


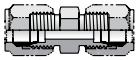

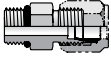

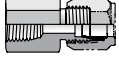
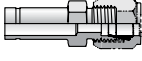
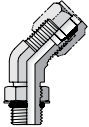
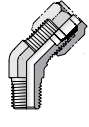
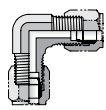
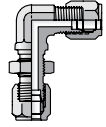
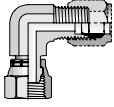
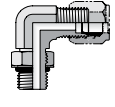
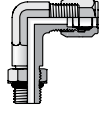
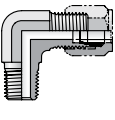
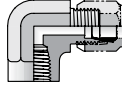
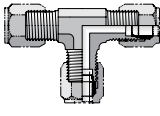
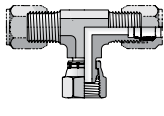
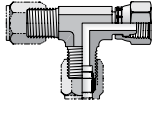
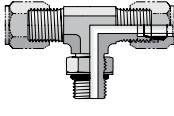
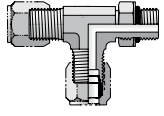
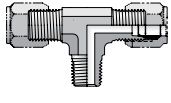
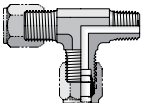
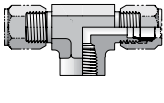
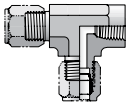
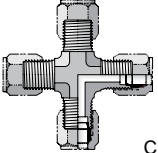




<p>Nuts, Ferrules, Locknuts</p>	<p>BU Nut</p>  <p>C7</p>	<p>TU Ferrules</p>  <p>C7</p>	<p>WLN Bulkhead Locknut</p>  <p>C7</p>	<p>Straights</p>	<p>HBU Union</p>  <p>C7</p>
<p>WBU Bulkhead Union</p>  <p>C8</p>	<p>F5BU SAE-ORB / Flareless</p>  <p>C8</p>	<p>FBU NPTF / Flareless</p>  <p>C8</p>	<p>GBU NPTF / Flareless</p>  <p>C9</p>	<p>TRBU Tube End Reducer</p>  <p>C9</p>	
<p>45° Elbows</p>	<p>V5BU SAE-ORB / Flareless</p>  <p>C9</p>	<p>VBU NPTF / Flareless</p>  <p>C9</p>	<p>90° Elbows</p>	<p>EBU Union Elbow</p>  <p>C10</p>	<p>WEBU Bulkhead Union Elbow</p>  <p>C10</p>
<p>C6BU Flareless Swivel/Flareless</p>  <p>C10</p>	<p>C5BU SAE-ORB / Flareless</p>  <p>C10</p>	<p>CC5BU SAE-ORB / Flareless</p>  <p>C11</p>	<p>CBU NPTF / Flareless</p>  <p>C11</p>	<p>DBU NPTF / Flareless</p>  <p>C11</p>	
<p>Tees</p>	<p>JBU Union Tee</p>  <p>C12</p>	<p>S6BU Swivel Branch Tee</p>  <p>C12</p>	<p>R6BU Swivel Run Tee</p>  <p>C12</p>	<p>S5BU SAE-ORB Branch Tee</p>  <p>C12</p>	<p>R5BU SAE-ORB Run Tee</p>  <p>C13</p>
<p>SBU NPTF Branch Tee</p>  <p>C13</p>	<p>RBU NPTF Run Tee</p>  <p>C13</p>	<p>OBU NPTF Branch Tee</p>  <p>C13</p>	<p>MBU NPTF Run Tee</p>  <p>C14</p>	<p>Cross</p>	<p>KBU Union Cross</p>  <p>C14</p>
<p>Plugs and Caps</p>	<p>PNU Plug</p>  <p>C14</p>	<p>FNU Cap</p>  <p>C14</p>			

Dimensions and pressures for reference only, subject to change.

The Parker Advantage

Robust Port Stud: The adjustable port stud is manufactured with a longer locknut designed to cover the uppermost threads completely. Since the backup washer is never exposed to the upper threads, it cannot be damaged during assembly. During assembly, exposed upper threads, as common with fittings from other fitting manufacturers, can lead to a deformed backup washer that can pinch the o-ring and create an o-ring extrusion gap that has the potential to leak. The longer locknut also provides a greater grip area for the wrench.

