JSRLP Series

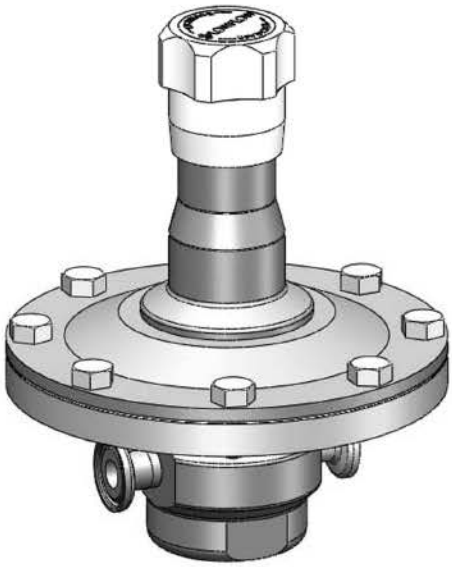
Low Pressure Reducing Valves for Bio-Pharm Gas Applications

New Option!
EPDM seat for low lockup and tight shutoff on no flow or deadhead blanketing applications

JSRLP is a high purity gas low pressure regulator designed and built specifically for hygienic, ASME BPE gas applications.

The JSRLP has been designed specifically for low pressure clean gas regulation in Stainless and Single use disposable applications. Whether it's precise regulation for sparging, blanketing, motive force, or SUD bag inflation, the JSRLP was built for the job!

The durable valve body and metal trim components are machined from ASTMA479 316L SST barstock and finished to ASME BPE SF5 (20Ra micro-inch, electropolished) standard. The valve is outfitted with a thin Jorlon diaphragm and Teflon, PEEK, or EPDM seats and seals that are all FDA approved, USP Class VI compliant materials. These materials of construction enable JSRLP to withstand the rigors of an autoclave if required. The EPDM seat reduces lockup to less than 0.5 psig on this model.



Features

- No exposed threaded connections below diaphragm
- In-line removable seat and trim facilitate cleaning and routine maintenance
- Barstock construction guarantees material integrity and surface finish
- Very low lockup with EPDM seat material
- High rangeability and relatively low set point offset lessens the need for reduced trim sizes
- Minimized internal volume
- Proprietary Jorlon diaphragm material provides exceptionally long life and Autoclave capability
- Soft seat material for ANSI Class VI shutoff

Documentation

The following documentation is shipped at no charge:

- Steriflow Unicert, a QC signed Certificate of Compliance for:
  - Material, listing heat numbers with attached MTR's
  - Surface Finish
  - FDA/USP Class VI - for all thermoplastic and elastomers
- Traceability:
  - Each individual product serial number is traceable to the Unicert serial number, heat numbers and attached MTR's

Other documents must be requested at time of RFQ, or order:

- ADI/TSE Free, Certified Test reports, Certificate of Origin.

Applications

Ideal for clean gases used in bio-pharmaceutical, and pharmaceutical process.

Designed specifically for low pressure control on traditional Stainless Steel and Single Use Disposable installations such as: Air or gas overlay, pressure filling, Lyophilization, sparging, or SUD bag inflation.

Clean Filter Air
Nitrogen
Carbon Dioxide
Argon
Oxygen
Custom purge or blanket gas

NOTE: Though not drainable in any installation orientation, this valve can be used on clean steam or non-cavitating liquids with Steriflow engineering application approval.

STERIFLOW
a division of Jordan Valve

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Specifications

Sizes: 1/2" (DN15) & 3/4" (DN20)

End Connections: ASME BPE, DIN, ISO Tri-clamp, or Tube Weld end; NPT

Gauge Ports: 1/4" FNPT is standard. Contact Factory for Tri-Clamp, VCR, or other alternatives.

Soft Seat Materials for ANSI Class VI Shut-Off:

- PTFE to +252°F (122°C) continuous or 275°F (135°C) intermittent [not to exceed 15 min. in a one hour period] FDA, USP Class VI
- PEEK to +350°F (176,7°C) FDA, USP Class VI
- EPDM to +300°F (150°C) FDA, USP Class VI*

Body Material: 316L SST

Diaphragm Material: Thin Jorlon FDA, USP Class VI

Maximum Inlet Pressure: 150 psig (10,5 bar)

Optional Cleaning Specifications

- Clean for Oil-Free
- O2 Cleaning complying with ASTM G93-03 2011 and CGA G-4.1-2009

Spring Ranges: 1-5 psi (0,07-0,3 bar); 5-15 psi (0,3-1,0 bar); 15-25 psi (1,0-1,7 bar); 25-50 psi (1,7-3,4 bar)

* Suggested for low lockup and tight shutoff on no flow or deadhead blanketing applications.

Flow Characteristics:

- High Flow: Trim Cv 0.8;
  Cv for relief valve sizing is 1.9
- Low Flow: Trim Cv 0.5;
  Cv for relief valve sizing is 0.6

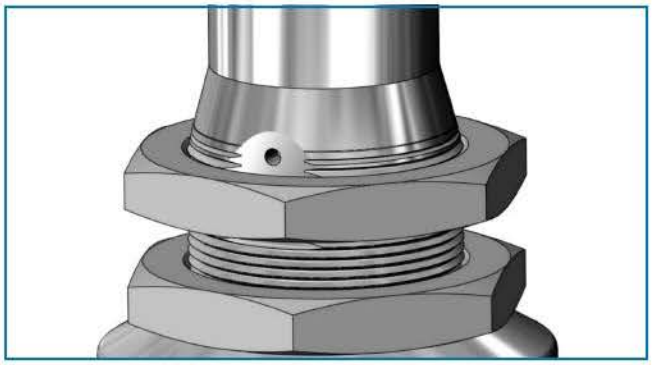
Surface Finish:

- Wetted Internal surface finish: Mechanically polished, and electropolished to ASME BPE SF5, 20 Ra µin (0.5 Ra µm) as standard
- Exterior surface finish: Mechanically polished, and electropolished to 40 Ra µin (1.0 Ra µm) as standard
- Other finishes available upon request

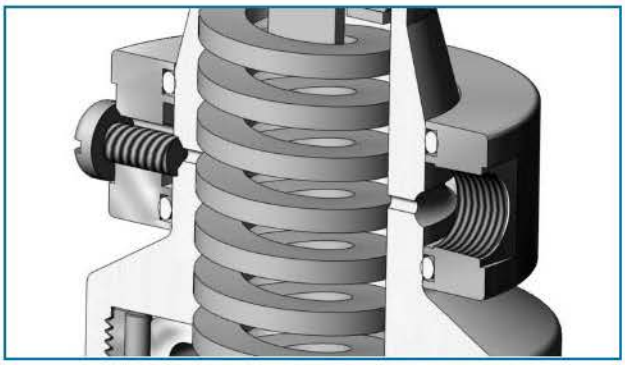
Options:

- Panel Mounting
- Captured Vent
- Self Relieving
- Gauge ports, pressure gauges

Options



Panel Mount Option



Captured Vent Option (1/8" NPT)

Option Definition

Captured Vent

The captured vent design is for 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.

