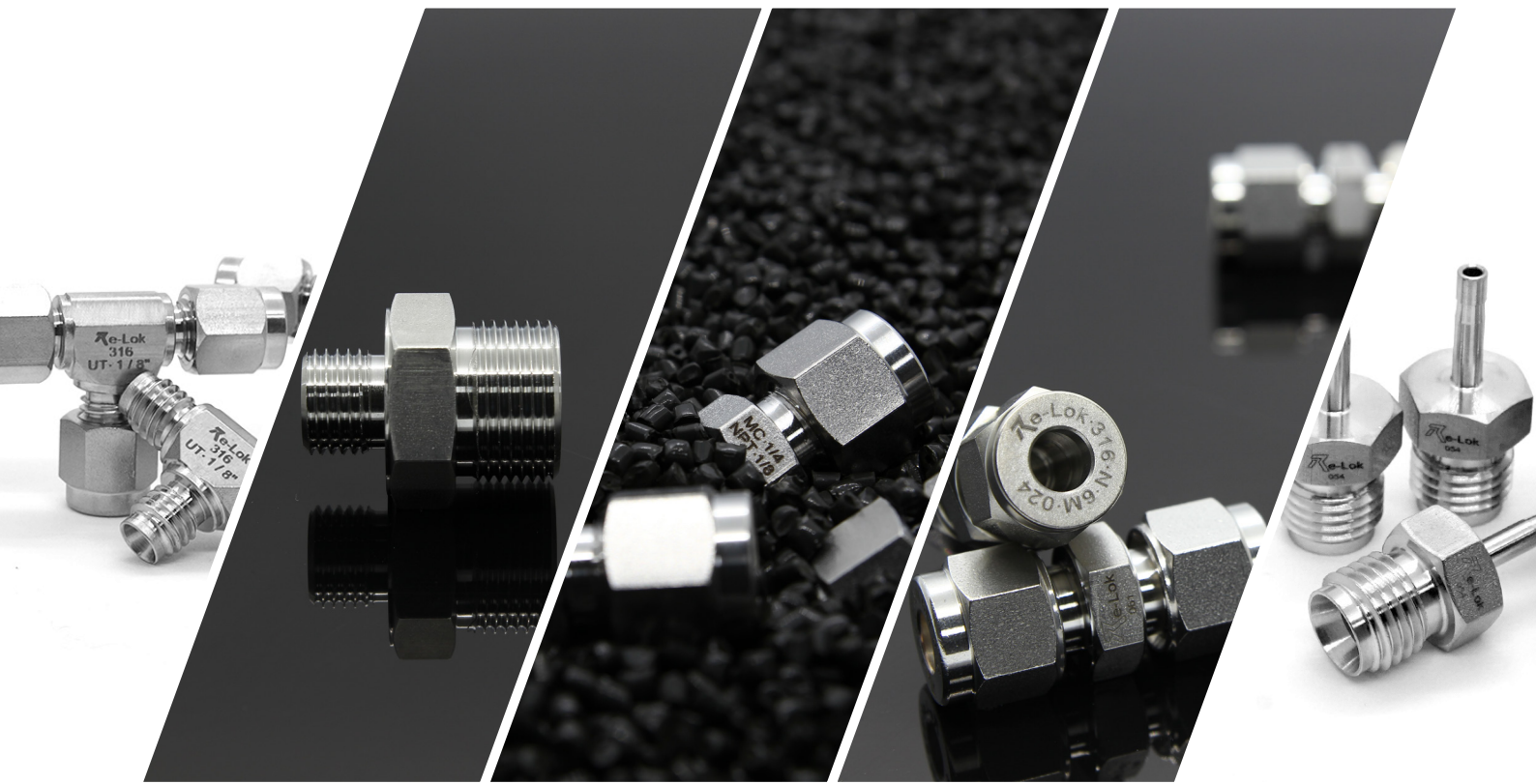




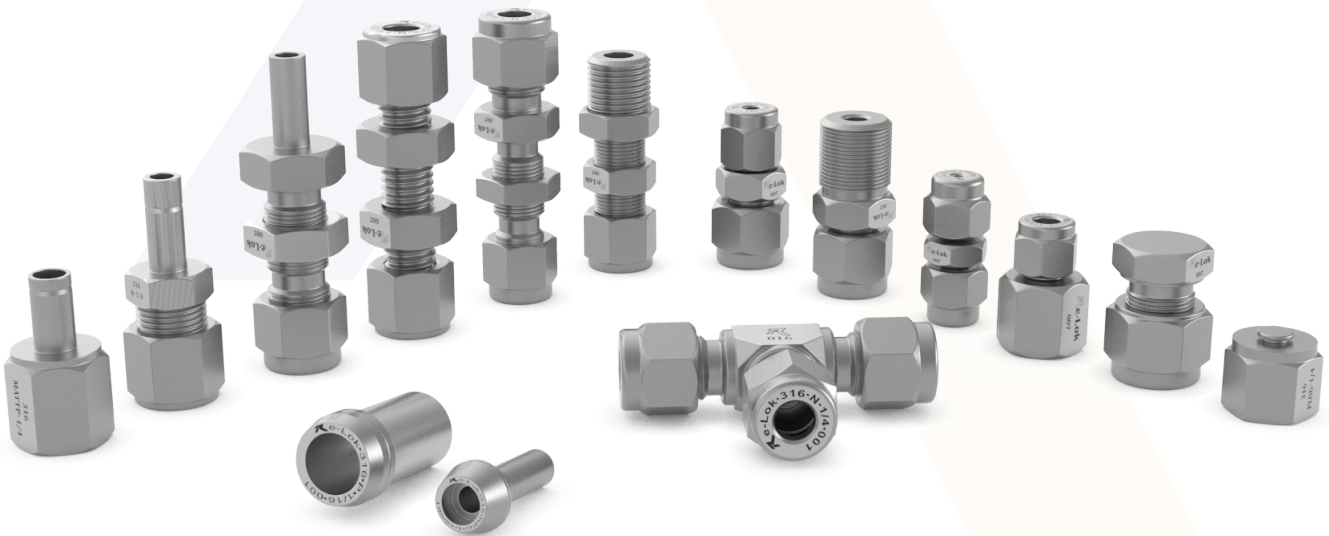
Compression Fittings Catalog



FERRULE (FF-BF)		8	BULKHEAD MALE CONNECTOR (BMC)		50
NUT (NUT)		9	MALE PIPE WELD CONNECTOR (MPWC)		51-52
UNION (U)		10	TUBE SOCKET WELD UNION (TSWU)		53
REDUCING UNION (RU)		11-15	FEMALE ADAPTOR TUBE TO PIPE (FATTP)		54-55
UNION TEE (UT)		16-17	MALE ADAPTOR TUBE TO PIPE (MATTP)		56-63
FEMALE CONNECTOR (FC)		18-24	SOCKET WELD ADAPTOR (SWA)		63
MALE CONNECTOR (MC)		25-37	CAP (CAP)		64
REDUCER (R)		38-42	PLUG (PLUG)		65
REDUCING PORT CONNECTOR (RPC)		43	UNION CROSS (UC)		66
PORT CONNECTOR (PC)		44	UNION ELBOW (UE)		67
BULKHEAD UNION (BU)		45-46	FEMALE ELBOW (FE)		68-69
BULKHEAD REDUCER (BR)		47	MALE ELBOW (ME)		70-76
BULKHEAD REDUCING UNION (BRU)		48	FEMALE BRANCH TEE (FBT)		77
BULKHEAD FEMALE CONNECTOR (BFC)		49	MALE BRANCH TEE (MBT)		78

ABOUT US

Re-Lok pipe fittings are produced in our state-of-the-art facility under the guidance of our experienced engineers. The quality of the fittings is our first and foremost priority in every stage of the production process. Furthermore, we adopt this very approach in material selection, design, production, testing, packaging, pre- and post-sales as well. We offer high quality with compatible prices. The value guaranteed by our product standards is always beyond our prices. We have a wide stock range in our warehouses. In addition to that, we focus on responding your custom order needs in the shortest time possible.



COMPRESSION FITTINGS

Re-Lok pipe fittings are mechanisms used both to seal and grip pipes. The mechanical advantage and geometry of such fittings ensures a leakproof assembly.

Re-Lok fittings are widely used in many diverse industries such as research, petrochemical, oil and gas, power and instrumentation.

- Great sealing ability
- Reliable design that prevents stripping
- Size ranges from 1/16" to 2" and from 2 mm to 50 mm
- High quality material and configuration for various needs
- Fast and easy assembly and disassembly
- Long-term and repetitive use thanks to its hardened, smooth thread structure
- Traceable quality thanks to its lot numbering
- Excellent assembly technique that does not create torque on the pipe during installation

ASSEMBLY INSTRUCTIONS

ASSEMBLY INSTRUCTIONS

1. Insert the pipe into the Re-Lok fitting.
2. Check that the pipe is placed on the fitting shoulder and the nut is hand-tight. At this point, it is recommended to draw a mark on the hexagon of the nut that extends into the fitting body. This mark will serve as an indicator for the starting point.
3. Tighten the nut according to the table given below which shows number of turns specified for different sizes.

Nut Size	Number of Turns
1/4 inch or 6 mm and larger	1-1/4 (5/4)
Smaller than 1/4 inch or 6 mm	3/4

REASSEMBLY INSTRUCTIONS

Re-Lok fittings can be assembled and reassembled several times without needing a new set of seals.

1. Before disassembling the nut, draw a mark on the fitting body according to the position of the nut on the body.
2. To reassemble the nut, tighten the nut with a wrench until it returns to its original position.
3. Gently tighten the nut until feeling a slight increase of torque.

QUALITY STANDARDS

Re-Lok pipe fittings are designed and produced by a team of expert mechanical and chemical engineers.

Re-Lok products, which are tested at every stage from production to packaging, have the highest quality standards.

Re-Lok pipe fittings provide a strip and leak free application even under high pressure. Our products are quality controlled regularly in Reaksi Laboratories.

Our products are subjected to:

- Pressure resistance and safety tests at 1000 bar;
- Performance tests up to 750 bar;
- Leak tests at 750 bar;
- Reassembly tests for 300 times.

Our long-term use guaranteed equipment is made of ASIS 316 stainless steel.

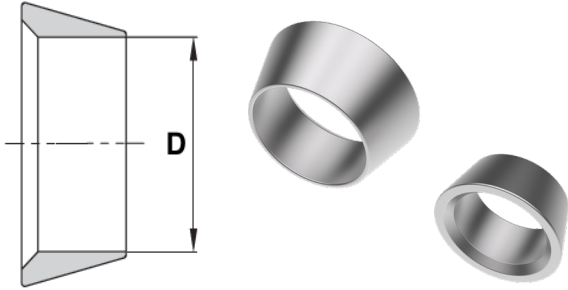
Re-Lok pipe fittings are cleaned in accordance with ASTM G93 standard following special passivation processes against corrosion.

After the cleaning process, the inner surfaces of the nuts are finally silver plated in accordance with the SAE AMS 2410 standard.

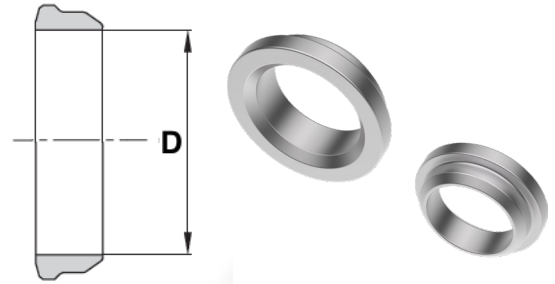
Other cleaning and coating procedures are carried out on special request. Please contact us for such requests.

FERRULE

FRONT FERRULE



BACK FERRULE



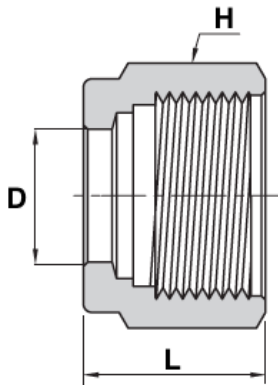
METRIC	
Product ID	D
	mm
FF_2 mm	2
FF_3	3
FF_4	4
FF_6	6
FF_8	8
FF_10	10
FF_12	12
FF_14	14
FF_15	15
FF_16	16
FF_18	18
FF_20	20
FF_22	22
FF_25	25
FF_28	28
FF_30	30
FF_32	32
FF_38	38
FF_50	50

IMPERIAL	
Product ID	D
	inch
FF_1/16	1/16
FF_1/8	1/8
FF_3/16	3/16
FF_1/4	1/4
FF_5/16	5/16
FF_3/8	3/8
FF_1/2	1/2
FF_5/8	5/8
FF_3/4	3/4
FF_7/8	7/8
FF_1	1
FF_1 1/4	1 1/4
FF_1 1/2	1 1/2
FF_2"	2

METRIC	
Product ID	D
	mm
BF_2 mm	2
BF_3	3
BF_4	4
BF_6	6
BF_8	8
BF_10	10
BF_12	12
BF_14	14
BF_15	15
BF_16	16
BF_18	18
BF_20	20
BF_22	22
BF_25	25
BF_28	28
BF_30	30
BF_32	32
BF_38	38
BF_50	50

IMPERIAL	
Product ID	D
	inch
BF_1/16	1/16
BF_1/8	1/8
BF_3/16	3/16
BF_1/4	1/4
BF_5/16	5/16
BF_3/8	3/8
BF_1/2	1/2
BF_5/8	5/8
BF_3/4	3/4
BF_7/8	7/8
BF_1	1
BF_1 1/4	1 1/4
BF_1 1/2	1 1/2
BF_2"	2

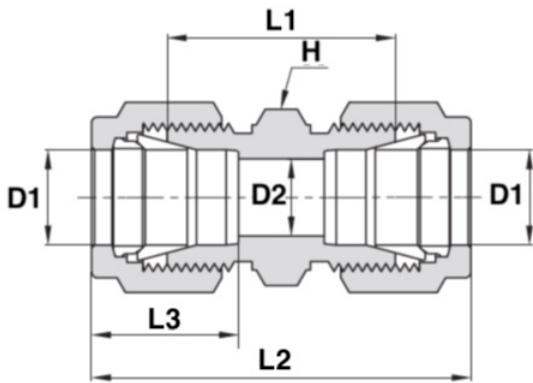
NUT



METRIC			
Product ID	D	H	L
	mm	mm	mm
NUT_2 mm	2	12	11.9
NUT_3	3	12	11.9
NUT_4	4	12	11.9
NUT_6	6	14	12.7
NUT_8	8	16	13.5
NUT_10	10	19	15.1
NUT_12	12	22	17.4
NUT_14	14	25	17.4
NUT_15	15	25	17.4
NUT_16	16	25	17.4
NUT_18	18	30	17.4
NUT_20	20	32	17.4
NUT_22	22	32	17.4
NUT_25	25	38	20.6
NUT_28	28	46	30.6
NUT_B28	B28	45	20.6
NUT_30	30	50	32.7
NUT_32	32	50	34.4
NUT_38	38	60	40.6
NUT_50	50	3 inch	54.0

IMPERIAL			
Product ID	D	H	L
	inch	inch	inch
NUT_1/16	1/16	5/16	.31
NUT_1/8	1/8	7/16	.47
NUT_3/16	3/16	1/2	.47
NUT_1/4	1/4	9/16	.50
NUT_5/16	5/16	5/8	.53
NUT_3/8	3/8	11/16	.56
NUT_1/2	1/2	7/8	.69
NUT_5/8	5/8	1	.69
NUT_3/4	3/4	1 1/8	.69
NUT_7/8	7/8	1 1/4	.69
NUT_1	1	1 1/2	.81
NUT_1 1/4	1 1/4	1 7/8	1.25
NUT_1 1/2	1 1/2	2 1/4	1.50
NUT_2"	2	3	2.06

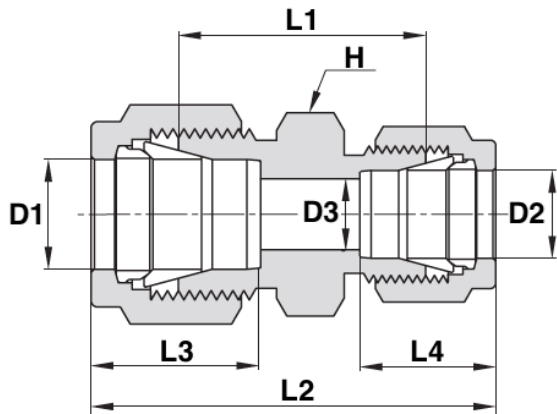
UNION



METRIC						
Product ID	D1	D2	H	L1	L2	L3
	mm	mm	mm	mm	mm	mm
U_2 mm	2	1.7	12	22.4	35.6	12.9
U_3	3	2.4	12	22.1	35.3	12.9
U_4	4	2.4	12	24.1	37.3	13.7
U_6	6	4.8	14	26.2	41.0	15.3
U_8	8	6.4	15	28.2	43.2	16.2
U_10	10	7.9	18	31.0	46.2	17.2
U_12	12	9.5	22	31.0	51.2	22.8
U_14	14	11.1	24	31.8	52.0	24.4
U_15	15	11.9	24	31.8	52.0	24.4
U_16	16	12.7	24	31.8	52.0	24.4
U_18	18	15.1	27	33.3	53.5	24.4
U_20	20	15.9	30	34.8	55.0	26.0
U_22	22	18.3	30	34.8	55.0	26.0
U_25	25	21.8	35	40.4	65.0	31.3
U_28	28	21.8	*	*	85.0	36.6
U_B28	B28	24.6	*	*	65.4	31.6
U_30	30	26.2	*	*	92.7	39.6
U_32	32	28.6	*	*	97.3	42.0
U_38	38	33.7	55	58.4	114.0	49.4
U_50	50	45.2	3 inch	71.7	146.0	65.0

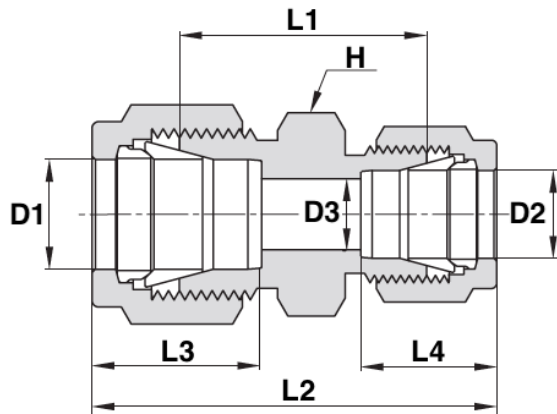
IMPERIAL						
Product ID	D1	D2	H	L1	L2	L3
	inch	inch	inch	inch	inch	inch
U_1/16	1/16	.05	5/16	.69	.99	.34
U_1/8	1/8	.09	7/16	.88	1.40	.50
U_3/16	3/16	.12	7/16	.95	1.47	.54
U_1/4	1/4	.19	1/2	1.03	1.61	.60
U_5/16	5/16	.25	9/16	1.11	1.69	.64
U_3/8	3/8	.28	5/8	1.19	1.77	.66
U_1/2	1/2	.41	13/16	1.22	2.02	.90
U_1/2-003	1/2	.50	*	*	4.30	*
U_5/8	5/8	.50	15/16	1.25	2.05	.96
U_3/4	3/4	.62	1 1/16	1.31	2.11	.96
U_7/8	7/8	.72	1 3/16	1.37	2.17	1.02
U_1	1	.88	1 3/8	1.59	2.55	1.23
U_1 1/8	1 1/8	.97			2.55	1.23
U_1 1/4	1 1/4	1.09	1 3/4	1.89	3.63	1.62
U_1 1/2	1 1/2	1.34	2 1/8	2.11	4.25	1.97
U_2"	2	1.81	2 3/4	2.94	5.88	2.66

REDUCING UNION



METRIC TO METRIC								
Product ID	D1	D2	D3	H	L1	L2	L3	L4
	mm	mm	mm	mm	mm	mm	mm	mm
RU_3 x 2	3	2	1.7	12	22.1	35.3	12.9	12.9
RU_4 x 3	4	3		11.1		41.6		
RU_6 x 2	6	2	1.7	14	24.6	38.6	15.3	12.9
RU_6 x 3	6	3	2.4	14	24.6	38.6	15.3	12.9
RU_6 x 4	6	4	2.4	14	25.4	39.4	15.3	13.7
RU_8 x 4	8	4		14.3		43.6		
RU_8 x 6	8	6	4.8	15	27.4	42.3	16.2	15.3
RU_10 x 6	10	6	4.8	18	29.5	44.5	17.2	15.3
RU_10 x 8	10	8	6.4	18	30.0	45.1	17.2	16.2
RU_12 x 6	12	6	4.8	22	29.5	47.0	22.8	15.3
RU_12 x 8	12	8	6.4	22	30.2	47.8	22.8	16.2
RU_12 x 10	12	10	7.9	22	31.0	48.7	22.8	17.2
RU_14 x 8	14	8		22.2		47.2		
RU_14 x 10	14	10		19.1		48.3		
RU_14 x 12	14	12	6.4			48.8	24.4	22.8
RU_15 x 12	15	12	6.4			48.8	24.4	22.8
RU_16 x 10	16	10	7.9	24	31.8	49.5	24.4	17.2
RU_16 x 12	16	12	9.5	24	31.8	52.0	24.4	22.8
RU_18 x 12	18	12	9.5	27	33.3	53.5	24.4	22.8
RU_18 x 16	18	16		27		57.4		

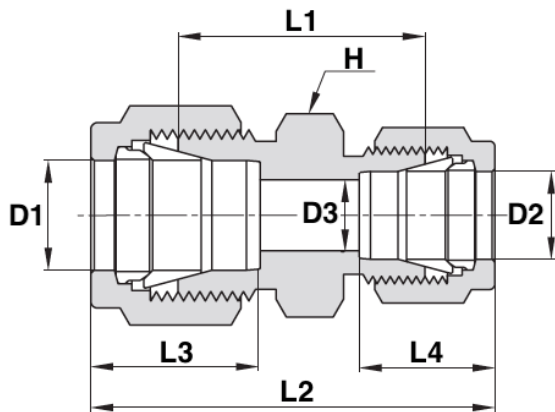
REDUCING UNION



METRIC TO METRIC (CONT)

Product ID	D1	D2	D3	H	L1	L2	L3	L4
	mm	mm	mm	mm	mm	mm	mm	mm
RU_22 x 12	22	12	*	30.1	*	59.5	*	*
RU_22 x 18	22	18	*	34.9	*	61.1	*	*
RU_25 x 12	25	12	*	34.9	*	66	*	*
RU_25 x 18	25	18	15.1	35	38.6	61.0	31.3	24.4
RU_25 x 20	25	20	15.9	35	39.9	62.3	31.3	26.0
RU_30 x 18	30	18	15.1	*	*	75.4	39.6	24.4
RU_30 x 20	30	20	15.9	*	*	75.4	39.6	26.0
RU_30 x 25	30	25	21.8	*	*	80.1	39.6	31.3
RU_32 x 18	32	18	15.1	*	*	77.8	42.0	24.4
RU_32 x 20	32	20	15.9	*	*	77.8	42.0	26.0
RU_32 x 25	32	25	21.8	*	*	82.3	42.0	31.3
RU_38 x 20	38	20	15.9	55	49.8	87.5	49.4	26.0
RU_38 x 25	38	25	21.8	55	55.5	95.4	49.4	31.3
RU_38 x 30	38	30	26.2	*	*	105	49.4	39.6

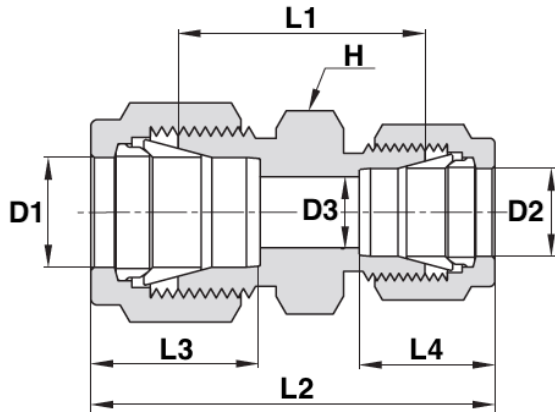
REDUCING UNION



METRIC TO IMPERIAL

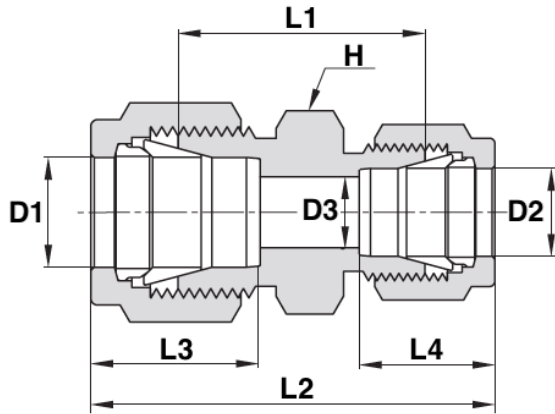
Product ID	D1	D2	D3	H	L1	L2	L3	L4
	mm	inch	mm	mm	mm	mm	mm	mm
RU_2 x 1/8	2	1/8	1.7	12	*	35.2	12.9	12.8
RU_2 x 1/4	2	1/4	1.7	14	24.6	38.6	12.9	15.2
RU_3 x 1/16	3	1/16	*	11.1	*	36.1	*	*
RU_3 x 1/8	3	1/8	2.4	12	22.1	35.2	12.9	12.7
RU_3 x 1/4	3	1/4	*	12.5	*	42.5	*	*
RU_4 x 1/8	4	1/8	2.4	12	23.4	36.5	13.7	12.7
RU_4 x 1/4	4	1/4	2.4	14	25.4	39.4	13.7	15.2
RU_6 x 1/16	6	1/16	1.3	14	*	34.3	15.3	8.6
RU_6 x 1/8	6	1/8	2.4	14	24.6	38.5	15.3	12.7
RU_6 x 1/4	6	1/4	4.8	14	26.2	41.0	15.3	15.2
RU_6 x 5/16	6	5/16	4.8	14	27.4	42.3	15.3	16.2
RU_6 x 1/2	6	1/2	*	20.6	29.4	49.7	*	*
RU_6 x 3/8	6	3/8	4.8	14		43.2	15.3	16.8
RU_8 x 1/8	8	1/8	2.4	15	25.7	39.8	16.2	12.7
RU_8 x 3/16	8	3/16	*	43.2	27.2	14.3	*	*
RU_8 x 1/4	8	1/4	4.8	15	27.4	42.3	16.2	15.2
RU_8 x 3/8	8	3/8	6.4	16	29.5	44.3	16.2	16.8
RU_8 x 1/2	8	1/2	*	20.6	31	50.9	*	*
RU_8 x 5/8	8	5/8	*	23.8	31	50.1	*	*

