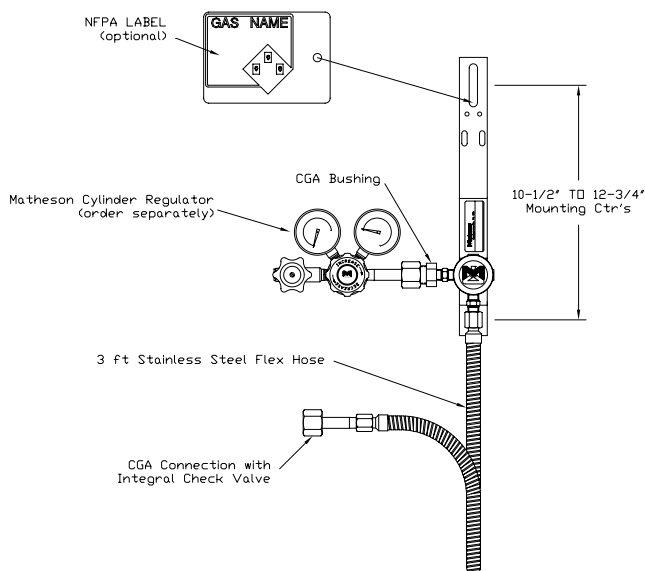




Single Station Manifolds (53 & 54 Manifold Series)



Introduction

Matheson 53 and 54 Series Single Station Manifolds provide a convenient means of wall mounting a regulator. These products consist of a mounting bracket; flex hose and integral check valve. The manifolds may be used with many of Matheson's single or dual stage, brass or stainless steel regulators (regulators sold separately).

Typical Application

- Supply of GC carrier gas/support gas
- Supply of calibration standards to on-line process analyzers, emission monitoring systems, etc

Specifications

- Standard Gases Delivered
 - Inerts 580 CGA
 - Flammables 350 CGA
 - Carbon Dioxide 320 CGA

NOTE: The CGA's shown above represent common gases used in the laboratory environment and are not exclusive for use with the Single Station Manifold. Please consult a Matheson Tri-Gas customer service representative for ordering a Single Station Manifold for a gas that is not listed.

- Wetted Components: Brass or 316 Stainless Steel
- Maximum Inlet Pressure: 3000 psig (depending upon CGA rating)
- Manifold Outlet Connection: CGA Bushing - Brass or Stainless Steel

Standard Features

- Standard Manifold System Components
 - 3-ft Flex Hoses with Integral Check Valves
 - Right Side Cylinder Set-Up (gas outlet is on left side)
 - Mounting Brackets

NOTE: Pressure regulators are not included as a standard item and must be ordered separately. Consult with a Matheson Tri-Gas customer service representative to select the optimum regulator to satisfy your gas delivery pressure requirements.

Don't See What You Want?

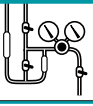
Matheson offers a complete line of Single Station Manifold Systems. Our standard, most common configuration options are listed below. However, if you don't see what you are looking for, contact a Matheson Tri-Gas customer service representative and ask to speak with your local equipment sales support specialist. They can help you configure a Single Station Manifold that meets your specific requirements.

Options

- Rigid Pigtail
- 6-ft Flex Hose
- Cylinder Holder with Strap
- Cylinder Holder (with Strap or with Strap and Chain)
- Vent Valve
- Master Valve
- Eliminate Check Valves
- NFPA Label and Mounting Plate
- CGA Handles

Ordering Information

Model Number	Material	Gas/CGA
53-18T	Brass	Inert / CGA 580
53-18V	Brass	Flammable / CGA 350
53-18W	Brass	Carbon Dioxide / CGA 320
53-18B	Brass	Zero Air / CGA 590
54-18T	Stainless Steel	Inert / CGA 580
54-18V	Stainless Steel	Flammable / CGA 350
54-18W	Stainless Steel	Carbon Dioxide / CGA 320
54-18B	Stainless Steel	Zero Air / CGA 590



SourceTrak™ Manifold Systems (53 & 54 Manifold Series)



The SourceTrak™ Manifold System distributes gas safer and more efficiently.

