

Protective solutions

Applications

The YV-K overpressure valve is used as air outlet valve in the internal walls (where blast protection is not needed) of Civil Defence and military shelters. The valve is designed to maintain an overpressure inside the shelter and to close the air outlet openings automatically in case of a ventilation system shutdown.

Specification

Manufacturer of YV-K overpressure valve is Temet, Helsinki Finland.

The YV-K valve comprises a gravity balanced stainless steel disk pivoted on the top side of a structural steel valve body and opening at an internal overpressure of 50 Pa. The valve disk is provided with stepless adjustment of the disk opening angle, and a gasket and a locking device for airtight closing of the valve disk. The valve is mounted on a tubular wall sleeve made of structural steel to be cast in the concrete wall and fabricated to correspond to the thickness of the installation wall. The valve is completely corrosion resistant. The valve disk and all components of the lever mechanism are made of stainless steel. The valve body is epoxy powder coated. All other parts are hot dip galvanized.

Design Criteria

The YV-K overpressure valve is made in accordance with the specific provisions issued by the Finnish Ministry of the Interior. The YV-K overpressure valve also meets the requirement of the Swiss Federal Office of Civil Defence. The YV-K is type tested and approved for use by the Technical Research Centre of Finland / VTT Building Technology, an Independent Testing Authority mandated to perform type inspection for shelter equipment and systems by the Ministry of the Interior. Type test reports as well as additional test data are available upon request.

Test and performance data

The valve is shock tested along the three main axis with a mechanical shock of the installation base having a maximum acceleration of 20 g and velocity of 1.5 m/s.

The valve is designed to function within the operating temperature range of -20 ...+80°C.

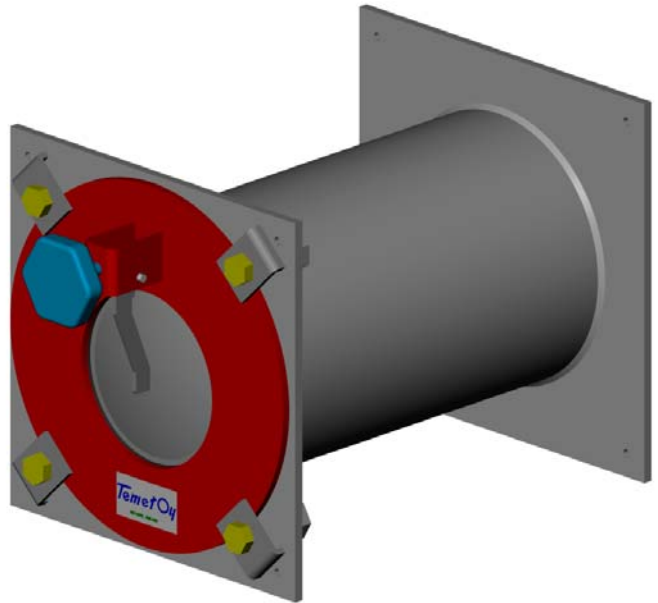
Type test report

VTT type test report and additional test data is available upon request.

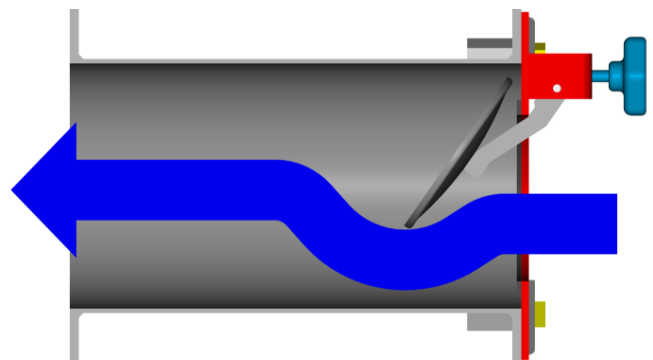
Other documents related to YV-200 Overpressure Valve:

