

# JRPH/JRPL Series

## Pressure Reducing Valves

### PRESSURE REDUCING VALVE

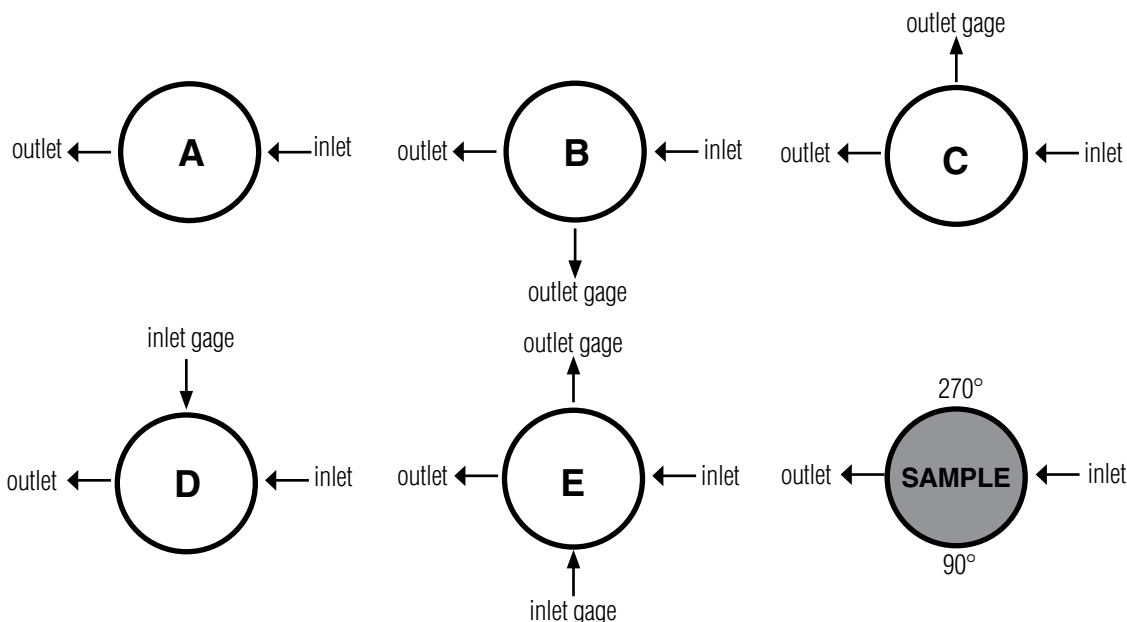
The LowFlow JRPH Series and JRPL Series are piston operated, balanced trim pressure regulators with high Cv's and KEL-F soft seat for ANSI Class VI shutoff. There are three set ranges for each model. Elastomer seals are used throughout with Buna-N, EPDM, and Viton being standard options, along with matching back up seals. These valves are designed to regulate a variety of gases, water, acids and oils.

#### Features:

- All wetted materials are 316L Stainless Steel. Other materials available on application
- Soft Kel-F seat provides ANSI Class VI shutoff
- Piston sensing for better regulation at higher pressures
- Balanced trim design allows for higher flows



### JRPH & JRPL SERIES FLOW CONFIGURATIONS



#### Top View

Gage ports are 1/4" FNPT; Consult factory for other porting options

**JRPH SERIES SPECIFICATIONS**

**Line Size:** 1/2", 3/4" & 1" (DN15, DN20 & DN25)

**Materials**

- Body & Trim: SS 316L
- Spring Housing: SS 316L
- Seat Insert: KEL-F
- Body Seals: Elastomer o-rings (Buna-N, EPDM, Viton) with back up rings

**Inlet Pressure:** 5800 psi (400 bar)

**Spring Ranges:**

- Black: 0 – 2150 psi (0 – 148 bar)
- Orange: 0 - 4060 psi (0 - 280 bar)
- Green: 0 - 5800 psi (0 - 400 bar)

**Seat Diameter:** 0.40" (10mm)

**Maximum Operating Pressure:** 5,800 psi max inlet @ 100°F / 3,000 psi max ΔP (400 bar max inlet @ 38°C / 207 bar max ΔP)

**Maximum Operating Temperature:** 4,800 psi max inlet @ 250°F (331 bar max inlet @ 121°C)

**End Connections**

- Threaded Ends – FNPT or BSPP
- Socketweld
- Buttweld

**Gauge Port:** 1/4" NPT

**Temperature Range:** -29°F to +250°F (-20°C to +120°C) - actual range depends on choice of seal materials

**Shutoff:** Class VI

**Flow Capacity:** Cv 2.1 (1,81 Kv)

**Optional Cleaning:** For oxygen service, oil free service

**Options**

- Panel Mounting
- Captured Vent
- Locking Wire
- Tamper Proof
- Lockout Device

**JRPL SERIES SPECIFICATIONS**

**Line Size:** 1/2", 3/4" & 1" (DN15, DN20 & DN25)

**Materials**

- Body & Trim: SS 316L
- Spring Housing: SS 316L
- Seat Insert: KEL-F
- Body Seals: Elastomer o-rings (Buna-N, EPDM, Viton) with back up rings