Introduction

Matheson's SourceTrak™ Manifold Systems offer a safe and efficient method of connecting multiple cylinders to a common gas supply line to provide centralized distribution of gas for both high and low purity delivery requirements. SourceTrak™ Manifold Systems can be used as a manually operated system in conjunction with a line regulator to regulate downstream delivery pressure, or they can be used as an integrated part of Matheson's Automatic Switchover Systems (see SwitchPro™). Utilizing SourceTrak™ Manifold Systems for the distribution of gas provides greater safety in the cylinder storage area by reducing repetitive cylinder handling and also minimizes the risk of ambient contamination within the gas delivery network.

The SourceTrak™ Manifold Systems can be furnished in brass or stainless steel materials to provide delivery service for a broad range of gases and are rated for pressures of up to 3000 psig. All SourceTrak™ Manifold Systems are single row configurations and are provided with the manifold piping, station (diaphragm) valves, 3-ft. flex hose, integral check valves, and manifold mounting brackets/clamps as standard components. The SourceTrak™ Manifold Systems are designed for "right side" cylinder set-up, where the gas flows from right to left through the manifold piping. (Left side set-up available as an option).

Applications

- Control gas delivery from multiple cylinders within a centralized distribution system providing safer and more efficient delivery of gas with the flexibility to address customized applications.

Design Features

- Ideal for High (UHP 99.999%+) or Low Purity Gas Delivery – available in brass or 316 stainless steel materials.
- Provides gas delivery for up to '4' cylinders (standard) or up to '10' cylinders (optional).
- Maximum delivery pressure up to 3000 psig.
- Manifold gas outlet connection is CGA compatible for Regulator attachment.
- Design allows convenient access to all components.
- Compact design is cost effective to implement and install.
- Manifold support brackets/clamps compatible for use with U-Channel frames.
- Optional features allow custom design for specific gas delivery applications.

Recommendations for Proper Application & Use of Manifold Systems

- 1) Manifolds should be used for distribution of a single gas during the entire life of the manifold. It is not recommended to change the gas service of the manifold.
- 2) Manifolds should always be used to distribute a single gas and should never be used to mix gases.
- 3) All Manifold pigtails should contain integral check valves as a safety measure. The use of a check valve should never be construed as a substitute for closing the Manifold station valve.
- 4) All standard Matheson Manifold Systems are constructed on 12" cylinder centers (station valve to station valve) to provide maximum support, stability and cylinder clearance. The end-user should never modify or change the dimensions and/or components of any Manifold System without authorization from Matheson.
- 5) Matheson has designed the SourceTrak™ Manifold Systems to meet a broad range of gas distribution needs and applications; however, Matheson welcomes the opportunity to quote and construct custom designs suited to a specific application.



SourceTrak™ Manifold Systems (53 & 54 Manifold Series) (continued)

Specifications

Standard Gases Delivered*:

Inerts	580 CGA
Flammables	350 CGA
Carbon Dioxide	320 CGA

**NOTE: The CGA's shown above represent common gases used in the laboratory environment and are not exclusive for use with the SourceTrak™ Manifold System. Many gases using CGA's other than those listed are compatible for use with Manifold Systems. Please consult a Matheson Tri-Gas customer service representative for ordering a SourceTrak™ Manifold System for a gas which is not listed.*

Wetted Components:	Brass or 316 Stainless Steel
Maximum Inlet Pressure:	3000 psig (depending upon CGA rating)
Manifold Outlet Connection:	CGA Bushing – Brass or Stainless Steel

