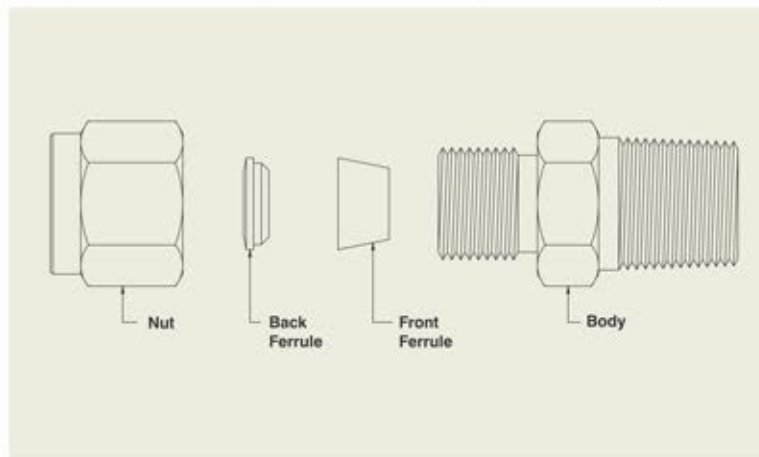


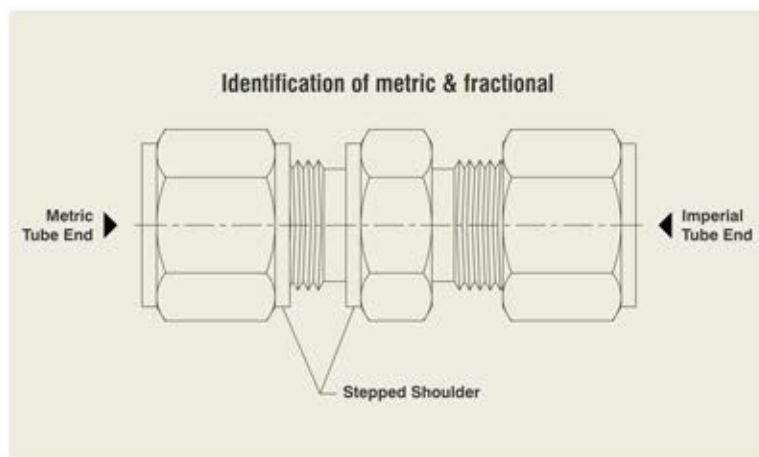
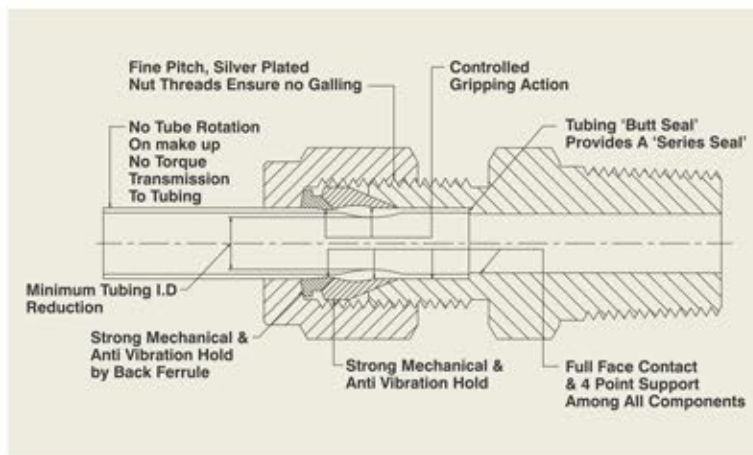
Instrumentation Tube Fittings

Aptek instrument tube fittings are used for leak proof, torque free seal in different instrumentation & process tubing connections. These products eliminate costly & hazardous leakages.



As shown in the figure the normal tube fitting is made of four parts.

The parts are machined as per international standards to achieve the high quality. The ferrules are hardened & burnished for better swaging. The nuts are silver plated for preventing the seize up on the threads. The fitting consists of four parts but when it is fixed to the tube as shown; it becomes a five parts leak proof connection. No special tool is required to install the tube fittings.



Materials :
Aptek fittings are available in different materials as shown in the below mentioned table.

MATERIALS	BARSTOCK	FORGINGS
STAINLESS STEEL (316 & 304)	ASTM-A-276, ASTM-A-479, BS-970, DIN-4401	ASTM-A-182, BS-970, DIN-4401
BRASS	ASTM-B-16, ASTM-B-453, BS-2874	ASTM-B-124, BS-2872
STEEL MONEL	ASTM-A-108, ASTM-B-164, BS-3076	ASTM-A-576, ASTM-B-164, BS-3076

Table - 1

NPT / ISO Pipe Size IN.	316 SS & Carbon Steel	
	Male Threads (PSI)	Female Threads (PSI)
1/8" NPT	9300	6000
1/4" NPT	7300	6000
3/8" NPT	7000	5000
1/2" NPT	6900	4500
3/4" NPT	6500	4200
1" NPT	4800	4000

Compression fittings are rated for working pressure higher than the tubing. Therefore pressure rating depends on choice of tubing which should be based on material. Wall thickness and temperature (see table below). De rating factors must be used to determinate tubing working pressure at high temperatures.

Maximum allowable working pressure for fractional size tubing (value in PSI)

Table - 2

Tubing O.D. (inch)	Tubing wall thickness (inch)											
	0.010"	0.012"	0.016"	0.020"	0.028"	0.035"	0.049"	0.065"	0.083"	0.095"	0.109"	0.120"
1/16"	6,852	8,395	11,510	14,395								
1/8"				6,843	9,948	12,622						
3/16"				4,345	6,342	8,145	11,760					
1/4"					4,575	5,910	8,700	11,773				
3/8"						3,770	5,465	7,520				
1/2"						2,770	3,980	5,415	7,155			
5/8"							3,130	4,240	5,550	6,480		
3/4"							2,570	3,490	4,535	5,270	6,150	
7/8"							2,190	2,948	3,845	4,443	5,180	
1"								2,568	3,318	3,843	4,462	4,970

Maximum allowable working pressure for metric size tubing (value in bar)

Table - 3

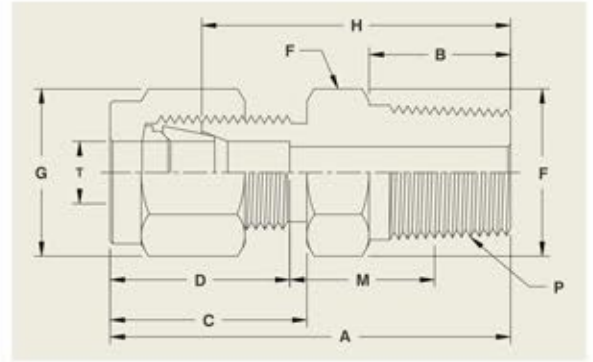
Tubing O.D. (mm)	Tubing wall thickness (mm)											
	0.5	0.6	0.8	1.0	1.2	1.5	1.6	1.8	2.0	2.2	2.5	3.0
3	492	610	825	1030								
6			382	495	603	775	909					
8			281	357	441	560	603					
10			220	278	342	438	471					
12			180	235	280	360	384	438				
16				170	203	259	278	315	360	398	458	561
18				148	178	231	245	278	313	350	400	495
22				121	145	186	201	223	250	278	320	392
25				104	125	160	175	194	218	243	278	339

- AISI 304 and AISI 316 stainless steel annealed seamless tubing ASTM A-269 or A-213 or equivalent
- Above mentioned working pressure is applicable only for - 29 ° C to 38 ° C for AISI 304 & AISI 316/316 L stainless steel. For temperature range other then mentioned above the standard pressure temperature chart applicable for the selected material grade should be referred for the selection of the maximum working pressure.

