



S.D. INDUSTRIES

37 Degree Flared Tube Fittings



We deliver confidence through quality products



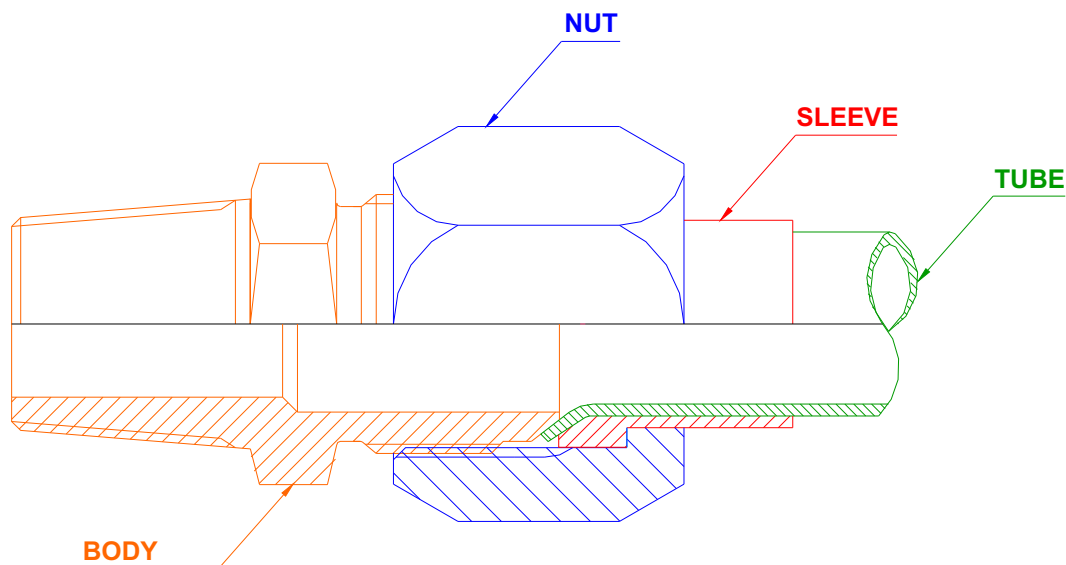
37 DEGREE FLARED TUBE FITTINGS

INTRODUCTION

37 Degree flare fitting is an excellent pressure fitting with a broad selection of styles and shapes used very extensively used all over the globe. Its main features are its simplicity, compactness, ease of assembly, high reliability, easy availability and global acceptance. These flare fittings can also used as hose adapters.

PRINCIPLE

The basic design is simple and uses a flared tube end to hold and seal the medium under pressure. Main construction consists of three pieces: the body, sleeve and nut. The end of the tube is flared to 74 degrees included angle and held in between the body nose and the sleeve with a nut on top of them, thus resulting in a very effective seal between the fittings and the flared tube.



SUITABILITY BETWEEN INCH AND METRIC TUBE FITTINGS

37-flare fitting is designed to suit metric and inch tubing simply by changing the sleeve. The same fitting can be used to connect corresponding sizes of both metric and inch OD tubing. This advantage reduces parts inventory and possible mixing of parts.



37 DEGREE FLARED TUBE FITTINGS

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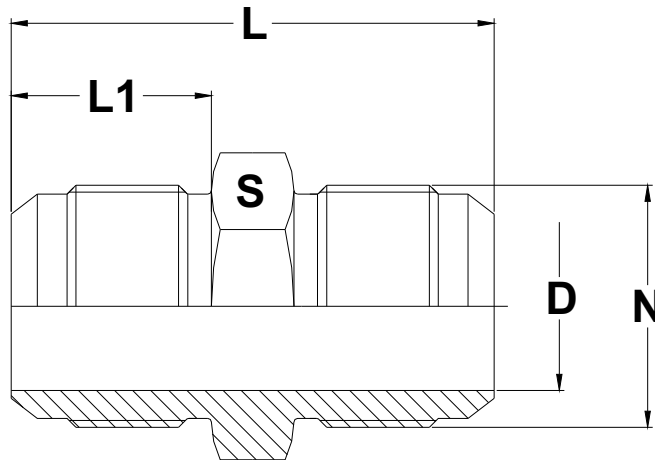
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SPARE FITTINGS

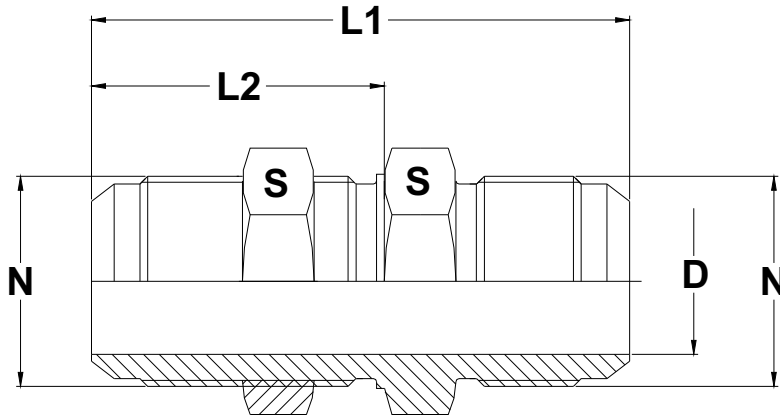
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UNION



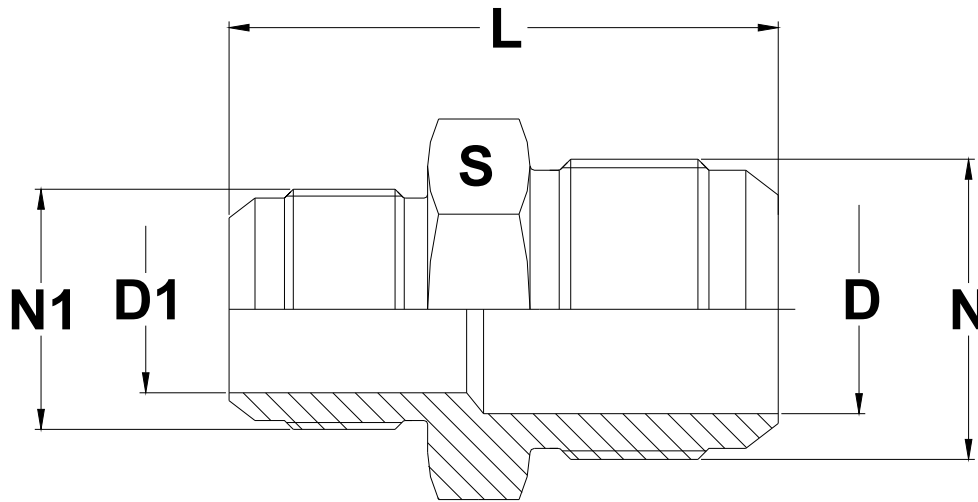
TUBE OD		THREAD	S	L	L1	D	PART NO.
mm	inch	UN / UNF	mm	mm	mm	mm	
6	1/4	7/16 -20	13	35	14	4.4	4F-U
8	5/16	1/2 -20	14	35	14	6	5F-U
10	3/8	9/16 -18	16	36	14.1	7.5	6F-U
12	1/2	3/4 -16	19	41	16.7	9.9	8F-U
14/15/16	5/8	7/8 -14	24	48	19.3	12.3	10F-U
18/20	3/4	1 1/16 -12	27	55	21.9	15.5	12F-U
25	1	1 5/16 -12	36	57	23.1	21.5	16F-U
28/30/32	1 1/4	1 5/8 -12	46	61.5	24.3	27.5	20F-U
35/38	1 1/2	1 7/8 -12	50	70	27.5	33	24F-U

**BULKHEAD UNION**

TUBE OD		THREAD	S	L1	L2	D	PART NO.
mm	inch	UN / UNF	mm	mm	mm	mm	
6	1/4	7/16 -20	17	52.6	31.5	4.4	4F-UB
8	5/16	1/2 -20	19	52.6	31.5	6	5F-UB
10	3/8	9/16 -18	22	55.4	33.5	7.5	6F-UB
12	1/2	3/4 -16	24	62	37.6	9.9	8F-UB
14/15/16	5/8	7/8 -14	30	69.6	41.1	12.3	10F-UB
18/20	3/4	1 1/16 -12	36	78.5	45.4	15.5	12F-UB
25	1	1 5/16 -12	41	79.8	45.4	21.5	16F-UB
28/30/32	1 1/4	1 5/8 -12	50	84.1	46.7	27.5	20F-UB
35/38	1 1/2	1 7/8 -12	55	89.4	47	33	24F-UB



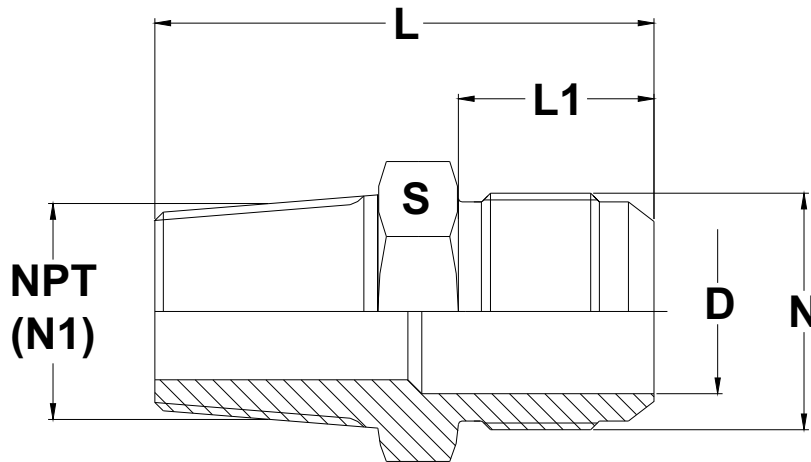
REDUCING UNION



TUBE OD		TUBE OD		THREAD		THREAD		S	L	D	D1	PART NO.
mm	inch	mm	inch	N		N1						
10	3/8	6	1/4	9/16	-18	7/16	-20	16	36	7.5	4.5	6-4F-UR
12	1/2	10	3/8	3/4	-16	9/16	-18	19	39.5	10	7.5	8-6F-UR
14/15/16	5/8	12	1/2	7/8	-14	3/4	-16	24	45	12	10	10-8F-UR
18/20	3/4	12	1/2	1 1/16	-12	3/4	-16	27	49	15.5	10	12-8F-UR
18/20	3/4	14/15/16	5/8	1 1/16	-12	7/8	-14	27	52	15.5	12	12-10F-UR
25	1	18/20	3/4	1 5/16	-12	1 1/16	-12	36	56	21	15.5	16-12F-UR