Panel Mount

The panel mount feature requires a panel cut out of 1-1/2", complete with a threaded spring housing, and a panel mount ring to secure the regulator.

*Self Relieving

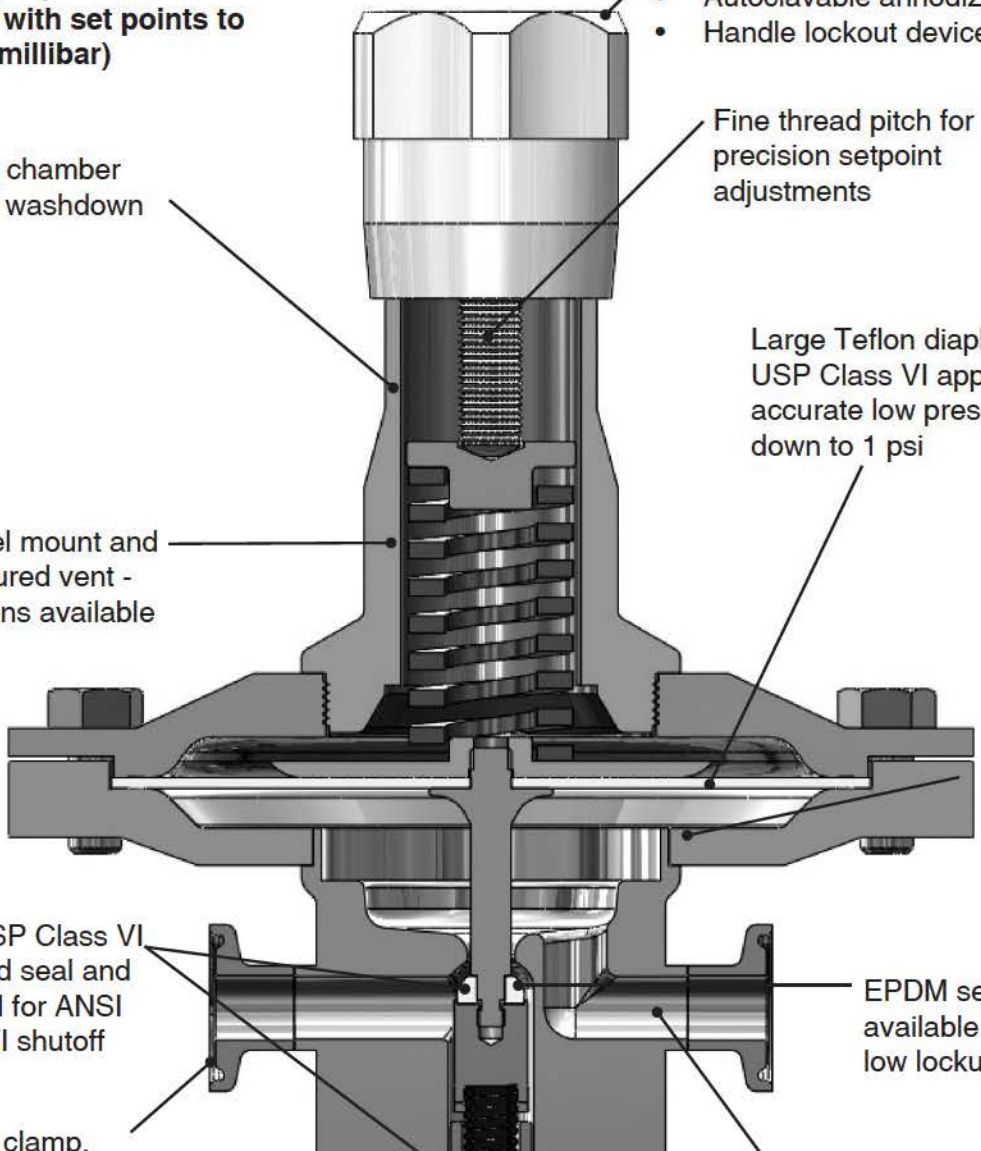
The self relieving option is used for internal venting of downstream pressure. From a practical standpoint, it allows for immediate reduction in outlet pressure setpoints and automatically alleviates regulator lock up (outlet pressure spikes), when flow is stopped. (Recommended with outlet gauges).

Gauge Ports - Pressure Gauges

1/4" FNPT Inlet and outlet gauge ports are standard. For Tri-clamp, VCR, or other gauge port options, contact factory.

Features & Benefits

Reliable, gas pressure regulation with set points to 1 psig (69 millibar)

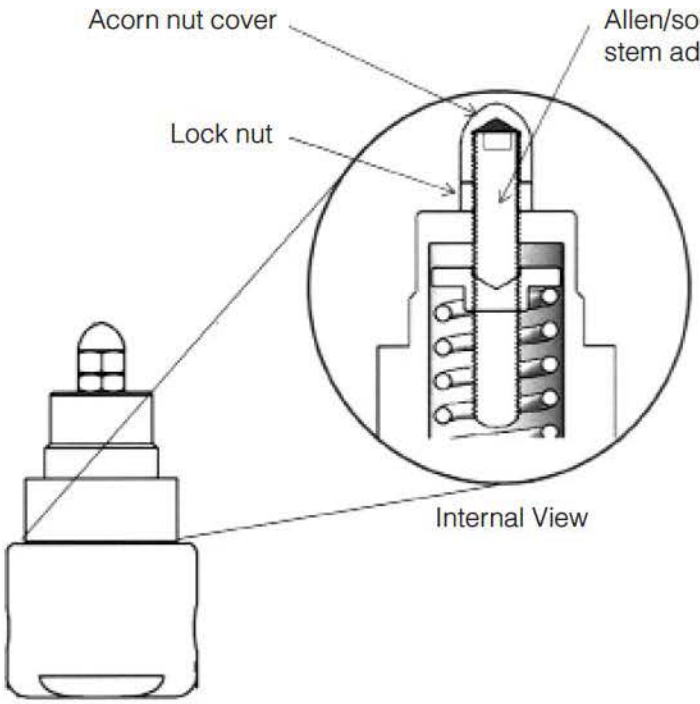


NOTE: Can be used on clean steam or non-cavitating liquids (the design is not drainable) with Steriflow engineering application approval.

