

SureFlow™ Bulk Specialty Gas Supply Systems and Controllers

Praxair is revolutionizing flow rates for ammonia as well as many other specialty gases. Our systems significantly reduce the number of cylinder changeouts required by conventional systems – helping customers achieve improvements in uptime, production costs, more consistent purity, and most importantly, safety.

The proprietary Praxair enclosed heating system and new silicone rubber heat blanket system allow for higher flow rates while maintaining controlled external ton container temperatures. These systems can be skid mounted to facilitate installation and movement around the facility. They deliver continuous ammonia flows of 600 slpm with peaks greater than 3000 slpm.

Gases

- Ammonia (NH₃)
- Chlorine (Cl₂)
- Dichlorosilane (SiH₂Cl₂)
- Hydrogen Chloride (HCl)
- Halocarbon 14 (CF₄)
- Halocarbon 23 (CHF₃)
- Halocarbon 116 (C₂F₆)
- Halocarbon 218 (C₃F₈)
- Halocarbon 318 (C₄F₈)
- Methane (CH₄)
- Nitrous Oxide (N₂O)
- Nitrogen Trifluoride (NF₃)
- Octafluorotetrahydrofuran (C₄F₈O)
- Silane (SiH₄)
- Silicon Tetrachloride (SiCl₄)
- Trichlorosilane (HSiCl₃)

Reliable, Easy-to-Use and Safe to Operate

- Self contained purge system
- Failsafe normally closed valves
- Data acquisition or remote monitoring PC interface on controller
- Redundant supply trains
- Auto switchover based on weight or pressure
- Bypass valving allows cross utilization of gas and components
- Excess flow switch
- Train isolation allows service on one train while the other remains in service
- Ventilated enclosures – air intake filters and diffuser for continuous, positive ventilation
- Double block valves for safe maintenance
- All components are 3000 psig rated
- Optional, redundant controller provides optimum service

Designed for High Purity

- Components and piping are UHP electropolished 316L Stainless Steel with an internal finish of less than 10 Ra Max
- Low dead space components and tubing branches for efficient purging
- Pressure transducers with low dead space
- Minimized wetted surface area of components
- Springless, packless diaphragm valves
- All welds are high-purity orbital welds
- All manual connections are VCR type
- Leak tight and tested to 1 x 10⁻⁹ scc/sec He

Controller

- Component burn-in prior to shipment
- Liquid crystal display TFT touchscreen
- Full graphical interface
- Emergency shutoff button on front
- All valve actuations are verified
- Critical alarms close all valves
- AC/DC power failure detection
- Ethernet communication ready
- Optional fiber optic RS-485
- Digital I/O optically isolated to prevent solenoid EM field from disrupting microprocessor
- Menu driven operation



SureFlow™ 500
Regulator Manifolds

Heating System


- Automatic shutoff with dual set points
- Safety critical alarms shut off flow
- Infrared temperature monitoring of ton container surface (enclosed heat system)
- Enclosed heat system is fully insulated and weather resistant



▲ Enclosed heating system (left) and silicone rubber heat system (right)



◀ BSGS Redundant PLC Controller

 Let our trained experts help you select a configuration based on your specific application, contact your local Praxair representative for more information.