

# Well Flow Management

## Flow Surveillance

### SmartVent™

**SmartVent™ is Expro's dual-DP based venturi flow meter designed for wet gas applications. The total liquid flow rate in the gas stream is determined continuously from a second online differential pressure measurement over the meter. The methodology used does not rely on homogeneous flow conditions, nor does it require the flow to be conditioned in any other way. De-Leeuw over-reading correction is used as part of the wet gas flow computers provided as part of the flow metering system.**

The SmartVent™ is also usually complimented with periodic measurements using Expro's MultiTrace™ which provides independent direct measurement of the condensate and water phase flow rate using tracer dilution technique. This method can be used to verify water cut and/or liquid fraction predictions using PVT simulation especially after field production has started to mature.

#### Applications

- Permanent installation on wet gas assets for continuous well performance monitoring
- Gas well testing on development and flowback wells

#### Features and benefits

- Wide turn down ratio
- Accurate gas rate measurement commensurate with ISO 5167
- Continuous well performance monitoring
- Cost efficient alternative to conventional test separators especially for high-rate development well testing
- Small equipment footprint and ease of installation



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Technical Specification	
Line size	2" – 12" (larger sizes on request)
Pressure Rating	ANSI 150# - 2500#
Temperature Rating	121°C
Materials	Carbon steel, stainless steel, Duplex SS / ...
Installation Requirements	
Upstream Straight Length	5D
Downstream Straight Length	3D
Orientation	Horizontal
Accuracy and Range	
Gas Rate - Uncertainty	3% to 5% of reading
Liquid Rate - Uncertainty	10% of reading
GVF Range	90 – 100% (pressure dependent)
Lockhart-Martinelli Range	0 – 0.35 (all pressure)
Static Pressure Loss	Low
Instrumentation	
DP Transmitters	2 off Rosemount / Yokogawa / ...
GP Transmitters	1 off Rosemount / Yokogawa / ...
T Transmitters	1 off Yokogawa / ...
Manifolds	Models from all leading suppliers available
Data Acquisition	
Type	PC Based Flow Computer (Petrotech)
Inputs	Digital transmitter signals from platform PCS
User Input	Fluid Composition (%C1, %C2 ...)
Outputs (digital)	Gas Flow Rate, Liquid Flow Rate, Condensate Flow Rate, Water Flow Rate, GVF, LMF, Pressure, Temperature, Diagnostics, Alarms
Communication	RS-232, RS-485, TCP/IP

**Note:** For more information contact your local Expro representative or email [flow.surveillance@expro.com](mailto:flow.surveillance@expro.com)