

in accordance with ISO 8434-1 / DIN 2353

Single Ferrule Bite type Fittings

Ermeto Type Fittings

Cutting Ring Fittings

24° Compression Fittings



vipal enterprises pvt ltd.



havi[®]
Fittings & Valves

DESIGN

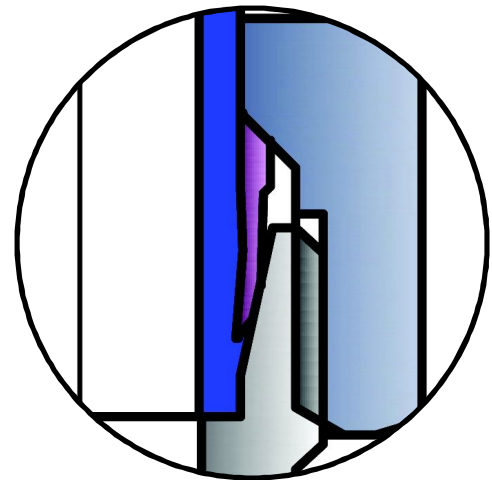
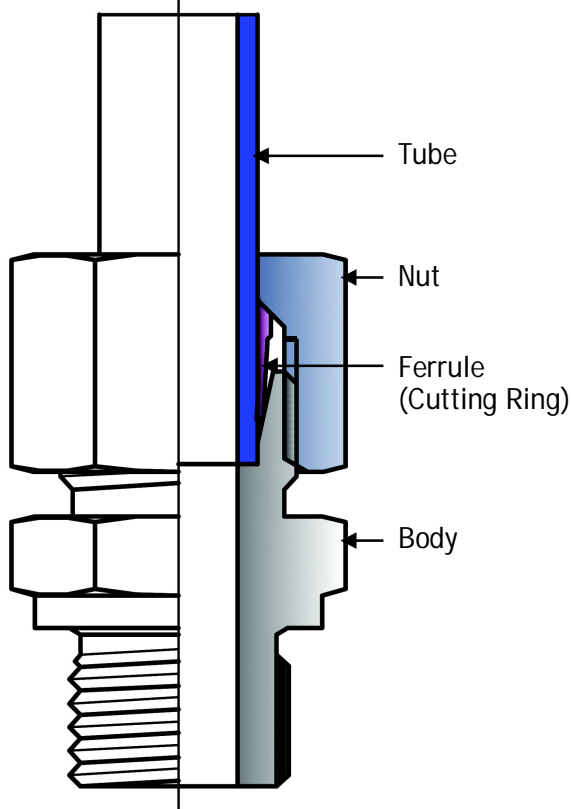
The Single Ferrule Bite type Fittings consists of three precisely machined components for a 100% reliable LEAK PROOF joint. Unlike Double Compression Fittings, these Fittings have single Ferrule which are Case hardened. Since the joint is made without compressing the Tube, these are called as Flareless Tube Fittings. These Fittings are extensively used in the application where medium to heavy Wall thickness Tubes are to be installed. The sharp biting edge of the Ferrule bites the Tube to provide a leak-free joint.

The construction of these Fittings are in accordance with ISO 8434-1 & DIN 2353. The Fittings are designed for Metric Tubes and the dimensions maintained for the Bore are in millimeters. These are available in three series as per the standard i.e LL - Very Light Series, L - Light Series, T - Heavy Series.

The Fittings can be easily dismantled and reassembled whenever required for Maintenance reasons, without effecting the Sealing Quality of Fitting. These Fittings are widely used in Hydraulics, Pneumatic and application of high pressure Fluid Systems.

CONSTRUCTION

HAVI Single Ferrule Bite type Fittings consists of 3 precisely machined components (Body, Ferrule & Nut)



Initially, the Nut has to be finger tightened by hand. At this stage, the Tube can easily pass through the Assembly. When the Nut is tightened further, the Ferrule moves ahead guided by the taper in the Body and the Nut. As the Ferrule moves ahead it bites the Tube and forms a firm and Leak proof joint. The Ferrules are case hardened to provide a soft shell and hardened layer. The advantage of this is that the Ferrule gains the springing feature that helps to seal the joint at time of reassembly.

PRESSURE RATINGS

Series	O.D of Tube in mm	Carbon Steel & Stainless Steel		Copper Alloy	
		Mpa	Bar	Mpa	Bar
L	4 to 8 inclusive	10	100	6.3	63
LL	6 to 15 inclusive	25	250	16	160
	18 to 22 inclusive	16	160	10	100
	28 to 42 inclusive	10	100	6.3	63
T	6 to 12 inclusive	63	630	40	400
	16 to 25 inclusive	40	400	25	250
	30 to 38 inclusive	25	250	16	160

The Pressure Rating shown in the above table are taken from ISO 8434-1:1994

MATERIAL OF CONSTRUCTION

Right selection of Material for Fittings is an important factor and is dependent on the End application. HAVI Bite type Fittings are available in variety of material like Carbon Steel, Brass, Stainless Steel 316/L and Stainless Steel 304.

Carbon Steel Fittings

Bar Stock - 14C14S14 of IS 1570 (Part III).

Forgings - 14MIS14 - Schedule 3 of IS 1570.

Plating - As a Standard these Fitting Body and Nut are Manganese based Phosphatizing Finish. Ferrules are Cadmium plated.

Stainless Steel Fittings

Bar Stock - ASTM A 276 / 479.

Forgings - ASTM A 182.

Plating - There is no plating done in Stainless Steel Fitting Body. Nut are Silver plated for Anti Galling feature.

Brass Fittings

Bar Stock & Forgings - Free Cutting Brass.

Plating - The Body and Nut are supplied with passivated finish. The Ferrules are not hardened and made from Brass. These Fittings are used for Low pressure application.

INSTALLATION

Just 3 easy Steps and YOU ARE DONE.....

Step 1. - TUBE CUTTING

Cut the Tube to the Right Angle with the help of fine-tooth Hacksaw.

Remove External as well as Internal Burrs formed at the end of the Tube during Cutting.

Clean the end of Tube, so that it is free from all the Chips and Burrs.

Step 2. - PRE-SETTING

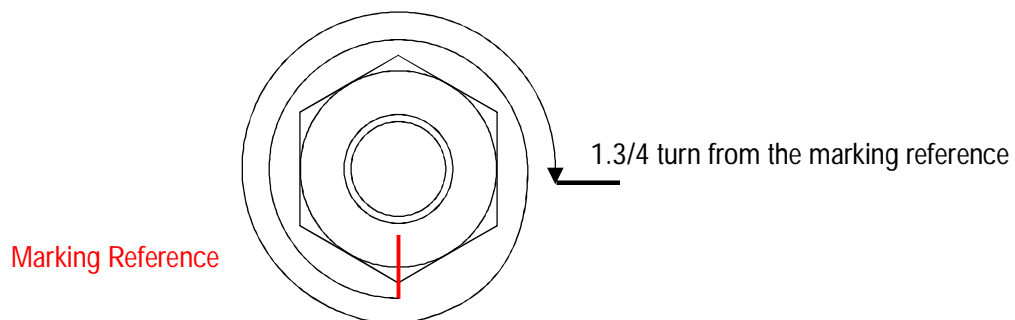
Apply Oil on the Body Degree, Nut Degree, Ferrule edge and threads.

Insert the Nut and then the Ferrule into the Tube end.

Tighten the Nut onto the Fitting Body by Hand.

At this stage the Tube will rotate with hand in the Assembly. Mark the Nut and the Tube for reference and tighten it with the help of spanner till the Tube does not rotate in the Assembly. Do not hold the Tube after it reaches the snug position (Tube does not rotate in the Assembly).

Make a total turn of 1.3/4 turn from the marking reference.



Step 3. - FINAL ASSEMBLY

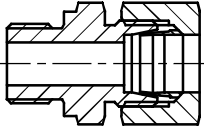
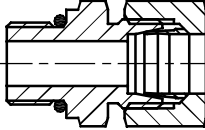
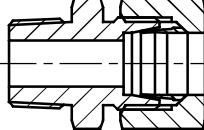
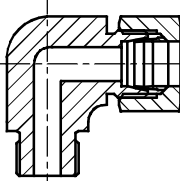
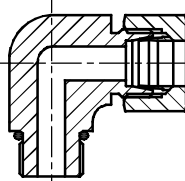
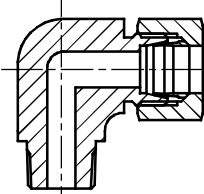
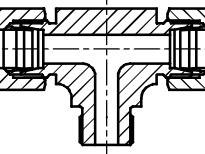
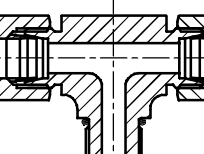
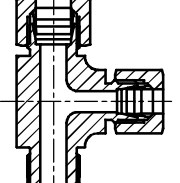
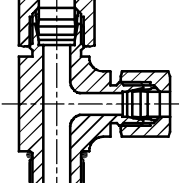
After doing the pre-setting, unscrew the joint and take it to the port where it has to be installed.

Tighten the Nut with the help of hand.

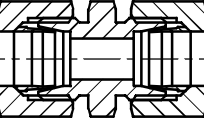
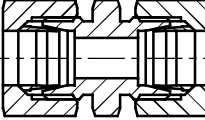
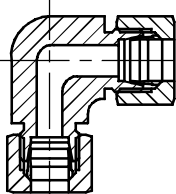
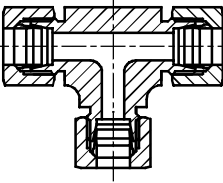
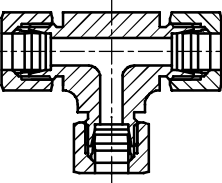
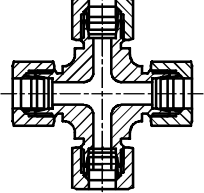
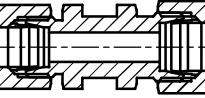
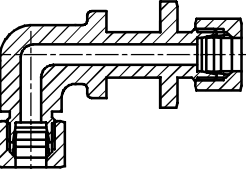
With the help of Spanner tighten the Nut to 1/6th turn to make the joint.

(For Tubes of smaller diameters, Pre-setting is not required and the joint could be made directly at the are of application)

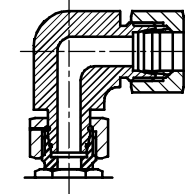
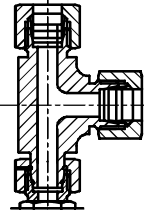
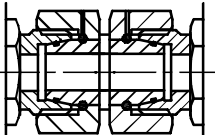
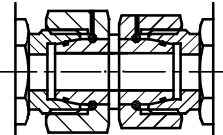

TUBE TO MALE THREAD

 <p>Male Connector MC-M Pg. 5</p>	 <p>Male Connector MC-R Pg. 6</p>	 <p>Male Connector MC-N Pg. 7</p>	 <p>Male Elbow ME-M Pg. 8</p>	 <p>Male Elbow ME-R Pg. 9</p>
 <p>Male Elbow ME-N Pg. 10</p>	 <p>Male Branch Tee MB-M Pg. 11</p>	 <p>Male Branch Tee MB-R Pg. 12</p>	 <p>Male Run Tee MR-M Pg. 13</p>	 <p>Male Run Tee MR-R Pg. 14</p>

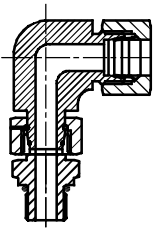
TUBE TO TUBE

 <p>Straight Union U Pg. 15</p>	 <p>Reducing Union RU Pg. 16</p>	 <p>Union Elbow UE Pg. 17</p>	 <p>Union Tee UT Pg. 18</p>	 <p>Reducing Tee RT Pg. 19</p>
 <p>Union Cross UC Pg. 20</p>	 <p>Bulk Head Union BU Pg. 21</p>	 <p>Bulk Head Union Elbow BUE Pg. 22</p>		

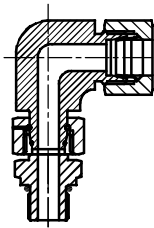
SWIVEL CONNECTORS

 <p>Swivel Union Elbow SE Pg. 23</p>	 <p>Swivel Union Tee ST Pg. 24</p>	 <p>Swivel Union SU Pg. 25</p>	 <p>Swivel Reducer Union SR Pg. 26</p>	 <p>45 Deg Swivel Elbow SD Pg. 43</p>
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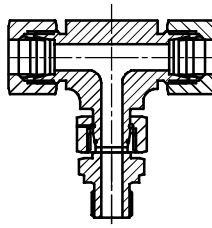
ADJUSTABLE SWIVEL CONNECTORS



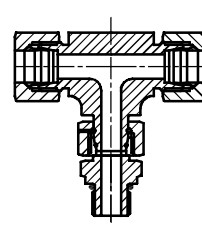
Adjustable Male Elbow
AE-M Pg. 27



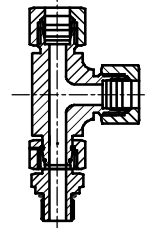
Adjustable Male Elbow
AE-R Pg. 28



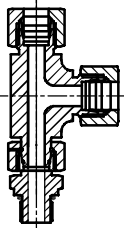
Adjustable Male Tee
AT-M Pg. 29



Adjustable Male Tee
AT-R Pg. 30

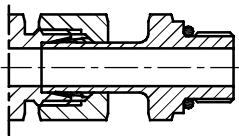


Adjustable Run Tee
AR-M Pg. 31

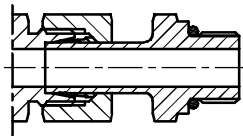


Adjustable Run Tee
AR-R Pg. 32

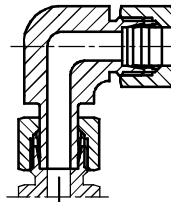
STANDPIPE CONNECTORS



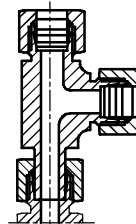
Standpipe Straight
SPC-M Pg. 33



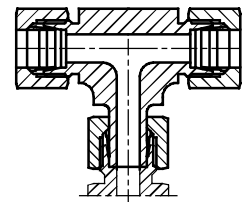
Standpipe Straight
SPC-R Pg. 34



Standpipe Elbow
SPE Pg. 35

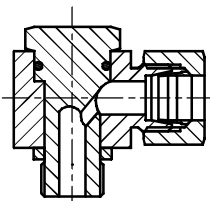


Standpipe Run Tee
SRT Pg. 36

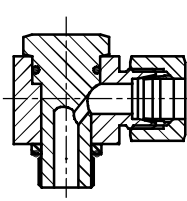


Standpipe Branch Tee
SBT Pg. 37

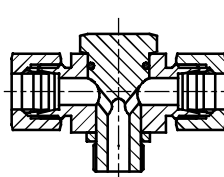
BANJO CONNECTORS



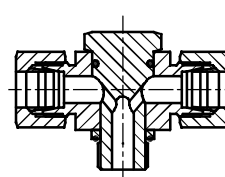
Banjo Elbow
BE-M Pg. 49



Banjo Elbow
BE-R Pg. 50

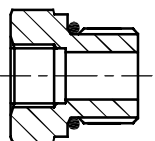


Banjo Tee
BT-M Pg. 51

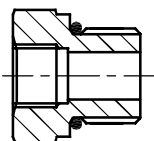


Banjo Tee
BT-R Pg. 52

ADAPTORS

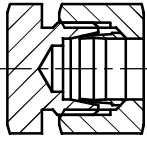


Reducing Adaptor
RA Pg. 41



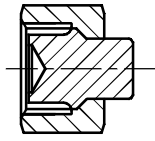
Expanding Adaptor
EA Pg. 42

PLUGS



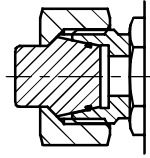
Tube Closing Plug

TP Pg. 44



Blanking Plug

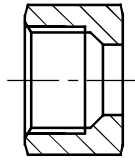
BP Pg. 45



Connector Plug

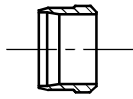
CP Pg. 46

SPARE COMPONENTS



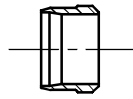
Nut

N Pg. 47



Cutting Ring Ferrule

CR Pg. 48



Progressive Ferrule

PR Pg. 48

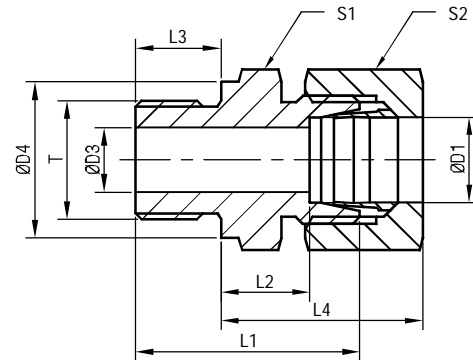
MC	16	L	R	6	OR	SS	W
							<p><u>Other conditions</u> W - Without Nut & Ferrule. Includes standard components. O - Only basic Body without Nut & Ferrule & standard Components.</p>
							<p><u>Material of Construction</u> S4 - SS304 S6 - SS316 CS - Carbon Steel B - Brass</p>
							<p><u>Sealing</u> OR - O-Ring ES - Elastometric Seal</p>
							<p><u>Thread Size</u> 2 - 1/8" 4 - 1/4" 6 - 3/8" 8 - 1/2" 12 - 3/4" 16 - 1" 20 - 1-1/4" 24 - 1-1/2" 32 - 2"</p>
							<p><u>Thread Type</u> M - Metric R - BSPP N - NPT T - BSPT</p>
							<p><u>Series</u> LL - Very Light Series L - Light Series T - Heavy Series</p>
							<p>Tube Size Mentioned in the Corresponding Table</p>

Item Code

Refer Index on Pg No. 1 & 2.

