ABLE INSTRUMENTS & CONTROLS

RHEONIK

THE WORLDS MOST VERSATILE RANGE OF CORIOLIS FLOW METERS

RHEONIK.

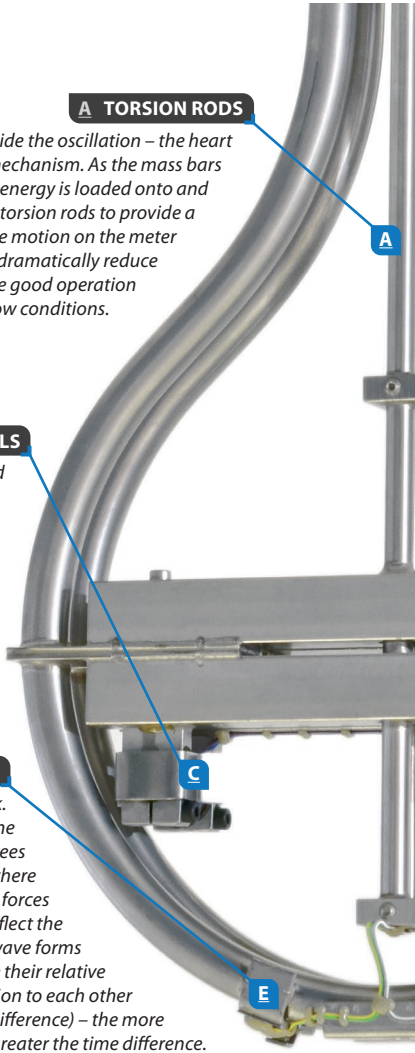
UNMATCHED DESIGN AND PERFORMANCE

- Unique Omega tube design mass flowmeter
- Increased wall thickness, no need for secondary containment
- Measurement of liquids and gas
- Flow rates from 0.001 kg/min to 25000 kg/min
- Diameters up to 12 inch/DN 300
- Pressures up to 1070 bar/15519 PSI, Temperature from -200°C to +400°C
- Available in EEx ia IIC – EEx de IIC (ATEX and CSA)
- Fiscal/custody transfer approvals OIML R117 & OIML R139 (hydrogen applications)
- Available in Stainless Steel, Hastelloy, Monel, Tantalum and others
- Unaffected by viscosity, density or pressure changes
- Extreme resistance to gas bubbles entrained in the process

ABLE

SUPERIOR OMEG

Rheonik was founded in 1986 with the sole purpose to develop testing of many different configurations, the unique design of being and was granted a patent. Unlike other Coriolis meters, the operation up to 1722 bar (24,969 psi) line pressure at a pre



A TORSION RODS

Help energize and guide the oscillation – the heart of the Rheonik meter mechanism. As the mass bars are driven and rotate, energy is loaded onto and unloaded from the torsion rods to provide a smooth and bump-free motion on the meter tubes. The torsion rods dramatically reduce energy loss and assure good operation even under harsh flow conditions.

C TWO DRIVE COILS

Start and maintain a strong and uniform oscillation. Two PID controlled drive coils maintain the oscillation even during harsh dampening conditions such as that resulting from air bubbles or significantly viscous materials or the process.

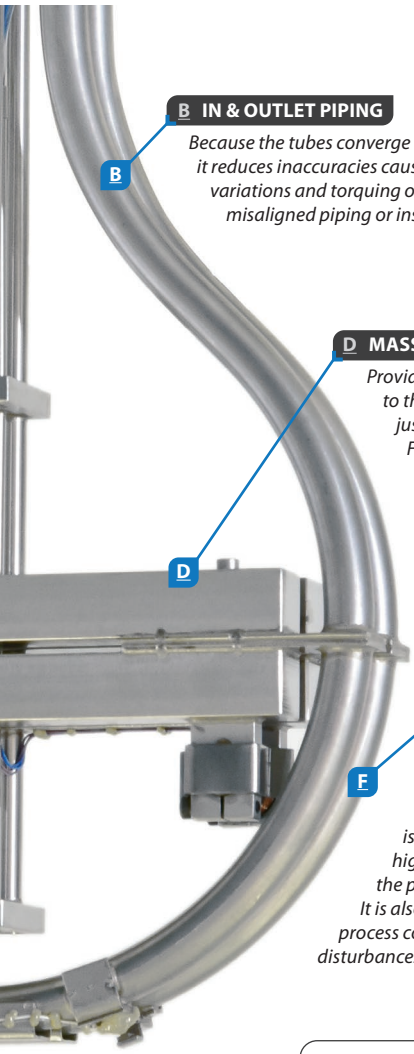
E TWO PICK UP COILS

Provide sinusoidal feedback. When there is no flow, the waveforms are 180 degrees out of phase. When there is flow, Coriolis forces bend and deflect the tubes and the wave forms change their relative position to each other (a time difference) – the more flow the greater the time difference.

