Preso®
Differential Pressure Flow Meters

Venturi Flow Meter

Model SSL

DESCRIPTION

The Venturi Model SSL (Classical Venturi Design) is a Hershel/Classical design differential pressure flow device. The Venturi flow meter restricts the flow at its throat, increasing the velocity of the fluid, and measures the pressure difference of the unrestricted flow and restricted flow. The meter's throat can be designed to meet the flow measurement application optimizing the meter's accuracy and permanent pressure loss.

CONFIGURATION

The Venturi inlet section is cylindrical with a pressure sensing tap the same diameter as the incoming pipe section. The tap is followed by a precise convergent section that causes a uniform change in fluid velocity. The cylindrical throat section with a pressure sensing tap, straight section and the exit cone has a precise angle in order to prevent permanent pressure loss that does not exceed 12% of the generated differential pressure. The beta ratio is determined by the manufacturer according to recognized standards and formulas. The discharge coefficient (Cd) is linear and stable in the operating flow range, has a value above 0.985 and is achieved by adhering to the ASME standards.

ACCURACY & REPEATABILITY

The accuracy of the flow element is within ±0.75% uncalibrated (±0.25% calibrated) with a repeatability of ±0.1% and turndown of 10:1 in the corresponding range of Reynolds' Numbers. For custody transfer applications, the Venturi is wet flow tested by an independent NIST certified laboratory under the design operating conditions and piping configurations.

BENEFITS

- Reduced Pumping Costs
- Lowest initial cost within Venturi Family
- Resists wear, maintenance free (no moving parts)
- Custom Fit lay length and end connections
- Minimal straight pipe distance requirements
- Turndown ratio of 10:1
- Repeatability of ± 0.1%
- Easily installed in any position with minimal straight pipe requirements (5 pipe diameters upstream and 2 pipe diameters downstream)
- Low permanent pressure-loss design

APPLICABLE FLUIDS

Liquids, gases and steam.

OPTIONS

- RTD

FEATURES

- A venturi provides longevity, reliability and long term performance.
- Provides an uncalibrated accuracy of ±0.75% with a repeatability of ±0.1%
- Is designed in accordance to ASME and ISO standards and it offers the highest "As Built" accuracy
- Provides lowest level of permanent pressure loss of any Venturi style, significantly less than orifice plates
- Standard and Unique Alloys
- Durable solution for liquids, gas, steam and mixed media
- With minor modifications the SSL can be transformed into a bi-directional flow meter
- Also known as "Classical" or "Herschel"

Badger Meter®

VEN-DS-00792-EN-05 (August 2021)

