

VP Series

High Purity, Gas Safe Delivery Panels

VP Series Gas Delivery Panels are manual, high pressure gas distribution systems designed to provide precise and safe delivery of high purity, corrosive, toxic and flammable gases. These panels are ideal for gases used in laboratory or process control where a high level of process purity is required. Each panel can be mounted in a stand alone configuration or in a gas cylinder cabinet which provides the extra safety of hazardous gas containment.

Panel components are selected, built and cleaned to maintain the highest level of purity for all gases utilized. The wetted surfaces are constructed of Type 316 Stainless Steel. The plumbing has been designed using low internal volumes with minimal dead legs to provide ease of purging and reduce contamination potential. Orbital welded joints are used to minimize the number of connections to ensure high purity. Components are installed using compression or pipe thread connections to facilitate replacement if necessary. The stainless steel back-plate has predrilled mounting holes and is silkscreen labeled with component names and identifiers to aid in the operation of the controls.

Five standard panel configurations (see page 75) have been designed to provide versatility to fit most any application requirement. Specially designed panel configurations can be engineered to meet customer provided specifications.



VP Series Panel

Specifications

Maximum Inlet Pressure:

See Part Number Key

Delivery Pressure Range:

See Part Number Key

Delivery Pressure Gauge:

30 psig range:

-30" Hg-0-60 psig / -1-0-4 bar

75 psig range:

-30" Hg-0-100 psig / -1-0-7 bar

150 psig range:

-30" Hg-0-200 psig / -1-0-14 bar

300 psig range:

0-400 psig / 0-27 bar

500 psig range:

0-600 psig / 0-34 bar

Gauge Size: 2" Dial

Operating Temperature Range:

-40°F to 140°F

Flow Coefficient:

Regulator: Cv = 0.06

Diaphragm Valve: Cv = 0.17

Inlet Connection: CGA 296, 320, 326,

330, 346, 350, 510, 540, 580, 590,

660 or 705 as ordered.

Outlet Connections: 1/4" compression

Rigid Pigtail: 36" long, 1/4" OD tubing with

5" ID service loop, providing

a 23" usable length

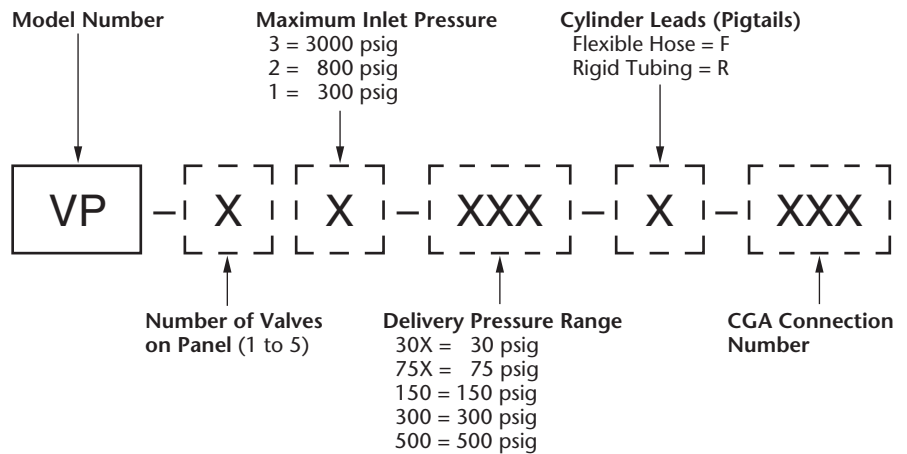
Flexible Hose (all metal): 36" long,

1/4" nominal ID, 0.445" nominal OD

Panel Dimensions:

12" x 14 1/4" x 1/8" (11 gauge)

Part Number Key for VP Series Panels



Materials of Construction

Regulator and Valve(s):

Type 316 Stainless Steel Bar Stock

Gauges: Type 316 Stainless Steel

Regulator Bonnet:

300 Series Stainless Steel

Other Metal Parts Exposed to Gas:

Type 316 Stainless Steel

Seats: PCTFE

Diaphragms: Type 316 Stainless Steel

Seals: PTFE and Viton®

Pigtails:

Rigid: Type 316L Stainless Steel

Flexible Hose: Type 316L SS inner core

with Type 304 SS double overbraid

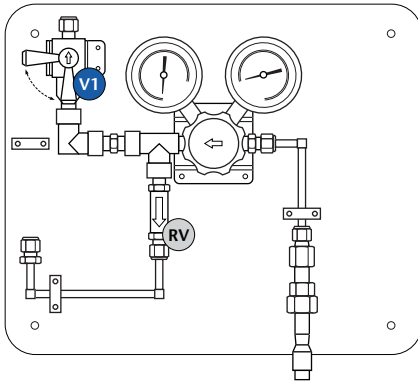
and Type 316L SS end fittings

Panel: Brushed Type 304 Stainless Steel

Ordering Information

To order a VP Series Gas Delivery Panel, complete the part number using the Part Number Key above. For example, to order a 5 valve panel with a regulator having a 3000 psig maximum inlet pressure, 75 psig maximum outlet pressure, and flexible hose with CGA 330 connection, the part number would be VP5-3-75X-F-330. Order by complete part number.

