

# TOP VALVE<sup>\*PAT</sup>

## Back Pressure & Pressure Relief Valves

Designed to Enhance the **ACCURACY** and **SAFETY** of Metering Pumps



- Long life diaphragm
- Range to 350 PSIG
- Built-in air release and optional gauge port
- Available in PVC, CPVC, PVDF, polypropylene, PTFE, stainless steel, Alloy 20 and Hastelloy C
- 7 sizes (1/4" - 2" threaded, flanged or socket)
- Color coded handles indicate size at a glance
- High temperature valves available to (300°F/149°C)
- High pressure metallic valves available to 350 psig
- High pressure thermoplastic valves available to 230 psig



**PRIMARY FLUID  
SYSTEMS INC.**

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# TOP VALVE<sup>\*PAT</sup>

For detailed product information visit our website:  
[primaryfluid.com](http://primaryfluid.com)

## Back Pressure/Anti-Siphon and Pressure Relief Valves

### Standard Valve Series: (threaded, socket and flanged)

#### This series incorporates:

- Polycarbonate molded top on all models
- Available in 7 sizes 1/4" to 2" NPT or BSPT
- 8 materials including PVC, CPVC, polypropylene, PVDF, PTFE, stainless steel, Alloy 20 & Hastelloy C
- **Back pressure (anti-siphon) valve** is a two port flow through design, factory set at 50 PSIG (field adjustable 15-150 PSIG)
- **Pressure relief valve** is a three port flow through design factory set at 50 PSIG (field adjustable 15-150 PSIG)
- **Pressure relief valve** is also available in a two port, off line style (model P2)
- Standard diaphragm is PTFE laminated and EPDM backed (3 year warranty); optional materials available
- Optional higher pressure rated (232 PSIG/16 BAR) PVC, CPVC (Corzan) and PVDF valves available
- Locking pressure adjustable handle standard
- Gauge port option
- Other optional materials available for molded top

**Note: CRN available on a variety of valves. Please contact us for price and availability.**

### Flanged Valve Series: (Plastic)



This series incorporates 150# socket-welded flanges on PVC and CPVC valves and threaded 150# companion flanges on polypropylene, PVDF and PTFE valves.

Flange sizes from 1/4" to 2" available.

### Flanged Valve Series: (Metallic valve bodies)



This series incorporates 150# weld neck flanges on all metallic valve bodies. Valve top material available in PVC, CPVC (Corzan).

These flanged valves are also available in the High Temperature and High Pressure Series.

### Flanged Valve Series: (All Metallic)



This series incorporates either an aluminum or 316 stainless steel top on a metallic body constructed of 316L, Alloy 20, Hastelloy C or titanium.

These flanged valves are also available in the High Temperature and High Pressure Series.

## Back Pressure/Anti-Siphon and Pressure Relief Valves

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### High Pressure Series (only available with metallic body)



- pressure range 50 to 350 PSIG
- this series incorporates a standard aluminum metallic top, viton diaphragm, high pressure spring with three standard choices of metallic wetted bottom
- standard body materials available are 316L stainless steel, Alloy 20 or Hastelloy C; other metallic bodies available on request
- standard metallic top is aluminum with optional 316L stainless material available
- valve is available in three styles: BH back pressure 2 port design; PH pressure relief 3 port in-line design; P2H pressure relief off-line design
- valves available in various configurations that include threaded, socket and flanged

### Mid-Range Series (only available with thermoplastic body)

- 20 - 230 psig range
- Available in PVC, CPVC, PP, and PVDF
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### High Temperature Series (for applications above 140°F/ 60°C)

- temperature limit of this valve is dependent on body material selection to a maximum of 300°F (149°C)
  - this series incorporates a standard aluminum metallic top, viton diaphragm, high pressure spring with three standard choices of metallic wetted bottom
  - standard body materials available are 316L stainless steel, Alloy 20 or Hastelloy C, all rated to the maximum temperature; other metallic bodies available on request
  - optional body materials available are CPVC (Corzan) and PVDF; these have limited pressure versus temperature ratings and the factory should be consulted to ensure proper selection
  - standard diaphragm material is Viton with optional materials available
  - standard metallic top is aluminum with optional 316L stainless steel available
  - valve is available in three styles: BH back pressure 2 port design; PH pressure relief 3 port in-line design; P2H pressure relief off-line design
  - valves available in various configurations that include threaded, socket and flanged
- 

### Top Valve Optional Extras (applies to all valves)



- gauge port
- various types of dry or liquid filled gauges
- gauge guards in various materials
- contact factory for pricing on options ([sales@primaryfluid.com](mailto:sales@primaryfluid.com))

