9.5	22	22	22.8	22.0	43.7	53.8
IER 12M - 20M	12	20	9.5	22	22	22.8	22.0	46.0	56.1
IER 12M - 22M	12	22	9.5	24	22	22.8	22.0	46.0	56.1
IER 12M - 25M	12	25	9.5	27	22	22.8	22.0	52.3	62.4
IER 16M - 12M	16	12	8.8	24	25	24.4	22.0	42.9	53.0
IER 18M - 12M	18	12	8.8	27	30	24.4	22.0	44.5	54.6
IER 18M - 16M	18	16	12.0	27	30	24.4	22.0	46.0	56.1
IER 18M - 20M	18	20	15.1	27	30	24.4	22.0	47.5	57.6
IER 18M - 22M IER 18M - 25M	18 18	22 25	15.1 15.1	27 27	30 30	24.4	22.0 22.0	47.5 52.3	57.6 62.4
IER 20M - 16M	20	16	12,0	30	32	26,0	22.0	47,8	57,9
IER 20M - 18M	20	18	13,9	30	32	26,0	22.0	47.8	57.9 57.9
IER 20M - 22M	20	22	15,8	30	32	26.0	22.0	49.3	57.9
IER 20M - 25M	20	25	15.8	30	32	26.0	22.0	54.1	64.2
IER 22M - 18M	22	18	13.9	30	32	26.0	22.0	47.8	57.9
IER 22M - 20M	22	20	15.1	30	32	26.0	22.0	49.3	59.4
IER 22M - 25M	22	25	18,3	30	32	26,0	22.0	54,1	64,2
IER 25M - 18M	25	18	13,9	35	38	31.3	26.5	50,8	63,1
IER 25M - 20M	25	20	15.5	35	38	31.3	26.5	52,3	64,6
IEK ZOM - ZOM	20	20	10.0	30	30	31.3	20.5	02.3	04.0





Tube Cap IETC



Connects Fractional Tube End

	Tube O.D		W	idth ac	cross fl	at				
Part No.)	ŀ			Н	Α	В	l	L
	in	mm	in	mm	in	mm				
IETC - 1	1/16	1.58	5/16	7.94	5/16	7.94	8.63	10.92	11.20	14.18
IETC - 2	1/8	3.17	7/16	11.11	7/16	11.11	12.70	15.24	13.46	20.06
IETC - 3	3/16	4.76	7/16	11.11	1/2	12.70	13.71	16.00	14.73	21.33
IETC - 4	1/4	6.35	1/2	12.70	9/16	14.28	15.24	17.78	16.00	23.26
IETC - 5	5/16	7.93	9/16	14.28	5/8	15.87	16.25	18.54	17.01	24.38
IETC - 6	3/8	9.52	5/8	15.87	11/16	17.46	16.76	19.30	18.28	25.65
IETC - 8	1/2	12.70	13/16	20.63	7/8	22.22	22.86	21.84	19.05	29.21
IETC - 10	5/8	15.87	15/16	23.81	1	25.40	24.38	21.84	19.81	29.97
IETC - 12	3/4	19.05	1-1/16	26.98	1-1/8	28.57	24.38	21.84	21.33	31.49
IETC - 14	7/8	22.22	1-3/16	30.16	1-1/4	31.75	25.90	21.84	23.87	34.03
IETC - 16	1	25.40	1-3/8	34.92	1-1/2	38.10	31.24	26.41	26.16	38.35

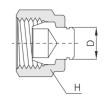
Connects Metric Tube End

Part No.	Tube O.D.		across at	Α	В	l	L
	D	h	H				
IETC - 2M	2	12	12	12.9	15.3	13.5	20.1
IETC - 3M	3	12	12	12.9	15.3	13.5	20.1
IETC - 4M	4	12	12	13.7	16.1	14.7	21.3
IETC - 6M	6	14	14	15.3	17.7	15.7	23.1
IETC - 8M	8	15	16	16.2	18.6	17.0	24.5
IETC - 10M	10	18	19	17.2	19.5	19.0	26.6
IETC - 12M	12	22	22	22.8	22.0	19.0	29.1
IETC - 15M	15	24	25	24.4	22.0	19.8	29.9
IETC - 16M	16	24	25	24.4	22.0	19.8	29.9
IETC - 18M	18	27	30	24.4	22.0	21.3	31.4
IETC - 20M	20	30	32	26.0	22.0	23.9	34.0
IETC - 22M	22	30	32	26.0	22.0	23.9	34.0
IETC - 25M	25	35	38	31.3	26.5	26.2	38.5



Tube Plug IETP





Connects Fractional Port

Part No.	Tube O.D. D		Width across flat H		
	in	mm	in	mm	
IETP - 1	1/16	1.58	5/16	7.94	
IETP - 2	1/8	3.17	7/16	11.11	
IETP - 3	3/16	4.76	1/2	12.70	
IETP - 4	1/4	6.35	9/16	14.28	
IETP - 5	5/16	7.93	5/8	15.87	
IETP - 6	3/8	9.52	11/16	17.46	
IETP - 8	1/2	12.70	7/8	22.22	
IETP - 10	5/8	15.87	1	25.40	
IETP - 12	3/4	19.05	1-1/8	28.57	
IETP - 14	7/8	22.22	1-1/4	31.75	
IETP - 16	1	25.40	1-1/2	38.10	

Connects Metric Port

Part No.	Tube O.D. D	Width across flat H
IETP - 2M	2	12
IETP - 3M	3	12
IETP - 4M	4	12
IETP - 6M	6	14
IETP - 8M	8	16
IETP - 10M	10	19
IETP - 12M	12	22
IETP - 15M	15	25
IETP - 16M	16	25
IETP - 18M	18	30
IETP - 20M	20	32
IETP - 22M	22	32
IETP - 25M	25	38





Front Ferrule



Fractional

Part No.	Tube O.D. D		
	in	mm	
IEFF- 1	1/16	1.58	
IEFF- 2	1/8	3.17	
IEFF- 3	3/16	4.76	
IEFF- 4	1/4	6.35	
IEFF- 5	5/16	7.93	
IEFF- 6	3/8	9.52	
IEFF- 8	1/2	12.70	
IEFF-10	5/8	15.87	
IEFF- 12	3/4	19.05	
IEFF-14	7/8	22,22	
IEFF-16	1 1	25.40	

Metric

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



Back Ferrule IEBF



Fractional

Part No.	Tube O.D. D			
	in	mm		
IEBF - 1	1/16	1.58		
IEBF - 2	1/8	3.17		
IEBF - 3	3/16	4.76		
IEBF - 4	1/4	6.35		
IEBF - 5	5/16	7.93		
IEBF - 6	3/8	9.52		
IEBF - 8	1/2	12.70		
IEBF - 10	5/8	15.87		
IEBF - 12	3/4	19.05		
IEBF - 14	7/8	22.22		
IEBF - 16	1	25.40		

Metric

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







ICONIC ENGINEERING

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Head Office & Factory:-Unit No 01, Shaikh Saheb Compound, R. S Marg, Pathanwadi Malad East, Mumbai-400097



info@iconicengg.com inquiryiconicengg@gail.com



www.tconicengg.com



Office :- +91 91678 44313 / +91 96996 86236



Handphone :- +91 91678 44313 / +91 96996 86236

