

# Cryostar accurately measures LNG fuel with Micro Motion Coriolis meters

## BENEFITS

- Relevant approvals for international markets
- Easy installation - minimum space required
- Reliable and accurate fiscal data
- No maintenance requirements



## APPLICATION

LNG fuel delivery measurement as part of a fuel dispenser for road transport use.

## CHALLENGE

Cryostar, a leading provider of advanced technologies for Liquefied Natural Gas (LNG) applications, needed a measurement device that would provide accurate delivery information for its LNG fuel dispenser. The dispenser is designed for delivering fuel to motor vehicles - such as trucks and city buses, and has to be compact and reliable. In addition, it needs to have all the approvals required for the growing markets in Europe, Asia, Australia and the U.S.

## SOLUTION

Emerson's Coriolis flowmeters were chosen by Cryostar for LNG mass flow measurement as part of their fuel dispensers. The Micro Motion® ELITE® range has all the approvals required for international markets, as well as providing the accurate and reliable data required by this fiscal application.

Emerson used its knowledge and experience in the application of LNG products to help Cryostar achieve the best possible design. This included advice on the behaviour of the LNG in the meter and how to avoid flashing - the rapid change of state from liquid to gas due to the pressure drop through the meter. Emerson also assisted Cryostar in obtaining Measuring Instruments Directive (MID) approval for the dispenser. MID is a single approval certificate which is valid throughout the whole of Europe.

*"Emerson helped with obtaining MID approval, and we used their valuable LNG knowledge and experience to achieve the best possible design"*  
Philippe Fauvel - Cryostar

[www.micromotion.com](http://www.micromotion.com)



Cryostar LNG dispenser with Micro Motion ELITE Coriolis meter



For more information:  
[www.EmersonProcess.com/solutions/oilgas](http://www.EmersonProcess.com/solutions/oilgas)  
[www.micromotion.com](http://www.micromotion.com)



The Cryostar dispenser uses a Micro Motion ELITE CMF100 flowmeter to determine mass flow, eliminating the separate fluid density compensation required by traditional volumetric technologies. This reduces costs and measurement uncertainty while simplifying installation. Additionally, Micro Motion meters do not require straight pipe runs or flow conditioning devices, enabling compact and efficient skid-based metering designs.

The Cryostar dispenser, which has a 99.5 per cent accuracy, has been approved by the relevant Weights and Measures departments in many world areas to the appropriate standard. These include MID (Europe) and Nederlands Meet Instituut (NMI) for Australia and Asia. Cryostar is also seeking National Type Evaluation Program (NTEP) approval for North America.

Micro Motion meters are ideally suited to cryogenic applications for dispensing LNG fuel to motor vehicles. They have no moving parts, enabling the meters to deliver improved system reliability and increased plant availability. Using Micro Motion Coriolis meters for LNG dispensing provides operators with accurate, real-time, in-line measurement data, while meeting the ATEX safety limitations.

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