Protective solutions

Applications

The PV-60-200-TC blast valve is used as air intake and outlet valve in Civil Defence and military shelters having high blast resistance requirements.

Specification

Manufacturer of PV-60-200-TC blast valve is Temet, Helsinki Finland.

The PV-60-200-TC blast valve comprises a spring balanced pressure disk moving on a spindle and closing the air passage against the valve seats in response to both positive and negative phase of the blast. The valve mechanism is mounted in a tubular wall sleeve made of structural steel to be cast in the concrete wall. The pressure disk and all components of the spindle mechanism are made of stainless steel. All other parts are either hot dip galvanized or coated with epoxy powder paint.

Design Criteria

The PV-60-200-TC blast valve is made in accordance with specific provisions issued by the Finnish Ministry of Interior. The PV-60-200-TC blast valve also meets the requirements of the Swiss Federal Office of Civil Defence. The PV-60-200-TC 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 Interior. Type test reports as well as additional test data are available upon request.

Test and performance data

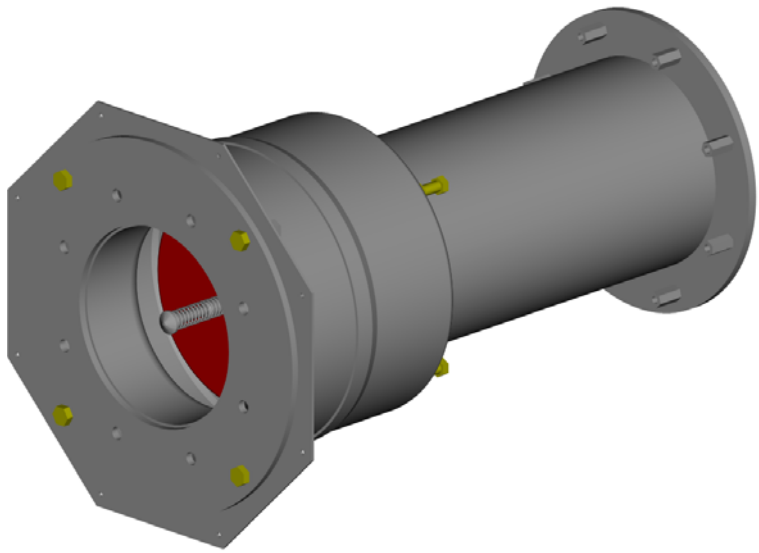
The valve is designed and tested to withstand multiple long duration (peak duration > 60 ms) blast loads having peak reflected overpressure of 20 bar and short duration (positive phase duration < 5.0 ms) blast load having peak reflected overpressure of 60 bar while retaining its full functional ability. The valve is shock tested in directions of the three main axis with a mechanical shock of the installation base having an acceleration in excess of 20 g and velocity of 1.5 m/s.
The valve is designed to function within the operating temperature range of -20 … +80 ºC.

Type test report

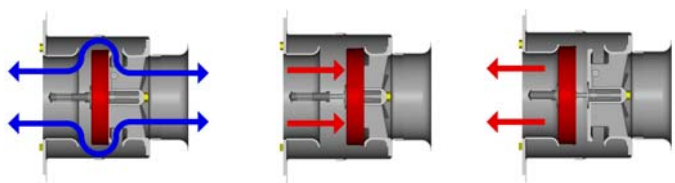
VTT type test report and additional test data is available upon request.

Other documents related to PV-60-200-TC Blast Valve:

Installation Instructions
Operation Principle & Maintenance Instructions



PV-60-200-TC Blast Valve



Normal ventilation position

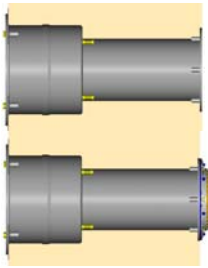
Blast pressure from the outside.
Valve closes

Negative pressure from the outside.
Valve closes.

