



# Minimize Risk of Implosion

## Alfa Laval SB Anti Vacuum House

### Concept

The Anti Vacuum House is used for minimizing the risk of implosion of tanks exposed to vacuum e.g. during emptying, cool-rinsing after hot-cleaning or caustic cleaning in a CO<sub>2</sub> atmosphere. The Anti Vacuum House can be combined with safety valves or pressure regulators mounted the top.

### Working principle

The Anti Vacuum House operates as standard at 50 mmH<sub>2</sub>O / 5 mbar for all valve sizes. Safety valves protect the vessel and ensures discharge if pressure in the tank exceeds the preset opening value. Regulating valves ensures pressure exhaust if pressure in the tank exceeds the preset opening value.

### Standard design

The Anti Vacuum House can be cleaned during tank CIP cycle by connecting CIP nozzle to main CIP supply.

CIP flow is approximately 500-800 l/min.

When the tank is cleaned a small volume of cleaning fluid will pass the valve body and clean the seat. To ensure thorough flushing of valve seat, force opening of the valve is necessary - this must be done when the tank is pressureless. The use of a drain collector is recommended to prevent CIP fluid spilling on to the tank.

Compliance Pressure Equipment Directive 2014/68/EU of the European Community, Fluida Group II



### TECHNICAL DATA

Nominal size	Opening pressure ( $\Delta P$ )	Allowable pressure PS
2"	50 mmH <sub>2</sub> O	4.5 bar
3"	50 mmH <sub>2</sub> O	4.5 bar
4"	50 mmH <sub>2</sub> O	4.5 bar
6"	50 mmH <sub>2</sub> O	4.5 bar

### PHYSICAL DATA

#### Materials

Product wetted steel parts: EN 1.4404 (AISI 316L)  
Product wetted seals: EPDM

#### Connections

Nut and liner acc. DIN 11851  
Clamp ferrule ISO 2852  
Nut and liner acc. SMS Swedish Standard Union  
Weld End acc. DIN 11850 or ISO 2037 depending on valve size

**Options**

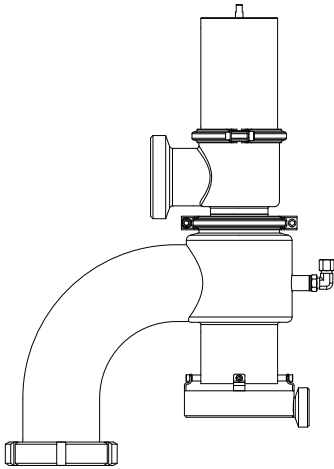
The Anti Vacuum House provides vacuum protection and can be combined with other valves to provide following functions:

- Safety valves for tank overpressure protection
- Regulating valves for process protection

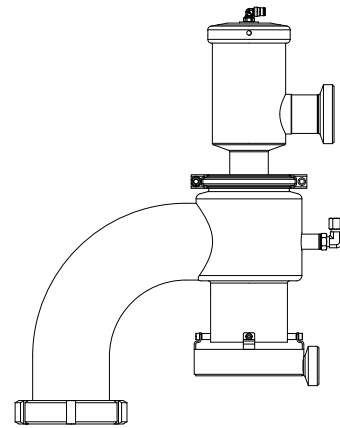
**Available combinations**

Anti Vacuum House	Regulating Valve		Safety Valve
	CO2 House	Pressure Exhaust	Pressure Relief Valve
2"	X	X	
3"	X	X	X
4"	X	X	X
6"	X	X	X

