

# The Original, Sanitary Y-Body Check Valve

## 45BYMP Check Valve

### 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



45BYMP Y-Body Check Valve.

### Options

#### Ball Material

- Buna
- SFY
- Nylon (max. 140°F)

#### Gasket Material

- NBR (standard)

### Ordering

Please state the following when ordering:

- Connection size
- Connection type
- Check ball material

Ball Check Valves

45BYMP-Size-Ball Mat'I\*

3.5

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

End Connection: Tri-Clamp®

L45BYWW-Size-Ball Mat'I\*

	Size (Tube OD)		A		Approx. Wt.	
	inch	mm	inch	mm	lb	kg
	1½	38.1	8 <sup>7</sup> / <sub>8</sub>	225.4	3.99	1.81
	2	50.8	10½	266.7	5.49	2.49
	2½	63.5	12 <sup>13</sup> / <sub>16</sub>	325.4	8.56	3.88
3	76.2	13 <sup>11</sup> / <sub>16</sub>	347.7	12.13	5.50	

End Connection: Tri-Clamp®

Valve Material:

316L Stainless Steel

All dimensions are for identification purposes only.

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

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

\*Ball Material:

U = Buna Ball

N = Nylon Ball

SF = Viton Ball

E = EPDM

**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.