**Inlet Pressure:** 5800 psi (400 bar)

**Spring Ranges:**

- Silver: 0 – 275 psi (0 – 19 bar)
- Beige: 0 – 400 psi (0 – 28 bar)
- Purple: 0 - 580 psi (0 - 40 bar)
- Black: 0 - 1160 psi (0 - 80 bar)

**Seat Diameter:** 0.40" (10mm)

**Maximum Operating Pressure:** 5,800 psi max inlet @ 100°F / 3,000 psi max ΔP (400 bar max inlet @ 38°C / 207 bar max ΔP)

**Maximum Operating Temperature:** 4,800 psi max inlet @ 250°F (331 bar max inlet @ 121°C)

**End Connections**

- Threaded Ends – FNPT or BSPP
- Socketweld
- Buttweld

**Gauge Port:** 1/4" NPT

**Temperature Range:** -29°F to +250°F (-20°C to +120°C) - actual range depends on choice of seal materials

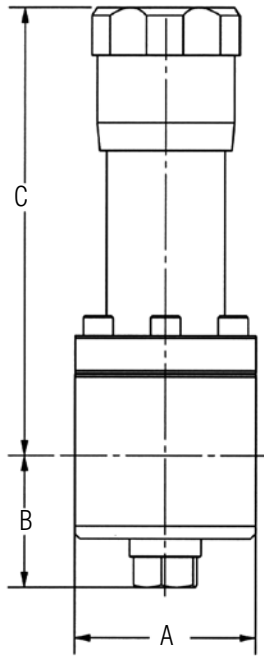
**Shutoff:** Class VI

**Flow Capacity:** Cv 2.1 (1,81 Kv)

**Optional Cleaning:** For oxygen service, oil free service

**Options**

- Panel Mounting
- Captured Vent
- Locking Wire
- Tamper Proof
- Lockout Device

**JRPH & JRPL DIMENSIONS**


VALVE SIZE	DIMENSIONS, INCHES			WEIGHT, LBS
	A	B	C	
1/2"	2.8	2.1	7.5	7.7
3/4"	3.2	1.8	7.5	9.9
1	3.2	1.8	7.5	9.9

VALVE SIZE	DIMENSIONS, MM			WEIGHT, KGS
	A	B	C	
DN15	71	53	191	3,5
DN20	81	46	191	4,5
DN25	81	46	191	4,5

**OPTION & DEFINITION**

**Panel Mount** The panel mount feature utilizes a threaded spring housing and a panel mount ring to secure the regulator to an instrument panel. This option requires a 2" panel cut out.

**Captured Vent** The captured vent design provides maximum safety for the user when handling toxic or hazardous media. It features a 1/8" FNPT port located on the spring housing. The user can easily tube this vent to a safe location. This option can be incorporated into a self-relieving regulator that provides an additional port to permit the safe expulsion of hazardous media.

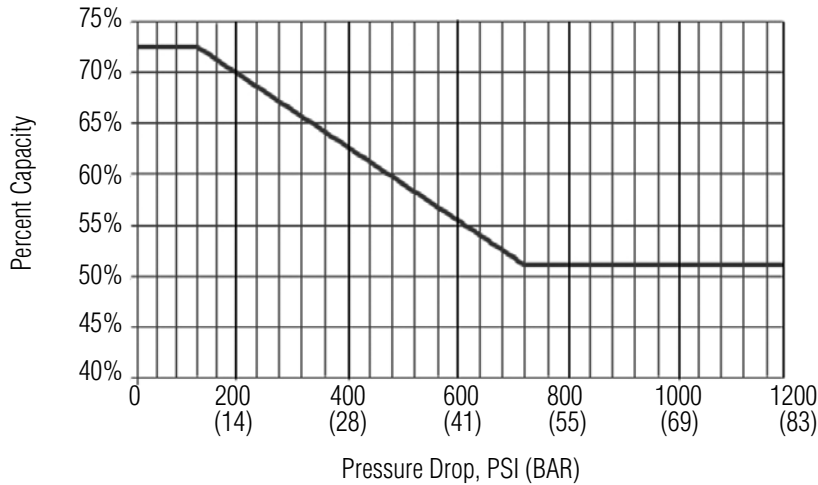
**Self Relieving** The self relieving option is used for internal venting of downstream pressure. From a practical standpoint, it allows for immediate reduction in pressure setpoints and automatically alleviates regulator lock up.

