

# PVC & CPVC BUTTERFLY CHECK VALVES

BFC-2-0306

## Very Low Profile, Quick Response, In-Line Check Valve



Spears® multi-purpose Butterfly Check Valves provide an extremely low profile and very quick response to back flow without slamming. Since most all components are internal, Spears® Butterfly Check Valves require no more space than a piece of pipe and fitting. Special design incorporates flexible reinforced elastomer seal for long life and is suitable for mounting in any position for greater versatility. Available in IPS sizes 2” through 12” with Flanged, Spigot, Male Thread, Grooved Pipe or wafer style end connections. Can be custom produced to virtually any standard pipe diameter.

### Chemical Resistant PVC & CPVC Construction

All PVC or CPVC construction provides optimum chemical and corrosion resistance for a multitude of industrial and chemical processing applications.

### Field Replacement Flex-Seal - Choice of Reinforced EPDM or Viton®

Internally reinforced EPDM or Viton® elastomer flex-seal provides long life and is field replaceable by removing valve from line. Contact Spears® for additional elastomer availability.

### 73°F Service Pressure Ratings

Butterfly Check Valves are pressure rated to 150 psi for water at 73°F for sizes 2” through 8” and to 100 psi for sizes 10” & 12”.

Viton® is a registered trademark of DuPont Dow Elastomers.

### Maximum PVC & CPVC Service Temperatures

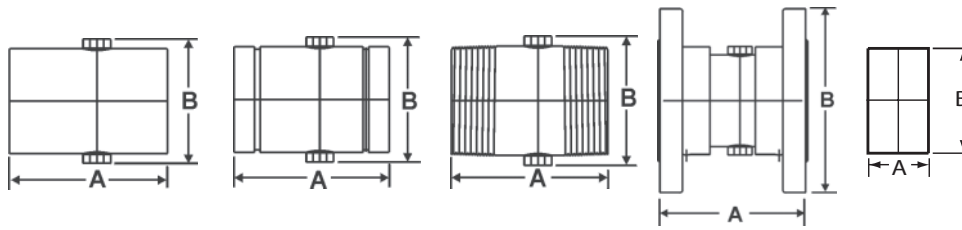
Maximum service temperature for PVC is 140°F and 200°F for CPVC. Valve pressure deratings at elevated temperatures apply.

### Quick Response Shut-off In Any Position

Two elastomer sealed valve plates located in the flow stream react almost instantaneously to back flow conditions. Limited travel results in very fast shut off regardless of horizontal, vertical, up or down flow installation.



# Full Assortment of End Connection Configuration Options



## Dimensions

Size	Spigot (Plain End) Valve, Grooved End Valve & Threaded Valve		Flanged		Wafer		Pressure Rating (psi)
	A	B	A	B	A	B	
2	6-15/32	2-27/32	6-1/8	6	1-3/4	4	150
2-1/2	5-3/4	3-9/16	6-1/4	7	2-1/2	4-5/8	150
3	5-3/4	4-1/4	6-5/16	7-1/2	2-1/2	5-1/4	150
4	6-3/4	5-1/4	7-1/4	9	3-1/4	6-5/8	150
6	10-1/2	7-7/16	11-3/8	11	4-3/4	8-5/8	150
8	14	9-3/4	14-3/4	13-1/2	6-1/4	10-7/8	150
10	16	11-7/8	17-5/16	16	8	13	100
12	18	13-7/8	17-7/16	19	11	15-3/4	100

As a general guideline, Opening & Closing Pressures will range from .2 to .5 psi for horizontal applications. Opening pressure tends to decrease in larger size valves. Valves installed in vertical up-flow applications will require slightly higher pressures.

## C<sub>v</sub> Values

Size	C <sub>v</sub>
2	91
2-1/2	123
3	365
4	665
6	1695
8	2990
10	5595
12	8490

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## General Installation Information

Butterfly Check Valve seating may be affected by normal system turbulence. Valves should be installed at least 5 pipe diameters away from any fitting. If used as a foot valve, do not place near bottom of a tank. Butterfly type check valves should not be used in continuous cycling applications, such as with reciprocating pumps. This can result in premature failure of sealing membrane. In horizontal installations, always orient the Hinge Post Bolts visible on the external body in a vertical (top and bottom) position, perpendicular to flow. In vertical installations downstream from an elbow, flow velocities can be higher on the outer radius of the elbow. To avoid uneven butterfly plate loading, the Hinge Post Bolts should align with crotch and outer radius of elbow and NOT from side to side of the elbow.

Notes: Flanged valves are designed for mounting between two (2) ANSI Class 125/150 bolt pattern flanges using user supplied 1/8" full-faced gaskets, bolts, nuts and flat washers. Male thread ends are standard NPT tapered. Grooved ends are for use with mechanical coupler designed for thermoplastic pipe.

**NOT FOR USE WITH COMPRESSED AIR OR GAS**

### Sample Engineering Specification

All thermoplastic Check Valves shall be Butterfly designed constructed PVC Cell Classification 12454 or CPVC Cell Classification 23447. Valves shall be flanged, spigot, male thread, grooved or wafer end. All valve seals shall be reinforced EPDM or Viton® and field replaceable. All 2" through 8" valves shall be pressure rated at 150 psi, all 10" & 12" valves at 100 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.