Large Line Size Meter Brochure

Venturi Flow Meters for Large Line Size Applications

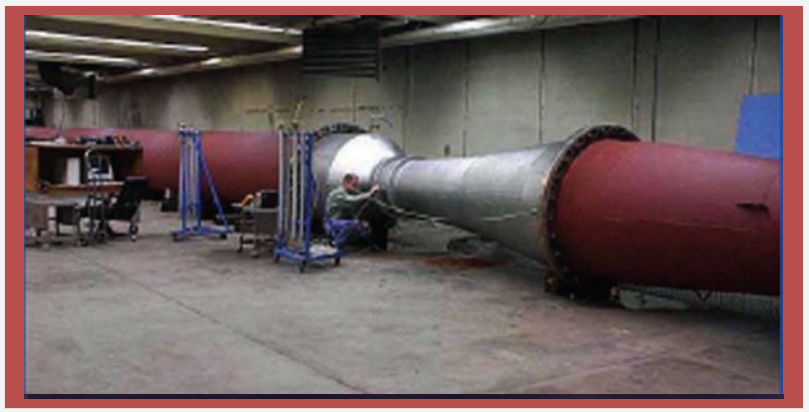
For nearly 30 years, Primary Flow Signal, Inc. has been the leading resource for the design, engineering, manufacturing, testing and delivery of our HVT modified short form Venturi meter.

During this time, the demands for clean water upon the municipal infrastructure in America as well as elsewhere thoughout the world have shifted and in many cases expanded, driven by the rapid increase of global population size and concentrations.

The accurate measurement of influent and effluent line fluids must now be measured in process piping comparatively of much larger dimensions. For this reason as well as the ever increasing inherent value of the line fluid(s) as well as capital costs and processing and distribution costs, large line size flow meter selection has increasingly embraced and specified Venturi type flow meters; ever more frequently, the selection has been in favor of the Primary Flow Signal, Inc. HVT –Halmi modified short form Venturi Meter, several examples of which are shown in this document.

The selection of this technology has numerous substantial advantages, as does the selection of the vendor resource to provide them. Here are some of the principal advantages of using Primary Flow Signal, Inc, and the HVT Venturi meter for any line size, but especially line sizes larger than 60.0 inches.

Worlds largest all 316L stainless steel, 180.0 inch HVT-FV venturi at the jobsite during installation.



60 inch HVT-FV model for the 180 inch Venturi meter. Three line size models were tested at Utah Water Research Facility including a very unique upstream pipe configuration.

Primary Flow Signal, Inc. holds certifications for **ISO 9001, ASME S, U&R** code stamps and **European PED**.

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Venturi Flow Meters for Large Line Size Applications (continued)

- PFS has well in excess of 500,000 successful HVT Venturi meter installations worldwide in line sizes ranging from 3/8 inch line size to 180” line size.
- PFS has the world’s largest calibration data base of its differential producer flow primaries in a broad range of line sizes and beta ratios(d/D). This indisputably supports meter performance, accuracy and reliability as no other technology can demonstrate.
- There are No Moving Parts meaning 100 year life expectancy or more is achievable.
- Wide selection of materials, including steel, stainless steel, monel, hastelloy, titanium, fiberglass and other synthetic materials, to accommodate any application conditions.
- Laboratory flow calibration is not required to guarantee +/-0.5% accuracy. The laws of hydraulic similitude apply to only Venturi meters thus, properly engineered and organized model testing/calibration of smaller size Venturi meters will provide coefficient performance data and substantiation that can be reliably assigned to a hydraulically identical, appropriately toleranced full size Venturi meter - no other type of flow meter can provide this advantage.

144.0 inch HVT-FV venturi meter ready for shipment. PFS was selected to provide six specially designed venturi meters between 96.0 and 166.0” line size.

72 inch HVT-FV venturi with special discharge end designed for use with mechanical coupling. Meter body is all stainless steel construction.

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- PFS has the capacity, experience, expertise and capability to provide the full range of disciplines necessary to properly, efficiently and cost effectively undertake any large line size Venturi meter requirement.
  - From engineering, to manufacturing to support and service, PFS maintains the largest facilities dedicated exclusively to the design, engineering, manufacturing and support of differential producer type flow meters.
  - Highest quality standards recognized by some of the most demanding customers in the world.
  - Complete in-house engineering staff including hydraulic, manufacturing, design, instrumentation, welding, radiography, Quality Assurance, etc.
  - Multiple company owned facilities providing capabilities redundancy to assure schedule compliance.
  - In-house high speed and large part machining, welding, fabrication, hydrotesting, finishing, testing and calibration.

78 inch HVT-CI venturi with dual pressure taps for wide range flow rate applications designed for large sewage facility.

Split range, sealed metering System including an in-place calibration feature.

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With over 2000 independent laboratory flow calibrations, many that also include a model of the approach piping that the full size venturi meter will be installed into on the field, PFS can provide exact installed accuracy, repeatability and headloss guarantee's without the need to calibrate the full size meter. PFS, Inc. has laboratory flow calibration test data for meter sizes from 0.50 inch to 72.0 inch including approach piping conditions.

84 inch HVT-FV venturi with carbon steel body and 316ss throat for large water plant pump station facility.

84 inch HVT insert meter designed for high volume seawater flow for desalination plant. Also available in monel or stainless steel.

Primary Flow Signal, Inc. has been providing reliable and accurate flow metering solutions for over two decades, with tens of thousands of successful installations worldwide. The unparalleled technical capabilities of the company in the field of accuracy and reliability have formed a cornerstone of the reputation that has become synonymous with excellence and reliability. In fact, many rely upon the knowledge and experience offered by PFS, Inc. exclusively for all of their flow measurement needs.

Primary Flow Signal

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