

Sealed Meter HVT Venturi System

SM Series

Available for Cast Iron, Ductile Iron and
Fabricated Venturi Meters



Description

The PFS Sealed Meter System (SMS) provides accurate and reliable measurement for applications that contain contamination, such as sewage and/or sludge, without the concern for plugged impulse lines. One of the greatest advantages this system offers is the ability to perform maintenance and calibration services without removing any parts of the system or stopping the flow. By utilizing dual or triple DP transmitters, the minimum to maximum flow rate range can be significantly extended while maintaining accurate and repeatable flow rate documentation.

Common Materials

- Cast Iron or Ductile Iron Body
- 304 or 316SS throat
- Stainless Steel (304/316)
- Carbon Steel

*Also available in other materials

Model Types

- HVT-SMC – Diaphragm Seal Cast Iron HVT Venturi
- HVT-SMD – Diaphragm Seal Ductile Iron HVT Venturi
- HVT-SMF – Diaphragm Seal Fabricated HVT Venturi

Specifications

Line Size: 6 to 14 inches | 16 to 96 inches

Diaphragm Seals: 2 inch SMS | 3 inch SMS

Head loss % of Differential (Venturi): 3.50 to 10.0 percent

Basic Accuracy (% of Total): +/- 0.25 (Calibrated) +/- 0.50 (2 Sigma) (Uncalibrated)

Minimum pipe Reynolds number: Must be greater than 75,000

Required Straight Piping: Consult datasheet for required US & DS piping based on your specific application

Beta Range: 0.30 through 0.75

Useful Service Life: Very Long

Service Functional Limits: Clear liquid, gas, contaminated and solid-bearing line fluid

Applications

- Wastewater Treatment Plant
- Raw Sewage/Sludge
- Solid-bearing and contaminated line fluids
- Potable Water
- Water Treatment Plant

Special Features

- Calibrate the DP transmitter without removing any parts of the system or stopping the flow
- Diaphragm sensor can be removed for maintenance
- Inspect the internal cross section of the meter at the high and low pressure point without removing the meter from service
- Elimination of all concerns over plugging the impulse lines or of air entrapment
- Extended product life with no moving parts (Venturi)
- Lower susceptibility to erosion
- No downstream installation effect; minimal upstream effect
- No annular chambers therefore no plugging
- Useful for flow measurement at high velocities
- Turndown ratio of 10:1, 20:1, 50:1 and greater can be achieved depending on the specific model and design of the meter as well as the type of secondary instrumentation system utilized
- Repeatability of $\pm 0.1\%$
- Mounts in any position