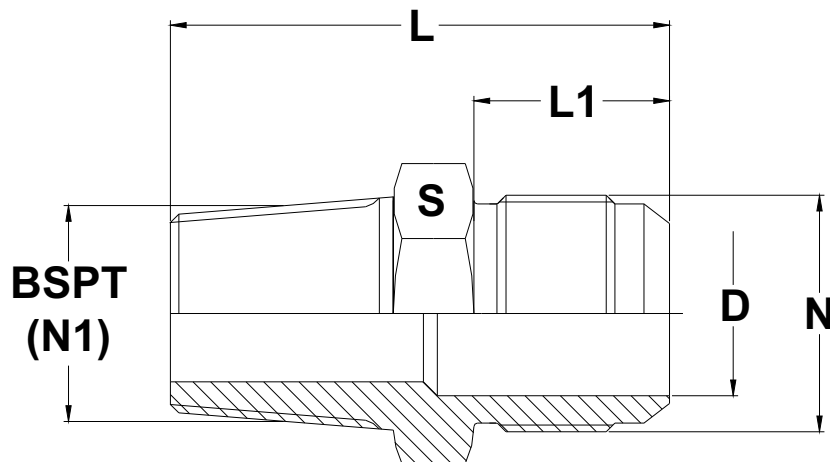
♂ MALE CONNECTOR



TUBE OD		THREAD		THREAD		S	L	L1	D	PART NO.
mm	inch	UN / UNF	N	NPT/NPTF	N1					
6	1/4	7/16	-20	1/8	-27	13	31	14	4.4	4-2F-MCN
6	1/4	7/16	-20	1/4	-18	14	36	14	4.4	4F-MCN
6	1/4	7/16	-20	3/8	-18	19	37	14	4.4	4-6F-MCN
6	1/4	7/16	-20	1/2	-14	22	43	14	4.4	4-8F-MCN
8	5/16	1/2	-20	1/8	-27	14	31	14	6	5-2F-MCN
8	5/16	1/2	-20	1/4	-18	14	36	14	6	5-4F-MCN
10	3/8	9/16	-18	1/8	-27	16	32	14.1	7.5	6-2F-MCN
10	3/8	9/16	-18	1/4	-18	16	36.3	14.1	7.5	6-4F-MCN
10	3/8	9/16	-18	3/8	-18	19	36.4	14.1	7.5	6F-MCN
10	3/8	9/16	-18	1/2	-14	22	42.9	14.1	7.5	6-8F-MCN
12	1/2	3/4	-16	1/4	-18	19	38.9	16.7	9.9	8-4F-MCN
12	1/2	3/4	-16	3/8	-18	19	38.9	16.7	9.9	8-6F-MCN
12	1/2	3/4	-16	1/2	-14	22	45.5	16.7	9.9	8F-MCN
12	1/2	3/4	-16	3/4	-14	27	47	16.7	9.9	8-12F-MCN
14/15/16	5/8	7/8	-14	3/8	-18	24	43.2	19.3	12.3	10-6F-MCN
14/15/16	5/8	7/8	-14	1/2	-14	24	48	19.3	12.3	10-8F-MCN
14/15/16	5/8	7/8	-14	3/4	-14	27	49.5	19.3	12.3	10-12F-MCN
18/20	3/4	1 1/16	-12	1/2	-14	27	52.3	21.9	15.5	12-8F-MCN
18/20	3/4	1 1/16	-12	3/4	-14	27	52.3	21.9	15.5	12F-MCN
18/20	3/4	1 1/16	-12	1	-11.5	36	57.1	21.9	15.5	12-16F-MCN
25	1	1 5/16	-12	3/4	-14	36	53.6	23.1	21.5	16-12F-MCN
25	1	1 5/16	-12	1	-11.5	36	58.4	23.1	21.5	16F-MCN
28/30/32	1 1/4	1 5/8	-12	1	-11.5	46	61.4	24.3	27.5	20-16F-MCN
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11.5	46	62.2	24.3	27.5	20F-MCN
35/38	1 1/2	1 7/8	-12	1 1/4	-11.5	50	67.3	27.5	33	24-20F-MCN
35/38	1 1/2	1 7/8	-12	1 1/2	-11.5	50	68.1	27.5	33	24F-MCN



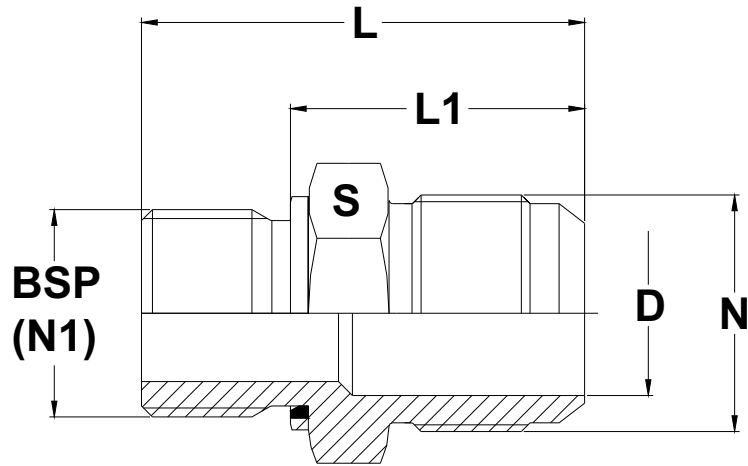
♣ MALE CONNECTOR



TUBE OD		THREAD UN / UNF		THREAD BSPT		S	L	L1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-28	13	30.7	14	4.4	4-2F-MCR
6	1/4	7/16	-20	1/4	-19	14	35.3	14	4.4	4F-MCR
8	5/16	1/2	-20	1/8	-28	14	30.7	14	6	5-2F-MCR
8	5/16	1/2	-20	1/4	-19	14	35.3	14	6	5-4F-MCR
10	3/8	9/16	-18	1/4	-19	16	35.6	14.1	7.5	6-4F-MCR
10	3/8	9/16	-18	3/8	-19	19	35.6	14.1	7.5	6F-MCR
10	3/8	9/16	-18	1/2	-14	22	41.1	14.1	7.5	6-8F-MCR
12	1/2	3/4	-16	1/4	-19	19	38.1	16.7	9.9	8-4F-MCR
12	1/2	3/4	-16	3/8	-19	19	38.1	16.7	9.9	8-6F-MCR
12	1/2	3/4	-16	1/2	-14	22	43.7	16.7	9.9	8F-MCR
14/15/16	5/8	7/8	-14	3/8	-19	24	41.9	19.3	12.3	10-6F-MCR
14/15/16	5/8	7/8	-14	1/2	-14	24	46.7	19.3	12.3	10-8F-MCR
14/15/16	5/8	7/8	-14	3/4	-14	27	48.3	19.3	12.3	10-12F-MCR
18/20	3/4	1 1/16	-12	1/2	-14	27	20.8	21.9	15.5	12-8F-MCR
18/20	3/4	1 1/16	-12	3/4	-14	27	50.8	21.9	15.5	12F-MCR
18/20	3/4	1 1/16	-12	1	-11	36	56.6	21.9	15.5	12-16F-MCR
25	1	1 5/16	-12	3/4	-14	36	53.1	23.1	21.5	16-12F-MCR
25	1	1 5/16	-12	1	-11	36	57.9	23.1	21.5	16F-MCR
28/30/32	1 1/4	1 5/8	-12	1	-11	46	60.2	24.3	27.5	20-16F-MCR
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11	46	61	24.3	27.5	20F-MCR
35/38	1 1/2	1 7/8	-12	1 1/4	-11	50	65.5	27.5	33	24-20F-MCR
35/38	1 1/2	1 7/8	-12	1 1/2	-11	50	66.3	27.5	33	24F-MCR



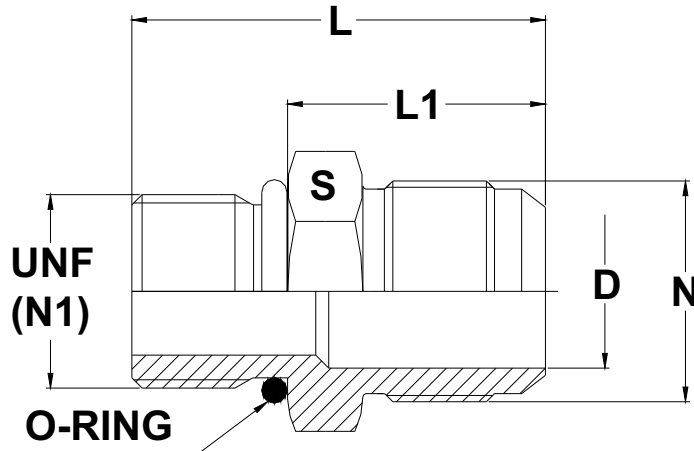
MALE CONNECTOR



TUBE OD		THREAD UN / UNF		THREAD BSP		S	L	L1	D	PART NO.
mm	inch	N	N1	mm	mm	mm	mm	mm		
6	1/4	7/16	-20	1/8	-28	16	28.7	22.5	4.4	4-2F-MCG
6	1/4	7/16	-20	1/4	-19	19	32	22.7	4.4	4F-MCG
6	1/4	7/16	-20	3/8	-19	22	33	23.7	4.4	4-6F-MCG
6	1/4	7/16	-20	1/2	-14	30	38.6	26	4.4	4-8F-MCG
8	5/16	1/2	-20	1/8	-28	16	28.7	22.5	6	5-2F-MCG
8	5/16	1/2	-20	1/4	-19	19	32	22.7	6	5-4F-MCG
8	5/16	1/2	-20	3/8	-19	22	33	23.7	6	5-6F-MCG
10	3/8	9/16	-18	1/8	-28	16	28.7	22.5	7.5	6-2F-MCG
10	3/8	9/16	-18	1/4	-19	19	32	22.7	7.5	6-4F-MCG
10	3/8	9/16	-18	3/8	-19	22	33	23.7	7.5	6F-MCG
10	3/8	9/16	-18	1/2	-14	30	38.6	26	7.5	6-8F-MCG
12	1/2	3/4	-16	1/4	-19	19	35	25.7	9.9	8-4F-MCG
12	1/2	3/4	-16	3/8	-19	22	36	26.7	9.9	8-6F-MCG
12	1/2	3/4	-16	1/2	-14	30	41.4	28.8	9.9	8F-MCG
12	1/2	3/4	-16	3/4	-14	36	42.4	29.8	9.9	8-12F-MCG
14/15/16	5/8	7/8	-14	3/8	-19	24	39.1	29.8	12.3	10-6F-MCG
14/15/16	5/8	7/8	-14	1/2	-14	30	43.9	31.3	12.3	10-8F-MCG
14/15/16	5/8	7/8	-14	3/4	-14	36	45	32.4	12.3	10-12F-MCG
18/20	3/4	1 1/16	-12	1/2	-14	30	46.7	34.1	15.5	12-8F-MCG
18/20	3/4	1 1/16	-12	3/4	-14	36	47.5	34.9	15.5	12F-MCG
18/20	3/4	1 1/16	-12	1	-11	46	52.6	36.7	15.5	12-16F-MCG
25	1	1 5/16	-12	3/4	-14	36	48.5	35.9	21.5	16-12F-MCG
25	1	1 5/16	-12	1	-11	46	53.6	37.7	21.5	16F-MCG
25	1	1 5/16	-12	1 1/4	-11	50	55.1	39.7	21.5	16-20F-MCG
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11	50	56.8	40.9	27.5	20F-MCG
28/30/32	1 1/4	1 5/8	-12	1 1/2	-11	55	56.9	41	27.5	20-24F-MCG
35/38	1 1/2	1 7/8	-12	1 1/4	-11	50	60.4	44.5	33	24-20F-MCG
35/38	1 1/2	1 7/8	-12	1 1/2	-11	55	61	45.1	33	24F-MCG



