Level Instrumentation for Hygienic Applications

Accurate, reliable point and continuous level measurement optimized for hygienic applications

EMERSON™

Accurate and reliable solutions for hygienic applications

When tasked with optimizing your plant's production, the smallest oversight can result in excessive downtime and lowered profitability. Installing hygienically-certified level instrumentation keeps your processes under control, maximizes production capacity and efficiency, and ensures stringent safety standards are met.

One of the challenges that breweries face is the need to increase plant throughput and maximize production capabilities, without affecting product quality.
-Chief Brewer, Vega Brewery.

Automating our processes helped us to reduce product losses and minimize production costs, by making fermentation procedures cost-efficient and sustainable.
-Distillery Manager, High Coast Distillery

Compliance with hygienic requirements, and the ability to get accurate and reliable measurements, were essential for the smooth running of our facility.
-Instrument & Equipment Director, Pharmaceutical Plant

"The ability to add ingredients with greater precision has enabled us to analyze and improve our processes and maximize the production capability at our plant."
Ulf Eriksson, Chief brewer, Vega Brewery

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Hygienic Level Measurement
Full range of continuous and point level measurements

Optimize production capability and reduce product loss

The food and beverage and life science industries face market challenges due to increased demand for product differentiation and product quality, while trying to improve operational efficiency and reduce costs.

Companies must seek new ways to achieve operational excellence to remain competitive in today's rapidly changing environment.

Our world-class expertise in measurement instrumentation can help you accomplish your goals and with our portfolio of hygienic instrumentation you can gain better control over your plant and overcome production challenges.

Our technologies meet standard industry regulations, ensuring food safety and product quality requirements are met. Use our level technologies and vast expertise to solve your challenges in the food and beverage and life sciences industry.

Wide range of process connections and brackets

Level Transmitters
Tri Clamp, DIN11851, VARIVENT® and D50 Weld-in
*For Rosemount 1408H

Pressure Transmitters
Variety of food grade seals with attached Rosemount 1199 diaphragm seals

Accurate and reliable level measurement optimized for hygienic applications

Rosemount 2110 Vibrating Fork Switch

- Top or side mounted for hygienic point measurement
- Choice of switch outputs and selectable switch delay to prevent false trips
- Fast drip fork design to ensure cleanability
- Magnetic test point for quick and easy functional test

Rosemount 2120 Vibrating Fork Switch

- Top or side mounted for hygienic point measurement
- Choice of switch outputs and selectable switch delay to prevent false trips
- Fast drip fork design to ensure cleanability
- Magnetic test point for quick and easy functional test

Rosemount 2555 Capacitance Probe

- Top and side-mounted point measurement of solids
- Simple and quick commissioning with automatic calibration
- Continuous self-diagnostic probe function
- Active Shield Technology protects against material build-up

Rosemount 1408H Level Transmitter

- Non-contacting top-down measurement
- Compact stainless steel housing with minimal crevices and full breadth of hygienic connections
- FMCW and 80 GHz technology, focused beam angle with no dead zones
- Maintenance free, unaffected by process conditions
- Conventional 4-20 mA/HART® output and IO-link connectivity

Rosemount 1208 Level and Flow Transmitters

- Top-down non-contacting measurement for simple applications in utilities
- Compact and robust plastic housing – ideal for outdoor conditions
- Easy to set up and configure
- Conventional 4-20mA HART® output (Rosemount 1208C) output and IO-link connectivity (Rosemount 1208A)
- Quick and easy configuration over optional Bluetooth® wireless enabled technology

Rosemount 5408 Level Transmitter

- Top-down non-contacting measurement for challenging applications
- FMCW Technology with 26 GHz frequency and advanced echo logics
- Maintenance free, unaffected by process conditions
- Signal quality metrics for predictive maintenance

Rosemount Pressure for Level

- Side-mounted for challenging applications with internal obstructions
- Complete hygienic diaphragm seal offering
- Rosemount 1199 diaphragm seals available with all Rosemount pressure transmitters
- Power advisory lets you know if power is lost

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Specifications and Applications

