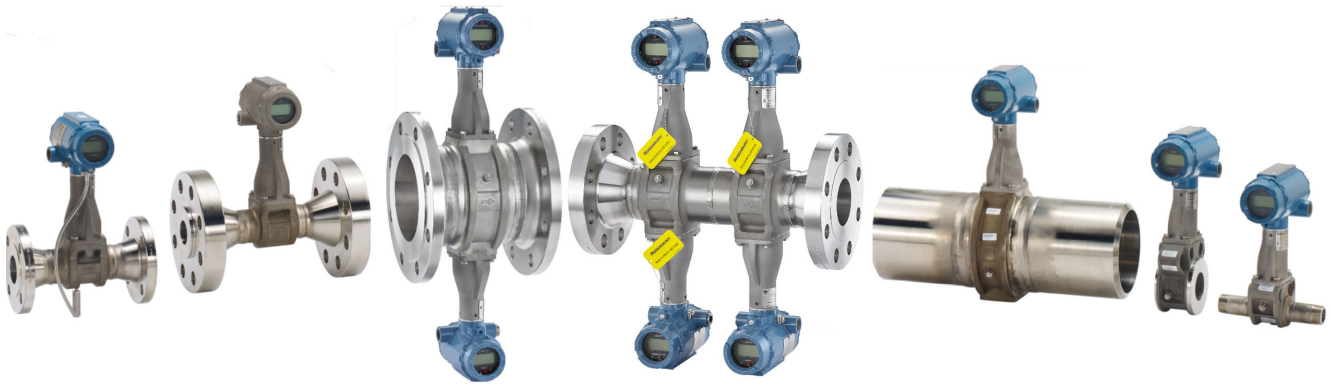


Rosemount™ 8800D Vortex Flowmeter



Industry Leading Vortex

- HART™, FOUNDATION™ Fieldbus, and Modbus RS-485 Protocols
- All welded, non-clog design provides maximum performance, reliability and enhanced safety by eliminating ports and gaskets.
- CriticalProcess™ increases process availability and enhances overall safety.
- SIL 2/3 Capable: IEC 61508 certified by an accredited 3rd party agency for use in safety instrumented systems up to SIL 3.
- Available with optional multivariable output. Internal temperature compensation provides cost-effective saturated steam and liquid mass flow measurement.
- Adaptive Digital Signal Processing (ADSP) provides vibration immunity and flow range optimization.
- Reducer™ Vortex extends the measurable flow range, reduces installation costs, and minimizes project risk.
- Simplified troubleshooting through device diagnostics and meter verification.
- Available in wafer, flanged, dual, quad, weld end, threaded end, reducer, and high pressure designs.

Product Overview

Rosemount 8800 selection guide

Rosemount 8800 Flanged vortex flow meter



- Wide range of flange ratings available
- Ideal for all applications from general purpose to the most demanding applications
- Available with ½ inch through 12 inch (15 mm through 300 mm) line sizes

Rosemount 8800 Reducer vortex flow meter

- Flanged vortex flow meter with reducing flanges integrated into the design
- Reduces cost by eliminating the need for field assembly of reduced piping
- Both reducer and standard vortex have a common face-to-face dimension which allows the user to change the meter without impacting the piping layout or drawing
- Available with 1 inch through 14 inch (25 mm to 350 mm) line sizes



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Rosemount 8800 MultiVariable vortex flow meter



- Integral temperature sensor enables temperature compensated mass flow for saturated steam and liquids
 - Incorporates temperature sensor into the vortex meter using the shedder bar as a thermowell, which keeps the vortex and temperature sensors isolated from process for easy verification and replacement
 - Capability to capture a pressure input from a HART pressure device for pressure compensation mass flow for saturated steam
 - Pressure and Temperature compensation mass flow for Superheated Steam
 - Superheat Diagnostics allows for an alert and/or alarm to activate when degrees of superheat are close to saturated conditions.
 - Available with integrated thermowell for 1½ inch through 12 inch (40 mm through 300 mm) Flanged and 2 inch through 12 inch (50 mm through 300 mm) Reducer Vortex meter body sizes
-

Rosemount 8800 Wafer vortex flow meter

- Lightweight, cost-effective solution
- Easy installation with standard alignment rings
- Ideal for utility applications
- Available with ½ inch through 8 inch (15 mm through 200 mm) line sizes