24° Cone End

Male Connector with Metric Thread **MC-M**



(Bar)

Series	D1	T	D3	D4	L1	L2	L3	L4	S1	S2	SS
L	6	M 10×1	4	14	23.5	8.5	8	23	14	14	315
	8	M 12×1.5	6	17	29	10	12	25	17	17	315
	10	M 14×1.5	7	19	30	11	12	26	19	19	315
	10	M 12×1.5	6	17	30	11	12	26	17	19	315
	10	M 16×1.5	8	22	31.5	12.5	12	24	22	19	315
	10	M 18×1.5	8	24	31.5	12.5	12	27	24	19	315
	10	M 22×1.5	8	27	35	14	14	29	27	19	315
	12	M 16×1.5	9	22	31.5	12.5	12	27	22	22	315
	12	M 14×1.5	7	19	30	11	12	26	19	22	315
	12	M 18×1.5	10	24	31.5	12.5	12	27	24	22	315
	12	M 22×1.5	10	27	35	14	14	29	27	22	315
	15	M 18×1.5	11	24	32.5	13.5	12	29	24	27	315
	15	M 16×1.5	9	22	32	13	12	28	24	27	315
	15	M 22×1.5	12	27	36	15	14	30	27	27	315
	18	M 22×1.5	14	27	36	14.5	14	31	27	32	315
	18	M 18×1.5	11	24	33.5	14	12	30	27	32	315
	22	M 26×1.5	18	32	40	16.5	16	33	32	36	160
	22	M 22×1.5	14	32	38	16.5	14	33	32	36	160
28	M 33×2	23	40	43	17.5	18	34	41	41	160	
35	M 42×2	30	50	48	17.5	20	39	50	50	160	
42	M 48×2	36	55	52	19	22	42	55	60	160	
T	06	M 12×1.5	4	17	32	13	12	28	17	17	630
	08	M 14×1.5	5	19	34	15	12	30	19	19	630
	10	M 16×1.5	7	22	34.5	15	12	31	22	22	630
	12	M 18×1.5	8	24	36.5	17	12	33	24	24	630
	12	M 14×1.5	5	19	36	16.5	12	33	22	24	630
	12	M 22×1.5	8	27	39	17.5	14	34	27	24	400
	14	M 20×1.5	10	26	41	19	14	37	27	27	630
	16	M 22×1.5	12	27	41	18.5	14	37	27	30	400
	16	M 18×1.5	8	24	38.5	18	12	36	27	30	400
	20	M 27×2	16	32	47	20.5	16	42	32	36	400
	25	M 33×2	20	40	53	23	18	47	41	46	400
	30	M 42×2	25	50	57	23.5	20	50	50	50	400
38	M 48×2	32	55	64	26	22	57	55	60	315	

L - Light Series

T - Heavy Series

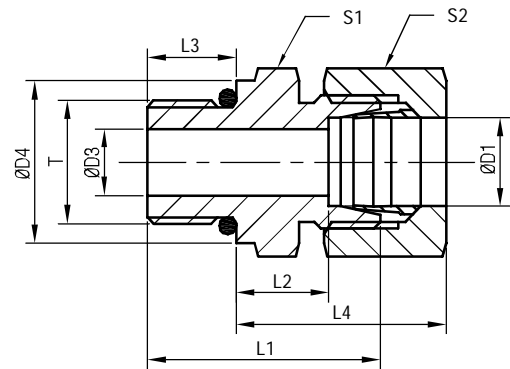
Description:

For Metric Threads add complete size in the Ordering Code.
example: MC18LM22-1.5MS4

Male Connector, 18mm Tube size x M22 x 1.5 Pitch
Metal Sealing in SS304.

24° Cone End

Male Connector with BSPP Thread **MC-R**

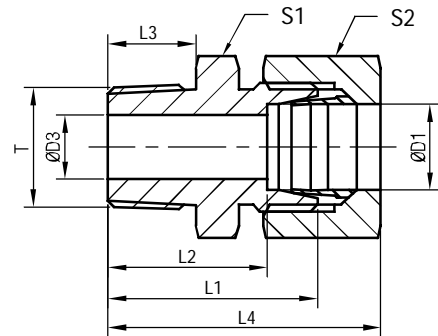


Series	D1	T	D3	D4	L1	L2	L3	L4	S1	S2	SS	B
L	6	G1/8A	4	14	23.5	8.5	8	23	14	14	315	200
	6	G1/4A	4	18	29	10	12	25	19	14	315	200
	6	G3/8A	4	22	30.5	11.5	12	26	22	14	315	200
	6	G1/2A	4	26	33	12	14	27	27	14	315	--
	8	G1/4A	6	18	29	10	12	25	19	17	315	200
	8	G1/8A	4	14	24.5	8.5	8	23	14	17	315	--
	8	G3/8A	6	22	30.5	11.5	12	26	22	17	315	200
	8	G1/2A	6	26	33	12	14	27	27	17	315	200
	10	G1/4A	6	18	30	11	12	26	19	19	315	200
	10	G1/8A	4	14	25.5	10.5	8	25	17	19	315	--
	10	G3/8A	8	22	31.5	12.5	12	27	22	19	315	200
	10	G1/2A	8	26	34	13	14	28	27	19	315	200
	12	G3/8A	9	22	31.5	12.5	12	27	22	22	315	200
	12	G1/8A	4	14	26.5	11.5	8	26	19	22	315	--
	12	G1/4A	6	18	31	12	12	27	19	22	315	200
	12	G1/2A	10	26	34	13	14	28	27	22	315	200
	12	G3/4A	10	32	37	14	16	29	32	22	315	--
	15	G1/2A	11	26	35	14	14	29	27	27	250	160
	15	G3/8A	9	22	32.5	13.5	12	29	24	27	250	160
	15	G3/4A	12	32	38	15	16	30	32	27	250	--
	18	G1/2A	14	26	36	14.5	14	31	27	32	250	160
	18	G3/8A	9	22	33.5	14	12	29.5	27	32	250	--
	18	G3/4A	15	32	38	14.5	16	30	32	32	250	--
	22	G3/4A	18	32	40	16.5	16	33	32	36	160	100
	22	G1/2A	14	26	38	16.5	14	33	32	36	160	100
	22	G1A	19	39	43	17.5	18	33.5	41	36	160	--
	28	G1A	23	39	43	17.5	18	34	41	41	160	100
	28	G1/2A	14	26	39	17.5	14	34	41	41	160	--
	28	G3/4A	18	32	41	17.5	16	34	41	41	160	--
	28	G11/4A	24	50	46	18.3	20	35	50	41	160	--
	35	G11/4A	30	49	48	17.5	20	39	50	50	160	100
	35	G1/2A	14	26	42	17.5	14	39	46	50	160	--
	35	G3/4A	18	32	44	17.5	16	39	46	50	160	--
	35	G1A	23	39	46	17.5	18	39	46	50	160	--
	35	G11/2A	30	55	52	19.5	22	41	55	50	160	--
	42	G11/2A	36	55	52	19	22	42	55	60	160	100
	42	G1A	23	39	48	19	18	42	55	60	160	--
	42	G11/4A	30	49	50	19	20	42	55	60	160	--

L - Light Series

24° Cone End

Male Connector with NPT Thread **MC-N**



(Bar)

Series	D1	T	D3	L1	L2	L3	L4	S1	S2	SS	B
LL	4	1/8-27 NPT	3	22	18	10	28	11	10	100	--
	6	1/8-27 NPT	4.5	22	16.5	10	28	11	12	100	63
	8	1/8-27 NPT	5	24	18.5	10	30	12	14	100	63
L	6	1/8-27 NPT	4	24	17	10	32	12	14	315	200
	6	1/4-18 NPT	4	30	23	14.5	38	17	14	315	200
	6	3/8-18 NPT	4	30	23	14.5	38	19	14	315	--
	6	1/2-14 NPT	4	36	29	19.5	44	22	14	315	--
	8	1/8-27 NPT	4	25	18	10	33	14	17	315	--
	8	1/4-18 NPT	6	30	23	14.5	38	17	17	315	200
	8	3/8-18 NPT	6	30	23	14.5	38	19	17	315	--
	8	1/2-14 NPT	6	36	29	19.5	44	22	17	315	--
	10	1/8-27 NPT	4	25	18	10	33	17	19	315	--
	10	1/4-18 NPT	7	31	24	14.5	39	17	19	315	200
	10	3/8-18 NPT	7	32	25	14.5	40	19	19	315	--
	10	1/2-14 NPT	8	37	30	19.5	45	22	19	315	--
	10	3/4-14 NPT	8	38	31	19.5	46	30	19	315	--
	12	1/8-27NPT	4	26	19	10	34	19	22	315	--
	12	1/4-18 NPT	7	32	25	14.5	40	19	22	315	200
	12	3/8-18 NPT	8	32	25	14.5	40	19	22	315	200
	12	1/2-14 NPT	10	37	30	19.5	45	22	22	315	200
	15	3/8-18 NPT	8	33	26	14.5	41	24	27	315	--
	15	1/2-14 NPT	12	38	31	19.5	46	24	27	315	200
	15	3/4-14 NPT	12	39	32	19.5	47	30	27	315	--
	15	1-11 1/2 NPT	12	45	38	24.5	53	36	27	315	--
	18	3/8-18 NPT	8	34	26.5	14.5	43	27	32	315	--
	18	1/2-14 NPT	12	39	31.5	19.5	48	27	32	315	200
	18	3/4-14 NPT	15	39	31.5	19.5	48	30	32	315	--
	18	1-11 1/2 NPT	15	45	37.5	24.5	54	36	32	315	--
	22	3/8-18 NPT	8	36.5	29	14.5	45	32	36	160	--
	22	1/2-14 NPT	12	41	33.5	19.5	50	32	36	160	--
	22	3/4-14 NPT	16	41	33.5	19.5	50	32	36	160	100
	22	1-11 1/2 NPT	19	47	39.5	24.5	56	36	36	160	--
	28	3/4-14 NPT	16	42	34.5	19.5	51	41	41	160	--
	28	1-11 1/2 NPT	21	47	39.5	24.5	56	41	41	160	100
	28	1 1/4-1 1/2 NPT	24	49	41.5	25	58	46	41	160	--
	35	1-11 1/2 NPT	22	50	39.5	24.5	61	46	50	160	--
35	1 1/4-1 1/2 NPT	28	51	40.5	25	62	46	50	160	--	
42	1 1/4- 1 1/2 NPT	28	53	42	25	65	55	60	160	--	
42	1 1/2-1 1/2 NPT	36	53	42	26	65	55	60	160	--	

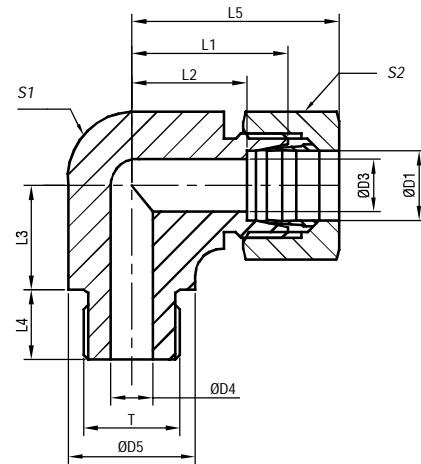
LL - Very Light Series

L - Light Series



24° Cone End

Male Elbow with Metric Thread ME-M



(Bar)

Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	S1	S2	SS
L	22	M26×1.5	19	18	31	35	27.5	26	16	44	27	36	160
	28	M33×2	24	23	39	38	30.5	30	18	47	36	41	160
	35	M42×2	30	30	49	45	34.5	34	20	56	41	50	160
	42	M48×2	36	36	55	51	40	39	22	63	50	60	160
T	20	M27×2	16	16	32	37	26.5	26	16	48	27	36	400
	25	M33×2	20	20	39	42	30	30	18	54	36	46	250
	30	M42×2	25	25	49	49	35.5	34	20	62	41	50	160
	38	M48×2	32	32	55	57	41	39	22	72	50	60	160

L - Light Series T - Heavy Series

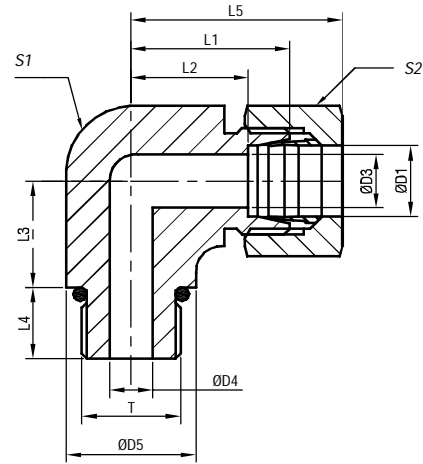
For Metric Threads add complete size in the Ordering Code.
example: MC18LM22-1.5MS4

Description:

Male Connector, 18mm Tube size x M22 x 1.5 Pitch
Metal Sealing in SS304.

24° Cone End

Male Elbow with BSPP Thread ME-R

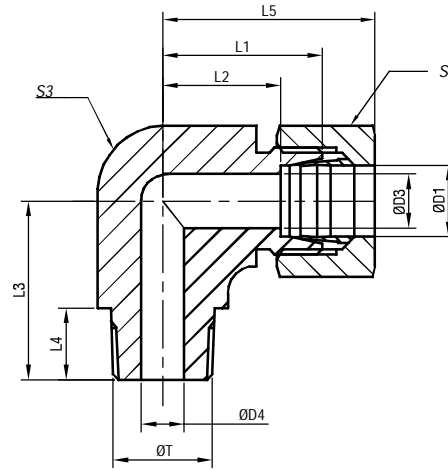


Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	S1	S2	(Bar)	
													SS	B
L	22	G3/4A	19	18	32	35	27.5	26	16	44	27	36	160	100
	28	G1A	24	23	39	38	30.5	30	18	47	36	41	160	100
	35	G11/4A	30	30	49	45	34.5	34	20	56	41	50	160	100
	42	G11/2A	36	36	55	51	40	39	22	63	50	60	160	100
T	20	G3/4A	16	16	32	37	26.5	26	16	48	27	36	400	250
	25	G1A	20	20	39	42	30	30	18	54	36	46	250	160
	30	G11/4A	25	25	49	49	35.5	34	20	62	41	50	160	100
	38	G11/2A	32	32	55	57	41	39	22	72	50	60	160	100

L - Light Series T - Heavy Series

24° Cone End

Male Elbow with NPT Thread ME-N



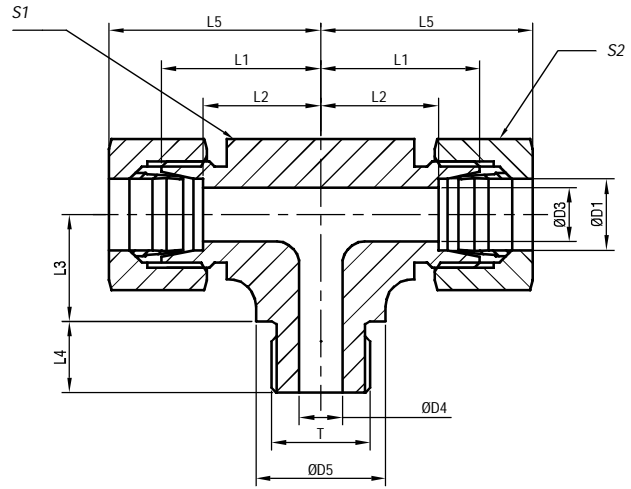
Series	D1	T	D3	D4	L1	L2	L3	L4	L5	S1	S2	S3	SS	B
L	6	1/8-27NPT	4	4	19	12	20	10	27	12	14	12	315	200
	6	1/4-18NPT	4	7	21	14	26	14.5	29	12	14	14	315	200
	6	3/8-18NPT	4	8	25	18	28	14.5	33	17	14	19	315	200
	8	1/8-27NPT	6	4	21	14	26	10	29	12	17	14	315	200
	8	1/4-18NPT	6	6	21	14	26	14.5	29	12	17	14	315	200
	10	1/4-18NPT	8	7	22	15	27	14.5	30	14	19	17	315	200
	10	3/8-18NPT	8	8	24	17	28	14.5	32	17	19	19	315	200
	12	1/4-18NPT	10	7	24	17	28	14.5	32	17	22	19	315	200
	12	3/8-18NPT	10	8	24	17	28	14.5	32	17	22	19	315	200
	12	1/2-14NPT	10	11	28	21	34	19.5	36	19	22	--	315	200
	15	1/2-14NPT	12	11	28	21	34	19.5	36	19	27	--	315	200
	18	1/2-14NPT	15	12	31	23.5	36	19.5	40	24	32	--	315	200
	22	3/4-14NPT	19	16	35	27.5	42	19.5	44	27	36	--	160	100
	28	1-11/2NPT	24	21	38	30.5	48	24.5	47	36	41	--	160	100
35	11/4-11 1/2NPT	30	28	45	34.5	54	25	56	41	50	--	160	100	
42	11/2-11 1/2NPT	36	34	51	40	61	26	63	50	60	--	160	100	
T	6	1/4-18NPT	4	4	23	16	26	14.5	31	12	17	14	630	400
	8	1/4-18NPT	5	5	24	17	27	14.5	32	14	19	17	630	400
	8	3/8-18NPT	5	8	25	18	28	14.5	33	17	19	19	630	400
	8	1/2-14NPT	5	10	30	23	34	19.5	38	19	19	--	630	400
	10	1/4-18NPT	7	5	25	17.5	28	14.5	34	17	22	19	630	400
	10	3/8-18NPT	7	7	25	17.5	28	14.5	34	17	22	19	630	400
	12	1/4-18NPT	8	5	29	21.5	29	14.5	38	17	24	22	630	400
	12	3/8-18NPT	8	8	29	22.5	28	14.5	38	17	24	22	630	400
	12	1/2-14NPT	8	10	30	22.5	34	19.5	39	19	24	--	630	400
	14	1/2-14NPT	10	10	30	22	34	19.5	40	19	27	--	630	400
	16	1/2-14NPT	12	12	33	24.5	36	19.5	43	24	30	--	400	250
	20	3/4-14NPT	16	16	37	26.5	42	19.5	48	27	36	--	400	250
	25	1-11/2NPT	20	20	42	30	48	24.5	54	36	46	--	400	250
	30	11/4-11 1/2NPT	25	25	49	35.5	54	25	62	41	50	--	400	250
38	11/2-11 1/2NPT	32	32	57	41	61	26	72	50	60	--	315	200	

