



# Iron HVT Venturi

## Cast Iron, Ductile Iron & Bi-directional Options CI, DI Series

### Description

The HVT Venturi Flow Element in Cast Iron and Ductile Iron is offered exclusively by Primary Flow Signal, Inc. for the highest accuracy and reliability for flow measurement of pressurized line fluids, including liquids and gases as well as solids-bearing line fluids, and harsh or contaminated line fluids. The HVT-CI is well proven in municipal water and wastewater flow measurement and flow control, as well as air and other gas applications. The HVT-DI (ductile iron) version is available for higher line pressure applications.

#### FLOW CONTROL

The HVT design is optimal for use with close-coupled butterfly valves to form highly efficient and effective flow rate controllers for filter effluent control (HVT-FCC). See Rate of Flow Controllers datasheet for more details.

#### SOLIDS BEARING FLOW

The HVT design is also available configured with remote diaphragm seals (HVT-SMC) making sewage flow measurement cost effective, accurate, and reliable without the concern for blocked pressure taps. See Sealed Meter System datasheet for more details.

#### FLOW METERING SYSTEM

For turnkey installation, a PFS Flow Master system can be provided with any flow measurement device(s) providing fully integrated control, management and reporting capabilities. A PFS Flow Master is fully customizable and often includes an enclosure along with pressure, temperature and recording instrumentation integrated into a single, organized package.

### Common Materials

- Cast Iron or Ductile Iron
- 304 or 316SS sleeved throat section

### Specifications

**Line Size:** 4 to 72 inches. If your line size is larger than 72", 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 for basic accuracy

**Required Straight Piping:** Consult the HVT Required Pipe Lengths Datasheet for required US & DS piping based on your specific application

**Beta Range:** 0.30 through 0.75

**Useful Service Life:** Very Long

**Warranty:** 25-Years

**Service Functional Limits:** Liquid, gas, contaminated and solid-bearing line fluid and can also utilize sealed diaphragm sensors

### Applications

- Filter Effluent
- Pumping Stations
- Raw Water / Wellfields
- WTP Influent / Effluent
- Water Distribution / Billing
- Reclaimed Water
- Sewage Collection Systems

### 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

### Model Types:

- HVT-CI – Cast Iron HVT Venturi
- HVT-DI – Ductile Iron HVT Venturi
- HVT-SMC – Diaphragm Seal Cast Iron HVT Venturi\*
- HVT-SMD – Diaphragm Seal Ductile Iron HVT Venturi\*
- HVT-FCC – Flow Control Cast Iron HVT Venturi\*
- HVT-FCD – Flow Control Ductile Iron HVT Venturi\*
- BCI – Bi-Directional Cast Iron HVT Venturi
- BDI – Bi-Directional Ductile Iron HVT Venturi

\* See additional literature for more information