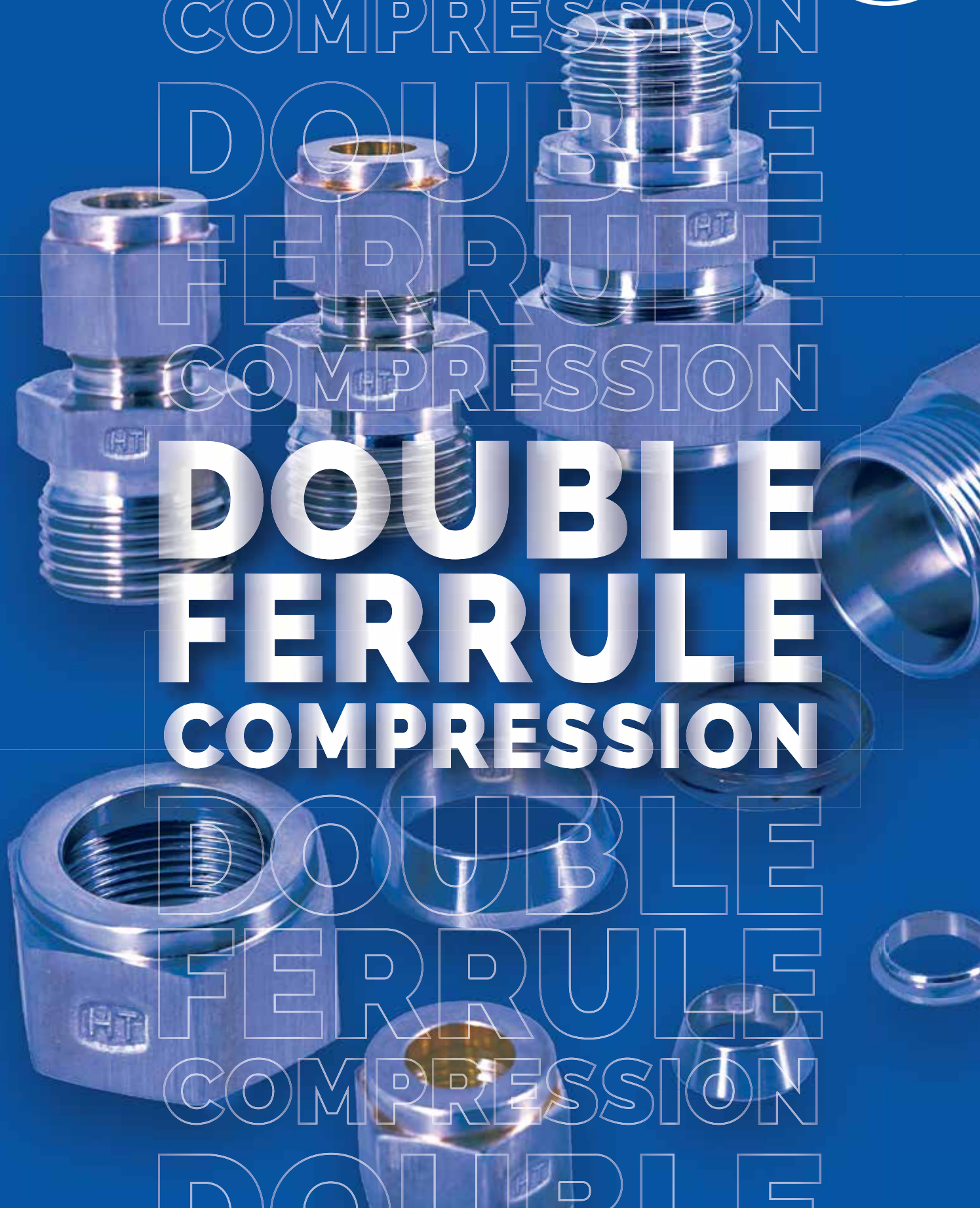




DOUBLE FERRULE COMPRESSION FITTINGS



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Hy-Tech Engineers Ltd., is a leader in design & manufacturing of all types of Hydraulic Fittings. Hy-Tech is an IATF 16949, ISO 14001 & IRIS certified company, catering to almost all leading OEMs in the field of Machine Tool Manufacturing, Earth Moving Equipment Manufacturers, Plastic Moulding Machine Manufacturers, Farming Equipment, Power Pack Manufacturers, Automobile Industries & steel Plants. Hy-Tech also has significant exports to USA and European OEMs and distributors.

Founded in 1978, by a team of dedicated technocrats, it has always grown in leaps and bounds, and has won esteem of customers. In attaining this goal, the Company's objectives of meeting the customers' increasing expectations for Quality, Delivery and Value were never compromised. Our 40+ years of knowledge in hydraulics, makes us best choice to guide our customers to select right fittings and save cost.

The Company has always kept pace with the latest technological developments. It has added a fleet of Multi Spindles, CNCs & SPM machines to enhance

the Quality & Productivity. We provide Zinc Nickel plating for higher corrosion resistance life.

The Company has over 3500 catalogue items, besides the other product as per customer requirements. We manufacture 12,000 fittings varieties with 3.5 million fittings per month with spare capacity of 1 million fittings.

We have four state of art manufacturing facilities in India with highly motivated team of employees and advance technology assisting us to produce reliable products at competitive price with better product flexibility, consistency and optimum service.

Why Hy-Tech Engineers

- In House Design And Development Cell
- Prototype Testing Facility
- In House Forging Facility
- Dedicated Cells For Key Customers
- Fleet Of Multi-Spindle, CNCs And SPMs
- Zinc Nickel Automated Plating Plants
- Stringent Quality Norms

Our Product Range

Type of Fittings

- DIN (metric)
- BSP
- JIC
- ORFS
- JIS
- Double ferrule
- Soft seal fitting

We also supply

- Split flanges
- Pipe clamps
- Hydraulic valve
- Instrument manifold



Hytech offers various plating solutions for carbon steel parts

Zinc Plating

In-house SCADA operated automatic plating plant ensures uniform and quality Zinc deposition and different types of passivation to suit the Salt Spray Test requirement of 240 hours of white rust and 300 hours of red rust. Hytech’s Zinc plating exceeds the standard requirement by 4 to 5 times in the case of salt spray life.

Zinc Nickel Plating

Zn-Ni plating usually composed of approximately 85% zinc and 15% nickel is electroplated on carbon steel as a protective coating in a process similar to the way zinc plating is applied. It typically consists of an 8 to 14 μm layer of 12 to 16% nickel alloy next to the substrate topped by a 0.06 to 0.15 μm trivalent passivate layer and a 0.5 to 4.0 μm topcoat layer.

1. Great Corrosion Protection – 1000 hrs Salt Spray Life

It offers a corrosion resistance 3 to 4 times more than conventional zinc plating. Salt spray testing data as per ASTM B117 shows no evidence of red rust beyond 1000 hours of salt spray life. This exceeds the requirement of SAE J514 and SAE J 1453 marginally.

2. Alternate to Expensive Materials

Due to the tremendous corrosion resistance, Hy-Tech’s Zn-Ni plating is becoming a substitute for expensive materials like SS316, SS304, and other exotic materials leading to cost savings of components. This is encouraging more auto, truck, and small-engine designers to consider it more seriously. It has also been adopted widely by the aerospace industry and is increasingly being used to protect heavy construction and agricultural equipment, as well as components and devices of all kinds that are exposed to environments that lead to excessive corrosion.

3. Increased Wear Resistance

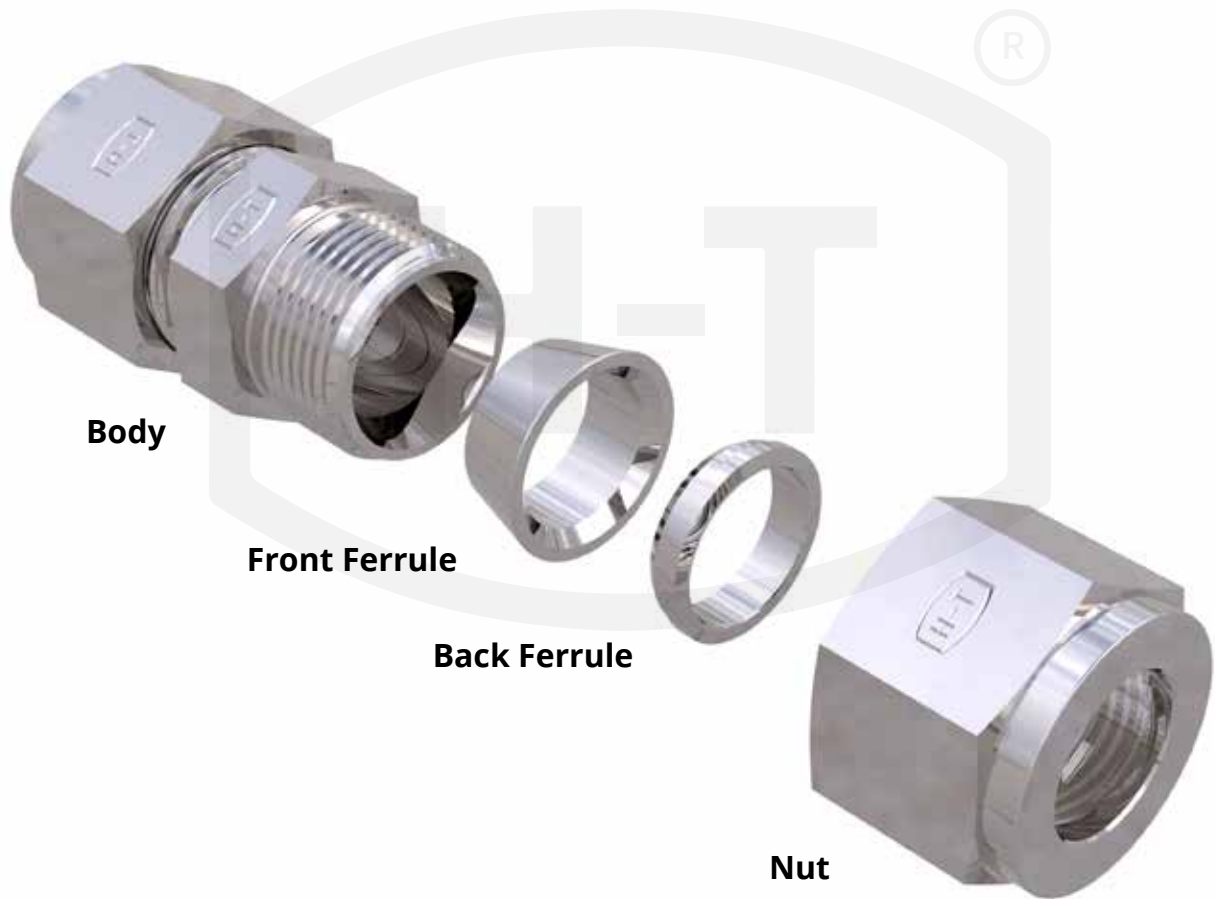
The layer of Zn- Ni plating is harder and nullifies the inherent metals surface irregularities, this reduces the friction and wear of the parts.

4. The Cost of Zinc Nickel Coating

Measured over the life of a coated component and factoring in the value of that extended life, is not significantly more than that of other electroplated coatings. It is this “value vs. cost” equation that successful users of Zn-Ni alloy coatings have found more accurate.



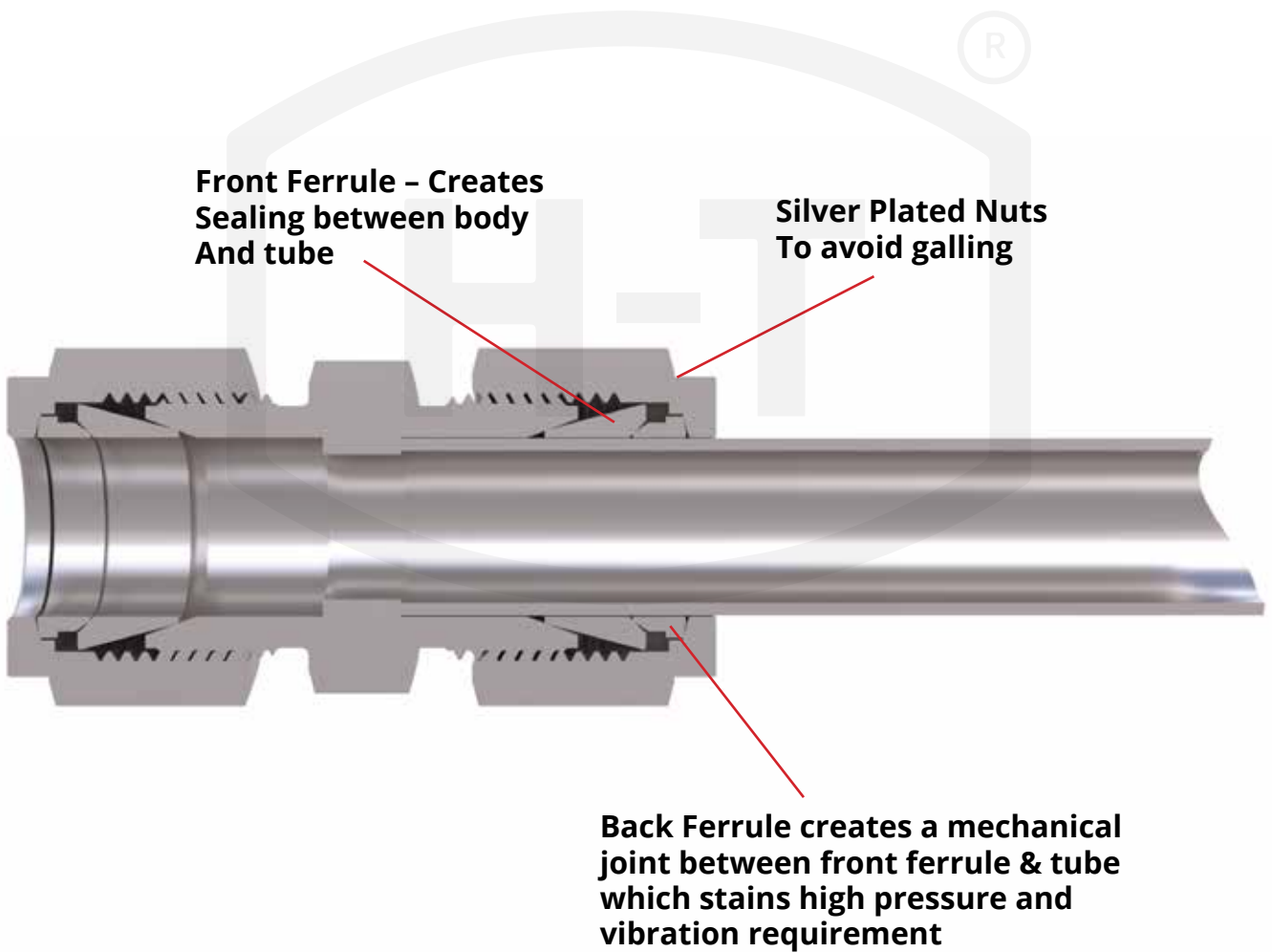
Hytech's Double Ferrule Tube Fittings consists of four pieces which include Nut, Back Ferrule, Front Ferrule and the Body. Upon installation with the tubing, it becomes the five-piece connection. Solid leak proof mechanical joint is formed by the attaching tube to the Double Ferrule Compression Fitting by swaging. Stainless Steel Double Ferrule Fittings are used across multiple industries such as the pulp & paper, laboratories, downstream petrochemical, aeronautical and shipbuilding as well as the defence industry



During the assembly when nut is being rotated, rotational movement of the nut is transferred to the axial movement of back ferrule by the specially designed threads of nut and body. This axial push to the back ferrule makes front ferrule to travel further, this displacement of front ferrule is restricted by cone of fitting's body making edge of front ferrule to be compressed against the tubing. Further tightening of nut ensures back ferrule creating hinge joint with the ferrule and tube. This makes tube to be compressed at two locations at

the edge of front ferrule and edge of back ferrule. This mechanical joint is a result of special designed geometry and metallurgical research done by Hytech R&D team.

Hytech has optimized each component form the assembly to do intended function. Front ferrule creates seal between body and tube while the back ferrule creates the seal between front ferrule and tube. Silver coated nuts ensures there would be minimum torque upon tightening.



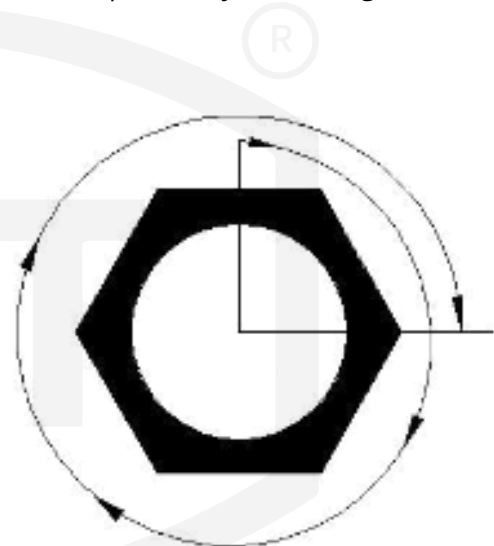
- Metal to metal seal connection eliminates potential assembly errors associated with overtightening of the parts
- Metal to metal seal allows the use of these fittings in wide temperature and pressure requirements
- Design is standard for inch tubing from 1/8" OD to 2" OD and 3 mm to 42 mm metric tubing, Assembly instructions are also common across all sizes, this helps installers to make more reliable and consistent leak proof joint
- Consistent make and remake feasibility
- Excellent vibration fatigue resistance
- These fittings can accommodate thermal cycling behaviour of atmosphere or internal media
- Stainless steel material makes these fitting suitable for corrosive application without affecting the performance over a period of time
- During the installation no torque is transmitted to the tubing.

Materials

- To achieve leak proof joint raw material of the fittings is chosen to have different hardness levels
- Fittings available in SS 316, SS316Ti and SS304 material construction as a standard catalogue product
- Hytech can supply these double ferrule fitting in special materials like Hastelloy, Inconel 600, 625 and 825, Monel, 6-MO, Titanium, Brass upon order confirmation.
- O rings Required for fitting are available in Viton and NBR grade of 70 durometer to 90 durometer hardness range.

Cleaning and Packaging

- Fittings are cleaned to remove machine oil, lubricant and loose particles.
- Threads are capped with thread protection and identification caps
- Individual fitting packing is available upon request
- Special cleaning and packaging in cleanroom are performed to meet desired cleanliness level required for special application
- Fittings for oxygen rich service application are cleaned and packed by standard guidelines.



1 +1/4th turn from Snug Tight

Hytech double-ferrule tube fittings are supplied in assembled conditions as finger tight assembly of nut and ferrules with the body. Hytech recommends not to disassemble them before assembly as it can result in dirt or foreign material getting into the fitting, which may act as a potential source of cause leaks. In case of disassembled please note that the tapered end of the bigger ferrule goes inside the taper of the body.

Hytech Tube Fittings are installed in three easy steps:

A) Assembly of Sizes Up to 1" OD (25 mm)

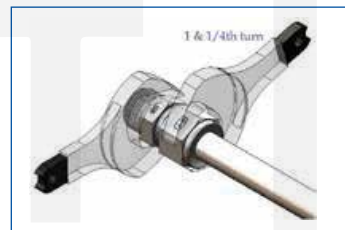
Step 1:

Cut the tube exactly at 90° and deburr it to remove any burr, Insert this tube end into Hytech Tube Fitting until it completely bottomed. At this point tube can rotate by hand, tightened the nut so that the rotational movement of the tube is stopped, this tightening is called "Snug Tight".



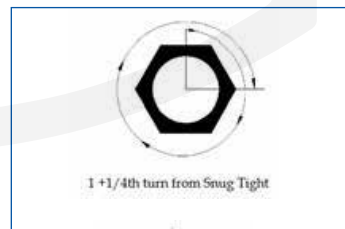
Step 2:

Mark on the Hytech Nut at any suitable position, make sure the body hex of the fitting is also got marked for easy counting in the next step.

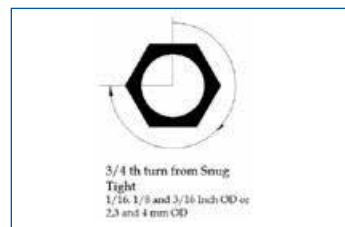


Step 3:

Hold the Hytech Fitting rigidly, preferably in vice, tighten the nut with a suitable wrench to one full and one-quarter turn from the marked position.



For small tube OD size of fittings like 1/16, 1/8, and 3/16 inch or 2, 3, and 4 mm. Tighten the nut after the snug tight by only three quarters from the marked position.



B) Assembly of Sizes above 1" OD /25 mm

- Preswage the ferrules onto tubes using Pre Swaging Tool
- Pre Swaging Tool for higher sizes is recommended as it lowers the installation time and increases the ease of installation at the site. If pre swaging tool is not available then perform assembly as mentioned in section A of these instructions
- Apply the lubricant provided with the fitting onto threads of nut, body, and rear edge of the ferrule
- Insert the tube with pre-swaged ferrules onto the fitting, make sure it is fully bottomed and sealed, tighten the nut until fingertight.
- Mark the nut at the suitable location
- Tighten the nut further by 90° i.e. 1/4th turn from the marked position

C) Reassembly Instructions: For all Sizes

- Hytech Double ferrule fittings can be reassembled many times with the following steps. Please depressurize the system before disassembly of Hytech Tube fitting
- Mark the nut, body, and tube before disassembly of the fitting, these marks will help during reassembly to reach the previously swaged position
- For sizes above 1" OD/25 mm apply the lubricant to threads of the body, nut, and rear edge of the ferrule
- Insert the tube with pre-swaged ferrules onto the fitting, make sure it is fully bottomed and sealed, tighten the nut until fingertight.
- Tighten the nut by holding the body steady to previously pulled up location as indicated by marking done before the disassembly
- There will be a significant rise in the resistance, tighten the nut further by a minimum of 45°

Proper selection, handling & installation of tubing plays a vital role in the performance of the tubing system. Hytech Engineers Pvt Ltd is not manufacturing & supplying tubings, We must focus on the importance of the selection of high-quality tubing which ensures a reliable, safe & leak-proof system. We would like to assist in tubing selection as per request from the customer. Following significant criteria are considered while ordering the tubings:

- Material
- Wall Thickness
- Surface Finish
- Hardness

Material:

The material of tubing should be SS316.

Wall Thickness:

The admissible pressure rating of tubing for the ample range of wall thickness is calculated from "S" values as defined by ANSI B 31.1 or ASME B31.3. The wall thickness of the selected tubes should be verified concerning the lower and upper limits given by standard ASTM A 269. The oval tubes will not fit through fitting elements like nuts, ferrules and bodies result in leakage may occur. The selection of tube wall thickness is directly dependant on the pressure rating of the system.

Surface Finish:

The details of surface finish are not mentioned in ASTM standards, Surface finish is very important for firm sealing. Finished tubes shall be fairly straight and have burr-free smooth ends. They shall have a smooth surface finish, The tubes are free from surface defects, depression, scratch marks, irregularities, insertion of foreign particles, cracks, etc. They shall be visibly clean.

Hardness:

Hardness of tubing shall be less than the fitting material, For SS316 tubing the hardness shall be 70-80 HRB.

Hytech double ferrule fittings pressure rating is dependant on the tubing being used in the assembly of the fittings. Being the weakest link in the assembly, tubing thickness governs the allowable pressure rating of the fitting. The following table gives the allowable pressure of selected tube OD and wall thickness

Testing

Main function of the tube fitting is to grip the tubing sufficiently to contain the pressure in the system. Fitting must remain connected with the tubing without leakage up to the maximum working pressure of the system. Mechanical compression joint should not fail under any undesired circumstances hence Hytech's Double Ferrule Fittings are tested and validated with numerous testing carried out at in house testing laboratory in Shirwal.

Most of these performance tests are given in ASTM F 1387. Following tests are performed onto the product before they released for the production.

- Pneumatic Proof Test
- Hydrostatic Proof Test
- Impulse Test
- Flexure Fatigue Test
- Tensile Test
- Hydrostatic Burst Test
- Repeated Assembly Test
- Rotary Flexure Test
- Vibration Test
- Impulse cum Vibration Test
- Thermal Cycling Test

Tube OD	Tube Wall Thickness, Inch															
	Working Pressure, PSIG															
	For gas services the tube wall thickness outside of the shaded area															
	0.010	0.012	0.014	0.016	0.020	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.12	0.134	0.156	0.188
1/16	5,700	7,000	8,350	9,770	12,830											
1/8"						8,730	11,410									
3/16"						5,590	7,180	10,660								
1/4"						4,110	5,100	7,650	10,680							
5/16"							4,130	5,970	8,240							
3/8"							3,405	4,900	6,700	8,858						
1/2"							2,675	3,500	5,200	6,840						
5/8"								3,020	4,090	5,340	6,200					
3/4"								2,490	3,360	4,380	5,070	5,910				
7/8"								2,120	2,860	3,710	4,290	4,990				
1"									2,490	3,220	3,720	4,315	4,790			
1-1/4"										2,540	2,930	3,400	3,760	4,245	5,010	
1-1/2"											2,300	2,800	3,100	3,490	4,110	5,030
2"												2,070	2,290	2,570	3,020	3,690

Hy-Tech tube fitting ordering numbers follow the sequence shown below.

	1	2	-	3	-	4	-	5	-	6
	D	113		08		-		12PT		HI
1 Component	3	Size (Tube OD)		4	Second End Connection Size					
D Double Ferrule Fitting	Fractional, in.		Metric, mm		Add a size designator from the list at left for the second end connection.					
	2 = 1/8"		3M = 3							
	3 = 3/16"		6M = 6							
2 Adapter Type	4 = 1/4"		8M = 8							
100 Front Ferruel	5 = 5/16"		10M = 10							
101 Back Ferruel	6 = 3/8"		12M = 12		5 Second End Connection Type					
102 Tube Nut	8 = 1/2"		14M = 14		Add a second end connection type designator as needed.					
103 Ferrule Set	10 = 5/8"		15M = 15		Blank NPT					
104 Nut Ferrule Set	12 = 3/4"		16M = 16		PT BSPT					
107 Blanking Plug	14 = 7/8"		18M = 18		L SAE Thread					
108 Cap	16 = 1"		20M = 20		SW Tube Socket Weld					
109 Union	20 = 1-1/4"		22M = 22		BW Pipe Butt Weld					
111 Bulkhead Union	24 = 1-1/2"		25M = 25		RJ ISO/BSP parallel pipe thread(gauge)					
113 Male Connector			28M = 28		G ISO/BSP parallel pipe thread(Japanese gauge)					
114 Female Connector			30M = 30		C ISO/BSP parallel pipe thread(DIN 3852)					
115 Male Tube Adaptor			32M = 32		B ISO/BSP parallel pipe thread Metal To Metal Sealing					
116 Female Tube Adaptor					P ISO/BSP parallel pipe thread Adj. End					
119 Tube End Reducer										
120 Bulkhead Tube End Reducer										
121 Bulkhead Male Connector										
122 Bulkhead Female Connector					6 Material					
123 Port Connector					HA EN1A Leaded					
127 90° Union Elbow					HD SAE1018					
129 90° Male Elbow					HH BRASS IS319					
130 90° Female Elbow					HI ASTM A276 TP SS316					
131 45° Male Elbow					HK ASTM A182 TP SS316					
133 Equal Tee					HL ASTM A276 TP SS304					
134 Cross					HN ASTM A182 TP SS304					
135 Male Run Tee					JK BRASS IS320					
136 Male Branch Tee					JL ASTM B16 C36000					
137 Female Run Tee					JJ ASTM B124 C37700					
138 Female Branch Tee					JG ASTM A276 TP SS304L					
143 90° Adjustable Male Elbow					JI ASTM A276 TP SS316L					
144 45° Adjustable Male Elbow					HM ASTM A479 TP SS304					
145 Adjustable Male Run Tee					HJ ASTM A479 TP SS316					
146 Adjustable Male Branch Tee					JQ ASTM A182 TP SS304L					
207 AN Male Connector (Tube OD To JIC End)					JR ASTM A182 TP SS316L					
210 Butt weld Connector										
211 Tube socket weld Connector										
O-Ring Material-			4		Tees and Crosses					
For CS material - NBR 90					Ordering numbers for tees and crosses					
For SS Material - Viton 90					indicate first the size of the run (1 to 2)					
For Brass Material - NBR 90	1		2		and then the size of the branch (3 for					
Any Special requirements, please mention at the time of enquiry.					tees and 3 to 4 for crosses).					
					Example: D135-08-12-HK					
			3		for a 316 SS for 1/2" tube with 3/4 in. male NPT run					

<p>Front Ferrule D100</p>  <p>DF-01</p>	<p>Back Ferrule D101</p>  <p>DF-02</p>	<p>Nut D102</p>  <p>DF-03</p>	<p>Ferrule Set D103</p>  <p>DF-04</p>
<p>Nut Ferrule Set D104</p>  <p>DF-05</p>	<p>Plug D107</p>  <p>DF-06</p>	<p>Cap D108</p>  <p>DF-07</p>	<p>Union D109</p>  <p>DF-08</p>
<p>Reducing Union D109</p>  <p>DF-09</p>	<p>Bulkhead Union D111</p>  <p>DF-10</p>	<p>Reducing Bulkhead Union D111</p>  <p>DF-11</p>	<p>Male Connector-NPT D113 (Inch Tube OD)</p>  <p>DF-12</p>
<p>Male Connector-NPT D113 (MM Tube OD)</p>  <p>DF-13</p>	<p>Male Connector- BSPT D113 (Inch Tube OD)</p>  <p>DF-14</p>	<p>Male Connector-BSPT D113 (MM Tube OD)</p>  <p>DF-15</p>	<p>Male Connector- BSPP (Type-C) D113 (Inch Tube OD)</p>  <p>DF-16</p>
<p>Male Connector-BSPP (Type-C) D113 (MM Tube OD)</p>  <p>DF-17</p>	<p>Male Connector-BSPP (Type-B) D113 (Inch Tube OD)</p>  <p>DF-18</p>	<p>Male Connector-BSPP (Type-B) D113 (MM Tube OD)</p>  <p>DF-19</p>	<p>Male Connector-SAE D113 (With O-Ring)</p>  <p>DF-20</p>

Supply of standard catalogue products is subject to availability. Check stock levels before placing order.

<p>Female Connector-NPT D114 (Inch Tube OD)</p> <p>DF-21</p>	<p>Female Connector-NPT D114 (MM Tube OD)</p> <p>DF-22</p>	<p>Female Connector-BSPT D114 (Inch Tube OD)</p> <p>DF-23</p>	<p>Female Connector-BSPT D114 (MM Tube OD)</p> <p>DF-24</p>
<p>Female Connector- BSPP (RJ) D114</p> <p>DF-25</p>	<p>Female Connector-BSPP(G) D114</p> <p>DF-26</p>	<p>Male Tube Adapter D115 (NPT)</p> <p>DF-27</p>	<p>Male Tube Adapter D115 (BSPT)</p> <p>DF-28</p>
<p>Male Tube Adapter D115 (BSPP-C)</p> <p>DF-29</p>	<p>Male Tube Adapter D115 (SAE-O-Ring)</p> <p>DF-30</p>	<p>Male Tube Adapter D115 (AN-37°)</p> <p>DF-31</p>	<p>Female Tube Adapter D116 (NPT)</p> <p>DF-32</p>
<p>Female Tube Adapter D116 (BSPT)</p> <p>DF-33</p>	<p>Female Tube Adapter (Type-E) D116 (BSPP)</p> <p>DF-34</p>	<p>Female Tube Adapter (Type-G) D116 (BSPP)</p> <p>DF-35</p>	<p>Female Tube Adapter (Type-R) D116 (BSPP)</p> <p>DF-36</p>
<p>Tube Reducer D119 (Inch Tube OD)</p> <p>DF-37</p>	<p>Tube Reducer D119 (MM Tube OD)</p> <p>DF-38</p>	<p>Tube Reducer D119 (MM TO Inch)</p> <p>DF-39</p>	<p>Bulkhead Tube Reducer D120 (Inch Tube OD)</p> <p>DF-40</p>

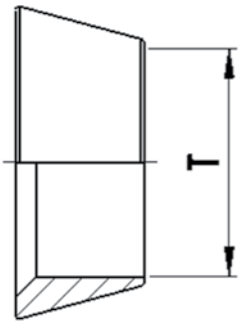
Supply of standard catalogue products is subject to availability. Check stock levels before placing order.

