



**LOWFLOW**  
a division of Jordan Valve

# *Fractional Flow Control Valves & Regulators*

- *Low flow control valves*
- *Heavy duty control valves*
- *High pressure regulators*
- *Self-operated pressure regulators*



## High Pressure LowFlow Control Valves

### Mark 708 Series Fractional Flow Control Valves

A line of pneumatic and electric control valves specifically for fractional flow services. Now standard with the quick change trim for applications requiring frequent trim changes without disturbing the actuator setting (Cv's 0.05 and greater). Inlet pressures up to 5,000 psi (348 bar).

Seat Type	Globe/Needle – Class IV or VI
Sizes	1/4" – 3/4" (DN8 – DN20)
End Connections	Threaded, Socket Weld, Integral Tube, Welded Flanged
Body Materials	Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	0.00001 to 4.0 (0,000009 to 3,4)
Ranges	3-15 or 6-30 psi; split ranges are available with optional positioner



### Mark 708BS Series Bellows Stem Seal

The Mark 708 bellows stem seals eliminate fugitive emissions by surrounding the valve stem with a pressure tight barrier, isolating the stem from the process fluid and preventing leakage to the atmosphere. Inlet pressures up to 1,500 psi (103 bar). Top mount positioner standard.

Seat Type	Globe/Needle – Class IV or VI
Sizes	1/4" – 3/4" (DN8 – DN20)
End Connections	Threaded, Socket Weld, Integral Tube, Welded Flanged
Body Materials	Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	0.00001 to 4.0 (0,000009 to 3,4)
Ranges	3-15 or 6-30 psi; split ranges are available; optional side-mounted positioner



### Mark 708CR Series Cryogenic Bonnet

The Mark 708 for cryogenic service features an extended bonnet that provides protection for the packing and actuator by preventing ice build-up which can interfere with the movement of the valve stem and affect valve performance. Minimum temperature to -425°F (-254°C).

Seat Type	Globe/Needle – Class IV or VI
Sizes	1/4" – 3/4" (DN8 – DN20)
End Connections	Threaded, Socket Weld, Integral Tube, Welded Flanged
Body Materials	Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	0.05 to 4.0 (0,04 to 3,4)
Ranges	3-15 or 6-30 psi; split ranges are available with optional positioner



### Mark 708HT Series with Finned Bonnet

The cooling finned bonnet option is for the protection of the stem packing and actuator from elevated temperatures. Maximum pressure is 3460 psi @ 800°F (238 bar @ 427°C). Top mount positioner standard.

Seat Type	Globe/Needle – Class IV or VI
Sizes	1/4" – 3/4" (DN8 – DN20)
End Connections	Threaded, Socket Weld*, Integral Tube, Welded Flanged* (*1/2" & 3/4" only)
Trim Materials	Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	0.05 to 4.0 (0,04 to 3,4)
Ranges	3-15 or 6-30 psi; split ranges are available; optional side-mounted positioner



## High Pressure LowFlow Control Valves

### Mark 708HP Series High Pressure

The Mark 708HP is manufactured in a variety of materials making it the perfect choice for demanding applications in the Oil & Gas industry including subsea, chemical and refinery pilot plants and R & D facilities. Maximum inlet pressure is 8000 psi. Side mount positioner standard.

Seat Type	Globe/Needle – Class IV
Sizes	1/2" (DN15)
End Connections	Threaded (FNPT), Autoclave, Socket Weld, Butt Weld
Body Materials	Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	0.05 to 1.25 (0,04 to 1,08)
Ranges	3-15 or 6-30 psi; split ranges are available; optional top-mounted positioner



### Mark 708ME Series Motor Valve

The Mark 708ME is a premier control valve for applications involving chemical injection, dosing, pilot plants and research labs. It offers several advantages including extreme accuracy, high turndown ratios, and repeatability. Area protection class is IP65.

