



Tube Fitting

- ❖ Available in tube sizes from 1/16 in. to 2 in. & 2mm to 50 mm.
- ❖ Easy to disconnect and retighten.
- ❖ Wide variety of materials and configurations.

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Introduction

Tubefit Engineers are designed as leak free connection for process, power & Instrumentations applications. These two ferrule fittings are manufactured to the high test quality standards & available in a large of sizes, materials and configurations.

Features

Tubefit Engineers Tube Fittings has been designed for use in instrumentations, process & control system, analyses and environment employed in chemical, petroleum, power generating, pulp & paper plants. Tubefit Engineers tube fitting has also found special application in other fields where high pressure tube fitting has also found special application in other fields where high pressure tube fittings are required.

If more specific information, including heat code traceability, is required Tubefit Engineers will provide details. Stainless steel Tubefit Engineers tube fittings work reliably on both seamless & welded - redrawn, fully, annealed type 304, 306 & 316L tubing.

Materials

Tubefit Engineers Tube Fittings are available as standard in Heat Code Traceable, SS316, SS316L, SS304, Carbon Steel, Brass, Monel, Hastalloy. Straight fittings are machined from cold finished bar stock & shaped bodies are machined from high quality forging. The Row materials used fully conforming to chemical requirements as per respective material specifications.

Two ferrule compact design

Tube fitting have been designed and manufactured with great care to meet the specifications required for wide range of applications in chemical, petro chemical, oil refinery, power generation, shipbuilding, pulp & paper, micro electronics, etc.

The double ferrule fitting consists of four parts body, front ferrule, back ferrule & nut. This two ferrule design consists of front & back compensates for any tolerances in tube OD, wall thickness, material hardness & always secure leak proof joints capable of high pressure, vacuum & vibration applications.

Allows the front ferrule to seal while the back ferrule grips. Uses consistent geometry (instead of torque) for gauge able make-up. Overcomes variations in tube materials, wall thickness & hardness. Provides excellent vibration resistance. Allows reliable remake connections.

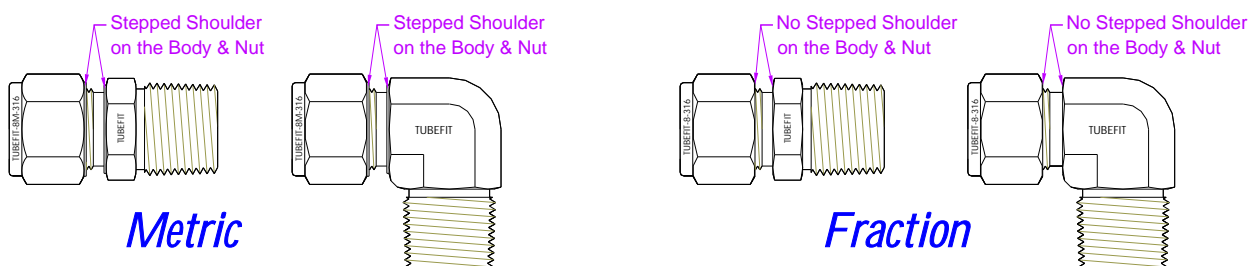
Installation

Easy to install using hand tools. No torque is transmitted to tubing during installation. Gap inspection gauge assures sufficient pull-up upon initial installation. Installation instructions are available (see page). Excellent gas-tight sealing and tube-gripping action. Reduced potential for improper pull-up. Consistent remakes. Excellent vibration fatigue resistance and tube support. Full compatibility with original stainless steel tube fittings & front ferrules of identical sizes. Easy 1.1/4-turn installation. Gauge ability on initial installation using gap inspection gauges

Identifying Tube Fittings

All metric tube Straight fittings, such as male connectors, unions, female connectors etc. & Shaped fittings, such as elbows, crosses, & tees, have a stepped shoulder on the body & nut hex.

All Fraction tube Straight fittings, such as male connectors, unions, female connectors etc. & Shaped fittings, such as elbows, crosses, & tees, have no stepped shoulder on the body & nut hex.



Standard Materials Specifications

Tube fittings are available as a standard in Stainless Steel, Brass, Monel & Hastalloy. Straight fittings are machined from cold finished bar stock & forging. Specifications for fitting materials & tubing are shown below. For special applications, contact TUBEFIT ENGINEERS.

O-rings

O-seal fittings include a 70 durometer Buna O-ring. Other straight thread fittings with O-rings include a 90 durometer fluorocarbon FKM O-ring. Other O-ring materials are available upon request. O-rings are coated with a thin film of silicone-based lubricant. Removal of factory applied lubricants may alter performance.

O-seal fittings are rated to 3000 psig (206 bar).

Plating & Coating

For improved performance, fitting components receive additional processing. Fitting bodies that are subjected to further processing (plating and coating) are shown.

Over 1 in. and over 25 mm stainless steel fittings use stainless steel ferrules with PFA coating.

Applications above 450°F (232°C)

require silver-plated front ferrules & uncoated back ferrules. To order fittings with silver-plated ferrules, add **-BM** as a suffix to the basic ordering number.

All carbon steel Swagelok tube fittings are supplied with 316 stainless steel back ferrules.

Safety Precautions

- ❖ Use only long reducers in female ports.
- ❖ Never allow problems to go unreported.
- ❖ Avoid unnecessary disassembly of unused fittings.
- ❖ Do not bleed system by loosening fitting nut or fitting plug.
- ❖ Never turn fitting body. Instead, hold fitting body & turn nut.
- ❖ Always use proper thread sealants on tapered pipe threads.
- ❖ Do not make up and tighten fittings when system is pressurized.
- ❖ Use gap inspection gauge to ensure sufficient pull-up upon initial installation.
- ❖ Do not mix materials or tubing, ferrules, nuts & fitting bodies from various manufacturers.
- ❖ Make sure that the tubing rests firmly on the shoulder of the tube fitting body before tightening the nut.

Tubing considerations

- ❖ Metal tubing material should be softer than fitting material. For example, stainless steel tubing should not be used with brass fittings.
- ❖ When tubing and fittings are made of the same material, tubing must be fully annealed.
- ❖ Always use an insert with extremely soft or pliable plastic tubing.
- ❖ Extremes of wall thickness should always be checked against fitting manufacturer's suggested minimum & maximum wall thickness limitations.
- ❖ Surface finish is very important to proper sealing. Tubing with any kind of depression, scratch, raised portion, or other surface defect will be difficult to seal, particularly in gas service.
- ❖ Tubing that is oval & will not easily fit through fitting nuts, ferrules & bodies should never be forced into the fitting.
- ❖ Tubefit Engineers Tube Fittings can be used with a wide variety of tubing materials & a large of tube wall thickness.

Materials Standards

Material	Bar Stock	Forging	Common Tubing Specification
Stainless Steel (Type 316)	ASTM A276 ASME SA479	ASTM A182 ASME SA182	ASTM A213 ASME SA213
Carbon Steel	ASTM A108	–	–
Brass	ASTM B16 ASTM B453	ASTM B283	ASTM B 75 ASME SB 75
Aluminium	ASTM B211	ASTM B247	–
Hastelloy C-276°	ASTM B574	ASTM B564	ASTM B622/626
Alloy 20	ASTM B473	ASTM B462	–
Alloy 400/R-405	ASTM B164 ASME SB164	ASTM B564 ASME SB564	–
Alloy 600	ASTM B166 ASME SB166	ASTM B564 ASME SB564	ASTM B 163
Titanium	ASTM B348	ASTM B381	ASTM B 338
Nylon	ASTM D4066	–	–
PTFE	ASTM D1710	ASTM D3294	–
SAF 2507	ASTM A479	ASTM A182	–

Plating & Coating

Fitting Material	Body Process
Aluminum	Anodized, hydrocarbon film
Alloy 400/R-405, Alloy 20, Alloy C-276, Alloy 600	Hydrocarbon film
Carbon Steel (except weld bodies)	Zinc plating
Carbon Steel (welded bodies)	Hydrocarbon film Chemical conversion coating
Titanium	Anodized
Brass, Nylon, 316 Stainless Steel, and PTFE	Not applicable

Interchangeability

Other tube fitting manufacturers often claim that their components are interchangeable with tube fitting components. We believe that interchanging & intermixing tube fitting components of different designs, made by different manufacturers, can result in leaks & tube slippage in a percentage of cases. We also believe this practice can be dangerous in critical applications.

Leak-tight seals that will withstand high pressure, vibration, vacuum & temperature changes depend upon close tolerances & consistent, exacting quality control in conjunction with good design principles. The full value we build into tube fittings is lost when components from other manufacturers are interchanged or intermixed with ours. We believe that any manufacturer's fitting performs best when only that manufacturer's components are used in its fittings.

We do not believe that a tube fitting made up by interchanging & intermixing components of other manufacturers with genuine tube fitting components will perform to the high standards of an all tube fitting.

Tube Fitting Pressure Ratings

Tube fittings are rated to the working pressure of tubing as listed in the catalog. Careful selection of high-quality tubing is important when installing safe, leak-tight systems.

NOTE: Some fittings with AN, O-Seal, and SAE/MS ends may have lower ratings. For more information, contact Tubefit Engineers sales or purchase representative.

Pipe End Pressure Ratings

Pressure ratings for fittings that have both tube fitting & pipe thread ends are determined by the end connection with the lowest pressure rating. The **Pipe End Pressure Ratings** chart lists pressure ratings for male and female pipe thread ends. For female & male pipe threads to have the same pressure rating in the same nominal pipe size, the female thread would require a heavier wall, resulting in a fitting too large & bulky to be practical.

Stress Values

Allowable stress of 20,000 psi (137,800 kPa) between -20 F & 100 F (-29 C and 37 C) based on ultimate tensile strength 75,000 psi (516,700kPa). Based on minimum wall thickness & maximum O.D. allowable by ASTM A 269 For welded tubing, the following derating rate to be applied for weld integrity. (ASME B 31.3 - 1993 Edition, Table A-1B). for double welded tubing : 0.85 & single welded tubing : 0.80

Note : ❖ All calculations are based on maximum outside diameter & minimum wall thck. without allowance for corrosion and erosion. ❖ Care should be taken for temperature rating if tubing are coated or plated. ❖ Figures shown are not for design purpose but for reference only and the accuracy of information here is not liability of our company.

Pressure Rating Calculations (ref. ASME B31.3 code for Process Piping)

NPT/ISO Pipe Size in.	316 SS & Carbon Steel				Brass			
	Male		Female		Male		Female	
	psig	bar	psig	bar	psig	bar	psig	bar
1/16	11000	760	6700	460	5500	380	3300	230
1/8	10000	690	6500	440	5000	340	3200	220
1/4	8000	550	6600	450	4000	270	3300	220
3/8	7800	540	5300	360	3900	270	2600	180
1/2	7700	530	4900	330	3800	260	2400	160
3/4	7300	500	4600	320	3600	250	2300	160
1	5300	370	4400	300	2600	180	2200	150
1.1/4	6000	410	5000	350	3000	200	2500	170
1.1/2	5000	340	4600	310	2500	170	2300	150
2	3900	270	3900	270	1900	130	1900	130

(For SS 316 multiply psi by 0.94 For Carbon Steel multiply psi by 0.75
For Brass the ratings remain same. To determine Working psi divide kPa by 6.89)

SAE / MS Pressure Ratings Calculations (ref. SAE J1926/3.)

SAE/MS Thread Size	316 SS & Carbon Steel			
	(Nonpositionable)		(Positionable)	
	psig	bar	psig	bar
5/16-24	4568	315	4568	315
7/16-20				
1/2-20				
9/16-18	3626	250	2900	200
3/4-16				
7/8-14	2900	200	2320	160
1.1/16-12				
1.3/16-12				
1.5/16-12	2320	160	1813	125
1.5/8-12				
1.7/8-12				
2.1/2-12	1813	125	1450	100

Stress values (ref. ASME B31.3 Code for Process Piping)

Material	Allowable Stress Value		Design Factor	Ultimate Tensile Strength	
	psig	bar		psig	bar
SS 316	20000	1378	3.75 : 1	75000	5170
Brass	10000	689	4 : 1	40000	2760
Steel	20000	1378	3 : 1	60000	4140

Designator Information

END CONNECTION DESIGNATOR

End. Connection	Desi.
- Male	M
- Female	F
- NPT	N
- ISO Tapered / BSPT	IT
- ISO Parallel / BSPP	IP
- UNF	U
- ISO Parallel / BSPP-Gauge	IPG
- SAE / MS Straight	SM
- O-Seal SAE / MS Straight	OSM
- O-Seal NPT	ON
- ISO Parallel / BSPP-RPIP	RPIP
- ISO Parallel /BSPP- RSIP	RSIP
- O-Seal ISO Parallel / BSPP	OIP
- 150#	1#
- 300#	3#
- Socket Weld Tube	SWT
- Tube Butt Weld	TBW
- Pipe Butt Weld	PBW
- AN Male (Flare)	ANM
- AN Female (Flare)	ANF
- Serrated (Flange)	SR
- Smooth (Flange)	SM
- Male Pipe	MP

TUBE O.D./THREAD DESIGNATOR

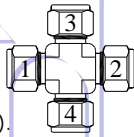
Inch			Metric		
Tube OD.	Size Nos.	Straight Thread.	Tube OD.	Size Nos.	Straight Thread.
1/16	1	3/16-20	2mm	2	5/16-20
1/8	2	5/16-20	3mm	3	5/16-20
3/16	3	3/8-20	4mm	4	3/8-20
1/4	4	7/16-20	6mm	6	7/16-20
6/16	5	1/2-20	8mm	8	1/2-20
3/8	6	9/16-20	10mm	10	5/8-20
1/2	8	3/4-20	12mm	12	3/4-20
5/8	10	7/8-20	14mm	14	7/8-20
3/4	12	1-20	15mm	15	7/8-20
7/8	14	1.1/8-20	16mm	16	7/8-20
1	16	1.5/16-20	18mm	18	1-20
1.1/4	20	1.5/8-20	20mm	20	1.1/8-20
1.1/2	24	1.15/16-20	22mm	22	1.1/8-20
2	32	2.1/2-20	25mm	25	1.5/16-20

MATERIAL DESIGNATOR

Description	Desi.
SS 316	S6
SS 304	S4
Carbon Steel	CS
Monel	MO
Brass	BR
Hastalloy	H276
Aluminium	AI
Teflon	PTFE
Titanium	TI

TEE & CROSS

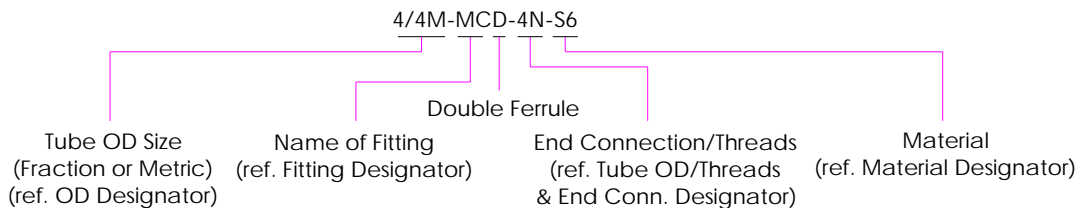
Tees are described by first sizing the run (1 to 2) & then the branch(3). Crosses are described by first sizing the run (1 to 2) & then the branch(3 to 4).



THREAD INFORMATION

Pipe Thread	Relevant Std.
NPT	ASME B1.20.1, MILL-P-71058
ISO Parallel - BSPP (ref. DIN 3852)	BS 2779, ISO 228, JIS B 0202
ISO Tapered - BSPT (ref. DIN 3852)	BS 21, ISO 7, JIS B 0203
ISO / BSP (Gauge) (ref. EN 837-1 & 837-3)	ISO 228, BS 2779
Unified (SAE)	ASME B 1.1

ORDERING INFORMATION



For easy reference, tables heads are color indicated Color Coding Fractional Tube
Metric Tube

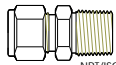
NOTE : 1)All Dimensions in this catalog are shown either as Fraction in Inches(in.)or Metric in Millimeters (mm).
2)Dimensions are for reference only and are subject to change.

3)For other Materials, End Connection/Threads, Tube OD Size, Name of Fitting or any other query please consult Tubefit Engineers Sales/Purchase department.

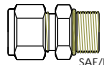
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Sr. No.	Description / End Connection	Type No.	Page No.
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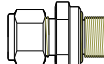
TUBE TO MALE PIPE THREAD



NPT/ISO Tapered



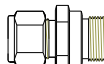
SAE/MS Straight



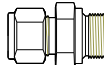
O-seal SAE/MS Straight



O-seal NPT/ISO Parallel



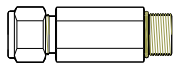
RP TYPE



RS TYPE

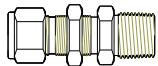
... Male Connector

Fractional Tube x NPT (M)	F - MCD - N	10
Metric Tube x NPT (M)	M - MCD - N	11
Fractional Tube x NPT (M)-Thermocouple(bore through)	F - MCBTD - N	12
Fractional Tube x ISO Tapered (M)	F - MCD - IT	13
Metric Tube x ISO Tapered (M)	M - MCD - IT	14
Fractional Tube x SAE/MS Straight (M)	F - MCD - SM	15
Fractional Tube x O-Seal SAE/MS Straight (M)	F - MCD - OSM	16
Fractional Tube x O-Seal NPT (M)	F - MCD - ON	17
Fractional Tube x O-Seal ISO Parallel (M)	F - MCD - OIP	18
Metric Tube x O-Seal ISO Parallel (M)	M - MCD - OIP	18
Fractional Tube x ISO Parallel (M) - RPIP	F - MCD - RPIP	19
Metric Tube x ISO Parallel (M) - RPIP	M - MCD - RPIP	19
Fractional Tube x ISO Parallel (M) - RSIP	F - MCD - RSIP	20
Metric Tube x ISO Parallel (M) - RSIP	M - MCD - RSIP	21



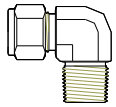
... Long Male Connector

Fractional Tube x SAE/MS Straight (M)	F - LMCD - SM	22
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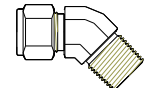
... Bulkhead Male Connector

Fractional Tube x SAE/MS Straight (M)	F - BMCD - SM	22
Fractional Tube x NPT (M)	F - BMCD - N	23
Metric Tube x NPT (M)	M - BMCD - N	23



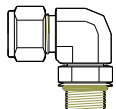
... Male Elbow

Fractional Tube x NPT (M)	F - MED - N	24
Metric Tube x NPT (M)	M - MED - N	25
Fractional Tube x ISO Tapered (M)	F - MED - IT	26
Metric Tube x ISO Tapered (M)	M - MED - IT	26



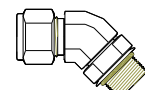
... 45° Male Elbow

Fractional Tube x NPT (M)	F - 45MED - N	27
Metric Tube x NPT (M)	M - 45MED - N	27



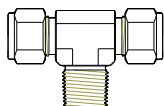
... Positionable Male Elbow

Fractional Tube x ISO Parallel (M)	F - PMED - IP	28
Metric Tube x ISO Parallel (M)	M - PMED - IP	28
Fractional Tube x SAE/MS Straight (M)	F - PMED - SM	29



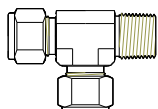
... 45° Positionable Male Elbow

Fractional Tube x SAE/MS Straight (M)	F - 45PMED - SM	29
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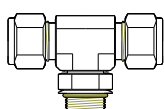
... Male Branch Tee

Fractional Tube x NPT (M)	F - MBTD - N	30
Metric Tube x NPT (M)	M - MBTD - N	30



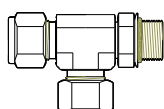
... Male Run Tee

Fractional Tube x NPT (M)	F - MRTD - N	31
Metric Tube x NPT (M)	M - MRTD - N	31



... Positionable Male Branch Tee

Fractional Tube x ISO Parallel (M)	F - PMBTD - IP	32
Metric Tube x ISO Parallel (M)	M - PMBTD - IP	32
Fractional Tube x SAE/MS Straight (M)	F - PMBTD - SM	33

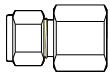


... Positionable Male Run Tee

Fractional Tube x SAE/MS Straight (M)	F - PMRTD - SM	33
Fractional Tube x ISO Parallel (M)	F - PMRTD - IP	34
Metric Tube x ISO Parallel (M)	M - PMRTD - IP	34

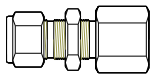
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TUBE TO FEMALE PIPE THREAD



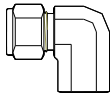
... Female Connector

Fractional Tube x NPT (F)	F - FCD - N	35
Metric Tube x NPT (F)	M - FCD - N	36
Fractional Tube x ISO Tapered (F)	F - FCD - IT	37
Metric Tube x ISO Tapered (F)	M - FCD - IT	37
Fractional Tube x ISO Parallel (F) - Gauge	F - FCD - IPG	38
Metric Tube x ISO Parallel (F) - Gauge	M - FCD - IPG	38



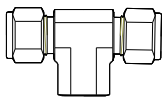
... Bulkhead Female Connector

Fractional Tube x NPT (F)	F - BFCD - N	39
Metric Tube x NPT (F)	M - BFCD - N	39



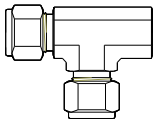
... Female Elbow

Fractional Tube x NPT (F)	F - FED - N	40
Metric Tube x NPT (F)	M - FED - N	41



... Female Branch Tee

Fractional Tube x NPT (F)	F - FBTD - N	42
Metric Tube x NPT (F)	M - FBTD - N	42



... Female Run Tee

Fractional Tube x NPT (F)	F - FRTD - N	43
Metric Tube x NPT (F)	M - FRTD - N	43

TUBE ENDS



... Tube Cap

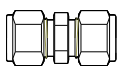
Fractional Tube	F - TCD	44
Metric Tube	M - TCD	44



... Plug

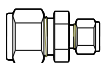
Fractional Tube	F - PD	45
Metric Tube	M - PD	45

TUBE TO TUBE



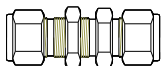
... Union

Fractional Tube x Fractional Tube	F - UD	46
Metric Tube x Metric Tube	M - UD	46
Metric Tube x Fractional Tube	M - UD - F	47



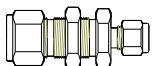
... Reducer Union

Fractional Tube x Fractional Tube	F - RUD - F	48
Metric Tube x Metric Tube	M - RUD - M	49



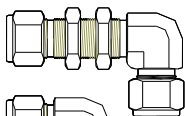
... Bulkhead Union

Fractional Tube x Fractional Tube	F - BUD	50
Metric Tube x Metric Tube	M - BUD	50



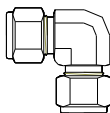
... Bulkhead Reducer Union

Fractional Tube x Fractional Tube	F - BRUD - F	51
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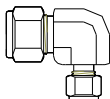
... Bulkhead Union Elbow

Fractional Tube x Fractional Tube	F - BUED	51
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... Union Elbow

Fractional Tube x Fractional Tube	F - UED	52
Metric Tube x Metric Tube	M - UED	52

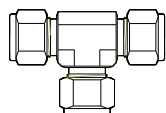


... Reducer Union Elbow

Fractional Tube x Fractional Tube	F - RUED	53
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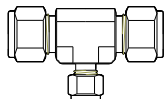
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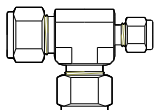
... *Union Tee*

Fractional Tube x Fractional Tube _____	F - UTD _____	54
Metric Tube x Metric Tube _____	M - UTD _____	54



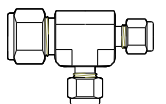
... *Reducer Union Tee* - (two similar to a different branch)

Fractional Tube x Fractional Tube _____	TRUTD - F - F _____	55
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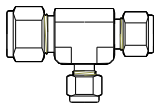
... *Reducer Union Tee* - (two similar to a different run X)

Fractional Tube x Fractional Tube _____	TRUTXD - F - F _____	56
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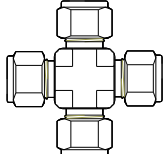
... *Reducer Union Tee* - (two similar to a different run Y)

Fractional Tube x Fractional Tube _____	TRUTYD - F - F _____	56
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... *Reducer Union Tee* - (all three different)

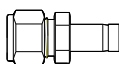
Fractional Tube x Fractional Tube _____	TRUTD - F - F - F _____	57
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... *Union Cross*

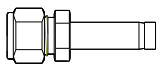
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Metric Tube x Metric Tube _____	M - UCD _____	58

PORT CONNECTOR



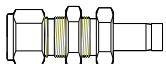
... *Reducer*

Fractional Tube x Fractional Stub _____	F - RD - F _____	59
Metric Tube x Metric Stub _____	M - RD - M _____	60
Metric Tube x Fractional Stub _____	M - RD - F _____	61



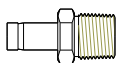
... *Long Reducer*

Fractional Tube x Fractional Long Stub _____	F - LRD - F _____	61
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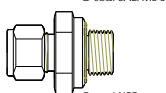
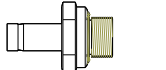
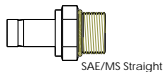
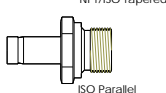
... *Bulkhead Reducer*

Fractional Tube x Fractional Stub _____	F - BRD - F _____	62
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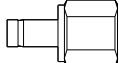
... *Male Adapter*

Fractional Stub x O-Seal NPT (M) _____	F - MADD - ON _____	62
Fractional Stub x NPT (M) _____	F - MADD - N _____	63
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Metric Stub x ISO Parallel (M) - RSIP _____	M - MAD - RSIP _____	68



... *Female Adapter*

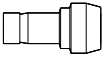
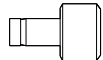
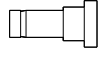
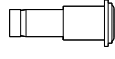
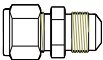

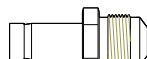

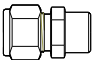
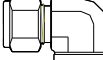

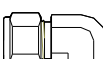




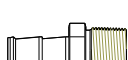
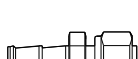

Fractional Stub x NPT (F) _____	F - FAD - N _____	69
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Metric Stub x ISO Parallel (F) - Gauge _____	M - FAD - IPG _____	72



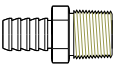
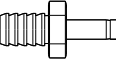

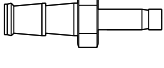



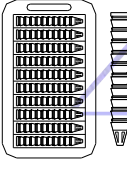


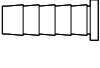




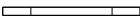


... *Port Connector*

Two Fractional Stub _____	F - PCD _____	73
Two Metric Stub _____	M - PCD _____	73

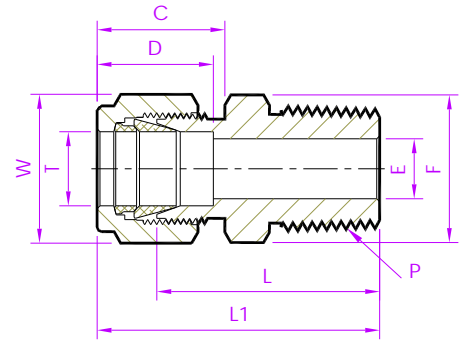
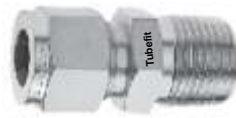
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	... <i>Nut</i> Fractional Tube _____ Metric Tube _____	F - ND _____ M - ND _____	90 90
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	... <i>Male Nut - (for Female Port)</i> Fractional Tube _____ Metric Tube _____	F - MND _____ M - MND _____	93 93
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- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Male Connector

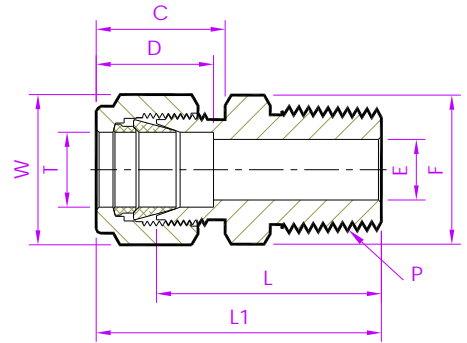
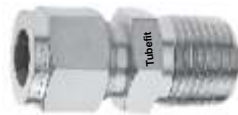
Fractional Tube x NPT (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
1 - MCD - 1N	- 100 - 1 - 1	1MSC1N	1/16	1/16	0.05	0.34	0.43	0.79	0.94	5/16	5/16
1 - MCD - 2N	- 100 - 1 - 2	1MSC2N		1/8	0.05			0.88	1.03	7/16	
1 - MCD - 4N	- 100 - 1 - 4	1MSC4N		1/4	0.05			1.07	1.22	9/16	
2 - MCD - 1N	- 200 - 1 - 1	2MSC1N	1/8	1/16	0.09	0.50	0.60	0.91	1.17	7/16	7/16
2 - MCD - 2N	- 200 - 1 - 2	2MSC2N		1/8	0.09			0.94	1.20	7/16	
2 - MCD - 4N	- 200 - 1 - 4	2MSC4N		1/4	0.09			1.14	1.40	9/16	
2 - MCD - 6N	- 200 - 1 - 6	2MSC6N		3/8	0.09			1.15	1.41	11/16	
2 - MCD - 8N	- 200 - 1 - 8	2MSC8N		1/2	0.09			1.40	1.66	7/8	
3 - MCD - 1N	- 300 - 1 - 1	3MSC1N	3/16	1/16	0.12	0.54	0.63	0.97	1.23	7/16	1/2
3 - MCD - 2N	- 300 - 1 - 2	3MSC2N		1/8	0.12			0.97	1.23	7/16	
3 - MCD - 4N	- 300 - 1 - 4	3MSC4N		1/4	0.12			1.17	1.43	9/16	
4 - MCD - 1N	- 400 - 1 - 1	4MSC1N	1/4	1/16	0.12	0.60	0.70	1.00	1.29	1/2	9/16
4 - MCD - 2N	- 400 - 1 - 2	4MSC2N		1/8	0.19			1.00	1.29	1/2	
4 - MCD - 4N	- 400 - 1 - 4	4MSC4N		1/4	0.19			1.20	1.49	9/16	
4 - MCD - 6N	- 400 - 1 - 6	4MSC6N		3/8	0.19			1.22	1.51	11/16	
4 - MCD - 8N	- 400 - 1 - 8	4MSC8N		1/2	0.19			1.47	1.76	7/8	
4 - MCD - 12N	- 400 - 1 - 12	4MSC12N		3/4	0.19			1.53	1.82	1.1/16	
5 - MCD - 2N	- 500 - 1 - 2	5MSC2N	5/16	1/8	0.19	0.64	0.73	1.05	1.34	5/8	5/8
5 - MCD - 4N	- 500 - 1 - 4	5MSC4N		1/4	0.25			1.23	1.52	5/8	
5 - MCD - 6N	- 500 - 1 - 6	5MSC6N		3/8	0.25			1.25	1.54	11/16	
5 - MCD - 8N	- 500 - 1 - 8	5MSC8N		1/2	0.25			1.50	1.79	7/8	
6 - MCD - 2N	- 600 - 1 - 2	6MSC2N	3/8	1/8	0.19	0.66	0.76	1.10	1.39	11/16	11/16
6 - MCD - 4N	- 600 - 1 - 4	6MSC4N		1/4	0.28			1.28	1.57	11/16	
6 - MCD - 6N	- 600 - 1 - 6	6MSC6N		3/8	0.28			1.28	1.57	11/16	
6 - MCD - 8N	- 600 - 1 - 8	6MSC8N		1/2	0.28			1.53	1.82	7/8	
6 - MCD - 12N	- 600 - 1 - 12	6MSC12N		3/4	0.28			1.59	1.88	1.1/16	
8 - MCD - 2N	- 810 - 1 - 2	8MSC2N	1/2	1/8	0.19	0.90	0.86	1.13	1.53	13/16	7/8
8 - MCD - 4N	- 810 - 1 - 4	8MSC4N		1/4	0.28			1.31	1.71	13/16	
8 - MCD - 6N	- 810 - 1 - 6	8MSC6N		3/8	0.38			1.31	1.71	13/16	
8 - MCD - 8N	- 810 - 1 - 8	8MSC8N		1/2	0.41			1.53	1.93	7/8	
8 - MCD - 12N	- 810 - 1 - 12	8MSC12N		3/4	0.41			1.59	1.99	1.1/16	
8 - MCD - 16N	- 810 - 1 - 16	8MSC16N		1	0.41			1.85	2.25	1.3/8	
10 - MCD - 6N	- 1010 - 1 - 6	10MSC6N	5/8	3/8	0.38	0.96	0.86	1.34	1.74	1	1
10 - MCD - 8N	- 1010 - 1 - 8	10MSC8N		1/2	0.47			1.53	1.93	1	
10 - MCD - 12N	- 1010 - 1 - 12	10MSC12N		3/4	0.50			1.59	1.99	1.1/16	
12 - MCD - 8N	- 1210 - 1 - 8	12MSC8N	3/4	1/2	0.47	0.96	0.86	1.59	1.99	1.1/16	1.1/8
12 - MCD - 12N	- 1210 - 1 - 12	12MSC12N		3/4	0.62			1.59	1.99	1.1/16	
12 - MCD - 16N	- 1210 - 1 - 16	12MSC16N		1	0.62			1.85	2.25	1.3/8	
14 - MCD - 12N	- 1410 - 1 - 12	14MSC12N	7/8	3/4	0.62	1.02	0.86	1.59	1.99	1.3/16	1.1/4
14 - MCD - 16N	- 1410 - 1 - 16	14MSC16N		1	0.72			1.85	2.25	1.3/8	
16 - MCD - 8N	- 1610 - 1 - 8	16MSC8N	1	1/2	0.47	1.23	1.04	1.78	2.26	1.3/8	1.1/2
16 - MCD - 12N	- 1610 - 1 - 12	16MSC12N		3/4	0.62			1.78	2.26	1.3/8	
16 - MCD - 16N	- 1610 - 1 - 16	16MSC16N		1	0.88			1.97	2.45	1.3/8	
20 - MCD - 16N	- 2000 - 1 - 16	20MSC16N	1.1/4	1	0.88	1.62	1.53	2.17	3.04	1.3/4	1.7/8
20 - MCD - 20N	- 2000 - 1 - 20	20MSC20N		1.1/4	1.09			2.17	3.04	1.3/4	
24 - MCD - 24N	- 2400 - 1 - 24	24MSC24N	1.1/2	1.1/2	1.34	1.97	1.78	2.43	3.50	2.1/8	2.1/4
32 - MCD - 32N	- 3200 - 1 - 32	32MSC32N	2	2	1.81	2.66	2.47	3.00	4.47	2.3/4	3

NOTE : 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to lager ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Male Connector

Metric Tube x NPT (M)

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size	ØE	D	C	L	L1	Body Hex F	Nut Hex W	
			(mm)	(In)	Dimensions in Millimetres							
2M - MCD - 2N	- 2MO - 1 - 2	M2MSC1/8N	2	1/8	1.7	12.9	15.3	23.9	30.5	11.1	11.1	
3M - MCD - 2N	- 3MO - 1 - 2	M3MSC1/8N	3	1/8	2.4	12.9	15.3	23.9	30.5	11.1	11.1	
3M - MCD - 4N	- 3MO - 1 - 4	M3MSC1/4N		1/4	2.4			29.0	35.6	14.2		
4M - MCD - 2N	- 4MO - 1 - 2	M4MSC1/8N	4	1/8	2.4	13.7	16.1	24.6	31.2	11.1	11.1	
4M - MCD - 4N	- 4MO - 1 - 4	M4MSC1/4N		1/4	2.4			29.7	36.3	14.2		
6M - MCD - 2N	- 6MO - 1 - 2	M6MSC1/8N	6	1/8	4.8	15.3	17.7	25.4	32.8	14.2	14.2	
6M - MCD - 4N	- 6MO - 1 - 4	M6MSC1/4N			1/4			4.8	30.5	37.9		14.2
6M - MCD - 6N	- 6MO - 1 - 6	M6MSC3/8N			3/8			4.8	31.0	38.4		17.4
6M - MCD - 8N	- 6MO - 1 - 8	M6MSC1/2N			1/2			4.8	37.3	44.7		22.2
8M - MCD - 2N	- 8MO - 1 - 2	M8MSC1/8N	8	1/8	4.8	16.2	18.6	26.7	34.2	16	16	
8M - MCD - 4N	- 8MO - 1 - 4	M8MSC1/4N			1/4			6.4	31.2	38.7		16
8M - MCD - 6N	- 8MO - 1 - 6	M8MSC3/8N			3/8			6.4	31.8	39.3		17.4
8M - MCD - 8N	- 8MO - 1 - 8	M8MSC1/2N			1/2			6.4	38.1	45.6		22.2
10M - MCD - 2N	- 10MO - 1 - 2	M10MSC1/8N	10	1/8	4.8	17.2	19.5	28.7	36.3	19	19	
10M - MCD - 4N	- 10MO - 1 - 4	M10MSC1/4N			1/4			7.9	33.3	40.9		19
10M - MCD - 6N	- 10MO - 1 - 6	M10MSC3/8N			3/8			7.9	33.3	40.9		19
10M - MCD - 8N	- 10MO - 1 - 8	M10MSC1/2N			1/2			7.9	38.9	46.5		22.2
10M - MCD - 12N	- 10MO - 1 - 12	M10MSC3/4N			3/4			7.9	40.4	48.0		27
10M - MCD - 16N	- 10MO - 1 - 16	M10MSC1N		1	7.9	45.3	55.0	35				
12M - MCD - 2N	- 12MO - 1 - 2	M12MSC1/8N	12	1/8	4.8	22.8	22.0	28.7	38.8	22.2	22.2	
12M - MCD - 4N	- 12MO - 1 - 4	M12MSC1/4N			1/4			7.1	33.3	43.4		22.2
12M - MCD - 6N	- 12MO - 1 - 6	M12MSC3/8N			3/8			9.5	33.3	43.4		22.2
12M - MCD - 8N	- 12MO - 1 - 8	M12MSC1/2N			1/2			9.5	38.9	49.0		22.2
12M - MCD - 12N	- 12MO - 1 - 12	M12MSC3/4N			3/4			9.5	40.4	50.5		27
14M - MCD - 4N	- 14MO - 1 - 4	M14MSC1/4N	14	1/4	7.1	24.4	22.0	34.0	44.1	25.4	25.4	
14M - MCD - 6N	- 14MO - 1 - 6	M14MSC3/8N			3/8			9.5	34.0	44.1		25.4
14M - MCD - 8N	- 14MO - 1 - 8	M14MSC1/2N			1/2			11.1	38.9	49.0		25.4
15M - MCD - 8N	- 15MO - 1 - 8	M15MSC1/2N	15	1/2	11.9	24.4	22.0	38.9	49.0	25.4	25.4	
16M - MCD - 6N	- 16MO - 1 - 6	M16MSC3/8N	16	3/8	9.5	24.4	22.0	34.0	44.1	25.4	25.4	
16M - MCD - 8N	- 16MO - 1 - 8	M16MSC1/2N			1/2			11.9	38.9	49.0		25.4
16M - MCD - 12N	- 16MO - 1 - 12	M16MSC3/4N			3/4			12.7	40.4	50.5		25.4
18M - MCD - 8N	- 18MO - 1 - 8	M18MSC1/2N	18	1/2	11.9	24.4	22.0	40.4	50.5	27	30	
18M - MCD - 12N	- 18MO - 1 - 12	M18MSC3/4N			3/4			15.1	40.4	50.5		27
20M - MCD - 8N	- 20MO - 1 - 8	M20MSC1/2N	20	1/2	11.9	26.0	22.0	42.2	52.3	30	32	
20M - MCD - 12N	- 20MO - 1 - 12	M20MSC3/4N			3/4			15.9	42.2	52.3		30
20M - MCD - 16N	- 20MO - 1 - 16	M20MSC1N			1			21.8	47.1	57.7		35
22M - MCD - 12N	- 22MO - 1 - 12	M22MSC3/4N	22	3/4	15.9	26.0	22.0	42.2	52.3	30	32	
22M - MCD - 16N	- 22MO - 1 - 16	M22MSC1N			1			18.3	47.0	57.1		35
25M - MCD - 8N	- 25MO - 1 - 8	M25MSC1/2N	25	1/2	11.9	31.3	26.5	45.2	57.5	35	38	
25M - MCD - 12N	- 25MO - 1 - 12	M25MSC3/4N			3/4			15.9	45.2	57.5		35
25M - MCD - 16N	- 25MO - 1 - 16	M25MSC1N			1			21.8	50.0	62.3		35
28M - MCD - 16N	- 28MO - 1 - 16	M28MSC1N	28	1	21.8	36.6	36.6	51.6	72.4	41	46	
28M - MCD - 20N	- 28MO - 1 - 20	M28MSC1-1/4N			1-1/4			21.8	52.9	73.1		46
30M - MCD - 20N	- 30MO - 1 - 20	M30MSC1-1/4N	30	1-1/4	26.2	39.6	39.2	55.6	77.2	46	50	
32M - MCD - 20N	- 32MO - 1 - 20	M32MSC1-1/4N	32	1-1/4	28.6	42.0	41.6	56.6	79.6	46	50	
38M - MCD - 24N	- 38MO - 1 - 24	M38MSC1-1/2N	38	1-1/2	33.7	49.4	47.9	64.0	91.6	55	60	

NOTE: 1)The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

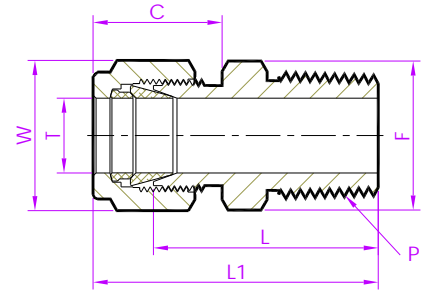
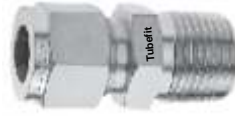
- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-

Tube To Male Pipe Thread

Male Connector

(Thermocouple-Bore Through)



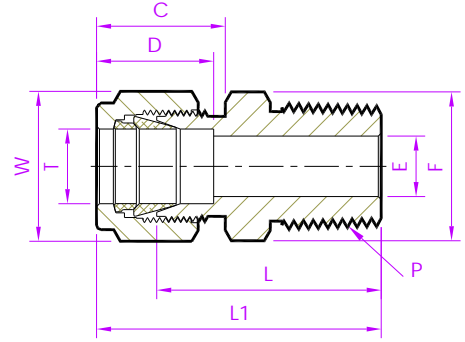
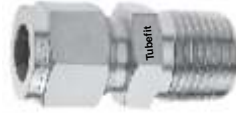
Fractional Tube x NPT (M)

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches									
1 - MCBTD - 1N	- 100 - 1 - 1BT	1MTC1N	1/16	1/16	0.43	0.79	0.94	5/16	5/16
1 - MCBTD - 2N	- 100 - 1 - 2BT	1MTC2N		1/8		0.88	1.03	7/16	
1 - MCBTD - 4N	- 100 - 1 - 4BT	1MTC4N		1/4		1.07	1.22	9/16	
2 - MCBTD - 1N	- 200 - 1 - 1BT	2MTC1N	1/8	1/16	0.60	0.91	1.17	7/16	7/16
2 - MCBTD - 2N	- 200 - 1 - 2BT	2MTC2N		1/8		0.94	1.20	7/16	
2 - MCBTD - 4N	- 200 - 1 - 4BT	2MTC4N		1/4		1.14	1.40	9/16	
2 - MCBTD - 6N	- 200 - 1 - 6BT	2MTC6N		3/8		1.15	1.41	11/16	
2 - MCBTD - 8N	- 200 - 1 - 8BT	2MTC8N		1/2		1.40	1.66	7/8	
3 - MCBTD - 2N	- 300 - 1 - 2 BT	3MTC2N	3/16	1/8	0.63	0.97	1.23	7/16	1/2
3 - MCBTD - 4N	- 300 - 1 - 4BT	3MTC4N		1/4		1.17	1.43	9/16	
4 - MCBTD - 1N	- 400 - 1 - 1BT	4MTC1N	1/4	1/16	0.70	1.00	1.29	1/2	9/16
4 - MCBTD - 2N	- 400 - 1 - 2BT	4MTC2N		1/8		1.00	1.29	1/2	
4 - MCBTD - 4N	- 400 - 1 - 4BT	4MTC4N		1/4		1.20	1.49	9/16	
4 - MCBTD - 6N	- 400 - 1 - 6BT	4MTC6N		3/8		1.22	1.51	11/16	
4 - MCBTD - 8N	- 400 - 1 - 8BT	4MTC8N		1/2		1.47	1.76	7/8	
4 - MCBTD - 12N	- 400 - 1 - 12BT	4MTC12N		3/4		1.53	1.82	1.1/16	
5 - MCBTD - 2N	- 500 - 1 - 2BT	5MTC2N	5/16	1/8	0.73	1.05	1.34	5/8	5/8
5 - MCBTD - 4N	- 500 - 1 - 4BT	5MTC4N		1/4		1.23	1.52	5/8	
5 - MCBTD - 6N	- 500 - 1 - 6BT	5MTC6N		3/8		1.25	1.54	11/16	
6 - MCBTD - 2N	- 600 - 1 - 2BT	6MTC2N	3/8	1/8	0.76	1.10	1.39	11/16	11/16
6 - MCBTD - 4N	- 600 - 1 - 4BT	6MTC4N		1/4		1.28	1.57	11/16	
6 - MCBTD - 6N	- 600 - 1 - 6BT	6MTC6N		3/8		1.28	1.57	11/16	
6 - MCBTD - 8N	- 600 - 1 - 8BT	6MTC8N		1/2		1.53	1.82	7/8	
6 - MCBTD - 12N	- 600 - 1 - 12BT	6MTC12N		3/4		1.59	1.88	1.1/16	
8 - MCBTD - 2N	- 810 - 1 - 2BT	8MTC2N		1/2		1/8	0.86	1.13		1.53	13/16	7/8
8 - MCBTD - 4N	- 810 - 1 - 4BT	8MTC4N	1/4		1.31	1.71		13/16	
8 - MCBTD - 6N	- 810 - 1 - 6BT	8MTC6N	3/8		1.31	1.71		13/16	
8 - MCBTD - 8N	- 810 - 1 - 8BT	8MTC8N	1/2		1.53	1.93		7/8	
8 - MCBTD - 12N	- 810 - 1 - 12BT	8MTC12N	3/4		1.59	1.99		1.1/16	
8 - MCBTD - 16N	- 810 - 1 - 16BT	8MTC16N	1		1.85	2.25		1.3/8	
10 - MCBTD - 6N	- 1010 - 1 - 6BT	10MTC6N	5/8	3/8	0.86	1.34	1.74	1	1
10 - MCBTD - 8N	- 1010 - 1 - 8BT	10MTC8N		1/2		1.53	1.93	1	
10 - MCBTD - 12N	- 1010 - 1 - 12BT	10MTC12N		3/4		1.59	1.99	1.1/16	
12 - MCBTD - 8N	- 1210 - 1 - 8BT	12MTC8N	3/4	1/2	0.86	1.59	1.99	1.1/16	1.1/8
12 - MCBTD - 12N	- 1210 - 1 - 12BT	12MTC12N		3/4		1.59	1.99	1.1/16	
12 - MCBTD - 16N	- 1210 - 1 - 16BT	12MTC16N		1		1.85	2.25	1.3/8	
14 - MCBTD - 12N	- 1410 - 1 - 12BT	14MTC12N	7/8	3/4	0.86	1.59	1.99	1.3/16	1.1/4
14 - MCBTD - 16N	- 1410 - 1 - 16BT	14MTC16N		1		1.85	2.25	1.3/8	
16 - MCBTD - 8N	- 1610 - 1 - 8BT	16MTC8N	1	1/2	1.04	1.78	2.26	1.3/8	1.1/2
16 - MCBTD 12N	- 1610 - 1 - 12BT	16MTC12N		3/4		1.78	2.26	1.3/8	
16 - MCBTD - 16N	- 1610 - 1 - 16BT	16MTC16N		1		1.97	2.45	1.3/8	

NOTE: 1)Dimension L1, C is shown in the finger-tight position. 2)Dimensions are for reference only and are subject to change. 3)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



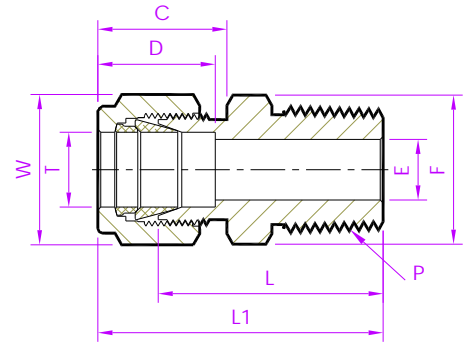
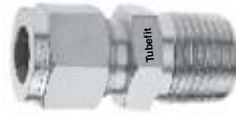
Male Connector

Fractional Tube x ISO Tapered (M)