REDUCING UNION



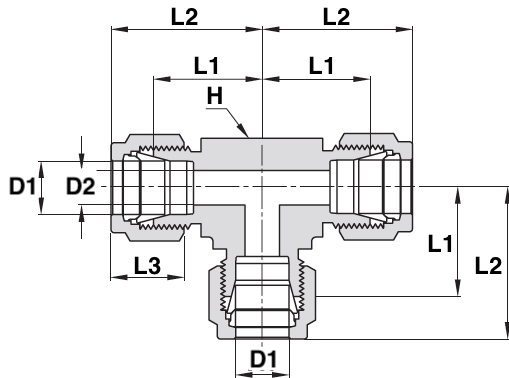
METRIC TO IMPERIAL (CONT)								
Product ID	D1	D2	D3	H	L1	L2	L3	L4
	mm	inch	mm	mm	mm	mm	mm	mm
RU_10 x 1/8	10	1/8	2.4	18	27.7	41.8	17.2	12.7
RU_10 x 1/4	10	1/4	4.8	18	29.5	44.5	17.2	15.2
RU_10 x 5/16	10	5/16	6.4	18	30.0	45.1	17.2	16.2
RU_10 x 3/8	10	3/8	7.1	18	31.0	45.9	17.2	16.8
RU_10 x 1/2	10	1/2		20.6	30.4	50.3		
RU_10 x 5/8	10	5/8		23.8	31.8	50.9		
RU_12 x 1/4	12	1/4	4.8	22		47	22.8	15.3
RU_12 x 5/16	12	5/16	6.4	22	30.2	47.8	22.8	16.2
RU_12 x 3/8	12	3/8	7.1	22	31.0	48.4	22.8	16.8
RU_12 x 1/2	12	1/2	9.5	22	31.0	51.2	22.8	22.9
RU_14 x 1/2	14	1/2	10.3	24		52	24.4	22.9
RU_15 x 1/2	15	1/2	10.3	24	31.8	52.0	24.4	22.9
RU_16 x 5/8	16	5/8	12.7	24	31.8	52.0	24.4	24.4
RU_16 x 3/4	16	3/4		27	35	57.5		
RU_18 x 3/4	18	3/4	15.1	27	33.3	53.5	24.4	24.4
RU_20 x 1/2	20	1/2	10.3	30		55	26	22.9
RU_20 x 1	20	1	15.9	35		62.8	26	31.3
RU_25 x 1	25	1	21.8	35		65	31.3	31.3

REDUCING UNION



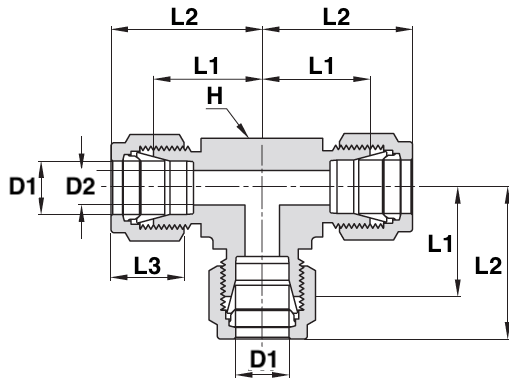
IMPERIAL TO IMPERIAL								
Product ID	D1	D2	D3	H	L1	L2	L3	L4
	mm	inch	mm	mm	mm	mm	mm	mm
RU_1/8 x 1/16	1/8	1/16	.05	7/16	.81	1.22	.50	.34
RU_3/16 x 1/16	3/16	1/16	.05	7/16	.86	1.27	.54	.34
RU_3/16 x 1/8	3/16	1/8	.09	7/16	.92	1.44	.54	.50
RU_1/4 x 1/16	1/4	1/16	.05	1/2	.91	1.35	.60	.34
RU_1/4 x 1/8	1/4	1/8	.09	1/2	.97	1.52	.60	.50
RU_1/4 x 3/16	1/4	3/16	.12	1/2	1.00	1.55	.60	.54
RU_5/16 x 1/8	5/16	1/8	.09	9/16	1.01	1.56	.64	.50
RU_5/16 x 1/4	5/16	1/4	.19	9/16	1.08	1.66	.64	.60
RU_3/8 x 1/16	3/8	1/16	.05	5/8	1.00	1.44	.66	.34
RU_3/8 x 1/8	3/8	1/8	.09	5/8	1.06	1.61	.66	.50
RU_3/8 x 1/4	3/8	1/4	.19	5/8	1.12	1.70	.66	.60
RU_3/8 x 5/16	3/8	5/16	.25	5/8	1.16	1.74	.66	.64
RU_1/2 x 1/8	1/2	1/8	.09	13/16	1.12	1.78	.90	.50
RU_1/2 x 1/4	1/2	1/4	.19	13/16	1.16	1.85	.90	.60
RU_1/2 x 3/8	1/2	3/8	.28	13/16	1.22	1.91	.90	.66
RU_5/8 x 3/8	5/8	3/8	.28	15/16	1.25	1.94	.96	.66
RU_5/8 x 1/2	5/8	1/2	.41	15/16	1.25	2.05	.96	.90
RU_3/4 x 1/4	3/4	1/4	.19	1 1/16	1.25	1.94	.96	.60
RU_3/4 x 3/8	3/4	3/8	.28	1 1/16	1.31	2.00	.96	.66
RU_3/4 x 1/2	3/4	1/2	.41	1 1/16	1.31	2.11	.96	.90
RU_3/4 x 5/8	3/4	5/8	.50	1 1/16	1.31	2.11	.96	.96
RU_7/8 x 3/4	7/8	3/4	*	1 3/16	1.44	2.3	*	*
RU_1 x 1/2	1	1/2	.41	1 3/8	1.50	2.38	1.23	.90
RU_1 x 3/4	1	3/4	.62	1 3/8	1.50	2.38	1.23	.96
RU_1 x 7/8	1	7/8	*	1 3/8	1.56	2.58	*	*
RU_2 x 1 1/2	2	1 1/2	*	2 3/4	2.65	5.18	*	*

UNION TEE



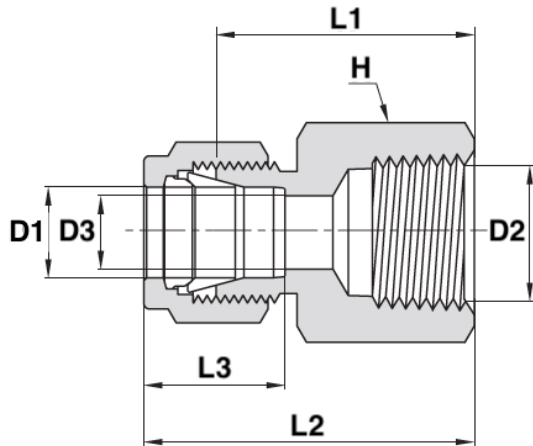
METRIC						
Product ID	D1 mm	D2 mm	H mm	L1 mm	L2 mm	L3 mm
UT_2 mm	2	1.7	9.5	15.7	22.3	12.9
UT_3	3	2.4	9.5	15.7	22.3	12.9
UT_4	4	2.4	12.7	18.8	25.4	13.7
UT_6	6	4.8	12.7	19.6	27.0	15.3
UT_8	8	6.4	15.9	22.4	29.9	16.2
UT_10	10	7.9	17.5	23.9	31.5	17.2
UT_12	12	9.5	20.6	25.9	36.0	22.8
UT_14	14	11.1	23.8	28.7	38.8	24.4
UT_15	15	11.9	23.8	28.7	38.8	24.4
UT_16	16	12.7	23.8	28.7	38.8	24.4
UT_18	18	15.1	27.0	29.7	39.8	24.4
UT_20	20	15.9	34.9	34.5	44.6	26.0
UT_22	22	18.3	34.9	34.5	44.6	26.0
UT_25	25	21.8	34.9	36.8	49.1	31.3
UT_28	28	21.8	41.0	*	64	36.6
UT_B28	B28	24.6	*	*	51.4	31.6
UT_30	30	26.2	46.0	*	69.9	39.6
UT_32	32	28.6	46.0	*	72.3	42.0
UT_38	38	33.7	55.0	56.4	84.0	49.4
UT_50	50	45.2	69.9	68.9	106.0	65.0

UNION TEE



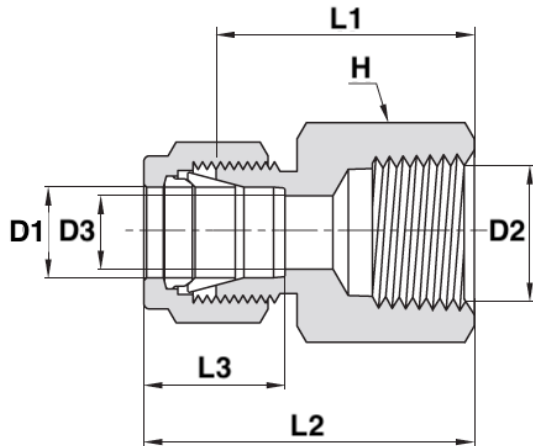
IMPERIAL						
Product ID	D1 inch	D2 inch	H inch	L1 inch	L2 inch	L3 inch
UT_1/16	1/16	.05	3/8	.55	.70	.34
UT_1/8	1/8	.09	3/8	.62	.88	.50
UT_3/16	3/16	.12	1/2	.70	.96	.54
UT_1/4	1/4	.19	1/2	.77	1.06	.60
UT_5/16	5/16	.25	5/8	.88	1.17	.64
UT_3/8	3/8	.28	5/8	.91	1.20	.66
UT_1/2	1/2	.41	13/16	1.02	1.42	.90
UT_5/8	5/8	.50	15/16	1.13	1.53	.96
UT_3/4	3/4	.62	1 1/16	1.17	1.57	.96
UT_7/8	7/8	.72	1 3/8	1.36	1.76	1.02
UT_1	1	.88	1 3/8	1.45	1.93	1.23
UT_B1 1/8	B1 1/8	.97	1 11/16	*	2.17	1.23
UT_1 1/4	1 1/4	1.09	1 11/16	1.75	2.62	1.62
UT_1 1/2	1 1/2	1.34	2	2.00	3.07	1.97
UT_2"	2	1.81	2 3/4	2.75	4.22	2.66

FEMALE CONNECTOR



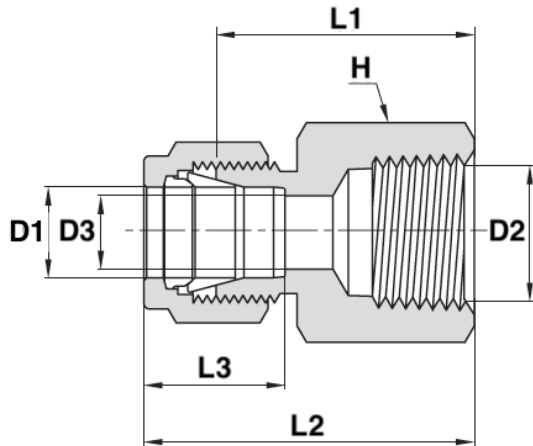
METRIC TO NPT							
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3
	mm	inch	mm	mm	mm	mm	mm
FC_3 x NPT-1/8	3	1/8	2.4	14	22.1	28.7	12.9
FC_3 x NPT-1/4	3	1/4	2.4	19	26.9	33.5	12.9
FC_4 x NPT-1/8	4	1/8	2.4	14	23.1	29.7	13.7
FC_6 x NPT-1/8	6	1/8	4.8	14	23.9	31.3	15.3
FC_6 x NPT-1/4	6	1/4	4.8	19	28.4	35.8	15.3
FC_6 x NPT-3/8	6	3/8	4.8	22	30.2	37.6	15.3
FC_6 x NPT-1/2	6	1/2	4.8	27	35.1	42.5	15.3
FC_8 x NPT-1/8	8	1/8	6.4	15	24.6	32.1	16.2
FC_8 x NPT-1/4	8	1/4	6.4	19	29.5	37.0	16.2
FC_8 x NPT-3/8	8	3/8	6.4	22	31.0	38.5	16.2
FC_8 x NPT-1/2	8	1/2	6.4	27	35.8	43.3	16.2
FC_10 x NPT-1/4	10	1/4	7.9	19	30.2	37.8	17.2
FC_10 x NPT-3/8	10	3/8	7.9	22	31.8	39.4	17.2
FC_10 x NPT-1/2	10	1/2	7.9	27	36.6	44.2	17.2
FC_12 x NPT-1/4	12	1/4	9.5	22	30.2	40.3	22.8
FC_12 x NPT-3/8	12	3/8	9.5	22	31.8	41.9	22.8
FC_12 x NPT-1/2	12	1/2	9.5	27	36.6	46.7	22.8
FC_15 x NPT-1/2	15	1/2	11.9	27	36.6	46.7	24.4
FC_16 x NPT-1/2	16	1/2	12.7	27	36.8	46.9	24.4
FC_20 x NPT-1/2	20	1/2	15.9	30	37.8	47.9	26.0
FC_20 x NPT-3/4	20	3/4	15.9	35	39.6	49.7	26.0
FC_22 x NPT-3/4	22	3/4	18.3	35	39.6	49.7	26.0
FC_22 x NPT-1	22	1	18.3	41	47.8	57.9	26.0
FC_25 x NPT-3/4	25	3/4	21.8	35	41.1	53.4	31.3
FC_25 x NPT-1	25	1	21.8	41	50.0	62.3	31.3

FEMALE CONNECTOR



IMPERIAL TO NPT							
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3
	inch	inch	inch	inch	inch	inch	inch
FC_1/16 x NPT-1/16	1/16	1/16	.05	7/16	.78	.93	.34
FC_1/16 x NPT-1/8	1/16	1/8	.05	9/16	.81	.96	.34
FC_1/8 x NPT-1/8	1/8	1/8	.09	9/16	.87	1.13	.50
FC_1/8 x NPT-1/4	1/8	1/4	.09	3/4	1.06	1.32	.50
FC_3/16 x NPT-1/8	3/16	1/8	.12	9/16	.91	1.17	.54
FC_1/4 x NPT-1/8	1/4	1/8	.19	9/16	.94	1.23	.60
FC_1/4 x NPT-1/4	1/4	1/4	.19	3/4	1.12	1.41	.60
FC_1/4 x NPT-3/8	1/4	3/8	.19	7/8	1.19	1.48	.60
FC_1/4 x NPT-1/2	1/4	1/2	.19	1 1/16	1.38	1.67	.60
FC_5/16 x NPT-1/8	5/16	1/8	.25	9/16	.97	1.26	.64
FC_5/16 x NPT-1/4	5/16	1/4	.25	3/4	1.16	1.45	.64
FC_3/8 x NPT-1/8	3/8	1/8	.28	5/8	1.00	1.29	.66
FC_3/8 x NPT-1/4	3/8	1/4	.28	3/4	1.19	1.48	.66
FC_3/8 x NPT-3/8	3/8	3/8	.28	7/8	1.25	1.54	.66
FC_3/8 x NPT-1/2	3/8	1/2	.28	1 1/16	1.44	1.73	.66
FC_3/8 x NPT-3/4	3/8	3/4	.28	1 5/16	1.59	1.88	.66
FC_1/2 x NPT-1/4	1/2	1/4	.41	13/16	1.19	1.59	.90
FC_1/2 x NPT-3/8	1/2	3/8	.41	7/8	1.25	1.65	.90
FC_1/2 x NPT-1/2	1/2	1/2	.41	1 1/16	1.44	1.84	.90
FC_1/2 x NPT-3/4	1/2	3/4	.41	1 5/16	1.50	1.90	.90

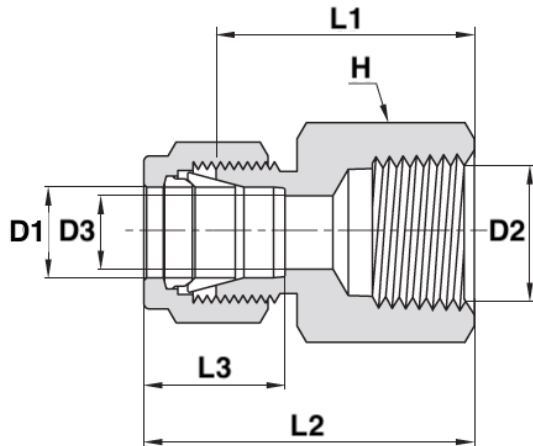
FEMALE CONNECTOR



IMPERIAL TO NPT (CONT)

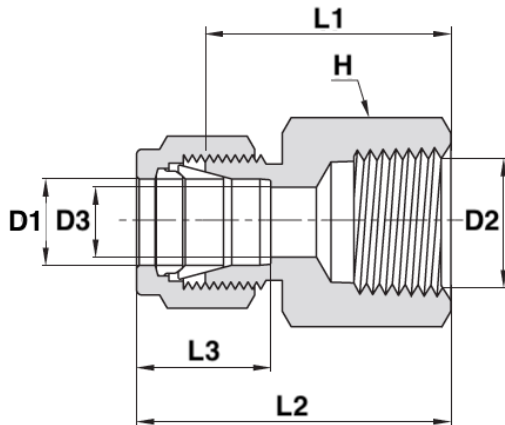
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3
	inch	inch	inch	inch	inch	inch	inch
FC_5/8 x NPT-3/8	5/8	3/8	.50	15/16	1.25	1.65	.96
FC_5/8 x NPT-1/2	5/8	1/2	.50	1 1/16	1.44	1.84	.96
FC_5/8 x NPT-3/4	5/8	3/4	.50	1 5/16	1.50	1.90	.96
FC_3/4 x NPT-1/2	3/4	1/2	.62	1 1/16	1.44	1.84	.96
FC_3/4 x NPT-3/4	3/4	3/4	.62	1 5/16	1.50	1.90	.96
FC_7/8 x NPT-3/4	7/8	3/4	.72	1 5/16	1.56	1.96	1.02
FC_1 x NPT-3/4	1	3/4	.88	1 3/8	1.62	2.10	1.23
FC_1 x NPT-1	1	1	.88	1 5/8	1.97	2.45	1.23
FC_1 1/4 x NPT-1 1/4	1 1/4	1 1/4	1.09	2.25	2.07	2.94	1.62
FC_1 1/2 x NPT-1 1/2	1 1/2	1 1/2	1.34	2.375	2.21	3.28	1.97
FC_2 x NPT-2	2	2	1.81	2.875	2.53	4.00	2.66

FEMALE CONNECTOR



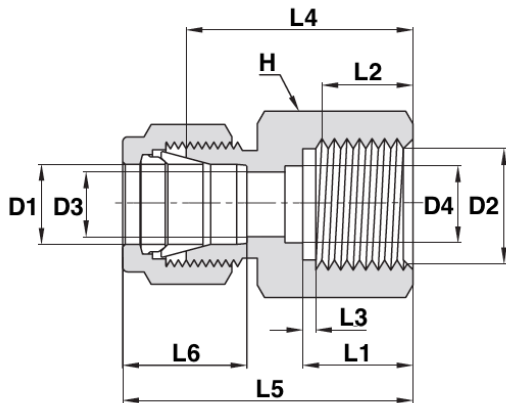
METRIC TO ISO TAPERED THREAD							
Product ID	D1	D2 (ISO)	D3	H	L1	L2	L3
	mm	inch	mm	mm	mm	mm	mm
FC_3 x R-1/8	3	R-1/8	2.4	14	22.1	28.7	12.9
FC_6 x R-1/8	6	R-1/8	4.8	14	23.9	31.3	15.3
FC_6 x R-1/4	6	R-1/4	4.8	19	28.4	35.8	15.3
FC_6 x R-3/8	6	R-3/8	4.8	22	30.2	37.6	15.3
FC_6 x R-1/2	6	R-1/2	4.8	27	35.1	42.5	15.3
FC_8 x R-1/8	8	R-1/8	6.4	15	24.6	32.1	16.2
FC_8 x R-1/4	8	R-1/4	6.4	19	29.5	37.0	16.2
FC_8 x R-3/8	8	R-3/8	6.4	22	31.0	38.5	16.2
FC_8 x R-1/2	8	R-1/2	6.4	27	35.8	43.3	16.2
FC_10 x R-1/8	10	R-1/8	7.9	18	25.4	33.0	17.2
FC_10 x R-1/4	10	R-1/4	7.9	19	30.2	37.8	17.2
FC_10 x R-3/8	10	R-3/8	7.9	22	31.8	39.4	17.2
FC_10 x R-1/2	10	R-1/2	7.9	27	36.6	44.2	17.2
FC_12 x R-1/8	12	R-1/8	8.3	22	25.4	35.5	22.8
FC_12 x R-1/4	12	R-1/4	9.5	22	30.2	40.3	22.8
FC_12 x R-3/8	12	R-3/8	9.5	22	31.8	41.9	22.8
FC_12 x R-1/2	12	R-1/2	9.5	27	36.6	46.7	22.8
FC_12 x R-3/4	12	R-3/4	9.5	35	38.9	49.0	22.8
FC_15 x R-3/8	15	R-3/8	11.9	24	31.8	41.9	24.4
FC_15 x R-1/2	15	R-1/2	11.9	27	36.6	46.7	24.4
FC_20 x R-1/2	20	R-1/2	15.9	30	37.8	47.9	26.0
FC_20 x R-3/4	20	R-3/4	15.9	35	39.6	49.7	26.0
FC_22 x R-3/4	22	R-3/4	18.3	35	39.6	49.7	26.0
FC_22 x R-1	22	R-1	18.3	41	47.8	57.9	26.0
FC_25 x R-3/4	25	R-3/4	21.8	35	41.1	53.4	31.3
FC_25 x R-1	25	R-1	21.8	41	50.0	62.3	31.3

FEMALE CONNECTOR



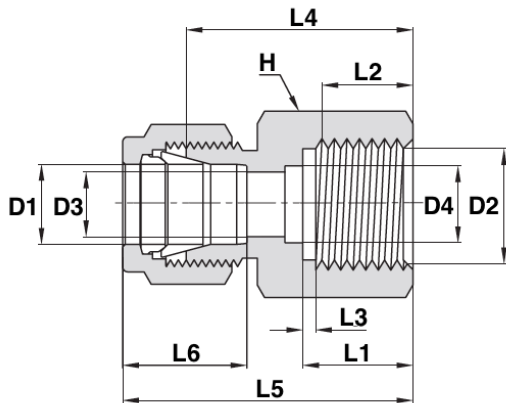
IMPERIAL TO ISO TAPERED THREAD							
Product ID	D1	D2 (ISO)	D3	H	L1	L2	L3
	inch	inch	inch	mm	inch	inch	inch
FC_1/16 x R-1/16	1/16	R-1/16	.05	7/16	.78	.93	.34
FC_1/16 x R-1/8	1/16	R-1/8	.05	9/16	.81	.96	.34
FC_1/8 x R-1/8	1/8	R-1/8	.09	9/16	.87	1.13	.50
FC_1/8 x R-1/4	1/8	R-1/4	.09	3/4	1.06	1.32	.50
FC_3/16 x R-1/8	3/16	R-1/8	.12	9/16	.91	1.17	.54
FC_1/4 x R-1/8	1/4	R-1/8	.19	9/16	.94	1.23	.60
FC_1/4 x R-1/4	1/4	R-1/4	.19	3/4	1.12	1.41	.60
FC_1/4 x R-3/8	1/4	R-3/8	.19	7/8	1.19	1.48	.60
FC_1/4 x R-1/2	1/4	R-1/2	.19	1 1/16	1.38	1.67	.60
FC_5/16 x R-1/4	5/16	R-1/4	.25	3/4	1.16	1.45	.64
FC_3/8 x R-1/8	3/8	R-1/8	.28	5/8	1.00	1.29	.66
FC_3/8 x R-1/4	3/8	R-1/4	.28	3/4	1.19	1.48	.66
FC_3/8 x R-3/8	3/8	R-3/8	.28	7/8	1.25	1.54	.66
FC_3/8 x R-1/2	3/8	R-1/2	.28	1 1/16	1.44	1.73	.66
FC_1/2 x R-1/4	1/2	R-1/4	.41	13/16	1.19	1.59	.90
FC_1/2 x R-3/8	1/2	R-3/8	.41	7/8	1.25	1.65	.90
FC_1/2 x R-1/2	1/2	R-1/2	.41	1 1/16	1.44	1.84	.90
FC_5/8 x R-1/2	5/8	R-1/2	.50	1 1/16	1.44	1.84	.96
FC_3/4 x R-1/2	3/4	R-1/2	.62	1 1/16	1.44	1.84	.96
FC_3/4 x R-3/4	3/4	R-3/4	.62	15/16	1.50	1.90	.96
FC_1 x R-3/4	1	R-3/4	.88	1 3/8	1.62	2.10	1.23
FC_1 x R-1	1	R-1	.88	1 5/8	1.97	2.45	1.23