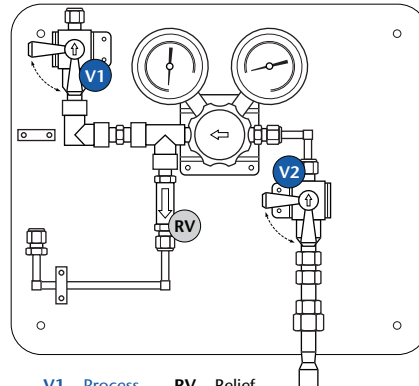
One Valve Panel



V1 – Process RV – Relief

The one valve panel features a pressure regulator, an on/off **process valve (V1)** and a pipe away **relief valve (RV)** providing protection from excess pressure. This panel is designed to control purge or non-corrosive process gases.

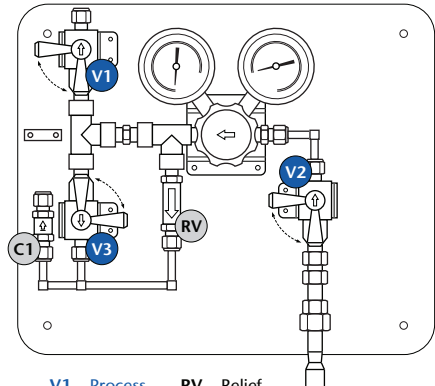
Two Valve Panel



V1 – Process RV – Relief
V2 – Isolation

The two valve panel has the same components as the one valve panel with the addition of a **high pressure inlet isolation valve (V2)**. The two valves allow total isolation of the pressure regulator. This panel is designed for use with non-corrosive gases for processes that do not require purge capability.

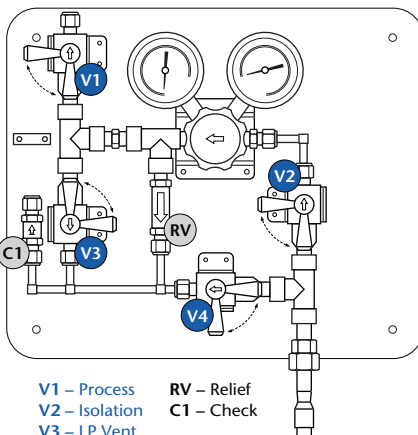
Three Valve Panel



V1 – Process RV – Relief
V2 – Isolation C1 – Check
V3 – LP Vent

The three valve panel incorporates all of the same features of the two valve panel with the addition of a **low pressure vent valve (V3)**. The vent valve is connected to a pipe away vent line protected from back flow by a **check valve (C1)**. The vent valve allows for purging of contaminants that may be introduced during cylinder change-out. This panel is designed for use with non-corrosive gases for processes that require purge capability.

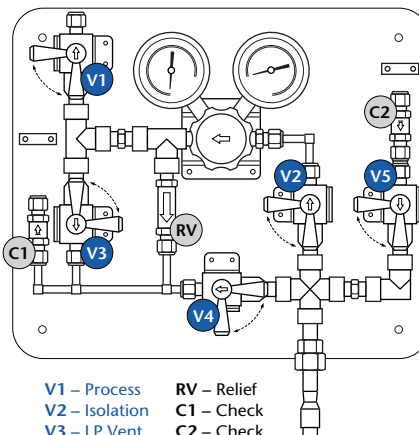
Four Valve Panel



V1 – Process RV – Relief
V2 – Isolation C1 – Check
V3 – LP Vent
V4 – HP Vent

In addition to including the same components as the three valve panel, a **high pressure vent valve (V4)** is added to this panel. This feature utilizes the high pressure process gas to enhance purging after cylinder change-out. This panel is designed for use with non-corrosive gases for processes that require the extra purity obtained with high pressure purging.

Five Valve Panel



V1 – Process RV – Relief
V2 – Isolation C1 – Check
V3 – LP Vent C2 – Check
V4 – HP Vent
V5 – Purge

The five valve panel has the same components as the four valve panel with the addition of a **purge valve (V5)** which connects to a regulated purge gas source. This allows the operator to flush the system with the purge gas to remove atmospheric contamination prior to start-up, before disconnecting an empty cylinder and after a cylinder change. A **check valve (C2)** prevents back flow of gas into the purge line should the purge valve be inadvertently left open. This panel is recommended when using toxic, corrosive and flammable gases.