

Hydrogen compression for filling stations

Working with the world's leading hydrogen gas compressor manufacturer for hydrogen refuelling stations



Overview

The use of hydrogen (H₂) in fuel-cells for road vehicles is becoming more widespread, and the network of H₂ filling stations is growing. Our customer is the leading supplier of H₂ gas compressors to this market with hundreds of compressor installations worldwide.

Project Brief

Work with the customer to develop a hazardous area solution for their H₂ compression system, to protect the control electronics in the event of an H₂ leak from the adjacent compressors & piping.

Working pressures can be as high as 700 bar for certain types of vehicle refuelling, so a rigorous approach to all aspects of gas safety is essential.

Given the worldwide market for these systems, a wide range of certifications was also required.

Challenges

Easy integration into existing systems, low visual impact

Capability to be modified to meet specific customer requirements

Class I Div 2 / Zone 2 specifications

Wide range of global certification

Outcome

Purge and pressurization (Ex p) was the best solution to protect the control electronics, which are housed in a dedicated control enclosure.

A flush mount Z-purge system, leakage compensation type, was selected to avoid unnecessary protrusion and limit the risk of damage.

The purge flow capacity of the Z purge was selected to ensure a short purging time prior to system start up.

The system carries the following certifications: IECEx, ATEX, EAC, FM, cULus, INMETRO, KOSHA, CCC, PESO

Expo Products and Services

Type Z Purge

IECEX, ATEX & UL certified purge and pressurization systems for Zone 2, Class I Div 2 applications



Features

- Global approvals
- Purge flow capacity up to 900 NI/min
- Leakage Compensation or Continuous Flow
- Stainless steel enclosure construction

Expo's Minipurge type Z range provides a full purge and pressurization solution for electrical enclosures and other equipment installed in Zone 2 or Class I Div 2 hazardous environments. Physically the same, Y purge systems are for use in Zone 1 / Class I Div 1 hazardous environments where the equipment to be protected already carries Zone 2 or Class I Div 2 certification.

[Click here](#) for more information.

Design and Consultancy services

Expo Technologies' team of consultants and certification engineers have the experience and knowledge to support our customers through the certification process for equipment to be used in Hazardous Areas.

From concept design through to maintenance, Expo Technologies works with you to reduce the risks and accelerate your entry into global markets.

[Click here](#) for more information.