CV Trim Selection Instructions

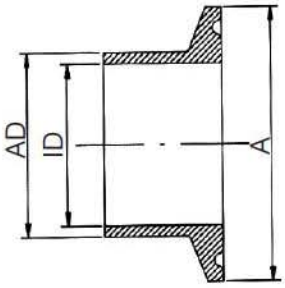
1. Select a graph on the next four pages that best represents your outlet pressure set point and flow range.
2. Select the inlet pressure line on the graph (horizontal sloped line, P1) that reflects your valve's actual inlet pressure.
3. That line indicates the Pressure/Flow capabilities of the Cv trim under flowing conditions.

Anti-Tamper Option



1. Adjust stem position with Allen wrench
2. Tighten lock nut against bonnet while holding stem position
3. Replace and tighten acorn nut

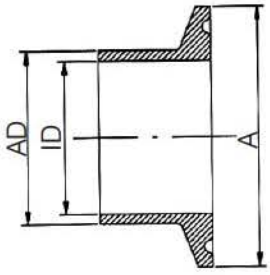
DIN & ISO Tri-Clamp Dimensions



DIN 32676 Row B (ISO 1127)

VALVE SIZE	A	AD	ID
DN15	50.5	21.3	18.1
DN15*	34.0	21.3	18.1
DN20	50.5	26.9	22.9

* with non-standard Tri-clamp face



DIN 32676 Row A (DIN 11850)

VALVE SIZE	A	AD	ID
DN15	34.0	19.0	16.0
DN15*	50.5	19.0	16.0
DN20	34.0	23.0	20.0
DN20*	50.5	23.0	20.0

* with non-standard Tri-clamp face

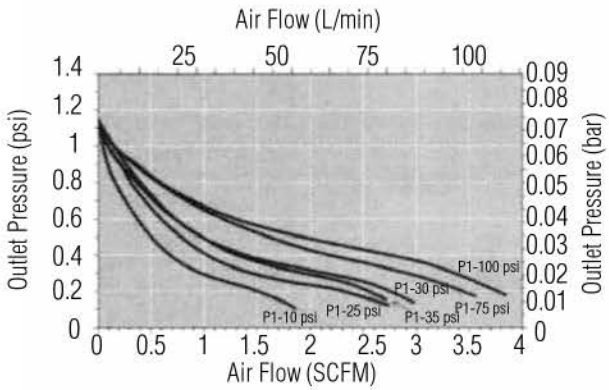
Flow Data for Cv trim selection

The graphs illustrate the change or "droop" in outlet pressures as the flow rate increases, and the lockup (setpoint rise) as flow decreases and approaches zero.

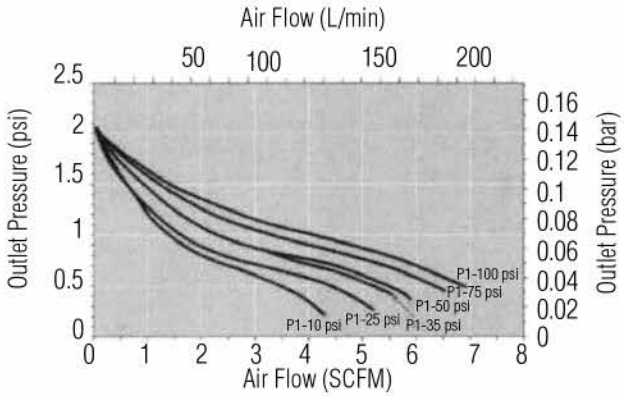
Flow Coefficient: 0.5

Maximum inlet pressure: 150 psig (10,3 bar)

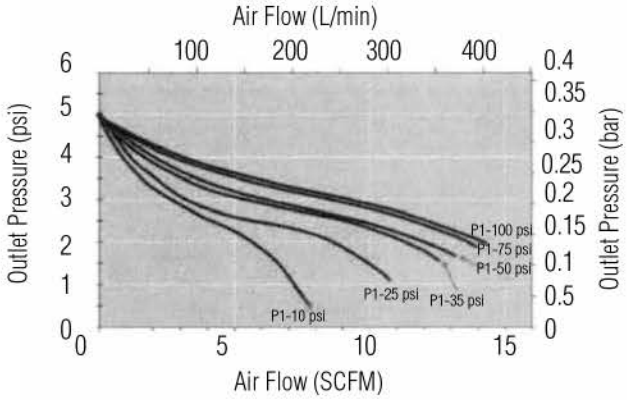
Pressure Control Range
Range Spring: 1-5 psig (0-0,3 bar)
Set Point: 1 psig



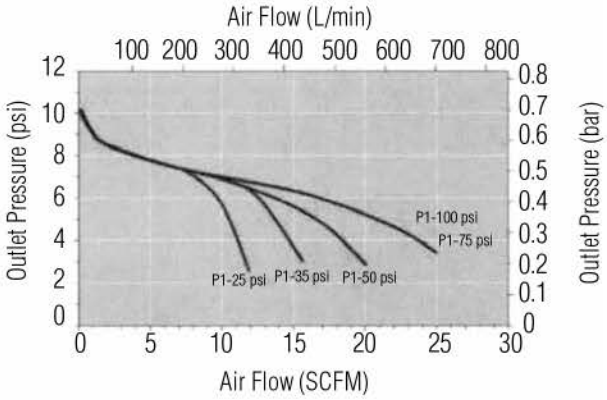
Pressure Control Range
Range Spring: 1-5 psig (0-0,3 bar)
Set Point: 2 psig



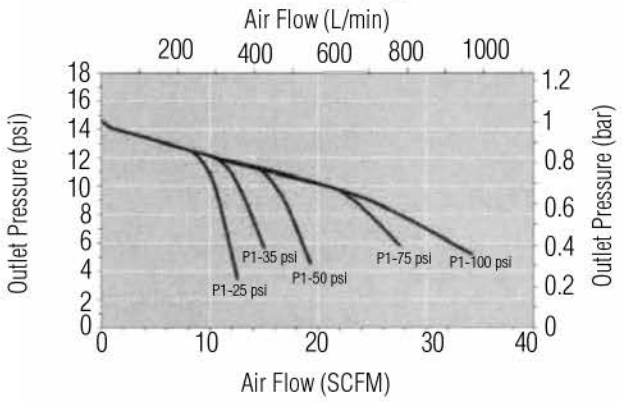
Pressure Control Range
Range Spring: 1-5 psig (0-0,3 bar)
Set Point: 5 psig



