

# Vacuum (Negative Pressure)

**BFM® fitting works and seals perfectly in almost all vacuum (negative pressure) applications.**

It is important to note, however, that negative pressures create a ‘suck-in’ effect on the flexible connector. This can cause two potential failure modes:

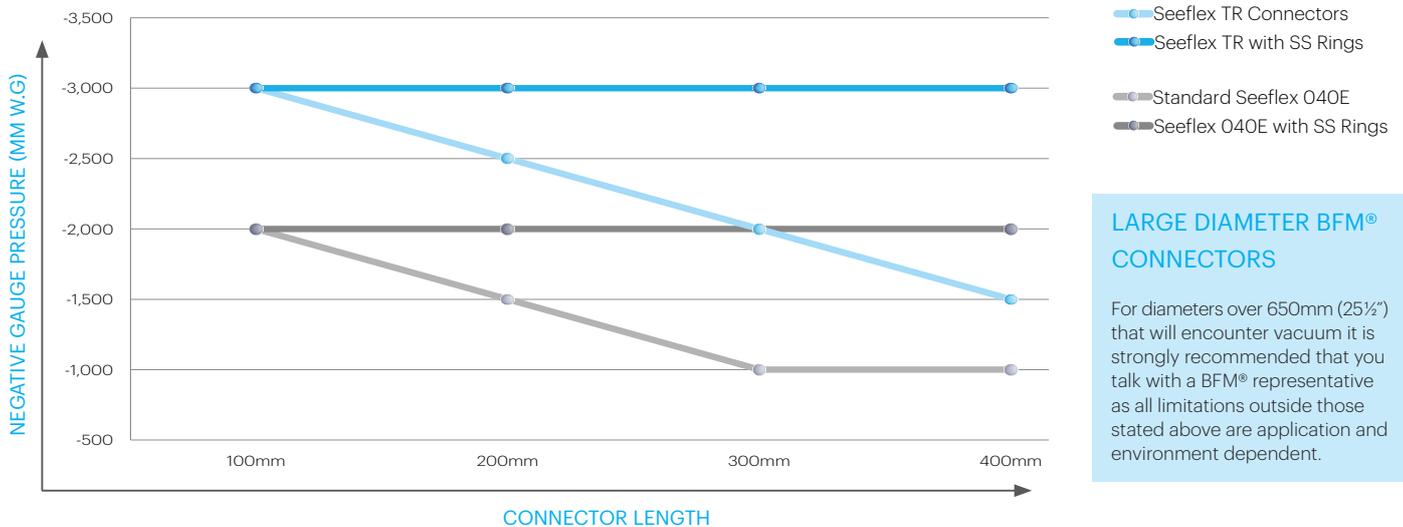
- (1) the connector wall collapses in on itself blocking the passage of product;
- (2) the connector-spigot seal opens letting atmospheric pressure in. In some cases the connector can release.

To help prevent this, the general rule under vacuum is that the maximum length of the BFM® connector should be no longer than its diameter without support rings. Stainless steel support rings (set 100mm (4”) apart) will help keep the connector walls open under vacuum and should be considered for connectors over 200mm (8”) long.

BFM® TR (tool release) connectors should also be considered as they have a stronger retention force than the standard BFM® connectors and give increased operational vacuum limits.

The following charts show the maximum recommended operational working vacuum for BFM® Seeflex 040E connector by length for standard and TR versions, both with and without stainless steel support rings:

MAXIMUM VACUUM					SEEFLEX 040E (Standard)				SEEFLEX 040E with SS Rings				SEEFLEX TR				SEEFLEX TR with SS Rings			
PSI	KPA	BAR	WG		CONNECTOR LENGTH (MM)				CONNECTOR LENGTH (MM)				CONNECTOR LENGTH (MM)				CONNECTOR LENGTH (MM)			
			(INCHES)	(MM)	100	200	300	400	100	200	300	400	100	200	300	400	100	200	300	400
-1.3	-8.963	-0.0896	-35.98	- 914	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-1.5	-10.342	-0.1034	-41.52	-1,055	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-1.7	-11.721	-0.1172	-47.06	-1,195	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-1.9	-13.100	-0.1310	-52.59	-1,336	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-2.0	-13.790	-0.1379	-55.36	-1,406	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-2.5	-17.237	-0.1724	-69.20	-1,758	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-3.0	-20.684	-0.2069	-83.04	-2,109	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-3.5	-24.132	-0.2413	-96.88	-2,461	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-4.0	-27.579	-0.2758	-110.72	-2,812	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-4.5	-31.027	-0.3103	-124.56	-3,164	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓



**LARGE DIAMETER BFM® CONNECTORS**

For diameters over 650mm (25½”) that will encounter vacuum it is strongly recommended that you talk with a BFM® representative as all limitations outside those stated above are application and environment dependent.

For more information on operating BFM® fittings in vacuums, please refer to the ‘BFM® Applications - Vacuum’ document.

**NOTE:** The BFM® connectors were tested in a static test rig under ambient temperatures. The SS Rings on the connectors tested were set at 100mm (4”) centres. Although the suggested limits are well within our tested results, the conditions in which the BFM® fitting will be installed must be taken into account. Please contact BFM® if you have any doubts. Always test on site first.