JSRLF Series

Low Flow Pressure Reducing Valves for Bio, Pharma and High Purity Gas Application

The Steriflow JSRLF Series line of low flow pressure regulators have the ability to handle very high pressures and very low flows. These valves are most often used in biopharmaceutical and pharmaceutical research, and production facilities for clean gas flow regulation.

The durable valve body and metal trim components are machined from ASTMA479 316L SST barstock. The standard finish is ASME BPE SF5 (20Ra micro-inch, electropolished), SF1 non-electropolished valves are available. The valve is outfitted with the rugged Jorlon diaphragm and Teflon or PEEK seats and seals that are all FDA approved, USP Class VI compliant materials. These materials of construction enable J-Pure to withstand the rigors of SIP and CIP processes if required.

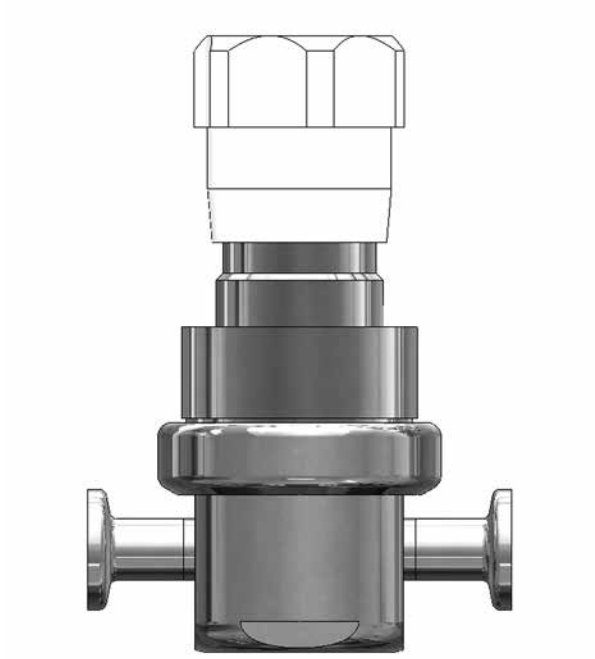
Features

- Top entry design facilitates in-line cleaning and maintenance
- Barstock construction guarantees material integrity and quality surface finish
- Four Cv's between 0.01 and 0.2 and six spring ranges guarantees a valve that will fit your application
- Optimized internal volume
- Proprietary Jorlon diaphragm material provides exceptionally long life
- Soft seat material for ANSI Class VI shutoff
- Can be used on continuous clean steam, and on non-cavitating fluids.

Documentation

The following documentation is shipped with each order:

- Steriflow Unicert
  - Traceable Material Heat Number for body and ferrules
  - Certificate of Compliance to FDA and USP Class VI
  - Certificate of Surface Finish
- Final Test Reports and Certificate of Origin available upon request at time of order



Surface Finish

- ASME BPE SF5 (20 Ra µin (0.5 Ra µm), electropolished) — standard for all external and wetted metal parts
- ASME BPE SF1 (20 Ra µin) mechanical finish, non-electropolished and other finishes available
- O_2 cleaning — optional

Applications

Ideal for biopharmaceutical and pharmaceutical research and production facilities and equipment for clean gas flow regulation.

- High purity purge, or blanket gas
- Sparge pressure regulation
- Motive force for fluid movement
- Clean air, N_2, CO_2, O_2, AR

Sanitary Valves

JSRLF Series Low Flow Gas Reducing Valves

STERIFLOW
a division of Jordan Valve

Steriflow by Jordan Valve
3170 Wasson Road • Cincinnati, OH 45209
513.533.5600 • 800.543.7311 • 513.871.0105 (f)
steriflow@richardsind.com • www.steriflowvalve.com

Specifications

Sizes: 1/4" (DN8), 3/8" (DN10), 1/2" (DN15)

End Connections: Tri-Clamp, Tube Weld End and NPT

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 (177°C), FDA & USP Class VI

Body Material

- ASTM A479 316L SST
- Contact factory for other body/trim/seat materials

Diaphragm Material: Jorlon, PTFE™, FDA & USP Class VI

Maximum Inlet Pressure:

- Tube End & Tri-Clamp: 450 psig (31,0 bar)
- NPT: 4000 psig (276 bar)

Pressure at Maximum Temperature:

- Tube End and Tri-Clamp: 450 psi @ 350°F (31,0 bar @ 177°C) with PEEK seats; 450 psi @ 150°F (30,1 bar @ 66°C) with PTFE seats
- NPT: 2165 psi @ 350°F (149 bar @ 177°C) with PEEK seats; 3600 psi @ 150°F (248 bar @ 66°C) with PTFE seats

Surface Finish:

- ASME BPE SF5, 20 Ra, µin (0,5 Ra, µm) electropolish standard
- ASME BPE SF1, 20 Ra, µin, (0,5 Ra µm), non-EP is optional, as are other finishes

Maximum Pressure Drop:

