

# JB Series

## Gas Back Pressure Reducing Valves

### *GAS BACK PRESSURE REDUCING VALVES*

The LowFlow JB Series line of back pressure regulators have the ability to handle very high pressures and very low flows. These valves are typically used in research and sampling systems for corrosive and specialty gases. Typical applications include gas chromatography and flame ionization detectors, as well as other industrial controls.

#### **Features:**

- Top entry design facilitates in-line cleaning and maintenance
- Barstock construction guarantees material integrity and surface finish
- High flow rate coupled with high rangeability reduces need for reduced trim sizes
- Optimized internal volume
- Proprietary Jorlon diaphragm material provides exceptionally long life
- Soft seat material for ANSI Class VI shutoff



**JB SERIES SPECIFICATIONS**

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

**End Connections**

- SWE
- NPT

**Soft Seat Materials for ANSI Class VI Shut-off**

- PTFE to +150°F (+66°C)
- PEEK to +350°F (+177°C)

**Seat-To-body O-Ring:**

- Viton - standard
- Consult factory for other materials

**Body Material**

- 316L SST – Standard
- Contact factory for other body/trim/seat materials

**Diaphragm Material:** Jorlon

**Maximum Inlet Pressure:** 3000 psig (207 bar)

**Pressure at Maximum Temperature:** 2165 psi @ 350°F (149 bar @ 177°C) with PEEK seat; 3600 psi @ 150°F (248 bar @ 66°C) with PTFE seat

**Spring Ranges**

- 5 – 50 psi (0,3 – 3,4 bar)
- 25 – 100 psi (1,7 – 6,9 bar)
- 50 – 150 psi (3,4 – 10,3 bar)
- 75 – 250 psi (5,2 – 17 bar)
- 100 – 475 psi (7 – 33 bar)
- 200 – 750 psi (14 – 52 bar)