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISO Male Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
1 - MCD - 1IT	- 100 - 1 - 1RT	1MSC1IT	1/16	1/16	0.05	0.34	0.43	0.79	0.94	5/16	5/16
1 - MCD - 2IT	- 100 - 1 - 2RT	1MSC2IT		1/8	0.05			0.88	1.03	7/16	
1 - MCD - 4IT	- 100 - 1 - 4RT	1MSC4IT		1/4	0.05			1.07	1.22	9/16	
2 - MCD - 1IT	- 200 - 1 - 1RT	2MSC1IT	1/8	1/16	0.09	0.50	0.60	0.91	1.17	7/16	7/16
2 - MCD - 2IT	- 200 - 1 - 2RT	2MSC2IT		1/8	0.09			0.94	1.20	7/16	
2 - MCD - 4IT	- 200 - 1 - 4RT	2MSC4IT		1/4	0.09			1.14	1.40	9/16	
2 - MCD - 6IT	- 200 - 1 - 6RT	2MSC6IT		3/8	0.09			1.15	1.41	11/16	
2 - MCD - 8IT	- 200 - 1 - 8RT	2MSC8IT		1/2	0.09			1.40	1.66	7/8	
3 - MCD - 1IT	- 300 - 1 - 1RT	3MSC1IT	3/16	1/16	0.12	0.54	0.63	0.97	1.23	7/16	1/2
3 - MCD - 2IT	- 300 - 1 - 2RT	3MSC2IT		1/8	0.12			0.97	1.23	7/16	
3 - MCD - 4IT	- 300 - 1 - 4RT	3MSC4IT		1/4	0.12			1.17	1.43	9/16	
4 - MCD - 1IT	- 400 - 1 - 1RT	4MSC1IT	1/4	1/16	0.12	0.60	0.70	1.00	1.29	1/2	9/16
4 - MCD - 2IT	- 400 - 1 - 2RT	4MSC2IT		1/8	0.19			1.00	1.29	1/2	
4 - MCD - 4IT	- 400 - 1 - 4RT	4MSC4IT		1/4	0.19			1.20	1.49	9/16	
4 - MCD - 6IT	- 400 - 1 - 6RT	4MSC6IT		3/8	0.19			1.22	1.51	11/16	
4 - MCD - 8IT	- 400 - 1 - 8RT	4MSC8IT		1/2	0.19			1.47	1.76	7/8	
4 - MCD - 12IT	- 400 - 1 - 12RT	4MSC12IT		3/4	0.19			1.53	1.82	1.1/16	
5 - MCD - 2IT	- 500 - 1 - 2RT	5MSC2IT	5/16	1/8	0.19	0.64	0.73	1.05	1.34	5/8	5/8
5 - MCD - 4IT	- 500 - 1 - 4RT	5MSC4IT		1/4	0.25			1.23	1.52	5/8	
5 - MCD - 6IT	- 500 - 1 - 6RT	5MSC6IT		3/8	0.25			1.25	1.54	11/16	
5 - MCD - 8IT	- 500 - 1 - 8RT	5MSC8IT		1/2	0.25			1.50	1.79	7/8	
6 - MCD - 2IT	- 600 - 1 - 2RT	6MSC2IT	3/8	1/8	0.19	0.66	0.76	1.10	1.39	11/16	11/16
6 - MCD - 4IT	- 600 - 1 - 4RT	6MSC4IT		1/4	0.28			1.28	1.57	11/16	
6 - MCD - 6IT	- 600 - 1 - 6RT	6MSC6IT		3/8	0.28			1.28	1.57	11/16	
6 - MCD - 8IT	- 600 - 1 - 8RT	6MSC8IT		1/2	0.28			1.53	1.82	7/8	
6 - MCD - 12IT	- 600 - 1 - 12RT	6MSC12IT		3/4	0.28			1.59	1.88	1.1/16	
8 - MCD - 2IT	- 810 - 1 - 2RT	8MSC2IT	1/2	1/8	0.19	0.90	0.86	1.13	1.53	13/16	7/8
8 - MCD - 4IT	- 810 - 1 - 4RT	8MSC4IT		1/4	0.28			1.31	1.71	13/16	
8 - MCD - 6IT	- 810 - 1 - 6RT	8MSC6IT		3/8	0.38			1.31	1.71	13/16	
8 - MCD - 8IT	- 810 - 1 - 8RT	8MSC8IT		1/2	0.41			1.53	1.93	7/8	
8 - MCD - 12IT	- 810 - 1 - 12RT	8MSC12IT		3/4	0.41			1.59	1.99	1.1/16	
8 - MCD - 16IT	- 810 - 1 - 16RT	8MSC16IT		1	0.41			1.85	2.25	1.3/8	
10 - MCD - 6IT	- 1010 - 1 - 6RT	10MSC6IT	5/8	3/8	0.38	0.96	0.86	1.34	1.74	1	1
10 - MCD - 8IT	- 1010 - 1 - 8RT	10MSC8IT		1/2	0.47			1.53	1.93	1	
10 - MCD - 12IT	- 1010 - 1 - 12RT	10MSC12IT		3/4	0.50			1.59	1.99	1.1/16	
12 - MCD - 8IT	- 1210 - 1 - 8RT	12MSC8IT		1/2	0.47			1.59	1.99	1.1/16	
12 - MCD - 12IT	- 1210 - 1 - 12RT	12MSC12IT	3/4	3/4	0.62	0.96	0.86	1.59	1.99	1.1/16	1.1/8
12 - MCD - 16IT	- 1210 - 1 - 16RT	12MSC16IT		1	0.62			1.85	2.25	1.3/8	
14 - MCD - 12IT	- 1410 - 1 - 12RT	14MSC12IT	7/8	3/4	0.62	1.02	0.86	1.59	1.99	1.3/16	1.1/4
14 - MCD - 16IT	- 1410 - 1 - 16RT	14MSC16IT		1	0.72			1.85	2.25	1.3/8	
16 - MCD - 8IT	- 1610 - 1 - 8RT	16MSC8IT	1	1/2	0.47	1.23	1.04	1.78	2.26	1.3/8	1.1/2
16 - MCD 12IT	- 1610 - 1 - 12RT	16MSC12IT		3/4	0.62			1.78	2.26	1.3/8	
16 - MCD - 16IT	- 1610 - 1 - 16RT	16MSC16IT		1	0.88			1.97	2.45	1.3/8	
20 - MCD - 16IT	- 2000 - 1 - 16RT	20MSC16IT	1.1/4	1	0.88	1.62	1.53	2.17	3.04	1.3/4	1.7/8
20 - MCD - 20IT	- 2000 - 1 - 20RT	20MSC20IT		1.1/4	1.09			2.17	3.04	1.3/4	
24 - MCD - 24IT	- 2400 - 1 - 24RT	24MSC24IT	1.1/2	1.1/2	1.34	1.97	1.78	2.43	3.50	2.1/8	2.1/4
32 - MCD - 32IT	- 3200 - 1 - 32RT	32MSC32IT	2	2	1.81	2.66	2.47	3.00	4.47	2.3/4	3

NOTE: 1)The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)ISO Tapered (BSP) thread as per BS 21.
- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



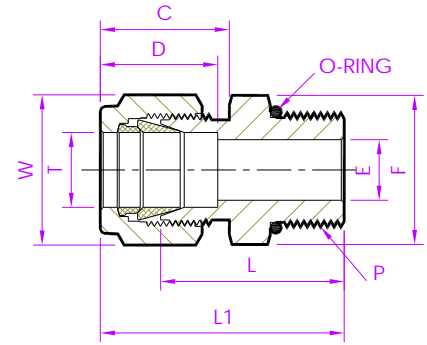
Male Connector

Metric Tube x ISO Tapered (M)

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISO Male Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
			(mm)	(In)	Dimensions in Millimetres						
2M - MCD - 2IT	- 2MO - 1 - 2RT	M2MSC1/8K	2	1/8	1.7	12.9	15.3	23.9	30.5	11.1	11.1
3M - MCD - 2IT	- 3MO - 1 - 2RT	M3MSC1/8K	3	1/8	2.4	12.9	15.3	23.9	30.5	11.1	11.1
3M - MCD - 4IT	- 3MO - 1 - 4RT	M3MSC1/4K		1/4	2.4			29.0	35.6	14.2	
4M - MCD - 2IT	- 4MO - 1 - 2RT	M4MSC1/8K	4	1/8	2.4	13.7	16.1	24.6	31.2	11.1	11.1
4M - MCD - 4IT	- 4MO - 1 - 4RT	M4MSC1/4K		1/4	2.4			29.7	36.3	14.2	
6M - MCD - 2IT	- 6MO - 1 - 2RT	M6MSC1/8K	6	1/8	4.8	15.3	17.7	25.4	32.8	14.2	14.2
6M - MCD - 4IT	- 6MO - 1 - 4RT	M6MSC1/4K		1/4	4.8			30.5	37.9	14.2	
6M - MCD - 6IT	- 6MO - 1 - 6RT	M6MSC3/8K		3/8	4.8			31.0	38.4	17.4	
6M - MCD - 8IT	- 6MO - 1 - 8RT	M6MSC1/2K		1/2	4.8			37.3	44.7	22.2	
8M - MCD - 2IT	- 8MO - 1 - 2RT	M8MSC1/8K	8	1/8	4.8	16.2	18.6	26.7	34.2	16	16
8M - MCD - 4IT	- 8MO - 1 - 4RT	M8MSC1/4K		1/4	6.4			31.2	38.7	16	
8M - MCD - 6IT	- 8MO - 1 - 6RT	M8MSC3/8K		3/8	6.4			31.8	39.2	17.4	
8M - MCD - 8IT	- 8MO - 1 - 8RT	M8MSC1/2K		1/2	6.4			38.1	45.6	22.2	
10M - MCD - 2IT	- 10MO - 1 - 2RT	M10MSC1/8K	10	1/8	4.8	17.2	19.5	28.7	36.3	17.4	19
10M - MCD - 4IT	- 10MO - 1 - 4RT	M10MSC1/4K		1/4	7.9			33.3	40.9	17.4	
10M - MCD - 6IT	- 10MO - 1 - 6RT	M10MSC3/8K		3/8	7.9			33.3	40.9	17.4	
10M - MCD - 8IT	- 10MO - 1 - 8RT	M10MSC1/2K		1/2	7.9			38.9	46.5	22.2	
12M - MCD - 4IT	- 12MO - 1 - 4RT	M12MSC1/4K	12	1/4	7.1	22.8	22.0	33.3	43.4	22.2	22.2
12M - MCD - 6IT	- 12MO - 1 - 6RT	M12MSC3/8K		3/8	9.5			33.3	43.4	22.2	
12M - MCD - 8IT	- 12MO - 1 - 8RT	M12MSC1/2K		1/2	9.5			38.9	49.0	22.2	
12M - MCD - 12IT	- 12MO - 1 - 12RT	M12MSC3/4K		3/4	9.5			40.4	50.5	27	
15M - MCD - 8IT	- 15MO - 1 - 8RT	M15MSC1/2K	15	1/2	11.9	24.4	22.0	38.9	49.0	25.4	25.4
16M - MCD - 4IT	- 16MO - 1 - 4RT	M16MSC1/4K	16	1/4	7.1	24.4	22.0	34.0	44.1	25.4	25.4
16M - MCD - 6IT	- 16MO - 1 - 6RT	M16MSC3/8K		3/8	9.5			34.0	44.1	25.4	
16M - MCD - 8IT	- 16MO - 1 - 8RT	M16MSC1/2K		1/2	11.9			38.9	49.0	25.4	
16M - MCD - 12IT	- 16MO - 1 - 12RT	M16MSC3/4K		3/4	12.7			40.4	50.5	27	
18M - MCD - 8IT	- 18MO - 1 - 8RT	M18MSC1/2K	18	1/2	11.9	24.4	22.0	40.4	50.5	27	30
18M - MCD - 12IT	- 18MO - 1 - 12RT	M18MSC3/4K		3/4	15.1			40.4	50.5	27	
20M - MCD - 8IT	- 20MO - 1 - 8RT	M20MSC1/2K	20	1/2	11.9	26.0	22.0	42.2	52.3	30	32
20M - MCD - 12IT	- 20MO - 1 - 12RT	M20MSC3/4K		3/4	15.9			42.2	52.3	30	
22M - MCD - 12IT	- 22MO - 1 - 12RT	M22MSC3/4K	22	3/4	15.9	26.0	22.0	42.2	52.3	30	32
22M - MCD - 16IT	- 22MO - 1 - 16RT	M22MSC1K		1	18.3			47.0	57.1	35	
25M - MCD - 12IT	- 25MO - 1 - 12RT	M25MSC3/4K	25	3/4	15.9	31.3	26.5	45.2	57.5	35	38
25M - MCD - 16IT	- 25MO - 1 - 16RT	M25MSC1K		1	21.8			50.0	62.3	35	

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)ISO Tapered (BSPT) thread as per BS 21.
- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



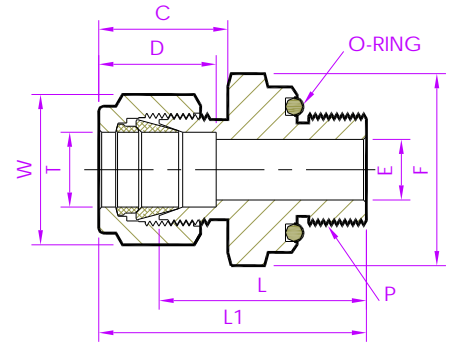
Male Connector

Fractional Tube x SAE/MS Straight (M)

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	SAE/MS Male Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
1 - MCD - 5SM	- 100 - 1 - 2ST	1M1SC2	1/16	5/16x24	0.05	0.34	0.43	0.72	0.92	7/16	5/16
2 - MCD - 5SM	- 200 - 1 - 2ST	2M1SC2	1/8	5/16x24	0.09	0.50	0.60	0.92	1.18	7/16	7/16
2 - MCD - 7SM	- 200 - 1 - 4ST	2M1SC4		7/16x20	0.09			0.98	1.24	9/16	
2 - MCD - 9SM	- 200 - 1 - 6ST	2M1SC6		9/16x18	0.09			1.05	1.31	11/16	
3 - MCD - 6SM	- 300 - 1 - 3ST	3M1SC3	3/16	3/8x24	0.12	0.54	0.63	0.94	1.20	9/16	1/2
4 - MCD - 7SM	- 400 - 1 - 4ST	4M1SC4	1/4	7/16x20	0.19	0.60	0.70	1.05	1.34	9/16	9/16
4 - MCD - 9SM	- 400 - 1 - 6ST	4M1SC6		9/16x18	0.19			1.11	1.40	11/16	
4 - MCD - 12SM	- 400 - 1 - 8ST	4M1SC8		3/4x16	0.19			1.19	1.48	7/8	
4 - MCD - 14SM	- 400 - 1 - 10ST	4M1SC10		7/8x14	0.19			1.31	1.60	1	
5 - MCD - 8SM	- 500 - 1 - 5ST	5M1SC5	5/16	1/2x20	0.25	0.64	0.73	1.08	1.37	5/8	5/8
6 - MCD - 7SM	- 600 - 1 - 4ST	6M1SC4	3/8	7/16x20	0.20	0.66	0.76	1.11	1.40	5/8	11/16
6 - MCD - 9SM	- 600 - 1 - 6ST	6M1SC6		9/16x18	0.28			1.17	1.46	11/16	
6 - MCD - 12SM	- 600 - 1 - 8ST	6M1SC8		3/4x16	0.28			1.25	1.54	7/8	
6 - MCD - 14SM	- 600 - 1 - 10ST	6M1SC10		7/8x14	0.28			1.37	1.66	1	
8 - MCD - 9SM	- 810 - 1 - 6ST	8M1SC6	1/2	9/16x18	0.28	0.90	0.86	1.14	1.54	13/16	7/8
8 - MCD - 12SM	- 810 - 1 - 8ST	8M1SC8		3/4x16	0.41			1.25	1.65	7/8	
8 - MCD - 14SM	- 810 - 1 - 10ST	8M1SC10		7/8x14	0.41			1.37	1.77	1	
8 - MCD - 17SM	- 810 - 1 - 12ST	8M1SC12		1.1/16x12	0.41			1.53	1.93	1.1/4	
10 - MCD - 12SM	- 1010 - 1 - 8ST	10M1SC8	5/8	3/4x16	0.42	0.96	0.86	1.25	1.65	15/16	1
10 - MCD - 14SM	- 1010 - 1 - 10ST	10M1SC10		7/8x14	0.50			1.38	1.78	1	
12 - MCD - 12SM	- 1210 - 1 - 8ST	12M1SC8	3/4	3/4x16	0.42	0.96	0.86	1.41	1.81	1.1/16	1.1/8
12 - MCD - 17SM	- 1210 - 1 - 12ST	12M1SC12		1.1/16x12	0.62			1.53	1.93	1.1/4	
14 - MCD - 19SM	- 1410 - 1 - 14ST	14M1SC14	7/8	1.3/16x12	0.72	1.02	0.86	1.53	1.93	1.3/8	1.1/4
16 - MCD - 17SM	- 1610 - 1 - 12ST	16M1SC12	1	1.1/16x12	0.66	1.23	1.04	1.62	2.10	1.3/8	1.1/2
16 - MCD - 21SM	- 1610 - 1 - 16ST	16M1SC16		1.5/16x12	0.88			1.66	2.14	1.1/2	

NOTE: 1)The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)SAE/MS (UNF) thread as per ASME B1.1.
- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Male Connector

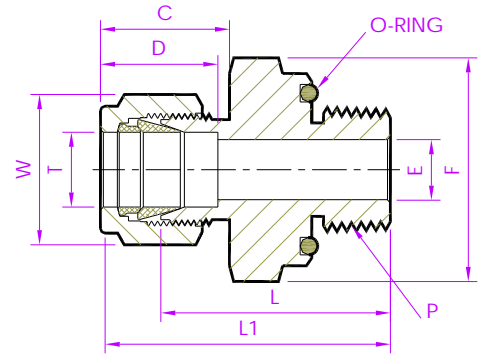
Fractional Tube x O-seal SAE/MS Straight (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	SAE/MS Male Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
1 - MCD - 5OSM	- 100 - 1 - OR	1M2SC2	1/16	5/16x24	0.05	0.34	0.43	0.90	1.05	9/16	5/16
2 - MCD - 5OSM	- 200 - 1 - OR	2M2SC2	1/8	5/16x24	0.09	0.50	0.60	1.03	1.29	9/16	7/16
3 - MCD - 6OSM	- 300 - 1 - OR	3M2SC3	3/16	3/8x24	0.12	0.54	0.63	1.09	1.35	5/8	1/2
4 - MCD - 7OSM	- 400 - 1 - OR	4M2SC4	1/4	7/16x20	0.19	0.60	0.70	1.22	1.51	3/4	9/16
5 - MCD - 8OSM	- 500 - 1 - OR	5M2SC5	5/16	1/2x20	0.25	0.64	0.73	1.37	1.60	7/8	5/8
6 - MCD - 9OSM	- 600 - 1 - OR	6M2SC6	3/8	9/16x18	0.28	0.66	0.76	1.38	1.67	15/16	11/16
8 - MCD - 12OSM	- 810 - 1 - OR	8M2SC8	1/2	3/4x16	0.41	0.90	0.86	1.41	1.81	1.1/8	7/8
10 - MCD - 14OSM	- 1010 - 1 - OR	10M2SC10	5/8	7/8x14	0.50	0.96	0.86	1.50	1.90	1.3/8	1
12 - MCD - 17OSM	- 1210 - 1 - OR	12M2SC12	3/4	1.1/16x12	0.62	0.96	0.86	1.66	2.06	1.1/2	1.1/8
14 - MCD - 17OSM	- 1410 - 1 - OR	14M2SC12	7/8	1.1/16x12	0.75	1.02	0.86	1.66	2.06	1.1/2	1.1/4
16 - MCD - 21OSM	- 1610 - 1 - OR	16M2SC16	1	1.5/16x12	0.88	1.23	1.04	1.81	2.29	1.3/4	1.1/2

NOTE: 1)The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)SAE/MS (UNF) thread as per ASME B1.1.
- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread

Male Connector



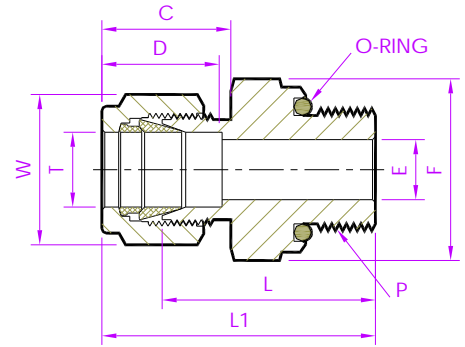
Fractional Tube x O-seal NPT (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	ØE	D	E	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
1 - MCD - 2ON	- 100 - 1 - 2 - OR	1M3SC2	1/16	1/8	0.05	0.34	0.43	0.92	1.12	3/4	5/16
2 - MCD - 2ON	- 200 - 1 - 2 - OR	2M3SC2	1/8	1/8	0.09	0.50	0.60	1.09	1.29	3/4	7/16
2 - MCD - 4ON	- 200 - 1 - 4 - OR	2M3SC4		1/4	0.09			1.17	1.43	15/16	
3 - MCD - 2ON	- 300 - 1 - 2 - OR	3M3SC2	3/16	1/8	0.12	0.54	0.63	1.06	1.32	3/4	1/2
3 - MCD - 4ON	- 300 - 1 - 4 - OR	3M3SC4		1/4	0.12			1.20	1.46	15/16	
4 - MCD - 2ON	- 400 - 1 - 2 - OR	4M3SC2	1/4	1/8	0.19	0.60	0.70	1.09	1.38	3/4	9/16
4 - MCD - 4ON	- 400 - 1 - 4 - OR	4M3SC4		1/4	0.19			1.22	1.51	15/16	
4 - MCD - 6ON	- 400 - 1 - 6 - OR	4M3SC6		3/8	0.19			1.28	1.57	1-1/8	
5 - MCD - 2ON	- 500 - 1 - 2 - OR	5M3SC2	5/16	1/8	0.19	0.64	0.73	1.14	1.43	3/4	5/8
5 - MCD - 4ON	- 500 - 1 - 4 - OR	5M3SC4		1/4	0.25			1.17	1.46	15/16	
6 - MCD - 2ON	- 600 - 1 - 2 - OR	6M3SC2	3/8	1/8	0.19	0.66	0.76	1.16	1.45	3/4	11/16
6 - MCD - 4ON	- 600 - 1 - 4 - OR	6M3SC4		1/4	0.28			1.28	1.57	15/16	
6 - MCD - 6ON	- 600 - 1 - 6 - OR	6M3SC6		3/8	0.28			1.34	1.63	1.1/8	
6 - MCD - 8ON	- 600 - 1 - 8 - OR	6M3SC8		1/2	0.28			1.56	1.85	1.3/8	
8 - MCD - 4ON	- 810 - 1 - 4 - OR	8M3SC4	1/2	1/4	0.28	0.90	0.86	1.28	1.68	15/16	7/8
8 - MCD - 6ON	- 810 - 1 - 6 - OR	8M3SC6		3/8	0.38			1.36	1.76	1.1/8	
8 - MCD - 8ON	- 810 - 1 - 8 - OR	8M3SC8		1/2	0.41			1.56	1.96	1.15/16	
10 - MCD - 8ON	- 1010 - 1 - 8 - OR	10M3SC8	5/8	1/2	0.47	0.96	0.86	1.56	1.96	1.3/8	1
10 - MCD - 12ON	- 1010 - 1 - 12 - OR	10M3SC12		3/4	0.50			1.66	2.06	1.1/2	
12 - MCD - 8ON	- 1210 - 1 - 8 - OR	12M3SC8	3/4	1/2	0.47	0.96	0.86	1.58	1.98	1.3/8	1.1/8
12 - MCD - 12ON	- 1210 - 1 - 12 - OR	12M3SC12		3/4	0.62			1.66	2.06	1.1/2	
16 - MCD - 12ON	- 1610 - 1 - 12 - OR	16M3SC12	1	3/4	0.62	1.23	1.04	1.76	2.24	1.1/2	1.1/2
16 - MCD - 16ON	- 1610 - 1 - 16 - OR	16M3SC16		1	0.88			2.00	2.40	1.3/4	

NOTE: 1)The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end. 2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
 Tube To Male Pipe Thread



Male Connector

Fractional Tube x O-seal ISO Parallel (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISO Male Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
4 - MCD - 4OIP	-----	4MSC4R - ED	1/4	1/4	0.19	0.60	0.70	1.19	1.48	3/4	9/16
4 - MCD - 8OIP	-----	4MSC8R - ED		1/2	0.19			1.47	1.76	1.1/16	
6 - MCD - 6OIP	-----	6MSC6R - ED	3/8	3/8	0.28	0.66	0.76	1.31	1.60	7/8	11/16
8 - MCD - 4OIP	-----	8MSC4R - ED	1/2	1/4	0.25	0.90	0.86	1.29	1.69	13/16	7/8
8 - MCD - 6OIP	-----	8MSC6R - ED		3/8	0.31			1.29	1.69	7/8	
8 - MCD - 8OIP	-----	8MSC8R - ED		1/2	0.41			1.45	1.85	1.1/16	
12 - MCD - 12OIP	-----	12MSC12R - ED	3/4	3/4	0.63	0.96	0.86	1.58	1.98	1.5/16	1.1/8

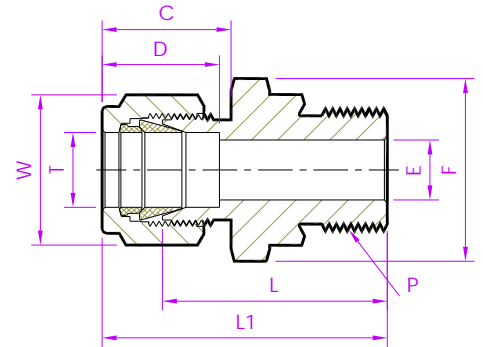
Metric Tube x O-seal ISO Parallel (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISO Male Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
			(mm)	(In)	Dimensions in Millimetres						
6M - MCD - 2OIP	-----	M6MSC1/8R - ED	6	1/8	4.8	15.3	17.7	25.1	32.5	14.2	14.2
6M - MCD - 4OIP	-----	M6MSC1/4R - ED		1/4	4.8			30.8	38.2	19.0	
6M - MCD - 6OIP	-----	M6MSC3/8R - ED		3/8	4.8			32.1	39.5	22.2	
6M - MCD - 8OIP	-----	M6MSC1/2R - ED		1/2	4.8			37.1	44.5	27.0	
10M - MCD - 4OIP	-----	M10MSC1/4R - ED	10	1/4	7.9	17.2	19.5	32.4	40.0	19.0	19.0
10M - MCD - 6OIP	-----	M10MSC3/8R - ED		3/8	7.9			33.5	41.1	22.2	
10M - MCD - 8OIP	-----	M10MSC1/2R - ED		1/2	7.9			38.4	46.0	27.0	
12M - MCD - 4OIP	-----	M12MSC1/4R - ED	12	1/4	9.5	22.8	22.0	33.0	43.1	22.2	22.2
12M - MCD - 6OIP	-----	M12MSC3/8R - ED		3/8	9.5			33.5	43.6	22.2	
12M - MCD - 8OIP	-----	M12MSC1/2R - ED		1/2	9.5			38.4	48.5	27.0	

NOTE : 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
 2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)ISO (BSP Parallel) thread as per BS 2779.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Male Connector

Fractional Tube x ISO Parallel (M) - RPIP

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISO Male Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
2 - MCD - 2RPIP	- 200 - 1 - 2RP	-----	1/8	1/8	0.09	0.50	0.60	0.92	1.18	9/16	7/16
2 - MCD - 4RPIP	- 200 - 1 - 4RP	-----	1/8	1/4	0.09	0.50	0.60	1.13	1.39	3/4	7/16
4 - MCD - 2RPIP	- 400 - 1 - 2RP	-----	1/4	1/8	1.19	0.60	0.70	0.98	1.27	9/16	9/16
4 - MCD - 4RPIP	- 400 - 1 - 4RP	-----	1/4	1/4	0.19	0.60	0.70	1.19	1.48	3/4	9/16
8 - MCD - 8RPIP	- 810 - 1 - 8RP	-----	1/2	1/2	0.41	0.90	0.86	1.53	1.93	1.1/16	7/8

- RPIP parallel threads ends are commonly used with a flat gasket to seal (RPGD Bonded Gasket)

Metric Tube x ISO Parallel (M) - RPIP

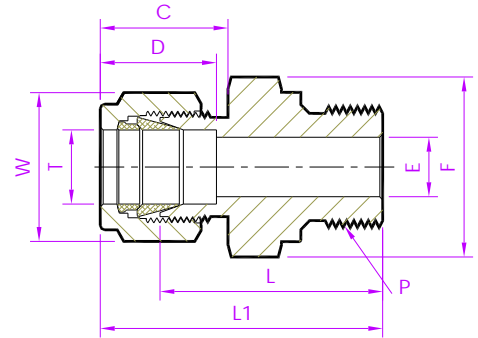
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISO Male Pipe Size P	ØE	D	C	L	L1	Hex F	Hex W
Dimensions in Millimetres											
3M - MCD - 2RPIP	- 3MO - 1 - 2RP	-----	3	1/8	2.4	12.9	15.3	23.4	30.0	14.2	11.1
3M - MCD - 4RPIP	- 3MO - 1 - 4RP	-----	3	1/4	2.4	12.9	15.3	28.7	35.3	19	11.1
4M - MCD - 2RPIP	- 4MO - 1 - 2RP	-----	4	1/8	2.4	13.7	16.1	24.1	30.7	14.2	11.1
6M - MCD - 2RPIP	- 6MO - 1 - 2RP	-----	6	1/8	4.0	15.3	17.7	24.9	32.3	14.2	14.2
6M - MCD - 4RPIP	- 6MO - 1 - 4RP	-----		1/4	4.8			30.2	37.6	19	
6M - MCD - 6RPIP	- 6MO - 1 - 6RP	-----		3/8	4.8			31.5	38.9	22.2	
6M - MCD - 8RPIP	- 6MO - 1 - 8RP	-----		1/2	4.8			37.3	44.7	27	
8M - MCD - 2RPIP	- 8MO - 1 - 2RP	-----	8	1/8	4.0	16.2	18.6	25.7	33.2	16	16
8M - MCD - 4RPIP	- 8MO - 1 - 4RP	-----		1/4	6.4			31.0	38.5	19	
8M - MCD - 6RPIP	- 8MO - 1 - 6RP	-----		3/8	6.4			32.3	39.8	22.2	
8M - MCD - 8RPIP	- 8MO - 1 - 8RP	-----		1/2	6.4			38.1	45.6	27	
10M - MCD - 4RPIP	- 10MO - 1 - 4RP	-----	10	1/4	5.9	17.2	19.5	31.8	39.4	19	19
10M - MCD - 6RPIP	- 10MO - 1 - 6RP	-----		3/8	7.9			33.0	40.6	22.2	
10M - MCD - 8RPIP	- 10MO - 1 - 8RP	-----		1/2	7.9			38.9	46.5	27	
12M - MCD - 4RPIP	- 12MO - 1 - 4RP	-----	12	1/4	5.9	22.8	22.0	32.5	42.6	22.2	22.2
12M - MCD - 6RPIP	- 12MO - 1 - 6RP	-----		3/8	7.9			33.0	43.1	22.2	
12M - MCD - 8RPIP	- 12MO - 1 - 8RP	-----		1/2	9.5			38.9	49.0	27	
12M - TMC - 12RPIP	- 12MO - 1 - 12RP	-----		3/4	9.5			42.7	52.8	35	
15M - MCD - 8RPIP	- 15MO - 1 - 8RP	-----	15	1/2	11.9	24.4	22.0	38.9	49.0	27	25
16M - MCD - 6RPIP	- 16MO - 1 - 6RP	-----	16	3/8	7.9	24.4	22.0	33.8	43.9	24	25
16M - MCD - 8RPIP	- 16MO - 1 - 8RP	-----		1/2	11.9			38.9	49.0	27	
18M - MCD - 8RPIP	- 18MO - 1 - 8RP	-----	18	1/2	11.9	24.4	22.0	38.9	49.0	27	30
18M - MCD - 12RPIP	- 18MO - 1 - 12RP	-----		3/4	15.1			42.7	52.8	35	

- RPIP parallel threads ends are commonly used with a flat gasket to seal (RPGD Bonded Gasket)

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to lager ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)ISO (BSP Parallel) thread as per BS 2779.
- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
 Tube To Male Pipe Thread

Male Connector



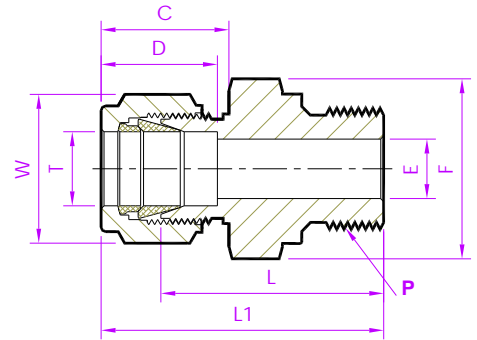
Fractional Tube x ISO Parallel (M) - RSIP

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISO Male Pipe Size P	ØE	D	C	L	L1	Hex F	Hex W
Dimensions in Inches											
2 - MCD - 2RSIP	- 200 - 1 - 2RS	2MSC2R	1/8	1/8	0.09	0.50	0.60	0.92	1.18	9/16	7/16
2 - MCD - 4RSIP	- 200 - 1 - 4RS	2MSC4R		1/4	0.09			1.13	1.39	3/4	
2 - MCD - 6RSIP	- 200 - 1 - 6RS	2MSC6R		3/8	0.09			1.17	1.43	7/8	
4 - MCD - 2RSIP	- 400 - 1 - 2RS	4MSC2R	1/4	1/8	0.16	0.60	0.70	0.98	1.27	9/16	9/16
4 - MCD - 4RSIP	- 400 - 1 - 4RS	4MSC4R		1/4	0.19			1.19	1.48	3/4	
4 - MCD - 6RSIP	- 400 - 1 - 6RS	4MSC6R		3/8	0.19			1.24	1.53	7/8	
4 - MCD - 8RSIP	- 400 - 1 - 8RS	4MSC8R		1/2	0.19			1.47	1.76	1.1/16	
6 - MCD - 2RSIP	- 600 - 1 - 2RS	6MSC2R	3/8	1/8	0.16	0.66	0.76	1.06	1.35	3/4	11/16
6 - MCD - 4RSIP	- 600 - 1 - 4RS	6MSC4R		1/4	0.23			1.25	1.54	3/4	
6 - MCD - 6RSIP	- 600 - 1 - 6RS	6MSC6R		3/8	0.28			1.30	1.59	7/8	
6 - MCD - 8RSIP	- 600 - 1 - 8RS	6MSC8R		1/2	0.28			1.53	1.82	1.1/16	
8 - MCD - 4RSIP	- 810 - 1 - 4RS	8MSC4R	1/2	1/4	0.23	0.90	0.86	1.28	1.68	13/16	7/8
8 - MCD - 6RSIP	- 810 - 1 - 6RS	8MSC6R		3/8	0.31			1.30	1.70	7/8	
8 - MCD - 8RSIP	- 810 - 1 - 8RS	8MSC8R		1/2	0.41			1.53	1.93	1.1/16	
12 - MCD - 8RSIP	- 1210 - 1 - 8RS	12MSC8R	3/4	1/2	0.47	0.96	0.86	1.53	1.93	1.1/16	1.1/8
12 - MCD - 12RSIP	- 1210 - 1 - 12RS	12MSC12R		3/4	0.62			1.68	2.08	1.5/16	
16 - MCD - 8RSIP	- 1610 - 1 - 8RS	16MSC8R	1	1/2	0.47	1.23	1.04	1.72	2.20	1.3/8	1.1/2
16 - MCD - 16RSIP	- 1610 - 1 - 16RS	16MSC16R		1	0.78			1.88	2.36	1.5/8	

- RSIP parallel threads ends are commonly used with a gasket having a bonded elastomer seal. RPGD type gasket may also be used (RSGD Fitting Gasket)

NOTE : 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
 2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)ISO (BSP Parallel) thread as per BS 2779.
 - ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Male Connector

Metric Tube x ISO Parallel (M) - RSIP

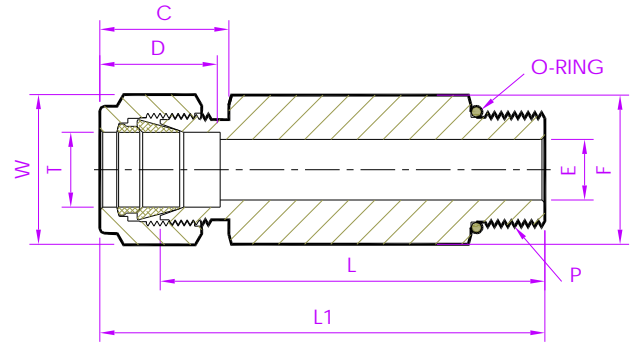
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE	ISO	ØE	D	C	L	L1	Body Hex F	Nut Hex W
			OD Ø T	Male Pipe Size P							
			(mm)	(In)	Dimensions in Millimetres						
2M - MCD - 2RSIP	- 2MO-1-2RS	M2MSC1/8R	2	1/8	1.7	12.9	15.3	23.4	30.0	14.2	11.1
3M - MCD - 2RSIP	- 3MO-1-2RS	M3MSC1/8R	3	1/8	2.4	12.9	15.3	23.4	30.0	14.2	11.1
3M - MCD - 4RSIP	- 3MO-1-4RS	M3MSC1/4R		1/4	2.4			28.7	35.3	19	
4M - MCD - 2RSIP	- 4MO-1-2RS	M4MSC1/8R	4	1/8	2.4	13.7	16.1	24.1	30.7	14.2	11.1
6M - MCD - 2RSIP	- 6MO-1-2RS	M6MSC1/8R	6	1/8	4.0	15.3	17.7	24.9	32.3	14.2	14.2
6M - MCD - 4RSIP	- 6MO-1-4RS	M6MSC1/4R		1/4	4.8			30.2	37.6	19	
6M - MCD - 6RSIP	- 6MO-1-6RS	M6MSC3/8R		3/8	4.8			31.5	38.9	22.2	
6M - MCD - 8RSIP	- 6MO-1-8RS	M6MSC1/2R		1/2	4.8			37.3	44.7	27	
8M - MCD - 2RSIP	- 8MO-1-2RS	M8MSC1/8R	8	1/8	4.0	16.2	18.6	25.7	33.2	16	16
8M - MCD - 4RSIP	- 8MO-1-4RS	M8MSC1/4R		1/4	6.4			31.0	38.5	19	
8M - MCD - 6RSIP	- 8MO-1-6RS	M8MSC3/8R		3/8	6.4			32.3	39.8	22.2	
8M - MCD - 8RSIP	- 8MO-1-8RS	M8MSC1/2R		1/2	6.4			38.1	45.6	27	
10M - MCD - 4RSIP	- 10MO-1-4RS	M10MSC1/4R	10	1/4	5.9	17.2	19.5	31.8	39.4	19	19
10M - MCD - 6RSIP	- 10MO-1-6RS	M10MSC3/8R		3/8	7.9			33.0	40.6	22.2	
10M - MCD - 8RSIP	- 10MO-1-8RS	M10MSC1/2R		1/2	7.9			38.9	46.5	27	
12M - MCD - 4RSIP	- 12MO-1-4RS	M12MSC1/4R	12	1/4	5.9	22.8	22.0	32.5	42.6	22.2	22.2
12M - MCD - 6RSIP	- 12MO-1-6RS	M12MSC3/8R		3/8	7.9			33.0	43.1	22.2	
12M - MCD - 8RSIP	- 12MO-1-8RS	M12MSC1/2R		1/2	9.5			38.9	49.0	27	
12M - MCD - 12RSIP	- 12MO-1-12RS	M12MSC3/4R		3/4	9.5			42.7	52.8	35	
16M - MCD - 6RSIP	- 16MO-1-6RS	M16MSC3/8R	16	3/8	7.9	24.4	22.0	33.8	43.9	24	25
16M - MCD - 8RSIP	- 16MO-1-8RS	M16MSC1/2R		1/2	11.9			38.9	49.0	27	
18M - MCD - 8RSIP	- 18MO-1-8RS	M18MSC1/2R	18	1/2	11.9	24.4	22.0	38.9	49.0	27	30
18M - MCD - 12RSIP	- 18MO-1-12RS	M18MSC3/4R		3/4	15.1			42.7	52.8	35	
20M - MCD - 8RSIP	- 20MO-1-8RS	M20MSC1/2R	20	1/2	11.9	26.0	22.0	40.4	50.5	30	32
20M - MCD - 12RSIP	- 20MO-1-12RS	M20MSC3/4R		3/4	15.9			42.7	52.8	35	
22M - MCD - 12RSIP	- 22MO-1-12RS	M22MSC3/4R	22	3/4	15.9	26.0	22.0	42.7	52.8	35	32
22M - MCD - 16RSIP	- 22MO-1-16RS	M22MSC1R		1	18.3			45.2	55.3	41	
25M - MCD - 12RSIP	- 25MO-1-12RS	M25MSC3/4R	25	3/4	15.9	31.3	26.5	45.2	57.5	35	38
25M - MCD - 16RSIP	- 25MO-1-16RS	M25MSC1R		1	19.8			47.8	60.1	41	
28M - MCD - 16RSIP	- 28MO-1-16RS	M28MSC1R	28	1	19.8	36.6	36.6	49.3	69.9	41	46
28M - MCD - 20RSIP	- 28MO-1-20RS	M28MSC1.1/4R		1.1/4	21.8			53.1	72.9	50	
30M - MCD - 20RSIP	- 30MO-1-20RS	M30MSC1.1/4R	30	1.1/4	25.0	39.6	39.2	54.9	76.7	50	50
32M - MCD - 16RSIP	- 32MO-1-16RS	M32MSC1R	32	1	19.8	42.0	41.6	54.4	77.4	46	50
32M - MCD - 20RSIP	- 32MO-1-20RS	M32MSC1.1/4R		1.1/4	25.0			55.9	79.2	50	
38M - MCD - 24RSIP	- 38MO-1-24RS	M38MSC1.1/4R	38	1.1/2	31.8	49.4	47.9	63.2	90.9	55	60

- RSIP parallel threads ends are commonly used with a gasket having a bonded elastomer seal. RPGD type gasket may also be used (RSGD Fitting Gasket)

NOTE : 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to lager ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)ISO (BSP Parallel) thread as per BS 2779.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

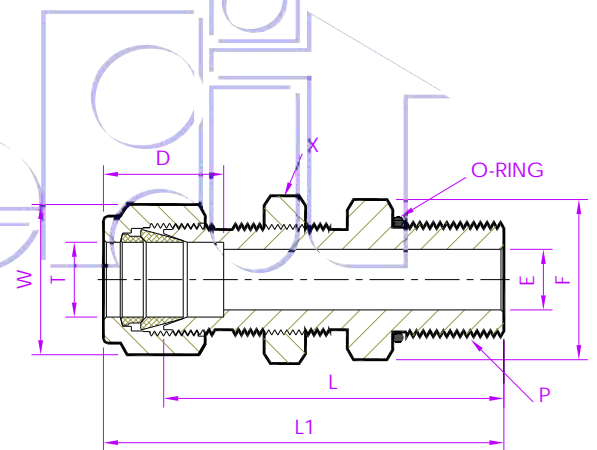
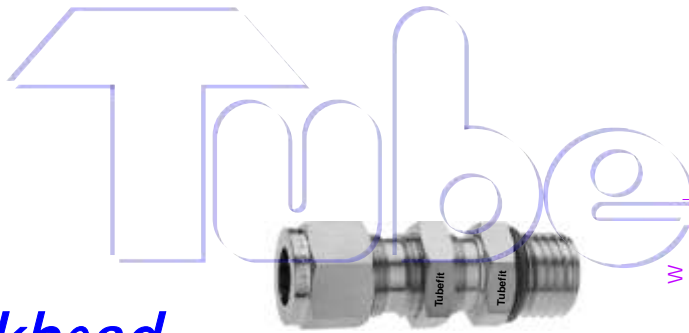
- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Long Male Connector

Fractional Tube x SAE/MS Straight (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	SAE/MS Male Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
4 - LMCD - 7SM	- 400 - 1L - 4ST	4 - 4 ZH3LA	1/4	7/16x20	0.19	0.60	0.70	1.97	2.26	9/16	9/16
5 - LMCD - 8SM	- 500 - 1L - 5ST	5 - 5 ZH3LA	5/16	1/2x20	0.25	0.64	0.73	2.03	2.32	5/8	5/8
6 - LMCD - 9SM	- 600 - 1L - 6ST	6 - 6 ZH3LA	3/8	9/16x18	0.28	0.66	0.76	2.19	2.48	11/16	11/16
8 - LMCD - 12SM	- 810 - 1L - 8ST	8 - 8 ZH3LA	1/2	3/4x16	0.41	0.90	0.86	2.58	3.01	7/8	7/8
10 - LMCD - 14SM	- 1010 - 1L - 10ST	10 - 10 ZH3LA	5/8	7/8x14	0.50	0.96	0.86	2.94	3.34	1	1
12 - LMCD - 17SM	- 1210 - 1L - 12ST	12 - 12 ZH3LA	3/4	1.1/16x12	0.62	0.96	0.86	3.48	3.88	1.1/8	1.1/8
14 - LMCD - 19SM	- 1410 - 1L - 14ST	14 - 14 ZH3LA	7/8	1.3/16x12	0.72	1.02	0.86	3.67	4.07	1.1/4	1.1/4
16 - LMCD - 21SM	- 1610 - 1L - 16ST	16 - 16 ZH3LA	1	1.5/16x12	0.88	1.23	1.04	3.83	4.34	1.1/2	1.1/2



Bulkhead Male Connector

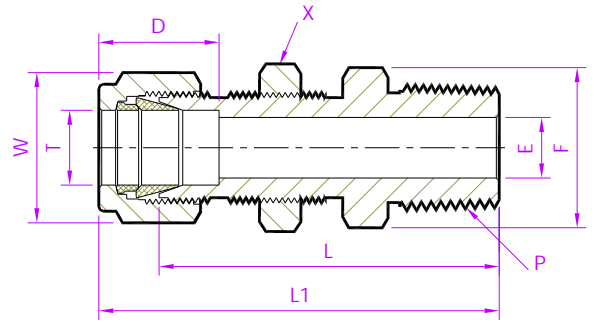
Fractional Tube x SAE/MS Straight (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	SAE/MS Male Pipe Size P	ØE	D	L	L1	Body Hex F	Nut Hex W	Panel Nut Hex X
Dimensions in Inches											
4 - BMCD - 6SM	- 400 - 61 - 6ST	4 - 6 AH2LZ	1/4	9/16x18	0.19	0.60	1.45	1.74	3/4	9/16	7/8
6 - BMCD - 6SM	- 600 - 61 - 6ST	6 - 6 AH2LZ	3/8	9/16x18	0.28	0.66	1.52	1.81	3/4	11/16	7/8

- For Lock Nut used 'BUND'.

NOTE: 1)The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end. 2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)SAE/MS (UNF) thread as per ASME B1.1. - ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Bulkhead Male Connector

Fractional Tube x NPT(M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	ØE	D	L	L1	Body Hex F	Nut Hex W	Panel Nut Hex X
Dimensions in Inches											
2 - BMCD - 2N	- 200 - 11 - 2	2MBC2N	1/8	1/8	0.09	0.50	1.57	1.83	7/16	7/16	1/2
3 - BMCD - 2N	- 300 - 11 - 2	3MBC2N	3/16	1/8	0.12	0.54	1.63	1.89	7/16	1/2	9/16
4 - BMCD - 4N	- 400 - 11 - 4	4MBC4N	1/4	1/4	0.19	0.60	1.84	2.13	9/16	9/16	5/8
4 - BMCD - 6N	- 400 - 11 - 6	4MBC6N		3/8	0.19		1.87	2.16	11/16		
4 - BMCD - 8N	- 400 - 11 - 8	4MBC8N		1/2	0.19		2.08	2.37	7/8		
5 - BMCD - 2N	- 500 - 11 - 2	5MBC2N	5/16	1/8	0.19	0.64	1.79	2.08	5/8	5/8	11/16
5 - BMCD - 4N	- 500 - 11 - 4	5MBC4N		1/4	0.25		1.98	2.27	5/8		
6 - BMCD - 4N	- 600 - 11 - 4	6MBC4N	3/8	1/4	0.28	0.66	1.97	2.26	11/16	11/16	3/4
6 - BMCD - 6N	- 600 - 11 - 6	6MBC6N		3/8	0.28		1.97	2.26	11/16		
6 - BMCD - 8N	- 600 - 11 - 8	6MBC8N		1/2	0.28		2.22	2.51	7/8		
8 - BMCD - 4N	- 810 - 11 - 4	8MBC4N	1/2	1/4	0.28	0.90	2.09	2.49	13/16	7/8	15/16
8 - BMCD - 6N	- 810 - 11 - 6	8MBC6N		3/8	0.38		2.09	2.49	13/16		
8 - BMCD - 8N	- 810 - 11 - 8	8MBC8N		1/2	0.41		2.31	2.71	7/8		
8 - BMCD - 12N	- 810 - 11 - 12	8MBC12N		3/4	0.41		2.32	2.72	1.1/16		
10 - BMCD - 6N	- 1010 - 11 - 6	10MBC6N	5/8	3/8	0.38	0.96	2.23	2.63	1	1	1.1/16
10 - BMCD - 8N	- 1010 - 11 - 8	10MBC8N		1/2	0.47		2.42	2.82	1		
12 - BMCD - 8N	- 1210 - 11 - 8	12MBC8N	3/4	1/2	0.47	0.96	2.60	3.00	1.1/16	1-1/8	1.3/16
12 - BMCD - 12N	- 1210 - 11 - 12	12MBC12N		3/4	0.62		2.60	3.00	1.1/16		
16 - BMCD - 12N	- 1610 - 11 - 12	16MBC12N	1	3/4	0.62	1.23	3.06	3.54	1.3/8	1-1/2	1.5/8
16 - BMCD - 16N	- 1610 - 11 - 16	16MBC16N		1	0.88		3.19	3.67	1.3/8		

Metric Tube x NPT (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	ØE	D	L	L1	Body Hex F	Nut Hex W	P.Nut Hex X
(mm) (Inch) Dimensions in Millimetres											
6M - BMCD - 2N	- 6MO - 11 - 2	M6MBC1/8N	6	1/8	4.8	15.3	42.2	49.6	14.2	14.2	16
6M - BMCD - 4N	- 6MO - 11 - 4	M6MBC1/4N		1/4	4.8		46.2	53.6	14.2		
8M - BMCD - 2N	- 8MO - 11 - 2	M8MBC1/8N	8	1/8	4.8	16.2	44.8	52.3	16	16	19
8M - BMCD - 4N	- 8MO - 11 - 4	M8MBC1/4N		1/4	6.4		50.0	57.5	16		
10M - BMCD - 4N	- 10MO - 11 - 4	M10MBC1/4N	10	1/4	7.9	17.2	50.8	58.4	19	19	22.2
10M - BMCD - 6N	- 10MO - 11 - 6	M10MBC3/8N		3/8	7.9		50.8	58.4	19		
10M - BMCD - 8N	- 10MO - 11 - 8	M10MBC1/2N		1/2	7.9		55.5	63.1	22.2		
12M - BMCD - 4N	- 12MO - 11 - 4	M12MBC1/4N	12	1/4	7.1	22.8	53.2	63.3	22.2	22.2	25
12M - BMCD - 6N	- 12MO - 11 - 6	M12MBC3/8N		3/8	9.5		54.4	64.5	22.2		
12M - BMCD - 8N	- 12MO - 11 - 8	M12MBC1/2N		1/2	9.5		58.7	68.8	22.2		

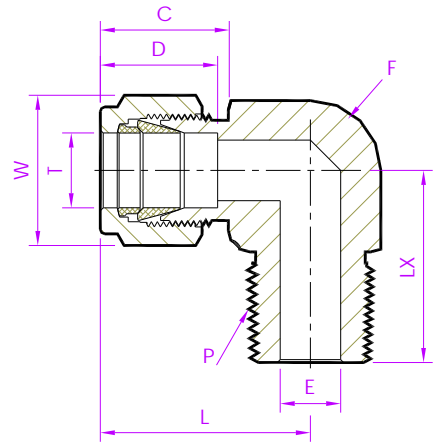
- For Lock Nut used 'BUND'.