Rosemount 8800 Weld-end vortex flow meter



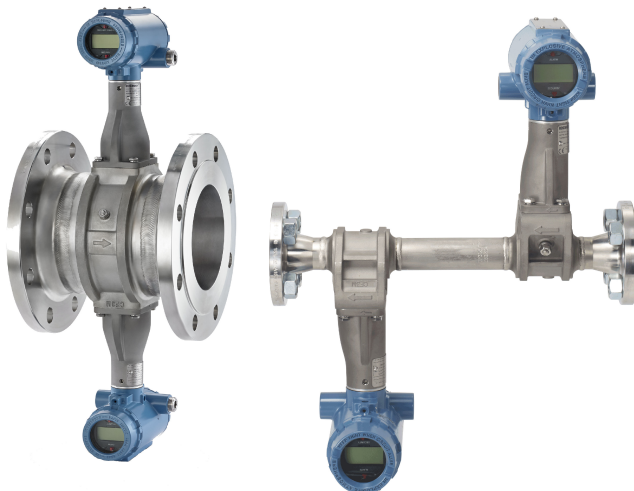
- Flange gaskets are eliminated by welding the flow meter directly into your process piping
 - The only vortex flow meter available with zero potential leak points
 - Ideal for applications where reducing potential leak points is important
 - Available with ½ inch through 12 inch (15 mm through 300 mm) line sizes
-

Rosemount 8800 Threaded End vortex flow meter

- Easy installation by matching existing threaded pipe union
- Reduce cost by eliminating flanged connections
- Available for ½ inch through 2 inch (15 mm through 50 mm) and 1 inch through 2 inch (25 mm through 50 mm) Reducer meter body sizes



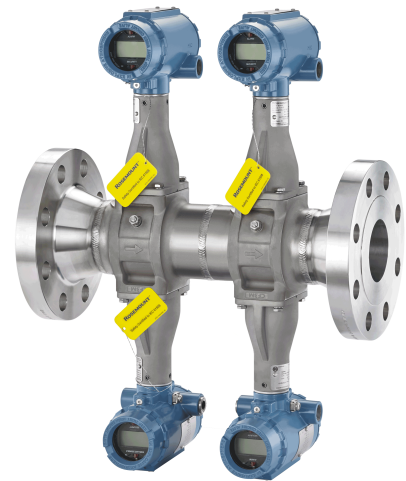
Rosemount 8800 Dual vortex flow meter



- Flanged vortex flow meter with redundant electronics and sensors
- Use for SIS and other applications where redundancy is critical
- Available with ½ inch through 12 inch (15 mm through 300 mm) line sizes

Rosemount 8800 Quad vortex flow meter

- Emerson delivers an integrated quadruple sensor configuration providing 2oo3 voting plus an additional independent output for process control
- Reduce installation costs with a simple drop-in solution
- Decrease operating expenses and maintenance over traditional dP orifice flow meters
- Excellent rangeability and no need for zeroing
- Couple with the CriticalProcess (CPA) option to ensure ultimate safety and reliability
- Transmitters available with independent configurations
- Available with 2 inch through 12 inch (50 mm through 300 mm) line sizes



The Rosemount 8800D delivers reliability, safety, and maximum process availability



- Rosemount Reliability—The Rosemount 8800D Vortex eliminates impulse lines, ports, and gaskets to improve reliability.
- Non-clog Design—Unique all welded, gasket-free construction which has no ports or crevices that can clog.
- SIL 2/3 Capable - The Rosemount 8800D Vortex is 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).
- Vibration Immunity—Mass balancing of the sensor system, and Adaptive Digital Signal Processing (ADSP) provide vibration immunity.
- Replaceable Sensor—The sensor is isolated from the process and can be replaced without breaking the process seal. All line sizes use the same sensor design allowing a single spare to serve every meter.
- Simplified Troubleshooting—Device Diagnostics enable field verification of meter electronics and sensor without process shutdown.

The Rosemount 8800D Critical Process Vortex increases process availability and enhances overall safety



Eliminate bypass piping for critical process installations

Traditional vortex installations in critical applications include a bypass line to allow process fluid to be re-directed around the vortex flow meter during routine sensor maintenance. Rosemount's unique non-wetted sensor can be installed without bypass piping, even in the most difficult process environments.

Improve process availability

Eliminate the need to shut down the process during routine maintenance and meter verification.

Enhances safety in hazardous process fluid applications

A Critical Process Valve (CPA option) enables access to the sensor cavity to verify that no process fluid is present.

Boost reliability, confidence, and control while reducing safety risks, maintenance costs, and down time in liquid and steam flow applications with the Rosemount 8800D MultiVariable™ flowmeter



Gain confidence in your mass flow measurement accuracy

Emerson MultiVariable Vortex provides the highest level of accurate steam mass flow over the widest range using an external pressure and/or internal temperature measurement to capture your dynamic operating conditions. This delivers the confidence required for your billing statements and also achieves better control in steam applications.

Reduce safety risks and maintenance burdens associated with many-component measurement solutions

By selecting Emerson MultiVariable Vortex, the safety risk to operators is reducing while at the same time, the maintenance required is reduced and simplified. The plant area shutdown requirements are reduced while performing maintenance or verification tasks, which also reduces the cost implications of being offline.