<p>Bulkhead Male Connector (NPT) D121</p>  <p>DF-41</p>	<p>Bulkhead Female Connector (NPT) D122</p>  <p>DF-42</p>	<p>Port Connector D123</p>  <p>DF-43</p>	<p>90° Union Elbow D127</p>  <p>DF-44</p>
<p>90° Male Elbow D129 (NPT) - (Inch Tube OD)</p>  <p>DF-45</p>	<p>90° Male Elbow D129 (NPT) - (MM Tube OD)</p>  <p>DF-46</p>	<p>90° Male Elbow D129 (BSPT) - (Inch Tube OD)</p>  <p>DF-47</p>	<p>90° Male Elbow D129 (BSPT) - (MM Tube OD)</p>  <p>DF-48</p>
<p>90° Male Elbow D129 (Socket Weld)</p>  <p>DF-49</p>	<p>90° Male Elbow D129 (Butt Weld)</p>  <p>DF-50</p>	<p>90° Female Elbow D130 (NPT)</p>  <p>DF-51</p>	<p>45° Male Elbow D131 (NPT)</p>  <p>DF-52</p>
<p>Union Tee D133</p>  <p>DF-53</p>	<p>Reducing Union Tee D133</p>  <p>DF-54</p>	<p>Cross Union D134</p>  <p>DF-55</p>	<p>Male Run Tee D135 (NPT)</p>  <p>DF-56</p>
<p>Male Branch Tee D136 (NPT)</p>  <p>DF-57</p>	<p>Female Run Tee D137 (NPT)</p>  <p>DF-58</p>	<p>Female Branch Tee D138 (NPT)</p>  <p>DF-59</p>	<p>90° Adjustable Elbow D143 (BSPP)</p>  <p>DF-60</p>

Supply of standard catalogue products is subject to availability. Check stock levels before placing order.

<p>90° Adjustable Elbow D143 (SAE)</p>  <p>DF-61</p>	<p>45° Adjustable Elbow D144 (SAE)</p>  <p>DF-62</p>	<p>Adjustable Run Tee D145 (SAE)</p>  <p>DF-63</p>	<p>Adjustable Run Tee D145 (BSPP)</p>  <p>DF-64</p>
<p>Adjustable Branch Tee D146 (BSPP)</p>  <p>DF-65</p>	<p>Adjustable Branch Tee D146 (SAE)</p>  <p>DF-66</p>	<p>AN Connector D207 (37°)</p>  <p>DF-67</p>	<p>Tube Butt Weld Connector D210 - (Inch Tube OD)</p>  <p>DF-68</p>
<p>Tube Butt Weld Connector D210 - (MM Tube OD)</p>  <p>DF-69</p>	<p>Tube Socket Weld Connector D211</p>  <p>DF-70</p>		

Supply of standard catalogue products is subject to availability. Check stock levels before placing order.



D100-Front Ferrule Tube

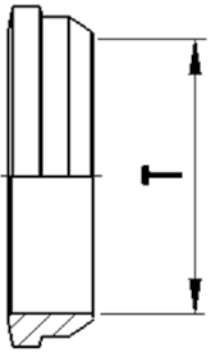
For Fractional Tube

T Tube O.D.	Hy-Tech Part Number
1/8"	D100-02-HI
1/4"	D100-04-HI
5/16"	D100-05-HI
3/8"	D100-06-HI
1/2"	D100-08-HI
5/8"	D100-10-HI
3/4"	D100-12-HI
7/8"	D100-14-HI
1"	D100-16-HI
1-1/4"	D100-20-HI
1-1/2"	D100-24-HI

For Metric Tube

T Tube O.D.	Hy-Tech Part Number
3	D100-03M-HI
6	D100-06M-HI
8	D100-08M-HI
10	D100-10M-HI
12	D100-12M-HI
14	D100-14M-HI
15	D100-15M-HI
16	D100-16M-HI
18	D100-18M-HI
20	D100-20M-HI
22	D100-22M-HI
25	D100-25M-HI
28	D100-28M-HI
30	D100-30M-HI
32	D100-32M-HI

All dimensions unless specified are in mm.



D101 -Back Ferrule Tube

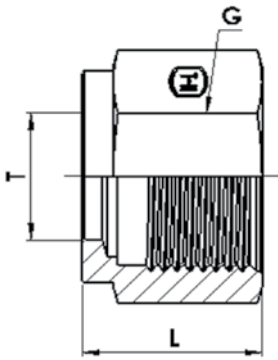
For Fractional Tube

T Tube O.D.	Hy-Tech Part Number
1/8"	D101-02-HI
1/4"	D101-04-HI
5/16"	D101-05-HI
3/8"	D101-06-HI
1/2"	D101-08-HI
5/8"	D101-10-HI
3/4"	D101-12-HI
7/8"	D101-14-HI
1"	D101-16-HI
1-1/4"	D101-20-HI
1-1/2"	D101-24HI

For Metric Tube

T Tube O.D.	Hy-Tech Part Number
3	D101-03M-HI
6	D101-06M-HI
8	D101-08M-HI
10	D101-10M-HI
12	D101-12M-HI
14	D101-14M-HI
15	D101-15M-HI
16	D101-16M-HI
18	D101-18M-HI
20	D101-20M-HI
22	D101-22M-HI
25	D101-25M-HI
28	D101-28M-HI
30	D101-30M-HI
32	D101-32M-HI

All dimensions unless specified are in mm.



D102-Nut Tube Nut

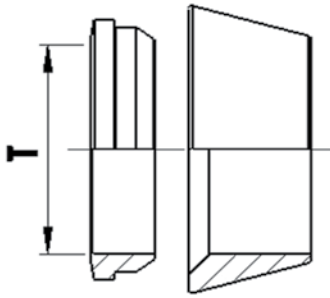
For Fractional Tube

T Tube O.D.	G Flat	L	Hy-Tech Part Number
1/8"	11.11	12.00	D102-02-
3/16"	12.70	12.00	D102-03-
1/4"	14.28	12.70	D102-04-
5/16"	15.88	13.50	D102-05-
3/8"	17.46	14.90	D102-06-
1/2"	22.22	17.50	D102-08-
5/8"	25.40	17.50	D102-10-
3/4"	28.58	18.00	D102-12-
7/8"	31.75	20.65	D102-14-
1"	38.10	21.00	D102-16-
1-1/4"	50.00	31.70	D102-20-
1-1/2"	57.15	38.20	D102-24-

For Metric Tube

T Tube O.D.	G Flat	L	Hy-Tech Part Number
3	12.00	11.90	D102-03M-
6	14.00	12.70	D102-06M-
8	16.00	13.50	D102-08M-
10	19.00	15.40	D102-10M-
12	22.00	17.40	D102-12M-
14	25.00	17.40	D102-14M-
15	25.00	17.40	D102-15M-
16	25.00	17.40	D102-16M-
18	30.00	17.40	D102-18M-
20	32.00	17.40	D102-20M-
22	32.00	17.40	D102-22M-
25	38.00	20.60	D102-25M-
28	46.00	30.60	D102-28M-
30	50.00	32.70	D102-30M-
32	50.00	34.40	D102-32M-

All dimensions unless specified are in mm.



D103-Ferrule Set

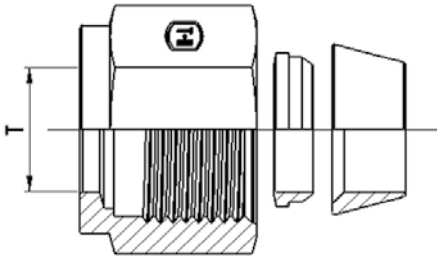
For Fractional Tube

T Tube O.D.	Hy-Tech Part Number
1/8"	D103-02-
3/16"	D103-03-
1/4"	D103-04-
5/16"	D103-05-
3/8"	D103-06-
1/2"	D103-08-
5/8"	D103-10-
3/4"	D103-12-
7/8"	D103-14-
1"	D103-16-
1-1/4"	D103-20-
1-1/2"	D103-24-

For Metric Tube

T Tube O.D.	Hy-Tech Part Number
3	D103-03M-
6	D103-06M-
8	D103-08M-
10	D103-10M-
12	D103-12M-
14	D103-14M-
15	D103-15M-
16	D103-16M-
18	D103-18M-
20	D103-20M-
22	D103-22M-
25	D103-25M-
28	D103-28M-
30	D103-30M-
32	D103-32M-

All dimensions unless specified are in mm.



D104-Nut Ferrule Set

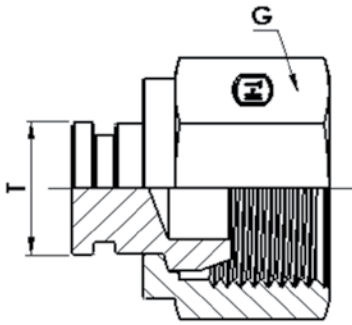
For Fractional Tube

T Tube O.D.	Hy-Tech Part Number
1/8"	D104-02-
3/16"	D104-03-
1/4"	D104-04-
5/16"	D104-05-
3/8"	D104-06-
1/2"	D104-08-
5/8"	D104-10-
3/4"	D104-12-
7/8"	D104-14-
1"	D104-16-
1-1/4"	D104-20-
1-1/2"	D104-24-

For Metric Tube

T Tube O.D.	Hy-Tech Part Number
3	D104-03M-
6	D104-06M-
8	D104-08M-
10	D104-10M-
12	D104-12M-
14	D104-14M-
15	D104-15M-
16	D104-16M-
18	D104-18M-
20	D104-20M-
22	D104-22M-
25	D104-25M-
28	D104-28M-
30	D104-30M-
32	D104-32M-

All dimensions unless specified are in mm.



D107-Plug Tube Plug

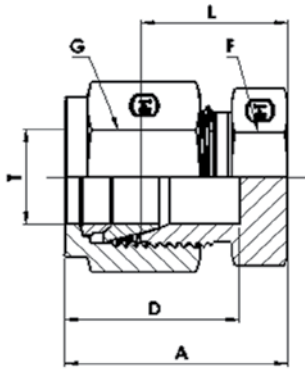
For Fractional Tube

T Tube O.D.	G	Hy-Tech Part Number
1/8"	11.11	D107-02-
1/4"	14.28	D107-04-
5/16"	15.88	D107-05-
3/8"	17.46	D107-06-
1/2"	22.22	D107-08-
5/8"	25.40	D107-10-
3/4"	28.58	D107-12-
7/8"	31.75	D107-14-
1"	38.10	D107-16-
1-1/4"	50.00	D107-20-
1-1/2"	57.15	D107-24-

For Metric Tube

T Tube O.D.	G	Hy-Tech Part Number
3	12.00	D107-03M-
6	14.00	D107-06M-
8	16.00	D107-08M-
10	19.00	D107-10M-
12	22.00	D107-12M-
14	25.00	D107-14M-
15	25.00	D107-15M-
16	25.00	D107-16M-
18	30.00	D107-18M-
20	32.00	D107-20M-
22	32.00	D107-22M-
25	38.00	D107-25M-
28	46.00	D107-28M-
30	50.00	D107-30M-
32	50.00	D107-32M-

All dimensions unless specified are in mm.



D108-Cap Tube Cap

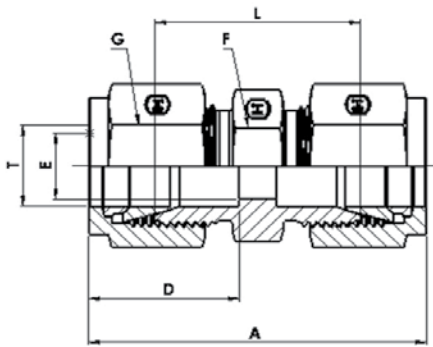
For Fractional Tube

T Tube O.D.	A	L	D	F	G	Hy-Tech Part Number
1/8"	21.37	13.50	14.22	11.11	11.11	D108-02-
1/4"	23.34	16.00	15.34	12.70	14.28	D108-04-
5/16"	24.50	17.00	16.30	14.28	15.88	D108-05-
3/8"	26.36	18.30	17.56	15.88	17.46	D108-06-
1/2"	29.03	19.10	22.63	20.64	22.22	D108-08-
5/8"	29.80	19.80	24.30	23.81	25.40	D108-10-
3/4"	32.39	21.30	25.39	26.98	28.58	D108-12-
7/8"	39.01	23.90	29.41	30.16	31.75	D108-14-
1"	39.43	26.20	32.23	34.92	38.10	D108-16-
1-1/4"	51.73	31.30	41.23	44.45	50.00	D108-20-
1-1/2"	65.33	37.30	50.83	53.98	57.15	D108-24-

For Metric Tube

T Tube O.D.	A	L	D	F	G	Hy-Tech Part Number
3	20.10	13.50	12.90	12.0	12.00	D108-03M-
6	23.10	15.70	15.30	14.0	14.00	D108-06M-
8	24.50	17.00	16.20	16.0	16.00	D108-08M-
10	26.60	19.00	17.20	19.0	19.00	D108-10M-
12	29.10	19.00	22.80	22.0	22.00	D108-12M-
14	30.30	19.80	24.40	24.0	25.00	D108-14M-
15	29.90	19.80	24.40	24.0	25.00	D108-15M-
16	29.90	19.80	24.40	24.0	25.00	D108-16M-
18	31.40	21.30	24.40	27.0	30.00	D108-18M-
20	34.00	23.90	26.00	30.0	32.00	D108-20M-
22	34.00	23.90	26.00	30.0	32.00	D108-22M-
25	38.50	26.20	31.30	35.0	38.00	D108-25M-
28	48.50	27.70	36.60	41.0	46.00	D108-28M-
30	53.40	31.80	39.60	46.0	50.00	D108-30M-
32	55.80	32.80	42.00	46.0	50.00	D108-32M-

All dimensions unless specified are in mm.



D109-Equal Union Tube x Tube

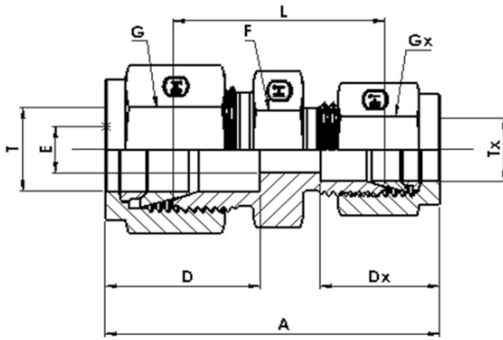
For Fractional Tube

T Tube O.D.	A	L	E	D	F	G	Hy-Tech Part Number
1/8"	38.14	22.40	2.30	14.22	11.11	11.11	D109-02-
1/4"	40.88	26.20	4.80	15.34	14.28	14.28	D109-04-
5/16"	44.20	28.20	6.30	16.80	14.28	15.88	D109-05-
3/8"	46.32	30.20	7.10	17.56	15.88	17.46	D109-06-
1/2"	50.86	31.00	10.40	22.63	20.64	22.22	D109-08-
5/8"	51.80	31.80	12.70	24.30	23.81	25.40	D109-10-
3/4"	55.48	33.30	15.80	25.39	26.98	28.58	D109-12-
7/8"	62.02	34.80	18.30	29.41	30.16	31.75	D109-14-
1"	66.86	40.40	22.30	32.23	34.92	38.10	D109-16-
1-1/4"	88.86	48.00	27.60	41.23	44.45	50.00	D109-20-
1-1/2"	109.66	53.60	34.00	50.83	53.97	57.15	D109-24-

For Metric Tube

T Tube O.D.	A	L	E	D	F	G	Hy-Tech Part Number
3	32.10	22.10	2.40	12.90	11.00	12.00	D109-03M-
6	38.50	26.20	4.80	15.30	14.00	14.00	D109-06M-
8	41.10	28.20	6.40	16.20	16.00	16.00	D109-08M-
10	47.10	31.00	7.90	17.20	17.00	19.00	D109-10M-
12	58.30	31.00	9.50	22.80	22.00	22.00	D109-12M-
14	62.70	31.00	11.10	24.40	24.00	25.00	D109-14M
15	63.10	31.80	11.90	24.40	24.00	25.00	D109-15M-
16	63.10	31.80	12.70	24.40	24.00	25.00	D109-16M-
18	63.10	33.30	15.10	24.40	27.00	30.00	D109-18M-
20	67.90	34.80	15.90	26.00	30.00	32.00	D109-20M
22	67.90	34.80	18.30	26.00	30.00	32.00	D109-22M-
25	81.60	40.40	21.80	31.30	35.00	38.00	D109-25M-
28	89.00	43.40	21.80	36.60	41.00	46.00	D109-28M-
30	97.20	49.50	26.20	39.60	46.00	50.00	D109-30M-
32	97.30	51.30	28.60	42.00	46.00	50.00	D109-32M-

All dimensions unless specified are in mm.



D109-Reducing Union Tube x Tube

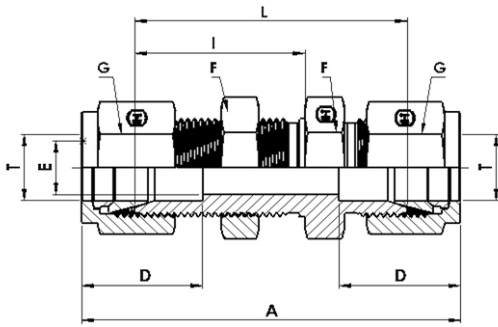
For Fractional Tube

T Tube O.D.	Tx Tube O.D.	A	L	E	D	Dx	F	G	Gx	Hy-Tech Part Number
1/4"	1/8"	39.81	24.60	2.40	15.34	14.22	14.28	14.28	11.11	D109-04-02-
5/16"	1/8"	41.57	25.70	2.40	16.80	14.22	14.28	15.88	11.11	D109-05-02-
5/16"	1/4"	42.84	27.50	4.80	16.80	15.34	14.28	15.88	14.28	D109-05-04-
3/8"	1/8"	42.83	26.90	2.40	17.56	14.22	15.88	17.46	11.11	D109-06-02-
3/8"	1/4"	43.90	28.50	4.80	17.56	15.34	15.88	17.46	14.28	D109-06-04-
3/8"	5/16"	45.56	29.50	6.30	17.56	16.80	15.88	17.46	15.88	D109-06-05-
1/2"	1/8"	46.30	28.50	2.40	22.63	14.22	20.64	22.22	11.11	D109-08-02-
1/2"	1/4"	46.77	29.50	4.80	22.63	15.34	20.64	22.22	14.28	D109-08-04-
1/2"	3/8"	48.99	31.00	7.10	22.63	17.56	20.64	22.22	17.46	D109-08-06-
5/8"	3/8"	49.86	31.80	7.10	24.30	17.56	23.81	25.40	17.46	D109-10-06-
5/8"	1/2"	51.73	31.80	10.40	24.30	22.63	23.81	25.40	22.22	D109-10-08-
3/4"	1/4"	50.23	31.80	4.80	25.39	15.34	26.98	28.58	14.28	D109-12-04-
3/4"	3/8"	52.45	33.30	7.10	25.39	17.56	26.98	28.58	17.46	D109-12-06-
3/4"	1/2"	54.32	33.30	10.40	25.39	22.63	26.98	28.58	22.22	D109-12-08-
3/4"	5/8"	54.39	33.30	12.70	25.39	24.30	26.98	28.58	25.40	D109-12-10-
1"	1/2"	61.26	38.10	10.40	32.23	22.63	34.92	38.10	22.22	D109-16-08-
1"	3/4"	62.42	38.10	15.80	32.23	25.39	34.92	38.10	28.58	D109-16-12-

For Metric Tube

T Tube O.D.	Tx Tube O.D.	A	L	E	D	Dx	F	G	Gx	Hy-Tech Part Number
6	3	38.60	24.60	2.40	15.30	12.90	14.00	14.00	12.00	D109-06M-03M-
8	6	42.30	27.40	4.80	16.20	15.30	16.00	16.00	14.00	D109-08M-06M-
10	6	44.50	29.50	4.80	17.20	15.30	17.00	19.00	14.00	D109-10M-06M-
10	8	45.10	30.00	6.40	17.20	16.20	17.00	19.00	16.00	D109-10M-08M-
12	6	47.00	29.50	4.80	22.80	15.30	22.00	22.00	14.00	D109-12M-06M-
12	8	47.80	30.20	6.40	22.80	16.20	22.00	22.00	16.00	D109-12M-08M-
12	10	48.70	31.00	7.90	22.80	17.20	22.00	22.00	19.00	D109-12M-10M-
14	12	48.80	28.20	6.40	24.40	22.80	24.00	25.00	22.00	D109-14M-12M-
15	12	48.80	28.60	6.40	24.40	22.80	24.00	25.00	22.00	D109-15M-12M-
16	10	49.50	31.80	7.90	24.40	17.20	24.00	25.00	19.00	D109-16M-10M-
16	12	52.00	31.80	9.50	24.40	22.80	24.00	25.00	22.00	D109-16M-12M-
18	12	53.50	33.30	9.50	24.40	22.80	27.00	30.00	22.00	D109-18M-12M-
25	18	61.00	38.60	15.10	31.30	24.40	35.00	38.00	30.00	D109-25M-18M-
25	20	62.80	40.40	15.90	31.30	26.00	35.00	38.00	32.00	D109-25M-20M-
30	18	75.40	43.70	15.10	39.60	24.40	46.00	50.00	30.00	D109-30M-18M-
30	20	75.40	43.70	15.90	39.60	26.00	46.00	50.00	32.00	D109-30M-20M-
30	25	80.10	46.20	21.80	39.60	31.30	46.00	50.00	38.00	D109-30M-25M-
32	18	77.80	44.70	15.10	42.00	24.40	46.00	50.00	30.00	D109-32M-18M-
32	20	77.80	44.70	15.90	42.00	26.00	46.00	50.00	32.00	D109-32M-20M-
32	25	82.30	47.00	21.80	42.00	31.30	46.00	50.00	38.00	D109-32M-25M-

All dimensions unless specified are in mm.



D111-Bulkhead Union Tube x Tube

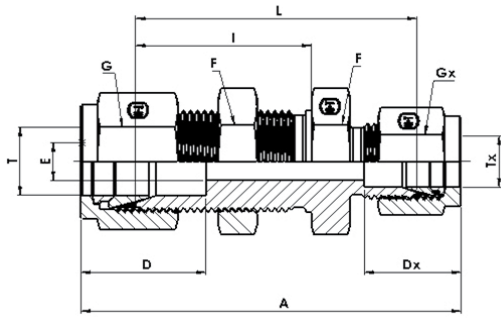
For Fractional Tube

T Tube O.D.	A	D	L	I	E	F	G	Panel Hole Size	Max Panel Thickness	Hy-Tech Part Number
1/8"	53.84	14.22	38.10	24.60	2.30	12.70	11.11	8.30	12.70	D111-02-
1/4"	57.68	15.34	43.00	26.20	4.80	15.88	14.28	11.50	10.10	D111-04-
5/16"	61.00	16.30	46.00	28.50	6.40	17.46	15.88	13.00	11.10	D111-05-
3/8"	63.62	17.56	47.50	29.50	7.10	19.05	17.46	14.60	11.10	D111-06-
1/2"	70.66	22.63	50.80	31.80	10.40	23.81	22.22	19.50	12.70	D111-08-
5/8"	72.30	24.30	52.30	32.50	12.70	26.98	25.40	22.60	12.70	D111-10-
3/4"	80.78	25.39	58.60	37.40	15.80	34.93	28.58	25.80	16.80	D111-12-
1"	97.76	32.23	71.30	45.20	22.40	41.28	38.10	33.70	19.00	D111-16-
1-1/4"	119.86	41.23	79.00	47.70	27.70	47.62	50.00	41.60	19.00	D111-20-
1-1/2"	140.86	50.83	84.80	49.30	34.04	57.15	57.15	49.60	19.00	D111-24-

For Metric Tube

T Tube O.D.	A	D	L	I	E	F	G	Panel Hole Size	Max Panel Thickness	Hy-Tech Part Number
3	51.30	12.90	38.10	24.60	2.40	14.00	12.00	8.30	12.70	D111-03M-
6	57.70	15.30	42.90	26.20	4.80	16.00	14.00	11.50	10.20	D111-06M-
8	61.00	16.20	46.00	28.60	6.40	17.00	16.00	13.10	11.20	D111-08M-
10	63.90	17.20	48.50	29.40	7.90	22.00	19.00	16.30	11.20	D111-10M-
12	71.00	22.80	50.80	31.80	9.50	24.00	22.00	19.50	12.70	D111-12M-
14	73.30	24.40	52.30	32.50	11.10	27.00	25.00	22.50	12.70	D111-14M-
15	72.50	24.40	52.30	32.50	11.90	27.00	25.00	22.80	12.70	D111-15M-
16	72.50	24.40	52.30	32.50	12.70	27.00	25.00	22.80	12.70	D111-16M-
18	78.90	24.40	58.70	37.30	15.10	30.00	30.00	26.00	16.80	D111-18M-
20	84.50	26.00	64.30	42.90	15.90	35.00	32.00	29.00	19.00	D111-20M-
25	95.90	31.30	71.30	45.20	21.80	41.00	38.00	33.70	19.00	D111-25M-
30	123.70	39.60	80.50	48.60	26.20	50.00	50.00	40.50	19.00	D111-30M-
32	128.30	42.00	82.30	49.50	28.60	50.00	50.00	42.50	19.00	D111-32M-

All dimensions unless specified are in mm.



D111-Bulkhead Reducing Union Tube x Tube

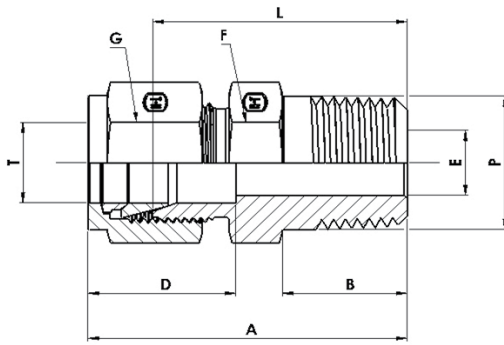
For Fractional Tube

T Tube O.D.	Tx Tube O.D.	A	D	Dx	L	I	E	F	G	Gx	Panel Hole Size	Max Panel Thickness	Hy-Tech Part Number
1/4"	1/8"	56.41	15.34	14.22	41.20	26.20	2.30	15.88	14.28	11.11	11.50	10.10	D111-04-02-
3/8"	1/4"	61.40	17.56	15.34	46.00	29.50	4.80	19.05	17.46	14.28	14.60	11.10	D111-06-04-
1/2"	1/4"	66.47	22.63	15.34	49.20	31.80	4.80	23.81	22.22	14.28	19.50	12.70	D111-08-04-
1/2"	3/8"	67.19	22.63	17.56	49.20	31.80	7.10	23.81	22.22	17.46	19.50	12.70	D111-08-06-

For Metric Tube

T Tube O.D.	Tx Tube O.D.	A	D	Dx	L	I	E	F	G	Gx	Panel Hole Size	Max Panel Thickness	Hy-Tech Part Number
6	3	55.20	15.30	12.90	41.20	26.20	2.40	16.00	14.00	12.00	11.50	10.20	D111-06M-03M-
8	6	62.90	16.20	15.30	48.00	28.60	4.80	17.00	16.00	14.00	13.10	11.20	D111-08M-06M-
10	6	63.60	17.20	15.30	48.50	29.40	4.80	22.00	19.00	14.00	16.30	11.20	D111-10M-06M-
12	6	68.30	22.80	15.30	50.80	31.80	4.80	24.00	22.00	14.00	19.50	12.70	D111-12M-06M-
12	10	68.50	22.80	17.20	50.80	31.80	7.90	24.00	22.00	19.00	19.50	12.70	D111-12M-10M-

All dimensions unless specified are in mm.

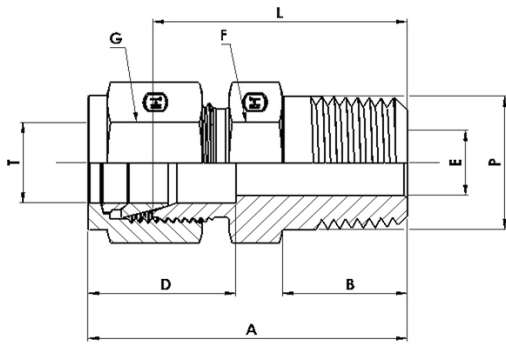


D113-Male Connector Tube x Male NPT Threads

For Fractional Tube

T Tube O.D.	P NPT Male	A	L	E	B	D	F	G	Hy-Tech Part Number
1/8"	1/8"	31.77	23.90	2.30	9.60	14.22	11.11	11.11	D113-02-02-
1/8"	1/4"	36.87	29.00	2.30	14.30	14.22	14.28	11.11	D113-02-04-
1/8"	3/8"	37.07	29.20	2.30	14.30	14.22	17.46	11.11	D113-02-06-
1/8"	1/2"	43.47	35.60	2.30	19.10	14.22	22.22	11.11	D113-02-08-
1/4"	1/8"	32.74	25.40	4.80	9.60	15.34	12.70	14.28	D113-04-02-
1/4"	1/4"	37.84	30.50	4.80	14.30	15.34	14.28	14.28	D113-04-04-
1/4"	3/8"	38.34	31.00	4.80	14.30	15.34	17.46	14.28	D113-04-06-
1/4"	1/2"	44.64	37.30	4.80	19.10	15.34	22.22	14.28	D113-04-08-
1/4"	3/4"	46.24	38.90	4.80	19.10	15.34	26.98	14.28	D113-04-12-
5/16"	1/8"	34.20	26.70	4.80	9.60	16.30	14.28	15.88	D113-05-02-
5/16"	1/4"	38.70	31.20	6.30	14.30	16.30	14.28	15.88	D113-05-04-
5/16"	3/8"	39.30	31.80	6.30	14.30	16.30	17.46	15.88	D113-05-06-
3/8"	1/8"	36.06	28.00	4.80	9.60	17.56	15.88	17.46	D113-06-02-
3/8"	1/4"	40.56	32.50	7.10	14.30	17.56	15.88	17.46	D113-06-04-
3/8"	3/8"	40.56	32.50	7.10	14.30	17.56	17.46	17.46	D113-06-06-
3/8"	1/2"	46.96	38.90	7.10	19.10	17.56	22.22	17.46	D113-06-08-
3/8"	3/4"	48.46	40.40	7.10	19.10	17.56	26.98	17.46	D113-06-12-
3/8"	1"	55.06	47.00	7.10	23.90	17.56	34.92	17.46	D113-06-16-
1/2"	1/8"	38.63	28.70	4.80	9.60	22.63	20.64	22.22	D113-08-02-
1/2"	1/4"	43.23	33.30	7.10	14.30	22.63	20.64	22.22	D113-08-04-
1/2"	3/8"	43.23	33.30	9.60	14.30	22.63	20.64	22.22	D113-08-06-
1/2"	1/2"	48.83	38.90	10.40	19.10	22.63	22.22	22.22	D113-08-08-
1/2"	3/4"	50.33	40.40	10.40	19.10	22.63	26.98	22.22	D113-08-12-
1/2"	1"	56.93	47.00	10.40	23.90	22.63	34.92	22.22	D113-08-16-
5/8"	1/4"	43.80	33.80	7.10	14.30	24.30	23.81	25.40	D113-10-04-
5/8"	3/8"	44.00	34.00	9.60	14.30	24.30	23.81	25.40	D113-10-06-
5/8"	1/2"	48.90	38.90	11.90	19.10	24.30	23.81	25.40	D113-10-08-
5/8"	3/4"	50.40	40.40	12.70	19.10	24.30	26.98	25.40	D113-10-12-
3/4"	3/8"	45.09	34.00	10.40	14.30	25.39	26.98	28.58	D113-12-06-
3/4"	1/2"	51.49	40.40	11.90	19.10	25.39	26.98	28.58	D113-12-08-
3/4"	3/4"	51.49	40.40	15.80	19.10	25.39	26.98	28.58	D113-12-12-
3/4"	1"	58.09	47.00	15.80	23.90	25.39	34.92	28.58	D113-12-16-
7/8"	1/2"	55.51	40.40	11.90	19.10	29.41	30.16	31.75	D113-14-08-
7/8"	3/4"	55.51	40.40	15.80	19.10	29.41	30.16	31.75	D113-14-12-
7/8"	1"	62.11	47.00	18.30	23.90	29.41	34.92	31.75	D113-14-16-
1"	1/2"	58.43	45.20	11.90	19.10	32.23	34.92	38.10	D113-16-08-
1"	3/4"	58.43	45.20	15.80	19.10	32.23	34.92	38.10	D113-16-12-
1"	1"	63.23	50.00	22.30	23.90	32.23	34.92	38.10	D113-16-16-
1-1/4"	1"	75.53	55.10	22.30	23.90	41.23	44.45	50.00	D113-20-16-
1-1/4"	1-1/4"	75.53	55.10	27.70	23.90	41.23	44.45	50.00	D113-20-20-
1-1/2"	1-1/2"	89.73	61.70	34.00	26.20	50.83	57.15	57.15	D113-24-24-

All dimensions unless specified are in mm.