Male Connector



Imperial Range



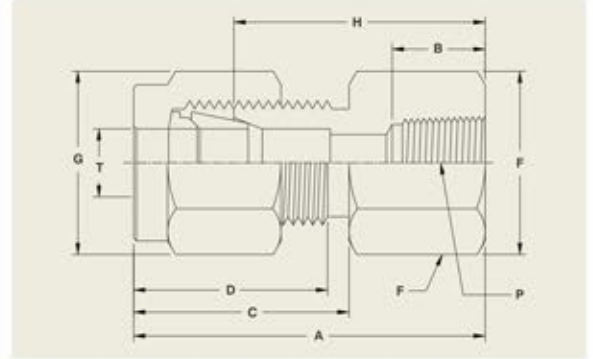
Dimensions in Inches

PART. NO.	T O/D	P	A LENGTH	B	C	D	F BODY	G NUT	H BODY	M
MCI-1616	1/16	1/16	0.94	0.38	0.44	0.34	5/16	5/16	0.78	0.34
MCI-1618	1/16	1/8	1.00	0.38	0.44	0.34	1/2	5/16	0.84	0.41
MCI-1816	1/8	1/16	1.19	0.38	0.63	0.53	1/2	7/16	0.91	0.41
MCI-1818	1/8	1/8	1.19	0.38	0.63	0.53	1/2	7/16	0.91	0.41
MCI-1814	1/8	1/4	1.41	0.56	0.63	0.53	9/16	7/16	1.13	0.50
MCI-3618	3/16	1/8	1.21	0.38	0.63	0.54	7/16	1/2	0.95	0.43
MCI-3614	3/16	1/4	1.42	0.56	0.63	0.54	9/16	1/2	1.16	0.54
MCI-1416	1/4	1/16	1.29	0.38	0.70	0.60	1/2	9/16	1.00	0.46
MCI-1418	1/4	1/8	1.29	0.38	0.70	0.60	1/2	9/16	1.00	0.45
MCI-1414	1/4	1/4	1.50	0.56	0.72	0.63	9/16	9/16	1.19	0.50
MCI-1438	1/4	3/8	1.51	0.56	0.70	0.60	11/16	9/16	1.19	0.56
MCI-1412	1/4	1/2	1.73	0.75	0.70	0.60	7/8	9/16	1.44	0.67
MCI-5618	5/16	1/8	1.34	0.38	0.73	0.64	9/16	5/8	1.05	0.46
MCI-5614	5/16	1/4	1.52	0.56	0.73	0.64	9/16	5/8	1.23	0.54
MCI-3818	3/8	1/8	1.38	0.38	0.76	0.66	5/8	11/16	1.09	0.48
MCI-3514	3/8	1/4	1.57	0.56	0.76	0.66	5/8	11/16	1.28	0.57
MCI-3838	3/8	3/8	1.57	0.56	0.76	0.66	11/16	11/16	1.28	0.56
MCI-3812	3/8	1/2	1.79	0.75	0.76	0.66	7/8	11/16	1.50	0.67
MCI-3834	3/8	3/4	1.82	0.75	0.76	0.66	1-1/16	11/16	1.53	0.68
MCI-1214	1/2	1/4	1.71	0.56	0.86	0.90	13/16	7/8	1.31	0.47
MCI-1238	1/2	3/8	1.71	0.56	0.86	0.90	13/16	7/8	1.31	0.46
MCI-1212	1/2	1/2	1.90	0.75	0.86	0.90	7/8	7/8	1.50	0.54
MCI-1234	1/2	3/4	1.93	0.75	0.86	0.90	1-1/16	7/8	1.53	0.55
MCI-5838	5/8	3/8	1.74	0.56	0.86	0.96	15/16	1	1.34	0.43
MCI-5812	5/8	1/2	1.93	0.75	0.86	0.96	15/16	1	1.53	0.51
MCI-5834	5/8	3/4	1.93	0.75	0.86	0.96	1-1/16	1	1.53	0.49
MCI-3412	3/4	1/2	1.99	0.75	0.86	0.96	1-1/16	1-1/8	1.59	0.57
MCI-3434	3/4	3/4	1.99	0.75	0.86	0.96	1-1/16	1-1/8	1.59	0.55
MCI-3401	3/4	1	2.21	0.94	0.86	0.96	1-3/16	1-1/8	1.81	0.68
MCI-0134	1	3/4	2.26	0.75	1.04	1.23	1-3/8	1-1/2	1.78	0.55
MCI-0101	1	1	2.45	0.94	1.04	1.23	1-3/8	1-1/2	1.97	0.65

Metric Range

Dimensions in mm

PART. NO.	T O/D	P	A LENGTH	B	C	D	F BODY	G NUT	H BODY	M
MCM-0418	4	1/8"	31.35	9.53	16.67	14.29	12	12	24.21	10.72
MCM-0414	4	1/4"	35.72	14.29	16.67	14.29	14	12	29.37	15.88
MCM-0618	6	1/8"	33.34	9.53	18.26	15.88	14	14	25.40	11.11
MCM-0614	6	1/4"	33.34	14.29	18.26	15.88	14	14	30.16	12.70
MCM-0638	6	3/8"	38.89	14.29	18.26	15.88	19	14	30.96	13.49
MCM-0612	6	1/2"	44.45	19.05	18.26	15.88	22	14	36.51	15.88
MCM-0818	8	1/8"	34.53	9.53	19.05	16.67	14	17	26.59	11.51
MCM-0814	8	1/4"	39.29	14.29	19.05	16.67	14	17	31.35	13.10
MCM-1018	10	1/8"	35.72	9.53	19.84	17.46	17	19	27.78	11.91
MCM-1014	10	1/4"	40.48	14.29	19.84	17.46	17	19	32.54	13.49
MCM-1038	10	3/8"	40.48	14.29	19.84	17.46	19	19	32.54	13.49
MCM-1012	10	1/2"	46.04	19.05	19.84	17.46	22	19	38.10	15.88
MCM-1034	10	3/4"	46.83	19.05	19.84	17.46	27	19	38.89	15.08
MCM-1214	12	1/4"	43.66	14.29	22.23	23.02	22	22	33.34	11.11
MCM-1238	12	3/8"	43.66	14.29	22.23	23.02	22	22	33.34	11.11
MCM-1212	12	1/2"	48.42	19.05	22.23	23.02	22	22	38.10	12.70
MCM-1234	12	3/4"	49.21	19.05	22.23	23.02	27	22	38.89	11.91
MCM-1638	16	3/8"	44.45	14.29	22.23	24.61	24	27	34.13	10.32
MCM-1612	16	1/2"	49.21	19.05	22.23	24.61	24	27	38.89	11.91
MCM-1634	16	3/4"	49.21	19.05	22.23	24.61	27	27	38.89	10.32
MCM-1812	18	1/2"	50.80	19.05	22.23	24.61	27	30	40.48	13.49
MCM-1834	18	3/4"	50.80	19.05	22.23	24.61	27	30	40.48	10.32
MCM-1801	18	1"	56.36	23.81	22.23	24.61	36	30	46.40	14.29
MCM-2012	20	1/2"	50.80	19.05	22.23	24.61	27	30	40.48	13.49
MCM-2034	20	3/4"	50.80	19.05	22.23	24.61	27	30	40.48	10.32
MCM-2001	20	1"	56.36	23.81	22.23	24.61	36	30	46.04	14.39
MCM-2534	25	3/4"	57.15	19.05	26.19	30.96	36	41	45.24	11.91
MCM-2501	25	1"	61.91	23.81	26.19	30.96	36	41	50.01	13.49



