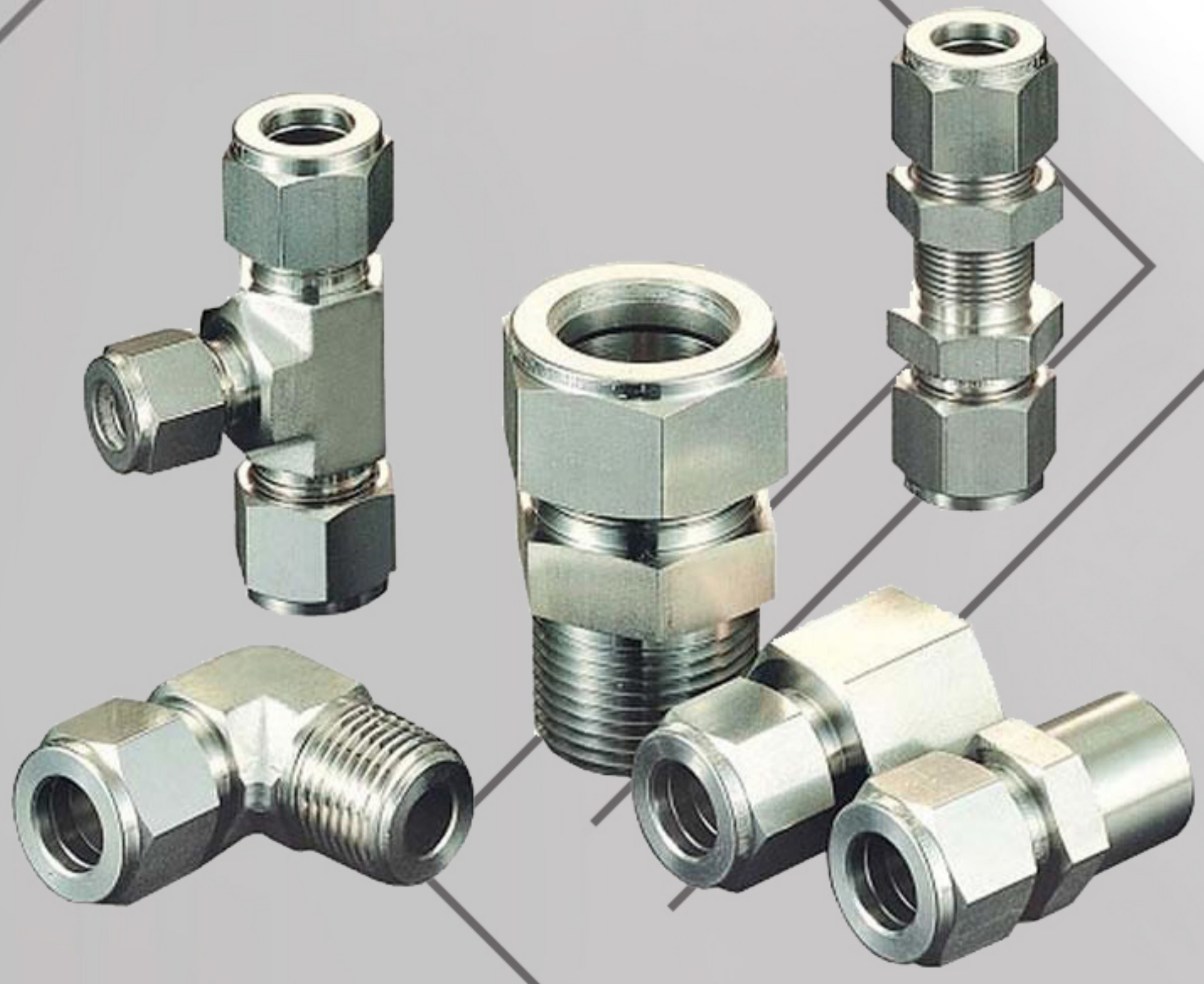
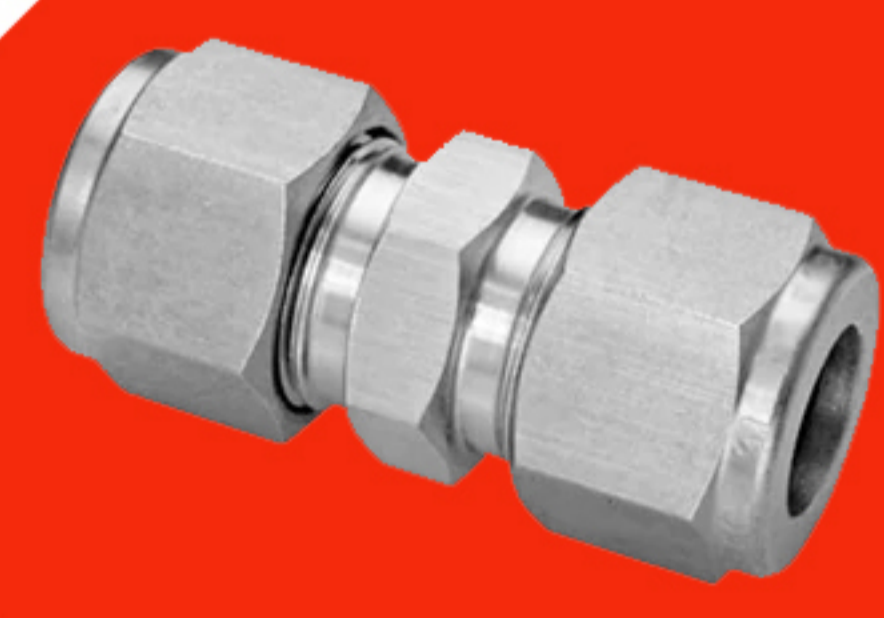


BULLION

Pipe & Tubes LLP

TUBE FITTINGS



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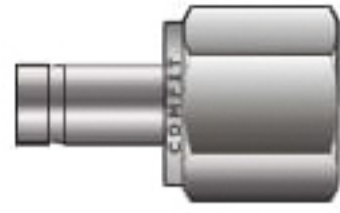
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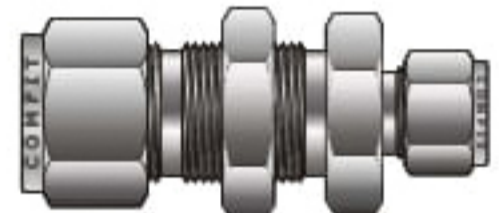
- FT x FT..... pg.13
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- FT x NPT.....pg.17
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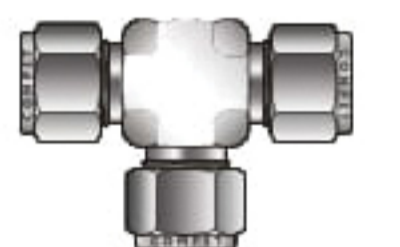
- FT x NPT.....pg.18
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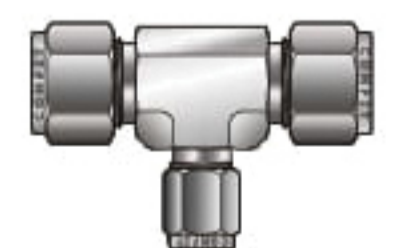
- FT x NPT..... pg.18
- MT x NPT..... pg.18

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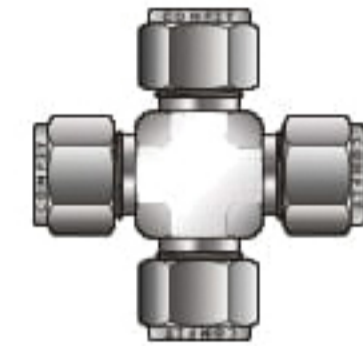
Reducer Union Tees-CRUT



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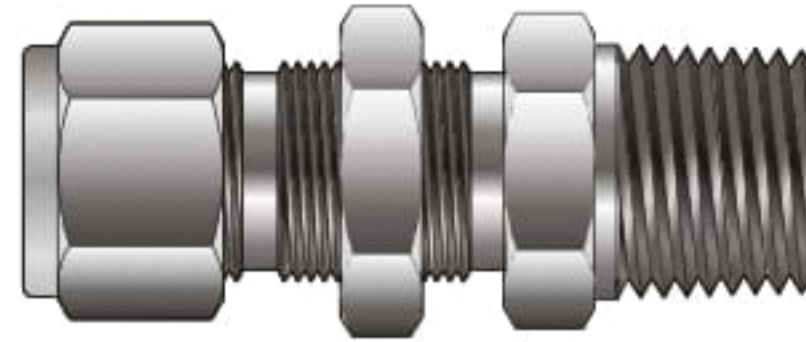
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DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

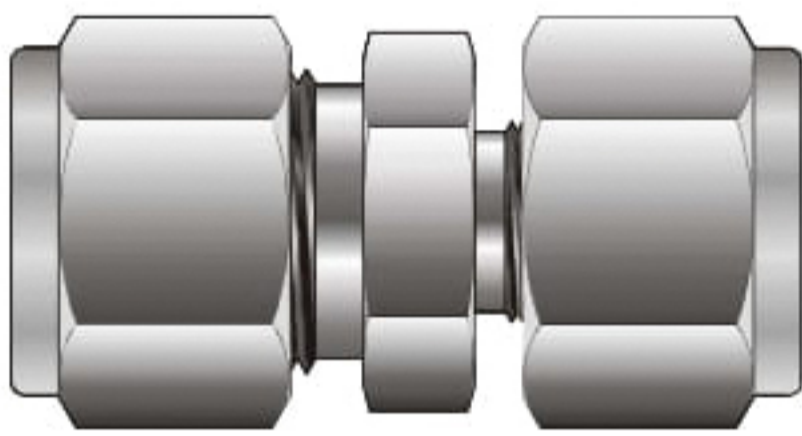
Tube Fittings



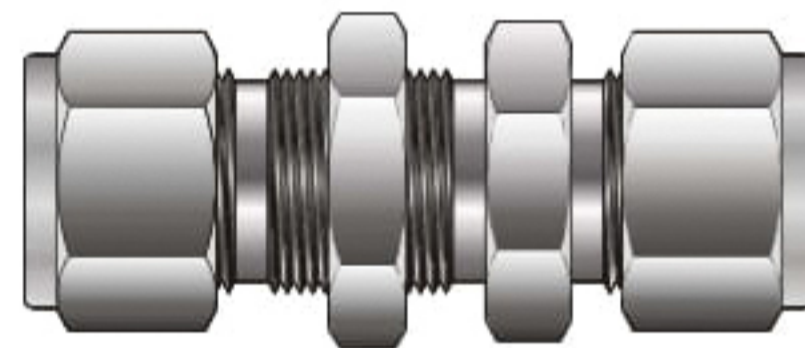
Male connector



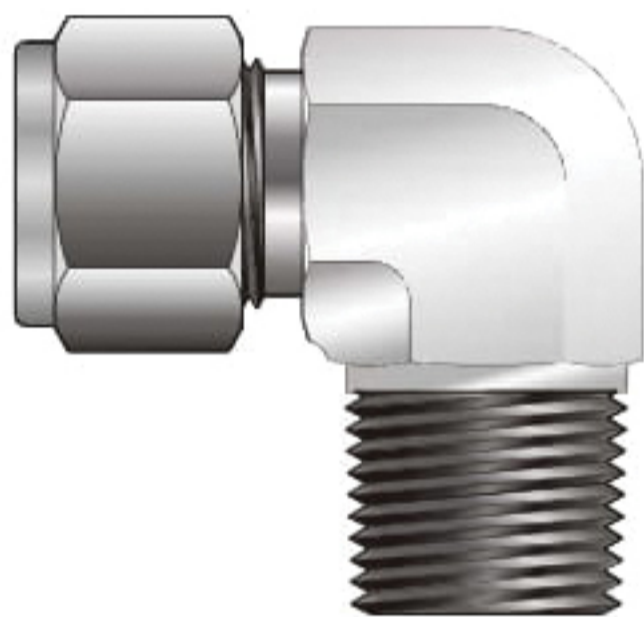
Bulkhead Male Connector



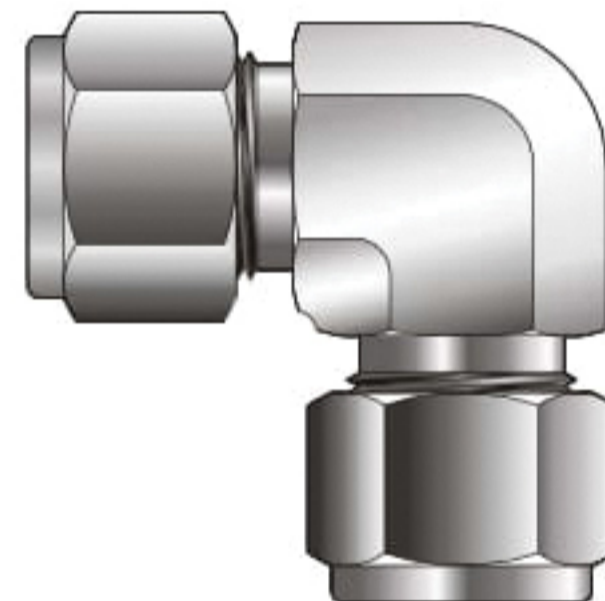
Union



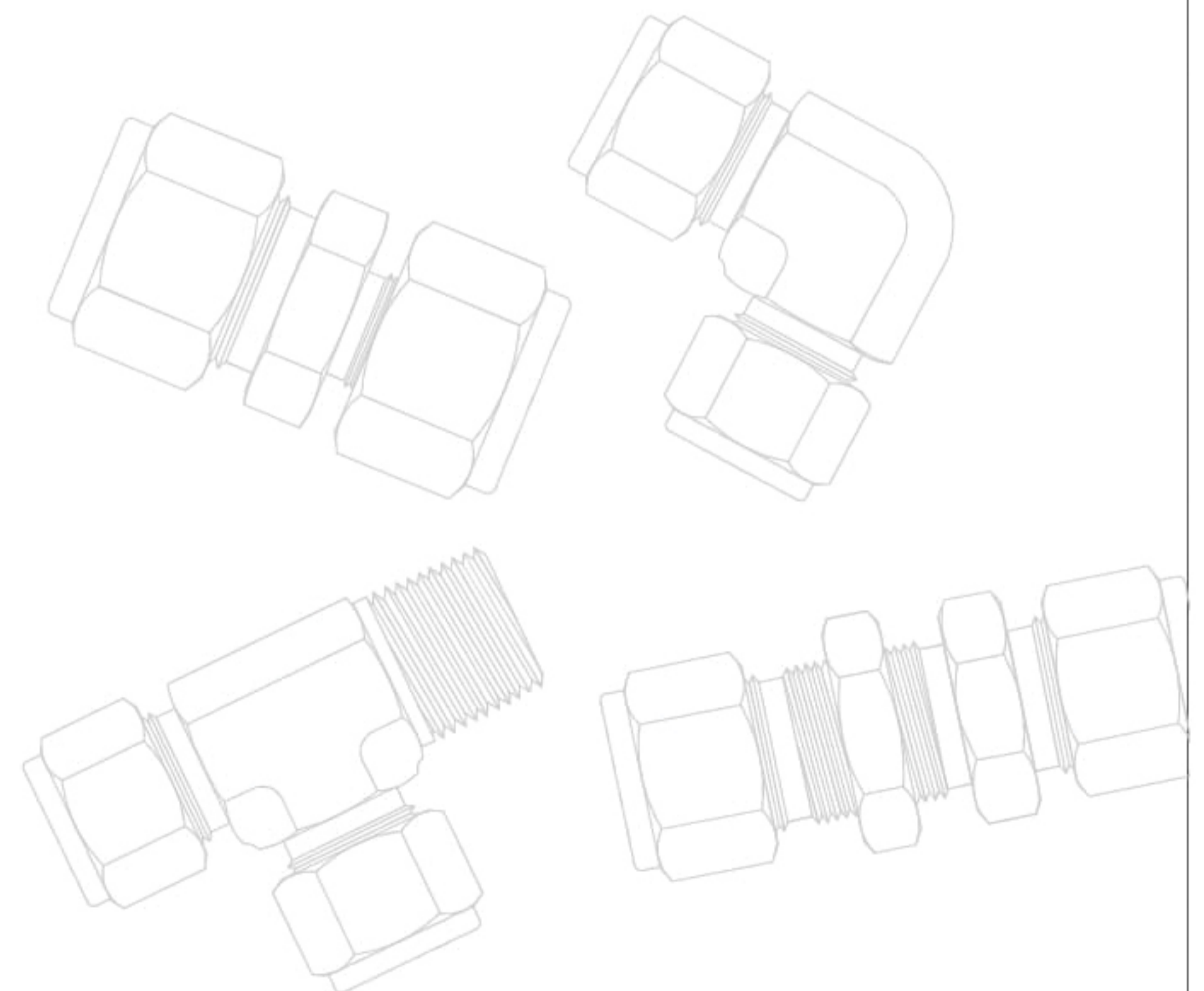
Bulkhead Union



Male Elbow



- Available in tube sizes from, in fraction 1/16" to 1" & in metric 2mm to 25 mm.
- Consistent gaugeability upon initial make-up.
- Easy to disconnect and retighten.
- Wide variety of materials and configurations.
- Provide a reliable, leak-proof connection in instrumentation & process tubing systems.



Proper Tube selection

- Always match same materials of Tube & its Fitting :- i.e SS Tubing Should only used with SS Fittings, Except for the Coper Tubing with brass Fitting
- Select Proper Tubing hardness :- Comfit Instrumentation Tube Fitting are Design To work for hardness 85 HRB max
- Select proper tubing wall thickness:- Wall thickness should always be checked against our table no. 1 to 2 for minimum and maximum wall thickness limitations
- Tubing Surfaced Finish :- Tubing should be always free from draw marks & surface scratches
- Negative tolerance for the tube should be zero.

Proper Tube preparation

- Tubing cutters are more commonly utilized on softer tubing such as copper, aluminum or even `soft' Steel tubing. If a tube cutter is utilized with stainless steel tubing, remember that a special cutting wheel, designed for use with stainless steel tubing should be employed. The use of dull or improper cutting wheels can work harden the cut area. This can adversely affect the fittings sealing ability.
- Cutting with a Hacksaw : When using a hacksaw to cut off tubing. It is essential to use a guide to assure square cutoffs. Further, to minimize the residual burrs, a hacksaw blade of 32 teeth per inch minimum is suggested.
- The burrs formed by either the tube cutter or hacksaw must be removed prior to assembly to prevent those burrs from eventually damaging the system. O.D. burrs can prevent tubing from seating properly in a fitting body. I.D. burrs can restrict flow, as well as possibly break loose and damage fine filtration elements. Note: Do not over deburr the O.D. of tubing.

After you deburr the tubing, it is essential to remove burrs from the tubing line. This can be accomplished by:

- Flushing with solvent or low pressure compressed air.
- Swab with lint-free cloth.

Maximum allowable working pressure table

316 or 304 STAINLESS STEEL (seamless)																	
Size (Inch)	WALL THICKNESS																
	.010	.012	.014	.016	.020	.028	.035	.049	.065	.083	.095	.109	.120	.134	.156	.188	
1/16"	5600	6900	8200	9500	12100	16800											
1/8"						8600	10900										
3/16"						5500	7000	10300									
1/4"						4000	5100	7500	10300								
5/16"							4100	5900	8100								
3/8"								3300	4800	6600							
1/2"								2600	3700	5100	6700						
5/8"									3000	4000	5200	6100					
3/4"									2400	3300	4300	5000	5800				
7/8"									2100	2800	3600	4200	4900				
1"										2400	3200	3700	4200	4700			
1-1/4"											3500	2900	3300	3700	4100	4900	
1-1/2"												2400	2700	3000	3400	4000	4500
2"													2000	2200	2500	2900	3200

Table 1

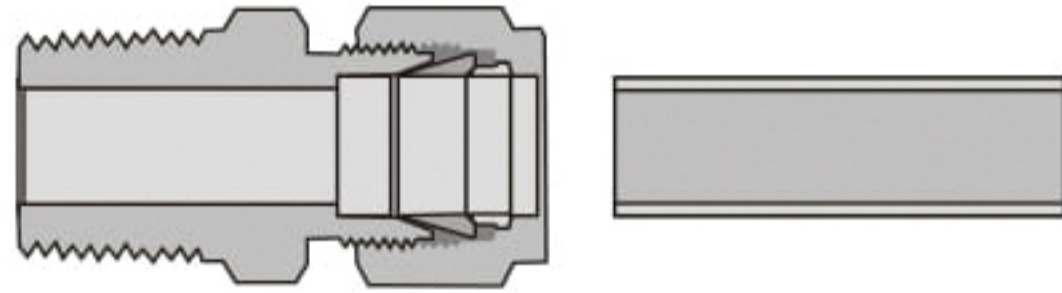
316 or 304 STAINLESS STEEL (seamless)																	
Size (Inch)	WALL THICKNESS																
	.010	.012	.014	.016	.020	.028	.035	.049	.065	.083	.095	.109	.120	.134	.156	.188	
1/16"	4800	5900	7000	8100	10300	14300											
1/8"						7300	9300										
3/16"						4700	6000	8700									
1/4"						3400	4400	6400	8700								
5/16"							3400	5000	6900								
3/8"								2800	4100	5600							
1/2"								2200	3200	4300	5700						
5/8"									2500	3400	4500	5200					
3/4"									2100	2800	3700	4200	4900				
7/8"									1800	2400	3100	3600	4200				
1"										2100	2700	3100	3600	4000			
1-1/4"											2100	2400	2800	3100	3500	4200	
1-1/2"												2000	2300	2600	2900	3400	4200
2"													1700	1900	2100	2500	3000

Table 2

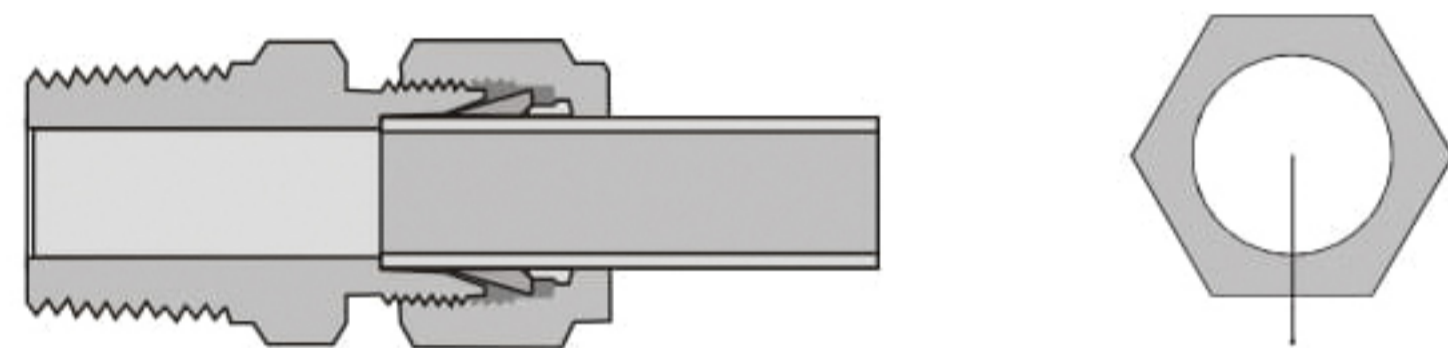
DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

Installation Instruction

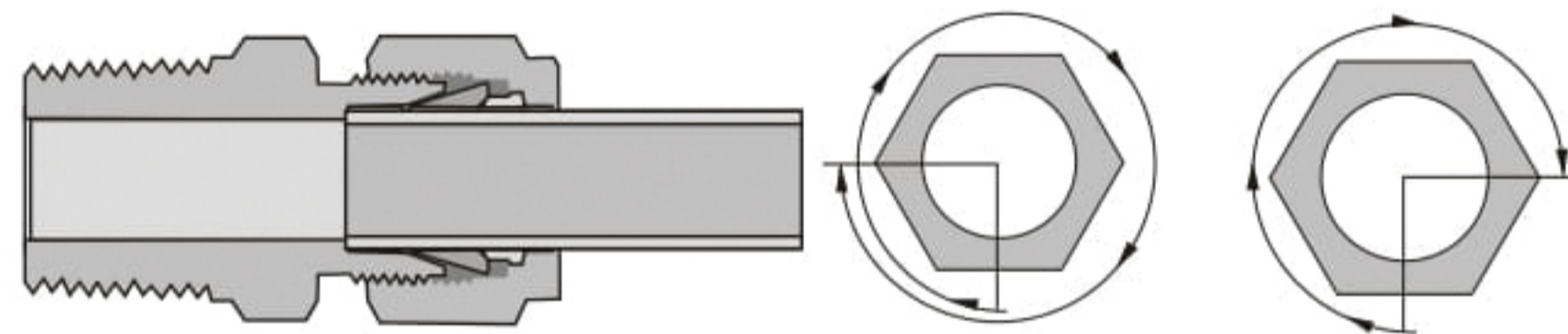
Assembly Instructions



- 1) Insert the tube in Comfit tube fitting till the face of tube rest in the fitting body as shown.



- 2) Tighten nut finger tight and scribe the nut at the 6° clock position as shown.

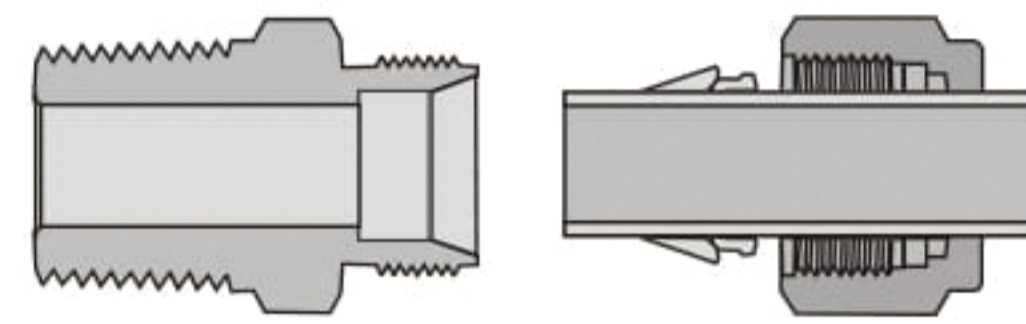


- 3) Hold fitting body steady, tighten the nut 1-1/4 turn from finger tight for fitting size in fraction 1/4" to 1", in Metric 6mm to 25mm and 3/4" turn from finger tight for fitting size in Fraction 1/16" to 3-1/6", in Metric 2mm to 4mm

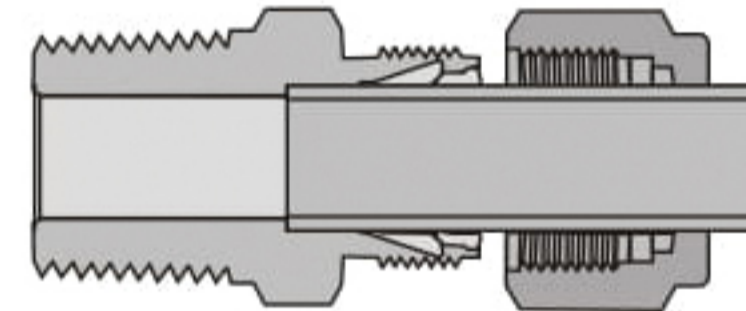
- 4) Never turn the fitting body. Instead, hold the fitting body and turn the nut.

Re-assembly Instructions

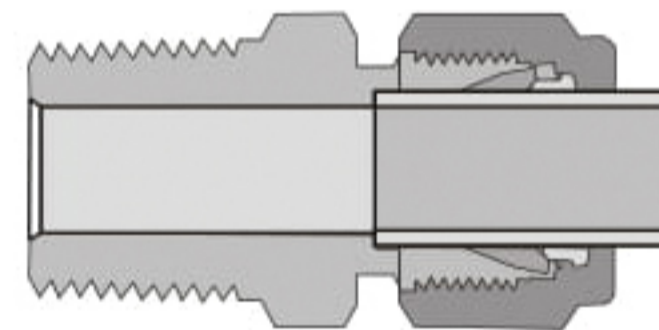
Comfit fittings can be dis-assembled and reassembled many times without Impairing the function and efficiency of the joints.



- 1) Prior to reassembly ensure that the fitting body and tube assembly are Free from any contaminant or damage.



- 2) Insert the tube assembly into the fitting body until the front ferrule seat firmly.



- 3) Tighten the nut by hand. Rotate the nut 1/4 of a turn with a spanner if necessary tighten the nut a further small amount to ensure the assembly is positively sealed.

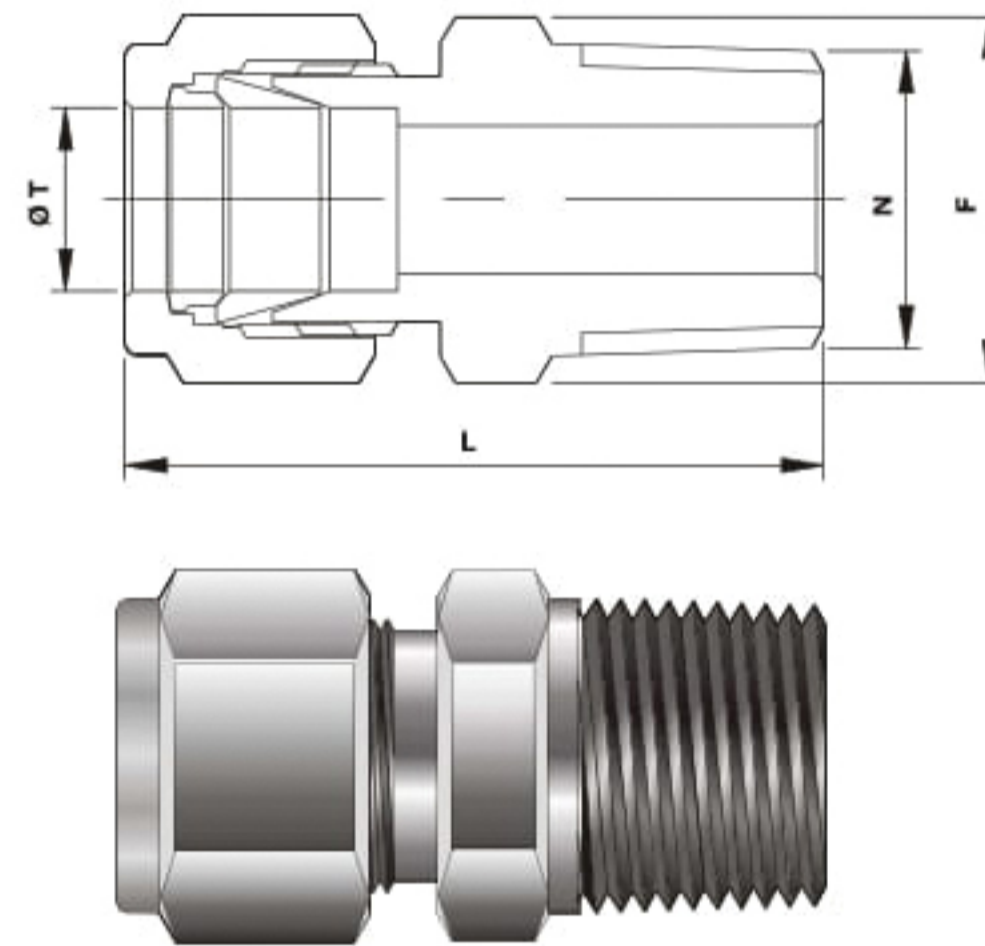
Safety Precautions

- Do not bleed the system by loosening the fitting nut or fitting plug.
- Do not make up and tighten fittings when the system is pressurized.
- Never allow problems to go unreported.
- Always use proper thread sealants on tapered pipe threads.
- Do not mix materials or fitting components from various manufacturers-tubing, ferrules, nuts and fitting bodies.

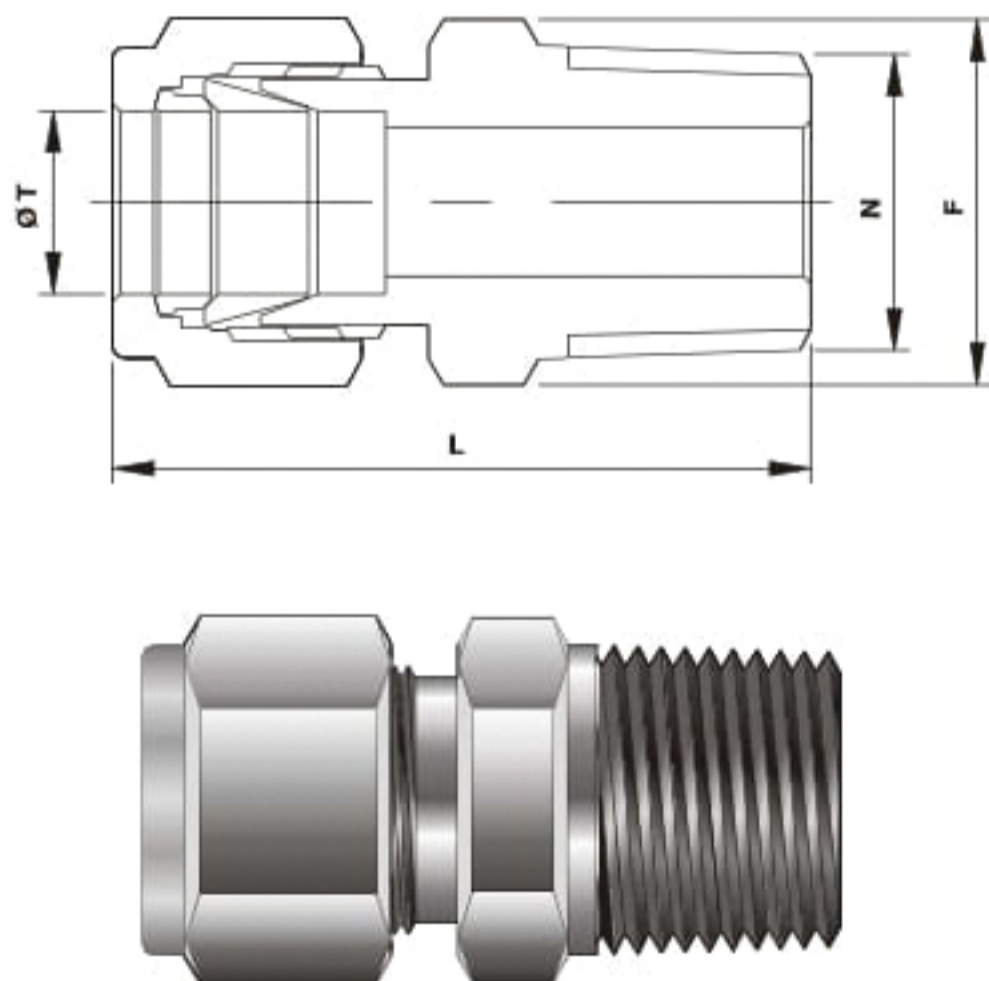
DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

TUBE OD (ØT)	NPT Male Pipe Size (N)	LENGTH (L)	HEX (F)
(Inches)			
1/8	1/16	1.17	7/16
1/8	1/8	1.20	7/16
1/8	1/4	1.40	9/16
1/8	3/8	1.41	11/16
1/8	1/2	1.66	7/8
1/4	1/16	1.29	9/16
1/4	1/8	1.29	9/16
1/4	1/4	1.49	9/16
1/4	3/8	1.51	11/16
1/4	1/2	1.76	7/8
1/4	3/4	1.82	1-1/16
5/16	1/8	1.34	9/16
5/16	1/4	1.52	9/16
5/16	3/8	1.54	11/16
5/16	1/2	1.79	7/8
3/8	1/8	1.39	5/8
3/8	1/4	1.57	5/8
3/8	3/8	1.57	11/16
3/8	1/2	1.82	7/8
3/8	3/4	1.88	1-1/16
1/2	1/8	1.53	7/8
1/2	1/4	1.71	7/8
1/2	3/8	1.71	7/8
1/2	1/2	1.93	7/8
1/2	3/4	1.99	1-1/16
1/2	1	2.25	1-3/8
5/8	3/4	1.99	1-1/16
3/4	1/2	1.99	1-1/16
3/4	3/4	1.99	1-1/16
3/4	1	2.25	1-3/8
1	1/2	2.26	1-3/8
1	3/4	2.26	1-3/8
1	1	2.45	1-3/8

MALE CONNECTOR.....FT X NPT (M)



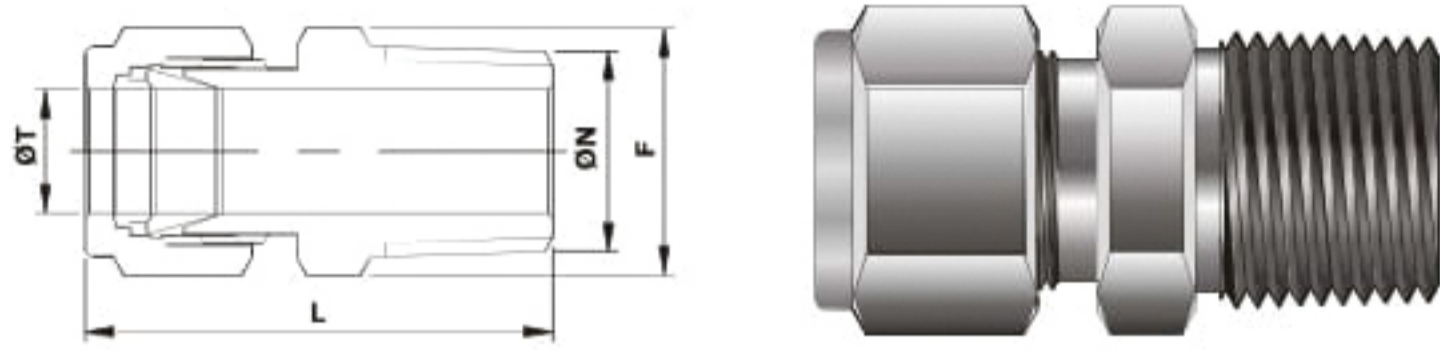
MALE CONNECTOR__MT X NPT(M)



TUBE OD (ØT)	NPT Male Pipe Size (N)	LENGTH (L)	HEX (F)
(Inches)			
3	1/8	29.7	11
3	1/4	35.6	14
4	1/8	31.2	11
4	1/4	36.3	14
6	1/8	32.8	14
6	1/4	37.9	14
6	3/8	38.4	17.4
6	1/2	44.7	22
8	1/8	34.2	16
8	1/4	38.7	16
8	3/8	39.3	17.4
8	1/2	45.6	22
10	1/8	36.3	19
10	1/4	40.9	19
10	3/8	40.9	19
10	1/2	46.5	22
10	3/4	48.0	27
10	1	55.0	35
12	1/8	38.8	22
12	1/4	43.4	22
12	3/8	43.4	22
12	1/2	49.0	22
12	3/4	50.5	27
15	1/2	49.0	25
16	3/8	44.1	25
16	1/2	49.0	25
16	3/4	50.5	27
20	1/2	52.3	30
25	1/2	57.5	35
25	3/4	57.5	35
25	1	62.3	35