**NOTE: CRN available on a variety of valves. Please contact us for price and availability.**

## Back Pressure/Anti-Siphon and Pressure Relief Valves

### Description

This line of diaphragm style, back pressure/anti-siphon and pressure relief valves features a completely adjustable pressure range to 350 PSIG and a built-in air release to reduce priming difficulties. The valves are available in sizes from 1/4" through 2", eight materials of construction, offer a three year warranty and are available with socket weld, flanged or special threaded connections. High temperature to (300°F/149°C) valves are available. *CRN certification available. Please contact factory.*

### Ordering Information e.g. Part # TVBP50-S/S-V-S

**TV - B - P - 50 - S/S - V - S**

**TOP VALVE**

**Valve Type:**  
B = Backpressure  
P = Pressure Relief (3 port)  
P2 = Pressure Relief (2 port)

**Valve Style or Connection:**  
P = Backpressure, FNPT thread  
R = Pressure Relief, FNPT thr'd (3 port)  
FW = Welded Flange  
FT = Thread Companion Flanged  
F = Flanged Non-Metallic  
S = Socket  
B = BSP thread  
T = High Temperature (300°F/149°C)  
H = High Pressure (to 350 psig) Metallic Bodies  
M = Mid-Range Pressure (to 230 psig) Thermoplastic Bodies  
U = Union Type Connection

**Valve Port Connection Size:**

25 = 1/4"	10 = 1"
45 = 1/4" X 1/2"	15 = 1 1/2"
50 = 1/2"	20 = 2"
75 = 3/4"	

**Top Options:**  
Polycarbonate Top Standard  
C = CPVC Top (CRN only)  
P = PVC Top (**optional 1.5"+**)  
A = Aluminum Top  
S = 316L S/S Top  
XXX = Custom spring range

**Miscellaneous Options:**  
E = EPDM Diaphragm  
V = Viton Diaphragm  
G = Gauge Port

**Body Material of Construction:**  
PVC = polyvinylchloride  
CPVC = Corzan  
PP = polypropylene  
TFE = 24% glass filled PTFE  
PVDF = polyvinylfluoride  
S/S = 316L Stainless Steel  
ALL20 = Alloy 20  
Hast = Hastelloy C 276

### Flow Rates

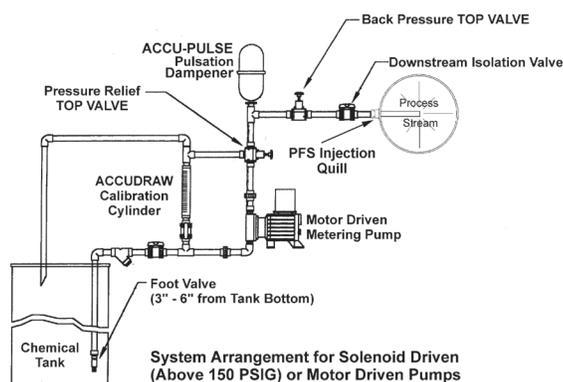
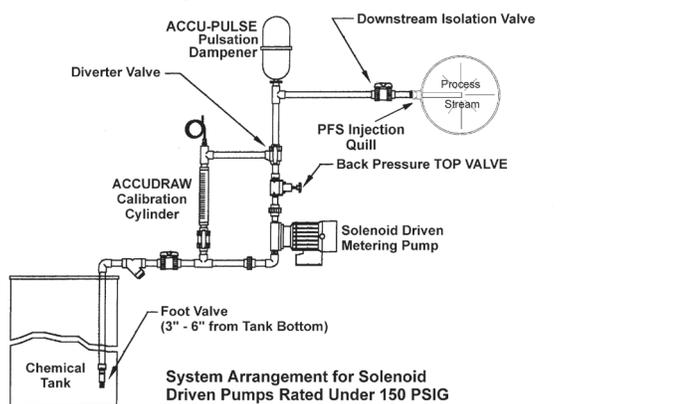
Flow capacity through TOP VALVE back pressure/anti-siphon and pressure relief valves under continuous flow conditions @ **50 PSIG** with ambient temperature water.

Size	1/4"	1/4" / 1/2"	1/2"	3/4"	1"	1 1/2"	2"
Flow rate USGPM	4	4	6	8	14	25	40

**Note:** Capacities will increase with pressure. If pressure is doubled, flow rate will approximately double. For capacities of valves with pulsating flow, use approximately 1/3 of the given flow rates.

### Typical Installations

The installations below are typical installation examples only. Consult your engineering department for the appropriate installation of your application or call Primary Fluid Systems Inc. for advice.



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