Imperial Range

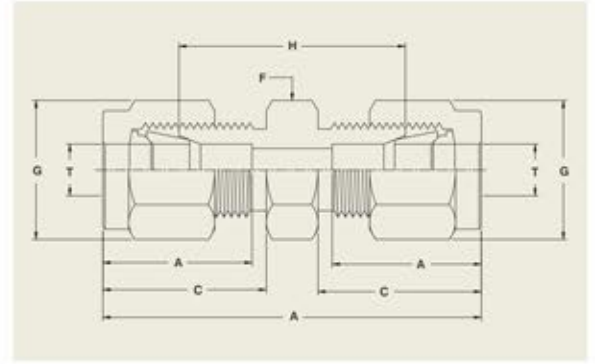
Dimensions in Inches

PART. NO.	T O/D	P	A LENGTH	B	C	D	F BODY	G NUT	H BODY
FCI-1616	1/16	1/16	0.94	0.36	0.44	0.34	1/2	5/16	0.78
FCI-1818	1/8	1/8	1.16	0.39	0.63	0.53	9/16	7/16	0.88
FCI-1814	1/8	1/4	1.34	0.59	0.63	0.53	3/4	7/16	1.06
FCI-3618	3/16	1/8	1.17	0.39	0.63	0.54	9/16	9/16	0.91
FCI-1418	1/4	1/8	1.23	0.39	0.70	0.60	9/16	9/16	0.94
FCI-1414	1/4	1/4	1.41	0.59	0.70	0.60	3/4	9/16	1.12
FCI-1438	1/4	3/8	1.48	0.59	0.70	0.60	7/8	9/16	1.19
FCI-1412	1/4	1/2	1.7	0.78	0.70	0.60	1-1/16	9/16	1.41
FCI-5618	5/16	1/8	1.26	0.39	0.73	0.64	3/4	5/8	0.97
FCI-5614	5/16	1/4	1.45	0.59	0.73	0.64	3/4	5/8	1.16
FCI-3818	3/8	1/8	1.29	0.39	0.76	0.66	5/8	11/16	1.00
FCI-3814	3/8	1/4	1.48	0.59	0.76	0.66	3/4	11/16	1.19
FCI-3838	3/8	3/8	1.54	0.59	0.76	0.66	7/8	11/16	1.25
FCI-3812	3/8	1/2	1.73	0.78	0.76	0.66	1-1/16	11/16	1.44
FCI-1214	1/2	1/4	1.65	0.59	0.86	0.90	13/16	7/8	1.25
FCI-1238	1/2	3/8	1.65	0.59	0.86	0.90	7/8	7/8	1.25
FCI-1212	1/2	1/2	1.84	0.78	0.86	0.90	1-1/16	7/8	1.44
FCI-5838	5/8	3/8	1.65	0.59	0.86	0.96	15/16	1	1.25
FCI-5812	5/8	1/2	1.84	0.78	0.86	0.96	1-1/16	1	1.44
FCI-3412	3/4	1/2	1.84	0.78	0.86	0.96	1-1/16	1-1/8	1.44
FCI-3434	3/4	3/4	1.9	0.81	0.86	0.96	1-5/16	1-1/8	1.50
FCI-0134	1	3/4	2.1	0.81	1.04	1.23	1-3/8	1-1/2	1.62
FCI-0101	1	1	2.45	1.00	1.04	1.23	1-5/8	1-1/2	1.97

Matric Range

Dimensions in mm

PART. NO.	T O/D	P	A LENGTH	B	C	D	F BODY	G NUT	H BODY
FCM-0418	4	1/8"	30.16	10	16.67	14.29	14	12	23.02
FCM-0618	6	1/8"	31.75	10	18.26	15.88	14	14	23.81
FCM-0614	6	1/4"	36.51	14	18.26	15.88	19	14	28.58
FCM-0638	6	3/8"	38.07	14	18.26	15.88	22	14	30.16
FCM-0612	6	1/2"	43.66	19	18.26	15.88	27	14	35.72
FCM-0818	8	1/8"	32.54	10	19.05	16.67	14	17	24.61
FCM-0814	8	1/4"	37.31	14	19.05	16.67	19	17	29.37
FCM-0118	10	1/8"	33.34	10	19.84	17.46	17	19	25.40
FCM-0114	10	1/4"	38.10	14	19.84	17.46	19	19	30.16
FCM-0138	10	3/8"	39.69	14	19.84	17.46	22	19	31.75
FCM-0112	10	1/2"	44.45	19	19.84	17.46	27	19	36.51
FCM-1214	12	1/4"	42.07	14	22.23	23.02	22	22	31.75
FCM-1238	12	3/8"	42.07	14	22.23	23.02	22	22	31.75
FCM-1212	12	1/2"	46.83	19	22.23	23.02	27	22	36.51
FCM-1612	16	1/2"	46.83	19	22.23	24.61	27	27	36.51
FCM-1812	18	1/2"	46.83	19	22.23	24.61	27	30	36.51
FCM-1834	18	3/4"	48.42	19	22.23	24.61	32	30	38.10
FCM-2012	20	1/2"	46.83	19	22.23	24.61	27	30	36.51
FCM-2034	20	3/4"	48.42	19	22.23	24.61	32	30	38.10
FCM-2534	25	3/4"	53.18	19	26.19	31.75	36	41	41.28
FCM-2501	25	1"	61.91	24	26.19	30.96	41	41	50.01



Imperial Range

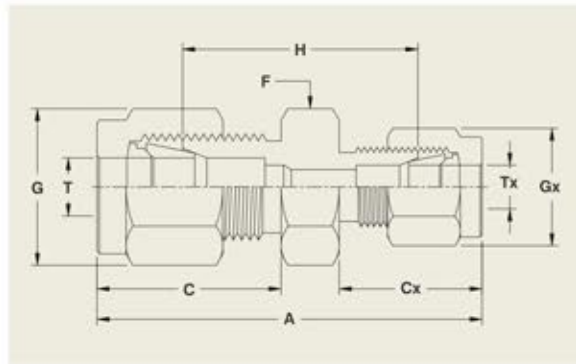
Dimensions in Inches

PART NO.	T O/D	A LENGTH	C	D	F BODY	G NUT	H BODY
EUI-16	1/16	1.00	0.44	0.34	5/16	5/16	0.689
EUI-18	1/8	1.44	0.63	0.53	1/2	7/16	0.881
EUI-36	3/16	1.47	0.63	0.54	7/16	1/2	0.945
EUI-14	1/4	1.61	0.70	0.60	0.551	9/16	1.043
EUI-56	5/16	1.68	0.73	0.64	0.551	5/8	1.102
EUI-38	3/8	1.77	0.76	0.66	5/8	11/16	1.189
EUI-12	1/2	2.02	0.86	0.90	7/8	7/8	1.220
EUI-58	5/8	2.05	0.86	0.96	0.945	1	1.26
EUI-34	3/4	2.11	0.86	0.96	1.102	1-1/8	1.319
EUI-01	1	2.55	1.04	1.23	1.417	1-1/2	1.594

Metric Range

Dimensions in mm

PART NO.	T O/D	A LENGTH	C	D	F BODY	G NUT	H BODY
EUM-04	4	38.50	16.67	14.29	12	12	24.21
EUM-06	6	42.07	18.26	15.88	14	14	26.19
EUM-08	8	44.04	19.05	16.67	14	17	28.18
EUM-10	10	46.04	19.84	17.46	17	19	31
EUM-12	12	51.59	22.23	23.01	22	22	31
EUM-16	16	52.39	22.23	24.61	24	25	32
EUM-18	18	53.98	22.23	24.61	27	30	33.34
EUM-20	20	55	22.23	24.61	27	32	34
EUM-25	25	64.29	26.19	30.96	36	38	40.48



Imperial Range

Dimensions in Inches

PART NO.	T O/D	TX O/D	A LENGTH	C	CX	F BODY	G NUT	GX NUT	H BODY
UUI-1816	1/8	1/16	1.25	0.63	0.44	1/2	7/16	5/16	0.81
UUI-3618	3/16	1/8	1.48	0.66	0.63	1/2	1/2	7/16	0.92
UUI-1416	1/4	1/16	1.37	0.72	0.44	1/2	9/16	5/16	0.91
UUI-1418	1/4	1/8	1.56	0.72	0.63	1/2	9/16	7/16	0.97
UUI-1436	1/4	3/16	1.55	0.70	0.63	1/2	9/16	1/2	1.00
UUI-5614	5/16	1/4	1.66	0.73	0.70	9/16	5/8	9/16	1.08
UUI-3814	3/8	1/4	1.70	0.76	0.70	5/8	11/16	9/16	1.12
UUI-3856	3/8	5/16	1.74	0.76	0.73	5/8	11/16	5/8	1.16
UUI-1214	1/2	1/4	1.85	0.86	0.70	3/16	7/8	9/16	1.16
UUI-1238	1/2	3/8	1.91	0.86	0.76	13/16	7/8	11/16	1.22
UUI-5638	5/8	3/8	1.94	0.86	0.76	15/16	1	11/16	1.25
UUI-5812	5/8	1/2	2.05	0.86	0.86	15/16	1	7/8	1.25
UUI-3412	3/4	1/2	2.11	0.86	0.86	1-1/16	1-1/8	7/8	1.31
UUI-3458	3/4	5/8	2.11	0.86	0.86	1-1/16	1-1/8	1	1.31
UUI-0134	1	3/4	2.47	1.04	0.86	1-3/8	1-1/2	1-1/8	1.59