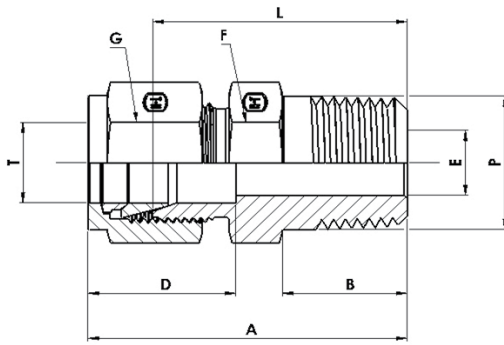


**D113-Male Connector
Tube x Male NPT Threads**

For Metric Tube

T Tube O.D.	P NPT Male	A	L	E	B	D	F	G	Hy-Tech Part Number
3	1/8"	29.70	23.10	2.40	9.60	12.90	12.00	12.00	D113-03M-02-
3	1/4"	35.60	29.00	2.40	14.30	12.90	14.00	12.00	D113-03M-04-
6	1/8"	32.80	25.40	4.80	9.60	15.30	14.00	14.00	D113-06M-02-
6	1/4"	37.60	30.20	4.80	14.30	15.30	14.00	14.00	D113-06M-04-
6	3/8"	38.40	31.00	4.80	14.30	15.30	19.00	14.00	D113-06M-06-
6	1/2"	44.70	37.30	4.80	19.10	15.30	22.00	14.00	D113-06M-08-
8	1/8"	34.20	26.70	4.80	9.60	16.20	16.00	16.00	D113-08M-02-
8	1/4"	38.70	31.20	6.40	14.30	16.20	16.00	16.00	D113-08M-04-
8	3/8"	39.30	31.80	6.40	14.30	16.20	19.00	16.00	D113-08M-06-
8	1/2"	44.80	37.30	6.40	19.10	16.20	22.00	16.00	D113-08M-08-
10	1/8"	36.30	28.70	4.80	9.60	17.20	19.00	19.00	D113-10M-02-
10	1/4"	40.90	33.30	7.10	14.30	17.20	19.00	19.00	D113-10M-04-
10	3/8"	40.90	33.30	7.90	14.30	17.20	19.00	19.00	D113-10M-06-
10	1/2"	45.70	38.10	7.90	19.10	17.20	22.00	19.00	D113-10M-08-
10	3/4"	46.50	38.90	7.90	19.10	17.20	27.00	19.00	D113-10M-12-
12	1/8"	38.80	28.70	4.80	9.60	22.80	22.00	22.00	D113-12M-02-
12	1/4"	43.40	33.30	7.10	14.30	22.80	22.00	22.00	D113-12M-04-
12	3/8"	43.40	33.30	9.50	14.30	22.80	22.00	22.00	D113-12M-06-
12	1/2"	48.20	38.10	9.50	19.10	22.80	22.00	22.00	D113-12M-08-
12	3/4"	49.00	38.90	9.50	19.10	22.80	27.00	22.00	D113-12M-12-
14	1/4"	44.50	34.00	7.10	14.30	24.40	24.00	25.00	D113-14M-04-
14	3/8"	44.50	34.00	9.50	14.30	24.40	24.00	25.00	D113-14M-06-
14	1/2"	44.50	34.00	11.10	19.10	24.40	24.00	25.00	D113-14M-08-
15	1/2"	49.00	38.90	11.90	19.10	24.40	24.00	25.00	D113-15M-08-
16	3/8"	44.10	34.00	9.50	14.30	24.40	24.00	25.00	D113-16M-06-
16	1/2"	49.00	38.90	11.90	19.10	24.40	24.00	25.00	D113-16M-08-
16	3/4"	49.00	38.90	12.70	19.10	24.40	27.00	25.00	D113-16M-12-
18	1/2"	50.50	40.40	11.90	19.10	24.40	27.00	30.00	D113-18M-08-
18	3/4"	50.50	40.40	15.10	19.10	24.40	27.00	30.00	D113-18M-12-
20	1/2"	52.30	42.20	11.90	19.10	26.00	30.00	32.00	D113-20M-08-
20	3/4"	52.30	42.20	15.90	19.10	26.00	30.00	32.00	D113-20M-12-
22	3/4"	52.30	42.20	15.90	19.10	26.00	30.00	32.00	D113-22M-12-
22	1"	57.90	47.80	18.30	23.90	26.00	35.00	32.00	D113-22M-16-
25	1/2"	57.50	45.20	11.90	19.10	31.30	35.00	38.00	D113-25M-08-
25	3/4"	57.50	45.20	15.90	19.10	31.30	35.00	38.00	D113-25M-12-
25	1"	62.30	50.00	21.80	23.90	31.30	35.00	38.00	D113-25M-16-
28	1"	72.40	51.60	21.80	23.90	36.60	41.00	46.00	D113-28M-16-
28	1-1/4"	73.10	52.30	21.80	23.90	36.60	46.00	46.00	D113-28M-20-
30	1-1/4"	77.20	55.60	26.20	23.90	39.60	46.00	50.00	D113-30M-20-
32	1-1/4"	79.60	56.60	28.60	23.90	42.00	46.00	50.00	D113-32M-20-

All dimensions unless specified are in mm.

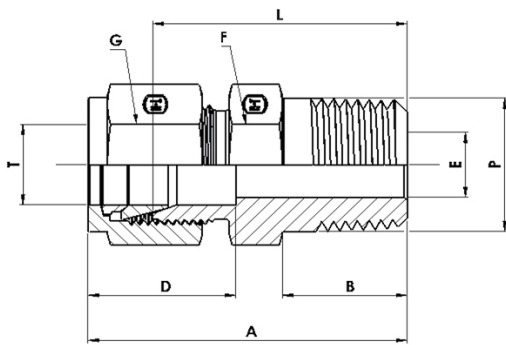


D113-Male Connector Tube x Male BSPT Threads

For Fractional Tube

T Tube O.D.	P BSPT Male	A	L	E	B	D	F	G	Hy-Tech Part Number
1/8"	1/8"	31.77	23.90	2.30	9.60	14.22	11.11	11.11	D113-02-02PT-
1/8"	1/4"	36.87	29.00	2.30	14.30	14.22	14.28	11.11	D113-02-04PT-
1/8"	3/8"	37.07	29.20	2.30	14.30	14.22	17.46	11.11	D113-02-06PT-
1/8"	1/2"	43.47	35.60	2.30	19.10	14.22	22.22	11.11	D113-02-08PT-
1/4"	1/8"	32.74	25.40	4.80	9.60	15.34	12.70	14.28	D113-04-02PT-
1/4"	1/4"	37.84	30.50	4.80	14.30	15.34	14.28	14.28	D113-04-04PT-
1/4"	3/8"	38.34	31.00	4.80	14.30	15.34	17.46	14.28	D113-04-06PT-
1/4"	1/2"	44.64	37.30	4.80	19.10	15.34	22.22	14.28	D113-04-08PT-
1/4"	3/4"	46.24	38.90	4.80	19.10	15.34	26.98	14.28	D113-04-12PT-
5/16"	1/8"	34.20	26.70	4.80	9.60	16.30	14.28	15.88	D113-05-02PT-
5/16"	1/4"	38.70	31.20	6.30	14.30	16.30	14.28	15.88	D113-05-04PT-
5/16"	3/8"	39.30	31.80	6.30	14.30	16.30	17.46	15.88	D113-05-06PT-
3/8"	1/8"	36.06	28.00	4.80	9.60	17.56	15.88	17.46	D113-06-02PT-
3/8"	1/4"	40.56	32.50	7.10	14.30	17.56	15.88	17.46	D113-06-04PT-
3/8"	3/8"	40.56	32.50	7.10	14.30	17.56	17.46	17.46	D113-06-06PT-
3/8"	1/2"	46.96	38.90	7.10	19.10	17.56	22.22	17.46	D113-06-08PT-
3/8"	3/4"	48.46	40.40	7.10	19.10	17.56	26.98	17.46	D113-06-12PT-
3/8"	1"	55.06	47.00	7.10	23.90	17.56	34.92	17.46	D113-06-16PT-
1/2"	1/8"	38.63	28.70	4.80	9.60	22.63	20.64	22.22	D113-08-02PT-
1/2"	1/4"	43.23	33.30	7.10	14.30	22.63	20.64	22.22	D113-08-04PT-
1/2"	3/8"	43.23	33.30	9.60	14.30	22.63	20.64	22.22	D113-08-06PT-
1/2"	1/2"	48.83	38.90	10.40	19.10	22.63	22.22	22.22	D113-08-08PT-
1/2"	3/4"	50.33	40.40	10.40	19.10	22.63	26.98	22.22	D113-08-12PT-
1/2"	1"	56.93	47.00	10.40	23.90	22.63	34.92	22.22	D113-08-16PT-
5/8"	1/4"	43.80	33.80	7.10	14.30	24.30	23.81	25.40	D113-10-04PT-
5/8"	3/8"	44.00	34.00	9.60	14.30	24.30	23.81	25.40	D113-10-06PT-
5/8"	1/2"	48.90	38.90	11.90	19.10	24.30	23.81	25.40	D113-10-08PT-
5/8"	3/4"	50.40	40.40	12.70	19.10	24.30	26.98	25.40	D113-10-12PT-
3/4"	3/8"	45.09	34.00	10.40	14.30	25.39	26.98	28.58	D113-12-06PT-
3/4"	1/2"	51.49	40.40	11.90	19.10	25.39	26.98	28.58	D113-12-08PT-
3/4"	3/4"	51.49	40.40	15.80	19.10	25.39	26.98	28.58	D113-12-12PT-
3/4"	1"	58.09	47.00	15.80	23.90	25.39	34.92	28.58	D113-12-16PT-
7/8"	1/2"	55.51	40.40	11.90	19.10	29.41	30.16	31.75	D113-14-08PT-
7/8"	3/4"	55.51	40.40	15.80	19.10	29.41	30.16	31.75	D113-14-12PT-
7/8"	1"	62.11	47.00	18.30	23.90	29.41	34.92	31.75	D113-14-16PT-
1"	1/2"	58.43	45.20	11.90	19.10	32.23	34.92	38.10	D113-16-08PT-
1"	3/4"	58.43	45.20	15.80	19.10	32.23	34.92	38.10	D113-16-12PT-
1"	1"	63.23	50.00	22.30	23.90	32.23	34.92	38.10	D113-16-16PT-
1-1/4"	1"	75.53	55.10	22.30	23.90	41.23	44.45	50.00	D113-20-16PT-
1-1/4"	1-1/4"	75.53	55.10	27.70	23.90	41.23	44.45	50.00	D113-20-20PT-
1-1/2"	1-1/2"	89.73	61.70	34.00	26.20	50.83	57.15	57.15	D113-24-24PT-

All dimensions unless specified are in mm.

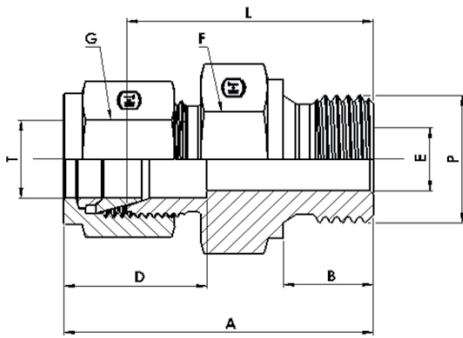


D113-Male Connector Tube x Male BSPT Threads

For Metric Tube

T Tube O.D.	P BSPT Male	A	L	E	B	D	F	G	Hy-Tech Part Number
3	1/8"	29.70	23.10	2.40	9.60	12.90	12.00	12.00	D113-03M-02PT-
3	1/4"	35.60	29.00	2.40	14.30	12.90	14.00	12.00	D113-03M-04PT-
6	1/8"	32.80	25.40	4.80	9.60	15.30	14.00	14.00	D113-06M-02PT-
6	1/4"	37.60	30.20	4.80	14.30	15.30	14.00	14.00	D113-06M-04PT-
6	3/8"	38.40	31.00	4.80	14.30	15.30	19.00	14.00	D113-06M-06PT-
6	1/2"	44.70	37.30	4.80	19.10	15.30	22.00	14.00	D113-06M-08PT-
8	1/8"	34.20	26.70	4.80	9.60	16.20	16.00	16.00	D113-08M-02PT-
8	1/4"	38.70	31.20	6.40	14.30	16.20	16.00	16.00	D113-08M-04PT-
8	3/8"	39.30	31.80	6.40	14.30	16.20	19.00	16.00	D113-08M-06PT-
8	1/2"	44.80	37.30	6.40	19.10	16.20	22.00	16.00	D113-08M-08PT-
10	1/8"	36.30	28.70	4.80	9.60	17.20	19.00	19.00	D113-10M-02PT-
10	1/4"	40.90	33.30	7.10	14.30	17.20	19.00	19.00	D113-10M-04PT-
10	3/8"	40.90	33.30	7.90	14.30	17.20	19.00	19.00	D113-10M-06PT-
10	1/2"	45.70	38.10	7.90	19.10	17.20	22.00	19.00	D113-10M-08PT-
10	3/4"	46.50	38.90	7.90	19.10	17.20	27.00	19.00	D113-10M-12PT-
12	1/8"	38.80	28.70	4.80	9.60	22.80	22.00	22.00	D113-12M-02PT-
12	1/4"	43.40	33.30	7.10	14.30	22.80	22.00	22.00	D113-12M-04PT-
12	3/8"	43.40	33.30	9.50	14.30	22.80	22.00	22.00	D113-12M-06PT-
12	1/2"	48.20	38.10	9.50	19.10	22.80	22.00	22.00	D113-12M-08PT-
12	3/4"	49.00	38.90	9.50	19.10	22.80	27.00	22.00	D113-12M-12PT-
14	1/4"	44.50	34.00	7.10	14.30	24.40	24.00	25.00	D113-14M-04PT-
14	3/8"	44.50	34.00	9.50	14.30	24.40	24.00	25.00	D113-14M-06PT-
14	1/2"	44.50	34.00	11.10	19.10	24.40	24.00	25.00	D113-14M-08PT-
15	1/2"	49.00	38.90	11.90	19.10	24.40	24.00	25.00	D113-15M-08PT-
16	3/8"	44.10	34.00	9.50	14.30	24.40	24.00	25.00	D113-16M-06PT-
16	1/2"	49.00	38.90	11.90	19.10	24.40	24.00	25.00	D113-16M-08PT-
16	3/4"	49.00	38.90	12.70	19.10	24.40	27.00	25.00	D113-16M-12PT-
18	1/2"	50.50	40.40	11.90	19.10	24.40	27.00	30.00	D113-18M-08PT-
18	3/4"	50.50	40.40	15.10	19.10	24.40	27.00	30.00	D113-18M-12PT-
20	1/2"	52.30	42.20	11.90	19.10	26.00	30.00	32.00	D113-20M-08PT-
20	3/4"	52.30	42.20	15.90	19.10	26.00	30.00	32.00	D113-20M-12PT-
22	3/4"	52.30	42.20	15.90	19.10	26.00	30.00	32.00	D113-22M-12PT-
22	1"	57.90	47.80	18.30	23.90	26.00	35.00	32.00	D113-22M-16PT-
25	1/2"	57.50	45.20	11.90	19.10	31.30	35.00	38.00	D113-25M-08PT-
25	3/4"	57.50	45.20	15.90	19.10	31.30	35.00	38.00	D113-25M-12PT-
25	1"	62.30	50.00	21.80	23.90	31.30	35.00	38.00	D113-25M-16PT-
28	1"	72.40	51.60	21.80	23.90	36.60	41.00	46.00	D113-28M-16PT-
28	1-1/4"	73.10	52.30	21.80	23.90	36.60	46.00	46.00	D113-28M-20PT-
30	1-1/4"	77.20	55.60	26.20	23.90	39.60	46.00	50.00	D113-30M-20PT-
32	1-1/4"	79.60	56.60	28.60	23.90	42.00	46.00	50.00	D113-32M-20PT-

All dimensions unless specified are in mm.

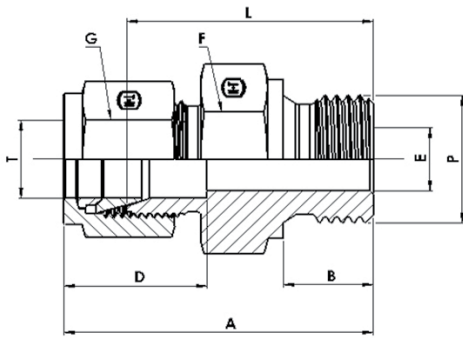


D113-Male Connector Tube x Male BSPP Threads

For Fractional Tube

T Tube O.D.	P BSPP Male	A	L	E	B	D	F	G	Hy-Tech Part Number
1/8"	1/8"	31.27	23.40	2.30	7.10	14.22	14.28	11.11	D113-02-02C-
1/8"	1/4"	36.57	28.70	2.30	11.20	14.22	19.05	11.11	D113-02-04C-
1/8"	3/8"	37.67	29.80	2.30	11.20	14.22	22.22	11.11	D113-02-06C-
1/4"	1/8"	32.24	24.90	4.80	7.10	15.34	14.28	14.28	D113-04-02C-
1/4"	1/4"	37.64	30.30	4.80	11.20	15.34	19.05	14.28	D113-04-04C-
1/4"	3/8"	38.84	31.50	4.80	11.20	15.34	22.22	14.28	D113-04-06C-
1/4"	1/2"	44.74	37.40	4.80	14.20	15.34	26.98	14.28	D113-04-08C-
3/8"	1/8"	34.46	26.40	4.80	7.10	17.56	15.88	17.46	D113-06-02C-
3/8"	1/4"	39.86	31.80	7.10	11.20	17.56	19.05	17.46	D113-06-04C-
3/8"	3/8"	41.16	33.10	7.10	11.20	17.56	22.22	17.46	D113-06-06C-
3/8"	1/2"	46.96	38.90	7.10	14.20	17.56	26.98	17.46	D113-06-08C-
1/2"	1/4"	42.43	32.50	7.10	11.20	22.63	20.64	22.22	D113-08-04C-
1/2"	3/8"	43.03	33.10	9.60	11.20	22.63	22.22	22.22	D113-08-06C-
1/2"	1/2"	48.83	38.90	10.40	14.20	22.63	26.98	22.22	D113-08-08C-
3/4"	1/2"	49.99	38.90	11.90	14.20	25.39	26.98	28.58	D113-12-08C-
3/4"	3/4"	53.79	42.70	15.80	15.70	25.39	33.33	28.58	D113-12-12C-
1"	1/2"	56.93	43.70	11.90	14.20	32.23	34.92	38.10	D113-16-08C-
1"	3/4"	56.93	43.70	15.80	15.70	32.23	34.92	38.10	D113-16-12C-
1"	1"	61.03	47.80	22.30	18.30	32.23	41.28	38.10	D113-16-16C-

All dimensions unless specified are in mm.

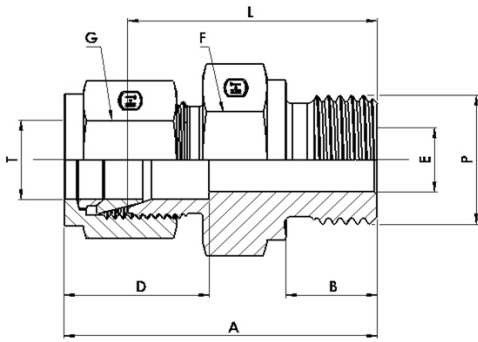


D113-Male Connector Tube x Male BSPP Threads

For Metric Tube

T Tube O.D.	P BSPP Male	A	L	E	B	D	F	G	Hy-Tech Part Number
3	1/8"	30.00	23.40	2.40	7.10	12.90	14.00	12.00	D113-03M-02C-
3	1/4"	35.30	28.70	2.40	11.20	12.90	19.00	12.00	D113-03M-04C-
6	1/8"	32.30	24.90	4.00	7.10	15.30	14.00	14.00	D113-06M-02C-
6	1/4"	37.60	30.20	4.80	11.20	15.30	19.00	14.00	D113-06M-04C-
6	3/8"	38.90	31.50	4.80	11.20	15.30	22.00	14.00	D113-06M-06C-
6	1/2"	44.70	37.30	4.80	14.20	15.30	27.00	14.00	D113-06M-08C-
8	1/8"	33.20	25.70	4.00	7.10	16.20	16.00	16.00	D113-08M-02C-
8	1/4"	38.50	31.00	5.90	11.20	16.20	19.00	16.00	D113-08M-04C-
8	3/8"	39.80	32.30	6.40	11.20	16.20	22.00	16.00	D113-08M-06C-
8	1/2"	45.60	38.10	6.40	14.20	16.20	27.00	16.00	D113-08M-08C-
10	1/4"	39.40	31.80	5.90	11.20	17.20	19.00	19.00	D113-10M-04C-
10	3/8"	40.60	33.00	7.90	11.20	17.20	22.00	19.00	D113-10M-06C-
10	1/2"	46.50	38.90	7.90	14.20	17.20	27.00	19.00	D113-10M-08C-
12	1/4"	42.60	32.50	5.90	11.20	22.80	22.00	22.00	D113-12M-04C-
12	3/8"	43.10	33.00	7.90	11.20	22.80	22.00	22.00	D113-12M-06C-
12	1/2"	49.00	38.90	9.50	14.20	22.80	27.00	22.00	D113-12M-08C-
12	3/4"	52.80	42.70	9.50	15.70	22.80	35.00	22.00	D113-12M-12C-
14	3/8"	43.90	33.40	7.90	11.20	24.40	24.00	25.00	D113-14M-06C-
14	1/2"	59.50	49.00	11.10	14.20	24.40	27.00	25.00	D113-14M-08C-
15	3/8"	45.50	35.40	7.90	11.20	24.40	24.00	25.00	D113-15M-08C-
15	1/2"	59.10	49.00	11.90	14.20	24.40	27.00	25.00	D113-15M-08C-
15	3/4"	62.90	52.80	11.90	15.70	24.40	35.00	25.00	D113-15M-08C-
16	3/8"	43.90	33.80	7.90	11.20	24.40	24.00	25.00	D113-16M-06C-
16	1/2"	49.00	38.90	11.90	14.20	24.40	27.00	25.00	D113-16M-08C-
16	3/4"	62.90	52.80	12.70	15.70	24.40	35.00	25.00	D113-16M-12C-
18	1/2"	59.10	49.00	11.90	14.20	24.40	27.00	30.00	D113-18M-08C-
18	3/4"	62.90	52.80	15.10	15.70	24.40	35.00	30.00	D113-18M-12C-
20	1/2"	50.50	40.40	11.90	14.20	26.00	30.00	32.00	D113-20M-08C-
20	3/4"	52.80	42.70	15.90	15.70	26.00	35.00	32.00	D113-20M-12C-
22	3/4"	52.80	42.70	15.90	15.70	26.00	35.00	32.00	D113-22M-12C-
22	1"	55.30	45.20	18.30	18.30	26.00	41.00	32.00	D113-22M-16C-
25	3/4"	57.50	45.20	15.90	15.70	31.30	35.00	38.00	D113-25M-12C-
25	1"	60.10	47.80	19.80	18.30	31.30	41.00	38.00	D113-25M-16C-
28	1"	70.10	49.30	19.80	18.30	36.60	41.00	46.00	D113-28M-16C-
28	1-1/4"	73.90	53.10	21.80	19.80	36.60	50.00	46.00	D113-28M-20C-
30	1-1/4"	76.50	54.90	26.20	19.80	39.60	50.00	50.00	D113-30M-20C-
32	1-1/4"	78.90	55.90	28.60	19.80	42.00	50.00	50.00	D113-32M-20C-

All dimensions unless specified are in mm.

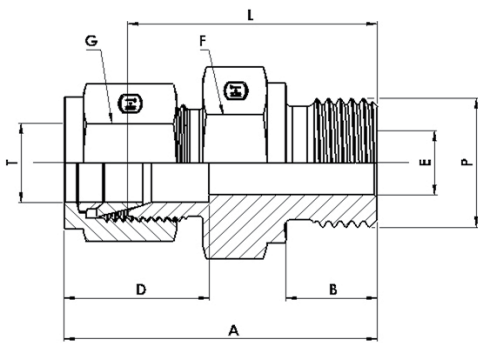


D113-Male Connector Tube x Male BSPP Threads

For Fractional Tube

T Tube O.D.	P BSPP Male	A	L	E	B	D	F	G	Hy-Tech Part Number
1/8"	1/8"	31.27	23.40	2.30	7.10	14.22	14.28	11.11	D113-02-02B-
1/8"	1/4"	36.57	28.70	2.30	11.20	14.22	19.05	11.11	D113-02-04B-
1/4"	1/8"	32.24	24.90	4.00	7.10	15.34	14.28	14.28	D113-04-02B-
1/4"	1/4"	37.54	30.20	4.80	11.20	15.34	19.05	14.28	D113-04-04B-
1/4"	3/8"	38.84	31.50	4.80	11.20	15.34	22.22	14.28	D113-04-06B-
1/4"	1/2"	44.74	37.40	4.80	14.20	15.34	26.98	14.28	D113-04-08B-
3/8"	1/4"	39.86	31.80	5.80	11.20	17.56	19.05	17.46	D113-06-04B-
3/8"	3/8"	41.06	33.00	7.10	11.20	17.56	22.22	17.46	D113-06-06B-
3/8"	1/2"	46.96	38.90	7.10	14.20	17.56	26.98	17.46	D113-06-08B-
1/2"	1/4"	42.43	32.50	5.80	11.20	22.63	20.64	22.22	D113-08-04B-
1/2"	3/8"	42.93	33.00	7.90	11.20	22.63	22.22	22.22	D113-08-06B-
1/2"	1/2"	48.83	38.90	10.40	14.20	22.63	26.98	22.22	D113-08-08B-
3/4"	1/2"	49.99	38.90	11.90	14.20	25.39	26.98	28.58	D113-12-08B-
3/4"	3/4"	53.79	42.70	15.80	15.70	25.39	33.33	28.58	D113-12-12B-
1"	1/2"	56.93	43.70	11.90	14.20	32.23	34.92	38.10	D113-16-08B-
1"	3/4"	58.43	45.20	15.80	15.70	32.23	34.92	38.10	D113-16-12B-
1"	1"	61.03	47.80	19.80	18.30	32.23	41.28	38.10	D113-16-16B-

All dimensions unless specified are in mm.

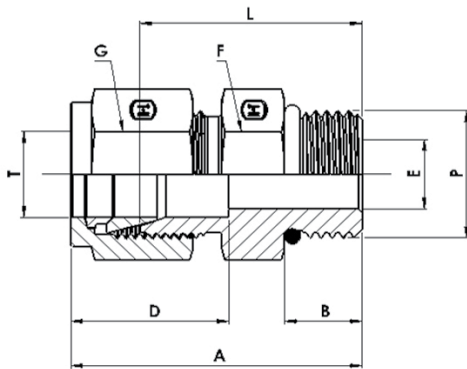


D113-Male Connector Tube x Male BSPP Threads

For Metric Tube

T Tube O.D.	P BSPP Male	A	L	E	B	D	F	G	Hy-Tech Part Number
3	1/8"	30.00	23.40	2.40	7.10	12.90	14.00	12.00	D113-03M-02B-
3	1/4"	35.30	28.70	2.40	11.20	12.90	19.00	12.00	D113-03M-04B-
6	1/8"	32.30	24.90	4.00	7.10	15.30	14.00	14.00	D113-06M-02B-
6	1/4"	37.60	30.20	4.80	11.20	15.30	19.00	14.00	D113-06M-04B-
6	3/8"	38.90	31.50	4.80	11.20	15.30	22.00	14.00	D113-06M-06B-
6	1/2"	44.70	37.30	4.80	14.20	15.30	27.00	14.00	D113-06M-08B-
8	1/8"	33.20	25.70	4.00	7.10	16.20	16.00	16.00	D113-08M-02B-
8	1/4"	38.50	31.00	5.90	11.20	16.20	19.00	16.00	D113-08M-04B-
8	3/8"	39.80	32.30	6.40	11.20	16.20	22.00	16.00	D113-08M-06B-
8	1/2"	45.60	38.10	6.40	14.20	16.20	27.00	16.00	D113-08M-08B-
10	1/4"	39.40	31.80	5.90	11.20	17.20	19.00	19.00	D113-10M-04B-
10	3/8"	40.60	33.00	7.90	11.20	17.20	22.00	19.00	D113-10M-06B-
10	1/2"	46.50	38.90	7.90	14.20	17.20	27.00	19.00	D113-10M-08B-
12	1/4"	42.60	32.50	5.90	11.20	22.80	22.00	22.00	D113-12M-04B-
12	3/8"	43.10	33.00	7.90	11.20	22.80	22.00	22.00	D113-12M-06B-
12	1/2"	49.00	38.90	9.50	14.20	22.80	27.00	22.00	D113-12M-08B-
12	3/4"	52.80	42.70	9.50	15.70	22.80	35.00	22.00	D113-12M-12B-
15	1/2"	59.10	49.00	11.90	14.20	24.40	27.00	25.00	D113-15M-08B-
16	3/8"	43.90	33.80	7.90	11.20	24.40	24.00	25.00	D113-16M-06B-
16	1/2"	49.00	38.90	11.90	14.20	24.40	27.00	25.00	D113-16M-08B-
18	1/2"	59.10	49.00	11.90	14.20	24.40	27.00	30.00	D113-18M-08B-
18	3/4"	62.90	52.80	15.10	15.70	24.40	35.00	30.00	D113-18M-12B-
20	1/2"	50.50	40.40	11.90	14.20	26.00	30.00	32.00	D113-20M-08B-
20	3/4"	52.80	42.70	15.90	15.70	26.00	35.00	32.00	D113-20M-12B-
22	3/4"	52.80	42.70	15.90	15.70	26.00	35.00	32.00	D113-22M-12B-
22	1"	55.30	45.20	18.30	18.30	26.00	41.00	32.00	D113-22M-16B-
25	3/4"	57.50	45.20	15.90	15.70	31.30	35.00	38.00	D113-25M-12B-
25	1"	60.10	47.80	19.80	18.30	31.30	41.00	38.00	D113-25M-16B-
28	1"	70.10	49.30	19.80	18.30	36.60	41.00	46.00	D113-28M-16B-
28	1-1/4"	73.90	53.10	21.80	19.80	36.60	50.00	46.00	D113-28M-20B-
30	1-1/4"	76.50	54.90	26.20	19.80	39.60	50.00	50.00	D113-30M-20B-
32	1-1/4"	78.90	55.90	28.60	19.80	42.00	50.00	50.00	D113-32M-20B-

All dimensions unless specified are in mm.



D113-Male Connector Tube x Male SAE Threads

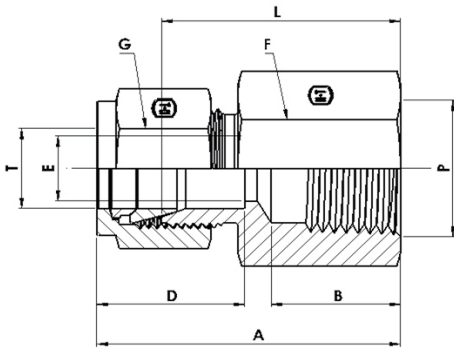
For Fractional Tube

T Tube O.D.	P SAE Male	A	L	E	B	D	F	G	Hy-Tech Part Number
1/8"	5/16-24	31.17	23.30	2.30	7.50	14.22	11.11	11.11	D113-02-02L
1/8"	7/16-20	33.07	25.20	2.30	9.10	14.22	14.28	11.11	D113-02-04L
1/8"	9/16-18	34.77	26.90	2.30	10.00	14.22	17.46	11.11	D113-02-06L
1/4"	5/16-24	32.44	25.10	2.30	7.50	15.34	12.70	14.28	D113-04-02L
1/4"	7/16-20	34.04	26.70	4.80	9.10	15.34	14.28	14.28	D113-04-04L
1/4"	9/16-18	35.54	28.20	4.80	10.00	15.34	17.46	14.28	D113-04-06L
1/4"	3/4-16	37.54	30.20	4.80	11.10	15.34	22.22	14.28	D113-04-08L
1/4"	7/8-14	40.74	33.40	4.80	12.70	15.34	25.40	14.28	D113-04-10L
5/16"	1/2-20	34.90	27.40	6.30	9.10	16.30	15.88	15.88	D113-05-05L
3/8"	7/16-20	36.26	28.20	4.60	9.10	17.56	15.88	17.46	D113-06-04L
3/8"	9/16-18	37.76	29.70	7.10	10.00	17.56	17.46	17.46	D113-06-06L
3/8"	3/4-16	39.86	31.80	7.10	11.10	17.56	22.22	17.46	D113-06-08L
3/8"	7/8-14	42.86	34.80	7.10	12.70	17.56	25.40	17.46	D113-06-10L
1/2"	9/16-18	38.93	29.00	7.10	10.00	22.63	20.64	22.22	D113-08-06L
1/2"	3/4-16	41.73	31.80	10.40	11.10	22.63	22.22	22.22	D113-08-08L
1/2"	7/8-14	44.73	34.80	10.40	12.70	22.63	25.40	22.22	D113-08-10L
1/2"	1-1/16-12	48.83	38.90	10.40	15.10	22.63	31.75	22.22	D113-08-12L
5/8"	3/4-16	41.80	31.80	10.70	11.10	24.30	23.81	25.40	D113-10-08L
5/8"	7/8-14	45.10	35.10	12.70	12.70	24.30	25.40	25.40	D113-10-10L
3/4"	3/4-16	46.89	35.80	10.70	11.10	25.39	26.98	28.58	D113-12-08L
3/4"	1-1/16-12	49.99	38.90	15.80	15.10	25.39	31.75	28.58	D113-12-12L
3/4"	1-5/16-12	50.79	39.70	16.00	15.10	25.39	38.10	28.58	D113-12-16L
7/8"	1-3/16-12	54.01	38.90	18.30	15.10	29.41	34.92	31.75	D113-14-14L
1"	1-1/16-12	54.33	41.10	16.80	15.10	32.23	34.92	38.10	D113-16-12L
1"	1-5/16-12	55.43	42.20	22.40	15.10	32.23	38.10	38.10	D113-16-16L
1-1/4"	1-5/8-12	66.63	46.20	27.70	15.10	41.23	47.62	50.00	D113-20-20L
1-1/2"	1-7/8-12	78.53	50.50	34.00	15.10	50.83	53.98	57.15	D113-24-24L

For Metric Tube

T Tube O.D.	P SAE Male	A	L	E	B	D	F	G	Hy-Tech Part Number
6	9/16-18	35.60	28.20	4.80	10.00	15.30	19.00	14.00	D113-06M-06L
10	9/16-18	37.30	29.70	7.10	10.00	17.20	19.00	19.00	D113-10M-06L
10	3/4-16	39.40	31.80	7.90	11.10	17.20	22.00	19.00	D113-10M-08L
12	7/16-20	39.00	28.90	5.20	9.10	22.80	22.00	22.00	D113-12M-04L
12	9/16-18	39.90	29.80	7.10	10.00	22.80	22.00	22.00	D113-12M-06L
12	3/4-16	41.90	31.80	9.50	11.10	22.80	22.00	22.00	D113-12M-08L

All dimensions unless specified are in mm.

