Surge Relief Systems
Designed for optimal performance

Total solution for protecting critical assets

EMERSON
Process Management
Emerson's Surge Relief Systems deliver a total solution to optimize pipeline management

What if you could...

Lower Total Cost of Ownership
- Reduce system size and weight with the highest capacity surge relief valves in the market
- Minimize maintenance with a valve designed to prevent Nitrogen consumption and extend the life of valve internals
- Lower operating costs by maintaining tight set point control via core Emerson technologies to efficiently use the Nitrogen supply

Ensure Pipeline Integrity and Safety
- Prevent accidents and protect personnel and assets by utilizing high capacity, fast acting Daniel surge relief valves to remove surges in milliseconds
- Avoid fatigue or catastrophic equipment failure and extend the operating life of equipment by mitigating surges
- Ensure optimal system performance during transient operations with factory testing, Lifecycle Service system audits and inline testing ports

Meet Regulatory Requirements
- Meet transient overpressure protection regulatory requirements and design codes such as ASME B31.4 by installing Surge Relief Systems from Emerson
- Avoid reporting and compliance activities for pressure excursions above 110%

Utilizing the best-in-class Daniel 765 Surge Relief Valve and other core Emerson technologies, we deliver state-of-the-art surge relief protection in a compact, simplified system design.

Surge Relief System
Designed for critical applications and ease of use
Surge relief protection is critical for the petroleum transportation industry to ensure safety, regulatory compliance, business continuity and pipeline integrity. That's why oil companies worldwide partner with Emerson to implement an industry leading solution. With over 40 years of experience engineering comprehensive, field proven surge relief systems, we eliminate project risk and complexity by delivering cost-effective, easy-to-integrate solutions.

Applications
Emerson's Surge Relief Systems are a cost effective, reliable, total solution for surge relief protection across all areas of the petroleum transportation industry, including:
- Liquid Pipelines
- Refineries
- Tank Farms
- Marine Loading and Unloading
- Terminals
- Floating, Production, Storage and Off-Loading (FPSO)

"Some pipelines are in transient operations over 60% of the time."
- Pipeline and Gas Journal

Emerson's Surge Relief Systems deliver a total solution to optimize pipeline management

What if you could...

Lower Total Cost of Ownership
- Reduce system size and weight with the highest capacity surge relief valves in the market
- Minimize maintenance with a valve designed to prevent Nitrogen consumption and extend the life of valve internals
- Lower operating costs by maintaining tight set point control via core Emerson technologies to efficiently use the Nitrogen supply

Ensure Pipeline Integrity and Safety
- Prevent accidents and protect personnel and assets by utilizing high capacity, fast acting Daniel surge relief valves to remove surges in milliseconds
- Avoid fatigue or catastrophic equipment failure and extend the operating life of equipment by mitigating surges
- Ensure optimal system performance during transient operations with factory testing, Lifecycle Service system audits and inline testing ports

Meet Regulatory Requirements
- Meet transient overpressure protection regulatory requirements and design codes such as ASME B31.4 by installing Surge Relief Systems from Emerson
- Avoid reporting and compliance activities for pressure excursions above 110%

Utilizing the best-in-class Daniel 765 Surge Relief Valve and other core Emerson technologies, we deliver state-of-the-art surge relief protection in a compact, simplified system design.

Surge Relief System
Designed for critical applications and ease of use
Surge relief protection is critical for the petroleum transportation industry to ensure safety, regulatory compliance, business continuity and pipeline integrity. That's why oil companies worldwide partner with Emerson to implement an industry leading solution. With over 40 years of experience engineering comprehensive, field proven surge relief systems, we eliminate project risk and complexity by delivering cost-effective, easy-to-integrate solutions.

Applications
Emerson's Surge Relief Systems are a cost effective, reliable, total solution for surge relief protection across all areas of the petroleum transportation industry, including:
- Liquid Pipelines
- Refineries
- Tank Farms
- Marine Loading and Unloading
- Terminals
- Floating, Production, Storage and Off-Loading (FPSO)
Key Specifications

System functions: Surge Relief and Surge Measurement
Pipeline surge system sizes: 100 to 1250 mm (4 to 50 in)
Pressure rating: ASME CL150 to 600
Flow capacity (Cv): 20 to 1200 m$^3$/h (86 to 5360 GPM)
Approvals: NACE
System structural material: Carbon base steel ASTM A106
System wetted material: ASTM A353 GR. LCC steel
Valve size: 50 to 400 mm (2 to 16 in)
Valve main body: ASTM A352 Gr. LCC steel
Valve wetted material: Carbon steel, stainless steel or nickel coated steel

Features of Gas Loaded Surge Relief Systems

- Highest flow capacities in the market for reduced system size and weight
- Exceptionally fast response speed
- Nitrogen supply and control system designed to optimize valve performance
- 45° piston operation leading to lower pressure drop and reduced maintenance compared to axial flow valves
- Oil barrier to prevent Nitrogen consumption
- Tight, stable set point pressure control and monitoring assured with core Emerson technologies
- Surge detection or measurement
- Lifecycle Service system audits and services

State-of-the-art Daniel control valve to ensure protection of your assets

Daniel 765 Surge Relief Valve
- High relief capacity
- Fast response time
- No Nitrogen consumption

Field proven flow meter for surge measurement

Daniel 3812 Liquid Ultrasonic Flow Meter
- High accuracy
- Low maintenance
- Low pressure drop

Best-in-class pressure transmitter for critical valve set point monitoring

Rosemount 3051 Transmitter
- Reliable pressure monitoring
- High accuracy
- Pressure diagnostic supplied