Installation Instructions

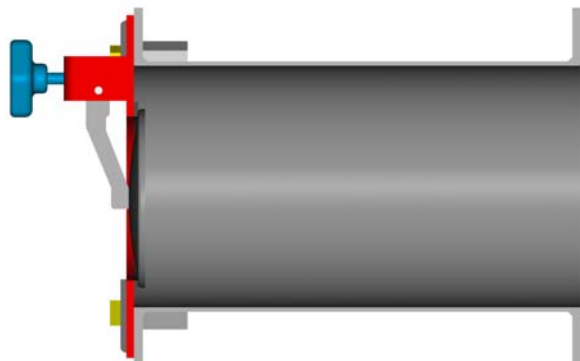
Operation & Maintenance Instructions



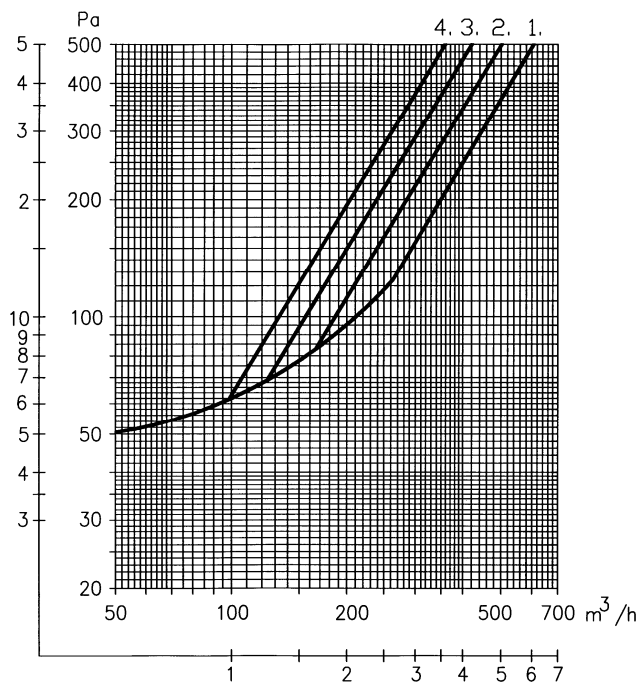
YV-K Overpressure Valve



YV-K Overpressure Valve Operation Principle



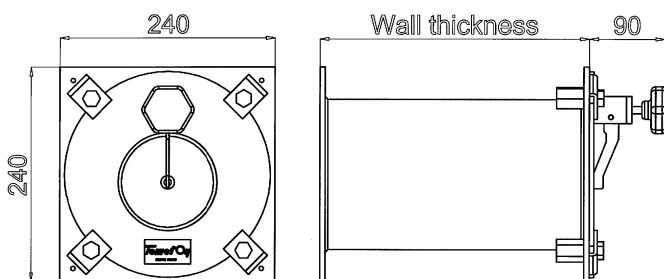
YV-K with wall sleeve



Air flow characteristics measured at 20 °C corresponding to air density of 1.2 kg/m³.

The chart also indicates the importance of the possibility for a stepless adjustment of the valve disk opening.

Graph 1 is for a valve without limited opening and Graphs 2, 3 and 4 for a valve with disk opening limited to 63 mm, 48 mm and 38 mm.

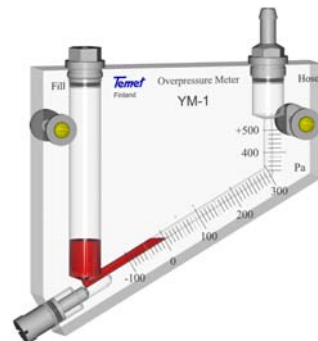
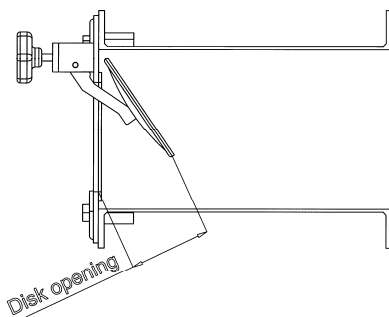


YV-K Overpressure Valve dimensions

Adjustment of overpressure

The overpressure in the shelter can be adjusted by rotating and locking the hand wheel of the overpressure meter in the desired position thus limiting the valve disk opening.

The shelter overpressure meter indicates when the specified overpressure inside the shelter is reached.



Design - Production – Installation – Maintenance - Consultation