







## Instrumentation

- TUBE FITTING
- PIPE FITTING
- NEEDLE VALVE
- MANIFOLD VALVE

The profession for best quality and best results.

One stand instrumentation solution / control & leak solution

#### About the company

CHARTERED ACEEL INDUSTRIES A fast growing manufacturing company having over 2 decades of experience and expertise in manufacturing and marketing high quality Fittings and Valves suitable for Instrumentation, Hydraulic and Pneumatic applications, used in industries like Automobile, Chemical, Petrochemical, oil & Gas, nuclear, Power Plant, Pharmaceutical, 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 critical dimensions, surface finishes, run out, sharp edges etc. after referring and meeting the requirements as per drawing, under rigid quality controlled procedures approved to ISO 9001 : 2015, which ensures consistent quality and high performance products.

#### Quality

Chartered Accel Industries has total quality management culture from the incoming high quality traceable raw material to finish products ensuring our commitment to efficient and high-quality products compatible with ISO 9001: 2015. This is achieved by continuous improving 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 caps 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 identification



#### **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	316SS						
Pipe Size	bar	psig					
1/8	316	4568					
1/4	315	4568					
3/8	315	4568					
1/2	160	2320					

#### **O-Seal Fittings**

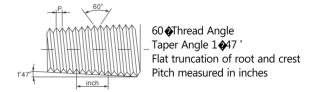
Rated to 206 bar (3000 psig) for 316SS fittings up to 1 inch and 25mm

#### **Kinds of Pipe End Thread**

#### **NPT Pipe Thread**

NPT (National Pipe Thread) is based on ANSI

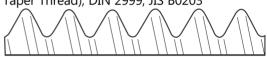


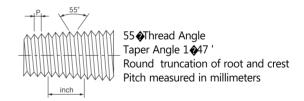


#### **ISO 7/1 Tapered Pipe Thread**

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

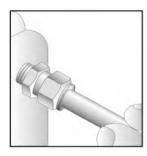
Gasket or O-ring is normally used to seal into the parallel female threaded components.







#### **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.

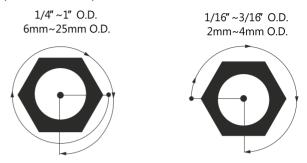
#### **Materials**

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 <sup>®</sup>	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	AGTWA 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**

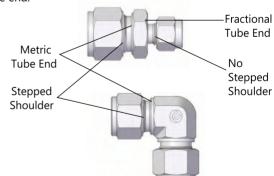
Tube Fittings are comply with NACE MR-0175/ISO 115156 for sour oilfield application or NACE MR-0103 for petroleum refining operations.

Identification of Matric

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.



<sup>\*</sup>Monel, Inconel, Incoloy, Incoloy 25-6MO are the trade marks of Special Metals.

<sup>\*</sup>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.

Fractional(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	II 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					Markina n	roccuro in	ncia		
8		4500 5650 7550 Working pressure in ps											
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  $40^{\circ}$ C(104°F) based on ultimate tensile strength to be 74000 psig.



#### **TUBE FITTING**

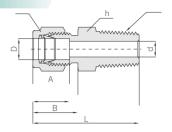




### TUBE FITTING



## Male Connector CAMA



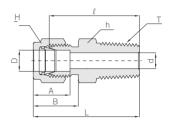
#### Connects Fractional Tube To Female NPT Thread

		Tube O.D.  T* d  Width across flat											
	Part No.		D	(NPT)	Min.		h	ŀ		A	В	l	L
		in	mm			in	mm	in	mm				
	1 <b>- SEMC</b> 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 <b>- SEMC</b> 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 - SEMC4N	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 <b>- SEMC</b> 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 <b>- SEMC</b> 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 <b>- SEMC</b> 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 <b>- SEMC</b> 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
1	2 <b>- SEMC</b> 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
ļ	3 - <b>SEMC</b> 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 <b>- SEMC</b> 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 <b>- SEMC</b> 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 - <b>SEMC</b> 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 - SEMC4N	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 <b>- SEMC</b> 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 <b>- SEMC</b> 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 <b>- SEMO</b> 2N	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 <b>- SEMC</b> 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 <b>- SEMC</b> 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 <b>- SEMC</b> 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 <b>- SEMC</b> 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 - <b>SEMC</b> 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 - <b>SEMC</b> 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 <b>- SEMC</b> 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 - <b>SEMC</b> 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 - <b>SEMC</b> 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 <b>- SEMC</b> 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 <b>- SEMC</b> 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 <b>- SEMC</b> 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 <b>- SEMC</b> 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 <b>- SEMC</b> 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 - <b>SEMC</b> 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 - <b>SEMC</b> 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 - <b>SEMC</b> 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 - <b>SEMC</b> 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 - <b>SEMC</b> 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 - <b>SEMC</b> 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 - <b>SEMC</b> 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 - <b>SEMC</b> 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 - <b>SEMC</b> 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 - <b>SEMC</b> 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 - <b>SEMC</b> 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 CAMC





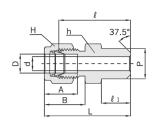
#### **Connects Metric Tube To Female ISO Tapered Thread**