Metric Range

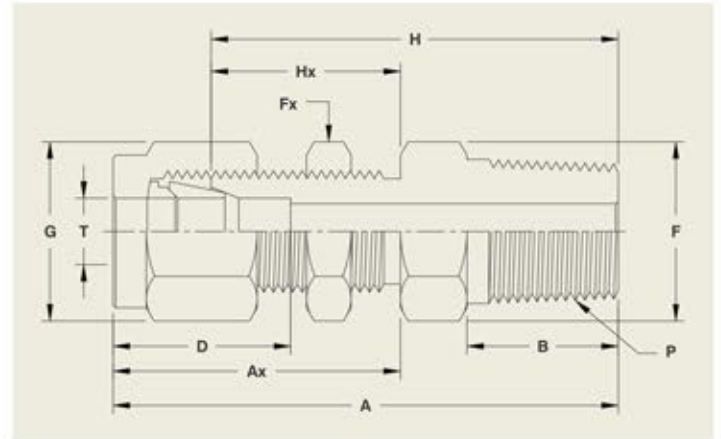
Dimensions in mm

PART NO.	T O/D	TX O/D	A LENGTH	C	CX	F BODY	G NUT	GX NUT	H BODY
UUM-0604	6	4	40.48	19.97	19.05	14	14	12	25.40
UUM-0804	8	6	43.26	19.05	19.97	14	17	14	27.38
UUM-1006	10	6	44.45	19.84	19.97	17	19	14	28.58
UUM-1008	10	8	45.24	19.84	19.05	17	19	17	29.37
UUM-1206	12	6	47.63	22.23	19.97	22	22	14	29.37
UUM-1210	12	10	49.21	22.23	19.84	22	22	19	30.96
UUM-1610	16	10	50.01	22.23	19.84	24	27	19	31.75
UUM-1612	16	12	52.39	22.23	22.23	24	27	22	31.75
UUM-2012	20	12	53.98	22.23	22.23	27	30	22	33.34
UUM-2016	20	16	53.98	22.23	22.23	27	30	27	33.34
UUM-2520	25	20	60.32	26.19	22.23	36	41	30	38.10

Bulkhead Male Connector



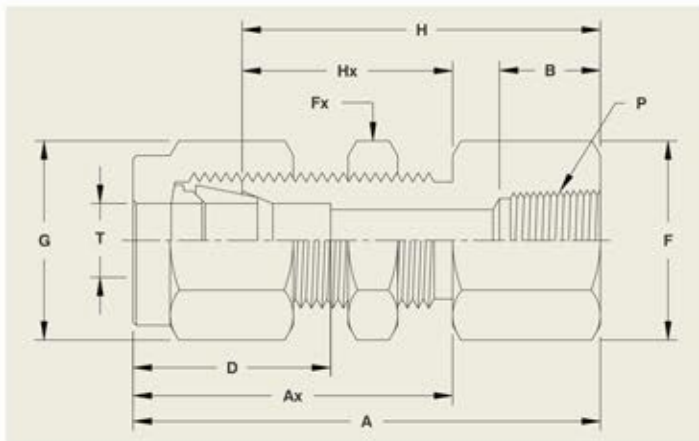
ISO 9001 : 2008 | PED 97/23/EC



Imperial Range

Dimensions in Inches

PART NO.	T O/D	P	B	D	F BODY	G NUT	FX	H	AX	HX	A	PANEL HOLE	MAX PANEL
BMCI-1418	1/4	1/8	0.38	0.60	5/8	9/16	5/8	1.66	1.32	1.03	1.95	29/64	0.40
BMCI-1414	1/4	1/4	0.56	0.60	5/8	9/16	5/8	1.81	1.32	1.03	2.10	29/64	0.40
BMCI-3814	3/8	1/4	0.56	0.66	3/4	11/16	3/4	1.97	1.45	1.16	2.26	37/64	0.44
BMCI-1212	1/2	1/2	0.75	0.90	15/16	7/8	15/16	2.28	1.65	1.25	2.68	49/64	0.50



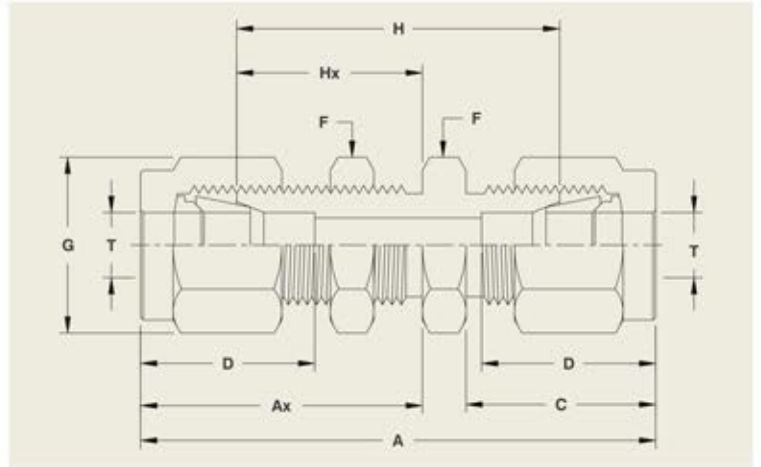
Bulkhead Female Connector



Imperial Range

Dimensions in Inches

PART NO.	T O/D	P	B	D	F BODY	G NUT	FX	H	AX	HX	A	PANEL HOLE	MAX PANEL
BFCI-1418	1/4	1/8	0.39	0.60	5/8	9/16	5/8	1.56	1.32	1.32	1.85	0.453	0.40
BFCI-1414	1/4	1/4	0.59	0.60	3/4	9/16	5/8	1.75	1.32	1.32	2.04	0.453	0.40
BFCI-3814	3/8	1/4	0.59	0.66	3/4	11/16	3/4	1.88	1.45	1.45	2.17	0.579	0.44
BFCI-1238	1/2	3/8	0.59	0.90	0.945	7/8	0.945	2.03	1.65	1.65	2.43	0.768	0.50
BFCI-1212	1/2	1/2	0.78	0.90	1.063	7/8	0.945	2.22	1.65	1.65	2.62	0.768	0.50



Imperial Range

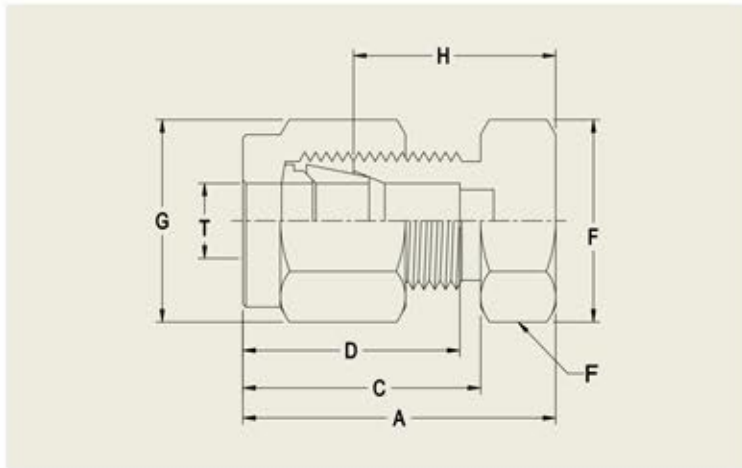
Dimensions in Inches

PART NO.	T O/D	A LENGTH	C	D	F BODY	G NUT	H
BUI-16	1/16	1.24	0.43	0.34	5/16	5/16	0.94
BUI-18	1/8	2.02	0.60	0.50	1/2	7/16	1.50
BUI-36	3/16	2.11	0.63	0.54	9/16	1/2	1.59
BUI-14	1/4	2.27	0.70	0.60	5/8	9/16	1.69
BUI-56	5/16	2.39	0.73	0.64	11/16	5/8	1.81
BUI-38	3/8	2.45	0.76	0.66	3/4	11/16	1.87
BUI-12	1/2	2.80	0.86	0.90	7/8	7/8	2.00
BUI-58	5/8	2.86	0.86	0.96	1-1/16	1	2.06
BUI-34	3/4	3.11	0.86	0.96	1-3/16	1-1/8	2.31
BUI-01	1	3.77	1.04	1.23	1-5/8	1-1/2	2.81

Metric Range

Dimensions in mm

PART NO.	T O/D	A LENGTH	C	D	F BODY	G NUT	H BODY	AX	HX
BUM-03	3	51.3	15.3	12.9	14	12	38.1	31.0	24.6
BUM-04	4	53.6	16.1	13.7	14	12	40.4	32.0	25.4
BUM-06	6	57.7	17.7	15.3	16	14	42.9	33.6	26.2
BUM-08	8	61.0	18.6	16.2	18	16	46.0	36.1	28.6
BUM-10	10	63.7	19.5	17.2	22	19	48.5	37.0	29.4
BUM-12	12	71.0	22.0	22.8	24	22	50.8	41.9	31.8
BUM-16	16	72.5	22.0	24.0	27	25	52.3	42.6	32.5
BUM-20	20	84.5	22.0	26.0	35	32	64.3	53.0	42.9



