



# Alfa Laval Unique Vacuum Breaker Valve

## Control/Check Valves

### Introduction

The Alfa Laval Unique Vacuum Breaker Valve is a CIP-able pneumatic check valve that ensures positive pressure, thereby eliminating vacuum conditions on the downstream side of high-temperature, short-time (HTST) pasteurization piping and systems.

Its compact, modular and hygienic design meets the highest process demands in terms of hygiene and safety. Built on the well-proven Alfa Laval Unique SSSV small single seat valve, it features a fast-acting actuator and a single air connection to enable Cleaning-in-Place (CIP).

It can also be fitted with the Alfa Laval ThinkTop® V50 for sensing and control unit of the valve. Few moving parts ensure easy maintenance, high reliability, and low total cost of ownership.

### Applications

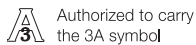
The Unique Vacuum Breaker Valve is designed to prevent vacuum conditions in hygienic high-temperature, short-time pasteurization systems across the dairy, food, beverage industries.

### Benefits

- Designed for convenient and effective CIP
- Compact, fast-acting and fully automated valve
- Exceptional valve hygiene and cleanability
- Authorized to carry the 3-A symbol

### Standard design

The Unique Vacuum Breaker Valve consists of a stainless steel valve body, seals, actuator, a rotating internal ball that moves up and down inside the valve chamber, and clamp rings.



Authorized to carry the 3A symbol



### Working principle

The Alfa Laval Unique Vacuum Breaker Valve operates in a manner similar to a ball check valve. When pipelines are pressurized during a process or CIP, the internal ball is forced upward against its seat, closing the vent port (Fig. 1a).

When pipeline pressure drops, the ball is drawn downward, allowing air to enter the vent, thereby preventing vacuum in the system (Fig. 1b).

During CIP, a pneumatic actuator is used (pulsed) to force the ball off the upper seat, enabling the seat and the interior of the vacuum breaker valve to be cleaned. CIP fluid is discharged during the actuator pulse and is drained through the vent port (Fig. 1c).

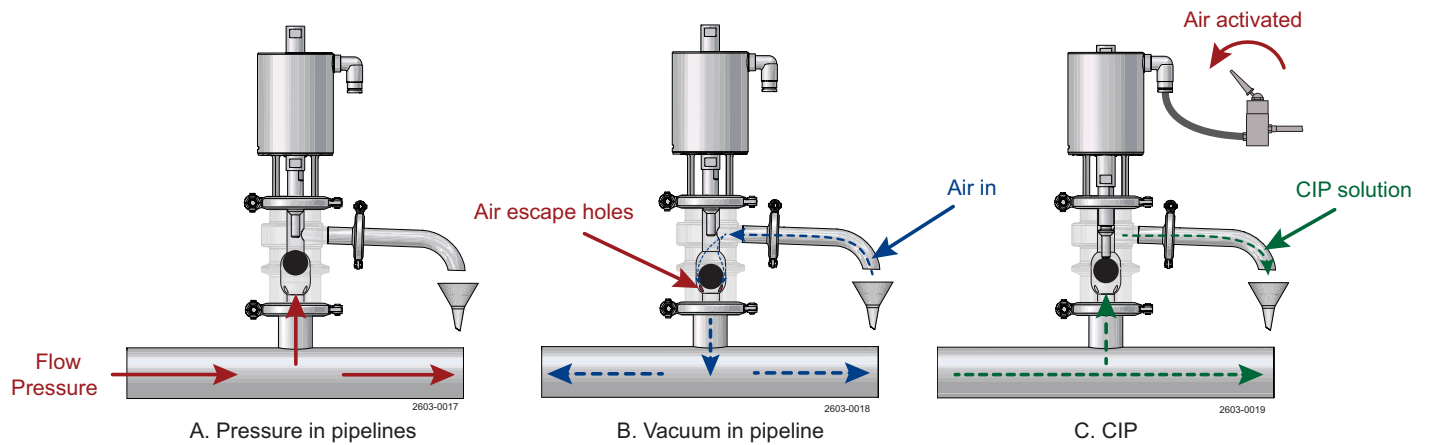


Fig. 1. Working Principle

## TECHNICAL DATA

Pressure	
<b>Valve</b>	
Maximum product pressure	10 bar
Minimum product pressure	Full vacuum
<b>Actuator</b>	
Maximum air pressure	7 bar
Minimum air pressure	5 bar
Temperature	
Temperature range	-10° C to 90° C

## PHYSICAL DATA

Materials	
<b>Valve/Actuator</b>	
Product wetted steel parts	AISI 316L
Product wetted seals	EPDM
Ball	Polypropylene HD
Internal surface finish	Ra ≤0.8 µm
<b>Actuator</b>	
Seals	NBR
External surface finish	Blasted

Options	
Seal material	Nitrile (NBR) or (FPM)

Connections	
Compressed air	6 mm
Vent	½" Tri-Clamp
Process/CIP	1½" Tri-Clamp

## Ordering

Please state the following when ordering:

- Unique SSV Vacuum Breaker
- Wetted elastomer preference
- Control Top

Dimensions (mm)

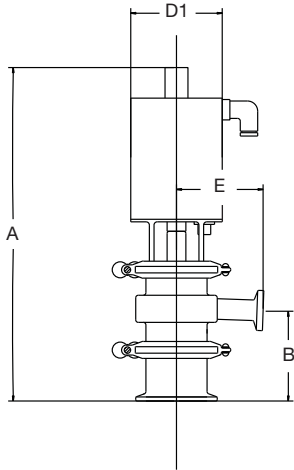


Fig. 2. Dimensions

Size	38 mm
A	208
B	56
D <sup>1</sup>	57
E	54
Weight (kg.)	1.85

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

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**How to contact Alfa Laval**

Contact details for all countries  
are continually updated on our website.  
Please visit [www.alfalaval.com](http://www.alfalaval.com) to  
access the information direct.