Part No.	Tube O.D.	T*	d	Width a	ross flat	A	В	e e	L
Fart No.	D.D.	R(PT)	Min	h	Н	_ ^	P	Į Ž	٠.
SEMC 2M - 2R	2	1/8	1.7	12	12	12.9	15.3	23.9	30.5
SEMC 3M - 2R	3	1/8	2.4	12	12	12.9	15.3	23.9	30.5
SEMC 3M - 4R	3	1/4	2.4	14	12	12.9	15.3	29.0	35.6
SEMC 4M - 2R	4	1/8	2.4	12	12	13.7	16.1	24.6	31.2
SEMC 4M - 4R	4	1/4	2.4	14	12	13.7	16.1	29.7	36.3
SEMC 6M - 2R	6	1/8	4.8	14	14	15.3	17.7	25.4	32.8
SEMC 6M - 4R	6	1/4	4.8	14	14	15.3	17.7	30.5	37.9
SEMC 6M - 6R	6	3/8	4.8	18	14	15.3	17.7	31.0	38.4
SEMC 6M - 8R	6	1/2	4.8	22	14	15.3	17.7	37.3	44.
SEMC 8M - 2R	8	1/8	4.8	15	16	16.2	18.6	26.7	34.2
SEMC 8M - 4R	8	1/4	6.4	15	16	16.2	18.6	31.2	38.
SEMC 8M - 6R	8	3/8	6.4	18	16	16.2	18.6	31.8	39.2
SEMC 8M - 8R	8	1/2	6.4	22	16	16.2	18.6	38.1	45.6
SEMC 10M - 2R	10	1/8	4.8	18	19	17.2	19.5	28.7	36.3
SEMC 10M - 4R	10	1/4	7.1	18	19	17.2	19.5	33.3	40.9
<b>SEMC</b> 10M - 6R	10	3/8	7.9	18	19	17.2	19.5	33.3	40.9
<b>SEMC</b> 10M - 8R	10	1/2	7.9	22	19	17.2	19.5	38.9	46.5
<b>SEMC</b> 12M - 4R	12	1/4	7.1	22	22	22.8	22.0	33.3	43.4
<b>SEMC</b> 12M - 6R	12	3/8	9.5	22	22	22.8	22.0	33.3	43.4
<b>SEMC</b> 12M - 8R	12	1/2	9.5	22	22	22.8	22.0	38.9	49.0
SEMC 12M - 12R	12	3/4	9.5	27	22	22.8	22.0	40.4	50.5
<b>SEMC</b> 15M - 8R	15	1/2	11.9	24	25	24.4	22.0	38.9	49.0
SEMC 16M - 4R	16	1/4	7.1	24	25	24.4	22.0	34.0	44.1
<b>SEMC</b> 16M - 6R	16	3/8	9.5	24	25	24.4	22.0	34.0	44.1
<b>SEMC</b> 16M - 8R	16	1/2	11.9	24	25	24.4	22.0	38.9	49.0
SEMC 16M - 12R	16	3/4	12.7	27	25	24.4	22.0	38.9	49.0
<b>SEMC</b> 18M - 8R	18	1/2	11.9	27	30	24.4	22.0	40.4	50.5
SEMC 18M - 12R	18	3/4	15.1	27	30	24.4	22.0	40.4	50.5
SEMC 20M - 8R	20	1/2	11.9	30	32	26.0	22.0	42.2	52.0
SEMC 20M - 12R	20	3/4	15.9	30	32	26.0	22.0	42.2	52.0
SEMC 22M - 12R	22	3/4	15.9	30	32	26.0	22.0	42.2	52.0
SEMC 22M - 16R	22	1	18.3	35	32	26.0	22.0	47.0	57.0
<b>SEMC</b> 25M - 12R	25	3/4	15.9	35	38	31.3	26.5	45.2	57.5
<b>SEMC</b> 25M - 16R	25	1	21.8	35	38	31.3	26,5	50.0	62.3



## Male Pipe Weld Connector CAPWC





#### **Connects Fractional Tube To Pipe**

Tube O.D.		O.D.	Male Pi	Male Pipe Size		٧	Vidth ac	ross flat						
Part No.		)	P	5	d Min.	h		H		Α	В	l	<b>l</b> 1	L
	in	mm	Nom.	O.D.	IVIIII.	in	mm	in	mm					
SEPWC 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
SEPWC 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
SEPWC 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
SEPWC 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
SEPWC 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
SEPWC 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
SEPWC 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
SEPWC 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
SEPWC 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	43.23
<b>SEPWC</b> 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
SEPWC 8 - 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
SEPWC 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
<b>SEPWC</b> 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
SEPWC10 - 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
SEPWC12 - 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
<b>SEPWC</b> 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

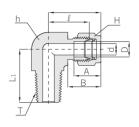
#### **Connects Metric Tube To Pipe**

Part No.	Tube O.D.	Male Pi	pe Size	d	Width a	cross flat	Α	В	l	<b>l</b> 1	L
	D	Nom.	O.D.	Min.	h	H					
SEPWC 3M - 2P	3	1/8	10.3	2.4	12	12	12.9	15.3	23.1	9.7	29.7
SEPWC 4M - 2P	4	1/8	10.3	2.4	12	12	13.7	16.1	24.1	9.7	30.7
SEPWC 6M - 2P	6	1/8	10.3	4.8	14	14	15.3	17.7	25.4	9.7	32.8
SEPWC 6M - 4P	6	1/4	13.7	4.8	14	14	15.3	17.7	30.2	14.2	37.6
SEPWC 8M - 2P	8	1/8	10.3	5.1	15	16	16.2	18.6	26.7	9.7	34.2
SEPWC 8M - 4P	8	1/4	13.7	6.4	15	16	16.2	18.6	31.2	14.2	38.7
SEPWC 8M - 8P	8	1/2	21.3	6.4	22	16	16.2	18.6	37.3	19.0	44.8
SEPWC10M - 4P	10	1/4	13.7	7.1	18	19	17.2	19.5	33.3	14.2	40.9
SEPWC10M - 6P	10	3/8	17.1	7.9	18	19	17.2	19.5	33.3	14.2	40.1
SEPWC10M - 8P	10	1/2	21.3	7.9	22	19	17.2	19.5	38.1	19.0	45.7
SEPWC12M - 4P	12	1/4	13.7	7.1	22	22	22.8	22.0	33.3	14.2	43.4
SEPWC12M - 6P	12	3/8	17.1	9.5	22	22	22.8	22.0	33.3	14.2	43.4
SEPWC12M - 8P	12	1/2	21.3	9.5	22	22	22.8	22.0	38.1	19.0	48.2
SEPWC14M - 6P	14	3/8	17.1	10.3	24	25	24.4	22.0	34.0	14.2	44.1
SEPWC15M - 8P	15	1/2	21.3	11.9	24	25	24.4	22.0	38.9	19.0	49.0
SEPWC16M - 8P	16	1/2	21.3	12.7	24	25	24.4	22.0	38.9	19.0	49.0
SEPWC18M - 8P	18	1/2	21 3	13 5	27	30	24 4	22 0	40 4	19 0	50 5



### Male Elbow CAME





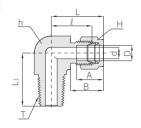
### **Connects Fractional Tube To Female NPT Thread**

	Tube	O.D.	T.1.			Width a	cross flat						
Part No.		D	T*	d	h			Н	Α	В	l	L	Lı
	in	mm	(NPT)	Min.	in	mm	in	mm					
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
SEME 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
<b>SEME</b> 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
SEME 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
SEME 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
SEME 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
<b>SEME</b> 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
SEME10 - 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
<b>SEME</b> 10 - 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
<b>SEME</b> 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
SEME12 - 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
<b>SEME</b> 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
<b>SEME</b> 14 - 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
<b>SEME</b> 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
<b>SEME</b> 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



