









## Welcome To the world of Process measurement

KROHNE continues into 2005 with a series of products and variants following the many new products introduced at last year's Interkama.

### Process Special

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... once again  
KROHNE proves its  
powers of innovation:

- Electromagnetic flowmeter with ceramic flow tube and flange connection - high-level reliability
- Coriolis-Flowmeters for up to 350°C
- Variable area flowmeters for upward, horizontal and downward flow
- Vibration switch for solids
- Ultrasonic level gauge for liquids and open channels
- Custody transfer metering skids for Oil and Gas
- PTB chooses KROHNE as supplier of transfer standard

All products have been developed in close consultation with big-name companies in process technology.

## **NEW** Ceramic flow tube with flange connection High-level reliability



Electromagnetic flowmeters with a ceramic flow tube and sandwich connections have proven themselves over many years, especially for high-accuracy measurements or for aggressive or abrasive products. The new version with a flange connection and a floating flow tube held by a gasket has been optimized for simple installation and reliable operation. The new flanged versions OPTIFLUX 5000 will be available in DN 15 to DN 100.

And all the features of the new OPTIFLUX range:

- 3 x 100% diagnostics**
- 100% application diagnostics**
- 100% out-of-spec test**
- 100% meter diagnostics**

The new diagnostics package for the OPTIFLUX not only fulfils the NAMUR guidelines, but exceeds them. In addition to extensive application process diagnostics, the OPTIFLUX senses whether it is still within its specification and whether, for example, it has been correctly installed.

## **PTB chooses KROHNE for transfer standard**

Cooperation with PTB on electromagnetic flowmeters



The Physikalische Technische Bundesanstalt (PTB) and KROHNE have signed a cooperation agreement for the joint development of a Flow Transfer Standard with a reproducibility of around 0.01%.

The EC measuring equipment directives stipulate quality assurance for all manufacturers of custody-transfer meters, for example water and heat meters. For this reason, the accuracy of calibration rigs has to be regularly monitored. The tests consist of a flow transfer standard which is calibrated and certified by the PTB and can be used to test and calibrate other calibrations rigs.

The PTB has had over 20 years of experience with the stability and accuracy of KROHNE's electromagnetic flowmeters. Ring trials by the Austrian Calibration Authority BEV on calibration rigs throughout Europe have confirmed once again the high reproducibility of KROHNE's EMFs. For this reason, the PTB decided to develop the Flow Transfer Standard together with KROHNE. More under

## **New** Coriolis-flowmeters up to 350°C

### **OPTIMASS 8000**

for temperatures  
-180°C to 230°C /  
-292°F to 446°F (non EX)

for temperatures  
-40°C to +230°C /  
-40°C to 446°F (Ex)

### **OPTIMASS 9000**

for temperatures  
0°C to 350°C / 32°F to 662°F

These will be available in two materials:  
316 SS and Hastelloy C22, and in sizes  
DN15 / 1/2" to DN100 / 4"

The now familiar MFC 050/51 and MFC 010 converter flexibility will be available with these high-temperature sensors. This means that the software tools we have developed for diagnostics, concentration measurement and the toolbox for optimum sizing will all be available for these sensors as well.



[www.krohne.com](http://www.krohne.com)

## Measures in any direction

H 250 variable area flowmeters now available for upward, horizontal and downward flow



Sometime the flow has to be measured in a horizontal pipeline or in one with the flow going downwards. For such cases KROHNE has its

high-end H 250. Fitted with a compensation spring it will work perfectly - even under such unfavorable conditions.

## Compact Variable area flowmeter for furnaces



**NEW**

### VA 45 glass-cone flowmeters

Combining the features of its predecessor VA 10/S and the new features of the VA 40 series, this new product offers even more robust construction; superior float and guide design for more stable readings even under unfavorable conditions. And, as with all variable area flowmeters it will provide a long working life.

## KROHNE Oil and Gas – High-pace growth

At this years Interkama, KROHNE Oil and Gas (KOG) showed a custody-transfer metering skid destined for measuring unstable condensate from the karachaganakskyyo neftegazokondensatnogo layer near the Kazakhstan border. Cold winters down to -42°C, hot dry summers up to +42°C. Frost-free for 160 days, in winter with 50 cm

permanent snow, and soil frozen down to 180 cm. Rainfall 400 mm per year. The KOG skid will withstand such conditions for years. Fitted with twin 5-beam ALTOSONIC V multiproduct ultrasonic flowmeters and full gas analysis, this meter was built in the record time of only 15 weeks. It will measure the raw material for fuel for over 20 million family cars per year.

[www.krohne-oilandgas.com](http://www.krohne-oilandgas.com)



**KROHNE**

The Level and Flow Company

## vibrations

### Good vibrations for liquids and solids

#### New switches for liquids and solids

Two new series of vibration switches will be introduced in April 2005: OPTISWITCH 5000 Series for liquids, and OPTISWITCH 3000 Series for solids. Both series are state of the art 2-wire switches in numerous versions: short and long paddles, coated and uncoated in a variety of metals and alloys.

**NEW**



### New-style CD-ROM

The complete KROHNE Internet site at your fingertips.

All the downloads - without the waiting time, and much more than any other CD-ROM

we have ever produced: ● Company background

● Industrial segment information

● Software, sizing programs

● Data Sheets, Manuals, QuickStarts

● The full range of KROHNE videos

**NEW**



### NEW Sound of silence

**OPTISOUND Ultrasonic level gauge for tanks and open channels. The low-cost alternative for:**

- Level measurement in process and storage tanks
- Sumps and wastewater tanks
- Level indication in silos
- Above conveyors for flow detection



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