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The Original, Sanitary Y-Body Check Valve

45BYMP Check Valve

PD 66378 US 2002-09

Application

The 45BYMP Check Valve is designed for use in sanitary stainless steel pipe systems to prevent reverse product flow. The valve can be installed in either a vertical or horizontal position.

Working Principle

When liquid under normal pressure enters the inlet of the 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, and the ball will return from the "Y" branch of the valve, and rest 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.

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 gasket. The valve is polished internally and externally and is authorized to carry the 3A symbol.

Size

- Available in sizes from 1½" to 3".

Connections

- Tri-Clamp
- Weld connections.

Technical Data

Max. product pressure 200 PSI (contact Alfa Laval for higher PSI)

Min. product pressure 1 PSI - to unseat check ball

Temperature range based on elastomer choice

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



Fig. 1. 45BYMP Y-Body Check Valve.

Options

Ball Material

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

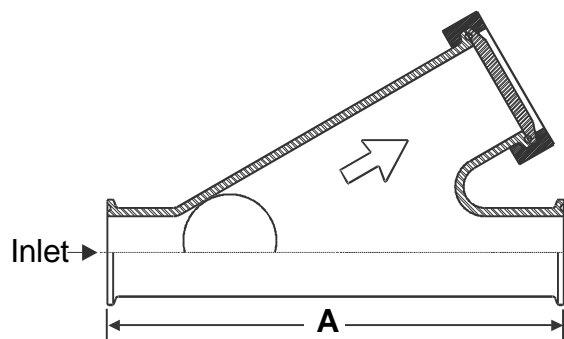
Gasket Material

- NBR (standard)

Ordering

Please state the following when ordering:

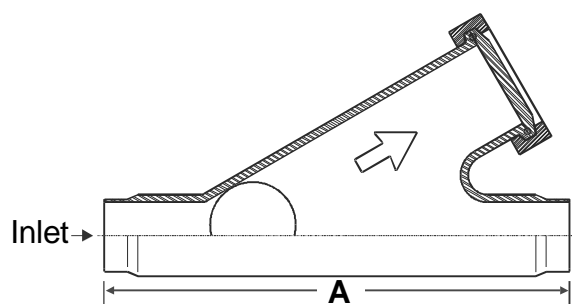
- Connection size
- Connection type
- Check ball material



45BYMP-Size-Ball Mat'l*

Size (Tube OD)		A		Approx. Wt.	
in	mm	in	mm	lb	kg
1½	38.1	8 ¹⁴ / ₃₂	214.3	3.00	1.36
2	50.8	10 ³ / ₃₂	256.4	3.25	1.47
2½	63.5	11 ¹ / ₂	292.1	7.69	3.48
3	76.2	12 ³ / ₈	314.3	10.14	4.59

End Connection: Tri-Clamp®



L45BYWW-Size-Ball Mat'l*

Size (Tube OD)		A		Approx. Wt.	
in	mm	in	mm	lb	kg
1½	38.1	8 ⁷ / ₈	225.4	3.99	1.81
2	50.8	10 ¹ / ₂	266.7	5.49	2.49
2½	63.5	12 ¹³ / ₁₆	325.4	8.56	3.88
3	76.2	13 ¹¹ / ₁₆	347.7	12.13	5.50