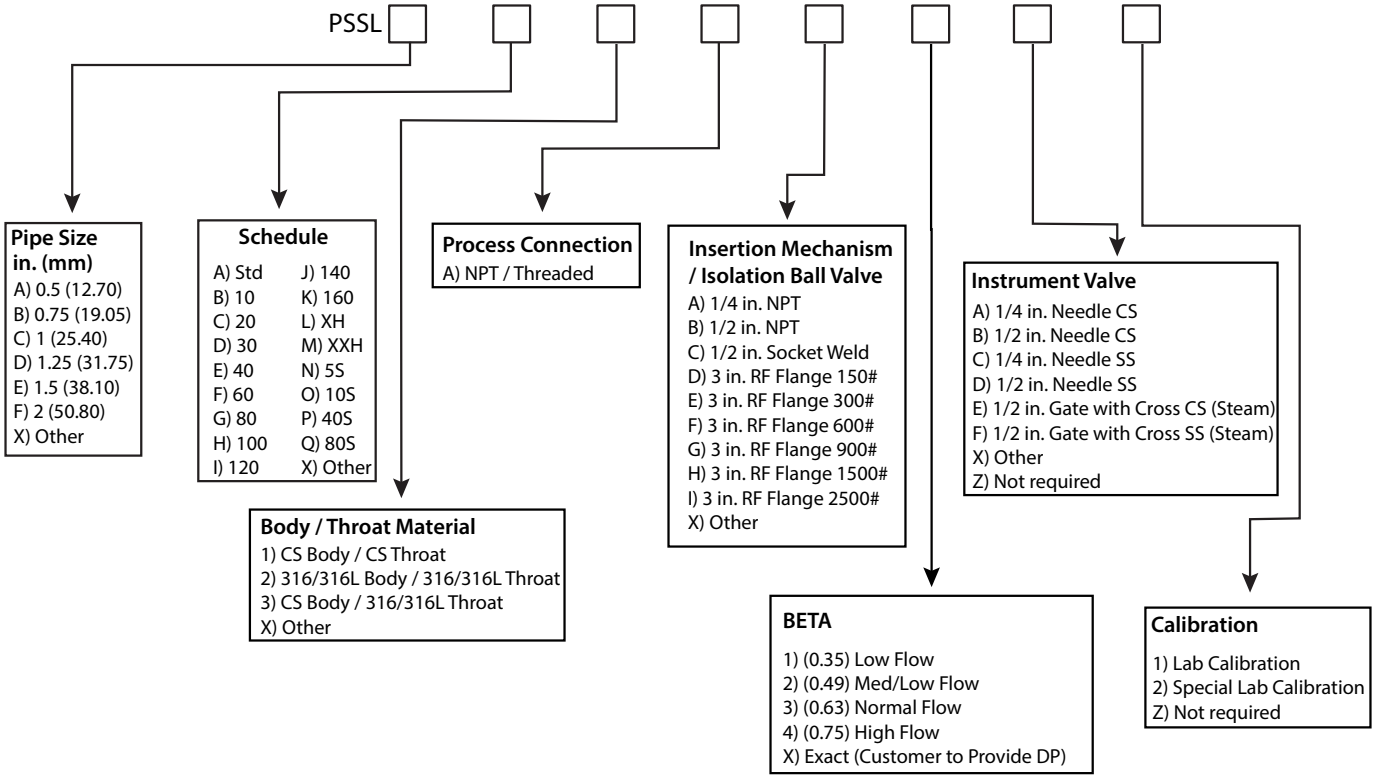
Product Data Sheet

SPECIFICATIONS

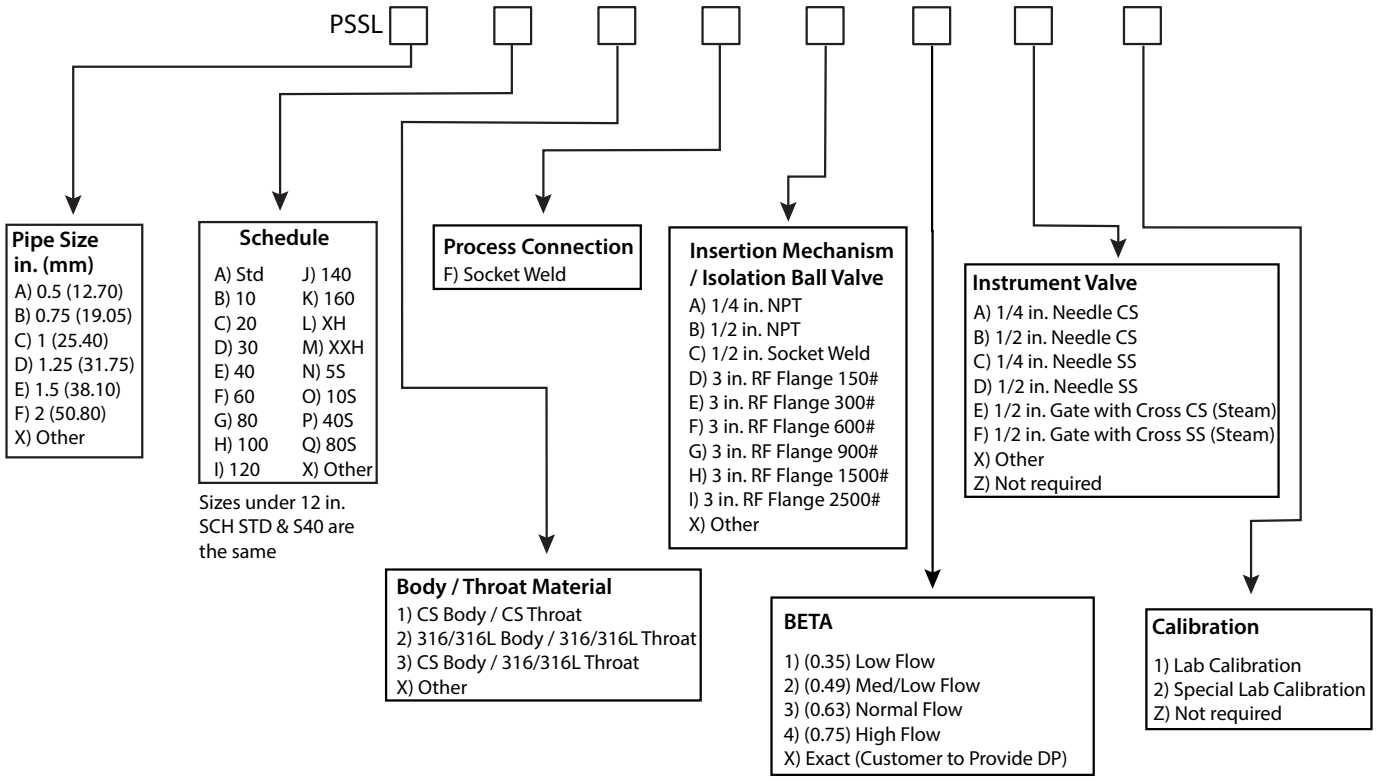
Applications	Liquids, Gases and Steam
Pipe Sizes	0.5…60 in. (13…1524 mm) and larger
Temperature Range	Up to 1500° F (816° C)
Pressure Range	Up to 9000 PSI
Pressure Loss	6% of maximum DP
Flow Range	0.25…825,000 GPM (0.95…3,123,000 LPM)
Accuracy	±0.75% uncalibrated; up to 0.25% calibrated
Repeatability	±0.1%
Turndown Ratio	10:1
Process Connections	NPT, flanged, butt weld, socket weld
Instrument Connections	NPT, socket weld, flanged
Standard Beta Ratios	0.35, 0.49, 0.63 and 0.75; Exact sizing available to provide custom beta ratios