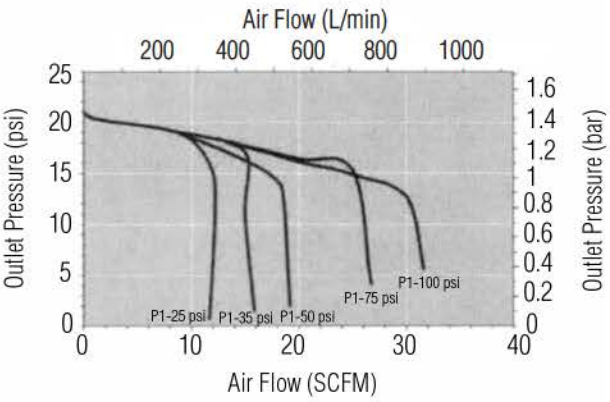
Pressure Control Range
Range Spring: 5-15 psig (0,3-1,0 bar)
Set Point: 10 psig



Pressure Control Range
Range Spring: 5-15 psig (0,3-1,0 bar)
Set Point: 15 psig



Pressure Control Range
Range Spring: 15-25 psig (1,0-1,7 bar)
Set Point: 20 psig



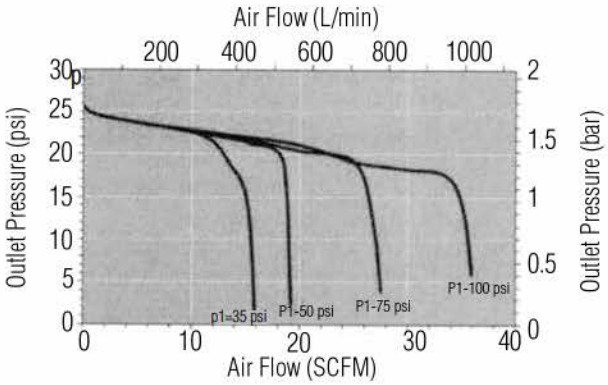
Flow Data for Cv trim selection

The graphs illustrate the change or "droop" in outlet pressures as the flow rate increases, and the lockup (setpoint rise) as flow decreases and approaches zero.

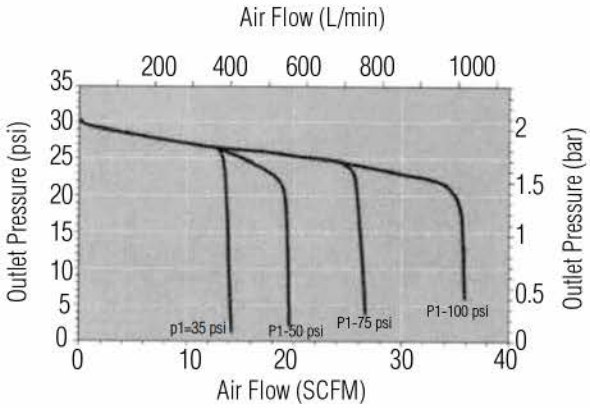
Flow Coefficient: 0.5

Maximum inlet pressure: 150 psig (10,3 bar)

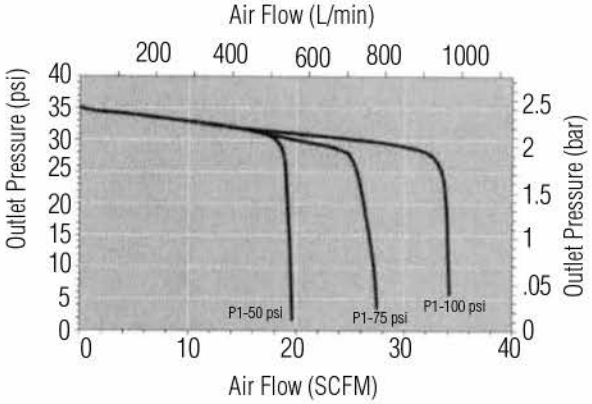
Pressure Control Range
Range Spring: 25-50 psi (1,7 - 3,4 bar)
Set Point: 25 psig



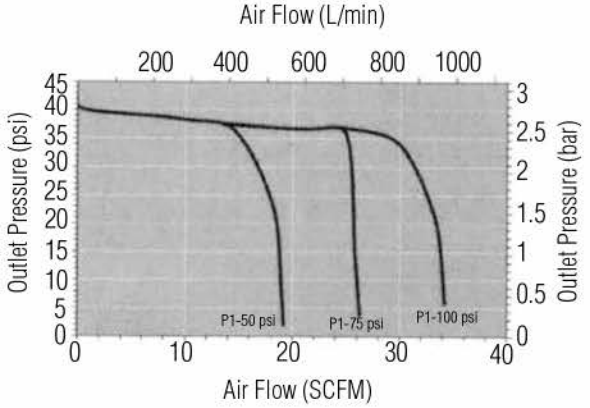
Pressure Control Range
Range Spring: 25-50 psi (1,7 - 3,4 bar)
Set Point: 30 psig



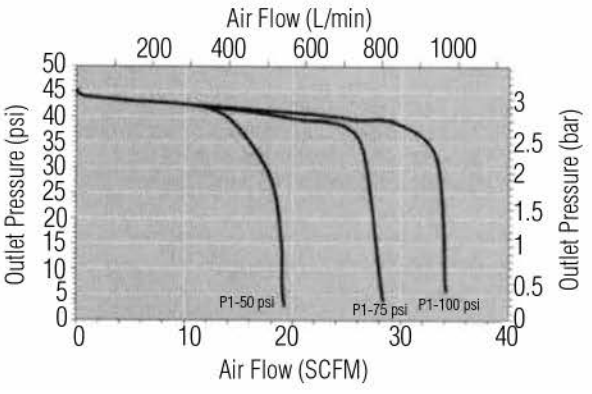
Pressure Control Range
Range Spring: 25-50 psig (1,7-3,4 bar)
Set Point: 35 psig