Visible bite: The style A (SAE 08115A) ferrule design allows for an easy inspection of the bite in the tubing. A verification can quickly be achieved which reduces time and assures proper assembly. This assurance also eliminates the risk of leaks and catastrophic failures.

Rear compression grip: The ferrule is also designed with a rear bevel to firmly hold the nut and tubing. This enhancement dampens the effects of vibration in the connection; thus extending the life of the joint.

Metal-to-metal sealing: The metal to metal sealing function broadens the range of both temperatures and media types. The temperature and media range of Ferulok is not limited by an elastomeric seal, but by the range of steel and stainless steel (see page T9 of the General Technical section for material temperature and media compatibility).

Superior Plating: Superior plating gives Parker steel tube fittings unmatched protection against red rust. In neutral salt spray test per ASTM B117, Parker Ferulok fittings substantially exceeded the SAE requirement of 96 hours to red rest.

No special tooling required: Neither flaring nor flanging tools are required to make a Ferulok connection. Smaller sizes of Ferulok can be assembled by a wrench thus reducing tooling costs and assembly time. However, portable presetting equipment is available for larger sizes and/or high production (see Section R of the catalog for equipment available).

Reference locations

Standard Material Specifications: Refer to Table U1 in Appendix page U2.

Assembly and Installation: Please refer to Ferulok Assembly located within the Assembly/Installation section of this catalog.

Recommended Tube Wall Thickness: Please refer to Table U3 located in the Appendix section.

Dynamic Pressure Ratings: Please refer to the last column of the part number tables located on the following pages of this section for the appropriate dynamic pressure ratings.

Seal Material Selection: Please refer to Table T8 in the General Technical section of this catalog for elastomeric seal information.

Tube Recommendation

Maximum tube wall thickness is based on the pressure holding capability of Ferulok fittings. Tubes above the recommended range can be used. However, the pressure holding capability of the assembly will be limited to the fitting capacity. The proper Ferulok assembly procedures as outlined on pages S23 - S26 of this catalog are critical to the performance of the fitting. Steel Ferulok works best with seamless or welded and drawn fully annealed tube, SAE J356, SAE J524, SAE J525 (max. hardness, RB72) or equivalent specification steel tube. For stainless steel Ferulok fittings, types 304 and 316 of ASTM A269, ASTM A213 (max. hardness, RB90) or equivalent stainless steel tube is recommended.

Ferulok fittings are also suitable for use with soft metal tube and various types of plastic tubes such as nylon, polyethylene, etc. When used with plastic tube, it is strongly recommended that a tube insert, such as T23UI, be used to prevent tube pull out due to tensile loading.

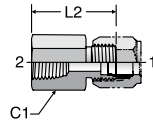
See Table U3 in Appendix on Page U3. Consult the Parker Hannifin Tube Fittings Division for other combinations of tube and tube fitting materials not shown.

Dimensions and pressures for reference only, subject to change.

GBU

Female Connector
Flareless / NPTF

SAE 080103

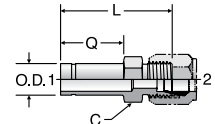


TUBE FITTING PART #	END SIZE		C1 HEX (in.)	L2 (in.)	Dynamic Pressure (x 1,000 PSI)	
	1 (in.)	2 NPTF			-S	-SS
	2 GBU	1/8				
4 GBU	1/4	1/8 - 27	9/16	1.09	5.0	5.0
4-4 GBU	1/4	1/4 - 18	3/4	1.29	5.0	5.0
5 GBU	5/16	1/8 - 27	9/16	1.08	5.0	5.0
6 GBU	3/8	1/4 - 18	3/4	1.31	5.0	5.0
6-6 GBU	3/8	3/8 - 18	7/8	1.34	5.0	5.0
6-8 GBU	3/8	1/2 - 14	1 1/8	1.59	5.0	5.0
8 GBU	1/2	3/8 - 18	7/8	1.47	5.0	5.0
8-4 GBU	1/2	1/4 - 18	7/8	1.46	5.0	5.0
8-8 GBU	1/2	1/2 - 14	1 1/8	1.69	5.0	5.0
10 GBU	5/8	1/2 - 14	1 1/8	1.77	4.5	4.5
12 GBU	3/4	3/4 - 14	1 3/8	1.89	4.0	4.0
14 GBU	7/8	3/4 - 14	1 3/8	1.86	3.0	3.0
16 GBU	1	1 - 11 1/2	1 5/8	2.13	3.0	3.0
20 GBU	1 1/4	1 1/4 - 11 1/2	2	2.22	2.5	2.5
24 GBU	1 1/2	1 1/2 - 11 1/2	2 3/8	2.23	2.5	2.5