Specification and selection guide								
	Rosemount 2110	Rosemount 2120	Rosemount 2555	Rosemount 1208A	Rosemount 1208C	Rosemount 1408H	Rosemount 5408	Rosemount DP Level
Measurement Type	Point measurement			Continuous measurement				
Accuracy	-	-	-	+/- 0.08 in (2mm)	+/- 0.08 in (2mm)	+/- 0.08 in (2mm)	+/- 0.04 in (1mm)	0.065% span
Process Temperature	-40 to 302 °F (-40 to 150 °C)	-40 to 302 °F (-40 to 150 °C)	-40 to 932 °F (-40 to 500 °C)	-40 to 176 °F (-40 to 80 °C)	-40 to 176 °F (-40 to 80 °C)	-40 to 176 °F (-40 to 80 °C)	-13 to 392 °F (-25 to 200 °C)	32 to 302 °F (0 to 150 °C)
Process Pressure	-3.62 to 1450 psi (-0.25 to 100 bar)	1450 psi (100 bar)	363 psi (25 bar)	-14.5 to 43.5 psi (-1 to 3 bar)	-14.5 to 43.5 psi (-1 to 3 bar)	-14.5 to 43.5 psi (-1 to 3 bar)	1450 psi (100 bar)	-5 psi to 800 psi (-0.34 to 55.2 bar)
Hygienic Approvals	3-A® EHEDG FDA	3-A® EHEDG FDA	EHEDG	FDA	FDA	FDA	3-A® FDA	3-A® EHEDG FDA ASME BPE
Ex Approvals	-	-	+	-	+ (Hazardous location Zone 2)	-	+	+
Outputs								
4-20mA	-	-	-	+(1)	+	+(1)	+	+
FOUNDATION™ Fieldbus	-	-	-	-	-	-	+	+
IO-Link	-	-	-	+	-	+	-	-
HART®	-	-	-	+	+	+	+	+
Relay	-	+	+	-	-	-	-	-
PNP/PLC	+	+	-	+	-	+	-	-
Direct load	+	+	-	-	-	-	-	-
8-16mA	-	+	-	-	-	-	-	-
Wetted Materials								
Polished stainless steel	+(2)	+(2)	+	-	-	-	-	+
Food grade PTFE	-	-	-	+	+	+	+	-
Food grade PPS GF40	-	-	+	-	-	-	-	-

+ Available
- Not available

(1) Not loop powered
(2) Machined, electropolished, mechanical polish

Optimize production capability and efficiency, while ensuring that stringent safety standards are met

Storage and buffer tanks

Automate filling and emptying cycles and prevent overfills and spills with accurate, reliable level instrumentation that is easy to install, configure, and operate.

Plastic tanks
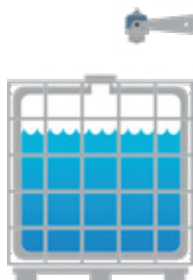
Measure level in IBC containers used to store cleaning chemicals or food flavorings, with robust devices that can withstand harsh environments.

Mixers and blending tanks

Ensure batch to batch consistency with high accuracy instruments. Instrument sensitivity ensures typical process conditions – e.g. turbulences do not pose a challenge.

Alcohol storage
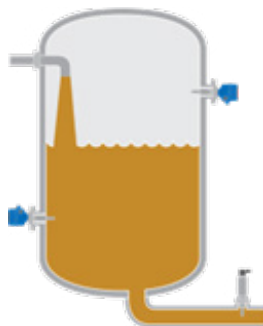
Protect pumps, prevent run-dry situations and production shutdown with compact, low intrusion level switches that can handle challenging environments.

CIP Processes

Get reliable level measurement during and after cleaning, plus optimization of cleaning agent storage.

Solids level detection

Get solids level detection that is unaffected by high temperatures, high mechanical stress and high tensile forces. Use for full, demand or empty detection on all bulk solids media.

Fermentation applications

Ensure consistent product quality in fermentation processes with dense foam by using Rosemount pressure transmitters and seals - available with required fill fluids and process connections.

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Emerson's portfolio of industry-leading instrumentation provides process insight into hygienic applications.

For more information, visit
Emerson.com/Rosemount-Level

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