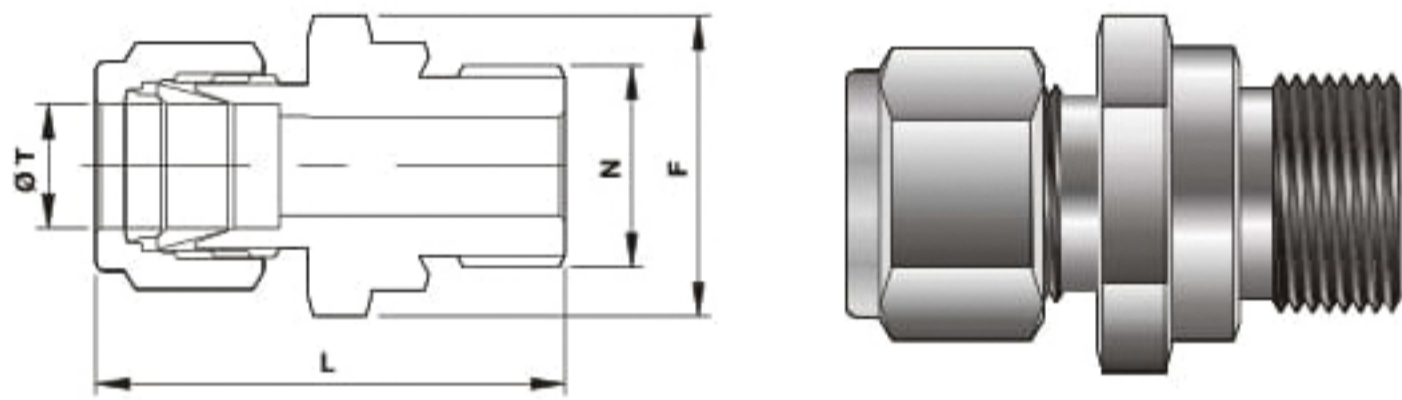
DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

**THERMOCOUPLE CONNECTOR
(FOR BORED-THROUGH FITTING) __FT X NPT(M)**



TUBE OD (ØT)	NPT Male Pipe Size (N)	LENGTH (L)	HEX (F)
(Inches)			
1/8	1/8	1.20	7/16
1/8	1/4	1.40	9/16
1/8	3/8	1.41	11/16
1/8	1/2	1.66	7/8
1/4	1/4	1.49	9/16
1/4	3/8	1.51	11/16
1/4	1/2	1.76	7/8
1/4	3/4	1.82	1-1/16
5/16	3/8	1.54	11/16
5/16	1/2	1.79	7/8
3/8	3/8	1.57	11/16
3/8	1/2	1.82	7/8
3/8	3/4	1.88	1-1/16
1/2	3/4	1.99	1-1/16
1/2	1	2.25	1-3/8
3/4	1	2.25	1-3/8

Male Connector - RP __FT x ISOP(M)

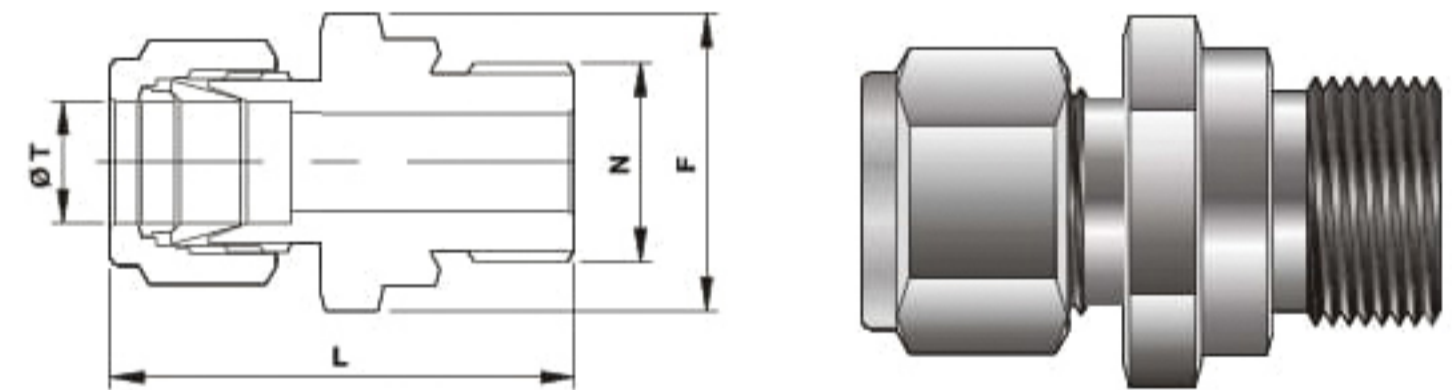


TUBE OD (ØT)	BSPP (ISO) Male Pipe Size (N)	LENGTH (L)	HEX (F)
(Inches)			
1/8	1/8	1.18	9/16
1/8	1/4	1.39	3/4
1/4	1/8	1.27	9/16
1/4	1/4	1.48	3/4
1/2	1/2	1.93	1-1/16

RP parallel threads are commonly used with flat RP gasket, please refer page no. 30

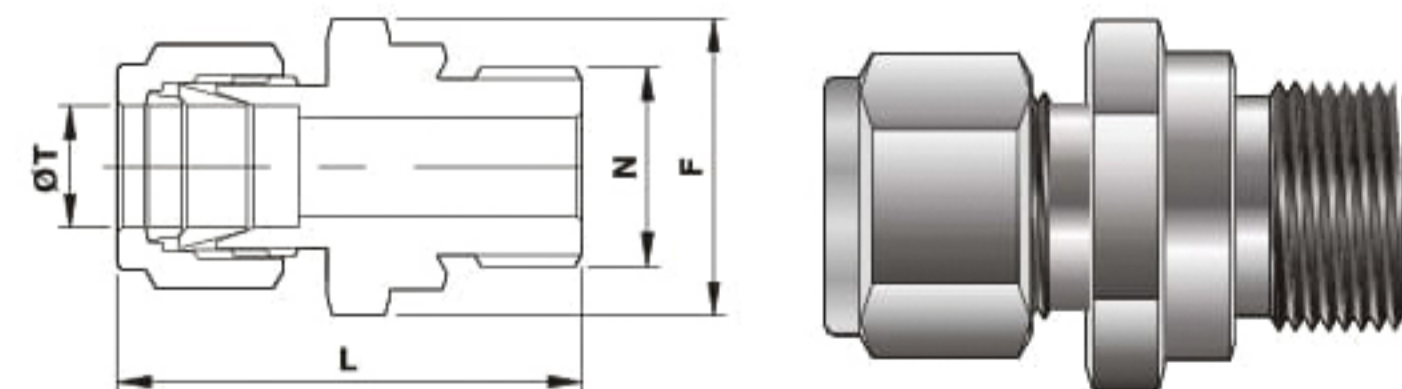
TUBE OD (ØT)	BSPP (ISO) Male Pipe Size (N)	LENGTH (L)	HEX (F)
(mm)	(Inches)	(mm)	
3	1/8	30.0	14
3	1/4	35.3	19
4	1/8	30.7	14
6	1/8	32.3	14
6	1/4	37.6	19
6	3/8	38.9	22
6	1/2	44.7	27
8	1/8	33.2	16
8	1/4	38.5	19
8	3/8	39.8	22
8	1/2	45.6	27
10	1/4	39.4	19
10	3/8	40.6	22
10	1/2	46.5	27
12	1/4	42.6	22
12	3/8	43.1	22
12	1/2	49.0	27
12	3/4	52.8	35
15	1/2	49.0	27
16	3/8	43.9	25
16	1/2	49.0	27
25	3/4	57.5	35
25	1	60.1	41

Male Connector-RP __MT x ISOP(M)



TUBE OD (ØT)	BSPP (ISO) Male Pipe Size (N)	LENGTH (L)	HEX (F)
(mm)	(Inches)	(mm)	
1/8	1/8	1.18	9/16
1/8	1/4	1.39	3/4
1/8	3/8	1.43	7/8
1/4	1/8	1.27	9/16
1/4	1/4	1.48	3/4
1/4	3/8	1.53	7/8
1/4	1/2	1.76	1-1/16
3/8	1/8	1.35	3/4
3/8	1/4	1.54	3/4
3/8	1/2	1.59	7/8
3/8	1/2	1.82	1-1/16
1/2	1/4	1.68	7/8
1/2	1/2	1.70	7/8
1/2	1/2	1.93	1-1/16
3/4	1/2	1.93	1-1/16
3/4	3/4	2.08	1-5/16
1	1/2	2.20	1-3/8
1	1	2.36	1-5/8

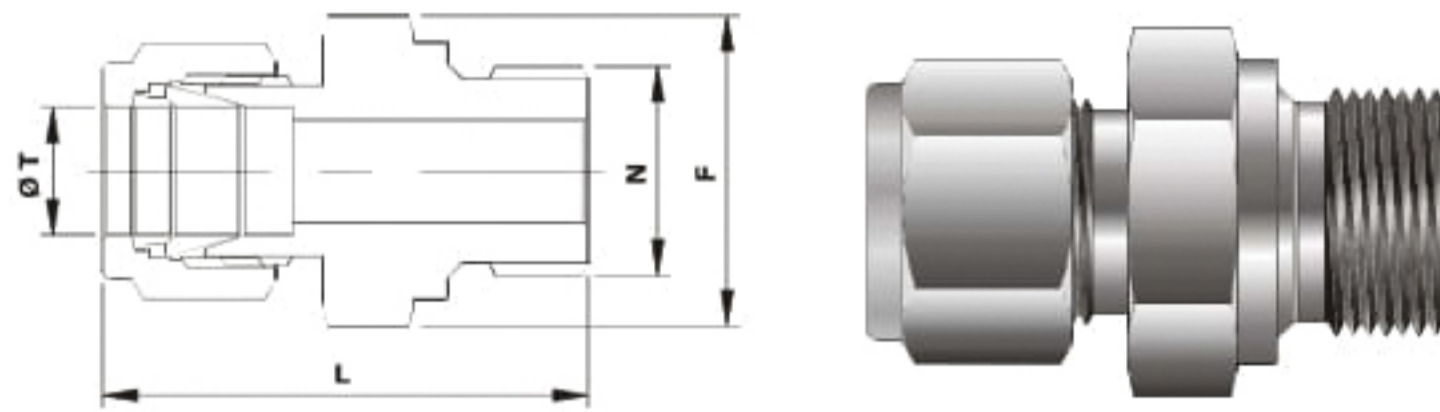
Male Connector-RS __FT x ISOP(M)



DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

1) RS parallel threads are commonly used with flat RS gasket, please refer page no. 29
2) RP gasket can also be used for RS fittings.

MALE CONNECTOR-RS_MT X ISOP(M)

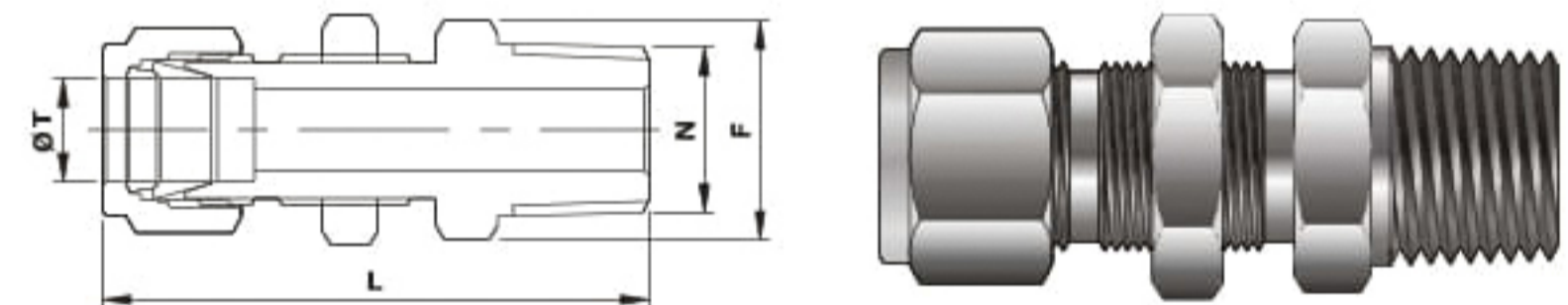


- 1) RS parallel threads are commonly used with flat RS gasket, please refer page no. 29
- 2) RP gasket can also be used for RS fittings.

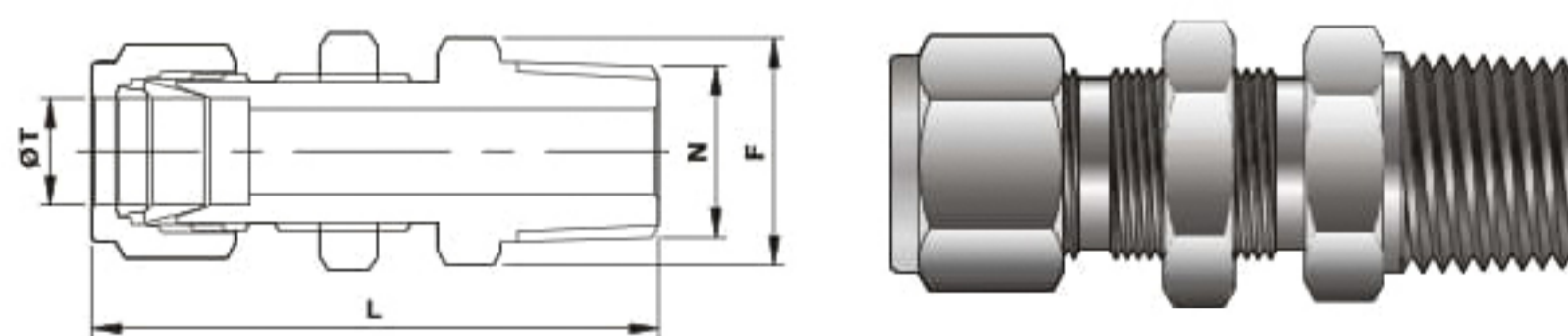
TUBE OD (ØT)	BSPP (ISO) Male Pipe Size(N)	LENGTH (L)	HEX (F)
(mm)	(Inches)	(mm)	
3	1/8	30.3	14
3	1/4	35.3	19
4	1/8	30.7	14
6	1/8	32.3	14
6	1/4	37.6	19
6	3/8	38.9	22
6	1/2	44.7	27
8	1/8	33.2	16
8	1/4	38.5	19
8	3/8	39.8	22
8	1/2	45.6	27
10	1/4	39.4	19
10	3/8	40.6	22
10	1/2	46.5	27
12	1/4	42.6	22
12	3/8	43.1	22
12	1/2	49.0	27
12	3/4	52.8	35
15	1/2	49.0	27
16	3/8	43.9	25
16	1/2	49.0	27
22	1	55.3	41
25	3/4	57.5	35
25	1	60.1	41

TUBE OD (ØT)	NPT Male Pipe Size (N)	LENGTH (L)	HEX (F)
(Inches)			
1/8	1/8	1.83	1/2
1/4	1/8	1.95	5/8
1/4	1/4	2.13	5/8
1/4	3/8	2.16	11/16
1/4	1/2	2.37	7/8
5/16	1/8	2.08	11/16
5/16	1/4	2.27	11/16
3/8	1/8	2.08	3/4
3/8	1/4	2.26	3/4
3/8	3/8	2.48	3/4
3/8	1/2	2.51	7/8
1/2	1/4	2.49	1
1/2	3/8	2.49	1
1/2	1/2	2.71	1
1/2	3/4	2.72	1-1/8
3/4	1/2	3.00	1-3/16
3/4	3/4	3.00	1-3/16
1	3/4	3.54	1-5/8
1	1	3.67	1-5/8

BULKHEAD MALE CONNECTOR_FT X NPT(M)



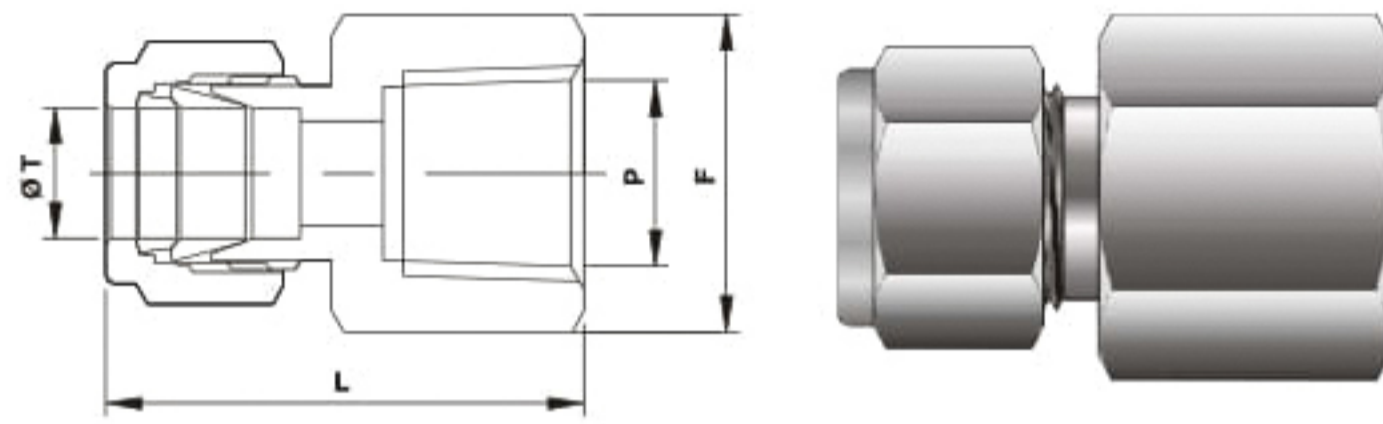
Bulkhead Male Connector__MT x NPT(M)



TUBE OD (ØT)	NPT Male Pipe Size (N)	LENGTH (L)	HEX (F)
(Inches)	(Inches)	(mm)	
6	1/8	49.6	16
6	1/4	53.6	16
8	1/8	52.3	19
8	1/4	57.5	19
10	1/4	58.4	22
10	3/8	58.4	22
10	1/2	63.1	22
12	1/4	63.3	25
12	3/8	64.5	25
12	1/2	68.8	25

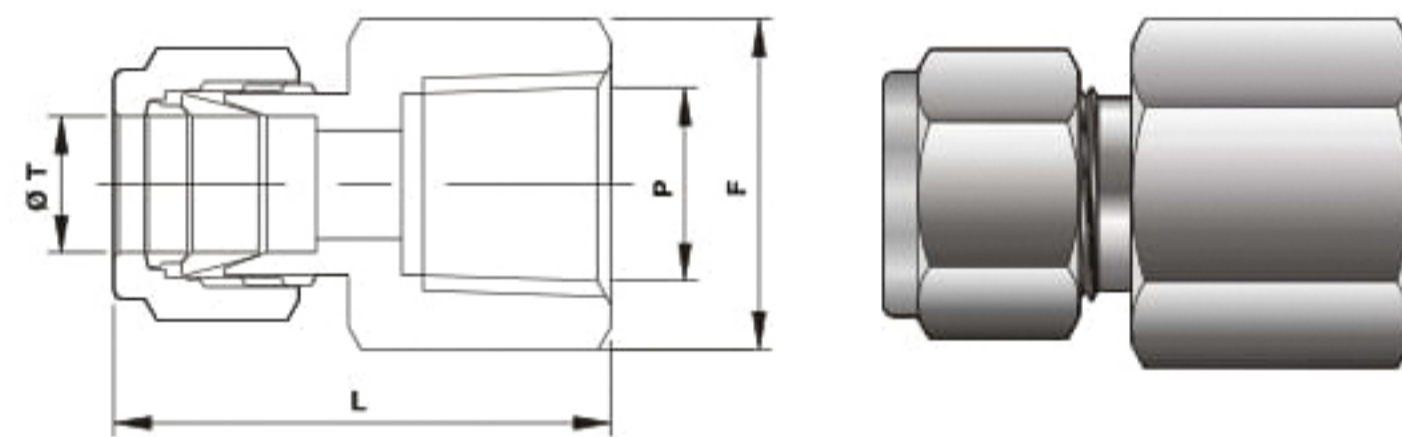
DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

Female Connector__FT x NPT(F)



TUBE OD (øT)	NPT Female Pipe Size (P)	LENGTH (L)	HEX (F)
(Inches)			
1/8	1/8	1.13	9/16
1/8	1/4	1.32	3/4
1/4	1/8	1.23	9/16
1/4	1/4	1.41	3/4
1/4	3/8	1.48	7/8
1/4	1/2	1.67	1-1/16
5/16	1/8	1.26	9/16
5/16	1/4	1.45	3/4
5/16	3/8	1.51	7/8
3/8	1/8	1.29	5/8
3/8	1/4	1.48	3/4
3/8	3/8	1.54	7/8
3/8	1/2	1.73	1-1/16
3/8	3/4	1.88	1-1/4
1/2	1/4	1.59	7/8
1/2	3/8	1.65	7/8
1/2	1/2	1.84	1-1/16
1/2	3/4	1.90	1-1/4
3/4	1/2	1.84	1-1/16
3/4	3/4	1.90	1-3/8
1	3/4	2.10	1-3/8
1	1	2.45	1-5/8

Female Connector__MT x NPT(F)

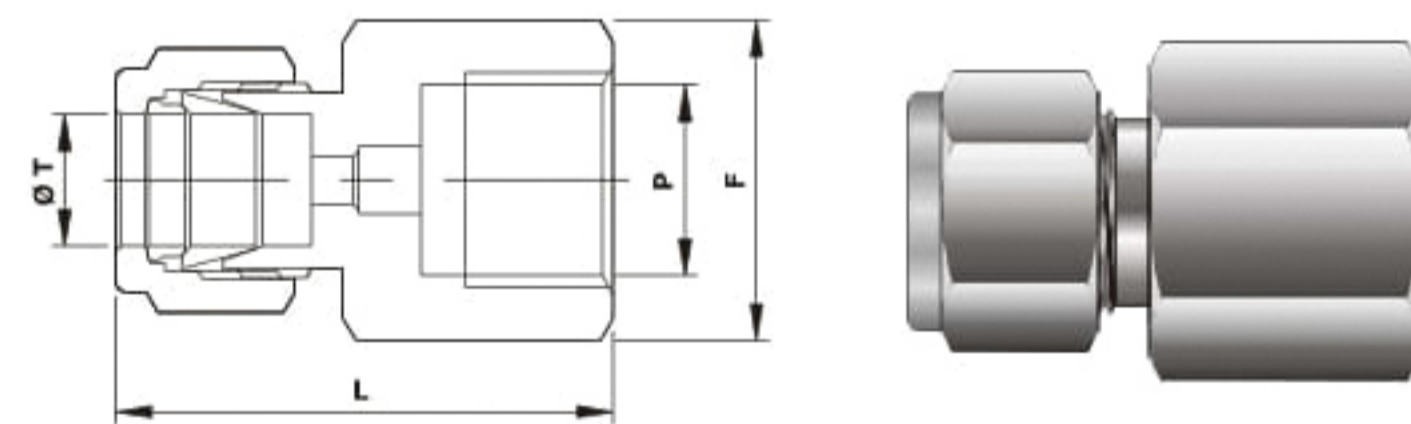


TUBE OD (øT)	NPT Female Pipe Size (P)	LENGTH (L)	HEX (F)
(mm)			
3	1/8	28.7	14
3	1/4	33.5	19
4	1/8	29.7	14
6	1/8	31.3	14
6	1/4	35.8	19
6	3/8	37.6	22
6	1/2	42.5	27
8	1/8	32.1	16
8	1/4	37.0	19
8	3/8	38.5	22
8	1/2	43.3	27
10	1/4	37.8	19
10	3/8	39.4	22
10	1/2	44.2	27
12	1/4	40.3	22
12	3/8	41.9	22
12	1/2	46.7	27
15	1/2	46.7	27
16	3/8	41.9	27
16	1/2	46.9	27
25	3/4	53.4	35
25	1	62.3	41

TUBE OD (øT)	BSPP (ISO) Female Pipe Size (P)	LENGTH (L)	HEX (F)
(Inch)			
1/8	3/8	1.22	7/8
1/4	1/4	1.48	3/4
1/4	3/8	1.48	7/8
1/4	1/2	1.71	1-1/16
5/16	1/4	1.51	3/4
5/16	1/2	1.61	1-1/16
3/8	1/4	1.54	3/4
3/8	3/8	1.52	7/8
3/8	1/2	1.65	1-1/16
1/2	1/4	1.65	7/8
1/2	3/8	1.75	7/8
1/2	1/2	1.90	1-1/16

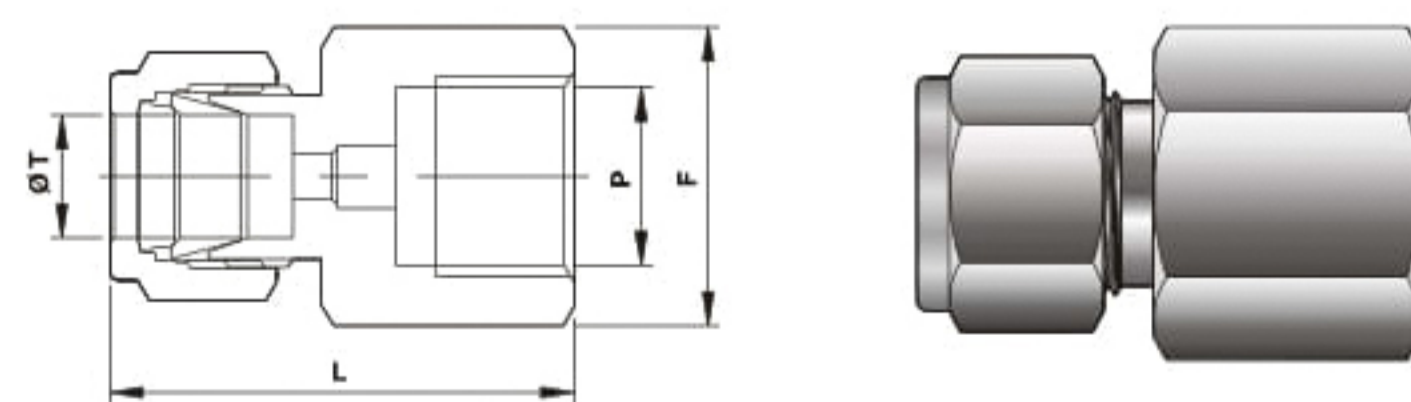
TUBE OD (øT)	BSPP (ISO) Female Pipe Size (P)	LENGTH (L)	HEX (F)
(mm)			
3	1/4	35.5	19
6	1/4	37.6	19
6	3/8	37.6	22
6	1/2	43.5	27
8	1/4	38.5	19
8	3/8	36.2	22
8	1/2	41.0	27
10	1/4	39.4	19
10	3/8	38.8	22
10	1/2	42.1	27
12	1/4	41.9	22
12	3/8	44.4	22
12	1/2	48.2	27
20	1/2	54.3	30
22	1/2	54.3	30

Female Connector-RG__FT x ISOP(F)



1) RG parallel threads are commonly used with flat RG gasket, please refer page no. 46

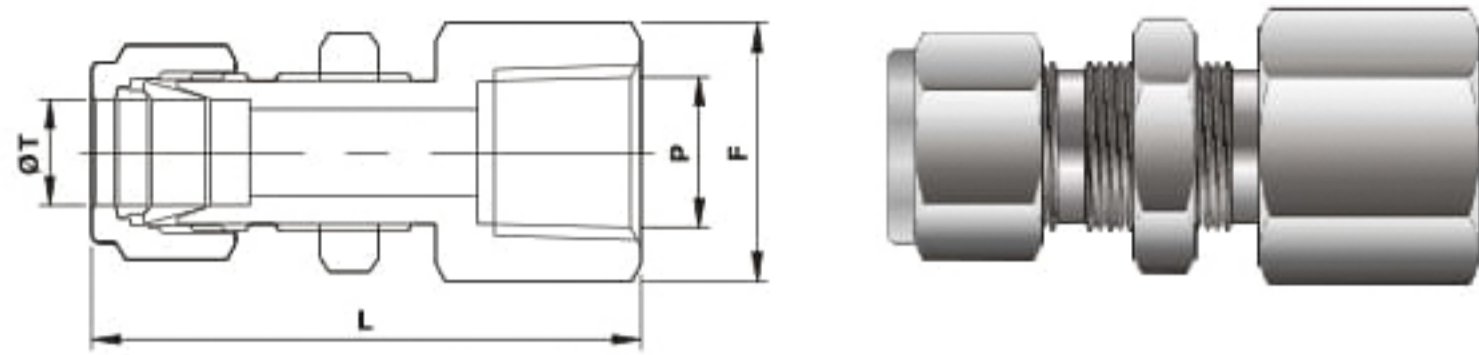
Female Connector-RG__MT x ISOP(F)



1) RG parallel threads are commonly used with flat RG gasket, please refer page no. 46

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

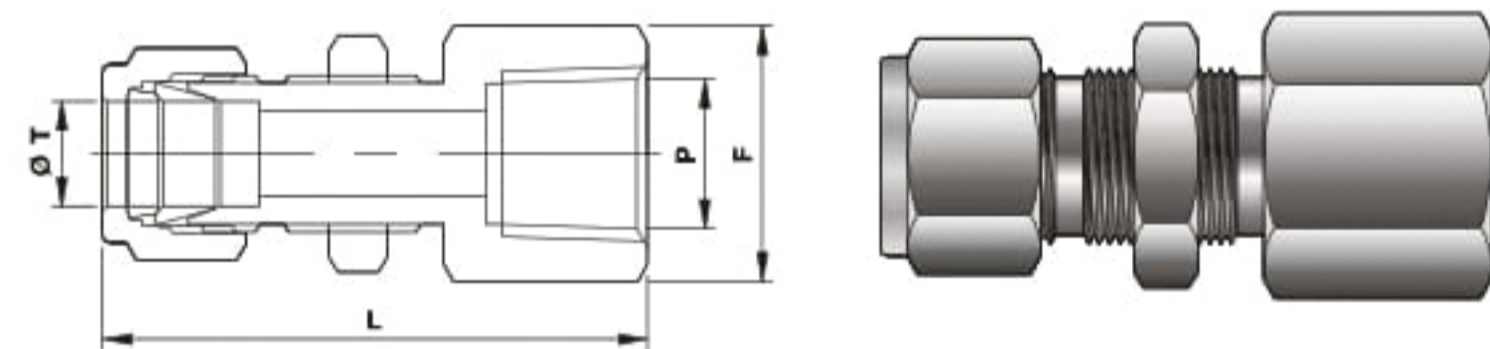
Bulkhead Female Connector_FT x NPT(F)



TUBE OD (ØT)	NPT Female Pipe Size (P)	LENGTH (L)	HEX (F)
(Inches)			
1/8	1/8	1.76	9/16
1/4	1/8	1.85	5/8
1/4	1/4	2.04	3/4
5/16	1/8	1.96	11/16
5/16	1/2	2.38	1-1/16
3/8	1/4	2.17	3/4
1/2	3/8	2.43	7/8
1/2	1/2	2.62	1
3/4	3/4	2.90	1-1/4
1	1	3.68	1-5/8

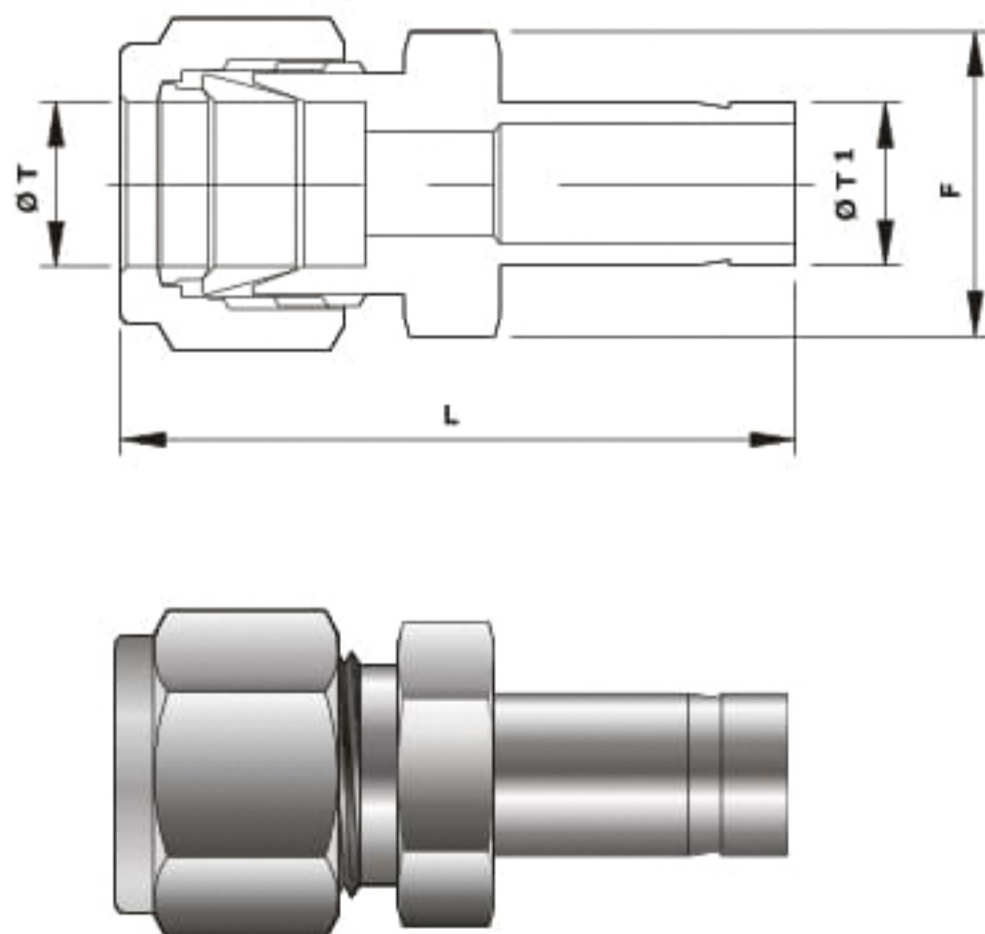
TUBE OD (ØT)	NPT Female Pipe Size (P)	LENGTH (L)	HEX (F)
(mm)	(Inches)	(mm)	
6	1/8	47.2	16
6	1/4	51.8	19
8	1/8	49.6	17.4
10	1/4	55.2	19
12	3/8	60.9	25
12	1/2	66.5	27

Bulkhead Female Connector_MT x NPT(F)

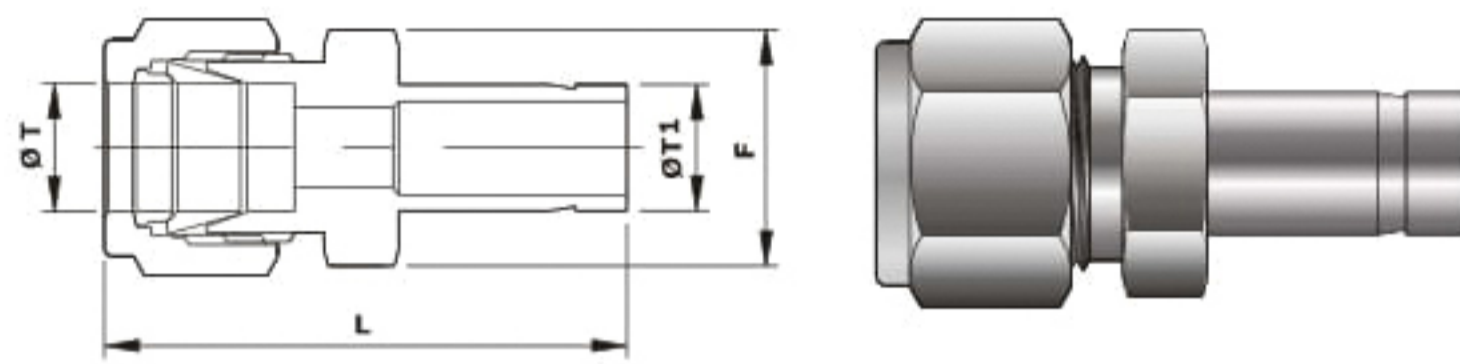


TUBE OD (ØT)	TUBE OD (ØT1)	LENGTH (L)	HEX (F)
(Inches)			
1/8	1/16	1.14	7/16
1/8	1/8	1.32	7/16
1/8	3/16	1.35	7/16
1/8	1/4	1.42	7/16
1/8	3/8	1.48	7/16
1/8	1/2	1.74	9/16
1/4	1/8	1.45	1/2
1/4	3/16	1.48	1/2
1/4	1/4	1.54	1/2
1/4	5/16	1.57	1/2
1/4	3/8	1.60	1/2
1/4	1/2	1.82	9/16
1/4	5/8	1.89	11/16
1/4	3/4	1.88	7/8
5/16	3/8	1.65	9/16
5/16	1/2	1.87	9/16
3/8	1/4	1.63	5/8
3/8	3/8	1.70	5/8
3/8	1/2	1.91	5/8
3/8	5/8	1.98	11/16
3/8	3/4	1.98	7/8
1/2	1/4	1.77	7/8
1/2	3/8	1.84	7/8
1/2	1/2	2.06	7/8
1/2	5/8	2.12	7/8
1/2	3/4	2.12	7/8
1/2	1	2.37	1-1/16
3/4	1/2	2.15	1-1/16

