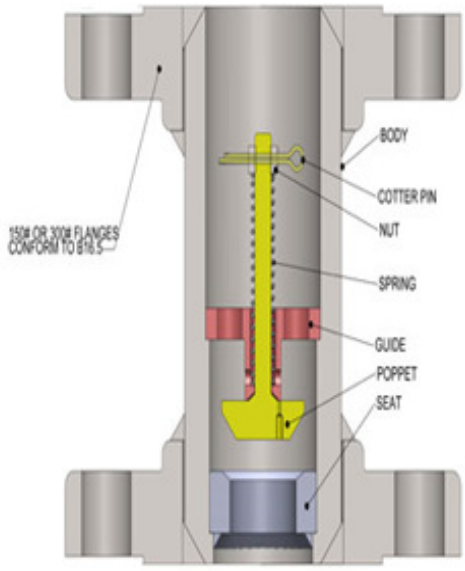
ASVIN EXCESS FLOW CHECK VALVES

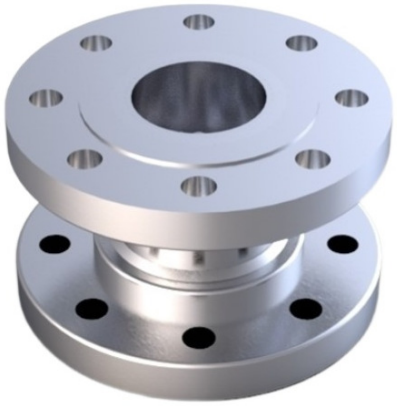
FOR PROCESS INDUSTRIES

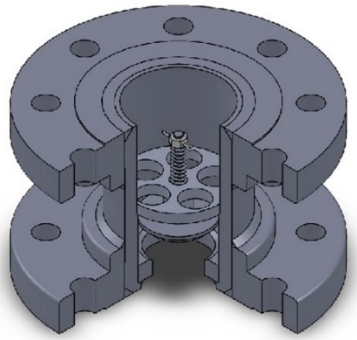


To become a leading entity in this field of Process Industries, **ASVIN** have been engaged in manufacturing **ASVIN Excess Flow Check Valves**, which find their usefulness in food processing, beverage, oil refinery and chemical industries. They are in-line valves through which pressurized gas or liquid flow in either direction. Offered valves are ideal to close upon excessive discharge of liquid or vapor resulting from a break in piping system. Provided

ASVIN Excess Flow Check Valves are spring-loaded flow shut-off valves which only close when flow through the valve exceeds a predetermined closing flow rate in a direction marked on them.

ASVIN Excess Flow Check Valve also called **ASVIN** Burst Control Valve or **ASVIN** Hose Safety Check Valve or **ASVIN** Velocity Check Valve. The **ASVIN** Excess Flow Check valve has a sliding poppet within a chamber with an orifice at one end, wherein the closing flow rate settings can be adjusted. Precise adjustments can be made externally by turning an adjustment nut against a threaded screw extending at the end of the valve which causes a poppet to move within the chamber. As the poppet is urged toward the retainer by a coiled spring, the poppet is moved longitudinally within the chamber, either toward or away from the orifice.





Turning the threaded nut enables to adjust the tension on the spring and therefore, the threshold flow rate of the valve could be precisely set. The valves operate by using the pressure differential across the valve to operate the poppet and spring assembly. The pressure differential is directly related to the flow of (SCFM) through the valve. When the pressure differential is within the operating limits - below the cut-off flow - of the unit, the force on the valve exerted by the spring is greater than that caused by the pressure differential the valve remains open and normal operation continues. When the pressure differential is above the cut-off limit, the force on the valve poppet exerted by the pressure differential is greater than the force exerted by the spring, and the valve closes. After the repairs to the line are made, normal operation is automatically enabled when pressure across the valve equalizes through the bleeder hole. The valve spring size can be specified by determining the air flow during normal operation and by estimating the flow if a failure or rupture occurs. **ASVIN** Excess Flow Check Valve is used in filling lines and protects the system against excess flow rates and safely shuts off the flow due to hose bursts or excessive leakages downstream of the valve. **ASVIN** Excess Flow check Valves are available in Standard Sandwich types suitable for mounting between a pair of flanges and also flanged screwed or butt weld connections types as per client requirements.

Selecting the proper closing flow rating is critical for the **ASVIN** excess flow check valve to work properly. If the rating is too high, the valve may fail to close when a line or fitting ruptures downstream of the valve. If the rating is too low, the valve will close prematurely, such as during pump start-up, when a surge of fluid is experienced. We recommend contacting **ASVIN** to help select the proper flow rating for your specific application. As a rule of thumb, a spring that provides a closing flow rate roughly 50% greater than the normal expected flow will provide sufficient margin to allow the valve to close in the event of a catastrophic event while eliminating nuisance closings.