L - Light Series

T - Heavy Series

24° Cone End

Male Branch Tee with Metric Thread MB-M



(Bar)

Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	S1	S2	SS
L	22	M26 × 1.5	19	18	31	35	27.5	26	16	44	27	36	160
	28	M33 × 2	24	23	39	38	30.5	30	18	47	36	41	160
	35	M42 × 2	30	30	49	45	34.5	34	20	56	41	50	160
	42	M48 × 2	36	36	55	51	40	39	22	63	50	60	160
T	20	M27 × 2	16	16	32	37	26.5	26	16	48	27	36	400
	25	M33 × 2	20	20	39	42	30	30	18	54	36	46	250
	30	M42 × 2	25	25	49	49	35.5	34	20	62	41	50	160
	38	M48 × 2	32	32	55	57	41	39	22	72	50	60	160

L - Light Series T - Heavy Series

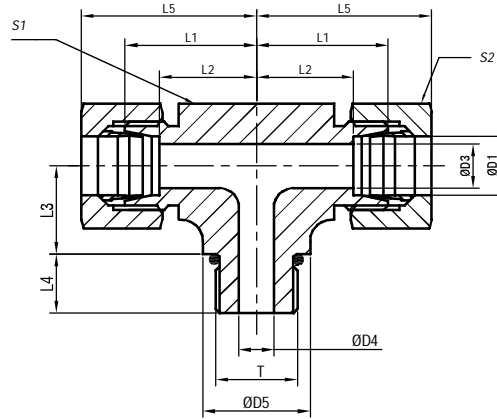
For Metric Threads add complete size in the Ordering Code.
example: MC18LM22-1.5MS4

Description:

Male Connector, 18mm Tube size x M22 x 1.5 Pitch
Metal Sealing in SS304.

24° Cone End

Male Branch Tee with BSPP Thread MB-R



Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	S1	S2	SS	B
L	22	G3/4A	19	18	32	35	27.5	26	16	44	27	36	160	100
	28	G1A	24	23	39	38	30.5	30	18	47	36	41	160	100
	35	G1 1/4 A	30	30	49	45	34.5	34	20	56	41	50	160	100
	42	G1 1/2 A	36	36	55	51	40	39	22	63	50	60	160	100
T	20	G3/4 A	16	16	32	37	26.5	26	16	48	27	36	400	250
	25	G1A	20	20	39	42	30	30	18	54	36	46	250	--
	30	G1 1/4 A	25	25	49	49	35.5	34	20	62	41	50	160	--
	38	G1 1/2 A	32	32	55	57	41	39	22	72	50	60	160	--

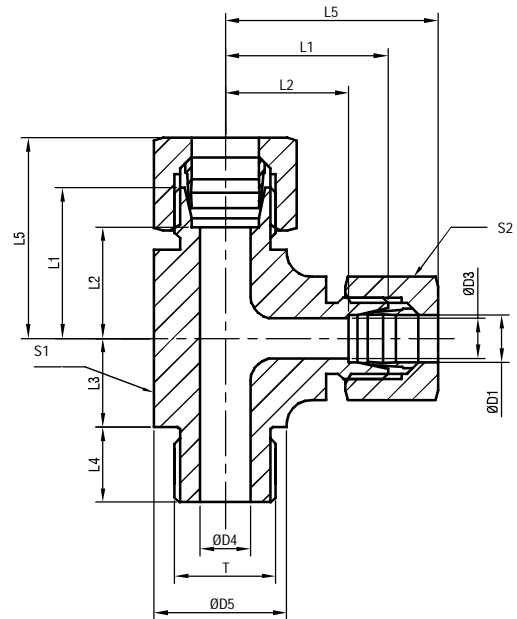
L - Light Series

T - Heavy Series



24° Cone End

Male Run Tee with Metric Thread MR-M



(Bar)

Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	S1	S2	SS
L	22	M26×1.5	19	18	31	35	27.5	26	16	44	27	36	160
	28	M33×2	24	23	39	38	30.5	30	18	47	36	41	160
	35	M42×2	30	30	49	45	34.5	34	20	56	41	50	160
	42	M48×2	36	36	55	51	40	39	22	63	50	60	160
T	20	M27×2	16	16	32	37	26.5	26	16	48	27	36	400
	25	M33×2	20	20	39	42	30	30	18	54	36	46	250
	30	M42×2	25	25	49	49	35.5	34	20	62	41	50	160
	38	M48×2	32	32	55	57	41	39	22	72	50	60	160

L - Light Series T - Heavy Series

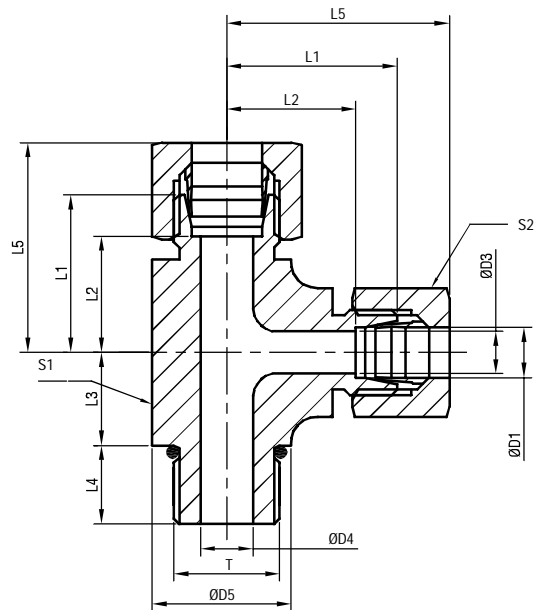
For Metric Threads add complete size in the Ordering Code.
example: MC18LM22-1.5MS4

Description:

Male Connector, 18mm Tube size x M22 x 1.5 Pitch
Metal Sealing in SS304.

24° Cone End

Male Run Tee with BSPP Thread MR-R



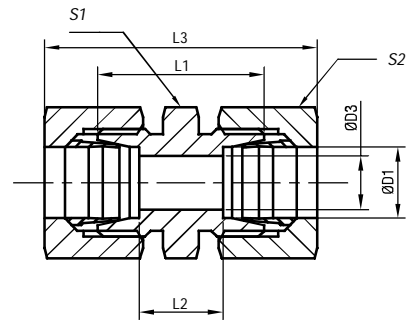
(Bar)

Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	S1	S2	SS
L	22	G3/4A	19	18	32	35	27.5	26	16	44	27	36	160
	28	G1A	24	23	39	38	30.5	30	18	47	36	41	160
	35	G1 1/4A	30	30	49	45	34.5	34	20	56	41	50	160
	42	G1 1/2A	36	36	55	51	40.0	39	22	63	50	60	160
T	20	G3/4A	16	16	32	37	26.5	26	16	48	27	36	400
	25	G1A	20	20	39	42	30.0	30	18	54	36	46	250
	30	G1 1/4A	25	25	49	49	35.5	34	20	62	41	50	160
	38	G1 1/2A	32	32	55	57	41.0	39	22	72	50	60	160

L - Light Series

T - Heavy Series

24° Cone End **Union U**



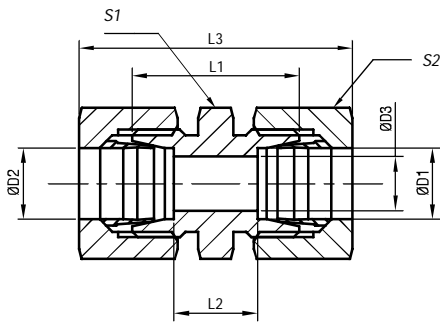
Series	D1	D3	L1	L2	L3	S1	S2	(Bar)	
								SS	B
LL	4	3	20.0	12.0	31	9	10.0	100	63
	6	4.5	20.0	9.0	32	11	12.0	100	63
	8	6	23.0	12.0	35	12	14.0	100	63
	10	8	23.0	12.0	35	14	17.0	100	63
	12	10	23.0	11.0	35	17	19.0	100	63
L	6	4	24.0	10.0	39	12	14.0	315	200
	8	6	25.0	11.0	40	14	17.0	315	200
	10	8	27.0	13.0	42	17	19.0	315	200
	12	10	28.0	14.0	43	19	22.0	315	200
	15	12	30	16	46	24	27.0	315	200
	18	15	31	16	48	27	32.0	315	200
	22	19	35	20	52	32	36.0	160	100
	28	24	36	21	54	41	41.0	160	100
	35	30	41.0	20.0	63	46	50.0	160	100
42	36	43.0	21.0	66	55	60.0	160	100	
T	6	4	30.0	16.0	45	14	17.0	630	400
	8	5	32.0	18.0	47	17	19.0	630	400
	10	7	32.0	17.0	49	19	22.0	630	400
	12	8	34.0	19.0	51	22	24.0	630	400
	14	10	38	22	57	24	27.0	630	400
	16	12	38	21	57	27	30.0	400	250
	20	16	44	23	66	32	36.0	400	250
	25	20	50	26	74	41	46.0	400	250
	30	25	54	27	80	46	50	400	250
38	32	61	29	90	55	60	315	200	

LL - Very Light Series L - Light Series T - Heavy Series

24° Cone End

Reducer Union RU

(Bar)



Series	D1	D2	D3	L1	L2	L3	S1	S2	S3	SS	B
LL	6	4	3	20	10.5	32	11	10	12	100	63
	8	4	3	22	12.5	34.0	12	10	14.0	100	63
	8	6	4.5	22	11	34	12	12	14	100	63
L	8	6	4	25	11	40	14	14	17	315	200
	10	6	4	26	12	41	17	14	19	315	200
	10	8	6	26	12	41.0	17	17	19.0	315	200
	12	6	4	27	13	42.0	19	14	22.0	315	200
	12	8	6	27	13	42.0	19	17	22.0	315	200
	12	10	8	28	14	43	19	19	22	315	200
	15	10	8	29	15	45	24	19	27	315	200
	15	12	10	29	15	45.0	24	22	27.0	315	200
	18	10	8	30	15.5	46.0	27	19	32.0	315	200
	18	12	10	30	15.5	46.0	27	22	32.0	315	200
	18	15	12	31	16.5	48	27	27	32	315	200
	22	12	10	32	17.5	48	32	22	36	160	100
	22	15	12	33	18.5	50.0	32	27	36.0	160	100
	22	18	15	33	18	50.0	32	32	36.0	160	100
	28	18	15	34	19	52.0	41	32	41.0	160	100
	28	22	19	36	21	54	41	36	41	160	100
	35	22	19	39	21	59	46	36	50	160	100
	35	28	24	39	21	59.0	46	41	50.0	160	100
	42	35	30	43	21.5	66.0	55	50	60.0	160	100
	T	8	6	4	32	18	47	17	17	19	630
10		6	4	32	17.5	48	19	17	22	630	400
10		8	5	32	17.5	48.0	19	19	22.0	630	400
12		6	4	34	19.5	50.0	22	17	24.0	630	400
12		8	5	34	19.5	50.0	22	19	24.0	630	400
12		10	7	34	19	51	22	22	24	630	400
14		10	7	36	20.5	54	24	22	27	630	400
14		12	8	36	20.5	54.0	24	24	27.0	630	400
16		10	7	36	20	54.0	27	22	30.0	400	250
16		12	8	36	20	54.0	27	24	30.0	400	250
16		14	10	36	21.5	57	27	27	30	400	250
20		10	7	40	22	60	32	22	36	400	250
20		12	8	40	22	60.0	32	24	36.0	400	250
20		16	12	42	23	63.0	32	30	36.0	400	250
25		16	12	46	25.5	68.0	41	30	46.0	400	250
25		20	16	48	25.5	71	41	36	46	400	250
30		20	16	50	26	74	46	36	50	400	250
30		25	20	52	26.5	77.0	46	46	50.0	400	250
38		30	25	59	29.5	87.0	55	50	60.0	315	200

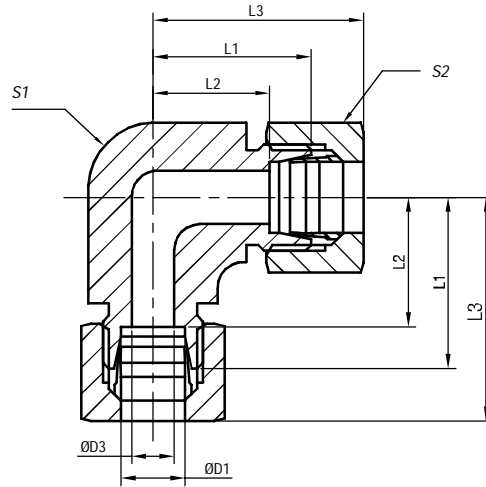
LL - Very Light Series

L - Light Series

T - Heavy Series

24° Cone End

Union Elbow UE



Series	D1	D3	L1	L2	L3	S1	S2	S3	SS	B
LL	4	3.0	15	11.0	21	9	10	9	100	63
	6	4.5	15	9.5	21	9	12	11	100	63
	8	6.0	17	11.5	23	12	14	12	100	63
	10	8.0	18	12.5	24	12	17	14	100	63
	12	10.0	19	13.0	25	14	19	17	100	63
L	6	4.0	19	12.0	27	12	14	12	315	200
	8	6.0	21	14.0	29	12	17	14	315	200
	10	8.0	22	15.0	30	14	19	17	315	200
	12	10.0	24	17.0	32	19	22	--	315	200
	15	12.0	28	21.0	36	19	27	--	315	200
	18	15.0	31	23.5	40	24	32	--	315	200
	22	19.0	35	27.5	44	27	36	--	160	100
	28	24.0	38	30.5	47	36	41	--	160	100
	35	30.0	45	34.5	56	41	50	--	160	100
42	36.0	51	40.0	63	50	60	--	160	100	
T	6	4.0	23	16.0	31	12	17	14	630	400
	8	5.0	24	17.0	32	14	19	17	630	400
	10	7.0	25	17.5	34	19	22	--	630	400
	12	8.0	29	21.5	38	17	24	22	630	400
	14	10.0	30	22.0	40	19	27	--	630	400
	16	12.0	33	24.5	43	24	30	--	400	250
	20	16.0	37	26.5	48	27	36	--	400	250
	25	20.0	42	30.0	54	36	46	--	400	250
	30	25.0	49	35.5	62	41	50	--	400	250
38	32.0	57	41.0	72	50	60	--	315	200	