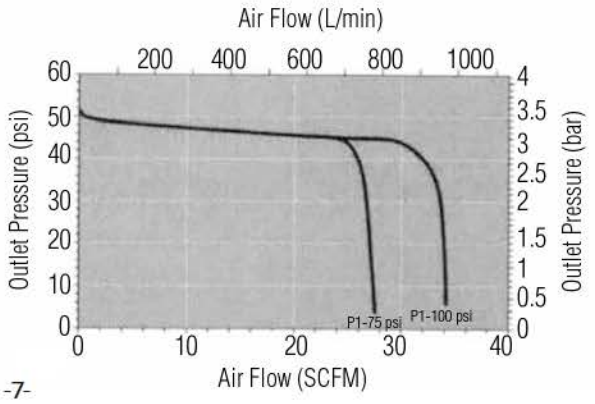
Pressure Control Range
Range Spring: 25-50 psig (1,7-3,4 bar)
Set Point: 40 psig



Pressure Control Range
Range Spring: 25-50 psig (1,7-3,4 bar)
Set Point: 45 psig



Pressure Control Range
Range Spring: 25-50 psig (1,7-3,4 bar)
Set Point: 50 psig



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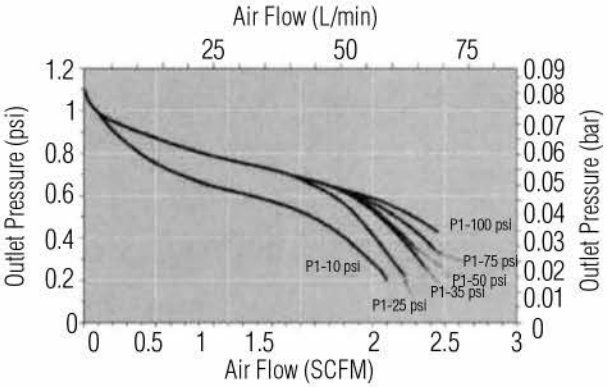
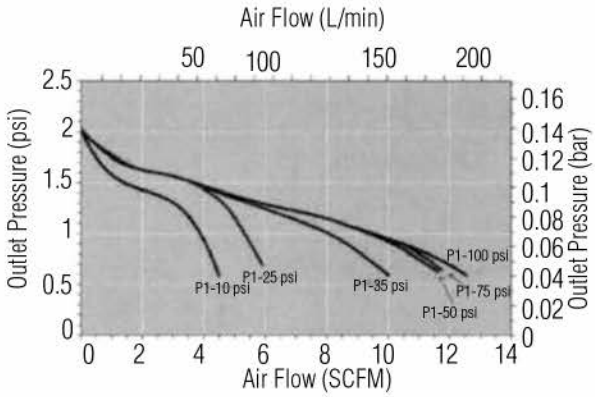
Flow Coefficient: 0.8

Maximum inlet pressure: 150 psig (10,3 bar)

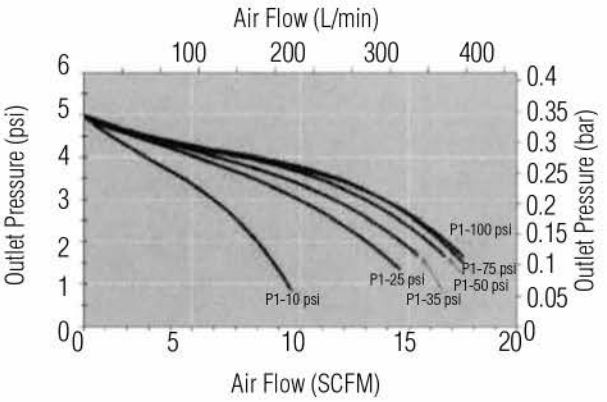
Pressure Control Range
Range Spring: 1-5 psig (0-0,3 bar)
Set Point: 1 psig



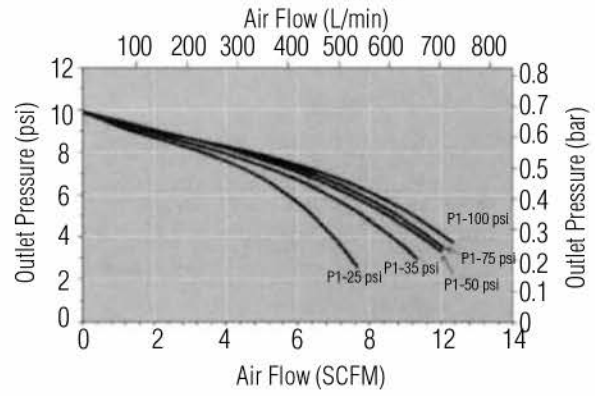
Pressure Control Range
Range Spring: 1-5 psig (0-0,3 bar)
Set Point: 2 psig



Pressure Control Range
Range Spring: 1-5 psig (0-0,3 bar)
Set Point: 5 psig



Pressure Control Range
Range Spring: 5-15 psig (0,3-1,0 bar)
Set Point: 10 psig



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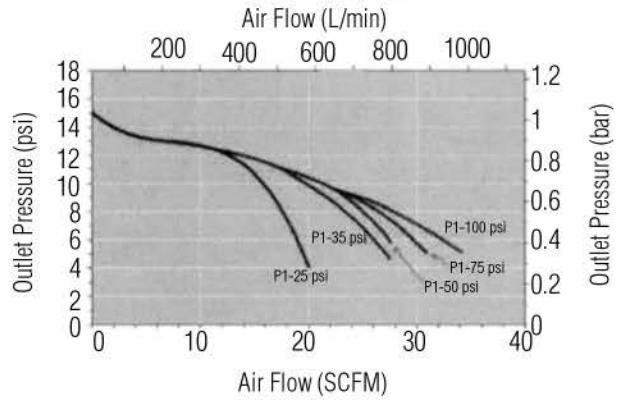
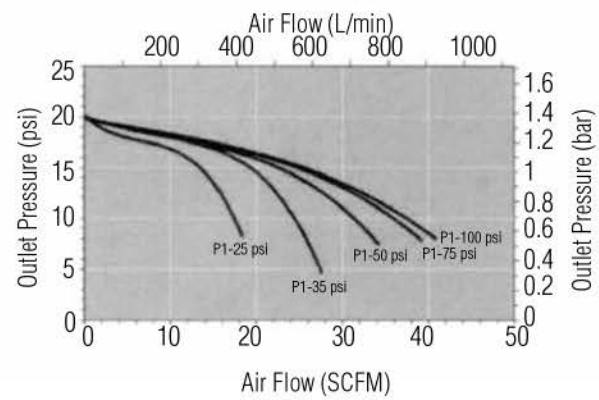


