

Ultrasonic Liquid Level measuring for firefighting cylinder utilizing FK-5-1-12 or HFC-227ea

Measuring the liquid level, using ultrasound, inside a cylinder with liquefied gas is standard in the fire industry since many decades. So far, only invasive methods utilizing a mechanical liquid level indicator where available have been approved for firefighting systems.

In 2023, Coltraco Ultrasonics and Viking EMEA joined forces to develop a non-invasive liquid level indicator utilizing ultrasound. It was essential for Viking EMEA that the finished unit would comply with regulations, such as NFPA 2001 clause 5.1.4.5: *Where a liquid-level indicator (LLI) is provided as a component of the container assembly, the LLI and method of measuring the agent quantity shall be listed.*



To ensure that Viking EMEA can offer their customers an ultrasonic liquid level indicator that meets the accuracy requirements of the notified bodies, across the system temperature range, Coltraco and Viking EMEA conducted a test and development series. This test series led to a software customized version of one of Coltraco's ultrasonic liquid level indicators, bringing the Portatank® Viking EMEA.

This unit was successfully witness tested and approved by FM (Factory Mutual) in December 2024 and listed with the VSN 1230 system (FM23FPUS0045) and the VSN 200 system (FM23FPUS0058). This approval also includes a marking done by factory or authorized first fill companies offering VSN 1230 and VSN 200 systems. Copies of the certificates are available from Viking EMEA.

Coltraco and Viking EMEA are delighted to provide the firefighting market with the first FM approved Non-invasive Ultrasonic Liquid Level Indicator and want to emphasize that only ultrasonic units approved with the firefighting system are eligible substitutes for Mechanical Liquid Level Indicators.

Coltraco Ultrasonics are global leaders since more than 35 years in the monitoring of liquefied extinguishing systems that protect high-asset value assets.

Viking EMEA Since its founding in 1989, Viking EMEA has been a key player in fire protection across Europe, the Middle East, and North Africa. With a diverse team of over 200 professionals representing more than 25 nationalities, Viking EMEA serves 2,100 clients across 74 countries. The company offers a comprehensive range of fire protection systems, including water and deluge systems, water mist, foam, gas, and detection & control technologies for commercial, residential and industrial applications.

Viking S.A.
21, Z.I. Haneboesch
L-4562 Differdange/Nieder Korn
Luxembourg

T: +352 58 37 37 1

vikinglux@viking-emea.com

Managing Director:
Dr. Alan Arelli Maffioli
Business license no.:
00112200 / 2

R.C. Luxembourg B30463
VAT: LU 14116511

www.viking-emea.com

J.P. Morgan Chase
SWIFT-BIC: CHASLULX
IBAN: LU96 0670 0065 5020 9718 (EUR account)
IBAN: LU69 0670 0065 5020 9719 (USD account)