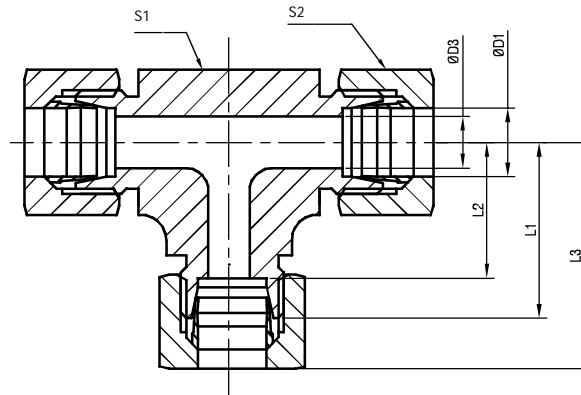
LL - Very Light Series

L - Light Series

T - Heavy Series

24° Cone End

Union Tee UT



Series	D1	D3	L1	L2	L3	S1	S2	S3	SS	B
LL	4	3.0	15	11.0	21	9	10	9	100	63
	6	4.5	15	9.5	21	9	12	11	100	63
	8	6.0	17	11.5	23	12	14	12	100	63
	10	8.0	18	12.5	24	12	17	14	100	63
	12	10.0	21	15.0	27	14	19	--	100	63
L	6	4.0	19	12.0	27	12	14	12	315	200
	8	6.0	21	14.0	29	12	17	14	315	200
	10	8.0	22	15.0	30	14	19	--	315	200
	12	10.0	24	17.0	32	17	22	--	315	200
	15	12.0	28	21.0	36	19	27	--	315	200
	18	15.0	31	23.5	40	24	32	--	315	200
	22	19.0	35	27.5	44	27	36	--	160	100
	28	24.0	38	30.5	47	36	41	--	160	100
	35	30.0	45	34.5	56	41	50	--	160	100
42	36.0	51	40.0	63	50	60	--	160	100	
T	6	4.0	23	16.0	31	12	17	14	630	400
	8	5.0	24	17.0	32	14	19	--	630	400
	10	7.0	25	17.5	34	17	22	--	630	400
	12	8.0	29	21.5	38	17	24	--	630	400
	14	10.0	30	22.0	40	19	27	--	630	400
	16	12.0	33	24.5	43	24	30	--	400	250
	20	16.0	37	26.5	48	27	36	--	400	250
	25	20.0	42	30.0	54	36	46	--	400	250
	30	25.0	49	35.5	62	41	50	--	400	250
	38	32.0	57	41.0	72	50	60	--	315	200

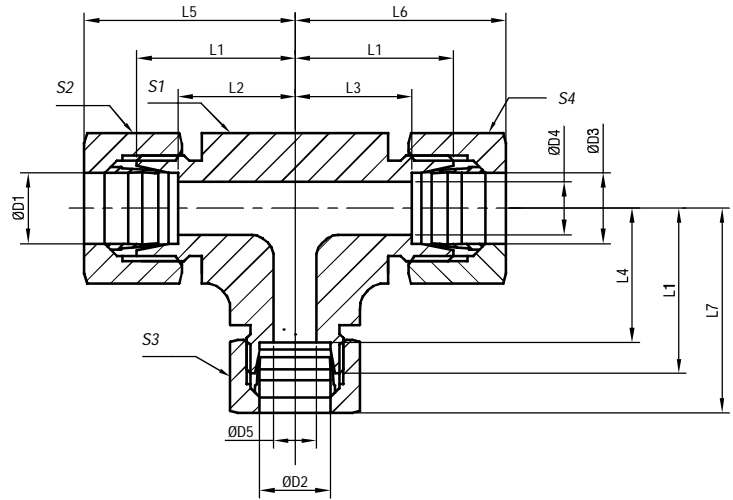
LL - Very Light Series

L - Light Series

T - Heavy Series

24° Cone End

Reducing Union Tee RT

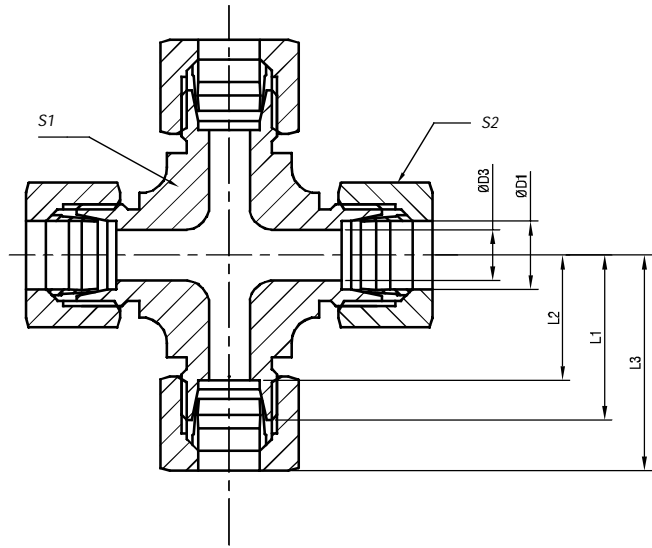


Series	D1	D2	D3	D4	D5	L1	L2	L3	L4	L5	L6	L7	S1	S2	S3	S4	S5	SS	B
LL	4	8	4	3.0	6	17	13.0	13.0	11.5	23	23	23	12	10	14	10	12	100	63
	6	4	6	4.5	3	15	9.5	9.5	11.0	21	21	21	11	12	10	12	9	100	63
L	6	8	6	4.0	6	21	14.0	14.0	14.0	29	29	29	14	14	17	14	12	315	200
	8	6	8	6.0	4	21	14.0	14.0	14.0	29	29	29	14	17	14	17	12	315	200
	6	10	6	4.0	8	22	15.0	15.0	15.0	30	30	30	--	14	19	14	14	315	200
	8	10	8	6.0	8	22	15.0	15.0	15.0	30	30	30	--	17	19	17	14	315	200
	10	6	10	8.0	4	22	15.0	15.0	15.0	30	30	30	--	19	14	19	14	315	200
	10	8	10	8.0	6	22	15.0	15.0	15.0	30	30	30	--	19	17	19	14	315	200
	10	10	6	4.0	8	22	15.0	15.0	15.0	30	30	30	--	19	19	14	14	315	200
	8	12	8	6.0	10	24	17.0	17.0	17.0	32	32	32	--	17	22	17	17	315	200
	12	6	12	10.0	4	24	17.0	17.0	17.0	32	32	32	--	22	14	22	17	315	200
	12	8	8	6.0	6	24	17.0	17.0	17.0	32	32	32	--	22	17	17	17	315	200
	12	8	12	10.0	6	24	17.0	17.0	17.0	32	32	32	--	22	17	22	17	315	200
	12	10	10	8.0	8	24	17.0	17.0	17.0	32	32	32	--	22	19	19	17	315	200
	12	10	12	10.0	8	24	17.0	17.0	17.0	32	32	32	--	22	19	22	17	315	200
	12	12	10	8.0	10	24	17.0	17.0	17.0	32	32	32	--	22	22	19	17	315	200
	10	15	10	8.0	12	28	21.0	21.0	21.0	36	36	36	--	19	27	19	19	315	200
	12	15	12	10.0	12	28	21.0	21.0	21.0	36	36	36	--	22	27	22	19	315	200
	15	6	15	12.0	4	28	21.0	21.0	21.0	36	36	36	--	27	14	27	19	315	200
	15	10	15	12.0	8	28	21.0	21.0	21.0	36	36	36	--	27	19	27	19	315	200
	15	12	12	10.0	10	28	21.0	21.0	21.0	36	36	36	--	27	22	22	19	315	200
	15	12	15	12.0	10	28	21.0	21.0	21.0	36	36	36	--	27	22	27	19	315	200
15	15	12	10.0	12	28	21.0	21.0	21.0	36	36	36	--	27	27	22	19	315	200	
12	18	12	10.0	15	31	24.0	24.0	23.5	39	39	40	--	22	32	22	24	315	200	
18	10	10	8.0	8	31	23.5	24.0	24.0	40	39	39	--	32	19	19	24	315	200	
18	10	18	15.0	8	31	23.5	23.5	24.0	40	40	39	--	32	19	32	24	315	200	
18	12	18	15.0	10	31	23.5	23.5	24.0	40	40	39	--	32	22	32	24	315	200	

LL - Very Light Series

L - Light Series

24° Cone End Union Cross UC



Series	D1	D3	L1	L2	L3	S1	S2	(Bar)	
								SS	B
LL	4	3.0	15	11.0	21	9	10	100	63
	6	4.5	15	9.5	21	9	12	100	63
	8	6.0	17	11.5	23	12	14	100	63
L	6	4.0	19	12.0	27	12	14	315	200
	8	6.0	21	14.0	29	12	17	315	200
	10	8.0	22	15.0	30	14	19	315	200
	12	10.0	24	17.0	32	17	22	315	200
	15	12.0	28	21.0	36	19	27	315	200
	18	15.0	31	23.5	40	24	32	315	200
	22	19.0	35	27.5	44	27	36	160	100
	28	24.0	38	30.5	47	36	41	160	100
	35	30.0	45	34.5	56	41	50	160	100
	42	36.0	51	40.0	63	50	60	160	100
T	6	4.0	23	16.0	31	12	17	630	400
	8	5.0	24	17.0	32	14	19	630	400
	10	7.0	25	17.5	34	17	22	630	400
	12	8.0	29	21.5	38	17	24	630	400
	14	10.0	30	22.0	40	19	27	400	250
	16	12.0	33	24.5	43	24	30	400	250
	20	16.0	37	26.5	48	27	36	315	200
	25	20.0	42	30.0	54	36	46	315	200
	30	25.0	49	35.5	62	41	50	315	200
38	32.0	57	41.0	72	50	60	315	200	

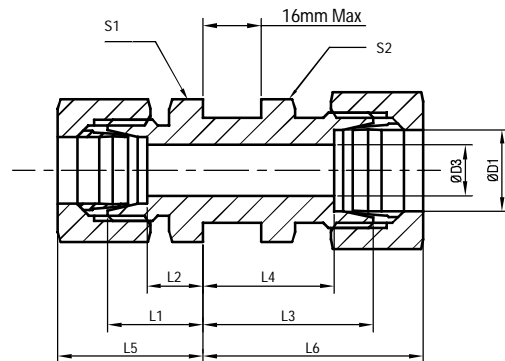
LL - Very Light Series

L - Light Series

T - Heavy Series

24° Cone End

Bulk Head Union BU

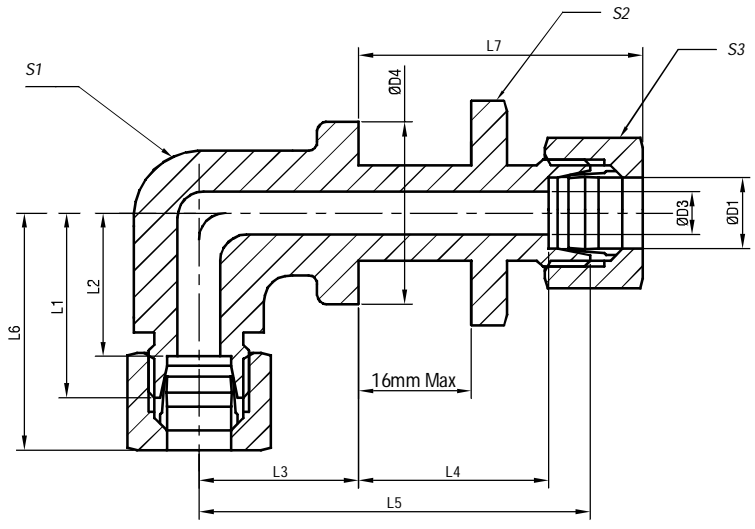


Series	D1	D3	L1	L2	L3	L4	L5	L6	S1	S2	S3	SS	B
L	6	4	14	7.0	34	27.0	22	42	17	17	14	315	200
	8	6	15	8.0	34	27.0	23	42	19	19	17	315	200
	10	8	17	10.0	35	28.0	25	43	22	22	19	315	200
	12	10	17	10.0	36	29.0	25	44	24	24	22	315	200
	15	12	19	12.0	38	31.0	27	46	27	30	27	315	200
	18	15	21	13.5	40	32.5	30	49	32	36	32	315	200
	22	19	24	16.5	42	34.5	33	51	36	41	36	160	100
	28	24	26	18.5	43	35.5	35	52	41	46	41	160	100
	35	30	29	18.5	47	36.5	40	58	50	55	50	160	160
	42	36	30	19.0	47	36.0	42	59	60	65	60	160	160
T	6	4	19	12.0	36	29.0	27	44	19	19	17	630	400
	8	5	20	13.0	36	29.0	28	44	22	22	19	630	400
	10	7	22	14.5	37	29.5	31	46	24	24	22	630	400
	12	8	22	14.5	38	30.5	31	47	27	27	24	630	400
	14	10	25	17.0	40	32.0	35	50	30	30	27	630	--
	16	12	25	16.5	40	31.5	35	50	32	32	30	400	250
	20	16	28	17.5	44	33.5	39	55	41	41	36	400	250
	25	20	32	20.0	47	35.0	44	59	46	46	46	400	250
	30	25	35	21.5	51	37.5	48	64	50	50	50	400	250
	38	32	38	22.0	53	37.0	53	68	65	65	60	315	--

L - Light Series

T - Heavy Series

24° Cone End **Bulk Head Union Elbow** **ME-R**

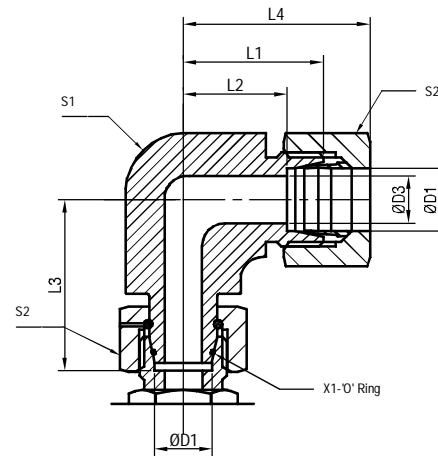


Series	(Bar)														
	D1	D3	D4	L1	L2	L3	L4	L5	L6	L7	S1	S2	S3	SS	B
L	6	4	17	19	12.0	14	27.0	48	27	42	12	17	14	315	200
	8	6	19	21	14.0	17	27.0	51	29	42	12	19	17	315	200
	10	8	22	22	15.0	18	28.0	53	30	43	14	22	19	315	200
	12	10	24	24	17.0	20	29.0	56	32	44	17	24	22	315	200
	15	12	27	28	21.0	23	31.0	61	36	46	19	30	27	315	200
	18	15	32	31	23.5	24	32.5	64	40	49	24	36	32	315	200
	22	19	36	35	27.5	30	34.5	72	44	51	27	41	36	160	--
	28	24	42	38	30.5	34	35.5	77	47	52	36	46	41	160	--
	35	30	50	45	34.5	39	36.5	86	56	58	41	55	50	160	--
42	36	60	51	40.0	43	36.0	90	63	59	50	65	60	160	--	
T	6	4	19	23	16.0	17	29.0	53	31	44	12	19	17	630	--
	8	5	22	24	17.0	18	29.0	54	32	44	14	22	19	630	--
	10	7	24	25	17.5	20	29.5	57	34	46	17	24	22	630	--
	12	8	27	29	21.5	21	30.5	59	38	47	17	27	24	630	--
	14	10	27	30	22.0	23	32.0	63	40	50	19	30	27	630	--
	16	12	30	33	24.5	24	31.5	64	43	50	24	32	30	400	--
	20	16	36	37	26.5	30	33.5	74	48	55	27	41	36	400	--
	25	20	42	42	30.0	34	35.0	81	54	59	36	46	46	400	--
	30	25	50	49	35.5	39	37.5	90	62	64	41	50	50	400	--
38	32	60	57	41.0	43	37.0	96	72	68	50	65	60	315	--	

L - Light Series T - Heavy Series

24° Cone End

Swivel union Elbow SE



(Bar)

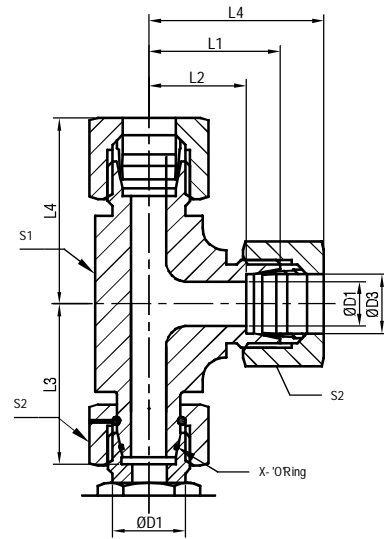
Series	D1	D3	L1	L2	L3	L4	S1	S2	SS
L	6	4	19	12.0	26.0	27	12	14	315
	8	6	21	14.0	27.5	29	12	17	315
	10	8	22	15.0	29.0	30	14	19	315
	12	10	24	17.0	29.5	32	17	22	315
	15	12	28	21.0	32.5	36	19	27	315
	18	15	31	23.5	35.5	40	24	32	315
	22	19	35	27.5	38.5	44	27	36	160
	28	24	38	30.5	41.5	47	36	41	160
	35	30	45	34.5	51.0	56	41	50	160
42	36	51	40.0	56.0	63	50	60	160	
T	6	4	23	16.0	27.0	31	12	17	630
	8	5	24	17.0	27.5	32	14	19	630
	10	6	25	17.5	30.0	34	17	22	630
	12	8	29	21.5	31.0	38	17	24	630
	14	9	30	22.0	35.0	40	19	27	630
	16	12	33	24.5	36.5	43	24	30	400
	20	16	37	26.5	44.5	48	27	36	400
	25	20	42	30.0	50.0	54	36	46	400
	30	25	49	35.5	55.0	62	41	50	400
38	32	57	41.0	63.0	72	50	60	315	

L - Light Series

T - Heavy Series

24° Cone End

Swivel Union Tee ST



(Bar)