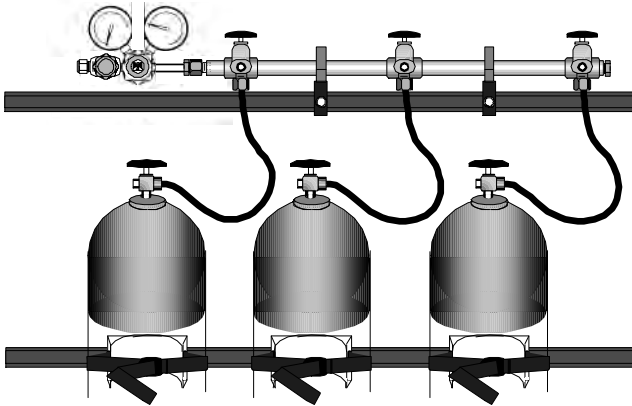
Standard Features

Standard Manifold System Components*

- Manifold Piping
- (Manual) Diaphragm Station Valves (1 per cylinder station)
- 3-ft. Flex Hoses with integral check valves
- Right Side Cylinder Set-Up (gas outlet is at left side)
- Mounting Brackets & Clamps

**NOTE: Pressure regulators are not included as a standard item and must be ordered separately. Consult with a Matheson Tri-Gas customer service representative to select the optimum regulator to satisfy your gas delivery pressure requirements.*

Standard SourceTrak™ System Assembly Cylinder Stations are located on 12" centers.



SourceTrak's™ configuration permits easy access to change out cylinders and maintain continuous gas delivery (Regulator is ordered separately)

Don't See What You Want Below?

Matheson offers a complete line of SourceTrak™ Manifold Systems. Our standard, most common configuration options are listed below. However, if you don't see what you're looking for, contact a Matheson Tri-Gas customer service representative and ask to speak with your local equipment sales support specialist. They can help you configure a SourceTrak™ Manifold that meets your specific requirements.

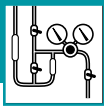
Options include:

- Up to ten Cylinders
- Rigid Pigtails
- 6 ft. Flex Hoses
- Cylinder Holder with Strap
- Cylinder Holder (with Strap or with Strap and Chain)
- Vent Valve
- Master Valve
- Left Side Cylinder Set Up
- Eliminate Check Valves
- NFPA Label and Mounting Plate
- CGA Handles

Ordering Information

Model Number	Material	Gas / CGA	No. of Cylinders
53-28T	Brass	Inert / CGA 580	2
53-38T	Brass	Inert / CGA 580	3
53-48T	Brass	Inert / CGA 580	4
53-28V	Brass	Flammable / CGA 350	2
53-38V	Brass	Flammable / CGA 350	3
53-48V	Brass	Flammable / CGA 350	4
53-28W	Brass	Carbon Dioxide / CGA 320	2
53-38W	Brass	Carbon Dioxide / CGA 320	3
53-48W	Brass	Carbon Dioxide / CGA 320	4

Model Number	Material	Gas / CGA	No. of Cylinders
54-28T	Stainless Steel	Inert / CGA 580	2
54-38T	Stainless Steel	Inert / CGA 580	3
54-48T	Stainless Steel	Inert / CGA 580	4
54-28V	Stainless Steel	Flammable / CGA 350	2
54-38V	Stainless Steel	Flammable / CGA 350	3
54-48V	Stainless Steel	Flammable / CGA 350	4
54-28W	Stainless Steel	Carbon Dioxide / CGA 320	2
54-38W	Stainless Steel	Carbon Dioxide / CGA 320	3
54-48W	Stainless Steel	Carbon Dioxide / CGA 320	4



272 SwitchPro™ Automatic Switchover Systems (523 & 524 Series) (continued)

Specifications

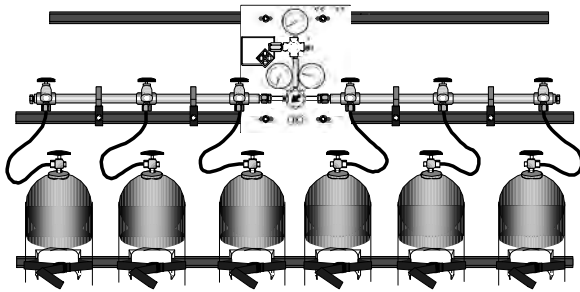
Standard Gases Delivered*:

Inerts	580 CGA
Flammables	350 CGA
Carbon Dioxide	320 CGA

*NOTE: The CGA's shown above represent common gases used in the laboratory environment and are not exclusive for use with the SwitchPro™ System. Many gases using CGA's other than those listed are compatible for use with SwitchPro™ Systems. Please consult a Matheson Tri-Gas customer service representative for ordering a SwitchPro™ System for a gas which is not listed.