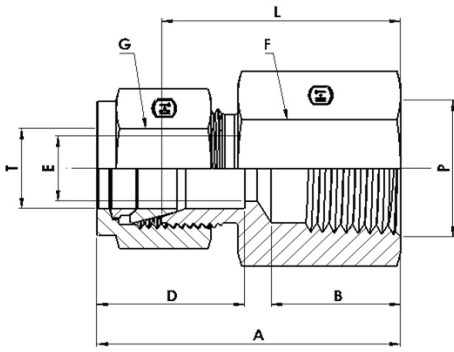


D114-Female Connector Tube x Female NPT Threads

For Fractional Tube

T Tube O.D.	P NPT Female	A	L	E	B	D	F	G	Hy-Tech Part Number
1/8"	1/8"	29.97	22.10	2.30	10.40	14.22	14.28	11.11	D114-02-02-
1/8"	1/4"	34.77	26.90	2.30	15.00	14.22	19.05	11.11	D114-02-04-
1/4"	1/8"	34.44	23.90	4.80	10.40	15.34	14.28	14.28	D114-04-02-
1/4"	1/4"	39.04	28.50	4.80	15.00	15.34	19.05	14.28	D114-04-04-
1/4"	3/8"	40.74	30.20	4.80	15.00	15.34	22.22	14.28	D114-04-06-
1/4"	1/2"	45.54	35.00	4.80	19.80	15.34	26.98	14.28	D114-04-08-
5/16"	1/8"	32.10	24.60	6.40	10.40	16.30	14.28	15.88	D114-05-02-
5/16"	1/4"	37.00	29.50	6.40	15.00	16.30	19.05	15.88	D114-05-04-
3/8"	1/8"	33.46	25.40	7.10	10.40	17.56	15.88	17.46	D114-06-02-
3/8"	1/4"	38.26	30.20	7.10	15.00	17.56	19.05	17.46	D114-06-04-
3/8"	3/8"	39.86	31.80	7.10	15.00	17.56	22.22	17.46	D114-06-06-
3/8"	1/2"	44.66	36.60	7.10	19.80	17.56	26.98	17.46	D114-06-08-
3/8"	3/4"	48.46	40.40	7.10	20.60	17.56	33.33	17.46	D114-06-12-
1/2"	1/4"	40.13	30.20	10.40	15.00	22.63	20.64	22.22	D114-08-04-
1/2"	3/8"	40.13	30.20	10.40	15.00	22.63	22.22	22.22	D114-08-04-
1/2"	1/2"	46.53	36.60	10.40	19.80	22.63	26.98	22.22	D114-08-08-
1/2"	3/4"	48.03	38.10	10.40	20.60	22.63	33.33	22.22	D114-08-12-
5/8"	3/8"	41.80	31.80	12.70	15.00	24.30	23.81	25.40	D114-10-06-
5/8"	1/2"	46.60	36.60	12.70	19.80	24.30	26.98	25.40	D114-10-08-
5/8"	3/4"	48.10	38.10	12.70	20.60	24.30	33.33	25.40	D114-10-12-
3/4"	1/2"	47.69	36.60	15.80	19.80	25.39	26.98	28.58	D114-12-08-
3/4"	3/4"	49.19	38.10	15.80	20.60	25.39	33.33	28.58	D114-12-12-
7/8"	3/4"	54.71	39.60	18.30	20.60	29.41	33.33	31.75	D114-14-12-
1"	3/4"	54.43	41.20	22.40	20.60	32.23	34.93	38.10	D114-16-12-
1"	1"	63.23	50.00	22.40	25.40	32.23	41.28	38.10	D114-16-16-
1-1/4"	1-1/4"	73.03	52.60	27.70	25.40	41.23	53.98	50.00	D114-20-20-
1-1/2"	1-1/2"	84.23	56.20	34.00	27.60	50.83	60.32	57.15	D114-24-24-

All dimensions unless specified are in mm.

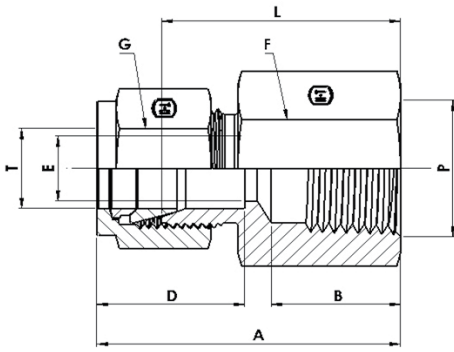


D114-Female Connector Tube x Female NPT Threads

For Metric Tube

T Tube O.D.	P SAE Male	A	L	E	B	D	F	G	Hy-Tech Part Number
3	1/8"	28.70	22.10	2.40	10.40	12.90	14.00	12.00	D114-03M-02-
3	1/4"	33.50	26.90	2.40	15.00	12.90	19.00	12.00	D114-03M-04-
6	1/8"	31.30	23.90	4.80	10.40	15.30	14.00	14.00	D114-06M-02-
6	1/4"	35.80	28.40	4.80	15.00	15.30	19.00	14.00	D114-06M-04-
6	3/8"	37.60	30.20	4.80	15.00	15.30	22.00	14.00	D114-06M-06-
6	1/2"	42.50	35.10	4.80	19.80	15.30	27.00	14.00	D114-06M-08-
8	1/8"	32.10	24.60	6.40	10.40	16.20	16.00	16.00	D114-08M-02-
8	1/4"	37.00	29.50	6.40	15.00	16.20	19.00	16.00	D114-08M-04-
8	3/8"	38.50	31.00	6.40	15.00	16.20	22.00	16.00	D114-08M-06-
8	1/2"	43.30	35.80	6.40	19.80	16.20	27.00	16.00	D114-08M-08-
10	1/4"	37.80	30.20	7.90	15.00	17.20	19.00	19.00	D114-10M-04-
10	3/8"	39.40	31.80	7.90	15.00	17.20	22.00	19.00	D114-10M-06-
10	1/2"	44.20	36.60	7.90	19.80	17.20	27.00	19.00	D114-10M-08-
12	1/4"	40.30	30.20	9.50	15.00	22.80	22.00	22.00	D114-12M-04-
12	3/8"	41.90	31.80	9.50	15.00	22.80	22.00	22.00	D114-12M-06-
12	1/2"	46.70	36.60	9.50	19.80	22.80	27.00	22.00	D114-12M-08-
15	1/2"	46.70	36.60	11.90	19.80	24.40	27.00	25.00	D114-15M-08-
16	1/2"	46.90	36.80	12.70	19.80	24.40	27.00	25.00	D114-16M-08-
20	1/2"	47.90	37.80	15.90	19.80	26.00	30.00	32.00	D114-20M-08-
20	3/4"	49.70	39.60	15.90	20.60	26.00	35.00	32.00	D114-20M-12-
22	3/4"	49.70	39.60	18.30	20.60	26.00	35.00	32.00	D114-22M-12-
22	1"	57.90	47.80	18.30	25.40	26.00	35.00	32.00	D114-22M-16-
25	3/4"	53.40	41.10	21.80	20.60	31.30	35.00	38.00	D114-25M-12-
25	1"	62.30	50.00	21.80	25.40	31.30	41.00	38.00	D114-25M-16-

All dimensions unless specified are in mm.

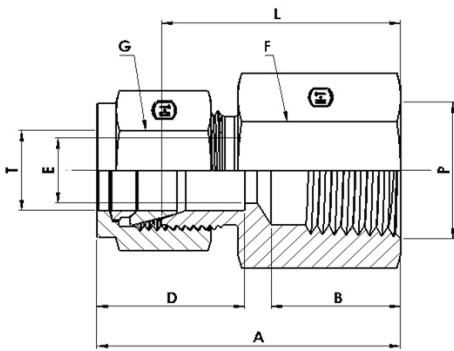


D114-Female Connector Tube x Female BSPT Threads

For Fractional Tube

T Tube O.D.	P BSPT Female	A	L	E	B	D	F	G	Hy-Tech Part Number
1/8"	1/8"	29.97	22.10	2.30	10.40	14.22	14.28	11.11	D114-02-02PT-
1/8"	1/4"	34.77	26.90	2.30	15.00	14.22	19.05	11.11	D114-02-04PT-
1/4"	1/8"	34.44	23.90	4.80	10.40	15.34	14.28	14.28	D114-04-02PT-
1/4"	1/4"	39.04	28.50	4.80	15.00	15.34	19.05	14.28	D114-04-04PT-
1/4"	3/8"	40.74	30.20	4.80	15.00	15.34	22.22	14.28	D114-04-06PT-
1/4"	1/2"	45.54	35.00	4.80	19.80	15.34	26.98	14.28	D114-04-08PT-
5/16"	1/8"	32.10	24.60	6.40	10.40	16.30	14.28	15.88	D114-05-02PT-
5/16"	1/4"	37.00	29.50	6.40	15.00	16.30	19.05	15.88	D114-05-04PT-
3/8"	1/8"	33.46	25.40	7.10	10.40	17.56	15.88	17.46	D114-06-02PT-
3/8"	1/4"	38.26	30.20	7.10	15.00	17.56	19.05	17.46	D114-06-04PT-
3/8"	3/8"	39.86	31.80	7.10	15.00	17.56	22.22	17.46	D114-06-06PT-
3/8"	1/2"	44.66	36.60	7.10	19.80	17.56	26.98	17.46	D114-06-08PT-
3/8"	3/4"	48.46	40.40	7.10	20.60	17.56	33.33	17.46	D114-06-12PT-
1/2"	1/4"	40.13	30.20	10.40	15.00	22.63	20.64	22.22	D114-08-04PT-
1/2"	3/8"	40.13	30.20	10.40	15.00	22.63	22.22	22.22	D114-08-04PT-
1/2"	1/2"	46.53	36.60	10.40	19.80	22.63	26.98	22.22	D114-08-08PT-
1/2"	3/4"	48.03	38.10	10.40	20.60	22.63	33.33	22.22	D114-08-12PT-
5/8"	3/8"	41.80	31.80	12.70	15.00	24.30	23.81	25.40	D114-10-06PT-
5/8"	1/2"	46.60	36.60	12.70	19.80	24.30	26.98	25.40	D114-10-08PT-
5/8"	3/4"	48.10	38.10	12.70	20.60	24.30	33.33	25.40	D114-10-12PT-
3/4"	1/2"	47.69	36.60	15.80	19.80	25.39	26.98	28.58	D114-12-08PT-
3/4"	3/4"	49.19	38.10	15.80	20.60	25.39	33.33	28.58	D114-12-12PT-
7/8"	3/4"	54.71	39.60	18.30	20.60	29.41	33.33	31.75	D114-14-12PT-
1"	3/4"	54.43	41.20	22.40	20.60	32.23	34.93	38.10	D114-16-12PT-
1"	1"	63.23	50.00	22.40	25.40	32.23	41.28	38.10	D114-16-16PT-
1-1/4"	1-1/4"	73.03	52.60	27.70	25.40	41.23	53.98	50.00	D114-20-20PT-
1-1/2"	1-1/2"	84.23	56.20	34.00	27.60	50.83	60.32	57.15	D114-24-24PT-

All dimensions unless specified are in mm.

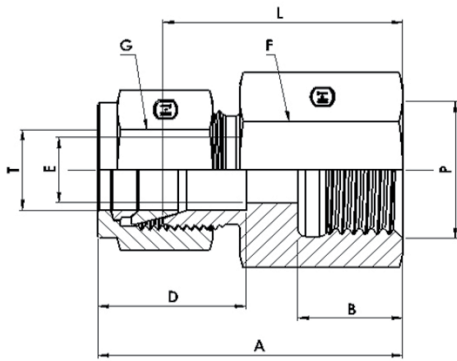


D114-Female Connector Tube x Female BSPT Threads

For Metric Tube

T Tube O.D.	P SAE Male	A	L	E	B	D	F	G	Hy-Tech Part Number
3	1/8"	28.70	22.10	2.40	10.40	12.90	14.00	12.00	D114-03M-02PT-
3	1/4"	33.50	26.90	2.40	15.00	12.90	19.00	12.00	D114-03M-04PT-
6	1/8"	31.30	23.90	4.80	10.40	15.30	14.00	14.00	D114-06M-02PT-
6	1/4"	35.80	28.40	4.80	15.00	15.30	19.00	14.00	D114-06M-04PT-
6	3/8"	37.60	30.20	4.80	15.00	15.30	22.00	14.00	D114-06M-06PT-
6	1/2"	42.50	35.10	4.80	19.80	15.30	27.00	14.00	D114-06M-08PT-
8	1/8"	32.10	24.60	6.40	10.40	16.20	16.00	16.00	D114-08M-02PT-
8	1/4"	37.00	29.50	6.40	15.00	16.20	19.00	16.00	D114-08M-04PT-
8	3/8"	38.50	31.00	6.40	15.00	16.20	22.00	16.00	D114-08M-06PT-
8	1/2"	43.30	35.80	6.40	19.80	16.20	27.00	16.00	D114-08M-08PT-
10	1/4"	37.80	30.20	7.90	15.00	17.20	19.00	19.00	D114-10M-04PT-
10	3/8"	39.40	31.80	7.90	15.00	17.20	22.00	19.00	D114-10M-06PT-
10	1/2"	44.20	36.60	7.90	19.80	17.20	27.00	19.00	D114-10M-08PT-
12	1/8"	35.50	25.40	8.30	10.40	22.80	22.00	22.00	D114-12M-02PT-
12	1/4"	40.30	30.20	9.50	15.00	22.80	22.00	22.00	D114-12M-04PT-
12	3/8"	41.90	31.80	9.50	15.00	22.80	22.00	22.00	D114-12M-06PT-
12	1/2"	46.70	36.60	9.50	19.80	22.80	27.00	22.00	D114-12M-08PT-
15	3/8"	41.90	31.80	11.90	15.00	24.40	27.00	25.00	D114-15M-08PT-
15	1/2"	46.70	36.60	11.90	19.80	24.40	27.00	25.00	D114-15M-08PT-
20	1/2"	47.90	37.80	15.90	19.80	26.00	30.00	32.00	D114-20M-08PT-
20	3/4"	49.70	39.60	15.90	20.60	26.00	35.00	32.00	D114-20M-12PT-
22	3/4"	49.70	39.60	18.30	20.60	26.00	35.00	32.00	D114-22M-12PT-
22	1"	57.90	47.80	18.30	25.40	26.00	35.00	32.00	D114-22M-16PT-
25	3/4"	53.40	41.10	21.80	20.60	31.30	35.00	38.00	D114-25M-12PT-
25	1"	62.30	50.00	21.80	25.40	31.30	41.00	38.00	D114-25M-16PT-

All dimensions unless specified are in mm.



D114-Female Connector Tube x Female BSPP Threads

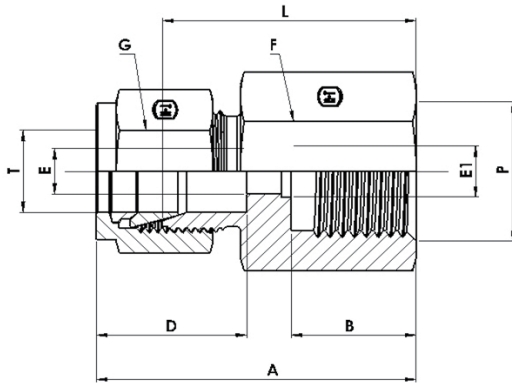
For Fractional Tube

T Tube O.D.	P BSPP Female	A	L	E	B	D	F	G	Hy-Tech Part Number
1/8"	1/8"	31.67	23.80	2.30	8.00	14.22	14.28	11.11	D114-02-02RJ-
1/4"	1/4"	37.54	30.20	4.60	12.00	15.34	19.05	14.28	D114-04-04RJ-
1/4"	3/8"	37.54	30.20	4.80	12.00	15.34	23.81	14.28	D114-04-06RJ-
1/4"	1/2"	37.44	30.10	4.80	16.00	15.34	26.98	14.28	D114-04-08RJ-
5/16"	1/4"	38.50	31.00	5.60	12.00	16.30	19.05	15.88	D114-05-04RJ-
5/16"	1/2"	40.50	33.00	7.10	16.00	16.30	26.98	15.88	D114-05-08RJ-
3/8"	1/4"	39.86	31.80	5.60	12.00	17.56	19.05	17.46	D114-06-04RJ-
3/8"	3/8"	39.36	31.30	6.60	12.00	17.56	23.81	17.46	D114-06-06RJ-
3/8"	1/2"	42.66	34.60	7.10	16.00	17.56	26.98	17.46	D114-06-08RJ-
1/2"	1/4"	41.73	31.80	5.60	12.00	22.63	20.64	22.22	D114-08-04RJ-
1/2"	3/8"	44.23	34.30	6.60	12.00	22.63	23.81	22.22	D114-08-06RJ-
1/2"	1/2"	48.03	38.10	7.10	16.00	22.63	26.98	22.22	D114-08-08RJ-

For Metric Tube

T Tube O.D.	P BSPP Female	A	L	E	B	D	F	G	Hy-Tech Part Number
6	1/4"	39.20	30.20	4.80	12.00	15.30	19.00	14.00	D114-06M-04RJ-
6	3/8"	39.20	30.20	4.80	12.00	15.30	24.00	14.00	D114-06M-06RJ-
6	1/2"	45.30	36.30	4.80	16.00	15.30	27.00	14.00	D114-06M-08RJ-
8	1/4"	38.50	31.00	5.50	12.00	16.20	19.00	16.00	D114-08M-04RJ-
8	3/8"	36.20	28.70	6.50	12.00	16.20	24.00	16.00	D114-08M-06RJ-
8	1/2"	40.50	33.00	7.00	16.00	16.20	27.00	16.00	D114-08M-08RJ-
10	1/4"	39.40	31.80	5.50	12.00	17.20	19.00	19.00	D114-10M-04RJ-
10	3/8"	38.80	31.20	6.50	12.00	17.20	24.00	19.00	D114-10M-06RJ-
10	1/2"	41.40	33.80	7.00	16.00	17.20	27.00	19.00	D114-10M-08RJ-
12	1/4"	41.90	31.80	5.50	12.00	22.80	22.00	22.00	D114-12M-04RJ-
12	3/8"	44.40	34.30	6.50	12.00	22.80	24.00	22.00	D114-12M-06RJ-
12	1/2"	48.20	38.10	7.00	16.00	22.80	27.00	22.00	D114-12M-08RJ-

All dimensions unless specified are in mm.



D114-Female Gauge Connector Tube x Female BSPP Threads

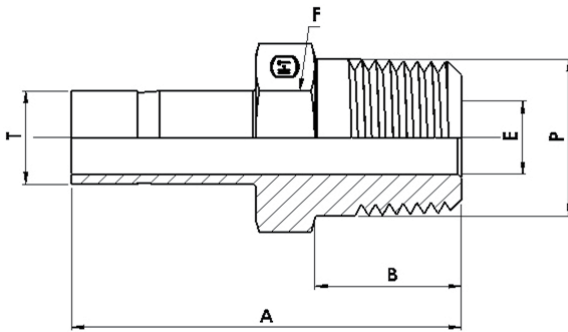
For Fractional Tube

T Tube O.D.	P BSPP Female	A	L	E	E1	B	D	F	G	Hy-Tech Part Number
1/8"	1/4"	36.57	28.70	2.30	5.50	13.00	14.22	19.05	11.11	D114-02-02G-
1/4"	1/4"	39.19	30.20	4.80	5.50	13.00	15.34	19.05	14.28	D114-04-04G-
1/4"	3/8"	39.19	30.20	4.80	6.50	14.20	15.34	23.81	14.28	D114-04-06G-
1/4"	1/2"	44.99	36.00	4.80	7.00	18.80	15.34	26.98	14.28	D114-04-08G-
5/16"	1/4"	40.95	31.00	5.60	5.50	13.00	16.30	19.05	15.88	D114-05-04G-
5/16"	1/2"	43.55	33.60	7.00	7.00	18.80	16.30	26.98	15.88	D114-05-08G-
3/8"	1/4"	43.01	31.80	5.60	5.50	13.00	17.56	19.05	17.46	D114-06-04G-
3/8"	3/8"	42.41	31.20	6.60	6.50	14.20	17.56	23.81	17.46	D114-06-06G-
3/8"	1/2"	45.71	34.50	7.00	7.00	18.80	17.56	26.98	17.46	D114-06-08G-
1/2"	3/8"	50.58	34.30	6.60	6.50	14.20	22.63	23.81	22.22	D114-08-06G-
1/2"	1/2"	54.38	38.10	7.00	7.00	18.80	22.63	26.98	22.22	D114-08-08G-

For Metric Tube

T Tube O.D.	P BSPP Female	A	L	E	E1	B	D	F	G	Hy-Tech Part Number
3	1/4"	35.30	28.70	2.40	5.50	12.9	12.90	19.00	12.00	D114-03M-04G-
6	1/4"	37.60	30.20	4.80	5.50	12.90	15.30	19.00	14.00	D114-06M-04G-
6	3/8"	37.60	30.20	4.80	6.50	14.10	15.30	24.00	14.00	D114-06M-06G-
6	1/2"	43.50	36.10	4.80	7.00	18.90	15.30	27.00	14.00	D114-06M-08G-
8	1/4"	38.50	31.00	5.50	5.50	12.90	16.20	19.00	16.00	D114-08M-04G-
8	3/8"	36.20	28.70	6.50	6.50	14.10	16.20	24.00	16.00	D114-08M-06G-
8	1/2"	41.00	33.50	7.00	7.00	18.90	16.20	27.00	16.00	D114-08M-08G-
10	1/4"	39.40	31.80	5.50	5.50	12.90	17.20	19.00	19.00	D114-10M-04G-
10	3/8"	38.80	31.20	6.50	6.50	14.10	17.20	24.00	19.00	D114-10M-06G-
10	1/2"	42.10	34.50	7.00	7.00	18.90	17.20	27.00	19.00	D114-10M-08G-
12	1/4"	41.90	31.80	5.50	5.50	12.90	22.80	22.00	22.00	D114-12M-04G-
12	3/8"	44.40	34.30	6.50	6.50	14.10	22.80	24.00	22.00	D114-12M-06G-
12	1/2"	48.20	38.10	7.00	7.00	18.90	22.80	27.00	22.00	D114-12M-08G-
20	1/2"	54.30	44.20	7.00	7.00	19.00	26.00	30.00	32.00	D114-20M-08G-
22	1/2"	54.30	44.20	7.00	7.00	19.00	26.00	30.00	32.00	D114-22M-08G-

All dimensions unless specified are in mm.



D115-Male Tube Adapters Tube x NPT Male Thread

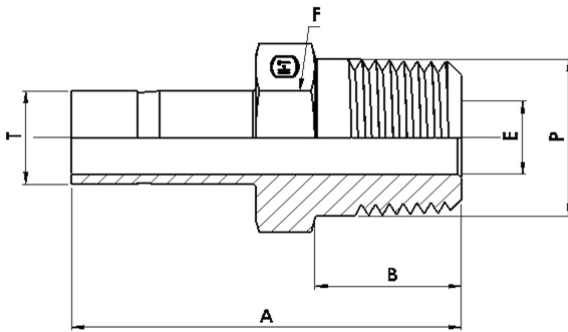
For Fractional Tube

T Tube O.D.	P NPT Male	A	B	E	F	Hy-Tech Part Number
1/8"	1/8"	29.50	9.60	2.00	11.11	D115-02-02-
1/8"	1/4"	34.80	14.30	2.00	14.28	D115-02-04-
3/16"	1/8"	30.30	9.60	3.00	11.11	D115-03-02-
3/16"	1/4"	35.60	14.30	3.00	14.28	D115-03-04-
1/4"	1/8"	31.80	9.60	4.30	11.10	D115-04-02-
1/4"	1/4"	37.10	14.30	4.30	14.28	D115-04-04-
1/4"	3/8"	37.80	14.30	4.30	17.46	D115-04-06-
1/4"	1/2"	43.40	19.10	4.30	22.22	D115-04-08-
5/16"	1/8"	32.80	9.60	4.80	11.11	D115-05-02-
5/16"	1/4"	38.10	14.30	5.60	14.28	D115-05-04-
3/8"	1/8"	33.50	9.60	4.80	11.10	D115-06-02-
3/8"	1/4"	38.90	14.30	6.80	14.28	D115-06-04-
3/8"	3/8"	39.60	14.30	6.80	17.46	D115-06-06-
3/8"	1/2"	45.20	19.10	6.80	22.22	D115-06-08-
1/2"	1/4"	44.50	14.30	7.10	14.28	D115-08-04-
1/2"	3/8"	45.20	14.30	9.40	17.46	D115-08-06-
1/2"	1/2"	50.80	19.10	9.40	22.22	D115-08-08-
5/8"	1/2"	52.30	19.10	11.90	22.22	D115-10-08-
3/4"	1/2"	52.30	19.10	11.90	22.22	D115-12-08-
3/4"	3/4"	52.30	19.10	14.70	26.98	D115-12-12-
1"	3/4"	58.70	19.10	15.70	26.98	D115-16-12-
1"	1"	66.00	23.90	20.30	34.93	D115-16-16-
1-1/4"	1-1/4"	80.30	23.90	25.90	44.45	D115-20-20-
1-1/2"	1-1/2"	94.50	26.20	31.80	53.98	D115-24-24-

For Metric Tube

T Tube O.D.	P NPT Male	A	B	E	F	Hy-Tech Part Number
6	1/8"	32.80	9.60	4.10	12.00	D115-06M-02-
6	1/4"	38.10	14.30	4.10	14.00	D115-06M-04-
8	1/4"	39.10	14.30	5.60	14.00	D115-08M-02-
8	3/8"	39.90	14.30	5.60	19.00	D115-08M-04-
10	1/4"	39.90	14.30	7.10	14.00	D115-10M-04-
10	3/8"	40.60	14.30	7.10	19.00	D115-10M-06-
10	1/2"	46.20	19.10	7.10	22.00	D115-10M-08-
12	1/4"	46.50	14.30	7.10	16.00	D115-12M-04-
12	1/2"	52.10	19.10	8.80	22.00	D115-12M-08-
28	1"	74.70	23.90	22.20	35.00	D115-28M-16-
28	1-1/4"	76.20	23.90	22.50	46.00	D115-28M-20-
30	1"	79.20	23.90	22.50	41.00	D115-30M-16-
30	1-1/4"	80.00	23.90	24.30	46.00	D115-30M-20-
32	1-1/4"	81.00	23.90	26.50	46.00	D115-32M-20-

All dimensions unless specified are in mm.



D115-Male Tube Adapters Tube x BSPT Male Thread

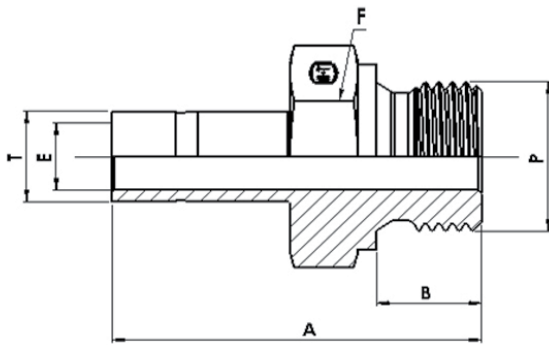
For Fractional Tube

T Tube O.D.	P BSPT Male	A	B	E	F	Hy-Tech Part Number
1/8"	1/8"	29.50	9.60	2.00	11.11	D115-02-02PT-
1/8"	1/4"	34.80	14.30	2.00	14.28	D115-02-04PT-
3/16"	1/8"	30.30	9.60	3.00	11.11	D115-03-02PT-
3/16"	1/4"	35.60	14.30	3.00	14.28	D115-03-04PT-
1/4"	1/8"	31.80	9.60	4.30	11.10	D115-04-02PT-
1/4"	1/4"	37.10	14.30	4.30	14.28	D115-04-04PT-
1/4"	3/8"	37.80	14.30	4.30	17.46	D115-04-06PT-
1/4"	1/2"	43.40	19.10	4.30	22.22	D115-04-08PT-
5/16"	1/8"	32.80	9.60	4.80	11.11	D115-05-02PT-
5/16"	1/4"	38.10	14.30	5.60	14.28	D115-05-04PT-
3/8"	1/8"	33.50	9.60	4.80	11.10	D115-06-02PT-
3/8"	1/4"	38.90	14.30	6.80	14.28	D115-06-04PT-
3/8"	3/8"	39.60	14.30	6.80	17.46	D115-06-06PT-
3/8"	1/2"	45.20	19.10	6.80	22.22	D115-06-08PT-
1/2"	1/4"	44.50	14.30	7.10	14.28	D115-08-04PT-
1/2"	3/8"	45.20	14.30	9.40	17.46	D115-08-06PT-
1/2"	1/2"	50.80	19.10	9.40	22.22	D115-08-08PT-
5/8"	1/2"	50.80	19.10	11.90	22.22	D115-10-08PT-
3/4"	1/2"	52.30	19.10	11.90	22.22	D115-12-08PT-
3/4"	3/4"	52.30	19.10	14.70	26.98	D115-12-12PT-
1"	3/4"	58.70	19.10	15.70	26.98	D115-16-12PT-
1"	1"	66.00	23.90	20.30	34.93	D115-16-16PT-
1-1/4"	1-1/4"	80.30	23.90	25.90	44.45	D115-20-20PT-
1-1/2"	1-1/2"	94.50	26.20	31.80	53.98	D115-24-24PT-

For Metric Tube

T Tube O.D.	P BSPT Male	A	B	E	F	Hy-Tech Part Number
6	1/8"	32.80	9.60	4.10	12.00	D115-06M-02PT-
6	1/4"	38.10	14.30	4.10	14.00	D115-06M-04PT-
8	1/4"	39.10	14.30	5.60	14.00	D115-08M-02PT-
8	3/8"	39.90	14.30	5.60	19.00	D115-08M-04PT-
10	1/4"	39.90	14.30	7.10	14.00	D115-10M-04PT-
10	3/8"	40.60	14.30	7.10	19.00	D115-10M-06PT-
10	1/2"	46.20	19.10	7.10	22.00	D115-10M-08PT-
12	1/4"	46.50	14.30	7.10	16.00	D115-12M-04PT-
12	1/2"	52.10	19.10	8.80	22.00	D115-12M-08PT-
28	1"	74.70	23.90	22.20	35.00	D115-28M-16PT-
28	1-1/4"	76.20	23.90	22.50	46.00	D115-28M-20PT-
30	1"	79.20	23.90	22.50	41.00	D115-30M-16PT-
30	1-1/4"	80.00	23.90	24.30	46.00	D115-30M-20PT-
32	1-1/4"	81.00	23.90	26.50	46.00	D115-32M-20PT-

All dimensions unless specified are in mm.