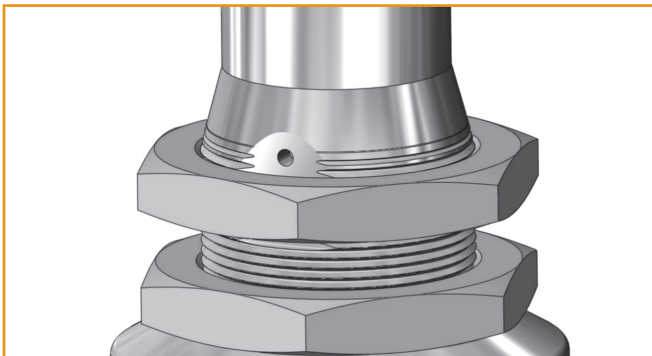
**Flow Characteristics**

- Cv 0.15
- Cv 0.25
- Cv 0.35

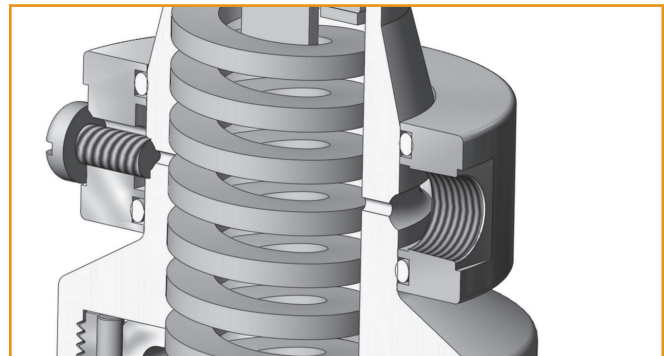
**Options**

- Panel Mounting
- Captured Vent

**OPTIONS & DEFINITIONS**



**Panel Mount Option**

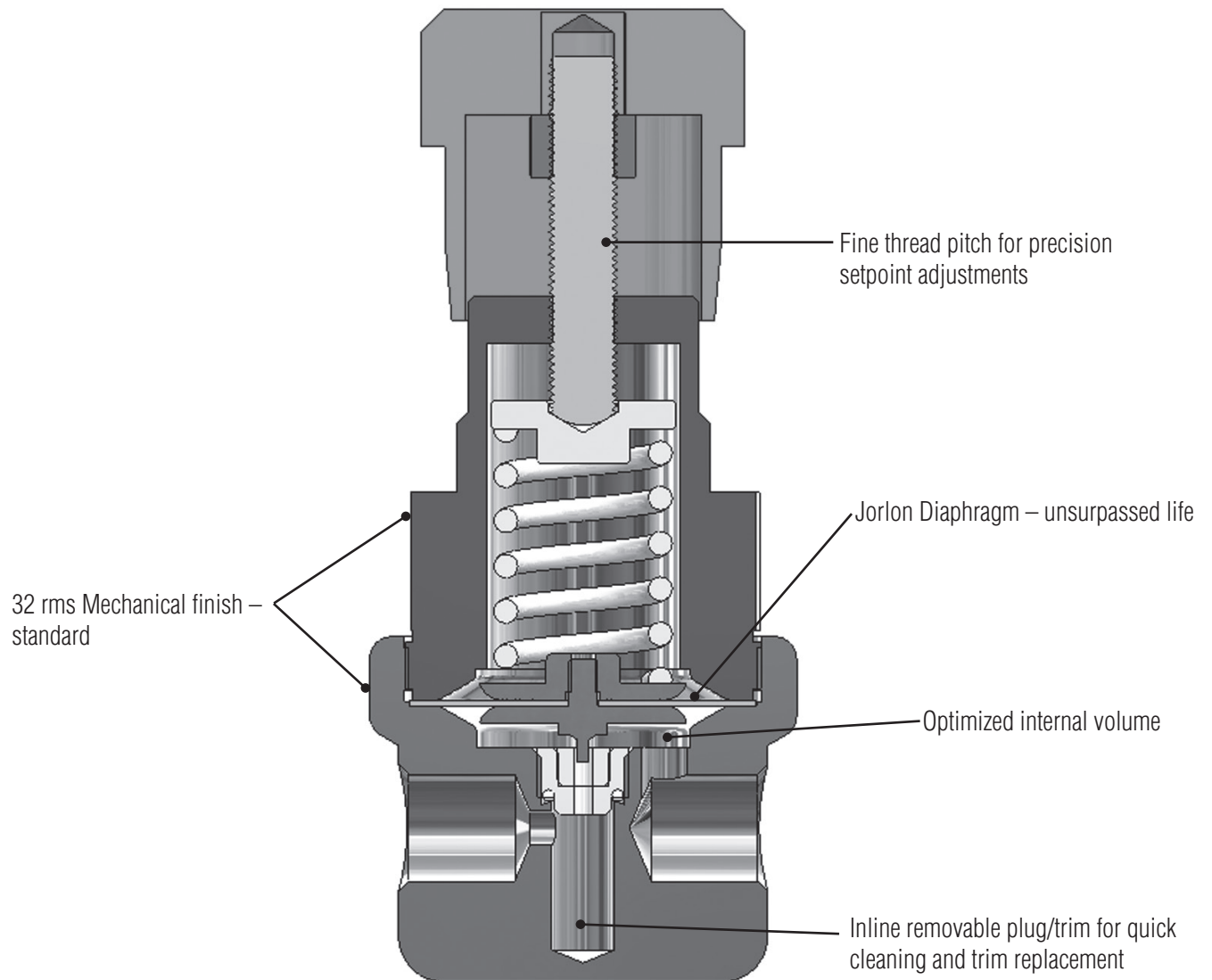