FEMALE CONNECTOR



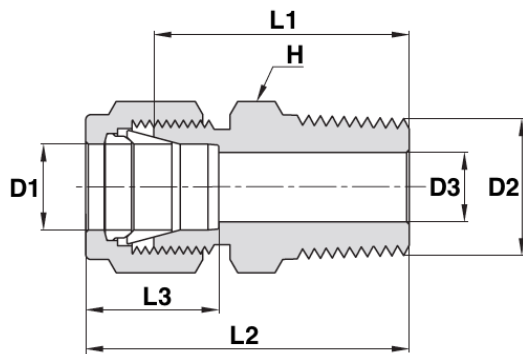
METRIC TO ISO PARALLEL THREAD											
Product ID	D1	D2 (ISO)	D3	D4	H	L1	L2	L3	L4	L5	L6
	mm	inch	mm	mm	mm	mm	mm	mm	mm	mm	mm
FC_3 x G-1/4	3	G-1/4	2.4	5.5	19	13.0	9.5	1.6	28.7	35.3	12.9
FC_6 x G-1/8	6	G-1/8	4.0	4.0	14	10.0	7.0	1.6	25.0	32.4	15.3
FC_6 x G-1/4	6	G-1/4	4.8	5.5	19	13.0	9.5	1.6	30.2	37.6	15.3
FC_6 x G-3/8	6	G-3/8	4.8	6.5	24	14.1	10.0	1.6	30.2	37.6	15.3
FC_6 x G-1/2	6	G-1/2	4.8	7.0	27	19.0	15.0	1.6	36.1	43.5	15.3
FC_8 x G-1/4	8	G-1/4	5.5	5.5	19	13.0	9.5	1.6	31.0	38.5	16.2
FC_8 x G-3/8	8	G-3/8	6.4	6.4	24	14.1	10.0	1.6	28.7	36.2	16.2
FC_8 x G-1/2	8	G-1/2	7.0	7.0	27	19.0	15.0	1.6	33.5	41.0	16.2
FC_10 x G-1/4	10	G-1/4	5.5	5.5	19	13.0	9.5	1.6	31.8	39.4	17.2
FC_10 x G-3/8	10	G-3/8	6.5	6.5	24	14.1	10.0	1.6	31.2	38.8	17.2
FC_10 x G-1/2	10	G-1/2	7.0	7.0	27	19.0	15.0	1.6	34.5	42.1	17.2
FC_12 x G-1/4	12	G-1/4	5.5	5.5	22	13.0	9.5	1.6	31.8	41.9	22.8
FC_12 x G-3/8	12	G-3/8	6.5	6.5	24	14.1	10.0	1.6	34.3	44.4	22.8
FC_12 x G-1/2	12	G-1/2	7.0	7.0	27	19.0	15.0	1.6	38.1	48.2	22.8
FC_20 x G-1/2	20	G-1/2	7.0	7.0	30	19.0	15.0	1.6	44.2	54.3	26.0
FC_22 x G-1/2	22	G-1/2	7.0	7.0	30	19.0	15.0	1.6	44.2	54.3	26.0

FEMALE CONNECTOR



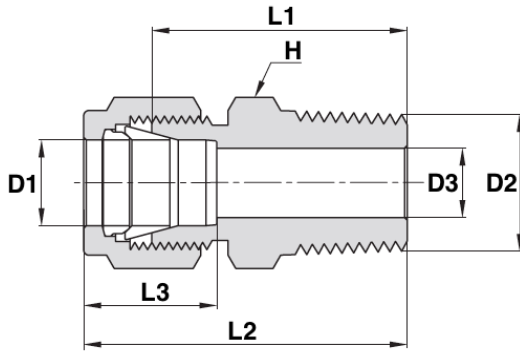
IMPERIAL TO ISO PARALLEL THREAD											
Product ID	D1	D2 (ISO)	D3	D4	H	L1	L2	L3	L4	L5	L6
	Inç	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch
FCI_1/8 x G-1/4	1/8	G-1/4	.09	.22	3/4	.51	.37	.06	1.13	1.39	.50
FCI_1/4 x G-1/8	1/4	G-1/8	.16	.16	9/16	.40	.28	.06	.98	1.27	.60
FCI_1/4 x G-1/4	1/4	G-1/4	.19	.22	3/4	.51	.37	.06	1.19	1.48	.60
FCI_1/4 x G-3/8	1/4	G-3/8	.19	.26	15/16	.56	.39	.06	1.19	1.48	.60
FCI_1/4 x G-1/2	1/4	G-1/2	.19	.28	1 1/16	.74	.59	.06	1.42	1.71	.60
FCI_5/16 x G-1/4	5/16	G-1/4	.22	.22	3/4	.51	.37	.06	1.22	1.51	.64
FCI_5/16 x G-1/2	5/16	G-1/2	.28	.28	1 1/16	.74	.59	.06	1.32	1.61	.64
FCI_3/8 x G-1/4	3/8	G-1/4	.22	.22	3/4	.51	.37	.06	1.25	1.54	.66
FCI_3/8 x G-3/8	3/8	G-3/8	.26	.26	15/16	.56	.39	.06	1.23	1.52	.66
FCI_3/8 x G-1/2	3/8	G-1/2	.28	.28	1 1/16	.74	.59	.06	1.36	1.65	.66
FCI_1/2 x G-3/8	1/2	G-3/8	.26	.26	15/16	.56	.39	.06	1.35	1.75	.90
FCI_1/2 x G-1/2	1/2	G-1/2	.28	.28	1 1/16	.74	.59	.06	1.50	1.90	.90

MALE CONNECTOR



METRIC TO NPT							
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3
	mm	inch	mm	mm	mm	mm	mm
MC_2 x NPT-1/8	2	1/8	1.7	12	23.9	30.5	12.9
MC_3 x NPT-1/8	3	1/8	2.4	12	23.9	30.5	12.9
MC_3 x NPT-1/4	3	1/4	2.4	14	29.0	35.6	12.9
MC_4 x NPT-1/8	4	1/8	2.4	12	24.6	31.2	13.7
MC_4 x NPT-1/4	4	1/4	2.4	14	29.7	36.3	13.7
MC_6 x NPT-1/8	6	1/8	4.8	14	25.4	32.8	15.3
MC_6 x NPT-1/4	6	1/4	4.8	14	30.5	37.9	15.3
MC_6 x NPT-3/8	6	3/8	4.8	18	31.0	38.4	15.3
MC_6 x NPT-1/2	6	1/2	4.8	22	37.3	44.7	15.3
MC_8 x NPT-1/8	8	1/8	4.8	15	26.7	34.2	16.2
MC_8 x NPT-1/4	8	1/4	6.4	15	31.2	38.7	16.2
MC_8 x NPT-3/8	8	3/8	6.4	18	31.8	39.3	16.2
MC_8 x NPT-1/2	8	1/2	6.4	22	38.1	45.6	16.2
MC_10 x NPT-1/8	10	1/8	4.8	18	28.7	36.3	17.2
MC_10 x NPT-1/4	10	1/4	7.9	18	33.3	40.9	17.2
MC_10 x NPT-3/8	10	3/8	7.9	18	33.3	40.9	17.2
MC_10 x NPT-1/2	10	1/2	7.9	22	38.9	46.5	17.2
MC_10 x NPT-3/4	10	3/4	7.9	27	40.4	48.0	17.2
MC_12 x NPT-1/8	12	1/8	4.8	22	28.7	38.8	22.8
MC_12 x NPT-1/4	12	1/4	7.1	22	33.3	43.4	22.8
MC_12 x NPT-3/8	12	3/8	9.5	22	33.3	43.4	22.8
MC_12 x NPT-1/2	12	1/2	9.5	22	38.9	49.0	22.8
MC_12 x NPT-3/4	12	3/4	9.5	27	40.4	50.5	22.8

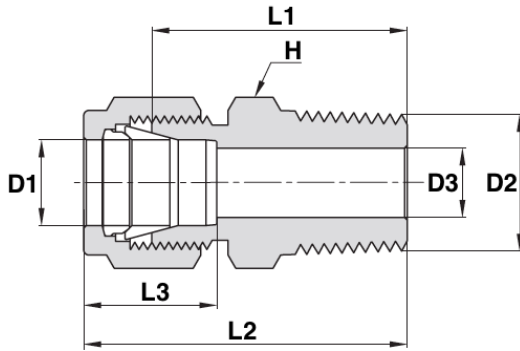
MALE CONNECTOR



METRIC TO NPT (CONT)

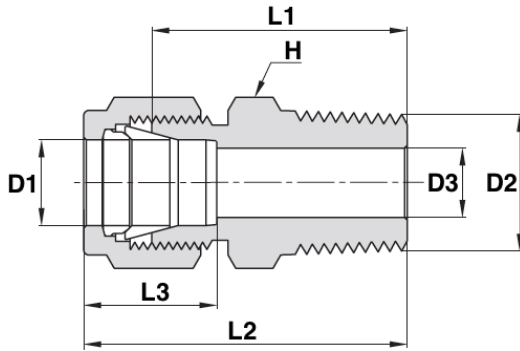
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3
	mm	inch	mm	mm	mm	mm	mm
MC_14 x NPT-1/4	14	1/4	7.1	24	34.0	44.1	24.4
MC_14 x NPT-3/8	14	3/8	9.5	24	34.0	44.1	24.4
MC_14 x NPT-1/2	14	1/2	11.1	24	38.9	49.0	24.4
MC_15 x NPT-1/2	15	1/2	11.9	24	38.9	49.0	24.4
MC_16 x NPT-3/8	16	3/8	9.5	24	34.0	44.1	24.4
MC_16 x NPT-1/2	16	1/2	11.9	24	38.9	49.0	24.4
MC_16 x NPT-3/4	16	3/4	12.7	27	40.4	50.5	24.4
MC_18 x NPT-1/2	18	1/2	11.9	27	40.4	50.5	24.4
MC_18 x NPT-3/4	18	3/4	15.1	27	40.4	50.5	24.4
MC_20 x NPT-1/2	20	1/2	11.9	30	42.2	52.3	26.0
MC_20 x NPT-3/4	20	3/4	15.9	30	42.2	52.3	26.0
MC_22 x NPT-3/4	22	3/4	15.9	30	42.2	52.3	26.0
MC_22 x NPT-1	22	1	18.3	35	47.0	57.1	26.0
MC_25 x NPT-1/2	25	1/2	11.9	35	45.2	57.5	31.3
MC_25 x NPT-3/4	25	3/4	15.9	35	45.2	57.5	31.3
MC_25 x NPT-1	25	1	21.8	35	50.0	62.3	31.3
MC_28 x NPT-1	28	1					
MC_28 x NPT-1 1/4	28	1 1/4					
MC_28 x NPT-B1	28	B1					
MC_28 x NPT-1 1/4	28	1 1/4					
MC_30 x NPT-1 1/4	30	1 1/4					
MC_32 x NPT-1 1/4	32	1 1/4					
MC_38 x NPT-1 1/2	38	1 1/2	33.7	55	64.0	91.6	49.4
MC_50 x NPT-2	50	2	45.2	3 inch	76.2	113.3	65.0

MALE CONNECTOR



IMPERIAL TO NPT							
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3
	inch	inch	inch	mm	inch	inch	inch
MC_1/16 x NPT-1/16	1/16	1/16	.05	5/16	.79	.94	.34
MC_1/16 x NPT-1/8	1/16	1/8	.05	7/16	.88	1.03	.34
MC_1/16 x NPT-1/4	1/16	1/4	.05	9/16	1.07	1.22	.34
MC_1/8 x NPT-1/16	1/8	1/16	.09	7/16	.91	1.17	.50
MC_1/8 x NPT-1/8	1/8	1/8	.09	7/16	.94	1.20	.50
MC_1/8 x NPT-1/4	1/8	1/4	.09	9/16	1.14	1.40	.50
MC_1/8 x NPT-3/8	1/8	3/8	.09	11/16	1.15	1.41	.50
MC_1/8 x NPT-1/2	1/8	1/2	.09	7/8	1.40	1.66	.50
MC_3/16 x NPT-1/8	3/16	1/8	.12	7/16	.97	1.23	.54
MC_3/16 x NPT-1/4	3/16	1/4	.12	9/16	1.17	1.43	.54
MC_1/4 x NPT-1/16	1/4	1/16	.12	1/2	1.00	1.29	.60
MC_1/4 x NPT-1/8	1/4	1/8	.19	1/2	1.00	1.29	.60
MC_1/4 x NPT-1/4	1/4	1/4	.19	9/16	1.20	1.49	.60
MC_1/4 x NPT-3/8	1/4	3/8	.19	11/16	1.22	1.51	.60
MC_1/4 x NPT-1/2	1/4	1/2	.19	7/8	1.47	1.76	.60
MC_1/4 x NPT-3/4	1/4	3/4	.19	1 1/16	1.53	1.82	.60
MC_5/16 x NPT-1/8	5/16	1/8	.19	9/16	1.05	1.34	.64
MC_5/16 x NPT-1/4	5/16	1/4	.25	9/16	1.23	1.52	.64
MC_5/16 x NPT-3/8	5/16	3/8	.25	11/16	1.25	1.54	.64
MC_3/8 x NPT-1/8	3/8	1/8	.19	5/8	1.10	1.39	.66
MC_3/8 x NPT-1/4	3/8	1/4	.28	5/8	1.28	1.57	.66
MC_3/8 x NPT-3/8	3/8	3/8	.28	11/16	1.28	1.57	.66
MC_3/8 x NPT-1/2	3/8	1/2	.28	7/8	1.53	1.82	.66
MC_3/8 x NPT-3/4	3/8	3/4	.28	1 1/16	1.59	1.88	.66
MC_3/8 x NPT-1	3/8	1	.28	1 3/8	1.85	2.14	.66
MC_1/2 x NPT-1/8	1/2	1/8	.19	13/16	1.13	1.53	.90

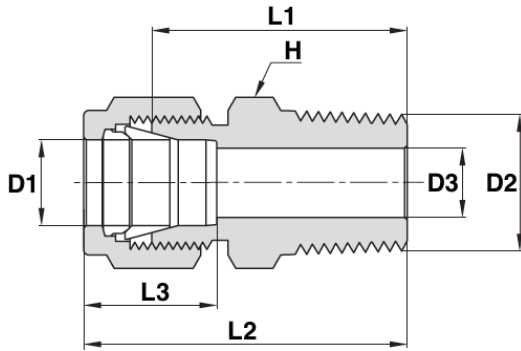
MALE CONNECTOR



IMPERIAL TO NPT (CONT)

Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3
	inch	inch	inch	mm	inch	inch	inch
MC_1/2 x NPT-1/4	1/2	1/4	.28	13/16	1.31	1.71	.90
MC_1/2 x NPT-3/8	1/2	3/8	.38	13/16	1.31	1.71	.90
MC_1/2 x NPT-1/2	1/2	1/2	.41	7/8	1.53	1.93	.90
MC_1/2 x NPT-3/4	1/2	3/4	.41	1 1/16	1.59	1.99	.90
MC_1/2 x NPT-1	1/2	1	.41	1 3/8	1.85	2.25	.90
MC_5/8 x NPT-1/4	5/8	1/4	.28	15/16	1.34	1.74	.96
MC_5/8 x NPT-3/8	5/8	3/8	.38	15/16	1.34	1.74	.96
MC_5/8 x NPT-1/2	5/8	1/2	.47	15/16	1.53	1.93	.96
MC_5/8 x NPT-3/4	5/8	3/4	.50	1 1/16	1.59	1.99	.96
MC_3/4 x NPT-3/8	3/4	3/8	.38	1 1/16	1.38	1.78	.96
MC_3/4 x NPT-1/2	3/4	1/2	.47	1 1/16	1.59	1.99	.96
MC_3/4 x NPT-3/4	3/4	3/4	.62	1 1/16	1.59	1.99	.96
MC_3/4 x NPT-1	3/4	1	.62	1 3/8	1.85	2.25	.96
MC_7/8 x NPT-1/2	7/8	1/2	.47	1 3/16	1.59	1.99	1.02
MC_7/8 x NPT-3/4	7/8	3/4	.62	1 3/16	1.59	1.99	1.02
MC_7/8 x NPT-1	7/8	1	.72	1 3/8	1.85	2.25	1.02
MC_1 x NPT-1/2	1	1/2	.47	1 3/8	1.78	2.26	1.23
MC_1 x NPT-3/4	1	3/4	.62	1 3/8	1.78	2.26	1.23
MC_1 x NPT-1	1	1	.88	1 3/8	1.97	2.45	1.23
MC_1 1/8 x NPT-1	1 1/8	1					
MC_1 1/4 x NPT-1	1 1/4	1	.86	1 3/4	2.17	3.04	1.62
MC_1 1/4 x NPT-1 1/4	1 1/4	1 1/4	1.09	1 3/4	2.17	3.04	1.62
MC_1 1/2 x NPT-1 1/2	1 1/2	1 1/2	1.34	2 1/8	2.43	3.50	1.97
MC_2 x NPT-2	2	2	1.81	2 3/4	3.00	4.47	2.66

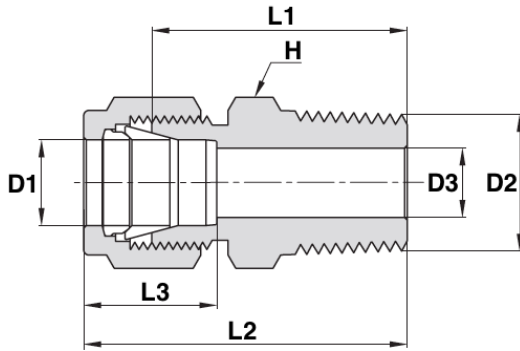
MALE CONNECTOR



METRIC TO ISO TAPERED THREAD

Product ID	D1	D2 (ISO)	D3	H	L1	L2	L3
	mm	inch	mm	mm	mm	mm	mm
MC_2 x R-1/8	2	R-1/8	1.7	12	23.9	30.5	12.9
MC_3 x R-1/8	3	R-1/8	2.4	12	23.9	30.5	12.9
MC_3 x R-1/4	3	R-1/4	2.4	14	29.0	35.6	12.9
MC_4 x R-1/8	4	R-1/8	2.4	12	24.6	31.2	13.7
MC_4 x R-1/4	4	R-1/4	2.4	14	29.7	36.3	13.7
MC_6 x R-1/8	6	R-1/8	4.8	14	25.4	32.8	15.3
MC_6 x R-1/4	6	R-1/4	4.8	14	30.5	37.9	15.3
MC_6 x R-3/8	6	R-3/8	4.8	18	31.0	38.4	15.3
MC_6 x R-1/2	6	R-1/2	4.8	22	37.3	44.7	15.3
MC_8 x R-1/8	8	R-1/8	4.8	15	26.7	34.2	16.2
MC_8 x R-1/4	8	R-1/4	6.4	15	31.2	38.7	16.2
MC_8 x R-3/8	8	R-3/8	6.4	18	31.8	39.2	16.2
MC_8 x R-1/2	8	R-1/2	6.4	22	38.1	45.6	16.2
MC_10 x R-1/8	10	R-1/8	4.8	18	28.7	36.3	17.2
MC_10 x R-1/4	10	R-1/4	7.9	18	33.3	40.9	17.2
MC_10 x R-3/8	10	R-3/8	7.9	18	33.3	40.9	17.2
MC_10 x R-1/2	10	R-1/2	7.9	22	38.9	46.5	17.2
MC_10 x R-3/4	10	R-3/4	7.9	27	40.4	48.0	17.2
MC_12 x R-1/4	12	R-1/4	7.1	22	33.3	43.4	22.8
MC_12 x R-3/8	12	R-3/8	9.5	22	33.3	43.4	22.8
MC_12 x R-1/2	12	R-1/2	9.5	22	38.9	49.0	22.8
MC_12 x R-3/4	12	R-3/4	9.5	27	40.4	50.5	22.8
MC_14 x R-1/4	14	R-1/4	7.1	24	34.0	44.1	24.4
MC_14 x R-3/8	14	R-3/8	9.5	24	34.0	44.1	24.4

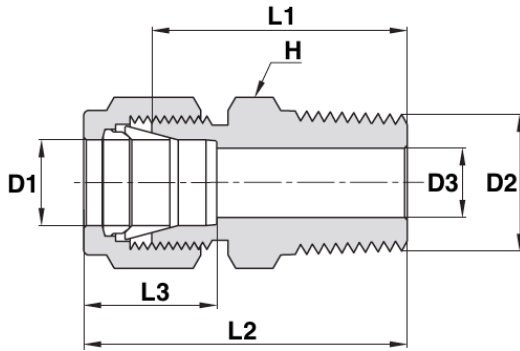
MALE CONNECTOR



METRIC TO ISO TAPERED THREAD (CONT)

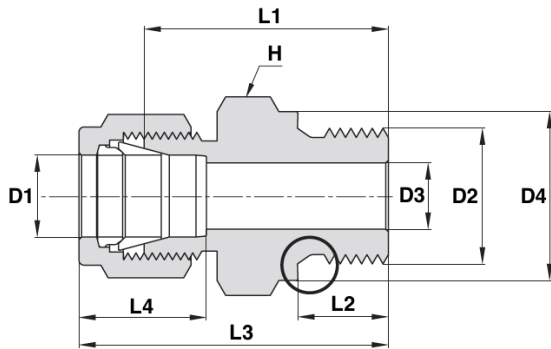
Product ID	D1	D2 (ISO)	D3	H	L1	L2	L3
	mm	inch	mm	mm	mm	mm	mm
MC_15 x R-1/2	15	R-1/2	11.9	24	38.9	49.0	24.4
MC_16 x R-1/4	16	R-1/4	7.1	24	34.0	44.1	24.4
MC_16 x R-3/8	16	R-3/8	9.5	24	34.0	44.1	24.4
MC_16 x R-1/2	16	R-1/2	11.9	24	38.9	49.0	24.4
MC_16 x R-3/4	16	R-3/4	12.7	27	40.4	50.5	24.4
MC_18 x R-1/2	18	R-1/2	11.9	27	40.4	50.5	24.4
MC_18 x R-3/4	18	R-3/4	15.1	27	40.4	50.5	24.4
MC_20 x R-1/2	20	R-1/2	11.9	30	42.2	52.3	26.0
MC_20 x R-3/4	20	R-3/4	15.9	30	42.2	52.3	26.0
MC_22 x R-3/4	22	R-3/4	15.9	30	42.2	52.3	26.0
MC_22 x R-1	22	R-1	18.3	35	47.0	57.1	26.0
MC_25 x R-1/2	25	R-1/2	11.9	35	45.2	57.5	31.3
MC_25 x R-3/4	25	R-3/4	15.9	35	45.2	57.5	31.3
MC_25 x R-1	25	R-1	21.8	35	45.2	57.5	31.3
MC_28 x R-1	28	R-1					
MC_28 x R-1 1/4	28	R-1 1/4					
MC_28 x BR-1	28	BR-1					
MC_28 x BR-1 1/4	28	BR-1 1/4					
MC_30 x R-1 1/4	30	R-1 1/4					
MC_32 x R-1 1/4	32	R-1 1/4					
MC_38 x R-1 1/2	38	R-1 1/2	33.7	55	64.0	91.6	49.4
MC_50 x R-2	50	R-2	45.2	3 inch	76.2	113.3	65.0

MALE CONNECTOR



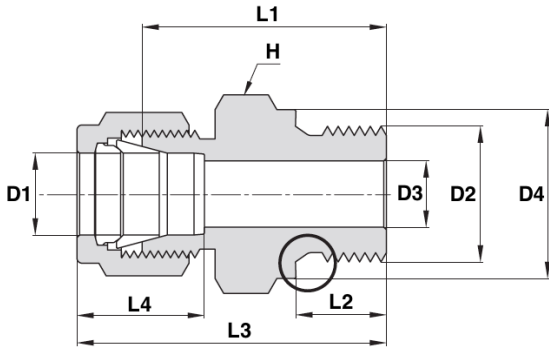
IMPERIAL TO ISO TAPERED THREAD							
Product ID	D1	D2 (ISO)	D3	H	L1	L2	L3
	inch	inch	inch	inch	inch	inch	inch
MC_1/8 x R-1/8	1/8	R-1/8	.09	7/16	.94	1.20	.50
MC_1/8 x R-1/4	1/8	R-1/4	.09	9/16	1.14	1.40	.50
MC_1/4 x R-1/8	1/4	R-1/8	.19	1/2	1.00	1.29	.60
MC_1/4 x R-1/4	1/4	R-1/4	.19	9/16	1.20	1.49	.60
MC_1/4 x R-3/8	1/4	R-3/8	.19	11/16	1.22	1.51	.60
MC_1/4 x R-1/2	1/4	R-1/2	.19	7/8	1.47	1.76	.60
MC_5/16 x R-1/8	5/16	R-1/8	.19	9/16	1.05	1.34	.64
MC_5/16 x R-1/4	5/16	R-1/4	.25	9/16	1.23	1.52	.64
MC_3/8 x R-1/8	3/8	R-1/8	.19	5/8	1.10	1.39	.66
MC_3/8 x R-1/4	3/8	R-1/4	.28	5/8	1.28	1.57	.66
MC_3/8 x R-3/8	3/8	R-3/8	.28	11/16	1.28	1.57	.66
MC_3/8 x R-1/2	3/8	R-1/2	.28	7/8	1.53	1.82	.66
MC_3/8 x R-3/4	3/8	R-3/4	.28	1 1/16	1.59	1.88	.66
MC_1/2 x R-1/4	1/2	R-1/4	.28	13/16	1.31	1.71	.90
MC_1/2 x R-3/8	1/2	R-3/8	.38	13/16	1.31	1.71	.90
MC_1/2 x R-1/2	1/2	R-1/2	.41	7/8	1.53	1.93	.90
MC_1/2 x R-3/4	1/2	R-3/4	.41	1 1/16	1.59	1.99	.90
MC_5/8 x R-1/2	5/8	R-1/2	.47	15/16	1.53	1.93	.96
MC_3/4 x R-3/4	3/4	R-3/4	.62	1 1/16	1.59	1.99	.96
MC_3/4 x R-1	3/4	R-1	.62	1 3/8	1.85	2.25	.96
MC_1 x R-3/4	1	R-3/4	.63	1 3/8	1.78	2.26	1.23
MC_1 x R-1	1	R-1	.88	1 3/8	1.97	2.45	1.23
MC_1 1/4 x R-1 1/4	1 1/4	R-1 1/4	1.09	1 3/4	2.17	3.04	1.62

