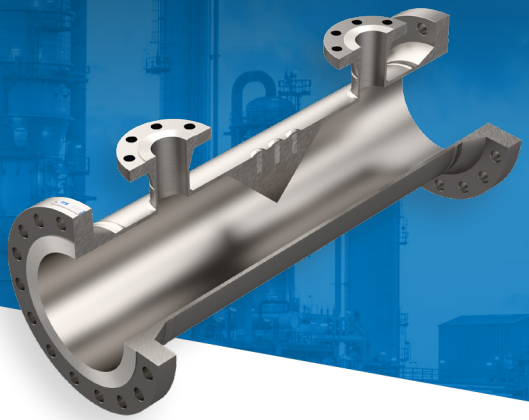

PRODUCT DATASHEET

Wedge Flow Meter

Description

A wedge flow element is a differential pressure device which utilizes a V-shaped restriction which is refered to as the “wedge”.The differential pressure measurement is used to calculate flow using a wedge flow equation. A wedge meter is extremely flexible in application and can be used to measure liquids and gases. They are particularly suited to measure dirty fluids, fluids with suspended solids or entrained gases, slurries and viscous liquids. The design achieves stable performance down to 5000 pipe reynolds and can be calibrated to maintain accuracy at reynolds lower than 5000 with laboratory flow calibration. Capable of bi-direction use, wedge meters can be fitted with any number of pressure measurement connections such as NPT & SW couplings or flanges which are required to assemble diaphram seal transmitters

Common Materials

- Carbon Steel
- 304 / 316SS

Other Available Materials

- Aluminum
- Monel
- Tantalum
- Zirconium
- Duplex S/S
- 321 SS
- Hastelloy B & C
- Titanium

Applications

- Liquids with suspended solids
- Chemical and Petrochemical industry
- Pulp and paper industry
- Mining, oil, gas and refineries
- High Viscosity Corrosive and Abrasive Liquids

Special Features

- Extended product life with no moving parts
- Lower susceptibility to erosion
- Wide Turndown ratio
- Repeatability of ± 0.2%
- Mounts in any position
- Bi-directional measurement possible
- Hard clad interior surfaces for abrasion/erosion resistance

Model Types

- WMF – Wedge, Meter, Flanged
- WMT – Wedge, Meter, Threaded Ends
- WMWFR – Wedge, Meter, Wafer Ends
- WMV – Wedge, Meter, Victaulic Ends
- WMW – Wedge, Meter, Butt Weld Ends

Specifications

Line Size: 1/2 to 30 inches

Head loss % of Differential: 25 to 60 percent

Basic Accuracy (% of Total):

Line Size	Wet Calibrated	Uncalibrated
1/2”	+/- 0.75	+/- 5.00
1-30”	+/- 0.50	+/- 3.00

Minimum pipe Reynolds number: Must be greater than 5000 for basic accuracy

Required Straight Piping: 10D upstream, 2D downstream

H/D Ratio: 0.2 to 0.7

Useful Service Life: Medium to Long depending on service

Service Functional Limits: Clear Liquids, Gas, Steam, Slurries, Suspended Solids, Viscous Liquids