Imperial Range

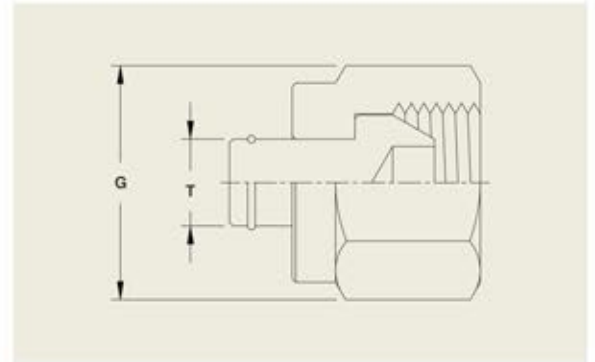
Dimensions in Inches

PART NO.	T O/D	A LENGTH	C	D	F BODY	G NUT	H BODY
CI-36	3/16	0.84	0.63	0.54	7/16	1/2	0.58
CI-14	1/4	0.92	0.70	0.60	1/2	9/16	0.63
CI-56	5/16	0.96	0.73	0.64	9/16	5/8	0.67
CI-38	3/8	1.01	0.76	0.66	5/8	1/16	0.72
CI-12	1/2	1.15	0.86	0.90	7/8	7/8	0.75
CI-58	5/8	1.18	0.86	0.96	15/16	1	0.78
CI-34	3/4	1.24	0.86	0.96	1-1/16	1-1/8	0.84
CI-01	1	1.51	1.04	1.23	1-3/8	1-1/2	1.03

Metric Range

Dimensions in mm

PART NO.	T O/D	A LENGTH	C	D	F BODY	G NUT	H BODY
CM-04	4	21.3	16.1	13.70	12	12	14.70
CM-06	6	23.1	17.7	15.30	14	14	15.70
CM-08	8	24.5	18.6	16.20	15	16	17.00
CM-10	10	26.6	19.5	17.20	18	19	19.00
CM-12	12	29.1	22.0	22.00	22	22	19.00
CM-16	16	29.9	22.0	22.00	24	25	19.80
CM-18	18	31.4	22.0	22.00	27	30	21.30
CM-20	20	34.0	22.0	22.00	30	32	23.90
CM-25	25	38.5	26.5	26.50	35	38	26.20



Imperial Range

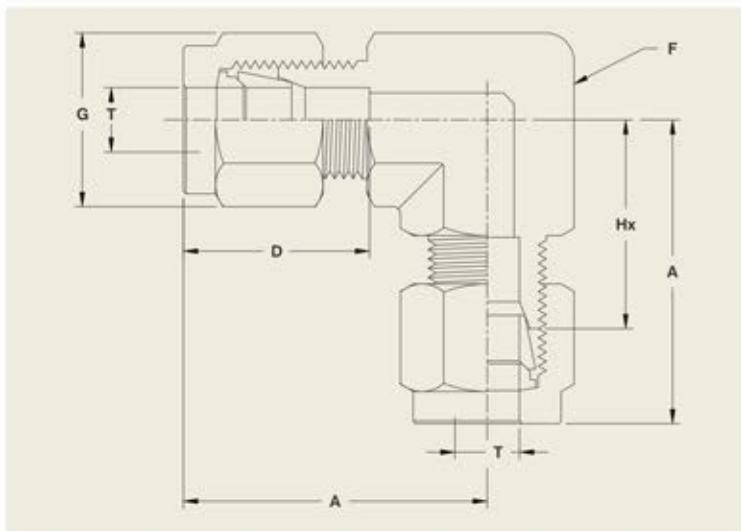
Dimensions in Inches

PART NO.	T O/D	G NUT
PI-16	1/16	5/16
PI-18	1/8	7/16
PI-36	3/16	1/2
PI-14	1/4	9/16
PI-56	5/16	5/8
PI-38	3/8	11/16
PI-12	1/2	7/8
PI-58	5/8	1
PI-34	3/4	1-1/8
PI-01	1	1-1/2

Matric Range

Dimensions in mm

PART NO.	T O/D	G NUT
PM-04	4	12
PM-06	6	14
PM-08	8	17
PM-10	10	19
PM-12	12	22
PM-16	16	27
PM-18	18	30
PM-20	20	30
PM-25	25	41



Union Elbow



Imperial Range

Dimensions in Inches

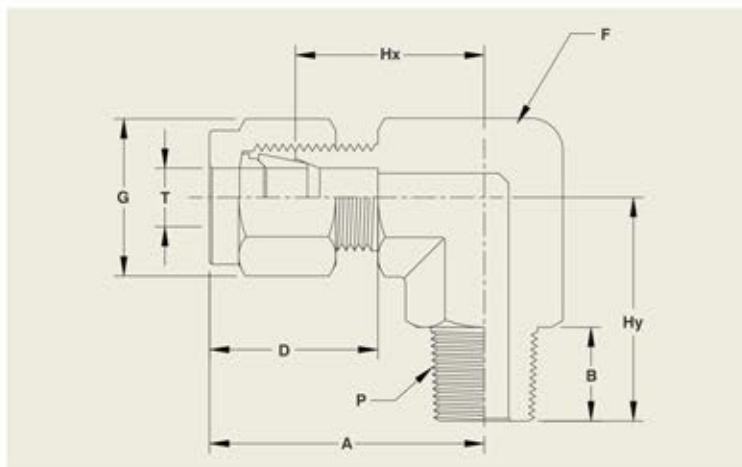
PART NO.	T O/D	A LENGTH	D	F BODY	G NUT	HX BODY
UEI-16	1/16	17.8	0.34	0.433	5/16	0.56
UEI-18	1/8	22.4	0.53	1/2	7/16	0.72
UEI-36	3/16	26	0.54	1/2	1/2	0.75
UEI-14	1/4	27	0.60	0.55	9/16	0.78
UEI-56	5/16	29	0.64	10.630	5/8	0.88
UEI-38	3/8	31	0.66	0.630	1/16	0.91
UEI-12	1/2	36	0.90	7/8	7/8	0.98
UEI-58	5/8	38	0.96	0.945	1	1.06
UEI-34	3/4	40	0.96	1.0630	1-1/8	1.11
UEI-01	1	49	1.23	1.380	1-1/2	1.31

Matric Range

Dimensions in mm

PART NO.	T O/D	A LENGTH	D	F BODY	G NUT	HX BODY
UEM-04	4	24.61	14.29	12	12	19.05
UEM-06	6	27	15.88	12	14	19.81
UEM-08	8	29	16.67	16	17	22.23
UEM-10	10	31	17.46	16	19	23.11
UEM-12	12	36	23.02	22	22	24.89
UEM-16	16	38	24.61	24	27	26.19
UEM-18	18	40	24.61	27	30	29.37
UEM-20	20	44	24.61	27	30	29.37
UEM-25	25	50	30.96	32	41	33.34

Male Elbow



Imperial Range

Dimensions in Inches

PART. NO	T O/D	P	A LENGTH	B	HY	D	F BODY	G NUT	HX BODY
MEI-1616	1/16	1/16	3/4	0.38	0.690	0.34	0.47	5/16	5/8
MEI-1618	1/16	1/8	3/4	0.38	0.708	0.34	0.47	5/16	5/8
MEI-1816	1/8	1/16	1	0.38	0.748	0.51	0.47	7/16	0.708
MEI-1818	1/8	1/8	0.945	0.38	0.748	0.53	0.47	7/16	0.708
MEI-1814	1/8	1/4	0.945	0.56	0.945	0.53	0.47	7/16	0.945
MEI-3618	3/16	1/8	1	0.38	0.768	0.54	0.47	1/2	3/4
MEI-1418	1/4	1/8	1.063	0.38	0.768	0.60	0.47	9/16	0.787
MEI-1414	1/4	1/4	1.063	0.56	0.945	0.60	0.47	9/16	0.945
MEI-1438	1/4	3/8	1.181	0.56	1.024	0.60	0.55	9/16	0.866
MEI-1412	1/4	1/2	1.260	0.75	1.299	0.60	0.75	9/16	0.945
MEI-5618	5/16	1/8	1.181	0.38	0.787	0.64	0.55	5/8	0.866
MEI-5614	5/16	1/4	1.181	0.56	1	0.64	0.55	5/8	0.866
MEI-3818	3/8	1/8	1.220	0.38	0.787	0.66	0.55	1/16	0.945
MEI-3814	3/8	1/4	1.220	0.56	1	0.66	0.55	11/16	0.945
MEI-3838	3/8	3/8	1.240	0.56	1.024	0.66	0.55	11/16	0.945
MEI-3812	3/8	1/2	1.338	0.75	1.299	0.66	0.75	11/16	1
MEI-1214	1/2	1/4	1.417	0.56	1.102	0.91	0.75	7/8	1
MEI-1238	1/2	3/8	1.417	0.56	1.102	0.91	0.75	7/8	1
MEI-1212	1/2	1/2	1.456	0.75	1.299	0.91	0.75	7/8	1
MEI-5838	5/8	3/8	1.496	0.56	1.181	0.96	0.94	1	1.063
MEI-5812	5/8	1/2	1.496	0.75	1.338	0.96	0.94	1	1.063
MEI-3412	3/4	1/2	1.535	0.75	1.417	0.96	1.06	1-1/8	1.141
MEI-3434	3/4	3/4	1.535	0.75	1.417	0.96	1.06	1-1/8	1.141
MEI-0134	1	3/4	1.929	0.94	1.654	1.23	1.25	1-1/2	1.338
MEI-0101	1	1	1.929	0.94	1.850	1.23	1.25	1-1/2	1.338

