PVC & CPVC BUTTERFLY CHECK VALVES

BFC-2-0212

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" - 12" with Flanged, Spigot, Male Threaded, Grooved Pipe style & Wafer end connections, and 14" - 24" Flanged, Spigot, Grooved & Wafer 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 Replaceable Internal Assembly - Choice of Reinforced EPDM or FKM Flex-Seal

Complete internal component assembly with reinforced EPDM or FKM 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", to 100 psi for sizes 10" through 16" and to 50 psi for sizes 18" to 24".

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.



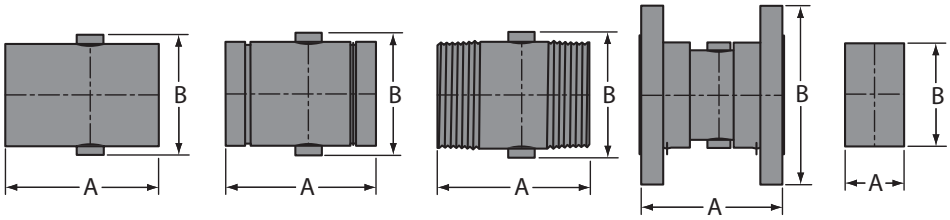
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Full Assortment of End Connection Configuration Options



Dimensions

Size	Spigot (Plain End) Valve, Grooved End Valve & Threaded Valve		Flanged		Wafer		Pressure Rating (psi)
	A	B	A	B	A	B	
2	5-3/4	2-9/16	6-1/16	6	1-3/4	4	150
2-1/2	5-3/4	3-3/32	6-1/8	7	2-3/8	4-3/4	150
3	5-3/4	4-1/32	6-1/4	7-1/2	2-3/4	5-1/4	150
4	6-3/4	4-13/16	7-1/4	9	3-5/8	6-5/8	150
6	10-1/2	7-9/32	11-3/8	11	4-1/4	8-5/8	150
8	14	10-7/32	14-9/16	13-1/2	6	11	150
10	16	11-31/32	17-3/8	16	10	13-1/4	100
12	16	14-1/32	17-1/4	19	12	16	100
14	18	14-3/4	20	21	13	17-5/8	100
16	19-3/4	16-17/32	21-1/4	23-1/2	13-1/2	20-1/8	70
18	26-1/2	19-31/32	27	25	15-1/2	21-1/2	50
20	28-7/8	21-25/32	40-7/8	27-1/2	17	23-3/4	50
24	29-7/8	25-21/32	43-7/8	32	19	28-1/8	50

C_v Values

Size	C_v	Size	C_v
2	91	12	8490
2-1/2	123	14	10,000
3	365	16	13,000
4	665	18	15,000
6	1695	20	18,000
8	2990	24	29,000
10	5595		

As a general guideline, Opening and 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.

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.

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 FKM with field replaceable internal assembly. All 2" through 8" valves shall be pressure rated at 150 psi, all 10" through 16" valves at 100 psi and all 18" through 24" at 50 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

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