

H2 Trailer Letdown System

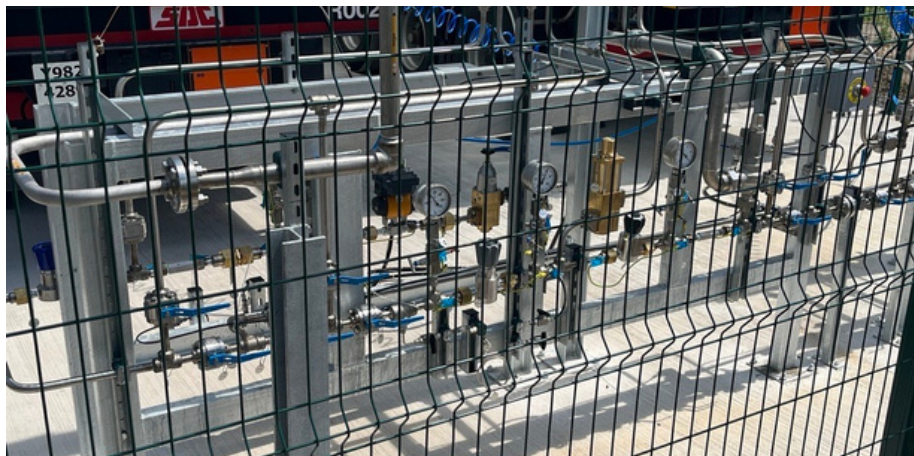


Technical Data Sheet

System Description:

The H2 Trailer Letdown System is designed for safe and efficient pressure reduction from high-pressure hydrogen trailers. It includes two primary components:

- Trailer Stanchion: Connects the trailer to the pressure letdown station.
- Pressure Letdown Station: Two-stage pressure reduction from trailer to process conditions.



Trailer Stanchion

Function

Interface between the trailer and the decant system, with purging and safety functionality.

Features

- Floor-standing unit with fixed mounting
- Connections for 1 or 2 trailers (1 active, 1 waiting)
- Integrated Back Pressure Maintaining Valve (set at 30 bar) – ensures safe residual pressure for Type 4 trailers
- Nitrogen supply port for purging during maintenance
- Earth lead and clamp included
- Optional: Dynamic Earth-Rite system
- Standard trailer hoses and connectors included

Materials

- Stainless steel piping and fittings for H₂ service
- Designed for outdoor installation

Options

- Integrated stanchion in letdown skid
- Custom trailer connector types

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Technical Data Sheet

Pressure Letdown Station

Function

Controlled pressure reduction from trailer to process, with built-in redundancy for continuity.

Standard Design

- Inlet Pressure: up to 300 bar
- Outlet Pressure: 3.5 bar (standard), adjustable variants available
- Dual-stage pressure reduction (e.g., 300 → 60 bar, then 60 → 3.5 bar)
- Dual stream system for redundancy (only one stream online at a time)

Components

- Manual valves with limited actuation
- Mass flow meter (optional)
- Pressure and temperature sensors for each stage
- eStop panel (remote mounted)



Materials

- Hydrogen-compatible stainless steel
- Adiabatic shock tested valves

Options

- Custom flow rates and outlet pressures
- Mass flow metering
- Integrated stanchion option

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