Seat Type	Globe/ Needle - Class IV or VI
Sizes	1/4" - 3/4" (DN8 - DN20)
End Connections	Threaded, Socket Weld, Inegral Tube, Welded Flanged
Body Materials	Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	0.00001 to 4.0 (0,000009 to 3,4)
Command Signals	Current or Voltage Command, On/Off



### Mark 708MV Series Motor Valve

The Mark 708MV is a premier control valve for applications involving chemical injection, dosing, pilot plants and research labs. It offers several advantages including extreme accuracy, high turndown ratios, and repeatability.

Seat Type	Globe/Needle – Class IV or VI
Sizes	1/4" – 3/4" (DN8 – DN20)
End Connections	Threaded, Socket Weld, Integral Tube, Welded Flanged
Body Materials	Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	0.00001 to 4.0 (0,000009 to 3,4)
Command Signals	Current or Voltage Command, On/Off



### Mark 709 Series Three Way Fractional Flow Control Valves

The Mark 709 is a lightweight control valve for use as a mixing valve in low flow process applications. Featuring a three-way body design, it is constructed with two inlets to blend two separate flow streams into a common outlet, creating a third fluid.

Seat Type	Globe/Needle – Class IV or VI
Sizes	1/2" & 3/4" (DN15 & DN20)
End Connections	Threaded, Socket Weld, Flanged
Trim Materials	Carbon Steel, Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	1.25 to 4.0 (1,06 to 3,4)
Ranges	3-15 or 6-30 psi; split ranges are available with optional positioner



## High Pressure LowFlow Control Valves

### Mark 8000 Series

The Mark 8000 is a group of heavy-duty control valves specifically designed for process applications requiring full flow or fractional flow control. The valve subassembly is manufactured completely from barstock. Inlet pressures up to 6,000 psi (414 bar).

Seat Type	Globe or Angle – Class III, IV or VI
Sizes	1/2" – 2" (DN15 – DN50)
End Connections	Threaded, Socket Weld, Flanged, Butt Weld
Body Materials	Carbon Steel, Stainless Steel, Brass, Hastelloy C, PVC, Kynar, others
Cv (Kv)	0.05 to 17 (0,04 to 14,5)
Ranges	3-15 or 6-30 psi; split ranges are available with optional positioner



### Mark 8000BS Series Bellows Stem Seal

Bellows stem seals eliminate fugitive emissions by surrounding the valve stem with a pressure-tight barrier, isolating the stem from the process fluid and preventing leakage to the atmosphere. Inlet pressures up to 1,500 psi (103 bar).

Seat Type	Globe – Class III, IV or VI
Sizes	1/2" & 3/4" (DN15 & DN20)
End Connections	Threaded, Socket Weld, Flanged, Butt Weld
Body Materials	Carbon Steel, Stainless Steel, Brass, Hastelloy C, others
Cv (Kv)	0.05 to 3.0 (0,4 to 2,6)
Ranges	3-15 or 6-30 psi; positioner recommended, split ranges available w/ pos.



### Mark 8000CR Series Cryogenic Option

The cryogenic option offers a bonnet extension that provides protection for the packing and actuator by preventing the formation and build-up of ice, which can interfere with movement of the valve stem and affect valve performance. Minimum temperature to -425°F (-254°C).

Seat Type	Globe – Class III, IV or VI
Sizes	1/2" – 2" (DN15 – DN50)
End Connections	Threaded, Socket Weld, Flanged, Butt Weld
Body Materials	Carbon Steel, Stainless Steel, Brass, Hastelloy C, others
Cv (Kv)	0.05 to 17 (0,04 to 14,5)
Ranges	3-15 or 6-30 psi; split ranges are available with optional positioner



### Mark 8000T Series Three Way Body

The three-way Mark 8000 can be specified for use on mixing or diverting services. Uses include mixing two separate flow sources into one common line or diverging a single flow path into two separate streams. Inlet pressures up to 6,000 psi (414 bar).