- Tube End and Tri-Clamp: 450 psi (31,0 bar)
- NPT: 3000 psi (207 bar)

Spring Ranges

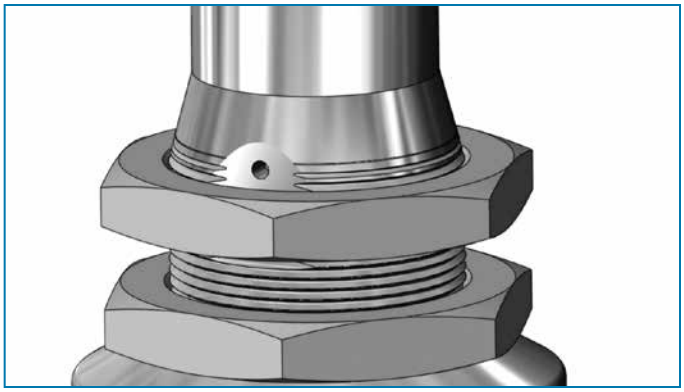
- 5 – 50 psi (0,3 – 3,4 bar)
- 25 – 100 psi (1,7 – 6,9 bar)
- 50 – 150 pis (3,4 – 10,3 bar)
- 25 – 250 psi (1,7 – 17 bar)
- 100 – 450 psi (7 – 30 bar)
- 200 – 750 psi (14 - 52 bar) - NPT only

Flow Capacities: Cv 0.012, Cv 0.03, Cv 0.08, Cv 0.20

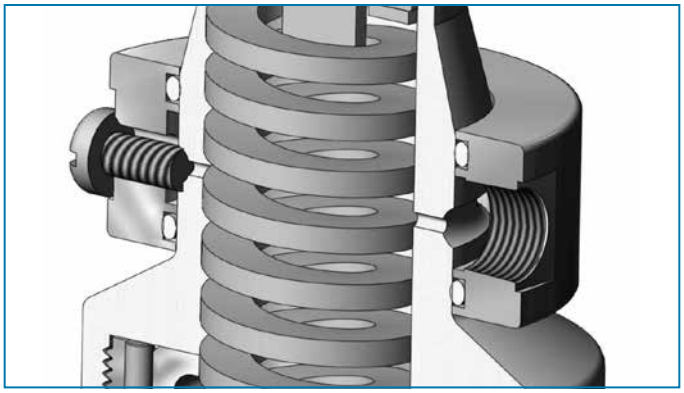
Options

- Panel Mounting
- Captured Vent
- Self Relieving - Available with PTFE seats

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.

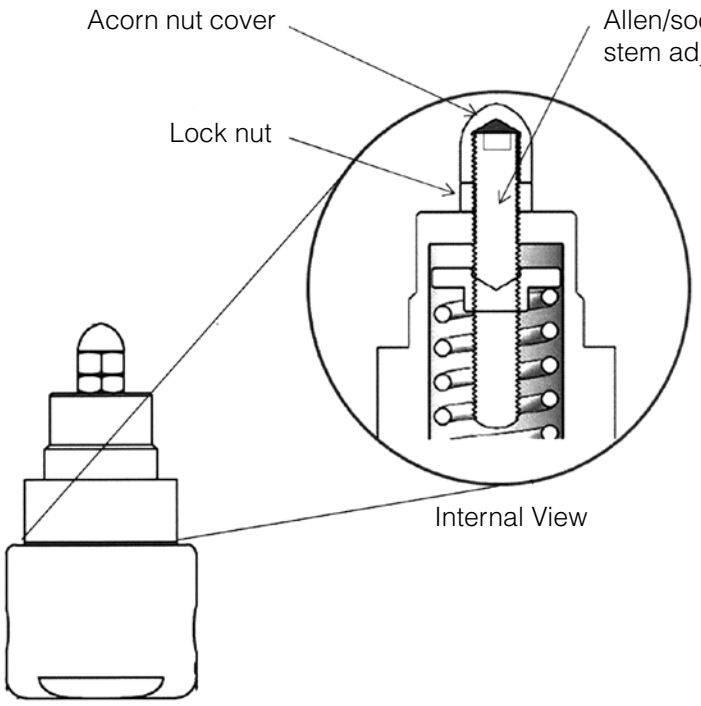
Panel Mount

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

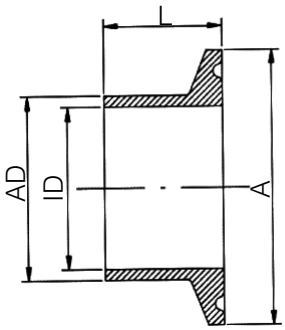
The self relieving option is used for internal venting of downstream pressure. From a practical stand-point, it allows for immediate reduction in pressure setpoints and automatically alleviates regulator lock up.

