

▶ Process instrumentation and solutions for the food and beverage industry

▶ Mass flowmeters with Entrained Gas Management

- EGM™: no loss of measurement with a gas entrainment (GVF) of 0 to 100 % in the medium
- Measurement of mass flow and density
- Continuous measurement, even during a transition from a pure liquid phase to a gas phase and back



Typical applications:

- Ice cream
- Margarine
- Chocolate
- Ground meat
- Syrup
- Spinach
- Oil

▶ High-performance ceramic for the most demanding situations

- Permanently resistant to corrosive and abrasive media
- Resistant to temperature shocks
- Absolutely secure against permeation and leakage



▶ Analytical sensors with integrated transmitter

- Complete circuitry has been condensed into the sensor head
- Cost advantage thanks to longer sensor service life due to regeneration before the offline calibration
- Integrated memory for configuration data



▶ Auxiliary and supply circuits

KROHNE provides suitable solutions for utility and supply circuits

- Process water/auxiliary water
- Compressed air/air
- Natural gas/combustion system consumption measurement
- Steam
- Heat/energy quantity measurement
- CIP/SIP

▶ Weblinks

Detailed information on the KROHNE portfolio for the food and beverage industry:
krohne.com/food

Service directory to contact our service team:
krohne.com/services

Configure it – online configuration tool for KROHNE instrumentation and platform for 2D/3D CAD data:
krohne.com/configure-it

KROHNE eShop* – online shop for measurement technology at attractive prices:

eshop.krohne.com/nl
* Only available for customers in Germany, France, Austria and the Netherlands.

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▶ KROHNE Food & Beverage – Your partner for the right measurement solution

The food and beverage industry is subject to constant change and faces rather short product life cycles. On top of that, there are strict hygienic and legal regulations that must be adhered to. KROHNE Food & Beverage is a specialist division, facing these challenges. The company offers a complete range of flow, level, temperature and pressure measurement, as well as process analysis technology including complete solutions plus services.

Excerpt from the KROHNE product portfolio – hygienic measuring devices

OPTIMASS – Coriolis mass flowmeters

- The straight measuring tube design eliminates negative effects on the measurement at high viscous liquids or pastes.
- EGM™ enables measurements of inhomogeneous mixtures, media with fibres or solid or gas entrainment
- Not susceptible to installation effects
- Minimal pressure loss with straight tube measuring devices: up to two sizes smaller than competitor devices if compared by pressure drop
- OPTICHECK – inline verification of meter accuracy



OPTIMASS 1400

OPTIMASS 6400

OPTIMASS 7400

Sensors for filling applications

OPTIBATCH 4011

- Measurement independent of viscosity, conductivity or inlet runs, determines volume or mass flow in extremely short filling cycles
- No separate electronic required
- Entire electronic is integrated in the fully welded stainless steel housing
- Standard deviation <0.04 %

OPTIBATCH 4011

BATCHFLUX 5500

- Specifically developed for the precise cold and hot filling processes for beverages
- High precision and long-term stability
- Excellent repeatability due to ceramic measuring tube
- Extremely short filling cycles <500 ms

BATCHFLUX 5500



OPTIFLUX – electromagnetic flowmeters

- All KROHNE electromagnetic flowmeters are wet-calibrated in direct comparison of volumes
- Electric conductivity of the medium can be used for detection of product change over
- For high bubble content, high solids content and pulsating flow
- 3x100% diagnostics (application and device diagnostic, out-of-spec test)
- OPTICHECK – inline verification of meter accuracy

OPTIFLUX 6300

OPTIFLUX 6100

OPTIFLUX 6050

OPTICHECK

H250 M40 – variable area flowmeter

- Hygienic stainless steel design without dead spaces and stagnation zones

H250 M40

OPTITEMP – industrial temperature assemblies

- Very good repeatability and long-term stability
- Standardised and customer-specific temperature assemblies
- Compact, fast and precise measurement
- Pt100 class A according to IEC 60751
- In-situ verification

OPTITEMP TRA-C61

OPTITEMP TRA-H61

OPTITEMP TRA-H65



OPTIWAVE 3500

OPTIWAVE 6500

OPTISWITCH 6600

OPTISWITCH 6500

OPTIBAR P 2010

OPTIBAR DP 7060

OPTIBAR PC/PM 5060

OPTIBAR PM 3050



SMARTPAT PH 8570



OPTISYS IND 8100

OPTISYS TSS 3050

OPTISENS TSS 7000

OPTIWAVE – FMCW radar in 80 GHz technology

- Distance, level, volume and mass measurement
- Flat PEEK or PP antenna for liquids and solids
- Not affected by process conditions: dust, foam, vapor, agitated or boiling surfaces, changes in pressure, temperature and density
- No operation or maintenance costs for purging as purge air for cleaning is not necessary

OPTISWITCH – level switch

- Measurement independent of media properties
- Not affected by adhesive media and foam
- Hygienic, flush-mounted installation

OPTIBAR – pressure and differential pressure transmitters series

- CIP/SIP compatible with continuous process temperatures up to +150 °C
- Flush and recessed metallic (PM) and ceramic (PC) diaphragms
- Full stainless housings in IP66/67
- Excellent repeatability and long-term stability
- 2-Wire HART, FF, PA, SIL2/3, 3A, EHEDG and FDA

SMARTPAT – digital analytical sensors

- Measurement of pH, ORP and conductivity
- No external transmitter needed
- Configuration and simplified offline calibration via FDT/DTM
- Direct connection of the sensor to the control system

OPTISYS IND 8100 – conductivity measuring systems

- Fast temperature compensation
- Configuration via touch display

Sensors for turbidity measurement

OPTISYS TSS X050

- Suitable for CIP/SIP and includes installation version for retractable assemblies
- Accurate NIR absorption measurement regardless of the colour
- Compact system with integral electronics

OPTISENS TSS 7000

- Self-compensating four beam technology reduces drift caused by soiling or ageing
- Maximum product safety thanks to glass-free design and no material transitions
- Durable LED

Level

Pressure

Process analytics

Flow

Temperature