# HEROSE UK tackles critical safety risks in cryogenic installations

*HEROSE UK explains how robust system design ensures infrastructure and personnel remain fully protected against unexpected low-temperature exposure.*

Low Temperature Protection at HEROSE UK

DONCASTER, SOUTH YORKSHIRE, UNITED KINGDOM, July 2, 2026 /EINPresswire.com/ -- While largely hidden from public view, cryogenic gas systems form the invisible backbone of modern industry. Across hundreds of thousands of facilities worldwide, ultra-low temperature liquid storage is relied upon for everything from delivering life-saving medical oxygen in hospitals and flash-freezing food on massive production lines, to enabling high-speed industrial laser cutting and cleanroom manufacturing in semiconductor fabrication. Because these diverse, high-demand sectors require continuous volumes of gas, the systems feeding them are under constant operational pressure.

> One of the most significant challenges faced by the industrial gases industry today is ensuring the safety and compliance of cryogenic systems."
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> *Keith Stewart, Managing Director at HEROSE UK*

Without correct design and engineering input, these systems can become overdrawn, allowing cold gas or cryogenic liquid to breach the supply barrier, with severe consequences. Every year operational failures in improperly protected cryogenic installations cause extensive equipment damage, costly downtime, workplace injuries and even loss of life.

A key risk is carbon steel brittle fracture. When carbon steel pipework or buffer vessels are exposed to sub-zero temperatures, stress and/or impact, the metal rapidly loses its ductility. This can result in an uncontrolled release of large amounts of stored energy, with fragmenting carbon steel causing major damage to infrastructure and posing a lethal threat to site personnel.

It is therefore essential that cryogenic installations are properly designed in strict compliance with the global standards for low temperature protection, CGA P-56 & EIGA 133. These standards

protect staff, customer sites and the industry.

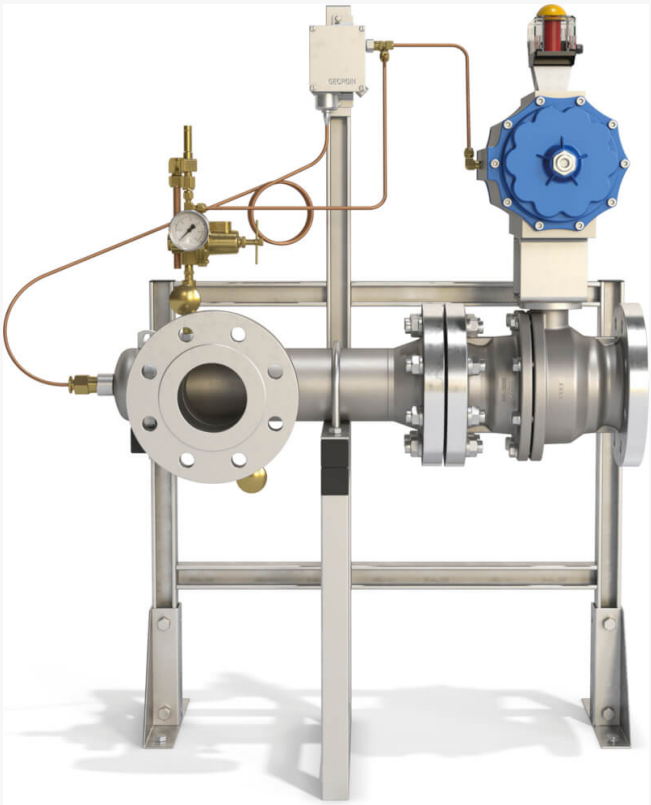
To protect carbon steel pipework and buffer vessels, HEROSE UK has developed several modular ranges of Low Temperature Protection Systems (LTPS). Functioning as an automated safety barrier, the LTPS prevents cold gas or cryogenic liquid from entering distribution pipelines or reaching a user's downstream process, thus guarding against the dangers of carbon steel brittle fracture.

Rather than a generic, one-size-fits-all component, HEROSE UK offers three distinct LTPS configurations precisely matched to CGA and EIGA selection matrix outputs:

**• Standard LTPS Modules (DN25 to DN50):** Designed for mini-bulk and bulk cryogenic installations. Built with copper and brass construction, featuring a 40 Barg design pressure, self-contained pneumatics, and auto or manual reset options.

• Stainless Steel LTPS Modules (DN65 to DN100): Engineered for high-flow bulk applications, supporting standard gas configurations up to 40 Barg and dedicated oxygen lines up to 23.5 Barg.

• 2oo3 Voting LTPS Modules (DN80): Designed for high-flow bulk operations requiring maximum supply security. It uses two-out-of-three voting logic to eliminate nuisance tripping, featuring automated alarms at -15°C, -18°C trip point and an optional UPS panel for 30 minutes of emergency power.



Stainless Steel LTPS Module Ranges

2oo3 Voting LTPS Module Ranges

Ultimately, robust low-temperature protection depends on continuously aligning system safeguards with evolving operational realities. To manage the invisible risks associated with overdrawn conditions, facilities must prioritise proactive risk assessments and collaborate

closely with technical experts to ensure compliance, resilience and most importantly, safety.

For more information on Low Temperature Protection Systems or to request technical guidance, contact the HEROSE UK engineering team.

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