



# Fabricated HVT Venturi

## for Flow Measurement

### FV Series

## Description

The HVT geometry form offers substantial design and engineering flexibility. Line and port connections can be provided with any required configuration including but not limited to flanged, threaded, butt & socket welded, victaulic, and more. Materials, schedules and lengths can also be provided to achieve pressure, temperature, flow range, line size, laying length and cost objectives as dictated by the specific applications. Similar in operation to an ASME/ISO classical venturi, the HVT design improves upon the ASME/ISO venturi geometry with improved accuracy and reduced permanent pressure loss in a more compact footprint. As with all of our venturi product lines, specialized features and equipment are available. Sealed metering system\* is available for the measurement of solids bearing or contaminated line fluids. Flow Masters\* are available to further extend the intrinsic benefits of the HVT flow meter by providing fully integrated control, management, and reporting capabilities.

\* See related literature on the options for additional information

## Special Features

- Extended product life with no moving parts
- 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
- NSF-61 (Potable Water) approved coatings are standard
- **Laying Length, the already shortened lay length of the HVT can be designed even shorter to fit limited space installations.**

## Applications

### Common Materials

- Carbon Steel
- 304 / 316SS
- Chrome Moly GR 11, 22, 91

### Other Materials

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

## Model Types

- FVF – Fabricated Venturi, Flanged
- FVFR – Fabricated Venturi, Flanged, Run
- FVS – Fabricated Venturi, Socket Weld Ends
- FVT – Fabricated Venturi, Threaded Ends
- FVW – Fabricated Venturi, Butt Weld Ends
- FVWFR – Fabricated Venturi, Wafer Ends
- FVWR – Fabricated Venturi, Butt Weld Ends, Run
- HVT-FCF – Flow Control Fabricated HVT Venturi
- HVT-SMF – Diaphragm Seal Fabricated HVT Venturi

## Specifications

**Line Size:** Line Size: 1/2 to 144 inches. If your line size is larger than 144", please contact PFS

**Head loss % of Differential:** 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 PFS datasheet

**Beta Range:** 0.30 through 0.75

**Useful Service Life:** Very Long

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