### Male Elbow CAME





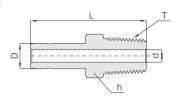
#### **Connects Metric Tube To Female ISO Tapered Thread**

				• • • •			Idpo			01 01
Part No.	Tube O.D.	T* R(PT)	d Min.		across at	A	В	l	L	L <sub>1</sub>
	D	K(FI)		h	Н					
SEME 3M - 2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
SEME 3M - 4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
SEME 4M - 2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
SEME 4M - 4R	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.4
SEME 6M - 2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
SEME 6M - 4R	6	1/4	4.8	12.7	14	15.3	17.7	19.6	27.0	23.4
SEME 6M - 6R	6	3/8	4.8	17.5	14	15.3	17.7	22.4	29.8	26.2
SEME 6M - 8R	6	1/2	4.8	20.6	14	15.3	17.7	24.4	31.8	33.0
SEME 8M - 2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
SEME 8M - 4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
SEME 8M - 6R	8	3/8	6.4	17.5	16	16.2	18.6	23.9	31.4	28.5
SEME 8M - 8R	8	1/2	6.4	20.6	16	16.2	18.6	25.1	32.6	33.0
<b>SEME</b> 10M - 2R	10	1/8	4.8	17.5	19	17.2	19.5	23.9	31.5	23.6
SEME 10M - 4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	26.2
<b>SEME</b> 10M - 6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	26.2
SEME 10M - 8R	10	1/2	7.9	20.6	19	17.2	19.5	25.9	33.5	33.0
<b>SEME</b> 12M - 2R	12	1/8	4.8	20.6	22	22.8	22.0	25.9	36.0	23.6
<b>SEME</b> 12M - 4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	26.2
<b>SEME</b> 12M - 6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	26.2
<b>SEME</b> 12M - 8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
<b>SEME</b> 12M -12R	12	3/4	9.5	27.0	22	22.8	22.0	29.7	39.8	36.8
<b>SEME</b> 16M - 6R	16	3/8	9.5	23.8	25	24.4	22.0	27.9	38.0	30.2
<b>SEME</b> 16M - 8R	16	1/2	11.9	23.8	25	24.4	22.0	27.9	38.0	35.1
<b>SEME</b> 16M -12R	16	3/4	12.7	27.0	25	24.4	22.0	29.7	39.8	36.8
<b>SEME</b> 18M - 8R	18	1/2	11.9	27.0	30	24.4	22.0	29.7	39.8	36.8
<b>SEME</b> 18M -12R	18	3/4	15.1	27.0	30	24.4	22.0	29.7	39.8	36.8
<b>SEME</b> 20M - 8R	20	1/2	11.9	34.9	32	26.0	22.0	34.5	44.6	41.7
<b>SEME</b> 20M -12R	20	3/4	15.9	30.0	32	26.0	22.0	34.5	44.6	41.7
<b>SEME</b> 22M -12R	22	3/4	15.9	30.0	32	26.0	22.0	34.5	44.6	41.7
<b>SEME</b> 22M -16R	22	1	18.3	34.9	32	26.0	22.0	34.5	44.6	46.5
<b>SEME</b> 25M -12R	25	3/4	15.9	34.9	38	31.3	26.5	36.8	49.1	41.7
<b>SEME</b> 25M -16R	25	1	21.8	34.9	38	31.3	26.5	36.8	49.1	46.5



### Male Adapter CAMA





#### Connects Fractional Port To Female NPT Thread

Part No.		O.D.	T* (NPT)	d		ross flat n	L
	in	mm	(NPI)	(mm)	in	mm	
<b>SEMA</b> 2 - 2N	1/8	3.17	1/8	2.03	7/16	11.11	29.50
<b>SEMA</b> 2 - 4N	1/8	3.17	1/4	2.03	9/16	14.28	34.80
<b>SEMA</b> 3 - 2N	3/16	4.76	1/8	3.04	7/16	11.11	30.22
<b>SEMA</b> 3 - 4N	3/16	4.76	1/4	3.04	9/16	14.28	35.56
SEMA 4 - 2N	1/4	6.35	1/8	4.32	7/16	11.11	31.80
<b>SEMA</b> 4 - 4N	1/4	6.35	1/4	4.32	9/16	14.28	37.08
<b>SEMA</b> 4 - 6N	1/4	6.35	3/8	4.32	11/16	17.46	37.84
<b>SEMA</b> 4 - 8N	1/4	6.35	1/2	4.32	7/8	22.22	43.43
<b>SEMA</b> 5 - 2N	5/16	7.93	1/8	4.57	7/16	11.11	32.76
<b>SEMA</b> 5 - 4N	5/16	7.93	1/4	5.59	9/16	14.28	38.10
<b>SEMA</b> 6 - 2N	3/8	9.52	1/8	4.83	7/16	11.11	33.50
<b>SEMA</b> 6 - 4N	3/8	9.52	1/4	6.86	9/16	14.28	38.90
<b>SEMA</b> 6 - 6N	3/8	9.52	3/8	6.86	11/16	17.46	39.60
<b>SEMA</b> 6 - 8N	3/8	9.52	1/2	6.86	7/8	22.22	45.20
<b>SEMA</b> 8 - 4N	1/2	12.70	1/4	7.11	9/16	14.28	44.50
<b>SEMA</b> 8 - 6N	1/2	12.70	3/8	9.40	11/16	17.46	45.20
SEMA 8 - 8N	1/2	12.70	1/2	9.40	7/8	22.22	50.50
<b>SEMA</b> 10 - 6N	5/8	15.87	3/8	9.65	11/16	17.46	47.40
<b>SEMA</b> 10 - 8N	5/8	15.87	1/2	11.94	7/8	22.22	52.30
<b>SEMA</b> 10 - 12N	5/8	15.87	3/4	11.94	1-1/16	26.98	52.30
<b>SEMA</b> 12 - 8N	3/4	19.05	1/2	11.94	7/8	22.22	52.30
<b>SEMA</b> 12 - 12N	3/4	19.05	3/4	14.73	1-1/16	26.98	52.30
<b>SEMA</b> 12 - 16N	3/4	19.05	1	14.73	1-3/8	34.92	57.91
<b>SEMA</b> 14 - 12N	7/8	22.22	3/4	15.75	1-1/16	26.98	54.30
<b>SEMA</b> 16 - 12N	1	25.40	3/4	15.75	1-1/16	26.98	58.70
<b>SEMA</b> 16 - 16N	1	25.40	1	20.32	1-3/8	34.92	66.00