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension L1, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread

Male Elbow



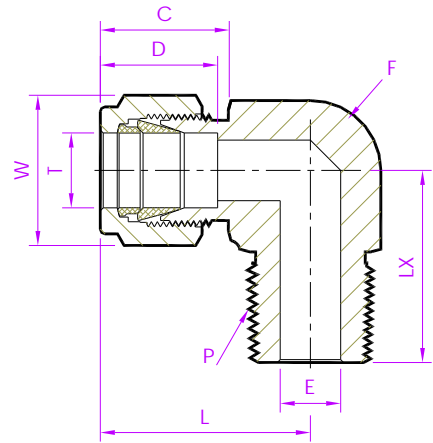
Fractional Tube x NPT (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	ØE	D	C	L	LX	Body Hex F	Nut Hex W	
Dimensions in Inches												
1 - MED - 1N	- 100 - 2 - 1	1MSEL1N	1/16	1/16	0.05	0.34	0.43	0.75	0.70	1/2	5/16	
1 - MED - 2N	- 100 - 2 - 2	1MSEL2N		1/8	0.05				0.75	0.70		1/2
2 - MED - 1N	- 200 - 2 - 1	2MSEL1N	1/8	1/16	0.09	0.50	0.60	0.93	0.70	1/2	7/16	
2 - MED - 2N	- 200 - 2 - 2	2MSEL2N		1/8	0.09				0.93	0.70		1/2
2 - MED - 4N	- 200 - 2 - 4	2MSEL4N		1/4	0.09				0.97	0.92		9/16
3 - MED - 2N	- 300 - 2 - 2	3MSEL2N	3/16	1/8	0.12	0.54	0.63	1.00	0.74	1/2	1/2	
3 - MED - 4N	- 300 - 2 - 4	3MSEL4N		1/4	0.12				1.00	0.92		9/16
4 - MED - 1N	- 400 - 2 - 1	4MSEL1N	1/4	1/16	0.12	0.60	0.70	1.06	0.74	9/16	9/16	
4 - MED - 2N	- 400 - 2 - 2	4MSEL2N		1/8	0.19				1.06	0.74		9/16
4 - MED - 4N	- 400 - 2 - 4	4MSEL4N		1/4	0.19				1.06	0.92		9/16
4 - MED - 6N	- 400 - 2 - 6	4MSEL6N		3/8	0.19				1.17	1.03		11/16
4 - MED - 8N	- 400 - 2 - 8	4MSEL8N		1/2	0.19				1.25	1.30		13/16
5 - MED - 2N	- 500 - 2 - 2	5MSEL2N	5/16	1/8	0.19	0.64	0.73	1.13	0.78	9/16	5/8	
5 - MED - 4N	- 500 - 2 - 4	5MSEL4N		1/4	0.25				1.13	0.96		9/16
5 - MED - 6N	- 500 - 2 - 6	5MSEL6N		3/8	0.25				1.20	1.03		11/16
6 - MED - 2N	- 600 - 2 - 2	6MSEL2N	3/8	1/8	0.19	0.66	0.76	1.20	0.82	5/8	11/16	
6 - MED - 4N	- 600 - 2 - 4	6MSEL4N		1/4	0.28				1.20	1.00		5/8
6 - MED - 6N	- 600 - 2 - 6	6MSEL6N		3/8	0.28				1.25	1.03		11/16
6 - MED - 8N	- 600 - 2 - 8	6MSEL8N		1/2	0.28				1.31	1.30		7/8
6 - MED - 12N	- 600 - 2 - 12	6MSEL12N		3/4	0.28				1.46	1.45		1.1/16
8 - MED - 4N	- 810 - 2 - 4	8MSEL4N	1/2	1/4	0.28	0.90	0.86	1.42	1.11	13/16	7/8	
8 - MED - 6N	- 810 - 2 - 6	8MSEL6N		3/8	0.38				1.42	1.11		13/16
8 - MED - 8N	- 810 - 2 - 8	8MSEL8N		1/2	0.41				1.42	1.30		7/8
8 - MED - 12N	- 810 - 2 - 12	8MSEL12N		3/4	0.41				1.57	1.45		1.1/16
10 - MED - 6N	- 1010 - 2 - 6	10MSEL6N	5/8	3/8	0.38	0.96	0.86	1.50	1.19	15/16	1	
10 - MED - 8N	- 1010 - 2 - 8	10MSEL8N		1/2	0.47				1.50	1.38		15/16
10 - MED - 12N	- 1010 - 2 - 12	10MSEL12N		3/4	0.50				1.57	1.45		1.1/16
12 - MED - 8N	- 1210 - 2 - 8	12MSEL8N	3/4	1/2	0.47	0.96	0.86	1.57	1.45	1.1/16	1.1/8	
12 - MED - 12N	- 1210 - 2 - 12	12MSEL12N		3/4	0.62				1.57	1.45		1.1/16
14 - MED - 12N	- 1410 - 2 - 12	14MSEL12N	7/8	3/4	0.62	1.02	0.86	1.76	1.64	1.3/8	1.1/4	
16 - MED - 12N	- 1610 - 2 - 12	16MSEL12N	1	3/4	0.62	1.23	1.04	1.93	1.64	1.3/8	1.1/2	
16 - MED - 16N	- 1610 - 2 - 16	16MSEL16N		1	0.88				1.93	1.83		1.3/8

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to lager ID at pipe thread or straight thread end.
2)Dimension LX, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Male Elbow

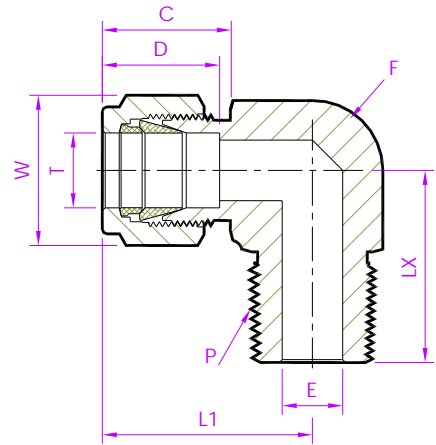
Metric Tube x NPT (M)

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	ØE	D	C	L	LX	Body Hex F	Nut Hex W	
			(mm)	(Inch)	Dimensions in Millimetres							
3M - MED - 2N	- 3MO - 2 - 2	M3MSEL1/8N	3	1/8	2.4	12.9	15.3	23.6	17.8	12.5	11.1	
3M - MED - 4N	- 3MO - 2 - 4	M3MSEL1/4N		1/4	2.4				24.6	23.4		15
4M - MED - 2N	- 4MO - 2 - 2	M4MSEL1/8N	4	1/8	2.4	13.7	16.1	25.4	18.8	12.5	11.1	
4M - MED - 4N	- 4MO - 2 - 4	M4MSEL1/4N		1/4	2.4				25.4	23.4		15
6M - MED - 2N	- 6MO - 2 - 2	M6MSEL1/8N	6	1/8	4.8	15.3	17.7	27.0	18.8	15	14.2	
6M - MED - 4N	- 6MO - 2 - 4	M6MSEL1/4N		1/4	4.8				27.0	23.4		15
6M - MED - 6N	- 6MO - 2 - 6	M6MSEL3/8N		3/8	4.8				29.8	26.2		17.5
6M - MED - 8N	- 6MO - 2 - 8	M6MSEL1/2N		1/2	4.8				31.8	33.0		22.5
8M - MED - 2N	- 8MO - 2 - 2	M8MSEL1/8N	8	1/8	4.8	16.2	18.6	28.8	19.8	15	16	
8M - MED - 4N	- 8MO - 2 - 4	M8MSEL1/4N		1/4	6.4				28.8	24.4		15
8M - MED - 6N	- 8MO - 2 - 6	M8MSEL3/8N		3/8	6.4				30.6	26.2		17.5
8M - MED - 8N	- 8MO - 2 - 8	M8MSEL1/2N		1/2	6.4				32.6	33.0		22.5
10M - MED - 2N	- 10MO - 2 - 2	M10MSEL1/8N	10	1/8	4.8	17.2	19.5	31.5	21.6	20.5	19	
10M - MED - 4N	- 10MO - 2 - 4	M10MSEL1/4N		1/4	7.1				31.5	26.2		20.5
10M - MED - 6N	- 10MO - 2 - 6	M10MSEL3/8N		3/8	7.9				31.5	26.2		20.5
10M - MED - 8N	- 10MO - 2 - 8	M10MSEL1/2N		1/2	7.9				33.5	33.0		22.5
12M - MED - 4N	- 12MO - 2 - 4	M12MSEL1/4N	12	1/4	7.1	22.8	22.2	36.0	28.2	20.5	22.2	
12M - MED - 6N	- 12MO - 2 - 6	M12MSEL3/8N		3/8	9.5				36.0	28.2		20.5
12M - MED - 8N	- 12MO - 2 - 8	M12MSEL1/2N		1/2	9.5				36.0	33.0		22.5
12M - MED - 12N	- 12MO - 2 - 12	M12MSEL3/4N		3/4	9.5				39.8	36.8		27.5
15M - MED - 8N	- 15MO - 2 - 8	M15MSEL1/2N	15	1/2	11.9	24.4	22.0	38.0	35.1	27.5	25.4	
16M - MED - 6N	- 16MO - 2 - 6	M16MSEL3/8N	16	3/8	9.5	24.4	22.0	38.0	30.2	27.5	25.4	
16M - MED - 8N	- 16MO - 2 - 8	M16MSEL1/2N		1/2	11.9				38.0	35.1		27.5
16M - MED - 12N	- 16MO - 2 - 12	M16MSEL3/4N		3/4	12.7				39.8	36.8		27.5
18M - MED - 8N	- 18MO - 2 - 8	M18MSEL1/2N	18	1/2	11.9	24.4	22.0	39.8	36.8	27.5	30	
18M - MED - 12N	- 18MO - 2 - 12	M18MSEL3/4N		3/4	15.1				39.8	36.8		27.5
20M - MED - 8N	- 20MO - 2 - 8	M20MSEL1/2N	20	1/2	11.9	26.0	22.0	44.6	41.7	32	32	
20M - MED - 12N	- 20MO - 2 - 12	M20MSEL3/4N		3/4	5.9				44.6	41.7		32
22M - MED - 12N	- 22MO - 2 - 12	M22MSEL3/4N	22	3/4	15.9	26.0	22.0	44.6	41.7	32	32	
22M - MED - 16N	- 22MO - 2 - 16	M22MSEL1N		1	18.3				44.6	46.5		36
25M - MED - 12N	- 25MO - 2 - 12	M25MSEL3/4N	25	3/4	15.9	31.3	26.5	49.1	41.7	36	38	
25M - MED - 16N	- 25MO - 2 - 16	M25MSEL1N		1	21.8				49.1	46.5		36

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension LX, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Male Elbow

Fractional Tube x ISO Tapered (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISO Male Pipe Size P	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Inches											
4 - MED - 4IT	- 400 - 2 - 4RT	4MSEL4K	1/4	1/4	0.19	0.60	0.70	1.06	0.92	9/16	9/16
4 - MED - 6IT	- 400 - 2 - 6RT	4MSEL6K		3/8	0.19			1.17	1.03	11/16	
4 - MED - 8IT	- 400 - 2 - 8RT	4MSEL8K		1/2	0.19			1.25	1.30	7/8	
6 - MED - 4IT	- 600 - 2 - 4RT	6MSEL4K	3/8	1/4	0.28	0.66	0.76	1.20	1.00	5/8	11/16
6 - MED - 6IT	- 600 - 2 - 6RT	6MSEL6K		3/8	0.28			1.23	1.03	11/16	
8 - MED - 6IT	- 810 - 2 - 6RT	8MSEL6K	1/2	3/8	0.41	0.90	0.86	1.35	1.25	3/4	7/8
8 - MED - 8IT	- 810 - 2 - 8RT	8MSEL8K		1/2	0.41			1.41	1.31	7/8	

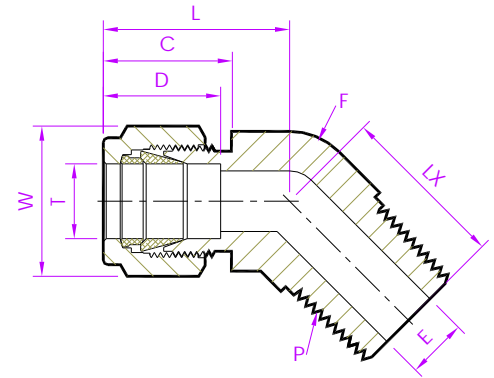
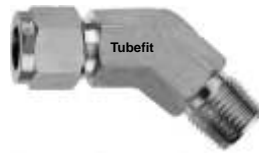
Metric Tube x ISO Tapered (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISO Male Pipe Size P	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Millimetres											
			(mm)	(In)							
6M - MED - 4IT	- 6MO - 2 - 4RT	M6MSEL1/4K	6	1/4	4.8	15.3	17.7	27.0	23.4	15	14.2
6M - MED - 6IT	- 6MO - 2 - 6RT	M6MSEL3/8K		3/8	4.8			29.8	26.2	17.5	
6M - MED - 8IT	- 6MO - 2 - 8RT	M6MSEL1/2K		1/2	4.8			31.8	33.0	22.5	
8M - MED - 4IT	- 8MO - 2 - 4RT	M8MSEL1/4K	8	1/4	6.4	16.2	18.6	28.8	24.4	15	16
8M - MED - 6IT	- 8MO - 2 - 6RT	M8MSEL3/8K		3/8	6.4			30.6	26.2	17.5	
8M - MED - 8IT	- 8MO - 2 - 8RT	M8MSEL1/2K		1/2	6.4			32.6	33.0	22.5	
10M - MED - 4IT	- 10MO - 2 - 4RT	M10MSEL1/4K	10	1/4	7.1	17.2	19.5	31.5	26.2	20.5	19
10M - MED - 6IT	- 10MO - 2 - 6RT	M10MSEL3/8K		3/8	7.9			31.5	26.2	20.5	
10M - MED - 8IT	- 10MO - 2 - 8RT	M10MSEL1/2K		1/2	7.9			33.5	33.0	22.5	
12M - MED - 4IT	- 12MO - 2 - 4RT	M12MSEL1/4K	12	1/4	7.1	22.8	22.0	36.0	28.2	20.5	22.2
12M - MED - 6IT	- 12MO - 2 - 6RT	M12MSEL3/8K		3/8	9.5			36.0	28.2	20.5	
12M - MED - 8IT	- 12MO - 2 - 8RT	M12MSEL1/2K		1/2	9.5			36.0	33.0	22.5	
12M - MED - 12IT	- 12MO - 2 - 12RT	M12MSEL3/4K		3/4	9.5			39.8	36.8	27.5	
16M - MED - 6IT	- 16MO - 2 - 6RT	M16MSEL3/8K	16	3/8	9.5	24.4	22.0	38.0	30.2	27.5	25.4
16M - MED - 8IT	- 16MO - 2 - 8RT	M16MSEL1/2K		1/2	11.9			38.0	35.1	27.5	
18M - MED - 8IT	- 18MO - 2 - 8RT	M18MSEL1/2K	18	1/2	11.9	24.4	22.0	39.8	36.8	27.5	30
18M - MED - 12IT	- 18MO - 2 - 12RT	M18MSEL3/4K		3/4	15.1			39.8	36.8	27.5	
20M - MED - 8IT	- 20MO - 2 - 8RT	M20MSEL1/2K	20	1/2	11.9	26.0	22.0	44.6	41.7	32	32
20M - MED - 12IT	- 20MO - 2 - 12RT	M20MSEL3/4K		3/4	15.9			44.6	41.7	32	
22M - MED - 12IT	- 22MO - 2 - 12RT	M22MSEL3/4K	22	3/4	15.9	26.0	22.0	44.6	41.7	32	32
22M - MED - 16IT	- 22MO - 2 - 16RT	M22MSEL1K		1	18.3			44.6	46.5	36	
25M - MED - 12IT	- 25MO - 2 - 12RT	M25MSEL3/4K	25	3/4	15.9	31.3	26.5	49.1	41.7	36	38
25M - MED - 16IT	- 25MO - 2 - 16RT	M25MSEL1K		1	21.8			49.1	46.5	36	

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to lager ID at pipe thread or straight thread end.
2)Dimension LX, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)ISO Tapered (BSPT) thread as per BS 21.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



45° Male Elbow

Fractional Tube x NPT (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	ØE	D	C	L	LX	Body Hex F	Nut Hex W
Dimensions in Inches											
1 - 45MED - 1N	- 100 - 5 - 1	1MVEL1N	1/16	1/16	0.05	0.34	0.43	0.62	0.57	9/16	5/16
2 - 45MED - 2N	- 200 - 5 - 2	2MVEL2N	1/8	1/8	0.09	0.50	0.60	0.88	0.66	9/16	7/16
3 - 45MED - 2N	- 300 - 5 - 2	3MVEL2N	3/16	1/8	0.12	0.54	0.63	0.84	0.58	9/16	1/2
4 - 45MED - 2N	- 400 - 5 - 2	4MVEL2N	1/4	1/8	0.19	0.60	0.70	0.97	0.65	9/16	9/16
4 - 45MED - 4N	- 400 - 5 - 4	4MVEL4N		1/4	0.19			0.97	0.83	9/16	
5 - 45MED - 2N	- 500 - 5 - 2	5MVEL2N	5/16	1/8	0.19	0.64	0.64	1.01	0.66	9/16	5/8
6 - 45MED - 2N	- 600 - 5 - 2	6MVEL2N	3/8	1/8	0.19	0.66	0.76	1.10	0.72	5/8	11/16
6 - 45MED - 4N	- 600 - 5 - 4	6MVEL4N		1/4	0.28			1.10	0.90	5/8	
6 - 45MED - 6N	- 600 - 5 - 6	6MVEL6N		3/8	0.28			1.15	0.95	13/16	
8 - 45MED - 6N	- 810 - 5 - 6	8MVEL6N	1/2	3/8	0.38	0.90	0.86	1.26	0.95	13/16	7/8
8 - 45MED - 8N	- 810 - 5 - 8	-----		1/2	0.41			1.26	1.14	7/8	
10 - 45MED - 8N	- 1010 - 5 - 8	10MVEL8N	5/8	1/2	0.47	0.96	0.86	1.29	1.17	7/8	1
12 - 45MED - 12N	- 1210 - 5 - 12	12MVEL12N	3/4	3/4	0.62	0.96	0.86	1.34	1.22	1.1/16	1.1/8
14 - 45MED - 12N	- 1410 - 5 - 12	14MVEL12N	7/8	3/4	0.62	1.02	0.86	1.36	1.27	1.5/16	1.1/4
16 - 45MED - 16N	- 1610 - 5 - 16	16MVEL16N	1	1	0.88	1.23	1.04	1.59	1.49	1.3/8	1.1/2

Metric Tube x NPT (M)

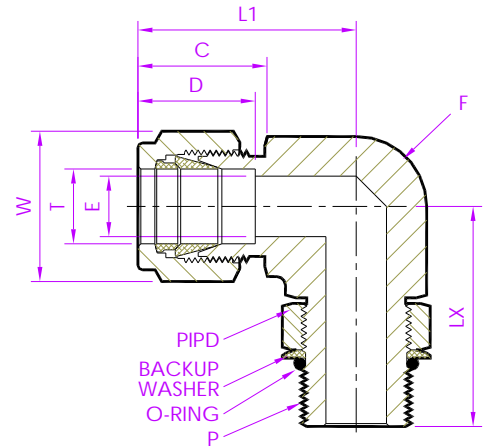
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	ØE	D	C	L	LX	Body Hex F	Nut Hex W
			(mm)	(Inch)	Dimensions in Millimetres						
6M - 45MED - 2N	-----	M6MVEL1/8N	6	1/8	4.8	15.3	17.7	16.0	16.8	12.5	14.2
6M - 45MED - 4N	-----	M6MVEL1/4N		1/4	4.8			16.0	21.8	12.5	
8M - 45MED - 2N	-----	M8MVEL1/8N	8	1/8	4.8	16.2	18.6	16.8	16.8	15	16
10M - 45MED - 4N	-----	M10MVEL1/4N	10	1/4	7.1	17.2	19.5	19.0	24.1	20.5	19
12M - 45MED - 6N	-----	M12MVEL3/8N	12	3/8	9.5	22.8	22.0	19.0	24.1	20.5	22.2
12M - 45MED - 8N	-----	M12MVEL1/2N		1/2	9.5			20.6	29.7	22.5	
16M - 45MED - 8N	-----	M16MVEL1/2N	16	1/2	11.9	24.4	22.0	20.6	29.7	27.5	25

NOTE : 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to lager ID at pipe thread or straight thread end.
2)Dimension L, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread

Positionable Male Elbow



Fractional Tube x ISO Parallel (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Male Pipe Size P	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Inches											
4 - PMED - 2IP	- 400 - 2 - 2PR	4MSEL2R	1/4	1/8	0.16	0.60	0.70	1.06	1.04	9/16	9/16
4 - PMED - 4IP	- 400 - 2 - 4PR	4MSEL4R		1/4	0.19			1.14	1.27	3/4	
6 - PMED - 4IP	- 600 - 2 - 4PR	6MSEL4R	3/8	1/4	0.23	0.66	0.76	1.20	1.27	3/4	11/16
6 - PMED - 6IP	- 600 - 2 - 6PR	6MSEL6R		3/8	0.28			1.31	1.46	13/16	
8 - PMED - 4IP	- 810 - 2 - 4PR	8MSEL4R	1/2	1/4	0.23	0.90	0.86	1.42	1.38	13/16	7/8
8 - PMED - 6IP	- 810 - 2 - 6PR	8MSEL6R		3/8	0.31			1.42	1.46	13/16	
8 - PMED - 8IP	- 810 - 2 - 8PR	8MSEL8R		1/2	0.41			1.50	1.71	15/16	
10 - PMED - 8IP	- 1010 - 2 - 8PR	10MSEL8R	5/8	1/2	0.47	0.96	0.86	1.50	1.71	15/16	1
12 - PMED - 8IP	- 1210 - 2 - 8PR	12MSEL8R	3/4	1/2	0.47	0.96	0.86	1.57	1.78	1.1/16	1.1/8
12 - PMED - 12IP	- 1210 - 2 - 12PR	12MSEL12R		3/4	0.62			1.57	1.92	1.1/16	
16 - PMED - 12IP	- 1610 - 2 - 12PR	16MSEL12R	1	3/4	0.62	1.23	1.04	1.93	2.10	1.3/8	1.1/2
16 - PMED - 16IP	- 1610 - 2 - 16PR	16MSEL16R		1	0.78			1.93	2.11	1.3/8	

Metric Tube x ISO Parallel (M)

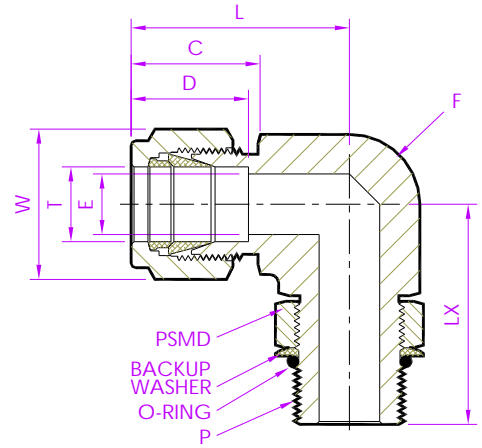
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISO Male Pipe Size P	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
			(mm)	(Inch)	Dimensions in Millimetres						
6M - PMED - 2IP	- 6MO - 2 - 2PR	-----	6	1/8	4.0	15.3	17.7	27.0	26.4	15	14.2
6M - PMED - 4IP	- 6MO - 2 - 4PR	-----		1/4	4.8			29.0	32.3	17.5	
8M - PMED - 2IP	- 8MO - 2 - 2PR	-----	8	1/8	4.0	16.2	18.6	28.8	27.4	15	16
8M - PMED - 4IP	- 8MO - 2 - 4PR	-----		1/4	5.9			29.9	32.2	17.5	
10M - PMED - 4IP	- 10MO - 2 - 4PR	-----	10	1/4	5.9	17.2	19.5	33.5	35.0	20.5	19
10M - PMED - 6IP	- 10MO - 2 - 6PR	-----		3/8	7.9			33.5	37.1	20.5	
12M - PMED - 4IP	- 12MO - 2 - 4PR	-----	12	1/4	5.9	22.8	22.0	36.0	35.0	20.5	22.2
12M - PMED - 6IP	- 12MO - 2 - 6PR	-----		3/8	7.9			36.0	37.1	20.5	
12M - PMED - 8IP	- 12MO - 2 - 8PR	-----		1/2	9.5			38.0	43.4	22.5	
12M - PMED - 12IP	- 12MO - 2 - 12PR	-----		3/4	9.5			39.8	48.8	27.5	

NOTE: 1) The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2) Dimension L1, C, D is shown in the finger-tight position. 3) Dimensions are for reference only and are subject to change 4) ISO Parallel (BSPP) thread as per BS 2779.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread

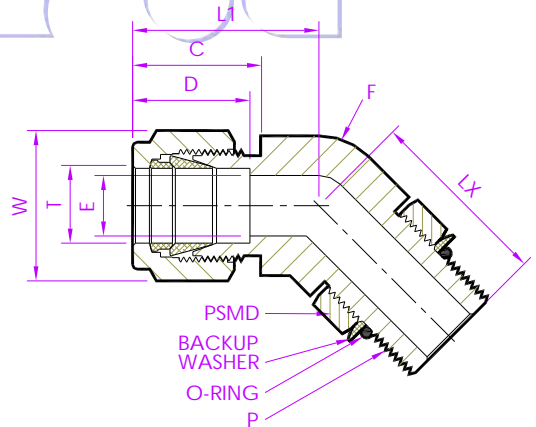
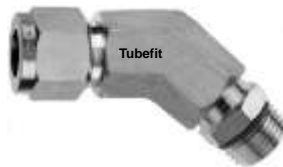
Positionable Male Elbow



Fractional Tube x SAE/MS Straight (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	SAE/MS Male Pipe Size P	ØE	D	C	L	LX	Body Hex F	Nut Hex W
Dimensions in Inches											
4 - PMED - 7SM	- 400 - 2 - 4ST	4M5SEL4	1/4	7/16x20	0.19	0.60	0.70	1.12	1.12	9/16	9/16
4 - PMED - 9SM	- 400 - 2 - 6ST	-----		9/16x18	0.19			1.20	1.27	5/8	
5 - PMED - 8SM	- 500 - 2 - 5ST	-----	5/16	1/2x20	0.23	0.64	0.73	1.19	1.16	9/16	5/8
6 - PMED - 9SM	- 600 - 2 - 6ST	6M5SEL6	3/8	9/16x18	0.28	0.66	0.76	1.26	1.27	5/8	11/16
6 - PMED - 12SM	- 600 - 2 - 8ST	-----		3/4x16	0.28			1.37	1.49	13/16	
8 - PMED - 12SM	- 810 - 2 - 8ST	8M5SEL8	1/2	3/4x16	0.41	0.90	0.86	1.48	1.49	13/16	7/8
10 - PMED - 14SM	- 1010 - 2 - 10ST	-----	5/8	7/8x14	0.50	0.96	0.86	1.56	1.71	15/16	1
12 - PMED - 17SM	- 1210 - 2 - 12ST	12M5SEL12	3/4	1.1/16x12	0.62	0.96	0.86	1.63	1.92	1.1/16	1.1/8
14 - PMED - 19SM	- 1410 - 2 - 14ST	-----	7/8	1.3/16x12	0.72	1.02	0.86	1.70	1.99	1.3/16	1.1/4
16 - PMED - 21SM	- 1610 - 2 - 16ST	16M5SEL16	1	1.5/16x12	0.88	1.23	1.04	1.99	2.11	1.3/8	1.1/2

45° Positionable Male Elbow



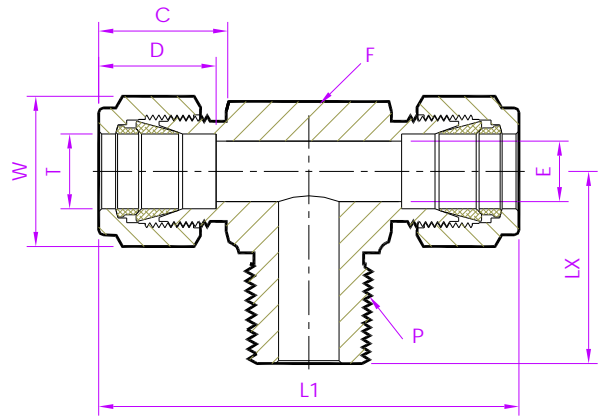
Fractional Tube x SAE/MS Straight (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	SAE/MS Male Pipe Size P	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Inches											
4 - 45PMED - 7SM	- 400 - 5 - 4ST	4M5VEL4	1/4	7/16x20	0.19	0.60	0.70	1.01	1.01	9/16	9/16
6 - 45PMED - 9SM	- 600 - 5 - 6ST	6M5VEL6	3/8	9/16x18	0.28	0.66	0.76	1.10	1.11	5/8	11/16
8 - 45PMED - 12SM	- 810 - 5 - 8ST	8M5VEL8	1/2	3/4x16	0.41	0.90	0.86	1.26	1.27	13/16	7/8
12 - 45PMED - 17SM	- 1210 - 5 - 12ST	12M5VEL12	3/4	1.1/16x12	0.62	0.96	0.86	1.57	1.86	1.1/8	1.1/8
16 - 45PMED - 21SM	- 1610 - 5 - 16ST	16M5VEL16	1	1.5/16x12	0.88	1.23	1.04	1.87	1.99	1.3/8	1.1/2

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension L, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)SAE/MS (UNF) thread as per ASME B1.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Male Branch Tee

Fractional Tube x NPT (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Inches											
2 - MBTD - 2N	- 200 - 3 - 2TTM	2MBT2N	1/8	1/8	0.09	0.50	0.60	1.86	0.70	1/2	7/16
2 - MBTD - 4N	- 200 - 3 - 4TTM	2MBT4N		1/4	0.09			1.94	0.92	9/16	
3 - MBTD - 2N	- 300 - 3 - 2TTM	3MBT2N	3/16	1/8	0.12	0.60	0.70	1.92	0.70	1/2	1/2
4 - MBTD - 2N	- 400 - 3 - 2TTM	4MBT2N		1/8	0.19			2.12	0.74	9/16	
4 - MBTD - 4N	- 400 - 3 - 4TTM	4MBT4N	1/4	1/4	0.19			2.12	0.92	9/16	9/16
5 - MBTD - 2N	- 500 - 3 - 2TTM	5MBT2N		1/8	0.19	0.64	0.73	2.34	0.82	5/8	
5 - MBTD - 4N	- 500 - 3 - 4TTM	5MBT4N	5/16	1/4	0.25			2.34	1.01	5/8	
6 - MBTD - 4N	- 600 - 3 - 4TTM	6MBT4N		1/4	0.28	0.66	0.76	2.40	1.00	5/8	11/16
6 - MBTD - 6N	- 600 - 3 - 6TTM	6MBT6N	3/8	3/8	0.28			2.62	1.11	13/16	
8 - MBTD - 6N	- 810 - 3 - 6TTM	8MBT6N		3/8	0.38	0.90	0.86	2.84	1.11	13/16	7/8
8 - MBTD - 8N	- 810 - 3 - 8TTM	8MBT8N	1/2	1/2	0.41			2.84	1.30	7/8	
10 - MBTD - 8N	- 1010 - 3 - 8TTM	10MBT8N	5/8	1/2	0.47	0.96	0.86	3.06	1.41	15/16	1
12 - MBTD - 12N	- 1210 - 3 - 12TTM	12MBT12N	3/4	3/4	0.62	0.96	0.86	3.14	1.45	1.1/16	1.1/8
14 - MBTD - 12N	- 1410 - 3 - 12TTM	14MBT12N	7/8	3/4	0.62	1.02	0.86	3.52	1.50	1.3/8	1.1/4
16 - MBTD - 12N	- 1610 - 3 - 12TTM	16MBT12N		3/4	0.62	1.23	1.04	3.88	1.66	1.3/8	1.1/2
16 - MBTD - 16N	- 1610 - 3 - 16TTM	16MBT16N	1	1	0.88			3.88	1.84	1.3/8	

Metric Tube x NPT (M)

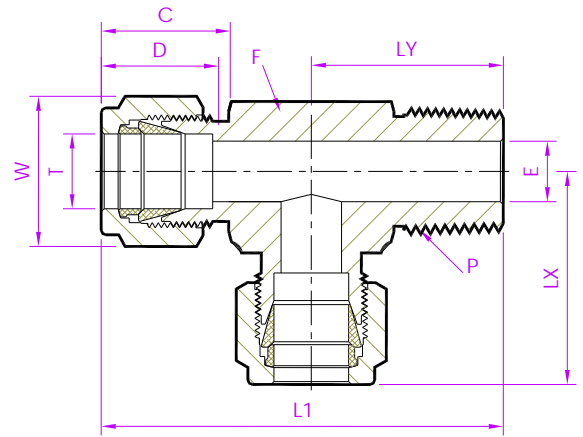
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T (mm)	NPT Male Pipe Size P (In)	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Millimetres											
6M - MBTD - 2N	- 6MO - 3 - 2TTM	M6MBT1/8N	6	1/8	4.8	15.3	17.7	53.9	27.0	15	14.2
6M - MBTD - 4N	- 6MO - 3 - 4TTM	M6MBT1/4N		1/4	4.8			53.9	27.0	15	
8M - MBTD - 2N	- 8MO - 3 - 2TTM	M8MBT1/8N	8	1/8	4.8	16.2	18.6	59.7	29.9	15	16
8M - MBTD - 4N	- 8MO - 3 - 4TTM	M8MBT1/4N		1/4	6.4			59.7	29.9	15	
10M - MBTD - 4N	- 10MO - 3 - 4TTM	M10MBT1/4N		1/4	7.1	17.2	19.5	67.0	33.5	20.5	19
10M - MBTD - 6N	- 10MO - 3 - 6TTM	M10MBT3/8N	10	3/8	7.9			67.0	33.5	20.5	
12M - MBTD - 4N	- 12MO - 3 - 4TTM	M12MBT1/4N		1/4	7.1	22.8	22.0	72.0	36.0	20.5	22.2
12M - MBTD - 6N	- 12MO - 3 - 6TTM	M12MBT3/8N	12	3/8	9.5			72.0	36.0	20.5	
12M - MBTD - 8N	- 12MO - 3 - 8TTM	M12MBT1/2N		1/2	9.5			72.0	36.0	22.5	
16M - MBTD - 8N	- 16MO - 3 - 8TTM	M16MBT1/2N	16	1/2	11.9	24.4	22.0	77.6	38.8	27.5	25.4

NOTE: 1)The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.
- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Male Run Tee



Fractional Tube x NPT (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	ØE	D	C	L1	LX	LY	Body Hex F	Nut Hex W
Dimensions in Inches												
2 - MRTD - 2N	- 200 - 3 - 2TMT	2MRT2N	1/8	1/8	0.09	0.50	0.60	1.63	0.93	0.70	7/16	7/16
2 - MRTD - 4N	- 200 - 3 - 4TMT	2MRT4N		1/4	0.09			1.89	0.97	0.92	9/16	
3 - MRTD - 2N	- 300 - 3 - 2TMT	3MRT2N	3/16	1/8	0.12	0.54	0.63	1.66	0.96	0.70	7/16	1/2
4 - MRTD - 2N	- 400 - 3 - 2TMT	4MRT2N		1/8	0.19			1.80	1.06	0.74	9/16	
4 - MRTD - 4N	- 400 - 3 - 4TMT	4MRT4N	1/4	1/4	0.19	0.60	0.70	1.98	1.06	0.92	9/16	9/16
5 - MRTD - 2N	- 500 - 3 - 2TMT	5MRT2N		1/8	0.19			1.99	1.17	0.82	5/8	
5 - MRTD - 4N	- 500 - 3 - 4TMT	5MRT4N	5/16	1/4	0.25	0.64	0.73	2.18	1.17	1.00	5/8	5/8
6 - MRTD - 4N	- 600 - 3 - 4TMT	6MRT4N		1/4	0.28			2.20	1.20	1.00	5/8	
6 - MRTD - 6N	- 600 - 3 - 6TMT	6MRT6N	3/8	3/8	0.28	0.66	0.76	2.42	1.31	1.11	13/16	11/16
8 - MRTD - 6N	- 810 - 3 - 6TMT	8MRT6N		3/8	0.38			2.53	1.42	1.11	13/16	
8 - MRTD - 8N	- 810 - 3 - 8TMT	8MRT8N	1/2	1/2	0.41	0.90	0.86	2.72	1.44	1.30	7/8	7/8
10 - MRTD - 8N	- 1010 - 3 - 8TMT	10MRT8N		5/8	1/2			0.47	0.96	0.86	2.88	
12 - MRTD - 12N	- 1210 - 3 - 12TMT	12MRT12N	3/4	3/4	0.62	0.96	0.86	3.02	1.57	1.45	1.1/16	1.1/8
14 - MRTD - 12N	- 1410 - 3 - 12TMT	14MRT12N	7/8	3/4	0.62	1.02	0.86	3.26	1.76	1.45	1.3/4	1.1/4
16 - MRTD - 12N	- 1610 - 3 - 12TMT	16MRT12N	1	3/4	0.62	1.23	1.23	3.60	1.94	1.66	1.3/8	1.1/2
16 - MRTD - 16N	- 1610 - 3 - 16TMT	16MRT16N		1	0.88			3.78	1.94	1.84	1.3/8	

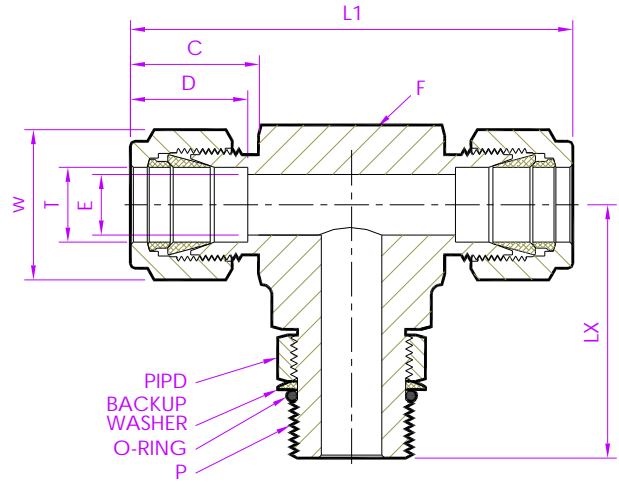
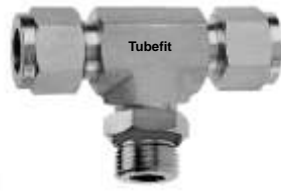
Metric Tube x NPT (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T (mm)	NPT Male Pipe Size P (Inch)	ØE	D	C	L1	LX	LY	Body Hex F	Nut Hex W
Dimensions in Millimetres												
6M - MRTD - 2N	- 6MO - 3 - 2TMT	M6MRT1/8N	6	1/8	4.8	15.3	17.7	45.8	27.0	18.0	15	14.2
6M - MRTD - 4N	- 6MO - 3 - 4TMT	M6MRT1/4N		1/4	4.8			50.3	27.0	23.4	15	
8M - MRTD - 2N	- 8MO - 3 - 2TMT	M8MRT1/8N	8	1/8	4.8	16.2	18.6	50.7	29.9	20.8	15	16
8M - MRTD - 4N	- 8MO - 3 - 4TMT	M8MRT1/4N		1/4	6.4			55.3	29.9	25.4	15	
10M - MRTD - 4N	- 10MO - 3 - 4TMT	M10MRT1/4N	10	1/4	7.9	17.2	19.5	61.7	33.5	28.2	20.5	19
10M - MRTD - 8N	- 10MO - 3 - 8TMT	M10MRT1/2N		1/2	7.9			66.5	33.5	33.0	22.5	
12M - MRTD - 4N	- 12MO - 3 - 4TMT	M12MRT1/4N	12	1/4	7.1	22.8	22.0	64.2	36.0	28.2	20.5	22
12M - MRTD - 6N	- 12MO - 3 - 6TMT	M12MRT3/8N		3/8	9.5			64.2	36.0	28.2	20.5	
12M - MRTD - 8N	- 12MO - 3 - 8TMT	M12MRT1/2N		1/2	9.5			69.0	36.0	33.0	22.5	
16M - MRTD - 8N	- 16MO - 3 - 8TMT	M16MRT1/2N	16	1/2	11.9	24.4	22.0	73.1	38.0	35.0	27.5	25
16M - MRTD - 16N	- 16MO - 3 - 8TMT	M16MRT1N		1	12.7			93.1	46.6	46.5	36	

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to lager ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Positionable Male Branch Tee

Fractional Tube x ISO Parallel (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Male Pipe Size P	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Inches											
4 - PMBTD - 2IP	- 400 - 3 - 2TTR	4MBT2R	1/4	1/8	0.16	0.60	0.70	2.12	1.04	9/16	9/16
4 - PMBTD - 4IP	- 400 - 3 - 4TTR	4MBT4R		1/4	0.19			2.28	1.27	5/8	
6 - PMBTD - 4IP	- 600 - 3 - 4TTR	6MBT4R	3/8	1/4	0.20	0.66	0.76	2.40	1.27	5/8	11/16
8 - PMBTD - 6IP	- 810 - 3 - 6TTR	8MBT6R	1/2	3/8	0.31	0.90	0.86	2.84	1.46	7/8	7/8
8 - PMBTD - 8IP	- 810 - 3 - 8TTR	8MBT8R		1/2	0.41			3.00	1.71	15/16	
10 - PMBTD - 8IP	- 1010 - 3 - 8TTR	10MBT8R	5/8	1/2	0.47	0.96	0.86	3.00	1.71	15/16	1
12 - PMBTD - 12IP	- 1210 - 3 - 12TTR	12MBT12R	3/4	3/4	0.62	0.96	0.86	3.14	1.92	1.1/16	1.1/8
12 - PMBTD - 8IP	- 1210 - 3 - 8TTR	12MBT8R		1/2	0.47			3.14	1.78	1.1/16	
16 - PMBTD - 16IP	- 1610 - 3 - 16TTR	16MBT16R	1	1	0.78	1.23	1.04	3.86	2.11	1.3/8	1.1/2

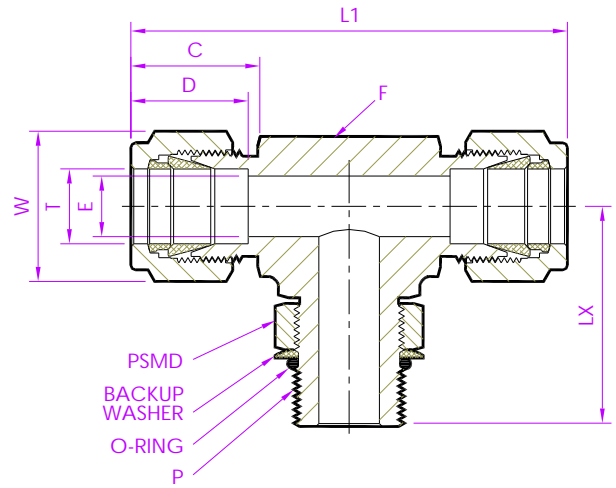
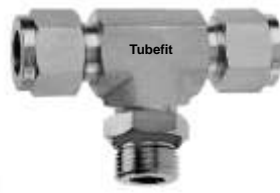
Metric Tube x ISO Parallel (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Male Pipe Size P	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Millimetres											
6M - PMBTD - 2IP	- 6MO - 3 - 2TTR	.....	6	1/8	4.0	15.3	17.7	53.9	26.4	15	14.2
6M - PMBTD - 4IP	- 6MO - 3 - 4TTR	.....		1/4	4.8			58.0	32.2	17.5	
8M - PMBTD - 2IP	- 8MO - 3 - 2TTR	.....	8	1/8	4.0	16.2	18.6	57.7	27.4	15	16
8M - PMBTD - 4IP	- 8MO - 3 - 4TTR	.....		1/4	5.9			59.7	32.2	17.5	
10M - PMBTD - 4IP	- 10MO - 3 - 4TTR	.....	10	1/4	5.9	17.2	19.5	67.0	35.0	20.5	19
12M - PMBTD - 6IP	- 12MO - 3 - 6TTR	.....	12	3/8	7.9	22.8	22.0	72.0	37.1	20.5	22.2
12M - PMBTD - 8IP	- 12MO - 3 - 8TTR	.....		1/2	9.5			76.1	43.4	27.5	

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to lager ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)ISO Parallel (BSPP) thread as per BS 2779.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

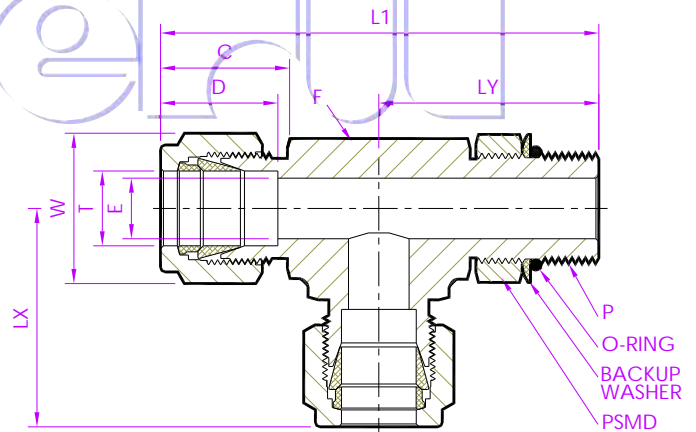
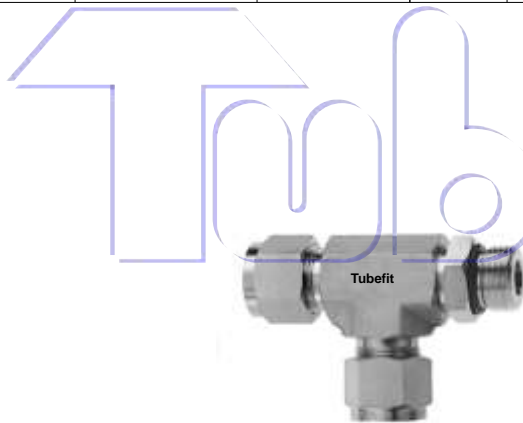
- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Positionable Male Branch Tee

Fractional Tube x SAE/MS Straight (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	SAE/MS Male Pipe Size P	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Inches											
4 - PMBTD - 7SM	- 400 - 3TTS	4M5BT4	1/4	7/16x20	0.19	0.60	0.70	2.24	1.12	9/16	9/16
6 - PMBTD - 9SM	- 600 - 3TTS	6M5BT6	3/8	9/16x18	0.28	0.66	0.76	2.52	1.27	5/8	11/16
8 - PMBTD - 12SM	- 810 - 3TTS	8M5BT8	1/2	3/4x16	0.41	0.90	0.86	2.96	1.49	13/16	7/8
12 - PMBTD - 17SM	- 1210 - 3TTS	12M5BT12	3/4	1.1/16x12	0.62	0.96	0.86	3.26	1.92	1.1/16	1.1/8
16 - PMBTD - 21SM	- 1610 - 3TTS	16M5BT16	1	1.5/16x12	0.88	1.23	1.04	3.98	2.11	1.3/8	1.1/2



Positionable Male Run Tee

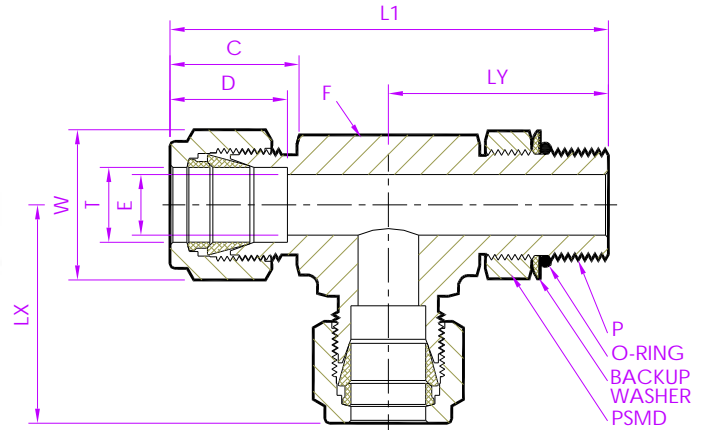
Fractional Tube x SAE/MS Straight (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	SAE/MS Male Pipe Size P	ØE	D	C	L1	LY	LX	Body Hex F	Nut Hex W
Dimensions in Inches												
4 - PMRTD - 7SM	- 400 - 3TST	4M5RT4	1/4	7/16x20	0.19	0.60	0.70	2.24	1.12	1.12	1/2	9/16
6 - PMRTD - 9SM	- 600 - 3TST	6M5RT6	3/8	9/16x18	0.28	0.66	0.76	2.53	1.27	1.26	5/8	11/16
8 - PMRTD - 12SM	- 810 - 3TST	8M5RT8	1/2	3/4x16	0.41	0.90	0.86	2.97	1.49	1.48	13/16	7/8
12 - PMRTD - 17SM	- 1210 - 3TST	12M5RT12	3/4	1.1/16x12	0.62	0.96	0.86	3.55	1.92	1.63	1.1/16	1.1/8
16 - PMRTD - 21SM	- 1610 - 3TST	16M5RT16	1	1.5/16x12	0.88	1.23	1.04	4.10	2.11	1.99	1.3/8	1.1/2

