

# BACK PRESSURE AND PRESSURE RELIEF VALVES

## SIGMAMOTOR

Provides higher accuracy and safety in metering pump systems

### Back Pressure Valves

- CNC precision machined parts
- Cost effective and reliable
- Pressures from 5-150 psi (350 optional)
- Variety of materials available
- Anti-syphon protection
- Fine pressure adjustment
- Optional air release and pressure gauge port

Sigmamotor back pressure valves prevent siphoning and varying rates of dosage from fluctuating downstream pressure by enacting positive discharge pressure in your metering pump system.

Inside the valve is a diaphragm held in place by a spring which is pressure set. When the pressure is exceeded the PTFE diaphragm is pushed up and material flows through the valve to the injection point. The valves are factory set at 50psi but are easily adjusted in the field.



### Pressure Relief Valves

- Fine pressure adjustment
- CNC precision machined parts
- Cost effective and reliable
- Variety of materials available
- Right-angle, 3-port design

Sigmamotor pressure relief valves operate when the system pressure raises above the set pressure of the valve to protect systems from damage due to blockages or excessive pressure situations.

Inside the valve a spring holds a PTFE diaphragm against the valve seat until preset pressure is exceeded, then the diaphragm is forced up and the material in the system is forced out of the relief port. The valve is set at 65psi at the factory but is easily field adjustable.



**BACK PRESSURE/PRESSURE RELIEF**

# BACK PRESSURE AND PRESSURE RELIEF VALVES

## Engineering Specifications

Max Flow Range @ 150 PSI				
BP Part#	PRV Part#	Size	Pulsating US GPH	Continuous US GPM
BA250(*)	PA250(*)	1/4"	100	10
BA375(*)	PA375(*)	3/8"	200	15
BA499(*)	PA499(*)	1/2" (mini)	350	17.5
BA500(*)	PA500(*)	1/2" (std. )	500	25
BA750(*)	PA750(*)	3/4"	600	30
BA100(*)	PA100(*)	1"	600	30
BA150(*)	PA150(*)	1-1/2"	1350	67
BA200(*)	PA200(*)	2"	2000	100
BA300(*)	PA300(*)	3"	5000	270
BA400(*)	PA400(*)	4"	5000	270

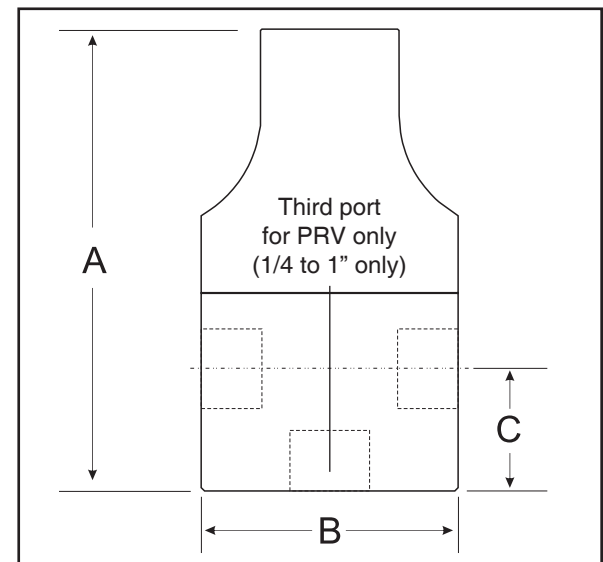
(\*) **Body Material** (ordering example: BA250PP = 1/4" Polypropylene)

P - PVC	K - Kynar
PP - Polypropylene	S - 316 S.S.
CP - CPVC	A - Alloy 20 S.S.
T - PTFE	H - HASTELLOY®

<b>Pressure Range (PSI)</b>	5-150 (50-350 PSI available on metal valves)
<b>Maximum Temperature</b>	Plastic: 140° F Metal: 300° F
<b>Material (Valve Top)</b>	PVC, 316 S.S. or CPVC
<b>Material (Valve Body)</b> Wetted Parts	PVC, CPVC, PP, PTFE, PVDF 316 S.S., A20, or Hastelloy C
<b>Material (Diaphragm)</b>	PTFE Standard, Viton optional

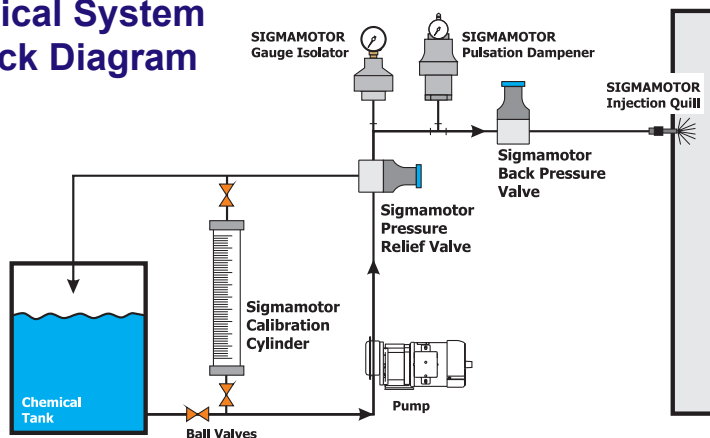
Flanged and union connections are also available.

## Dimensions



Size (NPT)	A	B Dia.	C
<b>Mini Body</b> 1/4" to 1/2"	Metal: 4.22" Other: 4.5"	2.375"	1.125"
<b>Std. Body</b> 1/2" to 1"	6.0"	3.5"	1.25"
<b>1-1/2"</b>	9.5"	4"	2.125"
<b>2"</b>	9.5"	4.45"	2.125"
<b>3"</b>	11.5"	8"	2.75"
<b>4"</b>	11.5"	8"	2.75"

## Typical System Block Diagram



FLOMOTION also provides a complete line of Calibration Cylinders

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