Pressure Control Range
Range Spring: 15-25 psig (1,0-1,7 bar)
Set Point: 20 psig



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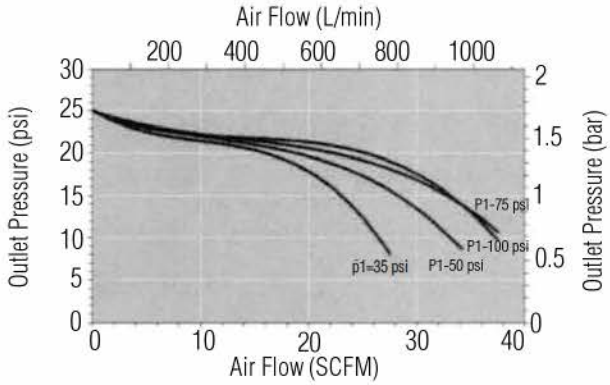
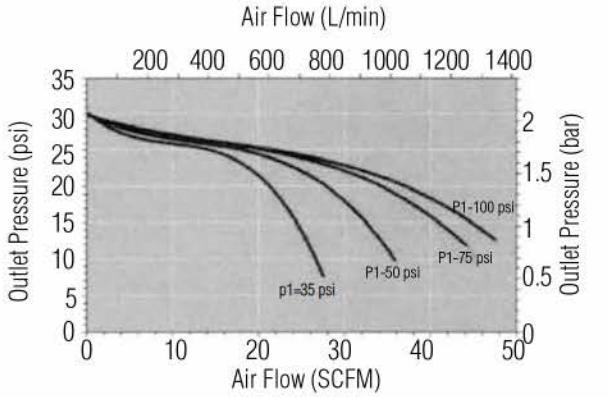
Flow Coefficient: 0.8

Maximum inlet pressure: 150 psig (10,3 bar)

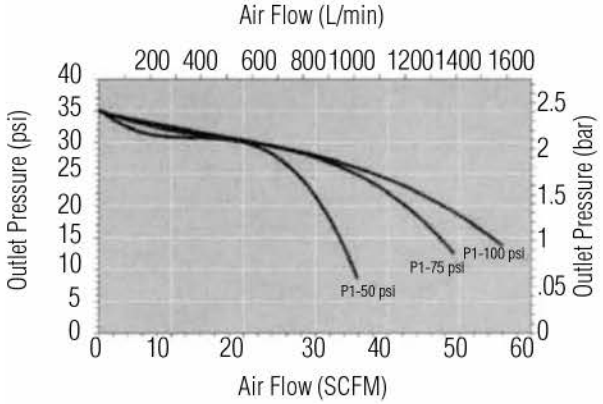
Pressure Control Range
Range Spring: 0-75 psig (0-5,2 bar)
Set Point: 25 psig



Pressure Control Range
Range Spring: 0-75 psig (0-5,2 bar)
Set Point: 30 psig



Pressure Control Range
Range Spring: 25-50 psig (1,7-3,4 bar)
Set Point: 35 psig



Pressure Control Range
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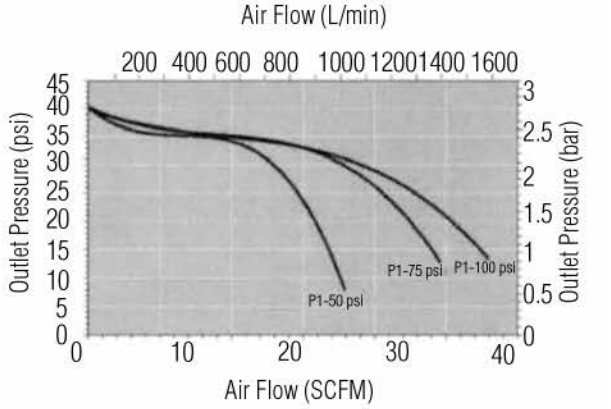
Set Point: 40 psig



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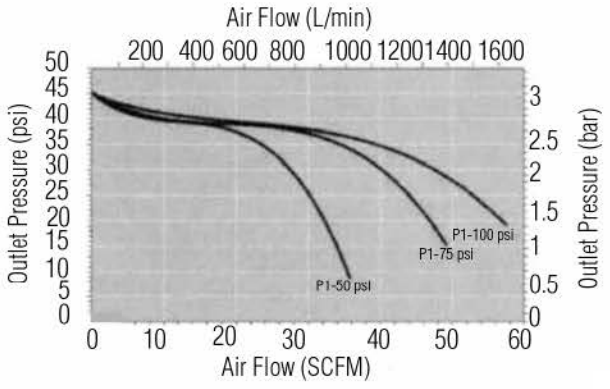
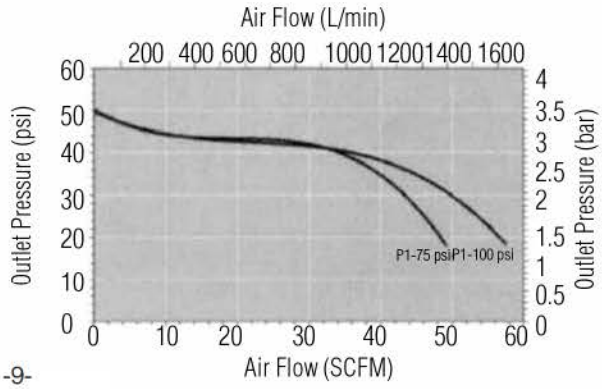
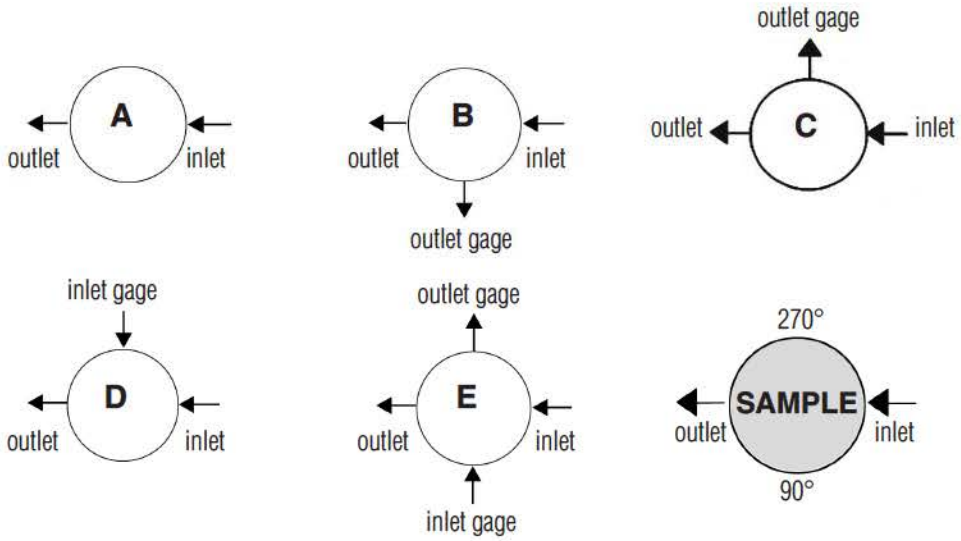
Set Point: 45 psig