PV-60-200-TC Blast Valve Operation Principle

TEMET BLAST VALVE PV-60-200-TC

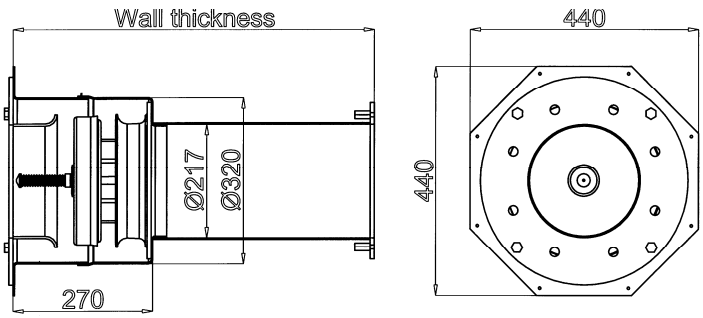
PV-60-200-TC Blast Valve and Accessories



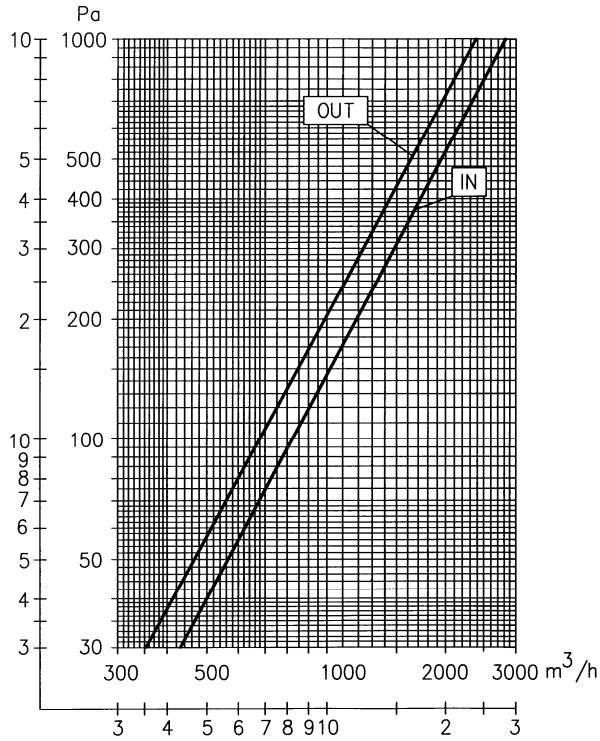
PV-60-200-TC

PV-60-200-TC with Pre-Filter ES-1000

PV-200-SP Splinter Plate



PV-60-200-TC Blast Valve Dimensions



Air flow characteristics measured at 20 °C corresponding to air density of 1.2 kg/m³. Maximum pass through pressure & impulse, 1.2 bar and 0.50 bar ms.

For pre-filter application, add 35 Pa, 50 Pa and 70 Pa to the pressure drop corresponding to nominal flow rates 850 m³/h, 1220 m³/h and 1510 m³/h per valve.

Example for valve selection:
The intake airflow into an HVAC plant room is 15000 m³/h at pressure drop of 300 Pa. The required number of PV-60-200-TC valves is 10 pcs.

Valve	Height (mm)	Width (mm)	Min wall thickness (mm)	Weight of valve elements (kg)	Weight of wall sleeve (kg)	Total weight (kg)	Air Flow at 100 Pa (m3/h) inward / outward	Air Flow at 200 Pa (m3/h) inward / outward	Air Flow at 300 Pa (m3/h) inward / outward
PV-60-200-TC	440	440	400	9	15	24	850/670	1220/940	1510/1170

Design - Production – Installation – Maintenance - Consultation

Temet Oy • Asentajankatu 3 • FI-00880 Helsinki, Finland
Tel. +358 20 757 9510 • fax +358 20 757 9515 • export@temet.fi

temet.com