ABLE Instruments & Controls Ltd are **Rheonik's exclusive representative** for sales and service in the UK and Ireland

GA TECHNOLOGY

a best-in-class Coriolis Mass Flowmeter range. After exhaustive the Omega tube meter with torsion rods and mass bars came into Omega tube design of Rheonik Coriolis meters has solutions for cision of 0,05% and with renowned mechanical reliability.



B IN & OUTLET PIPING

Because the tubes converge at the in/out section, it reduces inaccuracies caused by temperature variations and torquing of the tubes from misaligned piping or installation errors.

D MASS BAR

Provides great stability and support to the measurement tube oscillation, just like the pendulum of a clock. For applications where Coriolis meters are to be installed in close proximity to one another, the mass weight is adjusted on each one to suppress any localized crosstalk interference issues.

F MEASUREMENT TUBES

The part of the meter where the actual measurement is done via the pick-up coils. The measurement section is half round to cope with highest pressures and negate the possibility of deformation. It is also remote from the process connection where disturbances may originate.

RHEONIK.

ABSOLUTE PRECISION & RELIABILITY

With highly accurate mass flow measurement performance and extreme capabilities, Rheonik meters are the ideal choice for many applications and quickly provide payback through improved product quality and greatly reduced maintenance. Whether used for transfer batching, process feed or control, Rheonik meters provide online precise flow and density measurement.

FROM 1/24" UP TO 12" CORIOLIS FLOW TECHNOLOGY THAT OFFERS A LOT MORE

Industrial production uses a variety of complex instrumentation to monitor and control the manufacturing and quality of goods and materials. Consequently, Rheonik offers a wide range of high precision mass flow meters from 0.002 kg/min to 30,000 kg/min.

THE UNIQUE OMEGA PRODUCT DESIGN

The Rheonik range with its unique Omega tube design allows the most challenging mass flow metering applications to be solved:

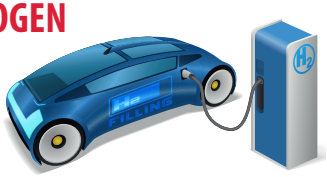
- *Liquid oxygen flow metering*
- *Chemical pilot plant*
- *Liquid hydrogen filling stations*
- *High pressure CO_2/O_2/N_2/H_2*
- *Asphalt blending station (bitumen at 363°C/685°F)*
- *High accuracy fuel filling stations – custody transfer*
- *HCL metering using large Tantalum meters*
- *High temperature metering solutions*
- *Food & beverage – dosing, recipe mixing, filling or cleaning*
- *Injection moulding hydraulics*
- *Petrochem feedstock measurement*
- *Fuel consumption management*

The unique mechanical arrangement of the Omega tube meter allows the use of tubing with heavier wall thickness giving higher pressure ratings, combating abrasion and erosion, and eliminating the requirement for the secondary pressure containment found with conventional designs.

The use of the Coriolis effect as a technique for liquid and gas mass flow measurement was firmly established over 35 years ago. Rheonik remain at the forefront of this technology and now produce the world's largest and most comprehensive range of meters.

For more information regarding the Rheonik Coriolis meters, please email **info@able.co.uk**

A PIONEER IN THE HYDROGEN FUEL CELL REVOLUTION



From the very outset, Rheonik has worked with all the major hydrogen suppliers to produce accurate flow meters that can manage the extremely high pressures associated with hydrogen distribution and dispensing.

The heart of a hydrogen dispenser is the point-of-sale flow meter. Meters must be Weights and Measures approved to ensure end customers receive the amount of hydrogen they are paying for. Sold in mass (kg), Coriolis meters are ideal for this service as they read primarily in that unit.

In this challenging measurement application, cars are refuelled with pressures of up to 700 bar and trucks and buses with up to 350 bar at a temperature of -40 °C. Cooling the hydrogen to -40 °C is necessary to keep refuelling times as short as 3 minutes for the average car.

EXTREME PRESSURE, HIGH TEMPERATURE, CUSTODY TRANSFER ACCURACY? NO PROBLEM

During refuelling, the RHM flow sensor is subject to high pressure and temperature gradients. The required measuring accuracy is dictated by the harmonised standard OIML R139. Despite the challenging conditions, Rheonik's Coriolis flowmeters meet the requirements for measuring accuracy and reliability and are approved according to OIML R139.

In addition, the RHE flow transmitters enable a secure transmission of the measured values to both the billing system and the station control system.

Most hydrogen dispensers around the world are fitted with a Rheonik flow meter, as the manufacturers know it will provide the performance and reliability that they, their customers and the hydrogen buying public require and demand.

ABLE

912 12/22

Registered Address
ABLE Instruments & Controls Ltd
Cutbush Park, Danehill, Lower Earley,
Reading, Berkshire, RG6 4UT. UK.

Reading
Tel: +44 (0)118 9311188 | Email: info@able.co.uk

Web
able.co.uk

E-commerce
247able.com