MALE CONNECTOR



METRIC TO ISO PARALLEL THREAD									
Product ID	D1	D2 (P-ISO)	D3	D4	H	L1	L2	L3	L4
	mm	inch	mm	mm	mm	mm	mm	mm	mm
MC_2 x G-1/8	2	G-1/8	1.7	13.8	14	23.4	7.1	30.0	12.9
MC_3 x G-1/8	3	G-1/8	2.4	13.8	14	23.4	7.1	30.0	12.9
MC_3 x G-1/4	3	G-1/4	2.4	18.0	19	28.7	11.2	35.3	12.9
MC_4 x G-1/8	4	G-1/8	2.4	13.8	14	24.1	7.1	30.7	13.7
MC_6 x G-1/8	6	G-1/8	4.0	13.8	14	24.9	7.1	32.3	15.3
MC_6 x G-1/4	6	G-1/4	4.8	18.0	19	30.2	11.2	37.6	15.3
MC_6 x G-3/8	6	G-3/8	4.8	21.8	22	31.5	11.2	38.9	15.3
MC_6 x G-1/2	6	G-1/2	4.8	26.0	27	37.3	14.2	44.7	15.3
MC_8 x G-1/8	8	G-1/8	4.0	13.8	15	25.7	7.1	33.2	16.2
MC_8 x G-1/4	8	G-1/4	6.4	18.0	19	31.0	11.2	38.5	16.2
MC_8 x G-3/8	8	G-3/8	6.4	21.8	22	32.3	11.2	39.8	16.2
MC_8 x G-1/2	8	G-1/2	6.4	26.0	27	38.1	14.2	45.6	16.2
MC_10 x G-1/4	10	G-1/4	5.9	18.0	19	31.8	11.2	39.4	17.2
MC_10 x G-3/8	10	G-3/8	7.9	21.8	22	33.0	11.2	40.6	17.2
MC_10 x G-1/2	10	G-1/2	7.9	26.0	27	38.9	14.2	46.5	17.2
MC_12 x G-1/4	12	G-1/4	5.9	18.0	22	32.5	11.2	42.6	22.8
MC_12 x G-3/8	12	G-3/8	7.9	21.8	22	33.0	11.2	43.1	22.8
MC_12 x G-1/2	12	G-1/2	9.5	26.0	27	37.4	14.2	47.5	22.8
MC_12 x G-3/4	12	G-3/4	9.5	32.0	35	42.7	15.7	52.8	22.8
MC_14 x G-3/8	14	G-3/8	7.9	21.8	24	33.8	11.2	43.9	24.4
MC_14 x G-1/2	14	G-1/2	11.1	26.0	27	38.9	14.2	49.0	24.4

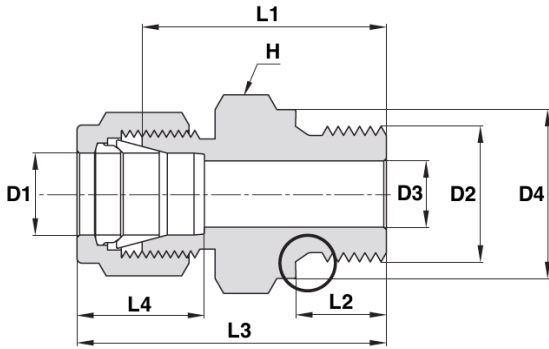
MALE CONNECTOR



METRIC TO ISO PARALLEL THREAD (CONT)

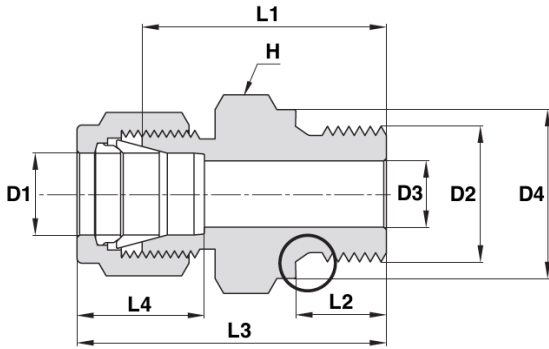
Product ID	D1	D2 (P-ISO)	D3	D4	H	L1	L2	L3	L4
	mm	inch	mm	mm	mm	mm	mm	mm	mm
MC_15 x G-3/8	15	G-3/8	7.9	21.8	24	33.8	11.2	43.9	24.4
MC_15 x G-1/2	15	G-1/2	11.9	26.0	27	37.4	14.2	47.5	24.4
MC_15 x G-3/4	15	G-3/4	11.9	32.0	35	42.1	15.7	52.8	24.4
MC_16 x G-3/8	16	G-3/8	7.9	21.8	24	33.8	11.2	43.9	24.4
MC_16 x G-1/2	16	G-1/2	11.9	26.0	27	38.9	14.2	49.0	24.4
MC_16 x G-3/4	16	G-3/4	12.7	32.0	35	42.1	15.7	52.8	24.4
MC_18 x G-1/2	18	G-1/2	11.9	26.0	27	38.9	14.2	49.0	24.4
MC_18 x G-3/4	18	G-3/4	15.1	32.0	35	42.7	15.7	52.8	24.4
MC_20 x G-1/2	20	G-1/2	11.9	26.0	30	40.4	14.2	50.5	26.0
MC_20 x G-3/4	20	G-3/4	15.9	32.0	35	42.7	15.7	52.8	26.0
MC_22 x G-3/4	22	G-3/4	15.9	32.0	35	42.7	15.7	52.8	26.0
MC_22 x G-1	22	G-1	18.3	39.0	41	45.2	18.3	55.3	26.0
MC_25 x G-3/4	25	G-3/4	15.9	32.0	35	45.2	15.7	57.5	31.3
MC_25 x G-1	25	G-1	19.8	39.0	41	47.8	18.3	60.1	31.3
MC_28 x G-1	28	G-1							
MC_28 x G-1 1/4	28	G-1 1/4							
MC_28 x BG-1	28	BG-1							
MC_28 x BG-1 1/4	28	BG-1 1/4							
MC_30 x G-1 1/4	30	G-1 1/4							
MC_32 x G-1 1/4	32	G-1 1/4							
MC_38 x G-1	38	G-1	1/2	31.8	54.7	55	63.2	22.1	90.9

MALE CONNECTOR



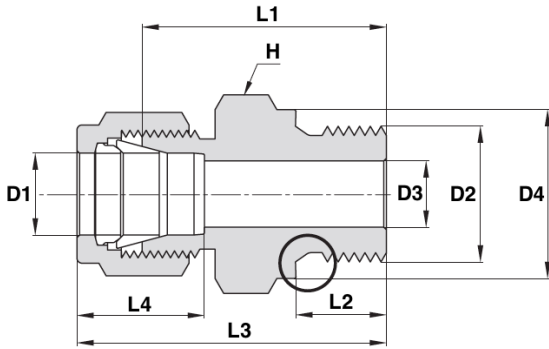
IMPERIAL TO ISO PARALLEL THREAD									
Product ID	D1	D2 (P-ISO)	D3	D4	H	L1	L2	L3	L4
	inch	inch	inch	inch	inch	inch	inch	inch	inch
MC_1/8 x G-1/8	1/8	G-1/8	0.09	0.54	9/16	0.92	0.28	1.18	0.50
MC_1/8 x G-1/4	1/8	G-1/4	0.09	0.71	3/4	1.13	0.44	1.39	0.50
MC_1/8 x G-3/8	1/8	G-3/8	0.09	0.86	7/8	1.17	0.44	1.43	0.50
MC_1/8 x G-1/2	1/8	G-1/2	0.09	1.02	1 1/16	1.40	0.56	1.66	0.50
MC_3/16 x G-1/8	3/16	G-1/8	0.12	0.54	9/16	0.95	0.28	1.21	0.54
MC_1/4 x G-1/8	1/4	G-1/8	0.16	0.54	9/16	0.98	0.28	1.27	0.60
MC_1/4 x G-1/4	1/4	G-1/4	0.19	0.71	3/4	1.19	0.44	1.48	0.60
MC_1/4 x G-3/8	1/4	G-3/8	0.19	0.86	7/8	1.24	0.44	1.50	0.60
MC_1/4 x G-1/2	1/4	G-1/2	0.19	1.02	1 1/16	1.47	0.56	1.76	0.60
MC_5/16 x G-1/4	5/16	G-1/4	0.23	0.71	3/4	1.22	0.44	1.51	0.64
MC_5/16 x G-3/8	5/16	G-3/8	0.25	0.86	7/8	1.27	0.44	1.56	0.64
MC_3/8 x G-1/8	3/8	G-1/8	0.16	1.26	5/8	1.05	0.28	1.34	0.66
MC_3/8 x G-1/4	3/8	G-1/4	0.23	0.71	3/4	1.25	0.44	1.54	0.66
MC_3/8 x G-3/8	3/8	G-3/8	0.28	0.86	7/8	1.30	0.44	1.59	0.66
MC_3/8 x G-1/2	3/8	G-1/2	0.28	1.02	1 1/16	1.53	0.56	1.82	0.66
MC_1/2 x G-1/4	1/2	G-1/4	0.23	0.71	13/16	1.28	0.44	1.68	0.90
MC_1/2 x G-3/8	1/2	G-3/8	0.31	0.86	7/8	1.30	0.44	1.70	0.90
MC_1/2 x G-1/2	1/2	G-1/2	0.41	1.02	1 1/16	1.47	0.56	1.87	0.90
MC_1/2 x G-3/4	1/2	G-3/4	0.41	1.26	1 5/16	1.68	0.62	2.08	0.90
MC_5/8 x G-3/8	5/8	G-3/8	0.31	0.86	24 mm	1.33	0.44	1.73	0.96
MC_5/8 x G-1/2	5/8	G-1/2	0.47	1.02	1 1/16	1.53	0.56	1.93	0.96
MC_3/4 x G-1/2	3/4	G-1/2	0.47	1.02	1 1/16	1.53	0.56	1.93	0.96
MC_3/4 x G-3/4	3/4	G-3/4	0.62	1.26	1 5/16	1.68	0.62	2.08	0.96
MC_1 x G-1/2	1	G-1/2	0.47	1.02	1 3/8	1.72	0.56	2.20	1.23
MC_1 x G-3/4	1	G-3/4	0.62	1.26	1 3/8	1.78	0.62	2.26	1.23
MC_1 x G-1	1	G-1	0.78	1.54	1 3/8	1.88	0.72	2.36	1.23

MALE CONNECTOR



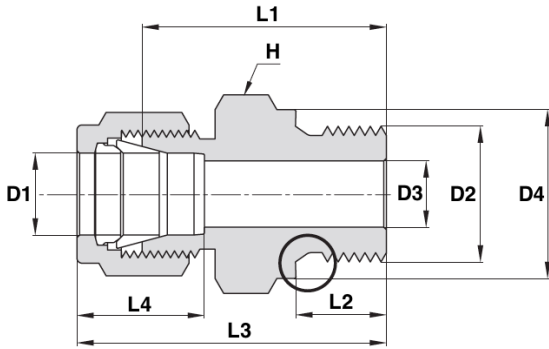
METRIC TO UTS									
Product ID	D1	D2 (P-ISO)	D3	D4	H	L1	L2	L3	L4
	mm	inch	mm	mm	mm	mm	mm	mm	mm
MC_3 x G-1/8A	3	G-1/8A	2.4	13.8	14	26.7	7.1	33.3	12.9
MC_3 x G-1/4A	3	G-1/4A	2.4	18.0	19	28.7	11.2	35.3	12.9
MC_4 x G-1/8A	4	G-1/8A	2.4	13.8	14	24.1	7.1	30.7	13.7
MC_6 x G-1/8A	6	G-1/8A	4.0	13.8	14	24.9	7.1	32.3	15.3
MC_6 x G-1/4A	6	G-1/4A	4.8	18.0	19	30.2	11.2	37.6	15.3
MC_6 x G-3/8A	6	G-3/8A	4.8	21.8	22	31.5	11.2	38.9	15.3
MC_6 x G-1/2A	6	G-1/2A	4.8	26.0	27	37.3	14.2	44.7	15.3
MC_8 x G-1/8A	8	G-1/8A	4.0	13.8	15	25.7	7.1	33.2	16.2
MC_8 x G-1/4A	8	G-1/4A	6.4	18.0	19	31.0	11.2	38.5	16.2
MC_8 x G-3/8A	8	G-3/8A	6.4	21.8	22	32.3	11.2	39.8	16.2
MC_8 x G-1/2A	8	G-1/2A	6.4	26.0	27	38.1	14.2	45.6	16.2
MC_10 x G-1/4A	10	G-1/4A	6.4	18.0	19	31.8	11.2	39.4	17.2
MC_10 x G-3/8A	10	G-3/8A	7.9	21.8	22	33.0	11.2	40.6	17.2
MC_10 x G-1/2A	10	G-1/2A	7.9	26.0	27	38.9	14.2	46.5	17.2
MC_12 x G-1/4A	12	G-1/4A	5.9	18.0	22	32.5	11.2	42.6	22.8
MC_12 x G-3/8A	12	G-3/8A	7.9	21.8	22	33.0	11.2	43.1	22.8
MC_12 x G-1/2A	12	G-1/2A	9.5	26.0	27	38.9	14.2	49.0	22.8
MC_12 x G-3/4A	12	G-3/4A	9.5	32.0	35	42.7	15.7	52.8	22.8
MC_15 x G-1/2A	15	G-1/2A	11.9	26.0	27	38.9	14.2	49.0	24.4

MALE CONNECTOR



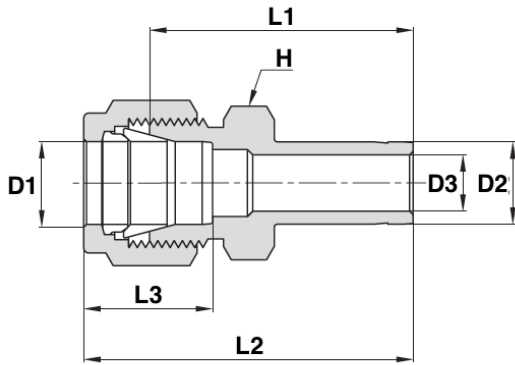
METRIC TO UTS (CONT)									
Product ID	D1	D2 (P-ISO)	D3	D4	H	L1	L2	L3	L4
	mm	inch	mm	mm	mm	mm	mm	mm	mm
MC_16 x G-3/8A	16	G-3/8A	7.9	21.8	24	33.8	11.2	43.9	22.4
MC_16 x G-1/2A	16	G-1/2A	11.9	26.0	27	38.9	14.2	49.0	22.4
MC_18 x G-1/2A	18	G-1/2A	11.9	26.0	27	38.9	14.2	49.0	22.4
MC_18 x G-3/4A	18	G-3/4A	15.1	32.0	35	42.2	15.7	52.3	22.4
MC_20 x G-1/2A	20	G-1/2A	11.9	26.0	30	40.4	14.2	50.5	26.0
MC_20 x G-3/4A	20	G-3/4A	15.9	32.0	35	42.7	15.7	52.8	26.0
MC_22 x G-3/4A	22	G-3/4A	15.9	32.0	35	42.7	15.7	52.8	26.0
MC_22 x G-1A	22	G-1A	18.3	39.0	41	45.2	18.3	55.3	26.0
MC_25 x G-3/4A	25	G-3/4A	15.9	32.0	35	45.2	15.7	57.5	31.3
MC_25 x G-1A	25	G-1A	19.8	39.0	41	47.8	18.3	60.1	31.3
MC_28 x G-1A	28	G-1A							
MC_28 x G-1 1/4A	28	G-1 1/4A							
MC_28 x BG-1A	28	BG-1A							
MC_28 x BG-1 1/4A	28	BG-1 1/4A							
MC_30 x G-1 1/4A	30	G-1 1/4A							
MC_32 x G-1 1/4A	32	G-1 1/4A							
MC_38 x G-1 1/2A	38	G-1 1/2A	31.8	54.7	55	64.9	20.6	92.1	49.4

MALE CONNECTOR



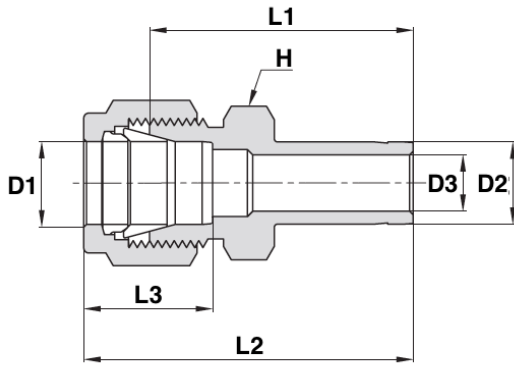
IMPERIAL TO UTS									
Product ID	D1	D2 (Straight Thread UN)	D3	D4	H	L1	L2	L3	L4
	inch	inch	inch	inch	inch	inch	inch	inch	inch
MC_1/8 x G-1/8A	1/8	G-1/8A	0.09	0.54	9/16	0.92	0.28	1.18	0.50
MC_1/8 x G-1/4A	1/8	G-1/4A	0.09	0.71	3/4	1.13	0.44	1.39	0.50
MC_1/4 x G-1/8A	1/4	G-1/8A	0.16	0.54	9/16	0.98	0.28	1.27	0.60
MC_1/4 x G-1/4A	1/4	G-1/4A	0.19	0.71	3/4	1.19	0.44	1.48	0.60
MC_1/2 x G-3/8A	1/2	G-3/8A	0.31	0.86	7/8	1.30	0.44	1.70	0.90
MC_1/2 x G-1/2A	1/2	G-1/2A	0.41	1.02	1-1/16	1.53	0.56	1.93	0.90
MC_3/4 x G-1/2A	3/4	G-1/2A	0.47	1.02	1-1/16	3.65	0.56	2.05	0.96
MC_3/4 x G-3/4A	3/4	G-3/4A	0.62	1.26	1 3/8	1.68	0.62	2.08	0.96
MC_1 x G-1A	1	G-1A	0.78	1.54	1 5/8	1.88	0.72	2.36	1.23

REDUCER



METRIC TO METRIC							
Product ID	D1 mm	D2 mm	D3 mm	H mm	L1 mm	L2 mm	L3 mm
R_2 x 3	2	3	1.7	12	26.9	33.5	12.9
R_3 x 4	3	4	2.2	12	28.4	35.0	12.9
R_3 x 6	3	6	2.4	12	29.5	36.1	12.9
R_3 x 10	3	10	2.4	14	31.8	38.4	12.9
R_4 x 6	4	6	2.4	12	30.5	37.1	13.7
R_6 x 3	6	3	2.1	14	29.5	36.9	15.3
R_6 x 8	6	8	4.8	14	32.5	39.9	15.3
R_6 x 10	6	10	4.8	14	33.3	40.7	15.3
R_6 x 12	6	12	4.8	14	38.9	46.3	15.3
R_6 x 18	6	18	4.8	22	42.2	49.6	15.3
R_8 x 6	8	6	4.0	15	32.8	40.3	16.2
R_8 x 10	8	10	6.4	15	34.5	42.0	16.2
R_8 x 12	8	12	6.4	15	40.1	47.6	16.2
R_10 x 6	10	6	4.0	18	34.8	42.4	17.2
R_10 x 8	10	8	5.6	18	35.8	43.4	17.2
R_10 x 12	10	12	7.9	18	42.2	49.8	17.2
R_10 x 15	10	15	7.9	18	43.7	51.3	17.2
R_10 x 18	10	18	7.9	22	43.7	51.3	17.2
R_12 x 6	12	6	4.0	22	34.8	44.9	22.8
R_12 x 8	12	8	5.6	22	35.8	45.9	22.8
R_12 x 10	12	10	7.1	22	36.6	46.7	22.8
R_12 x 16	12	16	9.5	22	43.7	53.8	22.8
R_12 x 18	12	18	9.5	22	43.7	53.8	22.8
R_12 x 20	12	20	9.5	22	46.0	56.1	22.8

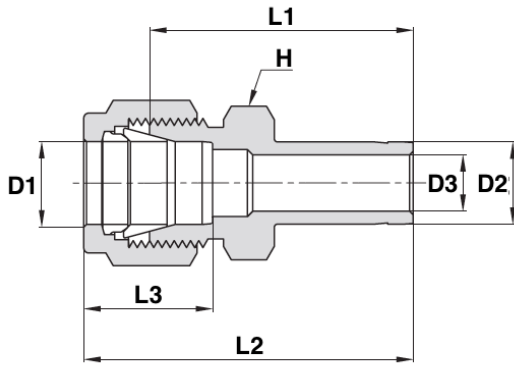
REDUCER



METRIC TO METRIC (CONT)

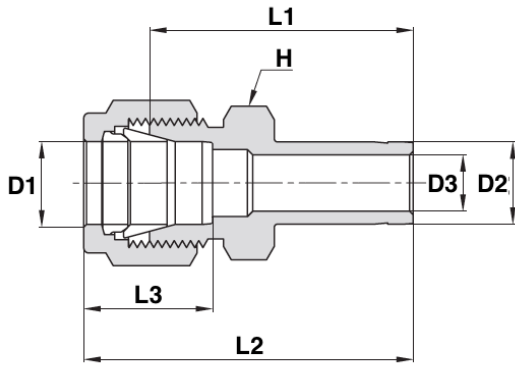
Product ID	D1 mm	D2 mm	D3 mm	H mm	L1 mm	L2 mm	L3 mm
R_12 x 22	12	22	9.5	24	46.0	56.1	22.8
R_12 x 25	12	25	9.5	27	52.3	62.4	22.8
R_14 x 12	14	12					
R_15 x 12	15	12					
R_16 x 12	16	12	8.8	24	42.9	53.0	24.4
R_18 x 16	18	16	12.7	27	46.0	56.1	24.4
R_18 x 20	18	20	15.1	27	47.5	57.6	24.4
R_18 x 22	18	22	15.1	27	47.5	57.6	24.4
R_18 x 25	18	25	15.1	27	52.3	62.4	24.4
R_20 x 16	20	16	12.7	30	47.8	57.9	26.0
R_20 x 18	20	18	13.9	30	47.8	57.9	26.0
R_20 x 22	20	22	15.9	30	49.3	59.4	26.0
R_20 x 25	20	25	15.9	30	54.1	64.2	26.0
R_22 x 18	22	18	13.9	30	47.8	57.9	26.0
R_22 x 20	22	20	15.1	30	49.3	59.4	26.0
R_22 x 25	22	25	18.3	30	54.1	64.2	26.0
R_25 x 18	25	18	13.9	35	50.8	63.1	31.3
R_25 x 20	25	20	15.1	35	52.3	64.6	31.3

REDUCER



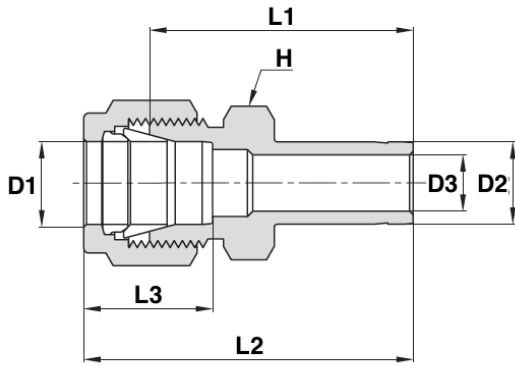
METRIC TO IMPERIAL							
Product ID	D1	D2	D	H	L1	L2	L3
	mm	inch	mm	mm	mm	mm	mm
R_2 x 1/8	2	1/8	2.0	12	26.9	33.5	12.9
R_3 x 1/8	3	1/8	2.0	12	26.9	33.5	12.9
R_3 x 1/4	3	1/4	2.4	12	29.5	36.1	12.9
R_4 x 1/4	4	1/4	2.4	12	30.5	37.1	13.7
R_6 x 1/8	6	1/8	2.2	14	29.5	36.9	15.3
R_6 x 1/4	6	1/4					
R_6 x 5/16	6	5/16	4.8	14	32.5	39.9	15.3
R_6 x 3/8	6	3/8	4.8	14	33.3	40.7	15.3
R_6 x 1/2	6	1/2	4.8	14	38.9	46.3	15.3
R_8 x 3/8	8	1/4					
R_8 x 3/8	8	3/8	6.4	15	34.5	42.0	16.2
R_8 x 1/2	8	1/2	6.4	15	40.1	47.6	16.2
R_10 x 3/8	10	3/8	6.8	18	36.6	44.2	17.2
R_10 x 1/2	10	1/2	7.9	18	42.2	49.8	17.2
R_12 x 1/2	12	1/2	9.4	22	42.2	52.3	22.8
R_12 x 3/4	12	3/4	9.4	22	43.7	53.8	22.8
R_18 x 3/4	18	3/4	15.0	27	46.0	56.1	24.4
R_18 x 1	18	1	15.1	27	52.3	62.4	24.4
R_25 x 1	25	1	20.3	35	57.2	69.5	31.3