Seat Type	Globe – Class III, IV or VI
Sizes	1/2" – 1" (DN15 – DN25)
End Connections	Threaded, Flanged, Socket Weld
Body Materials	Carbon Steel, Stainless Steel, Brass, Hastelloy C, others
Cv (Kv)	0.2 to 6.0 (0,17 to 5,1)
Ranges	3-15 or 6-30 psi; split ranges are available with optional positioner



## Pressure Regulators

### JR Series

The JR Series have the ability to handle very high pressures and very low flows. Typically used in research and sampling systems for corrosive and specialty gases. Typical applications include gas chromatography and flame ionization detectors. Inlet pressures up to 4000 psi. An air loaded version is available.

Seat Type	PTFE, PEEK, KEL-F
Sizes	1/4", 3/8", 1/2" (DN8, DN10, DN15)
End Connections	Threaded, Socket Weld, Flanged, others
Body Materials	316L Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	0.012, 0.03, 0.08, 0.3, (0,01, 0,026, 0,07, 0,17)
Spring Range	up to 750 psi (up to 52 bar)



### JRLL/ JRHL

The JRLL/ JRHL Series are low flow pressure regulators that have the ability to handle low set pressures and very low flows with less offset than valves with smaller diaphragms.

Seat Type	PTFE, PEEK, KEL-F
Sizes	1/4", 3/8", 1/2", 3/4" (DN8, DN10, DN15, DN20)
End Connections	NPT, Socket Weld, others
Body Materials	ASTM A479 316L SST, others
Cv (Kv)	0.012, 0.03, 0.08, 0.20, 0.5, 0.8 (0,010, 0,026, 0,07, 0,17, 0,43, 0,69)
Spring Range	1-75 psi (0,07- 5,2 bar) and 25-100 psi (1,7- 6,9 bar)



### JRH Series

The JRH Series have the ability to handle very high pressures and very low flows. The Jorlon diaphragm contributes to extremely long service life by greatly reducing or eliminating diaphragm failure.

Seat Type	KEL-F/ Viton
Sizes	3/8", 1/2" (DN10, DN15)
End Connections	Threaded, Socket Weld, Flanged, others
Body Materials	316L Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	0.8 (0,69)
Spring Range	2-10 psi (0,14- 0,69 bar) to 75-450 psi (5,2- 31 bar)



### JRHF Series

The JRHF is a high-flow, diaphragm operated, balanced trim regulator.

Seat Type	PTFE, PEEK
Sizes	1/2", 3/4", 1" (DN15, DN20, DN25)
End Connections	Threaded, Socket Weld, Flanged, others
Body Materials	316L Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	1/2" 1.5 (1,3); 3/4"-1" 1.9 (1,6)
Spring Range	up to 150 psi (10 bar)



## Pressure Regulators/ High Pressure Filters

### 1/4" JRPH/ JRPL Series

The 1/4" JRPH are piston operated pressure reducing valves with high pressure capability and ANSI Class VI shutoff.

Seat Type	PEEK, KEL-F
Sizes	1/4" (DN8)
End Connections	Threaded, Socket Weld, Flanged, others
Body Materials	316L Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	0.012, 0.03, 0.07, 0.2 (0,01, 0,026, 0,06, 0,17)
Spring Range	Up to 9135 psi (630 bar)



### JRPH/ JRPL Series

The JRPH/ JRPL Series are piston operated, balanced trim pressure regulators with a 2.1 Cv and soft seats for ANSI Class VI shutoff.

Seat Type	KEL-F
Sizes	1/2", 3/4", 1" (DN15, DN20, DN25)
End Connections	Threaded, Socket Weld, Flanged, Others
Body Materials	316L Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	2.1 (1,81)
Spring Range	up to 5800 psi (up to 400 bar)



### Mark 6800HP Series

A line of self-operated pressure regulating valves for use on high pressure industrial gas and liquid services to 3,800 psi (262 bar). The 6800HP features a balanced piston design for excellent stability even in high pressure drop situations.