Reducer_FT x Fractional Stub

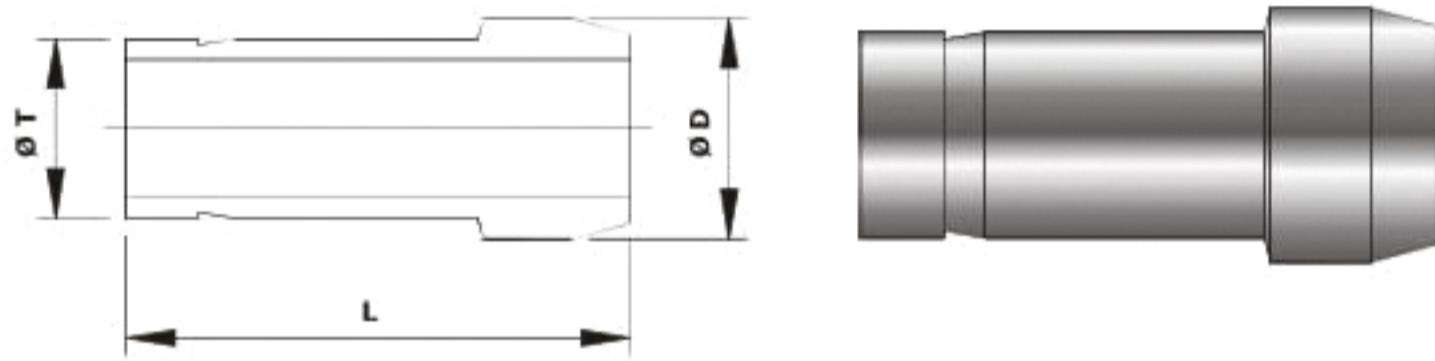


Reducer_MT x Metric Stub



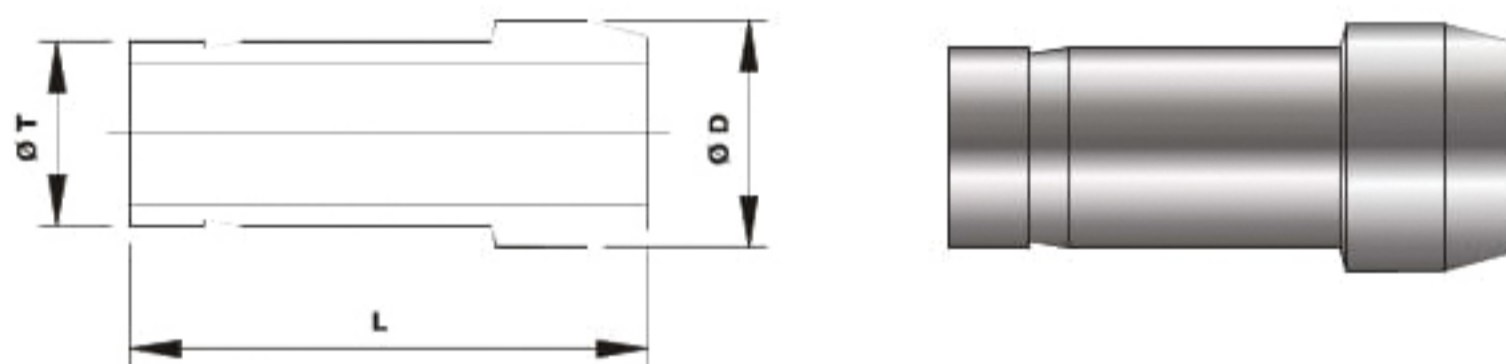
TUBE OD (ØT)	TUBE OD (ØT1)	LENGTH (L)	HEX (F)
(mm)			
2	3	33.5	12
3	4	35.0	12
3	6	36.1	12
3	10	38.4	14
4	6	37.1	12
6	3	36.9	14
6	8	39.9	14
6	10	40.7	14
6	12	46.3	14
6	18	49.6	22
8	6	40.3	16
8	10	42.0	16
8	12	47.6	16
10	6	42.4	19
10	8	43.4	19
10	12	49.8	19
10	15	51.3	19
10	18	51.3	22
12	6	44.9	22
12	8	45.9	22
12	10	46.7	22
12	16	53.8	22
12	18	53.8	22
12	20	56.1	22
12	22	56.1	25
12	25	62.4	27
16	12	53.0	25
16	18	54.7	25
16	20	55.3	25
16	25	64.0	27
25	16	63.2	30
25	18	63.1	35
25	20	64.6	35

Port Connector_Two Fractional Stub



TUBE OD (ØT)	LENGTH (L)	(ØD)
(Inch)		
1/8	0.88	0.24
1/4	0.97	0.37
5/16	1.02	0.43
3/8	1.03	0.50
1/2	1.41	0.62
3/4	1.47	0.87
1	1.89	1.12

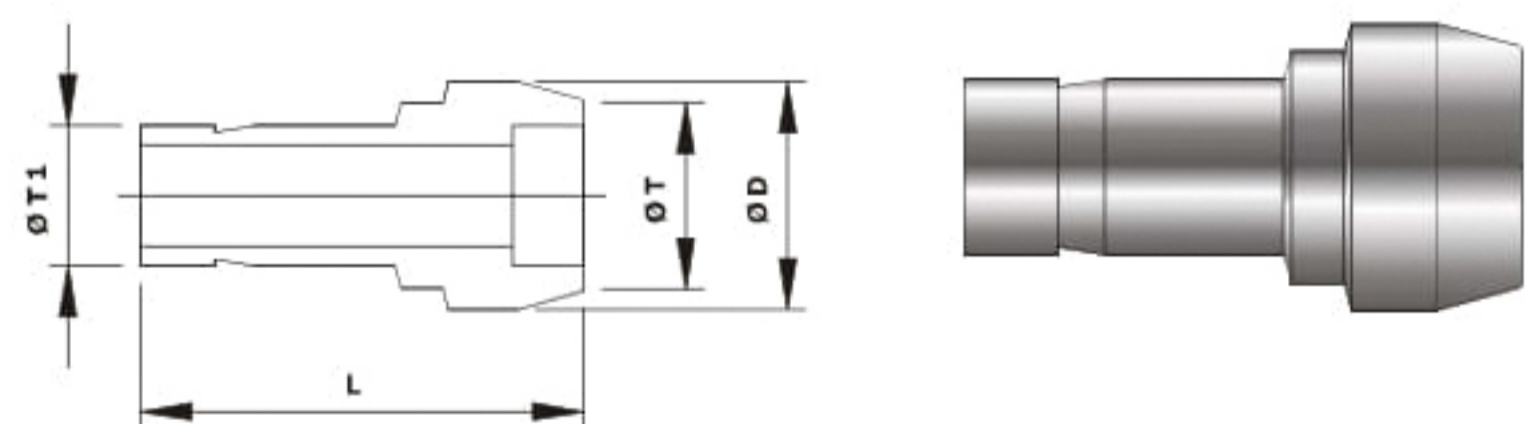
Port Connector_Two Metric Stub



TUBE OD (ØT)	LENGTH (L)	(ØD)
(mm)		
3	22.2	6.0
6	24.6	9.0
8	25.9	11.0
10	26.1	13.1
12	35.8	15.0
15	37.4	19.0
16	37.4	19.0
25	48.0	28.0

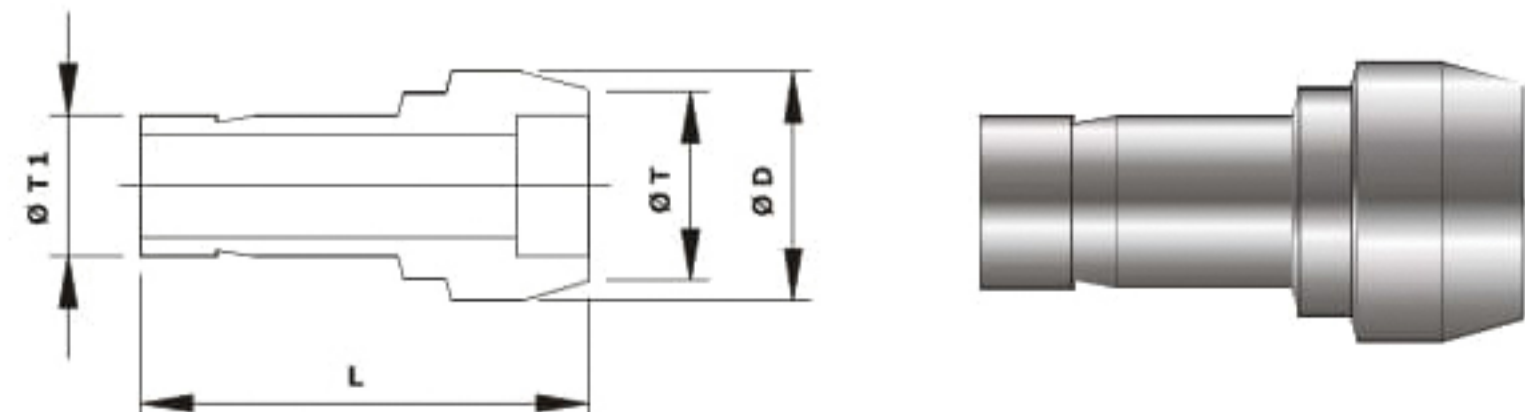
TUBE OD (ØT)	TUBE OD (ØT1)	LENGTH (L)	(ØD)
(Inch)			
1/8	1/16	0.68	0.24
1/4	1/16	0.71	0.37
1/4	1/8	0.89	0.37
3/8	1/8	0.91	0.50
3/8	1/4	0.93	0.50
1/2	1/4	1.15	0.62
1/2	3/8	1.520	0.62
3/4	1/2	1.49	0.87
1	1/2	1.68	1.12
1	3/4	1.71	1.12

Reducer Port Connector_Two Fractional Stub



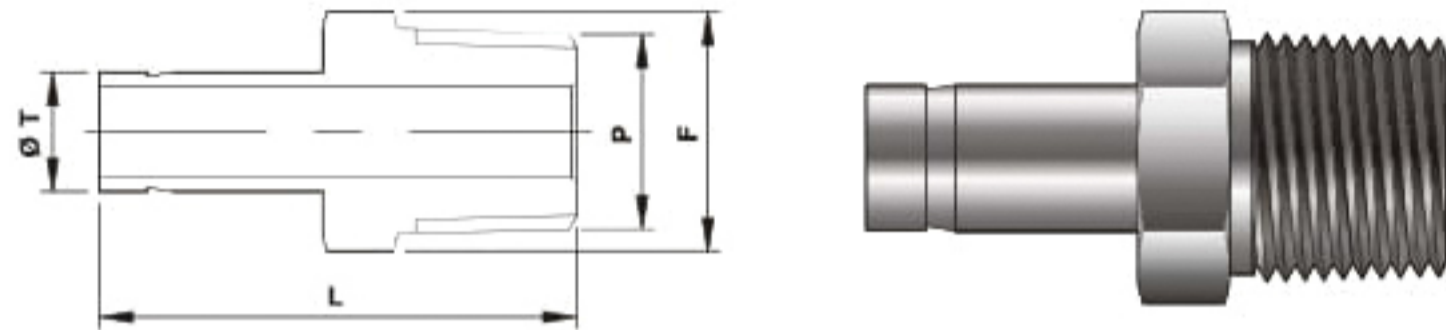
TUBE OD (ØT)	TUBE OD (ØT1)	LENGTH (L)	(ØD)
(mm)			
6	3	22.6	9.0
8	6	24.7	11.0
10	6	25.0	13.1
10	8	26.0	13.1
12	6	29.1	15.0
12	8	29.8	15.0
12	10	30.4	15.0
16	12	36.2	19.0

Reducer Port Connector_Two Metric Stub



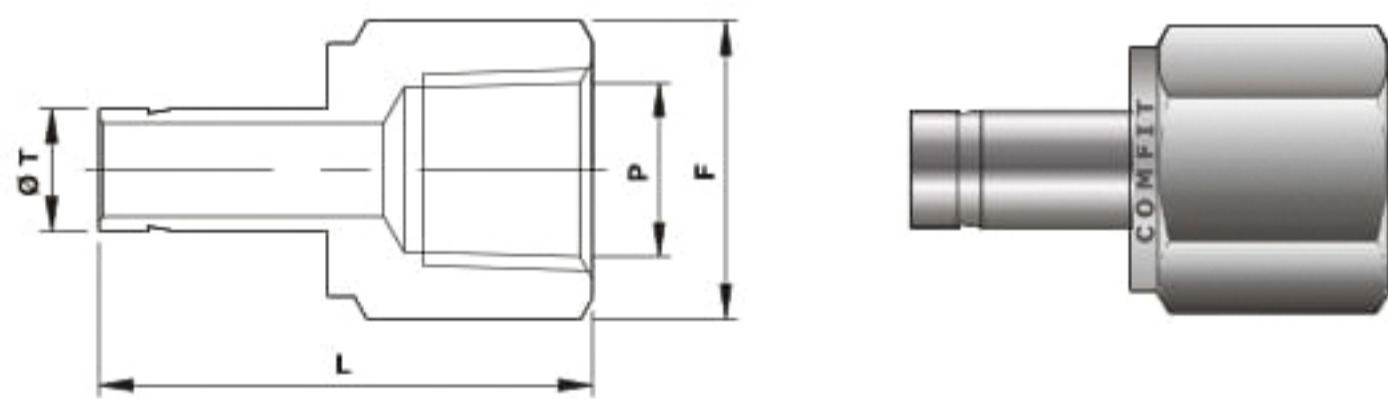
DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

Male Adapter_Fractional Stub x NPT(M)



TUBE OD (ØT)	BSPT (ISO) MALE (P)	LENGTH (L)	HEX (F)
(mm)	(Inch)	(mm)	
3	1/8	29.4	12
4	1/8	29.4	12
6	1/8	32.8	12
6	1/4	38.1	14
8	1/4	39.1	14
8	3/8	38.3	17.4
10	1/4	39.9	14
10	3/8	40.6	19
10	1/2	44.5	22
12	1/4	46.5	16
12	3/8	46.2	18
12	1/2	51.8	22
16	1/2	50.8	22
25	1	65.9	35

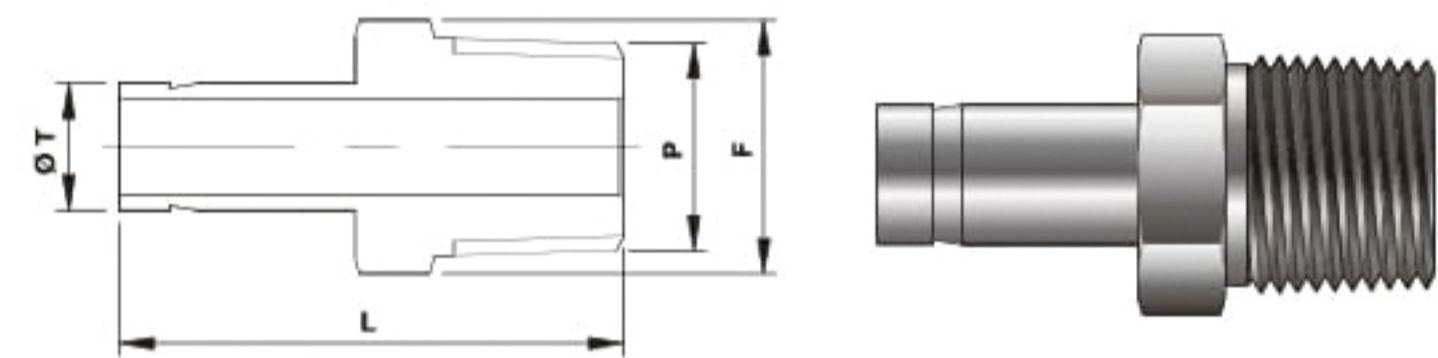
Female Adapter_Fractional Stub x NPT(F)



TUBE OD (ØT)	BSPT (ISO) Female Pipe Size (P)	LENGTH (L)	HEX (F)
(Inch)	(Inch)	(mm)	
3	1/8	27.8	14
4	1/8	28.6	14
6	1/8	32.5	14
8	1/4	39.1	19
10	1/4	38.1	19
10	3/8	31.8	22
10	1/2	41.3	27
12	1/4	40.5	19
12	3/8	43.7	22
12	1/2	43.8	27
16	1/2	48.4	27
25	1	66.7	41

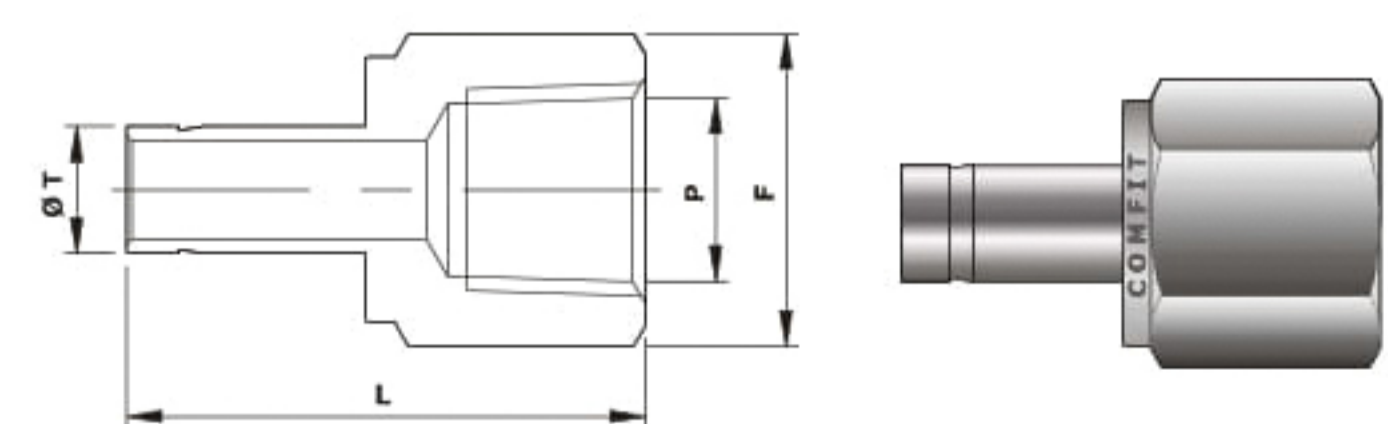
TUBE OD (ØT)	NPT Male Pipe Size (P)	LENGTH (L)	HEX (F)
(Inch)			
1/8	1/8	1.16	7/16
1/8	1/4	1.37	9/16
1/4	1/8	1.25	7/16
1/4	1/4	1.46	9/16
1/4	3/8	1.49	11/16
1/4	1/2	1.71	7/8
5/16	1/8	1.29	7/16
5/16	1/4	1.50	9/16
5/16	3/8	1.53	11/16
5/16	1/2	1.74	7/8
3/8	1/8	1.32	7/16
3/8	1/4	1.53	9/16
3/8	3/8	1.56	11/16
3/8	1/2	1.78	7/8
1/2	1/4	1.75	9/16
1/2	3/8	1.78	11/16
1/2	1/2	2.00	7/8
3/4	1/2	2.06	7/8
3/4	3/4	2.06	1-1/16
3/4	1	2.41	1-3/8
1	3/4	2.31	1-1/16
1	1	2.60	1-3/8

Male Adapter_Metric Stub x ISOT(M)



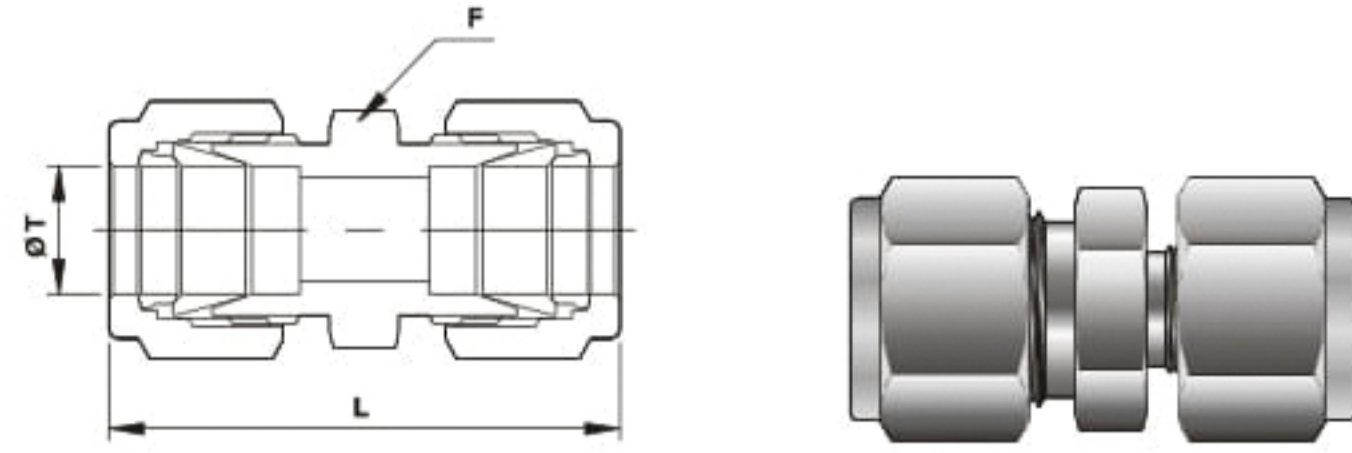
TUBE OD (ØT)	NPT Female Pipe Size (P)	LENGTH (L)	HEX (F)
(Inch)			
1/8	1/8	1.24	9/16
1/8	1/4	1.39	3/4
1/4	1/8	1.30	9/16
1/4	1/4	1.46	3/4
1/4	3/8	1.55	7/8
1/4	1/2	1.79	1-1/16
5/16	1/8	1.34	9/16
5/16	1/4	1.48	3/4
5/16	3/8	1.59	7/8
3/8	1/8	1.35	9/16
3/8	1/4	1.50	3/4
3/8	3/8	1.59	7/8
3/8	1/2	1.84	1-1/16
1/2	1/4	1.71	3/4
1/2	3/8	1.79	7/8
1/2	1/2	2.04	1-1/16
3/4	1/2	2.08	1-1/16
3/4	3/4	2.16	1-5/16
3/4	1	2.30	1-5/8
1	3/4	2.39	1-5/16
1	1	2.53	1-5/8

Female Adapter_Metric Stub x ISOT(F)



DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

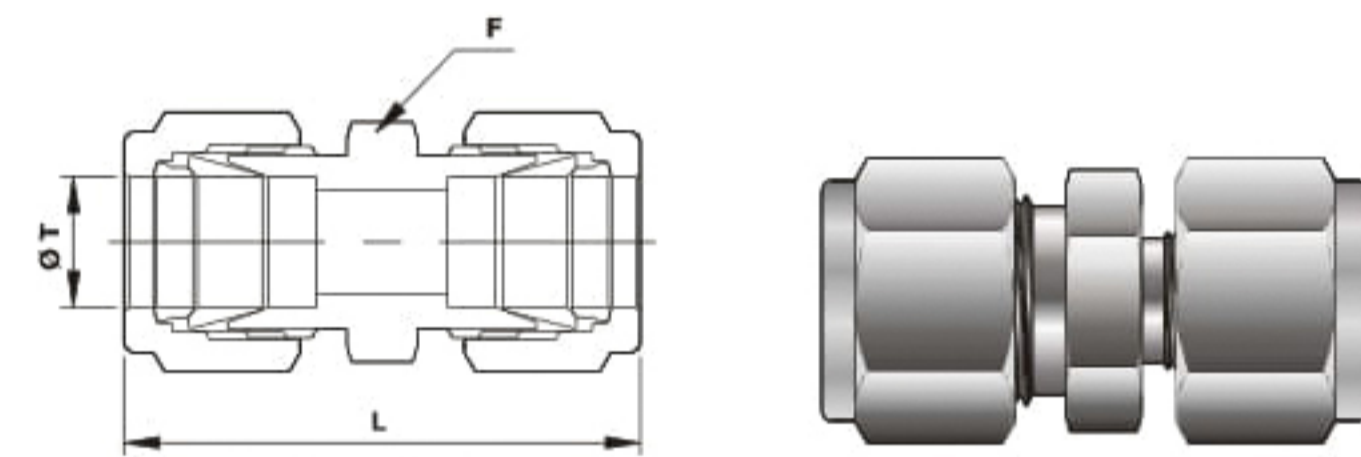
Union_FT X FT



TUBE OD (øT)	LENGTH (L)	HEX (F)
(Inches)		
1/8	1.40	7/16
1/4	1.61	1/2
5/16	1.69	9/16
3/8	1.77	5/8
1/2	2.02	7/8
3/4	2.11	1-1/16
1	2.55	1-3/8

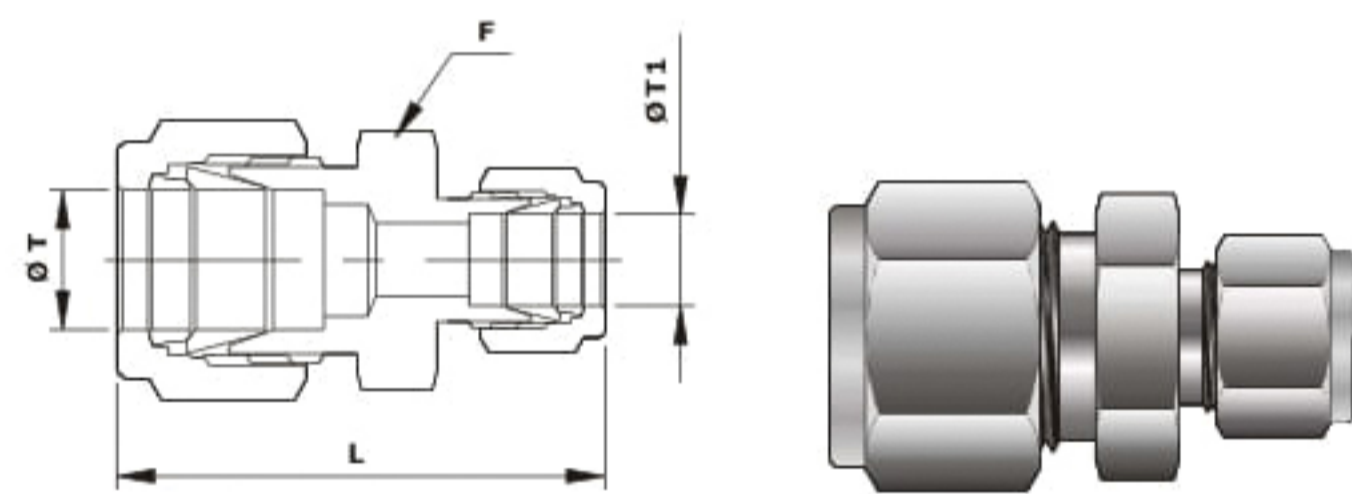
TUBE OD (øT)	LENGTH (L)	HEX (F)
(mm)		
2	35.6	12
3	35.3	12
4	37.3	12
6	41.0	14
8	43.2	15
10	46.2	19
12	51.2	22
15	52.0	25
16	52.0	25
25	65.0	35

Union_MT X MT



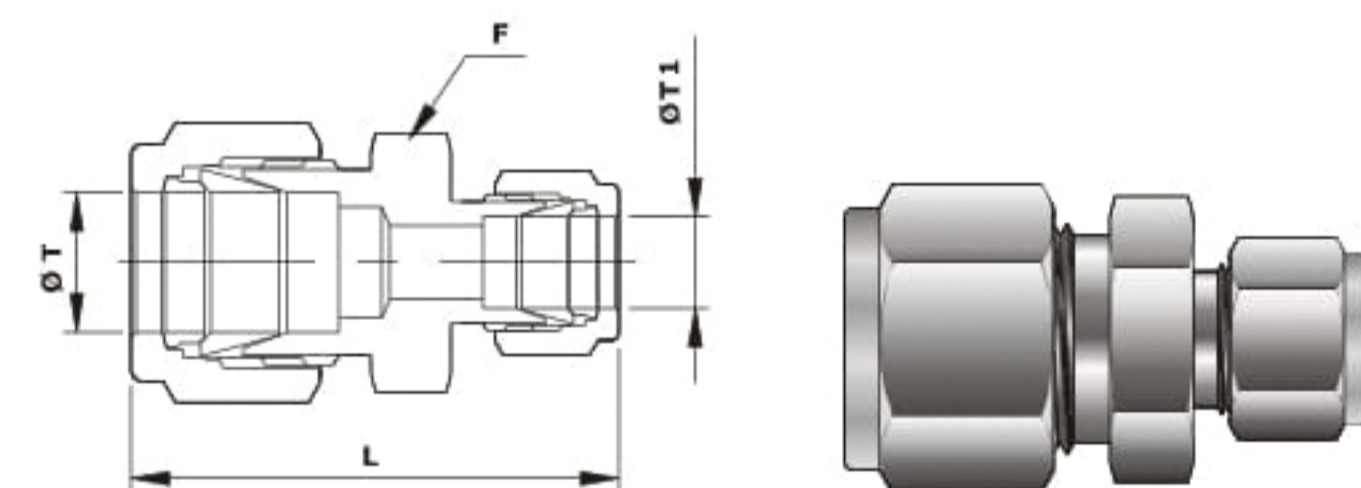
TUBE OD (øT)	TUBE OD (øT1)	LENGTH (L)	HEX (F)
(Inches)			
1/8	1/16	1.22	7/16
1/4	1/16	1.35	1/2
1/4	1/8	1.52	1/2
1/4	3/16	1.55	1/2
5/16	1/8	1.56	9/16
5/16	1/4	1.66	9/16
3/8	1/16	1.44	5/8
3/8	1/8	1.61	5/8
3/8	1/4	1.70	5/8
3/8	5/16	1.74	5/8
1/2	1/8	1.78	7/8
1/2	1/4	1.85	7/8
1/2	3/8	1.91	7/8
3/4	1/4	1.94	1-1/16
3/4	3/8	2.00	1-1/16
3/4	1/2	2.11	1-1/16
3/4	5/8	2.11	1-1/16
1	1/2	2.38	1-3/8
1	3/4	2.38	1-3/8

Reducer Union_FT X FT

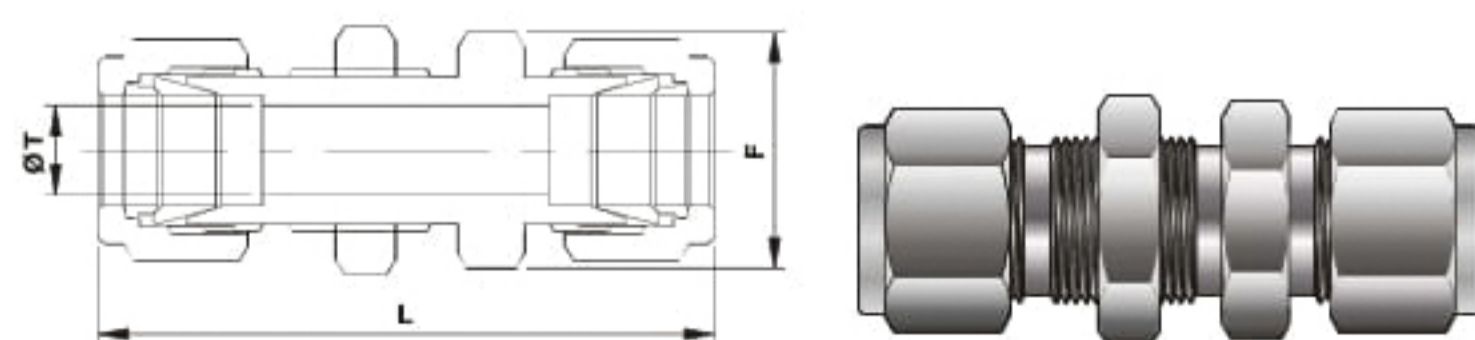


TUBE OD (øT)	TUBE OD (øT1)	LENGTH (L)	HEX (F)
(mm)			
3	2	35.3	12
6	2	38.6	14
6	3	38.6	14
6	4	39.4	14
8	6	42.3	16
10	6	44.5	19
10	8	45.1	19
12	6	47.0	22
12	8	47.8	22
12	10	48.7	22
16	10	49.5	25
16	12	52.0	25
25	18	61.0	35
25	25	62.3	35

Reducer Union_MT X MT



Bulkhead Union_FT X FT

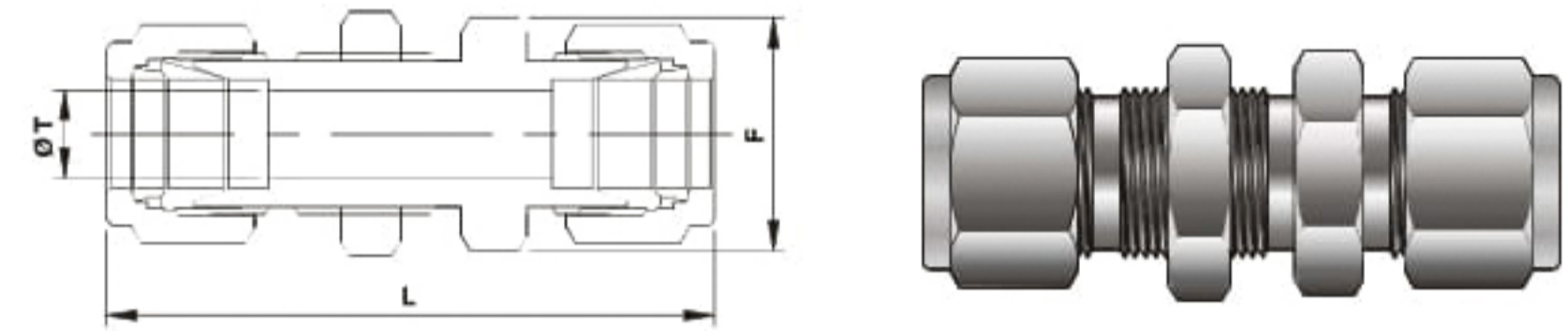


TUBE OD (øT)	LENGTH (L)	HEX (F)
(Inches)		
1/8	2.02	1/2
1/4	2.27	5/8
5/16	2.39	11/16
3/8	2.45	3/4
1/2	2.80	1
3/4	3.11	1-3/16
1	3.77	1-5/8

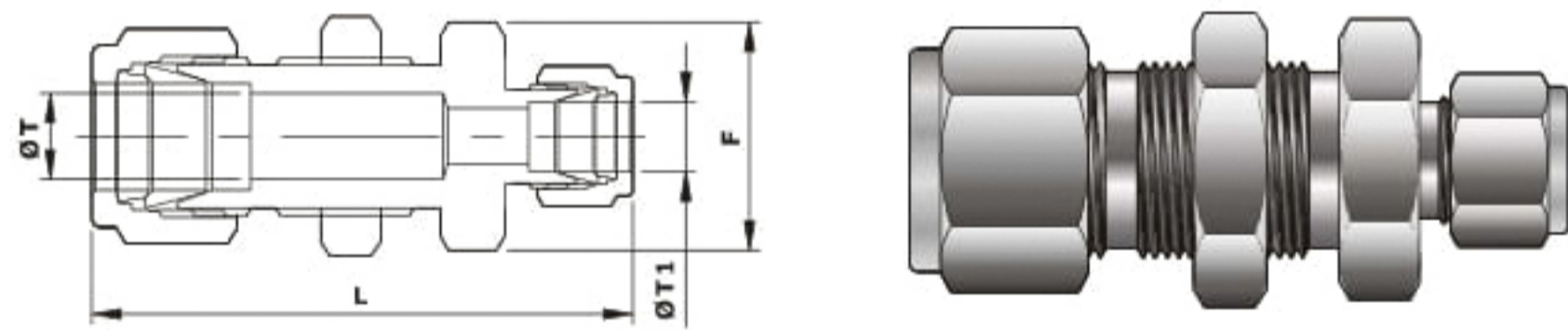
DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

TUBE OD (ØT)	LENGTH (L)	HEX (F)
(mm)		
3	51.3	14
4	53.6	14
6	57.7	16
8	61.0	19
10	63.7	22
12	71.0	25
15	72.5	27
16	72.5	27
25	95.8	41

Bulkhead Union_MT X MT

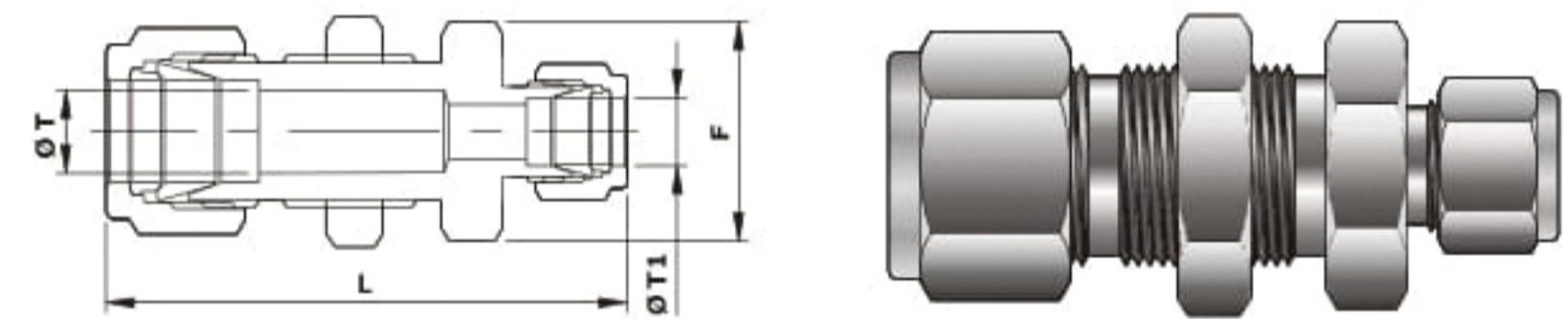


Bulkhead Reducer Union_FT X FT



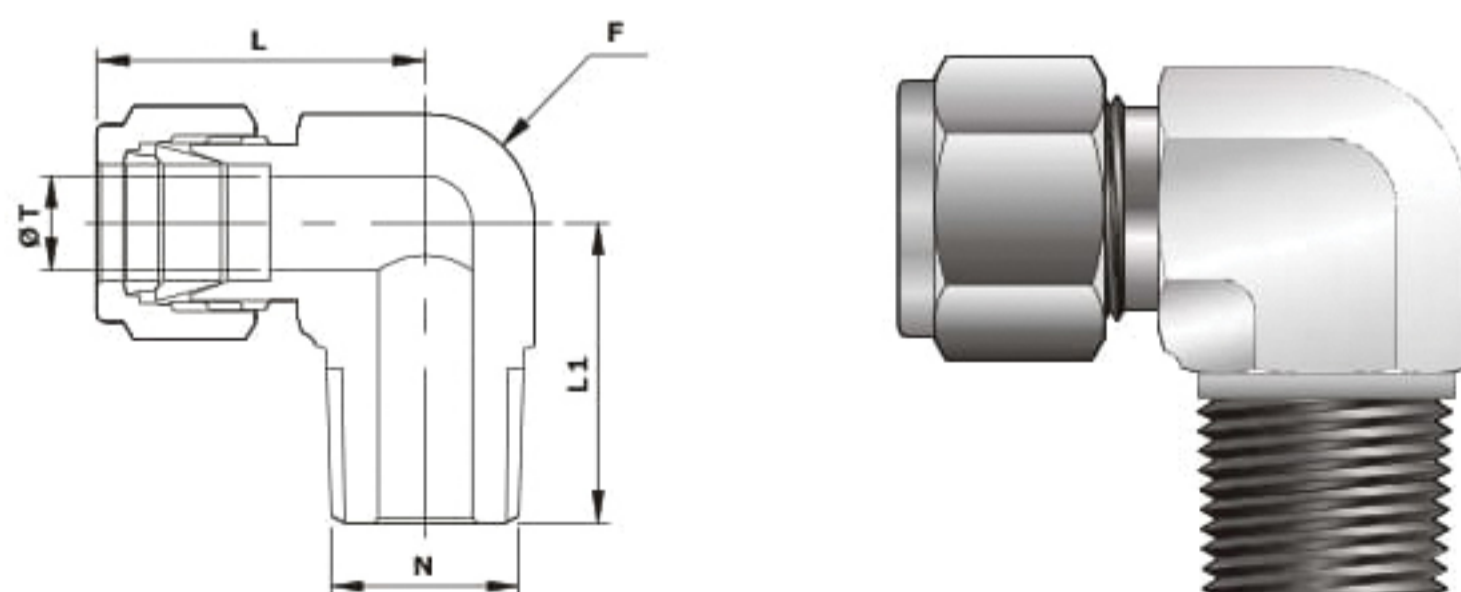
TUBE OD (ØT)	TUBE OD (ØT1)	LENGTH (L)	HEX (F)
(Inches)			
1/4	1/8	2.17	5/8
3/8	1/4	2.39	3/4
1/2	1/4	2.63	1