**Captured Vent Option (1/8" NPT)**

**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.

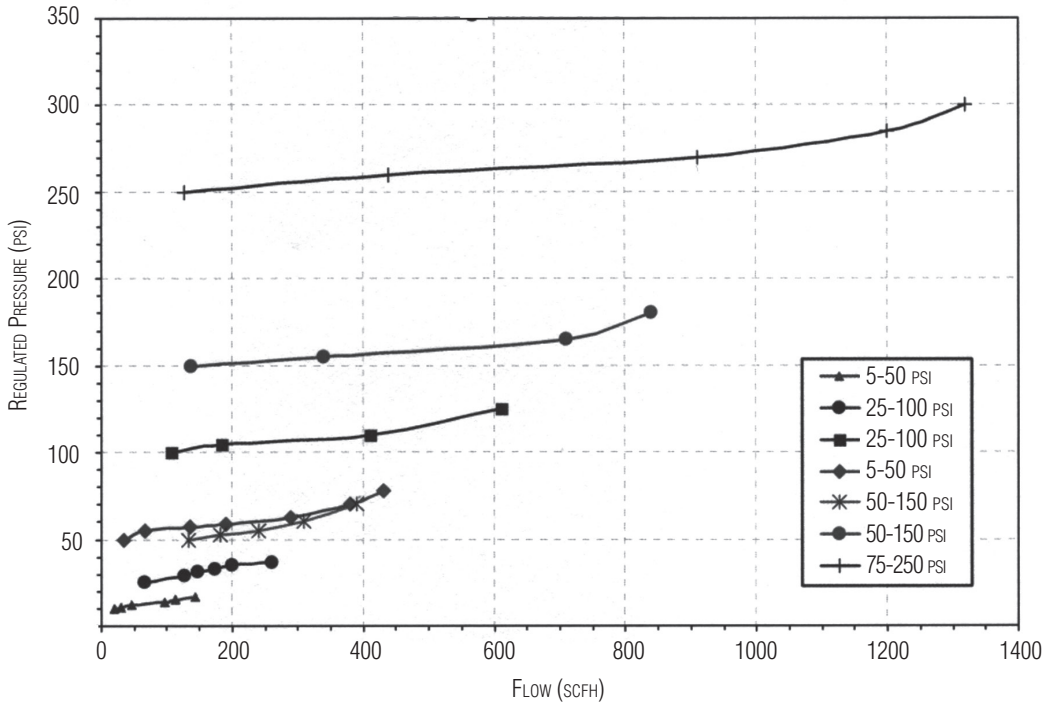
**Panel Mount** The panel mount feature requires a panel cut out of 1-1/2", complete with a threaded spring housing, and a panel mount ring to secure the regulator.