Metric Range

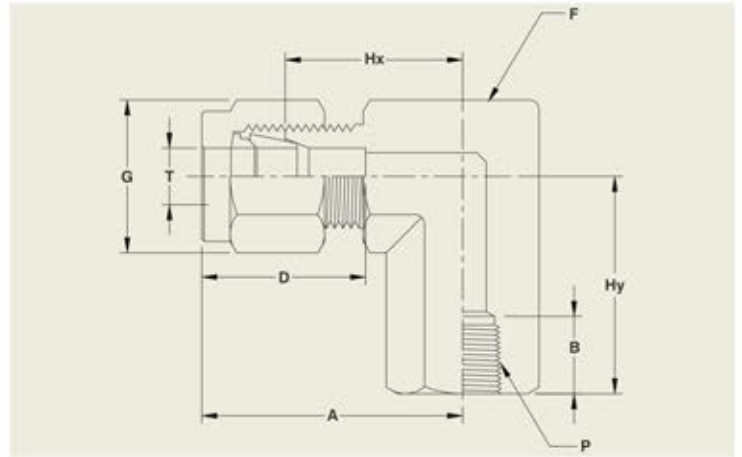
Dimensions in mm

PART. NO	T O/D	P	A LENGTH	B	HY	D	F BODY	G NUT	HX BODY
MEM-0418	4	1/8"	24.61	19.53	19.30	14.29	12	12	19.05
MEM-0618	6	1/8"	26.19	9.53	19.84	15.88	12	14	19.80
MEM-0614	6	1/4"	26.19	14.29	23.81	15.88	14	14	19.80
MEM-0638	6	3/8"	27.60	14.29	23.58	15.88	19	14	21.33
MEM-0612	6	1/2"	29.40	19.05	33.24	15.88	22	14	23.11
MEM-0818	8	1/8"	28.58	9.53	20.64	16.67	17	17	22.22
MEM-0814	8	1/4"	28.58	14.29	25.40	16.67	14	17	22.22
MEM-0838	8	3/8"	28.58	14.24	25.40	16.67	19	17	22.22
MEM-0812	8	1/2"	31.75	19.05	32.00	16.67	22	17	24.00
MEM-1018	10	1/8"	28.90	9.53	22.23	17.46	19	19	23.11
MEM-1014	10	1/4"	28.90	14.29	25.40	17.46	19	19	23.11
MEM-1038	10	3/8"	28.90	14.29	28.58	17.46	19	19	23.11
MEM-1012	10	1/2"	30.60	19.05	31.75	17.46	22	19	24.89
MEM-1214	12	1/4"	35.80	14.29	28.58	23.02	22	22	24.89
MEM-1238	12	3/8"	35.80	14.29	28.58	23.02	22	22	24.89
MEM-1212	12	1/2"	35.80	19.05	33.34	23.02	22	22	24.89
MEM-1638	16	3/8"	36.51	14.29	31.75	24.61	19	27	26.19
MEM-1612	16	1/2"	36.51	19.05	34.93	24.61	19	27	26.19
MEM-1812	18	1/2"	39.69	19.05	38.10	24.61	27	30	29.37
MEM-1834	18	3/4"	39.69	19.05	38.10	24.61	27	30	29.37
MEM-2012	20	1/2"	39.69	19.05	38.10	24.61	27	30	29.37
MEM-2034	20	3/4"	39.69	19.05	38.10	24.61	27	30	29.37
MEM-2534	25	3/4"	45.24	19.05	38.10	26.19	32	41	33.34
MEM-2501	25	1"	45.24	23.81	46.83	30.96	32	41	33.34

Female Elbow



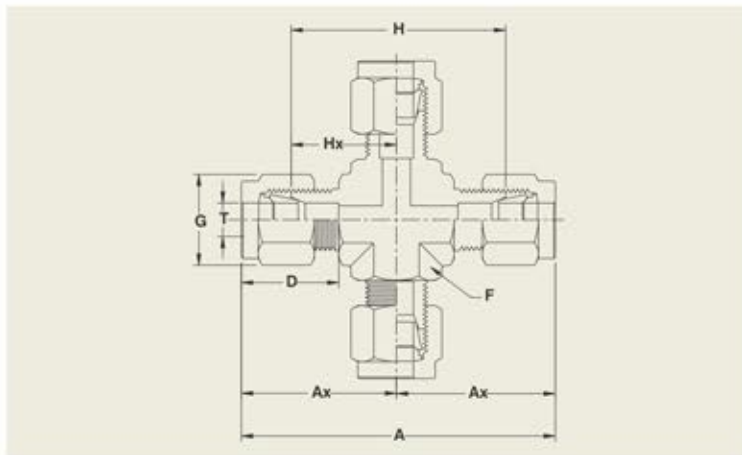
ISO 9001 : 2008 | PED 97/23/EC



Imperial Range

Dimensions in Inches

PART. NO	T O/D	P	A LENGTH	B	HY	D	F BODY	G NUT	HX BODY
FEI-1818	1/8	1/8	0.95	0.39	0.15	0.50	0.551	7/16	0.708
FEI-1814	1/8	1/4	1.07	0.59	0.88	0.50	0.748	7/16	0.825
FEI-3618	3/16	1/8	0.98	0.39	0.75	0.54	0.551	1/2	0.703
FEI-1418	1/4	1/8	1.04	0.39	0.75	0.60	0.551	9/16	0.749
FEI-1414	1/4	1/4	1.17	0.59	0.88	0.60	0.630	9/16	0.886
FEI-5618	5/16	1/8	1.17	0.39	0.75	0.64	0.551	5/8	0.866
FEI-5614	5/16	1/4	1.20	0.59	0.88	0.64	0.748	5/8	0.905
FEI-3818	3/8	1/8	1.20	0.39	0.75	0.66	0.748	11/16	0.905
FEI-3814	3/8	1/4	1.23	0.59	0.88	0.66	0.748	11/16	0.945
FEI-3838	3/8	3/8	1.32	0.59	0.88	0.66	0.748	11/16	1.027
FEI-3812	3/8	1/2	1.41	0.78	1.12	0.66	1.102	11/16	1.102
FEI-1214	1/2	1/4	1.38	0.59	0.88	0.90	0.748	7/8	1.000
FEI-1238	1/2	3/8	1.43	0.59	0.88	0.90	0.748	7/8	1.023
FEI-1212	1/2	1/2	1.52	0.78	1.12	0.90	1.102	7/8	1.142
FEI-5838	5/8	3/8	1.46	0.59	0.88	0.96	0.748	1	1.102
FEI-5812	5/8	1/2	1.52	0.78	1.12	0.96	1.102	1	1.142
FEI-3412	3/4	1/2	1.51	0.78	1.12	0.96	1.102	1-1/8	1.102
FEI-3434	3/4	3/4	1.65	0.81	1.25	0.96	1.102	1-1/8	1.260



