

# Flowgrid™ Valve

## 12" Dual Port

Flanged CL 150-600

The **Mooney™** 12" Dual Port V-6 Flowgrid Valve is an economical and easy to maintain pilot operated valve for both gas and liquid applications. The valve can be used with dual pilots for redundant control (acts as two regulators in parallel), but is primarily a large capacity valve that can be maintained by one person. The ports are mounted at 45 degree angles for easy in line maintenance. The low profile and easy in line maintenance makes it ideal for skid mounted, vault, and enclosure installations.

### Specifications

<b>Size</b>	12"
<b>Body Style</b>	Dual Port (12")
<b>End Connections</b>	12" CL 150, 300, 600 Flanged
<b>Temperature</b>	Working -20°F to 150°F Emergency -40°F to 175°F
<b>Max. Operating Differential</b>	800 psi
<b>Max. Emergency Differential</b>	1000 psi
<b>Min. Differential</b>	Refer to graph on page 2
<b>Cracking Differential</b>	Refer to graph on page 2
<b>Max. Inlet Pressure</b>	1480 psig <sup>1</sup>
<b>Outlet Pressure Range</b>	Limited By Pilot
<b>Flow Direction</b>	Bi-Directional <sup>2</sup>
<b>Body Taps</b>	Four 1/4" - 18NPT

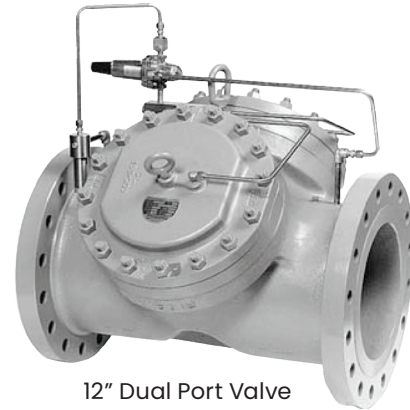
1. Limited by pilot or flange rating

2. Reverse flow by changing pilot connections and reversing spring case

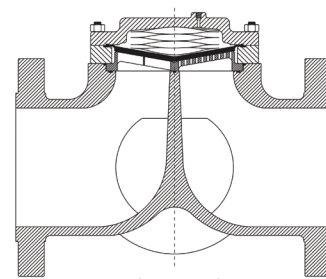
### Materials of Construction

<b>Body and Spring Case</b>	ASTM A 216 GR WCB   Carbon Steel
<b>Throttle Plate</b>	17 - 4PH Stainless Steel
<b>Diaphragm</b>	Nitrile/Nylon <sup>1</sup>
<b>O-Ring and Seals</b>	Nitrile
<b>Bolting</b>	ASTM A 193 GR B7 or Equal
<b>Spring</b>	301 Stainless Steel

1. Refer to diaphragm selection chart on page 2



12" Dual Port Valve  
with Series 20 Pilot



Sectional View

### Overpressure Protection

The Flowgrid Valve is bi-directional and has a full ASME rating on both the inlet and outlet. Overpressure protection is required only if the pressure can exceed the flange or body rating.