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)SAE/MS (UNF) thread as per ASME B1.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Male Pipe Thread



Positionable Male Run Tee

Fractional Tube x ISO Parallel (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Male Pipe Size P	ØE	D	C	L1	LY	LX	Body Hex F	Nut Hex W
Dimensions in Inches												
4 - PMRTD - 2IP	- 400 - 3 - 2TRT	4MRT2R	1/4	1/8	0.16	0.60	0.70	2.10	1.04	1.06	9/16	9/16
4 - PMRTD - 4IP	- 400 - 3 - 4TRT	4MRT4R		1/4	0.19			2.41	1.27	1.14	3/4	
6 - PMRTD - 4IP	- 600 - 3 - 4TRT	6MRT4R	3/8	1/4	0.23	0.66	0.76	2.47	1.27	1.20	3/4	11/16
8 - PMRTD - 6IP	- 810 - 3 - 6TRT	8MRT6R	1/2	3/8	0.31	0.90	0.86	2.88	1.46	1.42	7/8	7/8
8 - PMRTD - 8IP	- 810 - 3 - 8TRT	8MRT8R		1/2	0.41			3.21	1.71	1.50	1.1/16	
10 - PMRTD - 8IP	- 1010 - 3 - 8TRT	10MRT8R	5/8	1/2	0.47	0.96	0.86	3.21	1.71	1.50	1.1/16	1
12 - PMRTD - 12IP	- 1210 - 3 - 12TRT	12MRT12R	3/4	3/4	0.62	0.96	0.86	3.49	1.92	1.57	1.1/4	1.1/8
12 - PMRTD - 8IP	- 1210 - 3 - 8TRT	12MRT8R		1/2	0.47			3.35	1.78	1.57	1.1/16	
16 - PMRTD - 16IP	- 1610 - 3 - 16TRT	16MRT16R	1	1	0.78	1.23	1.04	4.04	2.11	1.93	1.3/8	1.1/2

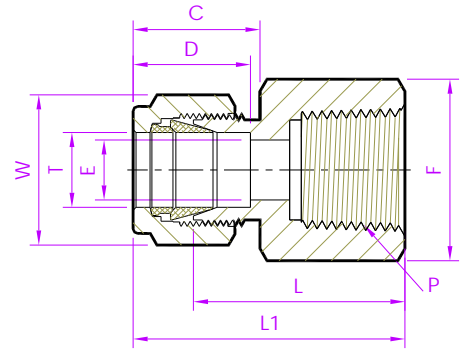
Metric Tube x ISO Parallel (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Male Pipe Size P	ØE	D	C	L1	LY	LX	Body Hex F	Nut Hex W
			(mm)	(In)	Dimensions in Millimetres							
6M - PMRTD - 2IP	- 6MO - 3 - 2TRT	-----	6	1/8	4.0	15.3	17.7	53.4	26.4	27.0	12.5	14.2
6M - PMRTD - 4IP	- 6MO - 3 - 4TRT	-----		1/4	4.8			61.2	32.2	29.0	16	
8M - PMRTD - 2IP	- 8MO - 3 - 2TRT	-----	8	1/8	4.0	16.2	18.6	56.3	27.4	28.8	15	16
8M - PMRTD - 4IP	- 8MO - 3 - 4TRT	-----		1/4	6.4			62.1	32.2	29.9	16	
10M - PMRTD - 4IP	- 10MO - 3 - 4TRT	-----	10	1/4	5.9	17.2	19.5	68.6	35.0	33.5	20.5	19
12M - PMRTD - 6IP	- 12MO - 3 - 6TRT	-----	12	3/8	7.9	22.8	22.0	73.1	37.1	36.0	20.5	22.2
12M - PMRTD - 8IP	- 12MO - 3 - 8TRT	-----		1/2	9.5			81.5	43.4	38.0	24	

NOTE: 1)The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)ISO (BSP Parallel) thread as per BS 2779.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Female Pipe Thread



Female Connector

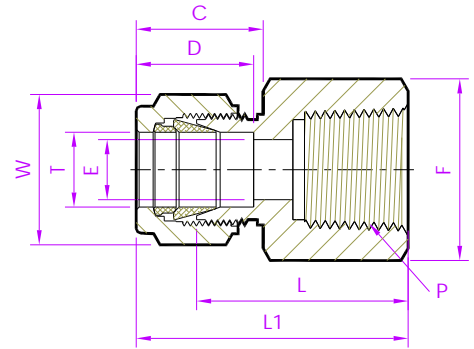
Fractional Tube x NPT (F)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Female Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
1 - FCD - 1N	- 100 - 7 - 1	1FSC1N	1/16	1/16	0.05	0.34	0.43	0.73	0.93	7/16	5/16
1 - FCD - 2N	- 100 - 7 - 2	1FSC2N		1/8	0.05			0.76	0.96	9/16	
2 - FCD - 2N	- 200 - 7 - 2	2FSC2N	1/8	1/8	0.09	0.50	0.60	0.87	1.13	9/16	7/16
2 - FCD - 4N	- 200 - 7 - 4	2FSC4N		1/4	0.09			1.06	1.32	3/4	
3 - FCD - 2N	- 300 - 7 - 2	3FSC2N	3/16	1/8	0.12	0.54	0.63	0.91	1.17	9/16	1/2
3 - FCD - 4N	- 300 - 7 - 4	3FSC4N		1/4	0.12			1.09	1.35	3/4	
4 - FCD - 2N	- 400 - 7 - 2	4FSC2N	1/4	1/8	0.19	0.60	0.70	0.94	1.23	9/16	9/16
4 - FCD - 4N	- 400 - 7 - 4	4FSC4N		1/4	0.19			1.12	1.41	3/4	
4 - FCD - 6N	- 400 - 7 - 6	4FSC6N		3/8	0.19			1.19	1.48	7/8	
4 - FCD - 8N	- 400 - 7 - 8	4FSC8N		1/2	0.19			1.38	1.67	1.1/16	
5 - FCD - 2N	- 500 - 7 - 2	5FSC2N	5/16	1/8	0.25	0.64	0.73	0.97	1.26	9/16	5/8
5 - FCD - 4N	- 500 - 7 - 4	5FSC4N		1/4	0.25			1.16	1.45	3/4	
5 - FCD - 6N	- 500 - 7 - 6	5FSC6N		3/8	0.25			1.22	1.51	7/8	
6 - FCD - 2N	- 600 - 7 - 2	6FSC2N	3/8	1/8	0.28	0.66	0.76	1.00	1.29	5/8	11/16
6 - FCD - 4N	- 600 - 7 - 4	6FSC4N		1/4	0.28			1.19	1.48	3/4	
6 - FCD - 6N	- 600 - 7 - 6	6FSC6N		3/8	0.28			1.25	1.54	7/8	
6 - FCD - 8N	- 600 - 7 - 8	6FSC8N		1/2	0.28			1.44	1.73	1.1/16	
6 - FCD - 12N	- 600 - 7 - 12	6FSC12N		3/4	0.28			1.59	1.88	1.5/16	
8 - FCD - 4N	- 810 - 7 - 4	8FSC4N	1/2	1/4	0.41	0.90	0.86	1.19	1.59	13/16	7/8
8 - FCD - 6N	- 810 - 7 - 6	8FSC6N		3/8	0.41			1.25	1.65	7/8	
8 - FCD - 8N	- 810 - 7 - 8	8FSC8N		1/2	0.41			1.44	1.84	1.1/16	
8 - FCD - 12N	- 810 - 7 - 12	8FSC12N		3/4	0.41			1.50	1.90	1.5/16	
10 - FCD - 6N	- 1010 - 7 - 6	10FSC6N	5/8	3/8	0.50	0.96	0.86	1.25	1.65	15/16	1
10 - FCD - 8N	- 1010 - 7 - 8	10FSC8N		1/2	0.50			1.44	1.84	1.1/16	
10 - FCD - 12N	- 1010 - 7 - 12	10FSC12N		3/4	0.50			1.50	1.90	1.5/16	
12 - FCD - 8N	- 1210 - 7 - 8	12FSC8N	3/4	1/2	0.62	0.96	0.86	1.44	1.84	1.1/16	1.1/8
12 - FCD - 12N	- 1210 - 7 - 12	12FSC12N		3/4	0.62			1.50	1.90	1.5/16	
14 - FCD - 12N	- 1410 - 7 - 12	14FSC12N	7/8	3/4	0.72	1.02	0.86	1.56	1.96	1.5/16	1.1/4
16 - FCD - 12N	- 1610 - 7 - 12	16FSC12N	1	3/4	0.88	1.23	1.04	1.62	2.10	1.3/8	1.1/2
16 - FCD - 16N	- 1610 - 7 - 16	16FSC12N		1	0.88			1.97	2.45	1.5/8	

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Female Pipe Thread



Female Connector

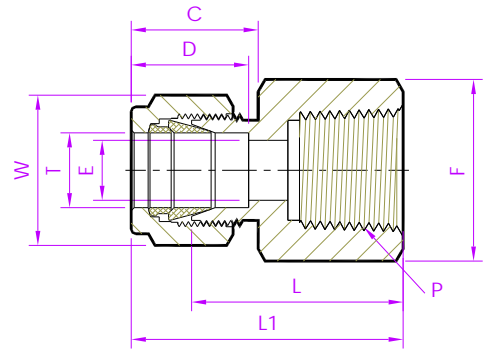
Metric Tube x NPT (F)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Female Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
			(mm)	(Inch)	Dimensions in Millimetres						
3M - FCD - 2N	- 3MO - 7 - 2	M3FSC1/8N	3	1/8	2.4	12.9	15.3	22.1	28.7	14.2	11.1
3M - FCD - 4N	- 3MO - 7 - 4	M3FSC1/4N	3	1/4	2.4	12.9	15.3	26.9	33.5	19	11.1
4M - FCD - 2N	- 4MO - 7 - 2	M4FSC1/8N	4	1/8	2.4	13.7	16.1	23.1	29.7	14.2	11.1
6M - FCD - 2N	- 6MO - 7 - 2	M6FSC1/8N	6	1/8	4.8	15.3	17.7	23.9	31.3	14.2	14.2
6M - FCD - 4N	- 6MO - 7 - 4	M6FSC1/4N		1/4	4.8			28.4	35.8	19	
6M - FCD - 6N	- 6MO - 7 - 6	M6FSC3/8N		3/8	4.8			30.2	37.6	22.2	
6M - FCD - 8N	- 6MO - 7 - 8	M6FSC1/2N		1/2	4.8			35.1	42.5	27	
8M - FCD - 2N	- 8MO - 7 - 2	M8FSC1/8N	8	1/8	6.4	16.2	18.6	24.6	32.1	16	16
8M - FCD - 4N	- 8MO - 7 - 4	M8FSC1/4N		1/4	6.4			29.5	37.0	19	
8M - FCD - 6N	- 8MO - 7 - 6	M8FSC3/8N		3/8	6.4			31.0	38.5	22.2	
8M - FCD - 8N	- 8MO - 7 - 8	-----		1/2	6.4			35.8	43.3	27	
10M - FCD - 4N	- 10MO - 7 - 4	M10FSC1/4N	10	1/4	7.9	17.2	19.5	30.2	37.8	19	19
10M - FCD - 6N	- 10MO - 7 - 6	M10FSC3/8N		3/8	7.9			31.8	39.4	22.2	
10M - FCD - 8N	- 10MO - 7 - 8	M10FSC1/2N		1/2	7.9			36.6	44.2	27	
12M - FCD - 4N	- 12MO - 7 - 4	M12FSC1/4N	12	1/4	9.5	22.8	22.0	30.2	40.3	22.2	22.2
12M - FCD - 6N	- 12MO - 7 - 6	M12FSC3/8N		3/8	9.5			31.8	41.9	22.2	
12M - FCD - 8N	- 12MO - 7 - 8	M12FSC1/2N		1/2	9.5			36.6	46.7	27	
15M - FCD - 8N	- 15MO - 7 - 8	-----	15	1/2	11.9	24.4	22.0	36.6	46.7	27	25.4
16M - FCD - 6N	- 16MO - 7 - 6	M16FSC3/8N	16	3/8	9.5	24.4	22.0	31.8	41.9	27	25.4
16M - FCD - 8N	- 16MO - 7 - 8	M16FSC1/2N		1/2	12.7			36.8	46.9	27	
20M - FCD - 8N	- 20MO - 7 - 8	M20FSC1/2N	20	1/2	15.9	26.0	22.0	37.8	47.9	30	32
20M - FCD - 12N	- 20MO - 7 - 12	M20FSC3/4N		3/4	15.9			39.6	49.7	35	
22M - FCD - 12N	- 22MO - 7 - 12	M22FSC3/4N	22	3/4	18.3	26.0	22.0	39.6	49.7	35	32
22M - FCD - 16N	- 22MO - 7 - 16	-----		1	18.3			47.8	57.9	41	
25M - FCD - 12N	- 25MO - 7 - 12	M25FSC3/4N	25	3/4	21.8	31.3	26.5	41.1	53.4	35	38
25M - FCD - 16N	- 25MO - 7 - 16	M25FSC1N		1	21.8			50.0	62.3	41	

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Female Pipe Thread



Female Connector

Fractional Tube x ISO Tapered (F)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISO Female Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
4 - FCD - 2IT	- 400 - 7 - 2RT	4FSC2K	1/4	1/8	0.19	0.60	0.70	1.23	1.23	9/16	9/16
4 - FCD - 4IT	- 400 - 7 - 4RT	4FSC4K		1/4	0.19			1.41	1.41	3/4	
4 - FCD - 6IT	- 400 - 7 - 6RT	4FSC6K		3/8	0.19			1.48	1.48	7/8	
4 - FCD - 8IT	- 400 - 7 - 8RT	4FSC8K		1/2	0.19			1.67	1.67	1.1/16	
6 - FCD - 4IT	- 600 - 7 - 4RT	6FSC4K	3/8	1/4	0.28	0.66	0.76	1.48	1.48	3/4	11/16
6 - FCD - 6IT	- 600 - 7 - 6RT	6FSC6K		3/8	0.28			1.54	1.54	7/8	
6 - FCD - 8IT	- 600 - 7 - 8RT	6FSC8K		1/2	0.28			1.73	1.73	1.1/16	
8 - FCD - 4IT	- 810 - 7 - 4RT	8FSC4K	1/2	1/4	0.41	0.90	0.86	1.59	1.59	13/16	7/8
8 - FCD - 6IT	- 810 - 7 - 6RT	8FSC6K		3/8	0.41			1.65	1.65	7/8	
8 - FCD - 8IT	- 810 - 7 - 8RT	8FSC8K		1/2	0.41			1.84	1.84	1.1/16	

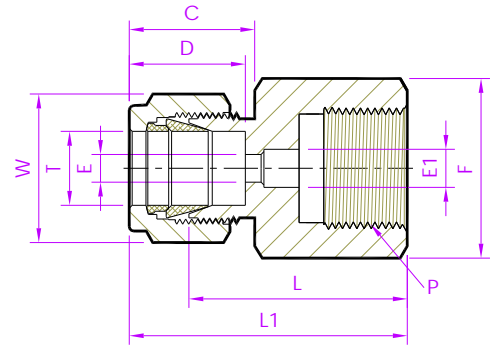
Metric Tube x ISO Tapered (F)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T (mm)	ISO Female Pipe Size P (In)	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Millimetres											
6M - FCD - 4IT	- 6MO - 7 - 4RT	M6FSC1/4K	6	1/4	4.8	15.3	17.7	28.4	35.8	19	14.2
6M - FCD - 6IT	- 6MO - 7 - 6RT	M6FSC3/8K		3/8	4.8			30.2	37.6	22	
6M - FCD - 8IT	- 6MO - 7 - 8RT	M6FSC1/2K		1/2	4.8			35.1	42.5	27	
8M - FCD - 4IT	- 8MO - 7 - 4RT	M8FSC1/4K	8	1/4	6.4	16.2	18.6	29.5	37.0	19	16
8M - FCD - 6IT	- 8MO - 7 - 6RT	M8FSC3/8K		3/8	6.4			31.0	38.5	22	
8M - FCD - 8IT	- 8MO - 7 - 8RT	M8FSC1/2K		1/2	6.4			35.8	43.3	27	
10M - FCD - 4IT	- 10MO - 7 - 4RT	M10FSC1/4K	10	1/4	7.9	17.2	19.5	30.2	37.8	19	19
10M - FCD - 6IT	- 10MO - 7 - 6RT	M10FSC3/8K		3/8	7.9			31.8	39.4	22	
10M - FCD - 8IT	- 10MO - 7 - 8RT	M10FSC1/2K		1/2	7.9			36.6	44.2	27	
12M - FCD - 4IT	- 12MO - 7 - 4RT	M12FSC1/4K	12	1/4	9.5	22.8	22.0	30.2	40.3	22	22.2
12M - FCD - 6IT	- 12MO - 7 - 6RT	M12FSC3/8K		3/8	9.5			31.8	41.9	22	
12M - FCD - 8IT	- 12MO - 7 - 8RT	-----		1/2	9.5			36.6	46.7	27	
12M - FCD - 12IT	- 12MO - 7 - 12RT	-----		3/4	9.5			38.9	49.0	35	
15M - FCD - 6IT	- 15MO - 7 - 6RT	-----	15	3/8	11.9	24.4	22.0	31.8	41.9	24	25.4
15M - FCD - 8IT	- 15MO - 7 - 8RT	-----		1/2	11.9			36.6	46.7	27	
16M - FCD - 8IT	- 16MO - 7 - 8RT	M16FSC1/2K	16	1/2	11.9	24.4	22.0	38.3	48.4	18	25.4
20M - FCD - 8IT	- 20MO - 7 - 8RT	M20FSC1/2K	20	1/2	15.9	26.0	22.0	37.8	47.9	30	32
20M - FCD - 12IT	- 20MO - 7 - 12RT	M20FSC3/4K		3/4	15.9			39.6	49.7	35	
22M - FCD - 12IT	- 22MO - 7 - 12RT	-----	22	3/4	18.3	26.0	22.0	39.6	49.7	35	32
22M - FCD - 16IT	- 22MO - 7 - 16RT	M22FSC1K		1	18.3			56.8	57.9	41	
25M - FCD - 12IT	- 25MO - 7 - 12RT	M25FSC3/4K	25	3/4	21.8	31.3	26.5	41.1	53.4	35	38
25M - FCD - 16IT	- 25MO - 7 - 16RT	M25FSC1K		1	21.8			50.0	62.3	41	

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change 4)ISO Tapered (BSP) thread as per BS 21.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Female Pipe Thread



Female Connector

Fractional Tube x ISO Parallel (F) GAUGE

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISO Female Pipe Size P	ØE	ØE1	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches												
4 - FCD - 4IPG	- 400 - 7 - 4RG	4FSC4GC	1/4	1/4	0.19	0.22	0.60	0.70	1.28	1.48	3/4	9/16
4 - FCD - 6IPG	- 400 - 7 - 6RG	4FSC6GC		3/8	0.19	0.26			1.28	1.48	15/16	
4 - FCD - 8IPG	- 400 - 7 - 8RG	4FSC8GC		1/2	0.19	0.26			1.51	1.71	1.1/16	
5 - FCD - 4IPG	- 500 - 7 - 4RG	5FSC4GC	5/16	1/4	0.22	-----	0.64	0.73	1.22	1.51	3/4	5/8
5 - FCD - 8IPG	- 500 - 7 - 8RG	5FSC8GC		1/2	0.28	-----			1.32	1.61	1.1/16	
6 - FCD - 4IPG	- 600 - 7 - 4RG	6FSC4GC	3/8	1/4	0.22	-----	0.66	0.76	1.25	1.54	3/4	11/16
6 - FCD - 6IPG	- 600 - 7 - 6RG	6FSC6GC		3/8	0.26	-----			1.25	1.54	15/16	
6 - FCD - 8IPG	- 600 - 7 - 8RG	6FSC8GC		1/2	0.28	-----			1.36	1.65	1.1/16	
8 - FCD - 4IPG	- 810 - 7 - 4RG	8FSC4GC	1/2	1/4	0.21	-----	0.90	0.86	1.25	1.65	13/16	7/8
8 - FCD - 6IPG	- 810 - 7 - 6RG	8FSC6GC		3/8	0.26	-----			1.35	1.75	15/16	
8 - FCD - 8IPG	- 810 - 7 - 8RG	8FSC8GC		1/2	0.28	-----			1.50	1.90	1.1/16	

Metric Tube x ISO Parallel (F) GAUGE

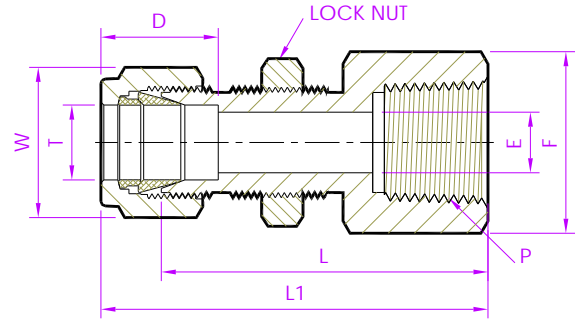
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISO Female Pipe Size P	ØE	ØE1	D	C	L	L1	Body Hex F	Nut Hex W
			(mm)	(In)	Dimensions in Millimetres							
3M - FCD - 4IPG	- 3MO - 7 - 4RG	M3GC1/4R	3	1/4	2.4	5.5	12.9	15.3	28.7	35.3	19	12
6M - FCD - 4IPG	- 6MO - 7 - 4RG	M6GC1/4R	6	1/4	4.8	5.5	15.3	17.7	30.2	37.6	19	14.2
6M - FCD - 6IPG	- 6MO - 7 - 6RG	M6GC3/8R		3/8	4.8	6.5			30.2	37.6	24	
6M - FCD - 8IPG	- 6MO - 7 - 8RG	M6GC1/2R		1/2	4.8	7.0			35.9	43.5	27	
8M - FCD - 4IPG	- 8MO - 7 - 4RG	M8GC1/4R	8	1/4	5.5	5.5	16.2	18.6	31.0	38.5	19	16
8M - FCD - 6IPG	- 8MO - 7 - 6RG	M8GC3/8R		3/8	6.5	6.5			28.7	36.2	24	
8M - FCD - 8IPG	- 8MO - 7 - 8RG	M8GC1/2R		1/2	7.0	7.0			33.5	41.0	27	
10M - FCD - 4IPG	- 10MO - 7 - 4RG	M10GC1/4R	10	1/4	5.5	5.5	17.2	19.5	31.8	39.4	19	19
10M - FCD - 6IPG	- 10MO - 7 - 6RG	M10GC3/8R		3/8	6.5	6.5			31.2	38.8	24	
10M - FCD - 8IPG	- 10MO - 7 - 8RG	M10GC1/2R		1/2	7.0	7.0			34.5	42.1	27	
12M - FCD - 4IPG	- 12MO - 7 - 4RG	M12GC1/4R	12	1/4	5.5	5.5	22.8	22.0	31.8	41.9	22	22.2
12M - FCD - 6IPG	- 12MO - 7 - 6RG	M12GC3/8R		3/8	6.5	6.5			34.3	44.4	24	
12M - FCD - 8IPG	- 12MO - 7 - 8RG	M12GC1/2R		1/2	7.0	7.0			38.1	48.2	27	
20M - FCD - 8IPG	- 20MO - 7 - 8RG	-----	20	1/2	7.0	7.0	26.0	22.0	44.2	54.3	30	32
22M - FCD - 8IPG	- 22MO - 7 - 8RG	-----	22	1/2	7.0	7.0	26.0	22.0	44.2	54.3	30	32

- No seal is made around the male thread. Instead, a gasket is dropped into the flat bottom in the female thread, and the end of the male threaded end exerts a load on the gasket to seal.(Use RGGD Fitting Gasket)

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change 4)ISO Parallel (BSPP) thread as per BS 2779.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Female Pipe Thread



Bulkhead Female Connector

Fractional Tube x NPT (F)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Female Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
2 - BFCD - 2N	- 200 - 71 - 2	2FBC2N	1/8	1/8	0.09	0.50	0.60	1.50	1.76	9/16	7/16
3 - BFCD - 2N	- 300 - 71 - 2	3FBC2N	3/16	1/8	0.12	0.54	0.63	1.53	1.79	9/16	1/2
4 - BFCD - 2N	- 400 - 71 - 2	4FBC2N	1/4	1/8	0.19	0.60	0.70	1.56	1.85	9/16	9/16
4 - BFCD - 4N	- 400 - 71 - 4	4FBC4N		1/4	0.19			1.75	2.04	3/4	
5 - BFCD - 2N	- 500 - 71 - 2	5FBC2N	5/16	1/8	0.25	0.64	0.73	1.67	1.96	11/16	5/8
5 - BFCD - 8N	- 500 - 71 - 8	5FBC8N		1/2	0.25			2.09	2.38	1.1/16	
6 - BFCD - 4N	- 600 - 71 - 4	6FBC4N	3/8	1/4	0.28	0.66	0.76	1.88	2.17	3/4	11/16
8 - BFCD - 6N	- 810 - 71 - 6	8FBC6N	1/2	3/8	0.41	0.90	0.86	2.03	2.43	7/8	7/8
8 - BFCD - 8N	- 810 - 71 - 8	8FBC8N		1/2	0.41			2.22	2.62	1.1/16	
10 - BFCD - 8N	- 1010 - 71 - 8	10FBC8N	5/8	1/2	0.50	0.96	0.86	2.25	2.65	1.1/16	1
12 - BFCD - 12N	- 1210 - 71 - 12	12FBC12N	3/4	3/4	0.62	0.96	0.86	2.50	2.90	1.1/4	1.1/8
14 - BFCD - 12N	- 1410 - 71 - 12	14FBC12N	7/8	3/4	0.72	1.02	0.86	2.78	3.18	1.3/8	1.1/4
16 - BFCD - 16N	- 1610 - 71 - 16	16FBC16N	1	1	0.88	1.23	1.04	3.20	3.68	1.5/8	1.1/2

Metric Tube x NPT (F)

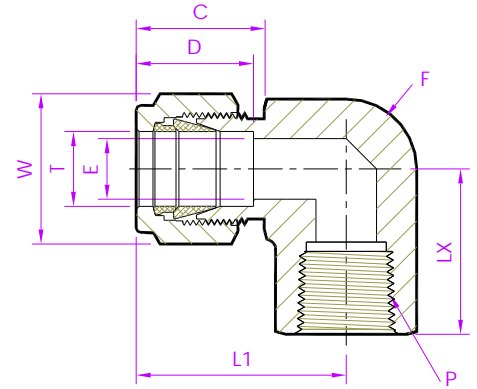
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Female Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
			(mm)	(In)	Dimensions in Inches						
6M - BFCD - 2N	- 6MO - 71 - 2	M6FBC1/8N	6	1/8	4.8	15.3	17.7	39.8	47.2	14.2	14.2
6M - BFCD - 4N	- 6MO - 71 - 4	M6FBC1/4N		1/4	4.8			44.4	51.8	19	
8M - BFCD - 2N	- 8MO - 71 - 2	M8FBC1/8N	8	1/8	4.8	16.2	18.6	42.1	49.6	16	16
10M - BFCD - 4N	- 10MO - 71 - 4	M10FBC1/4N	10	1/4	7.9	17.2	19.5	47.6	55.2	19	19
12M - BFCD - 6N	- 12MO - 71 - 6	M12FBC3/8N	12	3/8	9.5	22.8	22.0	50.8	60.9	22.2	22.2
12M - BFCD - 8N	- 12MO - 71 - 8	M12FBC1/2N		1/2	9.5			56.4	66.5	27	

- For Lock Nut use 'BUND'.

NOTE: 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Female Pipe Thread



Female Elbow

Fractional Tube x NPT (M)

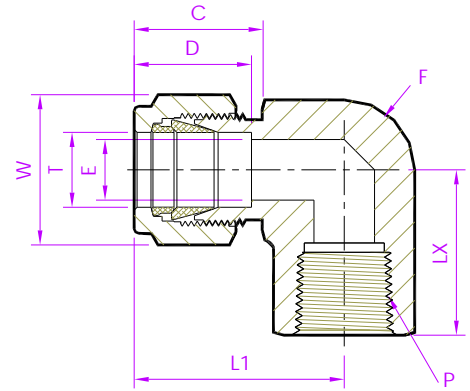
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Female Pipe Size P	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Inches											
1 - FED - 1N	- 100 - 8 - 1	1FEL1N	1/16	1/16	0.05	0.34	0.43	0.71	0.56	7/16	5/16
1 - FED - 2N	- 100 - 8 - 2	1FEL2N		1/8	0.05			0.81	0.75	9/16	
2 - FED - 2N	- 200 - 8 - 2	2FEL2N	1/8	1/8	0.09	0.50	0.60	0.97	0.75	9/16	7/16
2 - FED - 4N	- 200 - 8 - 4	2FEL4N		1/4	0.09			1.08	0.88	11/16	
3 - FED - 2N	- 300 - 8 - 2	3FEL2N	3/16	1/8	0.12	0.54	0.63	1.00	0.75	9/16	1/2
4 - FED - 2N	- 400 - 8 - 2	4FEL2N	1/4	1/8	0.19	0.60	0.70	1.06	0.75	9/16	9/16
4 - FED - 4N	- 400 - 8 - 4	4FEL4N		1/4	0.19			1.17	0.88	11/16	
4 - FED - 6N	- 400 - 8 - 6	4FEL6N		3/8	0.19			1.25	0.88	13/16	
4 - FED - 8N	- 400 - 8 - 8	4FEL8N		1/2	0.19			1.36	1.12	9/16	
5 - FED - 2N	- 500 - 8 - 2	5FEL2N	5/16	1/8	0.25	0.64	0.73	1.13	0.75	9/16	5/8
5 - FED - 4N	- 500 - 8 - 4	5FEL4N		1/4	0.25			1.20	0.88	11/16	
6 - FED - 2N	- 600 - 8 - 2	6FEL2N	3/8	1/8	0.28	0.66	0.76	1.20	0.75	5/8	11/16
6 - FED - 4N	- 600 - 8 - 4	6FEL4N		1/4	0.28			1.23	0.88	11/16	
6 - FED - 6N	- 600 - 8 - 6	6FEL6N		3/8	0.28			1.31	0.88	13/16	
6 - FED - 8N	- 600 - 8 - 8	6FEL8N		1/2	0.28			1.42	1.12	1	
8 - FED - 4N	- 810 - 8 - 4	8FEL4N	1/2	1/4	0.41	0.90	0.86	1.42	0.88	13/16	7/8
8 - FED - 6N	- 810 - 8 - 6	8FEL6N		3/8	0.41			1.42	0.88	13/16	
8 - FED - 8N	- 810 - 8 - 8	8FEL8N		1/2	0.41			1.53	1.12	1	
10 - FED - 6N	- 1010 - 8 - 6	10FEL6N	5/8	3/8	0.50	0.96	0.86	1.50	0.88	15/16	1
10 - FED - 8N	- 1010 - 8 - 8	10FEL8N		1/2	0.50			1.57	1.12	1.1/16	
12 - FED - 8N	- 1210 - 8 - 8	12FEL8N	3/4	1/2	0.62	0.96	0.86	1.57	1.12	1.1/16	1.1/8
12 - FED - 12N	- 1210 - 8 - 12	12FEL12N		3/4	0.62			1.76	1.25	1.3/8	
14 - FED - 12N	- 1410 - 8 - 12	14FEL12N	7/8	3/4	0.72	1.02	0.86	1.76	1.25	1.3/8	1.1/4
16 - FED - 12N	- 1610 - 8 - 12	16FEL12N	1	3/4	0.88	1.23	1.04	1.93	1.25	1.3/8	1.1/2
16 - FED - 16N	- 1610 - 8 - 16	16FEL16N		1	0.88			2.11	1.50	1.11/16	

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Female Pipe Thread

Female Elbow



Metric Tube x NPT (F)

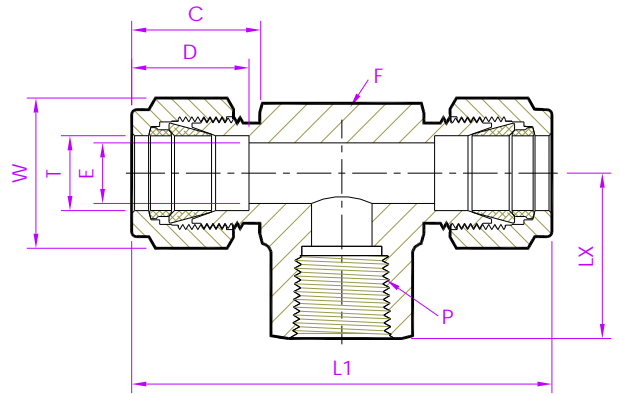
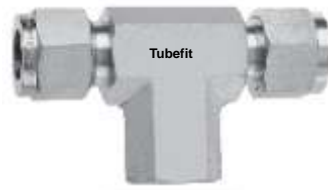
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Female Pipe Size P	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
			(mm)	(in)	Dimensions in Millimetres						
6M - FED - 2N	- 6MO - 8 - 2	M6FEL1/8N	6	1/8	4.8	15.3	17.7	27.0	19.0	14.2	14.2
6M - FED - 4N	- 6MO - 8 - 4	M6FEL1/4N		1/4	4.8			29.8	22.4	19	
6M - FED - 8N	- 6MO - 8 - 8	-----		1/2	4.8			34.6	28.4	27	
8M - FED - 2N	- 8MO - 8 - 2	M8FEL1/8N	8	1/8	4.8	16.2	18.6	28.8	19.1	16	16
8M - FED - 4N	- 8MO - 8 - 4	M8FEL1/4N		1/4	6.4			30.6	22.4	19	
10M - FED - 2N	- 10MO - 8 - 2	-----	10	1/8	7.9	17.2	19.5	31.5	19.0	17.4	19
10M - FED - 4N	- 10MO - 8 - 4	M10FEL1/4N		1/4	7.9			33.5	22.4	19	
10M - FED - 6N	- 10MO - 8 - 6	M10FEL3/8N		3/8	7.9			33.5	22.4	22.2	
10M - FED - 8N	- 10MO - 8 - 8	M10FEL1/2N		1/2	7.9			36.3	28.5	27	
12M - FED - 4N	- 12MO - 8 - 4	M12FEL1/4N	12	1/4	9.5	22.8	22.0	36.0	22.4	22.2	22.2
12M - FED - 6N	- 12MO - 8 - 6	M12FEL3/8N		3/8	9.5			36.0	22.4	22.2	
12M - FED - 8N	- 12MO - 8 - 8	M12FEL1/2N		1/2	9.5			38.8	28.4	27	
16M - FED - 6N	- 16MO - 8 - 6	M16FEL3/8N	16	3/8	9.5	24.4	22.0	39.5	23.6	25	25
16M - FED - 8N	- 16MO - 8 - 8	M16FEL1/2N		1/2	12.7			39.5	28.4	27	

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Female Pipe Thread

Female Branch Tee



Fractional Tube x NPT (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Female Pipe Size P	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Inches											
2 - FBTD - 2N	- 200 - 3 - 2TTF	2FBT2N	1/8	1/8	0.09	0.50	0.60	1.94	0.75	9/16	7/16
3 - FBTD - 2N	- 300 - 3 - 2TTF	3FBT2N	3/16	1/8	0.12	0.54	0.63	2.02	0.75	9/16	1/2
4 - FBTD - 2N	- 400 - 3 - 2TTF	4FBT2N	1/4	1/8	0.19	0.60	0.70	2.12	0.75	9/16	9/16
4 - FBTD - 4N	- 400 - 3 - 4TTF	4FBT4N		1/4	0.19			2.34	0.88	3/4	
5 - FBTD - 2N	- 500 - 3 - 2TTF	5FBT2N	5/16	1/8	0.25	0.64	0.73	2.34	0.75	5/8	5/8
6 - FBTD - 4N	- 600 - 3 - 4TTF	6FBT4N	3/8	1/4	0.28	0.66	0.76	2.46	0.88	3/4	11/16
6 - FBTD - 6N	- 600 - 3 - 6TTF	-----		3/8	0.28			2.62	0.88	7/8	
6 - FBTD - 8N	- 600 - 3 - 8TTF	-----		1/2	0.28			2.84	1.12	1.1/16	
8 - FBTD - 4N	- 810 - 3 - 4TTF	8FBT4N	1/2	1/4	0.41	0.90	0.86	2.84	0.88	7/8	7/8
8 - FBTD - 6N	- 810 - 3 - 6TTF	8FBT6N		3/8	0.41			2.84	0.88	7/8	
8 - FBTD - 8N	- 810 - 3 - 8TTF	8FBT8N		1/2	0.41			3.06	1.12	1.1/16	
10 - FBTD - 8N	- 1010 - 3 - 8TTF	10FBT8N	5/8	1/2	0.50	0.96	0.86	3.06	1.12	1.1/16	1
12 - FBTD - 12N	- 1210 - 3 - 12TTF	12FBT12N	3/4	3/4	0.62	0.96	0.86	3.52	1.25	1.1/4	1.1/8
14 - FBTD - 12N	- 1410 - 3 - 12TTF	14FBT12N	7/8	3/4	0.72	1.02	0.86	3.52	1.25	1.1/4	1.1/4
16 - FBTD - 12N	- 1610 - 3 - 12TTF	16FBT12N	1	3/4	0.88	1.23	1.04	3.86	1.25	1.1/4	1.1/2
16 - FBTD - 16N	- 1610 - 3 - 16TTF	16FBT16N		1	0.88			4.22	1.50	1.11/16	

Metric Tube x NPT (F)

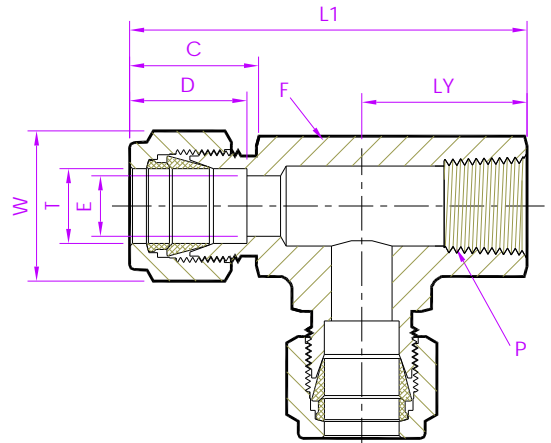
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Female Pipe Size P	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
			(mm)	(In)	Dimensions in Millimetres						
6M - FBTD - 2N	- 6MO - 3 - 2TTF	M6FBT1/8N	6	1/8	4.8	15.3	17.7	53.9	19.0	14.2	14.2
6M - FBTD - 4N	- 6MO - 3 - 4TTF	M6FBT1/4N		1/4	4.8			59.5	22.4	19	
8M - FBTD - 2N	- 8MO - 3 - 2TTF	M8FBT1/8N	8	1/8	6.4	16.2	18.6	59.7	19.0	16	16
8M - FBTD - 4N	- 8MO - 3 - 4TTF	-----		1/4	6.4			61.2	22.4	19	
10M - FBTD - 4N	- 10MO - 3 - 4TTF	M10FBT1/4N	10	1/4	7.9	17.2	19.5	67.0	22.4	19	19
12M - FBTD - 2N	- 12MO - 3 - 2TTF	M12FBT1/8N	12	1/8	8.3	22.8	22.0	72.0	22.3	22.2	22.2
12M - FBTD - 4N	- 12MO - 3 - 4TTF	M12FBT1/4N		1/4	9.5			72.0	22.4	22.2	
12M - FBTD - 6N	- 12MO - 3 - 6TTF	M12FBT3/8N		3/8	9.5			72.0	22.4	22.2	
12M - FBTD - 8N	- 12MO - 3 - 8TTF	M12FBT1/2N		1/2	9.5			77.6	28.5	27	
16M - FBTD - 8N	- 16MO - 3 - 8TTF	M16FBT1/2N	16	1/2	12.7	24.4	22.0	77.6	28.4	27	25

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Female Pipe Thread

Female Run Tee



Fractional Tube x NPT (F)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Female Pipe Size P	ØE	D	C	L1	LY	Body Hex F	Nut Hex W
Dimensions in Inches											
2 - FRTD - 2N	- 200 - 3 - 2TFT	2FRT2N	1/8	1/8	0.09	0.50	0.60	1.72	0.75	9/16	7/16
3 - FRTD - 2N	- 300 - 3 - 2TFT	3FRT2N	3/16	1/8	0.12	0.54	0.63	1.76	0.75	9/16	1/2
4 - FRTD - 2N	- 400 - 3 - 2TFT	4FRT2N	1/4	1/8	0.19	0.60	0.70	1.81	0.75	9/16	9/16
4 - FRTD - 4N	- 400 - 3 - 4TFT	4FRT4N		1/4	0.19			2.05	0.88	3/4	
5 - FRTD - 2N	- 500 - 3 - 2TFT	5FRT2N	5/16	1/8	0.25	0.64	0.73	1.92	0.75	5/8	5/8
6 - FRTD - 4N	- 600 - 3 - 6TFT	6FRT4N	3/8	1/4	0.28	0.66	0.76	2.11	0.88	3/4	11/16
8 - FRTD - 4N	- 810 - 3 - 4TFT	8FRT4N	1/2	1/4	0.41	0.90	0.86	2.56	1.13	7/8	7/8
8 - FRTD - 6N	- 810 - 3 - 6TFT	8FRT6N		3/8	0.41			2.30	0.88	7/8	
8 - FRTD - 8N	- 810 - 3 - 8TFT	8FRT8N		1/2	0.41			2.69	1.12	1.1/16	
10 - FRTD - 8N	- 1010 - 3 - 8TFT	10FRT8N	5/8	1/2	0.50	0.96	0.86	2.66	1.13	1.1/16	1
12 - FRTD - 12N	- 1210 - 3 - 12TFT	12FRT12N	3/4	3/4	0.62	0.96	0.86	3.01	1.25	1.1/4	1.1/8
14 - FRTD - 8N	- 1410 - 3 - 8TFT	14FRT8N	7/8	1/2	0.72	1.02	0.86	3.01	1.25	1.1/4	1.1/4
14 - FRTD - 12N	- 1410 - 3 - 12TFT	14FRT12N		3/4	0.72			3.01	1.25	1.1/4	
16 - FRTD - 12N	- 1610 - 3 - 12TFT	16FRT12N	1	3/4	0.88	1.23	1.04	3.18	1.25	1.3/8	1.1/2
16 - FRTD - 16N	- 1610 - 3 - 16TFT	16FRT16N		1	0.88			3.61	1.50	1.11/16	

Metric Tube x NPT (F)

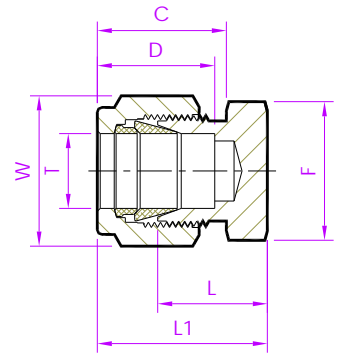
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Female Pipe Size P	ØE	D	C	L1	LY	Body Hex F	Nut Hex W
			(mm)	(In)	Dimensions in Millimetres						
6M - FRTD - 2N	- 6MO - 3 - 2TFT	M6FRT1/8N	6	1/8	4.8	15.3	17.7	46.0	19.0	14.2	14.2
6M - FRTD - 4N	- 6MO - 3 - 4TFT	M6FRT1/4N		1/4	4.8			52.1	22.4	19	
8M - FRTD - 2N	- 8MO - 3 - 2TFT	M8FRT1/8N	8	1/8	6.4	16.2	18.6	48.9	19.0	16	16
8M - FRTD - 4N	- 8MO - 3 - 4TFT	-----		1/4	6.4			53.0	22.4	19	
10M - FRTD - 4N	- 10MO - 3 - 4TFT	M10FRT1/4N	10	1/4	7.9	17.2	19.5	55.9	22.4	19	19
12M - FRTD - 4N	- 12MO - 3 - 4TFT	M12FRT1/4N	12	1/4	9.5	22.8	22.0	58.4	22.4	22.2	22.2
12M - FRTD - 6N	- 12MO - 3 - 6TFT	M12FRT3/8N		3/8	10.3			58.4	22.4	22.2	
12M - FRTD - 8N	- 12MO - 3 - 8TFT	M12FRT1/2N		1/2	9.5			67.3	28.5	27	
16M - FRTD - 8N	- 16MO - 3 - 8TFT	M16FRT1/2N	16	1/2	12.7	24.4	22.0	68.2	28.4	27	25.4

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

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- Tube Fitting (Double Ferrule)-
Tube Ends

Tube Cap



Fractional Tube

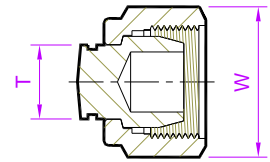
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches									
1 - TCD	- 100 - C	1BLEN1	1/16	0.34	0.43	0.39	0.59	7/16	5/16
2 - TCD	- 200 - C	2BLEN2	1/8	0.50	0.60	0.53	0.79	7/16	7/16
3 - TCD	- 300 - C	3BLEN3	3/16	0.54	0.63	0.58	0.84	7/16	1/2
4 - TCD	- 400 - C	4BLEN4	1/4	0.60	0.70	0.63	0.92	9/16	9/16
5 - TCD	- 500 - C	5BLEN5	5/16	0.64	0.73	0.67	0.96	5/8	5/8
6 - TCD	- 600 - C	6BLEN6	3/8	0.66	0.76	0.72	1.01	11/16	11/16
8 - TCD	- 810 - C	8BLEN8	1/2	0.90	0.86	0.75	1.15	7/8	7/8
10 - TCD	- 1010 - C	10BLEN10	5/8	0.96	0.86	0.78	1.18	1	1
12 - TCD	- 1210 - C	12BLEN12	3/4	0.96	0.86	0.84	1.24	1.1/16	1.1/8
14 - TCD	- 1410 - C	14BLEN14	7/8	1.02	0.86	0.94	1.34	1.3/8	1.1/4
16 - TCD	- 1610 - C	16BLEN16	1	1.23	1.04	1.03	1.51	1.3/8	1.1/2

Metric Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Millimetres									
2M - TCD	- 2MO - C	BLENM2	2	12.9	15.3	13.5	20.1	11.1	11.1
3M - TCD	- 3MO - C	BLENM3	3	12.9	15.3	13.5	20.1	11.1	11.1
4M - TCD	- 4MO - C	BLENM4	4	13.7	16.1	14.7	21.3	11.1	11.1
6M - TCD	- 6MO - C	BLENM6	6	15.3	17.7	15.7	23.1	14.2	14.2
8M - TCD	- 8MO - C	BLENM8	8	16.2	18.6	17.0	24.5	16	16
10M - TCD	- 10MO - C	BLENM10	10	17.2	19.5	19.0	26.6	19	19
12M - TCD	- 12MO - C	BLENM12	12	22.8	22.0	19.0	29.1	22.2	22.2
14M - TCD	- 14MO - C	BLENM14	14	24.4	22.0	19.8	29.9	25.4	25.4
15M - TCD	- 15MO - C	BLENM15	15	24.4	22.0	19.8	29.9	25.4	25.4
16M - TCD	- 16MO - C	BLENM16	16	24.4	22.0	19.8	29.9	25.4	25.4
18M - TCD	- 18MO - C	BLENM18	18	24.4	22.0	21.3	31.4	27	30
20M - TCD	- 20MO - C	BLENM20	20	26.0	22.0	23.9	34.0	30	32
22M - TCD	- 22MO - C	BLENM22	22	26.0	22.0	23.9	34.0	30	32
25M - TCD	- 25MO - C	BLENM25	25	31.3	26.5	26.2	38.5	35	38

NOTE: 1)Dimension L1, C, D is shown in the finger-tight position. 2)Dimensions are for reference only and are subject to change.

