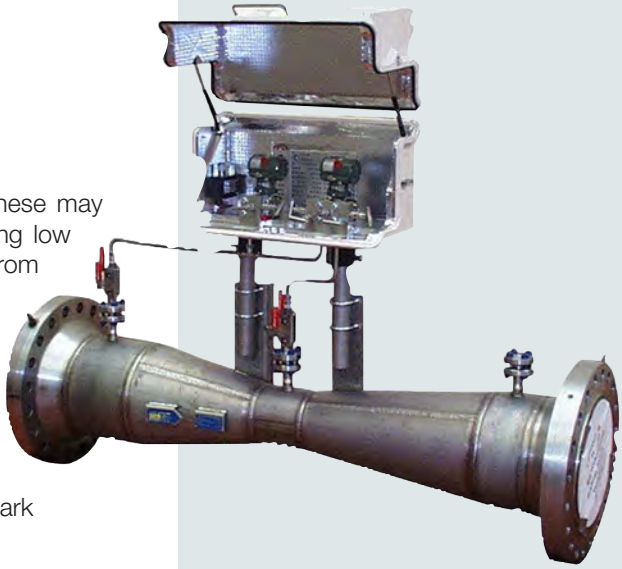
Dualstream 1

The Original Wet Gas Metering Solution



Each gas condensate development has its own unique challenges. These may include measuring gas rates to allocation standard, accurately detecting low levels of water for hydrate mitigation, or optimizing production recovery from marginal fields.

The Dualstream family of wet gas meters is uniquely positioned to provide the operator with the optimum "Life-of-Field" solution.

Solartron ISA's unrivalled global experience ensures user confidence in the data that Dualstream provide. Successfully installed and operated on over 200 gas condensate fields, Dualstream is considered the benchmark for wet gas metering.

Measurement Application

Dualstream 1 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 or 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 Advanced and Dualstream Elite flow meters.

Applications

- ✓ *Royalty Allocation*
- ✓ *Flow Line Monitoring*

Key Benefits

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

Hackworth Industrial Park, Shildon, County Durham, DL4 1LH, UK • Tel: +44 (0)1388 773065 • Fax: +44 (0)1388 774888
e-mail: sales.solartronisa@ametek.com • www.solartronisa.com
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AMETEK® OIL & GAS

Dualstream 1 Topside

Specifications

Measurement Technique

Dualstream wet gas Venturi

Wet gas correction algorithm

Liquid fraction from periodic well test

Operating Range

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

Performance

Typical Uncertainty (95% confidence level):

- Gas mass flow rate: <5%
- Liquid Mass flow rate: from Well Test

Repeatability

Gas Mass flow rate: <0.15%

Permanent Pressure Loss

Pressure loss specific to application (<1bar)

Mechanical Specification

Meter size: 2”NB to 24”NB (larger sizes on request)

End Connection: As per Operator requirements

Pressure class: ANSI Class 300# to 2500#

(API ratings on request)

Process Temperature Range: -40°C to 120°C (-40 °F to 248°F) (extended temperature ranges on request)

Flow meter body material: Duplex UNS S31803

(alternative materials on request)

Overall length: 5D (typical)

Weight: Dependent on NB/Pressure rating

Instrumentation

Standard field instrumentation comprising:

- Differential pressure
- Gauge pressure
- Temperature

Installation Requirements

Horizontal installation (vertical on request)

Upstream straight length: 3D to 10D typical (calibrated spool available for allocation systems)

Downstream straight length: None

(5D calibrated spool available with thermowell for allocation systems)

Compact flowmeter design options are available for applications where installation envelope is restricted, please contact Solartron ISA for details.

Data Acquisition

Options available include:

- Dualstream Flow Computer (safe area)
- Dualstream PC (safe area)
- Dualstream PC (hazardous area)

User required Inputs

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

AMETEK®
SOLARTRON ISA
Hackworth Industrial Park, Shildon, County Durham, DL4 1LH, UK
Tel: +44 (0)1388 773065 ∘ Fax: +44 (0)1388 774888
e-mail: sales.solartronisa@ametek.com ∘ www.solartronisa.com

Houston Sales and Services
4903 W. Sam Houston Parkway, N., Suite A-400, Houston, TX 77041
Tel: +1 713-466-4900 ∘ Fax: +1 713-849-1924

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