



Diaphragm Seals

Type ST Series

Diaphragm Seal Elements for Low Pressure

DESCRIPTION

Mansfield & Green ST Series diaphragm

seals are specifically designed to protect electronic transmitters, transducers, and low pressure gauges against process media damage

in a wide range of process control and pipeline applications. Designed for transmitter applications where closed systems require low sensitivity, the ST series offer superior accuracy where greater volumetric displacements are required.

Type ST seals feature a continuous duty design that permits instrument removal or replacement while a system is in operation without causing leakage of the process media. These seals include a metal diaphragm which is permanently welded to the seal's instrument flange. The instrument or top flange and process or bottom flange are sealed with a non-asbestos aramid fiber gasket. Optional glass filled TEFLON[®] and TEFLON-coated stainless steel gaskets are also available.



FEATURES

- Ideal for protecting instrumentation from process media
 - Electronic transmitters
 - SMART transmitters
 - Transducers
 - Low pressure gauges
- Continuous duty
- Ideal for process control and pipelines
- Materials available for corrosive applications
- Seal ratings to 3000 psig (207 bar)

SEAL CONFIGURATIONS

Threaded Seal Elements

The SBT seal element can be used for pressure or vacuum applications and has a standard pressure rating of 1500 psig at 100°F (103 bar at 38°C) with an optional rating for up to 3000 psig (207 bar). The SGT seal element is similar to the SBT seal, except that it has a 1/4 NPT flushing connection.

Flanged Seal Elements

The SCT seal element can be supplied with standard ANSI Class ratings of 150, 300, and 600. The SDT series is similar to the SCT series except it is supplied with a .25" flushing connection.

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MODEL ST SERIES SELECTION GUIDE

SEAL TYPE	SEAL MOUNTING	OPERATING TEMPERATURE	OPERATING PRESSURE	PROCESS APPLICATION	FLUSHING CONNECTION
SBT	Thread	100°F (38°C)	1500 psig (103 bar) ¹	Low Pressure/VAC ²	No Flush
SGT	Thread	100°F (38°C)	1500 psig (103 bar) ¹	Low Pressure/VAC ²	With Flushing Connection
SCT	Flange	–	Flange Dependent	Low Pressure/VAC ²	No Flush
SdT	Flange	–	Flange Dependent	Low Pressure/VAC ²	With Flushing Connection
SMT	In-Line Flow Thru	100°F (38°C)	1500 psig (103 bar)	Jacketed Pipeline	Butt Welded
SNT	In-Line Flow Thru	100°F (38°C)	1500 psig (103 bar)	Jacketed Pipeline	Flange Attached

NOTE:

¹ Optional 3000 psig available at 100°F (207 bar at 38°C)

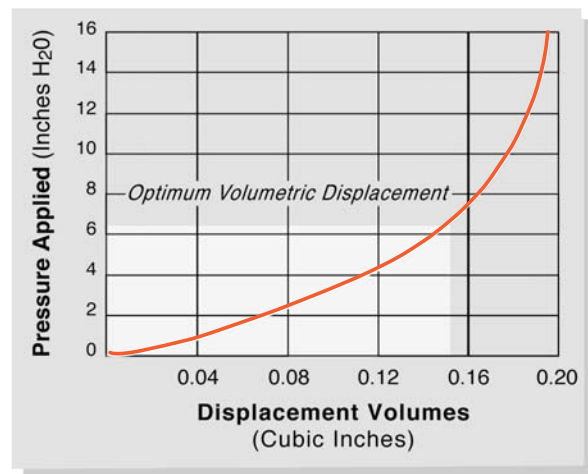
² These seals can be used for vacuum down to 29" Hg

Application Note

Thermal expansion or contraction, combined with unequal volumes on the opposite sides of a differential instrument, can lead to extreme zero shifts.

Special Requests

The diaphragm seal combinations in this catalog represent AMETEK's more commonly ordered products. If you don't find a seal combination in this specification sheet, or if you are in need of a special application or material, call us. AMETEK can supply you with the safe and reliable solution for most applications.



Pressure vs. Volumetric Displacement

Displacement curves are provided to assist in selecting a diaphragm seal with minimal full span displacement bias effects. This graph is for reference only and may not accurately represent the maximum displacement that may be used. Contact AMETEK for exact specifications.

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