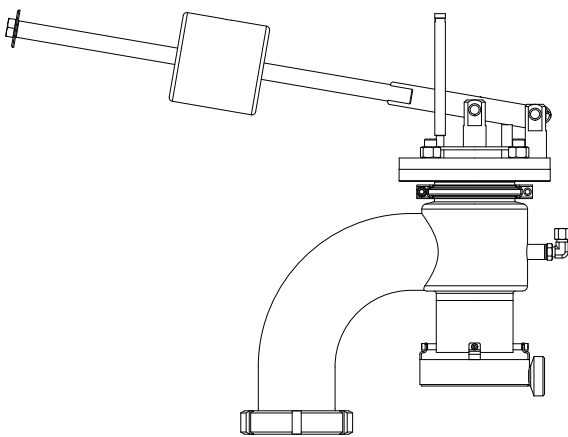
Anti Vacuum House with CO2 House



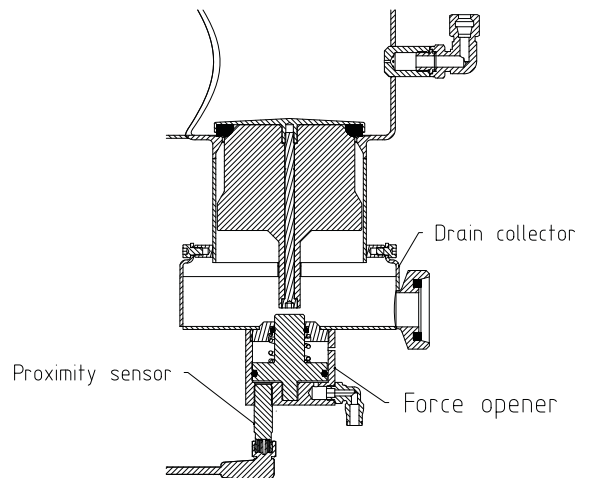
Anti Vacuum House with Pressure Exhaust



Anti Vacuum House with Pressure Relief Valve

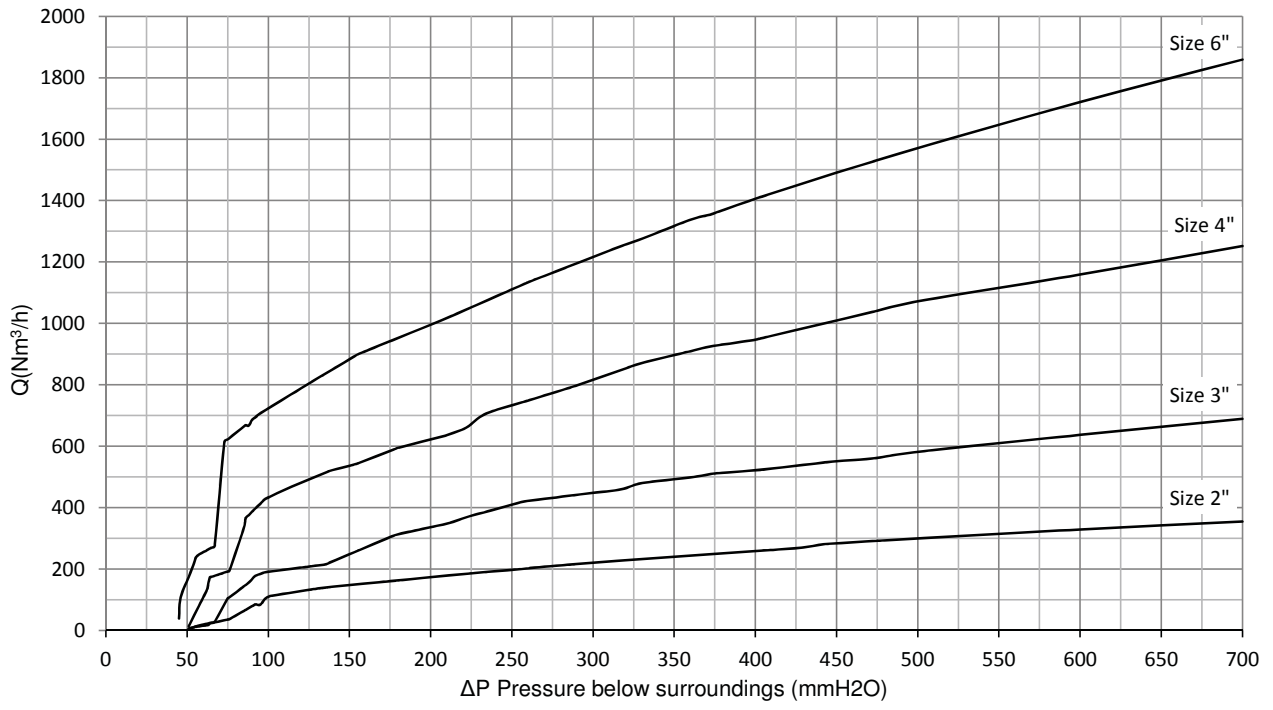


Cross section of Anti Vacuum House with Force opener, Proximity sensor and Drain collector



# Volumetric Flow Capacity

Medium: Air



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