PART NUMBER MATRIX

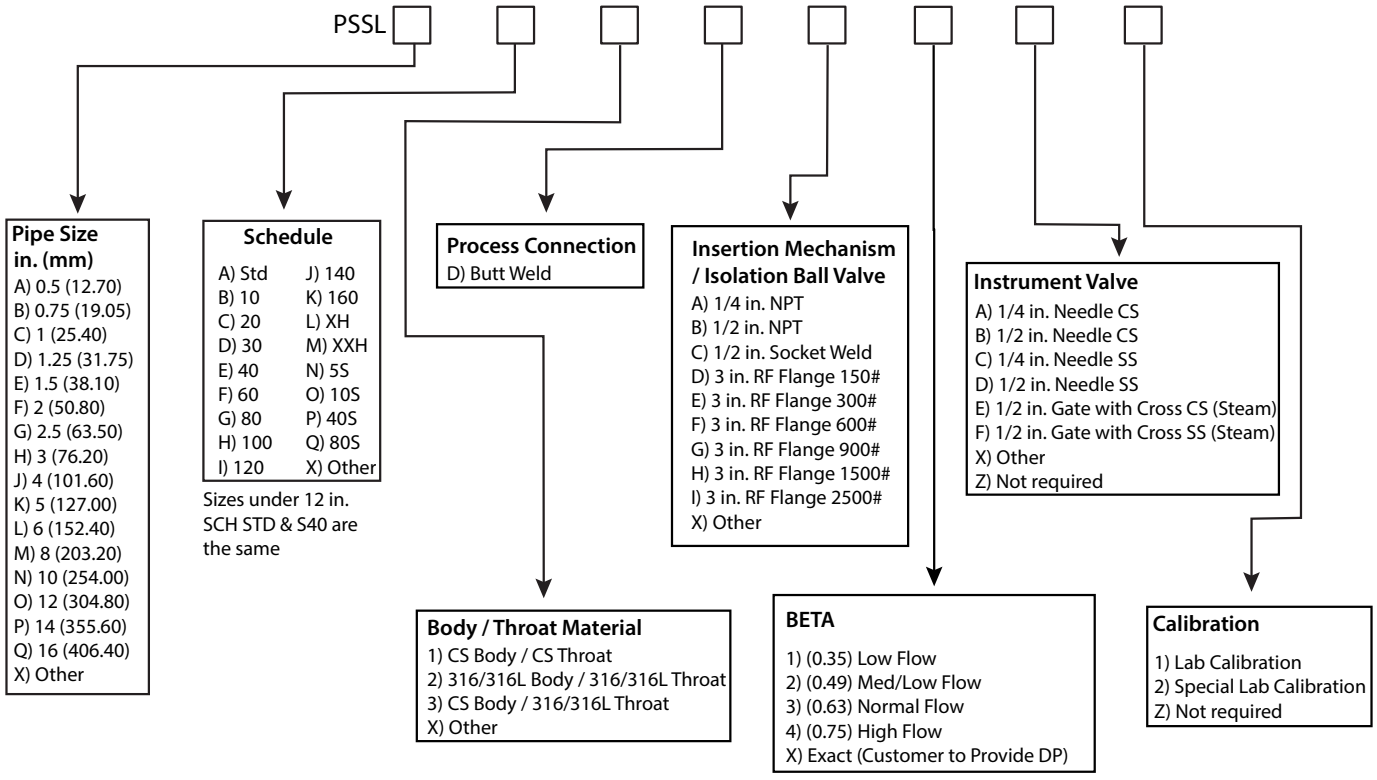
NPT Threaded



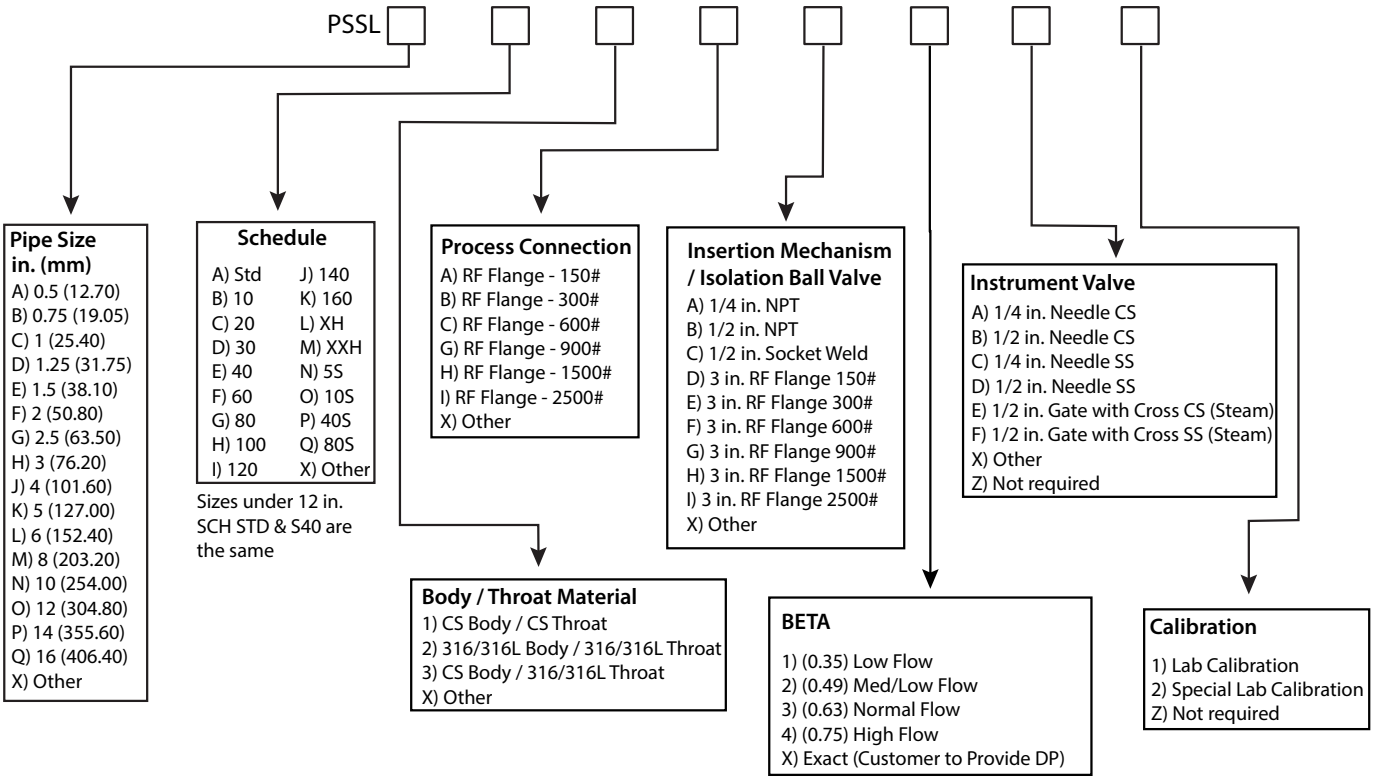
Socket Weld



Butt Weld



Flanged



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