Bulkhead Reducer Union_MT X MT



TUBE OD (ØT)	TUBE OD (ØT1)	LENGTH (L)	HEX (F)
(mm)			
12	10	68	25

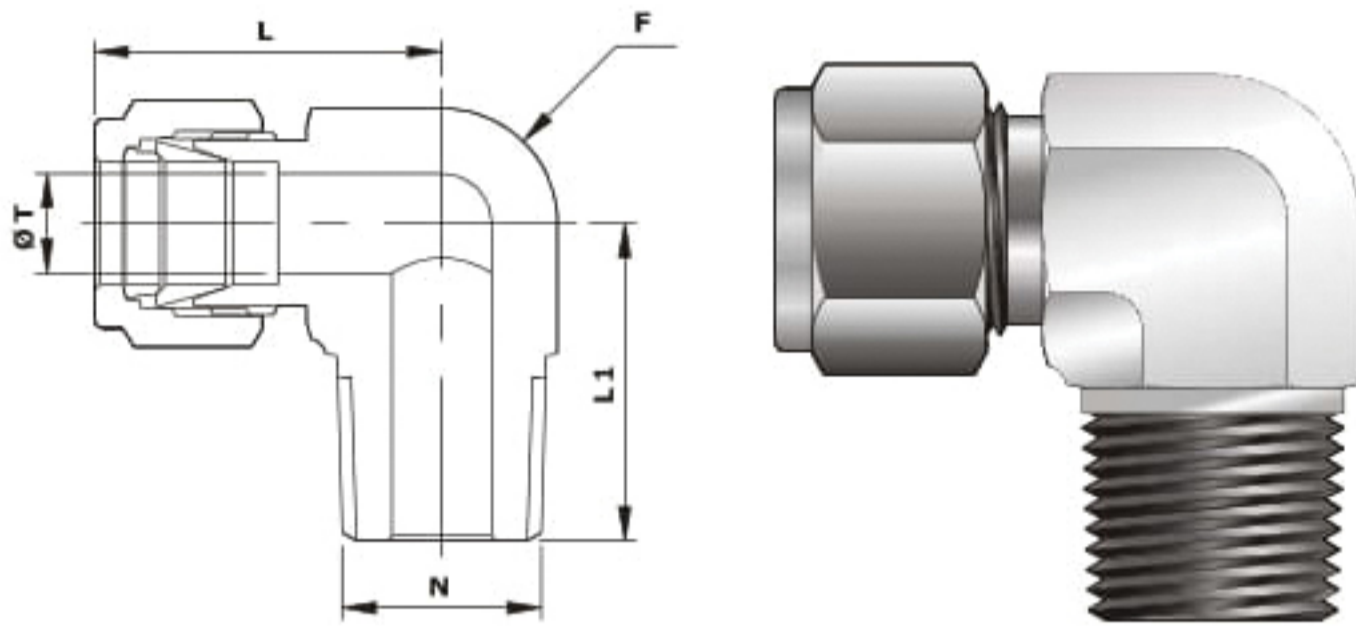
Male Elbow_FT X NPT(M)



TUBE OD (ØT)	NPT MALE PIPE (N)	LENGTH (L)	LENGTH (L1)	HEX (F)
(Inch)				
1/8	1/16	0.93	0.70	7/16
1/8	1/8	0.93	0.70	7/16
1/8	1/4	0.97	0.92	9/16
1/4	1/16	1.06	0.74	1/2
1/4	1/8	1.06	0.74	1/2
1/4	1/4	1.06	0.92	9/16
1/4	3/8	1.17	1.03	11/16
1/4	1/2	1.25	1.30	7/8
5/16	1/8	1.13	0.78	5/8
5/16	1/4	1.13	0.96	5/8
5/16	3/8	1.20	1.03	11/16
3/8	1/8	1.20	0.82	5/8
3/8	1/4	1.20	1.00	5/8
3/8	3/8	1.23	1.03	11/16
3/8	1/2	1.31	1.30	7/8
3/8	3/4	1.46	1.45	1-1/16
1/2	1/4	1.42	1.11	13/16
1/2	3/8	1.42	1.11	13/16
1/2	1/2	1.42	1.30	7/8
1/2	3/4	1.57	1.45	1-1/16
3/4	1/2	1.57	1.45	1-1/16
3/4	3/4	1.57	1.45	1-1/16
1	3/4	1.93	1.64	1-3/8
1	1	1.93	1.83	1-3/8

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

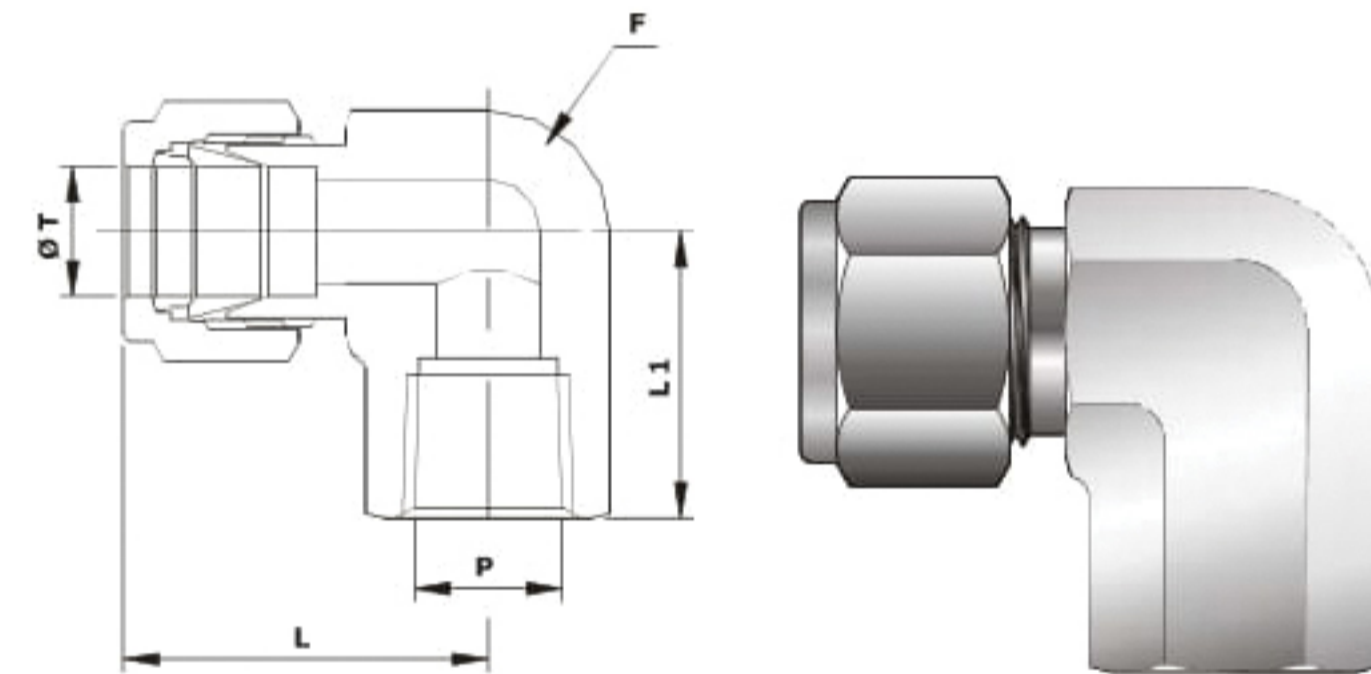
Male Elbow_MT X NPT (M)



TUBE OD (ØT)	NPT MALE PIPE (N)	LENGTH (L)	LENGTH (L1)	HEX (F)
(mm)	(Inch)	(mm)	(mm)	(Inch)
3	1/8	23.6	17.8	7/16
3	1/4	24.6	23.4	1/2
4	1/8	25.4	18.8	1/2
4	1/4	25.4	23.4	9/16
6	1/8	27.0	18.8	1/2
6	1/4	27.0	23.4	9/16
6	3/8	29.8	26.2	11/16
6	1/2	31.8	33.0	13/16
8	1/8	28.8	19.8	9/16
8	1/4	28.8	24.4	9/16
8	3/8	30.6	26.2	11/16
8	1/2	32.6	33.0	13/16
10	1/8	31.5	21.6	11/16
10	1/4	31.5	26.2	11/16
10	3/8	31.5	26.2	11/16
10	1/2	33.5	33.0	7/8
12	1/4	36.0	28.2	13/16
12	3/8	36.0	28.2	13/16
12	1/2	36.0	33.0	7/8
12	3/4	39.8	36.8	1-1/16
15	1/2	38.0	35.1	15/16
16	3/8	38.0	30.2	15/16
16	1/2	38.0	35.1	15/16
16	3/4	39.8	36.8	1-1/16
25	3/4	49.1	41.7	1-3/8
25	1	49.1	46.5	1-3/8

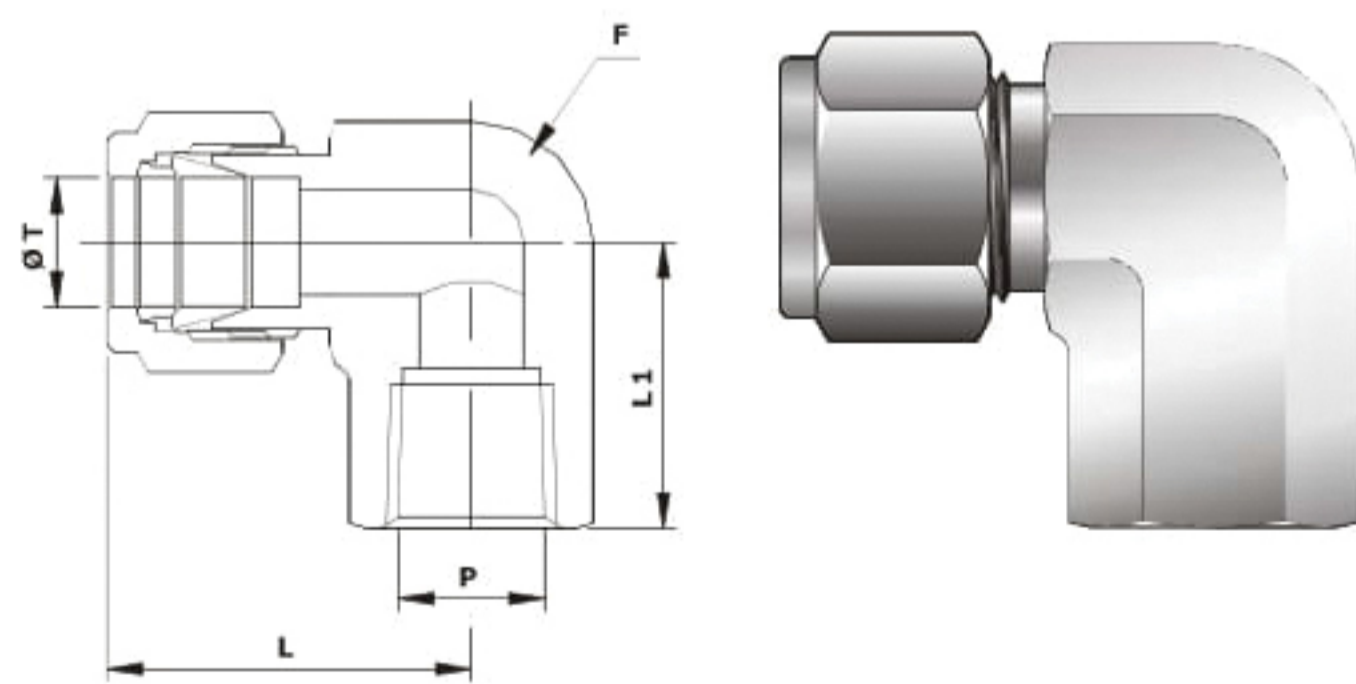
TUBE OD (ØT)	NPT Female Pipe Size (P)	LENGTH (L)	LENGTH (L1)	HEX (F)
(Inch)	(Inch)	(mm)	(mm)	(Inch)
1/8	1/8	0.97	0.75	9/16
1/8	1/4	1.08	0.88	3/4
1/4	1/8	1.06	0.75	9/16
1/4	1/4	1.17	0.88	3/4
1/4	3/8	1.25	0.88	7/8
1/4	1/2	1.36	1.12	1-1/16
5/16	1/8	1.13	0.75	9/16
5/16	1/4	1.20	0.88	3/4
3/8	1/8	1.20	0.75	5/8
3/8	1/4	1.23	0.88	3/4
3/8	3/8	1.31	0.88	7/8
3/8	1/2	1.42	1.12	1-1/16
1/2	1/4	1.42	0.88	3/4
1/2	3/8	1.42	0.88	7/8
1/2	1/2	1.53	1.12	1-1/16
3/4	1/2	1.57	1.12	1-1/16
3/4	3/4	1.76	1.25	1-3/8
1	3/4	1.93	1.25	1-3/8
1	1	2.11	1.50	1-11/16

Female Elbow_FT X NPT (F)



TUBE OD (ØT)	NPT Female Pipe Size (P)	LENGTH (L)	LENGTH (L1)	HEX (F)
(mm)	(Inch)	(mm)	(mm)	(Inch)
6	1/8	27.0	19.0	9/16
6	1/4	29.8	22.4	3/4
6	1/2	34.6	28.4	1-1/16
8	1/8	28.8	19.1	9/16
8	1/4	30.6	22.4	3/4
10	1/8	31.5	19.0	11/16
10	1/4	33.5	22.4	3/4
10	3/8	33.5	22.4	7/8
10	1/2	36.3	28.5	1-1/8
12	1/4	36.0	22.4	13/16
12	3/8	36.0	22.4	7/8
12	1/2	38.8	28.4	1-1/16
16	3/8	39.5	23.6	1-1/16
16	1/2	39.5	28.4	1-1/16

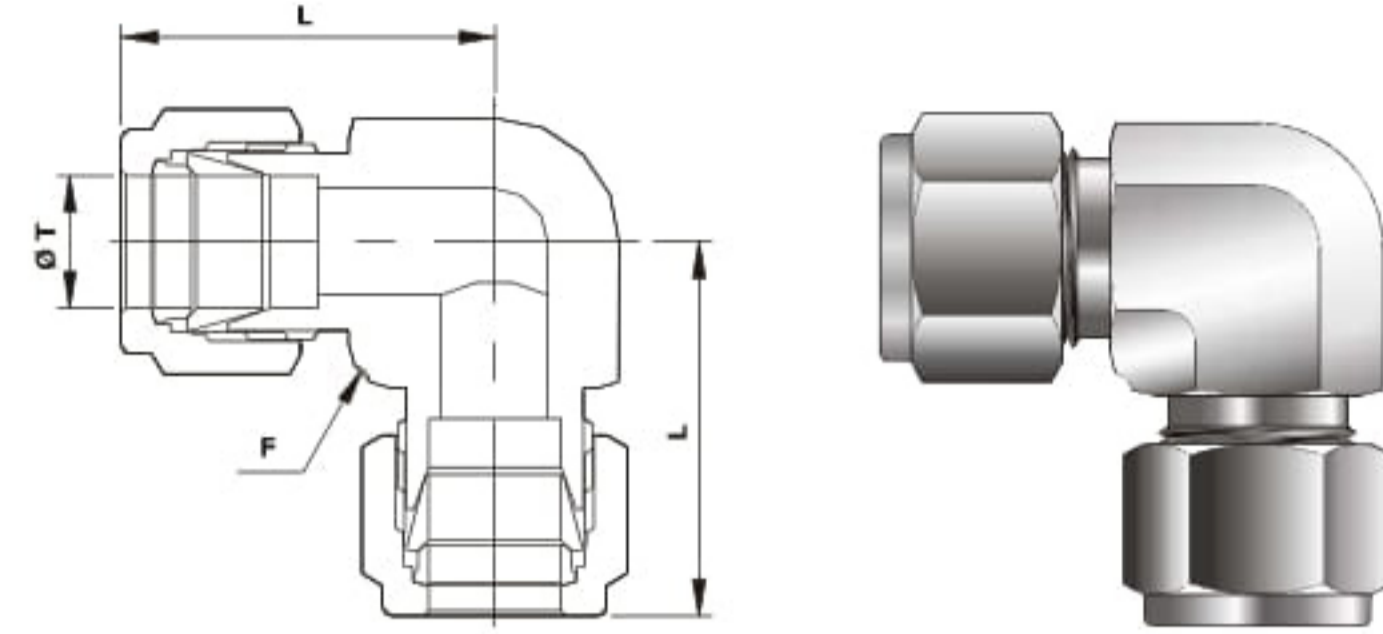
Female Elbow_MT X NPT (F)



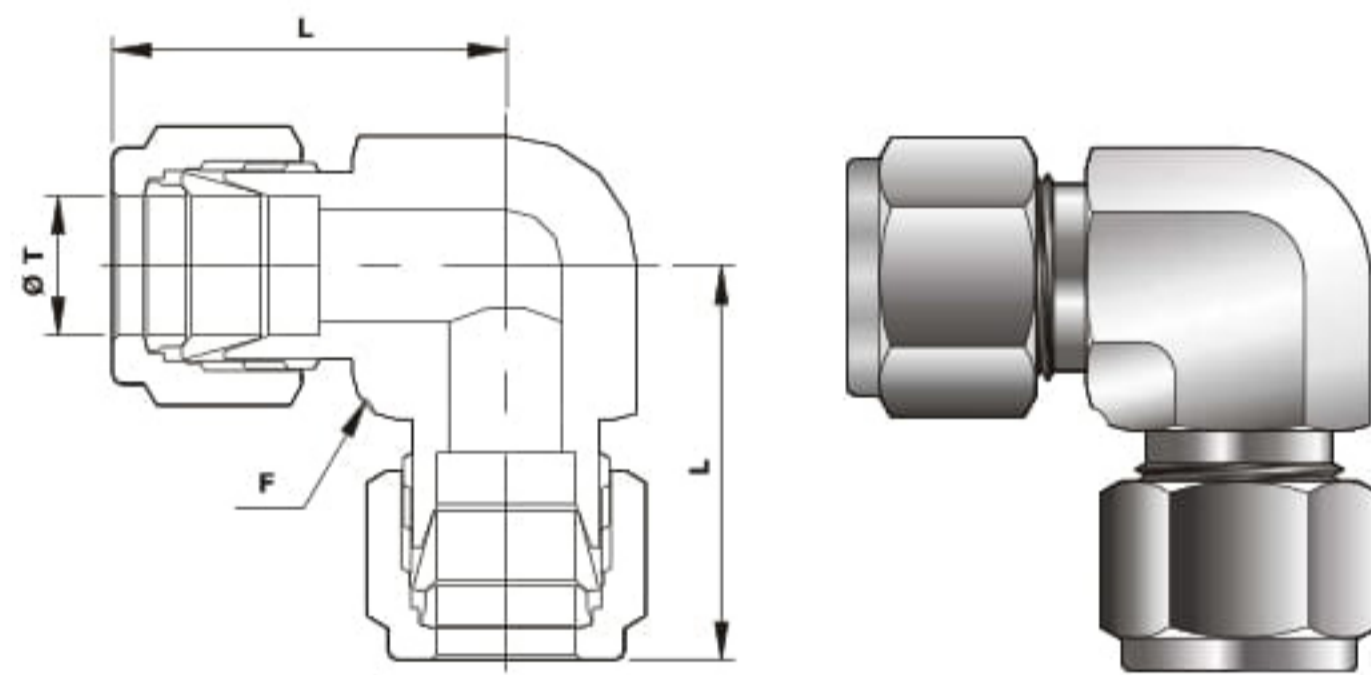
DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

TUBE OD (ØT)	LENGTH (L)	HEX (F)
(Inch)		
1/8	0.88	7/16
1/4	1.06	9/16
5/16	1.13	9/16
3/8	1.20	5/8
1/2	1.42	13/16
3/4	1.57	1-1/16
1	1.93	1-3/8

Union Elbow_FT X FT



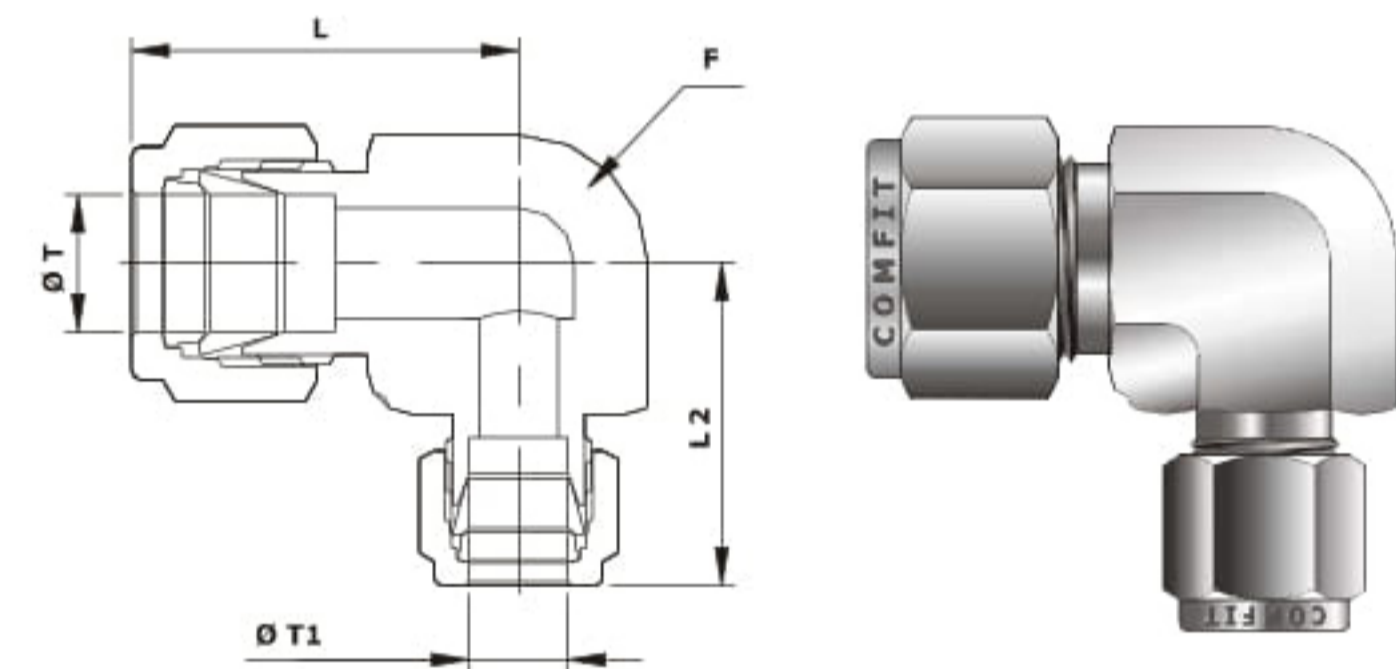
Union Elbow_MT X MT



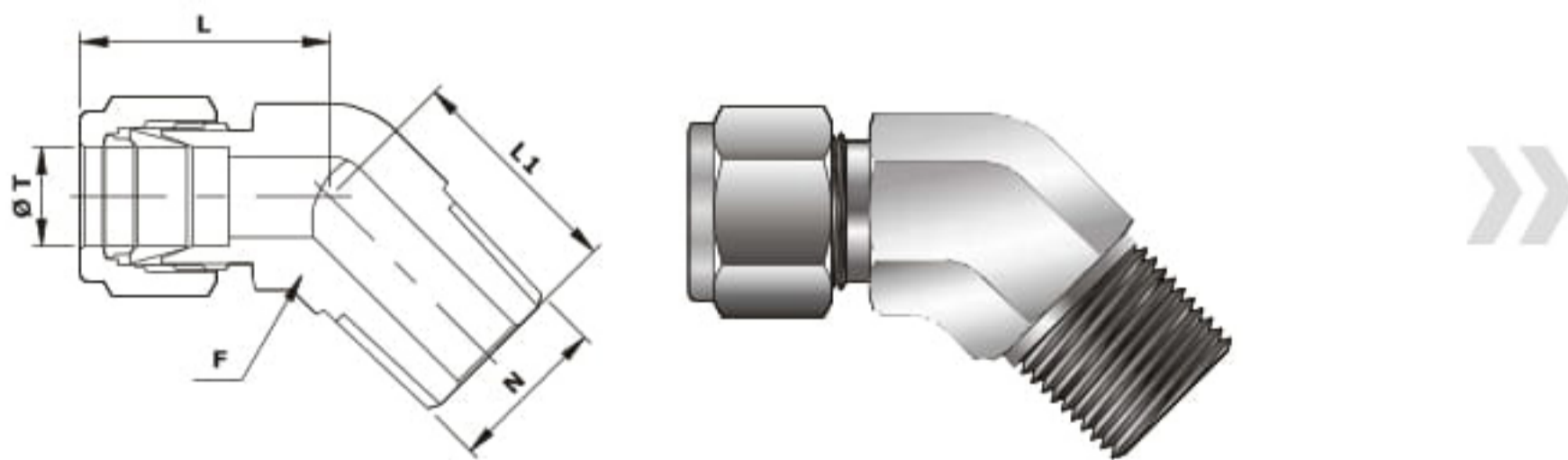
TUBE OD (ØT)	LENGTH (L)	HEX (F)
(mm)		(Inch)
3	22.3	7/16
4	25.4	7/16
6	27.0	9/16
8	28.8	9/16
10	31.5	11/16
12	36.0	13/16
14	38.0	1
15	38.8	1
16	38.0	1
25	49.1	1-3/8

TUBE OD (ØT)	TUBE OD (ØT1)	LENGTH (L)	LENGTH (L1)	HEX (F)
(Inch)				
1/4	1/8	1.06	0.96	9/16
5/16	1/8	1.17	1.04	5/8
5/16	1/4	1.17	1.14	5/8
3/8	1/8	1.20	1.04	11/16
3/8	1/4	1.20	1.09	11/16
3/8	5/16	1.20	1.17	11/16
1/2	1/4	1.42	1.25	13/16
1/2	5/16	1.42	1.28	13/16
1/2	3/8	1.42	1.31	13/16
3/4	1/4	1.56	1.38	1-1/16
3/4	3/8	1.56	1.45	1-1/16
3/4	1/2	1.56	1.56	1-1/16
1	1/2	1.94	1.62	1-3/8
1	3/4	1.94	1.76	1-3/8

Reducer Union Elbow_FT X FT



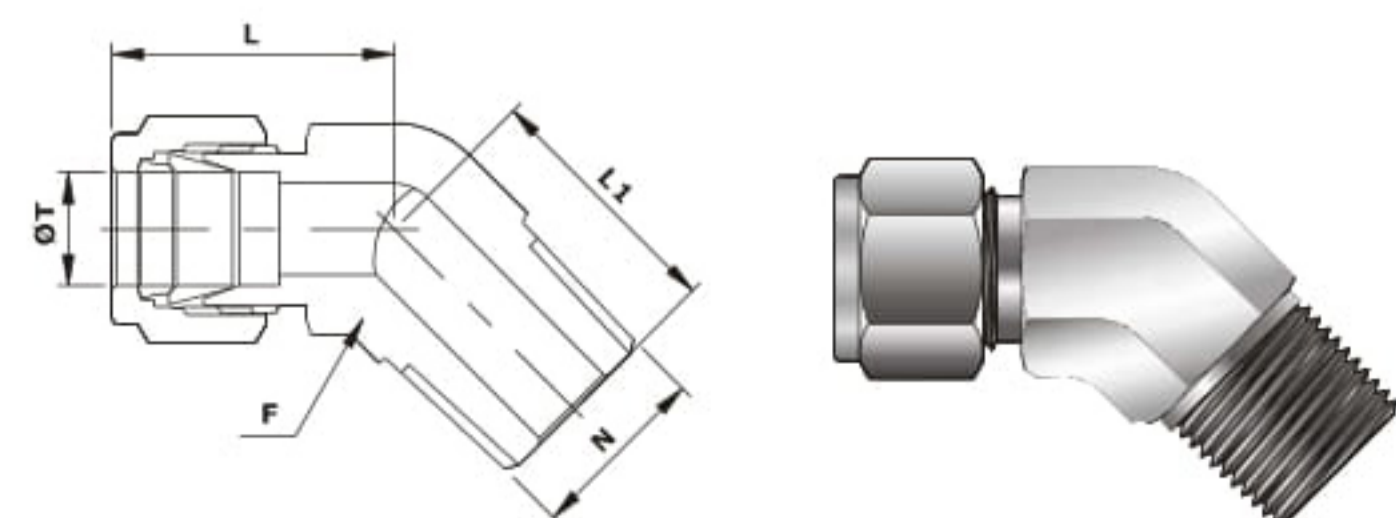
45° Male Elbow_FT X NPT (M)



TUBE OD (ØT)	NPT MALE PIPE (N)	LENGTH (L)	LENGTH (L1)	HEX (F)
(Inch)				
1/8	1/8	0.88	0.66	7/16
1/4	1/8	0.97	0.65	9/16
1/4	1/4	0.97	0.83	9/16
5/16	1/8	1.01	0.66	9/16
3/8	1/8	1.10	0.72	5/8
3/8	1/4	1.10	0.90	5/8
3/8	3/8	1.15	0.95	13/16
1/2	3/8	1.26	0.95	13/16
1/2	1/2	1.26	1.14	7/8
3/4	3/4	1.34	1.22	1-1/16
1	1	1.59	1.49	1-3/8

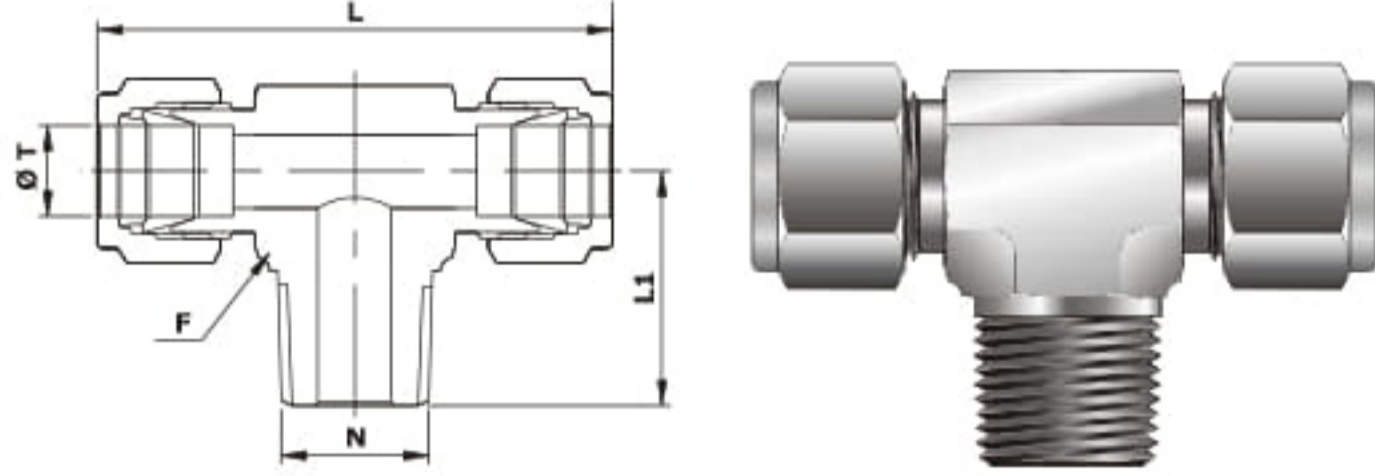
TUBE OD (ØT)	NPT MALE PIPE (N)	LENGTH (L)	LENGTH (L1)	HEX (F)
(mm)		(mm)		(Inch)
6	1/8	16.0	16.8	14.0
6	1/4	21.8	21.8	14.0
8	1/8	16.8	16.8	14.0
10	1/4	19.0	24.1	19.0
12	3/8	19.0	24.1	19.0
12	1/2	20.6	29.7	22.0
16	1/2	20.6	29.7	22.0

45° Male Elbow_MT X NPT (M)



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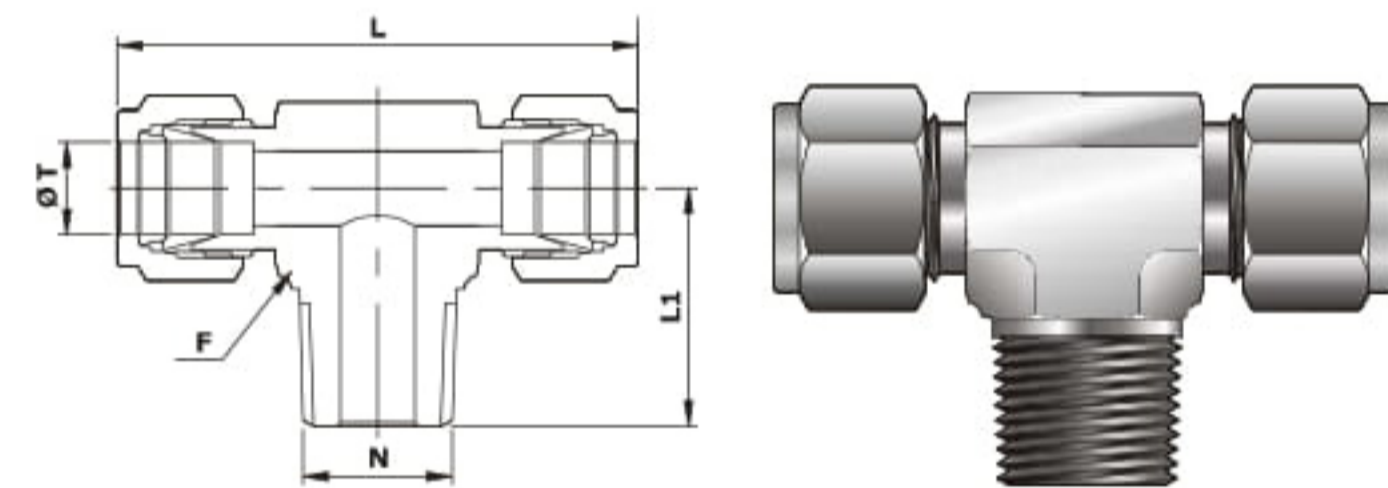
Male Branch Tee_FT X NPT (M)



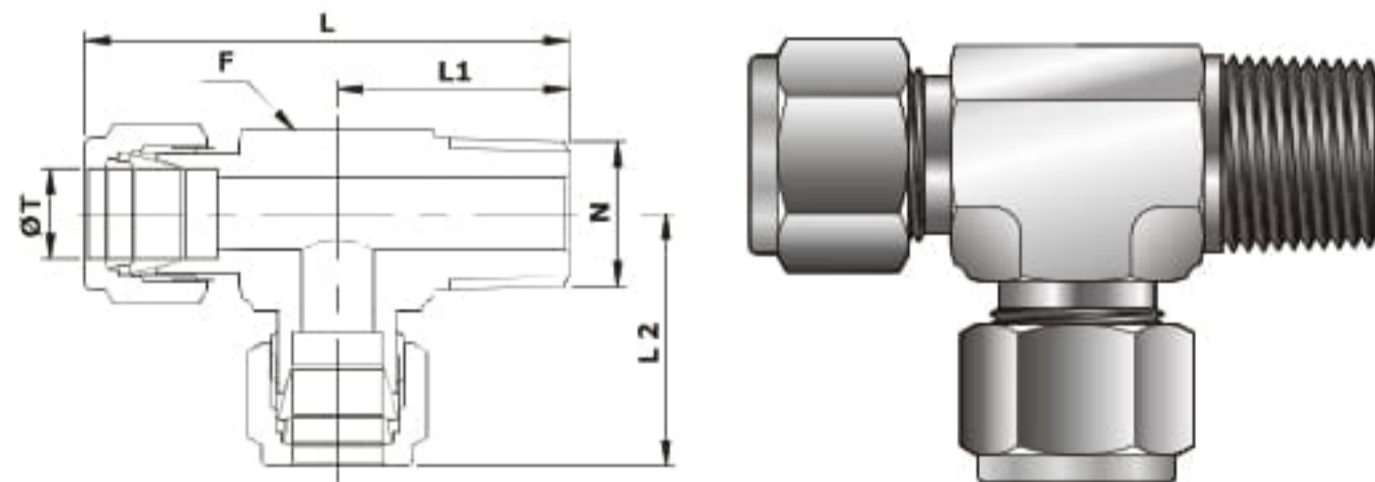
TUBE OD (ØT)	NPT MALE PIPE (N)	LENGTH (L)	LENGTH (L1)	HEX (F)
(Inch)				
1/8	1/8	1.86	0.70	7/16
1/8	1/4	1.94	0.92	9/16
1/4	1/8	2.12	0.74	9/16
1/4	1/4	2.12	0.92	9/16
5/16	1/8	2.34	0.82	5/8
5/16	1/4	2.34	1.01	5/8
3/8	1/4	2.40	1.00	5/8
3/8	3/8	2.62	0.11	11/16
1/2	3/8	2.84	1.11	13/16
1/2	1/2	2.84	1.30	7/8
3/4	3/4	3.14	1.45	1-1/16
1	3/4	3.88	1.66	1-3/8
1	1	3.88	1.84	1-3/8

TUBE OD (ØT)	NPT MALE PIPE (N)	LENGTH (L)	LENGTH (L1)	HEX (F)
(mm)	(Inch)	(mm)		(Inch)
6	1/8	53.9	27.0	9/16
6	1/4	53.9	27.0	9/16
8	1/8	59.7	29.9	5/8
8	1/4	59.7	29.9	5/8
10	1/4	67.0	33.5	13/16
10	3/8	67.0	33.5	13/16
12	1/4	72.0	36.0	13/16
12	3/8	72.0	36.0	13/16
12	1/2	72.0	36.0	7/8
16	1/2	77.6	38.8	15/16

Male Branch Tee_MT X NPT (M)



