

Data Sheet PFS-WM

WedgeType[™] Flow Meter

Leading Accuracy for Challenging Line Fluid Applications

Primary Flow Signal, Inc. is a leader in the design and manufacture of Venturi differential flow meters. Field-proven in hundreds of thousands of installations worldwide, differential metering ensures the most accurate and reliable metering available anywhere. Through innovation, coupled with peerless engineering and technical expertise, PFS delivers customers versatile, ultra-long lasting liquid and gas metering solutions for a variety of applications and industries.

The **PFS-WM WedgeType™** excels where others fail, accurately measuring highly viscous, rough, or solidsbearing fluids and slurries, as well as gas or steam. This meter is even ideal for asphalt, tar-sands, fracking fluids, spent water, sludge, cement, and other harsh industrial uses. The PFS-WM provides +/- 0.50% accuracy and +/- 0.20% repeatability while measuring thick abrasive slurries, gas-infused liquids, or steam. This differential-pressure meter consists of a cylinder with an embedded wedge, constricting the flow between sensors. It accurately handles relatively low Reynolds numbers, and the discharge coefficient is stable through the operation range. Coupling with PFS instrumentation provides a comprehensive metering solution; available instrumentation configurations include multi-variable (for gas/steam), split range, redundant service, and steam jacketed for specialized liquid asphalt and molten sulfur media.

Our new, high accuracy, highly compact WedgeX meter integrates mounted DP transmitters to mitigate gauge line errors.

PFS-WM WedgeType Features

Accuracy:

<1.0" +/- 0.75" of coefficient accuracy (wet calibrated);

+/- 0.50% of actual flow rate over calibrated range

Repeatability: +/- 0.20%

Line size: range is unlimited, with examples between 0.5" and 24" in service

Service capability: gas or liquid, including dirty, contaminated, or slurry

Materials: virtually any machinable or wieldable material, including carbon steel, 316 or 304 stainless steel, Hastelloy[®], Monel[®], PVC (for chlorine), or others on request **End configuration**: flange ends (PFS-WMF), threaded ends (PFS-WMT), weld ends (PFS-WMW), plain, mechanical joint, or other ends available as required

Temperature: dependent upon wetter materials and gasket material

Line pressure capacity: maximum working pressure is per ANSI B16.5

ISO 9001-2008 ASME S U NB R PED module H IBR GOST

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SEALED SENSORS (Extended) TRANSMITTER TRAN

WedgeType[™] Flow Meter Typical Configuration

When installing: 1) orient pressure taps horizontally: recommend 45°-90° from center vertical centerline of impulse tap components; 2) provide adequate clearances; 3) tighten flange bolts to industry flange assembly standards to avoid leakage; 4) ensure tolerances are within industry standards.

Typical Pipe Length Requirements	Preferred		Minimum	
	Up	Down	Up	Down
Partially opened gate valve	10	5	10	3
Concentric increaser	10	5	5	3
Concentric reducer	10	5	5	3
1 Elbow	10	5	5	3
2 Elbows close coupled in-plane	10	5	5	3
3 Elbows close coupled out-of-plane	10	5	10	3

Support Services

In addition to a wide range of differential producing Venturi flow meters, orifice plates, WedgeType[™] flow meters, and open channel flow elements, PFS provides comprehensive, specialized services for new and existing flow meters, including rehabilitation, hydraulic analysis, and full engineering support.



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Primary Flow Signal, Inc. products and operations are certified to industry standards for safety and performance. Visit our web site for details.

Certifications

ISO 9001; ASME S, U, R; European PED Module H; and other internationally recognized certifications, such as GOST, IBR, and CRN. In addition, WedgeType meters are certified to Section 8 Boiler and Pressure Vessel Code, ASME B31.1, 31.3 ASME fluid meters, MFC-3M-1985, ISO 5167, BS-7045.

Contact a Field Application Engineer for assistance.



All PFS products are proudly made in the U.S.A.