REDUCER



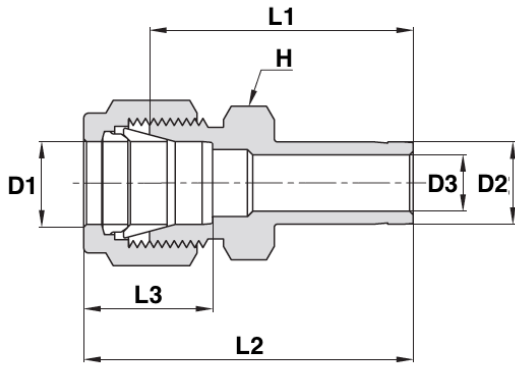
IMPERIAL TO IMPERIAL							
Product ID	D1 inch	D2 inch	D3 inch	H inch	L1 inch	L2 inch	L3 inch
R_1/16 x 1/8	1/16	1/8	.05	5/16	1.00	1.15	.34
R_1/16 x 1/4	1/16	1/4	.05	5/16	1.09	1.24	.34
R_1/8 x 1/16	1/8	1/16	.03	7/16	.88	1.14	.50
R_1/8 x 1/8	1/8	1/8	.08	7/16	1.06	1.32	.50
R_1/8 x 3/16	1/8	3/16	.09	7/16	1.09	1.35	.50
R_1/8 x 1/4	1/8	1/4	.09	7/16	1.16	1.42	.50
R_1/8 x 3/8	1/8	3/8	.09	7/16	1.22	1.48	.50
R_1/8 x 1/2	1/8	1/2	.09	9/16	1.48	1.74	.50
R_3/16 x 1/8	3/16	1/8	.08	7/16	1.11	1.37	.54
R_3/16 x 1/4	3/16	1/4	.12	7/16	1.20	1.46	.54
R_1/4 x 1/8	1/4	1/8	.08	1/2	1.16	1.45	.60
R_1/4 x 3/16	1/4	3/16	.12	1/2	1.19	1.48	.60
R_1/4 x 1/4	1/4	1/4	.17	1/2	1.25	1.54	.60
R_1/4 x 5/16	1/4	5/16	.19	1/2	1.28	1.57	.60
R_1/4 x 3/8	1/4	3/8	.19	1/2	1.31	1.60	.60
R_1/4 x 1/2	1/4	1/2	.19	9/16	1.53	1.82	.60
R_1/4 x 5/8	1/4	5/8	.19	11/16	1.60	1.89	.60
R_1/4 x 3/4	1/4	3/4	.19	13/16	1.59	1.88	.60
R_5/16 x 3/8	5/16	3/8	.25	9/16	1.36	1.65	.64
R_5/16 x 1/2	5/16	1/2	.25	9/16	1.58	1.87	.64

REDUCER



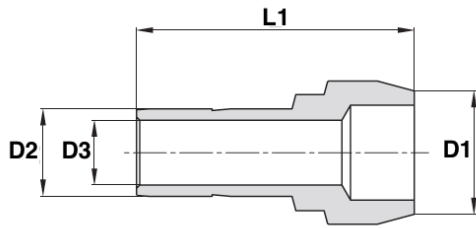
IMPERIAL TO IMPERIAL (CONT)							
Product ID	D1 inch	D2 inch	D3 inch	H inch	L1 inch	L2 inch	L3 inch
R_3/8 x 1/4	3/8	1/4	.17	5/8	1.34	1.63	.66
R_3/8 x 3/8	3/8	3/8	.27	5/8	1.41	1.70	.66
R_3/8 x 1/2	3/8	1/2	.28	5/8	1.62	1.91	.66
R_3/8 x 5/8	3/8	5/8	.28	11/16	1.69	1.98	.66
R_3/8 x 3/4	3/8	3/4	.28	13/16	1.69	1.98	.66
R_1/2 x 1/4	1/2	1/4	.17	13/16	1.37	1.77	.90
R_1/2 x 3/8	1/2	3/8	.27	13/16	1.44	1.84	.90
R_1/2 x 1/2	1/2	1/2	.37	13/16	1.66	2.06	.90
R_1/2 x 5/8	1/2	5/8	.41	13/16	1.72	2.12	.90
R_1/2 x 3/4	1/2	3/4	.41	13/16	1.72	2.12	.90
R_1/2 x 1	1/2	1	.41	1 1/16	1.97	2.37	.90
R_5/8 x 3/4	5/8	3/4	.50	15/16	1.75	2.15	.96
R_5/8 x 7/8	5/8	7/8	.50	15/16	1.81	2.21	.96
R_5/8 x 1	5/8	1	.50	1 1/16	2.00	2.40	.96
R_3/4 x 1/2	3/4	1/2	.37	1 1/16	1.75	2.15	.96
R_3/4 x 1	3/4	1	.62	1 1/16	2.06	2.46	.96
R_1 x 1 1/4	1	1 1/4	.88	1 3/8	2.69	3.17	1.23
R_1 x 1 1/2	1	1 1/2	.88	1 5/8	3.03	3.51	1.23
R_1 x 2	1	2					
R_1 1/4 x 1 1/2	1 1/4	1 1/2	1.09	1 3/4	3.23	4.10	1.62
R_1 1/4 x 2	1 1/4	2					
R_1 1/2 x 2	1 1/2	2					

REDUCER



IMPERIAL TO METRIC												
Product ID	D1		D2	D3		H	L1		L2		L3	
	inch	mm	mm	inch	mm	inch	inch	mm	inch	mm	inch	mm
R_1/8 x 6	1/8	3.17	6	.09	2.30	7/16	1.16	29.46	1.42	36.06	.50	12.7
R_1/4 x 6	1/4	6.35	6	.16	4.00	1/2	1.25	31.75	1.54	39.11	.60	15.2
R_3/8 x 8	3/8	9.52	8	.22	5.60	5/8	1.42	36.06	1.71	43.43	.66	16.8
R_3/8 x 12	3/8	9.52	12	.28	7.11	5/8	1.62	41.15	1.91	48.51	.66	16.8

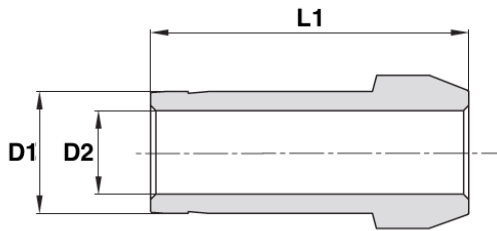
REDUCING PORT CONNECTOR



METRIC TO METRIC				
Product ID	D1	D2	D3	L
	mm	mm	mm	mm
RPC_6 x 3	6	3	2.1	22.9
RPC_8 x 6	8	6	4.0	24.7
RPC_10 x 6	10	6	4.0	25.8
RPC_10 x 8	10	8	5.6	26.1
RPC_12 x 6	12	6	4.0	29.1
RPC_12 x 8	12	8	5.6	29.8
RPC_12 x 10	12	10	7.1	30.6
RPC_16 x 12	16	12	8.8	37.5
RPC_28 x 25	28	25		
RPC_32 x 25	32	25		
RPC_38 x 25	38	25	19.8	65.8

IMPERIAL TO IMPERIAL				
Product ID	D1	D2	D3	L
	inch	inch	inch	inch
RPC_1/8 x 1/16	1/8	1/16	.03	.68
RPC_1/4 x 1/16	1/4	1/16	.03	.71
RPC_1/4 x 1/8	1/4	1/8	.08	.90
RPC_3/8 x 1/8	3/8	1/8	.08	.91
RPC_3/8 x 1/4	3/8	1/4	.17	.98
RPC_1/2 x 1/4	1/2	1/4	.17	1.15
RPC_1/2 x 3/8	1/2	3/8	.28	1.20
RPC_3/4 x 1/2	3/4	1/2	.39	1.49
RPC_1 x 1/2	1	1/2		
RPC_1 x 3/4	1	3/4		

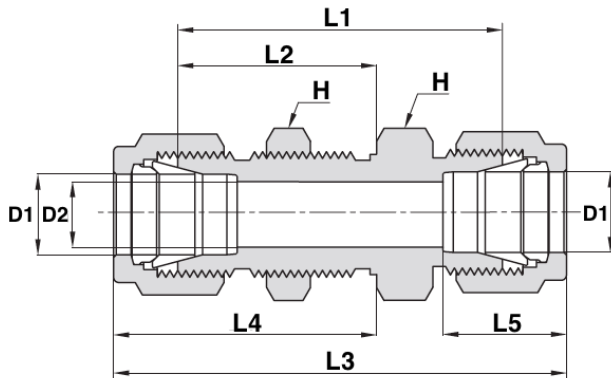
PORT CONNECTOR



METRIC			
Product ID	D1	D2	L
	mm	mm	mm
PC_3	3	2.1	22.2
PC_6	6	4.0	25.0
PC_8	8	5.6	25.9
PC_10	10	7.1	27.1
PC_12	12	8.8	36.2
PC_15	15		
PC_16	16	12.7	37.4
PC_18	18	13.9	37.4
PC_20	20		
PC_25	25		
PC_B28	B28		
PC_28	28		
PC_30	30		
PC_32	32		
PC_38	38	31.6	81.9
PC_50	50	42.8	114.0

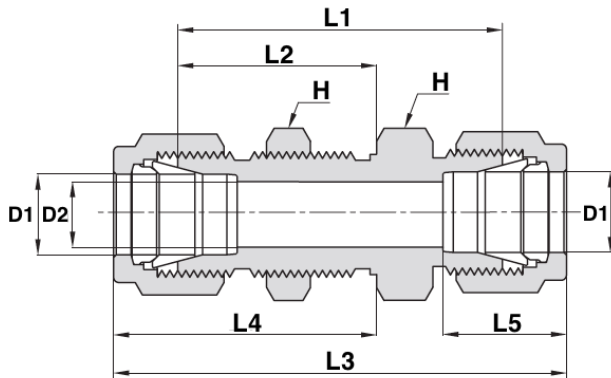
IMPERIAL			
Product ID	D1	D2	L
	inch	inch	inch
PC_1/16	1/16	.03	.54
PC_1/8	1/8	.08	.88
PC_1/4	1/4	.17	.98
PC_5/16	5/16	.24	1.02
PC_3/8	3/8	.27	1.03
PC_1/2	1/2	.37	1.41
PC_5/8	5/8		
PC_3/4	3/4	.59	1.47
PC_1	1	.80	1.90
PC_1 1/4	1 1/4	1.02	2.72
PC_1 1/2	1 1/2	1.25	3.31
PC_2	2	1.72	4.56

BULKHEAD UNION



METRIC TO METRIC										
Product ID	D1	D2	H	L1	L2	L3	L4	L5	Panel Hole Drill Size	Panel Hole Drill Size
	mm	mm	mm	inch	mm	mm	mm	mm	mm	mm
BU_3	3	2.4	14	38.1	24.6	51.3	31.2	12.9	8.30	12.7
BU_4	4	2.4	14	40.4	25.4	53.6	32.0	13.7	9.90	12.7
BU_6	6	4.8	16	42.9	26.2	57.7	33.6	15.3	11.50	10.2
BU_8	8	6.4	18	46.0	28.6	61.0	36.1	16.2	13.10	11.2
BU_10	10	7.9	22	48.5	29.4	63.7	37.0	17.2	16.25	11.2
BU_12	12	9.5	24	50.8	31.8	71.0	41.9	22.8	19.50	12.7
BU_14	14	11.0	27	52.3	32.5	72.5	42.6	24.4	22.80	12.7
BU_15	15	11.9	27	52.3	32.5	72.5	42.6	24.4	22.80	12.7
BU_16	16	12.7	27	52.3	32.5	72.5	42.6	24.4	22.80	12.7
BU_18	18	15.1	30	58.7	37.3	78.9	47.4	24.4	26.00	16.8
BU_20	20	15.9	35	64.3	42.9	84.5	53.0	26.0	29.00	19.0
BU_25	25	21.8	41	71.4	45.2	96.0	57.5	31.3	33.70	19.0
BU_30	30									
BU_32	32									
BU_38	38	33.7	60	89.8	51.9	145.0	79.5	49.4	50.50	19.0

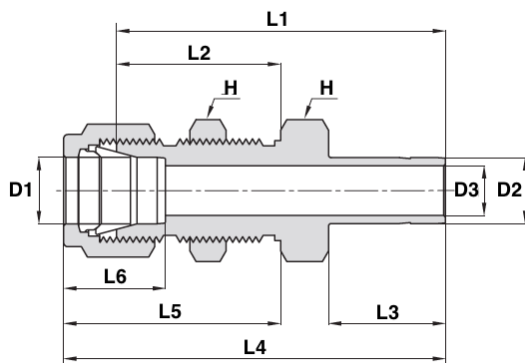
BULKHEAD UNION



IMPERIAL TO IMPERIAL

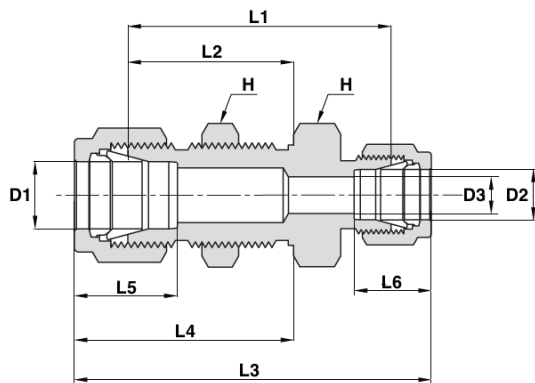
Product ID	D1	D2	H	L1	L2	L3	L4	L5	Panel Hole Drill Size	Panel Hole Drill Size
	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch
BU_1/16	1/16	.05	5/16	.94	.53	1.24	.68	.34	13/64	.12
BU_1/8	1/8	.09	1/2	1.50	.97	2.02	1.23	.50	21/64	.50
BU_3/16	3/16	.12	9/16	1.59	1.00	2.11	1.26	.54	25/64	.50
BU_1/4	1/4	.19	5/8	1.69	1.03	2.27	1.32	.60	29/64	.40
BU_5/16	5/16	.25	11/16	1.81	1.12	2.39	1.41	.64	33/64	.44
BU_3/8	3/8	.28	3/4	1.87	1.16	2.45	1.45	.66	37/64	.44
BU_1/2	1/2	.41	15/16	2.00	1.25	2.80	1.65	.90	49/64	.50
BU_5/8	5/8	.50	1 1/16	2.06	1.28	2.86	1.68	.96	57/64	.50
BU_3/4	3/4	.62	1 3/16	2.31	1.47	3.11	1.87	.96	1 1/64	.66
BU_1	1	.88	1 5/8	2.81	1.78	3.77	2.26	1.23	1 21/64	.75
BU_1 1/4	1 1/4	1.09	1 7/8	3.11	1.88	4.85	2.75	1.62	1 41/64	.75
BU_1 1/2	1 1/2	1.34	2 1/4	3.34	1.94	5.48	3.01	1.97	1 61/64	.75
BU_2	2	1.81	2 3/4	4.16	2.22	7.10	3.69	2.66	2 41/64	.75

BULKHEAD REDUCER



IMPERIAL TO NPT												
Product ID	D1	D2	D3	H	L1	L2	L3	L4	L5	L6	Panel Hole Drill Size	Max. Panel Width
	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch
BR_1/8 x 1/8	1/8	1/8	.08	1/2	1.69	.97	.53	1.95	1.23	.50	21/64	.50
BR_1/4 x 1/4	1/4	1/4	.17	5/8	1.91	1.03	.62	2.20	1.32	.60	29/64	.40
BR_3/8 x 3/8	3/8	3/8	.28	3/4	2.12	1.16	.69	2.41	1.45	.66	37/64	.44
BR_1/2 x 1/2	1/2	1/2	.39	15/16	2.47	1.25	.91	2.87	1.65	.90	49/64	.50
BR_5/8 x 5/8	5/8	5/8	.50	1 1/16	2.56	1.28	.97	2.96	1.68	.96	57/64	.50
BR_3/4 x 3/4	3/4	3/4	.59	1 3/16	2.81	1.47	.97	3.21	1.87	.96	1 1/64	.66
BR_1 x 1	1	1	.80	1 5/8	3.47	1.78	1.30	3.95	2.26	1.23	1 21/64	.75

BULKHEAD REDUCING UNION



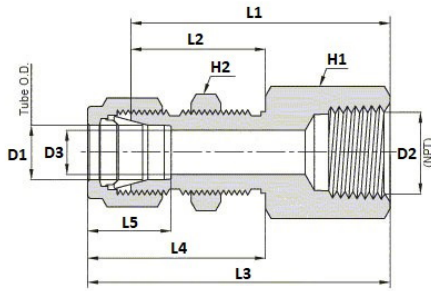
METRIC TO IMPERIAL

Product ID	D1	D2	D3	H	L1	L2	L3	L4	L5	L6	Panel Hole Drill Size	Max. Panel Width
	mm	inch	mm	inch	mm	mm	mm	mm	mm	mm		
BRU_6 x 1/8	6	1/8	2.4	16	41.1	26.2	55.1	33.6	15.3	12.7	11.5	10.2
BRU_6 x 1/4	6	1/4	4.8	16	42.9	26.2	57.7	33.6	15.3	15.2	11.5	10.2
BRU_12 x 1/2	12	1/2	9.5	24	50.8	31.8	71.1	41.9	22.8	22.9	19.5	12.7
BRU_18 x 3/4	18	3/4	15.1	30	58.7	37.3	79.0	47.4	24.4	24.4	26.0	16.8

IMPERIAL TO IMPERIAL

Product ID	D1	D2	D3	H	L1	L2	L3	L4	L5	L6	Panel Hole Drill Size	Max. Panel Width
	inch	inch	mm	inch	inch	inch	inch	inch	inch	inch		
BRU_1/8 x 1/16	1/8	1/16	.05	1/2	1.44	.97	1.85	1.23	.50	.34	21/64	.50
BRU_3/16 x 1/4	3/16	1/4	.12	9/16	1.62	1.00	2.17	1.26	.54	.60	25/64	.50
BRU_1/4 x 1/8	1/4	1/8	.09	5/8	1.62	1.03	2.17	1.32	.60	.50	29/64	.40
BRU_1/4 x 3/8	1/4	3/8	.19	5/8	1.74	1.03	2.61	1.32	.60	.66	29/64	.40
BRU_3/8 x 1/4	3/8	1/4	.19	3/4	1.81	1.16	2.39	1.45	.66	.60	37/64	.44
BRU_1/2 x 1/4	1/2	1/4	.19	15/16	1.94	1.25	2.63	1.65	.90	.60	49/64	.50
BRU_1/2 x 5/8	1/2	5/8	.41	15/16	2.03	1.25	2.83	1.65	.90	.96	49/64	.50
BRU_5/8 x 3/8	5/8	3/8	.28	1 1/16	2.06	1.28	2.75	1.68	.96	.66	57/64	.50

BULKHEAD FEMALE CONNECTOR



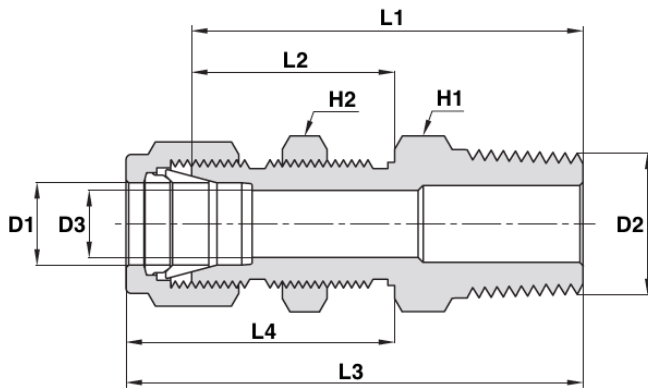
METRIC TO NPT

Product ID	D1	D2 (NPT)	D3	H1	H2	L1	L2	L3	L4	L5	Panel Hole Drill Size	Panel Hole Drill Size
	mm	inch	mm	inch	mm	mm	mm	mm	mm	mm	mm	mm
BFC_6 x NPT-1/4	6	1/4	4.8	19	16	44.4	26.2	51.8	33.6	15.3	11.5	10.2
BFC_12 x NPT-1/2	12	1/2	9.5	27	24	56.4	31.8	66.5	41.9	22.8	19.5	12.7

IMPERIAL TO NPT

Product ID	D1	D2 (NPT)	D3	H1	H2	L1	L2	L3	L4	L5	Panel Hole Drill Size	Panel Hole Drill Size
	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch
BFC_1/8 x NPT-1/8	1/8	1/8	.09	9/16	1/2	1.50	.97	1.76	1.23	.50	21/64	.50
BFC_1/4 x NPT-1/8	1/4	1/8	.19	5/8	5/8	1.56	1.03	1.85	1.32	.60	29/64	.40
BFC_1/4 x NPT-1/4	1/4	1/4	.19	3/4	5/8	1.75	1.03	2.04	1.32	.60	29/64	.40
BFC_3/8 x NPT-1/4	3/8	1/4	.28	3/4	3/4	1.88	1.16	2.17	1.45	.66	37/64	.44
BFC_1/2 x NPT-3/8	1/2	3/8	.41	15/16	15/16	2.03	1.25	2.43	1.65	.90	49/64	.50
BFC_1/2 x NPT-1/2	1/2	1/2	.41	1 1/16	15/16	2.22	1.25	2.62	1.65	.90	49/64	.50

BULKHEAD MALE CONNECTOR



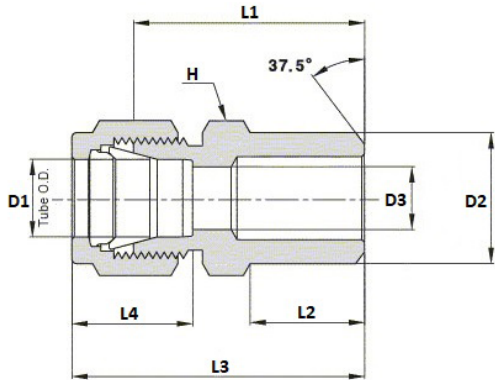
METRIC TO NPT

Product ID	D1	D2 (NPT)	D3	H1	H2	L1	L2	L3	L4	Panel Hole Drill Size	Max. Panel Width
	mm	inch	mm	inch	mm	mm	mm	mm	mm	mm	mm
BMC_6 x NPT-1/8	6	1/8	4.8	16	16	42.2	26.2	49.6	33.6	11.5	10.2
BMC_6 x NPT-1/4	6	1/4	4.8	16	16	46.2	26.2	53.6	33.6	11.5	10.2
BMC_12 x NPT-1/2	12	1/2	9.5	24	24	58.7	31.8	68.8	41.9	19.5	12.7

IMPERIAL TO NPT

Product ID	D1	D2 (NPT)	D3	H1	H2	L1	L2	L3	L4	Panel Hole Drill Size	Max. Panel Width
	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch
BMC_1/8 x NPT-1/8	1/8	1/8	.09	1/2	1/2	1.57	.97	1.83	1.23	21/64	.50
BMC_1/4 x NPT-1/8	1/4	1/8	.19	5/8	5/8	1.66	1.03	1.95	1.32	29/64	.40
BMC_1/4 x NPT-1/4	1/4	1/4	.19	5/8	5/8	1.84	1.03	2.13	1.32	29/64	.40
BMC_3/8 x NPT-1/4	3/8	1/4	.28	3/4	3/4	1.97	1.16	2.26	1.45	37/64	.44
BMC_3/8 x NPT-3/8	3/8	3/8	.28	3/4	3/4	1.97	1.16	2.26	1.45	37/64	.44
BMC_3/8 x NPT-1/2	3/8	1/2	.28	7/8	3/4	2.22	1.16	2.51	1.45	37/64	.44
BMC_1/2 x NPT-3/8	1/2	3/8	.40	15/16	15/16	2.09	1.25	2.49	1.65	49/64	.50
BMC_1/2 x NPT-1/2	1/2	1/2	.40	15/16	15/16	2.31	1.25	2.71	1.65	49/64	.50
BMC_3/4 x NPT-3/4	3/4	3/4	.62	1 3/16	1 3/16	2.60	1.47	3.00	1.87	1 1/64	.66
BMC_1 x NPT-1	1	1	.88	1 5/8	1 5/8	3.19	1.78	3.67	2.26	1 21/64	.75