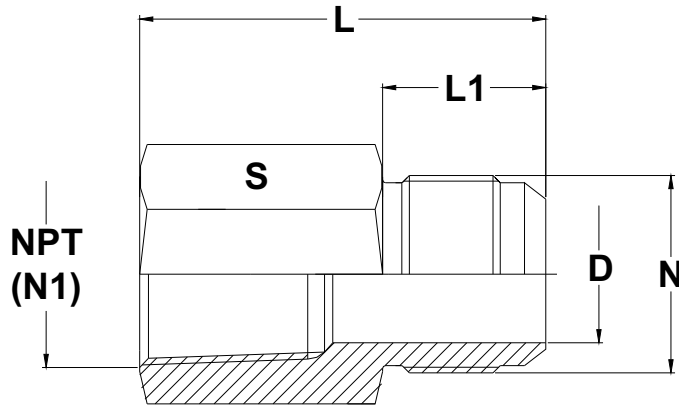
MALE CONNECTOR



TUBE OD		THREAD UN / UNF		THREAD UN / UNF		S	L	L1	D	PART NO.
mm	inch	N	N1	mm	mm	mm	mm	mm		
6	1/4	7/16	-20	7/16	-20	14	31.2	22	4.4	4-7F-MCU
6	1/4	7/16	-20	1/2	-20	17	31.2	22	4.4	4-8F-MCU
6	1/4	7/16	-20	9/16	-18	17	32.7	22.8	4.4	4-9F-MCU
6	1/4	7/16	-20	3/4	-16	22	35	23.9	4.4	4-12F-MCU
8	5/16	1/2	-20	1/2	-20	17	31.2	22	6	5-8F-MCU
8	5/16	1/2	-20	9/16	-18	17	33	23	6	5-9F-MCU
10	3/8	9/16	-18	7/16	-20	17	32.2	23	7.5	5-7F-MCU
10	3/8	9/16	-18	1/2	-20	17	32.2	23	7.5	6-8F-MCU
10	3/8	9/16	-18	9/16	-18	17	33	23	7.5	6-9F-MCU
10	3/8	9/16	-18	3/4	-16	22	35.1	24	7.5	6-12F-MCU
10	3/8	9/16	-18	7/8	-14	27	35	25.4	7.5	6-14F-MCU
12	1/2	3/4	-16	9/16	-18	22	36.6	26.7	9.9	8-9F-MCU
12	1/2	3/4	-16	3/4	-16	22	38.1	26.4	9.9	8-12F-MCU
12	1/2	3/4	-16	7/8	-14	27	40.7	28	9.9	8-14F-MCU
12	1/2	3/4	-16	1 1/16	-12	32	44.7	29.6	9.9	8-17F-MCU
14/15/16	5/8	7/8	-14	3/4	-16	27	41.7	30.6	12.3	10-12F-MCU
14/15/16	5/8	7/8	-14	7/8	-14	27	43.2	30.5	12.3	10-14F-MCU
14/15/16	5/8	7/8	-14	1 1/16	-12	32	47.2	32.1	12.3	10-17F-MCU
18/20	3/4	1 1/16	-12	3/4	-16	27	49.2	38	15.5	12F-MCU
18/20	3/4	1 1/16	-12	7/8	-14	27	47.7	35	15.5	12-14F-MCU
18/20	3/4	1 1/16	-12	1 1/16	-12	32	50	34.9	15.5	12-17F-MCU
18/20	3/4	1 1/16	-12	1 5/16	-12	41	50.5	35.4	15.5	12-21F-MCU
25	1	1 5/16	-12	7/8	-14	36	52.8	39.9	21.5	16-14F-MCU
25	1	1 5/16	-12	1 1/16	-12	36	50.5	36.6	21.5	16-17F-MCU
25	1	1 5/16	-12	1 3/16	-12	36	52	37.1	21.5	16-19F-MCU
25	1	1 5/16	-12	1 5/16	-12	41	52	37	21.5	16-21F-MCU
25	1	1 5/16	-12	1 5/8	-12	50	54.1	39.1	21.5	16-26F-MCU
28/30/32	1 1/4	1 5/8	-12	1 5/16	-12	46	59.1	44.2	27.5	20-21F-MCU
28/30/32	1 1/4	1 5/8	-12	1 5/8	-12	50	55.1	40.1	27.5	20-26F-MCU
35/38	1 1/2	1 7/8	-12	1 5/8	-12	55	60.4	45.5	33	24-26F-MCU
35/38	1 1/2	1 7/8	-12	1 7/8	-12	55	64.3	49.3	33	24-30F-MCU



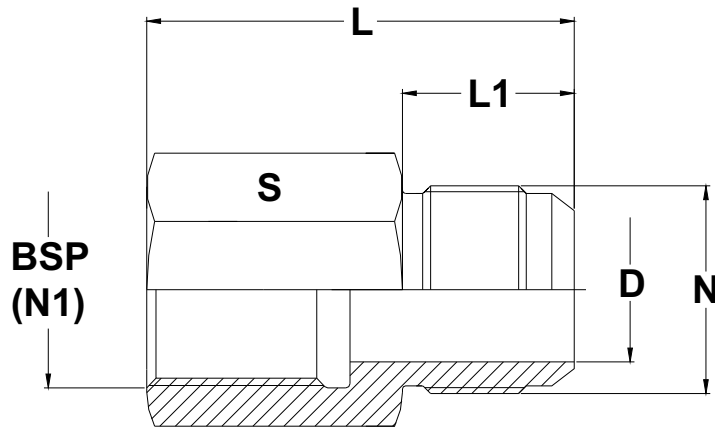
FEMALE CONNECTOR



TUBE OD		THREAD UN / UNF		THREAD NPT/NPTF		S	L	L1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-27	14	30.2	14	4.4	4-2F-FCN
6	1/4	7/16	-20	1/4	-18	19	35.3	14	4.4	4F-FCN
8	5/16	1/2	-20	1/8	-27	14	29.7	14	6	5-2F-FCN
8	5/16	1/2	-20	1/4	-18	19	35.3	14	6	5-4F-FCN
10	3/8	9/16	-18	1/4	-18	19	35.8	14.1	7.5	6-4F-FCN
10	3/8	9/16	-18	3/8	-18	22	37.3	14.1	7.5	6F-FCN
12	1/2	3/4	-16	3/8	-18	22	39.6	16.7	9.9	8-6F-FCN
12	1/2	3/4	-16	1/2	-14	30	45.5	16.7	9.9	8F-FCN
14/15/16	5/8	7/8	-14	1/2	-14	30	48	19.3	12.3	10-8F-FCN
18/20	3/4	1 1/16	-12	1/2	-14	30	48.5	21.9	15.5	12-8F-FCN
18/20	3/4	1 1/16	-12	3/4	-14	36	52.3	21.9	15.5	12F-FCN
25	1	1 5/16	-12	1	-11.5	41	59.7	23.1	21.5	16F-FCN
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11.5	50	63	24.3	27.5	20F-FCN
35/38	1 1/2	1 7/8	-12	1 1/2	-11.5	60	66.8	27.5	33	24F-FCN



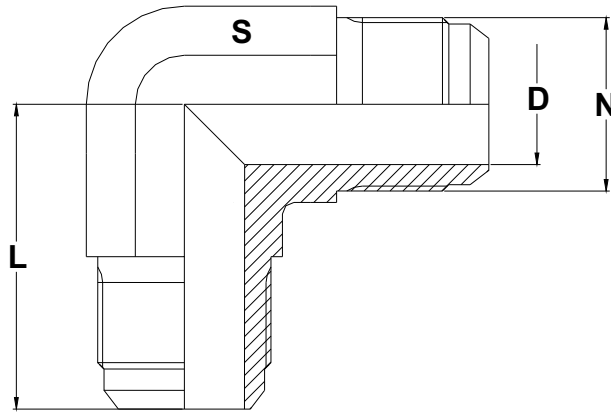
FEMALE CONNECTOR



TUBE OD		THREAD UN / UNF		THREAD BSP		S	L	L1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-28	16	30.2	14	4.4	4-2F-FCG
6	1/4	7/16	-20	1/4	-19	19	35.3	14	4.4	4F-FCG
8	5/16	1/2	-20	1/8	-28	16	29.7	14	6	5-2F-FCG
8	5/16	1/2	-20	1/4	-19	19	35.3	14	6	5-4F-FCG
10	3/8	9/16	-18	1/4	-19	19	35.8	14.1	7.5	6-4F-FCG
10	3/8	9/16	-18	3/8	-19	22	37.3	14.1	7.5	6F-FCG
12	1/2	3/4	-16	3/8	-19	22	39.6	16.7	9.9	8-6F-FCG
12	1/2	3/4	-16	1/2	-14	30	45.5	16.7	9.9	8F-FCG
14/15/16	5/8	7/8	-14	1/2	-14	30	48	19.3	12.3	10-8F-FCG
18/20	3/4	1 1/16	-12	1/2	-14	30	48.5	21.9	15.5	12-8F-FCG
18/20	3/4	1 1/16	-12	3/4	-14	36	52.3	21.9	15.5	12F-FCG
25	1	1 5/16	-12	1	-11	41	59.7	23.1	21.5	16F-FCG
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11	50	63	24.3	27.5	20F-FCG
35/38	1 1/2	1 7/8	-12	1 1/2	-11	60	66.8	27.5	33	24F-FCG



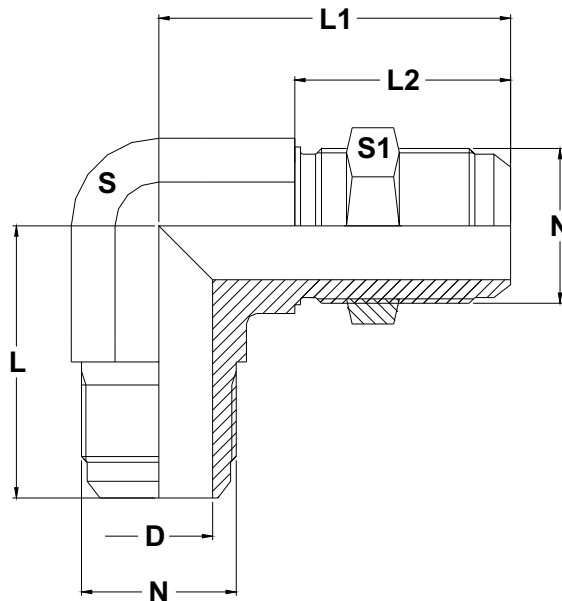
UNION ELBOW



TUBE OD		THREAD	S	L	D	PART NO.
mm	inch	UN / UNF				
6	1/4	7/16 -20	11	22.6	4.4	4F-E
8	5/16	1/2 -20	13	24.1	6	5F-E
10	3/8	9/16 -18	14	26.9	7.5	6F-E
12	1/2	3/4 -16	19	31.8	9.9	8F-E
14/15/16	5/8	7/8 -14	22	36.8	12.3	10F-E
18/20	3/4	1 1/16 -12	27	42.2	15.5	12F-E
25	1	1 5/16 -12	33	46	21.5	16F-E
28/30/32	1 1/4	1 5/8 -12	41	52.3	27.5	20F-E
35/38	1 1/2	1 7/8 -12	48	59.2	33	24F-E



