



Dualstream Venturi

The Original Wet Gas Metering System

Dualstream Venturi is a low CAPEX solution for allocation or monitoring of gas flow rate. It is typically used on a per well basis where well testing facilities exist or can easily be deployed. Common applications include tie-ins to existing infrastructure or large multi-well fields where production fluids remain relatively constant throughout field life.

Generally used in combination with test separators, tracer dilution techniques or Solartron ISA flow meters.

- Uses existing infrastructure
- Low CAPEX
- Uncomplicated & Robust
- Operator Maintenance
- Industry Standard Computer
- Large Installed base
- Regulatory Body approval (fiscal/allocation applications)

Plug and Play Compact Design

Our latest design benefits from Solartron ISA's unrivalled experience developed over three decades in the engineering, installation and operation of wet gas flow meters. Recent enhancements have been implemented to reduce installation time, improve measurement performance and increase operational safety on wellheads and flow lines.

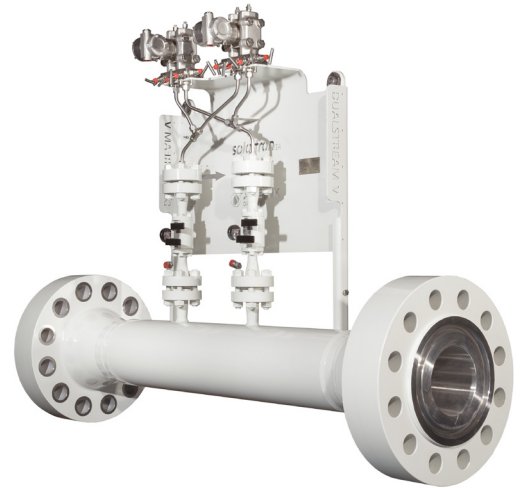
Measurement Application

Dualstream Venturi is a low CAPEX solution for allocation or monitoring of gas flow rate. It is typically used on a per well basis where well testing facilities exist or can easily be deployed. Well testing facilities typically consist of existing test separators or use tracer dilution techniques. Common applications include tie ins to existing infrastructure or large multi-well fields where production fluids remain relatively constant throughout field life.

Mode of Operation

When using a differential pressure (DP) device to measure wet gas, the presence of liquid will cause an over-read in the gas flow rate. A correction, typically the de Leeuw algorithm, is required to generate the 'true' gas flow rate. The liquid flow rates are assumed constant or must be derived periodically from well testing.

Real time measurement of the liquid flow rates is available using the Dualstream 1, Dualstream 2 and Dualstream 3.



Measurement Applications

- ✓ Royal Allocation
- ✓ Flow Line Monitoring

Key Benefits

- ✓ Uses Existing Infrastructure
- ✓ Low CAPEX
- ✓ Uncomplicated and Robust
- ✓ Operator Maintenance
- ✓ Industry Standard Computer
- ✓ Large Installed Base
- ✓ Regulatory Body Approval

Dualstream Venturi

Standard Specifications

Measurement Technique

Dualstream Venturi
Wet gas correction algorithm
Liquid fraction from well test

Mechanical Specification

Standard Line Sizes 2" through 24" Nominal bore
Pressure Class ANSI Class 300# to 2500#
(API ratings on request)

Process Temperature Range -40 to 120°C
Meter Body Material Duplex UNS31803 as standard

Alternate pressure ratings (ANSI/API 15K), temperature rating, sizes and material available on request

Installation Requirements

Horizontal installation (vertical on request)
Upstream straight length: calibrated spool available for allocation systems when specified

Typical Operating Range

- Turndown >8:1 typical
- Gas Mass Fraction >50-100%
- Water Liquid Ratio 0-100%

Typical Performance

- Typical Uncertainty (95% confidence level)
- Gas mass flow rate <5%
 - Liquid mass flow rate from well test

Typical Repeatability

- Gas mass flow rate 0.15%

Instrumentation

Standard field instrumentation comprising:

- Differential pressure – class leading true digital sensor
- Gauge pressure – secondary variable from DP sensor
- Temperature – non intrusive sensor

Data Acquisition

Options available include

- Dualstream Flow Computer Module (safe area) - industrial 19" server

Options available include:

- Dualstream Industrial Flow Computer (safe area)
- Dualstream PC (hazardous area)
- Floor or wall mounted panel (safe area)

User Required Inputs

- Hydrocarbon Composition
- Compositional Data
- Liquid Density
- Liquid Fraction (from well test)

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