Equal Union Cross



Imperial Range

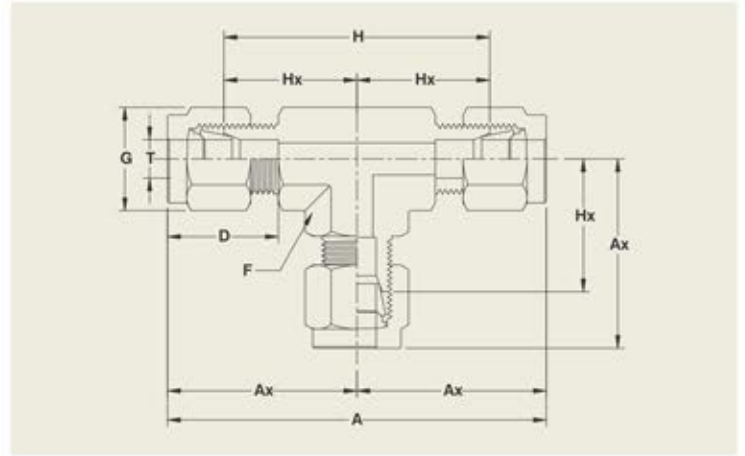
Dimensions in Inches

PART. NO	T O/D	AX LENGTH	D	F BODY	G NUT	HX BODY	H	A
UCI-18	1/8	0.99	0.53	1/2	7/16	0.72	1.44	1.98
UCI-36	3/16	1.01	0.54	1/2	1/2	0.75	1.50	2.02
UCI-14	1/4	1.07	0.60	9/16	9/16	0.78	1.56	2.14
UCI-56	5/16	1.17	0.64	5/8	5/8	0.88	1.76	2.34
UCI-38	3/8	1.2	0.66	5/8	1/16	0.91	1.82	2.40
UCI-12	1/2	1.38	0.90	7/8	7/8	0.98	1.96	2.76
UCI-58	5/8	1.46	0.96	0.81	1	1.06	2.12	2.92

Metric Range

Dimensions in mm

PART. NO	T O/D	Ax Length	D	F Body	G NUT	Hx Body	H	A
UCM-04	4	26.15	14.29	12	12	19.00	38.00	52.30
UCM-06	6	27.20	15.88	14	14	19.80	39.60	54.40
UCM-08	8	29.70	16.67	16	17	22.20	44.40	59.40
UCM-10	10	30.80	17.46	16	19	23.10	46.20	61.60
UCM-12	12	35.00	23.02	22	22	24.90	49.80	70.00
UCM-16	16	36.39	24.61	24	27	26.19	52.39	72.78



Imperial Range

Dimensions in Inches

PART. NO	T O/D	AX LENGTH	D	F BODY	G NUT	HX BODY	H	A
UTI-16	1/16	0.72	0.34	0.47	5/16	0.56	1.12	1.44
UTI-18	1/8	0.99	0.50	0.47	7/16	0.72	1.44	1.98
UTI-36	3/16	1.01	0.54	0.47	1/2	0.75	1.50	2.02
UTI-14	1/4	1.07	0.60	0.47	9/16	0.78	1.56	2.25
UTI-56	5/16	1.17	0.64	0.55	5/8	0.88	1.76	2.34
UTI-38	3/8	1.20	0.66	0.55	11/16	0.91	1.82	2.40
UTI-12	1/2	1.30	0.90	0.75	7/8	0.98	1.96	2.76
UTI-58	5/8	1.46	0.96	0.94	1	1.06	2.12	2.92
UTI-34	3/4	1.51	0.96	1.06	1-1/8	1.11	2.22	3.02
UTI-01	1	1.79	1.23	1.25	1-1/2	1.31	2.62	3.58

Metric Range

Dimensions in mm

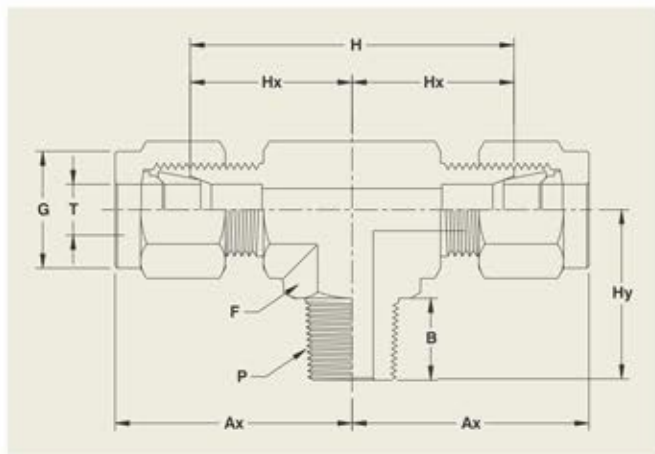
PART. NO	T O/D	AX LENGTH	D	F BODY	G NUT	HX BODY	H	A
UTM-04	4	26.15	14.29	12	12	19.00	38.00	52.30
UTM-06	6	27.20	15.88	12	14	19.80	39.60	54.40
UTM-08	8	29.70	16.67	14	17	22.20	44.40	59.40
UTM-10	10	30.80	17.46	14	19	23.10	46.20	61.60
UTM-12	12	35.00	23.02	19	22	24.90	49.80	70.00
UTM-16	16	36.39	24.61	24	27	26.19	52.39	72.78
UTM-18	18	39.37	24.61	27	30	29.37	58.74	78.74
UTM-20	20	39.37	24.61	27	30	29.37	58.74	78.74
UTM-25	25	45.24	30.96	32	41	33.54	67.08	90.48

Imperial Range

Dimensions in Inches

PART. NO.	T O/D	P	Ax Length	B	HY	F	G NUT	HX BODY	H	A
BTI-1818	1/8	1/8	0.99	0.38	0.76	1/2	7/16	0.72	1.44	1.98
BTI-1814	1/8	1/4	0.99	0.56	0.94	0.551	7/16	0.72	1.44	1.98
BTI-3618	3/16	1/8	1.01	0.38	0.76	1/2	1/2	0.75	1.50	2.02
BTI-1418	1/4	1/8	1.07	0.38	0.76	1/2	9/16	0.78	1.56	2.14
BTI-1414	1/4	1/4	1.07	0.56	0.94	0.551	9/16	0.78	1.56	2.14
BTI-1438	1/4	3/8	1.13	0.56	1.00	3/4	9/16	0.84	1.68	2.26
BTI-5618	5/16	1/8	1.16	0.38	0.82	3/4	5/8	0.87	1.74	2.32
BTI-3818	3/8	1/8	1.21	0.38	0.82	3/4	1/16	0.91	1.82	2.42
BTI-3814	3/8	1/4	1.21	0.56	1.00	3/4	11/16	0.91	1.82	2.42
BTI-3838	3/8	3/8	1.21	0.56	1.00	3/4	11/16	0.91	1.82	2.42
BTI-3812	3/8	1/2	1.21	0.75	1.26	7/8	11/16	0.91	1.82	2.42
BTI-1214	1/2	1/4	1.38	0.56	1.08	7/8	7/8	0.98	1.96	2.76
BTI-1238	1/2	3/8	1.38	0.56	1.08	7/8	7/8	0.98	1.96	2.76
BTI-1212	1/2	1/2	1.38	0.75	1.26	7/8	7/8	0.98	1.96	2.76
BTI-5812	5/8	1/2	1.46	0.75	1.38	0.945	1	1.06	2.12	2.92

Male Branch Tee



Metric Range

Dimensions in mm

PART. NO.	T O/D	P	AX LENGTH	B	HY	F	G NUT	HX BODY	H	A
BTM-0416	4	1/16	26.15	9.53	19.30	12	12	19.05	38.10	52.30
BTM-0418	4	1/8	26.15	9.53	19.53	12	12	19.05	38.10	52.30
BTM-0414	4	1/4	26.15	14.29	23.90	12	12	19.05	38.10	52.30
BTM-0618	6	1/8	27.21	9.53	19.30	14	14	19.80	39.60	54.42
BTM-0614	6	1/4	27.21	14.29	23.90	14	14	19.80	39.60	54.42
BTM-0638	6	3/8	29.00	14.29	25.40	19	14	21.33	42.66	57.46
BTM-0612	6	1/2	30.51	19.05	32.00	22	14	23.10	46.20	61.00
BTM-0818	8	1/8	29.70	9.53	20.80	19	17	22.22	44.44	59.40
BTM-0814	8	1/4	29.70	14.29	25.40	19	17	22.22	44.44	59.40
BTM-0838	8	3/8	29.70	14.29	25.40	19	17	22.22	44.44	59.40
BTM-0812	8	1/2	31.50	19.05	32.00	22	17	24.00	48.00	63.00
BTM-1018	10	1/8	30.80	9.53	20.80	19	19	23.10	46.20	61.60
BTM-1014	10	1/4	30.80	14.29	25.40	19	19	23.10	46.20	61.60
BTM-1038	10	3/8	30.80	14.29	25.40	19	19	23.10	46.20	61.60
BTM-1012	10	1/2	32.59	19.05	32.00	19	19	24.89	49.78	65.18
BTM-1214	12	1/4	34.99	14.29	27.40	22	22	24.89	49.78	69.98
BTM-1238	12	3/8	32.59	14.29	27.40	22	22	24.89	49.78	65.18
BTM-1212	12	1/2	32.59	19.05	32.00	22	22	24.89	49.78	65.18
BTM-1612	16	1/2	36.39	19.05	34.90	24	27	26.19	52.39	72.78