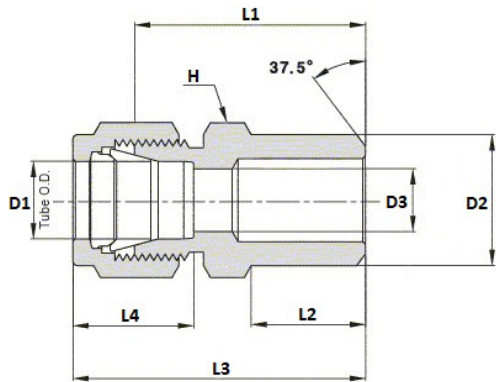
MALE PIPE WELD CONNECTOR



METRIC TO IMPERIAL

Product ID	D1	D2	D3	H	L1	L2	L3	L4
	mm	inch	mm	mm	mm	mm	mm	mm
MPWC_3 x 1/8	3	1/8	2.4	12	23.9	9.7	30.5	12.9
MPWC_4 x 1/8	4	1/8	2.4	12	24.6	9.7	31.2	13.7
MPWC_6 x 1/8	6	1/8	4.8	14	25.4	9.7	32.8	15.3
MPWC_6 x 1/4	6	1/4	4.8	14	30.5	14.2	37.9	15.3
MPWC_8 x 1/8	8	1/8	5.1	15	26.7	9.7	34.2	16.2
MPWC_8 x 1/4	8	1/4	6.4	15	31.2	14.2	38.7	16.2
MPWC_8 x 1/2	8	1/2	6.4	22	38.1	19.0	45.6	16.2
MPWC_10 x 1/4	10	1/4	7.1	18	33.3	14.2	40.9	17.2
MPWC_10 x 3/8	10	3/8	7.9	18	33.3	14.2	40.9	17.2
MPWC_10 x 1/2	10	1/2	7.9	22	38.9	19.0	46.5	17.2
MPWC_12 x 1/4	12	1/4	7.1	22	33.3	14.2	43.4	22.8
MPWC_12 x 3/8	12	3/8	9.5	22	33.3	14.2	43.4	22.8
MPWC_12 x 1/2	12	1/2	9.5	22	38.9	19.0	49.0	22.8
MPWC_12 x 3/4	12	3/4	9.5	27	40.4	19.0	50.5	22.8
MPWC_14 x 3/8	14	3/8	10.4	24	34.0	14.2	44.1	24.4
MPWC_15 x 1/2	15	1/2	11.9	24	38.9	19.0	49.0	24.4
MPWC_16 x 1/2	16	1/2	12.7	24	38.9	19.0	49.0	24.4
MPWC_18 x 1/2	18	1/2	13.5	27	40.4	19.0	50.5	24.4
MPWC_30 x 1 1/4	30	1 1/4						
MPWC_32 x 1 1/4	32	1 1/4						
MPWC_38 x 1 1/2	38	1 1/2	33.7	55	64.0	26.2	91.2	49.4

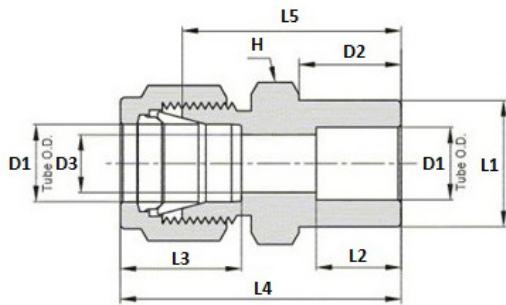
MALE PIPE WELD CONNECTOR



IMPERIAL TO IMPERIAL

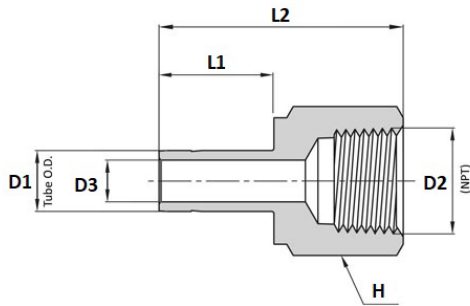
Product ID	D1	D2 (Straight Thread UN)	D3	H	L1	L2	L3	L4	O-Ring
	inch	inch	inch	inch	inch	inch	inch	inch	
MPWC_1/8 x 1/8	1/8	1/8	10.30	2.28	7/16	23.88	9.65	30.48	12.7
MPWC_3/16 x 1/8	3/16	1/8	10.30	3.04	7/16	24.60	9.65	31.25	13.7
MPWC_1/4 x 1/8	1/4	1/8	10.30	4.82	1/2	25.40	9.65	32.77	15.2
MPWC_1/4 x 1/4	1/4	1/4	13.70	4.82	9/16	30.48	14.22	37.85	15.2
MPWC_5/16 x 1/8	5/16	1/8	10.30	5.08	9/16	26.67	9.65	34.04	16.2
MPWC_5/16 x 1/4	5/16	1/4	13.70	6.35	9/16	31.24	14.22	38.61	16.2
MPWC_3/8 x 1/4	3/8	1/4	13.70	7.11	5/8	32.51	14.22	39.87	16.8
MPWC_3/8 x 3/8	3/8	3/8	17.10	7.11	11/16	32.51	14.22	39.87	16.8
MPWC_3/8 x 1/2	3/8	1/2	21.34	7.11	7/8	38.86	19.05	46.22	16.8
MPWC_3/8 x 3/4	3/8	3/4	26.67	7.11	1 1/16	40.38	19.05	47.75	16.8
MPWC_1/2 x 3/8	1/2	3/8	17.10	10.41	13/16	33.27	14.22	44.43	22.9
MPWC_1/2 x 1/2	1/2	1/2	21.34	10.41	7/8	38.86	19.05	49.00	22.9
MPWC_1/2 x 3/4	1/2	3/4	26.67	10.41	1 1/16	40.40	19.05	50.55	22.9
MPWC_1/2 x 1	1/2	1	33.40	10.41	1 3/8	47.50	23.87	57.65	22.9
MPWC_5/8 x 1/2	5/8	1/2	21.34	12.70	15/16	38.86	19.05	49.02	24.4
MPWC_3/4 x 1/2	3/4	1/2	21.34	13.46	1 1/16	38.86	19.05	49.00	24.4
MPWC_3/4 x 3/4	3/4	3/4	26.67	15.74	1 1/16	40.40	19.05	50.55	24.4
MPWC_1 x 1	1	1	33.40	22.35	1 3/8	50.03	23.87	62.23	31.2
MPWC_1 1/4 x 1 1/4	1 1/4	1 1/4	42.16	27.70	1 3/4	55.12	23.88	77.22	41.2
MPWC_1 1/2 x 1 1/2	1 1/2	1 1/2	48.26	34.00	2 1/8	61.72	26.16	88.90	50.0
MPWC_2 x 2	2	2	60.33	45.97	2 3/4	76.20	26.92	113.34	67.6

TUBE SOCKET WELD UNION



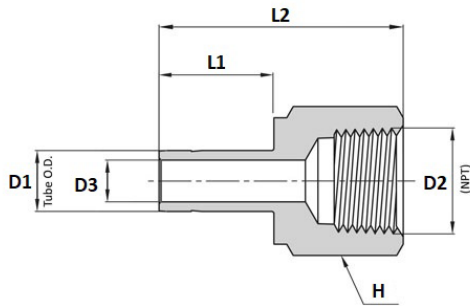
IMPERIAL									
Product ID	D1 inch	D2 inch	D3 inch	H inch	L1 inch	L2 inch	L3 inch	L4 inch	L5 inch
TSWU_1/8 x 1/8	1/8	.34	.09	7/16	.31	.25	.50	1.14	.88
TSWU_1/4 x 1/4	1/4	.41	.19	1/2	.44	.31	.60	1.32	1.03
TSWU_3/8 x 3/8	3/8	.47	.28	5/8	.62	.38	.66	1.48	1.19
TSWU_1/2 x 1/2	1/2	.47	.41	13/16	.75	.50	.90	1.62	1.22
TSWU_3/4 x 3/4	3/4	.47	.62	1 1/16	1.05	.56	.96	1.71	1.31
TSWU_1 x 1	1	.56	.88	1 3/8	1.36	.75	1.23	2.07	1.59

FEMALE ADAPTER TUBE TO PIPE



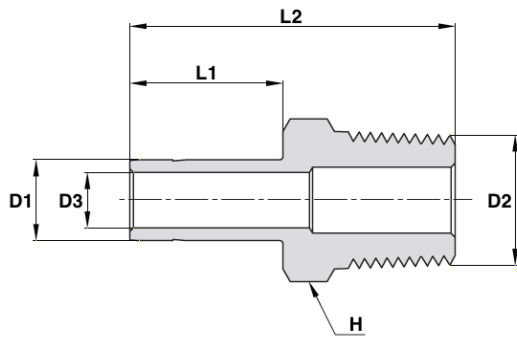
METRIC						
Product ID	D1	D2 (NPT)	D3	H	L1	L2
	mm	inch	mm	mm	mm	mm
FATTP_3 x NPT-1/8	3	1/8	2.1	14	13.5	31.5
FATTP_3 x NPT-1/4	3	1/4	2.1	19	13.5	35.3
FATTP_4 x NPT-1/4	4	1/4	2.2	19	14.2	35.0
FATTP_6 x NPT-1/8	6	1/8	4.0	14	15.7	32.5
FATTP_6 x NPT-1/4	6	1/4	4.0	19	15.7	37.1
FATTP_6 x NPT-3/8	6	3/8	4.0	22	15.7	39.6
FATTP_6 x NPT-1/2	6	1/2	4.0	27	15.7	45.5
FATTP_8 x NPT-1/8	8	1/8	5.6	14	16.8	34.3
FATTP_8 x NPT-1/4	8	1/4	5.6	19	16.8	37.6
FATTP_8 x NPT-1/2	8	1/2	5.6	27	16.8	46.0
FATTP_10 x NPT-1/4	10	1/4	7.1	19	17.5	38.1
FATTP_10 x NPT-3/8	10	3/8	7.1	22	17.5	40.1
FATTP_10 x NPT-1/2	10	1/2	7.1	27	17.5	46.5
FATTP_12 x NPT-1/4	12	1/4	8.8	19	23.1	43.4
FATTP_12 x NPT-3/8	12	3/8	8.8	22	23.1	45.5
FATTP_12 x NPT-1/2	12	1/2	8.8	27	23.1	52.3
FATTP_16 x NPT-3/8	16	3/8	12.7	24	24.7	48.0
FATTP_16 x NPT-1/2	16	1/2	12.7	27	24.7	53.1
FATTP_20 x NPT-1/2	20	1/2	15.1	27	26.6	56.0
FATTP_20 x NPT-3/4	20	3/4	15.1	35	26.6	56.0

FEMALE ADAPTER TUBE TO PIPE



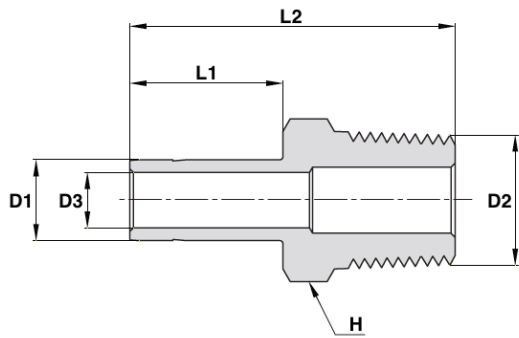
IMPERIAL						
Product ID	D1 inch	D2 (NPT) inch	D3 inch	H inch	L1 inch	L2 inch
FATTP_1/8 x NPT-1/8	1/8	1/8	.08	9/16	.53	1.24
FATTP_1/8 x NPT-1/4	1/8	1/4	.08	3/4	.53	1.39
FATTP_3/16 x NPT-1/4	3/16	1/4	.12	3/4	.56	1.41
FATTP_1/4 x NPT-1/8	1/4	1/8	.17	9/16	.62	1.30
FATTP_1/4 x NPT-1/4	1/4	1/4	.17	3/4	.62	1.46
FATTP_1/4 x NPT-3/8	1/4	3/8	.17	7/8	.62	1.55
FATTP_1/4 x NPT-1/2	1/4	1/2	.17	1 1/16	.62	1.79
FATTP_5/16 x NPT-1/4	5/16	1/4	.22	3/4	.66	1.48
FATTP_3/8 x NPT-1/8	3/8	1/8	.27	9/16	.69	1.35
FATTP_3/8 x NPT-1/4	3/8	1/4	.27	3/4	.69	1.50
FATTP_3/8 x NPT-3/8	3/8	3/8	.27	7/8	.69	1.59
FATTP_3/8 x NPT-1/2	3/8	1/2	.27	1 1/16	.69	1.84
FATTP_1/2 x NPT-1/4	1/2	1/4	.37	3/4	.91	1.71
FATTP_1/2 x NPT-3/8	1/2	3/8	.37	7/8	.91	1.79
FATTP_1/2 x NPT-1/2	1/2	1/2	.37	1 1/16	.91	2.05
FATTP_5/8 x NPT-1/2	5/8	1/2	.50	1 1/16	.97	2.09
FATTP_3/4 x NPT-1/2	3/4	1/2	.59	1 1/16	.97	2.08
FATTP_3/4 x NPT-3/4	3/4	3/4	.59	1 5/16	.97	2.16
FATTP_3/4 x NPT-1	3/4	1	.59	1 5/8	.97	2.30
FATTP_1 x NPT-3/4	1	3/4	.80	1 5/16	1.23	2.39
FATTP_1 x NPT-1	1	1	.80	1 5/8	1.23	2.53
FATTP_1 1/4 x NPT-1 1/4	1 1/4	1 1/4	1.02	2 1/8	1.73	3.06
FATTP_1 1/2 x NPT-1 1/2	1 1/2	1 1/2	1.25	2 3/8	2.14	3.50
FATTP_2 x NPT-2	2	2				

MALE ADAPTER TUBE TO PIPE



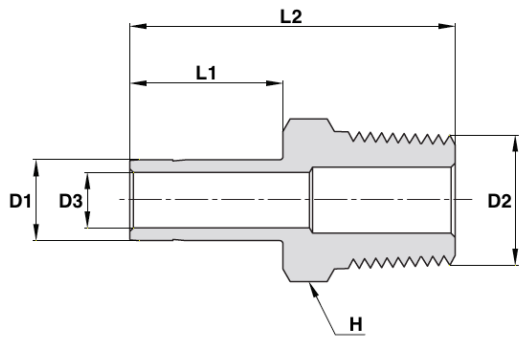
METRIC TO NPT						
Product ID	D1	D2 (NPT)	D3	H	L1	L2
	mm	inch	inch	mm	mm	mm
MATTP_3 x NPT-1/8	3	1/8	2.1	12	13.5	30.0
MATTP_3 x NPT-1/4	3	1/4	2.1	14	13.5	35.3
MATTP_6 x NPT-1/8	6	1/8	4.0	12	15.7	32.8
MATTP_6 x NPT-1/4	6	1/4	4.0	14	15.7	38.1
MATTP_6 x NPT-3/8	6	3/8	4.0	18	15.7	37.0
MATTP_6 x NPT-1/2	6	1/2	4.0	22	15.7	43.4
MATTP_8 x NPT-1/8	8	1/8	4.8	12	16.8	33.5
MATTP_8 x NPT-1/4	8	1/4	5.6	14	16.8	39.1
MATTP_8 x NPT-3/8	8	3/8	5.6	11/16 inch	16.8	37.8
MATTP_8 x NPT-1/2	8	1/2	5.6	22	16.8	43.0
MATTP_10 x NPT-1/4	10	1/4	7.1	9/16 inch	17.5	39.9
MATTP_10 x NPT-3/8	10	3/8	7.1	18	17.5	40.6
MATTP_10 x NPT-1/2	10	1/2	7.1	22	17.5	46.2
MATTP_12 x NPT-1/4	12	1/4	7.1	16	23.1	46.5
MATTP_12 x NPT-3/8	12	3/8	8.8	18	23.1	46.5
MATTP_12 x NPT-1/2	12	1/2	8.8	22	23.1	52.0
MATTP_16 x NPT-1/2	16	1/2	11.9	22	24.7	50.5
MATTP_20 x NPT-3/4	20	3/4	15.1	27	26.6	54.3
MATTP_28 x NPT-1	28	1				
MATTP_28 x NPT-1 1/4	28	1 1/4				
MATTP_30 x NPT-1	30	1				
MATTP_30 x NPT-1 1/4	30	1 1/4				
MATTP_32 x NPT-1 1/4	32	1 1/4				
MATTP_38 x NPT-1 1/2	38	1 1/2				

MALE ADAPTER TUBE TO PIPE



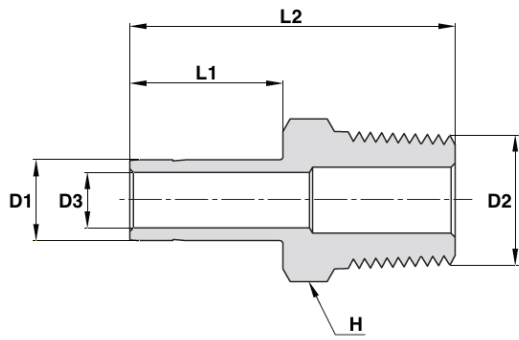
IMPERIAL TO NPT						
Product ID	D1	D2 (NPT)	D3	H	L1	L2
	inch	inch	inch	inch	inch	inch
MATTP_1/8 x NPT-1/8	1/8	1/8	.08	7/16	.53	1.16
MATTP_1/8 x NPT-1/4	1/8	1/4	.08	9/16	.53	1.37
MATTP_3/16 x NPT-1/8	3/16	1/8	.12	7/16	.56	1.19
MATTP_3/16 x NPT-1/4	3/16	1/4	.12	9/16	.56	1.40
MATTP_1/4 x NPT-1/8	1/4	1/8	.17	7/16	.62	1.25
MATTP_1/4 x NPT-1/4	1/4	1/4	.17	9/16	.62	1.46
MATTP_1/4 x NPT-3/8	1/4	3/8	.17	11/16	.62	1.49
MATTP_1/4 x NPT-1/2	1/4	1/2	.17	7/8	.62	1.71
MATTP_5/16 x NPT-1/8	5/16	1/8	.22	7/16	.66	1.29
MATTP_5/16 x NPT-1/4	5/16	1/4	.22	9/16	.66	1.50
MATTP_3/8 x NPT-1/8	3/8	1/8	.27	7/16	.69	1.32
MATTP_3/8 x NPT-1/4	3/8	1/4	.27	9/16	.69	1.53
MATTP_3/8 x NPT-3/8	3/8	3/8	.27	11/16	.69	1.56
MATTP_3/8 x NPT-1/2	3/8	1/2	.27	7/8	.69	1.78
MATTP_1/2 x NPT-1/4	1/2	1/4	.28	9/16	.91	1.75
MATTP_1/2 x NPT-3/8	1/2	3/8	.37	11/16	.91	1.78
MATTP_1/2 x NPT-1/2	1/2	1/2	.37	7/8	.91	2.0

MALE ADAPTER TUBE TO PIPE



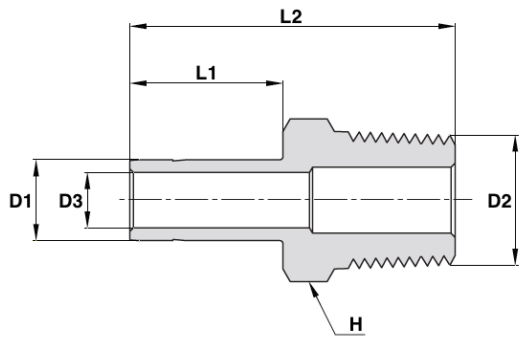
IMPERIAL TO NPT (CONT)						
Product ID	D1 inch	D2 (NPT) inch	D3 inch	H inch	L1 inch	L2 inch
MATTP_5/8 x NPT-3/8	5/8	3/8	.37	11/16	.97	1.81
MATTP_5/8 x NPT-1/2	5/8	1/2	.47	7/8	.97	2.06
MATTP_5/8 x NPT-3/4	5/8	3/4	.50	1 1/16	.97	2.06
MATTP_3/4 x NPT-1/2	3/4	1/2	.47	7/8	.97	2.06
MATTP_3/4 x NPT-3/4	3/4	3/4	.59	1 1/16	.97	2.06
MATTP_3/4 x NPT-1	3/4	1	.59	1 3/8	.97	2.28
MATTP_7/8 x NPT-3/4	7/8	3/4	.60	1 1/16	1.05	2.09
MATTP_1 x NPT-3/4	1	3/4	.60	1 1/16	1.30	2.31
MATTP_1 x NPT-1	1	1	.80	1 3/8	1.30	2.60
MATTP_1 1/4 x NPT-1 1/4	1 1/4	1 1/4	1.02	1 3/4	1.73	3.16
MATTP_1 1/2 x NPT-1 1/2	1 1/2	1 1/2	1.25	2 1/8	2.14	3.72
MATTP_2 x NPT-2	2	2				

MALE ADAPTER TUBE TO PIPE



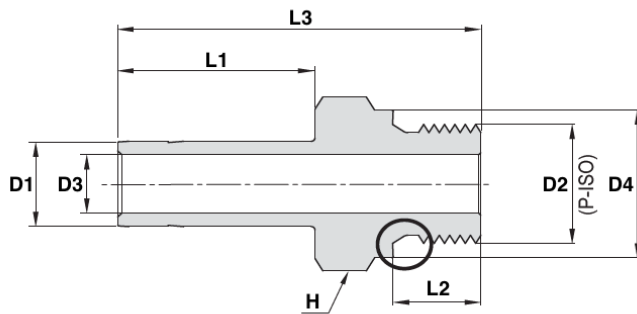
METRIC TO ISO TAPERED PIPE						
Product ID	D1	D2 (ISO)	D3	H	L1	L2
	mm	inch	inch	mm	mm	mm
MATTP_6 x R-1/8	6	R-1/8	4.0	12	15.7	32.8
MATTP_6 x R-1/4	6	R-1/4	4.0	14	15.7	38.1
MATTP_6 x R-1/2	6	R-1/2	4.0	22	15.7	43.4
MATTP_8 x R-1/8	8	R-1/8	4.8	12	16.8	33.5
MATTP_8 x R-1/4	8	R-1/4	5.6	14	16.8	39.1
MATTP_8 x R-3/8	8	R-3/8	5.6	11/16 inch	16.8	37.8
MATTP_10 x R-1/4	10	R-1/4	7.1	14	17.5	39.9
MATTP_10 x R-3/8	10	R-3/8	7.1	18	17.5	40.6
MATTP_10 x R-1/2	10	R-1/2	7.1	22	17.5	46.2
MATTP_12 x R-1/4	12	R-1/4	7.1	16	23.1	46.5
MATTP_12 x R-3/8	12	R-3/8	8.8	18	23.1	46.2
MATTP_12 x R-1/2	12	R-1/2	8.8	22	23.1	52.0
MATTP_20 x R-3/4	20	R-3/4	15.1	27	26.6	54.3
MATTP_28 x R-1	28	R-1				
MATTP_28 x R-1 1/4	28	R-1 1/4				
MATTP_30 x R-1 1/4	30	R-1 1/4				
MATTP_32 x R-1 1/4	32	R-1 1/4				
MATTP_38 x R-1 1/2	38	R-1 1/2				

MALE ADAPTER TUBE TO PIPE



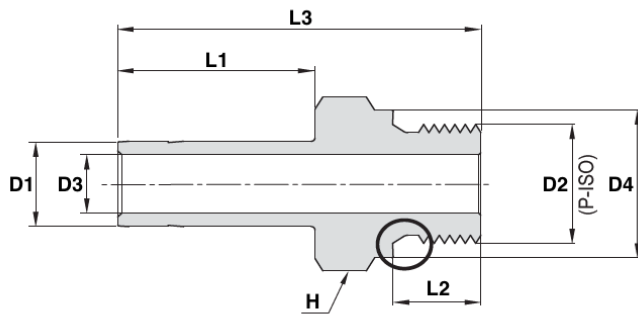
IMPERIAL TO ISO TAPERED PIPE						
Product ID	D1	D2 (ISO)	D3	H	L1	L2
	inch	inch	inch	inch	inch	inch
MATTP_1/8 x R-1/8	1/8	R-1/8	.08	7/16	.53	1.16
MATTP_1/8 x R-1/4	1/8	R-1/4	.08	9/16	.53	1.37
MATTP_1/4 x R-1/8	1/4	R-1/8	.17	7/16	.62	1.25
MATTP_1/4 x R-1/4	1/4	R-1/4	.17	9/16	.62	1.46
MATTP_1/4 x R-3/8	1/4	R-3/8	.17	11/16	.62	1.49
MATTP_1/4 x R-1/2	1/4	R-1/2	.17	7/8	.62	1.71
MATTP_3/8 x R-1/4	3/8	R-1/4	.27	9/16	.69	1.53
MATTP_3/8 x R-3/8	3/8	R-3/8	.27	11/16	.69	1.56
MATTP_3/8 x R-1/2	3/8	R-1/2	.27	7/8	.69	1.78
MATTP_1/2 x R-1/4	1/2	R-1/4	.28	9/16	.91	1.75
MATTP_1/2 x R-3/8	1/2	R-3/8	.37	11/16	.91	1.78
MATTP_1/2 x R-1/2	1/2	R-1/2	.37	7/8	.91	20.0
MATTP_5/8 x R-1/2	5/8	R-1/2	.47	7/8	.97	2.06
MATTP_3/4 x R-1/2	3/4	R-1/2	.47	7/8	.97	2.06
MATTP_3/4 x R-3/4	3/4	R-3/4	.59	1 1/16	.97	2.06
MATTP_1 x R-1	1	R-1	.80	1 3/8	1.30	2.60

