Parker
FluidConnectors

Bulletin 4300-FSF
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Flange-Seal™
Tube Fittings

The Fitting Authority

Flange-Seal Fitting

Parker's new Flange-Seal™ fitting provides an efficient and economical method to connect a tube assembly to another tube line or hose assembly (see figure 1). It can replace the conventional O-ring face seal braze-type fitting. The elimination of the brazing operation provides several advantages, such as faster, cleaner and safer tube line fabrication, resulting in cost reduction opportunities. The Flange-Seal fitting also replaces the more expensive tube union connection.

Figure 1

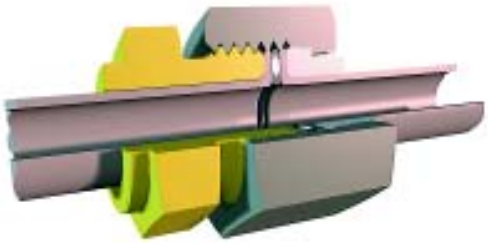


Figure 2

Leak-Free Design

The Flange-Seal fitting utilizes Parker's proven Parflange® process to create a 90° flange on the tube end. As shown in Figure 1, a bonded elastomeric seal is positioned between the Flange-Seal tube line and its mating tube/hose assembly. The seal is designed with rubber tabs on its outer diameter, allowing it to be securely positioned within the tube nut or hose swivel prior to assembly. When assembled, the seal is compressed between the two flat faces, providing a leak-tight connection (see Figure 2).

Parflange® Technology

Parker's patented Parflange process utilizes an orbital spindle process that cold forms a 90° flat face on the end of tube (see Figure 3). For over ten years, it has been the preferred method of preparing tube ends for use with o-ring face seal fittings, virtually eliminating the brazing method. This same, proven technology can now be utilized to attach a male flat face fitting to a tube end, again eliminating another braze operation.

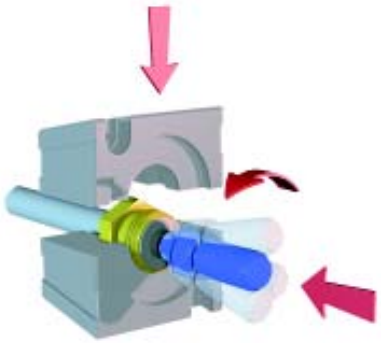


Figure 3

Feature	Advantage	Benefit
Elastomeric Seal	Tolerant of surface imperfections	Provides leak-free connection
Parflange method of assembly	Several times faster than brazing	Reduces assembly cost
	No special pre- and post- braze cleaning	Reduces tube preparation cost
	No open flame or heat source required	Improves operator safety
	No braze joint or potential leak path	Provides consistency in quality
	Allows for the use of plated components, e.g. fitting and tubing	Eliminates special corrosion-resistant post-treatment
Rubber tabs on seal	Aligns and retains the seal within nut	Assures a more positive and reliable seal
Direct tube to tube/hose connection	Replacement of union fitting	Reduces number of seal points and component cost

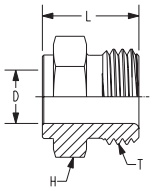
Specifications

Rated Pressure: Refer to LHP chart below
Material: Steel, zinc gold chromate plating
Seal Material: NBR (Nitrile), 90 durometer
Parflange Tooling:
Pin: Standard 90° Parflange pin
Die: Uniquely designed for Flange-Seal fitting
Test Requirments:
The Flange-Seal fitting has been tested in accordance with SAE J1453, meeting or exceeding the performance requirements of impulse, leakage, burst and over-torque.

Recommended Assemby Torque

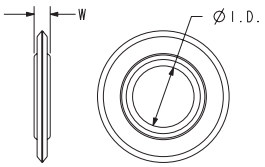
Fitting Dash Size	Thread Size	Assembly Torque (+10% -0%)		
		in.-lb.	ft.-lb.	N-m
4	9/16-18	220	18	25
6	11/16-16	360	30	40
8	13/16-16	480	40	55
10	1-14	720	60	80
12	1 3/16-16	1020	85	115
16	1 7/16-12	1320	110	150

Flange-Seal Fitting
LHP



Tube Fitting Part #	Tube O.D. (inch)	T Tube End UN/UNF-2A	D Drill (inch)	H Hex (inch)	L (inch)	Standard From Stock Dynamic Pressure (psi)	
						S	SS
4 LHP	1/4	9/16-18	1/4	5/8	0.59	9200	
6 LHP	3/8	11/16-16	3/8	3/4	0.69	9200	
8 LHP	1/2	13/16-16	1/2	7/8	0.79	9200	
10 LHP	5/8	1-14	5/8	1 1/16	0.95	6000	
12 LHP	3/4	1 3/16-12	3/4	1 1/4	1.00	6000	
16 LHP	1	1 7/16-12	1	1 1/2	1.02	6000	

Bonded Seal
PLS



Seal Part #	Fitting Dash Size	Tube O.D. (inch)	ID (inch)	W (inch)	Standard From Stock	
					N0702*	V0894**
4PLS	4	1/4	0.23	0.08	•	
6PLS	6	3/8	0.34	0.08	•	
8PLS	8	1/2	0.46	0.08	•	
10PLS	10	5/8	0.61	0.08	•	
12PLS	12	3/4	0.78	0.08	•	
16PLS	16	1	1.00	0.08	•	

*Nitrile (NBR)
**Fluorocarbon

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Worldwide Availability: Parker operates Fluid Connectors manufacturing locations and sales offices throughout North America, South America, Europe and Asia-Pacific.

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