- Tube Fitting (Double Ferrule)-
Tube Ends



Plug

Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	Nut Hex W
Dimensions in Inches				
1 - PD	- 100 - P	BLP1	1/16	5/16
2 - PD	- 200 - P	BLP2	1/8	7/16
3 - PD	- 300 - P	BLP3	3/16	1/2
4 - PD	- 400 - P	BLP4	1/4	9/16
5 - PD	- 500 - P	BLP5	5/16	5/8
6 - PD	- 600 - P	BLP6	3/8	11/16
8 - PD	- 810 - P	BLP8	1/2	7/8
10 - PD	- 1010 - P	BLP10	5/8	1
12 - PD	- 1210 - P	BLP12	3/4	1.1/8
14 - PD	- 1410 - P	BLP14	7/8	1.1/4
16 - PD	- 1610 - P	BLP16	1	1.1/2

Metric Tube

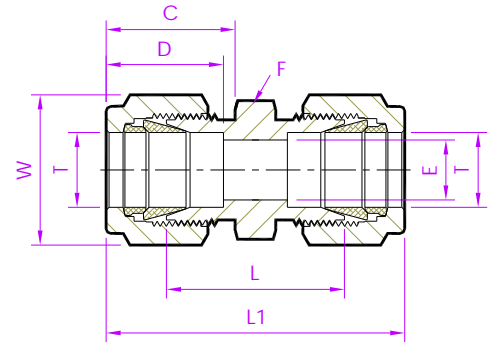
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	Nut Hex W
Dimensions in Millimetres				
2M - PD	- 2MO - P	BLPM2	2	11.1
3M - PD	- 3MO - P	BLPM3	3	11.1
4M - PD	- 4MO - P	BLPM4	4	11.1
6M - PD	- 6MO - P	BLPM6	6	14.2
8M - PD	- 8MO - P	BLPM8	8	16
10M - PD	- 10MO - P	BLPM10	10	19
12M - PD	- 12MO - P	BLPM12	12	22.2
14M - PD	- 14MO - P	BLPM14	14	25.4
15M - PD	- 15MO - P	BLPM15	15	25.4
16M - PD	- 16MO - P	BLPM16	16	25.4
18M - PD	- 18MO - P	BLPM18	18	30
20M - PD	- 20MO - P	BLPM20	20	32
22M - PD	- 22MO - P	BLPM22	22	32
25M - PD	- 25MO - P	BLPM25	25	38

NOTE: 1)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

**- Tube Fitting (Double Ferrule)-
Tube To Tube**

Union



Fractional Tube x Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches										
1 - UD	- 100 - 6	1SC1	1/16	0.05	0.34	0.43	0.59	0.99	7/16	5/16
2 - UD	- 200 - 6	2SC2	1/8	0.09	0.50	0.60	0.88	1.40	7/16	7/16
3 - UD	- 300 - 6	3SC3	3/16	0.12	0.54	0.63	0.95	1.47	7/16	1/2
4 - UD	- 400 - 6	4SC4	1/4	0.19	0.60	0.70	1.03	1.61	9/16	9/16
5 - UD	- 500 - 6	5SC5	5/16	0.25	0.64	0.73	1.11	1.69	5/8	5/8
6 - UD	- 600 - 6	6SC6	3/8	0.28	0.66	0.76	1.19	1.77	11/16	11/16
8 - UD	- 810 - 6	8SC8	1/2	0.41	0.90	0.86	1.22	2.02	7/8	7/8
10 - UD	- 1010 - 6	10SC10	5/8	0.50	0.96	0.86	1.25	2.05	1	1
12 - UD	- 1210 - 6	12SC12	3/4	0.62	0.96	0.86	1.31	2.11	1.1/16	1.1/8
14 - UD	- 1410 - 6	14SC14	7/8	0.72	1.02	0.86	1.37	2.17	1.3/16	1.1/4
16 - UD	- 1610 - 6	16SC16	1	0.88	1.23	1.04	1.59	2.55	1.3/8	1.1/2

Metric Tube x Metric Tube

UDbfit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Millimetres										
2M - UD	- 2MO - 6	SCM2	2	1.7	12.9	15.3	35.6	35.6	11.1	11.1
3M - UD	- 3MO - 6	SCM3	3	2.4	12.9	15.3	35.3	35.3	11.1	11.1
4M - UD	- 4MO - 6	SCM4	4	2.4	13.7	16.1	37.3	37.3	11.1	11.1
6M - UD	- 6MO - 6	SCM6	6	4.8	15.3	17.7	41.0	41.0	14.2	14.2
8M - UD	- 8MO - 6	SCM8	8	6.4	16.2	18.6	43.2	43.2	16	16
10M - UD	- 10MO - 6	SCM10	10	7.9	17.2	19.5	46.2	46.2	19	19
12M - UD	- 12MO - 6	SCM12	12	9.5	22.8	22.0	51.2	51.2	22.2	22.2
14M - UD	- 14MO - 6	SCM14	14	11.1	24.4	22.0	52.0	52.0	25.4	25.4
15M - UD	- 15MO - 6	SCM15	15	11.9	24.4	22.0	52.0	52.0	25.4	25.4
16M - UD	- 16MO - 6	SCM16	16	12.7	24.4	22.0	52.0	52.0	25.4	25.4
18M - UD	- 18MO - 6	SCM18	18	15.1	24.4	22.0	53.5	53.5	27	30
20M - UD	- 20MO - 6	SCM20	20	15.9	26.0	22.0	55.0	55.0	30	32
22M - UD	- 22MO - 6	SCM22	22	18.3	26.0	22.0	55.0	55.0	30	32
25M - UD	- 25MO - 6	SCM25	25	21.8	31.3	26.5	65.0	65.0	35	38

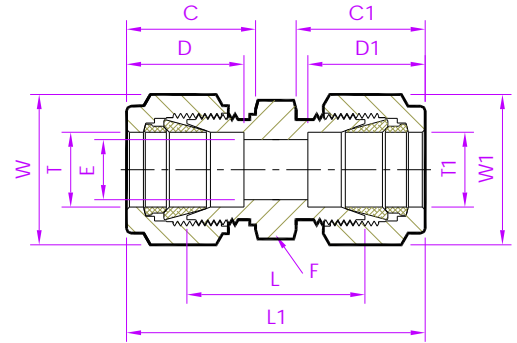
NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change.

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- Tube Fitting (Double Ferrule)-

Tube To Tube

Union



Metric Tube x Fractional Tube

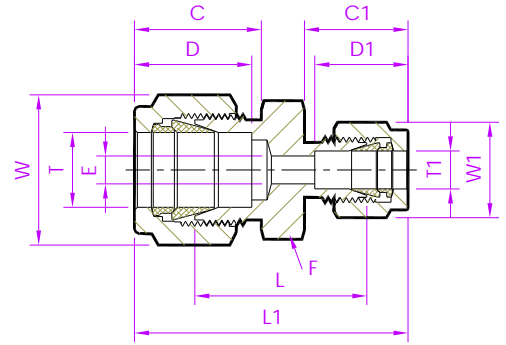
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE	TUBE	ØE	D	C	D1	C1	L	L1	Body Hex F	Nut Hex W	Nut Hex W1
			OD Ø T	OD Ø T1										
2M - UD - 2	- 2MO - 6 - 2	-----	2	1/8	1.7	12.9	15.3	0.50	0.60	35.2	35.2	11.1	11.1	7/16
2M - UD - 4	- 2MO - 6 - 4	-----		1/4	1.7			0.60	0.70	38.6	38.6	14.2		9/16
3M - UD - 2	- 3MO - 6 - 2	M3CU2	3	1/8	2.4	12.9	15.3	0.50	0.60	35.2	35.2	11.1	11.1	7/16
4M - UD - 2	- 4MO - 6 - 2	M4CU2	4	1/8	2.4	13.7	16.1	0.50	0.60	36.5	36.5	11.1	11.1	7/16
4M - UD - 4	- 4MO - 6 - 4	M4CU4		1/4	2.4			0.60	0.70	39.4	39.4	14.2		9/16
6M - UD - 2	- 6MO - 6 - 2	M6CU2	6	1/8	2.4	15.3	17.7	0.50	0.60	38.5	38.5	14.2	14.2	7/16
6M - UD - 4	- 6MO - 6 - 4	M6CU4		1/4	4.8			0.60	0.70	41.0	41.0	14.2		9/16
6M - UD - 5	- 6MO - 6 - 5	M6CU5		5/16	4.8			0.64	0.73	42.3	42.3	16		5/8
8M - UD - 4	- 8MO - 6 - 4	M8CU4	8	1/4	4.8	16.2	18.6	0.60	0.70	42.3	42.3	16	16	9/16
8M - UD - 6	- 8MO - 6 - 6	-----		3/8	6.4			0.66	0.76	44.3	44.3	17.4		11/16
10M - UD - 2	- 10MO - 6 - 2	M10CU2	10	1/8	2.4	17.2	19.5	0.50	0.60	41.8	41.8	19	19	7/16
10M - UD - 4	- 10MO - 6 - 4	M10CU4		1/4	4.8			0.60	0.70	44.5	44.5	19		9/16
10M - UD - 5	- 10MO - 6 - 5	-----		5/16	6.4			0.64	0.73	45.1	45.1	19		5/8
10M - UD - 6	- 10MO - 6 - 6	M10CU6		3/8	7.1			0.66	0.76	45.9	45.9	19		11/16
12M - UD - 5	- 12MO - 6 - 5	-----	12	5/16	6.4	22.8	22.0	0.64	0.73	47.8	47.8	22.2	22.2	5/8
12M - UD - 6	- 12MO - 6 - 6	M12CU6		3/8	7.1			0.66	0.76	48.4	48.4	22.2		11/16
12M - UD - 8	- 12MO - 6 - 8	M12CU8		1/2	9.5			0.90	0.86	51.2	51.2	22.2		7/8
15M - UD - 8	- 15MO - 6 - 8	M15CU8	15	1/2	10.3	24.4	22.0	0.90	0.86	52.0	52.0	25.4	25.4	7/8
16M - UD - 6	- 16MO - 6 - 6	M16CU6	16	3/8	7.1	24.4	22.0	0.66	0.76	52.0	52.0	25.4	25.4	11/16
16M - UD - 10	- 16MO - 6 - 10	-----		5/8	12.7			0.96	0.86	52.0	52.0	25.4		1
18M - UD - 12	- 18MO - 6 - 12	M18CU12	18	3/4	15.1	24.4	22.0	0.96	0.86	53.5	53.5	27	30	1-1/4
20M - UD - 8	- 20MO - 6 - 8	-----	20	1/2	10.3	26.0	22.0	0.90	0.86	55.0	55.0	30	32	7/8
20M - UD - 16	- 20MO - 6 - 16	-----		1	15.9			1.23	1.04	62.8	62.8	35		1-1/2
25M - UD - 16	- 25MO - 6 - 16	-----	25	1	21.8	31.3	26.5	1.23	1.04	65.0	65.0	35	38	1-1/2

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D, C1, D1 is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change.

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- Tube Fitting (Double Ferrule)-
 Tube To Tube

Reducer Union



Fractional Tube x Fractional Tube

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE OD Ø T1	ØE	D	C	D1	C1	L	L1	Body Hex F	Nut Hex W	Nut Hex W1
Dimensions in Inches														
2 - RUD - 1	- 200 - 6 - 1	2RU1	1/8	1/16	0.05	0.50	0.60	0.34	0.43	0.76	1.22	7/16	7/16	5/16
3 - RUD - 1	- 300 - 6 - 1	3RU1	3/16	1/16	0.05	0.54	0.63	0.34	0.43	0.81	1.27	7/16	1/2	5/16
3 - RUD - 2	- 300 - 6 - 2	3RU2		1/8	0.09			0.50	0.60	0.92	1.44	7/16		7/16
4 - RUD - 1	- 400 - 6 - 1	4RU1	1/4	1/16	0.05	0.60	0.70	0.34	0.43	0.80	1.35	9/16	9/16	5/16
4 - RUD - 2	- 400 - 6 - 2	4RU2		1/8	0.09			0.50	0.60	0.97	1.52	9/16		7/16
4 - RUD - 3	- 400 - 6 - 3	4RU3		3/16	0.12			0.54	0.63	1.00	1.55	9/16		1/2
5 - RUD - 2	- 500 - 6 - 2	5RU2	5/16	1/8	0.09	0.64	0.73	0.50	0.60	1.01	1.56	5/8	5/8	7/16
5 - RUD - 4	- 500 - 6 - 4	5RU4		1/4	0.19			0.60	0.70	1.08	1.66	5/8		9/16
6 - RUD - 1	- 600 - 6 - 1	6RU1	3/8	1/16	0.05	0.66	0.76	0.34	0.43	0.95	1.44	11/16	11/16	5/16
6 - RUD - 2	- 600 - 6 - 2	6RU2		1/8	0.09			0.50	0.60	1.06	1.61	11/16		7/16
6 - RUD - 4	- 600 - 6 - 4	6RU4		1/4	0.19			0.60	0.70	1.12	1.70	11/16		9/16
6 - RUD - 5	- 600 - 6 - 5	6RU5		5/16	0.25			0.64	0.73	1.16	1.74	11/16		5/8
8 - RUD - 2	- 810 - 6 - 2	8RU2	1/2	1/8	0.09	0.90	0.86	0.50	0.60	1.12	1.78	7/8	7/8	7/16
8 - RUD - 4	- 810 - 6 - 4	8RU4		1/4	0.19			0.60	0.70	1.16	1.85	7/8		9/16
8 - RUD - 6	- 810 - 6 - 6	8RU6		3/8	0.28			0.66	0.76	1.22	1.91	7/8		11/16
10 - RUD - 6	- 1010 - 6 - 6	10RU6	5/8	3/8	0.28	0.96	0.86	0.66	0.76	1.25	1.94	1	1	11/16
10 - RUD - 8	- 1010 - 6 - 8	10RU8		1/2	0.41			0.90	0.86	1.25	2.05	1		7/8
12 - RUD - 4	- 1210 - 6 - 4	12RU4	3/4	1/4	0.19	0.96	0.86	0.60	0.70	1.25	1.94	1.1/16	1.1/8	9/16
12 - RUD - 6	- 1210 - 6 - 6	12RU6		3/8	0.28			0.66	0.76	1.31	2.00	1.1/16		11/16
12 - RUD - 8	- 1210 - 6 - 8	12RU8		1/2	0.41			0.90	0.86	1.31	2.11	1.1/16		7/8
12 - RUD - 10	- 1210 - 6 - 10	12RU10		5/8	0.50			0.96	0.86	1.31	2.11	1.1/16		1
16 - RUD - 8	- 1610 - 6 - 8	16RU8	1	1/2	0.41	1.23	1.04	0.90	0.86	1.50	2.38	1.3/8	1.1/2	7/8
16 - RUD - 12	- 1610 - 6 - 12	16RU12		3/4	0.62			0.96	0.86	1.50	2.38	1.3/8		1.1/8

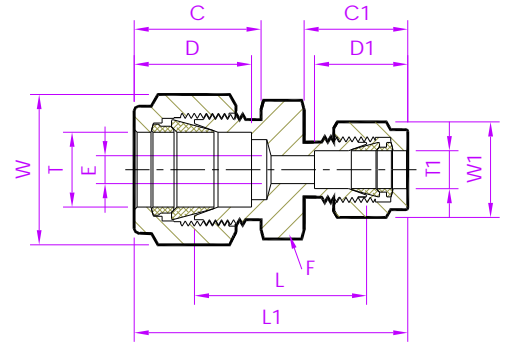
NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D, C1, D1 is shown in the finger-tight position.
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- Tube Fitting (Double Ferrule)-

Tube To Tube

Reducer Union



Metric Tube x Metric Tube

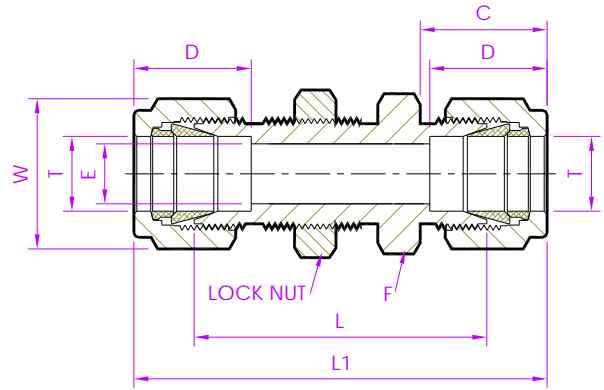
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE OD Ø T1	ØE	D	C	D1	C1	L	L1	Body Hex F	Nut Hex W	Nut Hex W1
Dimensions in Millimetres														
3M - RUD - 2M	- 3MO - 6 - 2M	M3RUM2	3	2	1.7	12.9	15.3	12.9	15.3	22.1	35.3	11.1	11.1	11.1
6M - RUD - 2M	- 6MO - 6 - 2M	M6RUM2	6	2	1.7	15.3	17.7	12.9	15.3	24.6	38.6	14.2	14.2	11.1
6M - RUD - 3M	- 6MO - 6 - 3M	M6RUM3		3	2.4			12.9	15.3	24.6	38.6	14.2		11.1
6M - RUD - 4M	- 6MO - 8 - 4M	M6RUM4		4	2.4			13.7	16.1	25.4	39.4	14.2		11.1
8M - RUD - 6M	- 8MO - 6 - 6M	M6RUM6	8	6	4.8	16.2	18.6	15.3	17.7	27.4	42.3	16	16	14.2
10M - RUD - 6M	- 10MO - 6 - 6M	M10RUM6	10	6	4.8	17.2	19.5	15.3	17.7	29.5	44.5	19	19	14.2
10M - RUD - 8M	- 10MO - 6 - 8M	M10RUM8		8	6.4			16.2	18.6	30.0	45.1	19		16
12M - RUD - 6M	- 12MO - 6 - 6M	M12RUM6	12	6	4.8	22.8	22.0	15.3	17.7	29.5	47.0	22.2	22.2	14.2
12M - RUD - 8M	- 12MO - 6 - 8M	M12RUM8		8	6.4			16.2	18.6	30.2	47.8	22.2		16
12M - RUD - 10M	- 12MO - 6 - 10M	M12RUM12		10	7.9			17.2	19.5	31.0	48.7	22.2		19
16M - RUD - 10M	- 16MO - 6 - 10M	M16RUM10	16	10	7.9	24.4	22.0	17.2	19.5	29.3	49.5	25.4	25.4	19
16M - RUD - 12M	- 16MO - 6 - 12M	M16RUM12		12	9.5			22.8	22.0	31.8	52.0	25.4		22.2
18M - RUD - 12M	- 18MO - 6 - 12M	M18RUM12	18	12	9.5	24.4	22.0	22.8	22.0	33.3	53.5	27	30	22.2
25M - RUD - 18M	- 25MO - 6 - 18M	M25RUM18	25	18	15.1	31.6	26.5	24.4	22.0	38.6	61.0	35	38	30
25M - RUD - 25M	- 25MO - 6 - 25M	M25RUM25		25	15.9			31.3	26.5	39.9	62.3	35		38
30M - RUD - 18M	- 30MO - 6 - 18M	M30RUM18	30	18	15.1	39.6	39.2	24.4	22.0	43.7	75.4	46	50	30
30M - RUD - 20M	- 30MO - 6 - 20M	M30RUM20		20	15.9			26.0	22.0	43.7	75.4	46		32
30M - RUD - 25M	- 30MO - 6 - 25M	M30RUM25		25	21.8			31.3	26.5	46.2	80.1	46		38
32M - RUD - 18M	- 32MO - 6 - 18M	M32RUM18	32	18	15.1	42.0	41.6	24.4	22.0	44.7	77.8	46	50	30
32M - RUD - 20M	- 32MO - 6 - 20M	M32RUM20		20	15.9			26.0	22.0	44.7	77.8	46		32
32M - RUD - 25M	- 32MO - 6 - 25M	M32RUM25		25	21.8			31.3	26.5	47.0	82.3	46		38
38M - RUD - 20M	- 38MO - 6 - 20M	M38RUM20	38	20	15.9	49.4	47.9	26.0	22.0	49.8	87.5	35	60	32
38M - RUD - 25M	- 38MO - 6 - 25M	M25RUM20		25	21.8			31.3	26.5	52.1	92.0	55		38
38M - RUD - 30M	- 38MO - 6 - 30M	M38RUM30		30	26.2			39.6	39.2	55.4	104.6	55		50

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- Tube Fitting (Double Ferrule)-
Tube To Tube

Bulkhead Union



Fractional Tube x Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches										
1 - BUD	- 100 - 61	1BC1	1/16	0.05	0.34	0.43	0.84	1.24	5/16	5/16
2 - BUD	- 200 - 61	2BC2	1/8	0.09	0.50	0.60	1.50	2.02	7/16	7/16
3 - BUD	- 300 - 61	3BC3	3/16	0.12	0.54	0.63	1.59	2.11	7/16	1/2
4 - BUD	- 400 - 61	4BC4	1/4	0.19	0.60	0.70	1.69	2.27	9/16	9/16
5 - BUD	- 500 - 61	5BC5	5/16	0.25	0.64	0.73	1.81	2.39	9/16	5/8
6 - BUD	- 600 - 61	6BC6	3/8	0.28	0.66	0.76	1.87	2.45	5/8	11/16
8 - BUD	- 810 - 61	8BC8	1/2	0.41	0.90	0.86	2.00	2.80	7/8	7/8
10 - BUD	- 1010 - 61	10BC10	5/8	0.50	0.96	0.86	2.06	2.86	1	1
12 - BUD	- 1210 - 61	12BC12	3/4	0.63	0.96	0.86	2.31	3.11	1.1/16	1.1/8
14 - BUD	- 1410 - 61	14BC14	7/8	0.72	1.02	0.86	2.53	3.33	1.3/16	1.1/4
16 - BUD	- 1610 - 61	16BC16	1	0.88	1.23	1.04	2.81	3.77	1.3/8	1.1/2

Metric Tube x Metric Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Millimetres										
3M - BUD	- 3MO - 61	BCM3	3	2.4	12.9	15.3	38.1	51.3	11.1	11.1
4M - BUD	- 4MO - 61	BCM4	4	2.4	13.7	16.1	40.4	53.6	11.1	11.1
6M - BUD	- 6MO - 61	BCM6	6	4.8	15.3	17.7	42.9	57.7	14.2	14.2
8M - BUD	- 8MO - 61	BCM8	8	6.4	16.2	18.6	46.0	61.0	16	16
10M - BUD	- 10MO - 61	BCM10	10	7.9	17.2	19.5	48.5	63.7	19	19
12M - BUD	- 12MO - 61	BCM12	12	9.5	22.8	22.0	50.8	71.0	22.2	22.2
14M - BUD	- 14MO - 61	-----	14	11.1	24.4	22.0	52.3	72.5	25.4	25.4
15M - BUD	- 15MO - 61	BCM15	15	11.9	24.4	22.0	52.3	72.5	25.4	25.4
16M - BUD	- 16MO - 61	BCM16	16	12.7	24.4	22.0	52.3	72.5	25.4	25.4
18M - BUD	- 18MO - 61	BCM18	18	15.1	24.4	22.0	58.7	78.9	27	30
20M - BUD	- 20MO - 61	BCM20	20	15.9	26.0	22.0	64.3	84.5	30	32
25M - BUD	- 25MO - 61	BCM25	25	21.8	31.3	26.5	71.2	95.8	35	38

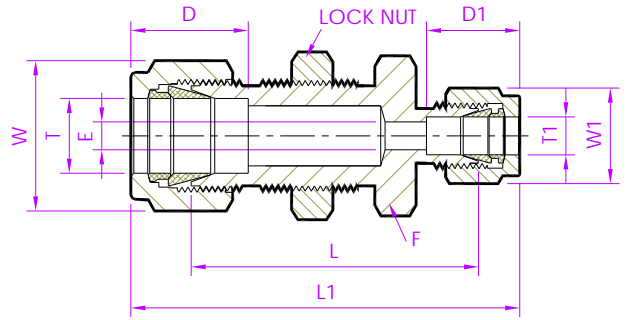
- For Lock Nut use `BUND`

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- Tube Fitting (Double Ferrule)-
Tube To Tube

Bulkhead Reducer Union

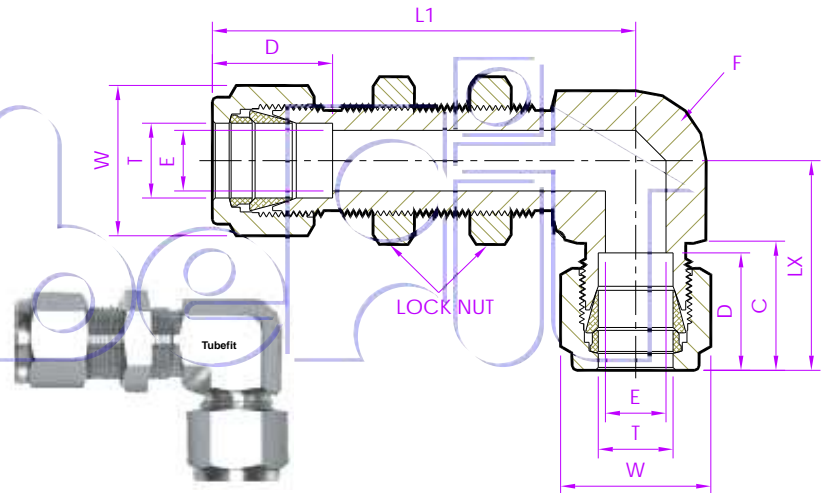


Fractional Tube x Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE OD Ø T1	ØE	D	D1	L	L1	Body Hex F	Nut Hex W	Nut Hex W
Dimensions in Inches												
4 - BRUD - 2	- 400 - 61 - 2	-----	1/4	1/8	0.09	0.60	0.50	1.62	2.17	5/8	9/16	7/16
6 - BRUD - 4	- 600 - 61 - 4	-----	3/8	1/4	0.19	0.66	0.60	1.81	2.39	3/4	11/16	9/16
8 - BRUD - 4	- 810 - 61 - 4	-----	1/2	1/4	0.19	0.90	0.60	1.94	2.63	7/8	7/8	9/16

- For Lock Nut use `BUND`

Bulkhead Union Elbow



Fractional Tube x Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Inches										
2 - BUED	-----	-----	1/8	0.09	0.50	0.60	1.93	0.88	1/2	7/16
3 - BUED	-----	-----	3/16	0.12	0.54	0.63	2.03	1.01	1/2	1/2
4 - BUED	-----	-----	1/4	0.19	0.60	0.70	2.10	1.07	9/16	9/16
5 - BUED	-----	-----	5/16	0.25	0.64	0.73	2.30	1.17	9/16	5/8
6 - BUED	-----	-----	3/8	0.28	0.66	0.76	2.36	1.20	11/16	11/16
8 - BUED	-----	-----	1/2	0.41	0.90	0.86	2.67	1.38	13/16	7/8
10 - BUED	-----	-----	5/8	0.50	0.96	0.86	2.82	1.46	7/8	1
12 - BUED	-----	-----	3/4	0.62	0.96	0.86	3.08	1.51	1.1/16	1.1/8

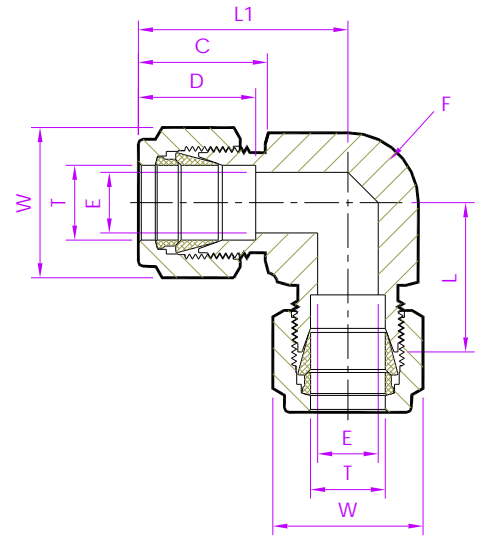
- For Lock Nut use `BUND`

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**- Tube Fitting (Double Ferrule)-
Tube To Tube**

Union Elbow



Fractional Tube x Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches										
1 - UED	- 100 - 9	1EE1	1/16	0.05	0.34	0.43	0.50	0.70	1/2	5/16
2 - UED	- 200 - 9	2EE2	1/8	0.09	0.50	0.60	0.62	0.88	1/2	7/16
3 - UED	- 300 - 9	3EE3	3/16	0.12	0.54	0.63	0.74	1.00	1/2	1/2
4 - UED	- 400 - 9	4EE4	1/4	0.19	0.60	0.70	0.77	1.06	9/16	9/16
5 - UED	- 500 - 9	5EE5	5/16	0.25	0.64	0.73	0.84	1.13	9/16	5/8
6 - UED	- 600 - 9	6EE6	3/8	0.28	0.66	0.76	0.91	1.20	11/16	11/16
8 - UED	- 810 - 9	8EE8	1/2	0.41	0.90	0.86	1.02	1.42	13/16	7/8
10 - UED	- 1010 - 9	10EE10	5/8	0.50	0.96	0.86	1.10	1.50	7/8	1
12 - UED	- 1210 - 9	12EE12	3/4	0.62	0.96	0.86	1.17	1.57	1.1/16	1.1/8
14 - UED	- 1410 - 9	14EE14	7/8	0.72	1.02	0.86	1.36	1.76	1.1/4	1.1/4
16 - UED	- 1610 - 9	16EE16	1	0.88	1.23	1.04	1.45	1.93	1.3/8	1.1/2

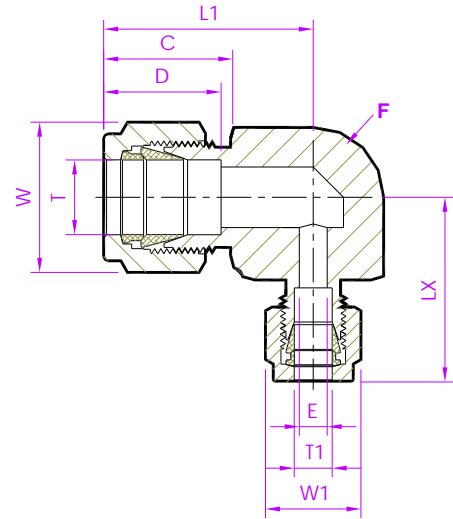
Metric Tube x Metric Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Millimetres										
3M - UED	- 3MO - 9	EEM3	3	2.4	12.9	15.3	15.7	22.3	12.5	11.1
4M - UED	- 4MO - 9	EEM4	4	2.4	13.7	16.1	18.8	25.4	12.5	11.1
6M - UED	- 6MO - 9	EEM6	6	4.8	15.3	17.7	19.6	27.0	14	14.2
8M - UED	- 8MO - 9	EEM8	8	6.4	16.2	18.6	21.3	28.8	14	16
10M - UED	- 10MO - 9	EEM10	10	7.9	17.2	19.5	23.9	31.5	17.5	19
12M - UED	- 12MO - 9	EEM12	12	9.5	22.8	22.0	25.9	36.0	20.5	22.2
14M - UED	- 14MO - 9	EEM14	14	11.1	24.4	22.0	27.9	38.0	22.5	25.4
15M - UED	- 15MO - 9	EEM15	15	11.9	24.4	22.0	28.7	38.8	22.5	25.4
16M - UED	- 16MO - 9	EEM16	16	12.7	24.4	22.0	28.7	38.0	22.5	25.4
18M - UED	- 18MO - 9	EEM18	18	15.1	24.4	22.0	29.7	39.8	27	30
20M - UED	- 20MO - 9	EEM20	20	15.9	26.0	22.0	34.5	44.6	32	32
22M - UED	- 22MO - 9	EEM22	22	18.3	26.0	22.0	34.5	44.6	32	32
25M - UED	- 25MO - 9	EEM25	25	21.8	31.3	26.5	36.8	49.1	36	38

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- Tube Fitting (Double Ferrule)-
Tube To Tube



Reducer Union Elbow

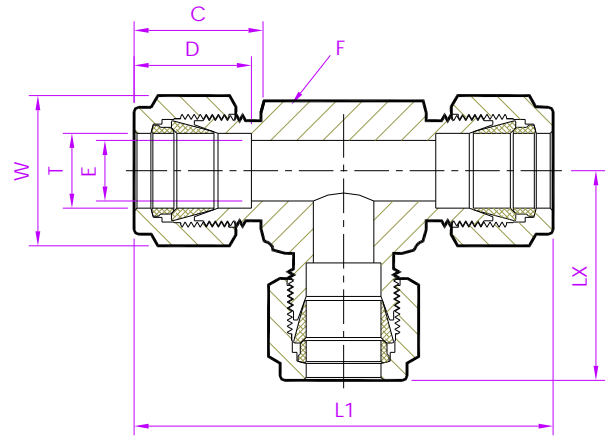
Fractional Tube x Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE OD Ø T1	ØE	D	C	L1	LX	Body Hex F	Nut Hex W	Nut Hex W1
Dimensions in Inches												
3 - RUED - 2	-----	3 - 2 ELZ	3/16	1/8	0.09	0.54	0.63	0.96	0.92	1/2	1/2	7/16
4 - RUED - 2	-----	4 - 2 ELZ	1/4	1/8	0.09	0.60	0.70	1.06	0.96	9/16	9/16	7/16
5 - RUED - 2	-----	5 - 2 ELZ	5/16	1/8	0.09	0.64	0.73	1.17	1.04	9/16	5/8	7/16
5 - RUED - 4	-----	5 - 4 ELZ		1/4	0.19			1.17	1.14			9/16
6 - RUED - 2	-----	6 - 2 ELZ	3/8	1/8	0.09	0.66	0.76	1.20	1.04	11/16	11/16	7/16
6 - RUED - 4	-----	6 - 4 ELZ		1/4	0.19			1.20	1.09			9/16
8 - RUED - 4	-----	8 - 4 ELZ	1/2	1/4	0.19	0.90	0.86	1.42	1.25	13/16	7/8	9/16
8 - RUED - 5	-----	8 - 5 ELZ		5/16	0.25			1.42	1.28			5/8
8 - RUED - 6	-----	8 - 6 ELZ		3/8	0.28			1.42	1.31			11/16
10 - RUED - 6	-----	10 - 6 ELZ	5/8	3/8	0.28	0.96	0.86	1.43	1.32	7/8	1	11/16
10 - RUED - 8	-----	10 - 8 ELZ		1/2	0.41			1.43	1.43			7/8
12 - RUED - 4	-----	12 - 4 ELZ	3/4	1/4	0.19	0.96	0.86	1.56	1.38	1.1/16	1.1/8	9/16
12 - RUED - 6	-----	12 - 6 ELZ		3/8	0.28			1.56	1.45			11/16
12 - RUED - 8	-----	12 - 8 ELZ		1/2	0.41			1.56	1.56			7/8
14 - RUED - 4	-----	14 - 4 ELZ	7/8	1/4	0.19	1.02	0.86	1.76	1.51	1.1/4	1.1/4	9/16
16 - RUED - 8	-----	16 - 8 ELZ	1	1/2	0.41	1.23	1.04	1.94	1.62	1.3/8	1.1/2	7/8
16 - RUED - 12	-----	16 - 12 ELZ		3/4	0.62			1.94	1.76			1.1/8

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

**- Tube Fitting (Double Ferrule)-
Tube To Tube**



Union Tee

Fractional Tube x Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Inches										
1 - UTD	- 100 - 3	1ET1	1/16	0.05	0.34	0.43	1.40	0.70	1/2	5/16
2 - UTD	- 200 - 3	2ET2	1/8	0.09	0.50	0.60	1.76	0.88	1/2	7/16
3 - UTD	- 300 - 3	3ET3	3/16	0.12	0.54	0.63	1.92	0.96	1/2	1/2
4 - UTD	- 400 - 3	4ET4	1/4	0.19	0.60	0.70	2.12	1.06	9/16	9/16
5 - UTD	- 500 - 3	5ET5	5/16	0.25	0.64	0.73	2.34	1.17	9/16	5/8
6 - UTD	- 600 - 3	6ET6	3/8	0.28	0.66	0.76	2.40	1.20	11/16	11/16
8 - UTD	- 810 - 3	8ET8	1/2	0.41	0.90	0.86	2.84	1.42	13/16	7/8
10 - UTD	- 1010 - 3	10ET10	5/8	0.50	0.96	0.86	3.06	1.53	7/8	1
12 - UTD	- 1210 - 3	12ET12	3/4	0.62	0.96	0.86	3.14	1.57	1.1/16	1.1/8
14 - UTD	- 1410 - 3	14ET14	7/8	0.72	1.02	0.86	3.52	1.76	1.1/4	1.1/4
16 - UTD	- 1610 - 3	16ET16	1	0.88	1.23	1.04	3.86	1.93	1.3/8	1.1/2

Metric Tube x Metric Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Millimetres										
2M - UTD	- 2MO - 3	ETM2	2	1.7	12.9	15.3	44.7	22.3	12.5	11.1
3M - UTD	- 3MO - 3	ETM3	3	2.4	12.9	15.3	44.7	22.3	12.5	11.1
4M - UTD	- 4MO - 3	ETM4	4	2.4	13.7	16.1	50.8	25.4	12.5	11.1
6M - UTD	- 6MO - 3	ETM6	6	4.8	15.3	17.7	53.9	27.0	14	14.2
8M - UTD	- 8MO - 3	ETM8	8	6.4	16.2	18.6	59.7	29.9	14	16
10M - UTD	- 10MO - 3	ETM10	10	7.9	17.2	19.5	63.0	31.5	17.5	19
12M - UTD	- 12MO - 3	ETM12	12	9.5	22.8	22.0	72.0	36.0	20.5	22.2
14M - UTD	- 14MO - 3	ETM14	14	11.1	24.4	22.0	77.6	38.8	22.5	25.4
15M - UTD	- 15MO - 3	ETM15	15	11.9	24.4	22.0	77.6	38.8	22.5	25.4
16M - UTD	- 16MO - 3	ETM16	16	12.7	24.4	22.0	77.6	38.8	22.5	25.4
18M - UTD	- 18MO - 3	ETM18	18	15.1	24.4	22.0	79.5	38.8	27	30
20M - UTD	- 20MO - 3	ETM20	20	15.9	26.0	22.0	89.3	44.6	32	32
22M - UTD	- 22MO - 3	ETM22	22	18.3	26.0	22.0	89.3	44.6	32	32
25M - UTD	- 25MO - 3	ETM25	25	21.8	31.3	26.5	98.3	49.1	36	38

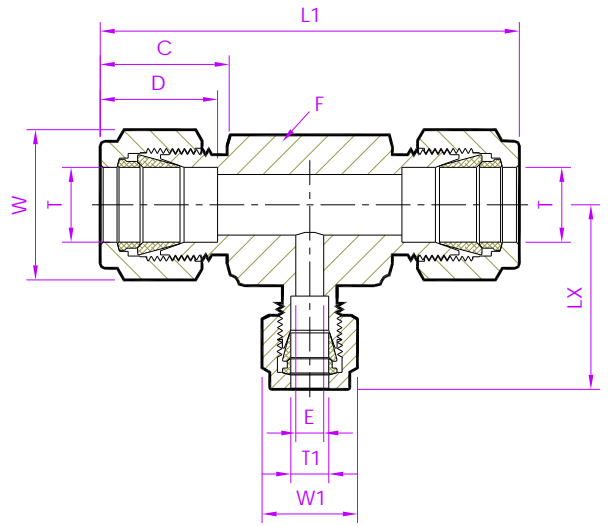
NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To Tube

Reducer Union Tee

(two similar to
a different branch)



Fractional Tube x Fractional Tube

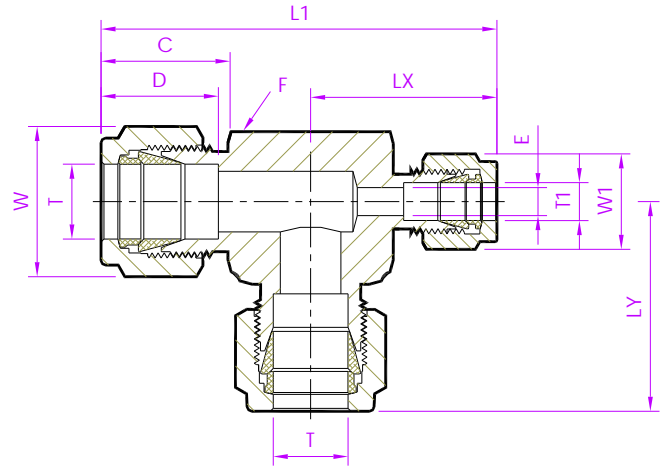
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE OD Ø T1	ØE	D	C	L1	LX	Body Hex F	Nut Hex W	Nut Hex W1
Dimensions in Inches												
RUTD - 4 - 4 - 2	- 400 - 3 - 4 - 2	4 - 4 - 2 JLZ	1/4	1/8	0.09	0.60	0.70	2.10	0.96	9/16	9/16	7/16
RUTD - 6 - 6 - 4	- 600 - 3 - 6 - 4	6 - 6 - 4 JLZ	3/8	1/4	0.19	0.66	0.76	2.40	1.14	11/16	11/16	9/16
RUTD - 8 - 8 - 4	- 810 - 3 - 8 - 4	8 - 8 - 4 JLZ	1/2	1/4	0.19	0.90	0.86	2.84	1.25	13/16	7/8	9/16
RUTD - 8 - 8 - 6	- 810 - 3 - 8 - 6	8 - 8 - 6 JLZ		3/8	0.28			2.84	1.31			11/16
RUTD - 10 - 10 - 6	- 1010 - 3 - 10 - 6	10 - 10 - 6 JLZ	5/8	3/8	0.28	0.96	0.86	3.06	1.42	7/8	1	11/16
RUTD - 10 - 10 - 8	- 1010 - 3 - 10 - 8	10 - 10 - 8 JLZ		1/2	0.41			2.86	1.43			7/8
RUTD - 12 - 12 - 4	- 1210 - 3 - 12 - 4	12 - 12 - 4 JLZ	3/4	1/4	0.19	0.96	0.86	3.12	1.38	1.1/16	1.1/8	9/16
RUTD - 12 - 12 - 6	- 1210 - 3 - 12 - 6	12 - 12 - 6 JLZ		3/8	0.28			3.14	1.46			11/16
RUTD - 12 - 12 - 8	- 1210 - 3 - 12 - 8	12 - 12 - 8 JLZ		1/2	0.41			3.14	1.57			7/8
RUTD - 12 - 12 - 10	- 1210 - 3 - 12 - 10	12 - 12 - 10 JLZ		5/8	0.50			3.12	1.56			1
RUTD - 14 - 14 - 4	- 1410 - 3 - 14 - 4	14 - 14 - 4 JLZ	7/8	1/4	0.19	1.02	0.86	3.52	1.59	1.1/4	1.1/4	9/16
RUTD - 14 - 14 - 6	- 1410 - 3 - 14 - 6	14 - 14 - 6 JLZ		3/8	0.28			3.52	1.65			11/16
RUTD - 16 - 16 - 4	- 1610 - 3 - 16 - 4	16 - 16 - 4 JLZ	1	1/4	0.19	1.23	1.04	3.88	1.59	1.3/8	1.1/2	9/16
RUTD - 16 - 16 - 6	- 1610 - 3 - 16 - 6	16 - 16 - 6 JLZ		3/8	0.28			3.86	1.65			11/16
RUTD - 16 - 16 - 8	- 1610 - 3 - 16 - 8	16 - 16 - 8 JLZ		1/2	0.41			3.86	1.76			7/8
RUTD - 16 - 16 - 10	- 1610 - 3 - 16 - 10	16 - 16 - 10 JLZ		5/8	0.50			3.88	1.76			1
RUTD - 16 - 16 - 12	- 1610 - 3 - 16 - 12	16 - 16 - 12 JLZ		3/4	0.62			3.86	1.76			1.1/8
RUTD - 16 - 16 - 14	- 1610 - 3 - 16 - 14	16 - 16 - 14 JLZ		7/8	0.72			3.70	1.76			1.1/4

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change.

- Tube Fitting (Double Ferrule)-
Tube To Tube

Reducer Union Tee

(two similar to
a different run - X)

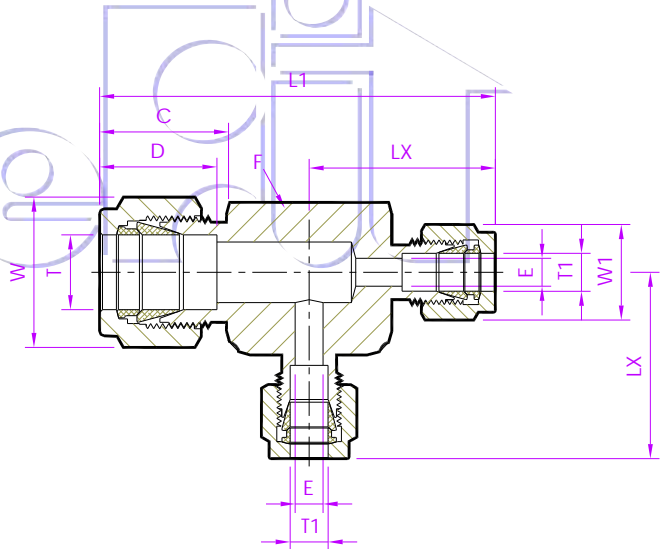


Fractional Tube x Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE OD Ø T1	ØE	D	C	L1	LX	LY	Body Hex F	Nut Hex W	Nut Hex W1
Dimensions in Inches													
RUTXD - 6 - 4 - 6	- 600 - 3 - 4 - 6	6 - 4 - 6 JLZ	3/8	1/4	0.19	0.66	0.76	2.34	0.85	1.20	11/16	11/16	9/16
RUTXD - 8 - 6 - 8	- 810 - 3 - 6 - 8	8 - 6 - 8 JLZ	1/2	3/8	0.28	0.90	0.86	2.73	1.31	1.42	13/16	7/8	11/16
RUTXD - 8 - 4 - 8	- 810 - 3 - 4 - 8	8 - 4 - 8 JLZ		1/4	0.19			2.67	1.25				9/16
RUTXD - 16 - 8 - 16	- 1610 - 3 - 8 - 16	16 - 8 - 16 JLZ	1	1/2	0.41	1.23	1.04	3.70	1.76	1.94	1.3/8	1.1/2	7/8
RUTXD - 16 - 12 - 16	- 1610 - 3 - 12 - 16	16 - 12 - 16 JLZ		3/4	0.62			3.70	1.76				1.1/8

Reducer Union Tee

(two similar to
a different run - Y)



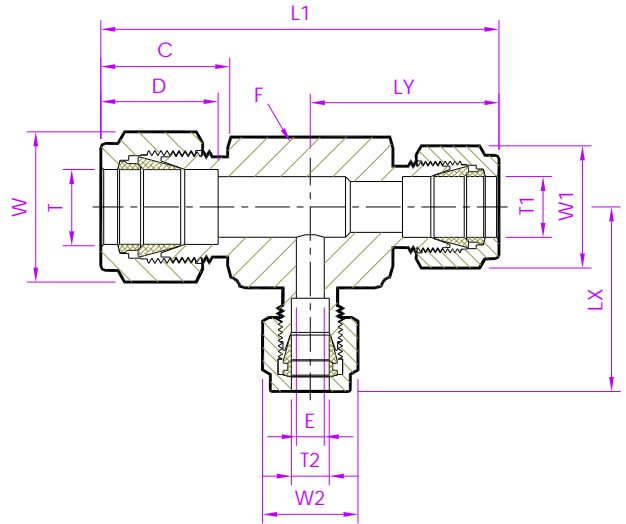
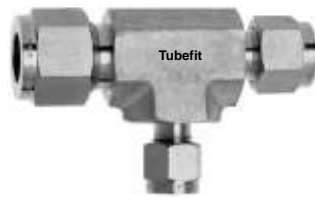
Fractional Tube x Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE OD Ø T1	ØE	D	C	L1	LX	Body Hex F	Nut Hex W	Nut Hex W1
Dimensions in Inches												
RUTYD - 8 - 4 - 4	- 810 - 3 - 4 - 4	8 - 4 - 4 JLZ	1/2	1/4	0.19	0.90	0.86	2.67	1.25	13/16	7/8	9/16
RUTYD - 8 - 6 - 6	- 810 - 3 - 6 - 6	8 - 6 - 6 JLZ		3/8	0.28			2.73	1.31			11/16
RUTYD - 12 - 8 - 8	- 1210 - 3 - 8 - 8	12 - 8 - 8 JLZ	3/4	1/2	0.41	0.96	0.86	3.12	1.56	1.1/16	1.1/8	7/8
RUTYD - 12 - 10 - 10	- 1210 - 3 - 10 - 10	12 - 10 - 10 JLZ		5/8	0.50			3.12	1.56			1
RUTYD - 16 - 14 - 14	- 1610 - 3 - 14 - 14	16 - 14 - 14 JLZ	1	7/8	0.72	1.23	1.04	3.70	1.76	1.3/8	1.1/2	1.1/4
RUTYD - 16 - 8 - 8	- 1610 - 3 - 8 - 8	16 - 8 - 8 JLZ		1/2	0.41			3.70	1.76			7/8
RUTYD - 16 - 6 - 6	- 1610 - 3 - 6 - 6	16 - 6 - 6 JLZ		3/8	0.28			3.59	1.65			11/16

NOTE: 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change.

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- Tube Fitting (Double Ferrule)-
Tube To Tube



Reducer Union Tee

(all three different)

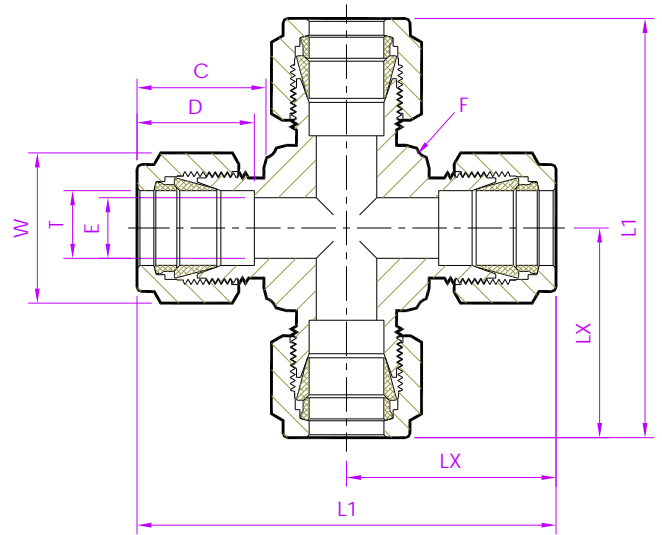
Fractional Tube x Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE	TUBE	TUBE	ØE	D	C	L1	LY	LX	Body Hex F	Nut Hex W	Nut Hex W1	Nut Hex W2
			OD Ø T	OD Ø T1	OD Ø T2										
Dimensions in Inches															
RUTD - 10 - 6 - 8	- 1010 - 3 - 6 - 8	10 - 6 - 8 JLZ	5/8	3/8	1/2	0.41	0.96	0.86	2.75	1.32	1.43	7/8	1	11/16	7/8
RUTD - 10 - 8 - 6	- 1010 - 3 - 8 - 6	10 - 8 - 6 JLZ		1/2	3/8	0.28								2.86	1.43	1.32	7/8	11/16
RUTD - 12 - 8 - 6	- 1210 - 3 - 8 - 6	12 - 8 - 6 JLZ	3/4	1/2	3/8	0.28	0.96	0.86	3.12	1.56	1.45	1.1/16	1.1/8	1	11/16
RUTD - 12 - 10 - 6	- 1210 - 3 - 10 - 6	12 - 10 - 6 JLZ		5/8	3/8	0.28								1.45	1	7/8
RUTD - 12 - 10 - 8	- 1210 - 3 - 10 - 8	12 - 10 - 8 JLZ	7/8	5/8	1/2	0.41	1.02	0.86	3.52	1.76	1.56	1.1/4	1.1/4	1	7/8
RUTD - 14 - 8 - 12	- 1410 - 3 - 8 - 12	14 - 8 - 12 JLZ		1/2	3/4	0.62								1.76	7/8	1-1/8
RUTD - 14 - 10 - 6	- 1410 - 3 - 10 - 6	14 - 10 - 6 JLZ	7/8	5/8	3/8	0.28	1.02	0.86	3.52	1.76	1.65	1.1/4	1.1/4	1	11/16
RUTD - 14 - 12 - 6	- 1610 - 3 - 8 - 4	14 - 12 - 6 JLZ		3/4	3/8	0.28								1.65	1.1/8	11/16
RUTD - 14 - 12 - 8	- 1410 - 3 - 12 - 8	14 - 12 - 8 JLZ	7/8	3/4	1/2	0.41	1.02	0.86	3.52	1.76	1.76	1.1/4	1.1/4	1.1/8	7/8
RUTD - 16 - 8 - 4	- 1610 - 3 - 8 - 4	16 - 8 - 4 JLZ		1/2	1/4	0.19								1.59	7/8	9/16
RUTD - 16 - 8 - 6	- 1610 - 3 - 8 - 6	16 - 8 - 6 JLZ	7/8	1/2	3/8	0.28	1.23	1.04	3.70	1.76	1.65	1.3/8	1.1/2	7/8	11/16
RUTD - 16 - 10 - 6	- 1610 - 3 - 10 - 6	16 - 10 - 6 JLZ		5/8	3/8	0.28								1.65	1	11/16
RUTD - 16 - 12 - 8	- 1610 - 3 - 12 - 8	16 - 12 - 8 JLZ	1	3/4	1/2	0.41	1.23	1.04	3.70	1.76	1.76	1.3/8	1.1/2	1.1/8	7/8
RUTD - 16 - 12 - 10	- 1610 - 3 - 12 - 10	16 - 12 - 10 JLZ		3/4	5/8	0.50								1.76	1.1/8	1
RUTD - 16 - 14 - 4	- 1610 - 3 - 14 - 4	16 - 14 - 4 JLZ	7/8	7/8	1/4	0.19	1.23	1.04	3.70	1.76	1.59	1.3/8	1.1/2	1.1/4	9/16
RUTD - 16 - 14 - 6	- 1610 - 3 - 14 - 6	16 - 14 - 6 JLZ		3/8	0.28	1.65								1.1/4	11/16
RUTD - 16 - 14 - 8	- 1610 - 3 - 14 - 8	16 - 14 - 8 JLZ	7/8	7/8	1/2	0.41	1.23	1.04	3.70	1.76	1.76	1.3/8	1.1/2	1.1/4	7/8
RUTD - 16 - 14 - 12	- 1610 - 3 - 14 - 12	16 - 14 - 12 JLZ		3/4	0.62	1.76								1.1/4	1.1/8
RUTD - 16 - 12 - 6	- 1610 - 3 - 12 - 6	-----	7/8	3/4	3/8	0.28	1.23	1.04	3.70	1.76	1.65	1.3/8	1.1/2	1.1/8	11/16

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change.