End Connection: Tri-Clamp®

Valve Material:
316L Stainless Steel

45BY-Size-02-Ball Mat'l*, Replacement Balls

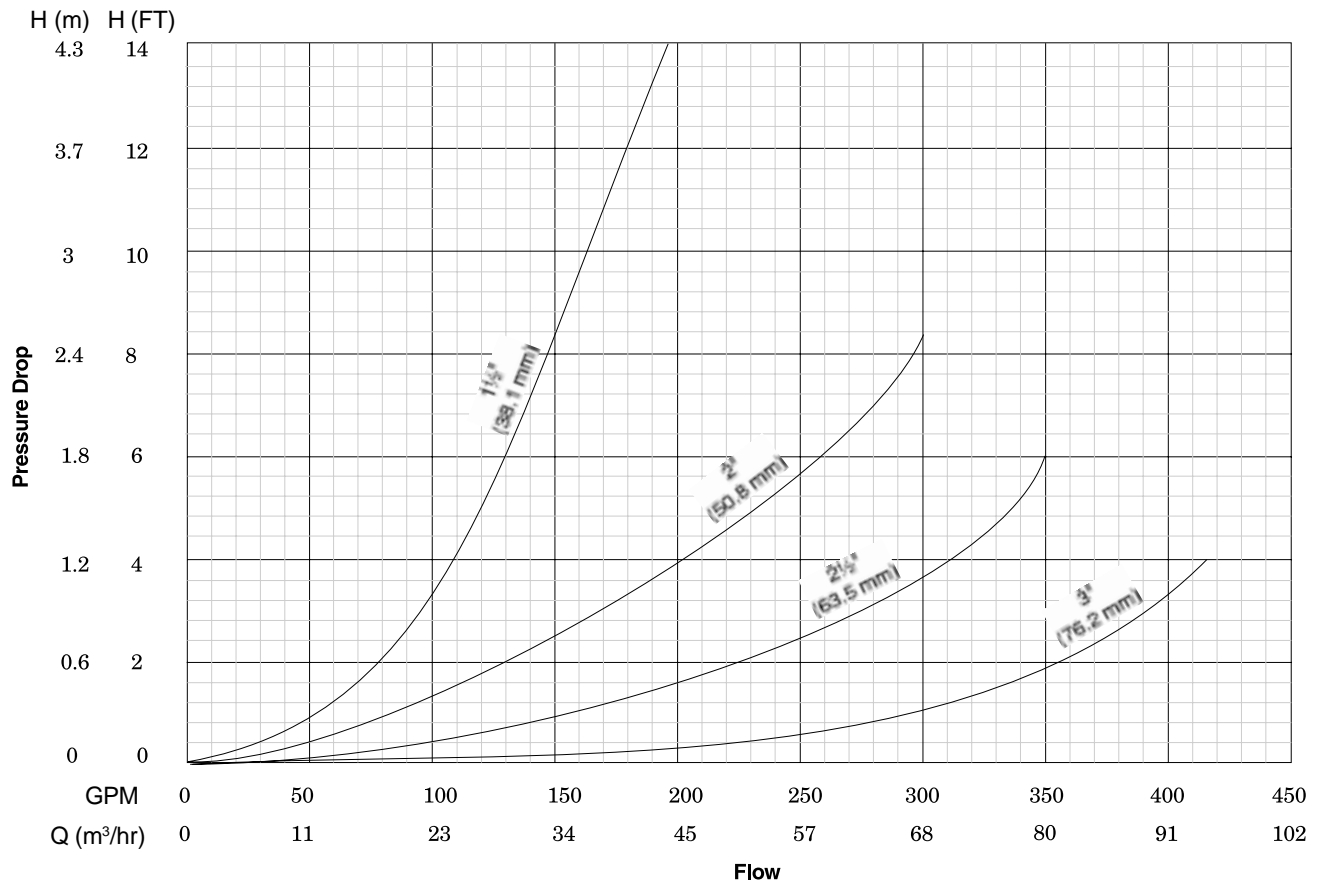
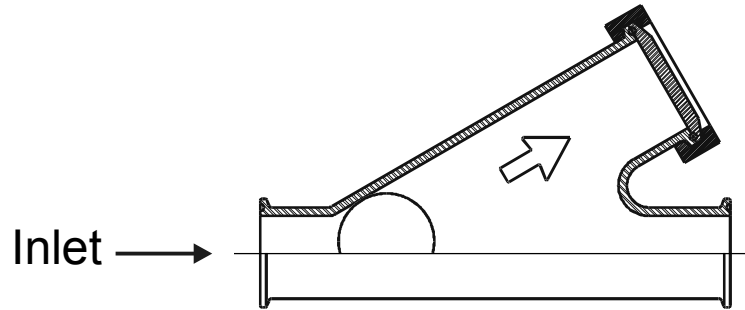
Size (Tube OD)		Size (Ball)	
in	mm	in	mm
1½	38.1	1 ⁵ / ₈	41.3
2	50.8	2 ¹ / ₈	54.0
2½	63.5	3 ¹ / ₂	88.9
3	76.2	4 ¹ / ₈	104.8

*Ball Material:
U = Buna Ball
N = Nylon Ball
SF = Viton Ball



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.



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The information contained herein is correct at the time of issue, but may be subject to change without prior notice.

How to contact Alfa Laval
Contact details for all countries
are continually updated on our website.
Please visit www.alfalaval.com to
access the information direct.



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