

Protective solutions

Applications

The PV-60-200 blast valve is used as air intake and outlet valve of Civil Defence and military shelters having high blast resistance requirements. The valve is also suitable for industrial blast protection applications.

Specification

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

The PV-60-200 blast valve comprises an stainless steel pressure disk mounted on a stainless steel spindle mechanism within nodular cast iron valve body. The valve mechanism is mounted in a rectangular modular wall frame that can house 1, 2, 4, 6, 8, 10 or 12 valve elements. The valve is completely corrosion resistant. All components of the spindle mechanism are made of stainless steel. Other parts are either hot dip galvanized or coated with epoxy powder paint.

Design Criteria

The PV-60-200 blast valve is made in accordance with specific provisions issued by the Finnish Ministry of Interior. The PV-60-200 blast valve also meets the requirement of the Swiss Federal Office of Civil Defence. The PV-60-200 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 Finnish 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 withstands a mechanical shock of the installation wall equivalent to sudden change in velocity of 1.5 m/s and stresses of a dropping test with an acceleration of 80 g in directions of the three main axis.

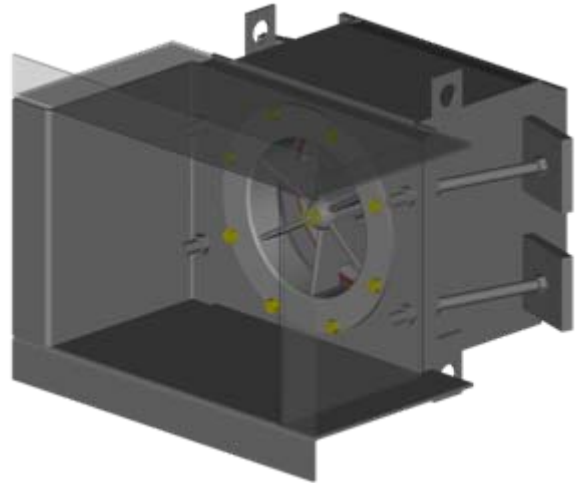
The valve is designed to function within the operating temperature range of -20 ... +80 °C.

Type test report

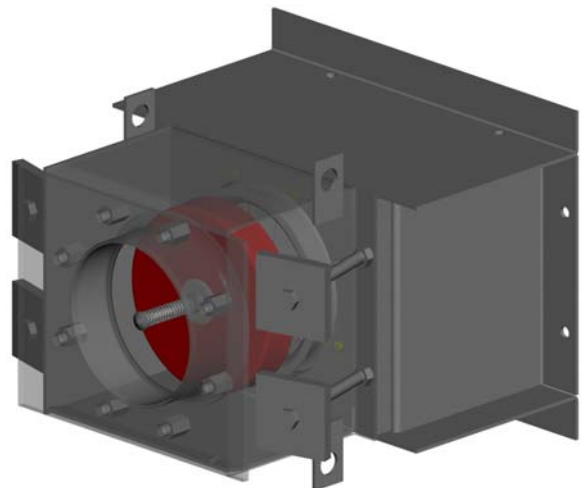
VTT type test report and additional test data is available upon request.

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

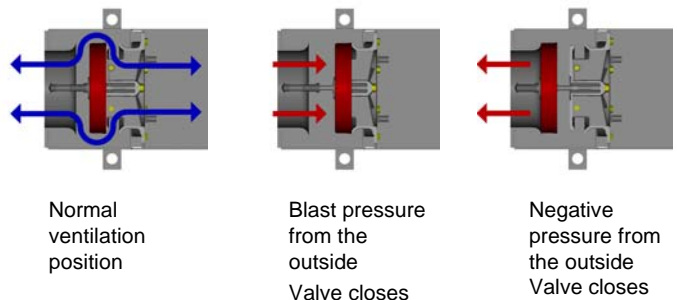
- Installation Instructions
- Operation & Maintenance Instructions



