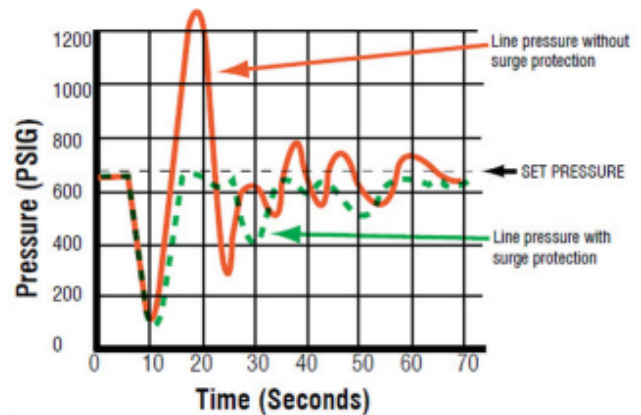


# SPARTANPRO™ SURGE RELIEF Nitrogen Loader System

Our standard Spartan system is both user friendly and highly customizable - an industry leader in accuracy, safety, and reliability.

## Liquid Pipeline Surge

A surge event is often caused by rapid changes in flow rate. The cause of these changes can be opening or closing of valves, starting and stopping of pumps, or the activation of ESD devices. As this occurs in normal operation, it is imperative to have a reliable surge relief system in place to prevent leaks, damages and injuries.



## Nitrogen Loaded Relief Valves

The purpose of a surge relief system is to control the nitrogen gas used to operate the relief valve. These valves need to be fast acting and relied upon to open fully in the event of a surge. Nitrogen gas is used to pressurize the valve piston and keep it in the closed position during normal operation. The nitrogen pressure, minus 4 psi (for the valve spring) is the effective setpoint of the valve. As pipeline pressure increases, the spring and gas pressure is overcome, and the valve opens.



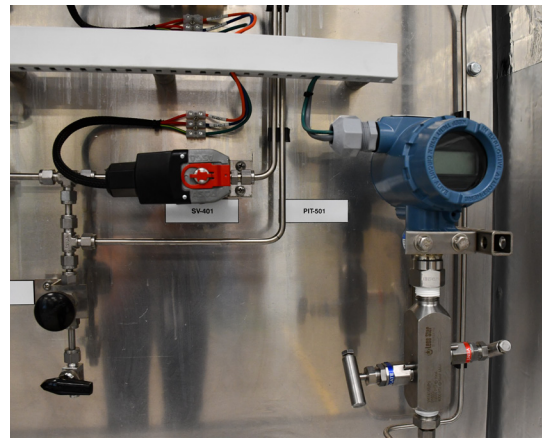
# SPARTANPRO™ SURGE RELIEF Nitrogen Loader System

## Full Turn Key Solution

The SpartanPRO™ Surge Relief System is packaged in a weatherproof, insulated and heated enclosure with front and back twin doors. It comes complete with (2) plenum cylinders, a ramp and tie-ins for Customer supplied nitrogen cylinders. Although the system is fully tested and ready to install upon delivery, we also provide startup and commissioning services.

### Additional features:

- High accuracy of nitrogen pressure control
  - Advanced dual PID pressure control
  - Fully digital setpoints, alarm limits, deadbands
- Extremely low nitrogen consumption
  - Up to 1 year per nitrogen supply cylinder
  - Alerts and alarms of nitrogen supply/usage and plenum pressures
- Robust, fault tolerant design
  - Redundant high-cycle solenoid valves
  - Automatic preservation of plenum pressure on loss of power or nitrogen supply
- Full-colour touchscreen operator interface
  - Intuitive graphic-based operation
  - Full configuration with real-time and historical trends
- Advanced remote connectivity
  - Local PLC connectivity
  - Cellular connectivity, including smart phones
  - Monitor operation, events, trends, nitrogen consumption, alarms and alerts
  - Remotely troubleshoot and log historical data



***For more information, contact us today!***  
**+1 (877) 278-6404 | [info@spartancontrols.com](mailto:info@spartancontrols.com)**