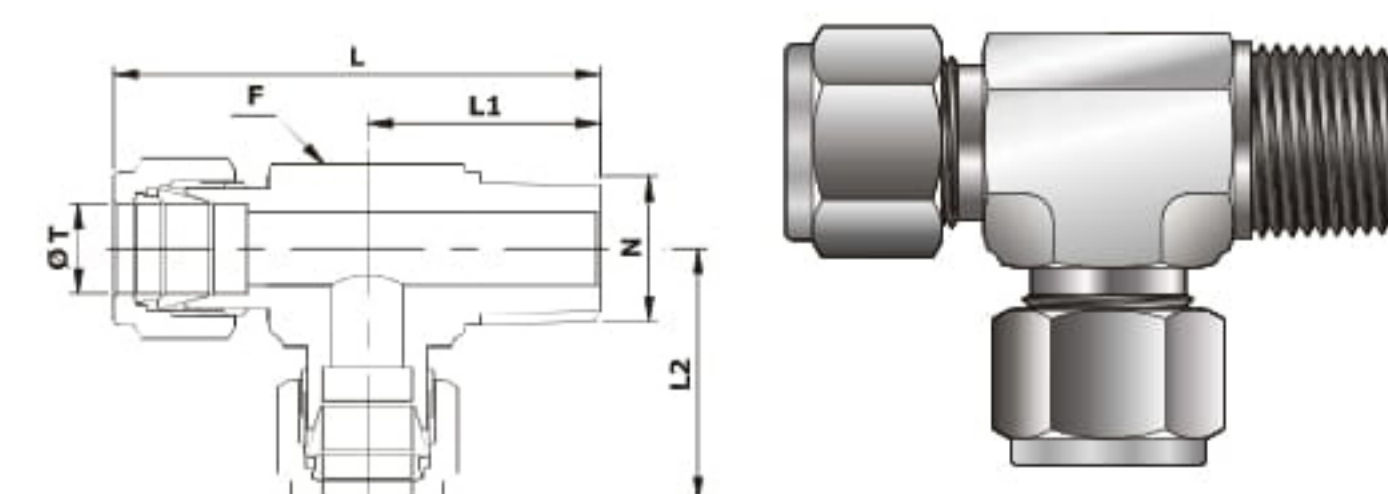
Male Run Tee_FT X NPT (M)



TUBE OD (ØT)	NPT MALE PIPE (N)	LENGTH (L)	LENGTH (L1)	LENGTH (L2)	HEX (F)
(Inch)					
1/8	1/8	1.63	0.70	0.93	7/16
1/8	1/4	1.89	0.92	0.97	9/16
1/4	1/8	1.80	0.74	1.06	9/16
1/4	1/4	1.98	0.92	1.06	9/16
5/16	1/8	1.99	0.82	1.17	5/8
5/16	1/4	2.18	1.00	1.17	5/8
3/8	1/4	2.20	1.00	1.20	5/8
3/8	3/8	2.42	1.11	1.31	11/16
1/2	3/8	2.53	1.11	1.42	13/16
1/2	1/2	2.72	1.30	1.44	7/8
3/4	3/4	3.02	1.45	1.57	1-1/16
1	3/4	3.60	1.66	1.94	1-3/8
1	1	3.78	1.84	1.94	1-3/8

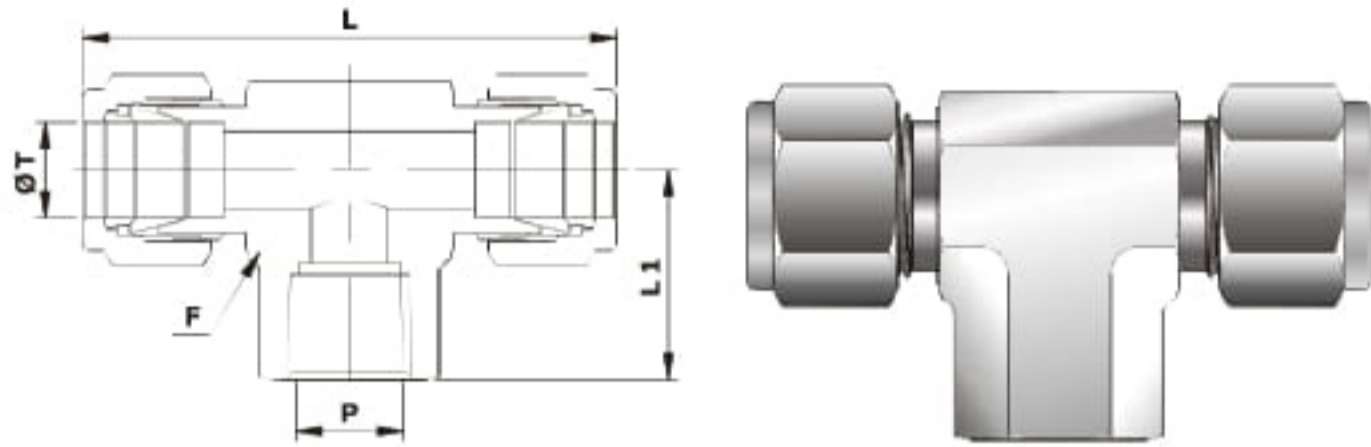
TUBE OD (ØT)	NPT MALE PIPE (N)	LENGTH (L)	LENGTH (L1)	LENGTH (L2)	HEX (F)
(mm)	(Inch)	(mm)			
6	1/8	45.8	18.0	27.0	9/16
6	1/4	50.3	23.4	27.0	9/16
8	1/8	50.7	20.8	29.9	5/8
8	1/4	55.3	25.4	29.9	5/8
10	1/4	61.7	28.2	33.5	13/16
10	1/2	66.5	33.0	33.5	7/8
12	1/4	64.2	28.2	36.0	13/16
12	3/8	64.2	28.2	36.0	13/16
12	1/2	69.0	33.0	36.0	7/8
16	1/2	73.1	35.0	38.0	15/16
16	1	93.1	46.5	46.6	1-3/8

Male Run Tee_MT X NPT (M)



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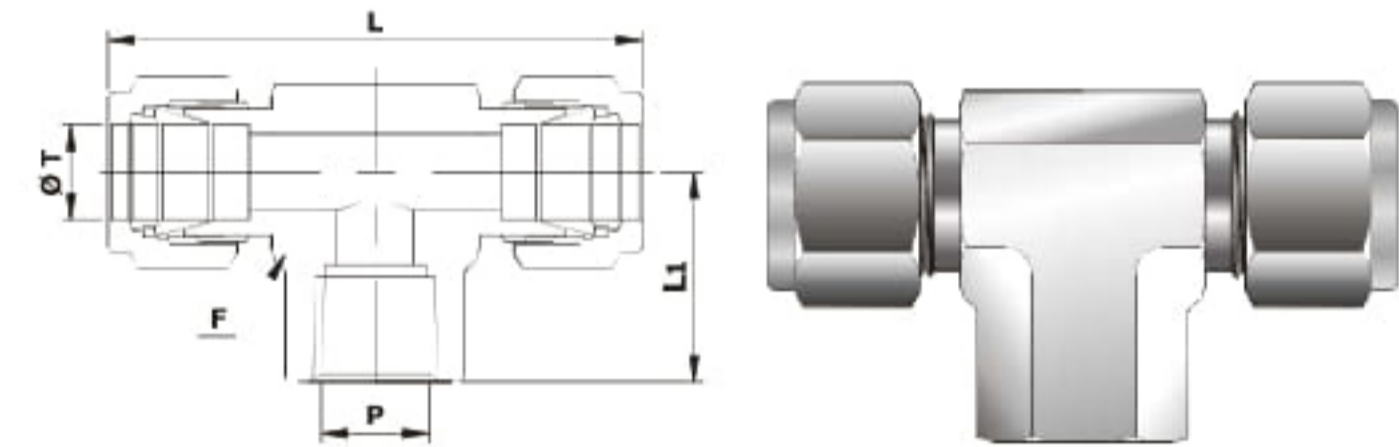
Female Branch Tee_FT X NPT (F)



TUBE OD (ØT)	NPT FEMALE PIPE Sizes (N)	LENGTH (L)	LENGTH (L1)	HEX (F)
(Inch)				
1/8	1/8	1.94	0.75	9/16
1/4	1/8	2.12	0.75	9/16
1/4	1/4	2.34	0.88	3/4
5/16	1/8	2.34	0.75	5/8
3/8	1/4	2.46	0.88	11/16
3/8	3/8	2.62	0.88	7/8
3/8	1/2	2.84	1.12	1-1/16
1/2	1/4	2.84	0.88	13/16
1/2	3/8	2.84	0.88	7/8
1/2	1/2	3.06	1.12	1-1/16
3/4	3/4	3.52	1.25	1-1/4
1	3/4	3.86	1.25	1-1/4
1	1	4.22	1.50	1-11/16

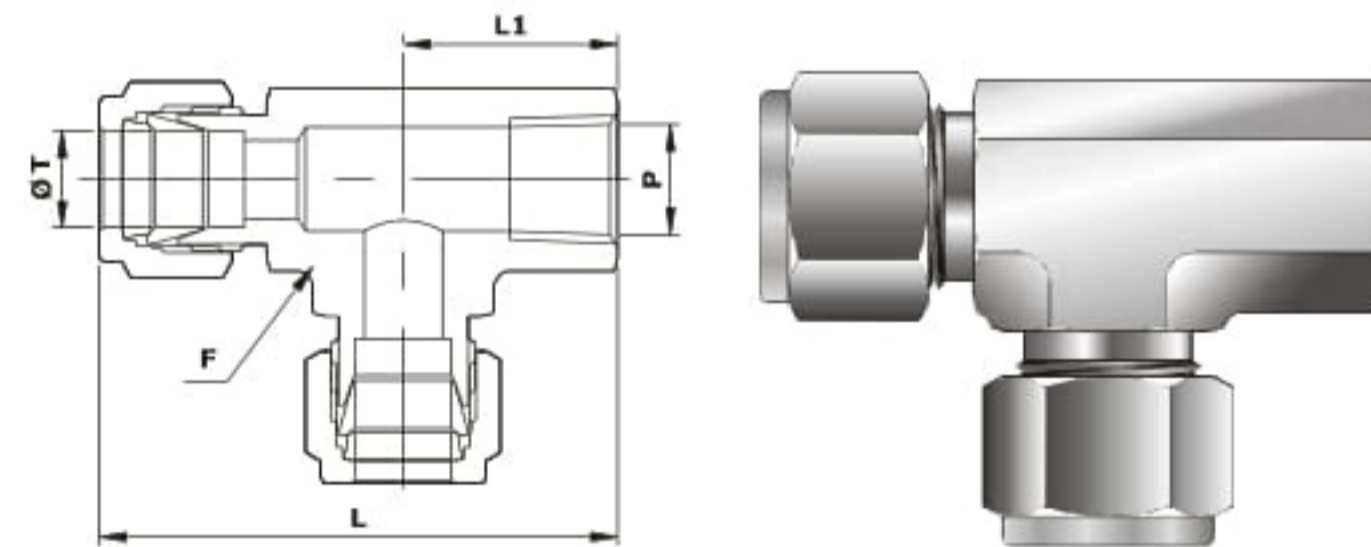
TUBE OD (ØT)	NPT FEMALE PIPE Sizes (N)	LENGTH (L)	LENGTH (L1)	HEX (F)
(mm)	(Inch)	(mm)		(Inch)
6	1/8	53.9	19.0	9/16
6	1/4	59.5	22.4	3/4
8	1/8	59.7	19.0	5/8
8	1/4	61.2	22.4	3/4
10	1/4	67.0	22.4	3/4
12	1/8	72.0	22.3	7/8
12	1/4	72.0	22.4	7/8
12	3/8	72.0	22.4	7/8
12	1/2	77.6	28.5	1-1/16
16	1/2	77.6	28.4	1-1/16

Female Branch Tee_MT X NPT (F)



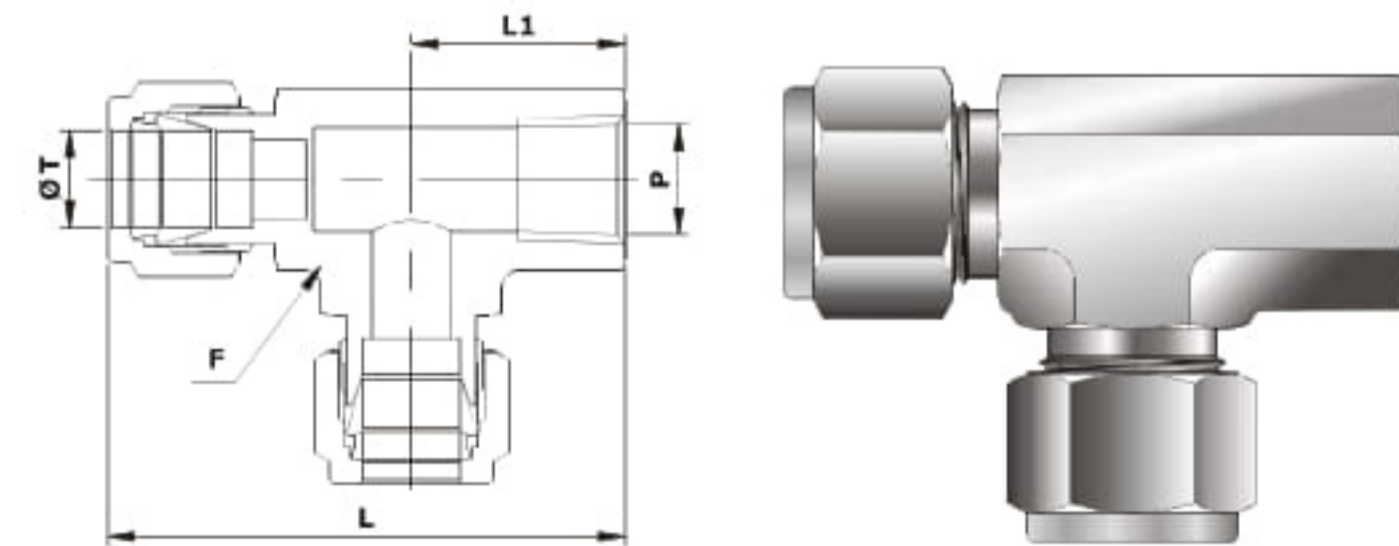
TUBE OD (ØT)	NPT FEMALE PIPE Sizes (N)	LENGTH (L)	LENGTH (L1)	HEX (F)
(mm)	(Inch)	(mm)		(Inch)
1/8	1/8	1.72	0.75	9/16
1/4	1/8	1.81	0.75	9/16
1/4	1/4	2.05	0.88	3/4
5/16	1/8	1.92	0.75	5/8
3/8	1/4	2.11	0.88	3/4
1/2	1/4	2.56	1.13	7/8
1/2	3/8	2.30	0.88	7/8
1/2	1/2	2.69	1.12	1-1/16
3/4	3/4	3.01	1.25	1-1/4
1	3/4	3.18	1.25	1-1/4
1	1	3.61	1.50	1-11/16

Female Run Tee_FT X NPT (F)



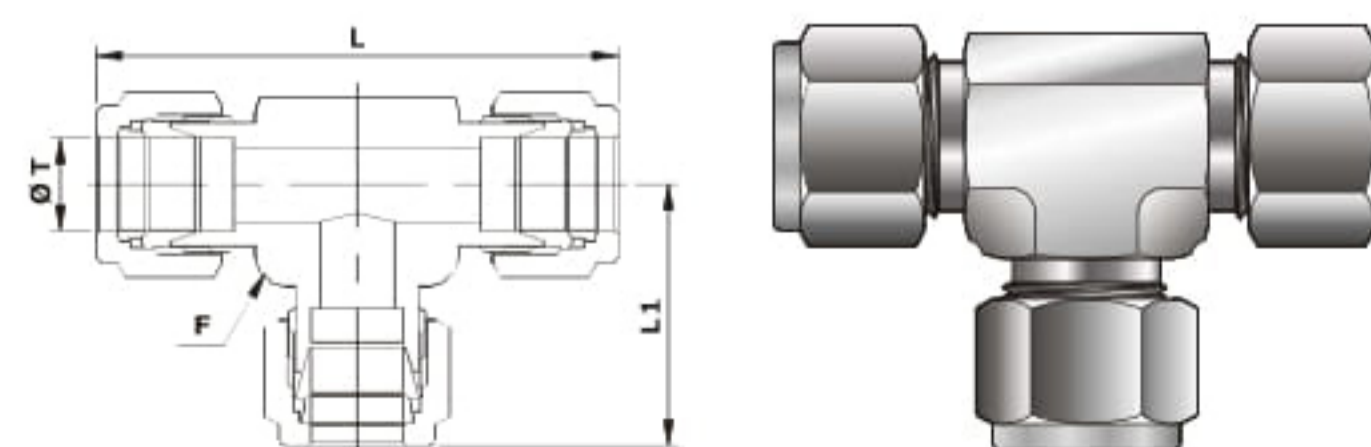
TUBE OD (ØT)	NPT Female Pipe Sizes (P)	LENGTH (L)	LENGTH (L1)	HEX (F)
(mm)	(Inch)	(mm)		(Inch)
6	1/8	46.0	19.0	9/16
6	1/4	52.1	22.4	3/4
8	1/8	48.9	19.0	5/8
8	1/4	53.0	22.4	3/4
10	1/4	55.9	22.4	3/4
12	1/4	58.4	22.4	7/8
12	3/8	58.4	22.4	7/8
12	1/2	67.3	28.5	1-1/16
16	1/2	28.4	28.4	1-1/16

Female Run Tee_MT X NPT (F)



TUBE OD (ØT)	Length (L)	LENGTH (L1)	HEX (F)
(Inch)			
1/8	1.76	0.88	7/16
3/16	1.92	0.96	7/16
1/4	2.12	1.06	9/16
5/16	2.34	1.17	5/8
3/8	2.40	1.20	11/16
1/2	2.84	1.42	13/16
3/4	3.14	1.57	1-1/16
1	3.86	1.93	1-3/8

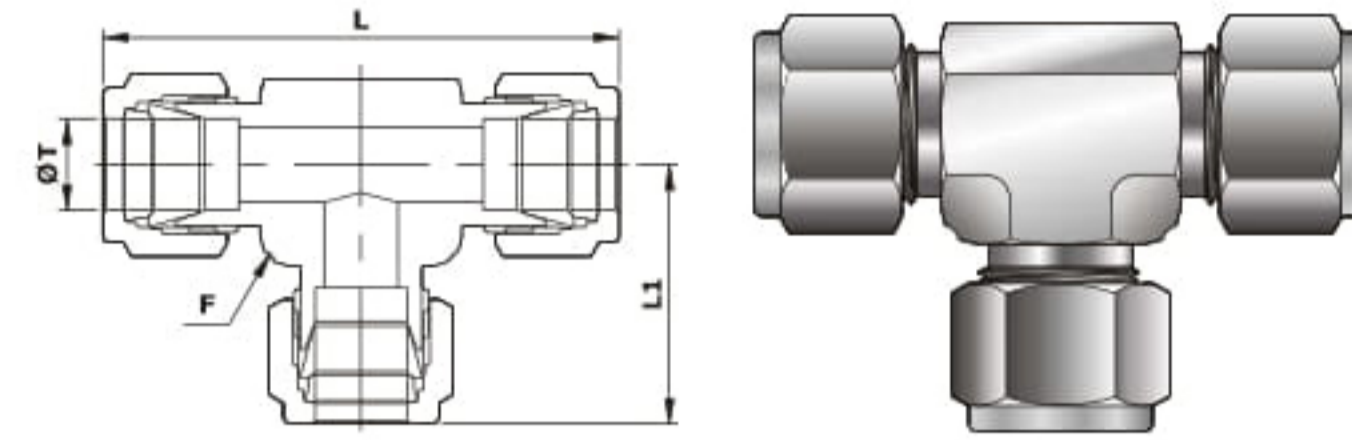
Union Tee_FT X FT



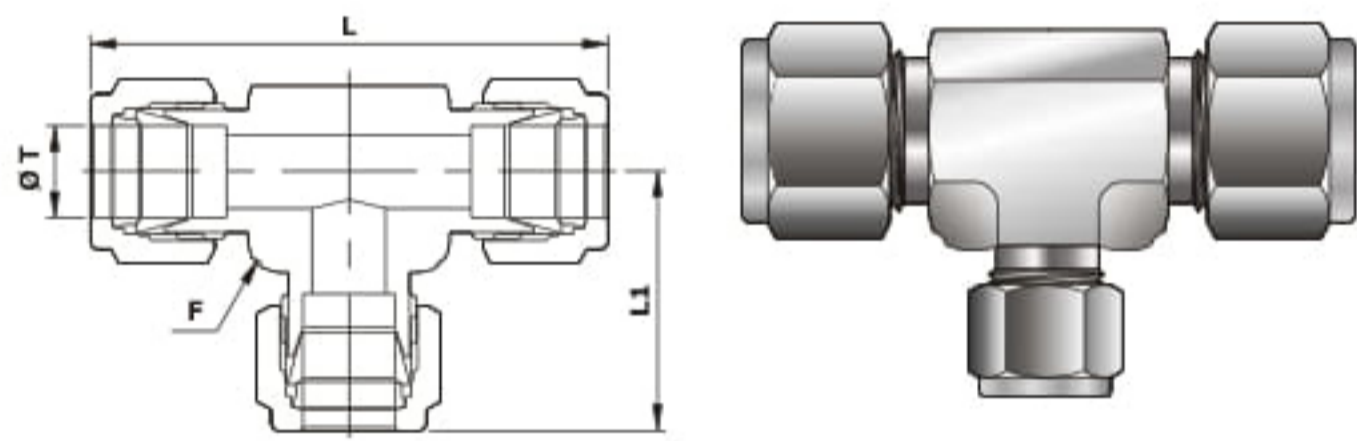
DIMENSIONS FOR REFERENCE ONLY SUBJECT TO CHANGE

TUBE OD (ØT)	LENGHT (L)	LENGTH (L1)	HEX (F)
(mm)			(Inch)
3	44.7	22.3	7/16
4	50.8	25.4	1/2
6	53.9	27.0	9/16
8	59.7	29.9	5/8
10	63.0	31.5	11/16
12	72.0	36.0	13/16
15	77.6	38.8	1
16	77.6	38.8	1
25	98.3	49.1	1-3/8

Union Tee_MT X MT



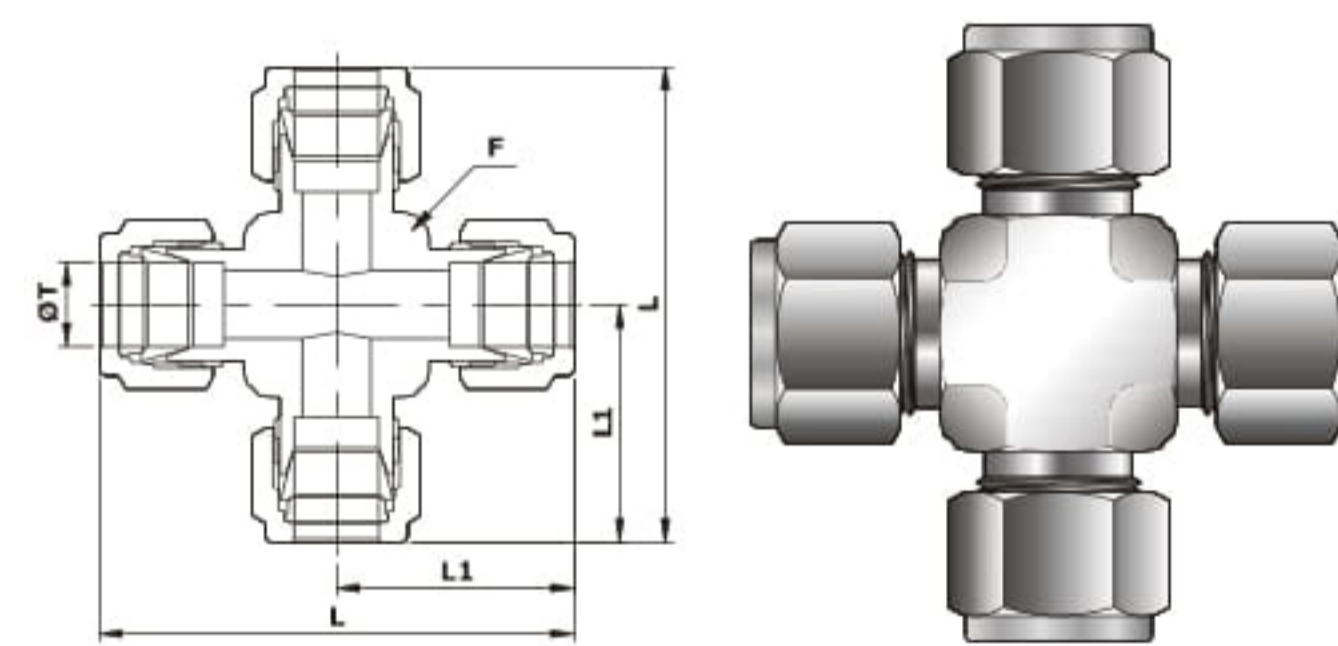
Reducer Union Tee_FT X FT X FT



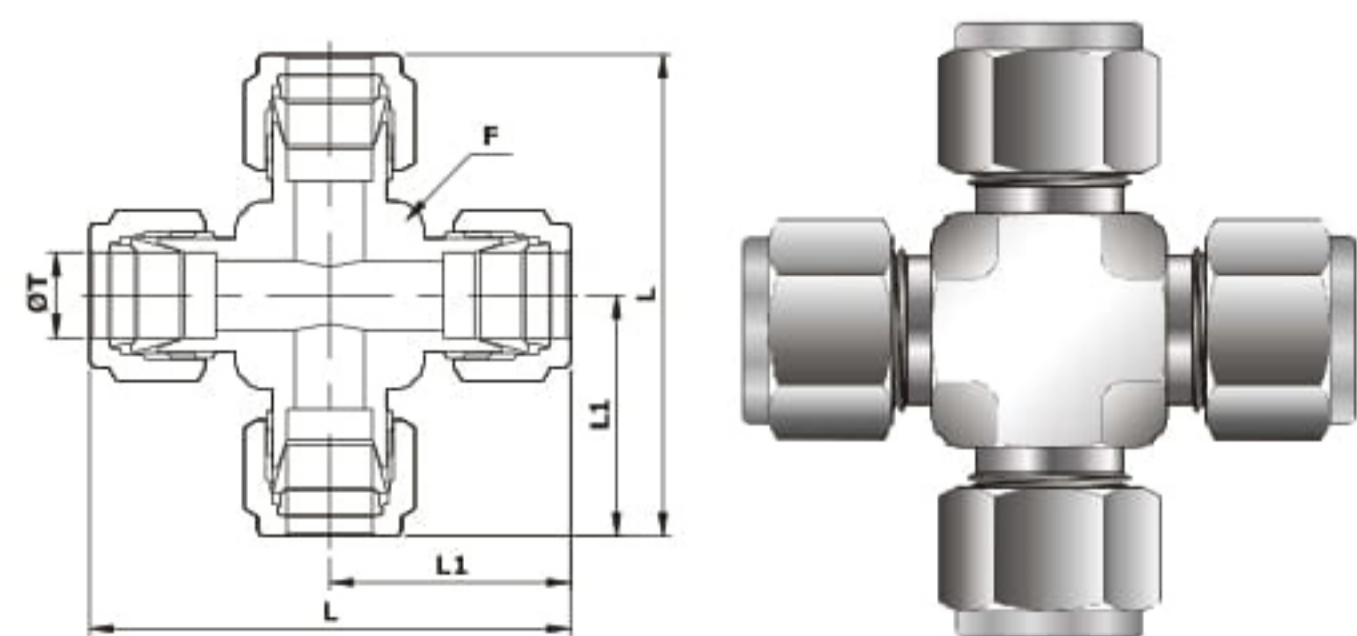
TUBE OD (ØT)	TUBE OD (ØT1)	TUBE OD (ØT2)	LENGTH (L)	LENGTH (L1)	LENGTH (L2)	HEX (F)
(Inch)						
1/4	1/4	1/8	2.10	0.96	1.05	9/16
3/8	3/8	1/4	2.40	1.14	1.20	11/16
3/8	1/4	3/8	2.34	1.20	0.85	11/16
3/8	1/4	1/4	2.34	1.14	1.14	11/16
1/2	1/2	1/4	2.84	1.25	1.42	13/16
1/2	1/4	1/2	2.67	1.42	1.25	13/16
1/2	1/4	1/4	2.67	1.25	1.25	7/8
1/2	1/2	3/8	2.84	1.31	1.42	13/16
1/2	3/8	1/2	2.73	1.42	1.31	13/16
1/2	3/8	3/8	2.73	1.31	1.31	7/8
5/8	3/8	3/8	2.95	1.42	1.42	1
5/8	3/8	1/2	2.75	1.43	1.32	1
5/8	5/8	1/2	2.86	1.43	1.43	1
5/8	1/2	1/2	2.86	1.43	1.43	1
5/8	1/2	3/8	2.86	1.32	1.43	1
3/4	1/2	3/8	3.12	1.45	1.56	1-1/16
3/4	3/4	1/4	3.12	1.38	1.56	1-1/16
3/4	3/4	3/8	3.14	1.46	1.57	1-1/16
3/4	3/8	3/8	3.03	1.46	1.46	1-1/16
3/4	3/4	1/2	3.14	1.57	1.57	1-1/16
3/4	1/2	1/2	3.12	1.56	1.56	1-1/16
1	1	1/4	3.88	1.59	1.94	1-3/8
1	1	3/8	3.86	1.65	1.93	1-3/8
1	3/8	3/8	3.59	1.65	1.65	1-3/8
1	1	1/2	3.86	1.76	1.93	1-3/8
1	1/2	1	3.70	1.94	1.76	1-3/8
1	1/2	1/2	3.70	1.76	1.76	1-3/8
1	1/2	1/4	3.70	1.59	1.76	1-3/8
1	1/2	3/8	3.70	1.65	1.76	1-3/8
1	1	3/4	3.86	1.76	1.93	1-3/8
1	3/4	1	3.70	1.94	1.76	1-3/8
1	3/4	1/2	3.70	1.76	1.76	1-3/8
1	3/4	5/8	3.70	1.76	1.76	1-3/8
1	3/4	3/8	3.69	1.65	1.76	1-3/8

Union Cross_FT X FT

TUBE OD (ØT)	LENGHT (L)	LENGTH (L1)	HEX (F)
(Inch)			
1/8	1.76	0.88	3/8
1/4	2.12	1.06	9/16
5/16	2.34	1.17	5/8
3/8	2.40	1.20	5/8
1/2	2.84	1.42	13/16
3/4	3.14	1.57	1-1/16
1	3.86	1.93	1-3/8



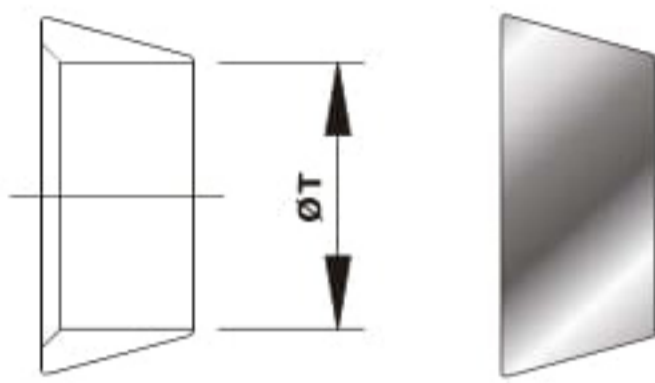
Union Cross_MT X MT



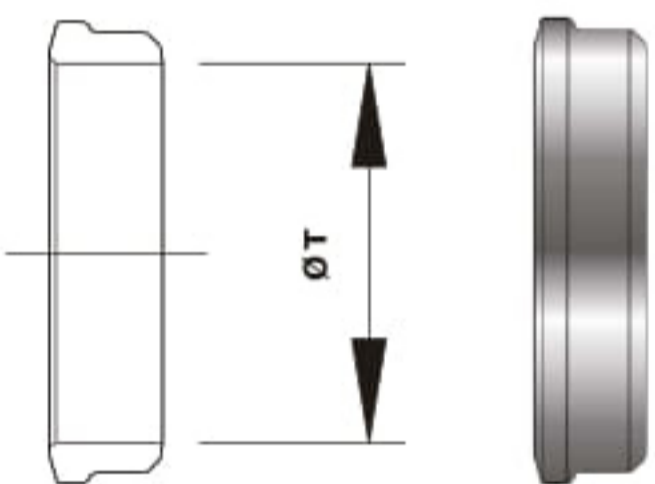
TUBE OD (ØT)	LENGHT (L)	LENGTH (L1)	HEX (F)
(mm)			(Inch)
3	44.7	22.3	7/16
4	50.8	25.4	7/16
6	53.9	27.0	9/16
8	59.7	29.9	5/8
10	67.0	33.5	13/16
12	72.0	36.0	13/16
16	74.0	37.0	1
25	98.3	49.1	1-3/8

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DOUBLE FERRULE

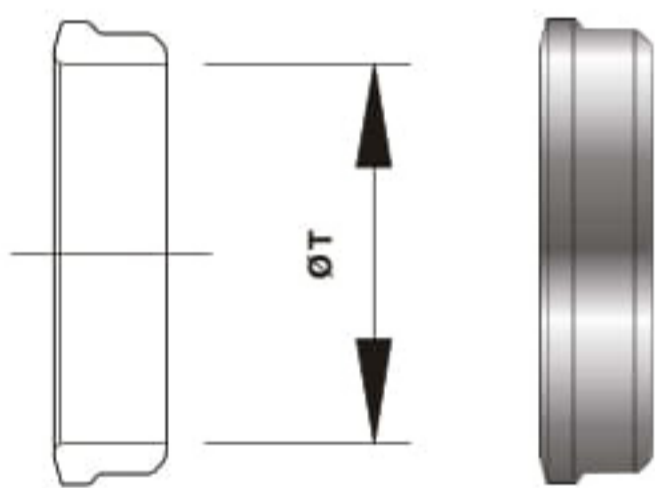


Front Ferrule

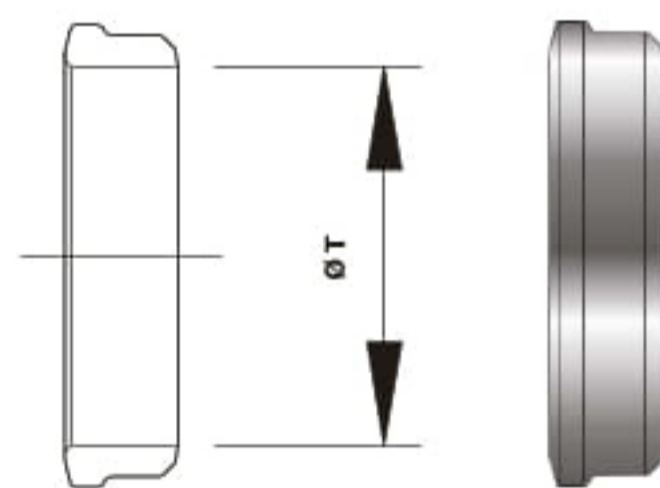


Back Ferrule

SINGLE FERRULE

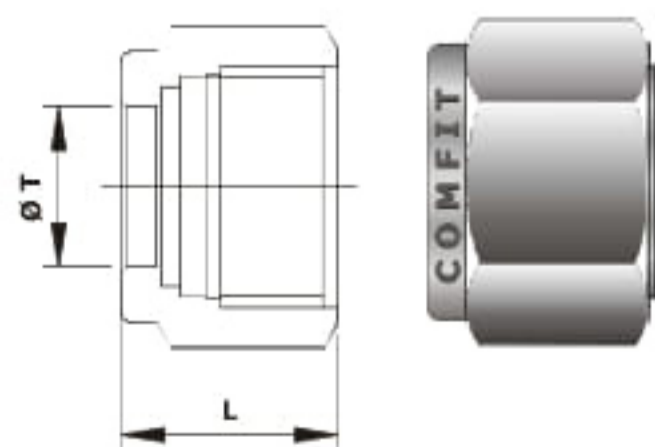


Size UPTO 3/8" & 8 mm



Size ABOVE 1/2" & 10 mm

NUT



Front Ferrule_FT

TUBE OD (ØT)
(Inch)
1/8
1/4
5/16
3/8
1/2
3/4
1

Front Ferrule_MT

TUBE OD (ØT)
(mm)
2
3
4
6
8
10
12
15
16
25

Back Ferrule_FT

TUBE OD (ØT)
(Inch)
1/8
1/4
5/16
3/8
1/2
3/4
1

Back Ferrule_MT

TUBE OD (ØT)
(mm)
3
4
6
8
10
12
15
16
25

Single Ferrule_FT

TUBE OD (ØT)
(Inch)
1/8
1/4
5/16
3/8
1/2
3/4
1

Single Ferrule_MT

TUBE OD (ØT)
(mm)
2
3
4
6
8
10
12
15
16
25

Nut_FT

TUBE OD (ØT)	LENGTH (L)
(Inches)	
1/8	0.47
1/4	0.50
5/16	0.53
3/8	0.56
1/2	0.69
3/4	0.69
1	0.81

Nut_MT

TUBE OD (ØT)	LENGTH (L)
(mm)	
3	11.9
4	11.9
6	12.7
8	13.5
10	15.1
12	17.4
15	17.4
16	17.4
25	20.6

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

Male Nut - (For Female Port)_FT



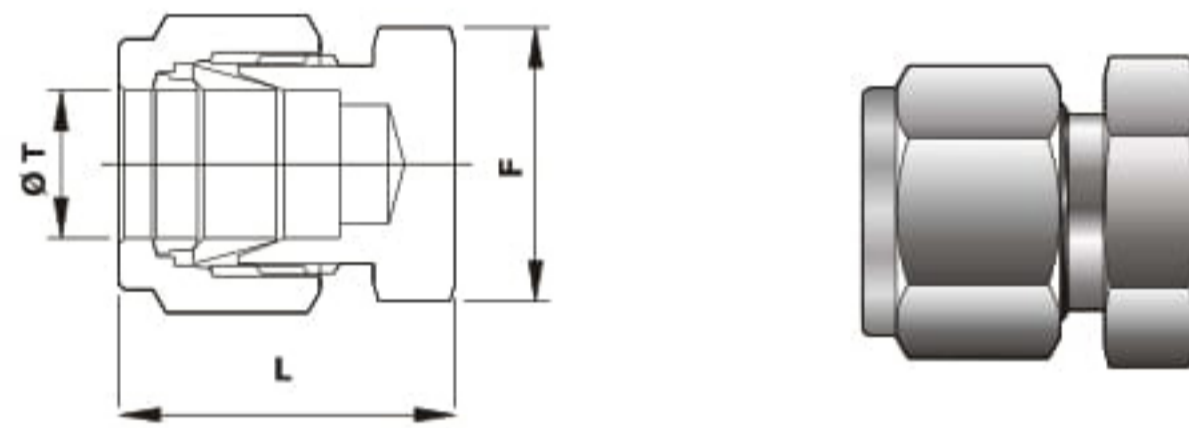
TUBE OD (ØT)	LENGTH (L)
(Inches)	
1/8	0.53
1/4	0.63
1/2	0.87