PV-60-200-1 Blast Valve inside view

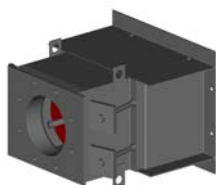


PV-60-200-1 Blast Valve outside view

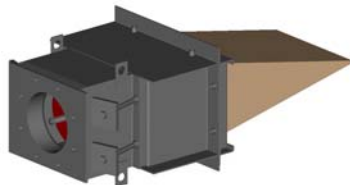


PV-60-200 Blast Valve Operation Principle

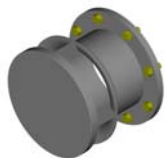
PV-60-200 Blast Valve and Accessories



PV-60-200-1



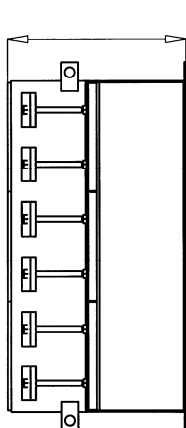
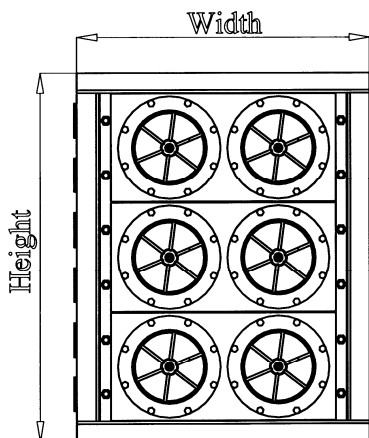
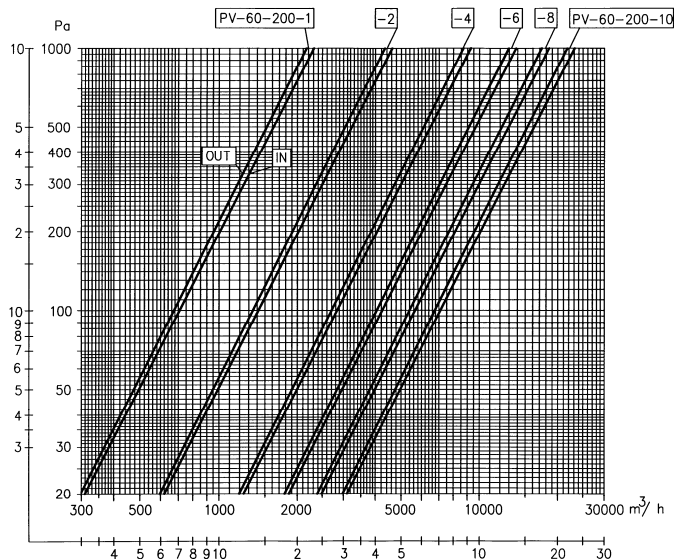
PV-60-200-1-PF



PV-200-SP Splinter Plate



PV-200-PF Pre-Filter



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 20 Pa, 40 Pa and 60 Pa to the pressure drop corresponding to nominal flow rates 705 m³/h, 1000 m³/h and 1230 m³/h per valve element.

Example for valve selection:
The exhaust airflow from an HVAC plant room is 14000 m³/h at pressure drop of 300 Pa. The correct valve type is PV-60-200-12 having a capacity of 14160 m³/h.

PV-60-200-6 Blast Valve Dimensions

Valve	Wall Frame Height (mm)	Wall Frame Width (mm)	Min wall thickness (mm)	Total weight (kg)	Air Flow at 100 Pa (m ³ /h) inward / outward	Air Flow at 200 Pa (m ³ /h) inward / outward	Air Flow at 300 Pa (m ³ /h) inward / outward
PV-60-200-1	440	540	400	60	705/680	1000/960	1230/1180
PV-60-200-2	440	860	400	120	1410/1360	2000/1920	2460/2360
PV-60-200-4	760	860	400	210	2820/2720	4000/3840	4920/4720
PV-60-200-6	1080	860	400	300	4230/4080	6000/5760	7380/7080
PV-60-200-8	1400	860	400	390	5640/5440	8000/7680	9840/9440
PV-60-200-10	1720	860	400	480	7050/6800	10000/9600	12300/11800
PV-60-200-12	2040	860	400	570	8460/8160	12000/11520	14760/14160

Design - Production – Installation – Maintenance - Consultation