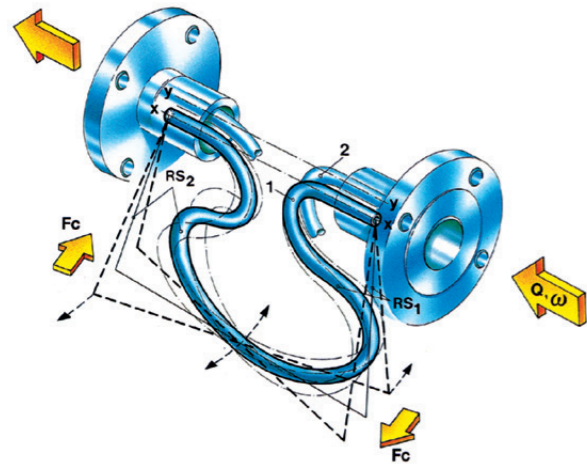
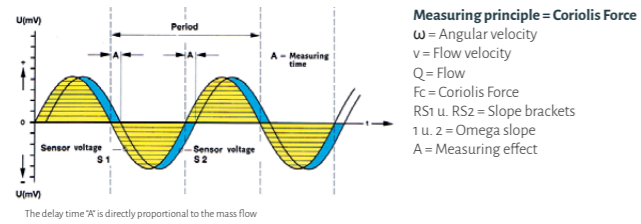


## Coriolis Mass Flowmeters Functionality and Operation

Two very important preconditions for accuracy and reliable measurement



And that's how a Coriolis Mass Flow Meter works:

Two parallel measuring pipes will be put into vibration - only a couple of tenth of millimeters. If fluid flow will be applied to the system - the swinging pipes will show a phase shift from the inlet to the outlet. This phase shift is directly proportional to the mass flow.

The phase shift of the measuring pipe will be precisely measured by coils and then digitally converted and processed in our high accurate transmitters.



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**Heinrichs**  
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100 YEARS PROCESS-INSTRUMENTATION 1911-2011  
 We measure flow, mass, density, level and pressure



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## Coriolis Mass Flowmeters „Mass & More“

- › High accurate
- › Cavity free construction
- › Robust
- › Very low to very high flow of liquids and gases
- › No disadvantages through single or double straight tube design
- › Independent of conductivity
- › Explosion proof version up +80° C ambient temperature
- › Optional different communication protocols available



## Coriolis Mass Flowmeters Evaluation and Communication

Two transmitter-generations for application-optimal operation

### › UMC4 Transmitter Standard functions – Watch your costs

- › IP 67/ 68 aluminum housing
- › 2 line digital LC display, multiple language
- › 6 -button clear text operation/ self explaining
- › 2 x 4-20 mA / HART
- › 1 status output
- › 1 pulse output



### › UMC3 Transmitter Universal Talent

- › IPT 67/68 aluminum housing
- › 2 line digital LC display, multiple language
- › 6 -button clear text operation/ self explaining
- › 2 x 4-20 mA / HART
- › 1 status output
- › 1 pulse output



Communication: Profibus, Fieldbus, Modbus  
 Custody Transfer Version

# Coriolis Mass Flowmeters

## The right instrument for all applications

As applications are different – we have four different models to choose from



### Tailored custom solutions to meet every demand

We are specialists in custom production of all kinds. Special material like titanium, tantalum, nickel, monel - no problem. High pressure e.g. up to 1000 bar - no problem. With our team of experts we can solve nearly all measuring challenges.



## TME „ECONOMY LINE“

Economically priced, without compromising performance



› Robust cast iron housing, very good damping qualities against external vibrations

<b>Ranges</b>	0...60.000 kg/h
<b>Sizes</b>	DN 10...DN 80
<b>Accuracy</b>	± 0,1% v. MW ±NP-Stability
<b>Density</b>	± 0,002 g/cm <sup>3</sup>
<b>Volume</b>	± 0,2%
<b>Temperature</b>	-40...+180°C
<b>Max. Pressure</b>	40 bar
<b>Wetted Parts</b>	st. st. 1.4571, 1.4404
<b>Process connection</b>	flange acc. DIN / ANSI
<b>EX approval</b>	ATEX, IEC Ex
<b>External heating</b>	liquid or steam on request

## TM „UNIVERSAL LINE“

High precision, with “me” almost everything works



› Special, extremely pressure resistant housing construction

<b>Ranges</b>	0...65.000 kg/h
<b>Sizes</b>	DN 10...DN 100
<b>Accuracy</b>	± 0,1% (0,05%) v. MW ± NP-Stability
<b>Density</b>	± 0,002 g/cm <sup>3</sup>
<b>Volume</b>	± 0,2%
<b>Temperature</b>	-90...+260°C
<b>Max. Pressure</b>	up to 1000 bar
<b>Wetted Parts</b>	st.st. 1.4571, 1.4404, Hast. C-22 Hast. B-2, Tantalum, Monel, Nickel other special material on request
<b>Process connection</b>	flange acc. DIN / ANSI / JIS /thread other special connections on request
<b>EX approval</b>	ATEX, NEPSI, IEC Ex
<b>External heating</b>	possible (liquid, steam, electrical)

## TMU „CLASSIC LINE“

The classic version – covers most applications



› Robust fully welded st.st. housing

<b>Ranges</b>	0...2.200.000 kg/h
<b>Sizes</b>	DN 10...DN 400
<b>Accuracy</b>	± 0,1% (0,05%) v. MW ± NP-Stability
<b>Density</b>	± 0,001 g/cm <sup>3</sup>
<b>Volume</b>	± 0,2%
<b>Temperature</b>	-90...+260°C
<b>Max. Pressure</b>	40/350 bar (higher pressure rating on request)
<b>Wetted Parts</b>	st.st. 1.4571, 1.4404, Hast. C-22
<b>Process connection</b>	flange acc. DIN / ANSI /thread other special connections on request
<b>EX approval</b>	ATEX, NEPSI, IEC Ex
<b>External heating</b>	liquid or steam on request
<b>Custody approval</b>	possible

## TMR „SLIM LINE“

As a replacement for PD meters or where space is at a premium



› Robust fully welded st.st. housing  
› Integrated flange connections, very compact design

<b>Ranges</b>	0...120.000 kg/h
<b>Sizes</b>	DN 20...DN 100
<b>Accuracy</b>	± 0,1% (0,15%) v. MW ±NP-Stability
<b>Density</b>	± 0,002 g/cm <sup>3</sup>
<b>Volume</b>	± 0,2%
<b>Temperature</b>	-40...+260°C
<b>Max. Pressure</b>	40 bar
<b>Wetted Parts</b>	st.st. 1.4571(316Ti), 1.4404(316L)
<b>Process connection</b>	flange acc. DIN / ANSI
<b>EX approval</b>	ATEX, IEC Ex
<b>External heating</b>	possible (liquid, steam)