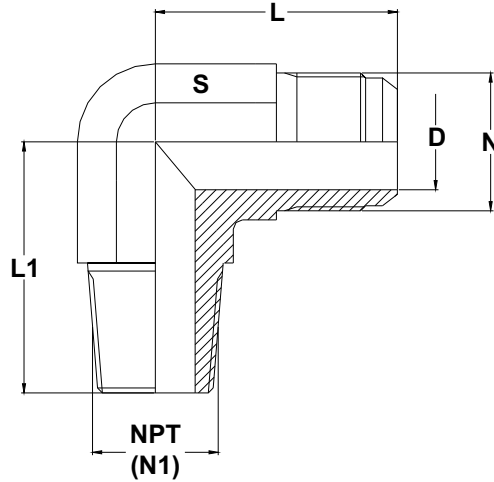
BULKHEAD ELBOW



TUBE OD		THREAD	S	S1	L	L1	L2	D	PART NO.
mm	inch	N UN / UNF	mm	mm	mm	mm	mm	mm	
6	1/4	7/16 -20	11	17	24.6	40.4	28.3	4.4	4F-EB
8	5/16	1/2 -20	13	19	26.2	41.1	28.3	6	5F-EB
10	3/8	9/16 -18	14	22	27.7	46	30.1	7.5	6F-EB
12	1/2	3/4 -16	19	24	34.5	53.6	35	9.9	8F-EB
14/15/16	5/8	7/8 -14	22	30	39.6	60.7	38.5	12.3	10F-EB
18/20	3/4	1 1/16 -12	27	36	45.2	67.8	42.8	15.5	12F-EB
25	1	1 5/16 -12	33	41	49	71	42.8	21.5	16F-EB
28/30/32	1 1/4	1 5/8 -12	41	50	55	76	44.1	27.5	20F-EB



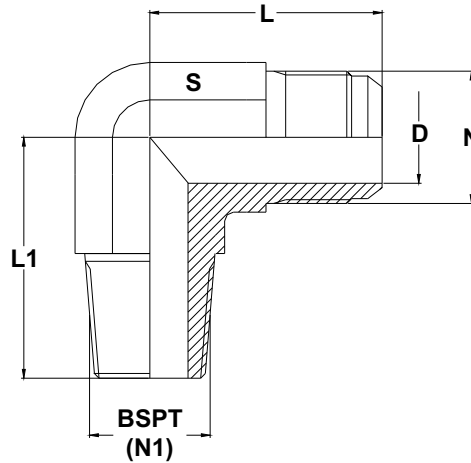
MALE ELBOW



TUBE OD		THREAD UN / UNF		THREAD NPT/NPTF		S	L	L1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-27	11	22.6	19.8	4.4	4-2F-MEN
6	1/4	7/16	-20	1/4	-18	14	26.6	27.7	4.4	4F-MEN
6	1/4	7/16	-20	3/8	-18	19	28.5	27.5	4.4	4-6F-MEN
6	1/4	7/16	-20	1/2	-14	22	31	36.5	4.4	4-8F-MEN
8	5/16	1/2	-20	1/8	-27	13	24.1	19.8	6	5-2F-MEN
8	5/16	1/2	-20	1/4	-18	14	26.6	27.7	6	5-4F-MEN
10	3/8	9/16	-18	1/8	-27	14	26.9	27.7	7.5	6-2F-MEN
10	3/8	9/16	-18	1/4	-18	14	26.9	23.9	7.5	6-4F-MEN
10	3/8	9/16	-18	3/8	-18	19	29	31	7.5	6F-MEN
10	3/8	9/16	-18	1/2	-14	22	31	37.3	7.5	6-8F-MEN
12	1/2	3/4	-16	1/4	-18	19	31.8	31	9.9	8-4F-MEN
12	1/2	3/4	-16	3/8	-18	19	31.8	31	9.9	8-6F-MEN
12	1/2	3/4	-16	1/2	-14	22	33.8	37.3	9.9	8F-MEN
12	1/2	3/4	-16	3/4	-14	27	36.1	40.4	9.9	8-12F-MEN
14/15/16	5/8	7/8	-14	3/8	-18	22	36.8	32.5	12.3	10-6F-MEN
14/15/16	5/8	7/8	-14	1/2	-14	22	36.8	37.3	12.3	10-8F-MEN
14/15/16	5/8	7/8	-14	3/4	-14	27	36.2	40.5	12.3	10-12F-MEN
18/20	3/4	1 1/16	-12	1/2	-14	27	42.2	40.4	15.5	12-8F-MEN
18/20	3/4	1 1/16	-12	3/4	-14	27	42.2	40.4	15.5	12F-MEN
18/20	3/4	1 1/16	-12	1	-11.5	33	44.7	50	15.5	12-16F-MEN
25	1	1 5/16	-12	3/4	-14	33	46	45.2	21.5	16-12F-MEN
25	1	1 5/16	-12	1	-11.5	33	46	50	21.5	16F-MEN
25	1	1 5/16	-12	1 1/4	-11.5	41	54	60.5	21.5	16-20F-MEN
28/30/32	1 1/4	1 5/8	-12	1	-11.5	41	52.3	59.7	27.5	20-16F-MEN
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11.5	41	52.3	60.5	27.5	20F-MEN
28/30/32	1 1/4	1 5/8	-12	1 1/2	-11.5	46	56	67	27.5	20-24F-MEN
35/38	1 1/2	1 7/8	-12	1 1/4	-11.5	48	59	57	33	24-20F-MEN
35/38	1 1/2	1 7/8	-12	1 1/2	-11.5	48	59	67	33	24F-MEN



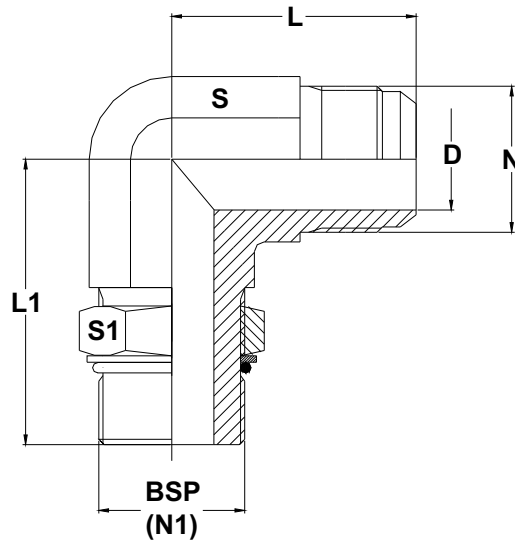
MALE ELBOW



TUBE OD		THREAD UN / UNF		THREAD BSPT		S	L	L1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-28	11	22.6	19.8	4.4	4-2F-MER
6	1/4	7/16	-20	1/4	-19	14	26.6	27.7	4.4	4F-MER
8	5/16	1/2	-20	1/8	-28	13	24.1	19.8	6	5-2F-MER
8	5/16	1/2	-20	1/4	-19	14	26.6	27.7	6	5-4F-MER
10	3/8	9/16	-18	1/4	-19	14	26.9	27.7	7.5	6-4F-MER
10	3/8	9/16	-18	3/8	-19	19	29	31	7.5	6F-MER
10	3/8	9/16	-18	1/2	-14	22	31	37.3	7.5	6-8F-MER
12	1/2	3/4	-16	1/4	-19	19	31.8	31	9.9	8-4F-MER
12	1/2	3/4	-16	3/8	-19	19	31.8	31	9.9	8-6F-MER
12	1/2	3/4	-16	1/2	-14	22	33.8	37.3	9.9	8F-MER
14/15/16	5/8	7/8	-14	3/8	-19	22	36.5	32.5	12.3	10-6F-MER
14/15/16	5/8	7/8	-14	1/2	-14	22	36.8	37.3	12.3	10-8F-MER
14/15/16	5/8	7/8	-14	3/4	-14	27	39.2	40.4	12.3	10-12F-MER
18/20	3/4	1 1/16	-12	1/2	-14	27	42.2	40.4	15.5	12-8F-MER
18/20	3/4	1 1/16	-12	3/4	-14	27	42.2	40.4	15.5	12F-MER
18/20	3/4	1 1/16	-12	1	-11	33	44.7	50	15.5	12-16F-MER
25	1	1 5/16	-12	3/4	-14	33	46	45.2	21.5	16-12F-MER
25	1	1 5/16	-12	1	-11	33	46	50	21.5	16F-MER
28/30/32	1 1/4	1 5/8	-12	1	-11	41	52.3	59.7	27.5	20-16F-MER
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11	41	52.3	60.5	27.5	20F-MER
35/38	1 1/2	1 7/8	-12	1 1/2	-11	48	59.2	67.1	33	24F-MER



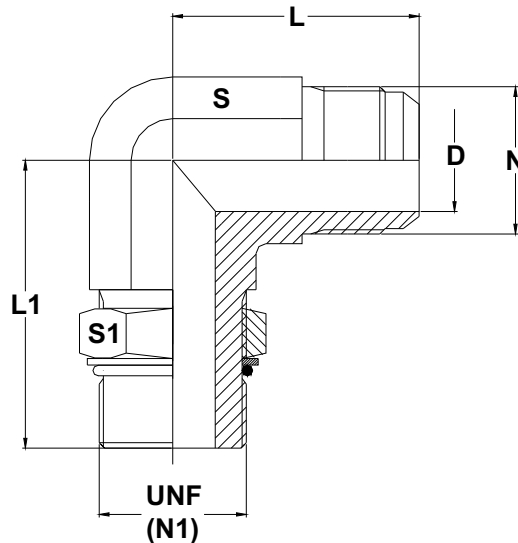
MALE ELBOW



TUBE OD		THREAD UN / UNF		THREAD BSPT		S	L	L1	S1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-28	11	22.6	26.2	14	4.4	4-2F-MEG
6	1/4	7/16	-20	1/4	-19	14	26.6	31.8	19	4.4	4F-MEG
8	5/16	1/2	-20	1/8	-28	13	24.1	27.7	14	6	5-2F-MEG
8	5/16	1/2	-20	1/4	-19	14	26.6	31.8	19	6	5-4F-MEG
8	5/16	1/2	-20	3/8	-19	19	28.5	36.8	22	6	5-6F-MEG
10	3/8	9/16	-18	1/4	-19	14	26.9	31.8	19	7.5	6-4F-MEG
10	3/8	9/16	-18	3/8	-19	19	29	36.8	22	7.5	6F-MEG
10	3/8	9/16	-18	1/2	-14	22	31	43.2	27	7.5	6-8F-MEG
12	1/2	3/4	-16	1/4	-19	19	31.8	36.8	19	9.9	8-4F-MEG
12	1/2	3/4	-16	3/8	-19	19	31.8	36.8	22	9.9	8-6F-MEG
12	1/2	3/4	-16	1/2	-14	22	33.8	43.2	27	9.9	8F-MEG
14/15/16	5/8	7/8	-14	3/8	-19	22	36.8	37.1	22	12.3	10-6F-MEG
14/15/16	5/8	7/8	-14	1/2	-14	27	36.8	43.2	27	12.3	10-8F-MEG
14/15/16	5/8	7/8	-14	3/4	-14	36	39.2	49.3	36	12.3	10-12F-MEG
18/20	3/4	1 1/16	-12	1/2	-14	27	42.2	49.3	27	15.5	12-8F-MEG
18/20	3/4	1 1/16	-12	3/4	-14	36	42.2	49.3	36	15.5	12F-MEG
18/20	3/4	1 1/16	-12	1	-11	41	44.7	52.1	41	15.5	12-16F-MEG
25	1	1 5/16	-12	3/4	-14	36	46	48.2	36	21.5	16-12F-MEG
25	1	1 5/16	-12	1	-11	41	46	52.1	41	21.5	16F-MEG
28/30/32	1 1/4	1 5/8	-12	1	-11	41	52.3	57.2	41	27.5	20-16F-MEG
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11	50	52.3	57.2	50	27.5	20F-MEG
35/38	1 1/2	1 7/8	-12	1 1/4	-11	50	59.2	60.7	50	33	24-20F-MEG
35/38	1 1/2	1 7/8	-12	1 1/2	-11	55	59.2	60.7	55	33	24F-MEG