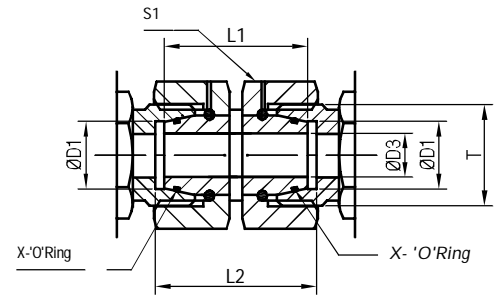
Series	S1	D3	L1	L2	L3	L4	S1	S2	SS
L	6	4	19	12.0	26.0	27	12	14	315
	8	6	21	14.0	27.5	29	12	17	315
	10	8	22	15.0	29.0	30	14	19	315
	12	10	24	17.0	29.5	32	17	22	315
	15	12	28	21.0	32.5	36	19	27	315
	18	15	31	23.5	35.5	40	24	32	315
	22	19	35	27.5	38.5	44	27	36	160
	28	24	38	30.5	41.5	47	36	41	160
	35	30	45	34.5	51.0	56	41	50	160
	42	36	51	40.0	56.0	63	50	60	160
T	6	4	23	16.0	27.0	31	12	17	630
	8	5	24	17.0	27.5	32	14	19	630
	10	6	25	17.5	30.0	34	17	22	630
	12	8	29	21.5	31.0	38	17	24	630
	14	9	30	22.0	35.0	40	19	27	630
	16	12	33	24.5	36.5	43	24	30	400
	20	16	37	26.5	44.5	48	27	36	400
	25	20	42	30.0	50.0	54	36	46	400
	30	25	49	35.5	55.0	62	41	50	400
	38	32	57	41.0	63.0	72	50	60	315

L - Light Series

T - Heavy Series

24° Cone End

Swivel Union **SU**



(Bar)

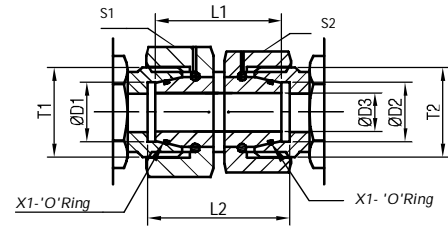
Series	D1	T	D3	L1	L2	S1	SS
L	6	M 12×1.5	2.5	32	33	14	315
	8	M 14×1.5	4.0	32	33	17	315
	10	M 16×1.5	6.0	33	34	19	315
	12	M 18×1.5	8.0	33	34	22	315
	15	M 22×1.5	10.0	38	39	27	315
	18	M 26×1.5	13.0	36	38	32	315
	22	M 30×2	17.0	42	44	36	160
	28	M 36×2	22.0	46	48	41	160
	35	M 45×2	28.0	48	52	50	160
	42	M 52×2	34.0	52	57	60	160
T	6	M 14×1.5	2.5	32	33	17	630
	8	M 16×1.5	4.0	33	34	19	630
	10	M 18×1.5	6.0	33	35	22	630
	12	M 20×1.5	8.0	36	38	24	630
	14	M 22×1.5	9.0	39	41	27	630
	16	M 24×1.5	11.0	39	42	30	400
	20	M 30×2	14.0	44	48	36	400
	25	M 36×2	18.0	46	53	46	400
	30	M 42×2	23.0	52	62	50	400
	38	M 52×2	30.0	52	67	60	315

L - Light Series

T - Heavy Series

24° Cone End

Reducing Swivel Union **SR**



Series	D1	D2	T1	T2	D3	L1	L2	S1	S2
L/T	6	6	M 14×1.5	M 12×1.5	2.5	32	33.0	17	14
L	8	6	M 14×1.5	M 12×1.5	2.5	32	33.0	17	14
L/T	8	8	M 16×1.5	M 14×1.5	4.0	33	34.0	19	17
L	10	6	M 16×1.5	M 12×1.5	2.5	33	34.0	19	14
L	10	8	M 16×1.5	M 14×1.5	4.0	33	34.0	19	17
L/T	10	10	M 18×1.5	M 16×1.5	6.0	33	34.5	22	19
L	12	6	M 18×1.5	M 12×1.5	2.5	33	34.0	22	14
L	12	8	M 18×1.5	M 14×1.5	4.0	33	34.0	22	17
L	12	10	M 18×1.5	M 16×1.5	6.0	33	34.0	22	19
L/T	12	12	M 20×1.5	M 18×1.5	8.0	36	37.5	24	22
L	15	8	M 22×1.5	M 14×1.5	4.0	38	39.0	27	17
L	15	10	M 22×1.5	M 16×1.5	6.0	38	39.0	27	19
L	15	12	M 22×1.5	M 18×1.5	8.0	38	39.0	27	22
L	18	10	M 26×1.5	M 16×1.5	6.0	36	37.5	32	19
L	18	12	M 26×1.5	M 18×1.5	8.0	36	37.5	32	22
L	18	15	M 26×1.5	M 22×1.5	10.0	38	39.5	32	27
L/T	18	16	M 26×1.5	M 24×1.5	11.0	39	41.5	32	30
L	22	12	M 30×2	M 18×1.5	8.0	42	43.5	36	22
L	22	15	M 30×2	M 22×1.5	10.0	42	43.5	36	27
L	22	18	M 30×2	M 26×1.5	13.0	42	44.0	36	32
L/T	22	20	M 30×2	M 30×2	14.0	44	47.0	36	36
L	28	15	M 36×2	M 22×1.5	10.0	46	47.5	41	27
L	28	18	M 36×2	M 26×1.5	13.0	46	48.0	41	32
L	28	22	M 36×2	M 30×2	17.0	46	46.0	41	36
L/T	28	25	M 36×2	M 36×2	18.0	46	50.5	41	46
L	35	18	M 45×2	M 26×1.5	13.0	48	51.0	50	32
L	35	22	M 45×2	M 30×2	17.0	48	51.0	50	36
L	35	28	M 45×2	M 36×2	22.0	48	51.0	50	41
L/T	35	30	M 45×2	M 42×2	23.0	52	59.0	50	50
L	42	22	M 52×2	M 30×2	17.0	52	55.5	60	36
L	42	28	M 52×2	M 36×2	22.0	52	55.5	60	41
L	42	35	M 52×2	M 45×2	28.0	52	56.5	60	50
L/T	42	38	M 52×2	M 52×2	30.0	52	62.0	60	60
T	8	6	M 16×1.5	M 14×1.5	2.5	33	34.0	19	17
T	10	6	M 18×1.5	M 14×1.5	2.5	33	34.5	22	17
T	10	8	M 18×1.5	M 16×1.5	4.0	33	34.5	22	19
T	12	6	M 20×1.5	M 14×1.5	2.5	36	37.5	24	17
T	12	8	M 20×1.5	M 16×1.5	4.0	36	37.5	24	19
T	12	10	M 20×1.5	M 18×1.5	6.0	36	38.0	24	22
T	16	10	M 24×1.5	M 18×1.5	6.0	39	41.5	30	22
T	16	12	M 24×1.5	M 20×1.5	8.0	39	41.5	30	24
T/L	16	15	M 24×1.5	M 20×1.5	10.0	39	41.0	30	27
T	20	12	M 30×2	M 20×1.5	8.0	44	47.0	36	24

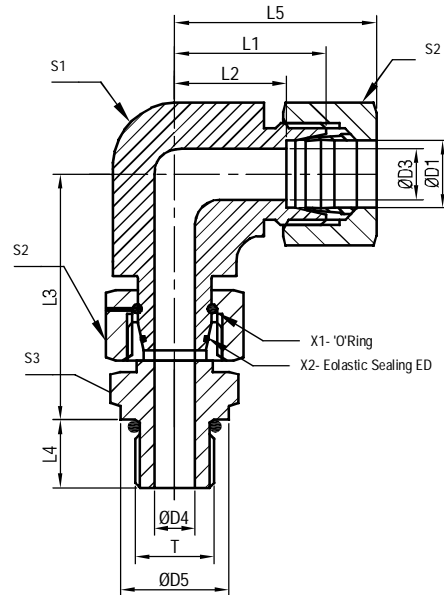
L - Light Series

T - Heavy Series

24° Cone End

Adjustable Swivel Elbow with Metric Thread

AE-M



(Bar)

Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	S1	S2	S3	SS
L	6	M10×1	4	4	14	19	12	34.5	8	27	12	14	14	315
	8	M12×1.5	6	6	17	21	14	37.5	12	29	12	17	17	315
	10	M14×1.5	8	7	19	22	15	40	12	30	14	19	19	315
	12	M16×1.5	10	9	22	24	17	42	12	32	17	22	22	315
	15	M18×1.5	12	11	24	28	21	46	12	36	19	27	24	315
	18	M22×1.5	15	14	27	31	23.5	50	14	40	24	32	27	315
	22	M26×1.5	19	18	32	35	27.5	55	16	44	27	36	32	160
	28	M33×2	24	23	40	38	30.5	59	18	47	36	41	41	160
	35	M42×2	30	30	50	45	34.5	68.5	20	56	41	50	50	160
42	M48×2	36	36	55	51	40	75	22	63	50	60	55	160	
T	6	M12×1.5	4	4	17	23	16	40	12	31	12	17	17	630
	8	M14×1.5	5	5	19	24	17	42.5	12	32	14	19	19	630
	10	M16×1.5	6	7	22	25	17.5	45	12	34	17	22	22	630
	12	M18×1.5	8	8	24	29	21.5	48	12	38	17	24	24	630
	14	M20×1.5	9	10	26	30	22	54	14	40	19	27	27	630
	16	M22×1.5	12	12	27	33	24.5	55	14	43	24	30	27	400
	20	M27×2	16	16	32	37	26.5	65	16	48	27	36	32	400
	25	M33×2	20	20	40	42	30	73	18	54	36	46	41	400
	30	M42×2	25	25	50	49	35.5	78.5	20	62	41	50	50	400
38	M48×2	32	32	55	57	41	89	22	72	50	60	55	315	

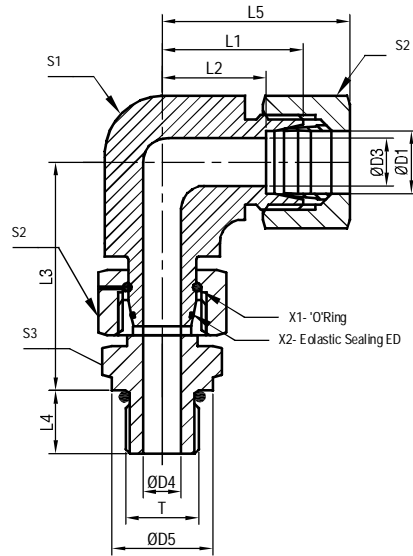
L - Light Series

T - Heavy Series

24° Cone End

Adjustable Swivel Elbow with BSPP Thread

AE-R



Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	S1	S2	S3	SS
L	6	G 1/8 A	4	4	14	19	12	34.5	8	27	12	14	14	315
	8	G 1/4 A	6	6	19	21	14.0	37.5	12	29	12	17	19	315
	10	G 1/4 A	8	6	19	22	15.0	40.0	12	30	14	19	19	315
	12	G 3/8 A	10	9	22	24	17.0	42.0	12	32	17	22	22	315
	15	G 1/2 A	12	11	27	28	21.0	46.5	14	36	19	27	27	315
	18	G 1/2 A	15	14	27	31	23.5	50.0	14	40	24	32	27	315
	22	G 3/4 A	19	18	32	35	27.5	55.0	16	44	27	36	32	160
	28	G1A	24	23	40	38	30.5	59.0	18	47	36	41	41	160
	35	G 1 1/4 A	30	30	50	45	34.5	68.5	20	56	41	50	50	160
	42	G 1 1/2 A	36	36	55	51	40.0	75.0	22	63	50	60	55	160
T	6	G 1/4 A	4	4	19	23	16.0	40.0	12	31	12	17	19	630
	8	G 1/4 A	5	5	19	24	17.0	42.5	12	32	14	19	19	630
	10	G 3/8 A	6	7	22	25	17.5	45.0	12	34	17	22	22	630
	12	G 3/8 A	8	8	22	29	21.5	48.0	12	38	17	24	22	630
	14	G 1/2 A	9	10	27	30	22.0	54.0	14	40	19	27	27	630
	16	G 1/2 A	12	12	27	33	24.5	55.0	14	43	24	30	27	400
	20	G 3/4 A	16	16	32	37	26.5	65.0	16	48	27	36	32	400
	25	G1A	20	20	40	42	30.0	73.0	18	54	36	46	41	400
	30	G 1 1/4 A	25	25	50	49	35.5	78.5	20	62	41	50	50	400
	38	G 1 1/2 A	32	32	55	57	41.0	89.0	22	72	50	60	55	315

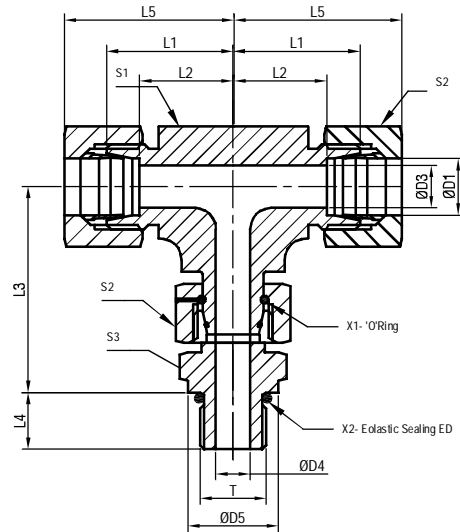
L - Light Series

T - Heavy Series

24° Cone End

Adjustable Swivel Tee with Metric Thread

AT-M



(Bar)

Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	S1	S2	S3	SS
L	6	M10×1	4	4	14	19	12	34.5	8	27	12	14	14	315
	8	M12×1.5	6	6	19	21	14	37.5	12	29	12	17	19	315
	10	M14×1.5	8	6	19	22	15	40	12	30	14	19	19	315
	12	M16×1.5	10	9	22	24	17	42	12	32	17	22	22	315
	15	M18×1.5	12	11	27	28	21	46.5	14	36	19	27	27	315
	18	M22×1.5	15	14	27	31	23.5	50	14	40	24	32	27	315
	22	M26×1.5	19	18	32	35	27.5	55	16	44	27	36	32	160
	28	M33×2	24	23	40	38	30.5	59	18	47	36	41	41	160
	35	M42×2	30	30	50	45	34.5	68.5	20	56	41	50	50	160
	42	M48×2	36	36	55	51	40	75	22	63	50	60	55	160
T	6	M12×1.5	4	4	19	23	16	40	12	31	12	17	19	630
	8	M14×1.5	5	5	19	24	17	42.5	12	32	14	19	19	630
	10	M16×1.5	6	7	22	25	17.5	45	12	34	17	22	22	630
	12	M18×1.5	8	8	22	29	21.5	48	12	38	17	24	22	630
	14	M20×1.5	9	10	27	30	22	54	14	40	19	27	27	630
	16	M22×1.5	12	12	27	33	24.5	55	14	43	24	30	27	400
	20	M27×2	16	16	32	37	26.5	65	16	48	27	36	32	400
	25	M33×2	20	20	40	42	30	73	18	54	36	46	41	400
	30	M42×2	25	25	50	49	35.5	78.5	20	62	41	50	50	400
	38	M48×2	32	32	55	57	41	89	22	72	50	60	55	315

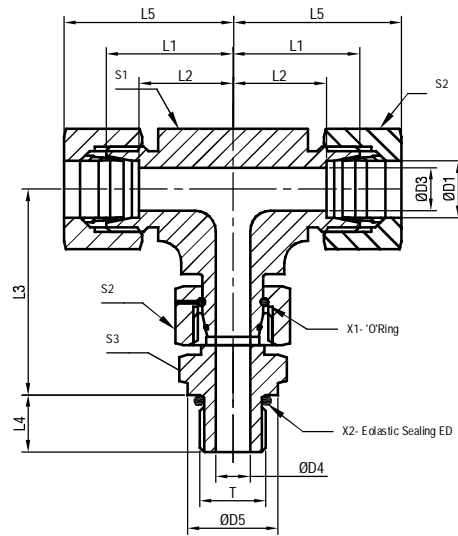
L - Light Series

T - Heavy Series

24° Cone End

Adjustable Swivel Tee with BSPP Thread

AT-R



(Bar)

Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	S1	S2	S3	SS
L	6	G 1/8 A	4	4	14	19	12	34.5	8	27	12	14	14	315
	8	G 1/4 A	6	6	19	21	14.0	37.5	12	29	12	17	19	315
	10	G 1/4 A	8	6	19	22	15.0	40.0	12	30	14	19	19	315
	12	G 3/8 A	10	9	22	24	17.0	42.0	12	32	17	22	22	315
	15	G 1/2 A	12	11	27	28	21.0	46.5	14	36	19	27	27	315
	18	G 1/2 A	15	14	27	31	23.5	50.0	14	40	24	32	27	315
	22	G 3/4 A	19	18	32	35	27.5	55.0	16	44	27	36	32	160
	28	G1A	24	23	40	38	30.5	59.0	18	47	36	41	41	160
	35	G 1 1/4 A	30	30	50	45	34.5	68.5	20	56	41	50	50	160
	42	G 1 1/2 A	36	36	55	51	40.0	75.0	22	63	50	60	55	160
T	6	G 1/4 A	4	4	19	23	16.0	40.0	12	31	12	17	19	630
	8	G 1/4 A	5	5	19	24	17.0	42.5	12	32	14	19	19	630
	10	G 3/8 A	6	7	22	25	17.5	45.0	12	34	17	22	22	630
	12	G 3/8 A	8	8	22	29	21.5	48.0	12	38	17	24	22	630
	14	G 1/2 A	9	10	27	30	22.0	54.0	14	40	19	27	27	630
	16	G 1/2 A	12	12	27	33	24.5	55.0	14	43	24	30	27	400
	20	G 3/4 A	16	16	32	37	26.5	65.0	16	48	27	36	32	400
	25	G1A	20	20	40	42	30.0	73.0	18	54	36	46	41	400
	30	G 1 1/4 A	25	25	50	49	35.5	78.5	20	62	41	50	50	400
38	G 1 1/2 A	32	32	55	57	41.0	89.0	22	72	50	60	55	315	