D115-Male Tube Adapters Tube x BSPP Male Thread

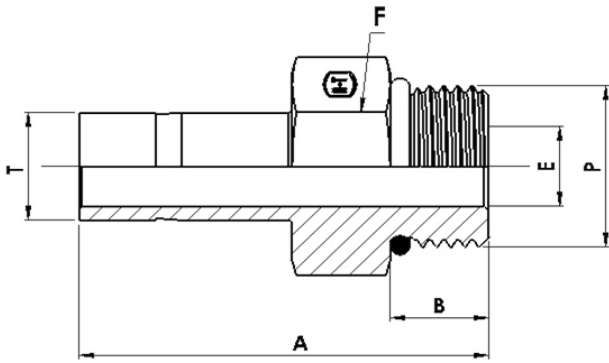
For Fractional Tube

T Tube O.D.	P BSPP Male	A	B	E	F	Hy-Tech Part Number
1/8"	1/8"	31.80	7.10	2.00	14.28	D115-02-02C-
1/8"	1/4"	36.30	11.20	2.00	19.05	D115-02-04C-
1/4"	1/8"	34.30	7.10	4.10	14.28	D115-04-02C-
1/4"	1/4"	38.90	11.20	4.30	19.05	D115-04-04C-
3/8"	1/4"	40.40	11.20	5.80	19.05	D115-06-04C-
3/8"	3/8"	41.10	11.20	6.90	22.22	D115-06-06C-
1/2"	1/4"	47.00	11.20	5.80	19.05	D115-08-04C-
1/2"	3/8"	47.80	11.20	7.90	22.22	D115-08-06C-
1/2"	1/2"	49.80	14.20	9.40	26.98	D115-08-08C-
3/4"	3/4"	55.90	15.70	14.70	33.33	D115-12-12C-
1"	1"	65.80	18.30	20.30	41.28	D115-16-16C-

For Metric Tube

T Tube O.D.	P NPT Male	A	B	E	F	Hy-Tech Part Number
6	1/8"	34.30	7.10	4.00	14.00	D115-06M-02C-
6	1/4"	38.90	11.20	4.10	19.00	D115-06M-04C-
8	1/4"	39.60	11.20	5.60	19.00	D115-08M-02C-
10	1/4"	40.40	11.20	5.90	19.00	D115-10M-04C-
10	3/8"	41.10	11.20	7.10	22.00	D115-10M-06C-
10	1/2"	43.20	14.20	7.10	27.00	D115-10M-08C-
12	1/4"	47.00	11.20	5.90	19.00	D115-12M-04C-
12	3/8"	47.80	11.20	7.90	22.00	D115-12M-06C-
12	1/2"	49.80	14.20	8.80	27.00	D115-12M-08C-
18	1/2"	51.30	14.20	11.90	27.00	D115-18M-08C-
18	3/4"	55.90	15.70	13.90	35.00	D115-18M-12C-
28	1"	71.90	18.30	19.80	41.00	D115-28M-16C-
28	1-1/4"	75.40	19.80	22.50	50.00	D115-28M-20C-
30	1-1/4"	79.80	19.80	24.30	50.00	D115-30M-20C-
32	1-1/4"	80.80	19.80	26.50	50.00	D115-32M-20C-

All dimensions unless specified are in mm.

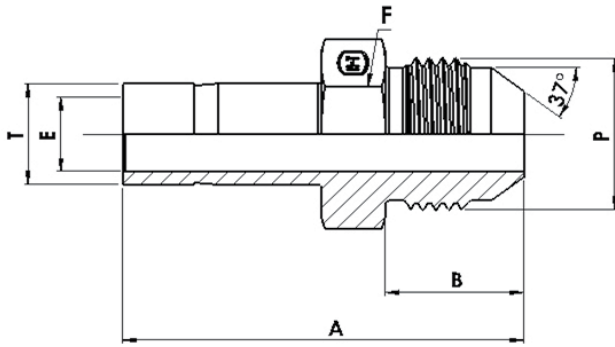


D115-Male Tube Adapters(With O-Ring) Tube x SAE Male Thread

For Fractional Tube

T Tube O.D.	P SAE Male	A	B	E	F	Hy-Tech Part Number
1/8"	5/16"-24	30.50	7.50	2.00	11.11	D115-02-02L-
1/4"	7/16"-20	35.30	9.10	4.30	14.28	D115-04-04L-
3/8"	7/16"-20	37.10	9.10	5.10	14.28	D115-06-04L-
3/8"	9/16"-18	38.60	10.00	6.90	17.46	D115-06-06L-
3/8"	3/4"-16	40.60	11.10	6.90	22.22	D115-06-08L-
1/2"	9/16"-18	44.20	10.00	7.10	17.46	D115-08-06L-
1/2"	3/4"-16	46.20	11.10	9.40	22.22	D115-08-08L-
5/8"	7/8"-14	49.30	12.70	11.90	25.40	D115-10-10L-
3/4"	1-1/16"-12	53.30	15.10	14.70	31.75	D115-12-12L-
1"	1-5/16"-12	61.20	15.10	20.30	38.10	D115-16-16L-
1-1/4"	1-5/8"-12	71.40	15.10	25.90	47.63	D115-20-20L-
1-1/2"	1-7/8"-12	83.30	15.10	31.80	53.98	D115-24-24L-

All dimensions unless specified are in mm.

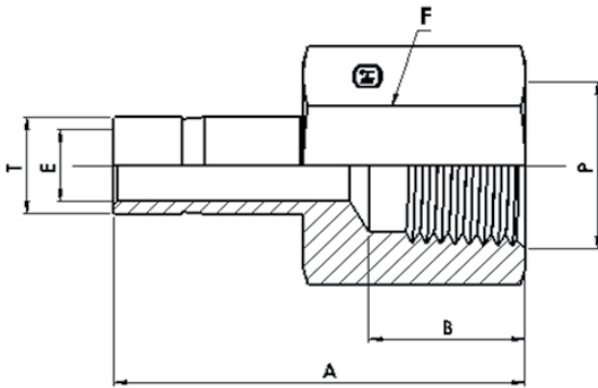


D115-Male Tube Adapters Tube x JIC Male Thread(37°)

For Fractional Tube

T Tube O.D.	AN Tube Flare OD	A	B	E	F	Hy-Tech Part Number
1/4"	1/4"	37.10	14.00	4.30	12.70	D115-04-04J-
3/8"	1/4"	38.90	14.00	4.30	12.70	D115-06-04J-
3/8"	3/8"	39.60	14.10	6.90	15.88	D115-06-06J-
1/2"	1/2"	48.50	16.70	9.40	20.64	D115-08-08J-
1/2"	3/4"	56.10	21.90	14.70	28.58	D115-08-12J-
1"	1"	65.50	23.10	20.30	34.92	D115-16-16J-

All dimensions unless specified are in mm.



D116-Female Tube Adapters Tube x NPT Female Thread

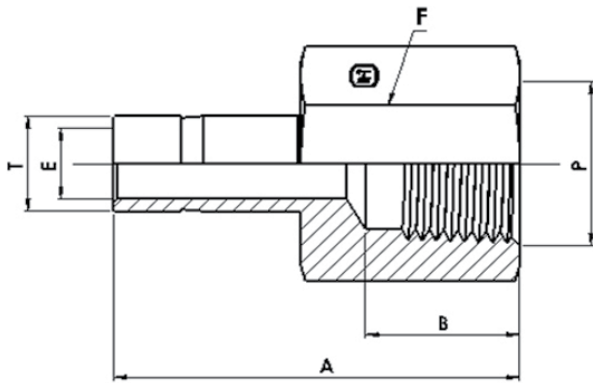
For Fractional Tube

T Tube O.D.	P NPT Female	A	B	E	F	Hy-Tech Part Number
1/8"	1/8"	31.50	10.40	2.00	14.28	D116-02-02-
1/8"	1/4"	35.30	15.00	2.00	19.05	D116-02-04-
3/16"	1/4"	35.80	15.00	3.00	19.05	D116-03-04-
1/4"	1/8"	33.00	10.40	4.30	14.28	D116-04-02-
1/4"	1/4"	37.10	15.00	4.30	19.05	D116-04-04-
1/4"	3/8"	39.40	15.00	4.30	22.22	D116-04-06-
1/4"	1/2"	45.50	19.80	4.30	26.98	D116-04-08-
5/16"	1/4"	37.60	15.00	5.60	19.05	D116-05-04-
3/8"	1/8"	34.30	10.40	6.90	14.28	D116-06-02-
3/8"	1/4"	38.10	15.00	6.90	19.05	D116-06-04-
3/8"	3/8"	40.10	15.00	6.90	22.22	D116-06-06-
3/8"	1/2"	46.70	19.80	6.90	26.98	D116-06-08-
1/2"	1/4"	43.40	15.00	9.40	19.05	D116-08-04-
1/2"	3/8"	45.50	15.00	9.40	22.22	D116-08-06-
1/2"	1/2"	52.10	19.80	9.40	26.98	D116-08-08-
5/8"	1/2"	53.10	19.80	11.90	26.98	D116-10-08-
3/4"	1/2"	52.80	19.80	14.70	26.98	D116-12-08-
3/4"	3/4"	54.90	20.60	14.70	33.33	D116-12-12-
3/4"	1"	58.40	25.40	14.70	41.28	D116-12-16-
1"	3/4"	60.70	20.60	20.30	33.33	D116-16-12-
1"	1"	64.30	25.40	20.30	41.28	D116-16-16-
1-1/4"	1-1/4"	77.70	25.40	25.90	53.95	D116-20-20-
1-1/2"	1-1/2"	88.90	27.60	31.80	60.32	D116-24-24-

For Metric Tube

T Tube O.D.	P NPT Female	A	B	E	F	Hy-Tech Part Number
6	1/8"	32.50	10.40	4.10	14.00	D116-06M-02-
6	1/4"	37.10	15.00	4.10	19.00	D116-06M-04-
8	1/4"	37.60	15.00	5.60	19.00	D116-08M-02-
10	1/4"	38.10	15.00	7.10	19.00	D116-10M-04-
10	3/8"	40.10	15.00	7.10	22.00	D116-10M-06-
10	1/2"	46.70	19.80	7.10	27.00	D116-10M-08-
12	1/4"	43.70	15.00	8.80	19.00	D116-12M-04-
12	1/2"	52.30	19.80	8.80	27.00	D116-12M-08-

All dimensions unless specified are in mm.



D116-Female Tube Adapters Tube x BSPT Female Thread

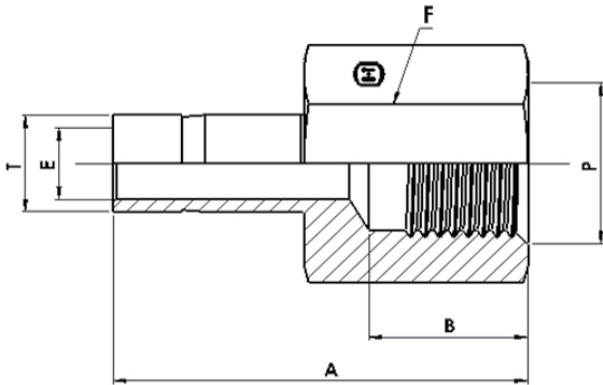
For Fractional Tube

T Tube O.D.	P BSPT Female	A	B	E	F	Hy-Tech Part Number
1/4"	1/8"	33.00	10.40	4.30	14.28	D116-04-02PT-
1/4"	1/4"	37.10	15.00	4.30	19.05	D116-04-04PT-
3/8"	1/4"	38.10	15.00	6.90	19.05	D116-06-04PT-
3/8"	3/8"	40.40	15.00	6.90	22.22	D116-06-06PT-
1/2"	1/4"	43.40	15.00	9.40	19.05	D116-08-04PT-
1/2"	3/8"	45.50	15.00	9.40	22.22	D116-08-06PT-
1/2"	1/2"	52.10	19.80	9.40	26.98	D116-08-08PT-

For Metric Tube

T Tube O.D.	P BSPT Female	A	B	E	F	Hy-Tech Part Number
6	1/8"	33.00	10.40	4.10	14.00	D116-06M-02PT-
6	1/4"	37.10	15.00	4.10	19.00	D116-06M-04PT-
8	1/4"	37.60	15.00	5.60	19.00	D116-08M-02PT-
10	1/4"	38.10	15.00	7.10	19.00	D116-10M-04PT-
10	3/8"	40.10	15.00	7.10	22.00	D116-10M-06PT-
12	1/4"	43.70	15.00	9.10	19.00	D116-12M-04PT-
12	3/8"	46.00	15.00	9.10	22.00	D116-12M-06PT-
12	1/2"	52.30	19.80	9.10	27.00	D116-12M-08PT-

All dimensions unless specified are in mm.



D116-Female Tube Adapters Tube x BSPP Female Thread

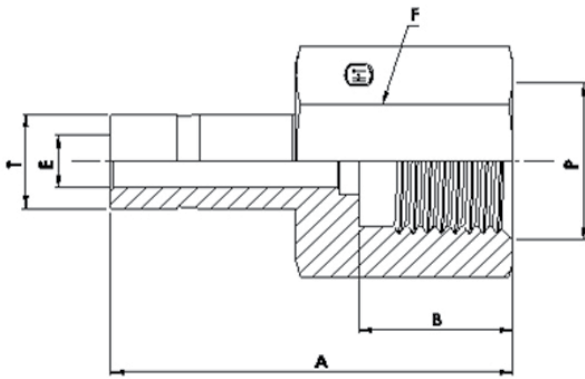
For Fractional Tube

T Tube O.D.	P BSPP Female	A	B	E	F	Hy-Tech Part Number
1/8"	1/8"	29.70	10.50	2.30	14.28	D116-02-02E-
1/4"	1/8"	31.80	15.50	4.30	14.28	D116-04-02E-
1/4"	1/4"	38.10	15.50	4.30	19.05	D116-04-04E-
3/8"	1/4"	39.40	15.50	6.90	19.05	D116-06-04E-
3/8"	3/8"	39.90	15.50	6.90	23.81	D116-06-06E-
1/2"	3/8"	45.20	15.50	9.40	23.81	D116-08-06E-
1/2"	1/2"	51.30	19.00	9.40	26.98	D116-08-08E-

For Metric Tube

T Tube O.D.	P BSPP Female	A	B	E	F	Hy-Tech Part Number
6	1/8"	32.00	10.50	4.10	14.00	D116-06M-02E-
6	1/4"	37.80	15.50	4.10	19.00	D116-06M-04E-
12	1/2"	49.80	19.00	8.80	27.00	D116-12M-08E-

All dimensions unless specified are in mm.



D116-Female Tube Adapters

Tube x BSPP Female Thread (Gauge)

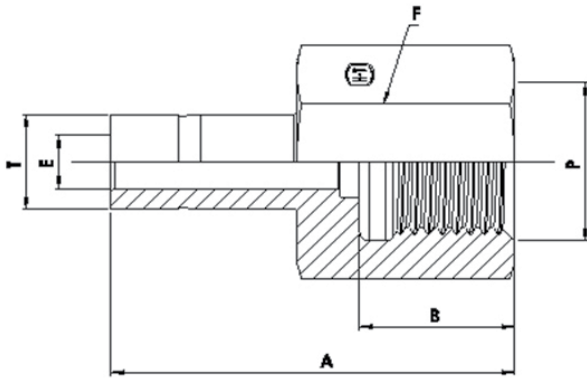
For Fractional Tube

T Tube O.D.	P BSPP Female	A	B	E	F	Hy-Tech Part Number
1/4"	1/4"	35.30	12.90	4.30	19.05	D116-04-04G-
3/8"	3/8"	39.40	14.10	6.60	23.81	D116-06-06G-
1/2"	1/2"	45.70	18.90	7.10	26.98	D116-08-08G-

For Metric Tube

T Tube O.D.	P BSPP Female	A	B	E	F	Hy-Tech Part Number
6	1/4"	35.30	13.00	4.10	19.00	D116-06M-04G-
6	3/8"	38.40	14.20	4.10	24.00	D116-06M-06G-
6	1/2"	42.90	18.90	4.10	27.00	D116-06M-08G-
8	1/4"	33.00	13.00	5.50	19.00	D116-08M-04G-
8	3/8"	38.90	14.20	5.60	24.00	D116-08M-06G-
8	1/2"	43.70	18.90	5.60	27.00	D116-08M-08G-
10	1/4"	34.50	13.00	5.50	19.00	D116-10M-04G-
10	3/8"	36.10	14.20	6.50	24.00	D116-10M-06G-
10	1/2"	41.10	18.90	7.10	27.00	D116-10M-08G-
12	1/4"	40.10	13.00	5.50	19.00	D116-12M-04G-
12	3/8"	44.70	14.20	6.50	24.00	D116-12M-06G-
12	1/2"	48.80	18.90	7.10	27.00	D116-12M-08G-
16	1/2"	49.00	18.90	7.00	27.00	D116-16M-08G-
18	1/2"	49.30	18.90	7.00	27.00	D116-18M-08G-

All dimensions unless specified are in mm.



D116-Female Tube Adapters Tube x BSPP Female Thread

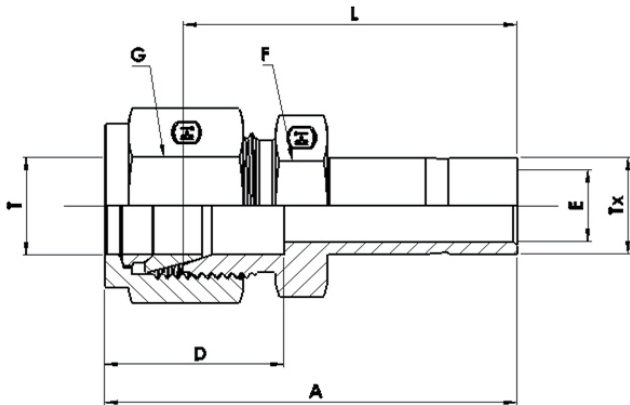
For Fractional Tube

T Tube O.D.	P BSPP Female	A	B	E	F	Hy-Tech Part Number
1/4"	1/4"	35.30	12.90	4.30	19.05	D116-04-04RJ-
3/8"	3/8"	39.40	14.10	6.60	23.81	D116-06-06RJ-
1/2"	1/2"	49.30	18.90	7.10	26.98	D116-08-08RJ-

For Metric Tube

T Tube O.D.	P BSPP Female	A	B	E	F	Hy-Tech Part Number
6	1/4"	35.30	8.00	4.10	19.00	D116-06M-04RJ-
6	3/8"	38.60	12.00	4.10	24.00	D116-06M-06RJ-
6	1/2"	42.90	16.00	4.10	27.00	D116-06M-08RJ-
8	1/4"	33.00	8.00	5.50	19.00	D116-08M-04RJ-
8	3/8"	39.40	12.00	5.60	24.00	D116-08M-06RJ-
8	1/2"	43.70	16.00	5.60	27.00	D116-08M-08RJ-
10	1/4"	34.50	8.00	5.50	19.00	D116-10M-04RJ-
10	3/8"	36.10	12.00	6.50	24.00	D116-10M-06RJ-
10	1/2"	41.10	16.00	7.10	27.00	D116-10M-08RJ-
12	1/4"	40.10	8.00	5.50	19.00	D116-12M-04RJ-
12	3/8"	44.70	12.00	6.50	24.00	D116-12M-06RJ-
12	1/2"	48.80	16.00	7.10	27.00	D116-12M-08RJ-

All dimensions unless specified are in mm.

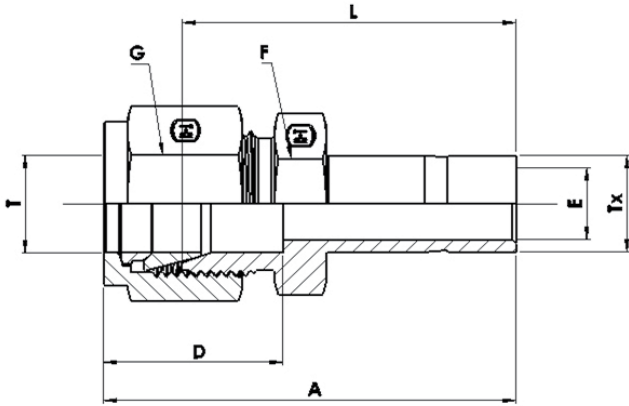


D119-Reducer Tube x Machined Tube Stub

For Fractional Tube

T Tube O.D.	Tx Tube O.D.	A	L	D	E	F	G	Hy-Tech Part Number
1/8"	1/8"	34.77	26.90	14.22	2.00	11.11	11.11	D119-02-02-
1/8"	3/16"	35.57	27.70	14.22	2.30	11.11	11.11	D119-02-03-
1/8"	1/4"	37.37	29.50	14.22	2.30	11.11	11.11	D119-02-04-
1/8"	3/8"	38.87	31.00	14.22	2.30	11.11	11.11	D119-02-06-
1/8"	1/2"	45.47	37.60	14.22	2.30	14.28	11.11	D119-02-08-
3/16"	1/8"	33.92	28.20	13.72	2.00	11.11	12.70	D119-03-02-
3/16"	1/4"	36.22	30.50	13.72	3.00	11.11	12.70	D119-03-04-
1/4"	1/8"	36.84	29.50	15.34	2.00	12.70	14.28	D119-04-02-
1/4"	3/16"	37.54	30.20	15.34	3.00	12.70	14.28	D119-04-03-
1/4"	1/4"	39.14	31.80	15.34	4.30	12.70	14.28	D119-04-04-
1/4"	5/16"	39.84	32.50	15.34	4.80	12.70	14.28	D119-04-05-
1/4"	3/8"	40.64	33.30	15.34	4.80	12.70	14.28	D119-04-06-
1/4"	1/2"	46.24	38.90	15.34	4.80	14.28	14.28	D119-04-08-
1/4"	5/8"	47.94	40.60	15.34	4.80	17.46	14.28	D119-04-10-
1/4"	3/4"	47.74	40.40	15.34	4.80	20.64	14.28	D119-04-12-
5/16"	3/8"	42.00	34.50	16.30	6.40	14.28	15.88	D119-05-06-
5/16"	1/2"	47.60	40.10	16.30	6.40	14.28	15.88	D119-05-08-
3/8"	1/4"	42.06	34.00	17.56	4.30	15.88	17.46	D119-06-04-
3/8"	3/8"	43.86	35.80	17.56	6.90	15.88	17.46	D119-06-06-
3/8"	1/2"	49.16	41.10	17.56	7.10	15.88	17.46	D119-06-08-
3/8"	5/8"	50.96	42.90	17.56	7.10	17.46	17.46	D119-06-10-
3/8"	3/4"	50.96	42.90	17.56	7.10	20.64	17.46	D119-06-12-
1/2"	1/4"	44.73	34.80	22.63	4.30	20.64	22.22	D119-08-04-
1/2"	3/8"	46.53	36.60	22.63	6.90	20.64	22.22	D119-08-06-
1/2"	1/2"	52.13	42.20	22.63	9.40	20.64	22.22	D119-08-08-
1/2"	5/8"	56.63	46.70	22.63	10.40	20.64	22.22	D119-08-10-
1/2"	3/4"	53.63	43.70	22.63	10.40	20.64	22.22	D119-08-12-
1/2"	1"	59.93	50.00	22.63	10.40	26.98	22.22	D119-08-16-
5/8"	3/4"	54.40	44.40	24.30	12.70	20.64	25.40	D119-10-12-
5/8"	7/8"	56.00	46.00	24.30	12.70	20.64	25.40	D119-10-14-
5/8"	1"	60.80	50.80	24.30	12.70	26.98	25.40	D119-10-16-
3/4"	1/2"	55.59	44.50	25.39	9.40	26.98	28.58	D119-12-08-
3/4"	1"	63.39	52.30	25.39	15.80	26.98	28.58	D119-12-16-
1"	1-1/4"	81.53	68.30	32.23	22.40	34.92	38.10	D119-16-20-
1"	1-1/2"	93.23	80.00	32.23	22.40	41.28	38.10	D119-16-24-
1-1/4"	1-1/2"	102.43	82.00	41.23	27.70	44.45	50.00	D119-20-24-

All dimensions unless specified are in mm.

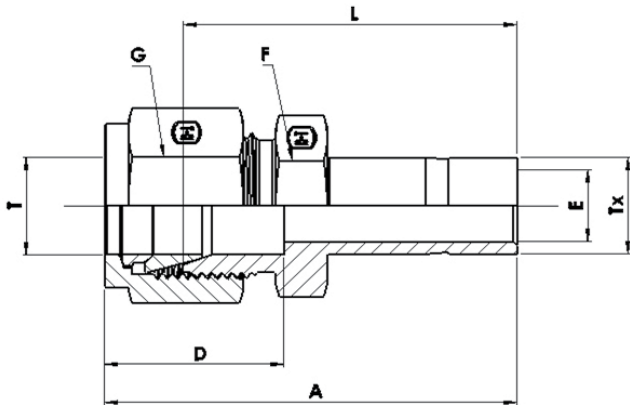


**D119-Reducer
Tube x Machined Tube Stub**

For Metric Tube

T Tube O.D.	Tx Tube O.D.	A	L	D	E	F	G	Hy-Tech Part Number
3	6	36.10	29.50	12.90	2.40	12.00	12.00	D119-03M-06M-
3	10	38.40	31.80	12.90	2.40	14.00	12.00	D119-03M-10M-
6	3	36.90	29.50	15.30	1.90	14.00	14.00	D119-06M-03M-
6	8	39.90	32.50	15.30	4.80	14.00	14.00	D119-06M-08M-
6	10	40.70	33.30	15.30	4.80	14.00	14.00	D119-06M-10M-
6	12	46.30	38.90	15.30	4.80	14.00	14.00	D119-06M-12M-
6	18	49.60	42.20	15.30	4.80	22.00	14.00	D119-06M-18M-
8	6	40.30	32.80	16.20	4.10	16.00	16.00	D119-08M-06M-
8	10	42.00	34.50	16.20	6.40	16.00	16.00	D119-08M-10M-
8	12	47.60	40.10	16.20	6.40	16.00	16.00	D119-08M-12M-
10	6	42.40	34.80	17.20	4.10	19.00	19.00	D119-10M-06M-
10	8	43.40	35.80	17.20	5.60	19.00	19.00	D119-10M-08M-
10	12	49.80	42.20	17.20	7.90	19.00	19.00	D119-10M-12M-
10	15	51.30	43.70	17.20	7.90	19.00	19.00	D119-10M-15M-
10	18	51.30	43.70	17.20	7.90	22.00	19.00	D119-10M-18M-
12	6	44.90	34.80	22.80	4.10	22.00	22.00	D119-12M-06M-
12	8	45.90	35.80	22.80	5.60	22.00	22.00	D119-12M-08M-
12	10	46.70	36.60	22.80	7.10	22.00	22.00	D119-12M-10M-
12	16	53.80	43.70	22.80	9.50	22.00	22.00	D119-12M-16M-
12	18	53.80	43.70	22.80	9.50	22.00	22.00	D119-12M-18M-
12	20	56.10	46.00	22.80	9.50	22.00	22.00	D119-12M-20M-
12	22	56.10	46.00	22.80	9.50	24.00	22.00	D119-12M-22M-
12	25	62.40	52.30	22.80	9.50	27.00	22.00	D119-12M-25M-
14	12	53.00	42.50	24.40	8.80	24.00	25.00	D119-14M-22M-
15	12	53.00	42.90	24.40	8.80	24.00	25.00	D119-15M-22M-
16	12	53.00	42.90	24.40	8.80	24.00	25.00	D119-16M-22M-
18	12	54.60	44.50	24.40	8.80	27.00	30.00	D119-18M-12M-
18	16	56.10	46.00	24.40	12.00	27.00	30.00	D119-18M-16M-
18	20	57.60	47.50	24.40	15.10	27.00	30.00	D119-18M-20M-
18	22	57.60	47.50	24.40	15.10	27.00	30.00	D119-18M-22M-
18	25	62.40	52.30	24.40	15.10	27.00	30.00	D119-18M-25M-
20	16	57.90	47.80	26.00	12.00	30.00	32.00	D119-20M-16M-
20	18	57.90	47.80	26.00	13.90	30.00	32.00	D119-20M-18M-
20	22	59.40	49.30	26.00	15.90	30.00	32.00	D119-20M-22M-
20	25	64.20	54.10	26.00	15.90	30.00	32.00	D119-20M-25M-
22	18	57.90	47.80	26.00	13.90	30.00	32.00	D119-22M-18M-
22	20	59.40	49.30	26.00	15.50	30.00	32.00	D119-22M-20M-
22	25	64.20	54.10	26.00	18.30	30.00	32.00	D119-22M-25M-
25	18	63.10	50.80	31.30	13.90	35.00	38.00	D119-25M-18M-
25	20	64.60	52.30	31.30	15.50	35.00	38.00	D119-25M-20M-

All dimensions unless specified are in mm.

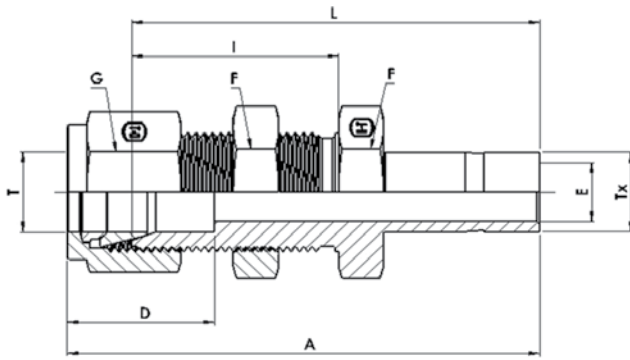


D119-Reducer Tube x Machined Tube Stub

For Metric to Inch Tube

T Tube O.D.	Tx Tube O.D.	A	L	D	E	F	G	Hy-Tech Part Number
3	1/8"	33.50	26.90	12.90	2.00	12.00	12.00	D119-03M-02-
3	1/4"	36.10	29.50	12.90	2.40	12.00	12.00	D119-03M-04-
6	1/8"	36.90	29.50	15.30	2.00	14.00	14.00	D119-06M-02-
6	1/4"	39.20	31.80	15.30	4.40	14.00	14.00	D119-06M-04-
6	5/16"	39.90	32.50	15.30	4.80	14.00	14.00	D119-06M-05-
6	3/8"	40.70	33.30	15.30	4.80	14.00	14.00	D119-06M-06-
6	1/2"	46.30	38.90	15.30	4.80	14.00	14.00	D119-06M-08-
8	1/4"	40.30	32.80	16.20	4.40	16.00	16.00	D119-08M-04-
8	3/8"	42.00	34.50	16.20	6.40	16.00	16.00	D119-08M-06-
8	1/2"	47.60	40.10	16.20	6.40	16.00	16.00	D119-08M-08-
10	3/8"	44.20	36.60	17.20	6.80	19.00	19.00	D119-10M-06-
10	1/2"	49.80	42.20	17.20	7.90	19.00	19.00	D119-10M-08-
12	1/2"	52.30	42.20	22.80	9.30	22.00	22.00	D119-12M-08-
12	3/4"	53.80	43.70	22.80	9.50	22.00	22.00	D119-12M-12-
18	3/4"	56.10	46.00	24.40	14.70	27.00	30.00	D119-18M-12-
18	1"	62.40	52.30	24.40	15.10	27.00	30.00	D119-18M-16-
25	1"	69.50	57.20	31.30	20.20	35.00	38.00	D119-25M-16-

All dimensions unless specified are in mm.

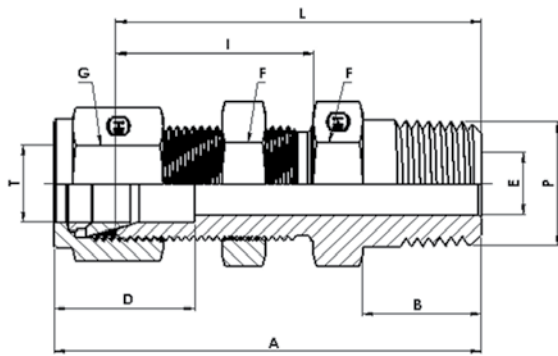


**D120-Bulkhead Reducer
Tube x Machined Tube Stub**

For Fractional Tube

T Tube O.D.	Tx Tube O.D.	A	L	D	I	E	F	G	Panel Hole Size	Max Panel Thickness	Hy-Tech Part Number
1/8"	1/8"	50.77	42.90	14.22	24.60	2.00	12.70	11.11	8.30	12.70	D120-02-02-
1/4"	1/4"	55.84	48.50	15.34	26.20	4.30	15.88	14.28	11.50	10.20	D120-04-04-
3/8"	3/8"	61.86	53.80	17.56	29.50	6.90	19.05	17.46	14.70	11.20	D120-06-06-
1/2"	1/2"	72.63	62.70	22.63	31.80	9.40	23.81	22.22	19.50	12.70	D120-08-08-
5/8"	5/8"	75.00	65.00	24.30	32.50	12.00	26.98	25.40	22.60	12.70	D120-10-10-
3/4"	3/4"	81.59	70.50	25.39	37.40	14.70	30.16	28.58	25.80	16.80	D120-12-12-
1"	1"	101.33	88.10	32.23	45.20	20.30	41.28	38.10	33.70	19.10	D120-16-16-

All dimensions unless specified are in mm.