Switchover Panel Dimensions:	12" W x 14" H
Wetted Components:	Brass or 316 Stainless Steel
Switchover Regulator Cv	0.06
Maximum Inlet Pressure:	3000 psig (depending upon CGA rating)
Manifold Outlet Connection:	CGA Bushing – Brass or Stainless Steel

SwitchPro™ System Assembly



The SwitchPro™ System is easy to operate and can be customized using optional features. Shown with optional manifold piping and station valves. Standard configuration has flex hoses connected directly to the switchover panel.

Don't See What You Want Below?

Matheson offers a complete line of SwitchPro™ Automatic Switchover Systems. Our standard, most common configuration options are listed below. However, if you don't see what you're looking for, contact a Matheson Tri-Gas customer service representative and ask to speak with your local equipment sales support specialist. They can help you configure a SwitchPro™ System that meets your specific requirements.

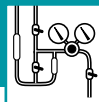
Options include:

- Up to ten Cylinders
- Rigid Pigtails
- 6 ft. Flex Hoses
- Cylinder Holders
- Certified Leak Test
- Auxiliary Gas Inlet Valve
- 1/8", 3/8" or 1/2" Outlet Compression Fitting
- NFPA Label
- Indicating Pressure Switches
- High Pressure Vent Valves
- Low or High Pressure Isolation Valves
- Manifold Piping with Station Valves

Ordering Information

Model Number	Material	Gas / CGA	Line Regulator Pressure	No. of Cylinders
523-028T	Brass	Inert / CGA 580	No Line Reg	2
523-048TN	Brass	Inert / CGA 580	No Line Reg	4
523-A28T	Brass	Inert / CGA 580	0-30 psig	2
523-A48TN	Brass	Inert / CGA 580	0-30 psig	4
523-B28T	Brass	Inert / CGA 580	0-100 psig	2
523-B48TN	Brass	Inert / CGA 580	0-100 psig	4
523-028V	Brass	Flammable / CGA 350	No Line Reg	2
523-048VN	Brass	Flammable / CGA 350	No Line Reg	4
523-A28V	Brass	Flammable / CGA 350	0-30 psig	2
523-A48VN	Brass	Flammable / CGA 350	0-30 psig	4
523-B28V	Brass	Flammable / CGA 350	0-100 psig	2
523-B48VN	Brass	Flammable / CGA 350	0-100 psig	4
523-028W	Brass	Carbon Dioxide / CGA 320	No Line Reg	2
523-048WN	Brass	Carbon Dioxide / CGA 320	No Line Reg	4
523-A28W	Brass	Carbon Dioxide / CGA 320	0-30 psig	2
523-A48WN	Brass	Carbon Dioxide / CGA 320	0-30 psig	4
523-B28W	Brass	Carbon Dioxide / CGA 320	0-100 psig	2
523-B48WN	Brass	Carbon Dioxide / CGA 320	0-100 psig	4

