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

Contact:
KROHNE Messtechnik GmbH
Ludwig-Krohne-Str. 5
47058 Duisburg
Germany
Tel.: +49 203 301 0
Fax: +49 203 301 103 89
sales.de@krohne.com

Global companies and representatives
The current list of all KROHNE contacts and addresses can be found at: www.krohne.com

Performance chemicals require process performance
The performance of chemical processes depends not only on the size of the plant but also on factors such as quality, availability, safety and capacity. Other important aspects include minimal energy consumption and material use, the reduction of waste and accompanying substances, and the reduction of the cost of ownership. Quick and simple start up and shut down as well as partial-load operation are also required. And this is often required under extreme environmental conditions, the likes of which are rarely seen in other industries.

Increasing competitive pressure in the industry, high system availability and quality conformity are covered with a broad range of products, solutions, services and expertise in all fields of process engineering.

Process analysis measurement technology
Sensors, assemblies, transmitters, systems and accessories for process analysis help provide important information for the optimisation and control of production processes for chemicals as well as for water/wastewater treatment.

Innovative analytics by KROHNE cover inline and online liquid analytical measurements. The analytical sensors are available with fully integrated transmitters, as well as traditional separate transmitters.

Complete measuring systems and panels, installation equipment, signal converters and accessories make them suitable for most requirements.

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
• Industrial gases and supercritical gases
Excerpt from the KROHNE product portfolio – chemical industry

**OPTIMASS** - mass flowmeters
- Conform mass flowmeters featuring Entrained Gas Management (EGM™): no loss of measuring signal for gas content of 0...100% in the medium
- Process temperatures -200...+640°C / -328...+1200°F
- Optional insulation / heating jacket / sun canopy
- Wide range of materials (e.g. tantalum, titanium, Hasselloy, Duplex, 316)
- Compliant with IEC 61508, NAMUR and NACE recommendations

**OPTIFLUX and WATERFLUX** – electromagnetic flowmeters
- Large choice of liner materials
- Ceramic measuring tubes and liners available in flange and sandwich versions, also with non-wetted electrodes
- Specific instruments for partially filled pipes
- Virtual reference option: no grounding rings / electrodes
- Detection of product changes by integrated measurement of electrical conductivity
- For high solids content and pulsating flow

**OPTISWIRL** – vortex flowmeters
- First choice for auxiliary and supply circuits
- Integrated pressure and temperature compensation
- Gross and net heat capacity calculation for hot water and steam
- Compliant with IEC 61508 and NAMUR recommendations

**OPTISONIC** – ultrasonic flowmeters
- Flow measurement of gases, liquids and steam
- No moving parts or components that protrude into the measuring tube
- Excellent long-term stability, no recalibration required
- Process temperatures -200...+404°C / -328...+752°F
- Clamp-on or in-line, bidirectional
- Detection of product changes by measurement of sound velocity

**Variable area flowmeters**
- Sturdy stainless steel construction for high operating pressures up to 3000 bar and process temperatures from -200...+640°C / -328...+1200°F; for liquids, gases and steam
- Horizontal, vertical and upside down installation possible
- Limit switch (NAMUR, transistor or reed contact)
- 2-wire current output 4...20mA with HART® communication
- FOUNDATION™ fieldbus / PROFIBUS® PA communication
- Flow counter, pulse output and totaliser
- Optionally available with PTFE/ceramic liner

**OPTIWAVE** – FMCW radar level transmitters
- Continuous, non-contact level measurement of liquids, pastes, granulates, powders and other solids (r ≥1.4)
- Antenna options for aggressive and abrasive media, high pressure high temperature applications with agitators or for high dust load
- Certified IEC 61508 and for hazardous areas

**OPTIFLEX** – TDR guided radar level transmitters
- Continuous level measurement of liquids, solids and liquid-liquid interface (r ≥1.4)
- Measuring distances up to 40 m; 131.23 ft
- Large choice of probes, e.g. for aggressive media, high pressure, high temperature and applications with interfering tank installations or bolting surfaces
- Certified IEC 61508 and for hazardous areas

**OPTISWITCH** – vibration level switches
- Level detection of liquids, solids and liquid-liquid interface
- Measurement independent of media properties such as viscosity, dielectric constant (rE) or electrical conductivity

**OPTITEMP** – industrial temperature assemblies
- Complete range of thermometers with a variety of materials, process connections and a comprehensive transmitter portfolio
- Complete portfolio for the measurement of differential, process and hydrostatic pressure
- Standard and special versions for solid, liquid and gaseous media; NAMUR-style thermowell
- For applications at high and extremely cold temperatures, high pressure and high flow velocities

**OPTIBAR** – operating pressure, differential pressure and hydrostatic pressure
- Application-specific converters, diaphragm seals, differential pressure sensors, orifice plates and accessories
- Reliable, sturdy and cost-effective measuring system

**SMARTPAT** – digital analytical sensors
- Analytical sensors for pH, ORP and conductivity
- For inline analysis of chemicals as well as industrial water and wastewater
- Application-specific sensor types
- Suitable for use in hazardous areas (Zone 0) and mounting assemblies

**OPTISYS** – sludge blanket measuring system
- Optical measurement of sedimentation profile, sludge level and fluff level in industrial wastewater
- Precise colour-independent NIR measurement up to 10 m / 32 ft depth