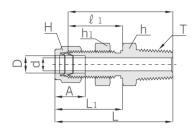
#### **Connects Metric Port To Female ISO Taperad Thread**

Part No.	Tube O.D. D	T* R(PT)	d Min.	Width across flat h	l	L
65144 014 05		4.0	4.4		45.75	00.0
SEMA 6M - 2R	6	1/8	4.1	12	15.75	32.8
SEMA 6M - 4R	6	1/4	4.1	14	15.75	38.1
SEMA 8M - 4R	8	1/4	5.6	14	16.50	39.1
<b>SEMA</b> 10M - 4R	10	1/4	7.1	14	17.50	39.9
<b>SEMA</b> 10M - 6R	10	3/8	7.1	18	17.50	40.6
<b>SEMA</b> 10M - 8R	10	1/2	7.1	22	17.50	45.2
<b>SEMA</b> 12M - 4R	12	1/4	7.1	14	23.50	46.5
<b>SEMA</b> 12M - 6R	12	3/8	8.8	17	23.50	46.2
<b>SEMA</b> 12M - 8R	12	1/2	8.8	22	23.50	51.8
SEMA18M - 8R	18	1/2	11.9	22	24.90	53.2
<b>SEMA</b> 18M - 12R	18	3/4	13.9	27	24.90	53.2





## Bulkhead Male Connector SEBMC

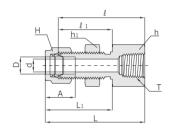


#### Connects Fractional Tube To Female NPT Thread

Tube O.D.			T↓	٦		W	idth ac	ross f	at							Panel	Panel
Part No.		)	I * (NPT)	d Min.	ŀ	1	ŀ	1		4	Α	l	<b>l</b> 1	L	L <sub>1</sub>	Hole	Max.
	in	mm	(INF I)	IVIIII.	in	mm	in	mm	in	mm						Drill Size	Thickness
SEBMC 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
SEBMC4 - 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
SEBMC 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
SEBMC 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
SEBMC6 - 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
SEBMC6 - 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
SEBMC8 - 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
SEBMC8 - 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
SEBMC12-12N	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
SEBMC16-16N	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 SEBFC



#### Connects Fractional Tube To Male NPT Thread

	Tube O.D. T* d			W	idth a	cross f	lat							Panel	Panel		
Part No.		D	(NPT)	Min		h		11	ŀ	ł	Α	l	<b>l</b> 1	L	L <sub>1</sub>	Hole	Max.
	in	mm	(NEI)		in	mm	in	mm	in	mm						Drill Size	Thickness
SEBFC 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
SEBFC 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
SEBFC 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
SEBFC 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
SEBFC 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
SEBFC 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
SEBFC12 -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

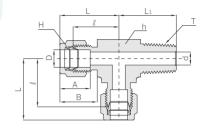
#### Connects Metric Tube To Male NPT Thread

Part No.	Tube O.D.	T* (NPT)	d Min.	Wid	th acros	s flat	Α	l	<b>l</b> 1	L	L <sub>1</sub>	Panel Hole	Panel Max.
	D	(111.1)		h	h₁†	Н						Drill Size	Thickness
SEBFC 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
SEBFC 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
SEBFC 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
SEBFC12M - 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 CAMRT



#### **Connects Fractional Tube To Female NPT Thread**

	O.D.				Width ac	ross flat							
Part No.	[	)	T* (NPT)	d Min.	ŀ	1	ŀ	1	Α	В	l	L	Lı
	in	mm	(INF I)	IVIIII.	in	mm	in	mm					
SEMRT 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
SEMRT 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
SEMRT 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
SEMRT 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
SEMRT 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
SEMRT 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
SEMRT 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
SEMRT 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
SEMRT 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
SEMRT 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
SEMRT10 - 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
<b>SEMRT</b> 12- 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

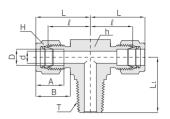
Connects Metric Tube To Female ISO Tapered Thread

Connects met	TIC TUD	C IO I	fillale i	JU Tak	<u>icicu i</u>	III Gau				
Part No.	Tube O.D.	T* R(PT)	d Min.	Width ac	ross flat	A	В	l l	L	L <sub>1</sub>
	D	N(FI)	141111.	h	Н					
SEMRT 3M - 2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
SEMRT 3M - 4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
SEMRT 4M - 2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
SEMRT 6M - 2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
SEMRT 6M - 4R	6	1/4	4.8	14.2	14	15.3	17.7	19.6	27.0	23.4
SEMRT 8M - 2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
SEMRT 8M - 4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
SEMRT10M - 4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	28.2
SEMRT10M - 6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	28.2
SEMRT12M - 4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
SEMRT12M - 6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
SEMRT12M - 8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
SEMRT16M - 6R	16	3/8	9.5	23.8	25	24.4	22.0	27.9	38.0	30.2
SEMRT16M - 8R	16	1/2	11.9	23.8	25	24.4	22.0	27.9	38.0	35.1
<b>SEMRT</b> 20M - 12R	20	3/4	15.9	30.0	32	26.0	22.0	34.5	44.6	41.7





### Male Branch Tee CAMBT



#### Connects Fractional Tube To Female NPT Thread

	Tube					Width ac	ross flat						
Part No.		D	T* (NPT)	d Min.	I	1	ŀ	-	A	В	l	L	L <sub>1</sub>
	in	mm	(NFI)		in	mm	in	mm					
SEMBT 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
SEMBT 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
SEMBT 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
SEMBT 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
SEMBT 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
SEMBT 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
SEMBT 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
SEMBT 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
SEMBT 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
SEMBT 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
<b>SEMBT</b> 10 - 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
<b>SEMBT</b> 12 - 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

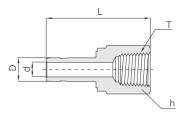
#### **Connects Metric Tube To Female ISO Tapered Thread**

