Repeatable 2-phase flow measurement

Is your measurement with your mass flowmeter interrupted because of gas entrainment in the medium?

No matter if your process has unwanted entrained gas or if you need air inside your product, KROHNE’s Coriolis mass flowmeter with Entrained Gas Management technology has come to the market to ensure stable and continuous measurements. The meter ensures continued operation across a wide range of gas fractions and complex flow conditions.

Continuous flow measurement with air or gas entrainments in the medium

KROHNE Academy online

eLearning module on “Entrained Gas Management in Coriolis flowmeters”

As part of the KROHNE Academy online we offer a variety of Web-based training courses (WBT) including a WBT covering mass flowmeters focused on Entrained Gas Management. Here you will learn about where entrained gas is present, the challenge of measuring using Coriolis mass flowmeters, Entrained Gas Management and its advantages, and applications where gas entrainment is of particular interest. The courses are all free and available for unlimited use.

Product overview – EGM™ available for OPTIMASS Coriolis mass flowmeter series

KROHNE’s OPTIMASS series with Entrained Gas Management (EGM™) functionality is the only range of meters to offer a solution for all flow conditions at a gas volume fraction (GVF) from 0 to 100%.

• Applications with entrained gas can easily be resolved using OPTIMASS with EGM™
• Enhanced diagnostics with 2-phase signal
• Diagnostics in accordance with NAMUR NE 107 requirements
• Continuous measurement with 0 to 100% gas entrainment
• Cryogenic and high temperature applications from -200 to +400 °C / -328 to +752 °F
Flow regimes
- Slug flow
- Sporadic air entrainment

Homogeneously distributed
- Pulp

Density measurement
Mass flow measurement

Mass or density – both is possible even with gas entrainment

Coriolis meters can measure the mass flow and density of any fluid, regardless if it is aerated or not.

Density measurement of single-phase fluids is common practice but for traditional meters it becomes challenging with entrained gas.

In many applications where entrained gas is present, meters with EGMTM show excellent accuracy and repeatability for process control, batching, loading, offloading and transfer measurement.

Typical applications
EGTM™ has proven to be very useful in 2-phase flow and batch/loading/empty-full-empty applications in various industries:

**Food & Beverage**
- Dairy
- Chocolate
- Tomato purée
- Coffee extract
- Ice cream
- Mayonnaise
- Meat
- Coolants
- Spinach
- Pre-dough
- Syrup
- Highly viscous sugar concentrates and molasses
- Liquid removal from stored tanks
- Push to empty tanks
- Tank management

**Chemical**
- Hydrogen peroxide processing
- Highly concentrated assets such as fuming HCl or HNO3
- Viscous monomers/polymer
- Polyurethane foams
- Liquid removal from stirred tanks
- Push to empty tanks
- Tank management

**Oil & Gas**
- Drilling fluids
- Truck loading/offloading
- Well heads
- Tank management