

## Technical Data

### Shock Free Check Valves

Model BV02  
Model BV03



#### General

The Model BV02 and BV03 check valves are designed to prevent reverse flow with a smooth shock-free closure. A manual valve housed in the cylinder assembly supply line of the BV02 controls the rate of both opening and closing.

The BV03 acts as a check valve without the manual valve.

A minimum pressure of 5 psi (34.5 kPa) between inlet and outlet is required to open the valves.

#### Design Features

- Modular construction - All internal parts including seat ring can be removed with the cylinder assembly without disturbing line connections.
- No diaphragms or stuffing boxes
- 45° body design assures high capacity
- Uniform speed of response
- Linear control characteristics
- Inherently checks reverse flow

#### Principle of Operation

The valves are pilot operated and operate on a balanced piston principle, spring biased to a closed position. Pressure differential overcomes the force of the spring, causing the main valve to open and establish flow. The pilot varies the pressure on the spring side of the piston for position.

#### “AP” (Aggressive Products) Option

The “AP” option valve cylinder incorporates a combination of seals and O-ring materials to provide optimum performance in aggressive product applications. Specify “AP” Option at time of order when valve is to be used on products which may affect standard seals.

#### Valve Capacity Data

Valve Size	2"	3"	4"	6"
*Cv-gpm	90	190	315	700

\*Cv based on wide open valve utilizing water at 60F (15.6C).

#### Materials of Construction

**Main Valve Body:** Steel-ASTM-A216-GR-WCB

**Main Valve Cylinder:** 17-4 Stainless Steel

**Main Valve Piston:** Stainless Steel

**Seat Ring:** Stainless Steel

**O-Rings:** Viton Standard

(Other elastomers available)

**Other Internal Parts:** Stainless Steel

**Pilot Valve Strainer/Needle Valve Strainer:**

Standard: Steel

**Tubings and Fittings:** Standard: Steel

#### Optional Equipment

- Valve Position Indicator
- Position Indicator Switches
- Independent Opening Speed Control
- Stainless Steel Tubing
- Thermal Relief
- Pilot Line Isolation Block Valves
- Manual Override (Opens Valve)

#### Recommended Spare Parts

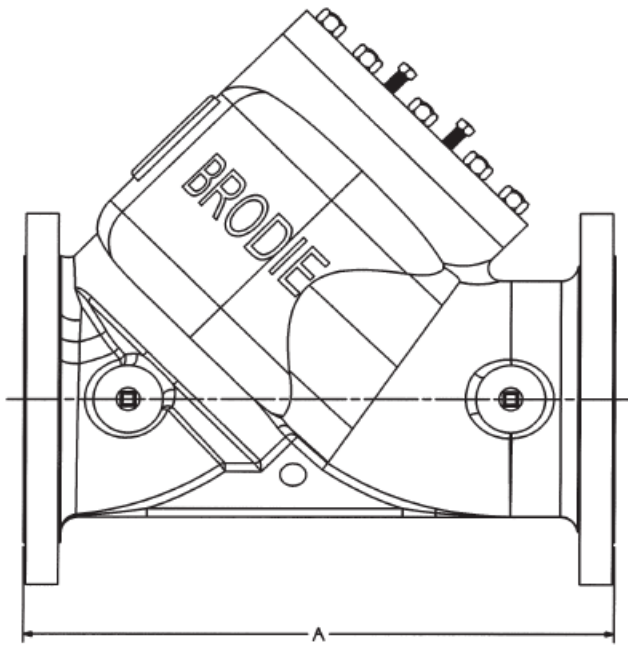
O-Rings

## Flange Connections

Valve Size	Connections	Max Working Pressures @100F	DIN Connections	Max working pressure
2"-6"	150 lb. ANSI	285 psi	DN 80 - DN 150 PN 25	25 Bar
2"-6"	300 lb. ANSI	740 psi	DN 80 - DN 150 PN 64	51 Bar

Temperature Range: -15°F to 150°F (-26°C to 66°C) Optional 250°F (121°C)

## Dimensions (For Certified Dimensional Prints -Consult Factory)



Valve Size	Dimensions		
	mm inches	150 lb.	300 lb.
2"	mm	260	N/A
	inches	10 1/2	
3"	mm	279	333
	inches	11	
4"	mm	330	368
	inches	13	
6"	mm	432	454
	inches	17	

## Pilot Spring Ranges

150-300 lb. Valves	
PSI	kPa
0-20	0-138
*0-40	0-276
30-80	207-552
70-180	483-1241
150-350	1034-2413
350-650	2413-4482

## Shipping Weight And Volume (Approximate)

Valve Size	Shipping Weight and volume	
	Weight	Volume
2"	69 lbs. @	3 Cu. Feet
	31.3 kgs. @	0.085 Cu. Meters
3"	105 lbs. @	2.36 Cu. Feet
	47.63 kgs. @	0.067 Cu. Meters
4"	140 lbs. @	2.51 Cu. Feet
	63.5 kgs. @	0.071 Cu. Meters
6"	250 lbs. @	4.84 Cu. Feet
	113.4 kgs. @	0.137 Cu. Meters

## Ordering Information

In order to accurately process an order, such information as product to be metered, product viscosity, product temperature range, ambient temperature range, rate of flow, operating pressure, units of registration, accessories required, and optional features needed must be specified by the customer.

**NOTE:**

Do not operate this instrument in excess of the specifications listed. Failure to heed this warning could result in serious injury and/or damage to the equipment.

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