Male Nut - (For Female Port)_MT



TUBE OD (ØT)	LENGTH (L)
(mm)	
10	22.1
12	22.1

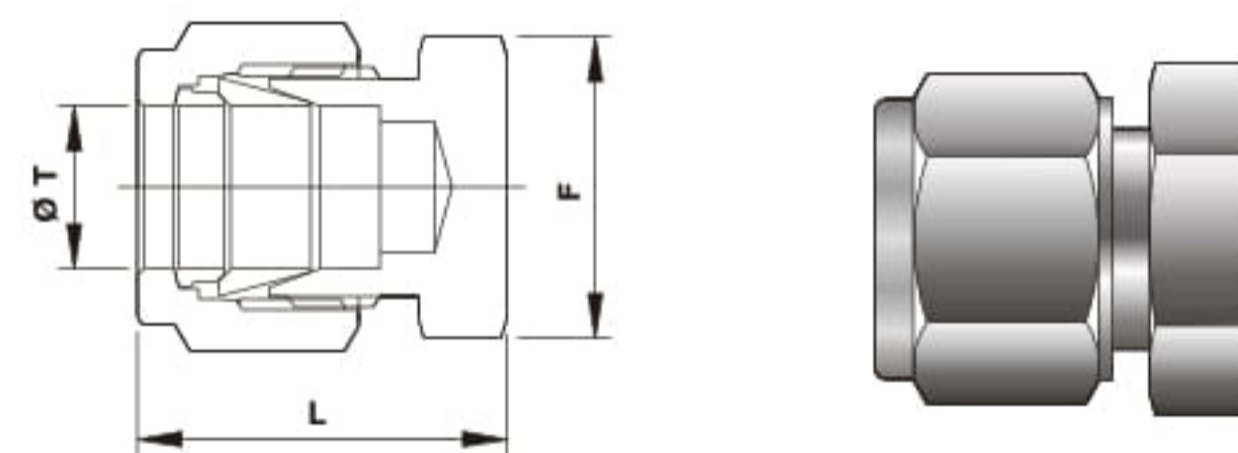
Tube Cap_FT



TUBE OD (ØT)	LENGTH (L)	HEX (F)
(Inch)		
1/8	0.79	7/16
1/4	0.92	9/16
5/16	0.96	5/8
3/8	1.01	11/16
1/2	1.15	7/8
3/4	1.24	1-1/16
1	1.51	1-3/8

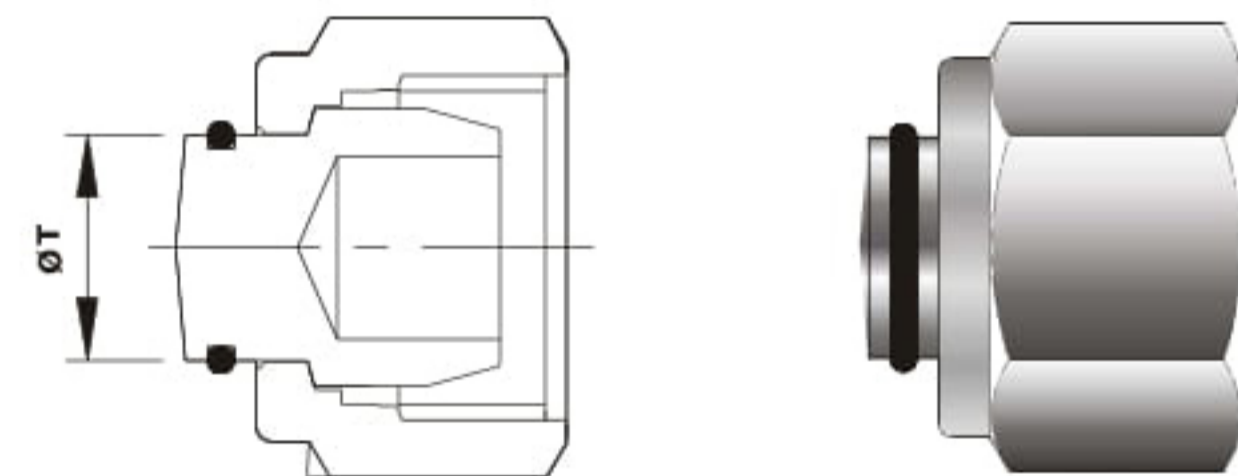
TUBE OD (ØT)	LENGTH (L)	HEX (F)
(mm)		
3	20.1	11
4	21.3	11
6	23.1	14
8	24.5	16
10	26.6	19
12	29.1	22
15	29.9	25
16	29.9	25
25	38.5	35

Tube Cap_MT



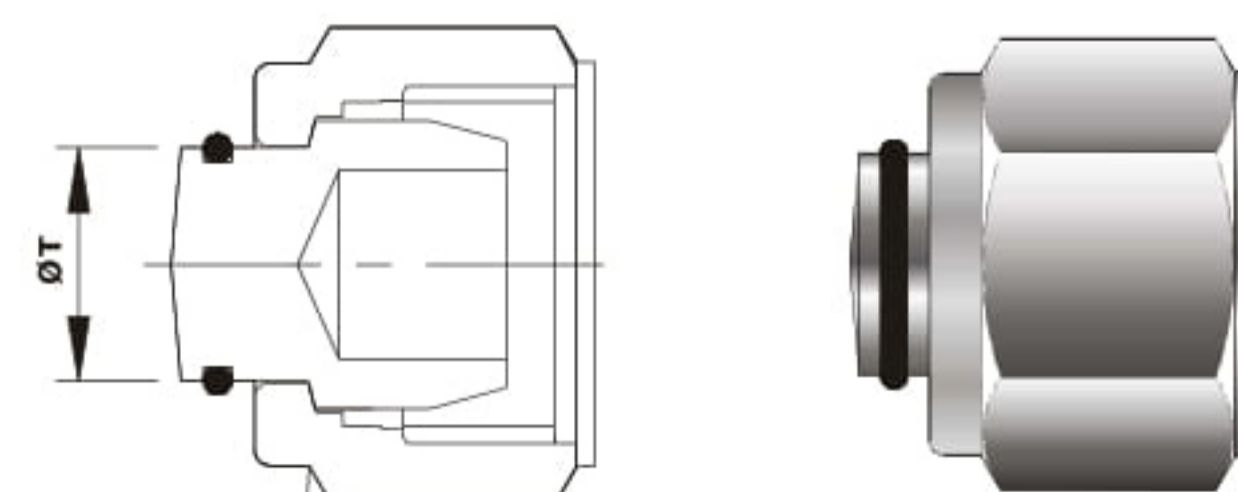
TUBE OD (ØT)
(Inch)
1/8
1/4
5/16
3/8
1/2
3/4
1

Tube Plug_FT



TUBE OD (ØT)
(mm)
3
4
6
8
10
12
15
16
25

Tube Plug_MT

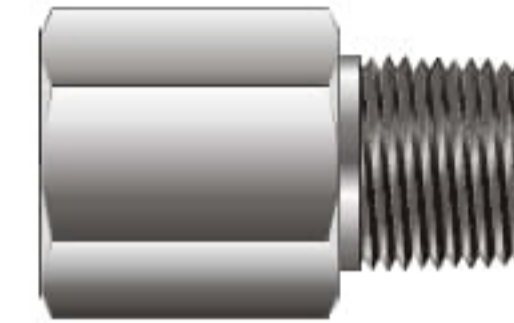


DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

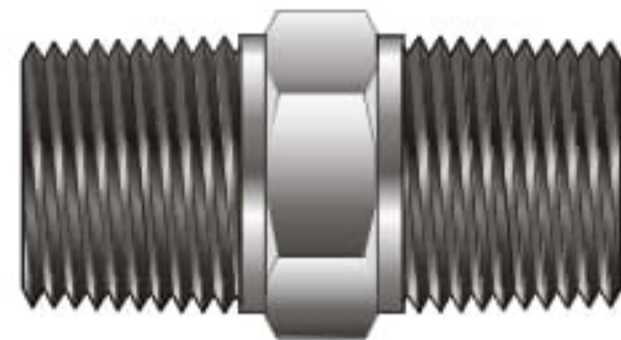
Pipe Fittings



Screwed Nipple



Adaptor



Hex Nipple



Male Hex Club



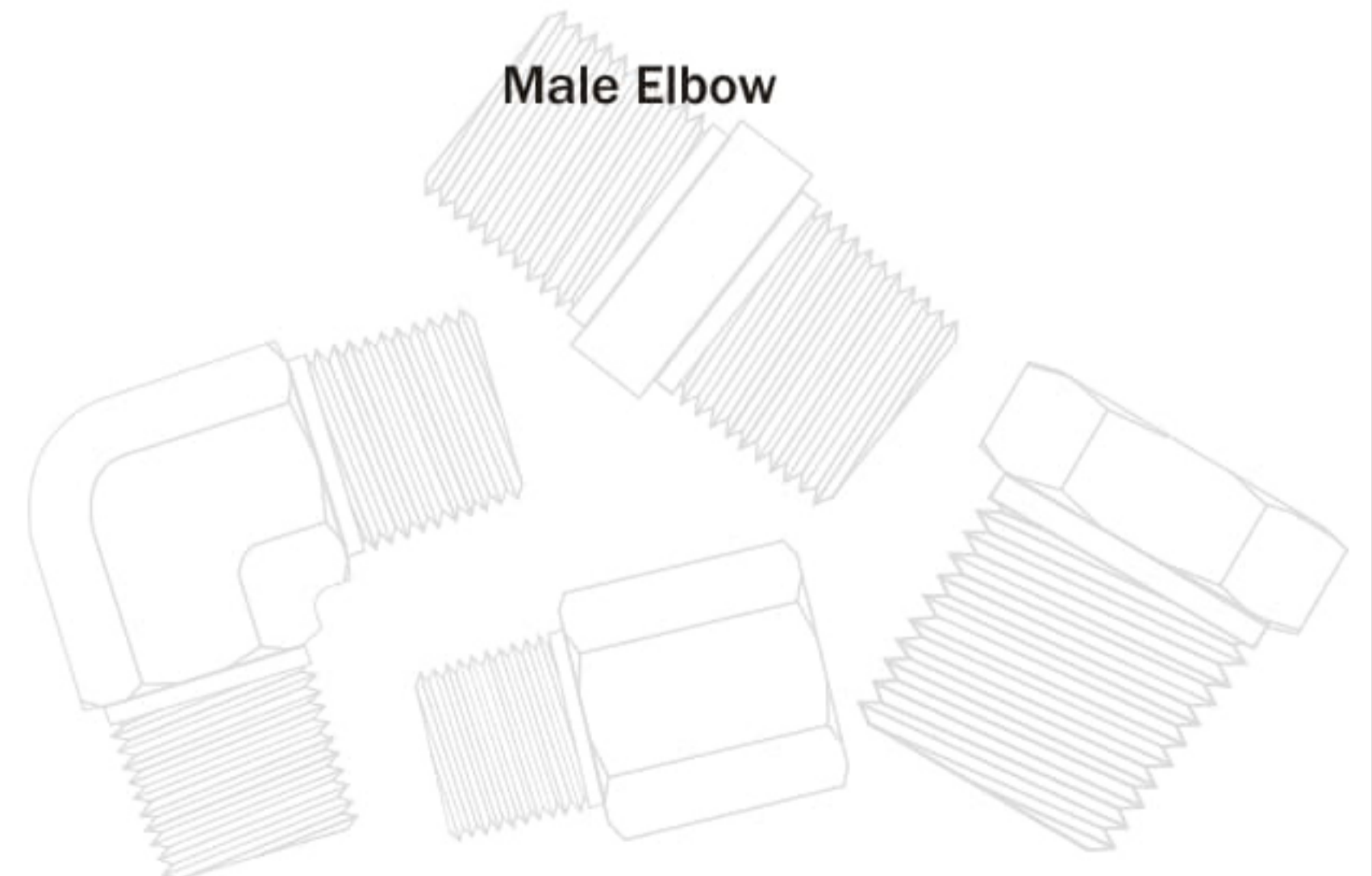
Female Elbow



Male Elbow

- o Available in 1/16" to 2"
- o Material - SS 316, Carbon Steel, Brass
- o Thread - NPT, ISO/BSP, SAE

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.



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Hex Nipples-CPHN

- NPT(M) x NPT(M).....pg. 25
- NPT(M) x ISOP(M)..... pg. 25

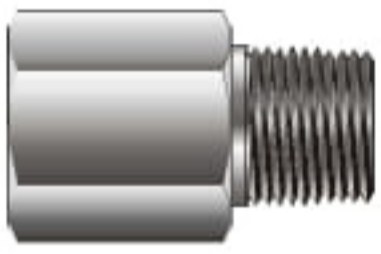
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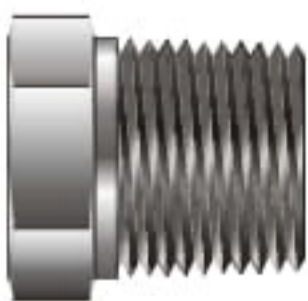
Reducing Adapters - CPRA

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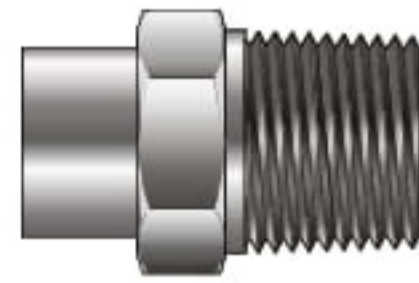
Couplings



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90° Elbow fittings

Elbows



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45° Elbow Fittings

45° Elbows



45° Female Elbow

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Tee Fittings

Tees



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Female Cross

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Gasket



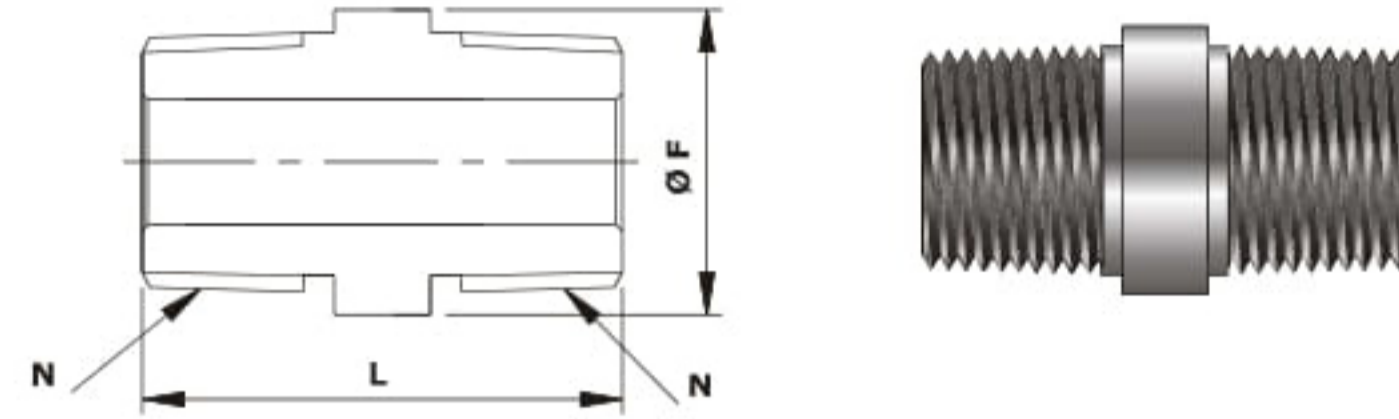
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Pipe Fittings

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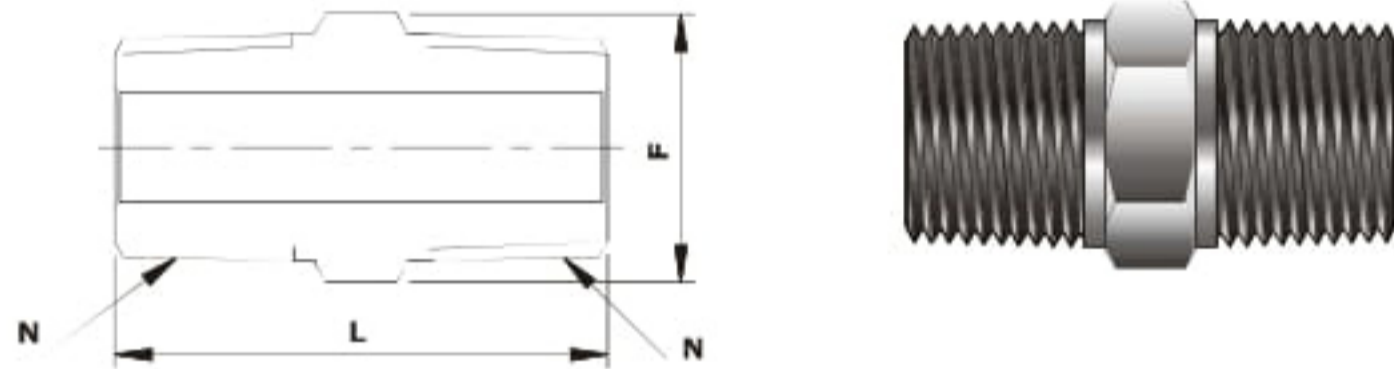
Close Nipple__NPT(M) x NPT(M)

NPT MALE (N)	LENGTH (L)	(ØF)	Working Pressure (PSIG)
(Inch)			STAINLESS STEEL
1/16	0.75	5/16	10000
1/8	0.75	7/16	9100
1/4	1.12	9/16	7500
3/8	1.12	11/16	7200
1/2	1.50	7/8	6600
3/4	1.50	1-1/16	6400
1	1.88	1-3/8	4600



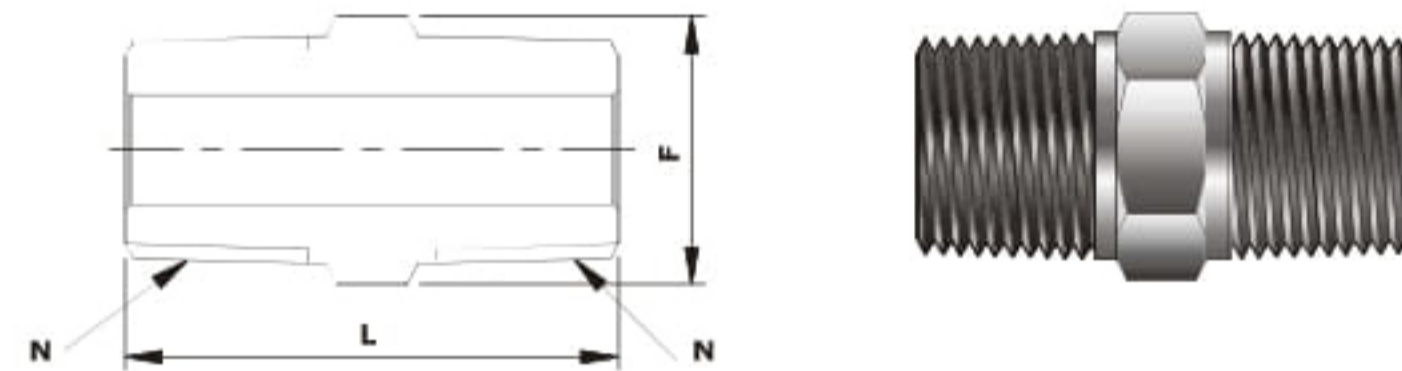
Hex Nipple__NPT(M) x NPT(M)

NPT MALE (N)	LENGTH (L)	HEX (F)	Working Pressure (PSIG)
(Inch)			STAINLESS STEEL
1/16	1.01	7/16	10000
1/8	1.01	7/16	9100
1/4	1.40	5/8	7500
3/8	1.43	3/4	7200
1/2	1.84	7/8	6600
3/4	1.84	1-1/8	6400
1	2.32	1-3/8	4600
1-1/4	2.41	1-3/4	3500
1-1/2	2.65	2	2900
2	2.90	2-3/4	



Hex Nipple-RS__NPT(M) x ISOP(M)

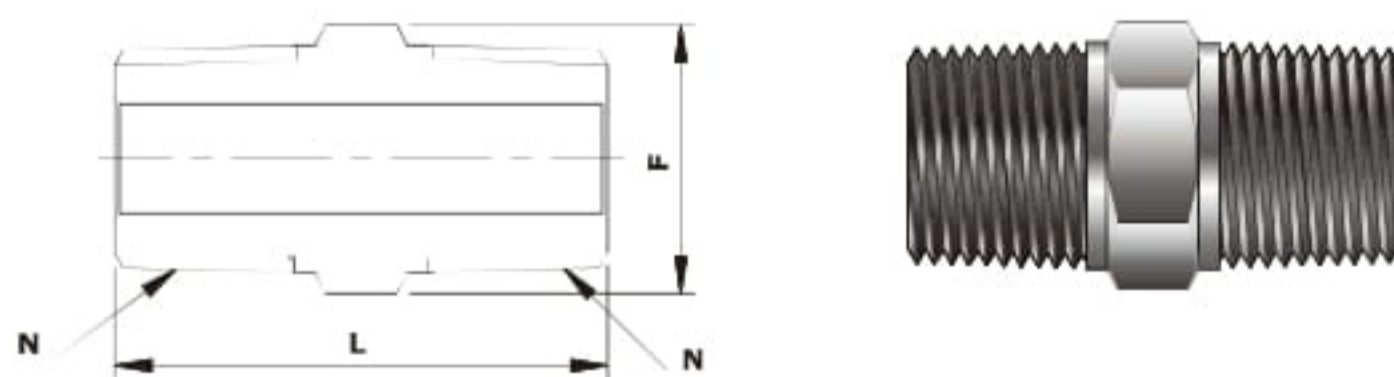
NPT MALE (N)	ISO MALE (N1)	LENGTH (L)	(B)	HEX (F)	Working Pressure (PSIG)
(Inch)					STAINLESS STEEL
1/8	1/8	1.07	0.28	9/16	9100
1/4	1/4	1.44	0.44	3/4	7500
3/8	3/8	1.47	0.44	7/8	7200
1/2	1/2	1.78	0.56	1-1/16	6600
3/4	3/4	1.95	0.62	1-5/16	6400
1	1	2.26	0.72	1-5/8	4600



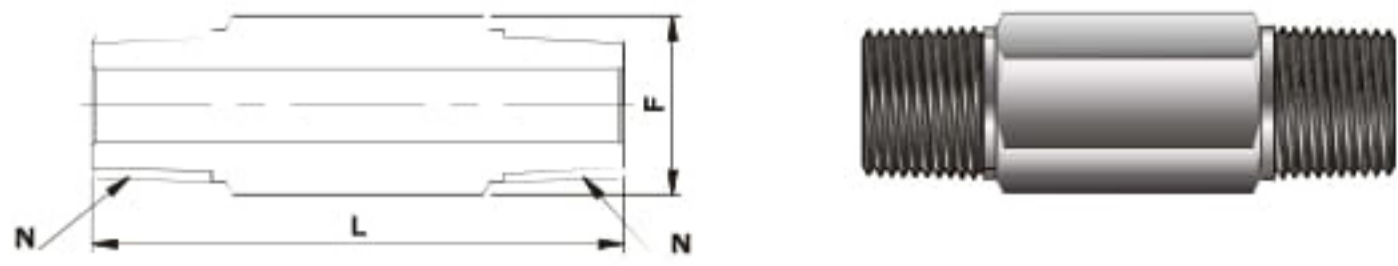
1) RS parallel threads are commonly used with flat RP gasket, please refer page no. 29

Hex Reducing Nipple__NPT(M) x NPT(M)

NPT MALE (N)	NPT (N1)	LENGTH (L)	HEX (F)	Working Pressure (PSIG)
(Inch)				STAINLESS STEEL
1/8	1/16	1.01	7/16	9100
1/4	1/16	1.25	5/8	7500
1/4	1/8	1.22	5/8	7500
3/8	1/16	1.27	3/4	7200
3/8	1/8	1.25	3/4	7200
3/8	1/4	1.43	3/4	7200
1/2	1/8	1.47	7/8	6600
1/2	1/4	1.65	7/8	6600
1/2	3/8	1.65	7/8	6600
3/4	1/8	1.59	1-1/8	6400
3/4	1/4	1.65	1-1/8	6400
3/4	3/8	1.78	1-1/8	6400
3/4	1/2	1.84	1-1/8	6400
1	1/8	1.78	1-3/8	4600
1	1/4	1.97	1-3/8	4600
1	1/2	2.13	1-3/8	4600
1	3/4	2.13	1-3/8	4600
1-1/4	1	2.41	1-3/4	3500
1-1/2	1	2.56	2	2900
2	1	2.78	2-3/4	



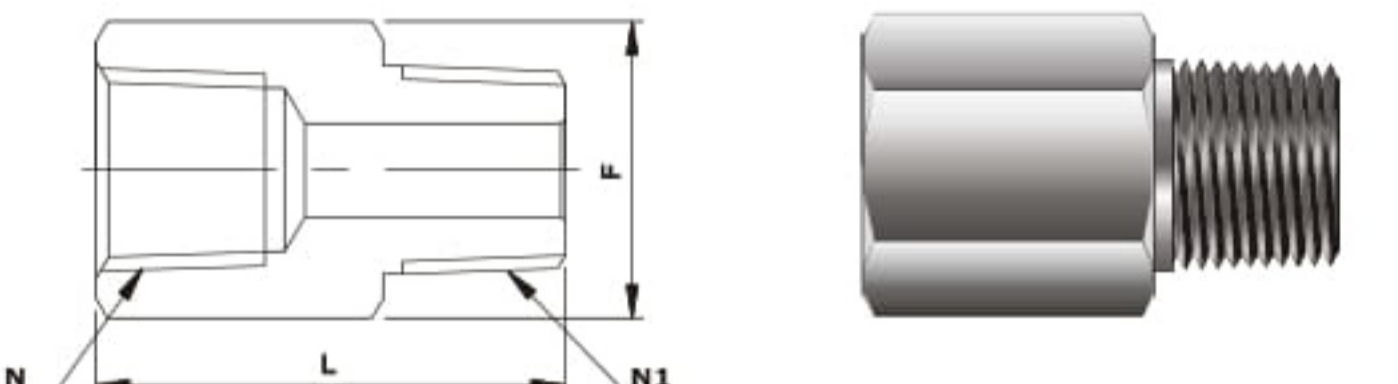
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- Specified length A,B,C,D,E to be shown as last designator in the ordering number, example : 1N-CPHLN-A

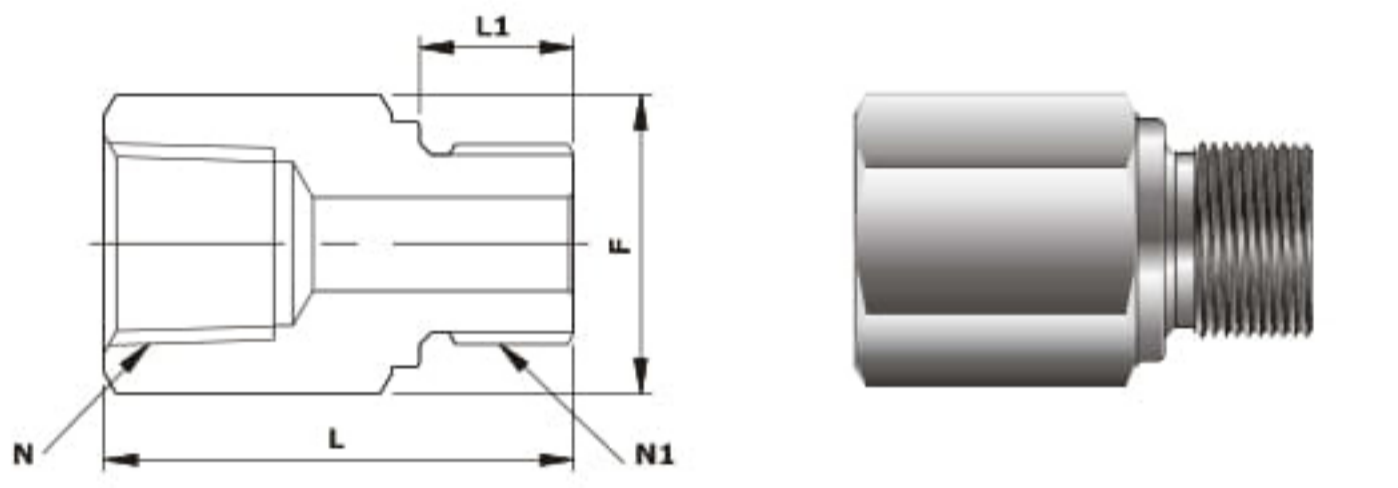
Hex Long Nipple__NPT(M) x NPT(M)

NPT MALE PIPE SIZE (N) (Inch)	(L) Available Length					HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
	A	B	C	D	E		
1/16						7/16	10000
1/8						7/16	9100
1/4						5/8	7500
3/8	1.50	2.00	2.50	3.00	4.00	3/4	7200
1/2						7/8	6600
3/4						1-1/8	6400
1						1-3/8	4600



Adapter__NPT(M) x NPT(F)

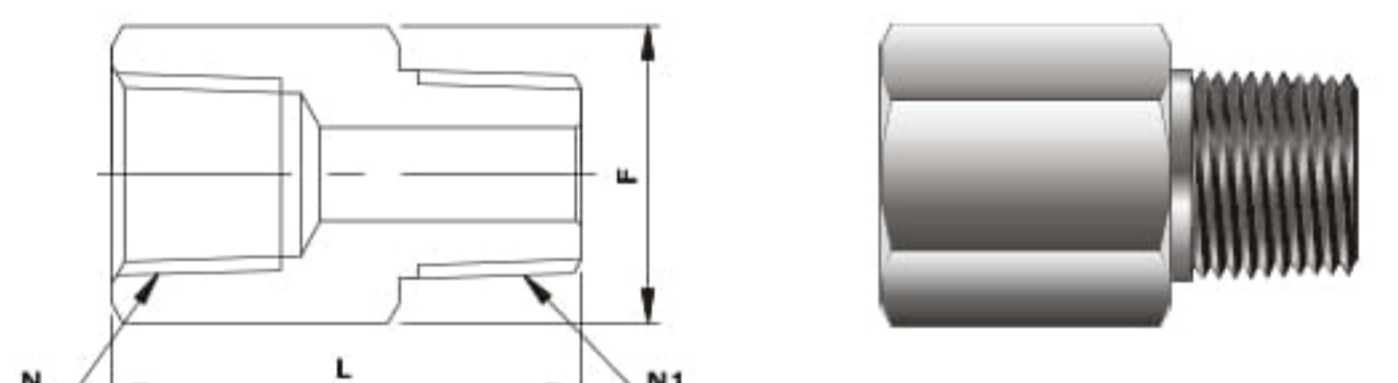
NPT MALE (N) (Inch)	NPT FEMALE (N1) (Inch)	LENGTH (L) (Inch)	HEX (F) (Inch)	WORKING PRESSURE (PSIG) STAINLESS STEEL
1/8	1/8	1.03	5/8	6400
1/4	1/4	1.39	3/4	6600
3/8	3/8	1.44	7/8	5300
1/2	1/2	1.88	1-1/8	5200
3/4	3/4	2.02	1-3/8	4300
1	1	2.38	1-5/8	4500



RS parallel threads are commonly used with flat RP gasket, please refer page no.29

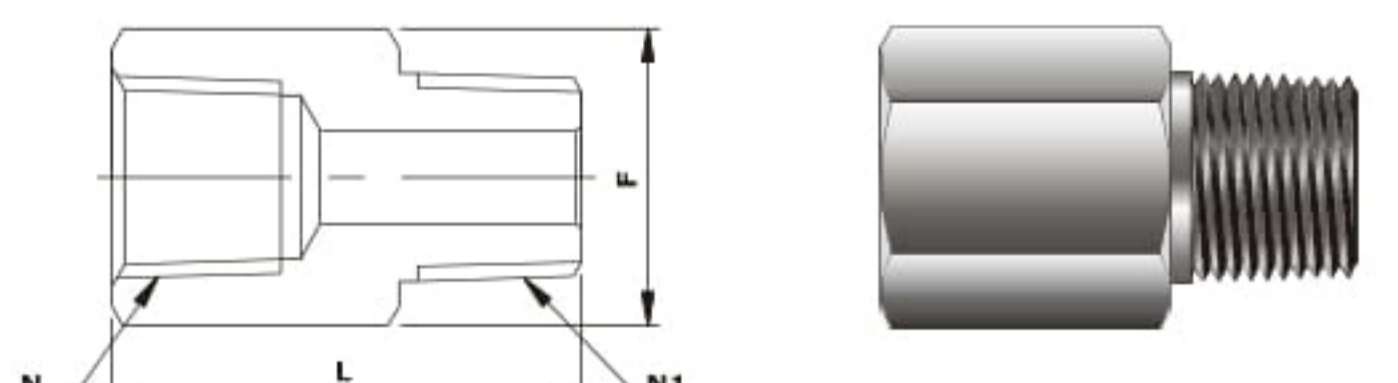
Adapter__NPT(F) x ISOT(M)

NPT FEMALE (N) (Inch)	ISO (BSPP) MALE (N1) (Inch)	LENGTH (L) (Inch)	HEX (F) (Inch)	LENGTH (L1) (Inch)	WORKING PRESSURE (PSIG) STAINLESS STEEL
1/8	1/8	0.99	9/16	0.28	6100
1/4	1/4	1.31	3/4	0.44	6200
3/8	3/8	1.41	7/8	0.44	5000
1/2	1/2	1.74	1-1/8	0.56	4600
3/4	3/4	2.00	1-5/16	0.62	4300
1	1	2.10	1-5/8	0.72	4100



Reducing Adapter__NPT(F) x NPT(M)

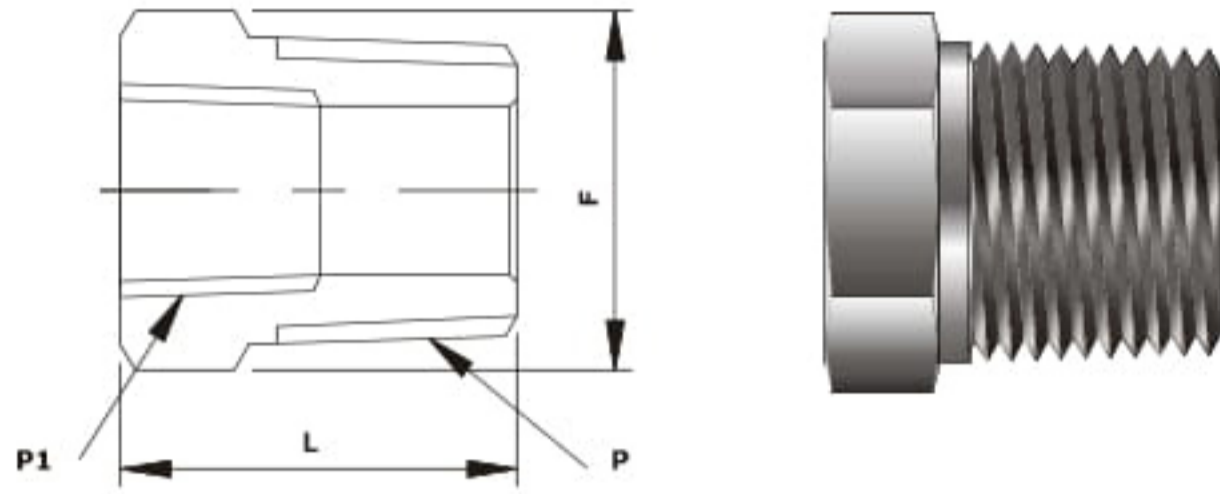
NPT FEMALE (N) (Inch)	NPT (N1) (Inch)	LENGTH (L) (Inch)	HEX (F) (Inch)	Working Pressure (PSIG) STAINLESS STEEL
1/8	1/16	1.03	5/8	6400
1/4	1/16	1.20	3/4	6600
3/8	1/16	1.25	7/8	5300
1/4	1/8	1.20	3/4	6600
3/8	1/8	1.25	7/8	5300
1/2	1/8	1.50	1-1/8	5200
3/4	1/8	1.56	1-3/8	4300
1	1/8	1.81	1-5/8	4500
3/8	1/4	1.44	7/8	5300
1/2	1/4	1.69	1-1/8	5200
3/4	1/4	1.75	1-3/8	4300
1	1/4	2.00	1-5/8	4500
1/2	3/8	1.69	1-1/8	5200
3/4	3/8	1.75	1-3/8	4300
1	3/8	2.00	1-5/8	4500
3/4	1/2	1.94	1-3/8	4300
1	1/2	2.19	1-5/8	4500
1	3/4	2.19	1-5/8	4500
1-1/2	3/4	2.48	2-3/8	
1-1/4	1	2.53	2-1/8	
1-1/2	1	2.65	2-3/8	
2	1	2.68	2-7/8	



Gauge Adapter _ISOP (F) X NPT (M)

ISO (BSPP) PARALLEL FEMALE (N1) (Inch)	NPT MALE (N) (Inch)	LENGTH (L) (Inch)	HEX (F) (Inch)	WORKING PRESSURE (PSIG) STAINLESS STEEL
1/8	1/8	1.09	3/4	6100
1/4	1/4	1.42	7/8	6200
3/8	3/8	1.49	1-1/16	5000
1/2	1/2	1.94	1-1/4	4600
3/4	3/4	2.00	1-5/16	4300
1	1	2.28	1-5/8	4100

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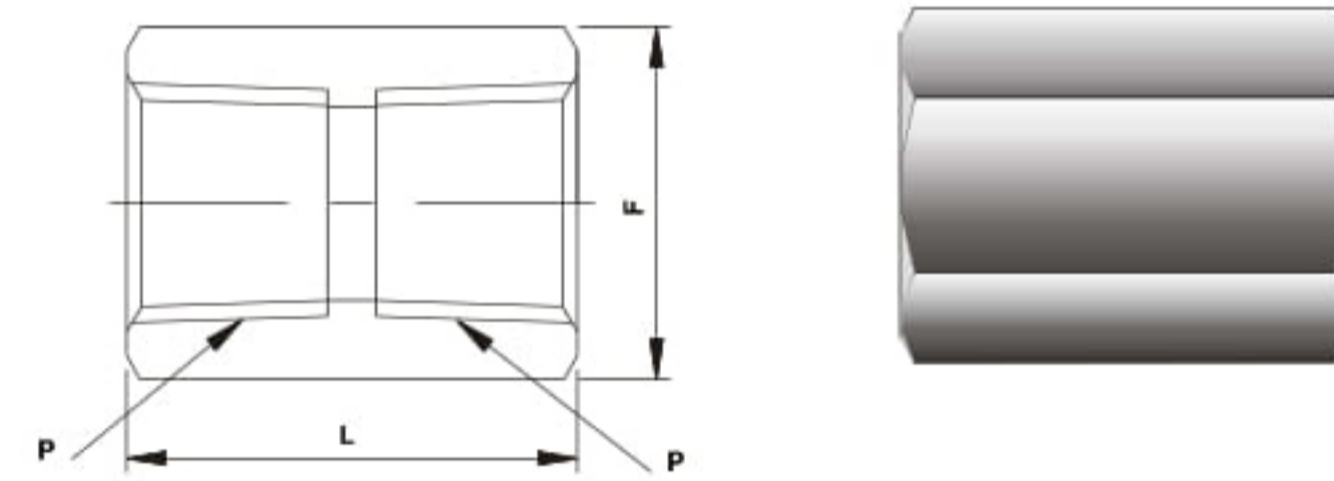