Part No.	Tube O.D.	T* R(PT)	d Min.	Width ac	ross flat	A	В	l	L	L <sub>1</sub>
	D	11(1.1)		h	Н					
SEMBT 3M - 2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
SEMBT 3M - 4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
SEMBT 4M - 2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
SEMBT 6M - 2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
SEMBT 6M - 4R	6	1/4	4.8	14.2	14	15.3	17.7	19.6	27.0	23.4
SEMBT 8M - 2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
SEMBT 8M - 4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
SEMBT10M - 4R	10	1/4	7.1	17.5	19	17.2	19.5	23.9	31.5	28.2
SEMBT10M - 6R	10	3/8	7.9	17.5	19	17.2	19.5	23.9	31.5	28.2
SEMBT12M - 4R	12	1/4	7.1	20.6	22	22.8	22.0	25.9	36.0	28.2
SEMBT12M - 6R	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	28.2
SEMBT12M - 8R	12	1/2	9.5	20.6	22	22.8	22.0	25.9	36.0	33.0
SEMBT16M - 6R	16	3/8	9.5	25.4	25	24.4	22.0	27.9	38.0	30.2
SEMBT16M - 8R	16	1/2	11.9	25.4	25	24.4	22.0	27.9	38.0	35.1
<b>SEMBT</b> 20M - 12R	20	3/4	15.9	30.0	32	26.0	22.0	34.5	44.6	41.7





## Female Adapter CAFA



#### Connects Fractional Port To Male NPT Thread

		• • • • • • • • • • • • • • • • • • • •					
Part No.	Tube [	O.D.	T* (NPT)	d Min.	_	ross flat	L
	in	mm	(NFI)	IVIII.	in	mm	
SEFA 2 - 2N	1/8	3.17	1/8	2.03	9/16	14.28	31.50
SEFA 2 - 4N	1/8	3.17	1/4	2.03	3/4	19.05	35.30
SEFA 3 - 2N	3/16	4.76	1/8	3.04	9/16	14.28	32.00
SEFA 3 - 4N	3/16	4.76	1/4	3.04	3/4	19.05	35.81
SEFA 4 - 2N	1/4	6.35	1/8	4.32	9/16	14.28	33.02
SEFA 4 - 4N	1/4	6.35	1/4	4.32	3/4	19.05	37.10
SEFA 4 - 6N	1/4	6.35	3/8	4.32	7/8	22.22	39.37
SEFA 4 - 8N	1/4	6.35	1/2	4.32	1-1/16	26.98	45.50
<b>SEFA</b> 5 - 2N	5/16	7.93	1/8	5.59	9/16	14.28	34.29
<b>SEFA</b> 5 - 4N	5/16	7.93	1/4	5.59	3/4	19.05	37.59
SEFA 6 - 2N	3/8	9.52	1/8	6.86	9/16	14.28	34.29
SEFA 6 - 4N	3/8	9.52	1/4	6.86	3/4	19.05	38.10
SEFA 6 - 6N	3/8	9.52	3/8	6.86	7/8	22.22	40.38
<b>SEFA</b> 6 - 8N	3/8	9.52	1/2	6.86	1-1/16	26.98	46.73
SEFA 8 - 4N	1/2	12.70	1/4	9.40	3/4	19.05	43.43
SEFA 8 - 6N	1/2	12.70	3/8	9.40	7/8	22.22	45.46
SEFA 8 - 8N	1/2	12.70	1/2	9.40	1-1/16	26.98	51.80
<b>SEFA</b> 10 - 6N	5/8	15.87	3/8	11.94	7/8	22.22	48.26
<b>SEFA</b> 10 - 8N	5/8	15.87	1/2	11.94	1-1/16	26.98	53.84
<b>SEFA</b> 10 - 12N	5/8	15.87	3/4	11.94	1-5/16	33.33	55.37
<b>SEFA</b> 12 - 8N	3/4	19.05	1/2	14.73	1-1/16	26.98	52.83
<b>SEFA</b> 12 - 12N	3/4	19.05	3/4	14.73	1-5/16	33.33	54.86
<b>SEFA</b> 12 - 16N	3/4	19.05	1	14.73	1-5/8	41.27	58.42
<b>SEFA</b> 14 - 12N	7/8	22.22	3/4	15.75	1-5/16	33.33	57.15
<b>SEFA</b> 16 - 12N	1	25.40	3/4	20.32	1-5/16	33.33	60.70
<b>SEFA</b> 16 - 16N	1	25.40	1	20.32	1-5/8	41.27	64.26

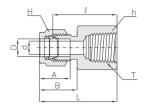
#### Connects Metric Port To Male ISO Tapered Thread

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





## Female Connector CAFC



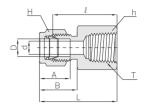
#### Connects Fractional Tube To Male NPT Thread

	Tube	O.D.				Width ac	ross flat					
Part No.		)	T* (NPT)	d Min.	ŀ	١	l	-	Α	В	l	L
	in	mm	(141-17		in	mm	in	mm				
SEFC 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
SEFC 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
SEFC 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
SEFC 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
SEFC 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
SEFC 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
SEFC 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
SEFC 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
SEFC 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
SEFC 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
SEFC 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
SEFC 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
SEFC 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
SEFC 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
SEFC 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
<b>SEFC</b> 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
SEFC 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
SEFC 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
SEFC 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
<b>SEFC</b> 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
<b>SEFC</b> 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
<b>SEFC</b> 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
<b>SEFC</b> 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
<b>SEFC</b> 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
<b>SEFC</b> 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
SEFC 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
<b>SEFC</b> 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
<b>SEFC</b> 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





## Female Connector CAFC



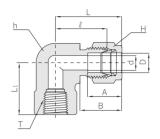
#### **Connects Metric Tube To Male ISO Tapered Thread**

