

GASGUARD® Gas Delivery Systems

Product Modularity

The GASGUARD® delivery systems represent Air Products' continuous commitment to provide state-of-the-art equipment for specialty gas storage, delivery, and control to the electronics industry. GASGUARD establishes a legacy of mass customized enclosures, piping panels and advanced controller capabilities that incorporate gas-specific core designs with user-selected configuration options. The GASGUARD systems offer component-level modularity to minimize spares and improve serviceability, with designs that incorporate benefits from hundreds of millions of service hours and the operational excellence of our global MEGASYS chemical management team.

Streamlined Enclosure Design

The GASGUARD enclosures meet or exceed the requirements of the latest Uniform Fire Code (UFC). The streamlined designs maximize laminar airflow characteristics, reducing exhaust requirements. The GASGUARD enclosures feature a sleek, modernized appearance with hidden hinges and hardware, improved seals to reduce air leakage, contoured corners, and wide door swing for ergonomic operator access.

Standard Piping Features

- Mass customized, pre-designed configuration
 - Customer configured options
 - 316L stainless steel electropolished components and tubing
 - Low internal volume panel design
 - Orbitally butt-welded construction and face seal breaks
 - Optimized component layout
 - Vacuum-assisted purging
 - Flow-through pressure sensors
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GASGUARD AP3 Valve Manifold Box (VMB) lowers the overall cost of ownership by enabling economical multi-point gas distribution.





GASGUARD AP3 two cylinder gas cabinet meets or exceeds regulatory requirements, and excels in field service through proven operability and reliability.

GASGUARD Gas Cabinets

The GASGUARD gas cabinet features mass customized, gas-specific panel designs that incorporate the most advanced, ultrahigh-purity (UHP) components. Mass customized panels are pre-designed to meet basic operational and safety requirements for the intended gas service while allowing customer configurable options. Process component layout design facilitates operation and maintenance, while minimizing internal purge volumes and process line welds to reduce the potential for contamination.

Cabinet Panel Features

- Deep-purge or cross-purge pigtails
- Excess flow switches as needed
- Filter and purifier options

GASGUARD Valve Manifold Boxes

Higher Performance and Lower Cost of Ownership

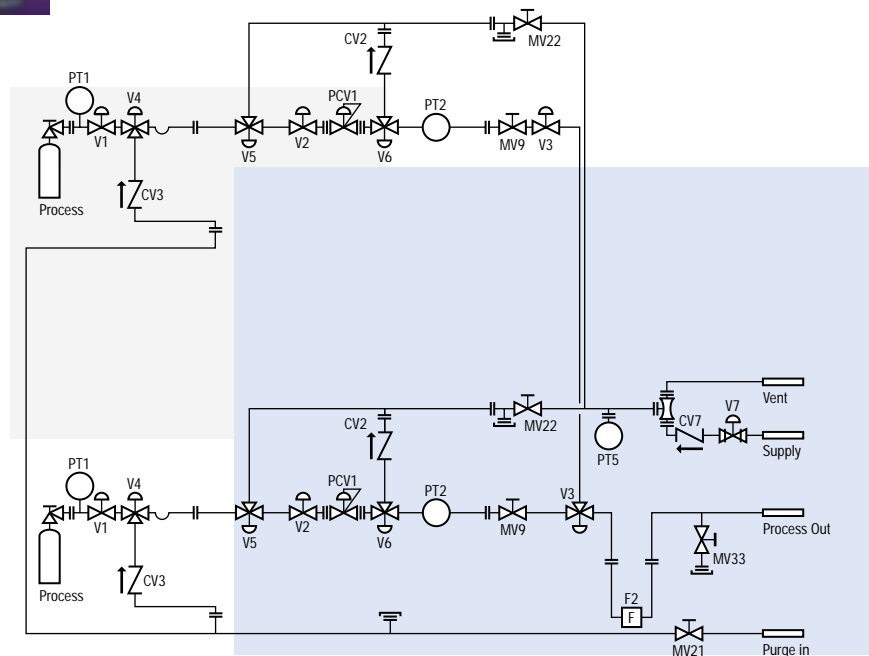
The automated gas distribution manifold enables a single GASGUARD gas cabinet to supply UHP gas to as many as eight use points. This reduces gas cabinet requirements by 50 percent or more, decreases equipment and piping needs, cuts air handling and space requirements, and lowers the number of cylinders that are stored or in use.

Multiline Independent Operation

The mass customized VMB is available in four, six, and eight stick configurations. Design is modular to allow addition of future sticks. The controller can operate up to eight process gas lines independently. Start, stop, purge, and evacuate operations can be accomplished safely with the controller. The GASGUARD VMB has several levels of automation from automatic shutoff of each stick to full automation of the purge operation. When installed in the tool service area, the VMB shortens critical piping runs, making tool purging quicker and more convenient. While line purges are performed, other tools can be kept operational without interrupting process gas flow.

