

Rosemount™ DP Flow Meters and Primary Elements



- Multivariable capabilities allow for real-time fully compensated mass and energy flow
- Fully-integrated wireless flow meters allow for easy installation
- Minimize permanent pressure loss and save energy with Rosemount Annubar™ Averaging Pitot Tube Technology
- Reduce straight pipe requirements to two diameters upstream and downstream from most flow disturbances with Conditioning Orifice Technology
- Improve accuracy and repeatability in small line sizes with Integral Orifice Plate Technology

DP Flow Meter Selection Guide

Rosemount integrated DP Flow Meters arrive fully assembled, configured, and leak tested for out-of-the-box installation.

Rosemount 3051SF Flow Meters enable best-in-class flow measurement utilizing advanced functionality



- Up to 0.80 percent mass flow rate accuracy
- Multivariable capabilities allow for real-time, fully compensated mass, and energy flow
- Advanced diagnostics predict and prevent abnormal process conditions
- Installation ready wireless flow solution
- Ultra for Flow measures percent-of-reading performance over 14:1 flow turndown
- 15-year stability, 15-year warranty
- SIL3 Capable: IEC 61508 certified by an accredited third party agency for use in safety instrumented systems up to SIL 3 (minimum requirement of single use [1oo1] for SIL 2 and redundant use [1oo2] for SIL 3)
- Available with 4–20 mA HART®, WirelessHART®, and FOUNDATION™ Fieldbus Protocols

Rosemount 3051CF Flow Meters combine the proven 3051C Pressure Transmitter and the latest primary element technology



- Up to 1.75 percent volumetric flow accuracy at 8:1 turndown
- Available with 4–20 mA HART®, WirelessHART®, and FOUNDATION™ Fieldbus Protocols
- 10-year stability
- SIL3 Capable: IEC 61508 certified by an accredited 3rd party agency for use in safety instrumented systems up to SIL 3 (minimum requirement of single use [1oo1] for SIL 2 and redundant use [1oo2] for SIL 3)

Rosemount 2051CF Flow Meters combine the 2051C Pressure Transmitter and the latest primary element technology



- Up to 2.00 percent volumetric flow accuracy at 5:1 turndown
- Available with HART®, WirelessHART®, and FOUNDATION™ Fieldbus Protocols
- 3-year stability

Rosemount Annubar Primary Element Technology

- Energy savings gained through minimal permanent pressure loss
- Innovative T-shape design providing accuracies up to ± 0.75 percent of flow rate (Rosemount 485 Annubar Primary Element)
- Variety of sensor materials for optimal compatibility with the process fluid
- Handles applications where conditions exceed the structural limitations of other primary elements
- Symmetrical sensor design allows bi-directional flow measurement (Rosemount 585 Annubar Primary Element)
- Rosemount 405A Compact Annubar primary element easily installs like an orifice plate
- Integral thermowell allows temperature measurement without additional pipe penetrations for Rosemount 485, 585, and 405A models.



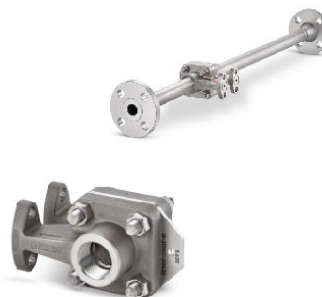
Rosemount Conditioning Orifice Plate Technology

- Reduce straight pipe requirements to two diameters upstream and downstream from most flow disturbances
- Discharge coefficient uncertainty as low as ± 0.5 percent
- Integral thermowell allows temperature measurement without an additional pipe penetration with the compact design
- Reduce installation costs compared to traditional orifice plates with the compact design
- Conditioning orifice plate is based on AGA, ASME, and ISO industry standards
- Available in various plate styles providing installation flexibility



Rosemount Integral Orifice Plate Technology

- Improves accuracy and repeatability in 1/2-in., 1-in., and 1 1/2-in. line sizes
- Self-centering plate design eliminates installation errors that are magnified in small line sizes
- Precision honed pipe sections allow accuracy of up to ± 1.00 percent of flow rate
- Installation flexibility with numerous process connections
- Integral thermowell allows temperature measurement without an additional pipe penetration



Access information when you need it with asset tags

Newly shipped devices include a unique QR code asset tag that enables you to access serialized information directly from the device. With this capability, you can:

- Access device drawings, diagrams, technical documentation, and troubleshooting information in your MyEmerson account
- Improve mean time to repair and maintain efficiency
- Ensure confidence that you have located the correct device
- Eliminate the time-consuming process of locating and transcribing nameplates to view asset information

Rosemount 3051SF DP Flow Meters



Rosemount 3051SFA



Rosemount 3051SFC



Rosemount 3051SFP

Rosemount 3051SF Flow Meters integrate the Rosemount 3051S with industry leading primary elements. Capabilities include:

- Flow meters are factory configured to meet your application needs ([Configuration Data Sheet](#) required)
- Multivariable capabilities allow scalable flow compensation (Measurement Types 1–4)
- 4–20 mA HART®, WirelessHART®, and FOUNDATION™ Fieldbus protocols
- Ultra for Flow for improved flow performance across wider flow ranges
- Integral temperature measurement (Option code T)
- Advanced diagnostics (Option code DA2)
- Direct or remote mount configurations available

Additional information

[Specifications](#)

[Relevant documents](#)

Online Product Configurator

Many products are configurable online using our Product Configurator. Select the **Configure** button or visit our [website](#) to start. With this tool's built-in logic and continuous validation, you can configure your products more quickly and accurately.

Specifications and options

See the Specifications and options section for more details on each configuration. The purchaser of the equipment must make the specification and selection of product materials, options, or components. For more information, see the Material selection section.