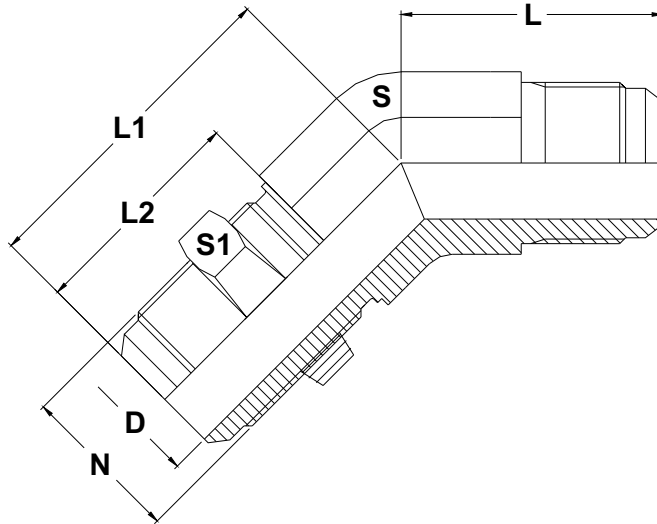
MALE ELBOW



TUBE OD		THREAD UN / UNF		THREAD UN / UNF		S	L	L1	S1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	mm	
6	1/4	7/16	-20	7/16	-20	11	31.2	22	14	4.4	4-7F-MCU
6	1/4	7/16	-20	9/16	-18	14	31.2	22	17	4.4	4-9F-MCU
8	5/16	1/2	-20	1/2	-20	13	31.2	22	17	6	5-8F-MCU
8	5/16	1/2	-20	9/16	-18	14	33	23	17	6	5-9F-MCU
10	3/8	9/16	-18	7/16	-20	14	26.9	30.3	14	7.5	5-7F-MCU
10	3/8	9/16	-18	1/2	-20	14	26.9	30.3	17	7.5	6-8F-MCU
10	3/8	9/16	-18	9/16	-18	14	26.9	31.8	17	7.5	6-9F-MCU
10	3/8	9/16	-18	3/4	-16	19	29	36.8	22	7.5	6-12F-MCU
10	3/8	9/16	-18	7/8	-14	22	31	43.2	27	7.5	6-14F-MCU
12	1/2	3/4	-16	9/16	-18	19	31.8	33.5	17	9.9	8-9F-MCU
12	1/2	3/4	-16	3/4	-16	19	31.8	36.8	22	9.9	8-12F-MCU
12	1/2	3/4	-16	7/8	-14	22	33.8	43.2	27	9.9	8-14F-MCU
12	1/2	3/4	-16	1 1/16	-12	27	36.1	49.3	32	9.9	8-17F-MCU
14/15/16	5/8	7/8	-14	3/4	-16	22	36.8	39.1	22	12.3	10-12F-MCU
14/15/16	5/8	7/8	-14	7/8	-14	22	26.8	43.2	27	12.3	10-14F-MCU
14/15/16	5/8	7/8	-14	1 1/16	-12	27	39.2	49.3	32	12.3	10-17F-MCU
18/20	3/4	1 1/16	-12	3/4	-16	27	42.2	41.2	22	15.5	12F-MCU
18/20	3/4	1 1/16	-12	7/8	-14	27	42.2	45.2	27	15.5	12-14F-MCU
18/20	3/4	1 1/16	-12	1 1/16	-12	27	42.2	49.3	32	15.5	12-17F-MCU
18/20	3/4	1 1/16	-12	1 5/16	-12	33	44.7	52.1	41	15.5	12-21F-MCU
25	1	1 5/16	-12	1 1/16	-12	33	46	52.1	32	21.5	16-17F-MCU
25	1	1 5/16	-12	1 5/16	-12	33	46	52.1	41	21.5	16-21F-MCU
25	1	1 5/16	-12	1 5/8	-12	41	52.3	57.2	41	21.5	16-26F-MCU
28/30/32	1 1/4	1 5/8	-12	1 5/8	-12	41	52.3	57.2	50	27.5	20-26F-MCU
35/38	1 1/2	1 7/8	-12	1 7/8	-12	48	59.2	60.7	55	33	24-30F-MCU



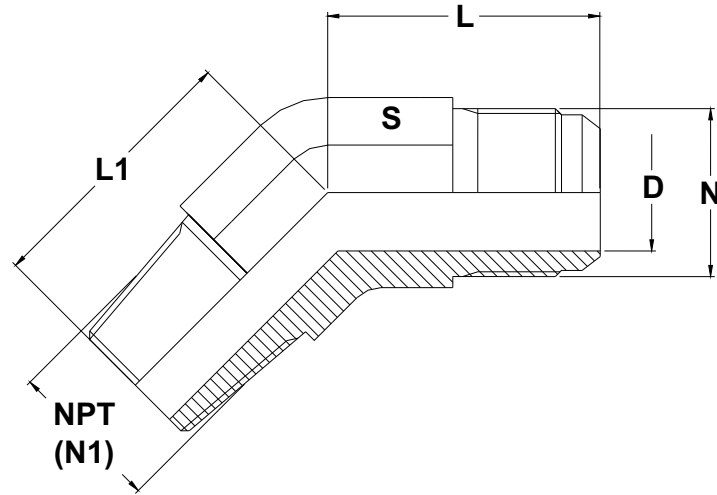
45 DEG. BULKHEAD ELBOW



TUBE OD		THREAD		S	S1	L	L1	L2	D	PART NO.
mm	inch	UN / UNF								
		N		mm	mm	mm	mm	mm	mm	
6	1/4	7/16	-20	11	17	24.6	40.4	28.3	4.4	4F-AEB
8	5/16	1/2	-20	13	19	26.2	41.1	28.3	6	5F-AEB
10	3/8	9/16	-18	14	22	27.7	46	30.1	7.5	6F-AEB
12	1/2	3/4	-16	19	24	34.5	53.6	35	9.9	8F-AEB
14/15/16	5/8	7/8	-14	22	30	39.6	60.7	38.5	12.3	10F-AEB
18/20	3/4	1 1/16	-12	27	36	45.2	67.8	42.8	15.5	12F-AEB
25	1	1 5/16	-12	33	41	49	71	42.8	21.5	16F-AEB



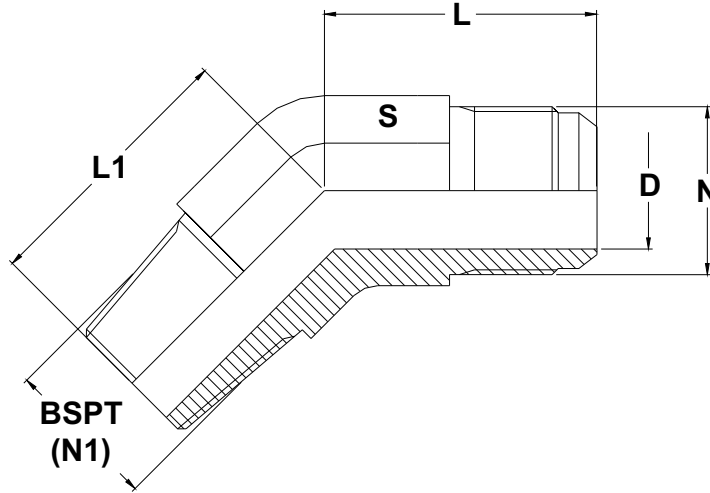
45 DEG. MALE ELBOW



TUBE OD		THREAD UN / UNF		THREAD NPT/NPTF		S	L	L1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-27	11	18.3	16.3	4.4	4-2F-AMEN
6	1/4	7/16	-20	1/4	-18	14	20.8	21.8	4.4	4F-AMEN
8	5/16	1/2	-20	1/8	-27	13	19.6	16.3	6	5-2F-AMEN
8	5/16	1/2	-20	1/4	-18	14	20.8	21.8	6	5-4F-AMEN
10	3/8	9/16	-18	1/8	-27	14	21.1	21.8	7.5	6-2F-AMEN
10	3/8	9/16	-18	1/4	-18	14	21	17	7.5	6-4F-AMEN
10	3/8	9/16	-18	3/8	-18	19	22.1	24.1	7.5	6F-AMEN
10	3/8	9/16	-18	1/2	-14	22	22.4	29.7	7.5	6-8F-AMEN
12	1/2	3/4	-16	1/4	-18	19	25	24	9.9	8-4F-AMEN
12	1/2	3/4	-16	3/8	-18	19	24.9	24.1	9.9	8-6F-AMEN
12	1/2	3/4	-16	1/2	-14	22	24.9	29.7	9.9	8F-AMEN
12	1/2	3/4	-16	3/4	-14	27	26.5	30.5	9.9	8-12F-AMEN
14/15/16	5/8	7/8	-14	3/8	-18	22	28	25	12.3	10-6F-AMEN
14/15/16	5/8	7/8	-14	1/2	-14	22	28.2	29.7	12.3	10-8F-AMEN
14/15/16	5/8	7/8	-14	3/4	-14	27	29.5	30.5	12.3	10-12F-AMEN
18/20	3/4	1 1/16	-12	1/2	-14	27	32.5	30.5	15.5	12-8F-AMEN
18/20	3/4	1 1/16	-12	3/4	-14	27	32.5	33	15.5	12F-AMEN
18/20	3/4	1 1/16	-12	1	-11.5	33	36	32.5	15.5	12-16F-AMEN
25	1	1 5/16	-12	3/4	-14	33	37.5	37.6	21.5	16-12F-AMEN
25	1	1 5/16	-12	1	-11.5	33	37.3	37.6	21.5	16F-AMEN
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11.5	41	40.4	42.4	27.5	20F-AMEN
35/38	1 1/2	1 7/8	-12	1 1/2	-11.5	48	45.2	45	33	24F-AMEN



