

# Gas Distribution Valve Panels

## Model 7VP

Scott™ Brand Model 7VP Gas Distribution Panels are manual, high-pressure gas systems designed to provide precise and safe delivery of high-purity, toxic, corrosive 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, on a process rack or in a gas cylinder cabinet that provides extra safety for hazardous gas containment.

The Model 7VP components are selected, built and cleaned to maintain the highest level of purity for all gases utilized. The Model 7VP is designed with limited internal volume to allow for easy and quick purging. This panel incorporates orbital welded joints to minimize the number of connections, ensuring high purity. Other components are installed using compressions or pipe thread connections to facilitate replacement if necessary. The stainless steel back-plate has predrilled mounting holes, and silkscreen labels with component names and identifiers to aid in the operation of the control. Air Liquide offers five standard panel configurations that are versatile to fit most applications. Custom designed panel configurations can be engineered to meet specific applications.

### Benefits/Features

1/4-turn valves allow for easy cycling and provide a visual indication that the valves are opened or closed

Check valves prevent back flow of gas.

Ensures system purity with diaphragm packless valve.

Micro welded fittings reduce leak paths and allow for compact panel design.

### Specifications

**Inlet Pressure:** 3000 psig (207 bar) maximum

**Operating Temperature:** -40°F to 140°F (-40°C to 60°C)

**Flow Coefficient:**  
Regulator: Cv = 0.6  
Diaphragm Valve: Cv = 0.17

**Gauge Size:** 2" face (50.8mm)

**Outlet Connection:** 1/4" Compression

**Flexible Hose (all metal):**  
36" (914.4mm) long  
1/4" (6.35mm) normal ID  
0.445" (11.3mm) normal OD

**Panel Dimensions (H x W x D):**  
12" x 14 1/4" x 1/8" (11 gauge)  
(304.8mm x 362mm x 3.2mm)

### Materials of Construction

**Regulator Body:** 316 Stainless Steel

**Diaphragm:** 316 Stainless Steel

**Seat:** PCTFE

**Seals:** PCTFE

**Regulator Bonnet:** 303 Stainless Steel

**Gauges:** 316 Stainless Steel

**Diaphragm Valve Bodies:**  
316 Stainless Steel

**Seat:** PCTFE



Q7VP53 Panel

**Check Valve Bodies:** 316 Stainless Steel

**Seal:** Viton®

**Relief Valve Body:** 316 Stainless Steel

**Seal:** Viton®

**Pigtails:** 316 Stainless Steel inner core with 304 Stainless Steel double overbraid and 316 Stainless Steel end fittings

**Panel:** Brushed 304 Stainless Steel

### Optional Equipment

Flash arrester

Pressure indicating switch

Gas cabinets

Armored pigtails

Longer pigtail lengths

Safety hose pigtails

Model 7VP	
Model Number	Number of Valves
Q7VP13-(*)-CGA	1
Q7VP23-(*)-CGA	2
Q7VP33-(*)-CGA	3
Q7VP43-(*)-CGA	4
Q7VP53-(*)-CGA	5

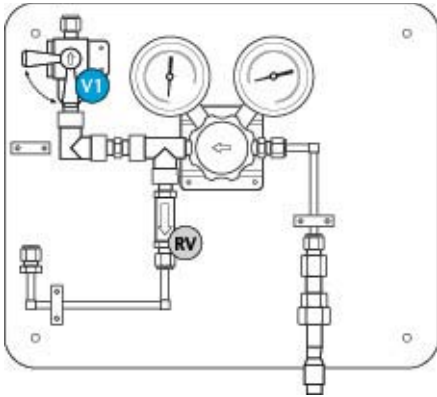
(*) Complete the Model Number	Regulator Delivery Pressure	
	psig	bar
A	1 – 30	0.07 – 2.1
B	2 – 75	0.1 – 5.2
C	5 – 150	0.3 – 10
D	10 – 300	0.7 – 20
E	15 – 500	1 – 35

\* Replace with delivery pressure from opposite table.

