

Flour Milling

Pressure Relief Valves VHS

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Description ▼

VHS Pressure Relief Valves consist of a cylindrically shaped metal body with clamp connection spigot to the silo, an exhaust outlet spout for duct connection, an elastic diaphragm able to re-establish pressure balance instantaneously, a counterweight kit to keep the valve closed under normal conditions, and a weather protection cover.

Function ▼

For some time, tighter safety regulations in industrialised countries have ensured stricter enforcement of rules regarding the safeguarding of silos and bins against both excess and negative pressure. There is no question that other countries will have to follow this example.

The counterweight-loaded VHS-type Pressure Relief Valve has one decisive advantage over other types of pressure relief valve. Due to the moment of inertia of the helical springs on those traditional pressure relief valves, pressure balance is re-established extremely quickly but not instantaneously.

The VHS, on the other hand, does the job in real time. Through an interplay of pressure on different surface areas on both sides of a diaphragm fitted inside the valve housing, perfect pressure balance is achieved. In the event of excess pressure this interaction enables air from inside the silo to flow back into the atmosphere; in case of suction pressure the air penetrates from the atmosphere into the silo.



Applications ▼

VHS Pressure Relief Valves are the last safety net when abnormal pressure conditions endanger the silo structure. This is why sudden excess or suction pressure inside the silo must be dealt with instantly. Even though ideally a VHS Pressure Relief Valve should never have to go into action, it must be efficient and reliable if needed.

Benefits ▼

- ✓ Safety for people and the environment thanks to the possibility to convey emissions;
- ✓ The special properties of the diaphragm help avoid blockage, as well as the formation of material crusts;
- ✓ The working principle of the VHS Pressure Relief Valve itself is innovative. Its special double-acting diaphragm pervious to air sees to both excess and suction pressure relief;
- ✓ No failure thanks to counterweight system never in contact with dust;
- ✓ Quick and easy maintenance due to few components;
- ✓ Easy to handle and fit thanks to lightweight design and reduced overall dimensions.

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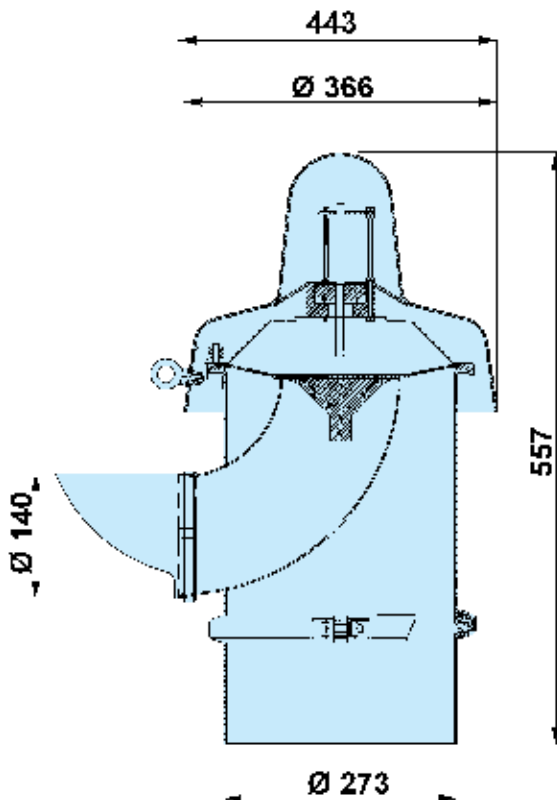
Pressure Relief Valves VHS



Technical Features / Performance ▼

- ▶ Carbon steel casing (VHS2731B), painted RAL 7001 (silver-grey) or in 304 stainless steel (VHS2732B)
- ▶ Body diameter = 273mm (10 in)
- ▶ Air volume up to 5,000Nm³/h (2,950 cfm)
- ▶ Exhaust outlet spout for connection with centralised suction system
- ▶ These valves are preset for a maximum negative pressure of -0.005 bar (0.07 psi) and a maximum excess pressure of 0.05 bar (0.72 psi)
- ▶ Should customer requirements be different, the valves can be set at a maximum excess pressure ranging from 0.02 bar (0.29 psi) to 0.08 bar (1.16 psi)
- ▶ Weight: 16 kg (35 lbs)
- ▶ Pre-equipped for inductive signalling sensors
- ▶ Small number of components
- ▶ Easier part replacement
- ▶ Lightweight and easy to handle
- ▶ Conveyed emission

Overall Dimensions ▼



| TYPE | Excess Pressure | Negative Pressure | kg |
|--------|----------------------------------|--------------------------|----|
| VHS273 | 300 ~ 1,000 mm H ₂ O* | -50 mm H ₂ O* | 22 |

This datasheet does not show the complete range but only the models most suitable for the application.