Overcome challenges of steam mass-flow measurement with a more durable solution

Emerson MultiVariable Vortex delivers the performance confidence and system reliability required in steam applications. Cost implications related to poor quality steam, complex system architecture and process shutdowns are eliminated by reducing vulnerability to leakage, clogging, plugging and freezing.

Reduced installation complexity with the Remote Transmitter

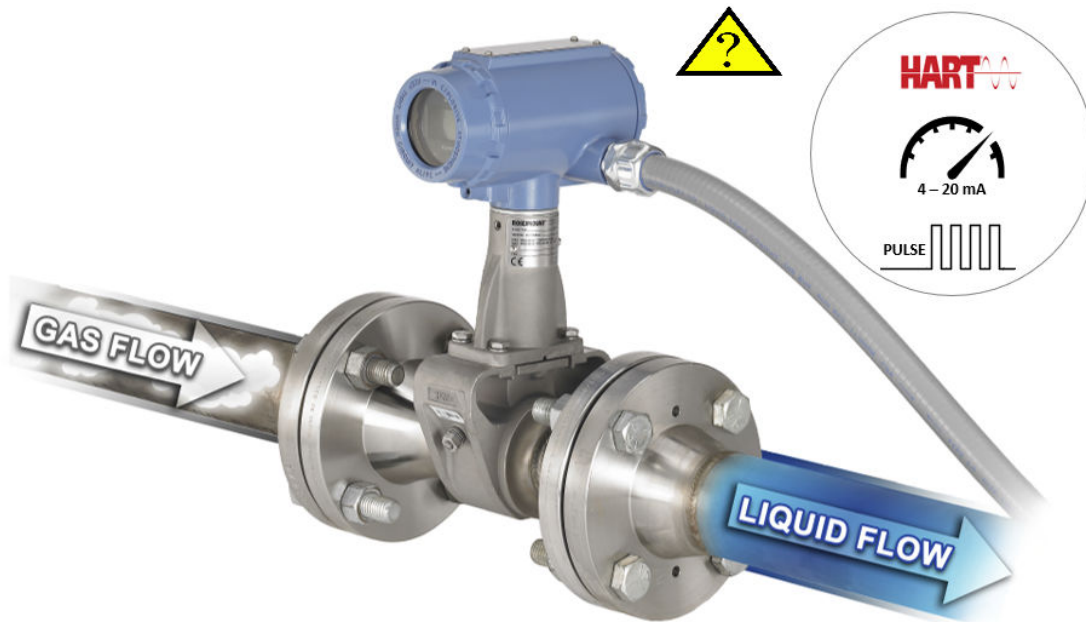


For installations where the transmitter must be located remotely from the sensor, two remote cable styles are available:

- Standard cable can be used for applications where environmental or physical damage is unlikely, or if the cable will be enclosed in conduit.
- Armored cable should be used when maximum reliability or resistance to environmental and physical damage are a concern. Cable glands of appropriate metal type are provided.

Both cable types are offered in standard lengths (10, 20, 33, 50, and 75 ft [3, 6, 10, 15, and 23 meters]). Standard cable can also be ordered in custom lengths.

Detect process fluid change from liquid to gas with SMART Fluid Diagnostics



Oil and gas separators

- Remotely detect when your separator dump valve allows gas to pass through your water dump leg.
- Selectable alert modes (digital, analog or pulse) signal when gas flow is detected.

Steam, nitrogen, or air blow down

- Control your clean in place (CIP) or blow down cycles with a single meter that measures the flow rate of your primary process fluid as well as the change from liquid to gas flow.
- Set your control system to control down cycle based on alert from in-line vortex meter.
- Selectable alert modes (digital, analog or pulse) signal when gas flow is detected.

Provide comparison to external time reference with Elapsed Time Meter

- Running totalizer of hours of operation
- Accuracy 1 hour per year maximum deviation



Access process variables and diagnostics locally with the optional LCD Display



The optional 11 digit, two-line integral LCD display can be configured to alternate between selected display options, such as flow, totalizer, mA output, temperature (MTA/MCA) and pressure (MPA/MCA). Diagnostics and fault conditions, when present, will also appear on the display for local troubleshooting.

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.

Flow rate sizing

Sizing calculations are required to select the proper flow meter size. These calculations provide pressure loss, accuracy, minimum and maximum flow rate data to guide in proper selection. Vortex sizing software can be found using the Selection and Sizing tool. The Selection and Sizing tool can be accessed online or downloaded for offline use using this link:

www.Emerson.com/FlowSizing

For reference for typical flow rates for common applications, please see [Typical flow rates](#) or refer to product reference manual 00809-0100-4004 or 00809-1100-4004.