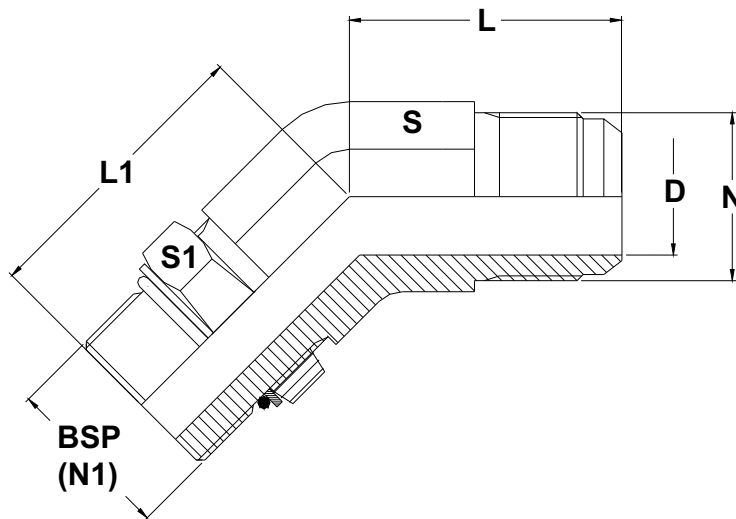
45 DEG. MALE ELBOW



TUBE OD		THREAD UN / UNF		THREAD BSPT		S	L	L1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-28	11	18.3	16.3	4.4	4-2F-AMER
6	1/4	7/16	-20	1/4	-19	14	20.8	21.8	4.4	4F-AMER
8	5/16	1/2	-20	1/8	-28	13	19.6	16.8	6	5-2F-AMER
8	5/16	1/2	-20	1/4	-19	14	20.8	21.8	6	5-4F-AMER
10	3/8	9/16	-18	1/4	-19	14	21.1	21.8	7.5	6-4F-AMER
10	3/8	9/16	-18	3/8	-19	19	22.1	24.1	7.5	6F-AMER
10	3/8	9/16	-18	1/2	-14	22	22.4	29.7	7.5	6-8F-AMER
12	1/2	3/4	-16	3/8	-19	19	24.9	24.1	9.9	8-6F-AMER
12	1/2	3/4	-16	1/2	-14	22	25.2	29.7	9.9	8F-AMER
14/15/16	5/8	7/8	-14	1/2	-14	22	28.2	29.7	12.3	10-8F-AMER
18/20	3/4	1 1/16	-12	3/4	-14	27	32.5	30.5	15.5	12F-AMER
25	1	1 5/16	-12	1	-11	33	37.3	37.6	21.5	16F-AMER
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11	41	40.4	42.4	27.5	20F-AMER
35/38	1 1/2	1 7/8	-12	1 1/2	-11	48	45.2	45	33	24F-AMER



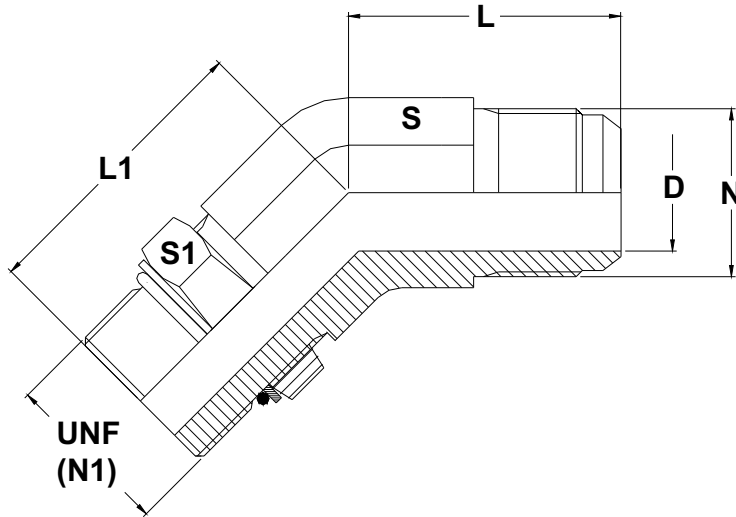
45 DEG. MALE ELBOW



TUBE OD		THREAD UN / UNF		THREAD BSPT		S	L	L1	S1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-28	11	18.3	26.5	14	4.4	4-2F-AMEG
6	1/4	7/16	-20	1/4	-19	14	20.8	29	19	4.4	4F-AMEG
8	5/16	1/2	-20	1/8	-28	13	19.6	26.5	14	6	5-2F-AMEG
8	5/16	1/2	-20	1/4	-19	14	20.8	29	19	6	5-4F-AMEG
10	3/8	9/16	-18	1/4	-19	14	21.1	29	19	7.5	6-4F-AMEG
12	1/2	3/4	-16	3/8	-19	19	24.9	33	22	9.9	8-6F-AMEG
12	1/2	3/4	-16	1/2	-14	22	25.2	38.5	27	9.9	8F-AMEG
14/15/16	5/8	7/8	-14	1/2	-14	22	28.2	38.6	27	12.3	10-8F-AMEG
14/15/16	5/8	7/8	-14	3/4	-14	27	29.5	44	36	12.3	10-12F-AMEG
18/20	3/4	1 1/16	-12	3/4	-14	27	32.5	44	36	15.5	12F-AMEG
25	1	1 5/16	-12	1	-11	33	37.2	47	41	21.5	16F-AMEG
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11	41	40.4	48	50	27.5	20F-AMEG



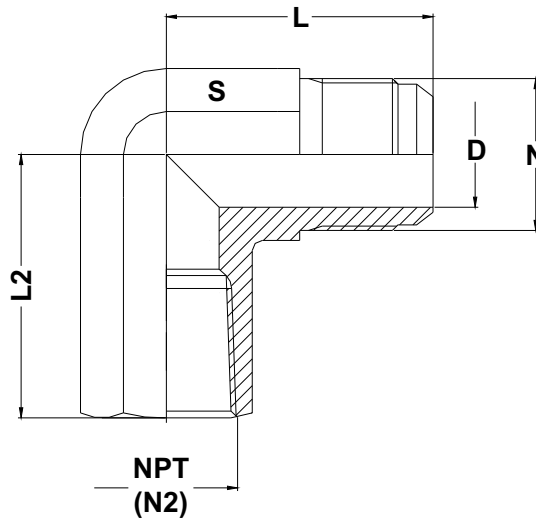
45 DEG. MALE ELBOW



TUBE OD		THREAD UN / UNF		THREAD UN / UNF		S	L	L1	I	S1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	mm	mm	
6	1/4	7/16	-20	7/16	-20	11	18.3	26.7	9.8	14	4.4	4-7F-AMEU
8	5/16	1/2	-20	1/2	-20	13	19.6	26.7	9.8	17	6	5-8F-AMEU
10	3/8	9/16	-18	9/16	-20	14	21.1	29	11	17	7.5	6-9F-AMEU
10	3/8	9/16	-18	3/4	-16	19	24.9	29.7	12.5	17	7.5	6-12F-AMEU
12	1/2	3/4	-16	3/4	-16	19	24.9	33	12.5	22	9.9	8-12F-AMEU
12	1/2	3/4	-16	7/8	-14	22	25.2	38.6	14.3	27	9.9	8-14F-AMEU
14/15/16	5/8	7/8	-14	3/4	-16	22	28.2	34.5	12.5	22	12.3	10-12F-AMEU
14/15/16	5/8	7/8	-14	7/8	-14	22	28.2	38.6	14.3	27	12.3	10-14F-AMEU
18/20	3/4	1 1/16	-12	7/8	-14	27	32.5	39.8	14.3	27	15.5	12-14F-AMEU
18/20	3/4	1 1/16	-12	1 1/16	-12	27	32.5	43.9	16.5	32	15.5	12-17F-AMEU
25	1	1 5/16	-12	1 5/16	-12	33	37.3	47.2	16.5	41	21.5	16-21F-AMEU
28/30/32	1 1/4	1 5/8	-12	1 5/8	-12	41	40.4	48.5	16.5	50	27.5	20-26F-AMEU
35/38	1 1/2	1 7/8	-12	1 7/8	-12	48	45.2	48.5	16.5	55	33	24-30F-AMEU



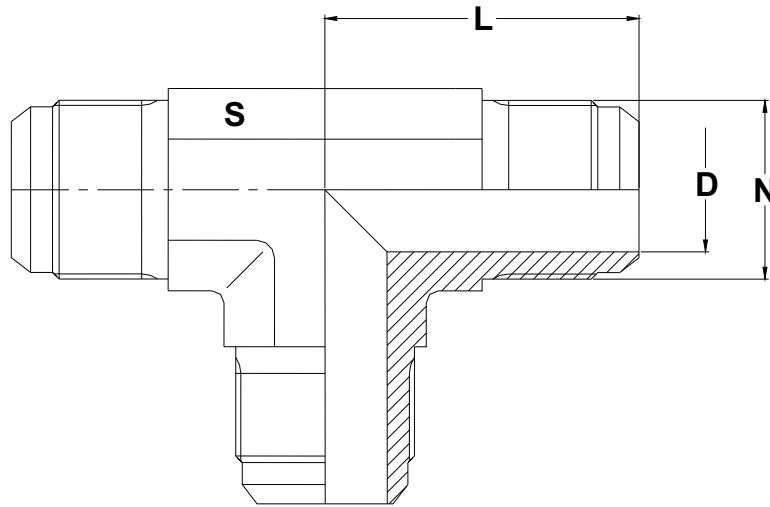
FEMALE ELBOW



TUBE OD		THREAD UN / UNF		THREAD NPT/NPTF		S	L	L2	D	PART NO.
mm	inch	N		N2		mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-27	14	27.4	16.8	4.4	4-2F-FEN
6	1/4	7/16	-20	1/4	-18	19	31	22.3	4.4	4F-FEN
8	5/16	1/2	-20	1/8	-27	14	27.4	16.8	6	5-2F-FEN
8	5/16	1/2	-20	1/4	-18	19	28.7	22.3	6	5-4F-FEN
10	3/8	9/16	-18	1/8	-27	14	31.2	17	7.5	6-2F-FEN
10	3/8	9/16	-18	1/4	-18	19	31.2	22.3	7.5	6-4F-FEN
10	3/8	9/16	-18	3/8	-18	22	33.3	25.9	7.5	6F-FEN
12	1/2	3/4	-16	1/4	-18	19	36.1	25.6	9.9	8-4F-FEN
12	1/2	3/4	-16	3/8	-18	22	36.1	25.9	9.9	8-6F-FEN
12	1/2	3/4	-16	1/2	-14	27	38.7	31.2	9.9	8F-FEN
14/15/16	5/8	7/8	-14	1/2	-14	27	41.7	31.2	12.3	10-8F-FEN
18/20	3/4	1 1/16	-12	1/2	-14	27	48	34.3	15.5	12-8F-FEN
18/20	3/4	1 1/16	-12	3/4	-14	33	48	34.5	15.5	12F-FEN
25	1	1 5/16	-12	1	-11.5	41	55.1	41.4	21.5	16F-FEN
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11.5	48	59.2	43.2	27.5	20F-FEN