**Locking Wire** The locking wire option utilizes a lead sealed metal wire to physically hold the adjusting screw in place to prevent any unwanted set point changes.

**Tamper Proof** The tamper proof option replaces the standard adjusting knob with a stainless steel acorn nut.

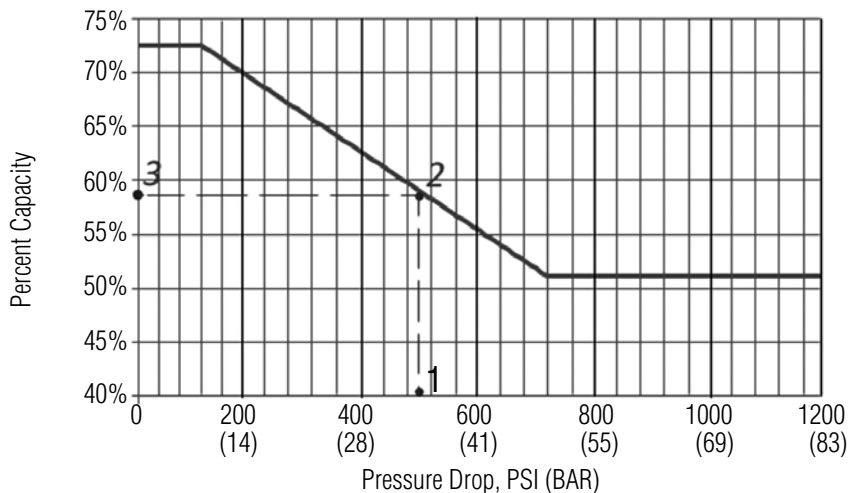
**Lockout Device** The lockout device is a 2 piece polypropylene enclosure which encapsulates the adjustment knob and prevents unwanted set point changes. The part number required for this valve is 26971. (Lock not included)

**JRPH & JRPL SERIES SIZING**



**SIZING**

1. Find the pressure drop on the X-axis
2. Draw a line, parallel with the Y-axis to the point where it intersects the curve on the graph
3. Draw a line, parallel with the X-axis to the Y-axis. This will determine the percent capacity that will work with the pressure drop.
4. Check JVCV (Jordan Valve Control Sizing Program) to verify percent capacity is not exceeded
5. Note: From 720 psi (50 bar) pressure drop to maximum pressure drop (3000 psi / 207 bar) use 51% capacity



**EXAMPLE**

Methane gas, ambient temperature, P1 - 1400 psi, P2=900 psi, 3/4" schedule 40 pipe, flow rate 50,000 SCFH

1. Pressure drop of 500 psi.
2. Draw a line, parallel with the Y-axis to the point where it intersects the curve on the graph
3. Draw a line, parallel with the X-axis to the Y-axis. This will determine the percent capacity that will work with the pressure drop. The percent capacity you can use is 58% of the rated Cv.
4. Input the process conditions into the JVCV sizing program. Using the conditions in this example, a 3/4" JRPL with 0 - 1160 range spring will be 43% open, lower than the 58% capacity based on the pressure drop.

**JRPL SERIES ORDERING SCHEMATIC**

Model	Size	Material	1 & 2	3 & 4	5 & 6	7 & 8	9 & 10	11 & 12	13 & 14	15	16	17
—	—	—	—	—	—	—	—	—	—	—	—	—

Model	
JRPL	Low Range

Size	
050	1/2" (DN15)
075	3/4" (DN20)
100	1" (DN25)

Material	
6L	Stainless Steel 316L

1 & 2	Body Feature		
End Connection	Port Configuration		
C	FNPT 1/2"	A	Port "A"
D	FNPT 3/4"	B	Port "B"
E	FNPT 1"	C	Port "C"
F	BSPP 1/2"	D	Port "D"
G	BSPP 3/4"	E	Port "E"
H	BSPP 1"		
ZZ	Non-Standard		

3 & 4	Trim	
BB	Buna-N	
EE	EPDM	
VV	Viton	
ZZ	Non-Standard	

5 & 6	Seat	
K5	KEL-F Cv 2.1 (1,81 Kv)	
ZZ	Non-Standard	

7 & 8	Range Spring/Outlet Pressure	
EC	0 - 275 psi (0-19 bar) (silver)	
E1	0 - 400 psi (0 - 28 bar) (beige)	
E2	0 - 580 psi (0 - 40 bar) (purple)	
E3	0 - 1160 psi (0 - 80 bar) (black)	
ZZ	Non-Standard	