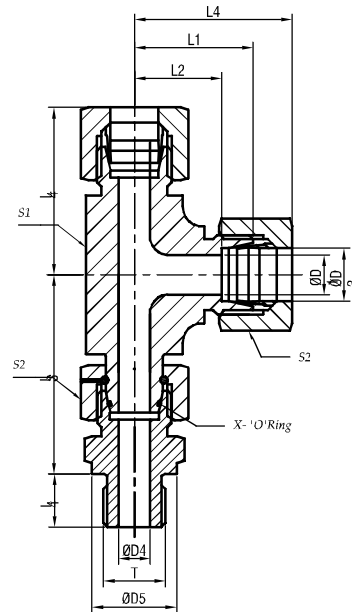
L - Light Series

T - Heavy Series

24° Cone End

Adjustable Swivel Run Tee with Metric Thread

AR-M



(Bar)

Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	S1	S2	S3	SS
L	6	M10×1	4	4	14	19	12	34.5	8	27	12	14	14	315
	8	M12×1.5	6	6	17	21	14	37.5	12	29	12	17	17	315
	10	M14×1.5	8	7	19	22	15	40	12	30	14	19	19	315
	12	M16×1.5	10	9	22	24	17	42	12	32	17	22	22	315
	15	M18×1.5	12	11	24	28	21	46	12	36	19	27	24	315
	18	M22×1.5	15	14	27	31	23.5	50	14	40	24	32	27	315
	22	M26×1.5	19	18	32	35	27.5	55	16	44	27	36	32	160
	28	M33×2	24	23	40	38	30.5	59	18	47	36	41	41	160
	35	M42×2	30	30	50	45	34.5	68.5	20	56	41	50	50	160
42	M48×2	36	36	55	51	40	75	22	63	50	60	55	160	
T	6	M12×1.5	4	4	17	23	16	40	12	31	12	17	17	630
	8	M14×1.5	5	5	19	24	17	42.5	12	32	14	19	19	630
	10	M16×1.5	6	7	22	25	17.5	45	12	34	17	22	22	630
	12	M18×1.5	8	8	24	29	21.5	48	12	38	17	24	24	630
	14	M20×1.5	9	10	26	30	22	54	14	40	19	27	27	630
	16	M22×1.5	12	12	27	33	24.5	55	14	43	24	30	27	400
	20	M27×2	16	16	32	37	26.5	65	16	48	27	36	32	400
	25	M33×2	20	20	40	42	30	73	18	54	36	46	41	400
	30	M42×2	25	25	50	49	35.5	78.5	20	62	41	50	50	400
38	M48×2	32	32	55	57	41	89	22	72	50	60	55	315	

L - Light Series

T - Heavy Series

Description:

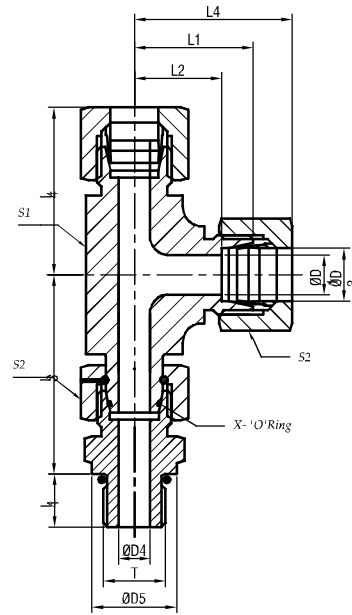
For Metric Threads add complete size in the Ordering Code.
example: MC18LM22-1.5MS4

Male Connector, 18mm Tube size x M22 x 1.5 Pitch
Metal Sealing in SS304.

24° Cone End

Adjustable Swivel Run Tee with BSPP Thread

AR-R



(Bar)

Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	S1	S2	S3	SS
L	6	G 1/8 A	4	4	14	19	12.0	34.5	8	27	12	14	14	315
	8	G 1/4 A	6	6	19	21	14.0	37.5	12	29	12	17	19	315
	10	G 1/4 A	8	6	19	22	15.0	40.0	12	30	14	19	19	315
	12	G 3/8 A	10	9	22	24	17.0	42.0	12	32	17	22	22	315
	15	G 1/2 A	12	11	27	28	21.0	46.5	14	36	19	27	27	315
	18	G 1/2 A	15	14	27	31	23.5	50.0	14	40	24	32	27	315
	22	G 3/4 A	19	18	32	35	27.5	55.0	16	44	27	36	32	160
	28	G1A	24	23	40	38	30.5	59.0	18	47	36	41	41	160
	35	G 1 1/4 A	30	30	50	45	34.5	68.5	20	56	41	50	50	160
42	G 1 1/2 A	36	36	55	51	40.0	75.0	22	63	50	60	55	160	
T	6	G 1/4 A	4	4	19	23	16.0	40.0	12	31	12	17	19	630
	8	G 1/4 A	5	5	19	24	17.0	42.5	12	32	14	19	19	630
	10	G 3/8 A	6	7	22	25	17.5	45.0	12	34	17	22	22	630
	12	G 3/8 A	8	8	22	29	21.5	48.0	12	38	17	24	22	630
	14	G 1/2 A	9	10	27	30	22.0	54.0	14	40	19	27	27	630
	16	G 1/2 A	12	12	27	33	24.5	55.0	14	43	24	30	27	400
	20	G 3/4 A	16	16	32	37	26.5	65.0	16	48	27	36	32	400
	25	G1A	20	20	40	42	30.0	73.0	18	54	36	46	41	400
	30	G 1 1/4 A	25	25	50	49	35.5	78.5	20	62	41	50	50	400
38	G 1 1/2 A	32	32	55	57	41.0	89.0	22	72	50	60	55	315	

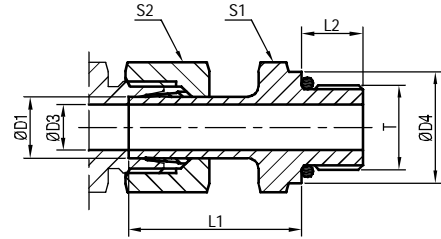
L - Light Series

T - Heavy Series

24° Cone End

Stand Pipe Connector with Metric Thread

SPC-M



(Bar)

Series	D1	T	D3	D4	L1	L2	S1	S2	SS
L	6	M10×1	3.5	14	24.5	8	14	14	315
	8	M12×1.5	5.5	17	26.5	12	17	17	315
	10	M14×1.5	7	19	27.5	12	19	19	315
	12	M16×1.5	9	22	30	12	22	22	315
	15	M18×1.5	11	24	30.5	12	24	27	315
	18	M22×1.5	14	27	31.5	14	27	32	315
	22	M26×1.5	18	32	32.5	16	32	36	160
	28	M33×2	23	40	35	18	41	41	160
	35	M42×2	29.5	50	42.5	20	50	50	160
42	M48×2	35.5	55	46.5	22	55	60	160	
T	6	M12×1.5	3.5	17	27	12	17	17	630
	8	M14×1.5	4.5	19	29.5	12	19	19	630
	10	M16×1.5	6.5	22	32	12	22	22	630
	12	M18×1.5	7.5	24	34	12	24	24	630
	14	M20×1.5	9.5	26	36.5	14	27	27	630
	16	M22×1.5	11.5	27	37	14	27	30	400
	20	M27×2	15.5	32	43	16	32	36	400
	25	M33×2	18	40	48	18	41	46	400
	30	M42×2	23.5	50	51	20	50	50	400
38	M48×2	29	55	60	22	55	60	315	

L - Light Series

T - Heavy Series

For Metric Threads add complete size in the Ordering Code.
example: MC18LM22-1.5MS4

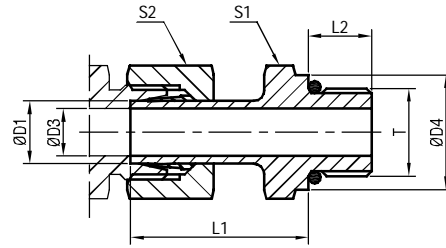
Description:

Male Connector, 18mm Tube size x M22 x 1.5 Pitch
Metal Sealing in SS304.

24° Cone End

Stand Pipe Connector with BSPP Thread

SPC-R



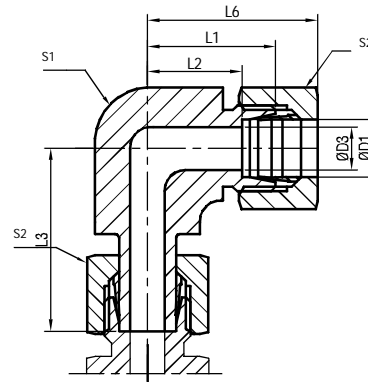
Series	D1	T	D3	D4	L1	L2	S1	S2	(Bar)	
									SS	B
L	6	G 1/8 A	3.5	14	24.5	8	14	14	315	200
	8	G 1/4 A	4.5	19	29.5	12	19	17	315	200
	10	G 1/4 A	7.0	19	27.5	12	19	19	315	200
	12	G 3/8 A	7.5	22	34.0	12	22	22	315	200
	12	G 1/4 A	7.0	19	28.5	12	19	22	--	--
	12	G 1/2 A	7.5	27	34.5	14	27	22	315	
	15	G 1/2 A	11.0	27	31.0	14	27	27	315	200
	18	G 1/2 A	14.0	27	31.5	14	27	32	315	200
	22	G 3/4 A	18.0	32	32.5	16	32	36	160	100
	28	G1A	23.0	40	35.0	18	41	41	160	--
	35	G 1 1/4 A	29.5	50	42.5	20	50	50	160	--
42	G 1 1/2 A	35.5	55	46.5	22	55	60	160	--	
T	6	G 1/4 A	3.5	19	27.0	12	19	17	630	--
	8	G 1/4 A	4.5	19	29.5	12	19	19	630	--
	10	G 3/8 A	6.5	22	32.0	12	22	22	630	--
	12	G 3/8 A	7.5	22	34.0	12	22	24	630	--
	12	G 1/2 A	7.5	27	34.5	14	27	24	630	--
	14	G 1/2 A	9.5	27	36.5	14	27	27	630	--
	16	G 1/2 A	11.5	27	37.0	14	27	30	400	--
	16	G 3/4 A	11.5	32	39.0	16	32	30		--
	20	G 3/4 A	15.5	32	43.0	16	32	36	400	--
	25	G1A	18.0	40	48.0	18	41	46	400	--
	30	G 1 1/4 A	23.5	50	51.0	20	50	50	400	--
38	G 1 1/2 A	29.0	55	60.0	22	55	60	315	--	

L - Light Series

T - Heavy Series

24° Cone End

Stand Pipe Run Elbow SPE



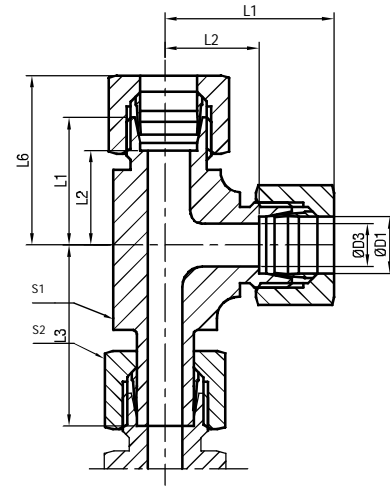
Series	D1	D3	L1	L2	L3	L4	S1	S2	(Bar)	
									SS	B
L	6	4	19	12.0	26.0	27	12	14	315	200
	8	6	21	14.0	27.5	29	12	17	315	200
	10	8	22	15.0	29.0	30	14	19	315	200
	12	10	24	17.0	29.5	32	17	22	315	200
	15	12	28	21.0	32.5	36	19	27	315	200
	18	15	31	23.5	35.5	40	24	32	315	200
	22	19	35	27.5	38.5	44	27	36	160	100
	28	24	38	30.5	42.0	47	36	41	160	100
	35	30	45	34.5	51.0	56	41	50	160	100
	42	36	51	40.0	60.0	63	50	60	160	100
T	6	4	23	16.0	27.0	31	12	17	630	400
	8	5	24	17.0	27.5	32	14	19	630	400
	10	7	25	17.5	31.0	34	17	22	630	400
	12	8	29	21.5	31.0	38	17	24	630	400
	14	10	30	22.0	35.0	40	19	27	400	250
	16	12	33	24.5	37.5	43	24	30	400	250
	20	16	37	26.5	44.5	48	27	36	400	250
	25	20	42	30.0	50.0	54	36	46	400	250
	30	25	49	35.5	55.0	62	41	50	400	250
	38	32	57	41.0	66.5	72	50	60	315	200

L - Light Series

T - Heavy Series

24° Cone End

Stand Pipe Run Tee SRT



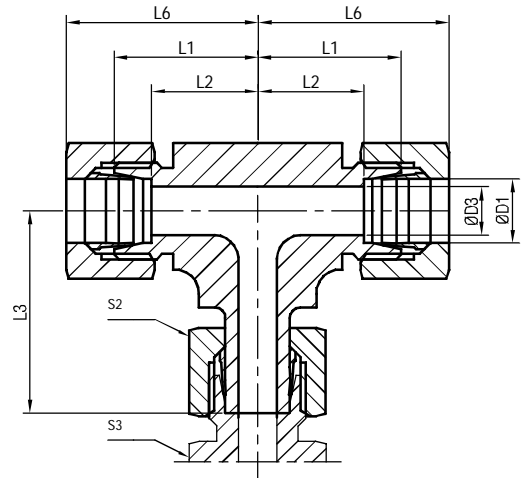
Series	D1	D3	L1	L2	L3	L4	S1	S2	(Bar)	
									SS	B
L	6	4	19	12.0	26.0	27	12	14	315	200
	8	6	21	14.0	27.5	29	12	17	315	200
	10	8	22	15.0	29.0	30	14	19	315	200
	12	10	24	17.0	30.5	32	17	22	315	200
	15	12	28	21.0	32.5	36	19	27	315	200
	18	15	31	23.5	35.5	40	24	32	315	200
	22	19	35	27.5	39.0	44	27	36	160	-
	28	24	38	30.5	43.5	47	36	41	160	-
	35	30	45	34.5	54.5	56	41	50	160	-
42	36	51	40.0	60.0	63	50	60	160	-	
T	6	4	23	16.0	27.0	31	12	17	630	-
	8	5	24	17.0	29.0	32	14	19	630	-
	10	7	25	17.5	32.0	34	17	22	630	-
	12	8	29	21.5	33.0	38	17	24	630	-
	14	10	30	22.0	35.0	40	19	27	400	-
	16	12	33	24.5	37.5	43	24	30	400	-
	20	16	37	26.5	44.5	48	27	36	400	-
	25	20	42	30.0	50.5	54	36	46	400	-
	30	25	49	35.5	56.5	62	41	50	400	-
38	32	57	41.0	66.5	72	50	60	315	-	

L - Light Series

T - Heavy Series

24° Cone End

Stand Pipe Branch Tee SBT



Series	D1	D3	L1	L2	L3	L4	S1	S2	SS	B
L	6	4	19	12.0	26.0	27	12	14	315	200
	8	6	21	14.0	27.5	29	12	17	315	200
	10	8	22	15.0	29.0	30	14	19	315	200
	12	10	24	17.0	30.5	32	17	22	315	200
	15	12	28	21.0	32.5	36	19	27	315	200
	18	15	31	23.5	35.5	40	24	32	315	200
	22	19	35	27.5	38.5	44	27	36	160	-
	28	24	38	30.5	43.5	47	36	41	160	-
	35	30	45	34.5	54.5	56	41	50	160	-
	42	36	51	40.0	60.0	63	50	60	160	-
T	6	4	23	16.0	27.0	31	12	17	630	-
	8	5	24	17.0	29.0	32	14	19	630	-
	10	7	25	17.5	31.0	34	17	22	630	-
	12	8	29	21.5	33.0	38	17	24	630	-
	14	10	30	22.0	35.0	40	19	27	400	-
	16	12	33	24.5	37.5	43	24	30	400	-
	20	16	37	26.5	44.5	48	27	36	400	-
	25	20	42	30.0	50.5	54	36	46	400	-
	30	25	49	35.5	56.5	62	41	50	400	-
	38	32	57	41.0	66.5	72	50	60	315	-

L - Light Series

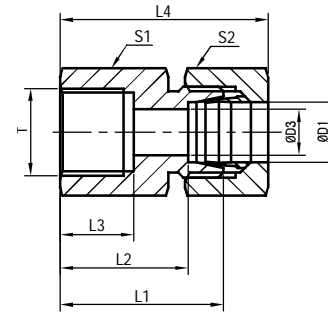
T - Heavy Series



24° Cone End

Female Connector with Metric Thread

FC-M



Series	D1	T	D3	L1	L2	L3	L4	S1	S2	SS
L	6	M10×1	4	26.5	19.5	12.5	34	14	14	315
	8	M12×1.5	6	31.0	24.0	17.0	39	17	17	315
	10	M14×1.5	8	32.0	25.0	17.0	40	19	19	315
	12	M16×1.5	10	33.0	26.0	17.0	41	22	22	315
	15	M18×1.5	12	35.0	28.0	17.0	43	24	27	315
	18	M22×1.5	15	37.0	29.5	19.0	46	30	32	315
	22	M26×1.5	19	42.0	34.5	21.0	51	32	36	160
	28	M33×2	24	45.0	37.5	24.0	54	41	41	160
	35	M42x2	30	51.0	40.5	26.0	62	55	50	160
	42	M48×2	36	53.0	42.0	28.0	65	60	60	160
T	6	M12×1.5	4	33.0	26.0	17.0	41	17	17	400
	8	M14x1.5	5	33.0	26.0	17.0	41	17	19	400
	10	M16×1.5	7	34.0	26.5	17.0	43	22	22	400
	12	M18×1.5	8	35.0	27.5	17.0	44	24	24	400
	14	M20×1.5	10	39.0	31.0	19.0	49	27	27	400
	16	M22×1.5	12	39.0	30.5	19.0	49	30	30	400
	20	M27×2	16	45.0	34.5	22.0	56	36	36	315
	25	M33×2	20	49.0	37.0	24.0	61	41	46	315
	30	M42×2	25	55.0	41.5	26.0	68	55	50	315
	38	M48×2	32	59.0	43.0	28.0	74	60	60	250

L - Light Series

T - Heavy Series

For Metric Threads add complete size in the Ordering Code.
example: MC18LM22-1.5MS4

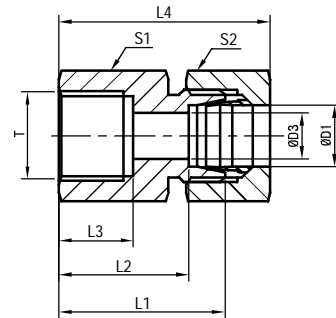
Description:

Male Connector, 18mm Tube size x M22 x 1.5 Pitch
Metal Sealing in SS304.