Reducing Bushing__NPT(M) x NPT(F)

NPT MALE (N)	NPT FEMALE (N1)	LENGTH (L)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)				
1/8	1/16	1.03	7/16	6400
1/4	1/16	1.03	9/16	7500
1/4	1/8	1.06	5/8	6000
3/8	1/16	0.86	3/4	7200
3/8	1/8	0.86	3/4	6400
3/8	1/4	1.19	3/4	5300
1/2	1/8	1.08	7/8	6600
1/2	1/4	1.08	7/8	6400
1/2	3/8	1.41	7/8	4600
3/4	1/8	1.17	1-1/8	6400
3/4	1/4	1.08	1-1/8	6400
3/4	3/8	1.08	1-1/8	5300
3/4	1/2	1.63	1-1/8	4900
1	1/8	1.36	1-3/8	4600
1	1/4	1.37	1-3/8	4600
1	3/8	1.37	1-3/8	4600
1	1/2	1.37	1-3/8	4600
1	3/4	1.85	1-3/8	4200
1-1/4	1/2	1.46	1-3/4	
1-1/4	3/4	1.47	1-3/4	3500
1-1/4	1	1.94	1-3/4	3500
1-1/2	1/2	1.61	2-1/8	
1-1/2	3/4	1.61	2-1/8	
1-1/2	1	1.61	2	2900
1-1/2	1-1/4	2.31	2	2700
2	1/2	1.83	2-3/4	
2	3/4	1.83	2-3/4	
2	1	1.83	2-3/4	
2	1-1/4	1.83	2-3/4	
2	1-1/2	1.83	2-3/4	

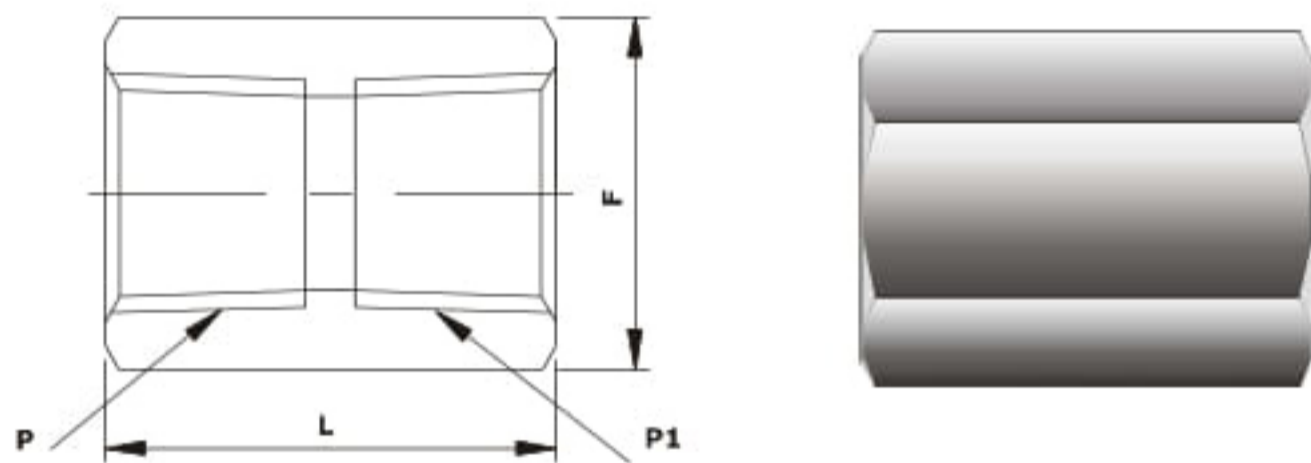
Hex Coupling__NPT(F) x NPT(F)

NPT FEMALE (P)	LENGTH (L)	HEX (F)	Working Pressure (PSIG) STAINLESS STEEL
(Inch)			
1/16	0.75	1/2	7500
1/8	0.81	5/8	6400
1/4	1.19	3/4	6600
3/8	1.31	7/8	5300
1/2	1.56	1-1/8	5200
3/4	1.62	1-3/8	4300
1	2.00	1-5/8	4500
1-1/4	2.38	2	3500
1-1/2	2.62	2-3/8	3200
2	2.62	2-7/8	



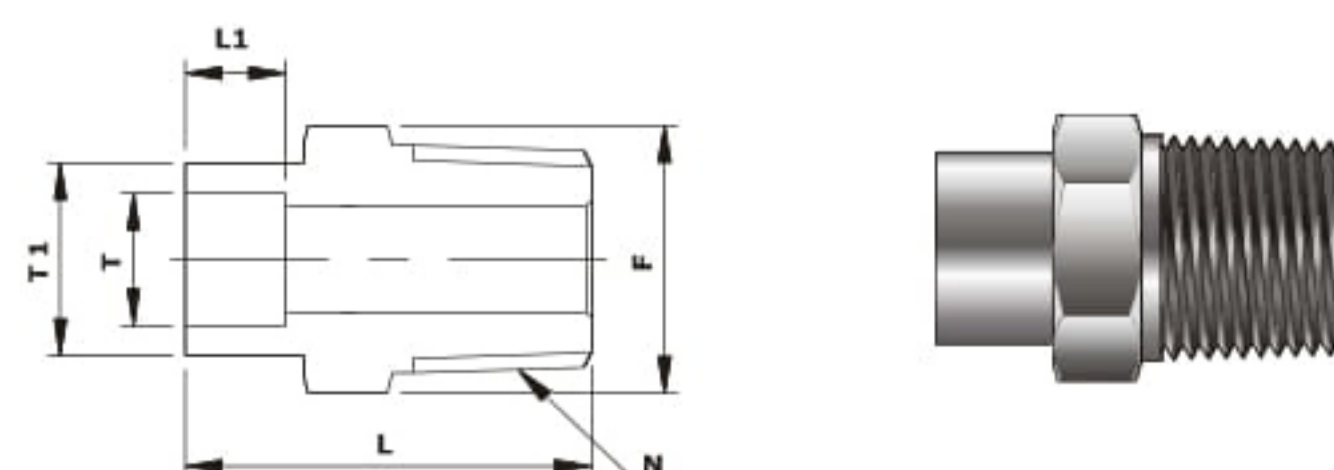
Hex Reducing Coupling__NPT(F) x NPT(F)

NPT Female (P)	NPT Female (P1)	LENGTH (L)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)				
1/8	1/16	0.75	5/8	6400
1/8	1/4	1.22	3/4	6600
1/4	1/16	0.92	3/4	6600
3/8	1/16	0.95	7/8	5300
3/8	1/8	1.03	7/8	5300
3/8	1/4	1.38	7/8	5300
1/2	1/8	1.56	1-1/8	5200
1/2	1/4	1.75	1-1/8	5200
1/2	3/8	1.78	1-1/8	5200
3/4	1/8	1.39	1-3/8	4300
3/4	1/4	1.81	1-3/8	4300
3/4	3/8	1.69	1-3/8	4300
3/4	1/2	2.06	1-3/8	4300
1	1/8	1.44	1-5/8	4500
1	1/4	1.63	1-5/8	4500
1	3/8	1.63	1-5/8	4500
1	1/2	2.19	1-5/8	4500
1	3/4	2.25	1-5/8	4500
1-1/4	1	2.41	2	3500
1-1/2	1	2.38	2-3/8	3200
2	1	2.58	2-7/8	



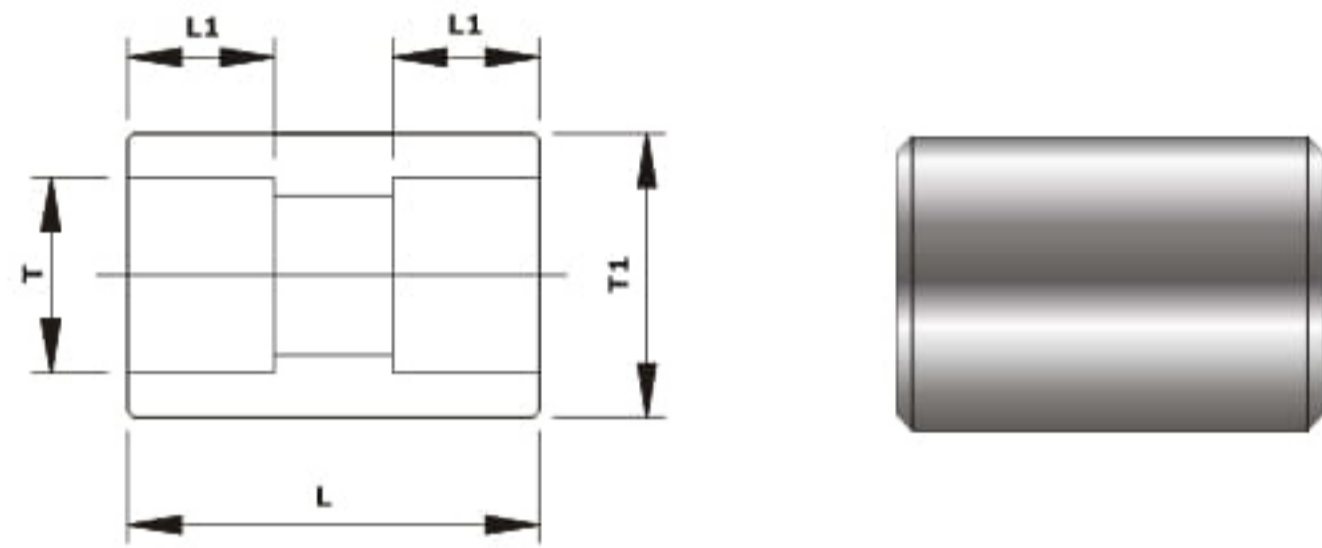
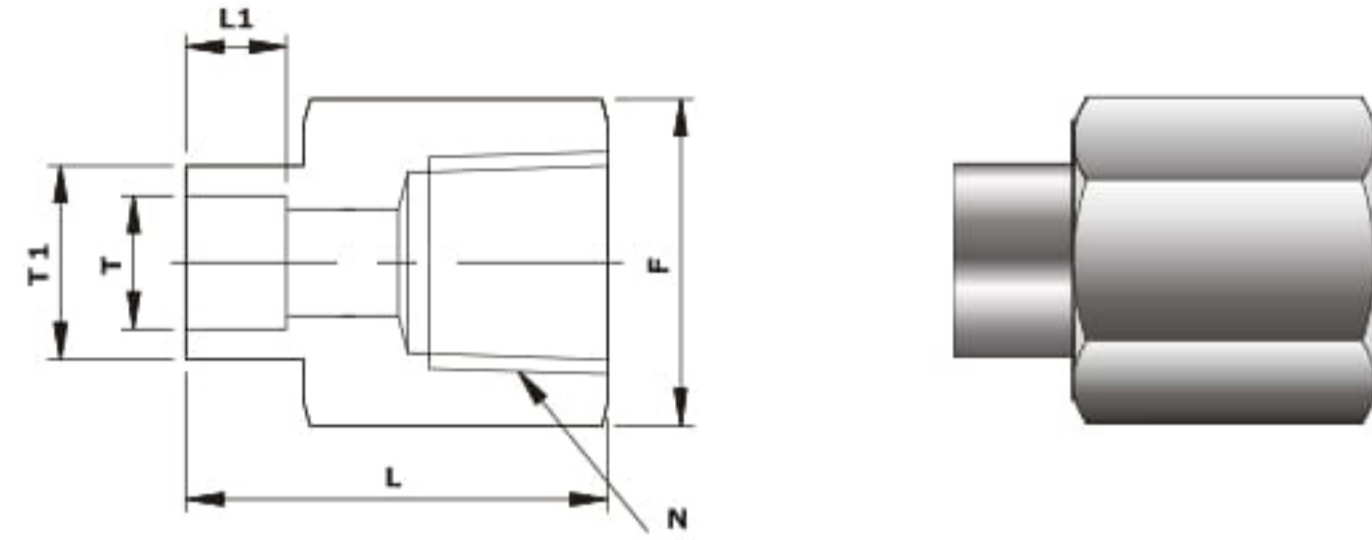
Male Connector _FT SW X NPT (M)

TUBE OD (ØT)	NPT MALE (N)	LENGTH (L)	(ØT1)	LENGTH (L1)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)						
1/4	1/4	1.25	0.48	0.28	9/16	7500
3/8	1/4	1.25	0.60	0.31	5/8	7500
3/8	3/8	1.25	0.60	0.31	11/16	7300
3/8	1/2	1.47	0.60	0.31	7/8	7200
1/2	1/4	1.31	0.73	0.38	3/4	6200
1/2	3/8	1.31	0.73	0.38	3/4	6200
1/2	1/2	1.53	0.73	0.38	7/8	6200



Female Connector_FT SW x NPT(F)

TUBE OD (ØT)	NPT FEMALE (N)	LENGTH (L)	LENGTH (L1)	(ØT1)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)						
1/8	1/8	0.83	0.29	0.10	9/16	6100
1/4	1/8	1.05	0.48	0.28	9/16	6100
1/4	1/4	1.18	0.48	0.28	3/4	6200
3/8	1/4	1.24	0.60	0.31	3/4	6200
1/2	3/8	1.36	0.73	0.38	7/8	5000
1/2	1/2	1.59	0.73	0.38	1-1/16	4600
5/8	1/2	1.65	0.92	0.41	1-1/16	4600
3/4	3/4	1.73	1.04	0.44	1-1/4	4300

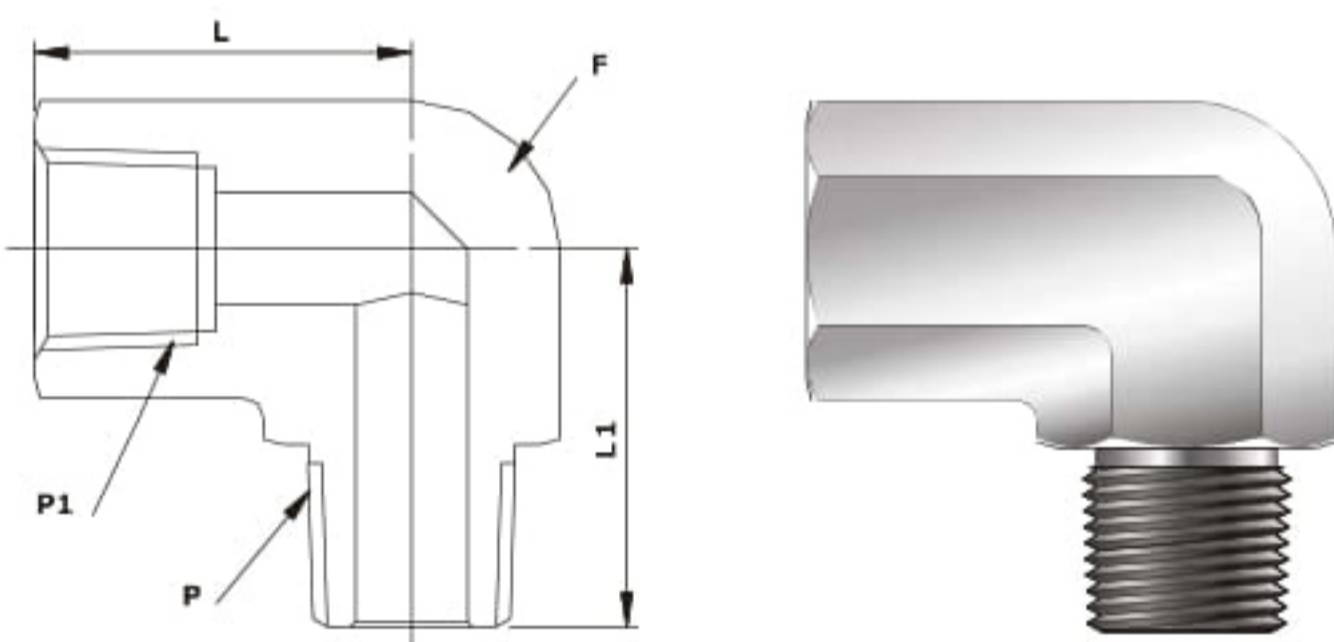
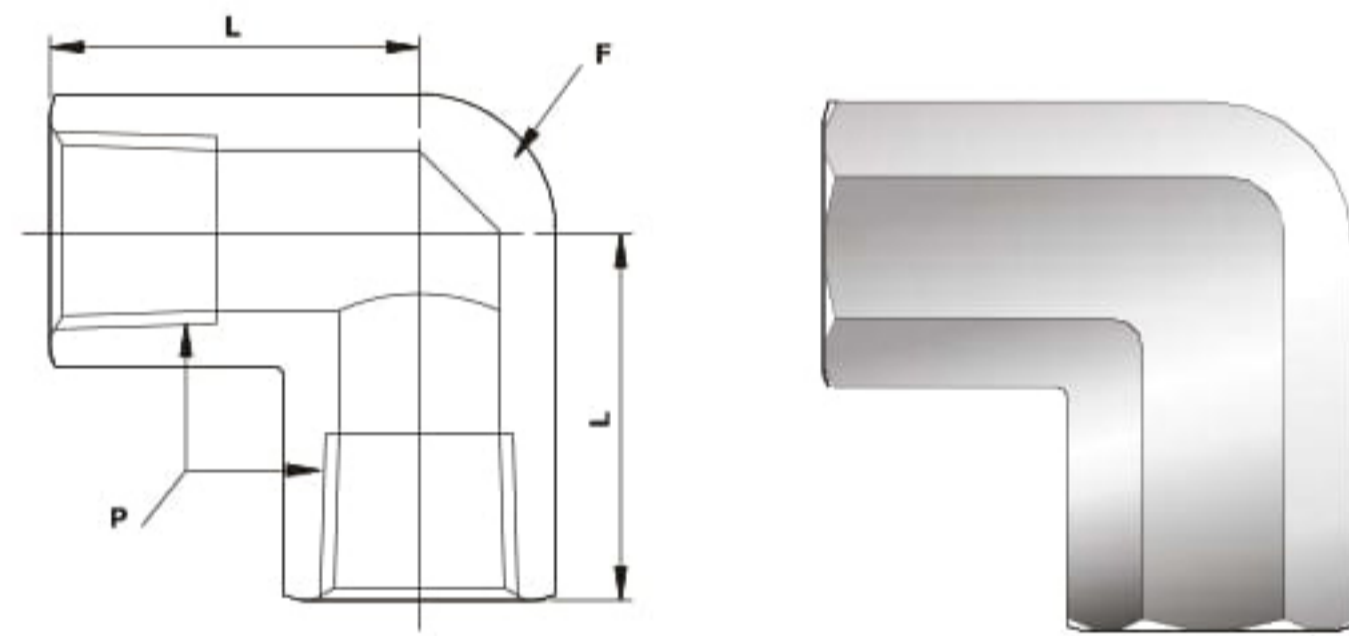


Pipe Union_Pipe SW

PIPE SIZE (ØP)	LENGTH (L)	(ØT1)	LENGTH (L1)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)				
1/4	1.06	0.98	0.38	9400
3/8	1.12	1.11	0.44	8000
1/2	1.12	1.36	0.50	7900
3/4	1.75	1.48	0.62	5700
1	1.75	1.86	0.62	5800

Female Elbow_NPT(F) x NPT(F)

NPT Female (P)	LENGTH (L)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)			
1/16	0.50	7/16	7000
1/8	1.04	9/16	5500
1/4	1.17	3/4	5600
3/8	1.42	7/8	5000
1/2	1.56	1-1/16	4500
3/4	1.92	1-5/16	3500
1	1.91	1-5/8	3900
1-1/4	1.70	1-7/8	3100
1-1/2	2.08	2-1/2	2500

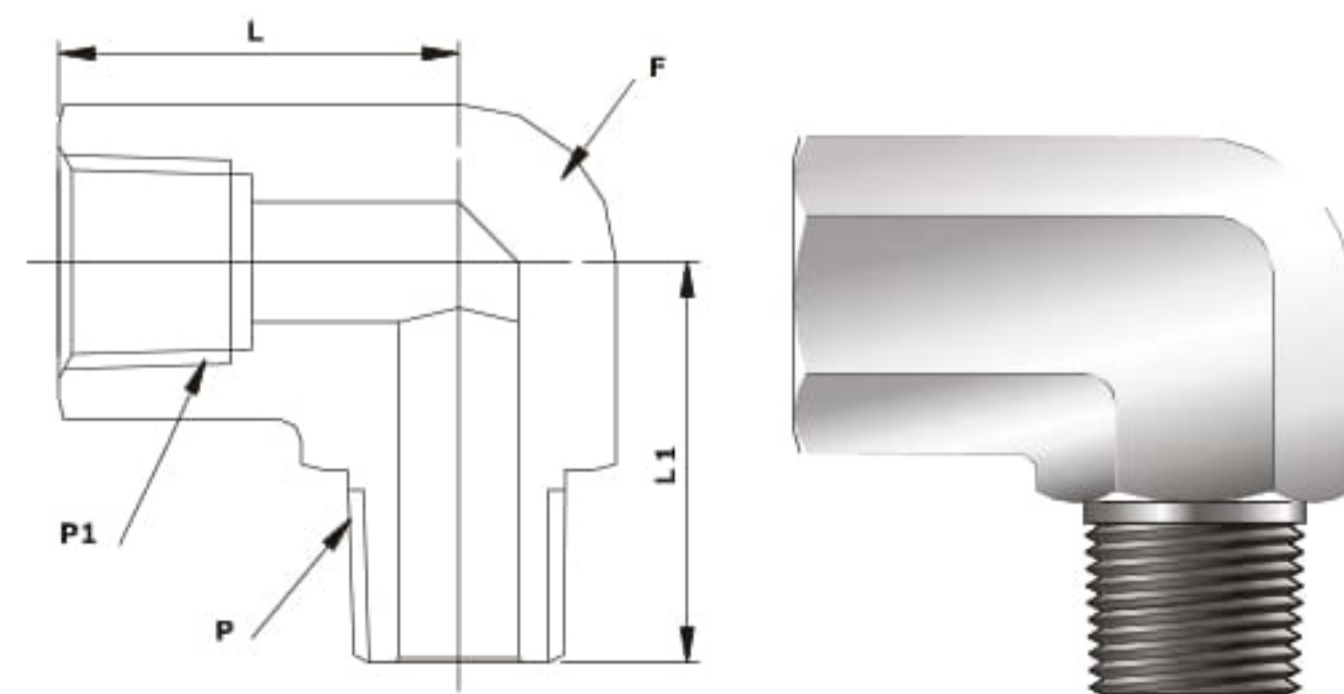


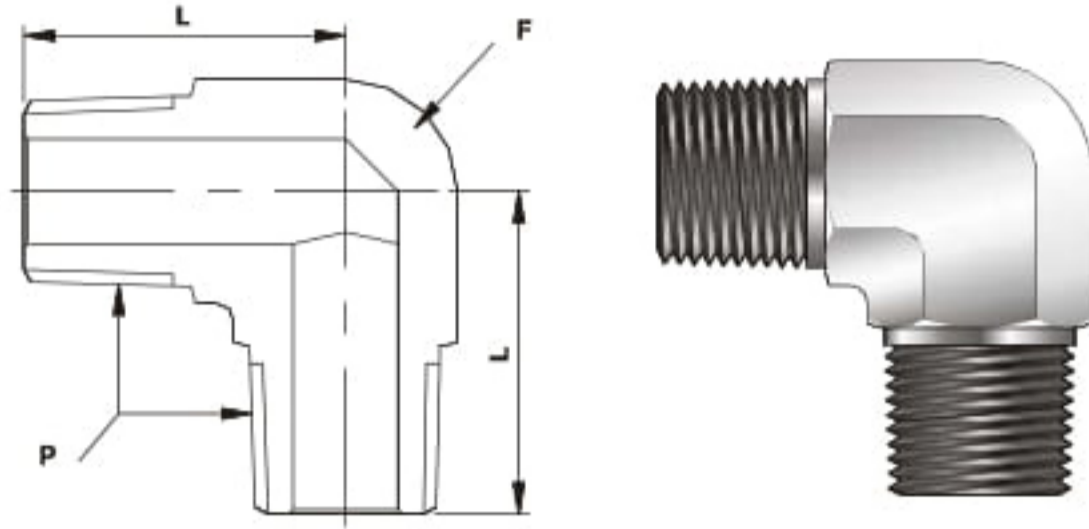
Street Elbow_NPT(M) x NPT(F)

NPT Male (P)	NPT Female (P1)	LENGTH (L)	LENGTH (L1)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)					
1/16	1/16	0.86	0.88	9/16	7000
1/8	1/8	1.04	0.87	9/16	5500
1/4	1/4	1.17	1.17	3/4	5600
3/8	3/8	1.42	1.26	7/8	5600
1/2	1/2	1.56	1.56	1-1/16	4500
3/4	3/4	1.92	1.67	1-5/16	3500
1	1	1.91	1.94	1-5/8	3900
1-1/4	1-1/4	1.91	2.38	1-7/8	3100

Reducing Street Elbow_NPT(M) x NPT(F)

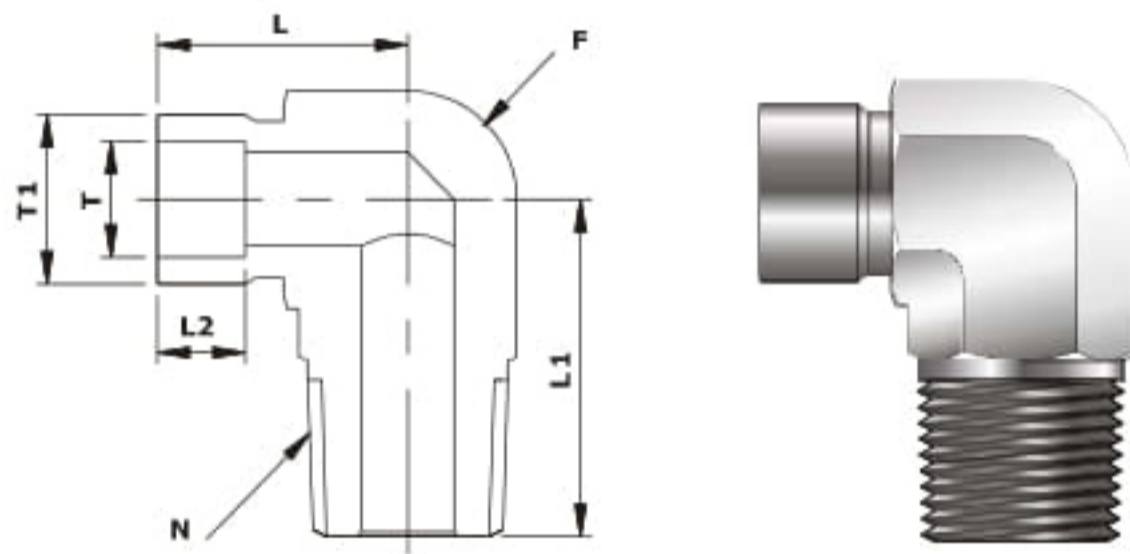
NPT Male (P)	NPT Female (P1)	LENGTH (L)	LENGTH (L1)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)					
1/8	1/16	1.04	0.87	9/16	7000
1/4	1/16	0.66	1.09	9/16	7000
1/4	1/8	1.17	1.00	9/16	5500
3/8	1/16	0.88	1.09	3/4	7000
3/8	1/8	0.88	1.22	3/4	5500
3/8	1/4	1.42	1.26	3/4	5500
1/2	1/8	0.95	1.47	7/8	5000
1/2	1/4	1.56	1.38	7/8	5600
1/2	3/8	1.56	1.38	7/8	5000
3/4	1/8	1.00	1.59	1-1/16	5500
3/4	1/4	1.00	1.59	1-1/16	5600
3/4	3/8	1.23	1.59	1-1/16	5000
3/4	1/2	1.23	1.59	1-1/16	4500
1	1/8	1.63	1.97	1-5/16	5500
1	1/4	1.63	1.97	1-5/16	5600
1	3/8	1.50	1.97	1-5/16	5000
1	1/2	1.63	1.97	1-5/16	4500
1	3/4	1.36	1.97	1-5/16	3500





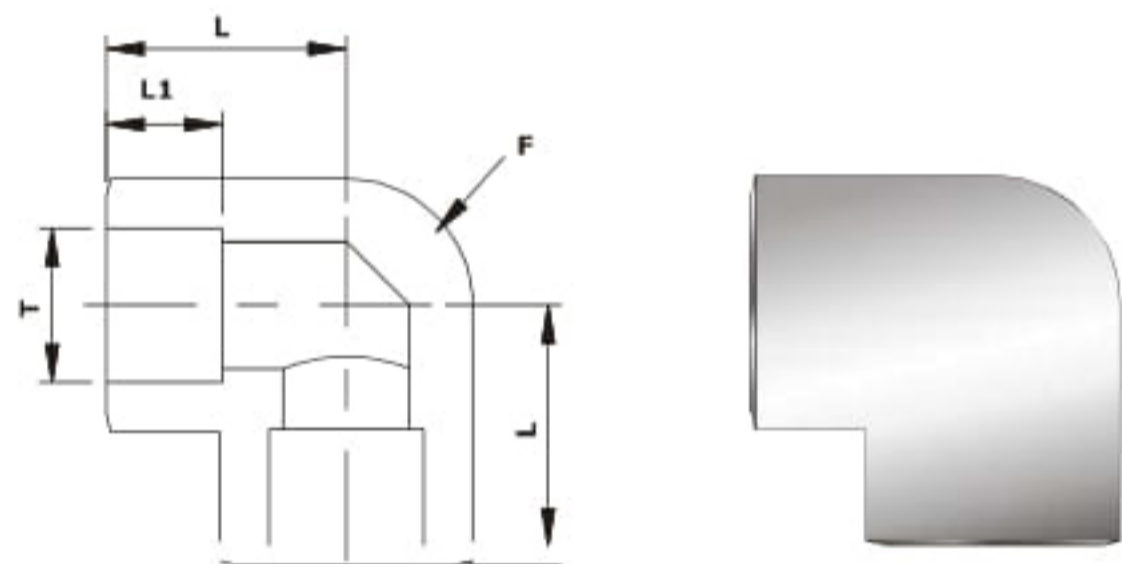
Male Elbow_NPT(M) x NPT(M)

NPT male (P)	LENGTH (L)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)			
1/16	0.66	3/8	9500
1/8	0.88	7/16	9100
1/4	1.05	9/16	7500
3/8	1.17	3/4	7200
1/2	1.45	7/8	5800
3/4	1.59	1-1/16	6400
1	1.97	1-5/16	4600



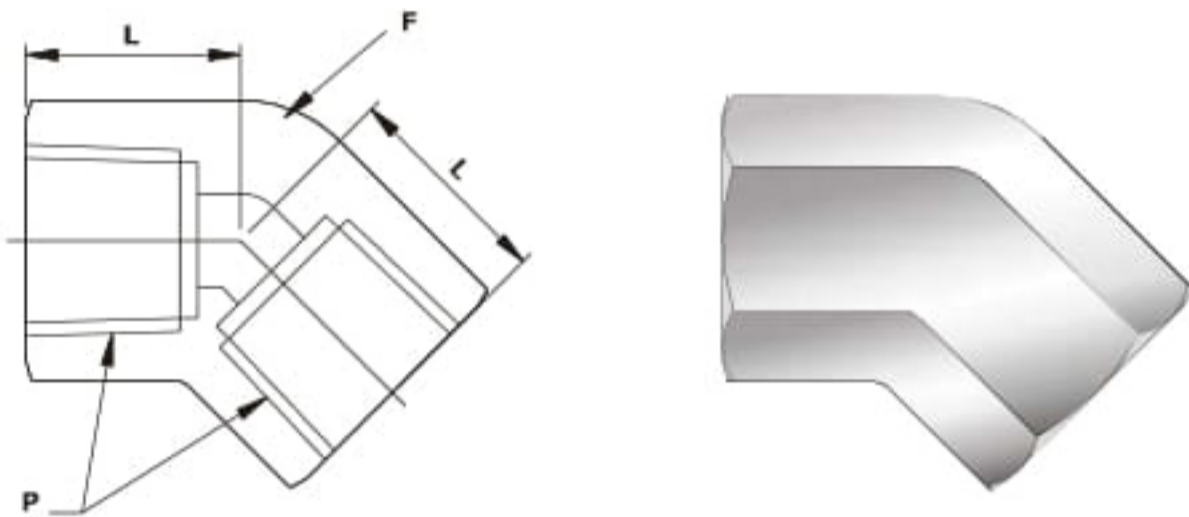
Male Elbow_FT SW x NPT(M)

TUBE OD (ØT)	NPT male (N)	LENGTH (L)	LENGTH (L1)	(ØT1)	LENGTH (L2)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)							
1/4	1/4	0.79	1.05	0.48	0.28	9/16	7500
3/8	1/4	1.04	1.05	0.62	0.31	9/16	7500
3/8	3/8	0.97	1.17	0.60	0.31	11/16	7300
3/8	1/2	1.02	1.45	0.60	0.31	7/8	7200
1/2	1/2	1.08	1.45	0.73	0.38	7/8	6200
3/4	3/4	1.56	1.56	1.12	0.44	1-1/16	6700



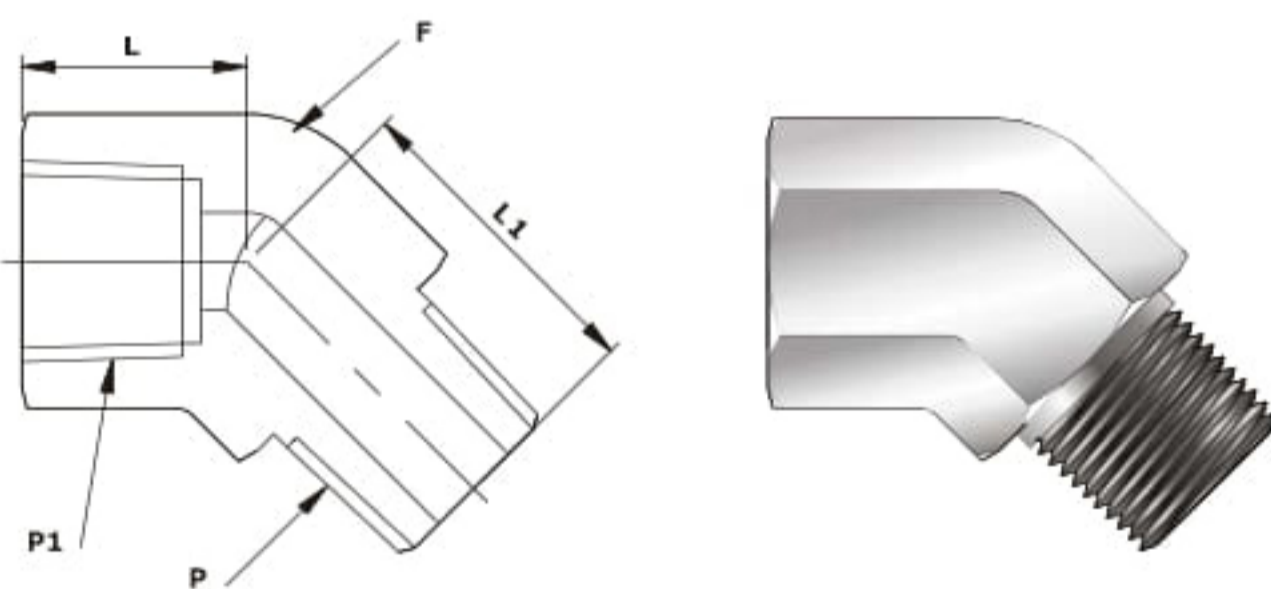
Union Elbow_FT SW Ends

TUBE OD (ØT)	LENGTH (L)	LENGTH (L1)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)				
1/4	0.86	0.28	7/16	11300
3/8	1.04	0.31	9/16	8400
1/2	1.17	0.38	11/16	7800
5/8	1.42	0.41	13/16	6700
3/4	1.56	0.44	1	6700
1	1.92	0.62	1-1/4	6100



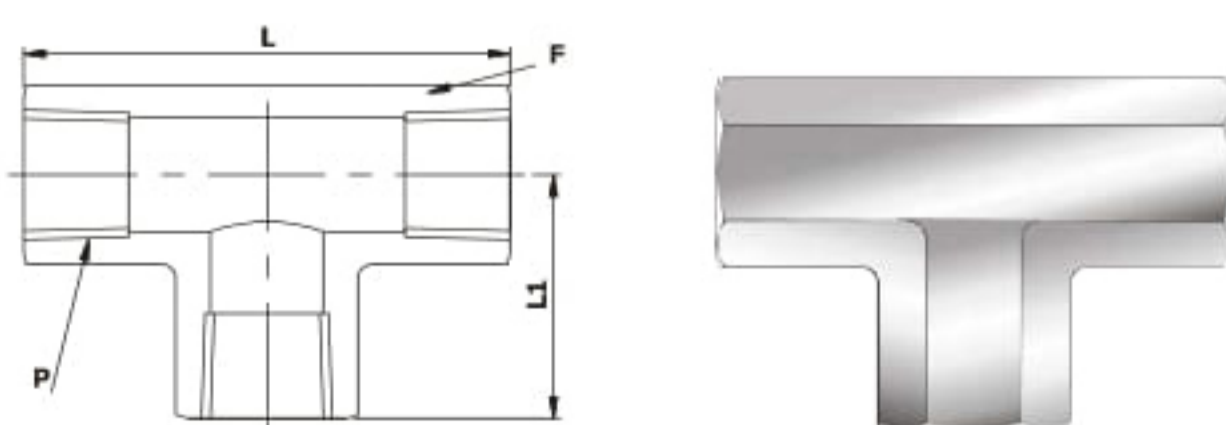
45° Female Elbow_NPT(F) x NPT(F)