## JB SERIES FEATURES & BENEFITS

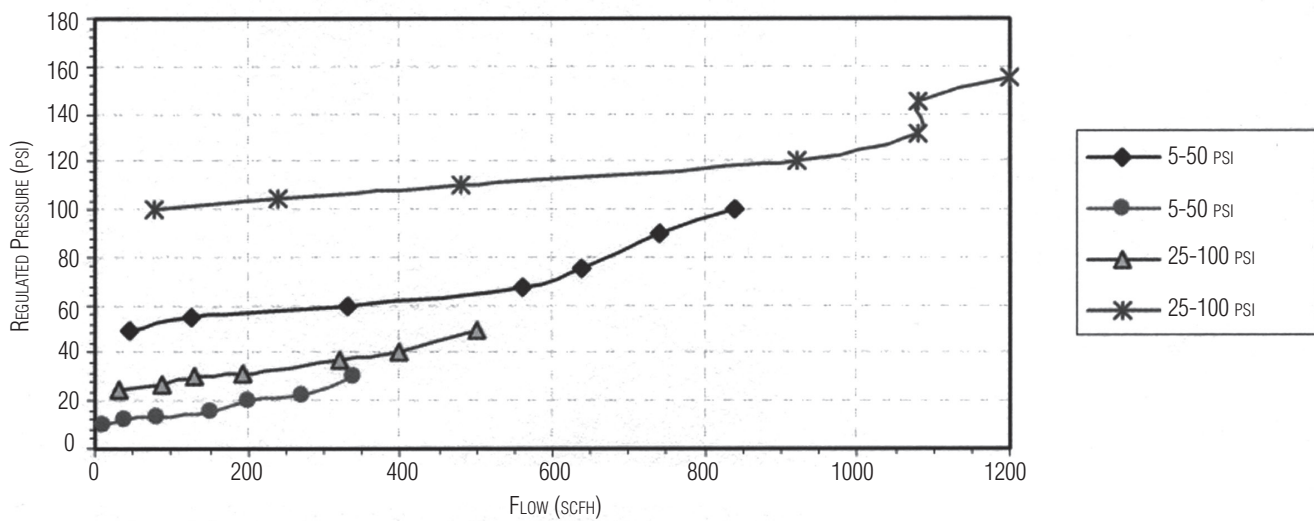


**JB SERIES TRIM FLOW GRAPHS**

• **JB = 0.15 Cv**

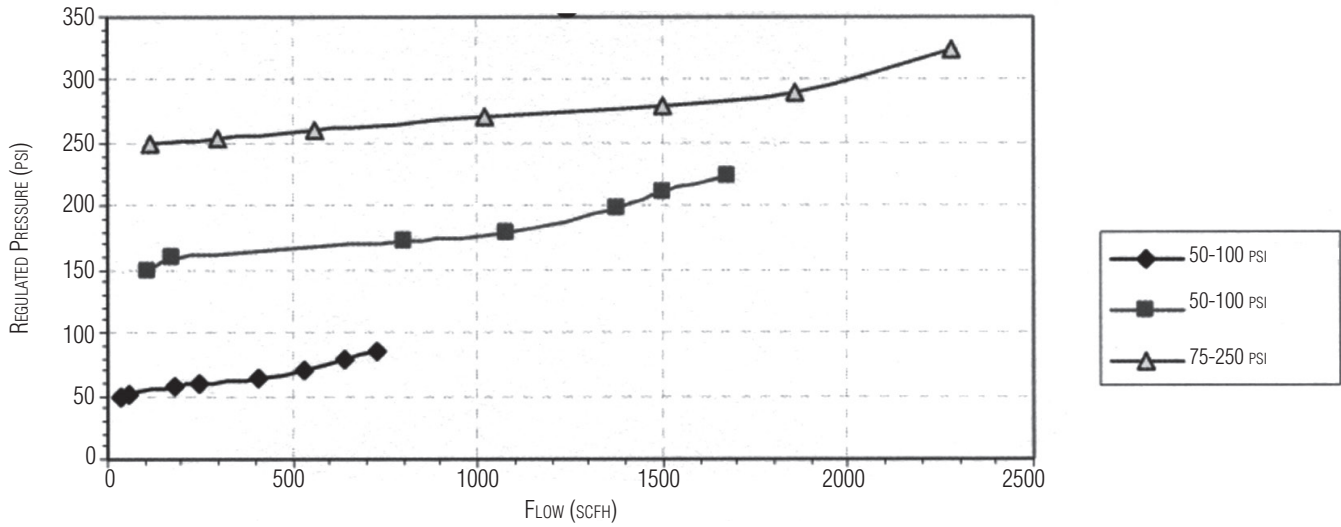


• **JB = 0.25 Cv**

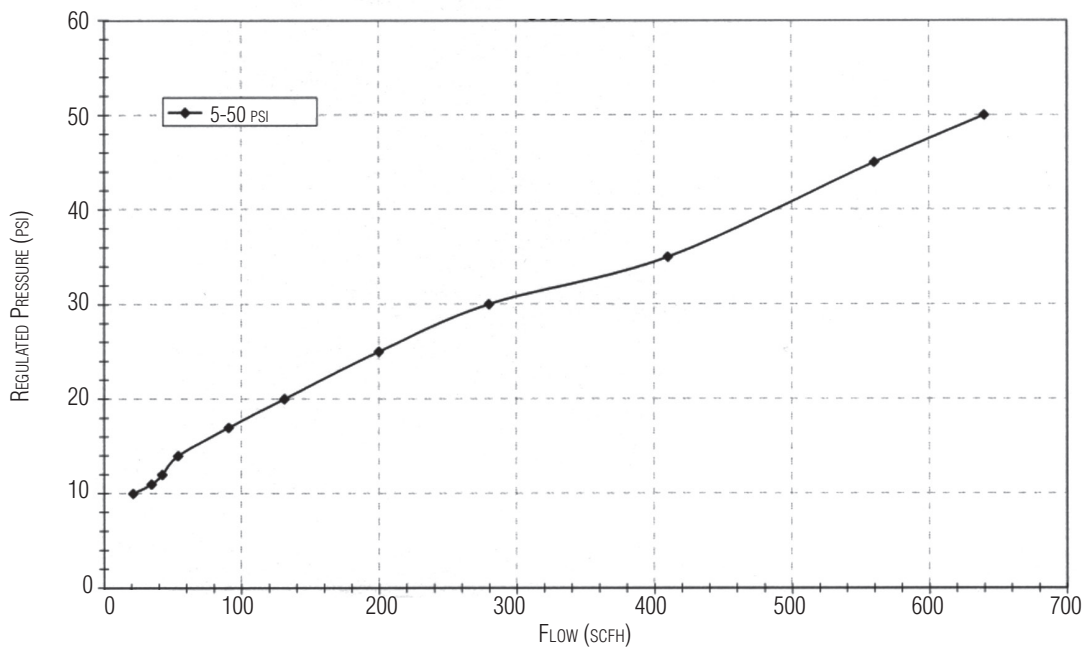


## JB SERIES TRIM FLOW GRAPHS

- 0.25Cv

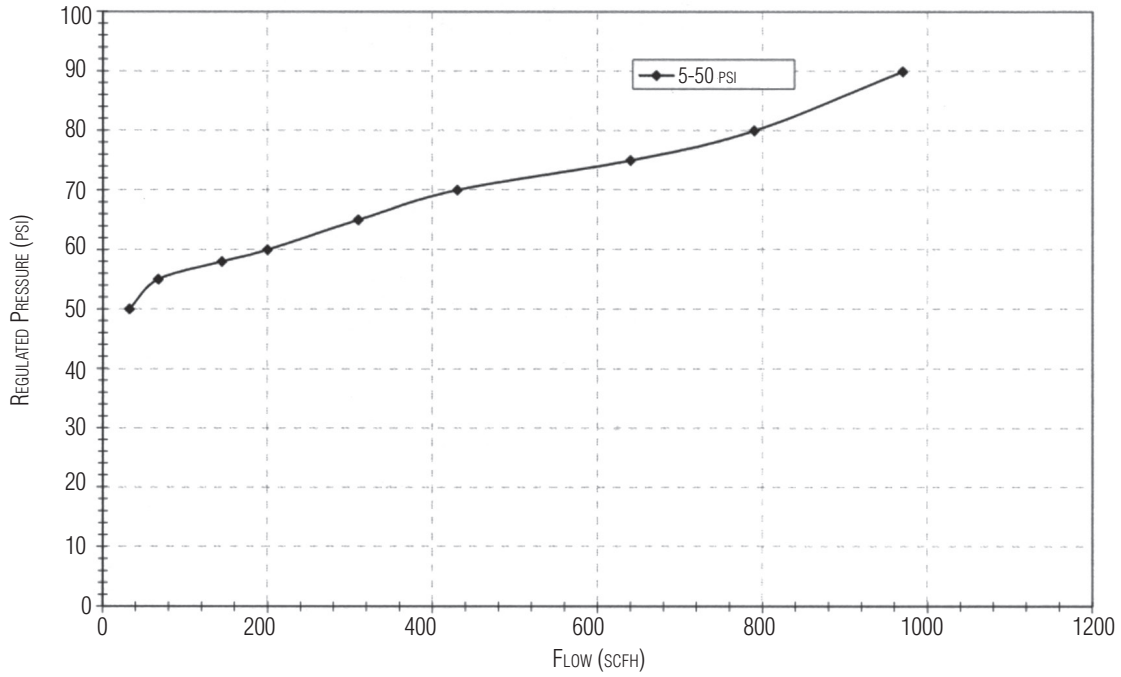


- 0.35Cv

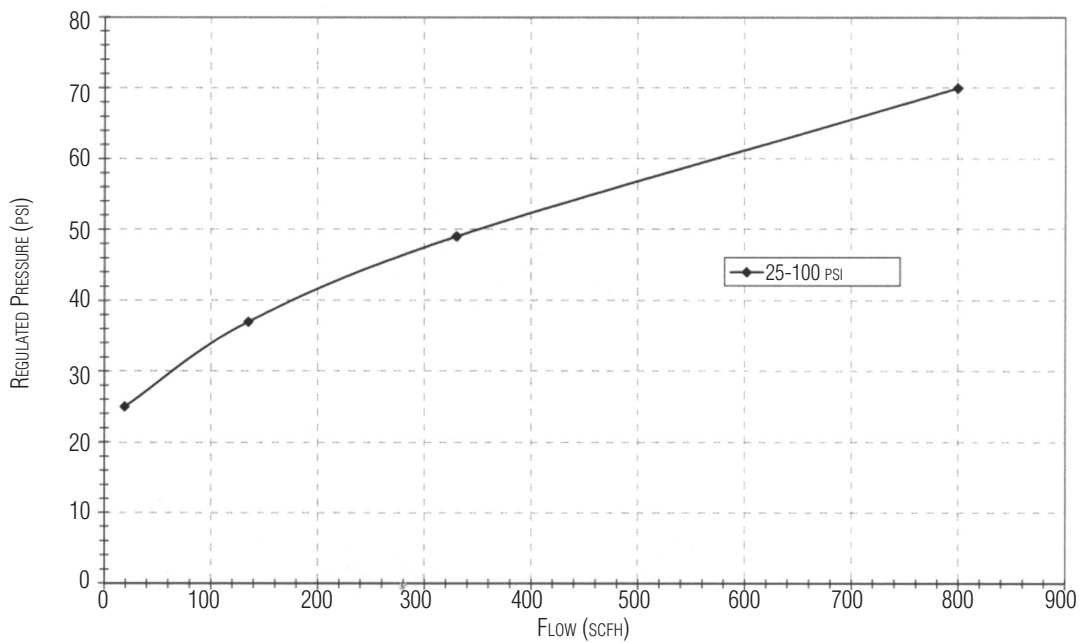


**JB SERIES TRIM FLOW GRAPHS**

- 0.35Cv

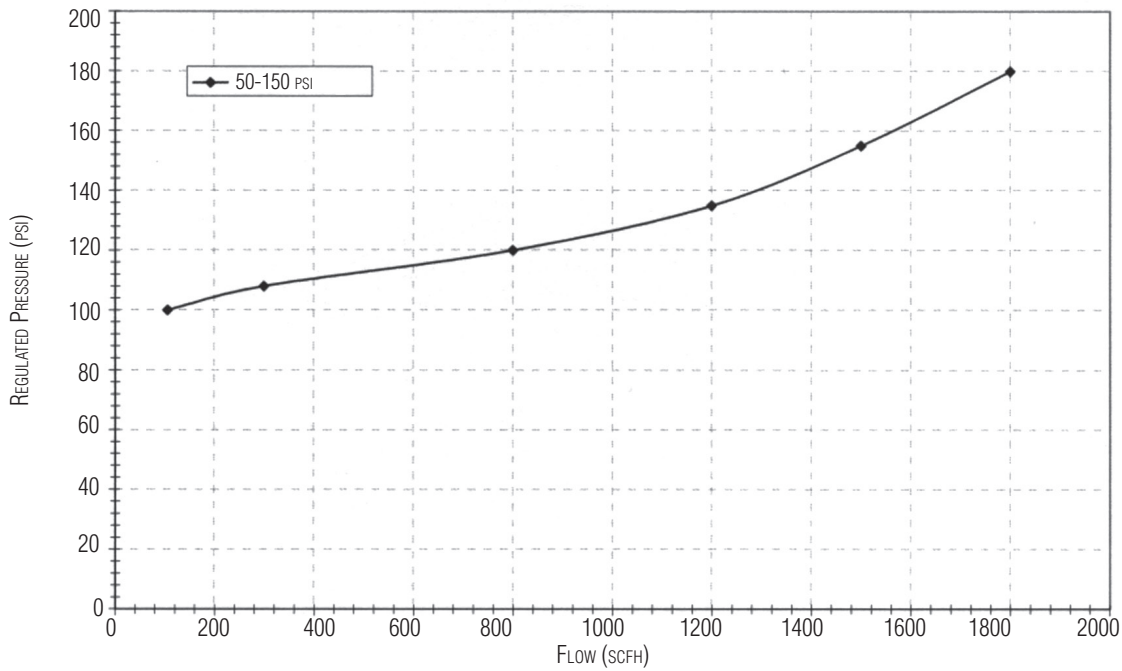


- 0.35Cv