9 & 10	Diaphragm	
00	None	

11 & 12	Actuator	
SK	Standard	
CV	Captured Vent	
PM	Panel Mount	
ZZ	Non-Standard	

13 & 14	Inlet Gauge	
FF	0 - 300 PSIG/BAR (Dual)	
GG	0 - 400 PSIG/BAR (DUAL)	
HH	0 - 600 PSIG/BAR (Dual)	
JJ	0 - 1000 PSIG /BAR (Dual)	
KK	0 - 2000 PSIG/BAR (Dual)	
LL	0 - 3000 PSIG/BAR (Dual)	
MM	0 - 5000 PSIG/BAR (Dual)	
NN	None	
ZZ	Non-Standard	

15	Outlet Gauge	
E	0 - 200 PSIG/BAR (Dual)	
F	0 - 300 PSIG/BAR (DUAL)	
G	0 - 400 PSIG/BAR (Dual)	
H	0 - 600 PSIG /BAR (Dual)	
J	0 - 1000 PSIG/BAR (Dual)	
K	0 - 2000 PSIG/BAR (Dual)	
N	None	
Z	Non-Standard	

16	SEP Compliance	
G	SEP Compliant	
0	None	
Z	Non-Standard	

17	Accessories	
A	Captured Vent Preset with Anti-Tamper*	
B	Standard Preset with Anti-Tamper*	
C	Panel Mount Preset with Anti-Tamper*	
S	Clean for Oil Free**	
X	Clean for Oxygen**	
0	None	
Z	Non-Standard	

\* Specify pressure at order entry

\*\* Consult factory for compatible gauge options

**JRPH SERIES ORDERING SCHEMATIC**

Model	Size	Material	1 & 2	3 & 4	5 & 6	7 & 8	9 & 10	11 & 12	13 & 14	15	16	17
—	—	—										

Model	
JRPH	High Range

Size	
050	1/2" (DN15)
075	3/4" (DN20)
100	1" (DN25)

Material	
6L	Stainless Steel 316L

1 & 2		Body Feature	
End Connection		Port Configuration	
C	FNPT 1/2"	A	Port "A"
D	FNPT 3/4"	B	Port "B"
E	FNPT 1"	C	Port "C"
F	BSPP 1/2"	D	Port "D"
G	BSPP 3/4"	E	Port "E"
H	BSPP 1"		
ZZ	Non-Standard		

3 & 4		Trim	
BB		Buna-N	
EE		EPDM	
VV		Viton	
ZZ		Non-Standard	

5 & 6		Seat	
K5		KEL-F Cv 2.1 (1,81 Kv)	
ZZ		Non-Standard	

7 & 8		Range Spring/Outlet Pressure	
H3		0 - 2500 psi (0 - 175 bar) (black)	
H4		0 - 2150 psi (0 - 148 bar) (black)	
H5		0 - 4060 psi (0 - 280 bar) (orange)	
H6		0 - 5800 psi (0 - 400 bar) (green)	
ZZ		Non-Standard	

9 & 10		Diaphragm	
00		None	

11 & 12		Actuator	
SK		Standard	
CF		Captured Dome	
CV		Captured Vent	
PM		Panel Mount	
ZZ		Non-Standard	

13 & 14		Inlet Gauge	
LL		0 - 3000 PSIG/BAR (Dual)	
MM		0 - 5000 PSIG/BAR (DUAL)	
PP		0 - 10000 PSIG/BAR (Dual)	
NN		None	
ZZ		Non-Standard	

15		Outlet Gauge	
K		0 - 2000 PSIG/BAR (Dual)	
L		0 - 3000 PSIG/BAR (DUAL)	
M		0 - 5000 PSIG/BAR (Dual)	
P		0 - 10000 PSIG /BAR (Dual)	
N		None	
Z		Non-Standard	

16		SEP Compliance	
G		SEP Compliant	
0		None	
Z		Non-Standard	

17		Accessories	
A		Captured Vent Preset with Anti-Tamper*	
B		Standard Preset with Anti-Tamper*	
C		Panel Mount Preset with Anti-Tamper*	
F		Captured Dome Preset with Anti Tamper*	
S		Clean for Oil Free**	
X		Clean for Oxygen**	
0		None	
Z		Non-Standard	

\* Specify pressure at order entry

\*\* Consult factory for compatible gauge options

LowFlow Valve reserves the right to make revisions to its product, specifications, literature and related information without notice. Please visit our website at [www.lowflowvalve.com](http://www.lowflowvalve.com) for the latest information on our products.