

Alfa Laval 45BYMP

Control/Check Valve

Introduction

The Alfa Laval 45BYMP Check Valve is a Y-body ball check valve designed to enable the product to pass through the valve with no restrictions with a minimal pressure drop while preventing reverse product flow in hygienic stainless steel pipe installations. Capable of being installed in either a vertical or horizontal position, the valve features a seat and stem angled at approximately 45° to the pipe axis.

Durable and long-lasting, the valve operates at a wide range of pressures and flow rates. Because the sealing check ball moves completely out of the process flow when open, the valve offers low pressure drop and easily handles viscous products or liquids containing solid particles.

Application

The 45BYMP Check Valve controls flow, pressure control in gas distribution systems and pressure reduction while preventing reverse flow in connection with gas storage. It is widely used across the dairy, food, beverage, home-personal care and chemical industries.

Benefits

- Straightforward, robust, hygienic and reliable design
- Fast-acting
- Minimal pressure drop
- Leakproof
- Authorized to carry the 3-A symbol

Standard Design

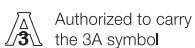
The valve consists of a single-piece, stainless steel body with an elastomeric ball (see Options for materials available). The "Y" branch of the valve maintains a Tri-Clamp® connection along with an associated Tri-Clamp, end cap, and NBR seal. The valve is polished internally and externally and is authorized to carry the 3-A symbol.

Working principle

When liquid under normal pressure enters the inlet of the Alfa Laval 45BYMP Check Valve, an elastomeric ball is pushed upward into the "Y" branch (lower pressure area) of the valve. When the liquid flow stops, the pressure within the valve equalizes. The ball then returns from the "Y" branch of the valve and rests itself against the smaller diameter of the valve near its inlet. Should a reverse-flow situation occur, the opposing pressure of the fluid will seat the ball firmly against the inlet of the valve, preventing reverse flow.



Certificate



TECHNICAL DATA

Pressure	
Max. product pressure	200 PSI
Min. product pressure	1 PSI - to unseat check ball

Temperature	
Temperature range	based on elastomer choice

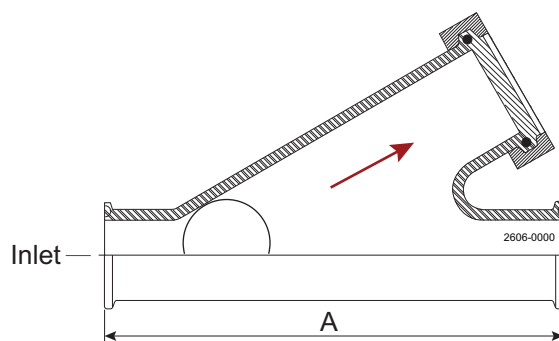
PHYSICAL DATA

Materials	
Product wetted steel parts	Stainless steel AISI 316L
Other steel parts	Stainless steel AISI 304
Product wetted parts	See option list below
Finish	32 Ra standard

Size	
Available in sizes:	1½" to 3"

Connections	
Tri-Clamp	

Dimensions
45BYMP-Size-Ball Mat'l*



Size (Tube OD)		A		Approx. Wt.	
inch	mm	inch	mm	lb	kg
1½	38.1	8 ¹⁹ / ₃₂	218.3	3.00	1.36
2	50.8	10 ³ / ₃₂	256.4	3.25	1.47
2½	63.5	11½	292.1	7.69	3.48
3	76.2	12 ³ / ₈	314.3	10.14	4.59

End Connection: Tri-Clamp®
 Valve Material:
 316L Stainless Steel

All dimensions are for identification purposes only.



45BY-Size02-Ball Mat'l*, Replacement Balls

Size (Tube OD)		Size (Ball)	
inch	mm	inch	mm
1½	38.1	1 ⁵ / ₈	41.3
2	50.8	2 ¹ / ₈	54.0
2½	63.5	3½	88.9
3	76.2	4 ¹ / ₈	104.8

*Ball Material:

U = Buna Ball

N = Nylon Ball

SF = Viton Ball

E = EPDM

Options

Ball Material

- Buna
- EPDM
- SFY
- Nylon (max. 140°F)

Gasket Material

- NBR (standard)

Ordering

Please state the following when ordering:

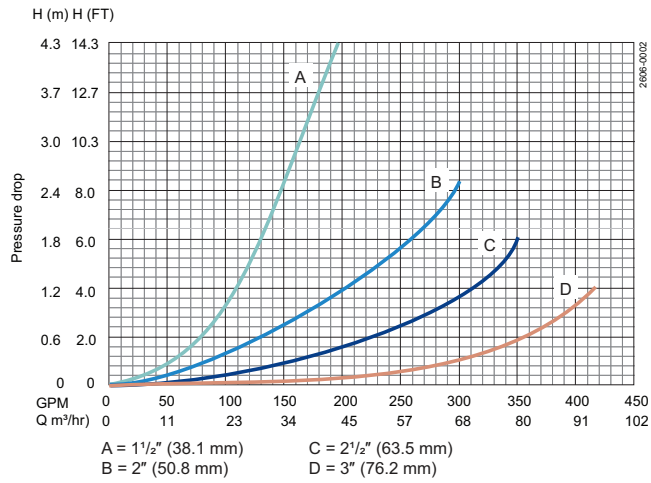
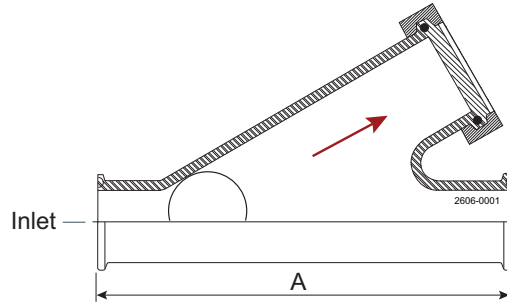
- Connection size
- Connection type
- Check ball material



Pressure Drop Curves

Model 45BYMP Ball Check Valve

All curves are tested pressure drop curves, not certified, and should be applied for guideline purposes only. Performance curves are based on tests using 68°F (20°C) water.



Alfa Laval reserves the right to change specifications without prior notification.

How to contact Alfa Laval

Contact details for all countries are continually updated on our website. Please visit www.alfalaval.us to access the information direct.