MALE ADAPTER TUBE TO PIPE



METRIC TO ISO PARALLEL PIPE								
Product ID	D1	D2 (ISO)	D3	D4	H	L1	L2	L3
	mm	inch	inch	mm	mm	mm	mm	mm
MATTP_6 x G-1/8	6	G-1/8	4.0	13.8	9/16	15.7	7.1	30.4
MATTP_6 x G-1/4	6	G-1/4	4.0	18.0	19	15.7	11.2	38.9
MATTP_8 x G-1/4	8	G-1/4	5.6	18.0	19	16.8	11.2	40.1
MATTP_10 x G-1/4	10	G-1/4	5.9	18.0	19	17.5	11.2	40.9
MATTP_10 x G-3/8	10	G-3/8	7.1	21.8	22	17.5	11.2	41.7
MATTP_10 x G-1/2	10	G-1/2	7.1	26.0	27	17.5	14.2	44.7
MATTP_12 x G-1/4	12	G-1/4	6.4	18.0	19	23.1	11.2	47.0
MATTP_12 x G-3/8	12	G-3/8	7.9	21.8	22	23.1	11.2	47.2
MATTP_12 x G-1/2	12	G-1/2	8.8	26.0	27	23.1	14.2	50.5
MATTP_18 x G-1/2	18	G-1/2	11.9	26.0	27	24.6	14.2	51.3
MATTP_18 x G-3/4	18	G-3/4	13.9	32.0	35	24.6	15.7	55.9
MATTP_28 x G1	28	G1						
MATTP_28 x G 1 1/4	28	G 1 1/4						
MATTP_B28 x G1	B28	G1						
MATTP_B28 x G 1 1/4	B28	G 1 1/4						
MATTP_30 x G 1 1/4	30	G 1 1/4						
MATTP_32 x G 1 1/4	32	G 1 1/4						
MATTP_38 x G-1 1/2	38	G-1 1/2	31.6	54.7	55	52.8	22.1	91.9

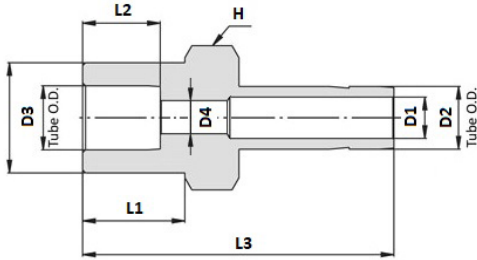
MALE ADAPTER TUBE TO PIPE



IMPERIAL TO ISO PARALLEL PIPE

Product ID	D1	D2 (ISO)	D3	D4	H	L1	L2	L3
	inch	inch	inch	inch	inch	inch	inch	inch
MATTP_1/8 x G-1/8	1/8	G-1/8	.08	.54	9/16	.53	.28	1.22
MATTP_1/8 x G-1/4	1/8	G-1/4	.08	.71	3/4	.53	.44	1.41
MATTP_1/4 x G-1/8	1/4	G-1/8	.16	.54	9/16	.62	.28	1.20
MATTP_1/4 x G-1/4	1/4	G-1/4	.17	.71	3/4	.62	.44	1.42
MATTP_3/8 x G-1/4	3/8	G-1/4	.23	.71	3/4	.69	.44	1.57
MATTP_3/8 x G-3/8	3/8	G-3/8	.27	.86	7/8	.69	.44	1.60
MATTP_1/2 x G-1/4	1/2	G-1/4	.23	.71	3/4	.91	.44	1.85
MATTP_1/2 x G-3/8	1/2	G-3/8	.31	.86	7/8	.91	.44	1.88
MATTP_1/2 x G-1/2	1/2	G-1/2	.37	1.02	1 1/16	.91	.56	1.96
MATTP_3/4 x G-3/4	3/4	G-3/4	.59	1.26	1 5/16	.97	.62	2.16
MATTP_1 x G-1	1	G-1	.78	1.54	1 5/8	1.23	.72	2.59

SOCKET WELD ADAPTER

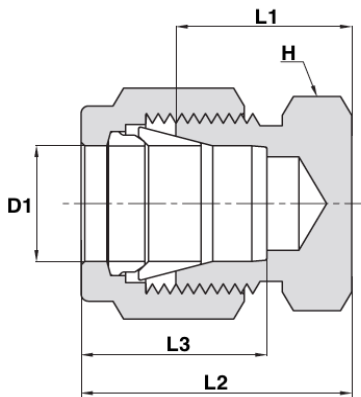


METRIC TO IMPERIAL

Product ID	D1	D2	D3	D4	H	L1	L2	L3
	mm	inch	mm	mm	inch	mm	mm	mm
SWA_6 x 1/4	6	1/4	10.4	4.0	1/2	11.2	7.9	31.7
SWA_10 x 1/4	10	1/4	10.4	4.8	9/16	11.2	7.9	34.0
SWA_10 x 3/8	10	3/8	11.9	7.1	5/8	15.8	9.7	36.0

IMPERIAL TO IMPERIAL

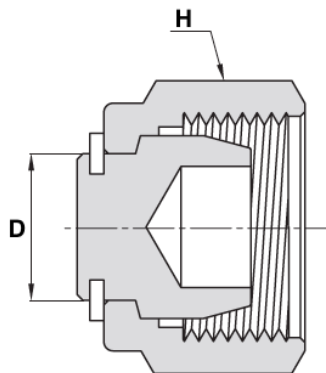
Product ID	D1	D2	D3	D4	H	L1	L2	L3
	inch	inch	inch	inch	inch	inch	inch	inch
SWA_1/4 x 1/4	1/4	1/4	.41	.17	1/2	.44	.31	1.25
SWA_3/8 x 3/8	3/8	3/8	.47	.28	5/8	.62	.38	1.42
SWA_1/2 x 1/2	1/2	1/2	.47	.39	13/16	.75	.50	1.67



METRIC					
Product ID	D1	H	L1	L2	L3
	mm	mm	mm	mm	mm
CAP_2 mm	2	12	13.5	20.1	12.9
CAP_3	3	12	13.5	20.1	12.9
CAP_4	4	12	14.7	21.3	13.7
CAP_6	6	14	15.7	23.1	15.3
CAP_8	8	15	17.0	24.5	16.2
CAP_10	10	18	19.0	26.6	17.2
CAP_12	12	22	19.0	29.1	22.8
CAP_14	14	24	19.8	29.9	24.4
CAP_15	15	24	19.8	29.9	24.4
CAP_16	16	24	19.8	29.9	24.4
CAP_18	18	27	21.3	31.4	24.4
CAP_20	20	30	23.9	34.0	26.0
CAP_22	22	30	23.9	34.0	26.0
CAP_25	25	35	26.2	38.5	31.3
CAP_28	28				
CAP_B28	B28				
CAP_30	30				
CAP_32	32				
CAP_38	38	55	37.8	65.4	49.4

IMPERIAL					
Product ID	D1	H	L1	L2	L3
	inch	inch	inch	inch	inch
CAP_1/16	1/16	5/16	.44	.59	.34
CAP_1/8	1/8	7/16	.53	.79	.50
CAP_3/16	3/16	7/16	.58	.84	.54
CAP_1/4	1/4	1/2	.63	.92	.60
CAP_5/16	5/16	9/16	.67	.96	.64
CAP_3/8	3/8	5/8	.72	1.01	.66
CAP_1/2	1/2	13/16	.75	1.15	.90
CAP_5/8	5/8	15/16	.78	1.18	.96
CAP_3/4	3/4	1 1/16	.84	1.24	.96
CAP_7/8	7/8	1 3/16	.94	1.34	1.02
CAP_1	1	1 3/8	1.03	1.51	1.23
CAP_1 1/8	1 1/8				
CAP_1 1/4	1 1/4	1 3/4	1.23	2.10	1.62
CAP_1 1/2	1 1/2	2 1/8	1.47	2.54	1.97
CAP_2"	2	2 3/4	1.94	3.41	2.66

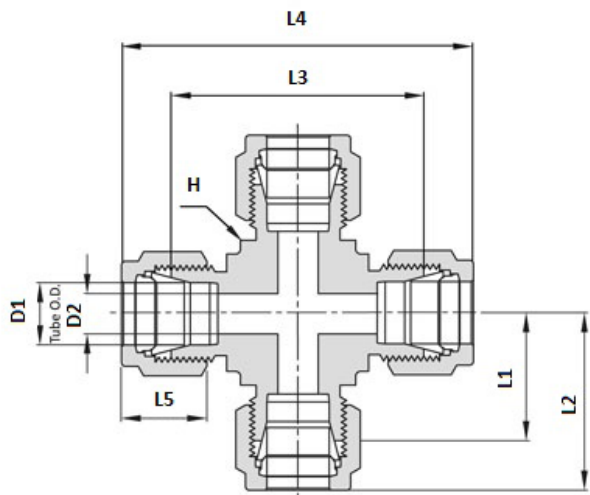
PLUG



METRIC		
Product ID	D	H
	mm	mm
PLUG_2 mm	2	14
PLUG_3	3	12
PLUG_4	4	12
PLUG_6	6	14
PLUG_8	8	16
PLUG_10	10	19
PLUG_12	12	22
PLUG_14	14	25
PLUG_15	15	25
PLUG_16	16	25
PLUG_18	18	30
PLUG_20	20	32
PLUG_22	22	32
PLUG_25	25	38
PLUG_28	28	
PLUG_30	30	
PLUG_38	38	60
PLUG_50	50	3 inch

IMPERIAL		
Product ID	D	H
	inch	inch
PLUG_1/16	1/16	5/16
PLUG_1/8	1/8	7/16
PLUG_3/16	3/16	1/2
PLUG_1/4	1/4	9/16
PLUG_5/16	5/16	5/8
PLUG_3/8	3/8	11/16
PLUG_1/2	1/2	7/8
PLUG_5/8	5/8	1
PLUG_3/4	3/4	1 1/8
PLUG_7/8	7/8	1 1/4
PLUG_1	1	1 1/2
PLUG_1 1/4	1 1/4	1 7/8
PLUG_1 1/2	1 1/2	2 1/4
PLUG_2"	2	3

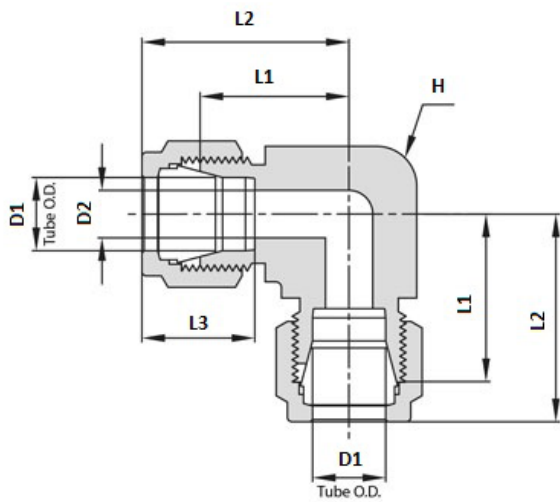
UNION CROSS



METRIC								
Product ID	D1	D2	H	L1	L2	L3	L4	L5
	mm	mm	mm	mm	mm	mm	mm	mm
UC_3	3	2.4	9.5	15.7	22.3	31.5	44.7	12.9
UC_6	6	4.8	12.7	19.6	27.0	39.1	53.9	15.3
UC_8	8	6.4	15.9	22.4	29.9	44.7	59.7	16.2
UC_10	10	7.9	20.6	25.9	33.5	51.8	67.0	17.2
UC_12	12	9.5	20.6	25.9	36.0	51.8	72.0	22.8
UC_16	16	12.7	23.8	26.9	37.0	53.8	74.0	24.4
UC_18	18	15.1	27.0	28.2	38.3	56.4	76.6	24.4
UC_20	20	15.9	34.9	34.5	44.6	69.0	89.3	26.0
UC_22	22	18.3	34.9	34.6	44.7	69.1	89.4	26.0
UC_25	25	21.8	34.9	36.8	49.1	73.7	98.3	31.3

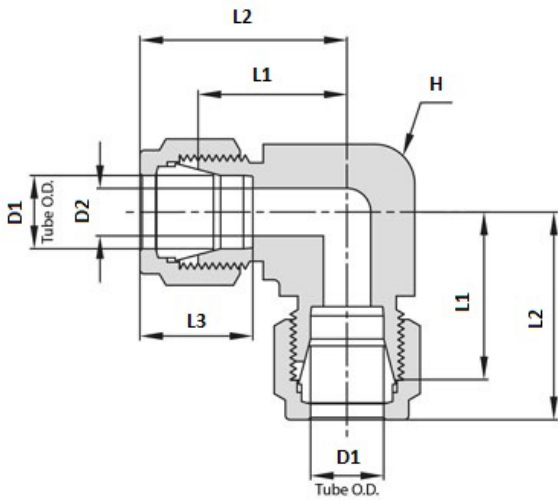
IMPERIAL								
Product ID	D1	D2	H	L1	L2	L3	L4	L5
	inch	inch	inch	inch	inch	inch	inch	inch
UC_1/8	1/8	.09	3/8	.62	.88	1.24	1.76	.50
UC_1/4	1/4	.19	1/2	.77	1.06	1.54	2.12	.60
UC_5/16	5/16	.25	5/8	.88	1.17	1.76	2.34	.64
UC_3/8	3/8	.28	5/8	.91	1.20	1.82	2.40	.66
UC_1/2	1/2	.41	13/16	1.02	1.42	2.04	2.84	.90
UC_3/4	3/4	.62	1 1/16	1.17	1.57	2.34	3.14	.96
UC_1	1	.88	1 3/8	1.45	1.93	2.90	3.86	1.23

UNION ELBOW



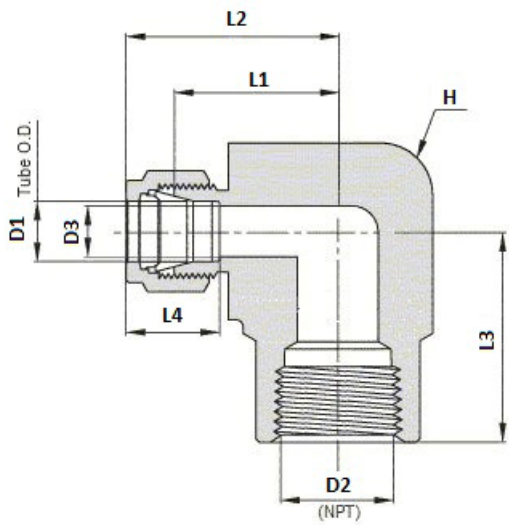
METRIC						
Product ID	D1	D2	H	L1	L2	L3
	mm	mm	mm	mm	mm	mm
UE_3	3	2.4	9.5	15.7	22.3	12.9
UE_4	4	2.4	12.7	18.8	25.4	13.7
UE_6	6	4.8	12.7	19.6	27.0	15.3
UE_8	8	6.4	14.3	21.3	28.8	16.2
UE_10	10	7.9	17.5	23.9	31.5	17.2
UE_12	12	9.5	20.6	25.9	36.0	22.8
UE_14	14	11.1	23.8	27.9	38.0	24.4
UE_15	15	11.9	23.8	27.9	38.0	24.4
UE_16	16	12.7	23.8	27.9	38.0	24.4
UE_18	18	15.1	27.0	29.7	39.8	24.4
UE_20	20	15.9	34.9	34.5	44.6	26.0
UE_22	22	18.3	34.9	34.5	44.6	26.0
UE_25	25	21.8	34.9	36.8	49.1	31.3

UNION ELBOW



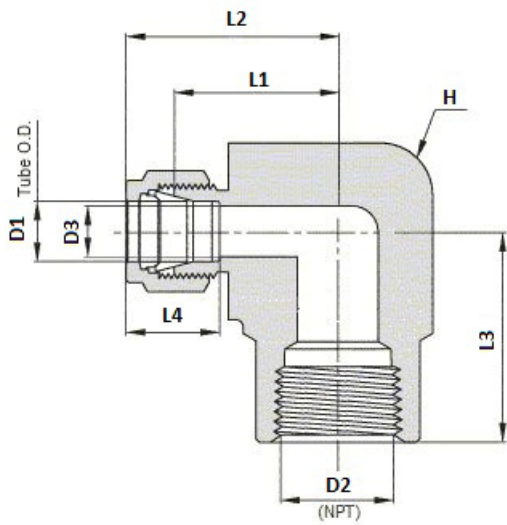
IMPERIAL						
Product ID	D1 inch	D2 inch	H inch	L1 inch	L2 inch	L3 inch
UE_1/16	1/16	.05	3/8	.55	.70	.34
UE_1/8	1/8	.09	3/8	.62	.88	.50
UE_3/16	3/16	.12	1/2	.74	1.00	.54
UE_1/4	1/4	.19	1/2	.77	1.06	.60
UE_5/16	5/16	.25	9/16	.84	1.13	.64
UE_3/8	3/8	.28	5/8	.91	1.20	.66
UE_1/2	1/2	.41	13/16	1.02	1.42	.90
UE_5/8	5/8	.50	15/16	1.10	1.50	.96
UE_3/4	3/4	.62	1 1/16	1.17	1.57	.96
UE_7/8	7/8	.72	1 3/8	1.36	1.76	1.02
UE_1	1	.88	1 3/8	1.45	1.93	1.23
UE_1 1/4	1 1/4	1.09	1 11/16	1.75	2.62	1.62
UE_1 1/2	1 1/2	1.34	2	2.00	3.07	1.97
UE_2	2	1.81	2 3/4	2.75	4.22	2.66

FEMALE ELBOW



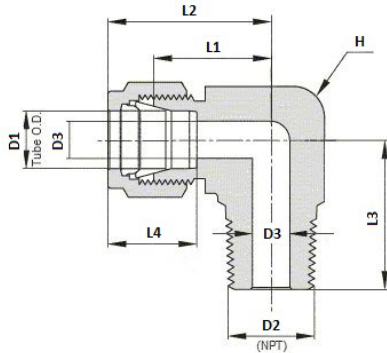
METRIC TO NPT								
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3	L4
	mm	inch	mm	mm	mm	mm	mm	mm
FE_6 x NPT-1/8	6	1/8	4.8	12.7	19.6	27.0	19.0	15.3
FE_6 x NPT-1/4	6	1/4	4.8	17.5	22.4	29.8	22.4	15.3
FE_6 x NPT-1/2	6	1/2	4.8	27.0	27.2	34.6	28.4	15.3
FE_8 x NPT-1/4	8	1/4	6.4	17.5	23.1	30.6	22.4	16.2
FE_10 x NPT-1/8	10	1/8	7.9	17.5	23.9	31.5	19.0	17.2
FE_10 x NPT-1/4	10	1/4	7.9	20.6	25.9	33.5	22.4	17.2
FE_12 x NPT-1/4	12	1/4	9.5	20.6	25.9	36.0	22.4	22.8
FE_12 x NPT-1/2	12	1/2	9.5	27.0	28.7	38.8	28.4	22.8
FE_16 x NPT-1/2	16	1/2	12.7	27.0	29.7	39.8	28.4	24.4

FEMALE ELBOW



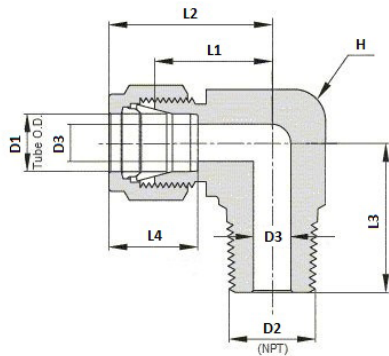
IMPERIAL TO NPT								
Product ID	D1 inch	D2 (NPT) inch	D3 inch	H inch	L1 inch	L2 inch	L3 inch	L4 inch
FE_1/8 x NPT-1/8	1/8	1/8	.09	1/2	.71	.97	.75	.50
FE_1/8 x NPT-1/4	1/8	1/4	.09	11/16	.82	1.08	.88	.50
FE_3/16 x NPT-1/8	3/16	1/8	.12	1/2	.74	1.00	.75	.54
FE_1/4 x NPT-1/8	1/4	1/8	.19	1/2	.77	1.06	.75	.60
FE_1/4 x NPT-1/4	1/4	1/4	.19	11/16	.88	1.17	.88	.60
FE_1/4 x NPT-3/8	1/4	3/8	.19	15/16	.96	1.25	.88	.60
FE_1/4 x NPT-1/2	1/4	1/2	.19	1 1/16	1.07	1.36	1.12	.60
FE_5/16 x NPT-1/8	5/16	1/8	.25	9/16	.84	1.13	.75	.64
FE_5/16 x NPT-1/4	5/16	1/4	.25	11/16	.91	1.20	.88	.64
FE_3/8 x NPT-1/8	3/8	1/8	.28	5/8	.91	1.20	.75	.66
FE_3/8 x NPT-1/4	3/8	1/4	.28	11/16	0.94	1.23	.88	.66
FE_3/8 x NPT-3/8	3/8	3/8	.28	15/16	1.02	1.31	.88	.66
FE_3/8 x NPT-1/2	3/8	1/2	.28	1 1/16	1.13	1.42	1.12	.66
FE_1/2 x NPT-1/4	1/2	1/4	.41	13/16	1.02	1.42	.88	.90
FE_1/2 x NPT-3/8	1/2	3/8	.41	15/16	1.02	1.42	.88	.90
FE_1/2 x NPT-1/2	1/2	1/2	.41	1 1/16	1.13	1.53	1.12	.90
FE_5/8 x NPT-3/8	5/8	3/8	.50	15/16	1.10	1.50	.88	.96
FE_5/8 x NPT-1/2	5/8	1/2	.50	1 1/16	1.17	1.57	1.12	.96
FE_3/4 x NPT-1/2	3/4	1/2	.62	1 1/16	1.17	1.57	1.12	.96
FE_3/4 x NPT-3/4	3/4	3/4	.62	1 3/8	1.36	1.76	1.25	.96
FE_7/8 x NPT-3/4	7/8	3/4	.72	1 3/8	1.36	1.76	1.25	1.02
FE_1 x NPT-3/4	1	3/4	.88	1 3/8	1.45	1.93	1.25	1.23
FE_1 x NPT-1	1	1	.88	1 11/16	1.63	2.11	1.50	1.23

MALE ELBOW



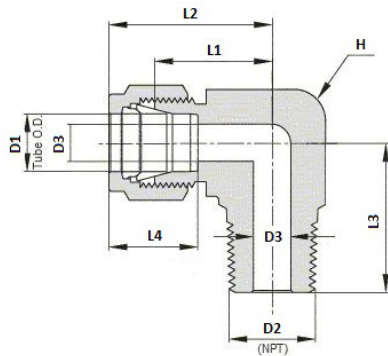
METRIC TO NPT								
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3	L4
	mm	inch	mm	mm	mm	mm	mm	mm
ME_3 x NPT-1/8	3	1/8	2.4	11.1	17.0	23.6	17.8	12.9
ME_3 x NPT-1/4	3	1/4	2.4	12.7	18.0	24.6	23.4	12.9
ME_4 x NPT-1/8	4	1/8	2.4	12.7	18.8	25.4	18.8	13.7
ME_4 x NPT-1/4	4	1/4	2.4	12.7	18.8	25.4	23.4	13.7
ME_6 x NPT-1/8	6	1/8	4.8	12.7	19.6	27.0	18.8	15.3
ME_6 x NPT-1/4	6	1/4	4.8	12.7	19.6	27.0	23.4	15.3
ME_6 x NPT-3/8	6	3/8	4.8	17.5	22.4	29.8	26.2	15.3
ME_6 x NPT-1/2	6	1/2	4.8	20.6	24.4	31.8	33.0	15.3
ME_8 x NPT-1/8	8	1/8	4.8	14.3	21.3	28.8	19.8	16.2
ME_8 x NPT-1/4	8	1/4	6.4	14.3	21.3	28.8	24.4	16.2
ME_8 x NPT-3/8	8	3/8	6.4	17.5	23.1	30.6	26.2	16.2
ME_8 x NPT-1/2	8	1/2	6.4	20.6	25.1	32.6	33.0	16.2
ME_10 x NPT-1/8	10	1/8	4.8	17.5	23.9	31.5	21.6	17.2
ME_10 x NPT-1/4	10	1/4	7.1	17.5	23.9	31.5	26.2	17.2
ME_10 x NPT-3/8	10	3/8	7.9	17.5	23.9	31.5	26.2	17.2
ME_10 x NPT-1/2	10	1/2	7.9	20.6	25.9	33.5	33.0	17.2
ME_12 x NPT-1/8	12	1/8	4.8	20.6	25.9	36.0	23.6	22.8
ME_12 x NPT-1/4	12	1/4	7.1	20.6	25.9	36.0	28.2	22.8
ME_12 x NPT-3/8	12	3/8	9.5	20.6	25.9	36.0	28.2	22.8
ME_12 x NPT-1/2	12	1/2	9.5	20.6	25.9	36.0	33.0	22.8
ME_12 x NPT-3/4	12	3/4	9.5	27.0	29.7	39.8	36.8	22.8

MALE ELBOW



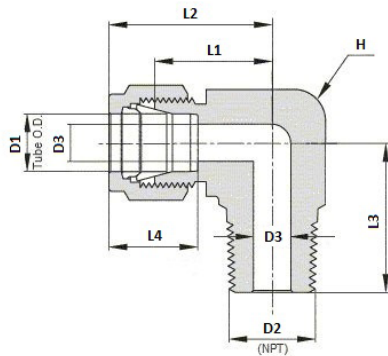
METRIC TO NPT (CONT)								
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3	L4
	mm	inch	mm	mm	mm	mm	mm	mm
ME_15 x NPT-1/2	15	1/2	11.9	23.8	27.9	38.0	35.1	24.4
ME_16 x NPT-3/8	16	3/8	9.5	23.8	27.9	38.0	30.2	24.4
ME_16 x NPT-1/2	16	1/2	11.9	23.8	27.9	38.0	35.1	24.4
ME_16 x NPT-3/4	16	3/4	12.7	27.0	29.7	39.8	36.8	24.4
ME_18 x NPT-1/2	18	1/2	11.9	27.0	29.7	39.8	36.8	24.4
ME_18 x NPT-3/4	18	3/4	15.1	27.0	29.7	39.8	36.8	24.4
ME_20 x NPT-1/2	20	1/2	11.9	34.9	34.5	44.6	41.7	26.0
ME_20 x NPT-3/4	20	3/4	15.9	34.9	34.5	44.6	41.7	26.0
ME_22 x NPT-3/4	22	3/4	15.9	34.9	34.5	44.6	41.7	26.0
ME_22 x NPT-1	22	1	18.3	34.9	34.5	44.6	46.5	26.0
ME_25 x NPT-3/4	25	3/4	15.9	34.9	36.8	49.1	41.7	31.3
ME_25 x NPT-1	25	1	21.8	34.9	36.8	49.1	46.5	31.3