				Talporous Timous		_			
Part No.	Tube O.D. D	T* R(PT)	d Min.		ross flat	А	В	l	L
				h	Н				
SEFC 3M - 2R	3	1/8	2.4	14	12	12.9	15.3	22.1	28.7
SEFC 3M - 4R	3	1/4	2.4	19	12	12.9	15.3	26.9	33.5
SEFC 4M - 2R	4	1/8	2.4	14	12	13.7	16.1	23.1	29.7
SEFC 6M - 2R	6	1/8	4.8	14	14	15.3	17.7	23.9	31.3
SEFC 6M - 4R	6	1/4	4.8	19	14	15.3	17.7	28.4	35.8
SEFC 6M - 6R	6	3/8	4.8	22	14	15.3	17.7	29.5	36.9
SEFC 6M - 8R	6	1/2	4.8	27	14	15.3	17.7	35.1	42.5
SEFC 8M - 2R	8	1/8	6.4	15	16	16.2	18.6	24.6	32.1
SEFC 8M - 4R	8	1/4	6.4	19	16	16.2	18.6	29.5	37.0
SEFC 8M - 6R	8	3/8	6.4	22	16	16.2	18.6	30.2	37.7
SEFC 8M - 8R	8	1/2	6.4	27	16	16.2	18.6	35.8	43.3
SEFC 10M - 2R	10	1/8	7.9	18	19	17.2	19.5	25.4	33.0
SEFC 10M - 4R	10	1/4	7.9	19	19	17.2	19.5	30.2	37.8
SEFC 10M - 6R	10	3/8	7.9	22	19	17.2	19.5	31.0	38.6
SEFC 10M - 8R	10	1/2	7.9	27	19	17.2	19.5	36.6	44.2
SEFC 12M - 2R	12	1/8	9.5	22	22	22.8	22.0	28.4	38.5
SEFC 12M - 4R	12	1/4	9.5	22	22	22.8	22.0	30.2	40.3
SEFC 12M - 6R	12	3/8	9.5	22	22	22.8	22.0	31,0	41,1
SEFC 12M - 8R	12	1/2	9,5	27	22	22.8	22.0	36,6	46.7
<b>SEFC</b> 12M - 12R	12	3/4	9.5	35	22	22.8	22.0	38,9	49.0
SEFC 15M - 8R	15	1/2	11.9	27	25	24.4	22.0	36.6	46.7
SEFC 16M - 8R	16	1/2	12.7	27	25	24.4	22.0	36.8	46.9
SEFC 20M - 8R	20	1/2	15,9	30	32	26.0	22.0	37,8	47.9
SEFC 20M - 12R	20	3/4	15.9	35	32	26.0	22.0	39.6	49.7
SEFC 22M - 12R	22	3/4	18,3	35	32	26.0	22.0	39,6	49.7
SEFC 22M - 16R	22	1	18.3	41	32	26.0	22.0	47.8	57.9
SEFC 25M - 12R	25	3/4	21,8	35	38	31,3	26.5	41,1	53,4
SEFC 25M - 16R	25	1	21.8	41	38	31.3	26.5	50.0	62.3





### Female Elbow CAFÉ



#### Connects Fractional Tube To Male NPT Thread

		Onai	IUDC		uic ii		Houd						
		O.D.	T*	d		Width ac	ross flat						
Part No.		)	(NPT)	Min.	ŀ	1		-	Α	В	l	L	L <sub>1</sub>
	in	mm	()		in	mm	in	mm					
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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
SEFE - 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

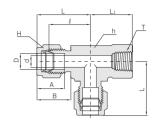
#### Connects Metric Tube To Male NPT Thread

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





### Female Run Tee CAFRT



#### 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 <sub>1</sub>
	in	mm	(NFI)	IVIIII.	in	mm	in	mm					
SEFRT- 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
SEFRT- 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
SEFRT- 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
SEFRT- 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
SEFRT- 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
SEFRT- 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
SEFRT-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
SEFRT-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
SEFRT-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

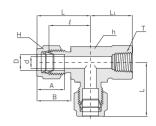
#### Connects Metric Tube To Male NPT Thread

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





### Female Branch Tee CAFBT



#### Connects Fractional Tube To Male NPT Thread

	Tube	O.D.				Width ac	ross flat	:					
Part No.			T* (NPT)	d Min.	ŀ	1	ı	-	Α	В	l	L	Lı
	in	mm	(1111)		in	mm	in	mm					
SEFBT - 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
SEFBT - 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
SEFBT - 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
SEFBT - 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
SEFBT - 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
SEFBT - 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
SEFBT - 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
SEFBT - 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
SEFBT -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
SEFBT -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
SEFBT - 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

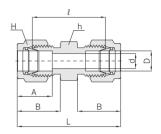
#### Connects Metric Tube To Male NPT Thread

Part No.	Tube O.D.	T* (NPT)	d Min.	Width ac	ross flat	Α	В	l	L	L <sub>1</sub>
		(141-1)	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	h	Н					
SEFBT 6M - 2N	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	19.0
SEFBT 6M - 4N	6	1/4	4.8	17.5	14	15.3	17.7	22.4	29.8	22.4
SEFBT 6M - 6N	6	3/8	4.8	20.6	14	15.3	17.7	24.4	31.7	22.4
SEFBT 6M - 8N	6	1/2	4.8	25.4	14	15.3	17.7	27.2	34.5	28.4
SEFBT 8M - 2N	8	1/8	6.4	15.8	16	16.2	18.6	23.1	29.9	19.0
SEFBT 8M - 4N	8	1/4	6.4	17.5	16	16.2	18.6	23.1	30.6	22.4
SEFBT 8M - 6N	8	3/8	6.4	20.6	16	16.2	18.6	25.2	32.4	22.4
SEFBT 8M - 8N	8	1/2	6.4	25.4	16	16.2	18.6	28.0	35.2	28.4
SEFBT 10M - 4N	10	1/4	7.9	20.6	19	17.2	19.5	25.9	33.5	22.4
SEFBT 10M - 6N	10	3/8	7.9	20.6	19	17.2	19.5	25.9	33.3	22.4
SEFBT 10M - 8N	10	1/2	9.5	25.4	19	17.2	19.5	26.2	33.6	22.4
SEFBT 12M - 4N	12	1/4	9.5	20.6	22	22.8	22.0	25.9	36.0	22.4
SEFBT 12M - 6N	12	3/8	9.5	20.6	22	22.8	22.0	25.9	36.0	22.4
SEFBT 12M - 8N	12	1/2	9.5	25.4	22	22.8	22.0	28.7	38.8	28.4
SEFBT 16M - 8N	16	1/2	12.7	25.4	25	24.4	22.0	29.7	39.5	28.7





## Union CAU



#### **Connects Fractional Tubes**

	Tube	O.D.			Width a	cross flat					
Part No.	[	)	d Min.	ŀ	1		Н	A	В	l	L
	in	mm	IVIII.	in	mm	in	mm				
SEU - 1	1/16	1.58	1.27	5/16	7.93	5/16	7.93	8.63	10.92	17.50	25.15
<b>SEU</b> - 2	1/8	3.17	2.28	7/16	11.11	7/16	11.11	12.70	15.24	22.35	35.56
<b>SEU</b> - 3	3/16	4.76	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.13	37.33
SEU - 4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	26.16	40.89
<b>SEU</b> - 5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	28.19	42.92
<b>SEU</b> - 6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	30.22	44.95
<b>SEU</b> - 8	1/2	12.70	10.41	13/16	20.63	7/8	22.22	22.86	21.84	30.98	51.30
<b>SEU</b> - 10	5/8	15.87	12.70	15/16	23.81	1	25.40	24.38	21.84	31.75	52.07
<b>SEU - 12</b>	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.57	24.38	21.84	33.27	53.59
SEU - 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
<b>SEU</b> - 16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	40.38	64.77