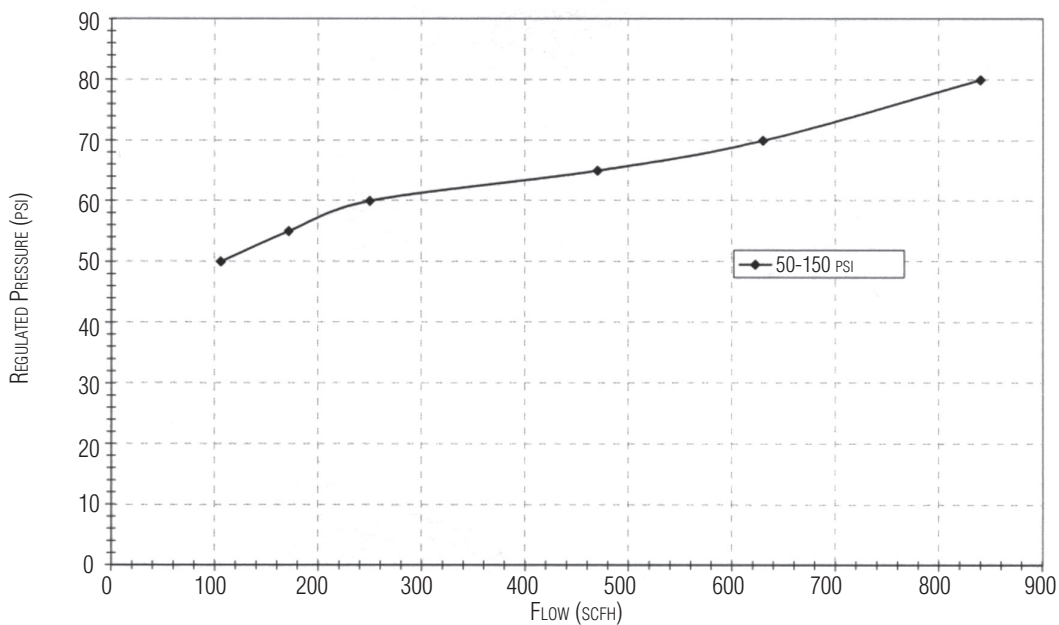


## JB SERIES TRIM FLOW GRAPHS

- 0.35Cv

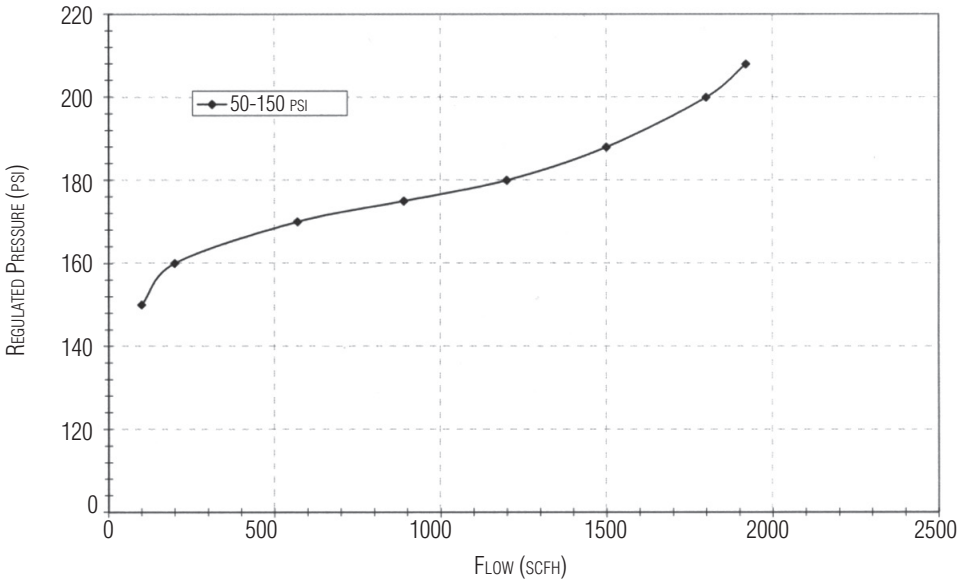


- 0.35Cv

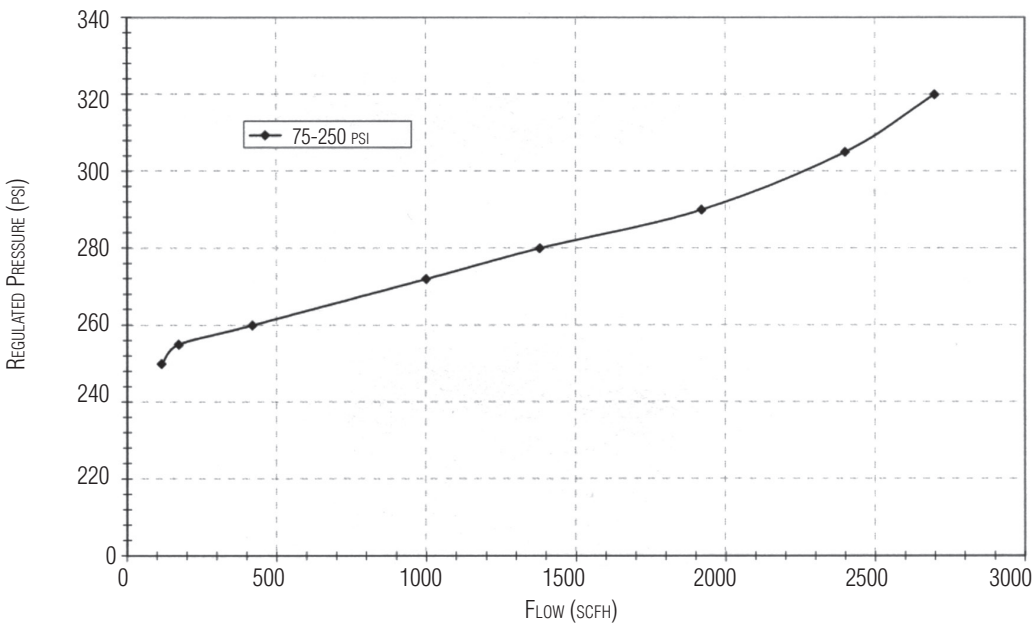


**JB SERIES TRIM FLOW GRAPHS**

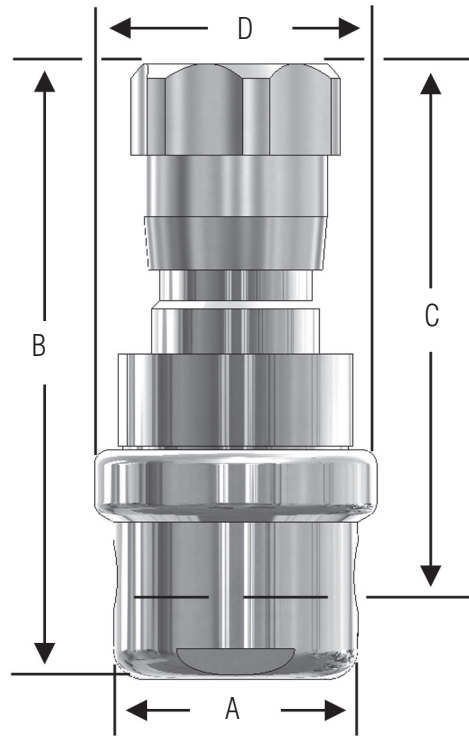
- 0.35Cv



- 0.35Cv



## JB SERIES FLOW DIMENSIONS



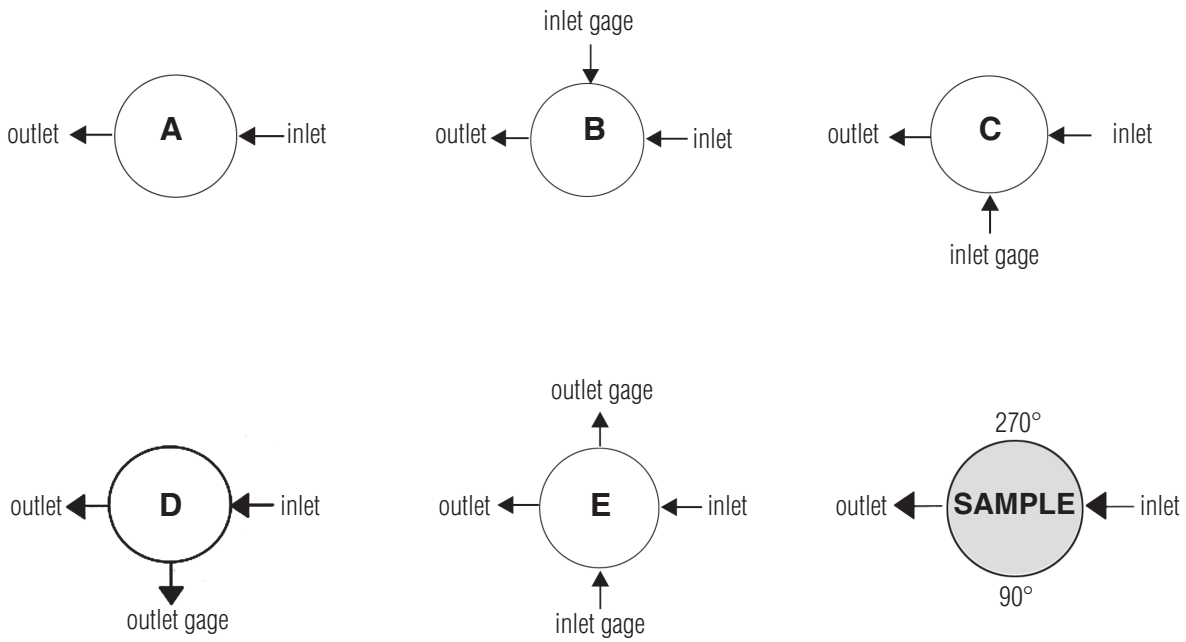
- JB Series, Inches**

VALVE SIZE	DIMENSIONS, INCHES				WEIGHT LBS
	A	B	C	D	
1/4"	2.00	5.03	4.20	2.31	3.4