Anti-Tamper Option



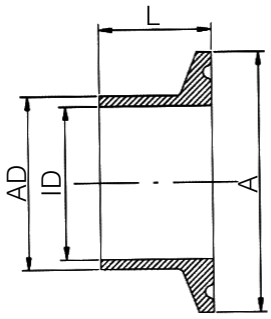
1. Adjust stem position with Allen wrench
2. Tighten lock nut against bonnet while holding stem position
3. Replace and tighten acorn nut

DIN & ISO Tri-Clamp Dimensions



DIN 32676 Row B (ISO 1127)

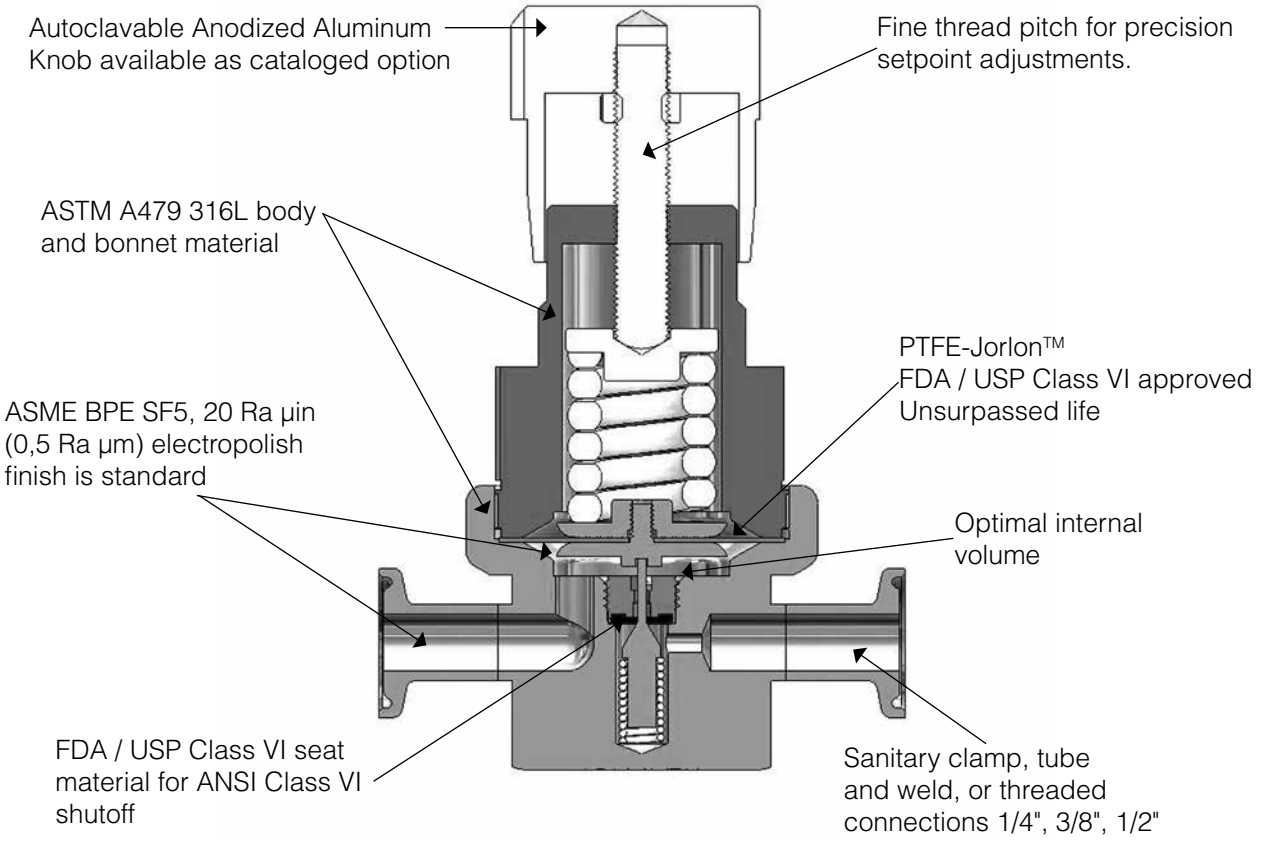
VALVE SIZE	A	L	AD	ID



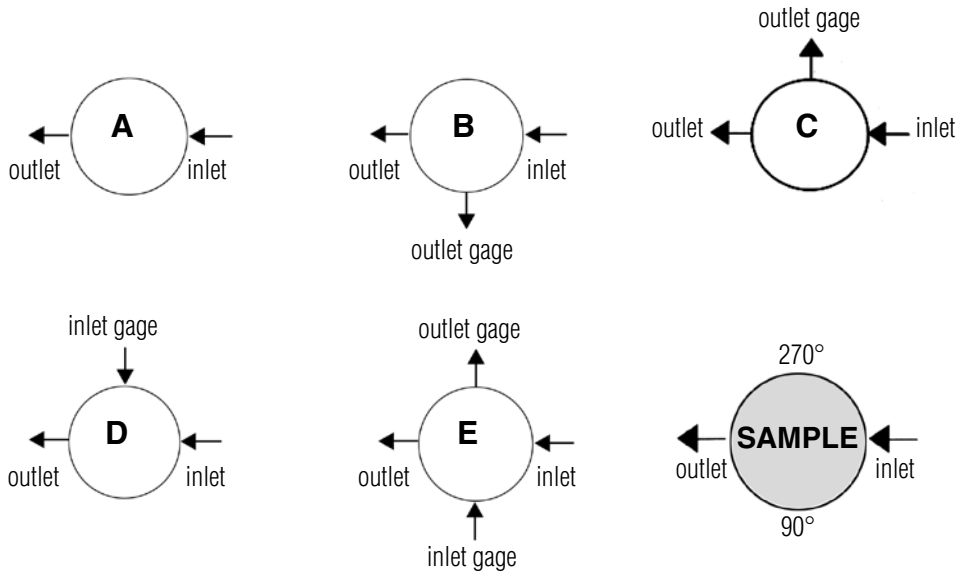
DIN 32676 Row A (ISO 11850)

VALVE SIZE	A	L	AD	ID

Features & Benefits

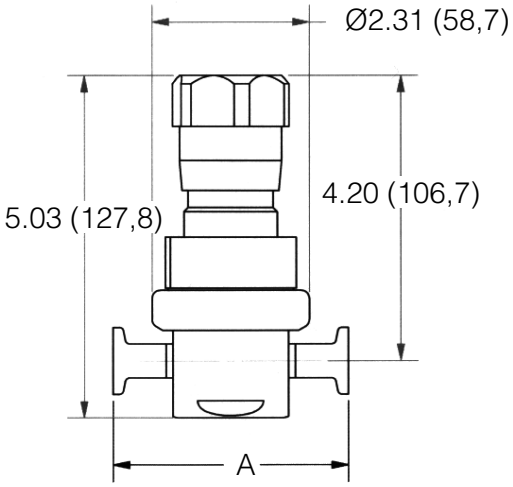


Flow Configurations



* Gage ports are 1/4" FNPT (consult factory for required alternative)
Consult factory for other porting options