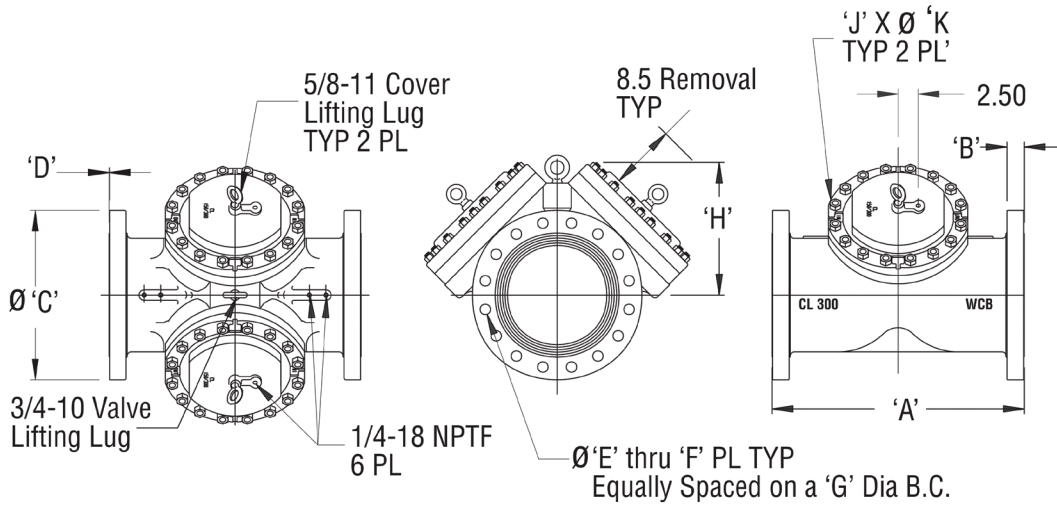
The pilots, like most regulators, may have an outlet pressure rating lower than the inlet pressure rating. If this is the case then some external form of over- pressure protection must be provided for the pilot.

Anytime the Flowgrid valve or pilot system is exposed to pressure in excess of its rating, it should be inspected for damage.

### Stock Numbers

12" Dual Port Valve	Stock Number	Weight
150# Flange	FG-74	1100 lbs.
300# Flange	FG-75	1200 lbs.
600# Flange	FG-81	1400 lbs.

## Dimensions



## Dimensions

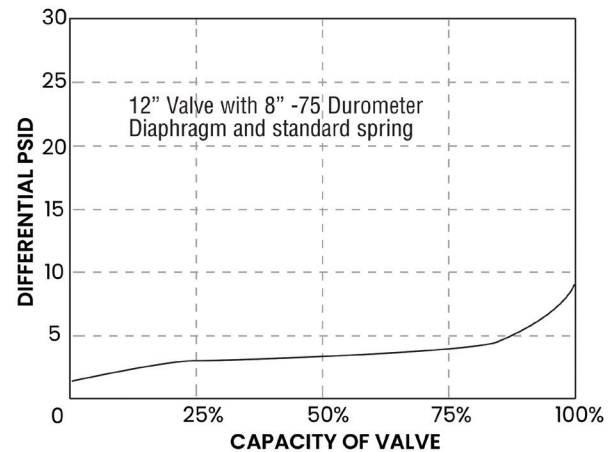
End Connection	A	B	C	D	E	F	G	H	J	K
150# Flange	29.00	1.25	19.00	0.062	1.00	12	17.00	16.50	16	.75 - 10-UNC-2B
300# Flange	30.50	2.00	20.50	0.062	1.25	16	17.75	16.50	16	.75 - 10-UNC-2B
600# Flange	32.25	2.88	22.00	0.250	1.38	20	19.25	17.00	24	.875 - 9-UNC-2B

## Flow Coefficients and Constants

12" Dual Port Valve				Swage Factor	
% Capacity	Cv	C <sub>1</sub>	C <sub>g</sub>	1.5:1	2:1
100%	1060	38	40400	0.97	0.95
75%	1030	30	30400	0.98	0.96
50%	700	29	20000	0.99	0.98
35%	500	28	14200	1.00	1.00

Note: Allow a 5% factor of safety when calculating relief capacity.

## Minimum Pressure Differential vs. Capacity



## Diaphragm Selection

Compound	Temp. Range (°F)	Maximum Differential	Characteristics	Recommended Applications
75 Duro	-20 to 150	1000 psid	Best All Around Material	60 psid to Max. Differential
60 Duro	-25 to 150	300 psid	Best Shutoff at Low Differential Pressure	Low Differential (100 psid or less) or Low Temperature
80 Duro High ACN	-5 to 175	1000 psid	Higher Abrasion and Swelling Resistance	High Differential (400 psid or higher) or Abrasive Conditions with Distillates
80 Duro Low ACN	-20 to 150	1000 psid	Higher Abrasion Resistance and Low Temperature Flexibility	High Differential (400 psid or higher) or Abrasive Conditions at Low Temperatures

**Baker Hughes** 