TRBU

Tube End Reducer
Tube / Flareless

SAE 080123

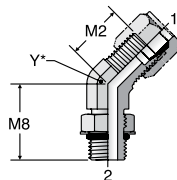


TUBE FITTING PART #	END SIZE		C HEX (in.)	L (in.)	Q (in.)	Dynamic Pressure (x 1,000 PSI)	
	1 (in.)	2 (in.)				-S	-SS
	6-4 TRBU	3/8					
8-4 TRBU	1/2	1/4	9/16	1.73	1.00	5.0	5.0
8-6 TRBU	1/2	3/8	5/8	1.77	1.00	5.0	5.0
10-6 TRBU	5/8	3/8	11/16	1.86	1.09	5.0	5.0
10-8 TRBU	5/8	1/2	13/16	1.95	1.09	4.5	4.5
12-6 TRBU	3/4	3/8	13/16	1.94	1.16	4.5	4.5
12-8 TRBU	3/4	1/2	13/16	2.03	1.16	4.5	4.5
12-10 TRBU	3/4	5/8	15/16	2.16	1.16	4.5	4.5
14-10 TRBU	7/8	5/8	15/16	2.14	1.16	4.0	4.0
16-8 TRBU	1	1/2	1 1/16	2.05	1.13	4.0	4.0
16-10 TRBU	1	5/8	1 1/16	2.11	1.13	4.0	4.0
16-12 TRBU	1	3/4	1 1/8	2.25	1.13	4.0	4.0
20-16 TRBU	1 1/4	1	1 3/8	2.28	1.16	3.0	3.0
24-12 TRBU	1 1/2	3/4	1 5/8	2.45	1.25	2.0	2.0
24-16 TRBU	1 1/2	1	1 5/8	2.45	1.25	2.0	2.0
24-20 TRBU	1 1/2	1 1/4	1 7/8	2.45	1.25	2.0	2.0

V5BU

45° Straight Thread Elbow
Flareless / SAE-ORB

SAE 080320



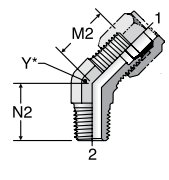
*Y – Across wrench flats

TUBE FITTING PART #	END SIZE		M2 (in.)	M8 (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)	
	1 (in.)	2 UN/UNF-2A				-S	-SS
	4 V5BU	1/4					
6 V5BU	3/8	9/16 - 18	0.83	1.14	9/16	5.0	5.0
8 V5BU	1/2	3/4 - 16	0.98	1.30	3/4	5.0	5.0
12 V5BU	3/4	1 1/16 - 12	1.27	1.73	1 1/16	4.0	4.0
16 V5BU	1	1 5/16 - 12	1.36	1.86	1 5/16	3.0	3.0

VBU

45° Male Elbow
Flareless / NPTF

SAE 080302



*Y – Across wrench flats

TUBE FITTING PART #	END SIZE		M2 (in.)	N2 (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)	
	1 (in.)	2 NPTF				-S	-SS
	3 VBU	3/16					
4 VBU	1/4	1/8 - 27	0.70	0.64	7/16	5.0	5.0
4-4 VBU	1/4	1/4 - 18	0.81	0.86	9/16	5.0	5.0
5 VBU	5/16	1/8 - 27	0.75	0.66	9/16	5.0	5.0
6 VBU	3/8	1/4 - 18	0.83	0.86	9/16	5.0	5.0
8 VBU	1/2	3/8 - 18	0.98	0.95	3/4	5.0	5.0
10 VBU	5/8	1/2 - 14	1.08	1.17	7/8	4.5	4.5
12 VBU	3/4	3/4 - 14	1.27	1.20	1 1/16	4.0	4.0
14 VBU	7/8	3/4 - 14	1.34	1.30	1 5/16	3.0	3.0
16 VBU	1	1 - 11 1/2	1.36	1.48	1 5/16	3.0	3.0
20 VBU	1 1/4	1 1/4 - 11 1/2	1.45	1.67	1 5/8	2.5	2.5

All "VBU" fittings include a 30° chamfer for sealing with NPSM swivel type fittings (steel only).

Dimensions and pressures for reference only, subject to change.