Pressure Control Range
Range Spring: 25-50 psig (1,7-3,4 bar)
Set Point: 50 psig



Flow Configurations/ Gauge Ports

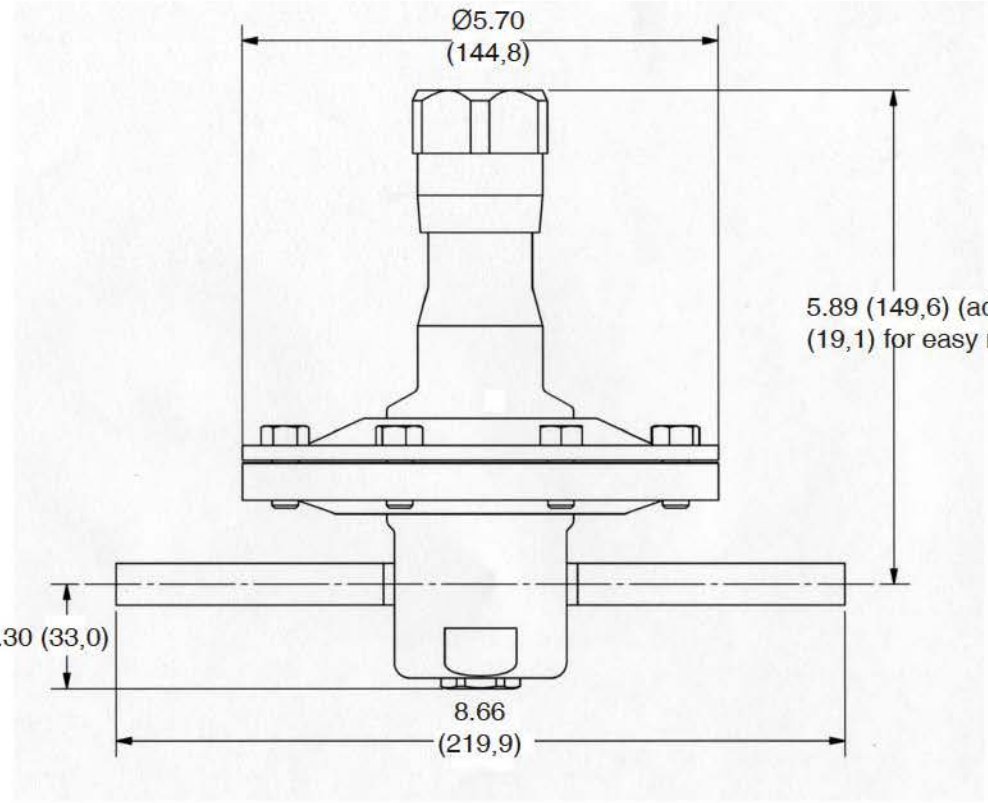


* Gage ports are 1/4" FNPT standard. For Tri-Clamp, VCR and other port options, contact the factory.

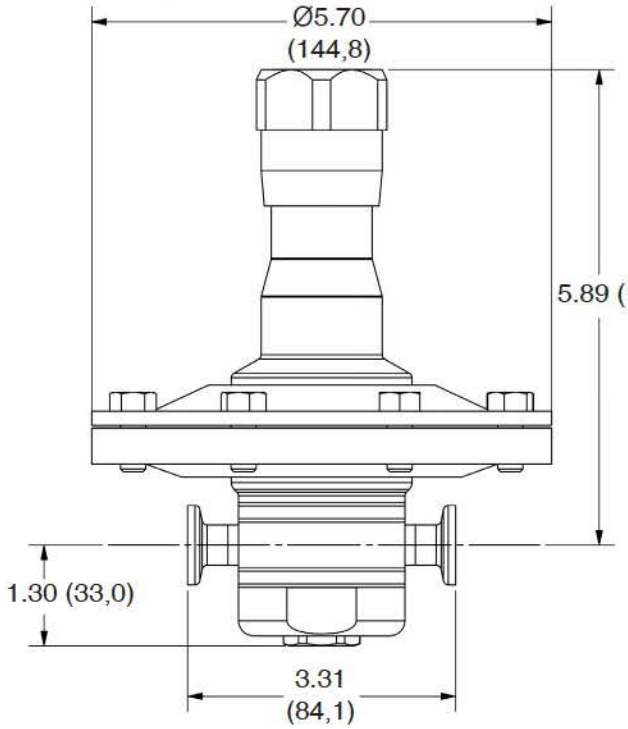
Sample Specifications

Stainless Steel pressure regulator shall be made from ASTM A479 barstock material, which includes body and all wetted metal parts. Regulator shall be activated by an un-tied, FDA approved, USP Class VI certified Jorlon diaphragm. Regulator shall be free of exposed threads within wetted process area and valve internal to hold minimal media volume. Regulator shall be direct acting and have a diaphragm area of no less than 18.75" to enable low set point offset. Regulator shall have trim that can be replaced inline without dome/spring chamber disassembly. Regulator shall reliably control outlet pressures as low as 1 psig.