Model Number	Material	Gas / CGA	Line Regulator Pressure	No. of Cylinders
524-028T	Stainless Steel	Inert / CGA 580	No Line Reg	2
524-048TN	Stainless Steel	Inert / CGA 580	No Line Reg	4
524-A28T	Stainless Steel	Inert / CGA 580	0-30 psig	2
524-A48TN	Stainless Steel	Inert / CGA 580	0-30 psig	4
524-B28T	Stainless Steel	Inert / CGA 580	0-100 psig	2
524-B48TN	Stainless Steel	Inert / CGA 580	0-100 psig	4
524-028V	Stainless Steel	Flammable / CGA 350	No Line Reg	2
524-048VN	Stainless Steel	Flammable / CGA 350	No Line Reg	4
524-A28V	Stainless Steel	Flammable / CGA 350	0-30 psig	2
524-A48VN	Stainless Steel	Flammable / CGA 350	0-30 psig	4
524-B28V	Stainless Steel	Flammable / CGA 350	0-100 psig	2
524-B48VN	Stainless Steel	Flammable / CGA 350	0-100 psig	4
524-028W	Stainless Steel	Carbon Dioxide / CGA 320	No Line Reg	2
524-048WN	Stainless Steel	Carbon Dioxide / CGA 320	No Line Reg	4
524-A28W	Stainless Steel	Carbon Dioxide / CGA 320	0-30 psig	2
524-A48WN	Stainless Steel	Carbon Dioxide / CGA 320	0-30 psig	4
524-B28W	Stainless Steel	Carbon Dioxide / CGA 320	0-100 psig	2
524-B48VN	Stainless Steel	Carbon Dioxide / CGA 320	0-100 psig	4



Matheson Gas Cabinets and Panels



Introduction

Matheson designs and manufactures a wide range of gas distribution panels and safety cabinet enclosures. Matheson's expertise in the handling of gases and chemicals has been translated into providing safe, efficient, and reliable process control systems.

Matheson supplies distribution panels and cabinet enclosures for the safe handling of chemical gases (such as H_2S and NO_2) and supplies advanced products for the handling of semiconductor manufacturing gases (such as AsH_3 and SiH_4). The purity level of a given system is individually addressed to meet the needs of the customer, minimize cost, and maximize efficiency.

Applications

Matheson gas distribution panels and cabinet enclosures are designed to dispense gases or chemicals in a controlled manner and to protect the customer from exposure to dangerous materials. Any industry using or processing hazardous chemicals and gases should consider use of these products.

In the chemical industry, this would include the use of gas distribution panels for the handling of reagents and precursors such as Hydrogen Sulfide and Nitric Oxide from the source to the point of use. If the line carrying the gas to the process has multiple uses, or if the line carries a potentially corrosive or toxic gas, a purge panel apparatus would be incorporated into the system for maximum flexibility. If the containers of these gases are relatively small, the distribution and purge panel(s) could be mounted within a cabinet enclosure at the factory. If the source of the gases is a bulk vessel, these distribution and purge panel(s) could be mounted near the vessel or near the point of use.

In manufacturing industries, this would include the use of gas distribution panels for the handling of hazardous materials such as Arsine, Phosphine and Silane used in manufacture of electronic devices. To ensure safety and purity of the process gases, purge assemblies would be incorporated into the system.

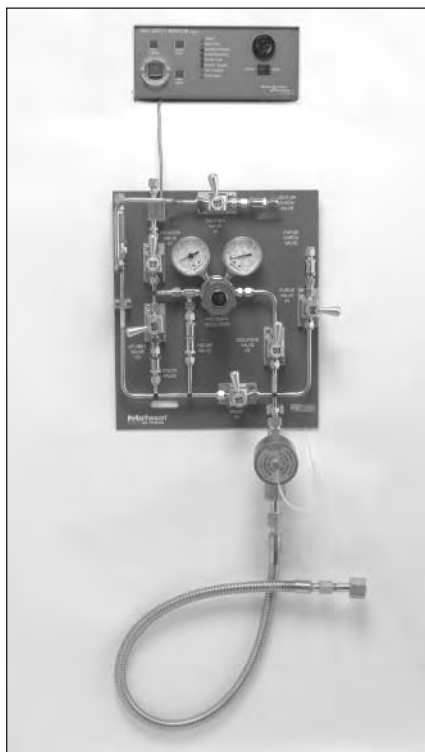
The gas distribution panels and cabinet enclosures are designed for use in hazardous services. It is strongly recommended that only qualified personnel specify and use this equipment. Matheson supplies a detailed instruction manual and in some cases, hands-on training to customers who purchase this equipment. The manuals should be reviewed and training attended by all customer personnel who will use the equipment.

