

# HYDROGEN METERING

Hydrogen fueled vehicles are now a common sight throughout the world. America, Canada, Japan, China and many European countries have established basic networks of hydrogen stations which support fuel cell cars, and those networks are expanding. Implementing clean fuel technologies is increasingly a priority for many countries, especially amid concerns about global warming.



Rheonik is a pioneer in the hydrogen fuel cell revolution. From the very outset, Rheonik has worked with all major hydrogen suppliers to produce accurate flow meters which expertly handle the extremely high pressures associated with hydrogen distribution and dispensing. Hydrogen is transferred into storage and fuel cell vehicles very quickly, and at very high pressures. A flow meter measuring under these conditions must be both accurate and reliable to be usable for end user point-of-sale billing. Rheonik mass flow meters have proven to be, and continue to be, the most reliable meters for H<sub>2</sub> measurement.

## FILLING STATIONS

Hydrogen fuel dispensers have been installed alongside gasoline and diesel dispensers in many filling stations around the world. Fuel cell vehicles can pull up, connect a hose, and fill up their tanks, just like vehicles using traditional petroleum-based fuels. The heart of a hydrogen dispenser is the point of sale flow meter. Meters must be Weights and Measures approved to ensure customers receive the exact amount of hydrogen they pay for. Because hydrogen is sold in mass units (kg), Coriolis meters are ideal for the application as they read primarily in mass

### RHEONIK CORIOLIS FEATURES:

- > Pressure ratings up to 1,400 bar
- > Sizes available for filling automobiles, industrial vehicles, trucks
- > Hydrogen compatible wetted materials
- > Custody transfer lockable

and have a large measurement turndown capability. Methods have been developed to qualify Coriolis meters for H<sub>2</sub> service using certified weigh scales and can be certified and sealed by local Weights and Measures officials, a protection for consumers.

The vast majority of hydrogen dispensers around the world are fitted with Rheonik flow meters. Dispenser manufacturers everywhere are confident that when a Rheonik meter is installed, it will provide the performance and reliability that they, their customers, and the hydrogen buying public require and demand.



**RHEONIK CORIOLIS FLOW METERS ARE THE SMART CHOICE FOR HYDROGEN GAS FLOW METERING.**

**THEY FEATURE:**

- > Small footprint
- > High pressure rating
- > Low maintenance – no moving parts
- > Wide measurement turndown capability
- > Suitable for use in hazardous areas
- > Built-in detailed diagnostic capabilities
- > Certified to OIML R137-1&2:2012

**H<sub>2</sub> DISTRIBUTION**



Few filling stations have pipelines supplying them with Hydrogen 24/7; for those who do not, it falls to trucks with high-pressure tube trailers to deliver hydrogen to local storage at filling stations. In order to control and account for the quantity of gas being delivered to local sites, each truck is equipped with a flow meter that totalizes the amount of each gas transfer.

Rheonik meters are fitted to tube trailers to provide records of all gas loaded to or unloaded from the trailer. Rheonik meters are rugged and stand up to the rigors of road transport, while their compact size makes for convenient installation in side enclosures and housings. Transmitters are operated directly from the truck's 12VDC battery supply, removing the need for additional power supply converters or external sources. Transmitters can be sealed against unauthorized change of configuration and settings, protecting the integrity of the measurement at all times.

**RHEONIK FLOW METERS ARE FOR:**

- > Point of Sale Dispensing
- > Tube Trailer Distribution Metering
- > Fork Truck/Industrial Vehicle Fueling
- > And more!

**CALL US TODAY!  
(866) 953-4668**