Dimensions, In. (mm) – 1/2" & 3/4" For ASME BPE



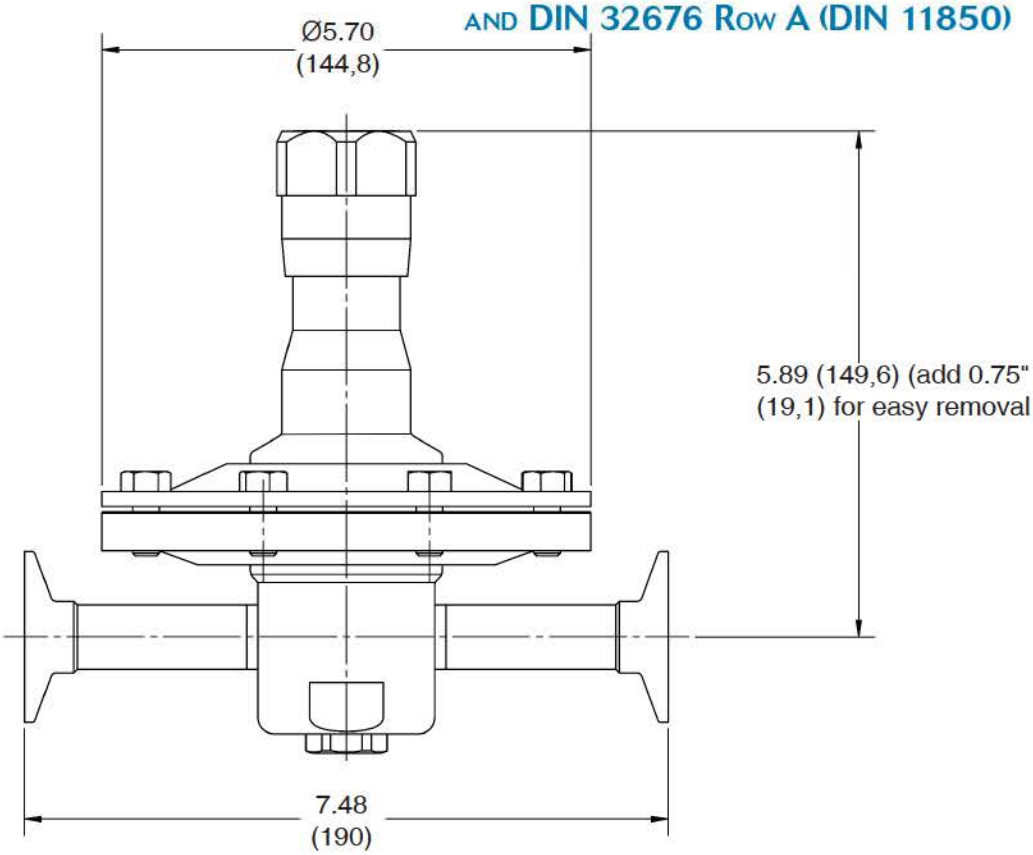
Dimensions, In. (mm) – 1/2" & 3/4" For ASME BPE



* Add 0.75" (19,1) for easy removal

Weight: 3.2 lbs (1,45 kgs)

Dimensions, In. (mm) – DN15, 20 for DIN 32676 Row B (ISO 1127) and DIN 32676 Row A (DIN 11850)



Ordering Schematic

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

Model	
JSRLP	High Purity Gas Pressure Reducing Valve

Size	
050	1/2" (DN15)
075	3/4" (DN 20)

Material	
6L	Stainless Steel 316L

1 & 2	Body Feature		
End Connection		Port Configuration*	
C	Tri-Clamp 20 Ra EP	A	Port "A"
P	FNPT 20 Ra EP	B	Port "B"
T	ASME BPE BWE 20 Ra EP	C	Port "C"
S[1]	ISO Tri-Clamp, DN15	D	Port "D"
V[1]	ISO w/34.0mm face T-Clamp, DN15	E	Port "E"
R[1]	ISO T-Clamp, DN20		
D[2]	DIN Tri-Clamp, DN15		
N[2]	DIN T-Clamp, DN15 w/50.5mm face		
U[2]	DIN T-Clamp, DN20		
X[2]	DIN T-Clamp, DN20 w/50.5mm face		
M[3]	DIN Tube Weld, DN15		
H[4]	ISO Tube Weld, DN15		
ZZ	Non-Standard		

[1] Acc. to DIN 32676 Row B (ISO 1127). See dimensions, page 4
[2] Acc. to DIN 32676 Row A (DIN 11850). See dimensions, page 4
[3] Acc. to DIN 11866, DIN 11850 Row A
[4] Acc. to DIN 11866 Row B, (ISO 1127)
* Std. Gauge Ports are 1/4" FNPT. Contact factory for availability of others.

3 & 4	Trim
1S	0.8 Cv
2S	0.5 Cv
1R	CV 0.8 Self-Relieving
2R	Cv 0.5 Self-Relieving
ZZ	Non-Standard

5 & 6	Seat Material
TF	PTFE
PK	Peek
EP	EPDM
ZZ	Non-Standard

7 & 8	Range Spring/Outlet Pressure
01	1 - 5 psi
05	5- 15 psi
15	15 - 25 psi
25	25 - 50 psi
ZZ	Non-Standard

9 & 10	Diaphragm Material
JL	Jorlon
ZZ	Non-Standard

11 & 12	Actuator
SK	Standard Actuator
AK	Standard Actuator / Autoclavable Anod. Aluminum knob
PM	Panel Mount (See illustration page 2)
CV	Captured Vent
TP	Anti-tamper feature (See illustration page 4)
ZZ	Non-Standard

13 & 14	Inlet Gauge*
AA	0 - 30 PSIG/Bar (Dual)
BB	0 - 60 PSIG/Bar (Dual)
CC	0 - 100 PSIG/Bar (Dual)
DD	0 - 160 PSIG/Bar (Dual)
EE	0 - 200 PSIG/Bar (Dual)
NN	None
ZZ	Non-Standard

* Gauges are Oil Free and O2 clean as standard.

Ordering Schematic (Con't)

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

15	Outlet Gauge*
A	0 - 30 PSIG/Bar (Dual)
B	0 - 60 PSIG/Bar (Dual)
C	0 - 100 PSIG/Bar (Dual)
D	0-160 PSIG/Bar (Dual)
N	None
ZZ	Non-Standard

* Gauges are Oil Free and O2 clean as standard.

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

17	Accessories
0	None Required
S	Clean For Oil Free
X	Clean for Oxygen*
Z	Non-Standard

*Procedure complies with ASTM G-93 2011 and CGA G-4.1-2009

Repair Kit Ordering Schematic

Model		Size		Material		Kit	/	1&2	3&4

Model	
JSRLP	High Purity Gas Pressure Reducing Valve

Size	
050	1/2"
075	3/4"

Material	
6L	Stainless Steel 316L

Kit	
KT	Repair Kit

1 & 2	Trim/Seat Material
PK	PEEK
TF	PTFE
EP	EPDM
ZZ	Non-Standard

3 & 4	Diaphragm Assembly
R1	Self Relieving / Jorlon / 0.5 Cv
R2	Self Relieving / Jorlon / 0.8 Cv
S1	Standard / Jorlon / 0.5 Cv
S2	Standard / Jorlon / 0.8 Cv
ZZ	Non-Standard

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