Dimensions

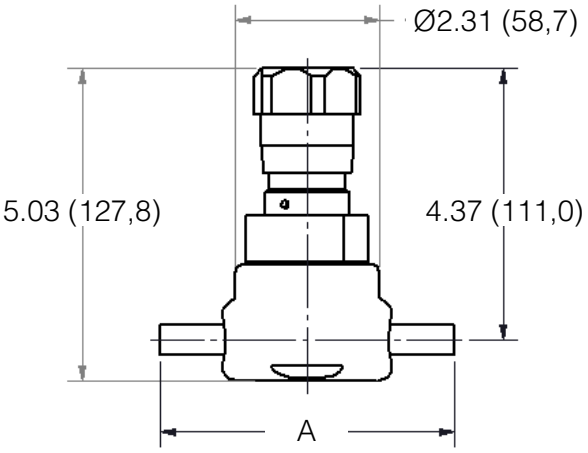


- JSRLF Series with Tri-Clamp Ends, Inches

VALVE SIZE	A	WEIGHT, LBS
1/2"	3.81	4.2
3/4"	3.81	4.2

- JSRLF Series with Tri-Clamp Ends, Metric

VALVE SIZE	A	WEIGHT, KG
DN15	96,8	1,9
DN20	96,8	1,9

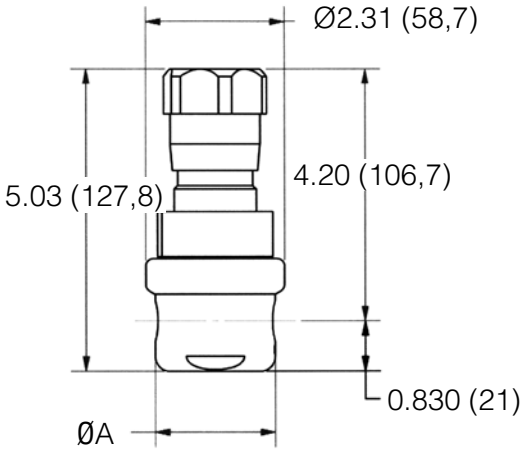


- JSRLF Series with Tube Ends, Inches

VALVE SIZE	A	WEIGHT, LBS
1/2"	3.81	4.2
3/4"	3.81	4.2

- JSRLF Series with Tube Ends, Metric

VALVE SIZE	A	WEIGHT, KG
DN15	96,8	1,9
DN20	96,8	1,9



- JSRLF Series with FNPT/SW Ends, Inches

VALVE SIZE	A	WEIGHT, LBS
1/4"	2.00	3.4
3/8"	2.00	3.4
1/2"	2.75	4.2

- JSRLF Series with FNPT/SW Ends, Metric

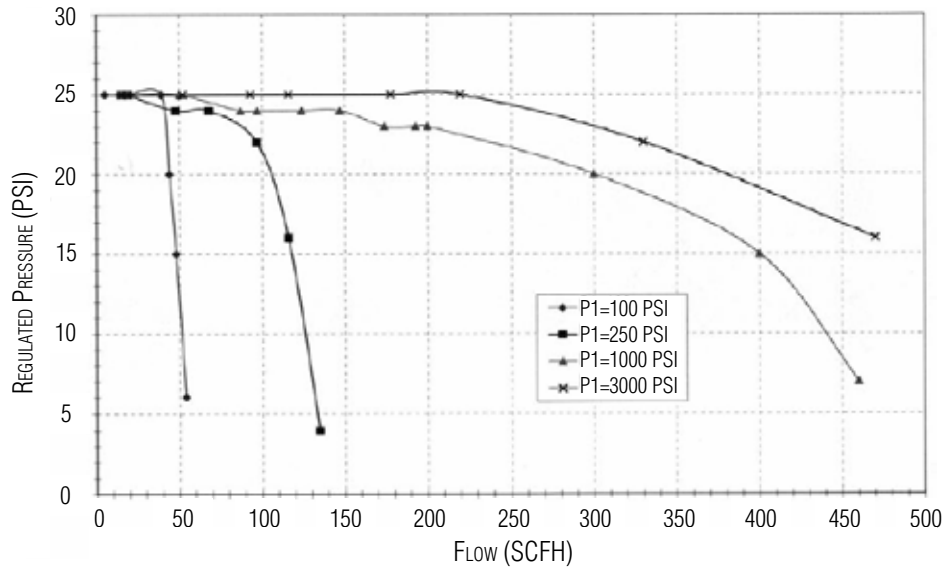
VALVE SIZE	A	WEIGHT, KG
DN8	50,8	1,5
DN10	50,8	1,5
DN15	69,9	1,9

Trim Flow Graphs

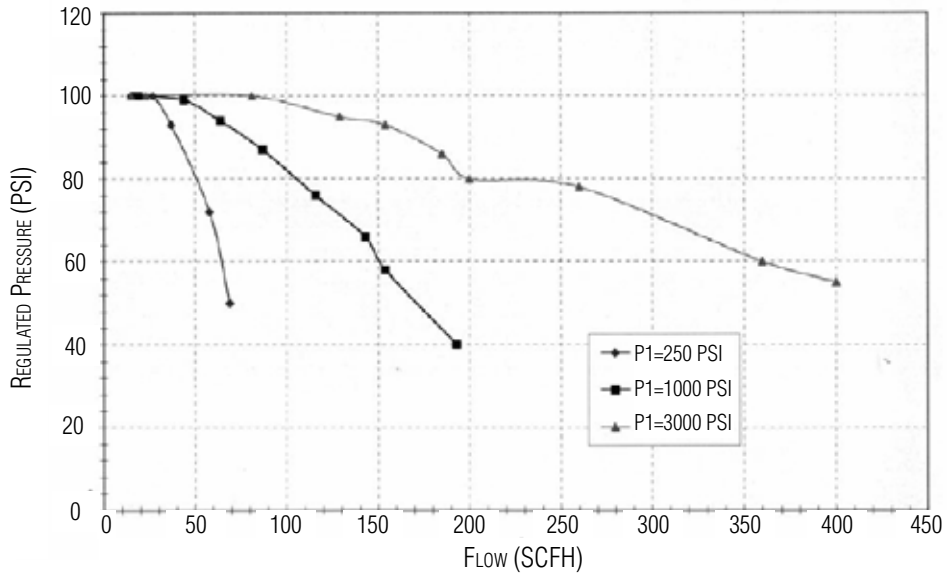
To select a valve with the proper Cv:

1. Convert pressure and flow units to those shown on the graphs below.
2. Select the graph below with a flow range (horizontal axis) that encompasses the minimum and maximum flows of your installation, and with an appropriate outlet regulated pressure (vertical axis). Also make sure that the application inlet pressure is covered by the graph (P1 legend box at bottom right of each chart). Please note maximum inlet pressure, pressure at temperature and differential pressure limitations on page 2.
3. Plot your desired set point on the graph you chose, at the flow rate you expect at that set point.
4. Pick the P1 inlet pressure curve in your graph (see P1 legend box) that is closest to your valve installation inlet pressure.
5. Draw a curve with the same slope parallel to that curve through your plotted set point. That curve approximates the flow of your valve under operating conditions.