24° Cone End

Female Connector with Metric Thread

FC-R



Series	D1	T	D3	L1	L2	L3	L4	S1	S2	SS	B
L	6	G1/8	4	26.0	19.0	12.0	34	14	14	315	200
	6	G1/4	4	31.0	24.0	17.0	39	19	14	315	200
	8	G1/4	6	31.0	24.0	17.0	39	19	17	315	200
	8	G3/8	6	32.0	25.0	17.0	40	24	17	315	200
	8	G1/2	6	36.0	29.0	20.0	44	27	17	315	200
	10	G1/4	8	32.0	25.0	17.0	40	19	19	315	200
	10	G3/8	8	33.0	26.0	17.0	41	24	19	315	200
	10	G1/2	8	37.0	30.0	20.0	45	27	19	315	200
	12	G3/8	10	33.0	26.0	17.0	41	24	22	315	200
	12	G1/2	10	37.0	30.0	20.0	45	27	22	315	200
	15	G1/2	12	38.0	31.0	20.0	46	27	27	315	200
	18	G1/2	15	38.0	30.5	20.0	47	27	32	315	200
	18	G3/8	15	34.0	26.5	17.0	43	27	32	315	200
	22	G3/4	19	43.0	35.5	22.0	52	36	36	160	100
	28	G1	24	45.5	38.0	24.5	55	41	41	160	100
	35	G11/4	30	51.5	41.0	26.5	63	55	50	160	100
42	G11/2	36	53.5	42.5	28.5	65	60	60	160	100	
T	6	G1/4	4	33.0	26.0	17.0	41	19	17	400	--
	8	G1/4	5	33.0	26.0	17.0	41	19	19	400	--
	10	G3/8	7	34.0	26.5	17.0	43	24	22	400	--
	12	G3/8	8	34.0	26.5	17.0	43	24	24	400	--
	12	G1/2	8	38.0	30.5	20.0	47	30	24	400	--
	14	G1/2	10	40.0	32.0	20.0	50	30	27	400	--
	16	G1/2	12	40.0	31.5	20.0	50	30	30	400	--
	20	G3/4	16	45.0	34.5	22.0	56	36	36	315	--
	25	G1	20	49.5	37.5	24.5	62	41	46	315	--
	30	G11/4	25	55.5	42.0	26.5	69	55	50	315	--
38	G11/2	32	59.5	43.5	28.5	74	60	60	250	--	

L - Light Series

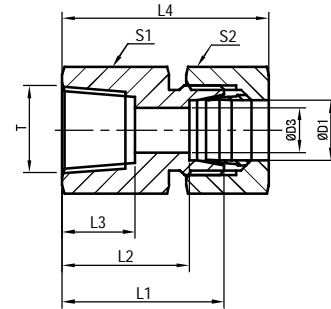
T - Heavy Series



24° Cone End

Female Connector with NPT Thread

FC-N



(Bar)

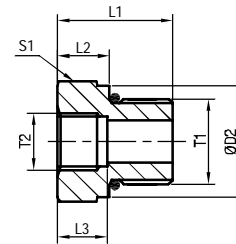
Series	D1	T	D3	L1	L2	L3	L4	S1	S2	SS
L	6	1/8-27NPT	4	26.0	19.0	11.6	34	14	14	315
	6	1/4-18NPT	4	30.5	23.5	16.4	38	19	14	315
	8	1/4-18NPT	6	30.5	23.5	16.4	38	19	17	315
	10	1/4-18NPT	8	31.0	24.0	16.4	39	19	19	315
	12	3/8-18NPT	10	34.0	27.0	17.4	42	24	22	315
	12	1/2-14NPT	10	39.0	32.0	22.6	47	27	22	315
	15	1/2-14NPT	12	40.0	33.0	22.6	48	27	27	315
	18	1/2-14NPT	15	40.0	32.5	22.6	49	27	32	315
	22	3/4-14NPT	19	43.0	35.5	23.1	52	36	36	160
	28	1-11 1/2NPT	24	48.0	40.5	27.8	57	41	41	160
	35	1 1/4-11 1/2NPT	30	51.0	40.5	28.3	62	55	50	160
	42	1 1/2-11 1/2NPT	36	53.0	42.0	28.3	65	60	60	160
T	6	1/8-27NPT	4	29.0	22.0	11.6	36	14	17	400
	6	1/4-18NPT	4	33.0	26.0	16.4	41	19	17	400
	8	1/4-18NPT	5	33.0	26.0	16.4	41	19	19	400
	10	3/8-18NPT	7	35.0	27.0	17.4	44	24	22	400
	12	1/4-18NPT	8	32.5	25.0	16.4	41	22	24	400
	12	3/8-18NPT	8	35.0	27.5	17.4	44	24	24	400
	12	1/2-14NPT	8	41.0	33.5	22.6	50	27	24	400
	14	1/2-14NPT	10	43.0	35.0	22.6	53	27	27	400
	16	1/2-14NPT	12	43.0	34.5	22.6	50	27	30	400
	20	1/2-14NPT	16	44.0	33.5	22.6	55	32	36	315
	20	3/4-14NPT	16	46.0	35.5	23.1	57	36	36	315
	25	1-11 1/2NPT	20	53.0	41.0	27.8	65	41	46	315
	30	1 1/4-11 1/2NPT	25	57.0	43.5	28.3	70	55	50	315
	38	1 1/2-11 1/2NPT	32	59.0	43.0	28.3	74	60	60	250

L - Light Series

T - Heavy Series

24° Cone End

Reducing Adaptor - Male to Female RA



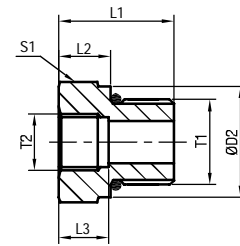
(Bar)

T1	T2	D2	D3	L1	L2	L3	S1	SS
G 1/8 A	G 1/4	14	4	31.0	8	17.0	19	400
G 1/8 A	G 3/8	14	4	32.0	8	17.0	24	400
G 1/4 A	G 1/8	19	5	29.0	12	12.0	19	400
G 1/4 A	G 3/8	19	5	36.0	12	17.0	24	400
G 1/4 A	G 1/2	19	5	40.0	12	20.0	30	400
G 1/4 A	G 3/4	19	5	43.0	12	22.0	36	400
G 3/8 A	G 1/8	22	-	22.5	12	8.0	22	400
G 3/8 A	G 1/4	22	8	36.0	12	17.0	22	400
G 3/8 A	G 1/2	22	8	41.0	12	20.0	30	400
G 3/8 A	G 3/4	22	8	44.0	12	22.0	36	315
G 1/2 A	G 1/8	27	-	24.0	14	8.0	27	400
G 1/2 A	G 1/4	27	-	24.0	14	12.0	27	400
G 1/2 A	G 3/8	27	12	37.0	14	17.0	27	400
G 1/2 A	G 3/4	27	12	46.0	14	22.0	36	315
G 1/2 A	G1	27	12	49.0	14	24.5	41	315
G 1/2 A	G 1 1/4	27	10	53.0	14	26.5	55	315
G 3/4 A	G 1/4	32	-	26.0	16	12.0	32	315
G 3/4 A	G 3/8	32	-	26.0	16	12.0	32	315
G 3/4 A	G 1/2	32	16	43.0	16	20.0	32	315
G 3/4 A	G1	32	16	51.0	16	24.5	41	315
G 3/4 A	G 1 1/4	32	16	55.0	16	26.5	55	315
G 3/4 A	G 1 1/2	32	16	57.0	16	28.5	60	250
G1A	G 1/4	40	-	29.0	18	12.0	41	315
G1A	G 3/8	40	-	29.0	18	12.0	41	315
G1A	G 1/2	40	-	29.0	18	14.0	41	315
G1A	G 3/4	40	20	49.0	18	22.0	41	315
G1A	G 1 1/4	40	20	57.0	18	26.5	55	315
G1A	G 1 1/2	40	20	59.0	18	28.5	60	250
G 1 1/4 A	G 1/2	50	-	32.0	20	14.0	50	315
G 1 1/4 A	G 3/4	50	-	32.0	20	16.0	50	315
G 1 1/4 A	G1	50	25	5.0	20	24.5	50	315
G 1 1/4 A	G 1 1/2	50	25	60.0	20	28.5	60	250
G 1 1/2 A	G 1/2	55	-	36.0	22	14.0	55	250
G 1 1/2 A	G 3/4	55	-	36.0	22	16.0	55	250
G 1 1/2 A	G1	55	-	36.0	22	18.0	55	250
G 1 1/2 A	G 1 1/4	55	32	58.0	22	26.5	55	250
G2A	G 1 1/2	75	40	65.0	24	28.5	75	-

24° Cone End

Expanding Adaptor - Male to Female

EA

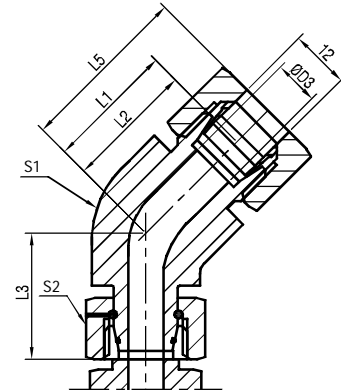


(Bar)

T1	T2	D2	D3	L1	L2	L3	S1	SS
G 1/4	G 1/8 A	14	4	31.0	8	17.0	19	400
G 3/8	G 1/8 A	14	4	32.0	8	17.0	24	400
G 1/8	G 1/4 A	19	5	29.0	12	12.0	19	400
G 3/8	G 1/4 A	19	5	36.0	12	17.0	24	400
G 1/2	G 1/4 A	19	5	40.0	12	20.0	30	400
G 3/4	G 1/4 A	19	5	43.0	12	22.0	36	400
G 1/8	G 3/8 A	22	-	22.5	12	8.0	22	400
G 1/4	G 3/8 A	22	8	36.0	12	17.0	22	400
G 1/2	G 3/8 A	22	8	41.0	12	20.0	30	400
G 3/4	G 3/8 A	22	8	44.0	12	22.0	36	315
G 1/8	G 1/2 A	27	-	24.0	14	8.0	27	400
G 1/4	G 1/2 A	27	-	24.0	14	12.0	27	400
G 3/8	G 1/2 A	27	12	37.0	14	17.0	27	400
G 3/4	G 1/2 A	27	12	46.0	14	22.0	36	315
G1	G 1/2 A	27	12	49.0	14	24.5	41	315
G 1 1/4	G 1/2 A	27	10	53.0	14	26.5	55	315
G 1/4	G 3/4 A	32	-	26.0	16	12.0	32	315
G 3/8	G 3/4 A	32	-	26.0	16	12.0	32	315
G 1/2	G 3/4 A	32	16	43.0	16	20.0	32	315
G1	G 3/4 A	32	16	51.0	16	24.5	41	315
G 1 1/4	G 3/4 A	32	16	55.0	16	26.5	55	315
G 1 1/2	G 3/4 A	32	16	57.0	16	28.5	60	250
G 1/4	G1A	40	-	29.0	18	12.0	41	315
G 3/8	G1A	40	-	29.0	18	12.0	41	315
G 1/2	G1A	40	-	29.0	18	14.0	41	315
G 3/4	G1A	40	20	49.0	18	22.0	41	315
G 1 1/4	G1A	40	20	57.0	18	26.5	55	315
G 1 1/2	G1A	40	20	59.0	18	28.5	60	250
G 1/2	G 1 1/4 A	50	-	32.0	20	14.0	50	315
G 3/4	G 1 1/4 A	50	-	32.0	20	16.0	50	315
G1	G 1 1/4 A	50	25	5.0	20	24.5	50	315
G 1 1/2	G 1 1/4 A	50	25	60.0	20	28.5	60	250
G 1/2	G 1 1/2 A	55	-	36.0	22	14.0	55	250
G 3/4	G 1 1/2 A	55	-	36.0	22	16.0	55	250
G1	G 1 1/2 A	55	-	36.0	22	18.0	55	250
G 1 1/4	G 1 1/2 A	55	32	58.0	22	26.5	55	250
G 1 1/2	G2A	75	40	65.0	24	28.5	75	-

24° Cone End

45 Degree Swivel Elbow SD



(Bar)

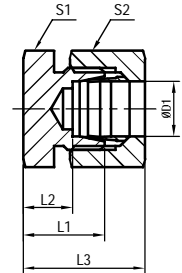
Series	D1	D3	L1	L2	L3	L4	S1	S2	SS
L	6	4	16.0	9.0	26.0	24	14	14	315
	8	6	19.0	12.0	27.5	27	14	17	315
	10	8	19.0	12.0	29.0	27	19	19	315
	12	10	21.0	14.0	29.5	29	19	22	315
	15	12	24.0	17.0	32.5	32	22	27	315
	18	15	24.0	16.5	35.5	33	27	32	315
	22	19	26.0	18.5	38.5	35	30	36	160
	28	24	30.5	23.0	41.5	40	36	41	160
	35	30	37.0	26.5	51.0	48	50	50	160
	42	36	37.0	26.0	56.0	49	50	60	160
T	6	4	16.0	9.0	27.0	24	14	17	630
	8	5	19.0	12.0	27.5	27	19	19	630
	10	7	21.0	13.5	30.0	30	19	22	630
	12	8	24.0	16.5	31.0	33	22	24	630
	16	12	24.0	15.5	36.5	34	27	30	400
	20	16	26.5	16.0	44.5	38	30	36	400
	25	20	30.5	18.5	50.0	43	36	46	400
	30	25	37.0	23.5	55.0	50	50	50	400
	38	32	37.0	21.0	63.0	52	50	60	315

L - Light Series

T - Heavy Series

24° Cone End

Tube Closing Plug TP



(Bar)

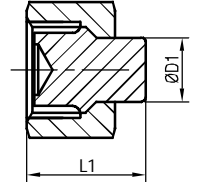
Series	D1	L1	L2	L3	S1	S2	SS
L	6	14	7.0	22	12	14	315
	8	15	8.0	23	14	17	315
	10	16	9.0	24	17	19	315
	12	17	10.0	25	19	22	315
	15	18	11.0	26	24	27	315
	18	19	11.5	28	27	32	315
	22	21	13.5	30	32	36	160
	28	22	14.5	31	41	41	160
	35	25	14.5	36	46	50	160
	42	27	16.0	39	55	60	160
T	6	18	11.0	26	14	17	630
	8	20	13.0	28	17	19	630
	10	20	12.5	29	19	22	630
	12	22	14.5	31	22	24	630
	14	24	16.0	34	24	27	630
	16	24	15.5	34	27	30	400
	20	28	17.5	39	32	36	400
	25	32	20.0	44	41	46	400
	30	34	20.5	47	46	50	400
	38	39	23.0	54	55	60	315

L - Light Series

T - Heavy Series

24° Cone End

Blanking Plug BP



(Bar)