Custom Gas Handling Systems

Matheson is always available to design and construct a customer specific system. We realize that the needs of all customers cannot be accommodated by standard design layouts. Matheson will develop a complete panel and cabinet enclosure system, tailored to meet each customer's individual requirements.



PAN-5000 Series Analytical Grade Gas Distribution Panels



5-valve panel with optional venturi, excess flow switch, ESO, GSM-4

Matheson introduces its new PAN-5000 Series of analytical grade stainless steel gas panels that are designed to safely control and dispense gases, while providing a high level of process purity. . . all at a reasonable cost. The PAN-5000 Series panels feature Matheson components that have a proven track record in analytical laboratories and chemical process industries worldwide. Use of these analytical distribution panels with a Matheson gas cabinet enclosure provides the high level of safety required when handling corrosive, flammable or toxic gases.

PAN-5000 Features

- 1, 3, 5-valve designs meet your purging requirements
- 5-valve panel provides full purging of corrosive, flammable and toxic gases
- Optional venturi provides vacuum evacuation of 5-valve panel during purging
- Front removable components simplify maintenance
- Excess flow, emergency shutoffs and GSM-4 alarm monitor / controller available

Gas Panel Component Descriptions

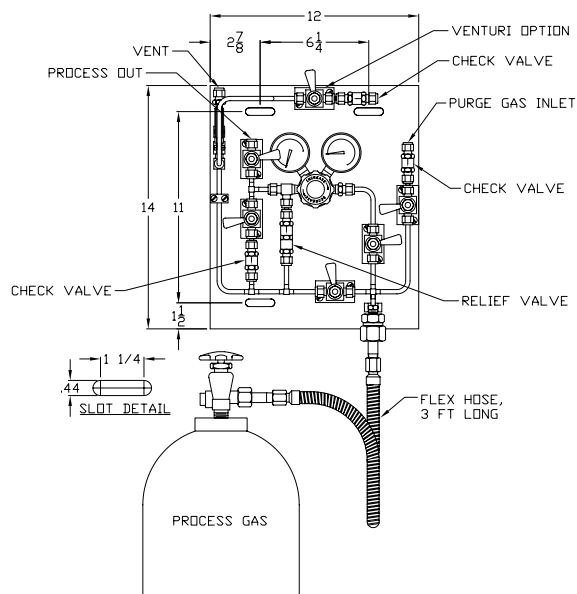
- Valves:** 316 stainless steel body and diaphragm with Kel-F seats for positive shut-off. All valves are mounted firmly to the backplate but are easily removable from the front for maintenance.
- Check Valves:** 316 stainless steel body and poppet with Viton o-rings. Check valves are provided on all vent lines and purge gas inlet lines.

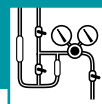
- Pressure Regulators:** 316 stainless steel body and diaphragm with Kel-F seat. Available in standard 0-30 and 0-100 psig pressure ranges to safely reduce cylinder pressure to your system. Other optional pressure ranges are available. Matheson Model 3610A Series stainless steel single stage tied-diaphragm regulators are used.
- Gauges:** 316 stainless steel socket and bourdon tube with dual scale showing pressure in both English and international units.
- Fittings:** All major panel components are fitted with compression or pipe thread connections. Welded microfit joints are used to minimize the number of connections and to ensure high purity.
- Backplate:** Constructed of carbon steel and coated with corrosion resistant paint, the panel has mounting holes for easy installation in your gas cabinet. Mounting hole spacing is consistent with all Matheson LabGas System® products. Panel also has labeling of all panel components to aid in operation of the controls.

- Pigtail / Flexhose Connection to the Cylinder Valve:** Three foot stainless steel braided flexible hose with the appropriate CGA connection for all CGAs except 330 and 660 which come with a rigid stainless steel pigtail.

- CGA Fittings:** 1-valve and 3-valve panels provide an integral check valve in the CGA fittings. The CGA fittings in the 5-valve panels do not have check valves.