D121-Bulkhead NPT Male Connectors Tube x NPT Male

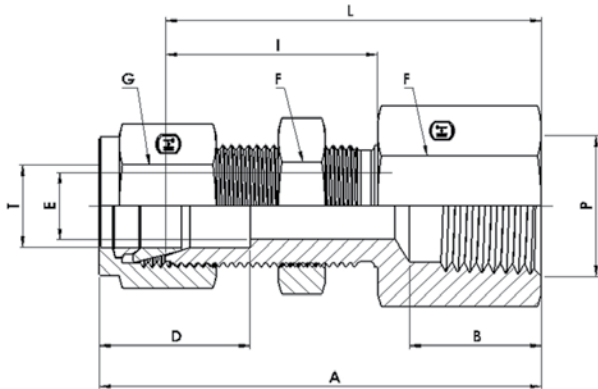
For Fractional Tube

T Tube O.D.	P NPT Male	A	D	L	I	B	E	F	G	Panel Hole Size	Max Panel Thickness	Hy-Tech Part Number
1/8"	1/8"	47.67	14.22	39.80	24.60	9.60	2.30	12.70	11.11	8.30	12.70	D121-02-02-
1/4"	1/8"	49.54	15.34	42.20	26.20	9.60	4.80	15.88	14.28	11.50	10.10	D121-04-02-
1/4"	1/4"	54.04	15.34	46.70	26.20	14.30	4.80	15.88	14.28	11.50	10.10	D121-04-04-
3/8"	1/4"	58.06	17.56	50.00	29.50	14.30	7.10	19.05	17.46	14.60	11.10	D121-06-04-
3/8"	3/8"	58.06	17.56	50.00	29.50	14.30	7.10	19.05	17.46	14.60	11.10	D121-06-06-
3/8"	1/2"	64.56	17.56	56.50	29.50	19.10	7.10	19.05	17.46	14.60	11.10	D121-06-08-
1/2"	3/8"	62.93	22.63	53.00	31.80	14.30	9.60	23.81	22.22	19.50	12.70	D121-08-06-
1/2"	1/2"	68.73	22.63	58.80	31.80	19.10	10.40	23.81	22.22	19.50	12.70	D121-08-08-
3/4"	3/4"	77.99	25.39	66.90	37.40	19.10	15.80	34.93	28.58	25.80	16.80	D121-12-12-
1"	1"	94.23	32.23	81.00	45.20	23.90	22.40	41.28	38.10	33.70	19.00	D121-16-16-

For Metric Tube

T Tube O.D.	P NPT Male	A	D	L	I	B	E	F	G	Panel Hole Size	Max Panel Thickness	Hy-Tech Part Number
3	1/8"	46.40	12.90	39.80	24.60	9.60	2.40	14.00	12.00	8.30	12.70	D121-03M-02-
6	1/8"	49.60	15.30	42.20	26.20	9.60	4.80	16.00	14.00	11.50	10.20	D121-06M-02-
6	1/4"	53.60	15.30	46.20	26.20	14.30	4.80	16.00	14.00	11.50	10.20	D121-06M-04-
10	1/4"	57.70	17.20	50.00	29.40	14.30	7.90	22.00	19.00	16.30	11.20	D121-10M-04-
10	3/8"	57.70	17.20	50.00	29.40	14.30	7.90	22.00	19.00	16.30	11.20	D121-10M-06-
12	3/8"	63.10	22.80	53.00	31.80	14.30	9.50	24.00	22.00	19.50	12.70	D121-12M-06-
12	1/2"	68.90	22.80	58.80	31.80	19.10	9.50	24.00	22.00	19.50	12.70	D121-12M-08-
16	1/2"	69.60	24.40	59.50	32.50	19.10	12.70	27.00	25.00	22.80	12.70	D121-16M-08-

All dimensions unless specified are in mm.



D1XX-Bulkhead NPT Female Connectors

Tube x NPT Female

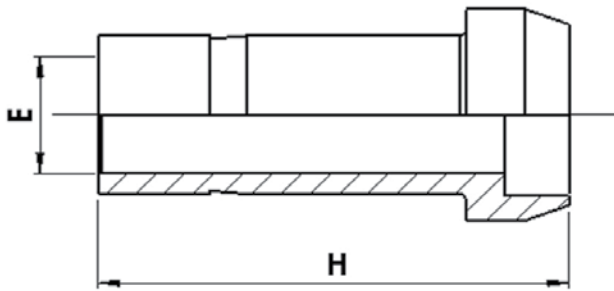
For Fractional Tube

T Tube O.D.	P NPT Female	A	D	L	I	B	E	F	G	Panel Hole Size	Max Panel Thickness	Hy-Tech Part Number
1/8"	1/8"	45.97	14.22	38.10	24.60	10.40	2.30	14.28	11.11	8.30	12.70	D122-02-02-
1/4"	1/8"	46.94	15.34	39.60	26.20	10.40	4.80	15.55	14.28	11.50	10.10	D122-04-02-
1/4"	1/4"	51.84	15.34	44.50	26.20	15.00	4.80	19.05	14.28	11.50	10.10	D122-04-04-
3/8"	1/4"	55.86	17.56	47.80	29.50	15.00	7.10	19.05	17.46	14.60	11.10	D122-06-04-
1/2"	3/8"	61.53	22.63	51.60	31.80	15.00	10.40	23.81	22.22	19.50	12.70	D122-08-06-
1/2"	1/2"	66.33	22.63	56.40	31.80	19.80	10.40	26.98	22.22	19.50	12.70	D122-08-08-
3/4"	3/4"	74.69	25.39	63.60	37.40	20.60	15.80	31.75	28.58	25.80	16.80	D122-12-12-
1"	1"	94.23	32.23	81.00	45.20	25.40	22.40	41.28	38.10	33.70	19.00	D122-16-16-

For Metric Tube

T Tube O.D.	P NPT Female	A	D	L	I	B	E	F	G	Panel Hole Size	Max Panel Thickness	Hy-Tech Part Number
6	1/8"	47.00	15.30	39.60	26.20	9.60	4.80	16.00	14.00	11.50	10.20	D122-06M-02-
6	1/4"	51.80	15.30	44.40	26.20	14.30	4.80	19.00	14.00	11.50	10.20	D122-06M-04-
8	1/4"	54.20	16.20	46.70	28.60	14.30	6.30	19.00	16.00	13.10	11.20	D122-08M-04-
12	1/2"	66.50	22.80	56.40	31.80	19.10	9.50	27.00	22.00	19.50	12.70	D122-12M-08-

All dimensions unless specified are in mm.



D123 - Port Connector Port Connector

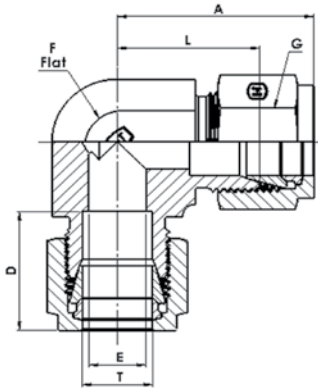
For Fractional Tube

T Tube O.D.	E	L	Hy-Tech Part Number
1/8"	2.00	22.40	D123-02-
1/4"	4.30	24.90	D123-04-
5/16"	5.60	25.90	D123-05-
3/8"	6.90	26.70	D123-06-
1/2"	9.40	36.30	D123-08-
5/8"	11.90	37.90	D123-10-
3/4"	14.70	37.90	D123-12-
1"	20.30	49.30	D123-16-
1-1/4"	25.90	69.10	D123-20-
1-1/2"	31.80	84.10	D123-24-

For Metric Tube

T Tube O.D.	E	L	Hy-Tech Part Number
3	1.90	22.20	D123-03M-
6	4.10	25.00	D123-06M-
8	5.60	26.00	D123-08M-
10	7.10	27.10	D123-10M-
12	8.80	36.20	D123-12M-
14	11.20	37.80	D123-14M-
15	12.00	37.80	D123-15M-
16	13.90	37.80	D123-16M-
18	15.50	39.40	D123-18M-
20	19.90	49.30	D123-20M-
22	22.60	49.00	D123-22M-
25	22.50	63.50	D123-25M-
28	24.30	67.60	D123-28M-
30	26.50	69.70	D123-30M-
32	31.60	81.90	D123-32M-

All dimensions unless specified are in mm.



D127-Union Elbow Tube x Tube

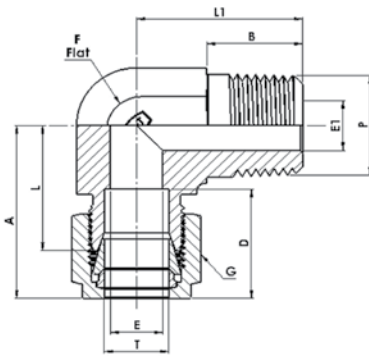
For Fractional Tube

T Tube O.D.	A	L	E	D	F	G	Hy-Tech Part Number
1/8"	23.67	15.80	2.40	14.22	9.53	11.11	D127-02-
1/4"	26.94	19.60	4.80	15.34	12.70	14.28	D127-04-
5/16"	28.80	21.30	6.30	16.30	14.28	15.88	D127-05-
3/8"	31.26	23.20	7.10	17.56	15.88	17.46	D127-06-
1/2"	35.83	25.90	10.40	22.63	20.64	22.22	D127-08-
5/8"	37.90	27.90	12.70	24.30	23.81	25.40	D127-10-
3/4"	40.79	29.70	15.80	25.39	26.98	28.58	D127-12-
7/8"	48.21	34.60	18.30	29.41	34.93	31.75	D127-14-
1"	50.03	36.80	22.30	32.23	34.93	38.10	D127-16-
1-1/4"	64.93	44.50	27.60	41.23	42.86	50.00	D127-20-
1-1/2"	78.83	50.80	34.00	50.83	50.80	57.15	D127-24-

For Metric Tube

T Tube O.D.	A	L	E	D	F	G	Hy-Tech Part Number
3	22.30	15.70	2.40	12.90	9.53	12.00	D127-03M-
6	27.00	19.60	4.80	15.30	12.70	14.00	D127-06M-
8	28.80	21.30	6.40	16.20	14.28	16.00	D127-08M-
10	31.50	23.90	7.90	17.20	17.46	19.00	D127-10M-
12	36.00	25.90	9.50	22.80	20.64	22.00	D127-12M-
14	38.40	27.90	11.10	24.40	23.81	25.00	D127-14M-
15	38.00	27.90	11.90	24.40	23.81	25.00	D127-15M-
16	38.00	27.90	12.70	24.40	23.81	25.00	D127-16M-
18	39.80	29.70	15.10	24.40	26.98	30.00	D127-18M-
20	44.60	34.50	15.90	26.00	34.93	32.00	D127-20M-
22	44.60	34.50	18.30	26.00	34.93	32.00	D127-22M-
25	49.10	36.80	21.80	31.30	34.93	38.00	D127-25M-
28	64.30	43.50	21.80	36.60	41.00	46.00	D127-28M-
30	69.90	48.30	26.20	39.60	46.00	50.00	D127-30M-
32	72.30	49.30	28.60	42.00	46.00	50.00	D127-32M-

All dimensions unless specified are in mm.

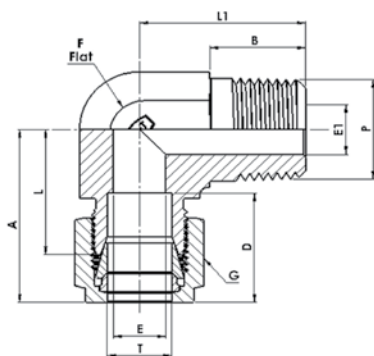


D129-Male Elbow Tube x Male NPT Threads

For Fractional Tube

T Tube O.D.	P NPT Male	A	L	L1	D	B	E	E1	F	G	Hy-Tech Part Number
1/8"	1/8"	26.17	18.30	18.90	14.22	9.60	2.30	2.30	11.11	11.11	D129-02-02-
1/8"	1/4"	26.17	18.30	23.30	14.22	14.30	2.30	2.30	12.70	11.11	D129-02-04-
3/16"	1/8"	24.52	18.80	18.80	13.72	9.60	3.10	3.10	12.70	12.70	D129-03-02-
3/16"	1/4"	24.52	18.80	23.40	13.72	14.30	3.10	3.10	12.70	12.70	D129-03-04-
1/4"	1/8"	26.94	19.60	18.80	15.34	14.30	4.80	4.80	12.70	14.28	D129-04-02-
1/4"	1/4"	27.14	19.80	23.90	15.34	14.30	4.80	4.80	12.70	14.28	D129-04-04-
1/4"	3/8"	29.74	22.40	26.20	15.34	14.30	4.80	4.80	17.46	14.28	D129-04-06-
1/4"	1/2"	31.94	24.60	33.00	15.34	14.30	4.80	4.80	20.64	14.28	D129-04-08-
5/16"	1/8"	28.80	21.30	19.80	16.30	9.60	4.80	4.80	14.28	15.88	D129-05-02-
5/16"	1/4"	28.80	21.30	24.50	16.30	14.30	6.30	6.30	14.28	15.88	D129-05-04-
5/16"	3/8"	30.60	23.10	26.20	16.30	14.30	6.30	6.30	17.46	15.88	D129-05-06-
3/8"	1/8"	31.16	23.10	20.60	17.56	14.30	4.80	4.80	15.88	17.46	D129-06-02-
3/8"	1/4"	31.16	23.10	25.40	17.56	14.30	7.10	7.10	15.88	17.46	D129-06-04-
3/8"	3/8"	31.96	23.90	26.20	17.56	14.30	7.10	7.10	17.46	17.46	D129-06-06-
3/8"	1/2"	33.96	25.90	33.00	17.56	14.30	7.10	7.10	20.64	17.46	D129-06-08-
3/8"	3/4"	37.76	29.70	36.80	17.56	14.30	7.10	7.10	26.98	17.46	D129-06-12-
1/2"	1/4"	35.83	25.90	28.30	22.63	19.10	7.10	7.10	20.64	22.22	D129-08-04-
1/2"	3/8"	35.83	25.90	28.30	22.63	19.10	9.60	9.60	20.64	22.22	D129-08-06-
1/2"	1/2"	35.83	25.90	33.00	22.63	19.10	10.40	10.40	20.64	22.22	D129-08-08-
1/2"	3/4"	39.63	29.70	36.80	22.63	19.10	10.40	10.40	26.98	22.22	D129-08-12-
5/8"	3/8"	38.00	28.00	30.20	24.30	14.30	9.60	9.60	23.81	25.40	D129-10-06-
5/8"	1/2"	38.00	28.00	35.10	24.30	19.10	11.90	11.90	23.81	25.40	D129-10-08-
5/8"	3/4"	39.70	29.70	36.80	24.30	19.10	12.70	12.70	26.98	25.40	D129-10-12-
3/4"	1/2"	40.79	29.70	37.00	25.39	19.10	11.90	11.90	26.98	28.58	D129-12-08-
3/4"	3/4"	40.79	29.70	36.80	25.39	19.10	15.80	15.80	26.98	28.58	D129-12-12-
7/8"	3/4"	49.61	34.50	41.70	29.41	19.10	15.80	15.80	34.92	31.75	D129-14-12-
1"	3/4"	50.03	36.80	42.20	32.23	23.90	15.80	15.80	34.92	38.10	D129-16-12-
1"	1"	50.03	36.80	46.70	32.23	23.90	22.30	22.30	34.92	38.10	D129-16-16-
1-1/4"	1-1/4"	64.93	44.50	47.80	41.23	23.90	27.70	27.70	42.86	50.00	D129-20-20-
1-1/2"	1-1/2"	78.83	50.80	60.50	50.83	26.20	34.00	34.00	50.80	57.15	D129-24-24-

All dimensions unless specified are in mm.

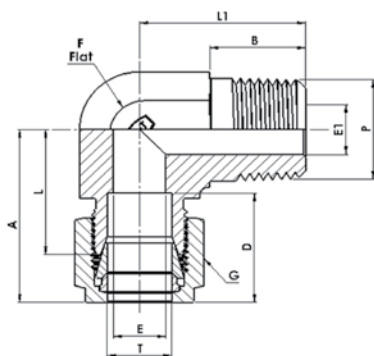


D129-Male Elbow Tube x Male NPT Threads

For Metric Tube

T Tube O.D.	P NPT Male	A	L	L1	D	B	E	E1	F	G	Hy-Tech Part Number
3	1/8"	23.60	17.00	17.80	12.90	9.60	2.40	2.40	11.11	12.00	D129-03M-02-
3	1/4"	24.60	18.00	23.40	12.90	14.30	2.40	2.40	12.70	12.00	D129-03M-04-
6	1/8"	27.00	19.60	18.80	15.30	9.60	4.80	4.80	12.70	14.00	D129-06M-02-
6	1/4"	27.00	19.60	23.40	15.30	14.30	4.80	4.80	12.70	14.00	D129-06M-04-
6	3/8"	29.80	22.40	26.20	15.30	14.30	4.80	4.80	17.46	14.00	D129-06M-06-
6	1/2"	31.80	24.40	33.00	15.30	19.10	4.80	4.80	20.64	14.00	D129-06M-08-
8	1/8"	28.80	21.30	19.80	16.20	9.60	4.80	4.80	14.28	16.00	D129-08M-02-
8	1/4"	28.80	21.30	24.40	16.20	14.30	6.40	6.40	14.28	16.00	D129-08M-04-
8	3/8"	30.60	23.10	26.20	16.20	14.30	6.40	6.40	17.46	16.00	D129-08M-06-
8	1/2"	32.60	25.10	33.00	16.20	19.10	6.40	6.40	20.64	16.00	D129-08M-08-
10	1/8"	31.50	23.90	23.60	17.20	9.60	4.80	4.80	17.46	19.00	D129-10M-02-
10	1/4"	31.50	23.90	26.20	17.20	14.30	7.10	7.10	17.46	19.00	D129-10M-04-
10	3/8"	31.50	23.90	26.20	17.20	14.30	7.90	7.90	17.46	19.00	D129-10M-06-
10	1/2"	31.50	23.90	33.00	17.20	19.10	7.90	7.90	20.64	19.00	D129-10M-08-
12	1/4"	36.00	25.90	28.20	22.80	14.30	7.10	7.10	20.64	22.00	D129-12M-02-
12	3/8"	36.00	25.90	28.20	22.80	14.30	9.50	9.50	20.64	22.00	D129-12M-04-
12	1/2"	36.00	25.90	33.00	22.80	19.10	9.50	9.50	20.64	22.00	D129-12M-06-
12	3/4"	39.80	29.70	36.80	22.80	19.10	9.50	9.50	26.98	22.00	D129-12M-08-
14	1/2"	38.40	27.90	35.10	24.40	19.10	11.10	11.10	23.81	25.00	D129-14M-08-
15	1/2"	38.00	27.90	35.10	24.40	19.10	11.90	11.90	23.81	25.00	D129-15M-08-
16	3/8"	38.00	27.90	30.20	24.40	14.30	9.50	9.50	23.81	25.00	D129-16M-06-
16	1/2"	38.00	27.90	35.10	24.40	19.10	11.90	11.90	23.81	25.00	D129-16M-08-
16	3/4"	39.80	29.70	36.80	24.40	19.10	12.70	12.70	26.98	25.00	D129-16M-12-
18	1/2"	39.80	29.70	36.80	24.40	19.10	11.90	11.90	26.98	30.00	D129-18M-08-
18	3/4"	39.80	29.70	36.80	24.40	19.10	15.10	15.10	26.98	30.00	D129-18M-12-
20	1/2"	44.60	34.50	41.70	26.00	19.10	11.90	11.90	34.92	32.00	D129-20M-08-
20	3/4"	44.60	34.50	41.70	26.00	19.10	15.90	15.90	34.92	32.00	D129-20M-12-
22	3/4"	44.60	34.50	41.70	26.00	19.10	15.90	15.90	34.92	32.00	D129-22M-12-
22	1"	44.60	34.50	46.50	26.00	23.90	18.30	18.30	34.92	32.00	D129-22M-16-
25	3/4"	49.10	36.80	41.70	31.30	19.10	15.90	15.90	34.92	38.00	D129-25M-12-
25	1"	49.10	36.80	46.50	31.30	23.90	21.80	21.80	34.92	38.00	D129-25M-16-
30	1-1/4"	69.90	48.30	53.10	39.60	23.90	26.20	26.20	46.00	50.00	D129-30M-20-
32	1-1/4"	72.30	49.30	53.10	42.00	23.90	27.80	27.80	46.00	50.00	D129-32M-20-

All dimensions unless specified are in mm.

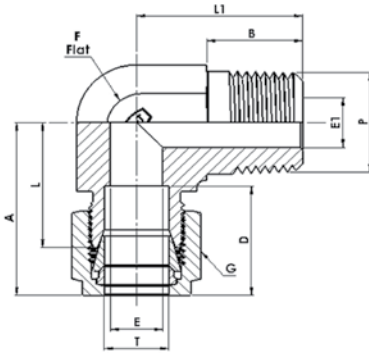


D129-Male Elbow Tube x Male BSPT Threads

For Fractional Tube

T Tube O.D.	P BSPT Male	A	L	L1	D	B	E	E1	F	G	Hy-Tech Part Number
1/8"	1/8"	26.17	18.30	18.90	14.22	9.60	2.30	2.30	11.11	11.11	D129-02-02PT-
1/8"	1/4"	26.17	18.30	23.30	14.22	14.30	2.30	2.30	12.70	11.11	D129-02-04PT-
3/16"	1/8"	24.52	18.80	18.80	13.72	9.60	3.10	3.10	12.70	12.70	D129-03-02PT-
3/16"	1/4"	24.52	18.80	23.40	13.72	14.30	3.10	3.10	12.70	12.70	D129-03-04PT-
1/4"	1/8"	26.94	19.60	18.80	15.34	14.30	4.80	4.80	12.70	14.28	D129-04-02PT-
1/4"	1/4"	27.14	19.80	23.90	15.34	14.30	4.80	4.80	12.70	14.28	D129-04-04PT-
1/4"	3/8"	29.74	22.40	26.20	15.34	14.30	4.80	4.80	17.46	14.28	D129-04-06PT-
1/4"	1/2"	31.94	24.60	33.00	15.34	14.30	4.80	4.80	20.64	14.28	D129-04-08PT-
5/16"	1/8"	28.80	21.30	19.80	16.30	9.60	4.80	4.80	14.28	15.88	D129-05-02PT-
5/16"	1/4"	28.80	21.30	24.50	16.30	14.30	6.30	6.30	14.28	15.88	D129-05-04PT-
5/16"	3/8"	30.60	23.10	26.20	16.30	14.30	6.30	6.30	17.46	15.88	D129-05-06PT-
3/8"	1/8"	31.16	23.10	20.60	17.56	14.30	4.80	4.80	15.88	17.46	D129-06-02PT-
3/8"	1/4"	31.16	23.10	25.40	17.56	14.30	7.10	7.10	15.88	17.46	D129-06-04PT-
3/8"	3/8"	31.96	23.90	26.20	17.56	14.30	7.10	7.10	17.46	17.46	D129-06-06PT-
3/8"	1/2"	33.96	25.90	33.00	17.56	14.30	7.10	7.10	20.64	17.46	D129-06-08PT-
3/8"	3/4"	37.76	29.70	36.80	17.56	14.30	7.10	7.10	26.98	17.46	D129-06-12PT-
1/2"	1/4"	35.83	25.90	28.30	22.63	19.10	7.10	7.10	20.64	22.22	D129-08-04PT-
1/2"	3/8"	35.83	25.90	28.30	22.63	19.10	9.60	9.60	20.64	22.22	D129-08-06PT-
1/2"	1/2"	35.83	25.90	33.00	22.63	19.10	10.40	10.40	20.64	22.22	D129-08-08PT-
1/2"	3/4"	39.63	29.70	36.80	22.63	19.10	10.40	10.40	26.98	22.22	D129-08-12PT-
5/8"	3/8"	38.00	28.00	30.20	24.30	14.30	9.60	9.60	23.81	25.40	D129-10-06PT-
5/8"	1/2"	38.00	28.00	35.10	24.30	19.10	11.90	11.90	23.81	25.40	D129-10-08PT-
5/8"	3/4"	39.70	29.70	36.80	24.30	19.10	12.70	12.70	26.98	25.40	D129-10-12PT-
3/4"	1/2"	40.79	29.70	37.00	25.39	19.10	11.90	11.90	26.98	28.58	D129-12-08PT-
3/4"	3/4"	40.79	29.70	36.80	25.39	19.10	15.80	15.80	26.98	28.58	D129-12-12PT-
7/8"	3/4"	49.61	34.50	41.70	29.41	19.10	15.80	15.80	34.92	31.75	D129-14-12PT-
1"	3/4"	50.03	36.80	42.20	32.23	23.90	15.80	15.80	34.92	38.10	D129-16-12PT-
1"	1"	50.03	36.80	46.70	32.23	23.90	22.30	22.30	34.92	38.10	D129-16-16PT-
1-1/4"	1-1/4"	64.93	44.50	47.80	41.23	23.90	27.70	27.70	42.86	50.00	D129-20-20PT-
1-1/2"	1-1/2"	78.83	50.80	60.50	50.83	26.20	34.00	34.00	50.80	57.15	D129-24-24PT-

All dimensions unless specified are in mm.

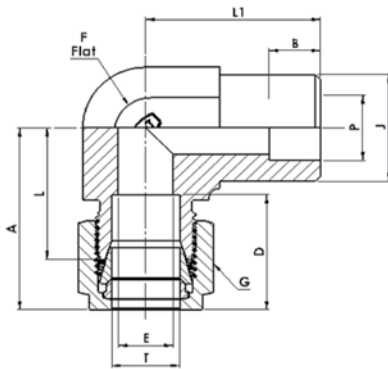


D129-Male Elbow Tube x Male BSPT Threads

For Metric Tube

T Tube O.D.	P NPT Male	A	L	L1	D	B	E	E1	F	G	Hy-Tech Part Number
3	1/8"	23.60	17.00	17.80	12.90	9.60	2.40	2.40	11.11	12.00	D129-03M-02PT-
3	1/4"	24.60	18.00	23.40	12.90	14.30	2.40	2.40	12.70	12.00	D129-03M-04PT-
6	1/8"	27.00	19.60	18.80	15.30	9.60	4.80	4.80	12.70	14.00	D129-06M-02PT-
6	1/4"	27.00	19.60	23.40	15.30	14.30	4.80	4.80	12.70	14.00	D129-06M-04PT-
6	3/8"	29.80	22.40	26.20	15.30	14.30	4.80	4.80	17.46	14.00	D129-06M-06PT-
6	1/2"	31.80	24.40	33.00	15.30	19.10	4.80	4.80	20.64	14.00	D129-06M-08PT-
8	1/8"	28.80	21.30	19.80	16.20	9.60	4.80	4.80	14.28	16.00	D129-08M-02PT-
8	1/4"	28.80	21.30	24.40	16.20	14.30	6.40	6.40	14.28	16.00	D129-08M-04PT-
8	3/8"	30.60	23.10	26.20	16.20	14.30	6.40	6.40	17.46	16.00	D129-08M-06PT-
8	1/2"	32.60	25.10	33.00	16.20	19.10	6.40	6.40	20.64	16.00	D129-08M-08PT-
10	1/8"	31.50	23.90	23.60	17.20	9.60	4.80	4.80	17.46	19.00	D129-10M-02PT-
10	1/4"	31.50	23.90	26.20	17.20	14.30	7.10	7.10	17.46	19.00	D129-10M-04PT-
10	3/8"	31.50	23.90	26.20	17.20	14.30	7.90	7.90	17.46	19.00	D129-10M-06PT-
10	1/2"	31.50	23.90	33.00	17.20	19.10	7.90	7.90	20.64	19.00	D129-10M-08PT-
12	1/4"	36.00	25.90	28.20	22.80	14.30	7.10	7.10	20.64	22.00	D129-12M-02PT-
12	3/8"	36.00	25.90	28.20	22.80	14.30	9.50	9.50	20.64	22.00	D129-12M-04PT-
12	1/2"	36.00	25.90	33.00	22.80	19.10	9.50	9.50	20.64	22.00	D129-12M-06PT-
12	3/4"	39.80	29.70	36.80	22.80	19.10	9.50	9.50	26.98	22.00	D129-12M-08PT-
14	1/2"	38.40	27.90	35.10	24.40	19.10	11.10	11.10	23.81	25.00	D129-14M-08PT-
15	1/2"	38.00	27.90	35.10	24.40	19.10	11.90	11.90	23.81	25.00	D129-15M-08PT-
16	3/8"	38.00	27.90	30.20	24.40	14.30	9.50	9.50	23.81	25.00	D129-16M-06PT-
16	1/2"	38.00	27.90	35.10	24.40	19.10	11.90	11.90	23.81	25.00	D129-16M-08PT-
16	3/4"	39.80	29.70	36.80	24.40	19.10	12.70	12.70	26.98	25.00	D129-16M-12PT-
18	1/2"	39.80	29.70	36.80	24.40	19.10	11.90	11.90	26.98	30.00	D129-18M-08PT-
18	3/4"	39.80	29.70	36.80	24.40	19.10	15.10	15.10	26.98	30.00	D129-18M-12PT-
20	1/2"	44.60	34.50	41.70	26.00	19.10	11.90	11.90	34.92	32.00	D129-20M-08PT-
20	3/4"	44.60	34.50	41.70	26.00	19.10	15.90	15.90	34.92	32.00	D129-20M-12PT-
22	3/4"	44.60	34.50	41.70	26.00	19.10	15.90	15.90	34.92	32.00	D129-22M-12PT-
22	1"	44.60	34.50	46.50	26.00	23.90	18.30	18.30	34.92	32.00	D129-22M-16PT-
25	3/4"	49.10	36.80	41.70	31.30	19.10	15.90	15.90	34.92	38.00	D129-25M-12PT-
25	1"	49.10	36.80	46.50	31.30	23.90	21.80	21.80	34.92	38.00	D129-25M-16PT-
30	1-1/4"	69.90	48.30	53.10	39.60	23.90	26.20	26.20	46.00	50.00	D129-30M-20PT-
32	1-1/4"	72.30	49.30	53.10	42.00	23.90	27.80	27.80	46.00	50.00	D129-32M-20PT-

All dimensions unless specified are in mm.

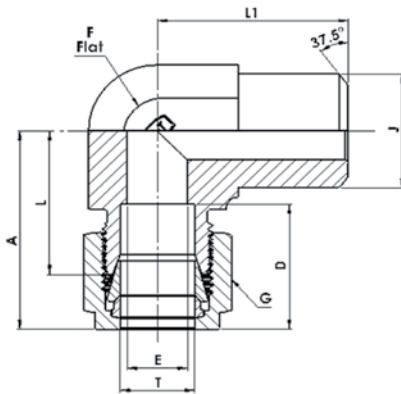


D129-Male Elbow Tube x Tube Socket Weld

For Fractional Tube

T Tube O.D.	P SW Tube	A	L	L1	D	B	E	J	F	G	Hy-Tech Part Number
1/4"	1/4"	26.94	19.60	26.90	15.34	7.00	4.80	12.70	12.70	14.28	D129-04-04SW-
3/8"	3/8"	31.16	23.10	30.50	17.56	7.90	7.10	16.00	15.88	17.46	D129-06-06SW-
1/2"	1/2"	35.83	25.90	36.10	22.63	9.70	10.40	20.60	20.64	22.22	D129-08-08SW-
3/4"	3/4"	40.79	29.70	39.90	25.39	11.20	15.80	26.90	26.98	28.58	D129-12-12SW-
1"	1"	50.03	36.80	49.00	32.23	15.80	22.30	35.10	34.92	38.10	D129-16-16SW-

All dimensions unless specified are in mm.

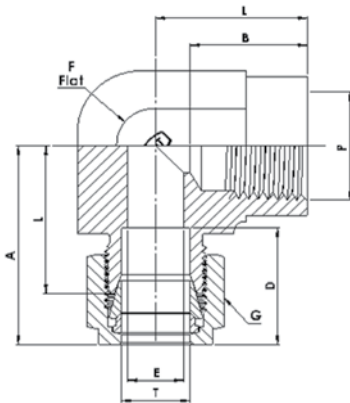


D129-Male Elbow Tube x Tube Pipe Weld

For Fractional Tube

T Tube O.D.	P BW Tube	A	L	L1	D	B	E	J	F	G	Hy-Tech Part Number
1/4"	1/8"	26.94	19.60	18.80	15.34	7.00	4.80	12.70	12.70	14.28	D129-04-02BW-
1/4"	1/4"	26.94	19.60	23.40	15.34	7.00	4.80	12.70	12.70	14.28	D129-04-04BW-
3/8"	3/8"	31.16	23.10	25.40	17.56	7.90	7.10	16.00	15.88	17.46	D129-06-06BW-
1/2"	1/2"	35.83	25.90	33.00	22.63	9.70	10.40	20.60	20.64	22.22	D129-08-08BW-
3/4"	3/4"	40.79	29.70	36.80	25.39	11.20	15.80	26.90	26.98	28.58	D129-12-12BW-

All dimensions unless specified are in mm.