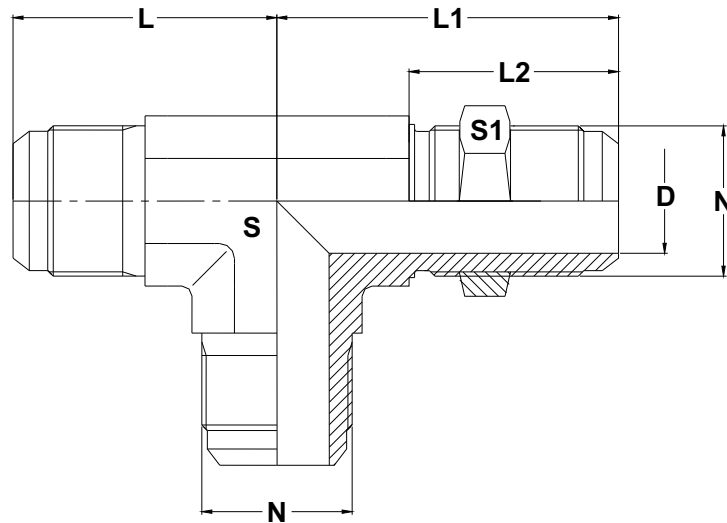
UNION TEE



TUBE OD		THREAD	S	L	D	PART NO.
mm	inch	UN / UNF	mm	mm	mm	
6	1/4	7/16 -20	11	22.6	4.4	4F-T
8	5/16	1/2 -20	13	24.1	6	5F-T
10	3/8	9/16 -18	14	26.9	7.5	6F-T
12	1/2	3/4 -16	19	31.8	9.9	8F-T
14/15/16	5/8	7/8 -14	22	36.8	12.3	10F-T
18/20	3/4	1 1/16 -12	27	42.2	15.5	12F-T
25	1	1 5/16 -12	33	46	21.5	16F-T
28/30/32	1 1/4	1 5/8 -12	41	52.3	27.5	20F-T
35/38	1 1/2	1 7/8 -12	48	59.2	33	24F-T



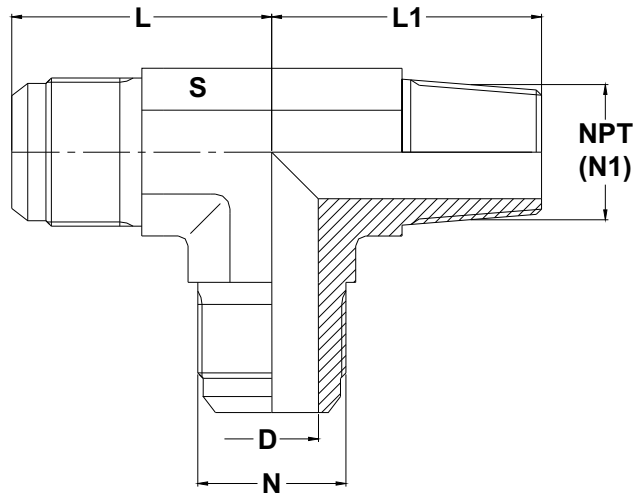
BULKHEAD RUN TEE



TUBE OD		THREAD	S	S1	L	L1	L2	D	PART NO.
mm	inch	UN / UNF	mm	mm	mm	mm	mm	mm	
6	1/4	7/16 -20	11	17	24.6	40.4	28.3	4.4	4F-TBR
8	5/16	1/2 -20	13	19	26.2	41.1	28.3	6	5F-TBR
10	3/8	9/16 -18	14	22	27.7	46	30.1	7.5	6F-TBR
12	1/2	3/4 -16	19	24	34.5	53.6	35	9.9	8F-TBR
14/15/16	5/8	7/8 -14	22	30	39.6	60.7	38.5	12.3	10F-TBR
18/20	3/4	1 1/16 -12	27	36	45.2	67.8	42.8	15.5	12F-TBR
25	1	1 5/16 -12	33	41	49	71	42.8	21.5	16F-TBR



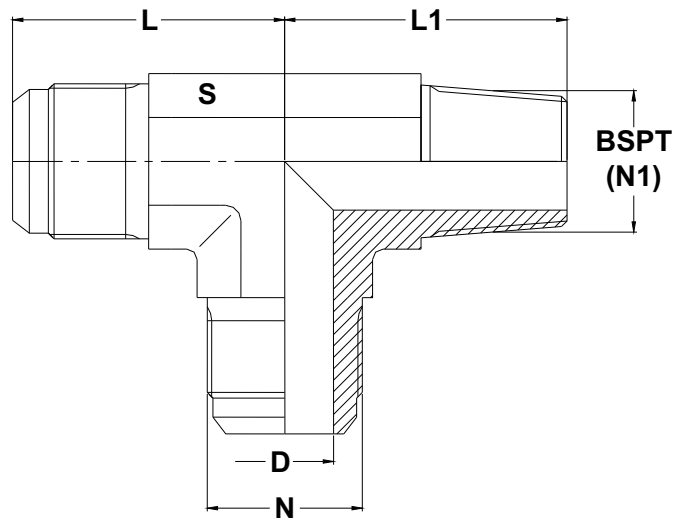
MALE RUN TEE



TUBE OD		THREAD UN / UNF		THREAD NPT/NPTF		S	L	L1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-27	11	22.6	20	4.4	4-2F-MRTN
6	1/4	7/16	-20	1/4	-18	14	26.5	27.5	4.4	4F-MRTN
8	5/16	1/2	-20	1/8	-27	13	24.5	20	6	5-2F-MRTN
10	3/8	9/16	-18	1/4	-18	14	26.9	27.7	7.5	6-4F-MRTN
10	3/8	9/16	-18	3/8	-18	19	29	31	7.5	6F-MRTN
12	1/2	3/4	-16	3/8	-18	19	31.8	31	9.9	8-6F-MRTN
12	1/2	3/4	-16	1/2	-14	22	33.8	37.3	9.9	8F-MRTN
14/15/16	5/8	7/8	-14	1/2	-14	22	36.8	37.3	12.3	10-8F-MRTN
18/20	3/4	1 1/16	-12	3/4	-14	27	42.2	40.4	15.5	12F-MRTN
25	1	1 5/16	-12	1	-11.5	33	46	50	21.5	16F-MRTN
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11.5	41	52.5	60.5	27.5	20F-MRTN
35/38	1 1/2	1 7/8	-12	1 1/2	-11.5	48	59	67	33	24F-MRTN



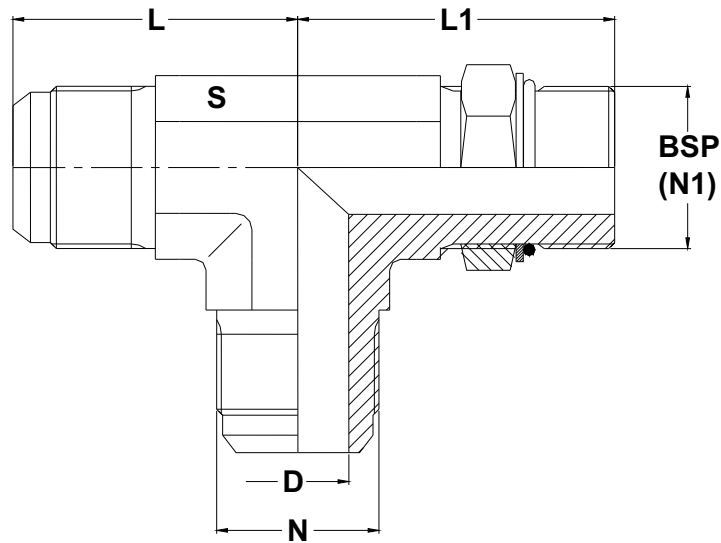
MALE RUN TEE



TUBE OD		THREAD UN / UNF		THREAD BSPT		S	L	L1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-28	11	22.6	19.8	4.4	4-2F-MRTR
8	5/16	1/2	-20	1/8	-28	13	24.1	19.8	6	5-2F-MRTR
10	3/8	9/16	-18	1/4	-19	14	26.9	27.7	7.5	6-4F-MRTR
12	1/2	3/4	-16	3/8	-19	19	31.8	31	9.9	8-6F-MRTR
14/15/16	5/8	7/8	-14	1/2	-14	22	36.8	37.3	12.3	10-8F-MRTR
18/20	3/4	1 1/16	-12	3/4	-14	27	42.2	40.4	15.5	12F-MRTR
25	1	1 5/16	-12	1	-11	33	46	50	21.5	16F-MRTR



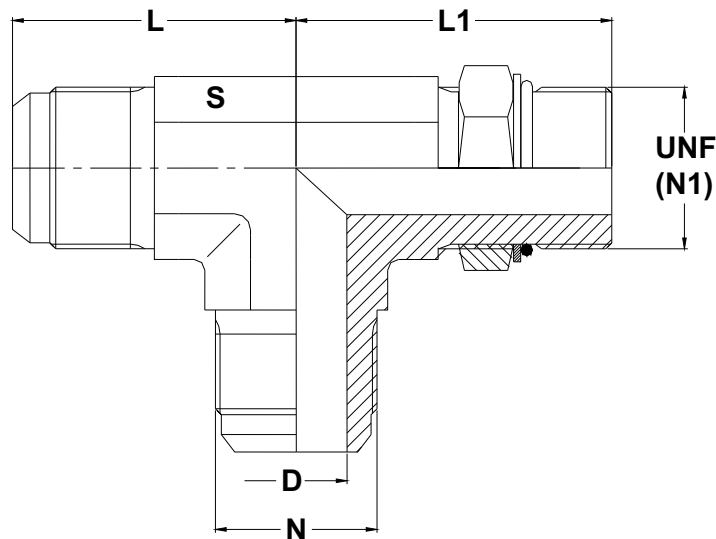
MALE RUN TEE



TUBE OD		THREAD UN / UNF		THREAD BSPT		S	L	L1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-28	11	22.6	26.2	4.4	4-2F-MRTG
8	5/16	1/2	-20	1/8	-28	13	24.1	27.7	6	5-2F-MRTG
10	3/8	9/16	-18	1/4	-19	14	26.9	31.8	7.5	6-4F-MRTG
12	1/2	3/4	-16	3/8	-19	19	31.8	36.8	9.9	8-6F-MRTG
12	1/2	3/4	-16	1/2	-14	22	33.8	43.2	9.9	8F-MRTG
14/15/16	5/8	7/8	-14	1/2	-14	22	36.8	43.2	12.3	10-8F-MRTG
18/20	3/4	1 1/16	-12	3/4	-14	27	42.2	49.3	15.5	12F-MRTG
25	1	1 5/16	-12	1	-11	33	46	52.1	21.5	16F-MRTG
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11	41	52.3	57.2	27.5	20F-MRTG