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**- Tube Fitting (Double Ferrule)-
Tube To Tube**



Union Cross

Fractional Tube x Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Inches										
2 - UCD	- 200 - 4	2ECR2	1/8	0.09	0.50	0.60	1.76	0.88	1/2	7/16
3 - UCD	- 300 - 4	3ECR3	3/16	0.12	0.54	0.63	1.92	0.95	1/2	1/2
4 - UCD	- 400 - 4	4ECR4	1/4	0.19	0.60	0.70	2.12	1.06	9/16	9/16
5 - UCD	- 500 - 4	5ECR5	5/16	0.25	5/16	0.64	2.34	0.73	9/16	5/8
6 - UCD	- 600 - 4	6ECR6	3/8	0.28	0.66	0.76	2.40	1.20	11/16	11/16
8 - UCD	- 810 - 4	8ECR8	1/2	0.41	0.90	0.86	2.84	1.42	13/16	7/8
10 - UCD	- 1010 - 4	10ECR10	5/8	0.50	0.96	0.86	2.86	1.43	7/8	1
12 - UCD	- 1210 - 4	12ECR12	3/4	0.62	0.96	0.86	3.14	1.57	1.1/16	1.1/8
14 - UCD	- 1410 - 4	14ECR14	7/8	0.72	1.02	0.86	3.52	1.76	1.1/4	1.1/4
16 - UCD	- 1610 - 4	16ECR16	1	0.88	1.23	1.04	3.86	1.93	1.3/8	1.1/2

Metric Tube x Metric Tube

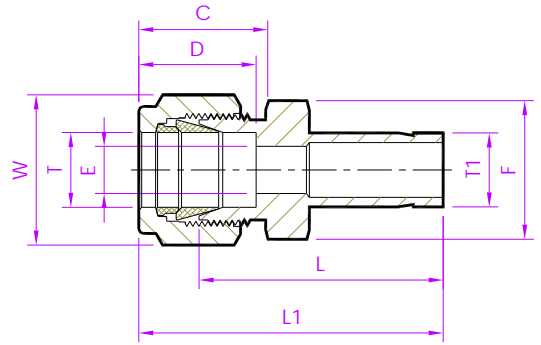
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	D	C	L1	LX	Body Hex F	Nut Hex W
Dimensions in Millimetres										
3M - UCD	- 3MO - 4	ECRM3	3	2.4	12.9	15.3	44.7	22.3	11.1	12
4M - UCD	- 4MO - 4	ECRM4	4	2.4	13.7	16.1	50.8	25.4	11.1	12
6M - UCD	- 6MO - 4	ECRM6	6	4.8	15.3	17.7	53.9	27.0	14.2	14
8M - UCD	- 8MO - 4	ECRM8	8	6.4	16.2	18.6	59.7	29.9	16	16
10M - UCD	- 10MO - 4	ECRM10	10	7.9	17.2	19.5	67.0	33.5	19	19
12M - UCD	- 12MO - 4	ECRM12	12	9.5	22.8	22.0	72.0	36.0	22.2	22
16M - UCD	- 16MO - 4	ECRM16	16	12.7	24.4	22.0	74.0	37.0	25.4	25
18M - UCD	- 18MO - 4	ECRM18	18	15.1	24.4	22.0	76.6	38.3	27	30
20M - UCD	- 20MO - 4	-----	20	15.9	26.0	22.0	89.3	44.6	30	32
25M - UCD	- 25MO - 4	-----	25	21.8	31.3	26.5	98.3	49.1	35	38

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change.

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**- Tube Fitting (Double Ferrule)-
Port Connector**

Reducer



Fractional Tube x Fractional Stub

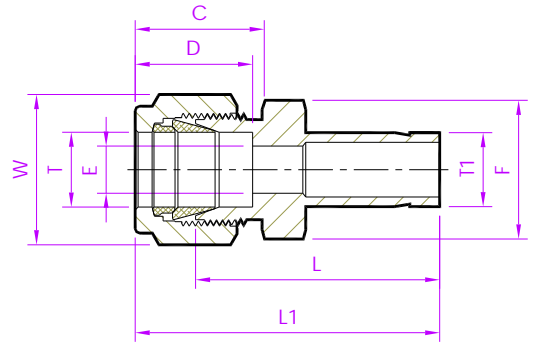
TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE OD Ø T1	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
1 - RD - 2	- 100 - R - 2	2TUR1	1/16	1/8	0.05	0.34	0.43	0.95	1.15	5/16	5/16
1 - RD - 3	- 100 - R - 3	3TUR1		3/16	0.05			0.93	1.13	5/16	
1 - RD - 4	- 100 - R - 4	4TUR1		1/4	0.05			1.04	1.24	5/16	
2 - RD - 1	- 200 - R - 1	1TUR2	1/8	1/16	0.03	0.50	0.60	0.88	1.14	7/16	7/16
2 - RD - 2	- 200 - R - 2	2TUR2		1/8	0.08			1.06	1.32	7/16	
2 - RD - 3	- 200 - R - 3	3TUR2		3/16	0.09			1.09	1.35	7/16	
2 - RD - 4	- 200 - R - 4	4TUR2		1/4	0.09			1.16	1.42	7/16	
2 - RD - 6	- 200 - R - 6	6TUR2		3/8	0.09			1.22	1.48	7/16	
2 - RD - 8	- 200 - R - 8	8TUR2		1/2	0.09			1.48	1.74	9/16	
3 - RD - 2	- 300 - R - 2	2TUR3	3/16	1/8	0.08	0.54	0.63	1.11	1.37	7/16	1/2
3 - RD - 4	- 300 - R - 4	4TUR3		1/4	0.12			1.20	1.46	7/16	
4 - RD - 2	- 400 - R - 2	2TUR4	1/4	1/8	0.08	0.60	0.70	1.16	1.45	9/16	9/16
4 - RD - 3	- 400 - R - 3	3TUR4		3/16	0.12			1.19	1.48	9/16	
4 - RD - 4	- 400 - R - 4	4TUR4		1/4	0.19			1.25	1.54	9/16	
4 - RD - 5	- 400 - R - 5	5TUR4		5/16	0.19			1.28	1.57	5/8	
4 - RD - 6	- 400 - R - 6	6TUR4		3/8	0.19			1.31	1.60	11/16	
4 - RD - 8	- 400 - R - 8	8TUR4		1/2	0.19			1.53	1.82	7/8	
4 - RD - 10	- 400 - R - 10	10TUR4		5/8	0.19			1.60	1.89	1	
4 - RD - 12	- 400 - R - 12	12TUR4	3/4	0.19	1.59	1.88	1.1/16				
5 - RD - 6	- 500 - R - 6	6TUR5	5/16	3/8	0.25	0.64	0.73	1.36	1.65	11/16	5/8
5 - RD - 8	- 500 - R - 8	8TUR5		1/2	0.25			1.58	1.87	5/8	
6 - RD - 4	- 600 - R - 4	4TUR6	3/8	1/4	0.19	0.66	0.76	1.34	1.63	11/16	11/16
6 - RD - 6	- 600 - R - 6	6TUR6		3/8	0.28			1.41	1.70	11/16	
6 - RD - 8	- 600 - R - 8	8TUR6		1/2	0.28			1.62	1.91	7/8	
6 - RD - 10	- 600 - R - 10	10TUR6		5/8	0.28			1.69	1.98	11/16	
6 - RD - 12	- 600 - R - 12	12TUR6		3/4	0.28			1.69	1.98	7/8	
8 - RD - 4	- 810 - R - 4	4TUR8	1/2	1/4	0.19	0.90	0.86	1.37	1.77	7/8	7/8
8 - RD - 6	- 810 - R - 6	6TUR8		3/8	0.28			1.44	1.84	7/8	
8 - RD - 8	- 810 - R - 8	-----		1/2	0.39			1.66	2.06	7/8	
8 - RD - 10	- 810 - R - 10	10TUR8		5/8	0.41			1.72	2.12	7/8	
8 - RD - 12	- 810 - R - 12	12TUR8		3/4	0.41			1.72	2.12	7/8	
8 - RD - 16	- 810 - R - 16	16TUR8		1	0.41			1.97	2.37	1.1/16	
10 - RD - 12	- 1010 - R - 12	12TUR10	5/8	3/4	0.50	0.96	0.86	1.75	2.15	1	1
10 - RD - 14	- 1010 - R - 14	14TUR10		7/8	0.50			1.81	2.21	1	
10 - RD - 16	- 1010 - R - 16	16TUR10		1	0.50			2.00	2.40	1.1/16	
12 - RD - 8	- 1210 - R - 8	8TUR12	3/4	1/2	0.39	0.96	0.86	1.75	2.15	1.1/16	1.1/8

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Port Connector

Reducer



Metric Tube x Metric Stub

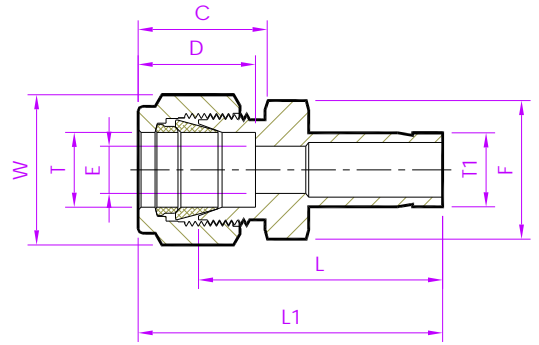
TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE OD Ø T1	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Millimetres											
2M - RD - 3M	- 2MO - R - 3M	M3TURM2	2	3	1.7	12.9	15.3	26.9	33.5	11	12
3M - RD - 4M	- 3MO - R - 4M	M4TURM3	3	4	2.4	12.9	15.3	28.4	35.0	11	12
3M - RD - 6M	- 3MO - R - 6M	M6TURM3		6	2.4			29.5	36.1	11	
3M - RD - 10M	- 3MO - R - 10M	M10TURM3		10	2.4			31.8	38.4	14	
4M - RD - 6M	- 4MO - R - 6M	M6TURM4	4	6	2.4	13.7	16.1	30.5	37.1	11	12
6M - RD - 3M	- 6MO - R - 3M	M3TURM6	6	3	1.8	15.3	17.7	29.5	36.9	14	14
6M - RD - 8M	- 6MO - R - 8M	M8TURM6		8	4.8			32.5	39.9	14	
6M - RD - 10M	- 6MO - R - 10M	M10TURM6		10	4.8			33.3	40.7	14	
6M - RD - 12M	- 6MO - R - 12M	M12TURM6		12	4.8			38.9	46.3	14	
6M - RD - 18M	- 6MO - R - 18M	-----		18	4.8			42.2	49.6	22	
8M - RD - 6M	- 8MO - R - 6M	M6TURM8	8	6	4.6	16.2	18.6	32.8	40.3	16	16
8M - RD - 10M	- 8MO - R - 10M	M10TURM8		10	6.4			34.5	42.0	16	
8M - RD - 12M	- 8MO - R - 12M	M12TURM8		12	6.4			40.1	47.6	16	
10M - RD - 6M	- 10MO - R - 6M	M6TURM10	10	6	4.6	17.2	19.5	34.8	42.4	19	19
10M - RD - 8M	- 10MO - R - 8M	M8TURM10		8	6.4			35.8	43.4	19	
10M - RD - 12M	- 10MO - R - 12M	M12TURM10		12	7.9			42.2	49.8	19	
10M - RD - 15M	- 10MO - R - 15M	M15TURM10		15	7.9			43.7	51.3	19	
10M - RD - 18M	- 10MO - R - 18M	-----		18	7.9			43.7	51.3	22	
12M - RD - 6M	- 12MO - R - 6M	M6TURM12	12	6	4.6	22.8	22.0	34.8	44.9	22	22
12M - RD - 8M	- 12MO - R - 8M	-----		8	6.4			35.8	45.9	22	
12M - RD - 10M	- 12MO - R - 10M	M10TURM12		10	7.7			36.6	46.7	22	
12M - RD - 16M	- 12MO - R - 16M	M16TURM12		16	9.5			43.7	53.8	22	
12M - RD - 18M	- 12MO - R - 18M	M18TURM12		18	9.5			43.7	53.8	22	
12M - RD - 20M	- 12MO - R - 20M	M20TURM12		20	9.5			46.0	56.1	22	
12M - RD - 22M	- 12MO - R - 22M	-----		22	9.5			46.0	56.1	25	
12M - RD - 25M	- 12MO - R - 25M	M25TURM12	25	9.5	52.3	62.4	27				
16M - RD - 12M	- 16MO - R - 12M	M12TURM16	16	12	9.1	24.4	22.0	42.9	53.0	25	25
16M - RD - 18M	- 16MO - R - 18M	M18TURM16		18	11.9			44.6	54.7	25	
16M - RD - 20M	- 16MO - R - 20M	M20TURM16		20	12.7			45.2	55.3	25	
16M - RD - 25M	- 16MO - R - 25M	M25TURM16		25	12.7			53.9	64.0	27	
18M - RD - 12M	- 18MO - R - 12M	M12TURM18	18	12	9.1	24.4	22.0	44.5	54.6	27	30
18M - RD - 16M	- 18MO - R - 16M	M16TURM18		16	12.7			46.0	56.1	27	
18M - RD - 20M	- 18MO - R - 20M	M20TURM18		20	15.1			47.5	57.6	27	
18M - RD - 22M	- 18MO - R - 22M	M22TURM18		22	15.1			47.5	57.6	27	
18M - RD - 25M	- 18MO - R - 25M	M25TURM18		25	15.1			52.3	62.4	27	
20M - RD - 16M	- 20MO - R - 16M	M16TURM20	20	16	12.7	26.0	22.0	47.8	57.9	30	32
20M - RD - 18M	- 20MO - R - 18M	M18TURM20		18	13.9			47.8	57.9	30	
20M - RD - 22M	- 20MO - R - 22M	M22TURM20		22	15.8			49.3	59.4	30	
20M - RD - 25M	- 20MO - R - 25M	M25TURM20		25	15.8			54.1	64.2	30	
22M - RD - 18M	- 22MO - R - 18M	-----	22	18	13.9	26.0	22.0	47.8	57.9	30	32
22M - RD - 20M	- 22MO - R - 20M	-----		20	15.1			49.3	59.4	30	
22M - RD - 25M	- 22MO - R - 25M	-----		25	18.3			54.1	64.2	30	
25M - RD - 16M	- 25MO - R - 16M	M16TURM25	25	16	21.8	31.3	26.5	50.9	63.2	30	38
25M - RD - 18M	- 25MO - R - 18M	M18TURM25		18	13.9			50.8	63.1	35	
25M - RD - 20M	- 25MO - R - 20M	M20TURM25		20	15.1			52.3	64.6	35	

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change.

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**- Tube Fitting (Double Ferrule)-
Port Connector**

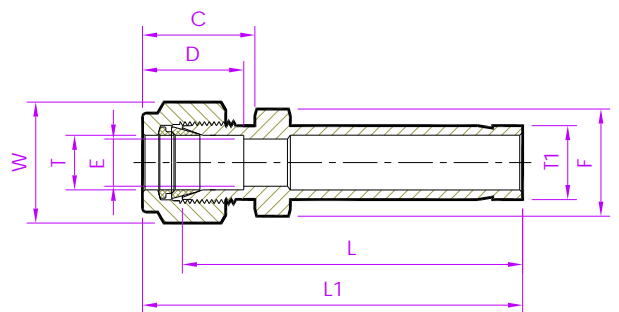
Reducer



Metric Tube x Fractional Stub

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE OD Ø T1	ØE	D	C	L	L1	Body Hex F	Nut Hex W
			(mm)	(Inch)	Dimensions in Millimetres						
2M - RD - 2	- 2MO - R - 2	-----	2	1/8	1.7	12.9	15.3	26.9	33.5	11.1	12
3M - RD - 2	- 3MO - R - 2	2TUCM3	3	1/8	2.0	12.9	15.3	26.9	33.5	11.1	12
3M - RD - 4	- 3MO - R - 4	4TUCM3	3	1/4	2.4	12.9	15.3	29.5	36.1	14.2	12
4M - RD - 4	- 4MO - R - 4	-----	4	1/4	2.4	13.7	16.1	30.5	37.1	14.2	12
6M - RD - 2	- 6MO - R - 2	-----	6	1/8	2.0	15.3	17.7	29.5	36.9	14.2	14.2
6M - RD - 4	- 6MO - R - 4	4TUCM6		1/4	4.9			31.8	39.2	14.2	
6M - RD - 5	- 6MO - R - 5	5TUCM6		5/16	4.8			32.5	39.9	14.2	
6M - RD - 6	- 6MO - R - 6	6TUCM6		3/8	4.8			33.3	40.7	14.2	
6M - RD - 8	- 6MO - R - 8	8TUCM6		1/2	4.8			38.9	46.3	14.2	
8M - RD - 6	- 8MO - R - 6	6TUCM8	8	3/8	6.4	16.2	18.6	34.5	42.0	16	16
8M - RD - 8	- 8MO - R - 8	8TUCM8		1/2	6.4			40.1	47.6	16	
10M - RD - 6	- 10MO - R - 6	6TUCM10	10	3/8	7.1	17.2	19.5	36.6	44.2	19	19
10M - RD - 8	- 10MO - R - 8	8TUCM10		1/2	7.9			42.2	49.8	19	
12M - RD - 8	- 12MO - R - 8	8TUCM12	12	1/2	9.5	22.8	22.0	42.2	52.3	22.2	22.2
12M - RD - 12	- 12MO - R - 12	12TUCM12		3/4	9.5			43.7	53.8	22.2	
18M - RD - 12	- 18MO - R - 12	12TUCM8	18	3/4	15.1	24.4	22.0	46.0	56.1	27	30
18M - RD - 16	- 18MO - R - 16	-----		1	15.1			52.3	62.4	27	
25M - RD - 16	- 25MO - R - 16	-----		25	1			20.2	31.3	26.5		57.2	69.5	35	38

Long Reducer



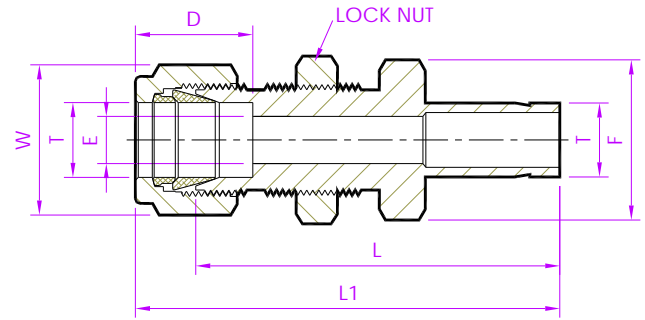
Fractional Tube x Fractional Long Stub

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE OD Ø T1	ØE	D	C	L	L1	Body Hex F	Nut Hex W
			Dimensions in Inches								
6 - LRD - 8	- 600 - RF - 8	-----	3/8	1/2	0.25	0.66	0.76	2.57	2.28	11/16	11/16

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change.
- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Port Connector

Bulkhead Reducer

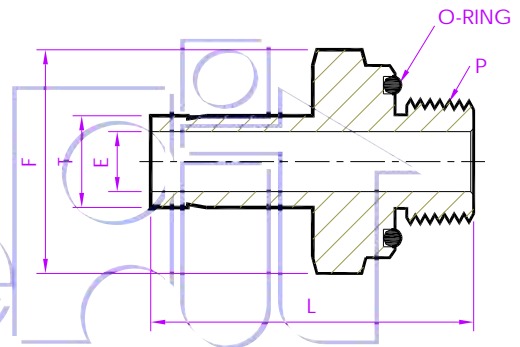
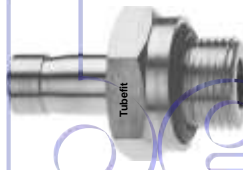


Fractional Tube x Fractional Stub

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches										
2 - BRD	- 200 - R1 - 2	2TUBC2	1/8	0.08	0.50	0.60	1.69	1.95	1/2	7/16
4 - BRD	- 400 - R1 - 4	4TUBC4	1/4	0.19	0.60	0.70	1.91	2.20	5/8	9/16
6 - BRD	- 600 - R1 - 6	6TUBC6	3/8	0.28	0.66	0.76	2.12	2.41	3/4	11/16
8 - BRD	- 810 - R1 - 8	8TUBC8	1/2	0.39	0.90	0.86	2.47	2.87	15/16	7/8
10 - BRD	- 1010 - R1 - 10	-----	5/8	0.50	0.96	0.86	2.56	2.96	1.1/16	1
16 - BRD	- 1610 - R1 - 16	-----	1	0.80	1.23	1.04	3.47	3.95	1.5/8	1.1/2

- For Lock Nut use 'BUND'

Male Adapter



Fractional Stub x O-seal NPT (M)

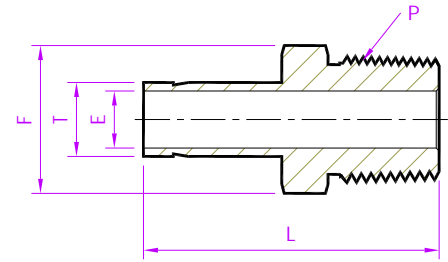
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	ØE	L	Body Hex F
Dimensions in Inches							
1 - MAD - 2ON	1 - TA - 1 - 2OR	1M3TU2	1/16	1/8	0.05	1.03	3/4
4 - MAD - 2ON	4 - TA - 1 - 2OR	4M3TU2	1/4	1/8	0.19	1.31	3/4
4 - MAD - 4ON	4 - TA - 1 - 4OR	4M3TU4		1/4	0.19	1.44	15/16
4 - MAD - 6ON	4 - TA - 1 - 6OR	4M3TU6		3/8	0.19	1.50	1-1/8
5 - MAD - 2ON	5 - TA - 1 - 2OR	5M3TU2	5/16	1/8	0.19	1.34	3/4
5 - MAD - 4ON	5 - TA - 1 - 4OR	5M3TU4		1/4	0.25	1.47	15/16
6 - MAD - 2ON	6 - TA - 1 - 2OR	6M3TU2	3/8	1/8	0.19	1.38	3/4
6 - MAD - 4ON	6 - TA - 1 - 4OR	6M3TU4		1/4	0.28	1.50	15/16
6 - MAD - 6ON	6 - TA - 1 - 6OR	6M3TU6		3/8	0.28	1.59	1.1/8
8 - MAD - 6ON	8 - TA - 1 - 6OR	8M3TU6	1/2	3/8	0.38	1.78	1.1/8
10 - MAD - 8ON	10 - TA - 1 - 8OR	10M3TU8	5/8	1/2	0.47	2.14	1.3/8
12 - MAD - 12ON	12 - TA - 1 - 12OR	12M3TU12	3/4	3/4	0.62	2.16	1.1/2
16 - MAD - 16ON	16 - TA - 1 - 16OR	16M3TU16	1	1	0.88	2.56	1.3/4

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Port Connector

Male Adapter



Fractional Stub x NPT (M)

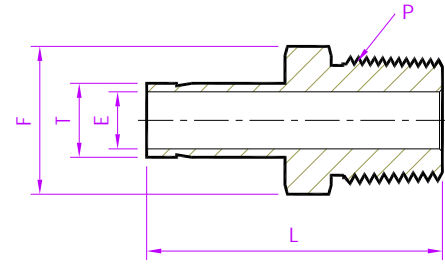
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	ØE	L	Body Hex F
Dimensions in Inches							
1 - MAD - 2N	- 1 - TA - 1 - 1	1MA2N	1/16	1/8	0.05	1.00	7/16
2 - MAD - 2N	- 2 - TA - 1 - 2	2MA2N	1/8	1/8	0.09	1.16	7/16
2 - MAD - 4N	- 2 - TA - 1 - 4	2MA4N		1/4	0.09	1.37	9/16
3 - MAD - 2N	- 3 - TA - 1 - 2	3MA2N	3/16	1/8	0.12	1.19	7/16
3 - MAD - 4N	- 3 - TA - 1 - 4	3MA4N		1/4	0.12	1.40	9/16
4 - MAD - 2N	- 4 - TA - 1 - 2	4MA2N	1/4	1/8	0.19	1.25	7/16
4 - MAD - 4N	- 4 - TA - 1 - 4	4MA4N		1/4	0.19	1.46	9/16
4 - MAD - 6N	- 4 - TA - 1 - 6	4MA6N		3/8	0.19	1.49	11/16
4 - MAD - 8N	- 4 - TA - 1 - 8	4MA8N		1/2	0.19	1.71	7/8
5 - MAD - 2N	- 5 - TA - 1 - 2	5MA2N	5/16	1/8	0.19	1.29	7/16
5 - MAD - 4N	- 5 - TA - 1 - 4	5MA4N		1/4	0.25	1.50	9/16
5 - MAD - 6N	- 5 - TA - 1 - 6	5MA6N		3/8	0.25	1.53	11/16
5 - MAD - 8N	- 5 - TA - 1 - 8	5MA8N		1/2	0.25	1.74	7/8
6 - MAD - 2N	- 6 - TA - 1 - 2	6MA2N	3/8	1/8	0.19	1.32	7/16
6 - MAD - 4N	- 6 - TA - 1 - 4	6MA4N		1/4	0.28	1.53	9/16
6 - MAD - 6N	- 6 - TA - 1 - 6	6MA6N		3/8	0.28	1.56	11/16
6 - MAD - 8N	- 6 - TA - 1 - 8	6MA8N		1/2	0.28	1.78	7/8
8 - MAD - 4N	- 8 - TA - 1 - 4	8MA4N	1/2	1/4	0.28	1.75	9/16
8 - MAD - 6N	- 8 - TA - 1 - 6	8MA6N		3/8	0.39	1.78	11/16
8 - MAD - 8N	- 8 - TA - 1 - 8	8MA8N		1/2	0.39	2.00	7/8
10 - MAD - 8N	- 10 - TA - 1 - 8	10MA8N	5/8	1/2	0.47	2.06	7/8
12 - MAD - 8N	- 12 - TA - 1 - 8	12MA8N	3/4	1/2	0.47	2.06	7/8
12 - MAD - 12N	- 12 - TA - 1 - 12	12MA12N		3/4	0.59	2.06	1-1/16
12 - MAD - 16N	- 12 - TA - 1 - 16	12MA16N		1	0.62	2.41	1-3/8
16 - MAD - 12N	- 16 - TA - 1 - 12	16MA12N	1	3/4	0.62	2.31	1-1/16
16 - MAD - 16N	- 16 - TA - 1 - 16	16MA16N		1	0.80	2.60	1-3/8

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

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- Tube Fitting (Double Ferrule)-
Port Connector

Male Adapter



Metric Stub x NPT (M)

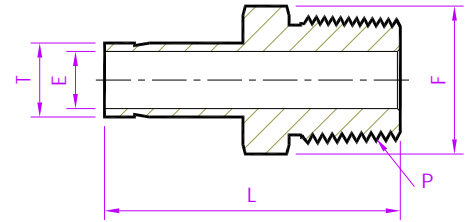
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Male Pipe Size P	ØE	L	Body Hex F
Dimensions in Inches							
3M - MAD - 2N	- 3 - MTA - 1 - 2	M3MA1/8N	3	1/8	2.4	29.4	11
4M - MAD - 2N	- 4 - MTA - 1 - 2	M4MA1/8N	4	1/8	2.4	29.4	11
6M - MAD - 2N	- 6 - MTA - 1 - 2	M6MA1/8N	6	1/8	4.6	32.8	11
6M - MAD - 4N	- 6 - MTA - 1 - 4	M6MA1/4N		1/4	4.6	38.1	14
6M - MAD - 6N	- 6 - MTA - 1 - 6	M6MA3/8N		3/8	4.8	36.5	18
6M - MAD - 8N	- 6 - MTA - 1 - 8	M6MA1/2N		1/2	4.8	42.1	22
8M - MAD - 4N	- 8 - MTA - 1 - 4	M8MA1/4N	8	1/4	6.2	39.1	14
8M - MAD - 6N	- 8 - MTA - 1 - 6	M8MA3/8N		3/8	6.4	38.1	18
10M - MAD - 4N	- 10 - MTA - 1 - 4	M10MA1/4N	10	1/4	7.1	39.9	14
10M - MAD - 6N	- 10 - MTA - 1 - 6	M10MA3/8N		3/8	7.7	40.6	18
10M - MAD - 8N	- 10 - MTA - 1 - 8	M10MA1/2N		1/2	7.7	46.2	22
12M - MAD - 4N	- 12 - MTA - 1 - 4	M12MA1/4N	12	1/4	7.1	46.5	14
12M - MAD - 6N	- 12 - MTA - 1 - 6	M12MA3/8N		3/8	9.5	44.5	18
12M - MAD - 8N	- 12 - MTA - 1 - 8	M12MA1/2N		1/2	9.1	52.0	22
16M - MAD - 8N	- 16 - MTA - 1 - 8	M16MA1/2N	16	1/2	11.9	50.8	22
16M - MAD - 12N	- 16 - MTA - 1 - 12	M16MA3/4N		3/4	12.7	51.6	27
18M - MAD - 8N	- 18 - MTA - 1 - 8	M18MA1/2N	18	1/2	11.9	50.8	22
18M - MAD - 12N	- 18 - MTA - 1 - 12	M18MA3/4N		3/4	15.1	51.6	27
20M - MAD - 8N	- 20 - MTA - 1 - 8	M20MA1/2N	20	1/2	11.9	51.8	22
20M - MAD - 12N	- 20 - MTA - 1 - 12	M20MA3/4N		3/4	15.9	52.4	27
25M - MAD - 16N	- 25 - MTA - 1 - 16	M25MA1N	25	1	21.8	65.9	35

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Port Connector

Male Adapter



Fractional Stub x ISO Tapered (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOT Male Pipe Size P	ØE	L	Body Hex F
Dimensions in Inches							
2 - MAD - 2IT	- 2 - TA - 1 - 2RT	-----	1/8	1/8	0.09	1.16	7/16
2 - MAD - 4IT	- 2 - TA - 1 - 4RT	-----		1/4	0.09	1.37	9/16
4 - MAD - 4IT	- 4 - TA - 1 - 4RT	4MA4K	1/4	1/4	0.19	1.46	9/16
4 - MAD - 6IT	- 4 - TA - 1 - 6RT	4MA6K		3/8	0.19	1.44	11/16
4 - MAD - 8IT	- 4 - TA - 1 - 8RT	4MA8K		1/2	0.19	1.66	7/8
5 - MAD - 2IT	- 5 - TA - 1 - 2RT	5MA2K	5/16	1/8	0.19	1.29	7/16
5 - MAD - 4IT	- 5 - TA - 1 - 4RT	5MA4K		1/4	0.25	1.50	9/16
6 - MAD - 4IT	- 6 - TA - 1 - 4RT	6MA4K	3/8	1/4	0.28	1.53	9/16
6 - MAD - 6IT	- 6 - TA - 1 - 6RT	6MA6K		3/8	0.28	1.56	11/16
6 - MAD - 8IT	- 6 - TA - 1 - 8RT	6MA8K		1/2	0.28	1.78	7/8
8 - MAD - 4IT	- 8 - TA - 1 - 4RT	8MA4K	1/2	1/4	0.28	1.75	9/16
8 - MAD - 6IT	- 8 - TA - 1 - 6RT	8MA6K		3/8	0.38	1.78	11/16
8 - MAD - 8IT	- 8 - TA - 1 - 8RT	8MA8K		1/2	0.39	2.00	7/8
10 - MAD - 8IT	- 10 - TA - 1 - 8RT	10MA8K	5/8	1/2	0.47	2.06	7/8
12 - MAD - 12IT	- 12 - TA - 1 - 12RT	-----	3/4	3/4	0.59	2.06	1-1/16
16 - MAD - 16IT	- 16 - TA - 1 - 16RT	-----	1	1	0.80	2.60	1-3/8

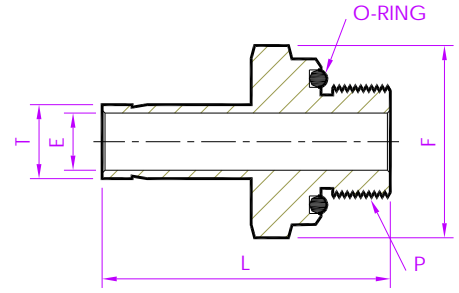
Metric Stub x ISO Tapered (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOT Male Pipe Size P	ØE	L	Body Hex F
			(mm)	(Inch)	Dimensions in Millimetres		
6M - MAD - 2IT	- 6 - MTA - 1 - 2RT	M6MA1/8K	6	1/8	4.6	32.8	12.5
6M - MAD - 4IT	- 6 - MTA - 1 - 4RT	M6MA1/4K		1/4	4.6	38.1	14
8M - MAD - 4IT	- 8 - MTA - 1 - 4RT	M8MA1/4K	8	1/4	6.2	39.1	14
8M - MAD - 6IT	- 8 - MTA - 1 - 6RT	M8MA3/8K		3/8	6.4	38.3	17.4
10M - MAD - 4IT	- 10 - MTA - 1 - 4RT	M10MA1/4K	10	1/4	7.1	39.9	14
10M - MAD - 6IT	- 10 - MTA - 1 - 6RT	M10MA3/8K		3/8	7.7	40.6	17.4
10M - MAD - 8IT	- 10 - MTA - 1 - 8RT	M10MA1/2K		1/2	7.9	44.5	22.2
12M - MAD - 4IT	- 12 - MTA - 1 - 4RT	M12MA1/4K	12	1/4	7.1	46.5	14
12M - MAD - 6IT	- 12 - MTA - 1 - 6RT	M12MA3/8K		3/8	9.1	46.2	17.4
12M - MAD - 8IT	- 12 - MTA - 1 - 8RT	M12MA1/2K		1/2	9.1	51.8	22.2
16M - MAD - 8IT	- 16 - MTA - 1 - 8RT	M16MA1/2K	16	1/2	11.9	50.8	22.2
18M - MAD - 12IT	- 18 - MTA - 1 - 12RT	M18MA3/4K	18	3/4	15.1	51.6	27
20M - MAD - 12IT	- 20 - MTA - 1 - 12RT	M20MA3/4K	20	3/4	15.9	52.4	27
25M - MAD - 16IT	- 25 - MTA - 1 - 16RT	M25MA1K	25	1	21.8	65.9	35

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimensions are for reference only and are subject to change 4)ISO Tapered (BSP1) thread as per BS 21.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Port Connector



Male Adapter

Fractional Stub x O-seal ISO Parallel (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Male Pipe Size P	ØE	L	Body Hex F
Dimensions in Inches							
4 - MAD - 4OIP	-----	4MA4R - ED	1/4	1/4	0.18	1.50	3/4
4 - MAD - 6OIP	-----	4MA6R - ED		3/8	0.18	1.50	3/4
8 - MAD - 4OIP	-----	8MA4R - ED	1/2	1/4	0.25	1.75	3/4
8 - MAD - 6OIP	-----	8MA6R - ED		3/8	0.31	1.78	7/8
8 - MAD - 8OIP	-----	8MA8R - ED		1/2	0.39	1.94	1.1/16

Metric Stub x O-seal ISO Parallel (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Male Pipe Size P	ØE	L	Body Hex F
Dimensions in Millimetres							
6M - MAD - 4OIP	-----	M6MA1/4R - ED	6	1/4	4.0	36.6	19.0
6M - MAD - 8OIP	-----	M6MA1/2R - ED		1/2	4.0	42.7	27.0
10M - MAD - 4OIP	-----	M10MA1/4R - ED	10	1/4	6.4	38.1	19.0
10M - MAD - 8OIP	-----	M10MA1/2R - ED		1/2	7.5	44.2	27.0
12M - MAD - 4OIP	-----	M12MA1/4R - ED	12	1/4	6.4	43.7	19.0
12M - MAD - 6OIP	-----	M12MA3/8R - ED		3/8	7.9	45.0	22.0
12M - MAD - 8OIP	-----	M12MA1/2R - ED		1/2	9.1	49.8	27.0

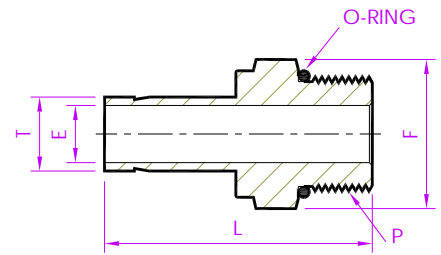
- O-rings provided are Buna-N standard and Viton - optional.

NOTE: 1)The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimensions are for reference only and are subject to change 4)ISO Parallel (BSPP) thread as per BS 2779.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

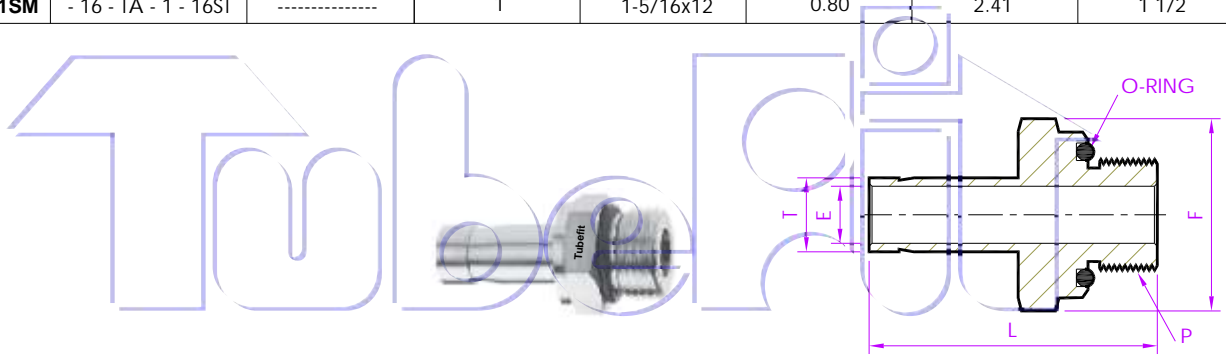
**- Tube Fitting (Double Ferrule)-
Port Connector**

Male Adapter



Fractional Stub x SAE/MS Straight (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	SAE/MS Male Pipe Size P	ØE	L	Body Hex F
Dimensions in Inches							
2 - MAD - 5SM	- 2 - TA - 1 - 2ST	-----	1/8	5/16x24	0.09	1.20	7/16
4 - MAD - 7SM	- 4 - TA - 1 - 4ST	-----	1/4	7/16x20	0.19	1.39	9/16
6 - MAD - 7SM	- 6 - TA - 1 - 4ST	6TUHA4	3/8	7/16x20	0.19	1.46	9/16
6 - MAD - 9SM	- 6 - TA - 1 - 6ST	-----		9/16x18	0.28	1.52	11/16
6 - MAD - 12SM	- 6 - TA - 1 - 8ST	6TUHA8	1/2	3/4x16	0.28	1.60	7/8
8 - MAD - 9SM	- 8 - TA - 1 - 6ST	8TUHA6		9/16x18	0.39	1.74	11/16
8 - MAD - 12SM	- 8 - TA - 1 - 8ST	-----	3/4x16	0.39	1.82	7/8	
10 - MAD - 14SM	- 10 - TA - 1 - 10ST	10TUHA10	5/8	7/8x14	0.50	1.94	1
12 - MAD - 17SM	- 12 - TA - 1 - 12ST	-----	3/4	1-1/16x12	0.59	2.10	1 1/4
16 - MAD - 21SM	- 16 - TA - 1 - 16ST	-----	1	1-5/16x12	0.80	2.41	1 1/2



Fractional Stub x O-seal SAE/MS Straight (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Male Pipe Size P	ØE	L	Body Hex F
Dimensions in Inches							
2 - MAD - 5OSM	- 2 - TA - 1 - OR	2M2TU2	1/8	5/16x24	0.09	1.28	9/16
3 - MAD - 6OSM	- 3 - TA - 1 - OR	3M2TU3	3/16	3/8x24	0.12	1.38	5/8
4 - MAD - 7OSM	- 4 - TA - 1 - OR	4M2TU4	1/4	7/16x24	0.19	1.54	3/4
5 - MAD - 8OSM	- 5 - TA - 1 - OR	5M2TU5	5/16	1/2x24	0.25	1.64	7/8
5 - MAD - 9OSM	- 5 - TA - 1 - OR	-----		9/16x24	0.28	1.70	15/16
6 - MAD - 9OSM	- 6 - TA - 1 - OR	6M2TU6	3/8	9/16x18	0.28	1.70	15/16
8 - MAD - 12OSM	- 8 - TA - 1 - OR	8M2TU8	1/2	3/4x24	0.39	1.95	1-1/8
10 - MAD - 14OSM	- 10 - TA - 1 - OR	10M2TU10	5/8	7/8x14	0.50	2.12	1-3/8
12 - MAD - 17OSM	- 12 - TA - 1 - OR	12M2TU12	3/4	1-1/16x12	0.62	2.16	1-1/2
16 - MAD - 21OSM	- 16 - TA - 1 - OR	16M2TU16	1	1-5/16x12	0.88	2.47	1-3/4

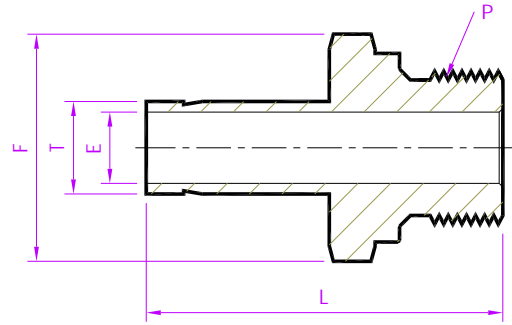
- This type of fittings can be adapted as a bulkhead fitting on thin wall tanks or vessels, eliminating welding, brazing or threading. Used `MOSMD' as Lock Nut.
- O-ring provided are Buna-N standard and Viton - optional.

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to lager ID at pipe thread or straight thread end.
2)Dimensions are for reference only and are subject to change 4)SAE/MS (UNF) thread as per ASME B1.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Port Connector

Male Adapter



Fractional Stub x ISO Parallel (M) - RSIP

Tube Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Male Pipe Size P	ØE	L	Body Hex F
Dimensions in Inches							
2 - MAD - 2RSIP	- 2 - TA - 1 - 2RS	2MA2R	1/8	1/8	0.09	1.22	9/16
2 - MAD - 4RSIP	- 2 - TA - 1 - 4RS	2MA4R		1/4	0.09	1.41	3/4
4 - MAD - 2RSIP	- 4 - TA - 1 - 2RS	4MA2R	1/4	1/8	0.16	1.31	9/16
4 - MAD - 4RSIP	- 4 - TA - 1 - 4RS	4MA4R		1/4	0.19	1.50	3/4
6 - MAD - 2RSIP	- 6 - TA - 1 - 2RS	6MA2R	3/8	1/8	0.19	1.34	9/16
6 - MAD - 4RSIP	- 6 - TA - 1 - 4RS	6MA4R		1/4	0.23	1.57	3/4
6 - MAD - 6RSIP	- 6 - TA - 1 - 6RS	6MA6R		3/8	0.28	1.60	7/8
6 - MAD - 8RSIP	- 6 - TA - 1 - 8RS	6MA8R		1/2	0.28	1.69	1.1/16
8 - MAD - 4RSIP	- 8 - TA - 1 - 4RS	8MA4R	1/2	1/4	0.23	1.79	3/4
8 - MAD - 6RSIP	- 8 - TA - 1 - 6RS	8MA6R		3/8	0.31	1.82	7/8
8 - MAD - 8RSIP	- 8 - TA - 1 - 8RS	8MA8R		1/2	0.39	1.94	1.1/16
10 - MAD - 8RSIP	- 10 - TA - 1 - 8RS	10MA8R	5/8	1/2	0.47	1.97	1.1/16
12 - MAD - 12RSIP	- 12 - TA - 1 - 12RS	12MA12R	3/4	3/4	0.59	2.16	1.5/16
16 - MAD - 16RSIP	- 16 - TA - 1 - 16RS	16MA16R	1	1	0.78	2.54	1.5/8

Metric Stub x ISO Parallel (M) - RSIP

Tube Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Male Pipe Size P	ØE	L	Body Hex F
			(mm)	(in)	Dimensions in Millimetres		
3M - MAD - 2RSIP	- 3 - MTA - 1 - 2RS	M3MA1/8R	3	1/8	2.4	31.0	14
4M - MAD - 2RSIP	- 4 - MTA - 1 - 2RS	M4MA1/8R	4	1/8	2.4	31.8	14
6M - MAD - 2RSIP	- 6 - MTA - 1 - 2RS	M6MA1/8R	6	1/8	4.0	34.3	14
6M - MAD - 4RSIP	- 6 - MTA - 1 - 4RS	M6MA1/4R		1/4	4.6	39.1	19
8M - MAD - 4RSIP	- 8 - MTA - 1 - 4RS	M8MA1/4R	8	1/4	5.9	40.1	19
10M - MAD - 4RSIP	- 10 - MTA - 1 - 4RS	M10MA1/4R	10	1/4	5.9	40.9	19
10M - MAD - 6RSIP	- 10 - MTA - 1 - 6RS	M10MA3/8R		3/8	7.7	41.7	22
10M - MAD - 8RSIP	- 10 - MTA - 1 - 8RS	M10MA1/2R		1/2	7.7	44.7	27
12M - MAD - 4RSIP	- 12 - MTA - 1 - 4RS	M12MA1/4R	12	1/4	5.9	46.7	19
12M - MAD - 6RSIP	- 12 - MTA - 1 - 6RS	M12MA3/8R		3/8	7.9	47.2	22
12M - MAD - 8RSIP	- 12 - MTA - 1 - 8RS	M12MA1/2R		1/2	9.1	50.5	27
16M - MAD - 8RSIP	- 16 - MTA - 1 - 8RS	M16MA1/2R	16	1/2	11.9	50.8	27
18M - MAD - 8RSIP	- 18 - MTA - 1 - 8RS	-----	18	1/2	11.9	52.1	27
18M - MAD - 12RSIP	- 18 - MTA - 1 - 12RS	M18MA3/4R		3/4	13.9	56.1	35
20M - MAD - 12RSIP	- 20 - MTA - 1 - 12RS	M20MA3/4R	20	3/4	15.9	54.0	32
20M - MAD - 16RSIP	- 20 - MTA - 1 - 16RS	M20MA1R		1	15.9	65.1	41

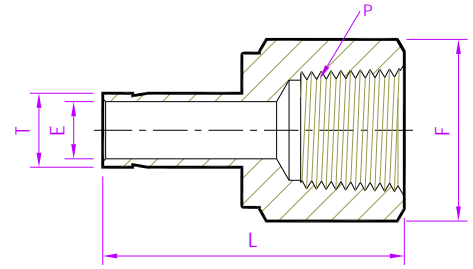
- RSIP parallel threads ends are commonly used with a gasket having a bonded elastomer seal. RPGD type gasket may also be used (RSGD Fitting Gasket)

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimensions are for reference only and are subject to change 4)ISO Parallel (BSP) thread as per BS 2779..