D130- Female Elbow Tube x Female NPT Threads

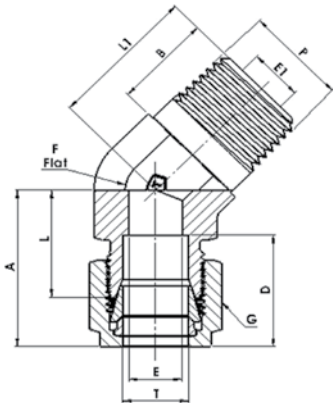
For Fractional Tube

T Tube O.D.	P NPT Female	A	L	L1	D	B	E	F	G	Hy-Tech Part Number
1/8"	1/8"	25.87	18.00	19.10	14.22	10.40	2.30	12.70	11.11	D130-02-02-
1/8"	1/4"	28.67	20.80	22.40	14.22	15.00	2.30	17.46	11.11	D130-02-04-
3/16"	1/8"	24.52	18.80	19.10	13.72	10.40	3.00	12.70	12.70	D130-03-02-
1/4"	1/8"	26.94	19.60	19.10	15.34	10.40	4.80	12.70	14.28	D130-04-02-
1/4"	1/4"	29.74	22.40	22.40	15.34	15.00	4.80	17.46	14.28	D130-04-04-
1/4"	3/8"	31.74	24.40	22.40	15.34	15.00	4.80	20.64	14.28	D130-04-06-
1/4"	1/2"	34.54	27.20	28.40	15.34	19.80	4.80	25.40	14.28	D130-04-08-
5/16"	1/8"	28.80	21.30	19.10	16.30	10.40	6.30	14.28	15.88	D130-05-02-
5/16"	1/4"	30.60	23.10	22.40	16.30	15.00	6.30	17.46	15.88	D130-05-04-
3/8"	1/8"	31.16	23.10	19.10	17.56	10.40	7.10	23.81	17.46	D130-06-02-
3/8"	1/4"	31.96	23.90	22.40	17.56	15.00	7.10	17.46	17.46	D130-06-04-
3/8"	3/8"	36.96	28.90	22.40	17.56	15.00	7.10	20.64	17.46	D130-06-06-
3/8"	1/2"	36.76	28.70	28.40	17.56	19.80	7.10	25.40	17.46	D130-06-08-
1/2"	1/4"	35.83	25.90	22.40	22.63	15.00	10.40	20.64	22.22	D130-08-04-
1/2"	3/8"	35.83	25.90	22.40	22.63	15.00	10.40	20.64	22.22	D130-08-06-
1/2"	1/2"	38.63	28.70	28.40	22.63	19.80	10.40	25.40	22.22	D130-08-08-
5/8"	3/8"	37.90	27.90	22.40	24.30	15.00	12.70	23.81	25.40	D130-10-06-
5/8"	1/2"	39.70	29.70	28.40	24.30	19.80	12.70	26.98	25.40	D130-10-08-
3/4"	1/2"	40.79	29.70	28.40	25.39	19.80	15.80	26.98	28.58	D130-12-08-
3/4"	3/4"	45.59	34.50	31.80	25.39	20.60	15.80	34.92	28.58	D130-12-12-
7/8"	3/4"	49.61	34.50	31.80	29.41	20.60	18.30	34.92	31.75	D130-14-12-
1"	3/4"	50.03	36.80	31.80	32.23	20.60	22.30	34.92	38.10	D130-16-12-
1"	1"	54.63	41.40	38.10	32.23	25.40	22.30	42.86	38.10	D130-16-16-

For Metric Tube

T Tube O.D.	P NPT Female	A	L	L1	D	B	E	F	G	Hy-Tech Part Number
6	1/8"	27.00	19.60	19.00	15.30	10.40	4.80	12.70	14.00	D130-06M-02-
6	1/4"	29.80	22.40	22.40	15.30	15.00	4.80	17.46	14.00	D130-06M-04-
6	1/2"	34.60	27.20	28.40	15.30	19.80	4.80	25.40	14.00	D130-06M-08-
8	1/4"	35.50	28.00	22.40	16.20	15.00	6.40	17.46	16.00	D130-08M-04-
10	1/8"	31.50	23.90	19.00	17.20	10.40	7.90	17.46	19.00	D130-10M-02-
10	1/4"	33.50	25.90	22.40	17.20	15.00	7.90	20.64	19.00	D130-10M-04-
12	1/4"	36.00	25.90	22.40	22.80	15.00	9.50	20.64	22.00	D130-12M-04-
12	1/2"	38.80	28.70	28.40	22.80	19.80	9.50	25.40	22.00	D130-12M-08-
16	1/2"	38.20	29.70	28.40	22.80	19.80	12.70	26.98	22.00	D130-12M-08-

All dimensions unless specified are in mm.

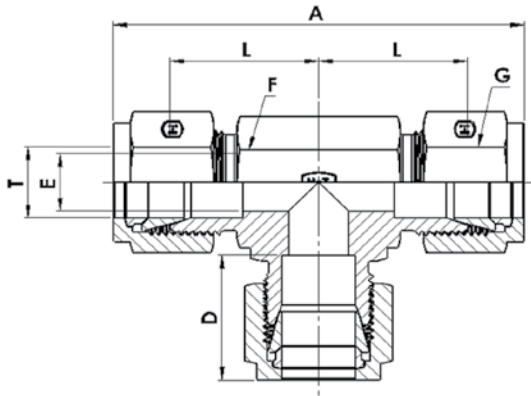


D131-45° Male Elbow Tube x Male NPT Threads

For Fractional Tube

T Tube O.D.	P NPT Male	A	L	L1	D	B	E	E1	F	G	Hy-Tech Part Number
1/4"	1/8"	24.64	17.30	16.50	15.34	14.30	4.80	4.80	12.70	14.28	D131-04-02-
1/4"	1/4"	24.64	17.30	21.10	15.34	14.30	4.80	4.80	12.70	14.28	D131-04-04-
3/8"	1/8"	28.66	20.60	18.30	17.56	14.30	4.80	4.80	15.88	17.46	D131-06-02-
3/8"	1/4"	28.66	20.60	22.90	17.56	14.30	7.10	7.10	15.88	17.46	D131-06-04-
3/8"	3/8"	29.86	21.80	24.10	17.56	14.30	7.10	7.10	20.64	17.46	D131-06-06-
1/2"	3/8"	31.73	21.80	24.10	22.63	19.10	9.60	9.60	20.64	22.22	D131-08-06-
1/2"	1/2"	31.73	21.80	29.00	22.63	19.10	10.40	10.40	20.64	22.22	D131-08-08-
3/4"	3/4"	34.99	23.90	31.00	25.39	19.10	15.80	15.80	26.98	28.58	D131-12-12-
1"	1"	41.43	28.20	37.90	32.23	23.90	22.30	22.30	34.92	38.10	D131-16-16-

All dimensions unless specified are in mm.



D133-Union Tee Tube x Tube x Tube

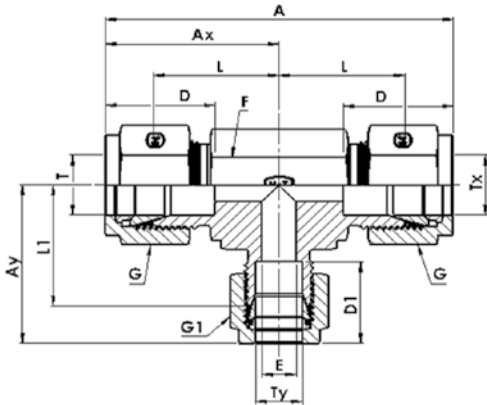
For Fractional Tube

T Tube O.D.	A	L	E	D	F	G	Hy-Tech Part Number
1/8"	23.67	15.80	2.40	14.22	9.53	11.11	D133-02-
1/4"	26.94	19.60	4.80	15.34	12.70	14.28	D133-04-
5/16"	28.80	21.30	6.30	16.30	14.28	15.88	D133-05-
3/8"	31.26	23.20	7.10	17.56	15.88	17.46	D133-06-
1/2"	35.83	25.90	10.40	22.63	20.64	22.22	D133-08-
5/8"	37.90	27.90	12.70	24.30	23.81	25.40	D133-10-
3/4"	40.79	29.70	15.80	25.39	26.98	28.58	D133-12-
7/8"	48.21	34.60	18.30	29.41	34.93	31.75	D133-14-
1"	51.33	36.80	22.30	32.23	34.93	38.10	D133-16-
1-1/4"	64.93	44.50	27.60	41.23	42.86	50.00	D133-20-
1-1/2"	78.83	50.80	34.00	50.83	50.80	57.15	D133-24-

For Metric Tube

T Tube O.D.	A	L	E	D	F	G	Hy-Tech Part Number
3	22.30	15.70	2.40	12.90	9.53	12.00	D133-03M-
6	27.00	19.60	4.80	15.30	12.70	14.00	D133-06M-
8	28.80	21.30	6.40	16.20	14.28	16.00	D133-08M-
10	31.50	23.90	7.90	17.20	17.46	19.00	D133-10M-
12	36.00	25.90	9.50	22.80	20.64	22.00	D133-12M-
14	38.40	27.90	11.10	24.40	23.81	25.00	D133-14M-
15	38.00	27.90	11.90	24.40	23.81	25.00	D133-15M-
16	38.00	27.90	12.70	24.40	23.81	25.00	D133-16M-
18	39.80	29.70	15.10	24.40	26.98	30.00	D133-18M-
20	44.60	34.50	15.90	26.00	34.93	32.00	D133-20M-
22	44.60	34.50	18.30	26.00	34.93	32.00	D133-22M-
25	49.10	36.80	21.80	31.30	34.93	38.00	D133-25M-
28	64.30	43.50	21.80	36.60	41.00	46.00	D133-28M-
30	69.90	48.30	26.20	39.60	46.00	50.00	D133-30M-
32	72.30	49.30	28.60	42.00	46.00	50.00	D133-32M-

All dimensions unless specified are in mm.



**D133-Reducing Tee
Tube x Tube x Tube**

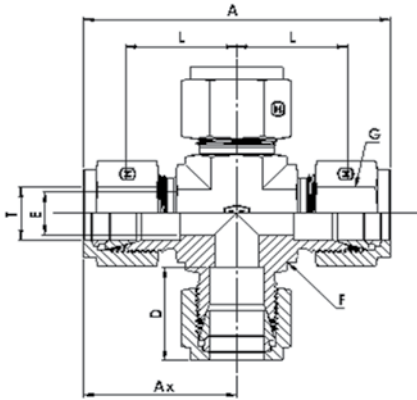
For Fractional Tube

T Tube O.D.	Tx Tube O.D.	Ty Tube O.D.	A	Ax	Ay	L	L1	E	D	D1	F	G	G1	Hy-Tech Part Number
1/4"	1/4"	1/8"	53.88	26.94	25.77	19.60	17.90	2.40	15.34	14.22	12.70	14.28	11.11	D133-04-04-02-
3/8"	3/8"	1/4"	62.32	31.16	29.24	23.10	21.90	4.80	17.56	15.34	15.88	17.46	14.28	D133-06-06-04-
1/2"	1/2"	1/4"	71.66	35.83	31.74	25.90	24.40	4.80	22.63	15.34	20.64	22.22	14.28	D133-08-08-04-
1/2"	1/2"	3/8"	71.66	35.83	33.96	25.90	25.90	7.10	22.63	17.56	20.64	22.22	17.46	D133-08-08-06-
5/8"	5/8"	3/8"	77.40	38.70	36.76	28.70	28.70	7.10	24.30	17.56	23.81	25.40	17.46	D133-10-10-06-
3/4"	3/4"	1/4"	81.58	40.79	35.54	29.70	28.20	4.80	25.39	15.34	26.98	28.58	14.28	D133-12-12-04-
3/4"	3/4"	3/8"	81.58	40.79	37.76	29.70	29.70	7.10	25.39	17.56	26.98	28.58	17.46	D133-12-12-06-
3/4"	3/4"	1/2"	81.58	40.79	39.63	29.70	29.70	10.40	25.39	22.63	26.98	28.58	22.22	D133-12-12-08-
7/8"	7/8"	1/2"	99.22	49.61	44.43	34.50	34.50	10.40	29.41	22.63	31.75	31.75	22.22	D133-14-14-08-
1"	1"	1/4"	100.06	50.03	40.34	36.80	33.00	4.80	32.23	15.34	34.92	38.10	14.28	D133-16-16-04-
1"	1"	3/8"	100.06	50.03	42.56	36.80	34.50	7.10	32.23	17.56	34.92	38.10	17.46	D133-16-16-06-
1"	1"	1/2"	100.06	50.03	44.43	36.80	34.50	10.40	32.23	22.63	34.92	38.10	22.22	D133-16-16-08-
1"	1"	3/4"	100.06	50.03	45.59	36.80	34.50	15.80	32.23	25.39	34.92	38.10	28.58	D133-16-16-12-

For Metric Tube

T Tube O.D.	Tx Tube O.D.	Ty Tube O.D.	A	Ax	Ay	L	L1	E	D	D1	F	G	G1	Hy-Tech Part Number
8	8	6	57.60	28.80	27.90	21.30	20.50	4.80	16.20	15.30	16.00	16.00	14.00	D133-08M-08M-06M-
10	10	6	63.00	31.50	29.80	23.90	22.40	4.80	17.20	15.30	17.46	19.00	14.00	D133-10M-10M-06M-
12	12	6	72.00	36.00	31.80	25.90	24.40	4.80	22.80	15.30	20.64	22.00	14.00	D133-12M-12M-06M-
12	12	10	72.00	36.00	33.50	25.90	25.90	7.90	22.80	17.20	20.64	22.00	19.00	D133-12M-12M-10M-
15	15	12	77.60	38.80	38.80	28.70	28.70	9.80	24.40	22.80	25.40	25.00	22.00	D133-15M-15M-12M-
16	16	12	77.60	38.80	38.80	28.70	28.70	9.80	24.40	22.80	25.40	25.00	22.00	D133-16M-16M-12M-
18	18	12	79.60	39.80	38.30	29.70	28.20	9.80	24.40	22.80	27.00	30.00	22.00	D133-18M-18M-12M-
20	20	6	85.20	42.60	38.40	32.50	31.00	4.80	26.00	15.30	34.92	32.00	14.00	D133-20M-20M-06M-
20	20	10	85.20	42.60	40.10	32.50	32.50	7.90	26.00	17.20	34.92	32.00	19.00	D133-20M-20M-10M-
20	20	12	85.20	42.60	42.60	32.50	32.50	9.80	26.00	22.80	34.92	32.00	22.00	D133-20M-20M-12M-
22	22	12	85.20	42.60	42.60	32.50	32.50	9.80	26.00	22.80	34.92	32.00	22.00	D133-22M-22M-12M-
25	25	10	98.20	49.10	41.90	36.80	34.30	7.90	31.30	17.20	34.92	38.00	19.00	D133-25M-25M-10M-
25	25	12	98.20	49.10	44.40	36.80	34.30	9.80	31.30	22.80	34.92	38.00	22.00	D133-25M-25M-12M-
25	25	20	98.20	49.10	44.40	36.80	34.30	15.90	31.30	26.00	34.92	38.00	32.00	D133-25M-25M-20M-

All dimensions unless specified are in mm.



D134-Union Cross Tube x Tube x Tube x Tube

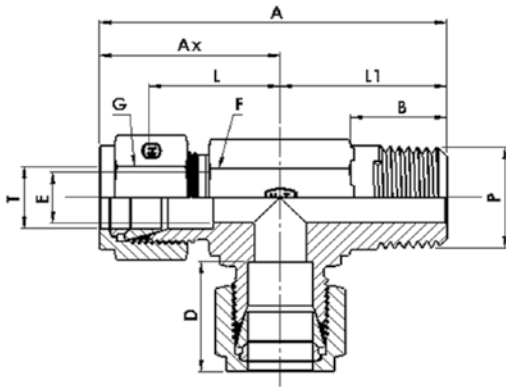
For Fractional Tube

T Tube O.D.	A	Ax	L	E	D	F	G	Hy-Tech Part Number
1/8"	47.34	23.67	15.80	2.40	14.22	9.53	11.11	D134-02-
1/4"	53.88	26.94	19.60	4.80	15.34	12.70	14.28	D134-04-
5/16"	57.6	28.80	21.30	6.30	16.30	14.28	15.88	D134-05-
3/8"	62.52	31.26	23.20	7.10	17.56	15.88	17.46	D134-06-
1/2"	71.66	35.83	25.90	10.40	22.63	20.64	22.22	D134-08-
5/8"	75.80	37.90	27.90	12.70	24.30	23.81	25.40	D134-10-
3/4"	81.58	40.79	29.70	15.80	25.39	26.98	28.58	D134-12-
1"	102.66	51.33	36.80	22.30	32.23	34.93	38.10	D134-16-

For Metric Tube

T Tube O.D.	A	Ax	L	E	D	F	G	Hy-Tech Part Number
3	44.60	22.30	15.70	2.40	12.90	9.53	12.00	D134-03M-
6	54.00	27.00	19.60	4.80	15.30	12.70	14.00	D134-06M-
8	57.60	28.80	21.30	6.40	16.20	14.28	16.00	D134-08M-
10	63.00	31.50	23.90	7.90	17.20	17.46	19.00	D134-10M-
12	72.00	36.00	25.90	9.50	22.80	20.64	22.00	D134-12M-
14	76.80	38.40	27.90	11.10	24.40	23.81	25.00	D134-14M-
15	76.00	38.00	27.90	11.90	24.40	23.81	25.00	D134-15M-
16	76.00	38.00	27.90	12.70	24.40	23.81	25.00	D134-16M-
18	79.60	39.80	29.70	15.10	24.40	26.98	30.00	D134-18M-
20	89.20	44.60	34.50	15.90	26.00	34.93	32.00	D134-20M-
22	89.20	44.60	34.50	18.30	26.00	34.93	32.00	D134-22M-
25	98.20	49.10	36.80	21.80	31.30	34.93	38.00	D134-25M-

All dimensions unless specified are in mm.



D135-Male Run Tee Tube x Male NPT Threads

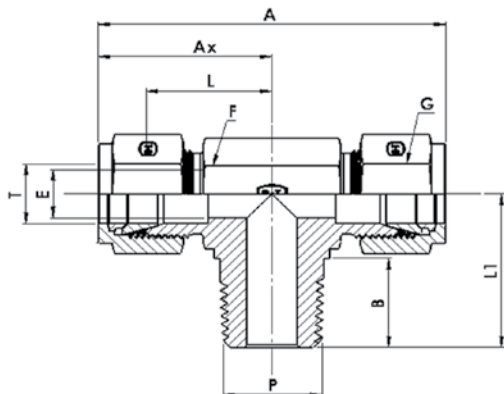
For Fractional Tube

T Tube O.D.	P NPT Male	A	Ax	L	L1	D	B	E	F	G	Hy-Tech Part Number
1/8"	1/8"	45.07	26.17	18.30	18.90	14.22	9.60	2.30	11.11	11.11	D135-02-02-
1/8"	1/4"	49.47	26.17	18.30	23.30	14.22	14.30	2.30	12.70	11.11	D135-02-04-
3/16"	1/8"	43.32	24.52	18.80	18.80	13.72	9.60	3.00	11.11	12.70	D135-03-02-
1/4"	1/8"	45.74	26.94	19.60	18.80	15.34	9.60	4.80	12.70	14.28	D135-04-02-
1/4"	1/4"	50.84	26.94	19.60	23.90	15.34	14.30	4.80	12.70	14.28	D135-04-04-
5/16"	1/8"	49.70	29.90	22.40	19.80	16.30	9.60	4.80	15.88	15.88	D135-05-02-
3/8"	1/4"	56.56	31.16	23.10	25.40	17.56	14.30	7.10	15.88	17.46	D135-06-04-
3/8"	3/8"	60.36	31.96	23.90	28.40	17.56	14.30	7.10	20.64	17.46	D135-06-06-
1/2"	3/8"	64.13	35.83	25.90	28.30	22.63	14.30	9.70	20.64	22.22	D135-08-06-
1/2"	1/2"	68.83	35.83	25.90	33.00	22.63	19.10	10.40	20.64	22.22	D135-08-08-
5/8"	1/2"	71.90	37.90	27.90	34.00	24.30	19.10	11.90	23.81	25.40	D135-10-08-
3/4"	3/4"	77.59	40.79	29.70	36.80	25.39	19.10	15.80	26.98	28.58	D135-12-12-
1"	1"	96.73	50.03	36.80	46.70	32.23	23.90	22.30	34.92	38.10	D135-16-16-
1-1/4"	1-1/4"	112.73	64.93	44.50	47.80	41.23	23.90	27.70	42.86	50.00	D135-20-20-
1-1/2"	1-1/2"	139.33	78.83	50.80	60.50	50.83	26.20	33.90	50.80	57.15	D135-24-24-

For Metric Tube

T Tube O.D.	P NPT Male	A	Ax	L	L1	D	B	E	F	G	Hy-Tech Part Number
6	1/8"	45.80	27.00	19.60	18.80	15.30	9.60	4.80	12.70	14.00	D135-06M-02-
6	1/4"	50.40	27.00	19.60	23.40	15.30	14.30	4.80	12.70	14.00	D135-06M-04-
6	3/8"	56.00	29.80	22.40	26.20	15.30	14.30	4.80	17.46	14.00	D135-06M-06-
8	1/4"	53.20	28.80	21.30	24.40	16.20	14.30	6.40	15.88	16.00	D135-08M-04-
8	3/8"	56.80	30.60	23.10	26.20	16.20	14.30	6.40	17.46	16.00	D135-08M-06-
8	1/2"	65.60	32.60	25.10	33.00	16.20	19.10	6.40	20.64	16.00	D135-08M-08-
12	1/4"	64.20	36.00	25.90	28.20	22.80	14.30	7.10	20.64	22.00	D135-12M-04-
12	3/8"	64.20	36.00	25.90	28.20	22.80	14.30	7.10	20.64	22.00	D135-12M-06-
12	1/2"	69.00	36.00	25.90	33.00	22.80	19.10	9.50	20.64	22.00	D135-12M-08-
16	1/2"	73.10	38.00	27.90	35.10	24.40	19.10	11.90	23.81	25.00	D135-16M-08-

All dimensions unless specified are in mm.



D136-Male Branch Tee Tube x Male NPT Threads

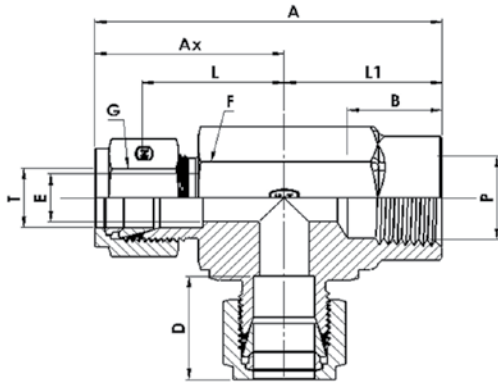
For Fractional Tube

T Tube O.D.	P NPT Male	A	Ax	L	L1	D	B	E	F	G	Hy-Tech Part Number
1/8"	1/8"	52.34	26.17	18.30	18.90	14.22	9.60	2.30	11.11	11.11	D136-02-02-
1/8"	1/4"	52.34	26.17	18.30	23.30	14.22	14.30	2.30	12.70	11.11	D136-02-04-
3/16"	1/8"	49.04	24.52	18.80	18.80	13.72	9.60	3.00	11.11	12.70	D136-03-02-
1/4"	1/8"	53.88	26.94	19.60	18.80	15.34	9.60	4.80	12.70	14.28	D136-04-02-
1/4"	1/4"	53.88	26.94	19.60	23.90	15.34	14.30	4.80	12.70	14.28	D136-04-04-
5/16"	1/8"	59.80	29.90	22.40	19.80	16.30	9.60	4.80	15.88	15.88	D136-05-02-
3/8"	1/4"	62.32	31.16	23.10	25.40	17.56	14.30	7.10	15.88	17.46	D136-06-04-
3/8"	3/8"	63.92	31.96	23.90	28.40	17.56	14.30	7.10	20.64	17.46	D136-06-06-
1/2"	3/8"	71.66	35.83	25.90	28.30	22.63	14.30	9.70	20.64	22.22	D136-08-06-
1/2"	1/2"	71.66	35.83	25.90	33.00	22.63	19.10	10.40	20.64	22.22	D136-08-08-
5/8"	1/2"	75.80	37.90	27.90	34.00	24.30	19.10	11.90	23.81	25.40	D136-10-08-
3/4"	3/4"	81.58	40.79	29.70	36.80	25.39	19.10	15.80	26.98	28.58	D136-12-12-
1"	1"	100.06	50.03	36.80	46.70	32.23	23.90	22.30	34.92	38.10	D136-16-16-
1-1/4"	1-1/4"	129.86	64.93	44.50	47.80	41.23	23.90	27.70	42.86	50.00	D136-20-20-
1-1/2"	1-1/2"	157.66	78.83	50.80	60.50	50.83	26.20	33.90	50.80	57.15	D136-24-24-

For Metric Tube

T Tube O.D.	P NPT Male	A	Ax	L	L1	D	B	E	F	G	Hy-Tech Part Number
6	1/8"	54.00	27.00	19.60	18.80	15.30	9.60	4.80	12.70	14.00	D136-06M-02-
6	1/4"	54.00	27.00	19.60	23.40	15.30	14.30	4.80	12.70	14.00	D136-06M-04-
6	3/8"	59.60	29.80	22.40	26.20	15.30	14.30	4.80	17.46	14.00	D136-06M-06-
8	1/4"	57.60	28.80	21.30	24.40	16.20	14.30	6.40	15.88	16.00	D136-08M-04-
8	3/8"	61.20	30.60	23.10	26.20	16.20	14.30	6.40	17.46	16.00	D136-08M-06-
8	1/2"	65.20	32.60	25.10	33.00	16.20	19.10	6.40	20.64	16.00	D136-08M-08-
12	1/4"	72.00	36.00	25.90	28.20	22.80	14.30	7.10	20.64	22.00	D136-12M-04-
12	3/8"	72.00	36.00	25.90	28.20	22.80	14.30	7.10	20.64	22.00	D136-12M-06-
12	1/2"	72.00	36.00	25.90	33.00	22.80	19.10	9.50	20.64	22.00	D136-12M-08-
16	1/2"	76.00	38.00	27.90	35.10	24.40	19.10	11.90	23.81	25.00	D136-16M-08-

All dimensions unless specified are in mm.



D137-Female Run Tee Tube x Female NPT Threads

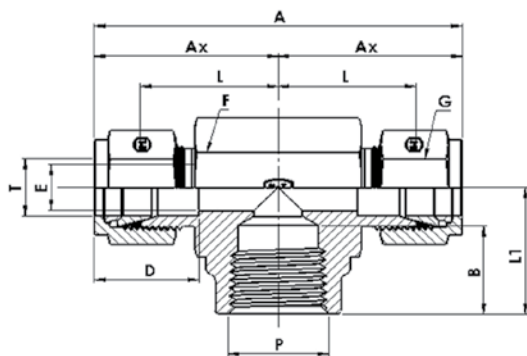
For Fractional Tube

T Tube O.D.	P NPT Female	A	Ax	L	L1	D	B	E	F	G	Hy-Tech Part Number
1/8"	1/8"	44.97	25.87	18.00	19.10	14.22	10.40	2.30	12.70	11.11	D137-02-02-
1/4"	1/8"	46.04	26.94	19.60	19.10	15.34	15.00	4.80	12.70	14.28	D137-04-02-
1/4"	1/4"	52.64	30.24	22.90	22.40	15.34	15.00	4.80	17.46	17.28	D137-04-04-
3/8"	1/4"	54.36	31.96	23.90	22.40	17.56	15.00	7.10	17.46	17.46	D137-06-04-
1/2"	3/8"	58.23	35.83	25.90	22.40	22.63	15.00	10.40	20.64	22.22	D137-08-06-
1/2"	1/2"	68.03	39.63	29.70	28.40	22.63	19.80	10.40	26.98	22.22	D137-08-08-
3/4"	3/4"	77.39	45.59	34.50	31.80	25.39	20.60	15.80	34.92	28.58	D137-12-12-
1"	3/4"	81.83	50.03	36.80	31.80	32.23	20.60	22.30	34.92	38.10	D137-16-12-
1"	1"	92.73	54.63	41.40	38.10	32.23	25.40	22.30	42.86	38.10	D137-16-16-

For Metric Tube

T Tube O.D.	P NPT Female	A	Ax	L	L1	D	B	E	F	G	Hy-Tech Part Number
6	1/8"	46.00	27.00	19.60	19.00	15.30	10.40	4.80	12.70	14.00	D137-06M-02-
6	1/4"	52.20	29.80	22.40	22.40	15.30	15.00	4.80	17.46	14.00	D137-06M-04-
8	1/8"	49.60	30.60	23.10	19.00	16.20	10.40	6.40	15.88	16.00	D137-08M-02-
8	1/4"	53.00	30.60	23.10	22.40	16.20	15.00	6.40	17.46	16.00	D137-08M-04-
10	1/4"	55.90	33.50	25.90	22.40	17.20	15.00	7.90	20.64	19.00	D137-10M-04-
12	1/4"	58.40	36.00	25.90	22.40	22.80	15.00	9.50	20.64	22.00	D137-12M-04-
12	3/8"	58.40	36.00	25.90	22.40	22.80	15.00	10.30	20.64	22.00	D137-12M-06-
12	1/2"	68.20	39.80	29.70	28.40	22.80	19.80	9.50	26.98	22.00	D137-12M-08-
16	1/2"	68.20	39.80	29.70	28.40	24.40	19.80	12.70	26.98	25.00	D137-16M-08-

All dimensions unless specified are in mm.



D138-Female Branch Tee Tube x Female NPT Threads

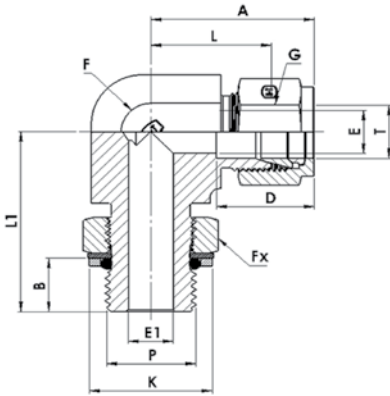
For Fractional Tube

T Tube O.D.	P NPT Female	A	Ax	L	L1	D	B	E	F	G	Hy-Tech Part Number
1/8"	1/8"	51.74	25.87	18.00	19.10	14.22	10.40	2.30	12.70	11.11	D138-02-02-
1/4"	1/8"	53.88	26.94	19.60	19.10	15.34	15.00	4.80	12.70	14.28	D138-04-02-
1/4"	1/4"	59.48	29.74	22.40	22.40	15.34	15.00	4.80	17.46	17.28	D138-04-04-
3/8"	1/4"	63.92	31.96	23.90	22.40	17.56	15.00	7.10	17.46	17.46	D138-06-04-
3/8"	3/8"	67.92	33.96	25.90	22.40	17.56	15.00	7.10	20.64	17.46	D138-06-06-
3/8"	1/2"	73.52	36.76	28.70	28.40	17.56	19.80	7.10	25.40	17.46	D138-06-08-
1/2"	1/4"	71.66	35.83	25.90	22.40	22.63	15.00	10.40	20.64	22.22	D138-08-04-
1/2"	3/8"	71.66	35.83	25.90	22.40	22.63	15.00	10.40	20.64	22.22	D138-08-06-
1/2"	1/2"	79.26	39.63	29.70	28.40	22.63	19.80	10.40	26.98	22.22	D138-08-08-
5/8"	1/2"	77.40	38.70	28.70	28.40	24.30	19.80	12.70	26.98	25.40	D138-10-08-
3/4"	3/4"	91.18	45.59	34.50	31.80	25.39	20.60	15.80	34.92	28.58	D138-12-12-
1"	3/4"	100.06	50.03	36.80	31.80	32.23	20.60	22.30	34.92	38.10	D138-16-12-
1"	1"	109.26	54.63	41.40	38.10	32.23	25.40	22.30	42.86	38.10	D138-16-16-

For Metric Tube

T Tube O.D.	P NPT Female	A	Ax	L	L1	D	B	E	F	G	Hy-Tech Part Number
6	1/8"	54.00	27.00	19.60	19.00	15.30	10.40	4.80	12.70	14.00	D138-06M-02-
6	1/4"	59.60	29.80	22.40	22.40	15.30	15.00	4.80	17.46	14.00	D138-06M-04-
8	1/8"	61.20	30.60	23.10	19.00	16.20	10.40	6.40	15.88	16.00	D138-08M-02-
8	1/4"	61.20	30.60	23.10	22.40	16.20	15.00	6.40	17.46	16.00	D138-08M-04-
10	1/4"	67.00	33.50	25.90	22.40	17.20	15.00	7.90	20.64	19.00	D138-10M-04-
12	1/4"	72.00	36.00	25.90	22.40	22.80	15.00	9.50	20.64	22.00	D138-12M-04-
12	3/8"	72.00	36.00	25.90	22.40	22.80	15.00	10.30	20.64	22.00	D138-12M-06-
12	1/2"	79.60	39.80	29.70	28.40	22.80	19.80	9.50	26.98	22.00	D138-12M-08-
16	1/2"	79.60	39.80	29.70	28.40	24.40	19.80	12.70	26.98	25.00	D138-16M-08-

All dimensions unless specified are in mm.