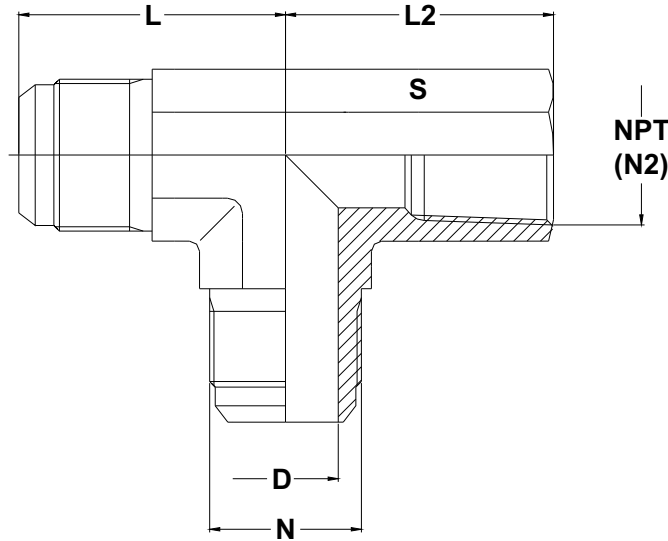
MALE RUN TEE



TUBE OD		THREAD UN / UNF		THREAD UN / UNF		S	L	I	S1	D	PART NO.
mm	inch	N		N1		mm	mm	mm	mm	mm	
6	1/4	7/16	-20	7/16	-20	11	22.6	16.4	14	4.4	4-7F-MRTU
8	5/16	1/2	-20	1/2	-20	13	24.1	17.9	17	6	5-8F-MRTU
10	3/8	9/16	-18	9/16	-20	14	26.9	20.8	17	7.5	6-9F-MRTU
12	1/2	3/4	-16	3/4	-16	19	31.8	24.3	22	9.9	8-12F-MRTU
14/15/16	5/8	7/8	-14	7/8	-14	22	36.8	28.9	27	12.3	10-14F-MRTU
18/20	3/4	1 1/16	-12	1 1/16	-12	27	42.2	32.8	32	15.5	12-17F-MRTU
25	1	1 5/16	-12	1 5/16	-12	33	46	35.6	41	21.5	16-21F-MRTU
28/30/32	1 1/4	1 5/8	-12	1 5/8	-12	41	52.3	40.7	50	27.5	20-26F-MRTU
35/38	1 1/2	1 7/8	-12	1 7/8	-12	48	59.2	44.2	55	33	24-30F-MRTU



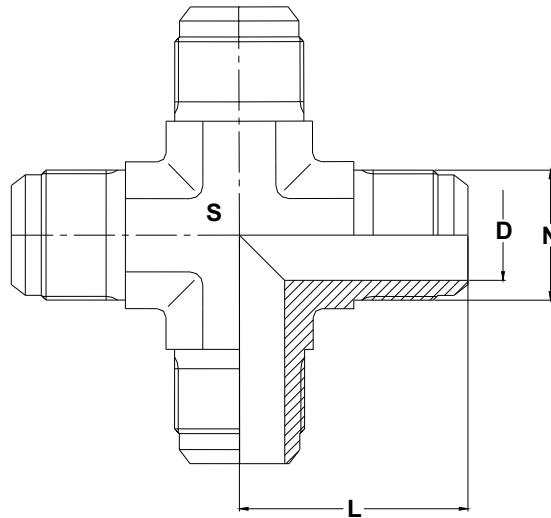
FEMALE RUN TEE



TUBE OD		THREAD UN / UNF		THREAD NPT/NPTF		S	L	L2	D	PART NO.
mm	inch	N		N2		mm	mm	mm	mm	
6	1/4	7/16	-20	1/8	-27	14	27.4	16.8	4.4	4-2F-FRTN
6	1/4	7/16	-20	1/4	-18	19	31	22.3	4.4	4F-FRTN
8	5/16	1/2	-20	1/8	-27	14	27.4	16.8	6	5-2F-FRTN
8	5/16	1/2	-20	1/4	-18	19	28.7	22.3	6	5-4F-FRTN
10	3/8	9/16	-18	1/8	-27	14	31.2	17	7.5	6-2F-FRTN
10	3/8	9/16	-18	1/4	-18	19	31.2	22.3	7.5	6-4F-FRTN
10	3/8	9/16	-18	3/8	-18	22	33.3	25.9	7.5	6F-FRTN
12	1/2	3/4	-16	1/4	-18	19	36.1	25.6	9.9	8-4F-FRTN
12	1/2	3/4	-16	3/8	-18	22	36.1	25.9	9.9	8-6F-FRTN
12	1/2	3/4	-16	1/2	-14	27	38.7	31.2	9.9	8F-FRTN
14/15/16	5/8	7/8	-14	1/2	-14	27	41.7	31.2	12.3	10-8F-FRTN
18/20	3/4	1 1/16	-12	1/2	-14	27	48	34.3	15.5	12-8F-FRTN
18/20	3/4	1 1/16	-12	3/4	-14	33	48	34.5	15.5	12F-FRTN
25	1	1 5/16	-12	1	-11.5	41	55.1	41.4	21.5	16F-FRTN
28/30/32	1 1/4	1 5/8	-12	1 1/4	-11.5	48	59.2	43.2	27.5	20F-FRTN



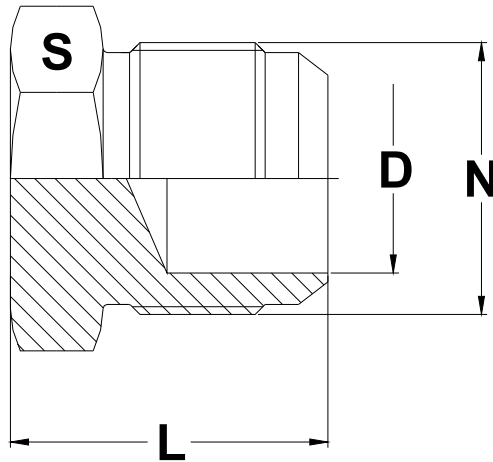
UNION CROSS



TUBE OD		THREAD	S	L	D	PART NO.
mm	inch	UN / UNF	mm	mm	mm	
6	1/4	7/16 -20	11	22.6	4.4	4F-K
8	5/16	1/2 -20	13	24.1	6	5F-K
10	3/8	9/16 -18	14	26.9	7.5	6F-K
12	1/2	3/4 -16	19	31.8	9.9	8F-K
14/15/16	5/8	7/8 -14	22	36.8	12.3	10F-K
18/20	3/4	1 1/16 -12	27	42.2	15.5	12F-K
25	1	1 5/16 -12	33	46	21.5	16F-K
28/30/32	1 1/4	1 5/8 -12	41	52.3	27.5	20F-K
35/38	1 1/2	1 7/8 -12	48	59.2	33	24F-K



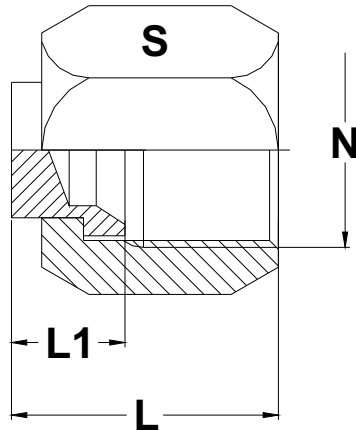
PIPE END CLOSURE



TUBE OD		THREAD	S	L	D	PART NO.
mm	inch	UN / UNF	mm	mm	mm	
6	1/4	7/16 -20	13	20.3	4.4	4F-PLUG
8	5/16	1/2 -20	14	20.3	6	5F-PLUG
10	3/8	9/16 -18	16	21.3	7.5	6F-PLUG
12	1/2	3/4 -16	19	23.9	9.9	8F-PLUG
14/15/16	5/8	7/8 -14	24	27.9	12.3	10F-PLUG
18/20	3/4	1 1/16 -12	27	32.5	15.5	12F-PLUG
25	1	1 5/16 -12	36	33.8	21.5	16F-PLUG
28/30/32	1 1/4	1 5/8 -12	46	36.8	27.5	20F-PLUG
35/38	1 1/2	1 7/8 -12	51	42.2	33	24F-PLUG



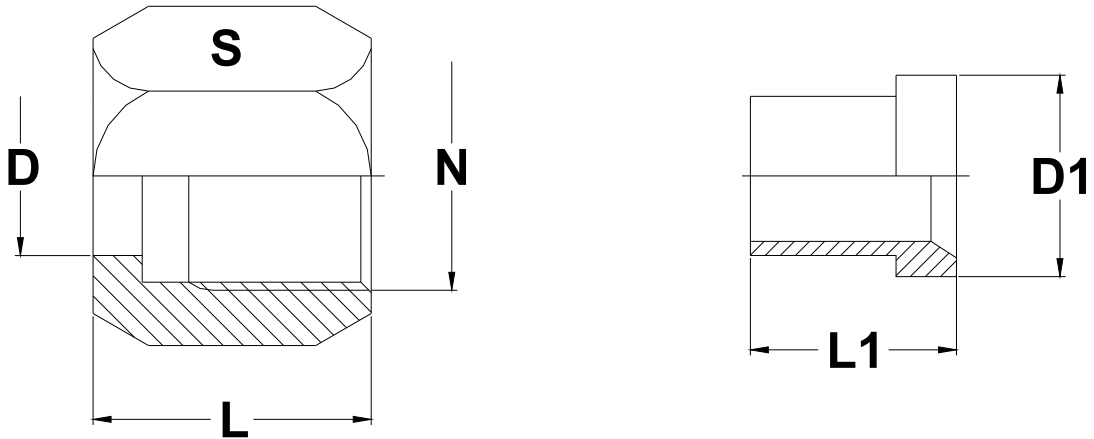
FITTING END CLOSURE



TUBE OD		THREAD	S	L	L1	PART NO.
mm	inch	UN / UNF	mm	mm	mm	
6	1/4	7/16 -20	14	17	9	4F-CAP
8	5/16	1/2 -20	17	19.5	10.5	5F-CAP
10	3/8	9/16 -18	19	20.5	10.5	6F-CAP
12	1/2	3/4 -16	22	23.9	13	8F-CAP
14/15/16	5/8	7/8 -14	27	27.1	14	10F-CAP
18/20	3/4	1 1/16 -12	32	31.6	14	12F-CAP
25	1	1 5/16 -12	41	32.8	17	16F-CAP
28/30/32	1 1/4	1 5/8 -12	50	35.47	19	20F-CAP
35/38	1 1/2	1 7/8 -12	60	43.2	21	24F-CAP



NUTS AND SLEEVES



TUBE OD		THREAD	S	L	D	L1	D1	PART NO.	
mm	inch	N	mm	mm	mm	mm	mm	NUT	SLEEVE
6	1/4	7/16 -20	14	15.5	7.8	10.4	9.7	4F-N	4F-S
8	5/16	1/2 -20	17	17	9.5	11.2	11.3	5F-N	5F-S
10	3/8	9/16 -18	19	18.3	11.2	12.7	12.7	6F-N	6F-S
12	1/2	3/4 -16	22	21.3	14.5	14.2	17.3	8F-N	8F-S
14/15/16	5/8	7/8 -14	27	24.6	17.8	16.8	20.2	10F-N	10F-S
18/20	3/4	1 1/16 -12	32	25.9	21.2	17.3	24.7	12F-N	12F-S
25	1	1 5/16 -12	41	28.4	27.7	19.8	31	16F-N	16F-S
28/30/32	1 1/4	1 5/8 -12	50	31	34.2	23.1	38.9	20F-N	20F-S
35/38	1 1/2	1 7/8 -12	60	35.8	41	28.4	45.3	24F-N	24F-S



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