- 0.012 Cv — 5 – 50 psi Spring Range

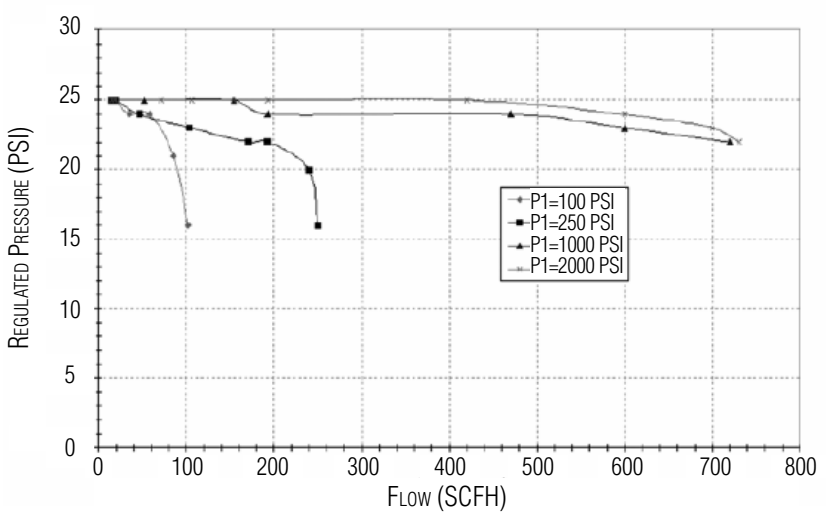


- 0.012 Cv — 50 – 150 psi Spring Range

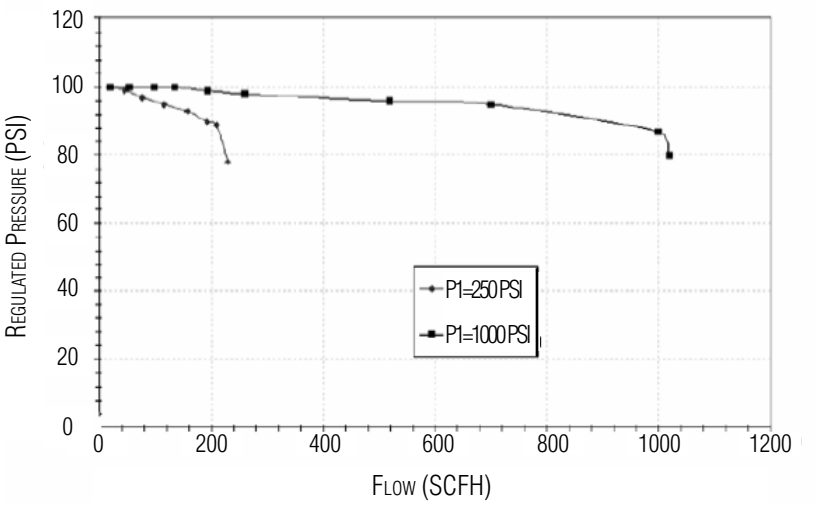


Trim Flow Graphs

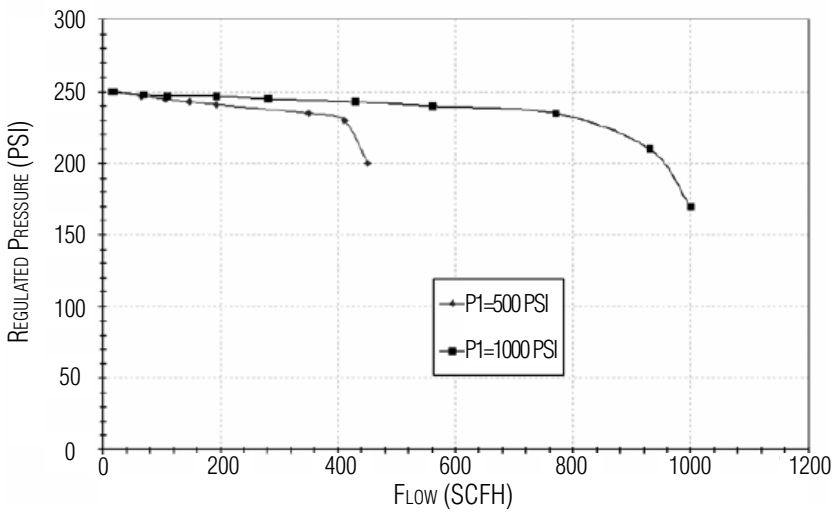
- 0.08 Cv — 5 – 50 psi Spring Range



- 0.08 Cv — 50 – 150 psi Spring Range

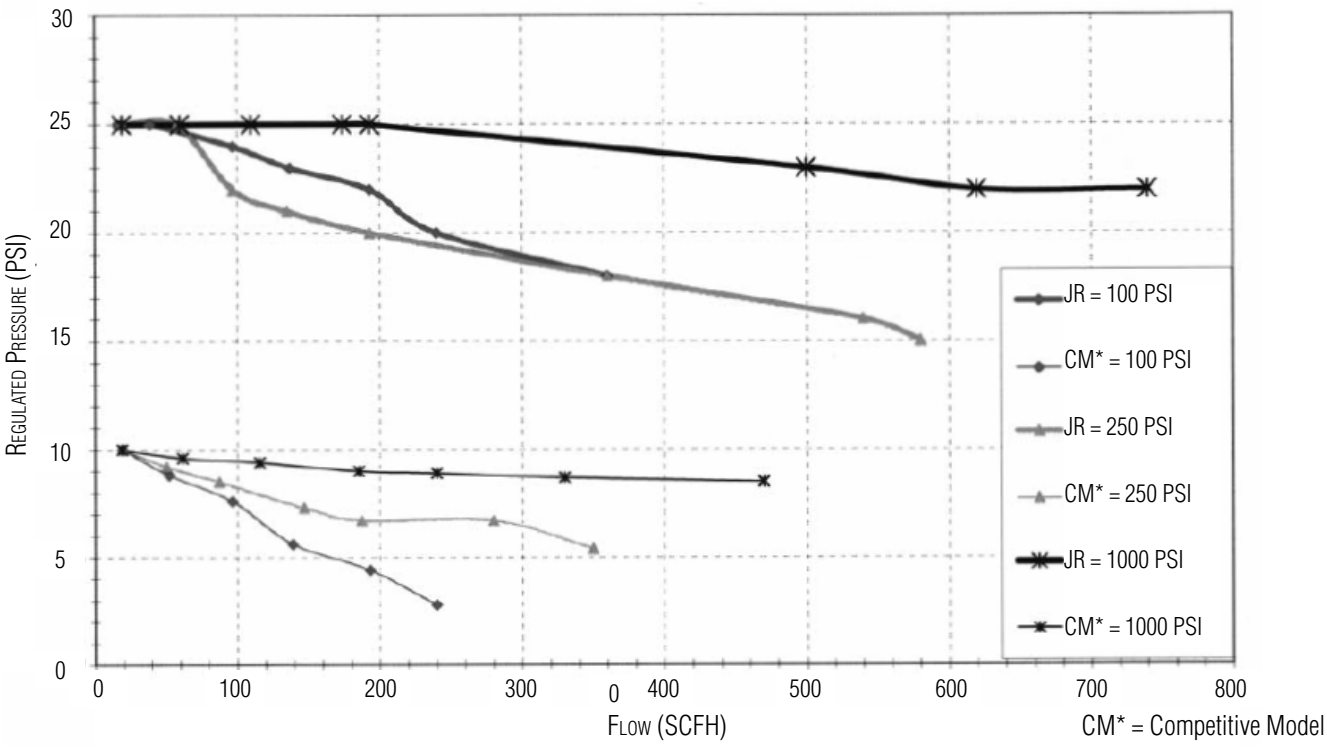


- 0.08 Cv — 100 – 475 psi Spring Range

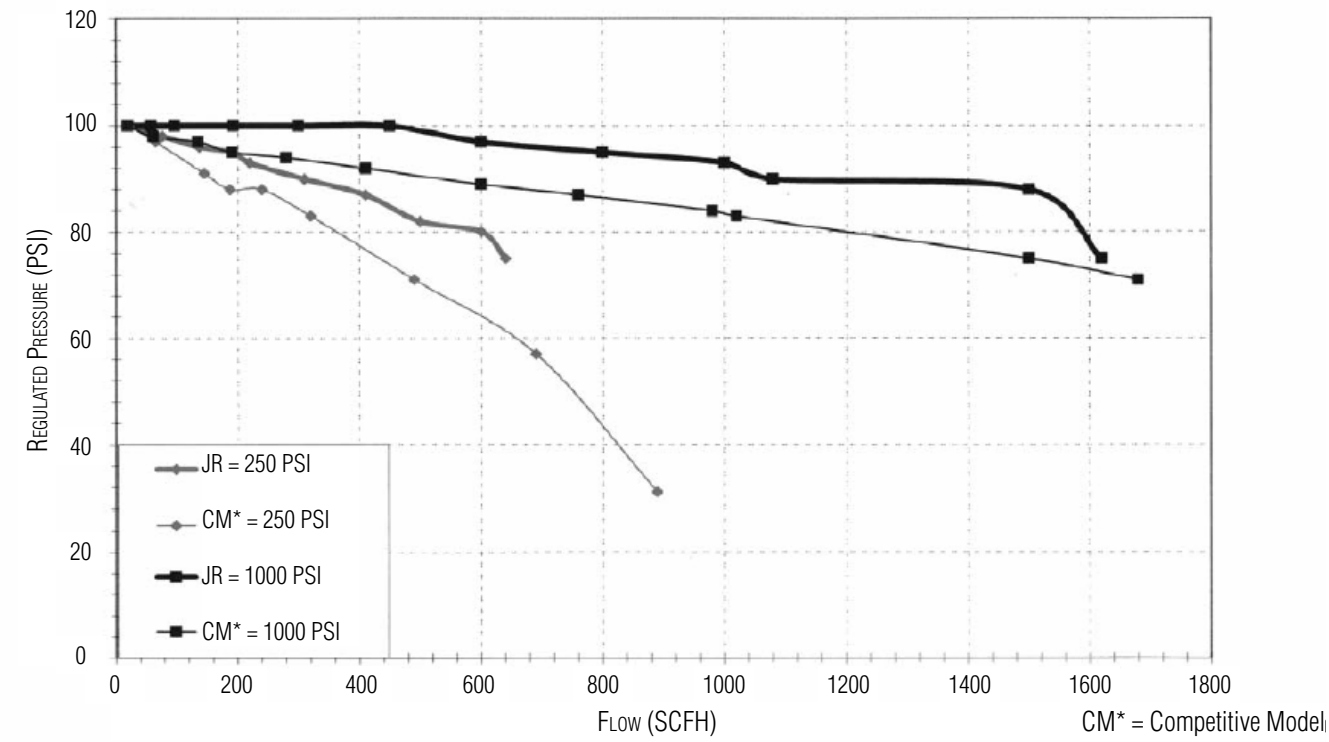


Trim Flow Graphs

- 0.2 Cv — 5 – 50 psi Spring Range



- 0.2 Cv — 50 – 150 psi Spring Range



Ordering Schematic

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

Model	
JSRLF	Low Flow Pressure Reducing Valve

Size	
025	1/4" (DN08)
038	3/8" (DN10)
050	1/2" (DN15)

Material	
6L	ASTM A479, 316L

1 & 2	Body Feature		
	End Connection	Port Configuration	
A	FNPT, 1/4"	A	Port "A"
B	FNPT, 3/8"	B	Port "B"
C	FNPT, 1/2"	C	Port "C"
T	ASME BPE Tri-Clamp, 1/2"	D	Port "D"
W	ASME BPE Tube Weld, 1/2"	E	Port "E"
S[1]	ISO Tri-Clamp, DN15		
D[2]	DIN Tri-Clamp, DN15		
