



**KROHNE**

▶ measure the facts

Process Measurement Solutions for the  
Food and Beverage Industry

# KROHNE

▶ measure the facts

Innovative Technology  
Since 1921

## ▶ VOLUMETRIC FLOW

### Electromagnetic Flow Meters

PMO version of the OPTIFLUX 6300C/F meter is approved for use in pasteurization loops per FDA requirements.

OPTIFLUX 6000 sensor for sanitary applications is available in sizes from 1/2" to 6" featuring:

- All stainless steel housing with tri-clover fittings (a wide range of sanitary process connectors are available)
- Guaranteed hygienic seal - Vacuum-proof liner
- Lock out feature stops tampering, external locking device prevents opening
- Exceeds CIP, AMDERC, FDA and 3-A requirements
- Choice of converters, available in stainless steel, either in compact or remote configuration

KROHNE is the world's largest producer of magmeters with the widest diameter range from 1/10" to 120" and the broadest selection of liners and electrode materials available for all applications.



OPTIFLUX 6300  
PMO Meter



IFC 100

## ▶ BATCH FILLING

### Electromagnetic & Coriolis Flow Meters



BATCHFLUX 5500 C  
Magmeter



BATCHFLUX 3100 C  
Magmeter

BATCHFLUX meters are for volumetric filling and batching of conductive fluids featuring:

- High stability ceramic measuring tube, extremely stable, long-term
- Rugged steel construction
- High speed output
- Excellent reliability, repeatability and accuracy
- Optimum sanitary design
- Only 2" overall width
- Variety of diagnostic functions
- 3A approved and FDA compliant



OPTIBATCH 4011 C  
Coriolis Meter



OPTIBATCH Coriolis meters are for mass filling and batching of conductive or non-conductive fluids featuring:

- Compact hygienic design with process connections for food, beverage or pharmaceutical applications
- Fully welded 316L Stainless Steel outer casing construction
- Superior accuracy, repeatability and reliability
- Suitable for CIP / SIP to maximum 120°C / 248°F
- Integrated electronics with Modbus output
- Available in 1/2" or 1" Diameters
- 3A approved EHEDG Certified and FDA compliant

## ▶ VA Meters

### Variable Area Flow Meters



H250 F M40

All metal instruments specially designed for use in the food and pharmaceutical industries

Accurate measurement of liquids or gases

Available options include HART, Fieldbus, LCD digital display of rate and totalizer, analog, pulse and alarm outputs, switches

CIP and SIP compatible, FDA compliant, Tri-clamp connections, flanges, etc.

Indicator in modular design, optional heating jacket, optional stainless steel housing





## MASS FLOW

### Coriolis Meters



Highly precise mass and density measurement - accuracy 0.1%

Multifunctional sensor for direct measurement of density, mass, volume and media temperature

Single, straight measuring pipe, no flow divider - or two parallel tubes with optimized flow divider

Entrained Gas/Air Management immune to gas entrainments/ two-phase flows

Easily drained and easy to clean

Low flow velocity, therefore low pressure loss

FDA complaint, 3-A, ASME Bioprocessing certified

Optional heating jacket



OPTIMASS 6400

Entrained gas/air management  
0 - 100%



OPTIMASS 7400



OPTIMASS 1400



## LEVEL

### Level Meters & Switches

Loop powered FMCW radar, up to 80GHz, TDR technology for contact and non-contact continuous level measurement

Independent of pressure, temperature and density

Unaffected by dust, vapor, foam

CIP / SIP up to 150°C or 300°F  
Suitable to various tank shapes and sizes

Advanced diagnostics, configuration, visualization and trending software

Liquids interface TDR, level switches available for liquids and solids

Wide choice of process connections



OPTIWAVE 3500



OPTIWAVE 6500



**80 GHz**  
radar level  
measurement



OPTIFLEX 3200



LS 6500



LS 6600



Optiwave 7500

## LIQUID ANALYSIS

pH, ORP, Conductivity, Chlorine, Turbidity Solutions

Conductivity or concentration measurement in CIP circuits

Multi-path total solids sensor for milk fat measurements, filtration/separator control and solid concentration monitoring



OPTISYS IND 8100

Waste water version of total solids sensor for early detection of product loss



OPTISYS TSS 1050-3050

Compact turbidity sensor for TS measurement in CIP circuits

Digital pH/ORP sensors with built-in transmitter technology for off-line calibration and reduced operating costs

Chlorine sensors insensitive to bio fouling and de-polarization



OPTISENS TSS 7000



SMARTPAT 8570

## TEMPERATURE

Sensors  
Transmitters

## PRESSURE



Sanitary  
Sensor  
Assemblies



OPTITEMP  
Compact  
Sensors

OPTITEMP TT51  
Transmitter



RTDs and thermocouple sensor assemblies

Robust design with sensor backup function reduces the influence of external disturbances

Transmitters featuring easy configuration, installation and maintenance with ConSoft, HART®

One-of-a-kind Smart Sense resistance monitoring detects moisture in the thermowell

Connection heads for a wide variety of requirements, extensive accessories

Hygienic process connections, 3-A approved

Fully welded metallic and ceramic process diaphragms

Superior temperature stability, quick response time

Two-wire 4...20mA

Flush process connections allow for gap-free installation

Universal adaptors for hydrostatic pressure

Extensive diagnostic and parameterization functions on the display and adjustment module or the user-friendly and free DTM



OPTIBAR 2010



OPTIBAR 5060

## VORTEX

Energy Management



OPTISWIRL 4200 flanged

For liquids, steam, gas or compressed air

High measuring accuracy - 1% of measurement value

2-wire device with integrated temperature and/or pressure measurement for true compensated flow

Gross and net heat measurement

Flanged or Sandwich/Wafer design

Ready to use - plug & play

Maintenance-free sensor design

Fieldbus communication

Pressure and temperature can be called up via HART

Unique valve option for pressure sensor isolation



OPTISWIRL 4200 sandwich