NPT Female (P)	LENGTH (L)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)			
1/16	0.47	7/16	7000
1/8	0.47	9/16	5500
1/4	0.69	3/4	5600
3/8	0.75	7/8	5000
1/2	0.94	1-1/16	4500
3/4	1.00	1-5/16	3500
1	1.19	1-5/8	3900



45° Street Elbow_NPT(M) x NPT(F)

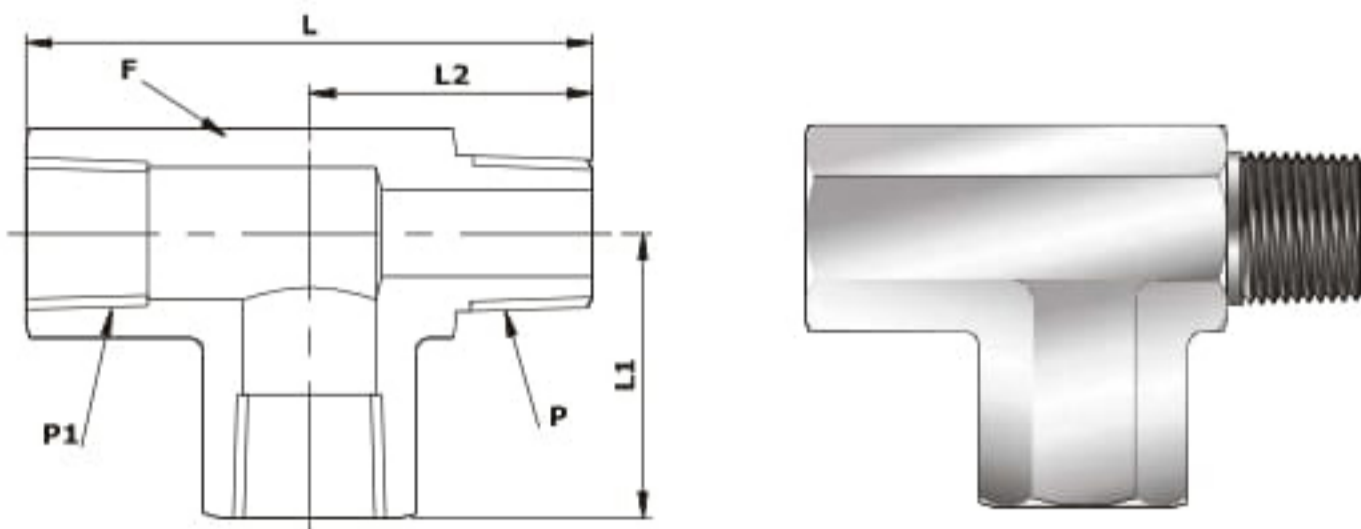
NPT Male (P)	NPT Female (P1)	LENGTH (L)	LENGTH (L1)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)					
1/16	1/16	0.47	0.66	7/16	7000
1/8	1/8	0.47	0.72	9/16	5500
1/4	1/4	0.63	1.05	3/4	5600
3/8	3/8	0.72	1.06	7/8	5000
1/2	1/2	0.91	1.34	1-1/16	4500
3/4	3/4	0.97	1.38	1-5/16	3500
1	1	1.13	1.72	1-5/8	3900



Female Tee_NPT(F) x NPT(F) x NPT(F)

NPT Female (P)	LENGTH (L)	LENGTH (L1)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)				
1/16	1.00	0.50	7/16	7000
1/8	2.08	1.04	9/16	5500
1/4	2.34	1.17	3/4	5600
3/8	2.84	1.42	7/8	5000
1/2	3.12	1.56	1-1/16	4500
3/4	3.84	1.92	1-5/16	3500
1	3.82	1.91	1-5/8	3900
1-1/4	3.40	1.70	1-7/8	3100
1-1/2	4.16	2.08	2-1/2	2500

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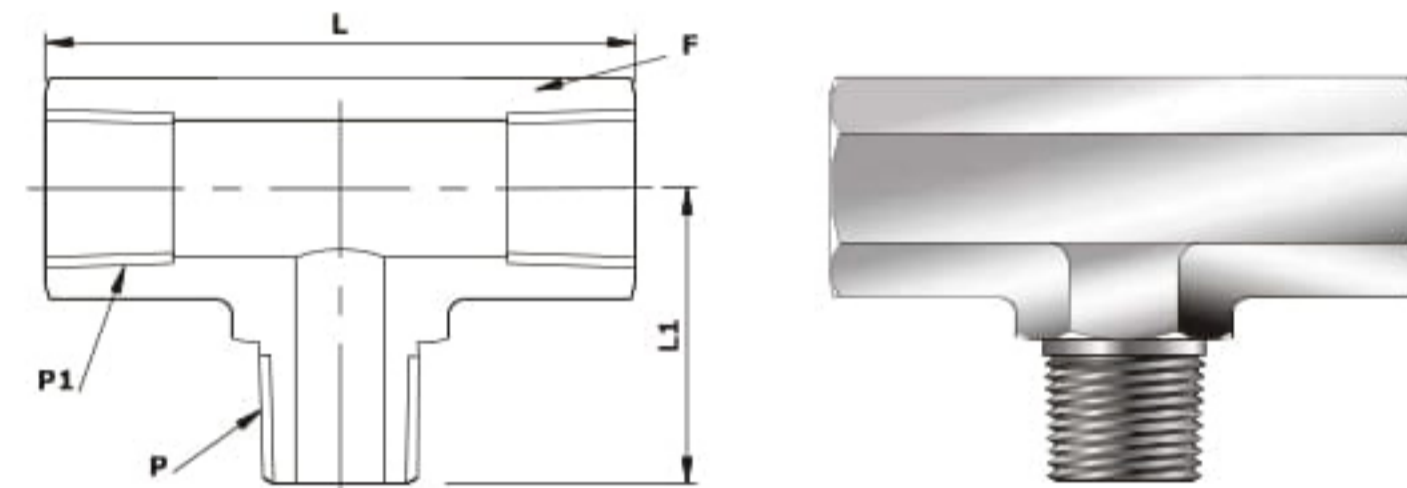


Street Tee__NPT(F) xNPT(M) x NPT(F)

NPT Male (P)	NPT Female (P1)	LENGTH (L)	LENGTH (L1)	LENGTH (L2)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)						
1/16	1/16	1.22	0.50	0.72	7/16	7000
1/8	1/8	1.91	1.04	0.87	9/16	5500
1/4	1/4	2.34	1.17	1.17	3/4	5600
3/8	3/8	2.68	1.42	1.26	7/8	5000
1/2	1/2	3.12	1.56	1.56	1-1/16	4500
3/4	3/4	2.95	1.36	1.59	1-5/16	3500
1	1	3.60	1.63	1.97	1-5/8	3900

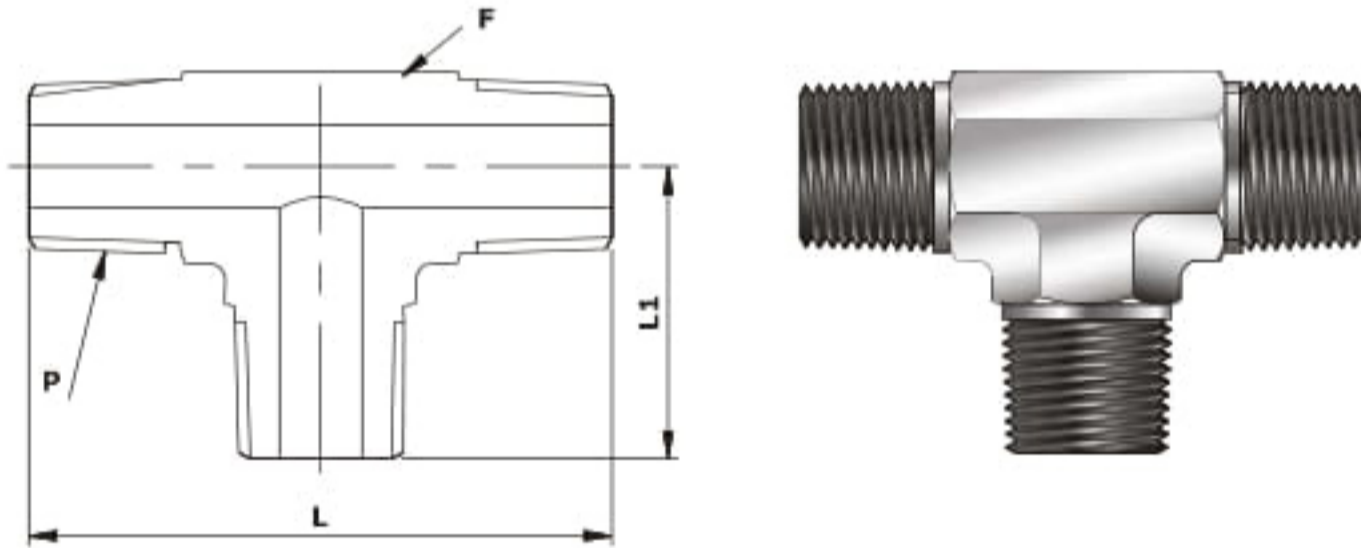
Branch Tee__NPT(F) x NPT(F) x NPT(M)

NPT Male (P)	NPT Female (P1)	LENGTH (L)	LENGTH (L1)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)					
1/16	1/16	1.00	0.72	7/16	7000
1/8	1/8	2.08	0.87	9/16	5500
1/4	1/4	2.34	1.17	3/4	5600
3/8	3/8	2.84	1.26	7/8	5000
1/2	1/2	3.12	1.56	1-1/16	4500
3/4	3/4	2.72	1.59	1-5/16	3500
1	1	3.26	1.97	1-5/8	3900



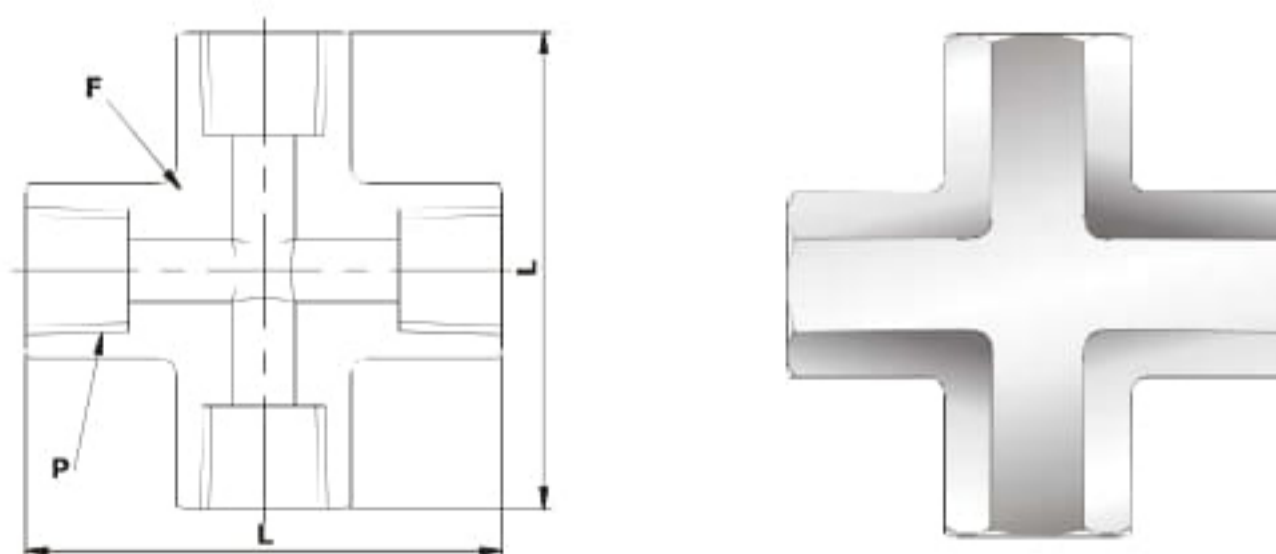
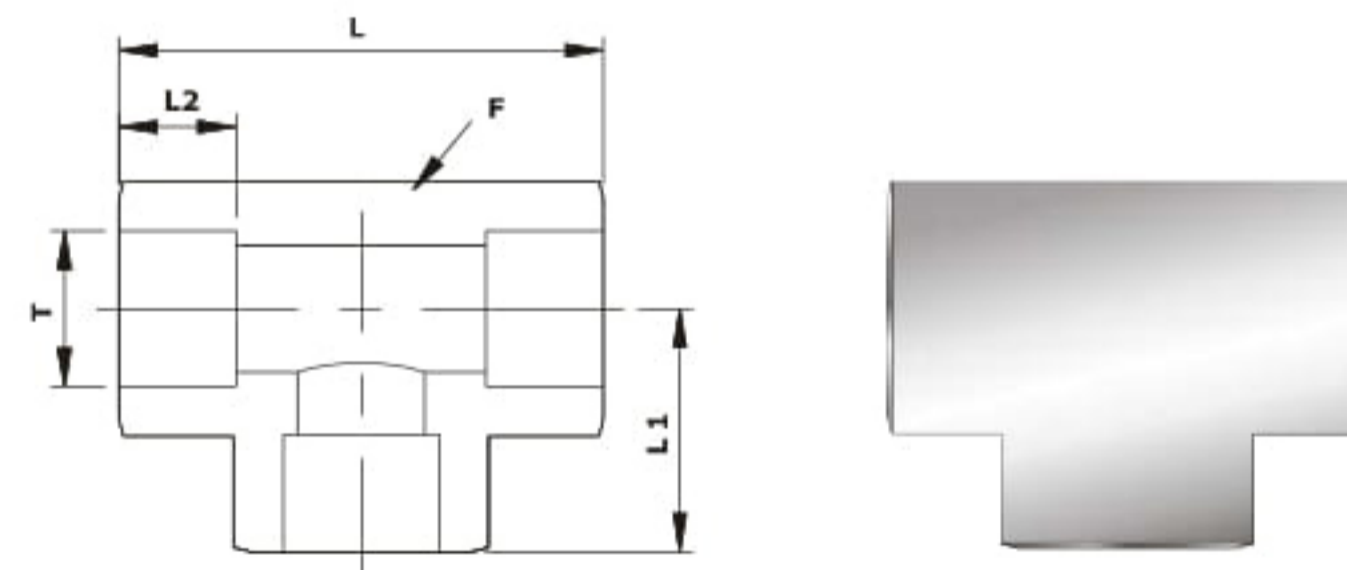
Male Tee__NPT(M) x NPT(M) x NPT(M)

NPT Male (P)	LENGTH (L)	LENGTH (L1)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)				
1/16	1.44	0.72	5/16	9500
1/8	1.76	0.88	7/16	9100
1/4	2.10	1.05	9/16	7500
3/8	2.34	1.17	3/4	7200
1/2	2.90	1.45	7/8	5800
3/4	3.18	1.59	1-1/16	6400
1	3.94	1.97	1-5/16	4600
1-1/4	4.44	2.22	1-5/8	3500
1-1/2	5.28	2.64	1-7/8	2900



Union Tee__FT SW Ends

TUBE OD (ØT)	LENGTH (L)	LENGTH (L1)	LENGTH (L2)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)					
1/8	1.18	0.56	0.10	7/16	11800
1/4	1.72	0.86	0.28	9/16	11300
3/8	2.08	1.04	0.31	9/16	8400
1/2	2.34	1.17	0.38	11/16	7800
5/8	2.84	1.42	0.41	13/16	6700
3/4	3.12	1.56	0.44	1	6700
1	3.84	1.92	0.62	1-1/4	6100



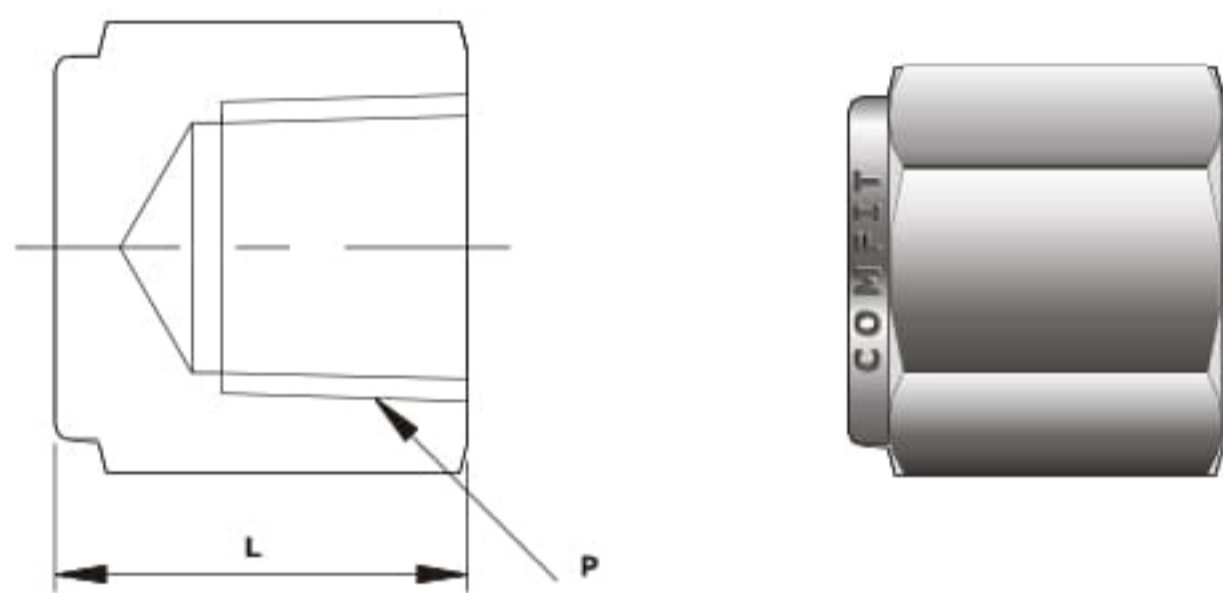
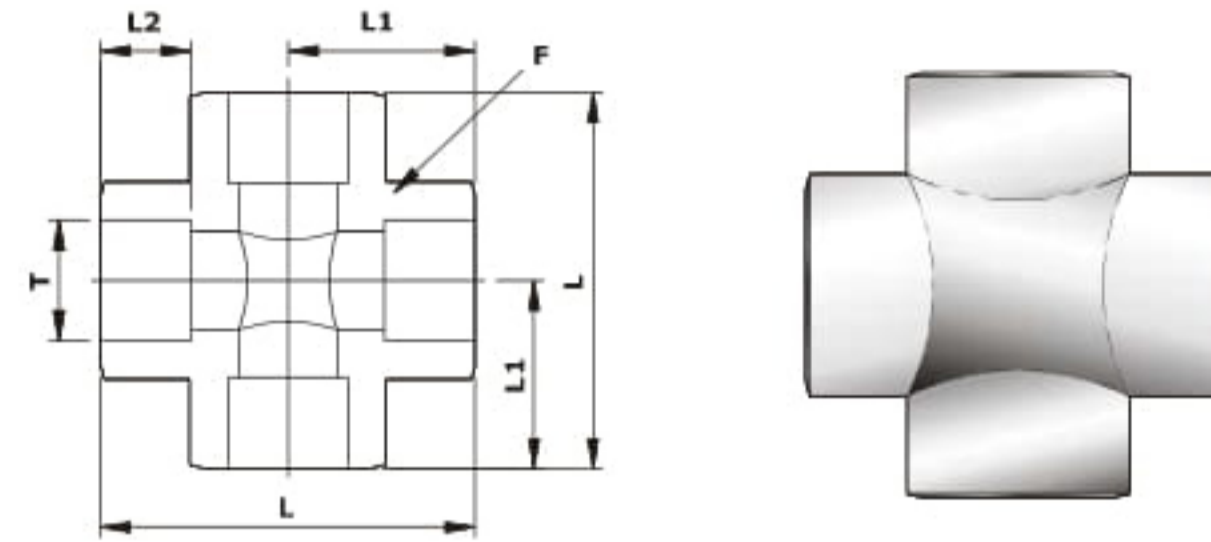
Female Cross__NPT(F) x 4 Sides

NPT Female (P)	LENGTH (L)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)			
1/16	1.00	7/16	7000
1/8	2.08	9/16	5500
1/4	2.34	3/4	5600
3/8	2.84	7/8	5000
1/2	3.12	1-1/16	4500
3/4	3.84	1-5/16	3500
1	3.82	1-5/8	3900

DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

Union Cross_FT SW Ends

TUBE OD (ØT)	LENGTH (L)	LENGTH (L1)	LENGTH (L2)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)					
1/4	1.72	0.86	0.28	7/16	11300
3/8	2.08	1.04	0.31	9/16	8400
1/2	2.34	1.17	0.38	11/16	7800
3/4	3.12	1.56	0.44	1	6700
1	3.84	1.92	0.62	1-1/4	6100

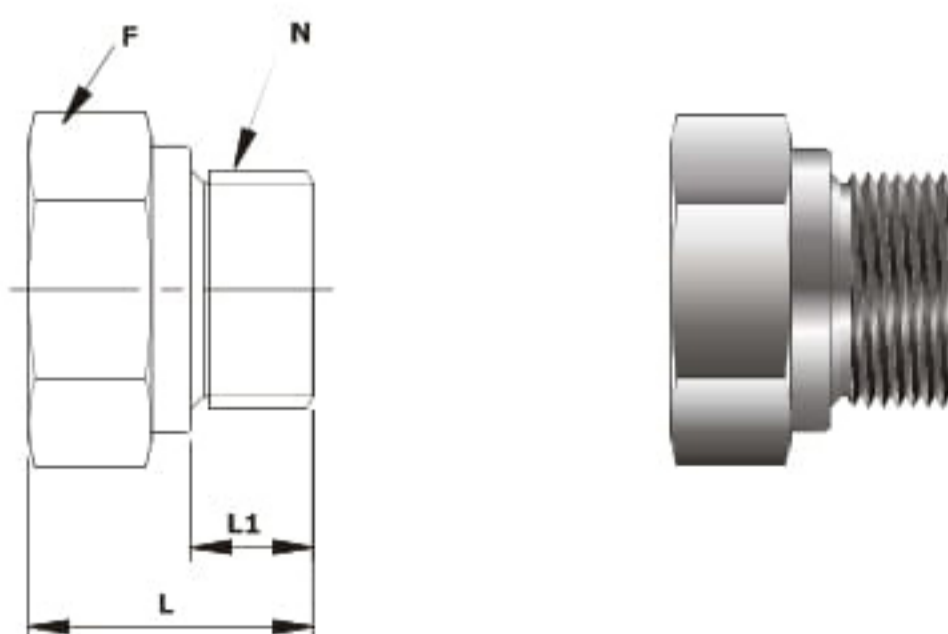
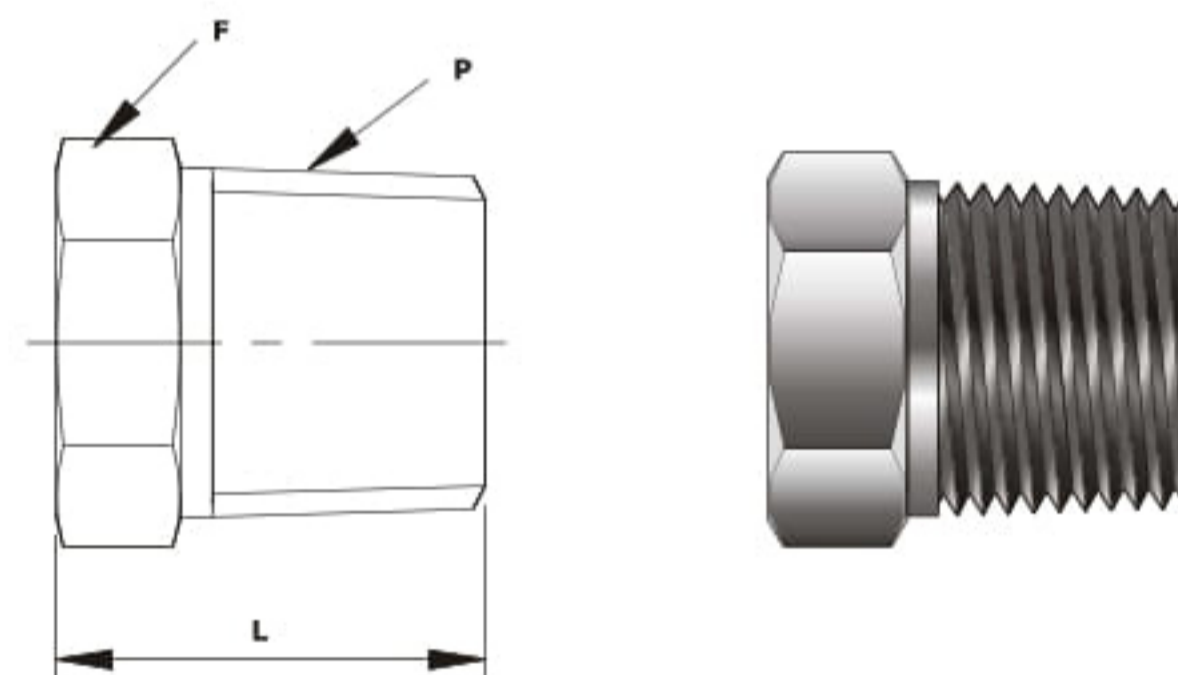


Hex Female Pipe Cap_NPT(F)

NPT Female (P)	LENGTH (L)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)			
1/16	0.50	7/16	7500
1/8	0.75	9/16	6400
1/4	0.91	3/4	6600
3/8	1.03	7/8	5300
1/2	1.34	1-1/16	5200
3/4	1.44	1-1/4	4300
1	1.62	1-5/8	4500
1-1/4	2.00		
1-1/2	2.06		
2	2.17		

Hex Male Plug_NPT(M)

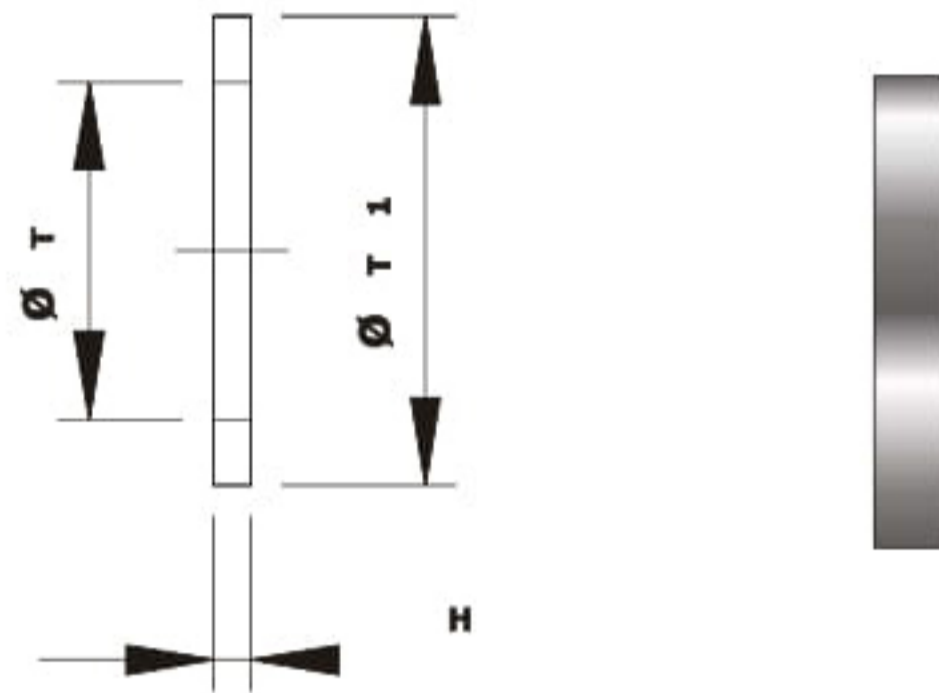
NPT Male (P)	LENGTH (L)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)			
1/16	0.75	3/8	10000
1/8	0.75	7/16	9100
1/4	0.96	9/16	7500
3/8	0.99	11/16	7200
1/2	1.21	7/8	6600
3/4	1.21	1-1/16	6400
1	1.50	1-5/16	4600
1-1/4	1.59	1-3/4	
1-1/2	1.74	2-1/8	
2	1.96	2-3/4	



Hex Pipe Plug-RS_ISOP(M)

ISO MALE (N)	LENGTH (L)	LENGTH (L1)	HEX (F)	WORKING PRESSURE (PSIG) STAINLESS STEEL
(Inch)				
1/8	0.55	0.28	9/16	9100
1/4	0.78	0.44	3/4	7500
3/8	0.78	0.44	7/8	7200
1/2	0.99	0.56	1-1/16	6600
3/4	1.13	0.63	1-5/16	6400
1	1.21	0.72	1-5/8	4600

1) RS parallel threads are commonly used with flat RP gasket, please refer page no. 29



DIMENSIONS FOR REFERENCE ONLY, SUBJECT TO CHANGE.

Gasket_RS

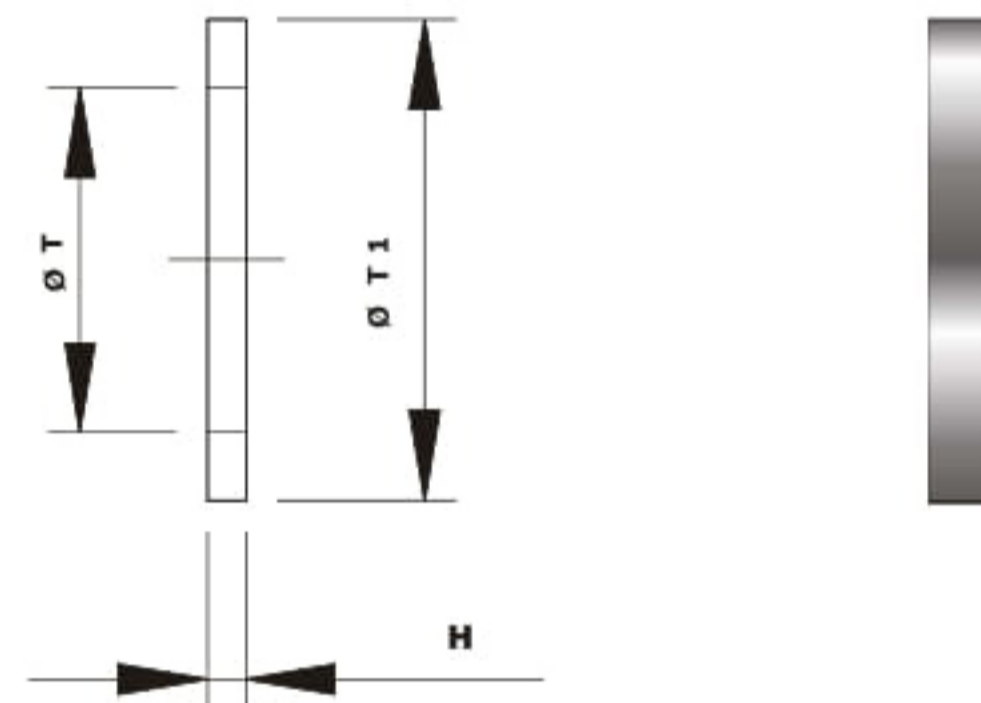
(ØT)		(H)		(ØT1)	
(mm)	(Inch.)	(mm)	(Inch.)	(mm)	(Inch.)
(Dimensions in Millimeters & Inches)					
10.4	0.41	2.0	0.08	16.0	0.63
13.7	0.54	2.0	0.08	20.6	0.81
17.3	0.68	2.0	0.08	23.9	0.94
21.6	0.85	2.5	0.10	28.7	1.12
27.2	1.06	2.5	0.10	35.1	1.38
33.8	1.33	2.5	0.10	42.9	1.69

It's consists of a Buna-N inner ring bonded to a carbon steel outer ring. (Viton inner ring bonded to a stainless steel outer ring is available on special order) used to seal a male BSP(ISO) Parallel Threads.

Gasket_RP

(ØT)		(H)		(ØT1)	
(mm)	(Inch.)	(mm)	(Inch.)	(mm)	(Inch.)
9.9	0.39	1.0	0.04	15.0	0.59
13.5	0.52	1.5	0.06	18.8	0.75
17.0	0.66	1.5	0.06	22.9	0.91
21.3	0.83	1.5	0.06	27.0	1.06
26.7	1.05	2.0	0.08	33.0	1.30
33.5	1.31	2.0	0.08	40.6	1.58

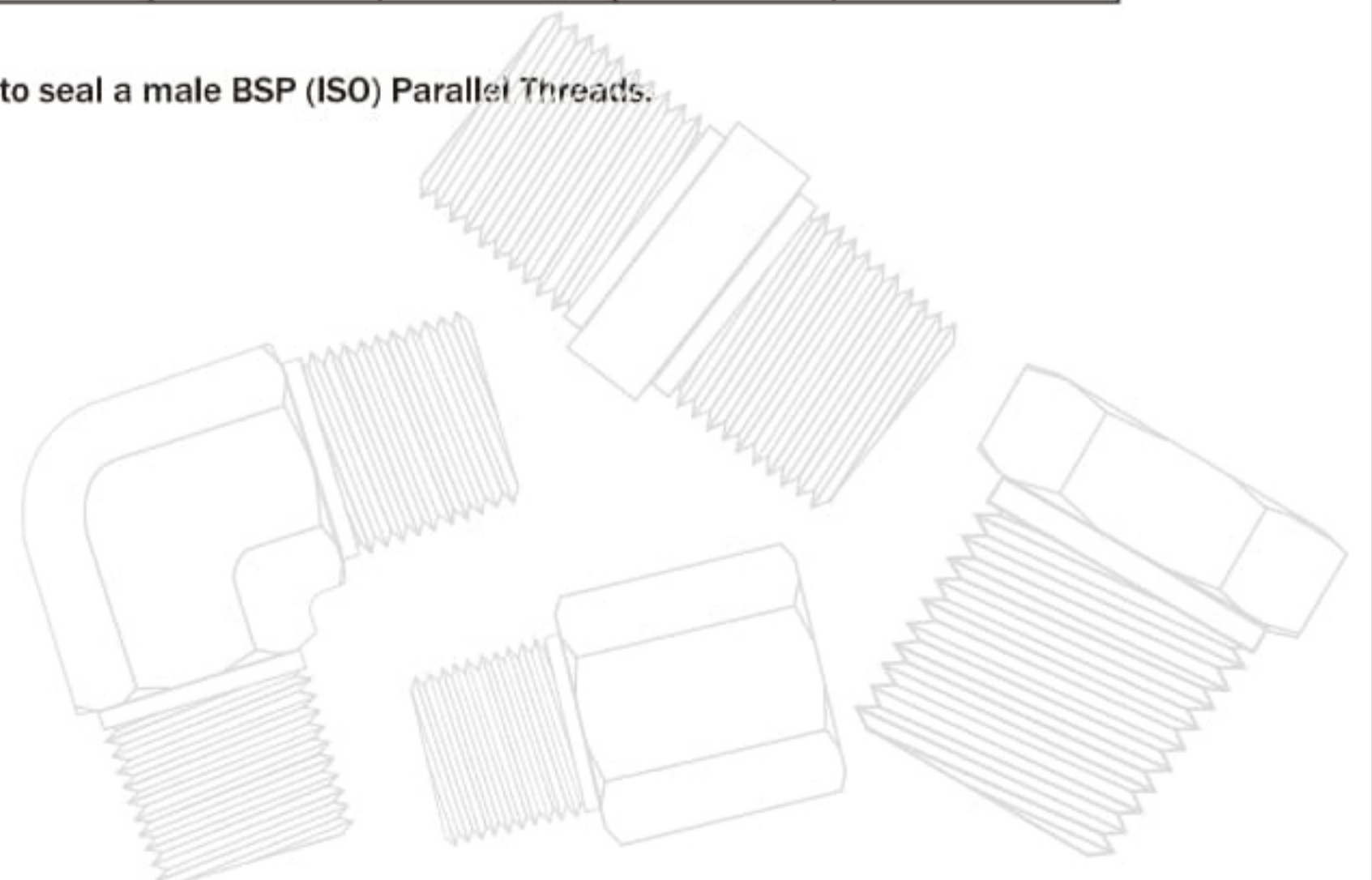
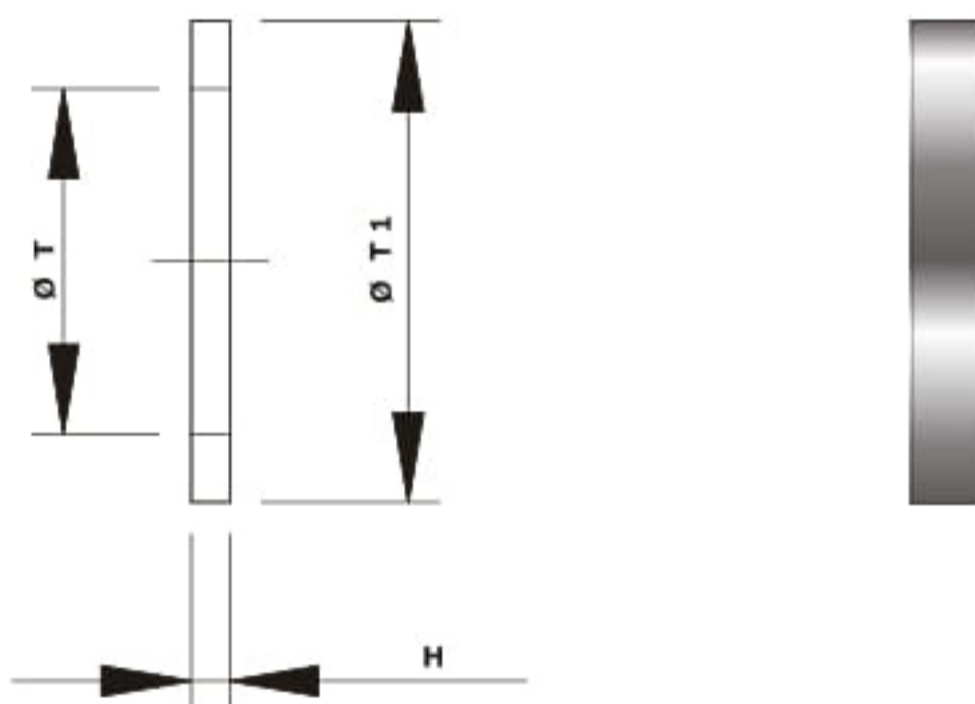
It's consists of a copper Gasket used to seal a male BSP(ISO) Parallel Threads.



Gasket_RG

	(ØT)		(H)		(ØT1)	
	(mm)	(Inch.)	(mm)	(Inch.)	(mm)	(Inch.)
(Dimensions in Millimeters & Inches)						
	7.6	0.30	1.8	0.07	10.7	0.42
	8.6	0.34	2.3	0.09	14.2	0.56
	9.1	0.36	2.5	0.10	17.8	0.70

It's consists of a copper Gasket used to seal a male BSP (ISO) Parallel Threads.



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