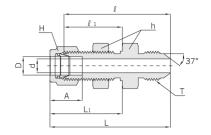
#### **Connects Metric Tubes**

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





## Bulkhead Union CABU



#### **Connects Fractional Tubes**

	Tube	O.D.		٧	Vidth ac	ross fla	t							Panel	Panel
Part No.	I	)	d Min.	h,	h <sub>1</sub>		1	Α	В	l	<b>l</b> 1	L	Lı	Hole	Max.
	in	mm		in	mm	in	mm							Drill Size	Thickness
SEBU - 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
SEBU - 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
SEBU - 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
SEBU - 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
SEBU - 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
SEBU - 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
SEBU - 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
SEBU -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
SEBU -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
SEBU -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
SEBU -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

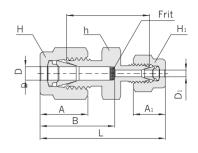
#### **Connects Metric Tubes**

Part No.	Tube O.D.	d Min.	Wid	th across	flat	Α	В	l	<b>l</b> 1	L	L <sub>1</sub>	Panel Hole	Panel Max.
	D		h	hı*	H							Drill Size	Thickness
SEBU - 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
SEBU - 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
SEBU - 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
SEBU - 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
SEBU -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
SEBU -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
SEBU -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
SEBU -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
SEBU -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
SEBU -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
SEBU -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
SEBU -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 CARU



#### **Connects Fractional Tubes**

		Tube	O.D.				W	idth ac	ross fl	at							
Part No.		)		<b>)</b> 1	d Min.	ŀ	1	ŀ	1	F	1	Α	<b>A</b> 1	В	Bı	l	L
	in	mm	in	mm	IVIIII.	in	mm	in	mm	in	mm						
<b>SERU</b> 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
<b>SERU</b> 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
<b>SERU</b> 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
SERU 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
<b>SERU</b> 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
<b>SERU</b> 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
<b>SERU</b> 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
<b>SERU</b> 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
<b>SERU</b> 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
<b>SERU</b> 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
SERU 6 - 4	3/8	9.52	1/4	6.35	4.82	5/8	15 <b>.</b> 87	11/16	17.46	9/16	14.28	16.76	15.24	19.30	17.78	28.44	43.18
<b>SERU</b> 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
<b>SERU</b> 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
<b>SERU</b> 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
SERU 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
<b>SERU</b> 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
<b>SERU</b> 10 - 8	5/8	15.87	1/2	12.70	10.41	15/16	23.81	1	25.40	7/8	22.22	24.38	22.86	21.84	21.84	31.75	52.07
SERU12 - 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
SERU12 - 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
<b>SERU</b> 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
SERU12 -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
<b>SERU</b> 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
<b>SERU</b> 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

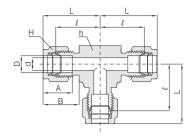
#### **Connects Metric Tubes**

Part No.	Tube	O.D.	d	Wid	th across	flat	A	<b>A</b> 1	В	Bı	e	L
	D	D <sub>1</sub>	Min.	h	Н	Hı						
SERU 3M - 2M	3	2	1.7	12	12	12	12.9	12.9	15.3	15.3	22.1	35.3
SERU 6M - 2M	6	2	1.7	14	14	12	15.3	12.9	17.7	15.3	24.6	38.6
SERU 6M - 3M	6	3	2.4	14	14	12	15.3	12.9	17.7	15.3	24.6	38.6
SERU 6M - 4M	6	4	2.4	14	14	12	15.3	13.7	17.7	16.1	25.4	39.4
SERU 8M - 6M	8	6	4.8	15	16	14	16.2	15.3	18.6	17.7	27.4	42.3
SERU 10M - 6M	10	6	4.8	18	19	14	17.2	15.3	19.5	17,7	29.5	44.5
SERU 10M - 8M	10	8	6.4	18	19	16	17.2	16.2	19.5	18.6	30.0	45.1
SERU 12M - 6M	12	6	4.8	22	22	14	22.8	15.3	22.0	17,7	29.5	47.0
SERU 12M - 8M	12	8	6.4	22	22	16	22.8	16.2	22.0	18.6	30.2	47.8
<b>SERU</b> 12M -10M	12	10	7.9	22	22	19	22.8	17.2	22.0	19.5	31.0	48.7
<b>SERU</b> 16M -10M	16	10	7.9	24	25	19	24.4	17.2	22.0	19.5	31.8	49.5
<b>SERU</b> 16M -12M	16	12	9.5	24	25	22	24.4	22.8	22.0	22.0	31.8	52.0
<b>SERU</b> 18M -12M	18	12	9.5	27	30	22	24.4	22.8	22.0	22.0	33.3	53.5
<b>SERU</b> 25M -18M	25	18	15.1	35	38	30	31.3	24.4	26.5	22.0	38.6	61.0
SERU 25M -20M	25	20	15.9	35	38	32	31.3	26.0	26.5	22.0	39.9	62.3





## Union Tee CAUT



#### **Connects Fractional Tubes**

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

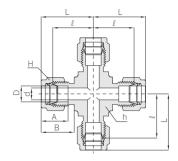
#### **Connects Metric Tubes**

Part No. 0	Tube O.D.	d	Width ac	cross flat	A	В	Į.	L
	D	Min.	h	Н	1			
SEUT - 2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
SEUT - 3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
SEUT - 4M	4	2.4	12.7	12	13.7	16.1	18.8	25.4
SEUT - 6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
SEUT - 8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8
SEUT -10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
SEUT -12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
SEUT -15M	15	11.9	23.8	25	24.4	22.0	28.7	38.8
SEUT -16M	16	12.7	23.8	25	24.4	22.0	28.7	38.8
SEUT -18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
SEUT -20M	20	15.9	30.0	32	26.0	22.0	32.5	42.6
SEUT -22M	22	18.3	30.0	32	26.0	22.0	32.5	42.6
SEUT -25M	25	21.8	34.9	38	31.3	26.5	36.8	49.1