- Optional Equipment:** Excess Flow Switch (EFS), Excess Flow Valve (EFV), Emergency Shut Off (ESO), Venturi, GSM-4 Alarm Monitor / Controller





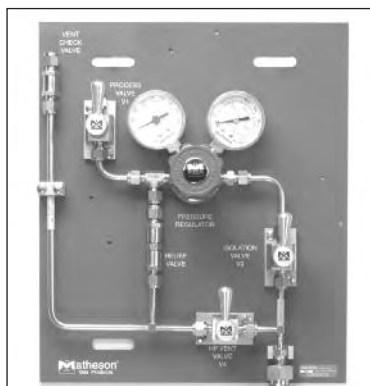
PAN-5000 Series Analytical Grade Gas Distribution Panels *(continued)*

1-Valve Panel Model PAN-5100



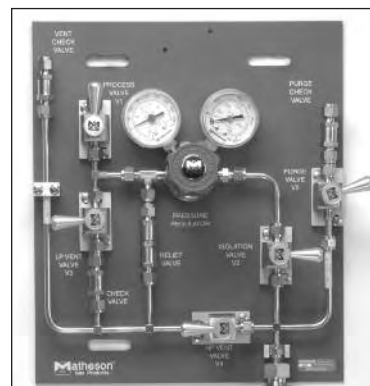
This most basic panel design offers a pressure regulator and process on/off control valve. Connection to the gas supply is conveniently made using a standard stainless steel flexible hose. This panel is recommended when using inert gases with processes that do not require purge capability. Available with CGA 320, 326, 346, 540, 580 or 590. Each CGA contains an integral check valve.

3-Valve Panel Model PAN-5300



The 3-valve panel provides a pressure regulator with both a process on/off control valve and a high pressure vent valve, allowing total isolation of the regulator, as well as the ability to purge contaminants that may have been introduced by changing cylinders. The vent line is protected from back flow by a check valve downstream of the vent valve. This panel is recommended when using non-toxic, non-corrosive, and non-pyrophoric gases with processes that require the additional purity that a high pressure purge is capable of supplying. Available with CGA 320, 326, 350, 510, 540, 580 or 590. Each CGA contains an integral check valve.

5-Valve Panel Model PAN-5500



The 5-valve panel provides all the same features as a 3-valve panel with the addition of a low-pressure vent valve, and adds the safety feature of being able to cycle purge the panel with an inert gas prior to disconnecting the cylinder. This panel provides the safety needed to handle toxic, semi-corrosive and flammable gases. The 5-valve panel is available with an optional venturi for vacuum evacuation of the panel during purging. The 5-valve panel is available with CGA 320, 326, 330, 350, 510, 540, 580, 590 or 660. Unlike the 1- and 3-valve designs, CGA's do not contain integral check valves.

Ordering Information

Model Series	Number of Valves	Delivery Pressure	Venturi Option	CGA	Option Package
PAN —	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	— <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	— <input type="checkbox"/>

MODEL SERIES

5 = PAN-5000 Series

NUMBER OF VALVES

1 = 1-Valve Panel
 3 = 3-Valve Panel
 5 = 5-Valve Panel

DELIVERY PRESSURE

0 = 30 psig
 1 = 100 psig

VENTURI OPTION

0 = No
 1 = Yes (Available on 5-valve panel only)

CGA - Select from the following available CGAs

1-Valve Panel: 320, 326, 346, 540, 580, 590
 3-Valve Panel: 320, 326, 350, 510, 540, 580, 590
 5-Valve Panel: 320, 326, 330, 350, 510, 540, 580, 590, 660

NOTES: 510 CGA *NOT* for acetylene service
 660 CGA *NOT* for ammonia service
 CGA's for 1-valve and 3-valve panels come with integral check valve
 No integral check valve in CGA for 5-valve panel

OPTION PACKAGE

0 = None
 A = Auto Shutdown (EFS, ESO, GSM-4)
 V = Excess Flow Valve
 X = Excess Flow Switch