D143-90° Positionable Male Elbow ISO/BSPP Tube x Male BSPP Threads

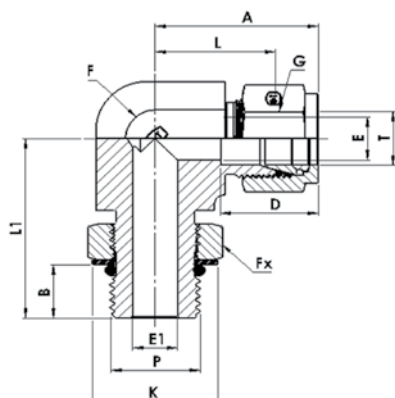
For Fractional Tube

T Tube O.D.	P BSPP Male	A	L	L1	D	B	E	E1	K	F	Fx	G	Hy-Tech Part Number
1/4"	1/8"	26.94	19.60	26.40	15.34	8.50	4.00	4.00	16.70	12.70	14.00	14.28	D143-04-02P-
1/4"	1/4"	28.94	21.60	32.30	15.34	11.20	4.80	4.80	20.20	15.88	19.00	14.28	D143-04-04P-
3/8"	1/4"	31.16	23.10	32.30	17.56	11.20	5.80	5.80	20.20	15.88	19.00	17.46	D143-06-04P-
3/8"	3/8"	33.96	25.90	37.10	17.56	11.10	7.10	7.10	24.00	20.64	22.00	17.46	D143-06-06P-
1/2"	1/4"	35.83	25.90	35.10	22.63	11.20	5.80	5.80	20.20	20.64	19.00	22.22	D143-08-04P-
1/2"	3/8"	35.83	25.90	37.10	22.63	11.10	7.90	7.90	24.00	20.64	22.00	22.22	D143-08-06P-
1/2"	1/2"	37.83	27.90	43.40	22.63	14.90	10.40	10.40	29.10	23.81	27.00	22.22	D143-08-08P-
5/8"	1/2"	37.90	27.90	43.40	24.30	14.90	11.90	11.90	29.10	23.81	27.00	25.40	D143-10-08P-
3/4"	1/2"	40.79	29.70	45.20	25.39	14.90	11.90	11.90	29.10	26.98	27.00	28.58	D143-12-08P-
3/4"	3/4"	40.79	29.70	48.80	25.39	14.90	15.80	15.80	36.40	26.98	36.00	28.58	D143-12-12P-
1"	3/4"	50.03	36.80	53.30	32.23	14.90	15.80	15.80	36.40	34.92	36.00	38.10	D143-16-12P-
1"	1"	50.03	36.80	53.60	32.23	17.30	19.80	19.80	45.60	34.92	41.00	38.10	D143-16-16P-

For Metric Tube

T Tube O.D.	P BSPP Male	A	L	L1	D	B	E	E1	K	F	Fx	G	Hy-Tech Part Number
6	1/8"	27.00	19.60	26.40	15.30	8.50	4.00	4.00	16.70	12.70	14.00	14.00	D143-06M-02P-
6	1/4"	29.00	21.60	32.30	15.30	11.20	4.80	4.80	20.20	15.88	19.00	14.00	D143-06M-04P-
8	1/8"	28.80	21.30	27.40	16.20	11.20	4.00	4.00	16.70	14.28	14.00	16.00	D143-08M-02P-
8	1/4"	29.90	22.40	32.20	16.20	11.20	5.90	5.90	20.20	15.88	19.00	16.00	D143-08M-04P-
10	1/4"	33.50	25.90	35.00	17.20	11.20	5.90	5.90	20.20	20.64	19.00	19.00	D143-10M-04P-
10	3/8"	33.50	25.90	37.10	17.20	11.20	7.90	7.90	24.00	20.64	22.00	19.00	D143-10M-06P-
12	1/4"	36.00	25.90	35.00	22.80	11.20	5.90	5.90	20.20	20.64	19.00	22.00	D143-12M-04P-
12	3/8"	36.00	25.90	37.10	22.80	11.20	7.90	7.90	24.00	20.64	22.00	22.00	D143-12M-06P-
12	1/2"	38.00	27.90	43.40	22.80	14.90	9.50	9.50	29.10	23.81	27.00	22.00	D143-12M-08P-
12	3/4"	39.80	29.70	48.80	22.80	14.90	9.50	9.50	36.40	26.98	36.00	22.00	D143-12M-12P-

All dimensions unless specified are in mm.

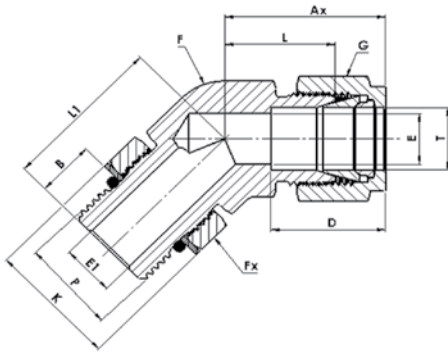


D143-90° Positionable Male Elbow SAE Tube x Male SAE Threads

For Fractional Tube

T Tube O.D.	P SAE Male	A	L	L1	D	B	E	E1	K	F	Fx	G	Hy-Tech Part Number
1/4"	7/16"-20	28.44	21.10	28.40	15.34	10.30	4.80	4.80	16.50	12.70	14.00	14.28	D143-04-04L-
1/4"	9/16"-18	30.44	23.10	32.30	15.34	11.10	4.80	4.80	20.20	15.88	17.00	14.28	D143-04-06L-
5/16"	1/2"-20	30.40	22.90	29.50	16.30	10.30	5.80	5.80	18.30	14.28	17.00	15.88	D143-05-05L-
3/8"	7/16"-20	32.06	24.00	32.30	17.56	10.30	5.80	5.80	16.50	15.88	14.00	17.46	D143-06-04L-
3/8"	9/16"-18	32.66	24.60	32.30	17.56	11.10	7.10	7.10	20.20	15.88	17.00	17.46	D143-06-06L-
3/8"	3/4"-16	35.46	27.40	37.80	17.56	12.60	7.10	7.10	25.70	20.64	22.00	17.46	D143-06-08L-
1/2"	9/16"-18	37.33	27.40	37.00	22.63	11.10	7.10	7.10	20.20	20.64	17.00	22.22	D143-08-04L-
1/2"	3/4"-16	37.33	27.40	37.80	22.63	12.60	10.40	10.40	25.70	20.64	22.00	22.22	D143-08-08L-
5/8"	7/8"-14	39.50	29.50	43.40	24.30	14.40	12.70	12.70	29.30	23.81	27.00	25.40	D143-10-10L-
3/4"	1-1/16"-12	42.29	31.20	48.80	25.39	16.70	15.80	15.80	36.70	26.98	32.00	28.58	D143-12-12L-
7/8"	1-3/16"-12	48.11	33.00	50.50	29.41	16.70	18.30	18.30	40.40	30.16	36.00	31.75	D143-14-14L-
1"	1-5/16"-12	51.63	38.40	53.60	32.23	16.70	22.40	22.40	44.00	34.92	41.00	38.10	D143-16-16L-
1-1/4"	1-5/8"-12	66.13	45.70	58.20	41.23	16.70	27.70	27.70	55.00	42.86	50.00	50.00	D143-20-20L-
1-1/2"	1-7/8"-12	78.83	50.80	60.50	50.83	16.70	34.00	34.00	62.30	50.80	55.00	57.15	D143-24-24L-

All dimensions unless specified are in mm.

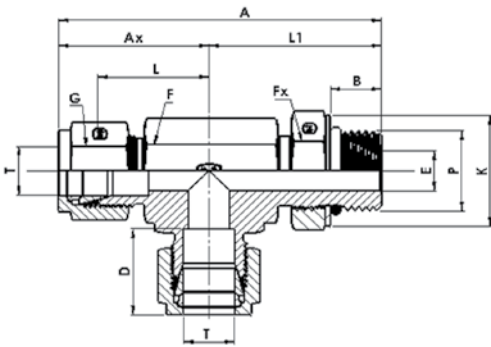


D143-90° Positionable Male Elbow SAE Tube x Male SAE Threads

For Fractional Tube

T Tube O.D.	P SAE Male	A	L	L1	D	B	E	E1	K	F	Fx	G	Hy-Tech Part Number
1/4"	7/16"-20	25.64	18.30	25.70	15.34	10.30	4.80	4.80	16.50	12.70	14.00	14.28	D144-04-04L-
3/8"	9/16"-18	28.66	20.60	28.20	17.56	11.10	7.10	7.10	20.20	15.88	17.00	17.46	D144-06-06L-
1/2"	3/4"-16	31.73	21.80	32.30	22.63	12.60	10.40	10.40	25.70	20.64	22.00	22.22	D144-08-08L-
3/4"	1-1/16"-12	40.79	29.70	47.20	25.39	16.70	15.80	15.80	36.70	26.98	32.00	28.58	D144-12-12L-
1"	1-5/16"-12	48.53	35.30	50.50	32.23	16.70	22.40	22.40	44.00	34.92	41.00	38.10	D144-16-16L-

All dimensions unless specified are in mm.

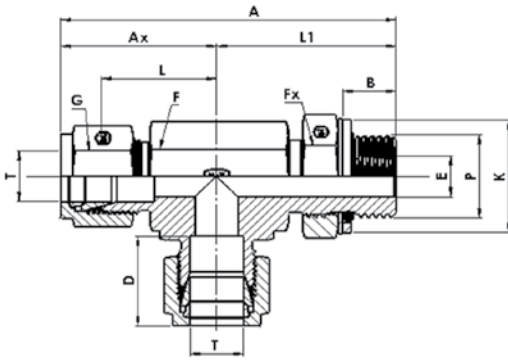


D145- Positionable Male Run Tee SAE Tube x Male SAE Threads

For Fractional Tube

T Tube O.D.	P SAE Male	A	Ax	L	L1	D	B	E	E1	K	F	Fx	G	Hy-Tech Part Number
1/4"	7/16"-20	56.84	28.44	21.10	28.40	15.34	10.30	4.80	4.80	16.50	12.70	14.00	14.28	D145-04-04L-
1/4"	9/16"-18	62.74	30.44	23.10	32.30	15.34	11.10	4.80	4.80	20.20	15.88	17.00	14.28	D145-04-06L-
5/16"	1/2"-20	59.90	30.40	22.90	29.50	16.30	10.30	5.80	5.80	18.30	14.28	17.00	15.88	D145-05-05L-
3/8"	7/16"-20	64.36	32.06	24.00	32.30	17.56	10.30	5.80	5.80	16.50	15.88	14.00	17.46	D145-06-04L-
3/8"	9/16"-18	64.96	32.66	24.60	32.30	17.56	11.10	7.10	7.10	20.20	15.88	17.00	17.46	D145-06-06L-
3/8"	3/4"-16	73.26	35.46	27.40	37.80	17.56	12.60	7.10	7.10	25.70	20.64	22.00	17.46	D145-06-08L-
1/2"	9/16"-18	74.33	37.33	27.40	37.00	22.63	11.10	7.10	7.10	20.20	20.64	17.00	22.22	D145-08-04L-
1/2"	3/4"-16	75.13	37.33	27.40	37.80	22.63	12.60	10.40	10.40	25.70	20.64	22.00	22.22	D145-08-08L-
5/8"	7/8"-14	82.90	39.50	29.50	43.40	24.30	14.40	12.70	12.70	29.30	23.81	27.00	25.40	D145-10-10L-
3/4"	1-1/16"-12	91.09	42.29	31.20	48.80	25.39	16.70	15.80	15.80	36.70	26.98	32.00	28.58	D145-12-12L-
7/8"	1-3/16"-12	98.61	48.11	33.00	50.50	29.41	16.70	18.30	18.30	40.40	30.16	36.00	31.75	D145-14-14L-
1"	1-5/16"-12	105.23	51.63	38.40	53.60	32.23	16.70	22.40	22.40	44.00	34.92	41.00	38.10	D145-16-16L-
1-1/4"	1-5/8"-12	124.33	66.13	45.70	58.20	41.23	16.70	27.70	27.70	55.00	42.86	50.00	50.00	D145-20-20L-
1-1/2"	1-7/8"-12	139.33	78.83	50.80	60.50	50.83	16.70	34.00	34.00	62.30	50.80	55.00	57.15	D145-24-24L-

All dimensions unless specified are in mm.



**D145- Positionable Male Run Tee ISO/BSPP
Tube x Male BSPP Threads**

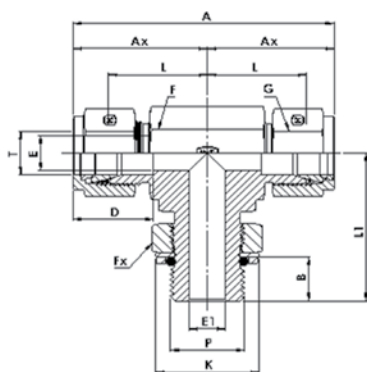
For Fractional Tube

T Tube O.D.	P BSPP Male	A	Ax	L	L1	D	B	E	E1	K	F	Fx	G	Hy-Tech Part Number
1/4"	1/8"	53.34	26.94	19.60	26.40	15.34	8.50	4.00	4.00	16.70	12.70	14.00	14.28	D145-04-02P-
1/4"	1/4"	61.24	28.94	21.60	32.30	15.34	11.20	4.80	4.80	20.20	15.88	19.00	14.28	D145-04-04P-
3/8"	1/4"	63.46	31.16	23.10	32.30	17.56	11.20	5.80	5.80	20.20	15.88	19.00	17.46	D145-06-04P-
3/8"	3/8"	71.06	33.96	25.90	37.10	17.56	11.10	7.10	7.10	24.00	20.64	22.00	17.46	D145-06-06P-
1/2"	1/4"	70.93	35.83	25.90	35.10	22.63	11.20	5.80	5.80	20.20	20.64	19.00	22.22	D145-08-04P-
1/2"	3/8"	72.93	35.83	25.90	37.10	22.63	11.10	7.90	7.90	24.00	20.64	22.00	22.22	D145-08-06P-
1/2"	1/2"	81.23	37.83	27.90	43.40	22.63	14.90	10.40	10.40	29.10	23.81	27.00	22.22	D145-08-08P-
5/8"	1/2"	81.30	37.90	27.90	43.40	24.30	14.90	11.90	11.90	29.10	23.81	27.00	25.40	D145-10-08P-
3/4"	1/2"	85.99	40.79	29.70	45.20	25.39	14.90	11.90	11.90	29.10	26.98	27.00	28.58	D145-12-08P-
3/4"	3/4"	89.59	40.79	29.70	48.80	25.39	14.90	15.80	15.80	36.40	26.98	36.00	28.58	D145-12-12P-
1"	3/4"	103.33	50.03	36.80	53.30	32.23	14.90	15.80	15.80	36.40	34.92	36.00	38.10	D145-16-12P-
1"	1"	103.63	50.03	36.80	53.60	32.23	17.30	19.80	19.80	45.60	34.92	41.00	38.10	D145-16-16P-

For Metric Tube

T Tube O.D.	P BSPP Male	A	Ax	L	L1	D	B	E	E1	K	F	Fx	G	Hy-Tech Part Number
6	1/8"	53.40	27.00	19.60	26.40	15.30	8.50	4.00	4.00	16.70	12.70	14.00	14.00	D145-06M-02P-
6	1/4"	61.30	29.00	21.60	32.30	15.30	11.20	4.80	4.80	20.20	15.88	19.00	14.00	D145-06M-04P-
8	1/8"	56.20	28.80	21.30	27.40	16.20	11.20	4.00	4.00	16.70	14.28	14.00	16.00	D145-08M-02P-
8	1/4"	62.10	29.90	22.40	32.20	16.20	11.20	5.90	5.90	20.20	15.88	19.00	16.00	D145-08M-04P-
10	1/4"	68.50	33.50	25.90	35.00	17.20	11.20	5.90	5.90	20.20	20.64	19.00	19.00	D145-10M-04P-
10	3/8"	70.60	33.50	25.90	37.10	17.20	11.20	7.90	7.90	24.00	20.64	22.00	19.00	D145-10M-06P-
12	1/4"	71.00	36.00	25.90	35.00	22.80	11.20	5.90	5.90	20.20	20.64	19.00	22.00	D145-12M-04P-
12	3/8"	73.10	36.00	25.90	37.10	22.80	11.20	7.90	7.90	24.00	20.64	22.00	22.00	D145-12M-06P-
12	1/2"	81.40	38.00	27.90	43.40	22.80	14.90	9.50	9.50	29.10	23.81	27.00	22.00	D145-12M-08P-
12	3/4"	88.60	39.80	29.70	48.80	22.80	14.90	9.50	9.50	36.40	26.98	36.00	22.00	D145-12M-12P-

All dimensions unless specified are in mm.



D146- Positionable Male Branch Tee ISO/BSPP Tube x Male BSPP Threads

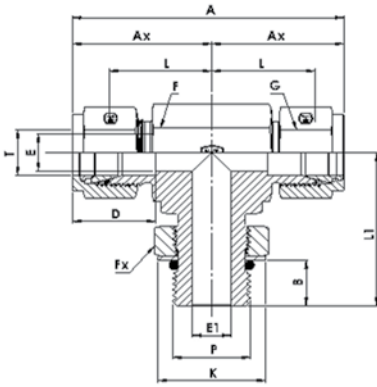
For Fractional Tube

T Tube O.D.	P BSPP Male	A	Ax	L	L1	D	B	E	E1	K	F	Fx	G	Hy-Tech Part Number
1/4"	1/8"	53.88	26.94	19.60	26.40	15.34	8.50	4.00	4.00	16.70	12.70	14.00	14.28	D146-04-02P-
1/4"	1/4"	57.88	28.94	21.60	32.30	15.34	11.20	4.80	4.80	20.20	15.88	19.00	14.28	D146-04-04P-
3/8"	1/4"	62.32	31.16	23.10	32.30	17.56	11.20	5.80	5.80	20.20	15.88	19.00	17.46	D146-06-04P-
3/8"	3/8"	67.92	33.96	25.90	37.10	17.56	11.10	7.10	7.10	24.00	20.64	22.00	17.46	D146-06-06P-
1/2"	1/4"	71.66	35.83	25.90	35.10	22.63	11.20	5.80	5.80	20.20	20.64	19.00	22.22	D146-08-04P-
1/2"	3/8"	71.66	35.83	25.90	37.10	22.63	11.10	7.90	7.90	24.00	20.64	22.00	22.22	D146-08-06P-
1/2"	1/2"	75.66	37.83	27.90	43.40	22.63	14.90	10.40	10.40	29.10	23.81	27.00	22.22	D146-08-08P-
5/8"	1/2"	75.80	37.90	27.90	43.40	24.30	14.90	11.90	11.90	29.10	23.81	27.00	25.40	D146-10-08P-
3/4"	1/2"	81.58	40.79	29.70	45.20	25.39	14.90	11.90	11.90	29.10	26.98	27.00	28.58	D146-12-08P-
3/4"	3/4"	81.58	40.79	29.70	48.80	25.39	14.90	15.80	15.80	36.40	26.98	36.00	28.58	D146-12-12P-
1"	3/4"	100.06	50.03	36.80	53.30	32.23	14.90	15.80	15.80	36.40	34.92	36.00	38.10	D146-16-12P-
1"	1"	100.06	50.03	36.80	53.60	32.23	17.30	19.80	19.80	45.60	34.92	41.00	38.10	D146-16-16P-

For Metric Tube

T Tube O.D.	P BSPP Male	A	Ax	L	L1	D	B	E	E1	K	F	Fx	G	Hy-Tech Part Number
6	1/8"	54.00	27.00	19.60	26.40	15.30	8.50	4.00	4.00	16.70	12.70	14.00	14.00	D146-06M-02P-
6	1/4"	58.00	29.00	21.60	32.30	15.30	11.20	4.80	4.80	20.20	15.88	19.00	14.00	D146-06M-04P-
8	1/8"	57.60	28.80	21.30	27.40	16.20	11.20	4.00	4.00	16.70	14.28	14.00	16.00	D146-08M-02P-
8	1/4"	59.80	29.90	22.40	32.20	16.20	11.20	5.90	5.90	20.20	15.88	19.00	16.00	D146-08M-04P-
10	1/4"	67.00	33.50	25.90	35.00	17.20	11.20	5.90	5.90	20.20	20.64	19.00	19.00	D146-10M-04P-
10	3/8"	67.00	33.50	25.90	37.10	17.20	11.20	7.90	7.90	24.00	20.64	22.00	19.00	D146-10M-06P-
12	1/4"	72.00	36.00	25.90	35.00	22.80	11.20	5.90	5.90	20.20	20.64	19.00	22.00	D146-12M-04P-
12	3/8"	72.00	36.00	25.90	37.10	22.80	11.20	7.90	7.90	24.00	20.64	22.00	22.00	D146-12M-06P-
12	1/2"	76.00	38.00	27.90	43.40	22.80	14.90	9.50	9.50	29.10	23.81	27.00	22.00	D146-12M-08P-
12	3/4"	79.60	39.80	29.70	48.80	22.80	14.90	9.50	9.50	36.40	26.98	36.00	22.00	D146-12M-12P-

All dimensions unless specified are in mm.

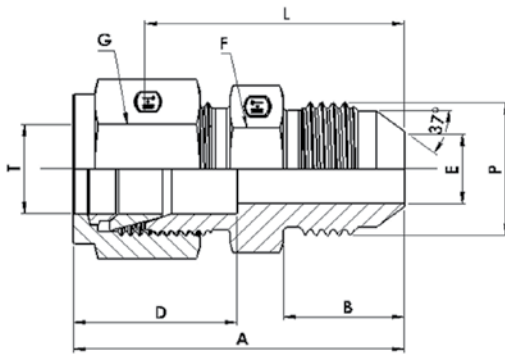


**D146- Positionable Male Branch Tee SAE
Tube x Male SAE Threads**

For Fractional Tube

T Tube O.D.	P SAE Male	A	Ax	L	L1	D	B	E	E1	K	F	Fx	G	Hy-Tech Part Number
1/4"	7/16"-20	56.88	28.44	21.10	28.40	15.34	10.30	4.80	4.80	16.50	12.70	14.00	14.28	D146-04-04L-
1/4"	9/16"-18	60.88	30.44	23.10	32.30	15.34	11.10	4.80	4.80	20.20	15.88	17.00	14.28	D146-04-06L-
5/16"	1/2"-20	60.80	30.40	22.90	29.50	16.30	10.30	5.80	5.80	18.30	14.28	17.00	15.88	D146-05-05L-
3/8"	7/16"-20	64.12	32.06	24.00	32.30	17.56	10.30	5.80	5.80	16.50	15.88	14.00	17.46	D146-06-04L-
3/8"	9/16"-18	65.32	32.66	24.60	32.30	17.56	11.10	7.10	7.10	20.20	15.88	17.00	17.46	D146-06-06L-
3/8"	3/4"-16	70.92	35.46	27.40	37.80	17.56	12.60	7.10	7.10	25.70	20.64	22.00	17.46	D146-06-08L-
1/2"	9/16"-18	74.66	37.33	27.40	37.00	22.63	11.10	7.10	7.10	20.20	20.64	17.00	22.22	D146-08-04L-
1/2"	3/4"-16	74.66	37.33	27.40	37.80	22.63	12.60	10.40	10.40	25.70	20.64	22.00	22.22	D146-08-08L-
5/8"	7/8"-14	79.00	39.50	29.50	43.40	24.30	14.40	12.70	12.70	29.30	23.81	27.00	25.40	D146-10-10L-
3/4"	1-1/16"-12	84.58	42.29	31.20	48.80	25.39	16.70	15.80	15.80	36.70	26.98	32.00	28.58	D146-12-12L-
7/8"	1-3/16"-12	96.22	48.11	33.00	50.50	29.41	16.70	18.30	18.30	40.40	30.16	36.00	31.75	D146-14-14L-
1"	1-5/16"-12	103.26	51.63	38.40	53.60	32.23	16.70	22.40	22.40	44.00	34.92	41.00	38.10	D146-16-16L-
1-1/4"	1-5/8"-12	132.26	66.13	45.70	58.20	41.23	16.70	27.70	27.70	55.00	42.86	50.00	50.00	D146-20-20L-
1-1/2"	1-7/8"-12	157.66	78.83	50.80	60.50	50.83	16.70	34.00	34.00	62.30	50.80	55.00	57.15	D146-24-24L-

All dimensions unless specified are in mm.

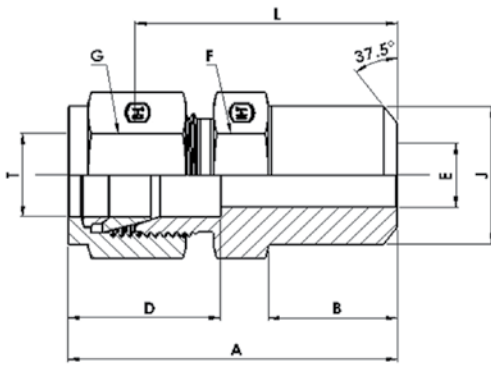


D207-AN Male Connectors Tube x AN Tube Flare (37°)

For Fractional Tube

T Tube O.D.	AN Tube Flare Size P	A	L	D	B	E	F	G	Hy-Tech Part Number
1/8"	1/8"	32.77	24.90	14.22	11.40	1.50	11.11	11.11	D207-02-02-
1/8"	1/4"	36.27	28.40	14.22	14.00	2.30	12.70	11.11	D207-02-04-
1/4"	1/4"	37.54	30.20	15.34	14.00	4.30	12.70	14.28	D207-04-04-
5/16"	5/16"	38.50	31.00	16.30	14.00	5.80	14.28	15.88	D207-05-05-
3/8"	1/4"	40.36	32.30	17.56	14.00	4.30	15.88	17.46	D207-06-04-
3/8"	3/8"	40.36	32.30	17.56	14.10	7.10	15.88	17.46	D207-06-06-
1/2"	1/2"	45.73	35.80	22.63	16.70	9.90	20.64	22.22	D207-08-08-
3/4"	3/4"	54.29	43.20	25.39	21.90	15.50	28.58	28.58	D207-12-12-
1"	1"	62.53	49.30	32.23	23.10	21.30	34.92	38.10	D207-16-16-

All dimensions unless specified are in mm.

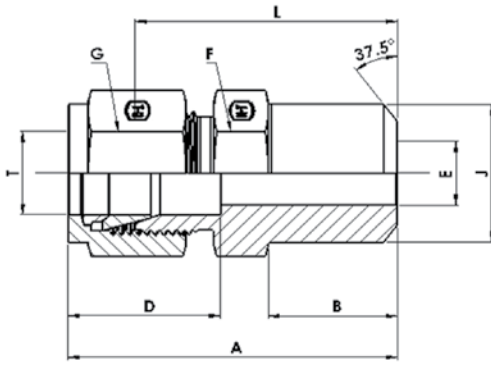


D210-Male Pipet Weld Tube x Male Pipe Weld

For Fractional Tube

T Tube O.D.	Pipe Weld Size	A	L	D	E	B	J	F	G	Hy-Tech Part Number
1/8"	1/8"	31.77	23.90	14.22	2.30	9.70	10.30	11.11	11.11	D210-02-02BW-
3/16"	1/8"	30.31	24.60	13.71	3.10	9.70	10.30	11.11	12.70	D210-03-02BW-
1/4"	1/8"	32.74	25.40	15.34	4.80	9.70	10.30	12.70	14.28	D210-04-02BW-
1/4"	1/4"	37.84	30.50	15.34	4.80	14.20	13.70	14.28	14.28	D210-04-04BW-
5/16"	1/8"	34.20	26.70	16.30	5.30	9.70	10.30	14.28	15.88	D210-05-02BW-
5/16"	1/4"	38.70	31.20	16.30	6.30	14.20	13.70	14.28	15.88	D210-05-04BW-
3/8"	1/4"	40.56	32.50	17.56	7.10	14.20	13.70	15.88	17.46	D210-06-04BW-
3/8"	3/8"	40.56	32.50	17.56	7.10	14.20	17.10	17.46	17.46	D210-06-06BW-
3/8"	1/2"	46.96	38.90	17.56	7.10	19.10	21.30	22.22	17.46	D210-06-08BW-
3/8"	3/4"	48.56	40.50	17.56	7.10	19.10	26.70	26.98	17.46	D210-06-12BW-
1/2"	3/8"	43.23	33.30	22.63	10.40	14.20	17.10	20.64	22.22	D210-08-06BW-
1/2"	1/2"	48.83	38.90	22.63	10.40	19.10	21.30	22.22	22.22	D210-08-08BW-
1/2"	3/4"	50.33	40.40	22.63	10.40	19.10	26.70	26.95	22.22	D210-08-12BW-
1/2"	1"	56.93	47.00	22.63	10.40	23.90	33.40	34.92	22.22	D210-08-16BW-
5/8"	1/2"	48.90	38.90	24.30	12.70	19.10	21.30	23.81	25.40	D210-10-08BW-
3/4"	1/2"	51.49	40.40	25.39	14.00	19.10	21.30	26.98	28.58	D210-12-08BW-
3/4"	3/4"	51.49	40.40	25.39	15.80	19.10	26.70	26.98	28.58	D210-12-12BW-
1"	1"	63.23	50.00	32.23	22.40	23.90	33.40	34.92	38.10	D210-16-16BW-
1-1/4"	1-1/4"	75.53	55.10	41.23	27.70	23.90	42.20	44.45	50.00	D210-20-20BW-
1-1/2"	1-1/2"	89.73	61.70	50.83	34.00	26.20	48.30	53.97	57.15	D210-24-24BW-

All dimensions unless specified are in mm.

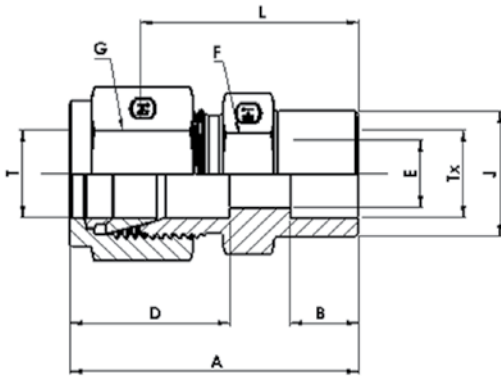


D210-Male Pipet Weld Tube x Male Pipe Weld

For Metric Tube

T Tube O.D.	Pipe Weld Size	A	L	D	E	B	J	F	G	Hy-Tech Part Number
3	1/8"	29.70	23.10	12.90	2.40	9.70	10.30	12.70	12.00	D210-03M-02BW-
6	1/8"	32.80	25.40	15.30	4.80	9.70	10.30	12.70	14.00	D210-06M-02BW-
6	1/4"	37.60	30.20	15.30	4.80	14.20	13.70	14.28	14.00	D210-06M-04BW-
8	1/8"	34.20	26.70	16.20	5.40	9.70	10.30	14.28	16.00	D210-08M-02BW-
8	1/4"	38.70	31.20	16.20	6.40	14.20	13.70	14.28	16.00	D210-08M-04BW-
8	1/2"	44.80	37.30	16.20	6.40	19.10	21.30	22.22	16.00	D210-08M-08BW-
10	1/4"	40.90	33.30	17.20	7.50	14.20	13.70	17.46	19.00	D210-10M-04BW-
10	3/8"	40.10	32.50	17.20	7.90	14.20	17.10	17.46	19.00	D210-10M-06BW-
10	1/2"	45.70	38.10	17.20	7.90	19.10	21.30	22.22	19.00	D210-10M-08BW-
12	1/4"	43.40	33.30	22.80	7.50	14.20	13.70	20.64	22.00	D210-12M-04BW-
12	3/8"	43.40	33.30	22.80	9.50	14.20	17.10	20.64	22.00	D210-12M-06BW-
12	1/2"	48.20	38.10	22.80	9.50	19.10	21.30	22.22	22.00	D210-12M-08BW-
12	3/4"	50.50	40.40	22.80	9.50	23.90	26.70	26.98	22.00	D210-12M-12BW-
14	3/8"	44.50	34.00	24.40	10.70	14.20	17.10	23.81	25.00	D210-14M-06BW-
15	1/2"	49.00	38.90	24.40	11.90	19.10	21.30	23.81	25.00	D210-15M-08BW-
16	1/2"	49.00	38.90	24.40	12.70	19.10	21.30	23.81	25.00	D210-16M-08BW-
18	1/2"	50.50	40.40	24.40	13.90	19.10	21.30	26.98	30.00	D210-18M-08BW-
30	1-1/4"	77.20	55.60	39.60	26.20	23.90	42.20	46.00	50.00	D210-30M-20BW-
32	1-1/4"	79.60	56.60	42.00	28.60	23.90	42.20	46.00	50.00	D210-32M-20BW-

All dimensions unless specified are in mm.



D211-Tube Socket Weld Tube x Tube Socket Weld

For Fractional Tube

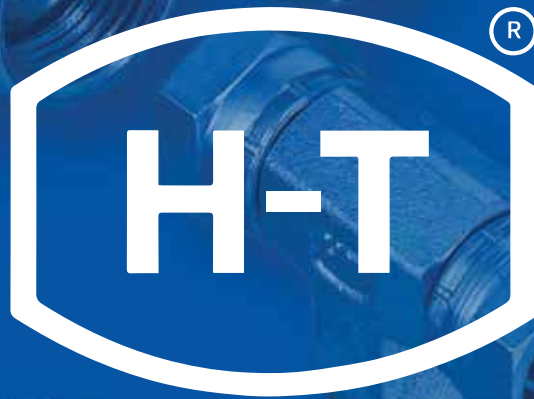
T Tube O.D.	Tube Socket Weld Size Tx	A	L	D	E	B	J	F	G	Hy-Tech Part Number
1/8"	1/8"	30.27	22.40	14.22	2.30	6.35	7.40	11.11	11.11	D211-02-02SW-
1/4"	1/4"	33.54	26.20	15.34	4.80	7.10	12.20	12.70	14.28	D211-04-04SW-
3/8"	3/8"	38.26	30.20	17.56	7.10	7.90	15.20	15.88	17.46	D211-06-06SW-
1/2"	1/2"	40.93	31.00	22.63	10.40	9.70	18.50	20.64	22.22	D211-08-08SW-
3/4"	3/4"	44.39	33.30	25.39	15.70	11.20	26.40	26.98	28.58	D211-12-12SW-
1"	1"	53.63	40.40	32.23	22.40	15.70	34.50	34.92	38.10	D211-16-16SW-

All dimensions unless specified are in mm.









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