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Port Connector

Female Adapter



Fractional Stub x NPT (F)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Female Pipe Size P	ØE	L	Body Hex F
Dimensions in Inches							
4 - FAD - 4N	- 4 - TA - 7 - 4	4FA4N	1/4	1/4	0.19	1.46	3/4
4 - FAD - 6N	- 4 - TA - 7 - 6	4FA6N		3/8	0.19	1.55	7/8
4 - FAD - 8N	- 4 - TA - 7 - 8	4FA8N		1/2	0.19	1.79	1-1/16
5 - FAD - 4N	- 5 - TA - 7 - 4	5FA4N	5/16	1/4	0.25	1.48	3/4
5 - FAD - 6N	- 5 - TA - 7 - 6	5FA6N		3/8	0.25	1.59	7/8
6 - FAD - 4N	- 6 - TA - 7 - 4	6FA4N	3/8	1/4	0.28	1.50	3/4
6 - FAD - 6N	- 6 - TA - 7 - 6	6FA6N		3/8	0.28	1.59	7/8
6 - FAD - 8N	- 6 - TA - 7 - 8	6FA8N		1/2	0.28	1.84	1-1/16
8 - FAD - 4N	- 8 - TA - 7 - 4	8FA4N	1/2	1/4	0.39	1.71	3/4
8 - FAD - 6N	- 8 - TA - 7 - 6	8FA6N		3/8	0.39	1.79	7/8
8 - FAD - 8N	- 8 - TA - 7 - 8	8FA8N		1/2	0.39	2.04	1-1/16
12 - FAD - 8N	- 12 - TA - 7 - 8	12FA8N	3/4	1/2	0.59	2.08	1-1/16
12 - FAD - 12N	- 12 - TA - 7 - 12	12FA12N		3/4	0.59	2.16	1-5/16
12 - FAD - 16N	- 12 - TA - 7 - 16	12FA16N		1	0.59	2.30	1-5/8
16 - FAD - 12N	- 16 - TA - 7 - 12	16FA12N	1	3/4	0.80	2.39	1-5/16
16 - FAD - 16N	- 16 - TA - 7 - 16	16FA16N		1	0.80	2.53	1-5/8

Metric Stub x NPT (F)

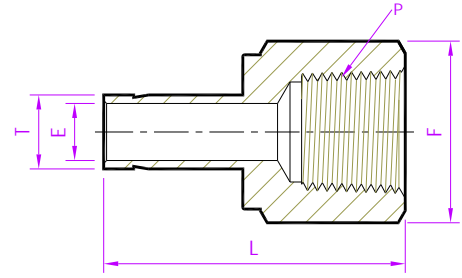
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	NPT Female Pipe Size P	ØE	L	Body Hex F
			(mm)	(Inch)	Dimensions in Millimetres		
6M - FAD - 2N	- 6 - MTA - 7 - 2	M6FA1/8N	6	1/8	4.6	32.5	14
6M - FAD - 4N	- 6 - MTA - 7 - 4	M6FA1/4N		1/4	4.6	37.1	19
2M - FAD - 4N	- 8 - MTA - 7 - 4	M8FA1/4N	8	1/4	6.4	37.6	19
8M - FAD - 6N	- 8 - MTA - 7 - 6	M8FA3/8N		3/8	6.4	36.5	22
10M - FAD - 4N	- 10 - MTA - 7 - 4	M10FA1/4N	10	1/4	7.7	38.1	19
10M - FAD - 6N	- 10 - MTA - 7 - 6	M10FA3/8N		3/8	7.7	40.1	22
10M - FAD - 8N	- 10 - MTA - 7 - 8	M10FA1/2N		1/2	7.7	46.5	27
12M - FAD - 4N	- 12 - MTA - 7 - 4	M12FA1/4N	12	1/4	9.1	43.7	19
12M - FAD - 6N	- 12 - MTA - 7 - 6	M12FA3/8N		3/8	9.1	42.9	22
12M - FAD - 8N	- 12 - MTA - 7 - 8	M12FA1/2N		1/2	9.1	52.3	27
16M - FAD - 8N	- 16 - MTA - 7 - 8	M16FA1/2N	16	1/2	12.7	49.2	27
18M - FAD - 12N	- 18 - MTA - 7 - 12	M18FA3/4N	18	3/4	12.7	52.4	32
20M - FAD - 8N	- 20 - MTA - 7 - 8	M20FA1/2N	20	1/2	15.9	50.0	27
20M - FAD - 12N	- 20 - MTA - 7 - 12	M20FA3/4N		3/4	15.9	53.2	32
25M - FAD - 16N	- 25 - MTA - 7 - 16	M25FA1N	25	1	21.8	66.7	41

NOTE: 1)The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimensions are for reference only and are subject to change 4)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Port Connector

Female Adapter



Fractional Stub x ISO Tapered (F)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOT Female Pipe Size P	ØE	L	Body Hex F
Dimensions in Inches							
4 - FAD - 2IT	- 4 - TA - 7 - 2RT	4FA2K	1/4	1/8	0.19	1.30	9/16
4 - FAD - 4IT	- 4 - TA - 7 - 4RT	4FA4K		1/4	0.19	1.45	3/4
6 - FAD - 4IT	- 6 - TA - 7 - 4RT	6FA4K	3/8	1/4	0.28	1.50	3/4
6 - FAD - 6IT	- 6 - TA - 7 - 6RT	6FA6K		3/8	0.28	1.59	7/8
8 - FAD - 4IT	- 8 - TA - 7 - 4RT	8FA4K	1/2	1/4	0.39	1.71	3/4
8 - FAD - 6IT	- 8 - TA - 7 - 6RT	8FA6K		3/8	0.39	1.80	7/8
8 - FAD - 8IT	- 8 - TA - 7 - 8RT	8FA8K		1/2	0.39	2.05	1-1/16

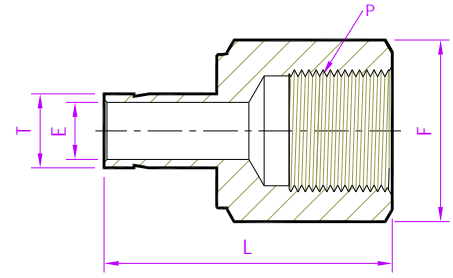
Metric Stub x ISO Tapered (F)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOT Female Pipe Size P	ØE	L	Body Hex F
Dimensions in Millimetres							
3M - FAD - 2IT	- 3 - MTA - 7 - 2RT	M3FA1/8K	3	1/8	1.8	27.8	14
4M - FAD - 2IT	- 4 - MTA - 7 - 2RT	M4FA1/8K	4	1/8	2.0	28.6	14
6M - FAD - 2IT	- 6 - MTA - 7 - 2RT	M6FA1/8K	6	1/8	1.6	32.5	14
8M - FAD - 4IT	- 8 - MTA - 7 - 4RT	M8FA1/4K	8	1/4	6.4	39.1	19
10M - FAD - 4IT	- 10 - MTA - 7 - 4RT	M10FA1/4K	10	1/4	7.7	38.1	19
10M - FAD - 6IT	- 10 - MTA - 7 - 6RT	M10FA3/8K		3/8	7.7	31.8	22
10M - FAD - 8IT	- 10 - MTA - 7 - 8RT	M10FA1/2K		1/2	7.7	41.3	27
12M - FAD - 4IT	- 12 - MTA - 7 - 4RT	M12FA1/4K	12	1/4	9.1	40.5	19
12M - FAD - 6IT	- 12 - MTA - 7 - 6RT	M12FA3/8K		3/8	9.1	43.7	22
12M - FAD - 8IT	- 12 - MTA - 7 - 8RT	M12FA1/2K		1/2	9.1	46.8	27
16M - FAD - 8IT	- 16 - MTA - 7 - 8RT	M16FA1/2K	16	1/2	12.7	48.4	27
18M - FAD - 12IT	- 18 - MTA - 7 - 12RT	M18FA3/4K	18	3/4	14.0	51.6	32
20M - FAD - 12IT	- 20 - MTA - 7 - 12RT	M20FA3/4K	20	3/4	15.1	52.4	32
25M - FAD - 16IT	- 25 - MTA - 7 - 16RT	M25FA1K	25	1	19.8	66.7	41

NOTE: 1)The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimensions are for reference only and are subject to change 4)ISO Tapered (BSP) thread as per BS 21.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Port Connector



Female Adapter

Fractional Stub x ISO Parallel (F)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Female Pipe Size P	ØE	L	Body Hex F
Dimensions in Inches							
2 - FAD - 2IP	- 2 - TA - 7 - 2RP	-----	1/8	1/8	0.09	1.17	9/16
4 - FAD - 2IP	- 4 - TA - 7 - 2RP	-----	1/4	1/8	0.19	1.25	9/16
4 - FAD - 4IP	- 4 - TA - 7 - 4RP	4FA4R		1/4	0.19	1.50	3/4
6 - FAD - 4IP	- 6 - TA - 7 - 4RP	-----	3/8	1/4	0.28	1.55	3/4
6 - FAD - 6IP	- 6 - TA - 7 - 6RP	6FA6R		3/8	0.28	1.57	7/8
8 - FAD - 6IP	- 8 - TA - 7 - 6RP	-----	1/2	3/8	0.39	1.78	7/8
8 - FAD - 8IP	- 8 - TA - 7 - 8RP	8FA8R		1/2	0.39	1.95	1.1/16

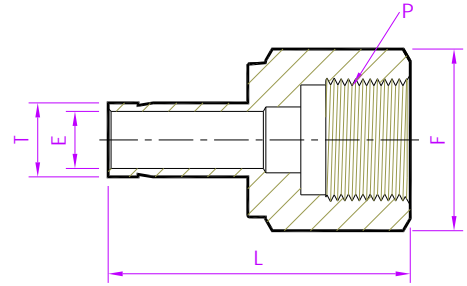
Metric Stub x ISO Parallel (F)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Female Pipe Size P	ØE	L	Body Hex F
Dimensions in Millimetres							
3M - FAD - 2IP	- 3 - MTA - 7 - 2RP	M3FA1/8R	(mm)	(in)			
3M - FAD - 4IP	- 3 - MTA - 7 - 4RP	M3FA1/4R	3	1/8	1.8	28.6	14
4M - FAD - 2IP	- 4 - MTA - 7 - 2RP	M4FA1/8R	4	1/4	1.6	28.6	19
6M - FAD - 2IP	- 6 - MTA - 7 - 2RP	M6FA1/8R	6	1/8	2.0	29.4	14
6M - FAD - 4IP	- 6 - MTA - 7 - 4RP	M6FA1/4R		1/4	4.6	37.8	19
8M - FAD - 4IP	- 8 - MTA - 7 - 4RP	M8FA1/4R	8	1/4	6.4	38.1	19
10M - FAD - 4IP	- 10 - MTA - 7 - 4RP	M10FA1/4R	10	1/4	7.5	38.9	19
10M - FAD - 8IP	- 10 - MTA - 7 - 8RP	M10FA1/2R		1/2	7.5	43.7	27
12M - FAD - 6IP	- 12 - MTA - 7 - 6RP	M12FA3/8R	12	3/8	9.1	44.5	22
12M - FAD - 8IP	- 12 - MTA - 7 - 8RP	M12FA1/2R		1/2	9.1	48.4	27
16M - FAD - 8IP	- 16 - MTA - 7 - 8RP	M16FA1/2R	16	1/2	12.7	50.0	27
18M - FAD - 12IP	- 18 - MTA - 7 - 12RP	M18FA3/4R	18	3/4	14.0	53.2	32
20M - FAD - 12IP	- 20 - MTA - 7 - 12RP	M20FA3/4R	20	3/4	15.1	54.0	32
25M - FAD - 16IP	- 25 - MTA - 7 - 16RP	M25FA1R	25	1	19.8	67.5	41

NOTE : 1)The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimensions are for reference only and are subject to change 4)ISO Parallel (BSP) thread as per BS 2779.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Port Connector



Female Adapter

Fractional Stub x ISO Parallel (F) - Gauge

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Female Pipe Size P	ØE	L	Body Hex F
Dimensions in Inches							
4 - FAD - 4IPG	- 4 - TA - 7 - 4RG	-----	1/4	1/4	0.19	1.39	3/4
6 - FAD - 6IPG	- 6 - TA - 7 - 6RG	-----	3/8	3/8	0.26	1.55	7/8
8 - FAD - 8IPG	- 8 - TA - 7 - 8RG	-----	1/2	1/2	0.28	1.80	1.1/16

Metric Stub x ISO Parallel (F) - Gauge

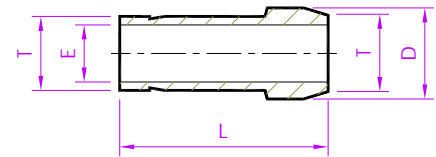
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ISOP Female Pipe Size P	ØE	L	Body Hex F
			(mm)	(in)	Dimensions in Millimetres		
6M - FAD - 4IPG	- 6 - MTA - 7 - 4RG	-----	6	1/4	4.6	35.3	19
6M - FAD - 6IPG	- 6 - MTA - 7 - 6RG	-----		3/8	4.6	38.4	22
6M - FAD - 8IPG	- 6 - MTA - 7 - 8RG	-----		1/2	4.6	42.9	27
8M - FAD - 4IPG	- 8 - MTA - 7 - 4RG	-----	8	1/4	5.5	33.0	19
8M - FAD - 8IPG	- 8 - MTA - 7 - 8RG	-----		1/2	6.2	43.7	27
10M - FAD - 4IPG	- 10 - MTA - 7 - 4RG	-----	10	1/4	5.5	34.5	19
10M - FAD - 8IPG	- 10 - MTA - 7 - 8RG	-----		1/2	7.0	40.1	27
12M - FAD - 4IPG	- 12 - MTA - 7 - 4RG	-----	12	1/4	5.5	40.1	19
12M - FAD - 8IPG	- 12 - MTA - 7 - 8RG	-----		1/2	7.0	48.8	27
16M - FAD - 8IPG	- 16 - MTA - 7 - 8RG	-----	16	1/2	7.0	49.0	27
18M - FAD - 8IPG	- 18 - MTA - 7 - 8RG	-----	18	1/2	7.0	49.3	27

- No seal is made around the male thread. Instead, a gasket is dropped into the flat bottom in the female thread, and the end of the male threaded end exerts a load on the gasket to seal. (Use RGGD Fitting Gasket)

NOTE: 1) The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2) Dimensions are for reference only and are subject to change 4) ISO Parallel (BSPP) thread as per BS 2779.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

**- Tube Fitting (Double Ferrule)-
Port Connector**



Port Connector

Two Fractional Stub

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	ØD	L
Dimensions in Inches						
1 - PCD	- 101 - PC	1PC1	1/16	0.03	0.13	0.54
2 - PCD	- 201 - PC	2PC2	1/8	0.09	0.24	0.88
3 - PCD	- 301 - PC	3PC3	3/16	0.12	0.35	0.98
4 - PCD	- 401 - PC	4PC4	1/4	0.19	0.37	0.97
5 - PCD	- 501 - PC	-----	5/16	0.25	0.43	1.02
6 - PCD	- 601 - PC	6PC6	3/8	0.30	0.50	1.03
8 - PCD	- 811 - PC	8PC8	1/2	0.39	0.62	1.41
12 - PCD	- 1211 - PC	12PC12	3/4	0.59	0.87	1.47
16 - PCD	- 1611 - PC	16PC16	1	0.80	1.12	1.89

Two Metric Stub

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	ØD	L
Dimensions in Millimeters						
3M - PCD	- 3M1 - PC	PCM3	3	2.1	5.0	22.2
6M - PCD	- 6M1 - PC	PCM6	6	4.4	9.0	24.6
8M - PCD	- 8M1 - PC	PCM8	8	6.2	10.0	25.9
10M - PCD	- 10M1 - PC	PCM10	10	8.2	13.1	26.1
12M - PCD	- 12M1 - PC	PCM12	12	9.1	15.0	35.8
15M - PCD	- 15M1 - PC	-----	15	12.7	19.0	37.4
16M - PCD	- 16M1 - PC	PCM16	16	12.7	19.0	37.4
18M - PCD	- 18M1 - PC	PCM18	18	13.9	21.0	37.4
20M - PCD	- 20M1 - PC	-----	20	15.1	23.0	38.9
25M - PCD	- 25M1 - PC	-----	25	19.8	28.0	48.0

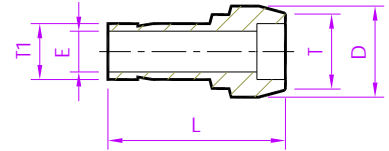
NOTE : 1)The 'E' Dimension is the minimum opening. 2)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-

Port Connector

Reducer Port Connector



Two Fractional Stub

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE OD Ø T1	ØE	ØD	L
Dimensions in Inches							
2 - RPCD - 1	- 201 - PC - 1	1PC2	1/8	1/16	0.03	0.24	0.68
4 - RPCD - 1	- 401 - PC - 1	1PC4	1/4	1/16	0.03	0.37	0.71
4 - RPCD - 2	- 401 - PC - 2	2PC4		1/8	0.09	0.37	0.89
6 - RPCD - 2	- 601 - PC - 2	2PC6	3/8	1/8	0.09	0.50	0.91
6 - RPCD - 4	- 601 - PC - 4	4PC4		1/4	0.19	0.50	0.98
8 - RPCD - 4	- 811 - PC - 4	4PC8	1/2	1/4	0.19	0.62	1.15
8 - RPCD - 6	- 811 - PC - 6	6PC8		3/8	0.28	0.62	1.20
12 - RPCD - 8	- 1211 - PC - 8	8PC12	3/4	1/2	0.39	0.87	1.49
16 - RPCD - 8	- 1611 - PC - 8	-----	1	1/2	0.39	1.12	1.68
16 - RPCD - 12	- 1611 - PC - 12	-----		3/4	0.59	1.12	1.71

Two Metric Stub

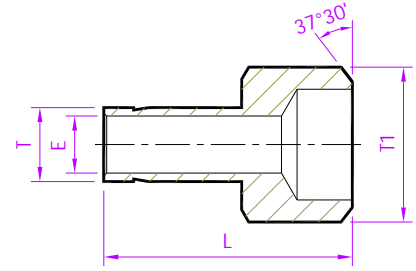
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE OD Ø T1	ØE	ØD	L
Dimensions in Millimetres							
6M - RPCD - 3M	- 6M1 - PC - 3M	M3PCM6	6	3	2.2	9.0	22.6
8M - RPCD - 6M	- 8M1 - PC - 6M	M6PCM8	8	6	4.6	11.0	24.7
10M - RPCD - 6M	- 10M1 - PC - 6M	M6PCM10		6	4.6	13.1	25.0
10M - RPCD - 8M	- 10M1 - PC - 8M	M8PCM10	8	6.4	26.0		
12M - RPCD - 6M	- 12M1 - PC - 6M	M6PCM12	12	6	4.6	15.0	29.1
12M - RPCD - 8M	- 12M1 - PC - 8M	M8PCM12		8	6.4		29.8
12M - RPCD - 10M	- 12M1 - PC - 10M	-----		10	7.7		30.4
16M - RPCD - 12M	- 16M1 - PC - 12M	-----	16	12	9.1	19.0	36.2

NOTE : 1)The 'E' Dimension is the minimum opening. 2)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Port Connector

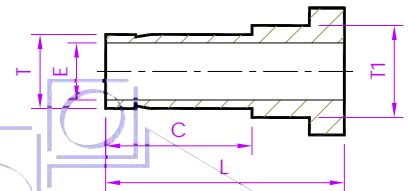
Weld Adapter



Fractional Stub x Pipe Butt Weld

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	MALE PIPE WELD Size	ØE	L	ØT1
Dimensions in Inches							
4 - WAD - 4PB	SS - 4 - TA - 1 - 4W	-----	1/4	1/4	0.19	1.14	0.54
6 - WAD - 8PB	SS - 6 - TA - 1 - 8W	-----	3/8	1/2	0.28	1.46	0.84
8 - WAD - 8PB	SS - 8 - TA - 1 - 8W	-----	1/2	1/2	0.39	1.66	0.84
8 - WAD - 12PB	SS - 8 - TA - 1 - 12W	-----		3/4	0.39	1.68	1.05
12 - WAD - 12PB	SS - 12 - TA - 1 - 12W	-----	3/4	3/4	0.59	1.87	1.05

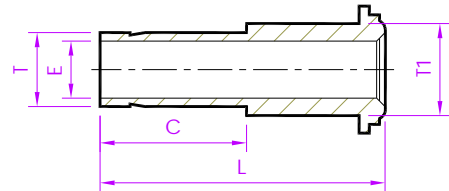
Gland Adapter (VCO)



Fractional Stub

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	ØT1	C	L
Dimensions in Inches							
4 - GAVCOD	SS - 4 - VCO - 3 - 4TA	-----	1/4	0.19	0.38	0.64	1.31
6 - GAVCOD	SS - 6 - VCO - 3 - 6TA	-----	3/8	0.28	0.60	0.70	1.38
8 - GAVCOD	SS - 8 - VCO - 3 - 8TA	-----	1/2	0.39	0.60	0.96	1.62
12 - GAVCOD	SS - 12 - VCO - 3 - 12TA	-----	3/4	0.59	0.92	1.02	1.80
16 - GAVCOD	SS - 16 - VCO - 3 - 16TA	-----	1	0.80	1.19	1.30	2.05

Gland Adapter (VCR)



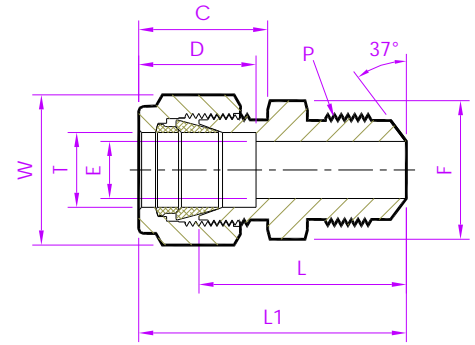
Fractional Stub

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	ØT1	C	L
Dimensions in Inches							
4 - GAVCRD	SS - 4 - VCR - 3 - 4TA	-----	1/4	0.19	0.35	0.64	1.62
6 - GAVCRD	SS - 6 - VCR - 3 - 6TA	-----	3/8	0.28	0.60	0.70	1.81
8 - GAVCRD	SS - 8 - VCR - 3 - 8TA	-----	1/2	0.39	0.60	0.96	1.94

NOTE: 1) The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2) Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To An Flare 37°

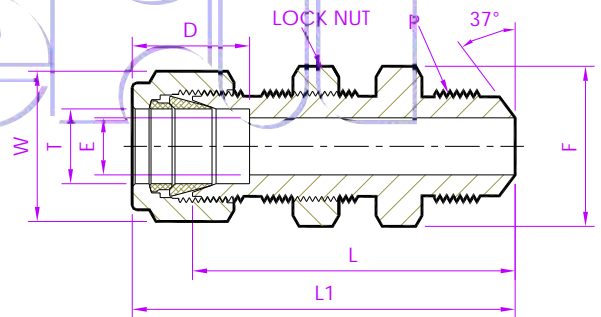
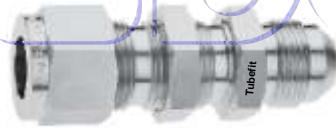


AN Union

Fractional Tube x AN Flare (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	AN Tube Flare Size	UNF Male Pipe Size P	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches												
1 - ANUD - 2	- 100 - 6 - 2AN	2XASC1	1/16	1/8	5/16-24UNF	0.05	0.34	0.43	1.05	1.07	7/16	5/16
2 - ANUD - 2	- 200 - 6 - 2AN	2XASC2	1/8	1/8	5/16-24UNF	0.06	0.50	0.60	1.01	1.27	7/16	7/16
3 - ANUD - 3	- 300 - 6 - 3AN	3XASC3	3/16	3/16	3/8-24UNF	0.12	0.54	0.63	1.06	1.32	7/16	1/2
4 - ANUD - 4	- 400 - 6 - 4AN	4XASC4	1/4	1/4	7/16-20UNF	0.17	0.60	0.70	1.19	1.48	9/16	9/16
5 - ANUD - 5	- 500 - 6 - 5AN	5XASC5	5/16	5/16	1/2-20UNF	0.23	0.64	0.73	1.22	1.51	5/8	5/8
6 - ANUD - 6	- 600 - 6 - 6AN	6XASC6	3/8	3/8	9/16-18UNF	0.28	0.66	0.76	1.27	1.56	11/16	11/16
8 - ANUD - 8	- 810 - 6 - 8AN	8XASC8	1/2	1/2	3/4-16UNF	0.39	0.90	0.86	1.41	1.81	7/8	7/8
10 - ANUD - 10	- 1010 - 6 - 10AN	10XASC10	5/8	5/8	7/8-14UNF	0.25	0.96	0.86	1.53	1.93	1	1
12 - ANUD - 12	- 1210 - 6 - 12AN	12XASC12	3/4	3/4	1.1/16-12UNF	0.61	0.96	0.86	1.70	2.10	1.1/16	1.1/8
16 - ANUD - 16	- 1610 - 6 - 16AN	16XASC16	1	1	1.5/16-12UNF	0.84	1.23	1.04	1.94	2.42	1.3/8	1.1/2

AN Bulkhead Union



Fractional Tube x AN Flare (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	AN Tube Flare Size	UNF Male Pipe Size P	ØE	D	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
2 - ANBUD - 2	- 200 - 61 - 2 AN	2XABC2	1/8	1/8	5/16-24UNF	0.09	0.50	1.65	1.91	1/2	7/16
3 - ANBUD - 3	- 300 - 61 - 3 AN	3XABC3	3/16	3/16	3/8-24UNF	0.12	0.54	1.72	1.98	9/16	1/2
4 - ANBUD - 4	- 400 - 61 - 4AN	4XASC4	1/4	1/4	7/16-20UNF	0.17	0.60	1.83	2.12	5/8	9/16
5 - ANBUD - 5	- 500 - 61 - 5 AN	5XABC5	5/16	5/16	1/2-20UNF	0.25	0.64	1.92	2.21	11/16	5/8
6 - ANBUD - 6	- 600 - 61 - 6AN	6XASC6	3/8	3/8	9/16-18UNF	0.28	0.66	1.96	2.25	3/4	11/16
8 - ANBUD - 8	- 810 - 61 - 8AN	8XASC8	1/2	1/2	3/4-16UNF	0.39	0.90	2.19	2.59	7/8	7/8
10 - ANBUD - 10	- 1010 - 61 - 10 AN	10XABC10	5/8	5/8	7/8-14UNF	0.50	0.96	2.34	2.74	1.1/16	1
12 - ANBUD - 12	- 1210 - 61 - 12AN	12XASC12	3/4	3/4	1.1/16-12UNF	0.61	0.96	2.71	3.11	1.3/16	1.1/8
16 - ANBUD - 16	- 1610 - 61 - 16AN	16XASC16	1	1	1.5/16-12UNF	0.84	1.23	3.16	3.64	1.3/8	1.1/2

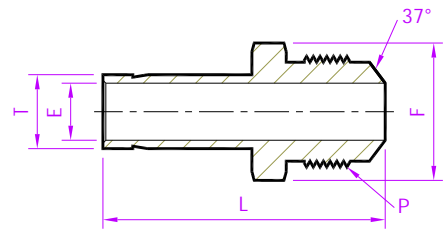
- For Lock Nut use 'BLND'

NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L1, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change 4)UNF thread as per ASME B1.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Tube To An Flare 37°

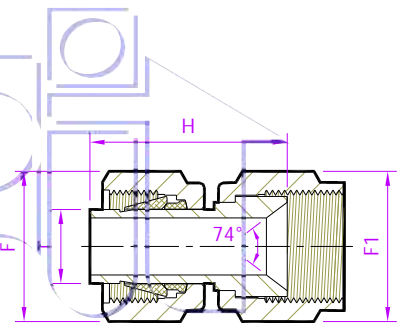
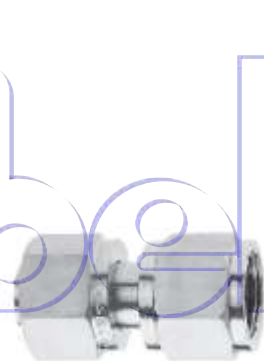
AN Adapter (Male)



Fractional Stub x AN Flare Tube (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	AN TUBE FLARE Size	ISOP Male Pipe Size P	ØE	L	Body Hex F
Dimensions in Inches								
4 - ANAMD - 4	- 4 - TA - 1 - 4AN	-----	1/4	1/4	7/16 UNFx20	0.19	1.46	1/2
6 - ANAMD - 4	- 6 - TA - 1 - 4AN	-----	3/8	1/4	7/16 UNFx20	0.28	1.53	1/2
6 - ANAMD - 6	- 6 - TA - 1 - 6AN	-----		3/8	9/16 UNFx18	0.28	1.56	5/8
8 - ANAMD - 8	- 8 - TA - 1 - 8AN	-----	1/2	1/2	3/4 UNFx16	0.39	1.91	13/16
12 - ANAMD - 12	- 12 - TA - 1 - 12AN	-----	3/4	3/4	1.1/16 UNFx12	0.59	2.21	1.1/8
16 - ANAMD - 16	- 16 - TA - 1 - 16AN	-----	1	1	1.5/16 UNFx12	0.80	2.58	1.3/8

AN Adapter (Female)



Fractional Stub x Female AN

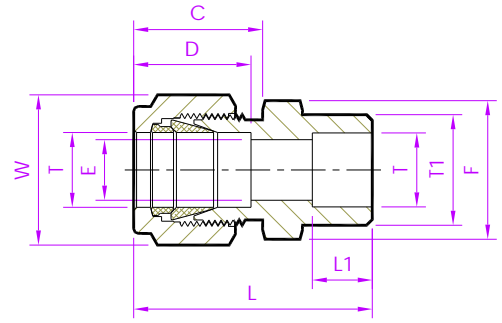
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	AN TUBE OD	H	Hex F	Hex F1
Dimensions in Inches							
2 - ANAFD - 2	- 200 - A - 2ANF	2X6TU2	1/8	1/8	0.73	7/16	3/8
2 - ANAFD - 4	- 200 - A - 4ANF	-----		1/4	0.75	7/16	9/16
4 - ANAFD - 4	- 400 - A - 4ANF	4X6TU4	1/4	1/4	0.84	9/16	9/16
6 - ANAFD - 6	- 600 - A - 6ANF	6X6TU6	3/8	3/8	0.98	11/16	11/16
8 - ANAFD - 8	- 810 - A - 8ANF	8X6TU8	1/2	1/2	1.25	7/8	7/8
12 - ANAFD - 12	- 1210 - A - 12ANF	12X6TU12	3/4	3/4	1.49	1-1/4	1-1/4
16 - ANAFD - 16	- 1610 - A - 16ANF	16X6TU16	1	1	1.80	1-1/2	1-1/2

NOTE: 1)The E Dimension is the minimum opening & fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimensions are for reference only and are subject to change 4)ISO Parallel (BSPP) thread as per BS 2779.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Weld Fitting

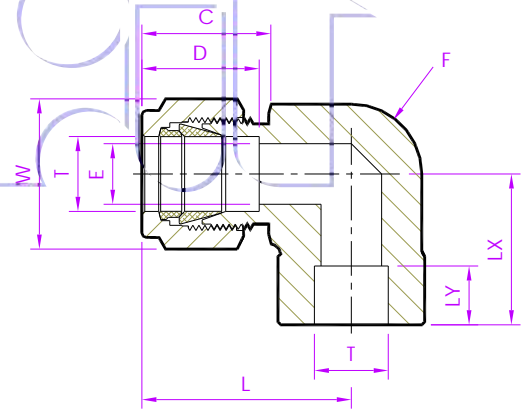
Tube Socket Weld Union



Fractional Tube x Socket Weld Tube

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØT1	ØE	D	C	L	L1	Body Hex F	Nut Hex W
Dimensions in Inches											
2 - TSWUD	- 200 - 6 - 2W	2 - 2 ZHLW	1/8	0.31	0.09	0.50	0.60	1.14	0.25	7/16	7/16
3 - TSWUD	- 300 - 6 - 3W	3 - 3 ZHLW	3/16	0.42	0.12	0.54	0.63	1.17	0.25	7/16	1/2
4 - TSWUD	- 400 - 6 - 4W	4 - 4 ZHLW	1/4	0.44	0.19	0.60	0.70	1.32	0.31	1/2	9/16
6 - TSWUD	- 600 - 6 - 6W	6 - 6 ZHLW	3/8	0.62	0.28	0.66	0.76	1.48	0.38	5/8	11/16
8 - TSWUD	- 810 - 6 - 8W	8 - 8 ZHLW	1/2	0.75	0.41	0.90	0.86	1.62	0.50	13/16	7/8
10 - TSWUD	- 1010 - 6 - 10W	10 - 10 ZHLW	5/8	0.92	0.50	0.96	0.86	1.65	0.50	15/16	1
12 - TSWUD	- 1210 - 6 - 12W	12 - 12 ZHLW	3/4	1.05	0.62	0.96	0.86	1.71	0.56	1-1/16	1-1/8
16 - TSWUD	- 1610 - 6 - 16W	16 - 16 ZHLW	1	1.31	0.88	1.23	1.04	2.07	0.75	1-3/8	1-1/2

Tube Socket Weld Elbow



Fractional Tube x Socket Weld Tube

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	D	C	L	LX	LY	Body Hex F	Nut Hex W
Dimensions in Inches											
2 - TSWED	- 200 - 9 - 2W	2 - 2 ZELW	1/8	0.09	0.50	0.60	0.92	0.63	0.16	7/16	7/16
3 - TSWED	- 300 - 9 - 3W	3 - 3 ZELW	3/16	0.12	0.54	0.63	0.98	0.69	0.20	7/16	1/2
4 - TSWED	- 400 - 9 - 4W	4 - 4 ZELW	1/4	0.19	0.60	0.70	1.06	0.77	0.31	1/2	9/16
6 - TSWED	- 600 - 9 - 6W	6 - 6 ZELW	3/8	0.28	0.66	0.76	1.20	0.91	0.38	11/16	11/16
8 - TSWED	- 810 - 9 - 8W	8 - 8 ZELW	1/2	0.41	0.90	0.86	1.42	1.02	0.50	13/16	7/8
10 - TSWED	- 1010 - 9 - 10W	10 - 10 ZELW	5/8	0.47	0.96	0.86	1.56	1.16	0.49	1.1/16	1
12 - TSWED	- 1210 - 9 - 12W	12 - 12 ZELW	3/4	0.62	0.96	0.86	1.57	1.17	0.56	1.1/16	1.1/8
16 - TSWED	- 1610 - 9 - 16W	16 - 16 ZELW	1	0.88	1.23	1.04	1.93	1.45	0.75	1.3/8	1.1/2

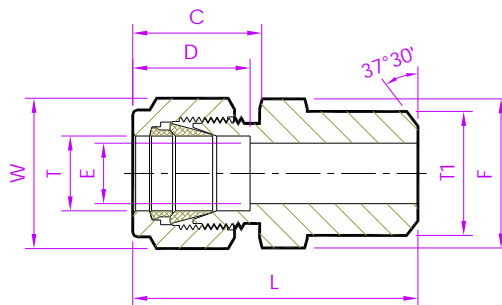
NOTE : 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to lager ID at pipe thread or straight thread end.
2)Dimension L1, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-

Weld Fitting

Male Pipe Weld Connector



Fractional Tube x Pipe Butt Weld

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	Male Pipe Weld	ØE	D	C	ØT1	L	Body Hex F	Nut Hex W
Dimensions in Inches											
2 - MPWCD - 2PB	- 200 - 1 - 2W	2 - 1/8 ZHLW2	1/8	1/8	0.09	0.50	0.60	0.405	1.20	7/16	7/16
3 - MPWCD - 2PB	- 300 - 1 - 2W	3 - 1/8 ZHLW2	3/16	1/8	0.12	0.54	0.63	0.405	1.23	7/16	1/2
4 - MPWCD - 2PB	- 400 - 1 - 2W	4 - 1/8 ZHLW2	1/4	1/8	0.19	0.60	0.70	0.405	1.29	1/2	9/16
4 - MPWCD - 4PB	- 400 - 1 - 4W	4 - 1/4 ZHLW2		1/4	0.19			0.540	1.49	9/16	
5 - MPWCD - 2PB	- 500 - 1 - 2W	5 - 1/8 ZHLW2	5/16	1/8	0.20	0.64	0.73	0.405	1.34	5/8	5/8
5 - MPWCD - 4PB	- 500 - 1 - 4W	5 - 1/4 ZHLW2		1/4	0.25			0.540	1.52	5/8	
6 - MPWCD - 4PB	- 600 - 1 - 4W	6 - 1/4 ZHLW2	3/8	1/4	0.28	0.66	0.76	0.540	1.57	11/16	11/16
6 - MPWCD - 6PB	- 600 - 1 - 6W	6 - 3/8 ZHLW2		3/8	0.28			0.675	1.57	11/16	
6 - MPWCD - 8PB	- 600 - 1 - 8W	6 - 1/2 ZHLW2		1/2	0.28			0.840	1.82	7/8	
6 - MPWCD - 12PB	- 600 - 1 - 12W	6 - 3/4 ZHLW2		3/4	0.28			1.050	1.88	1.1/16	
8 - MPWCD - 6PB	- 810 - 1 - 6W	8 - 3/8 ZHLW2	1/2	3/8	0.41	0.90	0.86	0.675	1.71	7/8	7/8
8 - MPWCD - 8PB	- 810 - 1 - 8W	8 - 1/2 ZHLW2		1/2	0.41			0.840	1.93	7/8	
8 - MPWCD - 12PB	- 810 - 1 - 12W	8 - 3/4 ZHLW2		3/4	0.41			1.050	1.99	1.1/16	
10 - MPWCD - 8PB	- 1010 - 1 - 8W	10 - 1/2 ZHLW2	5/8	1/2	0.50	0.96	0.86	0.840	1.93	1	1
12 - MPWCD - 12PB	- 1210 - 1 - 12W	12 - 3/4 ZHLW2	3/4	3/4	0.62	0.96	0.86	1.050	1.99	1.1/16	1.1/8
16 - MPWCD - 16PB	- 1610 - 1 - 16W	16 - 1 ZHLW2	1	1	0.88	1.23	1.04	1.315	2.45	1.3/8	1.1/2

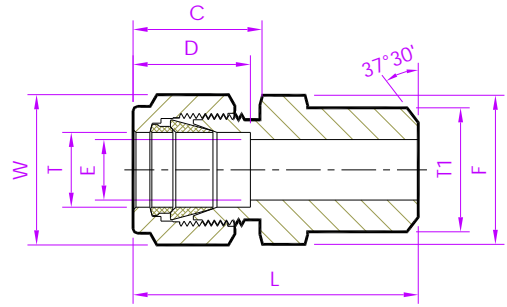
- TUBEFIT tube fittings with weld ends allow you to make tube-to-weld connections. The fittings provide leak-proof seals at the tubing connections. They also eliminate costly, hazardous leaks in instrumentation and process tubing. They permit disassembly in otherwise permanently welded tubing systems. Materials include 316/316L stainless steel, steel, brass and aluminium.

NOTE : 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to lager ID at pipe thread or straight thread end.
2)Dimension L, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change.

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- Tube Fitting (Double Ferrule)-
Weld Fitting

Male Pipe Weld Connector



Metric Tube x Pipe Butt Weld

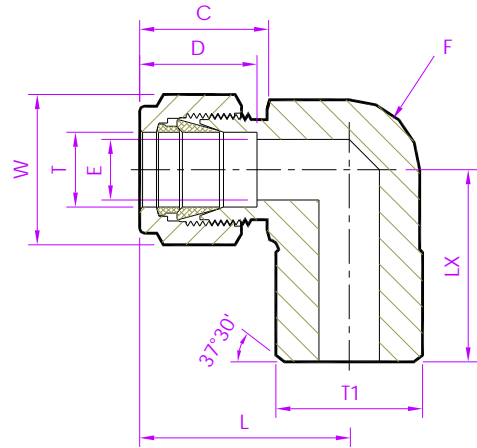
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	Male Pipe Weld	ØE	D	C	ØT1	L	Body Hex F	Nut Hex W
			(mm)	(Inch)	Dimensions in Inches						
3M - MPWCD - 2PB	- 3MO - 1 - 2W	ZHLW2 3 - 1/8	3	1/8	2.4	12.9	15.3	10.3	30.5	11	12
4M - MPWCD - 2PB	- 4MO - 1 - 2W	ZHLW2 4 - 1/8	4	1/8	2.4	13.7	16.1	10.3	31.2	11	12
6M - MPWCD - 2PB	- 6MO - 1 - 2W	ZHLW2 6 - 1/8	6	1/8	4.8	15.3	17.7	10.3	32.8	14	14
6M - MPWCD - 4PB	- 6MO - 1 - 4W	ZHLW2 6 - 1/4		1/4	4.8			13.7	37.9	14	
8M - MPWCD - 2PB	- 8MO - 1 - 2W	ZHLW2 8 - 1/8	8	1/8	5.1	16.2	18.6	10.3	34.2	16	16
8M - MPWCD - 4PB	- 8MO - 1 - 4W	ZHLW2 8 - 1/4		1/4	6.4			13.7	38.7	16	
8M - MPWCD - 8PB	- 8MO - 1 - 8W	ZHLW2 8 - 1/2		1/2	6.4			21.3	45.6	22	
10M - MPWCD - 4PB	- 10MO - 1 - 4W	ZHLW2 10 - 1/4	10	1/4	7.1	17.2	19.5	13.7	40.9	19	19
10M - MPWCD - 6PB	- 10MO - 1 - 6W	ZHLW2 10 - 3/8		3/8	7.9			17.1	40.9	19	
10M - MPWCD - 8PB	- 10MO - 1 - 8W	ZHLW2 10 - 1/2		1/2	7.9			21.3	46.5	22	
12M - MPWCD - 4PB	- 12MO - 1 - 4W	ZHLW2 12 - 1/4	12	1/4	7.1	22.8	22.0	13.7	43.4	22	22
12M - MPWCD - 6PB	- 12MO - 1 - 6W	ZHLW2 12 - 3/8		3/8	9.5			17.1	43.4	22	
12M - MPWCD - 8PB	- 12MO - 1 - 8W	ZHLW2 12 - 1/2		1/2	9.5			21.3	49.0	22	
14M - MPWCD - 6PB	- 14MO - 1 - 6W	.....	14	3/8	10.3	24.4	22.0	17.1	44.1	25	25
15M - MPWCD - 8PB	- 15MO - 1 - 8W	ZHLW2 15 - 1/2	15	1/2	11.9	24.4	22.0	21.3	49.0	25	25
16M - MPWCD - 8PB	- 16MO - 1 - 8W	ZHLW2 16 - 1/2	16	1/2	12.7	24.4	22.0	21.3	49.0	25	25
18M - MPWCD - 8PB	- 18MO - 1 - 8W	ZHLW2 18 - 1/2	18	1/2	13.5	24.4	22.0	21.3	50.5	27	30

- TUBEFIT tube fittings with weld ends allow you to make tube-to-weld connections. The fittings provide leak-proof seals at the tubing connections. They also eliminate costly, hazardous leaks in instrumentation and process tubing. They permit disassembly in otherwise permanently welded tubing systems. Materials include 316/316L stainless steel, steel, brass and aluminium.

NOTE: 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension L, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

**- Tube Fitting (Double Ferrule)-
Weld Fitting**



Male Pipe Weld Elbow

Fractional Tube x Pipe Butt Weld

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	Male Pipe Weld	ØE	D	C	ØT1	L	Body Hex F	Nut Hex W
Dimensions in Inches											
2 - MPWED - 2PB	200 - 2 - 2W	2 - 1/8 ZELW2	1/8	1/8	0.09	0.50	0.60	0.405	0.92	7/16	7/16
3 - MPWED - 2PB	300 - 2 - 2W	3 - 1/8 ZELW2	3/16	1/8	0.12	0.54	0.63	0.405	1.01	1/2	1/2
4 - MPWED - 2PB	400 - 2 - 2W	4 - 1/8 ZELW2	1/4	1/8	0.19	0.60	0.70	0.405	1.06	1/2	9/16
4 - MPWED - 4PB	400 - 2 - 4W	4 - 1/4 ZELW2		1/4				0.540	1.06	9/16	
6 - MPWED - 4PB	600 - 2 - 4W	6 - 1/4 ZELW2	3/8	1/4	0.28	0.66	0.76	0.540	1.20	11/16	11/16
8 - MPWED - 6PB	810 - 2 - 6W	8 - 3/8 ZELW2	1/2	3/8	0.41	0.90	0.86	0.675	1.37	3/4	7/8
8 - MPWED - 8PB	810 - 2 - 8W	8 - 1/2 ZELW2		1/2				0.41	0.840	1.42		7/8
10 - MPWED - 8PB	1010 - 2 - 8W	10 - 1/2 ZELW2	5/8	1/2	0.50	0.96	0.86	0.840	1.43	7/8	1
12 - MPWED - 12PB	1210 - 2 - 12W	12 - 3/4 ZELW2	3/4	3/4	0.62	0.96	0.86	1.050	1.57	1-1/16	1-1/8
16 - MPWED - 12PB	1610 - 2 - 12W	16 - 3/4 ZELW2	1	3/4	0.88	1.23	1.04	1.050	1.94	1-3/8	1-1/2
16 - MPWED - 16PB	1610 - 2 - 16W	16 - 1 ZELW2		1				0.88	1.315	1.94		1-3/8

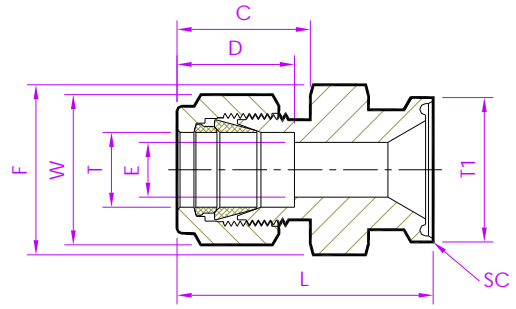
- TUBEFIT tube fittings with weld ends allow you to make tube-to-weld connections. The fittings provide leak-proof seals at the tubing connections. They also eliminate costly, hazardous leaks in instrumentation and process tubing. They permit disassembly in otherwise permanently welded tubing systems. Materials include 316/316L stainless steel, steel, brass and aluminium.

NOTE : 1)The E Dimension is the minimum opening & Fittings of this group may be back drilling to larger ID at pipe thread or straight thread end.
2)Dimension L, C, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change.

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- Tube Fitting (Double Ferrule)-
Special Fitting

Sanitary Flange



Fractional Tube x Flange

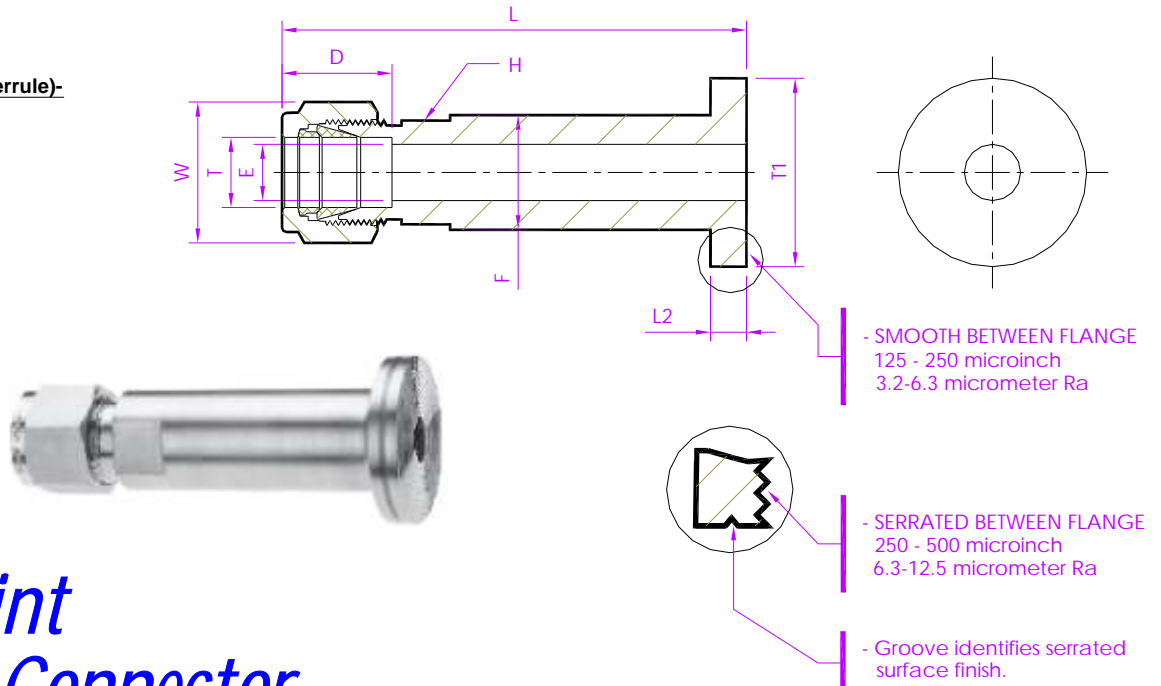
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	Male Pipe Weld	ØE	D	C	ØT1	L	Body Hex F	Nut Hex W
Dimensions in Inches											
4 - SFD - 8FL	SS - 400 - SC - 8	4 - 8 ZHLS - SS	1/4	1/2	0.19	0.60	0.70	0.98	1.57	1	9/16
4 - SFD - 12FL	SS - 400 - SC - 12	4 - 12 ZHLS - SS		3/4	0.19			0.98	1.57	1	
4 - SFD - 16FL	SS - 400 - SC - 16	4 - 16 ZHLS - SS		1	0.19			1.98	1.57	1-3/8	
4 - SFD - 24FL	SS - 400 - SC - 24	4 - 24 ZHLS - SS		1-1/2	0.19			1.98	1.57	1-3/8	
6 - SFD - 8FL	SS - 600 - SC - 8	6 - 8 ZHLS - SS	3/8	1/2	0.28	0.66	0.76	0.98	1.63	1	11/16
6 - SFD - 12FL	SS - 600 - SC - 12	6 - 12 ZHLS - SS		3/4	0.28			0.98	1.63	1	
6 - SFD - 16FL	SS - 600 - SC - 16	6 - 16 ZHLS - SS		1	0.28			1.98	1.63	1-3/8	
6 - SFD - 24FL	SS - 600 - SC - 24	6 - 24 ZHLS - SS		1-1/2	0.28			1.98	1.63	1-3/8	
8 - SFD - 8FL	SS - 810 - SC - 8	8 - 8 ZHLS - SS	1/2	1/2	0.37	0.90	0.86	0.98	1.74	1	7/8
8 - SFD - 12FL	SS - 810 - SC - 12	8 - 12 ZHLS - SS		3/4	0.41			0.98	1.74	1	
8 - SFD - 16FL	SS - 810 - SC - 16	8 - 16 ZHLS - SS		1	0.41			1.98	1.74	1-3/8	
8 - SFD - 24FL	SS - 810 - SC - 24	8 - 24 ZHLS - SS		1-1/2	0.41			1.98	1.74	1-3/8	
16 - SFD - 16FL	SS - 1610 - SC - 16	-----	1	1	0.87	1.23	1.04	1.98	1.91	1-3/8	1-1/2
16 - SFD - 32FL	SS - 1610 - SC - 32	-----		2	0.88			2.52	2.49	2-3/4	

- Sanitary flange fittings combine the reliability and versatility of TUBEFIT tube fittings with conventional sanitary flanges. The fittings permit direct connection of utility and process lines. Flange sizes are 1/2, 3/4, 1, 1-1/2, and 2 inches. TUBEFIT tube fitting ends are available in 1/4, 3/8, 1/2, and 1 inches. TUBEFIT tube fittings allow use of a variety of tubing materials including metal, hard plastic, and soft plastic. Applications include steam sterilization lines, nutrient feed systems, sterile air systems, sampling lines, pilot plants, instrumentation systems, and other areas where leak-free performance is vital.