VMB Panel Features

- Standard stick design for interchangeability
- Modular for future expandability up to eight sticks
- Pneumatic valves for automatic start/stop/optional purge
- Excess flow switches per stick (optional)
- Pressure transducers located on each process stick
- Pressure regulator options
- Filtration options



Typical Dual Cylinder Automated Switchover System

GASGUARD AP Controllers

Modular Control Technology

Extensive field experience from previous controller generations and feedback from valued customers yielded the modular GASGUARD controller. Delivering field-proven automation through a menu-driven operator interface, the GASGUARD controller features a customer selectable display, LED indicators, and improved, ergonomic keypad. The controller is positioned for maximum viewing of panel schematics, system status, process values, alarm conditions, and menu options. The GASGUARD controller layout eases maintenance through improved component access, requiring no special tools for service, while employing a modular design to simplify the customer's spare parts strategy, minimizing long-term costs. The controller has expandable I/O for digital and analog signals, thus allowing control of multiple process panels or process sticks within valve manifold boxes. In addition, dedicated connection ports ease network communication.

Controller Features

GASGUARD AP2 Display

- 8 line by 40 character text LCD display
- Static, inserted flow graphic

GASGUARD AP3 Display

- 10.4" color, 10.4" high-contrast electro luminescent (EL), or 9.4" monochrome display
- Dynamic, real time graphics

Standard Features

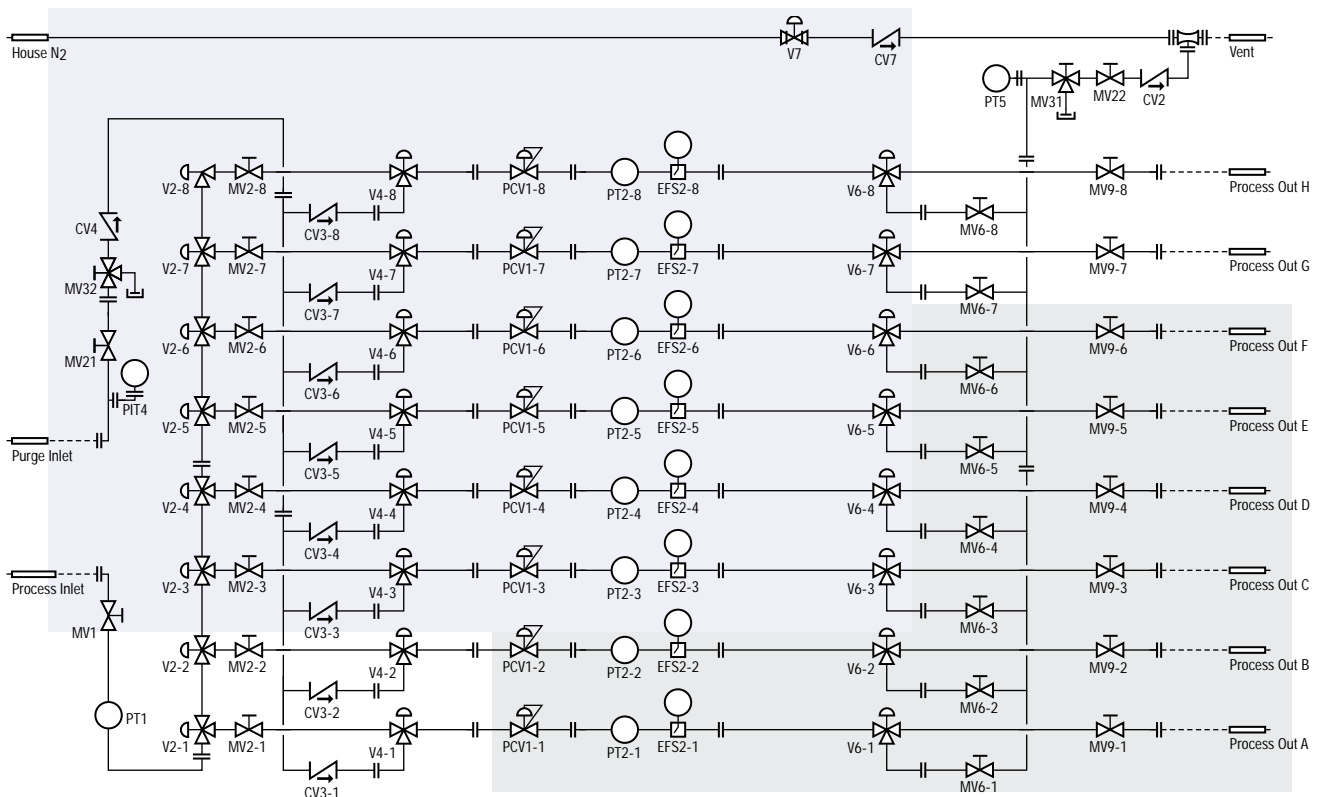
- Simplified 22 key operator keypad
- Configurable software
- Laptop interface
- Pneumatic solenoids
- Expandable Input/Output
- Analog inputs with 16-bit resolution
- Four levels of security access
- Pop-up window for all fault and shutdown alarms
- Time-stamped alarms

Common Options

- Enclosure inert gas blanket (z-purge)
- NEC Class 1, Division 2 locations
- Network communication



GASGUARD AP3 controller with color display.



Typical Automated Single Inlet, 8 Outlet Valve Manifold Box

For More Information

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