M[3]	DIN Tube Weld, DN15		
P[4]	ISO Tube Weld, DN15		
ZZ	Non-Standard		

[1] Acc. to DIN 32676 Row B (ISO 1127). See dimensions, page 3
[2] Acc. to DIN 32676 Row A (DIN 11850). See dimensions, page 3
[3] Acc. to DIN 11866, DIN 11850 Row A
[4] Acc. to DIN 11866 Row B, (ISO 1127)

3 & 4	Trim
1S	Cv 0.012
2S	Cv 0.08
3S	Cv 0.2
4S	Cv 0.03
1R	Cv 0.012 Self-Relieving
2R	Cv 0.08 Self-Relieving
3R	Cv 0.2 Self-Relieving
4R	CV 0.03 Self-Relieving
ZZ	Non-Standard

5 & 6	Seat Material - FDA & USP Class VI		
T1	PTFE Cv 0.012	P2	PEEK Cv 0.08
T2	PTFE Cv 0.08	P3	PEEK Cv 0.2
T3	PTFE Cv 0.2	P4	PEEK Cv 0.03
T4	PTFE Cv 0.03	ZZ	Non-Standard
P1	PEEK Cv 0.012		

7 & 8	Range Spring / Outlet Pressure		
E1	5 - 50 psi	E5	100 - 450 psi
E2	25 - 100 psi	E6	200 - 750 psi (NPT only)
E3	50 - 150 psi		
E4	75 - 250 psi	ZZ	Non-Standard

9 & 10	Diaphragm Material
JL	Jorlon™ PTFE, FDA & USP Class VI
ZZ	Non-Standard

11 & 12	Actuator
SK	Standard Actuator
AK	Autoclavable Anodized Aluminum Knob available as cataloged option