NOTE: 1)The E Dimension is the minimum opening. 2)Dimension L, C, D is shown in the finger-tight position.
3)Dimensions are for reference only and are subject to change.

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- Tube Fitting (Double Ferrule)-
Special Fitting



Lap Joint Flange Connector

(serrated & smooth between flange)

Fractional Tube x Lap Joint Stub End

Tube Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	ØF	ØT1	D	L2	L	Body Hex H	Nut Hex W
Dimensions in Inches											
4 - LJFICD - SMD	- 400 - 1 - 0264 (Smooth)	-----	1/4	0.19	0.83	1.36	0.60	0.26	3.18	11/16	9/16
6 - LJFICD - SMD	- 600 - 1 - 0151 (Smooth)	-----	3/8	0.28	0.83	1.36	0.66	0.26	3.24	11/16	11/16
6 - LJFICD - SRD	- 600 - 1 - 0152 (Serrated)	-----		0.28	0.83	1.36		0.26	3.24	11/16	
8 - LJFICD - SMD	- 810 - 1 - 0080 (Smooth)	-----	1/2	0.31	0.83	1.36	0.90	0.26	3.35	3/4	7/8

Metric Tube x Lap Joint Stub End

Tube Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ØE	ØF	ØT1	D	L2	L	Body Hex H	Nut Hex W
Dimensions in Millimetres											
10M - LJFICD - SMD	- 10MO - 1 - 0005 (Smooth)	M10LJF - 5 (Smooth)	10	7.9	21.1	34.5	17.2	6.5	82.6	19	19
10M - LJFICD - SRD	- 10MO - 1 - 0006 (Serrated)	M10LJF - 9 (Serrated)		7.9	21.1	34.5		6.5	82.6	19	
12M - LJFICD - SMD	-----	M12LJF - 5 (Smooth)	12	9.5	21.1	34.5	22.8	6.5	85.0	19	22
12M - LJFICD - SRD	-----	M12LJF - 9 (Serrated)		9.5	21.1	34.5		6.5	85.0	19	

- Lap joint stub ends are used with 1/2 in, lap joint pipe flanges. Two surface finishes, smooth or serrated, are available on the sealing surface of the stub end. Available in 316 stainless steel and alloy 400.
- Groove on flange dia T1 identifies serrated surface finish.

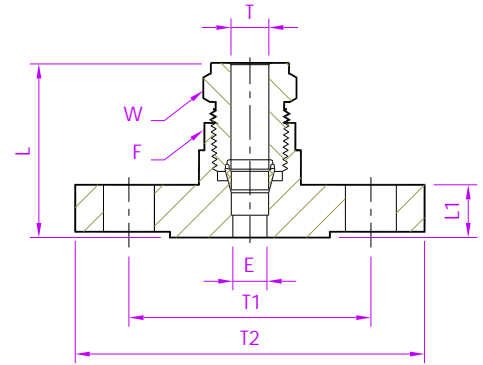
NOTE : 1)The E Dimension is the minimum opening. 2)Dimension L, D is shown in the finger-tight position. 3)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Special Fitting

Integral Flange Connector

(ANSI/DIN/JIS Flanges)

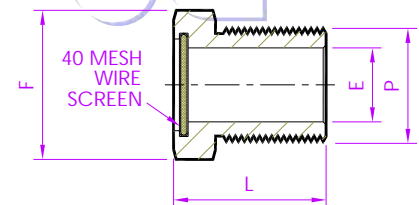


Fractional & Metric Tube x Pressure Class

Tube Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	ANSI Class	ØE	ØT1	ØT2	L1	L	Hex F	Hex W
Dimensions in Inches											
8 - IFCD - 1#	SS - 8FO - F8 - 150	-----	1/2	150	0.41	2.38	3.5	0.45	1.89	1	15/16
8 - IFCD - 3#	SS - 8FO - F8 - 300	-----		300	0.41	2.62	3.8	0.57	1.89		
Dimensions in Millimetres											
10M - IFCD - 1#	SS - 10MFO - F8 - 150	-----	10	150	7.9	60.4	90	11.4	48	25	22
10M - IFCD - 3#	SS - 10MFO - F8 - 300	-----		300	7.9	66.5	96	14.5	48		
12M - IFCD - 1#	SS - 12MFO - F8 - 150	-----	12	150	9.5	60.4	90	11.4	48	25	25
12M - IFCD - 3#	SS - 12MFO - F8 - 300	-----		300	9.5	66.5	96	14.5	48		

- Eliminates additional connections./Integrally machined forging; no weld seams or joints.
316 stainless steel./Compatible with ANSI B 16.5 - 1988.
125 - 500 microinch finish./Use only long reducers in female ports.

Vent Protector



NPT (M)

Tube Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	NPT Thread Size P	ØE	L	BODY Hex F
Dimensions in Inches						
4N - VPD	MS - MD - 4M	4 MDF - SS	1/4	0.28	0.78	9/16
6N - VPD	MS - MD - 6M	6 MDF - SS	3/8	0.41	0.81	11/16
8N - VPD	MS - MD - 8M	8 MDF - SS	1/2	0.50	1.03	7/8
12N - VPD	MS - MD - 12M	12 MDF - SS	3/4	0.72	1.06	1.1/16
16N - VPD	MS - MD - 16M	16 MDF - SS	1	0.94	1.31	1.3/8

- TUBEFIT vent protectors, or more commonly known as the mud dauber fittings, protect open ends of instruments, tubing, outlet vents, and bleed-off lines. The mesh wire screen prevents foreign particles such as mud dauber insects from entering and clogging various systems and causing damage.
- Standard materials are brass and stainless steel. Additional materials, sizes and fitting configurations are available on request.

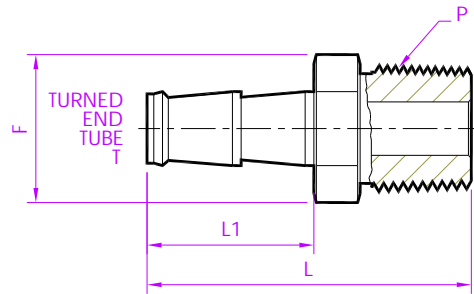
NOTE: 1)The E Dimension is the minimum opening. 2)Dimensions are for reference only and are subject to change.
3)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-

Hose Fitting

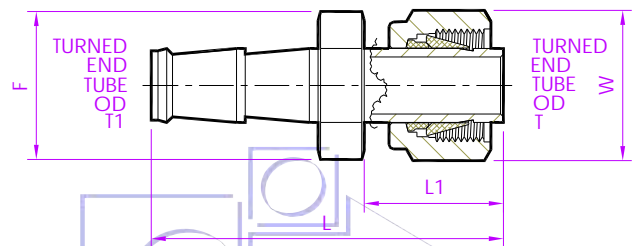
Hose Male Adapter



Serreated Hose End x NPT (M)

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	HOSE Size Ø T	NPT Male Pipe Size P	L	L1	Body Hex F
			(mm)	(in)	Dimensions in Inches		
4M - HMAD - 4N	PB4 - PM4	4 - 4 P2HF	4	1/4	1.65	0.80	9/16

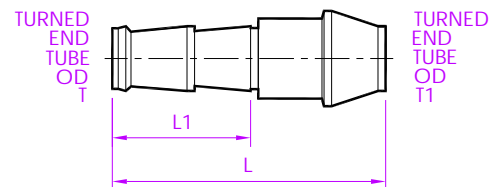
Hose Tube Adapter Swaged



Hose End x Tube Swaged

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	HOSE Size T1	L	L1	Body Hex F	Nut Hex W
			(in)	(mm)	Dimensions in Inches			
4 - HTASD - 4M	PB4 - TA4	4 - 4 P2LZ6	1/4	4	1.77	0.72	7/16	9/16
6 - HTASD - 6M	PB6 - TA6	6 - 6 P2LZ6	3/8	6	1.98	0.78	9/16	11/16
8 - HTASD - 8M	PB8 - TA8	8 - 8 P2LZ6	1/2	8	2.42	1.03	11/16	7/8

Hose Port Connector (serreated)



Serreated Hose End x Stub

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	HOSE Size Ø T	PORT Size Ø T1	L	L1
			(mm)	(in)	Dimensions in Inches	
4M - HPCD - 6	-----	4 - 6 ZP2	4	3/8	1.40	0.80

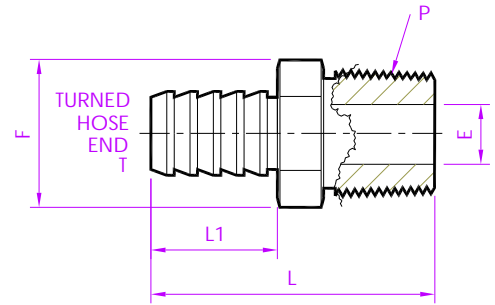
NOTE : 1)Dimensions are for reference only and are subject to change. 2)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-

Hose Fitting

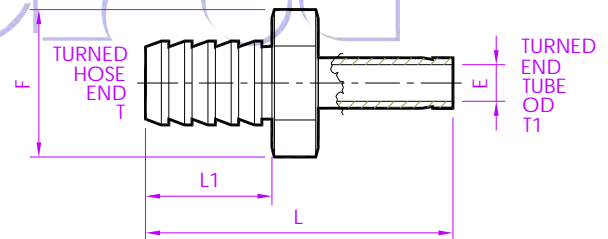
Barbed Male Adapter



Barbed x Male Pipe

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	HOSE ID Ø T	NPT Male Pipe Size P	ØE	L	L1	Body Hex F
Dimensions in Inches								
2 - BMAD - 2N	2 - HC - 1 - 2	2 - 2B2HF	1/8	1/8	0.078	1.00	0.41	7/16
2 - BMAD - 4N	2 - HC - 1 - 4	2 - 4 B2HF		1/4	0.078	1.22	0.41	9/16
4 - BMAD - 2N	4 - HC - 1 - 2	4 - 2 B2HF	1/4	1/8	0.188	1.41	0.75	7/16
4 - BMAD - 4N	4 - HC - 1 - 4	4 - 4 B2HF		1/4	0.188	1.59	0.78	9/16
5 - BMAD - 2N	5 - HC - 1 - 2	5 - 2 B2HF	5/16	1/8	0.188	1.50	0.88	7/16
5 - BMAD - 4N	5 - HC - 1 - 4	5 - 4 B2HF		1/4	0.250	1.69	0.88	9/16
6 - BMAD - 4N	6 - HC - 1 - 4	6 - 4 B2HF	3/8	1/4	0.281	1.72	0.88	9/16
6 - BMAD - 6N	6 - HC - 1 - 6	6 - 6 B2HF		3/8	0.297	1.72	0.88	11/16
8 - BMAD - 6N	8 - HC - 1 - 6	8 - 6 B2HF	1/2	3/8	0.375	1.81	0.94	3/4
8 - BMAD - 8N	8 - HC - 1 - 8	8 - 8 B2HF		1/2	0.375	2.00	0.94	7/8
12 - BMAD - 12N	12 - HC - 1 - 12	12 - 12 B2HF	3/4	3/4	0.625	2.13	1.03	1-1/16

Barbed Tube Adapter



Barbed x Stub

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	HOSE ID Ø T	TUBE OD ØT1	ØE	L	L1	Body Hex F
Dimensions in Inches								
2 - BTAD - 2	2 - HC - A - 201	2 B2TU2	1/8	1/8	0.078	1.16	0.41	7/16
2 - BTAD - 4	2 - HC - A - 401	4 B2TU4		1/4	0.078	1.26	0.41	
4 - BTAD - 4	4 - HC - A - 401	4 B2TU4	1/4	1/4	0.156	1.64	0.78	7/16
4 - BTAD - 6	4 - HC - A - 601	6 B2TU6		3/8	0.156	1.75	0.78	

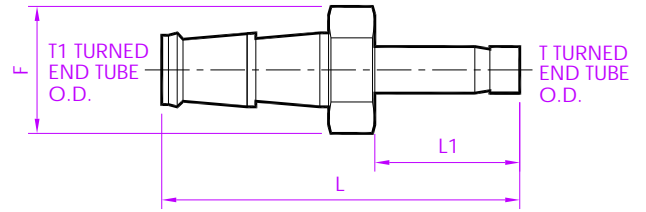
NOTE : 1)Dimensions are for reference only and are subject to change. 2)NPT thread as per ANSI B 1.20.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-

Hose Fitting

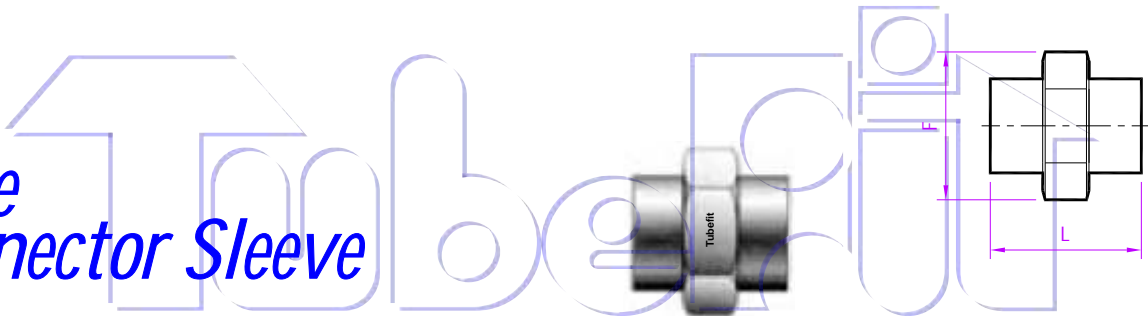
Hose Tube Adapter



Fractional Stub x Serreated Hose End

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	HOSE Size Ø T1	L	L1	Body Hex F
Dimensions in Inches							
4 - HTAD - 4M	PB 4 - TA4	4 - 4 P2TU	1/4	4	1.80	0.64	7/16
6 - HTAD - 6M	PB 6 - TA6	6 - 6 P2TU	3/8	6	2.02	0.72	9/16
8 - HTAD - 8M	PB 8 - TA8	8 - 8 P2TU	1/2	8	2.42	0.98	11/16

Hose Connector Sleeve



Fractional Tube

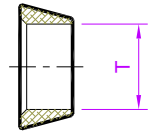
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	HOSE ID	HOSE OD	L	BODY Hex F
Dimensions in Inches						
2 - HCSD - 4	-----	HCS 2 - 4	1/8	1/4	0.41	7/16
4 - HCSD - 6	-----	HCS 4 - 6	1/4	3/8	0.78	9/16
4 - HCSD - 7	-----	HCS 4 - 7		7/16	0.78	5/8
4 - HCSD - 8	-----	HCS 4 - 8		1/2	0.78	11/16
4 - HCSD - 9	-----	HCS 4 - 9		9/16	0.78	3/4
5 - HCSD - 7	-----	HCS 5 - 7		5/16	7/16	0.88
6 - HCSD - 8	-----	HCS 6 - 8	3/8	1/2	0.88	11/16
6 - HCSD - 9	-----	HCS 6 - 9		9/16	0.88	3/4
8 - HCSD - 11	-----	HCS 8 - 11	1/2	11/16	0.94	7/8
12 - HCSD - 16	-----	HCS 12 - 16	3/4	1	1.06	1.1/4

NOTE : 1)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Spare Components

Front Ferrule



Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T
			Dimensions in Inches
1 - FFD	- 103 - 1	1FF1	1/16
2 - FFD	- 203 - 1	2FF2	1/8
3 - FFD	- 303 - 1	3FF3	3/16
4 - FFD	- 403 - 1	4FF4	1/4
5 - FFD	- 503 - 1	5FF5	5/16
6 - FFD	- 603 - 1	6FF6	3/8
8 - FFD	- 813 - 1	8FF8	1/2
10 - FFD	- 1013 - 1	10FF10	5/8
12 - FFD	- 1213 - 1	12FF12	3/4
14 - FFD	- 1413 - 1	14FF14	7/8
16 - FFD	- 1613 - 1	16FF16	1

Metric Tube

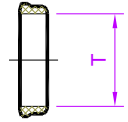
Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T
			Dimensions in Millimetres
2M - FFD	- 2M3 - 1	FFM2	2
3M - FFD	- 3M3 - 1	FFM3	3
4M - FFD	- 4M3 - 1	FFM4	4
6M - FFD	- 6M3 - 1	FFM6	6
8M - FFD	- 8M3 - 1	FFM8	8
10M - FFD	- 10M3 - 1	FFM10	10
12M - FFD	- 12M3 - 1	FFM12	12
14M - FFD	- 14M3 - 1	FFM14	14
15M - FFD	- 15M3 - 1	FFM15	15
16M - FFD	- 16M3 - 1	FFM16	16
18M - FFD	- 18M3 - 1	FFM18	18
20M - FFD	- 20M3 - 1	FFM20	20
22M - FFD	- 22M3 - 1	FFM22	22
25M - FFD	- 25M3 - 1	FFM25	25

NOTE : 1)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Spare Components

Back Ferrule



Fractional Tube

Tube Fitting Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T
			Dimensions in Inches
1 - BFD	- 104 - 1	1BF1	1/16
2 - BFD	- 204 - 1	2BF2	1/8
3 - BFD	- 304 - 1	3BF3	3/16
4 - BFD	- 404 - 1	4BF4	1/4
5 - BFD	- 504 - 1	5BF5	5/16
6 - BFD	- 604 - 1	6BF6	3/8
8 - BFD	- 814 - 1	8BF8	1/2
10 - BFD	- 1014 - 1	10BF10	5/8
12 - BFD	- 1214 - 1	12BF12	3/4
14 - BFD	- 1414 - 1	14BF14	7/8
16 - BFD	- 1614 - 1	16BF16	1

Metric Tube

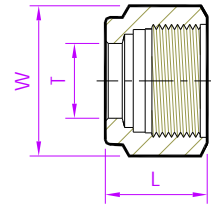
Tube Fitting Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T
			Dimensions in Millimetres
2M - BFD	- 2M4 - 1	BFM2	2
3M - BFD	- 3M4 - 1	BFM3	3
4M - BFD	- 4M4 - 1	BFM4	4
6M - BFD	- 6M4 - 1	BFM6	6
8M - BFD	- 8M4 - 1	BFM8	8
10M - BFD	- 10M4 - 1	BFM10	10
12M - BFD	- 12M4 - 1	BFM12	12
14M - BFD	- 14M4 - 1	BFM14	14
15M - BFD	- 15M4 - 1	BFM15	15
16M - BFD	- 16M4 - 1	BFM16	16
18M - BFD	- 18M4 - 1	BFM18	18
20M - BFD	- 20M4 - 1	BFM20	20
22M - BFD	- 22M4 - 1	BFM22	22
25M - BFD	- 25M4 - 1	BFM25	25

NOTE: 1) Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Spare Components

Nut



Fractional Tube

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	L	Nut Hex W
Dimensions in Inches					
1 - ND	- 102 - 1	1NU1	1/16	0.31	5/16
2 - ND	- 202 - 1	2NU2	1/8	0.47	7/16
3 - ND	- 302 - 1	3NU3	3/16	0.47	1/2
4 - ND	- 402 - 1	4NU4	1/4	0.50	9/16
5 - ND	- 502 - 1	5NU5	5/16	0.53	5/8
6 - ND	- 602 - 1	6NU6	3/8	0.56	11/16
8 - ND	- 812 - 1	8NU8	1/2	0.69	7/8
10 - ND	- 1012 - 1	10NU10	5/8	0.69	1
12 - ND	- 1212 - 1	12NU12	3/4	0.69	1.1/8
14 - ND	- 1412 - 1	14NU14	7/8	0.69	1.1/4
16 - ND	- 1612 - 1	16NU16	1	0.81	1.1/2

Metric Tube

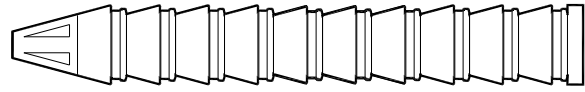
TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	L	Nut Hex W
Dimensions in Millimetres					
2M - ND	- 2M2 - 1	NUM2	2	11.9	11
3M - ND	- 3M2 - 1	NUM3	3	11.9	11
4M - ND	- 4M2 - 1	NUM4	4	11.9	11
6M - ND	- 6M2 - 1	NUM6	6	12.7	14
8M - ND	- 8M2 - 1	NUM8	8	13.5	16
10M - ND	- 10M2 - 1	NUM10	10	15.1	19
12M - ND	- 12M2 - 1	NUM12	12	17.4	22
14M - ND	- 14M2 - 1	NUM14	14	17.4	25
15M - ND	- 15M2 - 1	NUM15	15	17.4	25
16M - ND	- 16M2 - 1	NUM16	16	17.4	25
18M - ND	- 18M2 - 1	NUM18	18	17.4	30
20M - ND	- 20M2 - 1	NUM20	20	17.4	32
22M - ND	- 22M2 - 1	NUM22	22	17.4	32
25M - ND	- 25M2 - 1	NUM25	25	20.6	38

NOTE : 1)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

Ferrule Pack

(set of 10)



Fractional Tube

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T
			Dimensions in Inches
1 - FPD - 10	- 100 - Sets - 10	-----	1/16
2 - FPD - 10	- 200 - Sets - 10	-----	1/8
3 - FPD - 10	- 300 - Sets - 10	-----	3/16
4 - FPD - 10	- 400 - Sets - 10	-----	1/4
5 - FPD - 10	- 500 - Sets - 10	-----	5/16
6 - FPD - 10	- 600 - Sets - 10	-----	3/8
8 - FPD - 10	- 810 - Sets - 10	-----	1/2
12 - FPD - 10	- 1210 - Sets - 10	-----	3/4
16 - FPD - 10	- 1610 - Sets - 10	-----	1

MetricTube

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T
			Dimensions in Millimetres
6M - FPD - 10	- 6MO - Sets - 10	-----	6
8M - FPD - 10	- 8MO - Sets - 10	-----	8
10M - FPD - 10	- 10MO - Sets - 10	-----	10
12M - FPD - 10	- 12MO - Sets - 10	-----	12
14M - FPD - 10	- 14MO - Sets - 10	-----	14
16M - FPD - 10	- 16MO - Sets - 10	-----	16
18M - FPD - 10	- 18MO - Sets - 10	-----	18
20M - FPD - 10	- 20MO - Sets - 10	-----	20

NOTE : 1)Dimensions are for reference only and are subject to change.

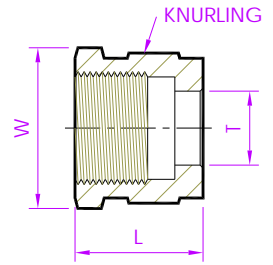
- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-

Spare Components

Knurled Nut

(for soft tube)



Fractional Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	L	Nut Hex W
Dimensions in Inches					
1 - KND	- 102 - 1K	1 BZP	1/16	0.31	7/16
2 - KND	- 202 - 1K	2 BZP	1/8	0.47	7/16
3 - KND	- 302 - 1K	3 BZP	3/16	0.47	1/2
4 - KND	- 402 - 1K	4 BZP	1/4	0.50	9/16
5 - KND	- 502 - 1K	5 BZP	5/16	0.53	5/8
6 - KND	- 602 - 1K	6 BZP	3/8	0.56	11/16
8 - KND	- 812 - 1K	8 BZP	1/2	0.69	7/8
10 - KND	- 1012 - 1K	10 BZP	5/8	0.69	1
12 - KND	- 1212 - 1K	-----	3/4	0.69	1.1/8
14 - KND	- 1412 - 1K	-----	7/8	0.69	1.1/4
16 - KND	- 1612 - 1K	-----	1	0.81	1.1/2

Metric Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	L	Nut Hex W
Dimensions in Millimetres					
2M - KND	- 2M2 - 1K	-----	2	11.9	11
3M - KND	- 3M2 - 1K	-----	3	11.9	11
4M - KND	- 4M2 - 1K	-----	4	11.9	11
6M - KND	- 6M2 - 1K	-----	6	12.7	14
8M - KND	- 8M2 - 1K	-----	8	13.5	16
10M - KND	- 10M2 - 1K	-----	10	15.1	19
12M - KND	- 12M2 - 1K	-----	12	17.4	22
14M - KND	- 14M2 - 1K	-----	14	17.4	25
15M - KND	- 15M2 - 1K	-----	15	17.4	25
16M - KND	- 16M2 - 1K	-----	16	17.4	25
18M - KND	- 18M2 - 1K	-----	18	17.4	30
20M - KND	- 20M2 - 1K	-----	20	17.4	32
22M - KND	- 22M2 - 1K	-----	22	17.4	32
25M - KND	- 25M2 - 1K	-----	25	20.6	38

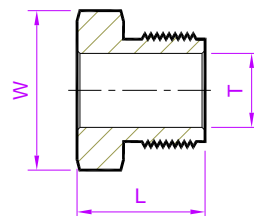
- The Tubefit Knurled Nut tube fitting provides a leak-tight seal without the use of inserts on most wall thickness of polyethylene tubing. Inserts may be required for larger sizes.
- The Knurled Nut fitting consists of a brass or stainless steel tube fitting body with nylon ferrules & a knurled nut.
- To set the ferrules on the tubing, initial connections must be made with a wrench, tightening the nut 1-1/4 turns from finger-tight (3/4 turn for 1/16, 1/8 & 3/16 in.; 2, 3, & 4mm fittings). Leaktight connections may be reassembled with finger tight assembly.

NOTE : 1)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Spare Components

Male Nut (for female port)



Fractional Tube

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	L	Nut Hex W
Dimensions in Inches					
1 - MND	- 1F2 - 1GC	1BZI	1/16	0.38	1/4
2 - MND	- 2F2 - 1GC	2BZI	1/8	0.53	3/8
4 - MND	- 4F2 - 1	-----	1/4	0.63	1/2
8 - MND	- 8F2 - 1	-----	1/2	0.87	15/16

Metric Tube

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	L	Nut Hex W
Dimensions in Millimetres					
10M - MND	- 10MF2 - 1	-----	10	22.1	22
12M - MND	- 12MF2 - 1	-----	12	22.1	24

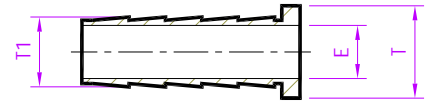
NOTE: 1)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-

Spare Components

Insert



Fractional Tube

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE ID Ø T1	BORE ID Ø E
Dimensions in Inches					
3 - ID - 2	- 305 - 2	3 - TIZ (.125)	3/16	1/8	0.09
4 - ID - 2	- 405 - 2	4 - TIZ (.125)	1/4	1/8	0.09
4 - ID - 3	- 405 - 3	4 - TIZ (.188)		3/16	0.14
5 - ID - 2	- 505 - 2	5 - TIZ (.125)	5/16	1/8	0.09
5 - ID - 3	- 505 - 3	5 - TIZ (.188)		3/16	0.12
5 - ID - 4	- 505 - 4	5 - TIZ (.250)		1/4	0.19
6 - ID - 3	- 605 - 3	6 - TIZ (.188)	3/8	3/16	0.12
6 - ID - 4	- 605 - 4	6 - TIZ (.250)		1/4	0.19
8 - ID - 4	- 815 - 4	8 - TIZ (.250)	1/2	1/4	0.19
8 - ID - 6	- 815 - 6	8 - TIZ (.375)		3/8	0.31
10 - ID - 6	- 1015 - 6	10 - TIZ (.375)	5/8	3/8	0.31
10 - ID - 8	- 1015 - 8	10 - TIZ (.500)		1/2	0.44
12 - ID - 8	- 1215 - 8	12 - TIZ (.500)	3/4	1/2	0.44
12 - ID - 10	- 1215 - 10	12 - TIZ (.625)		5/8	0.56
16 - ID - 12	- 1615 - 12	16 - TIZ (.750)	1	3/4	0.69
16 - ID - 87	- 1615 - 14	16 - TIZ (.875)		7/8	0.81

Metric Tube

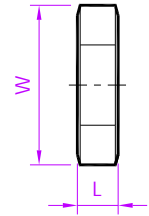
TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	TUBE ID Ø T1	BORE ID Ø E
Dimensions in Millimetres					
6M - ID - 4M	- 6M5 - 4M	TIZ6(4)	6	4	2.8
8M - ID - 6M	- 8M5 - 6M	TIZ8(6)	8	6	4.4
10M - ID - 6M	- 10M5 - 6M	TIZ10(6)	10	6	4.4
10M - ID - 8M	- 10M5 - 8M	TIZ10(8)		8	6.4
12M - ID - 8M	- 12M5 - 8M	TIZ12(8)	12	8	6.4
12M - ID - 10M	- 12M5 - 10M	TIZ12(10)		10	8.3
15M - ID - 10M	- 15M5 - 10M	TIZ15(10)	15	10	8.3

NOTE : 1)The E Dimension is the minimum opening. 2)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-
Spare Components

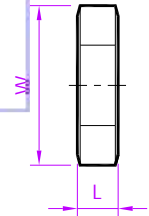
Bulkhead Lock Nut (BUND)



Fractional Tube

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	Thread Size SAE/MS	TUBE OD Ø T	L	Nut Hex W
Dimensions in Inches						
1 - BUND-SM	102 - 61	1 WLZ	10x32	1/16	0.13	5/16
2 - BUND-SM	202 - 61	2 WLZ	5/16x20	1/8	0.19	1/2
3 - BUND-SM	302 - 61	3 WLZ	3/8x20	3/16	0.22	9/16
4 - BUND-SM	402 - 61	4 WLZ	7/16x20	1/4	0.22	5/8
5 - BUND-SM	502 - 61	5 WLZ	1/2x20	5/16	0.23	11/16
6 - BUND-SM	602 - 61	6 WLZ	9/16x20	3/8	0.25	3/4
8 - BUND-SM	812 - 61	8 WLZ	3/4x20	1/2	0.28	15/16
10 - BUND-SM	1012 - 61	10 WLZ	7/8x20	5/8	0.31	1.1/16
12 - BUND-SM	1212 - 61	12 WLZ	1x20	3/4	0.34	1.3/16
14 - BUND-SM	1412 - 61	14 WLZ	1.1/8x20	7/8	0.38	1.3/8
16 - BUND-SM	1612 - 61	16 WLZ	1.5/16x20	1	0.38	1.5/8

Lock Nut for O-seal Connector (MOSMD)



Fractional Tube

TubeFit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	Thread Size SAE/MS	L	Nut Hex W
Dimensions in Inches					
2 - MOSMD-OSM	-----	2 L5N	5/16x24	0.22	7/16
3 - MOSMD-OSM	-----	3 L5N	3/8x24	0.22	1/2
4 - MOSMD-OSM	-----	4 L5N	7/16x24	0.25	9/16
5 - MOSMD-OSM	-----	5 L5N	1/2x20	0.25	5/8
6 - MOSMD-OSM	-----	6 L5N	9/16x18	0.27	11/16
8 - MOSMD-OSM	-----	8 L5N	3/4x16	0.31	7/8
10 - MOSMD-OSM	-----	10 L5N	7/8x14	0.36	1
12 - MOSMD-OSM	-----	12 L5N	1.1/16x12	0.41	1.1/4
14 - MOSMD-OSM	-----	14 L5N	1.3/16x12	0.41	1.3/8
16 - MOSMD-OSM	-----	16 L5N	1.5/16x12	0.41	1.1/2

NOTE : 1)Dimensions are for reference only and are subject to change. 2)SAE/MS (UNEF) thread as per ASME B1.1.

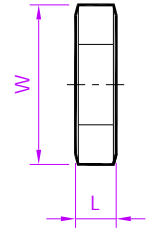
- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-

Spare Components

Positionable Lock Nut

(PSMD)

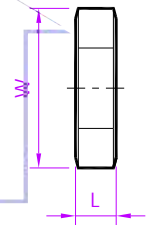
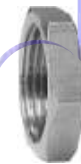


Fractional Tube

Tube Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	Thread Size SAE/MS	L	Nut Hex W
Dimensions in Inches						
4 - PSMD-SM	-----	4 WLN	1/4	7/16x20	0.28	11/16
6 - PSMD-SM	-----	6 WLN	3/8	9/16x18	0.27	13/16
8 - PSMD-SM	-----	8 WLN	1/2	3/4x16	0.31	1
12 - PSMD-SM	-----	12 WLN	3/4	1.1/16x12	0.41	1.3/8
16 - PSMD-SM	-----	16 WLN	1	1.5/16x12	0.41	1.5/8

Positionable Lock Nut

(PIPD)



Fractional Tube

Tube Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	TUBE OD Ø T	Thread Size ISO	L	Nut Hex W
Dimensions in Inches						
4 - PIPD-IP	-----	4 L4N	1/4	1/8	0.25	9/16
6 - PIPD-IP	-----	6 L4N	3/8	1/4	0.27	3/4
8 - PIPD-IP	-----	8 L4N	1/2	3/8	0.31	7/8
10 - PIPD-IP	-----	10 L4N	3/4	1/2	0.36	1.1/16
12 - PIPD-IP	-----	12 L4N	1	3/4	0.41	1.3/8
16 - PIPD-IP	-----	16 L4N	1	1	0.41	1.5/8

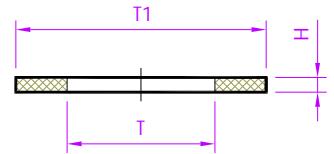
NOTE: 1)Dimensions are for reference only and are subject to change. 2)SAE/MS (UNF) thread as per ASME B1.1.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

- Tube Fitting (Double Ferrule)-

Spare Components

Gasket(Bonded)-RPG



Fractional Tube & Metric Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	ØT		ØT1		H	
			mm	in	mm	in	mm	in
Dimensions in Millimetres & Inches								
2 - RPGD	CU - 2 - RPGD - 2	-----	9.9	0.39	15.0	0.59	1.0	0.04
4 - RPGD	CU - 4 - RPGD - 2	-----	13.5	0.52	18.8	0.75	1.5	0.06
6 - RPGD	CU - 6 - RPGD - 2	-----	17.0	0.66	22.9	0.91	1.5	0.06
8 - RPGD	CU - 8 - RPGD - 2	-----	21.3	0.83	27.0	1.06	1.5	0.06
12 - RPGD	CU - 12 - RPGD - 2	-----	26.7	1.05	33.0	1.30	2.0	0.08
16 - RPGD	CU - 16 - RPGD - 2	-----	33.5	1.31	40.6	1.58	2.0	0.08

- Provides a seal with ISO parallel threads. The standard material is copper.
- The RPGD gaskets can also be used with the RSIPD fitting.

Gasket-RGG

Fractional Tube & Metric Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	ØT		ØT1		H	
			mm	in	mm	in	mm	in
Dimensions in Millimetres & Inches								
4 - RGGD	CU - 4 - RGGD - 2	-----	7.6	0.30	10.7	0.42	1.8	0.07
6 - RGGD	CU - 6 - RGGD - 2	-----	8.6	0.34	14.2	0.56	2.3	0.09
8 - RGGD	CU - 8 - RGGD - 2	-----	9.1	0.36	17.8	0.70	2.5	0.10

- Provides a seal on pressure gauges equipped with ISO parallel male threads. The standard material is copper.

Gasket-RSG

Fractional Tube & Metric Tube

Tubefit Part No.	Equivalent Part No. Type 1	Equivalent Part No. Type 2	ØT		ØT1		H	
			mm	in	mm	in	mm	in
Dimensions in Millimetres & Inches								
2 - RSGD	S - 2 - RSGD - 2	-----	10.4	0.41	16.0	0.63	2.0	0.08
4 - RSGD	S - 4 - RSGD - 2	-----	13.7	0.54	20.6	0.81	2.0	0.08
6 - RSGD	S - 6 - RSGD - 2	-----	17.3	0.68	23.9	0.94	2.0	0.08
8 - RSGD	S - 8 - RSGD - 2	-----	21.6	0.85	28.7	1.12	2.5	0.10
12 - RSGD	S - 12 - RSGD - 2	-----	27.2	1.06	35.1	1.38	2.5	0.10
16 - RSGD	S - 16 - RSGD - 2	-----	33.8	1.33	42.9	1.69	2.5	0.10

- Provides a seal with ISO parallel threads. The gasket consists of a Viton or Buna inner ring bonded to a carbon steel outer ring. (A Viton inner ring bonded to a stainless steel outer ring is available on special order)
- RSGD gaskets cannot be used with RPIPD fittings. (This gasket can be used with `RSIP` type fittings)
- To order add `V` for Viton or `B` for Buna-N as a suffix to the basic ordering number, e.g. 2 - RSGD - V

NOTE : 1)Dimensions are for reference only and are subject to change.

- ALL PART NUMBERS ARE PROPRIETARY OF THEIR RESPECTIVE OWNERS. -

Tube Fittings Installation

Tube Fittings can be installed in three simple steps as shown below.

Step-1

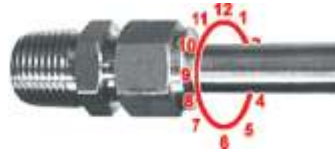
Tube Fittings are supplied in assembled condition & are ready to use. Simply insert the tube into the fitting. Make sure the tube rests firmly on the shoulder of the fitting & the nut is finger-tight.



STEP-1

Step-2

Scribe the nut and body hex at 9 O'clock position.

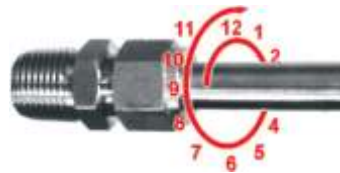


STEP-2

Step-3

Hold the fitting body with a wrench. Start tightening the nut to make a 1.1/4 turn to stop at 12 O'clock position. Gap Gauges can now be used to check if there installation has been complete.

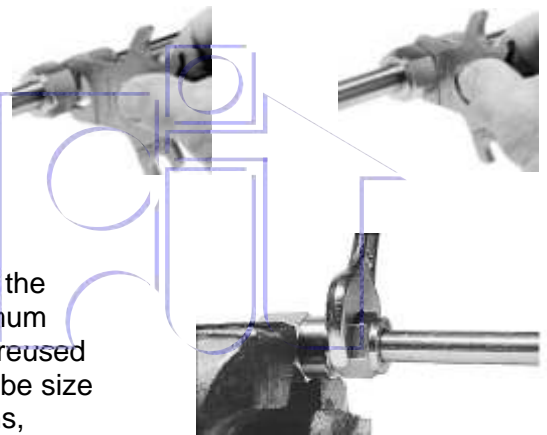
NOTE: For 1/16, 1/8, and 3/16 in.; 2, 3, and 4 mm tube fittings, tighten the nut 3/4 turn to the 3 o'clock position.



STEP-3

Gaugeability

On initial installation, the gap inspection gauge assures the installer or inspector that a fitting has been sufficiently tightened. Position the gap inspection gauge next to the gap between the nut & body. If the gauge will not enter the gap, the fitting is sufficiently tightened. If the gauge will enter the gap, additional tightening is required.



Reassembly of Tube Fittings

Once the installation is carried out as instructed, the Ferrules in the fittings have gripped the tube sufficiently to withstand the Maximum Working Pressure of the Tubes selected. This joint can now be reused on the same body or can be used on any other body of same tube size without disturbing the performance. Just follow these instructions, Insert the preswaged ferrule tube into the same or new body of same size. Tighten the nut by hand & then rotate use a wrench until you will feel the same resistance. You could take an additional 1/8 turn if required.

NOTE: Do not use the gap inspection gauge with reassembled fittings.



Preswaging Tube Fittings

Some hard to reach places of installations like cramped locations, sub sea applications, use of ladders, etc., use of preswaging tools is recommended. This tool has to be ordered along with the size of the fitting you are using. Holding this tool on a vice follow the assembly instructions indicated.

Now by simply carry the swaged joints to the locations and follow the reassembly instructions.

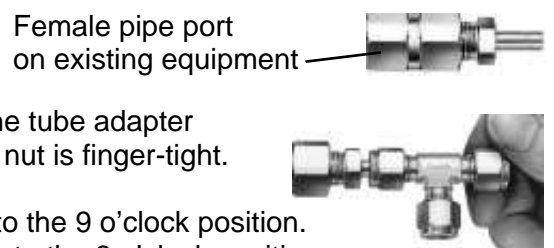
NOTE: Do not use the gap inspection gauge with fittings that were assembled using the preswaging tool.

Tube Adapters

Installation Instructions

- ❖ Install the end opposite the tube adapter end.
- ❖ Insert the tube adapter into the tube fitting. Make sure that the tube adapter rests firmly on the shoulder of the tube fitting body and that the nut is finger-tight.
- ❖ Scribe the nut at the 6 o'clock position.
- ❖ While holding fitting body steady, tighten the nut 1.1/4 turns to the 9 o'clock position.

NOTE: For 1/8 and 3/16 in. tube fittings, tighten the nut 3/4 turn to the 3 o'clock position.

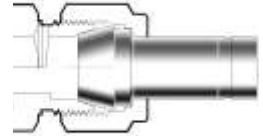


Port Connector Installation

Installation Instructions—machined ferrule end

- ❖ Remove the nut and ferrules from one tube fitting end.
- ❖ Place the nut over the machined ferrule end of the port connector.
- ❖ Turn the nut onto the fitting so that it is finger-tight.
- ❖ Scribe the nut at the 6 o'clock position.
- ❖ While holding fitting body steady, tighten the nut 1/4 turn to the 9 o'clock position.

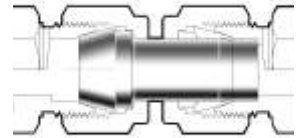
NOTE: For 1/16 and 1/8 in. and 3 mm tube fittings, tighten the nut 1/8 turn.



Installation Instructions—tube adapter end

- ❖ Insert the tube adapter into the tube fitting. Make sure that the tube adapter rests firmly on the shoulder of the tube fitting body & that the nut is finger-tight.
- ❖ Scribe the nut at the 6 o'clock position.
- ❖ While holding fitting body steady, tighten the nut 1.1/4 turns to the 9 o'clock position.

NOTE: For 1/16 and 1/8 in. and 3 mm tube fittings, tighten the nut 3/4 turn to the 3 o'clock position.



Cap & Plug Installation

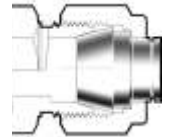
Cap Installation Instructions

Caps are used to blank tube ends for future use.

Simply insert the tube into the cap & follow the Installation procedures mentioned.

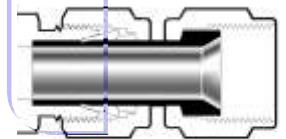
Plug Installation Instructions

Plugs are used on unused tube ports of Tube Fitting bodies by replacing the Nuts / ferrules with the Plug (with Nut) of same size. Just follow the Reassembly instructions.



AN Adaptor Installation

Simply tighten the nut by hand and later by wrench until you feel resistance.



Weld Fittings

Welding Precautions

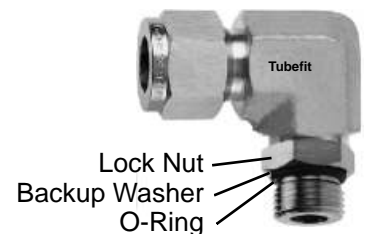
- ❖ Remove the nut & ferrules.
- ❖ Turn a tube fitting plug or another nut onto the fitting so that it is finger-tight.
- ❖ Provide a suitable heat sink to dissipate the heat.
- ❖ Tack weld at four positions 90° apart to hold the fitting in place.
- ❖ Complete the weld.
- ❖ Remove the plug or nut and replace the nut and ferrules.

CAUTION: When welding carbon steel fittings, the heat often removes the protective oil from the threads. It is important to apply another lubricant, such as Goop® thread lubricant.

Positionable Elbows and Tees

Installation Instructions

- ❖ Turn the positionable end into the female fitting until the metal back-up washer contacts the face of the fitting.
- ❖ Turn the positionable end out of the female fitting (not more than one turn) until the tube fitting end is positioned properly.
- ❖ While holding fitting body steady, tighten the lock nut until the metal back-up washer contacts the face of the fitting.



O-Seal Male Connectors

Installation Instructions

- ❖ Turn the O-seal connector into the female end until it is finger-tight.
- ❖ Tighten the O-seal connector until it makes metal-to-metal contact with the face of the female end.
- ❖ Tighten slightly with a wrench.

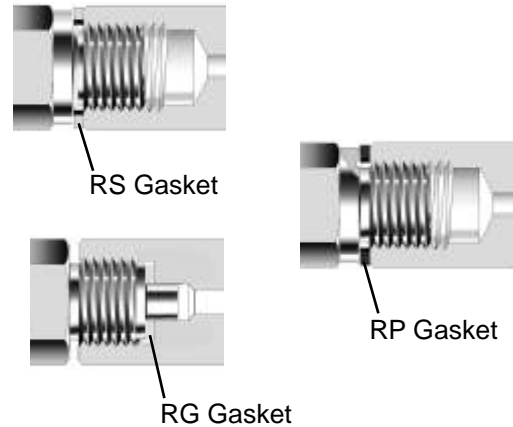
Details of Bonded & Metal Washer Seal

RS Fitting Steel Gasket provides a seal with male BSP/ISO parallel threads. The gasket consists of a fluorocarbon FKM or Buna inner ring bonded to a carbon steel outer ring.

RP Fitting Copper Gasket provides a seal with male BSP/ISO parallel threads.

NOTE: The RP gasket may be used with an RS end connection.

RG Fitting Copper Gasket provides a seal on pressure gauges equipped with BSP/ISO parallel male threads.



ISO Internal Parallel Pipe Thread

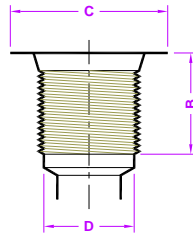
❖ Use appropriate lubricant compatible with the system & environment.

❖ Install the SAE/MS thread fitting over the boss until the metal washer touches the face of it.

❖ Position the fitting as required & backed out of no more than ONE turn counterclockwise.

❖ Use proper wrench & tighten the lock nut until the washer touches the face of the boss.

❖ SAE/MS fittings are compatible with J1926, MS16142 & JIC female straight thread O-Ring bosses.



ISO Female Parallel Pipe Size	B Min Full Thread Depth	D Thread Minor Dia.	C Min Flat Dia for RS,RP	C Min Flat Dia for PR, TRT, TTR
1/8	0.31	0.337/0.348	0.59	0.68
1/4	0.47	0.450/0.468	0.75	0.90
3/8	0.47	0.588/0.606	0.91	1.04
1/2	0.55	0.733/0.755	1.06	1.26
3/4	0.63	0.949/0.971	1.30	1.62
1	0.71	1.193/1.218	1.57	1.91

SAE/MS Internal Straight Thread Boss

(Hydraulic tube Fittings - SAE J1926 / 1 part Dimensions of SAE Standard)

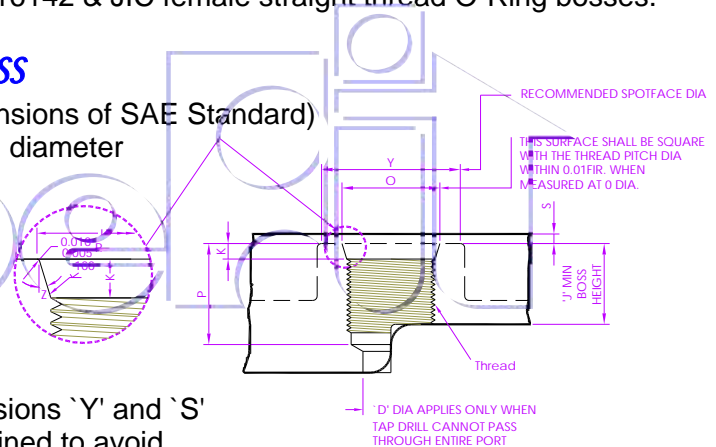
❖ Diameter U shall be concentric with thread pitch diameter within 0.13 full indicator reading (FIR) & shall be free from longitudinal and spiral tool marks. Angular tool marks up to 2.5 Micro meter max. shall be permissible.

❖ Maximum recommended spotface depth to permit sufficient wrench grip for proper tightening of the fitting or locknut.

❖ It face of boss is on a machined surface, dimensions 'Y' and 'S' need not apply as long as 'R' 0.25/0.375 is maintained to avoid damage to the O-ring during installation.

❖ Tap drill depths given require use of a bottoming taps to produce the specified full thread lengths. Where standard taps are used, the tap drill depths must be increased accordingly.

❖ Figures are for reference only, as any boss can be used for a tubing size depending upon other design criteria.



O-Ring Dimensions for SAE/MS Bosses

Nominal Tube OD.	Size Nos.	Uniform Size Number	I.D. in.	Cross Sec. in.
1/8	2	002	0.239	0.064
3/16	3	003	0.301	0.064
1/4	4	004	0.351	0.072
5/16	5	005	0.414	0.072
3/8	6	006	0.468	0.078
1/2	8	008	0.644	0.87
5/8	10	010	0.756	0.97
3/4	12	012	0.924	0.116
7/8	14	014	1.048	0.116
1	16	016	1.171	0.116
1.1/4	20	020	1.475	0.118
1.1/2	24	024	1.720	0.118
2	32	032	2.337	0.118

Safety Precautions

❖ Tube Fittings are supplied in Assembled condition & ready for use. DO NOT disassemble the Tube Fitting. ❖ To select the correct tubing, refer to the Tube Data for Maximum Working Pressure Allowances.

❖ Use of Fully Annealed Tubing is recommended. ❖ Always use an Insert with soft Plastic Tubing. ❖ Smooth surface finish of the Tubing is very important, specially in Gas applications. ❖ Carefully follow the Assembly Instructions overleaf. ❖ While assembling always use separate wrenches for holding the body and tightening the Nut. Do not turn the Body, turn the Nut. ❖ Use only Long Reducers with Female Ports. ❖ Use a proper thread sealant /PTFE tape while assembling Taper thread. ❖ While installing fitting near Tube bends, sufficient straight length of Tubing should be kept to allow the Tube to be bottomed in fitting. ❖ While tightening or loosening a fitting always be sure that the system is not pressurized. ❖ Do not loosen the nut or Pipe threads to Bleed System Lines.