3/8"	2.00	5.03	4.20	2.31	3.4
1/2"	2.75	5.03	4.20	2.31	4.2

- JB Series, Metric**

VALVE SIZE	DIMENSIONS, MM				WEIGHT KGS
	A	B	C	D	
DN8	50,8	128	107	58,7	1,5
DN10	50,8	128	107	58,7	1,5
DN15	69,9	128	107	58,7	1,9

**JB SERIES TRIM FLOW GRAPHS**



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

## JB SERIES ORDERING SCHEMATIC

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

Size	
025	1/4"
038	3/8"
050	1/2"

Material	
6L	Stainless Steel 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"
		D	Port "D"
		E	Port "E"
ZZ	Non-Standard		

3 & 4 Trim	
1S	Cv 0.15
2S	Cv 0.25
3S	Cv 0.35
ZZ	Non-Standard

5 & 6 Seat Material	
T1	PTFE Cv 0.15
T2	PTFE Cv 0.25
T3	PTFE Cv 0.35
P1	PEEK Cv 0.15
P2	PEEK Cv 0.25
P3	PEEK Cv 0.35

7 & 8 Range Spring/Outlet Pressure	
E1	5- 50 psi
E2	25 - 100 psi
E3	50 - 150 psi
E4	75 - 250 psi
E5	100 - 475 psi
E6	200 - 750 psi

9 & 10 Diaphragm Material	
JL	Jorlon
ZZ	Non-Standard

11 & 12 Actuator	
Ranges E1 thru E6	
SK	Standard
CV	Captured Vent
PM	Panel Mount
ZZ	Non-Standard

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

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**JB SERIES 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
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)
J	0 - 1000 psi/bar (dual)
N	None
Z	Non-Standard

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

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