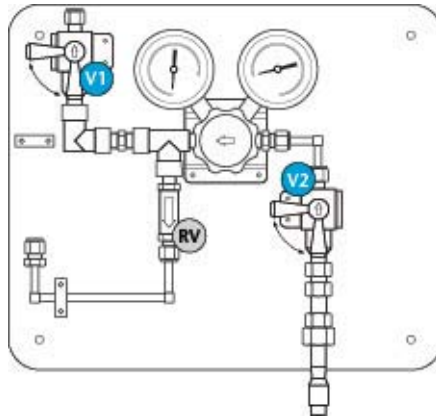
# Gas Distribution Valve Panels (cont'd.)

Model 7VP

**One Valve Panel**



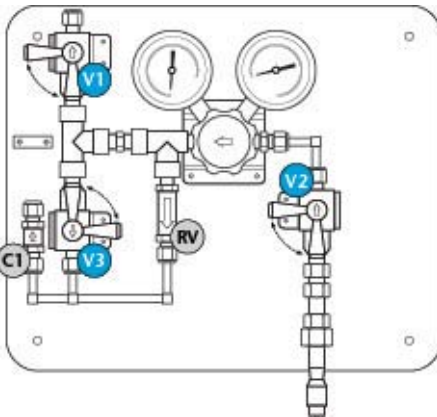
**Two Valve Panel**



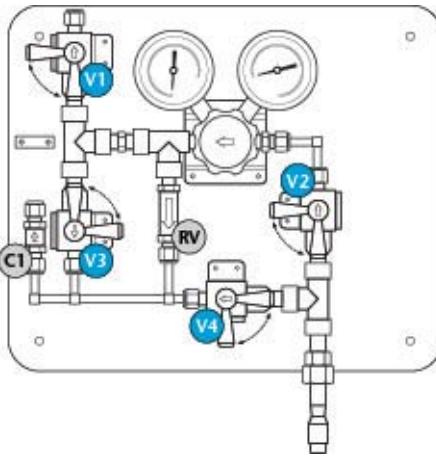
**One Valve Panel** – A single-stage pressure regulator, open/close **process valve (V1)** and a pipe away **relief valve (RV)** provides protection from excess pressure. Designed to control purge gases into another system or noncorrosive process gases.

**Two Valve Panel** – One valve panel with a **high-pressure inlet isolation valve (V2)**. Allows for total isolation of the pressure regulator. Designed for use with noncorrosive gases for processes that do not require purging.

**Three Valve Panel**



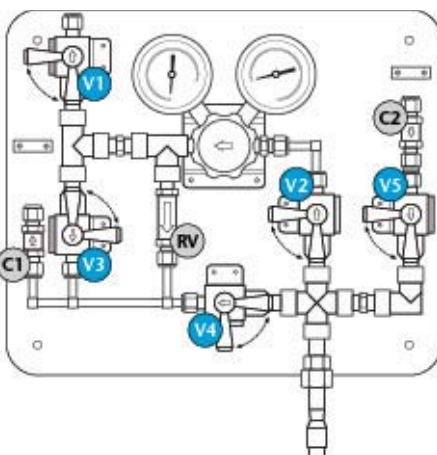
**Four Valve Panel**



**Three Valve Panel** – Two valve panel with a **low pressure vent valve (V3)** connected to a pipe away vent line protected from back flow by a **check valve (C1)**. Allows for purging of contaminants that may be introduced during cylinder change-out. Designed for use with noncorrosive gases for processes that require purge capability.

**Four Valve Panel** – Three valve panel with a **high-pressure vent valve (V4)**. Utilizes the high-pressure process gas to enhance purging after cylinder change-out. Designed for use with noncorrosive gases for processes that require the extra purity obtained with high pressure purging.

**Five Valve Panel**



**Key**  
V1 Process  
V2 Isolation  
V3 Low Pressure Vent  
V4 High-Pressure Vent  
V5 Purge

RV Relief  
C1 Check  
C2 Check

**Five Valve Panel** – Four valve panel with a **purge valve (V5)** connected to a regulated purge gas source. Allows the operator to flush the system with purge gas to remove atmospheric contamination before start-up, disconnecting an empty cylinder, and after cylinder change out. **Check valve (V2)** prevents back flow of the gas into the purge line should the purge valve be inadvertently left open. Recommended when using toxic, corrosive or flammable gases.