## Union Cross CAUC



#### **Connects Fractional Tubes**

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

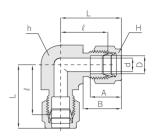
#### **Connects Metric Tubes**

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





## Union Elbow CAUE



#### **Connects Fractional Tubes**

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

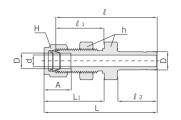
#### **Connects Metric Tubes**

Part No.	Tube O.D.	d	Width ac	ross flat	A	В	l	L
	D	Min.	h	Н				
SEUE - 2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
SEUE - 3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
SEUE - 4M	4	2.4	12.7	12	13.7	16.4	18.8	25.4
SEUE - 6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
SEUE - 8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8
SEUE -10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
SEUE -12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
SEUE -15M	15	11.9	23.8	25	24.4	22.0	28.7	38.8
SEUE -16M	16	12.7	23.8	25	24.4	22.0	28.7	38.8
SEUE -18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
SEUE -20M	20	15.9	30.0	32	26.0	22.0	32.5	42.6
SEUE -22M	22	18.3	30.0	32	26.0	22.0	32.5	42.6
SELIE -25M	25	21.8	3/1 0	38	31.3	26.5	36.8	49.1





## Reducer CAR

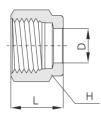


#### **Connects Fractional Tube To Fractional Port**

	Tube O.D. d	d	W	idth ac	ross fla	t							Panel	Panel	
Part No.		D	Min.		h	ŀ	1	Α	l	<b>l</b> 1	<b>l</b> 2	L	L <sub>1</sub>	Hole	Max.
	in	mm		in	mm	in	mm							Dril Size	Thickness
SEBR 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
SEBR 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
SEBR 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
SEBR 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
SEBR10 - 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
SEBR16 - 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



## Nut CAN



#### **Fractional**

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

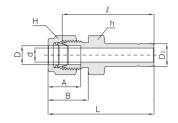
#### **Metric**

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





## Reducer CAR



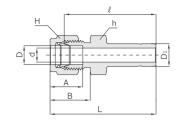
#### Connects Fractional Tube To Fractional Port

Tube O.D.				rract	Ullai								
					d			cross flat			_		
Part No.		D		$\mathbf{D}_1$	Min.		h		1	Α	В		L
050 4 0	in	mm	in	mm	4.07	in	mm	in	mm	0.00	40.00	05.40	00.04
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER 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
SER10 - 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
SER10 - 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
SER10 - 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
SER12 - 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
SER12 - 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
SER16 - 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
SER16 - 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
SER16 - 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 CAR



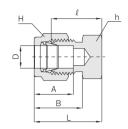
#### **Connects Metric Tube To Metric Port**

Part No.	Tube	e O.D.	d	Width a	cross flat	A	В	ı	L
	D	<b>D</b> <sub>1</sub>	Min.	h	Н				
SER 2M - 3M	2	3	1.7	12	12	12.9	15.3	26.9	33.5
SER 3M - 4M	3	4	2.2	12	12	12.9	15.3	28.4	35.0
SER 3M - 6M	3	6	2.4	12	12	12.9	15.3	29.5	36.1
SER 3M - 10M	3	10	2.4	12	12	12.9	15.3	31.8	38.4
SER 4M - 6M	4	6	2.4	12	12	13.7	16.1	30.5	37.1
SER 6M - 3M	6	3	1.9	14	14	15.3	17.7	29.5	36.9
SER 6M - 8M	6	8	4.8	14	14	15.3	17.7	32.5	39.9
SER 6M - 10M	6	10	4.8	14	14	15.3	17.7	33.3	40.7
SER 6M - 12M	6	12	4.8	14	14	15.3	17.7	38.9	46.3
SER 8M - 6M	8	6	4.1	15	16	16.2	18.6	32.8	40.3
SER 8M - 10M	8	10	6.4	15	16	16.2	18.6	34.5	42.0
SER 8M - 12M	8	12	6.4	15	16	16.2	18.6	40.1	47.6
SER 10M - 6M	10	6	4.1	18	19	17.2	19.5	34.8	42.4
SER 10M - 12M	10	12	7.9	18	19	17.2	19,5	42.2	49.8
SER 10M - 15M	10	15	7.9	18	19	17.2	19.5	43.7	51.3
SER 10M - 18M	10	18	7.9	19	19	17.2	19.5	43.7	51.3
SER 12M - 6M	12	6	4.1	22	22	22.8	22.0	34.8	44.9
SER 12M - 10M	12	10	7.1	22	22	22.8	22.0	36.6	46.7
SER 12M - 16M	12	16	9.5	22	22	22.8	22.0	43.7	53.8
SER 12M - 18M	12	18	9.5	22	22	22.8	22.0	43.7	53.8
SER 12M - 20M	12	20	9.5	22	22	22.8	22.0	46.0	56.1
SER 12M - 22M	12	22	9.5	24	22	22.8	22.0	46.0	56.1
SER 12M - 25M	12	25	9.5	27	22	22.8	22.0	52.3	62.4
SER 16M - 12M	16	12	8.8	24	25	24.4	22.0	42.9	53.0
SER 18M - 12M	18	12	8.8	27	30	24.4	22.0	44.5	54.6
SER 18M - 16M	18	16	12.0	27	30	24.4	22.0	46.0	56.1
SER 18M - 20M	18	20	15.1	27	30	24.4	22.0	47.5	57.6
SER 18M - 22M	18	22	15.1	27	30	24.4	22.0	47.5	57.6
SER 18M - 25M	18	25	15.1	27	30	24.4	22.0	52.3	62.4
SER 20M - 16M	20	16	12.0	30	32	26.0	22.0	47.8	57.9
SER 20M - 18M	20	18	13.9	30	32	26.0	22.0	47.8	57.9
SER 20M - 22M	20	22	15.8	30	32	26.0	22.0	49.3	59.4
SER 20M - 25M	20	25	15.8	30	32	26.0	22.0	54.1	64.2
SER 22M - 18M	22	18	13.9	30	32	26.0	22.0	47.8	57.9
SER 22M - 20M	22	20	15.1	30	32	26.0	22.0	49.3	59.4
SER 22M - 25M	22	25	18.3	30	32	26.0	22.0	54.1	64.2
SER 25M - 18M	25	18	13.9	35	38	31.3	26.5	50.8	63.1
SER 25M - 20M	25	20	15.5	35	38	31.3	26.5	52.3	64.6





### Tube Cap CATC



#### **Connects Fractional Tube End**

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

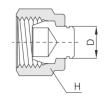
#### **Connects Metric Tube End**

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



## Tube Plug





#### **Connects Fractional Port**

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

#### **Connects Metric Port**

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





## Front Ferrule CAFF



#### **Fractional**

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

#### Metric

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



## Back Ferrule SEFF



#### **Fractional**

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

#### Metric

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







# CHARTERED ACCEL INDUSTRIES

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