MALE ELBOW



IMPERIAL TO NPT								
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3	L4
	inch	inch	inch	inch	inch	inch	inch	inch
ME_1/16 x NPT-1/16	1/16	1/16	.05	7/16	.60	.75	.70	.34
ME_1/16 x NPT-1/8	1/16	1/8	.05	7/16	.60	.75	.70	.34
ME_1/8 x NPT-1/16	1/8	1/16	.09	7/16	.67	.93	.70	.50
ME_1/8 x NPT-1/8	1/8	1/8	.09	7/16	.67	.93	.70	.50
ME_1/8 x NPT-1/4	1/8	1/4	.09	1/2	.71	.97	.92	.50
ME_3/16 x NPT-1/8	3/16	1/8	.12	1/2	.74	1.00	.74	.54
ME_3/16 x NPT-1/4	3/16	1/4	.12	1/2	.74	1.00	.92	.54
ME_1/4 x NPT-1/16	1/4	1/16	.12	1/2	.77	1.06	.74	.60
ME_1/4 x NPT-1/8	1/4	1/8	.19	1/2	.77	1.06	.74	.60
ME_1/4 x NPT-1/4	1/4	1/4	.19	1/2	.77	1.06	.92	.60
ME_1/4 x NPT-3/8	1/4	3/8	.19	11/16	.88	1.17	1.03	.60
ME_1/4 x NPT-1/2	1/4	1/2	.19	13/16	.96	1.25	1.30	.60
ME_5/16 x NPT-1/8	5/16	1/8	.19	9/16	.84	1.13	.78	.64
ME_5/16 x NPT-1/4	5/16	1/4	.25	9/16	.84	1.13	.96	.64
ME_5/16 x NPT-3/8	5/16	3/8	.25	11/16	.91	1.20	1.03	.64
ME_3/8 x NPT-1/8	3/8	1/8	.19	5/8	.91	1.20	.82	.66
ME_3/8 x NPT-1/4	3/8	1/4	.28	5/8	.91	1.20	1.00	.66
ME_3/8 x NPT-3/8	3/8	3/8	.28	11/16	.94	1.23	1.03	.66
ME_3/8 x NPT-1/2	3/8	1/2	.28	13/16	1.02	1.31	1.30	.66
ME_3/8 x NPT-3/4	3/8	3/4	.28	1 1/16	1.17	1.46	1.45	.66
ME_1/2 x NPT-1/4	1/2	1/4	.28	13/16	1.02	1.42	1.11	.90

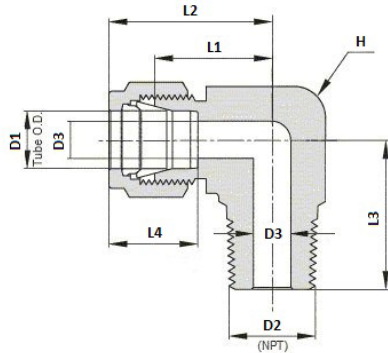
MALE ELBOW



IMPERIAL TO NPT (CONT)

Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3	L4
	inch	inch	inch	inch	inch	inch	inch	inch
ME_1/2 x NPT-3/8	1/2	3/8	.38	13/16	1.02	1.42	1.11	.90
ME_1/2 x NPT-1/2	1/2	1/2	.41	13/16	1.02	1.42	1.30	.90
ME_1/2 x NPT-3/4	1/2	3/4	.41	1 1/16	1.17	1.57	1.45	.90
ME_5/8 x NPT-3/8	5/8	3/8	.38	15/16	1.10	1.50	1.19	.96
ME_5/8 x NPT-1/2	5/8	1/2	.47	15/16	1.10	1.50	1.38	.96
ME_5/8 x NPT-3/4	5/8	3/4	.50	1 1/16	1.17	1.57	1.45	.96
ME_3/4 x NPT-1/2	3/4	1/2	.47	1 1/16	1.17	1.57	1.45	.96
ME_3/4 x NPT-3/4	3/4	3/4	.62	1 1/16	1.17	1.57	1.45	.96
ME_7/8 x NPT-3/4	7/8	3/4	.62	1 3/8	1.36	1.76	1.64	1.02
ME_1 x NPT-3/4	1	3/4	.62	1 3/8	1.45	1.93	1.64	1.23
ME_1 x NPT-1	1	1	.86	1 3/8	1.45	1.93	1.83	1.23
ME_1 1/4 x NPT-1 1/4	1 1/4	1 1/4	1.09	1 11/16	1.75	2.62	1.88	1.62
ME_1 1/2 x NPT-1 1/2	1 1/2	1 1/2	1.34	2	2.00	3.07	2.38	1.97
ME_2 x NPT-2	2	2	1.81	2 3/4	2.75	4.22	2.78	2.66

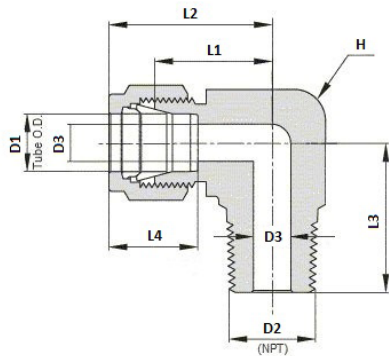
MALE ELBOW



METRIC TO ISO TAPERED THREAD

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	mm	inch	mm	mm	mm	mm	mm	mm
ME_3 x R-1/8	3	R-1/8	2.4	11.1	17.0	23.6	17.8	12.9
ME_3 x R-1/4	3	R-1/4	2.4	12.7	18.0	24.6	23.4	12.9
ME_4 x R-1/8	4	R-1/8	2.4	12.7	18.8	25.4	18.8	13.7
ME_4 x R-1/4	4	R-1/4	2.4	12.7	18.8	25.4	23.4	13.7
ME_6 x R-1/8	6	R-1/8	4.8	12.7	19.6	27.0	18.8	15.3
ME_6 x R-1/4	6	R-1/4	4.8	12.7	19.6	27.0	23.4	15.3
ME_6 x R-3/8	6	R-3/8	4.8	17.5	22.4	29.8	26.2	15.3
ME_6 x R-1/2	6	R-1/2	4.8	20.6	24.4	31.8	33.0	15.3
ME_8 x R-1/8	8	R-1/8	4.8	14.3	21.3	28.8	19.8	16.2
ME_8 x R-1/4	8	R-1/4	6.4	14.3	21.3	28.8	24.4	16.2
ME_8 x R-3/8	8	R-3/8	6.4	17.5	23.1	30.6	26.2	16.2
ME_8 x R-1/2	8	R-1/2	6.4	20.6	25.1	32.6	33.0	16.2
ME_10 x R-1/8	10	R-1/8	4.8	17.5	23.9	31.5	21.6	17.2
ME_10 x R-1/4	10	R-1/4	7.1	17.5	23.9	31.5	26.2	17.2
ME_10 x R-3/8	10	R-3/8	7.9	17.5	23.9	31.5	26.2	17.2
ME_10 x R-1/2	10	R-1/2	7.9	20.6	25.9	33.5	33.0	17.2
ME_12 x R-1/8	12	R-1/8	4.8	20.6	25.9	36.0	23.6	22.8
ME_12 x R-1/4	12	R-1/4	7.1	20.6	25.9	36.0	28.2	22.8
ME_12 x R-3/8	12	R-3/8	9.5	20.6	25.9	36.0	28.2	22.8
ME_12 x R-1/2	12	R-1/2	9.5	20.6	25.9	36.0	33.0	22.8
ME_12 x R-3/4	12	R-3/4	9.5	27.0	29.7	39.8	36.8	22.8

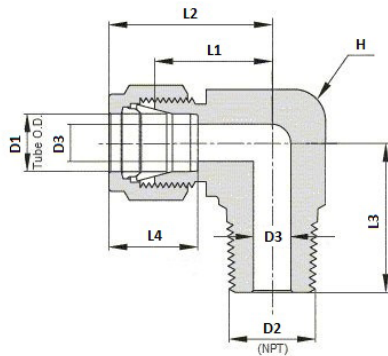
MALE ELBOW



METRIC TO ISO TAPERED THREAD (CONT)

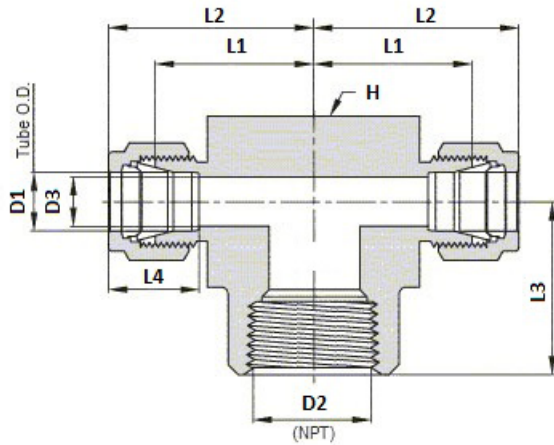
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	mm	inch	mm	mm	mm	mm	mm	mm
ME_14 x R-1/2	14	R-1/2	11.0	23.8	27.9	38.0	35.0	24.4
ME_15 x R-1/2	15	R-1/2	11.9	23.8	27.9	38.0	35.1	24.4
ME_16 x R-3/8	16	R-3/8	9.5	23.8	27.9	38.0	30.2	24.4
ME_16 x R-1/2	16	R-1/2	11.9	23.8	27.9	38.0	35.1	24.4
ME_18 x R-1/2	18	R-1/2	11.9	27.0	29.7	39.8	36.8	24.4
ME_18 x R-3/4	18	R-3/4	15.1	27.0	29.7	39.8	36.8	24.4
ME_20 x R-1/2	20	R-1/2	11.9	34.9	34.5	44.6	41.7	26.0
ME_20 x R-3/4	20	R-3/4	15.9	34.9	34.5	44.6	41.7	26.0
ME_22 x R-3/4	22	R-3/4	15.9	34.9	34.5	44.6	41.7	26.0
ME_22 x R-1	22	R-1	18.3	34.9	34.5	44.6	46.5	26.0
ME_25 x R-3/4	25	R-3/4	15.9	34.9	36.8	49.1	41.7	31.3
ME_25 x R-1	25	R-1	21.8	34.9	36.8	49.1	46.5	31.3

MALE ELBOW



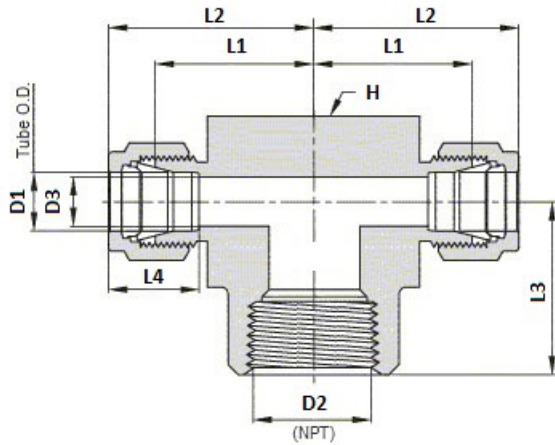
IMPERIAL TO ISO TAPERED THREAD								
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3	L4
	inch	inch	inch	inch	inch	inch	inch	inch
ME_1/8 x R-1/8	1/8	R-1/8	.09	7/16	.67	.93	.70	.50
ME_1/8 x R-1/4	1/8	R-1/4	.09	1/2	.71	.97	.92	.50
ME_1/4 x R-1/8	1/4	R-1/8	.19	1/2	.77	1.06	.74	.60
ME_1/4 x R-1/4	1/4	R-1/4	.19	1/2	.77	1.06	.92	.60
ME_1/4 x R-3/8	1/4	R-3/8	.19	11/16	.88	1.17	1.03	.60
ME_1/4 x R-1/2	1/4	R-1/2	.19	13/16	.96	1.25	1.30	.60
ME_5/16 x R-1/4	5/16	R-1/4	.25	9/16	.84	1.13	.96	.64
ME_3/8 x R-1/8	3/8	R-1/8	.19	5/8	.91	1.20	.82	.66
ME_3/8 x R-1/4	3/8	R-1/4	.28	5/8	.91	1.20	1.00	.66
ME_3/8 x R-3/8	3/8	R-3/8	.28	11/16	.94	1.23	1.03	.66
ME_1/2 x R-1/4	1/2	R-1/4	.28	13/16	1.02	1.42	1.11	.90
ME_1/2 x R-3/8	1/2	R-3/8	.38	13/16	1.02	1.42	1.11	.90
ME_1/2 x R-1/2	1/2	R-1/2	.41	13/16	1.02	1.42	1.30	.90
ME_3/4 x R-1/2	3/4	R-1/2	.47	1 1/16	1.17	1.57	1.45	.96
ME_1 x R-1	1	R-1	.86	1 3/8	1.45	1.93	1.83	1.23

FEMALE BRANCH TEE



METRIC TO NPT								
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3	L4
	mm	inch	mm	mm	mm	mm	mm	mm
FBT_6 x NPT-1/8	6	1/8	4.8	15.9	19.6	27.0	19.0	15.3
FBT_6 x NPT-1/4	6	1/4	4.8	20.6	22.4	29.8	22.4	15.3
FBT_8 x NPT-1/8	8	1/8	6.4	15.9	22.4	29.9	19.0	16.2
FBT_8 x NPT-1/4	8	1/4	6.4	20.6	23.1	30.6	22.4	16.2
FBT_10 x NPT-1/4	10	1/4	7.9	20.6	25.9	33.5	22.4	17.2
FBT_10 x NPT-3/8	10	3/8	7.9	23.8	25.9	33.5	22.4	17.2
FBT_12 x NPT-1/4	12	1/4	9.5	20.6	25.9	36.0	22.4	22.8
FBT_12 x NPT-3/8	12	3/8	9.5	23.8	25.9	36.0	22.4	22.8
FBT_12 x NPT-1/2	12	1/2	9.5	27.0	28.7	38.8	28.4	22.8
FBT_16 x NPT-1/2	16	1/2	12.7	27.0	28.7	38.8	28.4	24.4

FEMALE BRANCH TEE



IMPERIAL TO NPT

Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3	L4
	inch	inch	inch	inch	inch	inch	inch	inch
FBT_1/8 x NPT-1/8	1/8	1/8	.09	5/8	.70	.97	.75	.50
FBT_1/4 x NPT-1/8	1/4	1/8	.19	5/8	.77	1.06	.75	.60
FBT_1/4 x NPT-1/4	1/4	1/4	.19	13/16	.88	1.17	.88	.60
FBT_3/8 x NPT-1/4	3/8	1/4	.28	13/16	.94	1.23	.88	.66
FBT_3/8 x NPT-3/8	3/8	3/8	.28	15/16	1.02	1.31	.88	.66
FBT_3/8 x NPT-1/2	3/8	1/2	.28	1 1/16	1.13	1.42	1.12	.66
FBT_1/2 x NPT-1/4	1/2	1/4	.41	13/16	1.02	1.42	.88	.90
FBT_1/2 x NPT-3/8	1/2	3/8	.41	15/16	1.02	1.42	.88	.90
FBT_1/2 x NPT-1/2	1/2	1/2	.41	1 1/16	1.13	1.53	1.12	.90
FBT_5/8 x NPT-1/2	5/8	1/2	.50	1 1/16	1.13	1.53	1.12	.96
FBT_3/4 x NPT-3/4	3/4	3/4	.62	1 3/8	1.36	1.76	1.25	.96
FBT_1 x NPT-3/4	1	3/4	.88	1 3/8	1.45	1.93	1.25	1.23
FBT_1 x NPT-1	1	1	.88	1 11/16	1.63	2.11	1.50	1.23

MALE BRANCH TEE



METRIC TO NPT								
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3	L4
	mm	inch	mm	mm	mm	mm	mm	mm
MBT_6 x NPT-1/8	6	1/8	4.8	12.7	19.6	27.0	18.8	15.3
MBT_6 x NPT-1/4	6	1/4	4.8	12.7	19.6	27.0	23.4	15.3
MBT_8 x NPT-1/8	8	1/8	4.8	15.9	22.4	29.9	20.8	16.2
MBT_8 x NPT-1/4	8	1/4	6.4	15.9	22.4	29.9	25.4	16.2
MBT_10 x NPT-1/4	10	1/4	7.1	20.6	25.9	33.5	28.2	17.2
MBT_12 x NPT-1/4	12	1/4	7.1	20.6	25.9	36.0	28.2	22.8
MBT_12 x NPT-3/8	12	3/8	9.5	20.6	25.9	36.0	28.2	22.8
MBT_12 x NPT-1/2	12	1/2	9.5	20.6	25.9	36.0	33.0	22.8
MBT_16 x NPT-1/2	16	1/2	11.9	23.8	28.7	38.8	35.8	24.4

IMPERIAL TO NPT								
Product ID	D1	D2 (NPT)	D3	H	L1	L2	L3	L4
	inch	inch	inch	inch	inch	inch	inch	inch
MBT_1/8 x NPT-1/8	1/8	1/8	.09	7/16	.67	.93	.70	.50
MBT_1/8 x NPT-1/4	1/8	1/4	.09	1/2	.71	.97	.92	.50
MBT_3/16 x NPT-1/8	3/16	1/8	.12	7/16	.70	.96	.70	.54
MBT_1/4 x NPT-1/8	1/4	1/8	.19	1/2	.77	1.06	.74	.60
MBT_1/4 x NPT-1/4	1/4	1/4	.19	1/2	.77	1.06	.92	.60
MBT_5/16 x NPT-1/8	5/16	1/8	.19	5/8	.88	1.17	.82	.64
MBT_3/8 x NPT-1/4	3/8	1/4	.28	5/8	.91	1.20	1.00	.66
MBT_3/8 x NPT-3/8	3/8	3/8	.28	13/16	1.02	1.31	1.11	.66
MBT_1/2 x NPT-3/8	1/2	3/8	.38	13/16	1.02	1.42	1.11	.90
MBT_1/2 x NPT-1/2	1/2	1/2	.41	13/16	1.02	1.42	1.30	.90
MBT_5/8 x NPT-1/2	5/8	1/2	.47	15/16	1.13	1.53	1.41	.96
MBT_3/4 x NPT-3/4	3/4	3/4	.62	1 1/16	1.17	1.57	1.45	.96

PIPE SELECTION

The pipes used with Re-Lok fittings have immediate impact on the safety, durability and sealing of the equipment. For this reason, pipes should be considered as part of the fittings and they should be chosen correctly. Unfavorable situations such as peeling, leaking and explosion may occur as a result of incorrect or inappropriate pipe selection.

MATERIAL

The pipe material should be selected in accordance with the type of fluid so that the fluid inside the system does not damage the pipe. In addition, pipes must be soft annealed and seamless.

HARDNESS

Pipes should be selected from materials of the same hardness or softer than fittings. For example; stainless steel fittings should be used for stainless steel pipes and brass fittings for copper pipes.

SURFACE QUALITY

There should be no abrasions, scratches, dents, dirt and dust on pipe surfaces; and no burrs on the pipe ends. These types of problems cause stripping of the pipes and leaking due to the incomplete mechanical connection.

TEMPERATURE

The temperature of the system and the environment may affect the maximum working pressure of the pipes depending on the material. Temperature stress factors are given in Table 4 depending on the material types.

PRESSURE

The most important factor when selecting a pipe is the working pressure of the system. Maximum allowable working pressures are given in Tables 1, 2 and 3 according to the outer diameter and wall thickness of the pipes from various materials.

GEOMETRY

There should be no deformation in the circular form of the pipes. Disturbances in the circular form can damage the fittings.

PIPE SPECIFICATIONS

Table 1: Stainless Steel Imperial Pipe Working Pressures (psi)

Pipe OD (inch)	Wall Thickness (inch)																				
	0.010	0.012	0.014	0.016	0.020	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120	0.134	0.156	0.188					
1/16	5600	6860	8150	9480	11890																
1/8						8550	10730														
3/16						5500	7100	10150													
1/4						4100	5200	7600	10150												
5/16							4100	5900	7975												
3/8								3350	4850	6525											
1/2									2650	3750	5150	6525									
5/8										2950	4050	5250	5945								
3/4											2450	3350	4250	4950	5655						
7/8												2050	2850	3650	4250	4843					
1													2100	2700	3200	3700	3987				
1 1/4														2400	2800	3300	3600	4100	4785		
1 1/2																2300	2700	3000	3400	4000	4785
2																	2000	2200	2500	2900	3600

Table 2: Stainless Steel Metric Pipe Working Pressures (psi)

Pipe OD (mm)	Wall Thickness (mm)														
	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0	3.5	4.0	4.5	5.0	
3	670														
6	310	420	540	710											
8		310	390	520											
10		240	300	400	510										
12		200	250	330	410	470									
14		160	200	270	340	380	430								
15		150	190	250	310	360	400								
16			170	230	290	330	370	400							
18			150	200	260	290	320	370							
20			140	180	230	260	290	330	380						
22			120	160	200	230	260	300	340						
25					180	200	230	260	290	320					
38							140	160	190	200	240	270	310		
50											150	180	210	240	270

We recommend high quality, annealed, seamless or welded, 304 or 316 stainless steel pipes, whose hardness is 90HRB (200HV) or less. The pipes should comply to ASTM A213, A269 or equivalent standards. They need to be scratch free and also suitable to flare and bend.

PIPE SPECIFICATIONS

Table 3: Allowable Pressure Factors at High Temperatures

F	C°	AISI 316
200	93	1
400	204	0.96
600	316	0.85
800	427	0.79
1000	538	0.76

In order to determine allowable pressure at high temperatures, multiply the working pressure value from Table 1 and 2 with the factor from Table 3. For example; for an imperial pipe, with a diameter of 1/2 and a wall thickness of 0.49 inch, the working pressure is 3750 psi. The factor is 0.79 at 800F (427C°), then allowable pressure is 3750 psi*0.79=2962.5 psi.

Table 4: Minimum Wall Thicknesses for Gas Applications

IMPERIAL		METRIC	
PIPE OD	MIN WALL THICKNESS	PIPE OD	MIN WALL THICKNESS
1/8	0.028	3	0.8
3/16	0.028	6	0.8
1/4	0.028	8	1.0
5/16	0.035	10	1.0
3/8	0.035	12	1.0
1/2	0.049	14	1.2
5/8	0.065	16	1.5
3/4	0.065	18	1.5
7/8	0.083	20	1.8
1	0.083	22	2.0
1 1/4	0.109	25	2.2
1 1/2	0.134	38	3.5
2	0.188	50	5.0

Gases have smaller molecules compared to liquids; therefore, they can escape from the smallest leakage paths. In order to prevent this situation and achieve greater safety and efficiency, we recommend pipes with higher wall thickness.

In some applications, the pipes stored on shelves are dragged off the shelves. However, dragging may lead to scratches and dents on the pipes' surface. Normally, the pipes should be taken from the shelves by lifting, not by dragging.

The same care should be taken in the production processes as well in order to avoid scratches and dents. The parts where the fittings will grip the pipes should be checked before the connections are secured. The blades and saws that are used for cutting pipes should be sharp. After the cutting process, the ends of the pipes should be straight, and there should be no extra cut marks and burrs on the ends. Since the blunt blades and saws exert excess pressure on the pipe, the circular shape may deform. In such case of deformation, the assembly of the pipes with the fittings reveals the possibility of leaking and stripping as well as the risk of damage to the equipment.



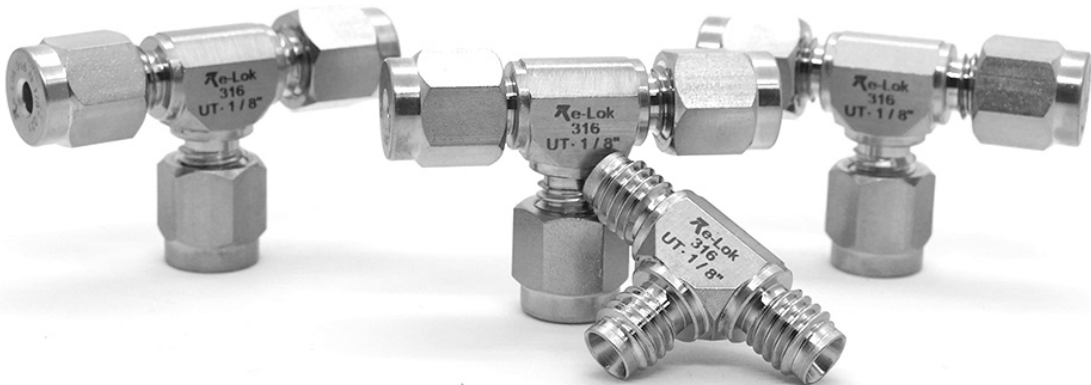
CONTACT US

You can contact us for all of your questions and requests from info@re-lok.com

If you would like to request a quote or place a regular or custom order, you can send an email to sales@re-lok.com

If you have any questions about technical matters such as assembly, quality standards or pipes, please reach us from support@re-lok.com

If you have further questions or concerns, feel free to call us from +90 (312) 385 2082



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