Male Run Tee



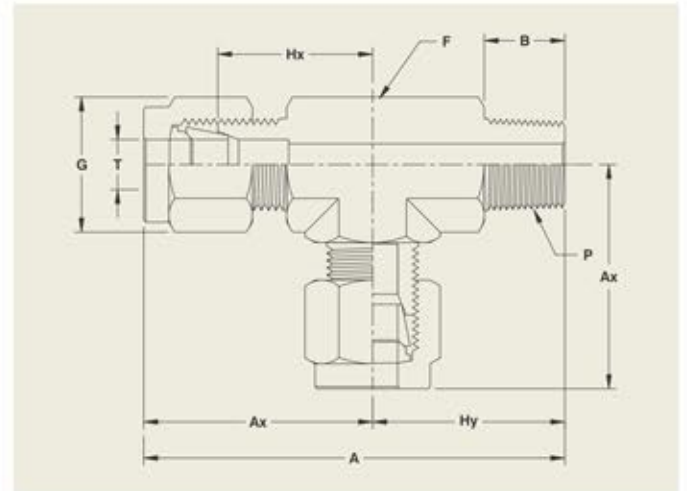
ISO 9001 : 2008 | PED 97/23/EC



Metric Range

Dimensions in mm

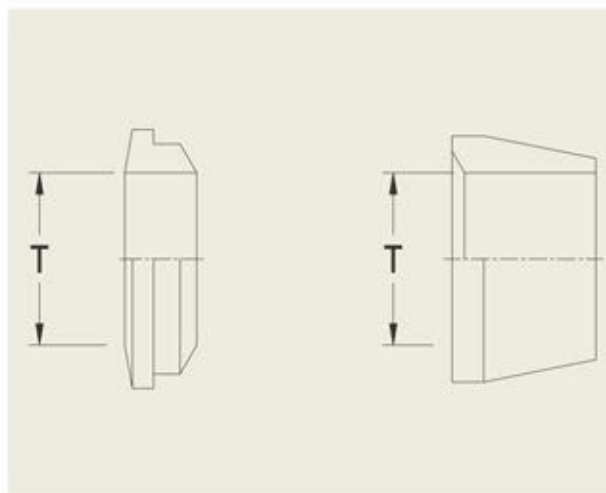
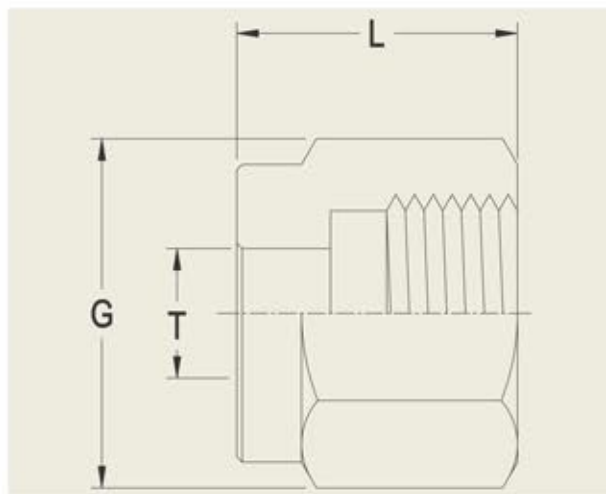
PART. NO.	T O/D	P	AX LENGTH	B	HY	F	G NUT	HX BODY	H	A
RTM-0416	4	1/16	26.15	9.53	19.30	12	12	19.05	38.10	45.45
RTM-0418	4	1/8	26.15	9.53	19.30	12	12	19.05	38.10	45.45
RTM-0414	4	1/4	26.15	14.29	23.88	12	12	19.05	38.10	50.03
RTM-0618	6	1/8	27.21	9.53	19.30	12	14	19.81	39.62	46.51
RTM-0614	6	1/4	27.21	14.29	23.88	14	14	19.81	39.62	51.09
RTM-0638	6	3/8	28.74	14.29	25.40	19	14	21.34	42.68	54.14
RTM-0612	6	1/2	30.51	19.05	32.00	22	14	23.11	43.22	62.51
RTM-0818	8	1/8	29.73	9.53	20.83	19	17	22.23	44.46	50.56
RTM-0814	8	1/4	29.73	14.29	25.40	19	17	22.23	44.46	55.13
RTM-0838	8	3/8	29.73	14.29	25.40	19	17	22.23	44.46	55.13
RTM-0812	8	1/2	31.50	19.05	32.00	22	17	24.00	48.00	63.50
RTM-1018	10	1/8	30.81	9.53	20.83	19	19	23.11	46.22	51.64
RTM-1014	10	1/4	30.81	14.29	25.40	19	19	23.11	46.22	56.21
RTM-1038	10	3/8	30.81	14.29	25.40	19	19	23.11	46.22	56.21
RTM-1012	10	1/2	32.59	19.05	32.00	22	19	24.89	49.78	64.59
RTM-1214	12	1/4	34.99	14.29	27.43	22	22	24.89	49.78	62.42
RTM-1238	12	3/8	34.99	14.29	27.43	22	22	24.89	49.78	62.42
RTM-1212	12	1/2	34.99	19.05	32.00	22	22	24.89	49.78	66.99
RTM-1612	16	1/2	36.39	19.05	34.30	25	27	26.19	52.38	71.32



Imperial Range

Dimensions in Inches

PART. NO.	T O/D	P	AX LENGTH	B	HY	F	G NUT	HX BODY	H	A
RTI-1818	1/8	1/8	1.00	0.38	0.76	0.47	7/16	0.72	1.48	1.76
RTI-1814	1/8	1/4	1.00	0.56	0.94	0.47	7/16	0.72	1.66	1.94
RTI-3618	3/16	1/8	1.00	0.38	0.76	0.47	1/2	0.75	1.51	1.76
RTI-1418	1/4	1/8	1.07	0.38	0.76	0.47	9/16	0.78	1.54	1.83
RTI-1414	1/4	1/4	1.07	0.56	0.94	0.47	9/16	0.78	1.72	2.01
RTI-5618	5/16	1/8	1.16	0.38	0.82	0.55	5/8	0.87	1.70	1.98
RTI-3814	3/8	1/4	1.21	0.56	1.00	0.55	1/16	0.91	1.91	2.21
RTI-1238	1/2	3/8	1.38	0.56	1.08	0.74	7/8	0.98	2.06	2.46
RTI-1212	1/2	1/2	1.38	0.75	1.26	0.74	7/8	0.98	2.24	2.64
RTI-5812	5/8	1/2	1.47	0.75	1.38	0.74	1	1.06	2.40	2.85



Nut & Ferrules



(Nut)

(Ferrules)

Imperial Range Dimensions In Inches

PART NO.	T O/D	G NUT A/F	L
NI-16	1/16	5/16	0.31
NI-18	1/8	7/16	0.47
NI-36	3/16	1/2	0.50
NI-14	1/4	9/16	0.50
NI-56	5/16	5/8	0.53
NI-38	3/8	1/16	0.56
NI-12	1/2	7/8	0.69
NI-58	5/8	1	0.69
NI-34	3/4	1-1/8	0.69
NI-01	1	1-1/2	0.81

Metric Range Dimensions In mm

PART NO.	T O/D	G NUT A/F	L
NM-04	4	12	12.00
NM-06	6	14	12.70
NM-08	8	17	14.00
NM-10	10	17	14.00
NM-12	12	22	17.00
NM-16	16	27	17.46
NM-18	18	30	17.46
NM-20	20	30	17.46
NM-25	25	41	20.64

Imperial Range Metric Range

PART NO.	T O/D	T O/D
FI-16	1/16	4
FI-18	1/8	6
FI-38	3/8	8
FI-14	1/4	10
FI-56	5/16	12
FI-38	3/8	16
FI-12	1/2	18
FI-58	5/8	20
FI-34	3/4	25
FI-01	1	