Since **ASVIN** 'excess flow check valves depend on flow in order to close, the line downstream of the valve must be as short and as free from bends and other flow restrictions as possible. A general rule is to have 10 diameters of straight piping downstream of the valve. Lines and fittings should not be reduced to a smaller size than the size line for which the valve is intended.

Seat Materials:

All valve seats are integral and can be supplied either with an O-ring seat or without an O-ring (metal-to-metal seat). Whether the valve body is metal or plastic, the term "metal-to-metal" is used for seats without O-rings. "Metal-to-metal" seats are the same material as the valve body unless otherwise specified. ALL O-RING SEATS HAVE A MAXIMUM PRESSURE RATING OF 1500 PSI.

VITON ® (-10°F to 400°F)
Buna-N (-40°F to 250°F)
EPDM (-65°F to 300°F)
Neoprene (-40°F to 250°F)
Silicone (-80°F to 450°F)
Teflon- (-320°F to 500°F)

Springs:

All standard springs are 316 stainless steel unless noted otherwise. Several cracking pressure options are available for each valve. Spring sizes are defined by the orifice diameter of the valve.

316 Stainless Steel (-320°F to 400°F)
17-7 PH Stainless Steel (-20°F to 400°F)
Alloy C-276 (-320°F to 400°F)
Alloy B (-320°F to 400°F)
Alloy 400 or MONEL® (-320°F to 400°F)
Alloy X750 or INCONEL® Alloy X750 (-320°F to 700°F)
Titanium Beta C (-75°F to 550°F)

Performance Standards

- MSS SP-115 in 1995 – Design, Performance & Test
- US DOT 192.381 in 1996 - Performance
- ASTM F1802 in 1997 – Test Method
- ASTM F2138 in 2001 – Standard Specification

Features of ASVIN Excess Flow Check Valve:

- Designed to fit between 150- or 300-pound American Standard steel pipe flanges. Ring Groove flanges can be furnished if required.
- A350 LF2 forged carbon steel flanges
- Generous flow channels provide low pressure drops.
- Heavy duty steel construction will withstand temperatures from -50° F (-45° C) to +300° F (+148° C) and internal pressures up to 1900 psig.
- Complete 304 or 316 stainless steel construction is available for use in corrosive or extreme environments.
- Other valve sizes may be available. Contact **ASVIN** for alternate sizes.

Size Range : From ¼” (6 mm) to 16” (400 mm)

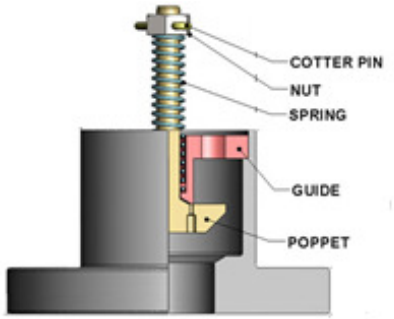
Pressure Range : From 2 psi (0.15 bar) to 9000 psi (620 bar)

Connections : Threaded / Screwed / Flanged, Wafer (Sandwich), Butt & socket welds

Materials : Stainless Steel, Carbon Steel, Brass, etc….

Flow Rates (L/min) Theoretical maximum water flow rate when outlet is open ended

Screwed					
Inlet Pressure (kPa)	**Inlet Size**				
	½” (15NB)	**¾” (20NB)**	**1” (25NB)**	**1 ½” (40NB)**	**2” (50NB)**
200	25	30	75	375	530
300	30	35	95	470	660
500	40	45	125	605	850
1000	55	65	175	660	1205
1500	70	80	210	1050	1480
2000	80	90	245	1215	1705
2500	85	100	275	1355	1910
3000	95	110	300	1485	2090
3500	100	120	325	1605	2260



Flanged				
Inlet Pressure (kPa)	Inlet Size			
	2" (50NB)	3" (80NB)	4" (100NB)	6" (150NB)
300	1350	3100	5650	13400
500	1700	4000	7100	17500
1000	2500	5600	10000	24800
1500	3000	6900	12000	30000
2000	3500	7900	14000	34700
2500	3800	8800	15700	38700

Face to Face Dimensions in inches			
SIZE	SCREWED	FLANGED	SANDWICH
15 NB	2.34	--	--
20 NB	2.34	--	--
25 NB	3.00	3.75	--
32 NB	3.00	3.80	--
40 NB	3.19	4.38	3.25
50 NB	3.68	5.13	3.38
65 NB	5.00	7.28	3.63
80 NB	5.50	8.38	3.75
100 NB	6.00	9.69	4.69
150 NB	--	13.75	7.19
200 NB	--	15.10	8.19
250 NB	--	19.25	11.31
300 NB	--	22.25	11.63

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