Seat Type	Stellite, Vespel, Teflon
Sizes	1/2", 3/4", 1" (DN15, DN20, DN25)
End Connections	Threaded, Socket Weld, Flanged
Body Materials	316L Stainless Steel, Hastelloy C, Alloy 20, others
Cv (Kv)	0.5, 1.0, 2.5, (0,4, 0,86, 2,1)
Setpoints	250 - 3000 psi (17,2 - 207 bar)



### J Series Filters

J Series Filters provide filtration of particulates in gas and liquid systems prior to pressure or flow components. J Series Filters utilize a pleated, 10 micron filter in 304 Stainless Steel for maximum contaminant control. Cleanable and replaceable elements provide long life and reduced operating costs.

Sizes	1/4" to 1"
End Connections	Female and Male NPT
Body Materials	303 Stainless Steel, 17-4 Stainless Steel
Operating Temperature	-320°F to 550°F (-196°C to 288°C)
Maximum Rated Optimum Pressure	3,000 - 10,000 psig (207 - 690 bar)
Design Maximum Proof Pressure	4,500 - 15,000 psig (310 - 1034 bar)



## Back Pressure Regulators

### JB Series

The JB Series back pressure regulating valves have the ability to handle very high pressures and very low flows. Top entry design facilitates in-line cleaning and maintenance.

Seat Type	PEEK, KEL-F
Sizes	1/4", 3/8", 1/2" (DN8, DN10, DN15)
End Connections	Threaded, Socket Weld, Flanged, others
Body Materials	316L Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	0.05, 0.15, 0.25, 0.35 (0,043, 0,13, 0,22, 0,30)
Spring Range	up to 750 psi (up to 52 bar)



### JBDL Series

The JBDL Series are high Cv diaphragm sensed back pressure regulators. The most common applications are fuels, water, acids, liquids and gases.

Seat Type	KEL-F
Sizes	1/2" (DN15)
End Connections	Threaded, Socket Weld, Flanged, others
Body Materials	316L Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	1.95 (1,66)
Spring Range	up to 400 psi (up to 28 bar)



### JBPH

The JBPH Series are spring operated, piston sensed back pressure regulating valves capable of set pressures up to 5,800 psi with ANSI Class VI shutoff.

Seat Type	KEL-F
Sizes	1/2", 3/4", 1" (DN15, DN20, DN25)
End Connections	Threaded, Socket Weld, Flanged, others
Body Materials	316L Stainless Steel, Hastelloy C, Monel Alloy 20, others
Cv (Kv)	0.5 (0,43)
Spring Range	Up to 5,800 psi (400 bar)



### Mark 5800HP/ Mark 5850 Series

The Mark 5800HP/ Mark 5850HP Series are high pressure, back pressure regulators designed to maintain upstream pressure of gases and liquids. As lightweight products, both are well suited for applications where space and weight are at a premium. Inlet pressures up to 5000 psi (345 bar).

Seat Type	Teflon (standard), PEEK, Delrin
Sizes	1/2", 3/4", 1" (DN15, DN20, DN25)
End Connections	Threaded, Socket Weld, Flanged
Body Materials	316L Stainless Steel, Hastelloy C, Monel, Alloy 20, others
Cv (Kv)	0.4, 1.0 (0,34, 0,86)
Spring Range	400 - 5000 psi (27,6 - 345 bar)



To learn more about LowFlow Valve products and  
to find the name of a local representative visit:  
[www.lowflowvalve.com](http://www.lowflowvalve.com)



A Division of Jordan Valve  
3170 Wasson Road  
Cincinnati, OH 45209 USA

toll free. 800.543.7311  
local. 513.533.5600  
fax. 513.871.0105

email. [lowflow@richardsind.com](mailto:lowflow@richardsind.com)  
website. [www.lowflowvalve.com](http://www.lowflowvalve.com)