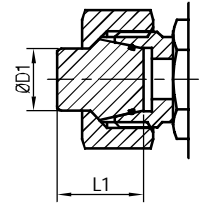
Series	D1	L1	SS
L	6	19.5	315
	8	19.5	315
	10	21.0	315
	12	21.8	315
	15	22.0	315
	18	24.0	315
	22	26.0	160
	28	26.5	160
	35	32.0	160
	42	32.5	160
T	6	19.5	630
	8	19.5	630
	10	21.0	630
	12	21.8	630
	14	23.5	630
	16	25.5	400
	20	30.5	400
	25	32.5	400
	30	35.5	400
	38	40.0	315

L - Light Series

T - Heavy Series

24° Cone End

Connector Plug CP



(Bar)

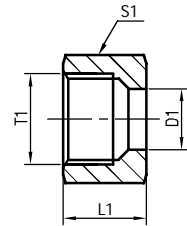
Series	D1	L1	SS
L	6	18.5	315
	8	18.5	315
	10	20.0	315
	12	20.5	315
	15	20.5	315
	18	22.5	315
	22	25.0	160
	28	25.5	160
	35	30.0	160
	42	30.0	160
T	6	18.5	630
	8	18.5	630
	10	20.0	630
	12	20.5	630
	14	22.5	630
	16	23.5	400
	20	28.5	400
	25	29.0	400
	30	30.5	400
	38	33.0	315

L - Light Series

T - Heavy Series

24° Cone End

Nut N



Series	D1	T1	L4	S1	SS	B
LL	4	M8x1	11.0	10	100	63
	6	M10x1	11.5	12	100	63
	8	M12x1	12.0	14	100	63
	10	M14x1	12.5	17	100	63
	12	M16x1	13.0	19	100	63
L	6	M12×1.5	14.5	14	315	200
	8	M14×1.5	14.5	17	315	200
	10	M16×1.5	15.5	19	315	200
	12	M18×1.5	15.5	22	315	200
	15	M22×1.5	17.0	27	315	200
	18	M26×1.5	18.0	32	315	200
	22	M30x2	20.0	36	160	100
	28	M36x2	21.0	41	160	100
	35	M45x2	24.0	50	160	100
	42	M52x2	24.0	60	160	100
T	6	M14×1.5	16.5	17	630	400
	8	M16×1.5	16.5	19	630	400
	10	M18×1.5	17.5	22	630	400
	12	M20×1.5	17.5	24	630	400
	14	M22×1.5	20.5	27	630	400
	16	M24×1.5	20.5	30	400	250
	20	M30x2	24.0	36	400	250
	25	M36x2	27.0	46	400	250
	30	M42x2	29.0	50	400	250
	38	M52x2	32.5	60	315	250

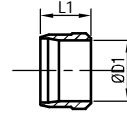
LL - Very Light Series

L - Light Series

T - Heavy Series

24° Cone End

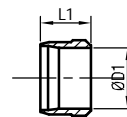
Cutting Ring Ferrule CR



Series	D1	L1
LL	4	6.0
	6	7.0
	8	7.0
	10	7.0
	12	7.5
L	6	9.5
	8	9.0
	10	10.0
	12	10.0
	15	10.0
	18	10.0
	22	10.5
	28	10.5
	35	13.0
42	13.5	
T	6	9.5
	8	9.0
	10	10.0
	12	10.0
	14	10.0
	16	10.5
	20	12.5
	25	12.5
	30	13.0
38	13.5	

24° Cone End

Progressive Ring Ferrule PR

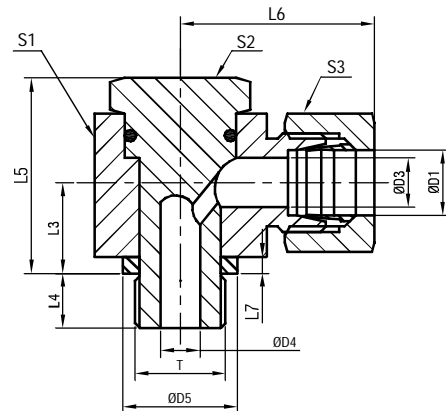


Series	D1	L2
L	6	9.5
	8	9.5
	10	10.0
	12	10.0
	15	10.0
	18	10.0
	22	10.5
	28	10.5
	35	13.0
42	13.0	
T	6	9.5
	8	9.5
	10	10.0
	12	10.0
	14	10.0
	16	10.0
	20	13.0
	25	13.0
	30	13.0
38	13.0	

24° Cone End

Banjo Elbow Connector with Metric Thread

BE-M



(Bar)

Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	L6	L7	S1	S2	S3	SS
L	6	M10×1	4	4.5	14	19.0	12.0	10.5	8	24.0	27	2.5	17	17	14	250
	8	M12×1.5	6	6.0	17	21.5	14.5	14.0	12	30.0	29	3.0	22	19	17	250
	10	M14×1.5	8	6.0	19	22.5	15.5	14.0	12	30.0	30	3.0	22	19	19	250
	12	M16×1.5	10	7.5	21	25.0	18.0	16.5	12	36.0	33	3.0	27	24	22	250
	15	M18×1.5	11	9.0	23	27.5	21.5	18.5	12	39.5	37	3.0	30	27	27	250
	18	M22×1.5	15	12.0	27	28.5	21.0	21.5	14	45.0	37	4.5	32	30	32	250
	22	M26×1.5	19	17.0	31	35.0	27.5	24.0	16	53.0	44	3.5	41	36	36	160
	28	M33x2	24	21.0	39	39.5	32.0	30.5	18	66.0	49	3.5	50	46	41	160
	35	M42x2	30	27.0	49	46.5	36.0	35.5	20	76.0	58	3.5	60	55	50	160
	42	M48x2	36	34.0	55	51.5	40.5	40.5	22	87.0	63	3.5	70	60	60	160
T	6	M12×1.5	4	6.0	17	23.5	16.5	14.0	12	30.0	31	3.0	22	19	17	315
	8	M14×1.5	5	6.0	19	23.5	16.5	14.0	12	30.0	31	3.0	22	19	19	315
	10	M16×1.5	7	7.5	21	26.0	18.5	16.5	12	36.0	35	3.0	27	24	22	315
	12	M18×1.5	8	9.0	23	27.5	20.0	18.5	12	39.5	36	3.0	27	27	24	315
	14	M20×1.5	10	10.0	25	30.5	22.5	20.0	14	43.5	40	3.0	32	30	27	315
	16	M22×1.5	12	12.0	27	30.5	22.0	21.5	14	45.0	40	4.5	32	30	30	315
	20	M27×2	16	16.0	32	37.0	26.5	24.0	16	53.0	48	3.5	41	36	36	160
	25	M33x2	20	21.0	39	43.5	31.5	30.5	18	66.0	56	3.5	50	46	46	160
	30	M42x2	25	27.0	49	50.5	37.0	35.5	20	76.0	64	3.5	60	55	50	160
	38	M48x2	32	34.0	55	57.5	41.5	40.5	22	87.0	72	3.5	70	60	60	160

L - Light Series

T - Heavy Series

Description:

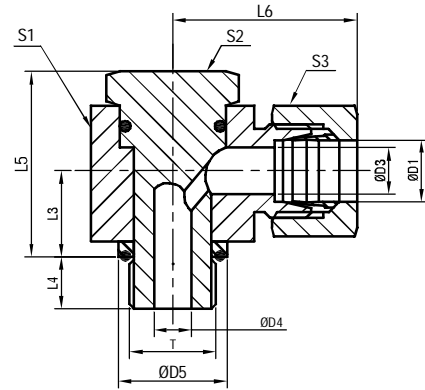
For Metric Threads add complete size in the Ordering Code.
example: MC18LM22-1.5MS4

Male Connector, 18mm Tube size x M22 x 1.5 Pitch
Metal Sealing in SS304.

24° Cone End

Banjo Elbow Connector with BSPP Thread

BE-R



Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	L6	L7	S1	S2	S3	(Bar)	
																SS	B
L	6	G 1/8 A	4	4.5	14	19.0	12.0	10.5	8	24	27	2.5	17	17	14	250	160
	8	G 1/4 A	6	6.0	18	21.5	14.5	14.0	12	30	29	3.0	22	19	17	250	160
	10	G 1/4 A	8	6.0	18	22.5	15.5	14.0	12	30	30	3.0	22	19	19	250	160
	12	G 3/8 A	10	7.5	21	25.0	18.0	16.5	12	36	33	3.0	27	24	22	250	160
	15	G 1/2 A	12	11.0	26	28.5	21.5	21.5	14	45	37	4.5	32	30	27	250	160
	18	G 1/2 A	15	11.0	26	28.5	21.0	21.5	14	45	37	4.5	32	30	32	250	160
	22	G 3/4 A	19	17.0	32	35.0	27.5	24.0	16	53	44	3.5	41	36	36	160	--
	28	G1A	24	21.0	39	39.5	32.0	30.5	18	66	49	3.5	50	46	41	160	--
	35	G 1 1/4 A	30	27.0	57	46.5	36.0	35.5	20	76	58	3.5	60	55	50	160	--
	42	G 1 1/2 A	36	34.0	55	51.5	40.5	40.5	22	87	63	3.5	70	60	60	160	--
T	6	G 1/4 A	4	6.0	18	23.5	16.5	14.0	12	30	31	3.0	22	19	17	315	200
	8	G 1/4 A	5	6.0	18	23.5	16.5	14.0	12	30	31	3.0	22	19	19	315	200
	10	G 3/8 A	7	7.5	22	26.0	18.5	16.5	12	36	35	3.0	27	24	22	315	200
	12	G 3/8 A	8	7.5	22	26.0	18.5	16.5	12	36	35	3.0	27	24	24	315	200
	14	G 1/2 A	10	11.0	26	30.5	22.5	21.5	15	45	40	4.5	32	30	27	315	--
	16	G 1/2 A	12	11.0	26	30.5	22.0	21.5	14	45	40	4.5	32	30	30	315	--
	20	G 3/4 A	16	17.0	32	37.0	26.5	24.0	16	53	48	3.5	41	36	36	160	--
	25	G1A	20	21.0	39	43.5	31.5	30.5	18	66	56	3.5	50	46	46	160	--
	30	G 1 1/4 A	25	27.0	49	50.5	37.0	35.5	20	76	64	3.5	60	55	50	160	--
	38	G 1 1/2 A	32	34.0	55	57.5	41.5	40.5	22	87	72	3.5	70	60	60	160	--

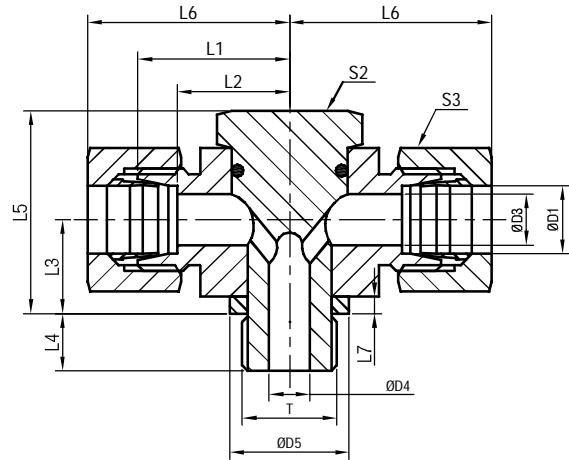
L - Light Series

T - Heavy Series

24° Cone End

Banjo Tee Connector with Metric Thread

BT-M



Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	L6	L7	S1	S2	S3	SS
L	6	M10×1	4	4.5	14	19.0	12.0	10.5	8	24.0	27	2.5	17	17	14	250
	8	M12×1.5	6	6.0	17	21.5	14.5	14.0	12	30.0	29	3.0	22	19	17	250
	10	M14×1.5	8	6.0	19	22.5	15.5	14.0	12	30.0	30	3.0	22	19	19	250
	12	M16×1.5	10	7.5	21	25.0	18.0	16.5	12	36.0	33	3.0	27	24	22	250
	15	M18×1.5	11	9.0	23	27.5	21.5	18.5	12	39.5	37	3.0	30	27	27	250
	18	M22×1.5	15	12.0	27	28.5	21.0	21.5	14	45.0	37	4.5	32	30	32	250
	22	M26×1.5	19	17.0	31	35.0	27.5	24.0	16	53.0	44	3.5	41	36	36	160
	28	M33x2	24	21.0	39	39.5	32.0	30.5	18	66.0	49	3.5	50	46	41	160
	35	M42x2	30	27.0	49	46.5	36.0	35.5	20	76.0	58	3.5	60	55	50	160
	42	M48x2	36	34.0	55	51.5	40.5	40.5	22	87.0	63	3.5	70	60	60	160
T	6	M12×1.5	4	6.0	17	23.5	16.5	14.0	12	30.0	31	3.0	22	19	17	315
	8	M14×1.5	5	6.0	19	23.5	16.5	14.0	12	30.0	31	3.0	22	19	19	315
	10	M16×1.5	7	7.5	21	26.0	18.5	16.5	12	36.0	35	3.0	27	24	22	315
	12	M18×1.5	8	9.0	23	27.5	20.0	18.5	12	39.5	36	3.0	27	27	24	315
	14	M20×1.5	10	10.0	25	30.5	22.5	20.0	14	43.5	40	3.0	32	30	27	315
	16	M22×1.5	12	12.0	27	30.5	22.0	21.5	14	45.0	40	4.5	32	30	30	315
	20	M27×2	16	16.0	32	37.0	26.5	24.0	16	53.0	48	3.5	41	36	36	160
	25	M33x2	20	21.0	39	43.5	31.5	30.5	18	66.0	56	3.5	50	46	46	--
	30	M42x2	25	27.0	49	50.5	37.0	35.5	20	76.0	64	3.5	60	55	50	160
	38	M48x2	32	34.0	55	57.5	41.5	40.5	22	87.0	72	3.5	70	60	60	160

(Bar)

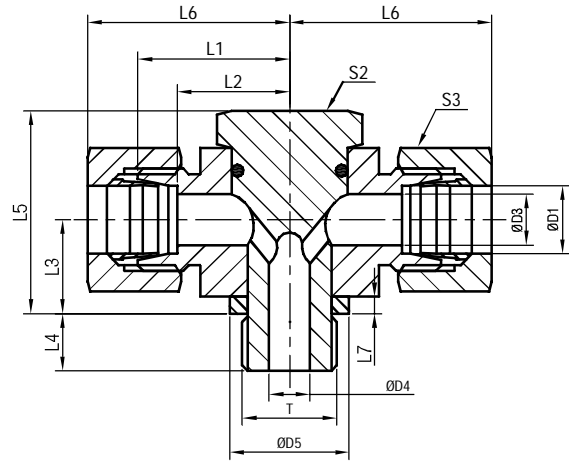
L - Light Series

T - Heavy Series

24° Cone End

Banjo Tee Connector with BSPP Thread

BT-R



Series	D1	T	D3	D4	D5	L1	L2	L3	L4	L5	L6	L7	S1	S2	S3	SS
L	6	G 1/8 A	4	4.5	14	19	12	10.5	8	24	27	2.5	17	17	14	250
	8	G 1/4 A	6	6.0	18	21.5	14.5	14.0	12	30	29	3.0	22	19	17	250
	10	G 1/4 A	8	6.0	18	22.5	15.5	14.0	12	30	30	3.0	22	19	19	250
	12	G 3/8 A	10	7.5	21	25.0	18.0	16.5	12	36	33	3.0	27	24	22	250
	15	G 1/2 A	12	11.0	26	28.5	21.5	21.5	14	45	37	4.5	32	30	27	250
	18	G 1/2 A	15	11.0	26	28.5	21.0	21.5	14	45	37	4.5	32	30	32	250
	22	G 3/4 A	19	17.0	32	35.0	27.5	24.0	16	53	44	3.5	41	36	36	160
	28	G1A	24	21.0	39	39.5	32.0	30.5	18	66	49	3.5	50	46	41	160
	35	G 1 1/4 A	30	27.0	57	46.5	36.0	35.5	20	76	58	3.5	60	55	50	160
	42	G 1 1/2 A	36	34.0	55	51.5	40.5	40.5	22	87	63	3.5	70	60	60	160
T	6	G 1/4 A	4	6.0	18	23.5	16.5	14.0	12	30	31	3.0	22	19	17	315
	8	G 1/4 A	5	6.0	18	23.5	16.5	14.0	12	30	31	3.0	22	19	19	315
	10	G 3/8 A	7	7.5	22	26.0	18.5	16.5	12	36	35	3.0	27	24	22	315
	12	G 3/8 A	8	7.5	22	26.0	18.5	16.5	12	36	35	3.0	27	24	24	315
	14	G 1/2 A	10	11.0	26	30.5	22.5	21.5	15	45	40	4.5	32	30	27	315
	16	G 1/2 A	12	11.0	26	30.5	22.0	21.5	14	45	40	4.5	32	30	30	315
	20	G 3/4 A	16	17.0	32	37.0	26.5	24.0	16	53	48	3.5	41	36	36	160
	25	G1A	20	21.0	39	43.5	31.5	30.5	18	66	56	3.5	50	46	46	160
	30	G 1 1/4 A	25	27.0	49	50.5	37.0	35.5	20	76	64	3.5	60	55	50	160
	38	G 1 1/2 A	32	34.0	55	57.5	41.5	40.5	22	87	72	3.5	70	60	60	160

L - Light Series T - Heavy Series

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