



KOBOLD Group

100 YEARS OF EXPERIENCE

We measure flow, mass, density, level and pressure

Hydrogen Dispensing CORIOLIS flow measurement at it's highest level



www.heinrichs.eu

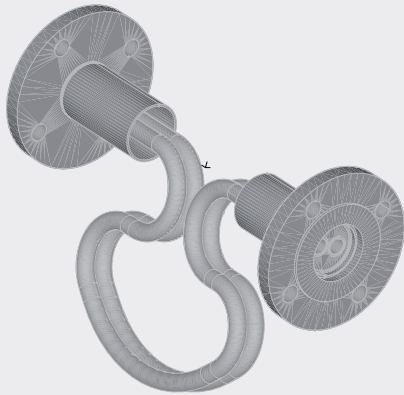
H₂ CORIOLIS

Mass flow series

Proven technology

H₂ CORIOLIS experience since 2001

15 years of proven experience
350 / 550 / 750 bar filling pressure



With **15 years of experience** we are aware of all challenges and problems when operating a high pressure hydrogen dispenser station under metrology aspects.

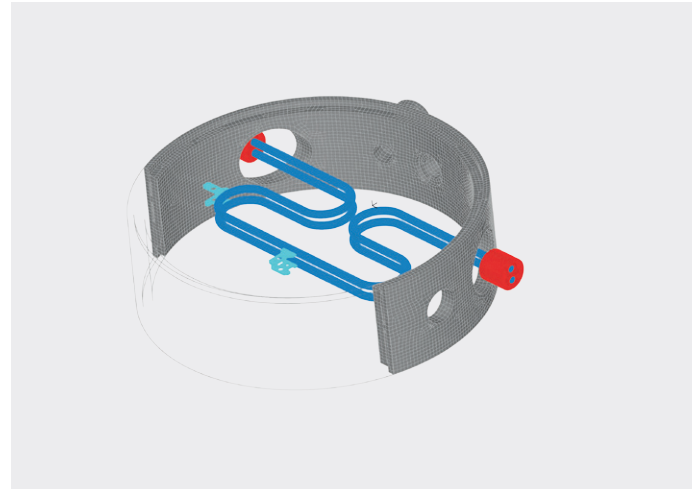
Our knowledge as one of the first manufacturers of **CORIOLIS mass flow meters**, enables us to support our customers with high degree of competence on future flow measurement applications.

H₂ CORIOLIS

Mass flow series

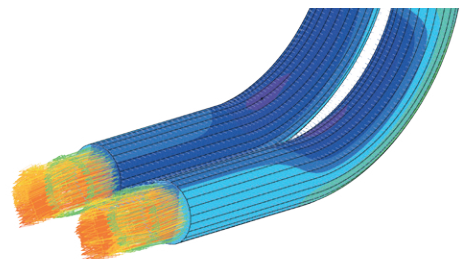
CORIOLIS flow measurement

taken to the next level



Highest Level FEM, CFD and FSI Analysis The future way to solve highly complex measurement challenges.

Using the latest simulation technology, we are able to identify and solve applications barriers to provide the optimal solution. Combined with our long-term experience regarding Coriolis high-pressure systems, high accurate **H₂ Metrology** is no longer a desire.



H₂ CORIOLIS

Mass flow series

Meter concept and technology

A **flexible CORIOLIS pipe arrangement** and a **compact sensor design** serves as the heart of our H₂ Flow Meter technology.

The meter body made of highly resistive st. st. includes an N₂ filling for an interference free operation with low temperature H₂. A service filling nozzle for N₂ as well as a special safety blow out for the measuring chamber makes the sensor service friendly, safe and suitable for SIL. Special heat treated coriolis pipe materials allow maximum measuring performance.



H₂ CORIOLIS

Mass flow series

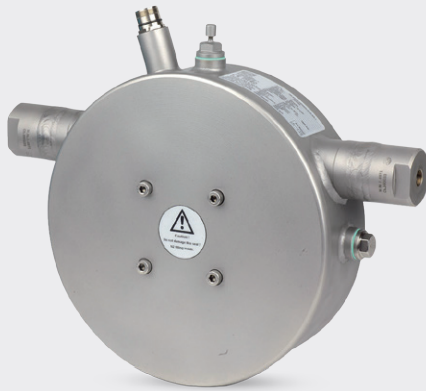
Meter concept and technology

- › Compact flow body concept
- › Flow body with screwed or welded cover
- › Process connection to fit for AutoClave or Hofer
- › N₂ filling
- › N₂ service nozzle
- › Safety blow out membrane
- › Transmitter remote
- › Cable with sealing plug connection
- › Variable output concept with 4-20 mA, HART and frequency output
- › Clear text menu and 6 button easy operation concept

H₂ CORIOLIS

Mass flow series

Variable CORIOLIS pipe concept
technology on demand



We design the meter to the application. U-shape, Omega or mixed forms for low or high pressure and low or high flow.

Our experience enables us to calculate the ideal coriolis shape for each application. The latest standard coriolis for H70 tanks can with-stand **750 bar** filling pressure and 1050 bar max. design pressure and can of course be operated acc. to SAE 2601]

Different flow ranges **from 3,6 kg/min up to 7,2 kg/min** and variable inlet pressure systems allow max. accuracy, long term stability and best metrology suitability.

H₂ CORIOLIS

Mass flow series

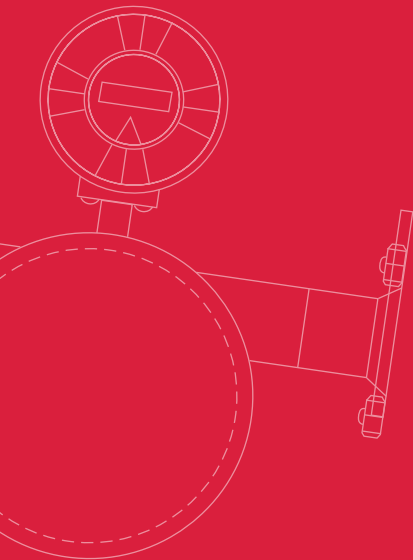
Overview
technical data

Sensor

Flow range H ₂ gas	3,6 kg/min 7,2 kg/min
Filling pressure	350 / 550 / 750 bar
Design pressure	up to 1050 bar
Accuracy (gases)	min ± 0,5 % v. MW
Temperature range	-40...+60 °C
Process connection	AutoClave, Hofer
Sensor pipe material	st.st.
Body material	st.st.

Transmitter

Housing material	painted aluminum
Power supply	19-36 VDC 90-265 VAC
Ingress protection	IP67 / IP 68
Output Signal	2x 4-20 mA, Frequency output Status output
Output option	2x 90° phase shifted pulse
Communication	HART
Approvals	ATEX, IEC Ex



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