

# BFM® Applications - Negative Pressure

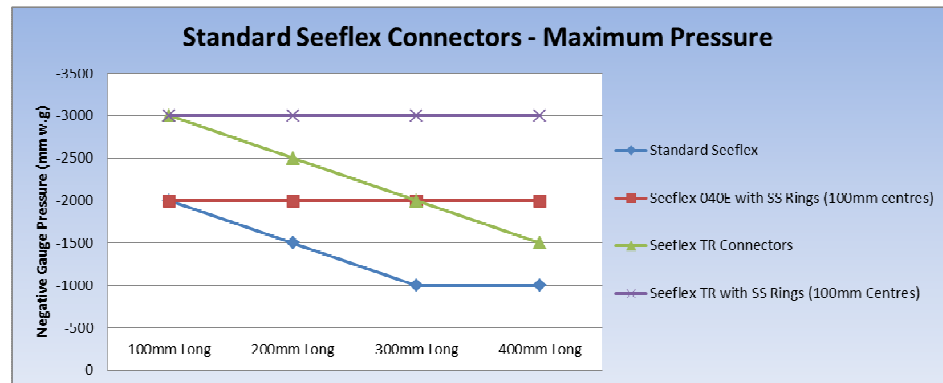
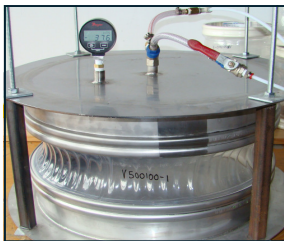
BFM® fittings are often used in various applications where they are operating in negative vacuum situations. Typically these installations are in operations where the plants are drying or processing dry powdered type products and need the plant and equipment to be under a slight negative pressure to keep the internals of the buildings clean from leaking dust out of machinery. The BFM® fitting works and seals perfectly in almost all negative pressure applications.

The amount of movement, environment, temperature and nature of the pressure should be taken into account when specifying a connector.



## What vacuum can my BFM® fitting run at?

The table below provides maximum values for the maximum working negative pressure for the BFM fitting using Seeflex 040E connectors.



## CAUTION

The BFM connectors were tested in a static test rig under ambient temperatures. 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 one of distributors if you have any doubts.



## Connector Length

As a general rule on vacuum, the maximum length of the BFM connector should be no longer than its diameter without support rings. For instance a 100mm diameter BFM should be no more than 100mm long. The reason is that the vacuum will pull the connector walls inwards, which will eventually close the connector.

## BFM® connectors with Support Rings

Stainless Steel Support rings can be used to negate the effects of length. For instance a 400mm long connector will hold as much vacuum as a 100mm long connector if it has three support rings (100mm apart). The rings also help keep the connector walls open and away from the product flow.



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### BFM TR Connectors

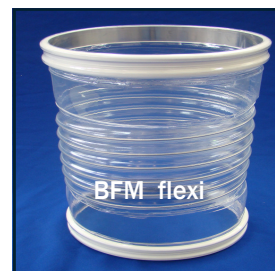
BFM manufactures a range of connectors where the cuff has a stronger seal in the spigot, and requires a tool to release the connector. The cuff on the TR connectors is far more difficult to release and this can provide an element of added security. By using the BFM TR connector the vacuum limits above are increased

Although the BFM connector will not release from the spigot at these pressures, the connector will be under a lot of stress, the connector walls will be hardened and sucked inwards. If you have a connector 200mm long or greater the SS Rings should be considered.

### BFM Flexi Connectors

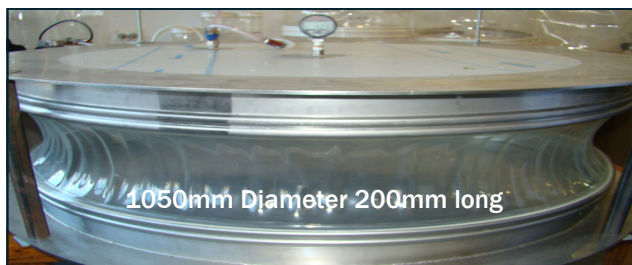
There are BFM® flexi connectors available in 200 and 300mm diameter. The BFM® flexi has a stainless steel spiral wire wrapped in Urethane. These connectors are commonly used on two applications.

1. Light vacuum applications.
2. Where it is critical that the connector is held open while it moves up or down and as the product flows through the connector.



### Large Diameter BFM Connectors

For diameters over 650mm that will encounter vacuum it is strongly recommended that you talk with a BFM representative. The BFM® fitting will handle vacuum at gauge pressure of up to -1000mm w.g on short length connectors. This will depend on the application and the environment.



### BFM LM4 connectors

BFM connectors can be manufactured from LM4 which is a 100% pure woven polyester fabric. The woven fabric has been proven to allow air to bleed into the system, alleviating the pressure. We have numerous examples of this working, especially at the base of Silo's where bridging can occur causing a sporadic and extreme negative pressure situation. This makes the LM4 an option when pressures are over our recommended values in the chart on the previous page. Because the media alleviates vacuum allowing air into the system failure will only occur in an extreme and sudden vacuum occurrence.



### Larger Vacuums

The BFM fitting has been tested up to absolute vacuum on a number of connectors. All the connectors tested held vacuums far in excess of the limits we have provided, however we would not recommend using any urethane connector over the set limits as this will be a strain on the whole system and the connector will not function at their peak levels.

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