

FLOW SAFE®
PRESSURE RELIEF SOLUTIONS

Protecting Critical LNG & Cryogenic Operations

Reliable Overpressure Protection for Extreme Service Conditions

Across the LNG, cryogenic, hydrogen, industrial gas, and marine fuel value chain, pressure relief valves are a critical safety component. From liquefaction plants and storage terminals to LNG bunkering facilities and cryogenic transportation systems, Flow Safe delivers trusted overpressure protection designed for the world's most demanding applications.

Our engineered relief valve solutions help protect personnel, equipment, and operations from overpressure events caused by thermal expansion, process upsets, trapped liquid, boil-off gas generation, and emergency conditions.

Applications We Serve

LNG Production & Liquefaction

- LNG liquefaction trains
- Cold boxes and heat exchangers
- Process vessels and separators
- Cryogenic transfer systems
- LNG export facilities

LNG Storage & Terminals

- LNG storage tanks
- Boil-off gas (BOG) systems
- Loading and unloading facilities
- Cryogenic piping systems
- Tank protection systems

LNG Marine & Bunkering

- LNG-fueled vessels
- Fuel gas supply systems
- LNG cargo tanks
- Bunkering skids
- Shipboard cryogenic storage

Industrial Gas & Air Separation

- Liquid Oxygen (LOX)
- Liquid Nitrogen (LIN)
- Liquid Argon (LAR)
- Cryogenic process equipment
- Bulk gas storage and distribution

Hydrogen & Clean Energy

- Liquid hydrogen storage
- Hydrogen liquefaction facilities
- Hydrogen fueling stations
- Cryogenic transportation systems

FLOW SAFE F84 SERIES

Cryogenic & Gas Service Pressure Relief Valves



Designed for gas, vapor, and cryogenic service applications where reliable performance, tight sealing, and repeatable operation are essential.

Ideal Applications

- LNG storage tanks
- Boil-off gas systems
- LNG vaporizers
- Cryogenic process vessels
- Hydrogen gas systems
- Air separation units
- LNG transfer and fuel gas piping

Key Benefits

» Cryogenic service capability
» Proven spring-loaded design
» Bubble-tight seat options
» Corrosion-resistant construction
» High reliability in extreme temperature environments
» Fast response to overpressure conditions

Typical Media

LNG Vapor | Natural Gas | Hydrogen | Nitrogen | Oxygen| Argon | Helium

Protecting Critical Assets

The F84 Series provides dependable overpressure protection for systems where rapid pressure increases can occur due to boil-off gas generation, process upsets, or thermal expansion.



FLOW SAFE F88L SERIES

Dual-Phase & Liquid Service Relief Valves



The F88L Series is engineered for liquid and dual-phase applications commonly found throughout LNG and cryogenic facilities.

Ideal Applications

- Cryogenic liquid transfer lines
- LNG loading systems
- LNG pumps
- Truck loading stations
- Cryogenic storage vessels
- Liquid hydrogen systems
- Thermal relief protection

Key Benefits

» Optimized for liquid and dual-phase flow

» Stable operation under varying process conditions

» Accurate set pressure performance

» Reduced maintenance requirements

» Rugged design for demanding industrial service

Typical Media

LNG | Liquid Hydrogen | Liquid Oxygen | Liquid Nitrogen | Liquid Argon | Refrigerated Hydrocarbons

Critical Safety Protection

The F88L safeguards equipment against pressure buildup resulting from trapped cryogenic liquids and thermal expansion events that can rapidly increase system pressure.



FLOW SAFE F7000/F8000 SERIES



Pilot Operated Relief Valve Technology

For applications requiring superior performance, high operating margins, and exceptional tightness, Flow Safe's F7000 and F8000 Pilot Operated Relief Valve (PORV) systems provide advanced overpressure protection.

Ideal Applications

- LNG liquefaction plants
- LNG export terminals
- Large cryogenic storage tanks
- Hydrogen processing facilities
- Marine LNG fuel systems
- Air separation units
- High-capacity process systems

Key Benefits

» Exceptional seat tightness at operating pressure
» High relieving capacities
» Reduced product loss from leakage
» Stable operation near set pressure
» Excellent performance in low-pressure and high-capacity applications
» Available for demanding cryogenic and industrial service environments

Why Pilot Operated Technology?

Pilot-operated relief valves allow facilities to operate closer to design pressure while minimizing leakage and improving process efficiency. This translates into enhanced plant reliability, reduced emissions, and lower operating costs.



WHY FLOW SAFE?

Trusted Protection for Critical Energy Infrastructure

Flow Safe pressure relief valves help safeguard:

- LNG Plants
- Import & Export Terminals
- Marine & Offshore Facilities
- Hydrogen Projects
- Industrial Gas Facilities
- Cryogenic Storage Systems
- Transportation & Bunkering Operations

Engineered for Safety. | Designed for Reliability. | Built for Critical Service.

LET'S DISCUSS YOUR LNG & CRYOGENIC APPLICATION

Whether protecting a cryogenic storage tank, LNG transfer line, boil-off gas system, marine fueling skid, or hydrogen facility, Flow Safe has a pressure relief solution engineered for your application.



Flow Safe, Inc.

A Dresser Utility Solutions Company

LNG | Cryogenic | Hydrogen | Industrial Gas | Marine | Energy

Protecting People, Process, and Equipment Through Reliable Overpressure Protection.

Texas Office
Flow Safe, Inc.
16240 Port Northwest Drive
Houston, TX 77041
P: (832) 678-2070
F: (716) 662-2580

New York Office
Flow Safe, Inc.
3865 Taylor Road
Orchard Park, NY, USA 14127
P: (716) 662-2585
F: (716) 662-2580

Khang Anh Quan (KAQ) Co., Ltd
39/1 Nguyen Cuu Dam, Tan Son Nhi Ward
Ho Chi Minh City | Vietnam
Tel : (+84)28-62938986
Contact: Nguyen Tran Trung Tin
Email : jackie@kaq.com.vn

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DRESSER UTILITY SOLUTIONS

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