CV	Captured Vent
PM	Panel Mount
TP	Anti-tamper feature (See illustration page 3)
ZZ	Non-Standard

13 & 14	Inlet Gauge		
AA	0 - 30 psi / bar (Dual)	HH	0 - 600 psig/bar (Dual) NPT only
BB	0 - 60 psig / bar (Dual)	JJ	0 - 1000 psi/bar (Dual) NPT only
CC	0 - 100 psig / bar (Dual)	KK	0 - 2000 psi/bar (Dual) NPT only
DD	0 - 160 psig / bar (Dual)	LL	0 - 3000 psi/bar (Dual) NPT only
EE	0 - 200 psig / bar (Dual)	MM	0 - 5000 psi/bar (Dual) NPT only
FF	0 - 300 psig / bar (Dual)	NN	None
GG	0 - 400 psig / bar (Dual)	ZZ	Non-Standard

15	Outlet Gauge
A	0 - 30 psig
B	0 - 60 psig / bar (Dual)
C	0 - 100 psig / bar (Dual)
D	0 - 160 psig / bar (Dual)
E	0 - 200 psig / bar (Dual)
F	0 - 300 psig / bar (Dual)
G	0 - 400 psig / bar (Dual)
H	0 - 600 psig / bar (Dual) NPT only
J	0 - 1000 psi / bar (Dual) NPT only
N	None
Z	Non-Standard

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

17	Accessories
S	Clean For Oil Free
X	Clean For Oxygen
Ø	None
Z	Non-Standard