

HVT-FV Fabricated Venturi Pressure Vessel

Proven Accuracy and Wide-Range Versatility

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 **HVT-FV Halmi Fabricated Venturi** primary flow element has the most thoroughly substantiated accuracy on the market today, with thousands in service worldwide.

The HVT-FV is a rugged, reliable, differential flow measurement device, designed to measure full pipe flow of clean or solids-bearing gases or liquids over extreme temperature ranges. PFS can custom manufacture the HVT-FV in a wide variety of configurations to fit budgets and application needs, for the most accurate metering solution (+/-0.50%, 2 Sigma).

Incorporating the HVT-SM Sealed Metering System allows measurement of solids-bearing (contaminated) line fluids, as well as higher viscosity liquids.

HVT-FV Fabricated Pressure Vessel Features

Accuracy:

+/- 0.50% of actual reading
(2 Sigma)

+/- 0.25% of actual reading
or better based on hydraulic
calibration

Beta ratios: unlimited range,
with examples from 0.2 to 0.8

Line size: range is unlimited, with
examples between 3/8" and 144"
in service

Materials: include, but are not
limited to: carbon steel, 316
stainless steel, 304 stainless
steel, Duplex stainless steel,
Chrome Molybdenum, aluminum,
Hastelloy® B&C, Monel®, Inconel®,
zirconium, titanium, and tantalum

End configuration: flange ends
weld end, plain, mechanical joint,
or other as requested

Temperature: (cryogenic to super
heated steam): -400° F to 1,250° F
(limited only by materials chosen
for construction and associated
secondary devices)

Line pressure capacity: from full
vacuum to the limits of materials

HVT-FV Fabricated Pressure Vessel Features

Line fluid capabilities:

Gas or liquid
Clean, or with minimal particulate

Pipe Reynolds number R_D

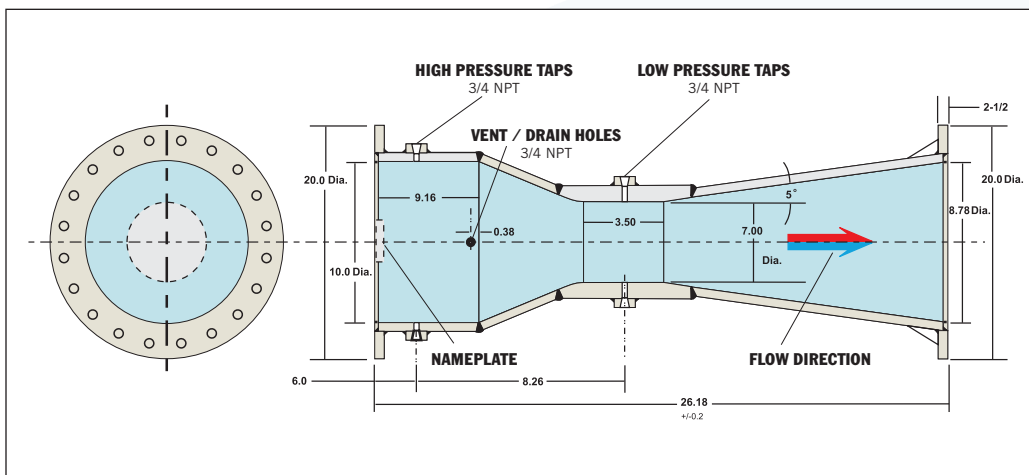
capability: discharge coefficient is constant above 75,000 R_D

Installation: horizontal, vertical, or any angle is possible

Permanent pressure loss:

Varies from 3% of differential and up depending on Beta ratio and recovery cone geometry
Ratios including Beta and exit cone truncation can be engineered to meet requirements

HVT-FV Typical Configuration



Liquid Applications: All impulse piping must have minimum 1 inch per foot, DOWN to the flow transmitter(s). Transmitter at or below the meter center line.

Gas Applications: All impulse piping must have minimum 8 cm per foot, UPWARDS to the flow transmitter(s).

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.

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.

Certifications

ISO 9001, ASME S, U, R; European PED Module H; and other internationally recognized certifications, such as GOST, IBR, and CRN.

Contact a Field Application Engineer for assistance.



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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.



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