# Protective solutions

## Applications

The blast valve PV-KK-W is a special application of the PV-KK blast valve introduced in Temet document no. 1274 1010 001-2 specifically designed for installation in existing buildings where casting of the valve frame in concrete is not possible. The PV-KK-W blast valve is installed in an opening in the blast resistant wall by welding to a subframe or steel structure. The valve is also applicable to industrial applications with risk of chemical and dust explosions.

The valve is available in single-column configurations of 1, 2, 3, 4, 5 and 6 valve blocks with air flow characteristics as depicted in the opposite graph.

## Specification

Manufacturer of PV-KK blast valve is Temet Oy, Helsinki Finland.
The valve is completely corrosion resistant. The valve closing elements are made of special non-corroding aluminum alloy, all springs are made of stainless steel, and the valve body and wall frame made of structural steel are hot dip galvanized. The valve can be installed in upright or horizontal position in a wall or ceiling/floor.

## Design Criteria

The PV-KK-W blast valve is designed for a long duration blast load with 100 kPa (1.0 bar) reflected peak overpressure. The valve is tested with pressure waves having a finite rise time thus simulating hydrocarbon or dust explosions.

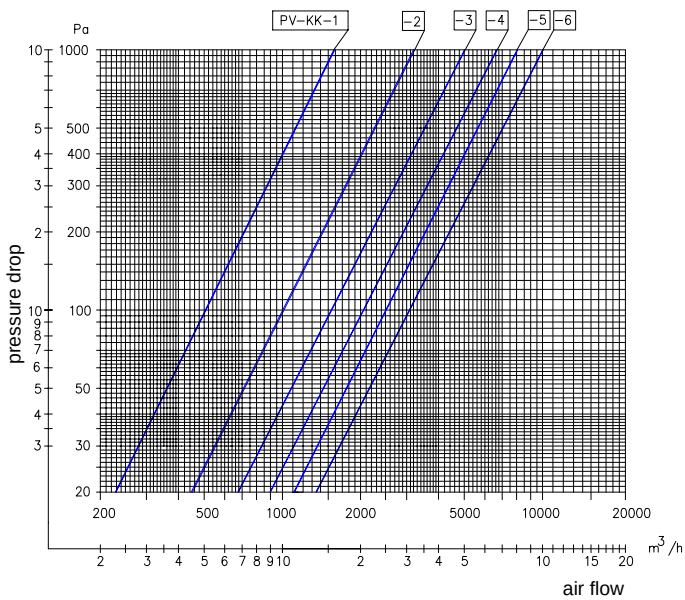
The valve is designed to function within the operating temperature range of -20 …+200 ºC.

## Test Reports

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

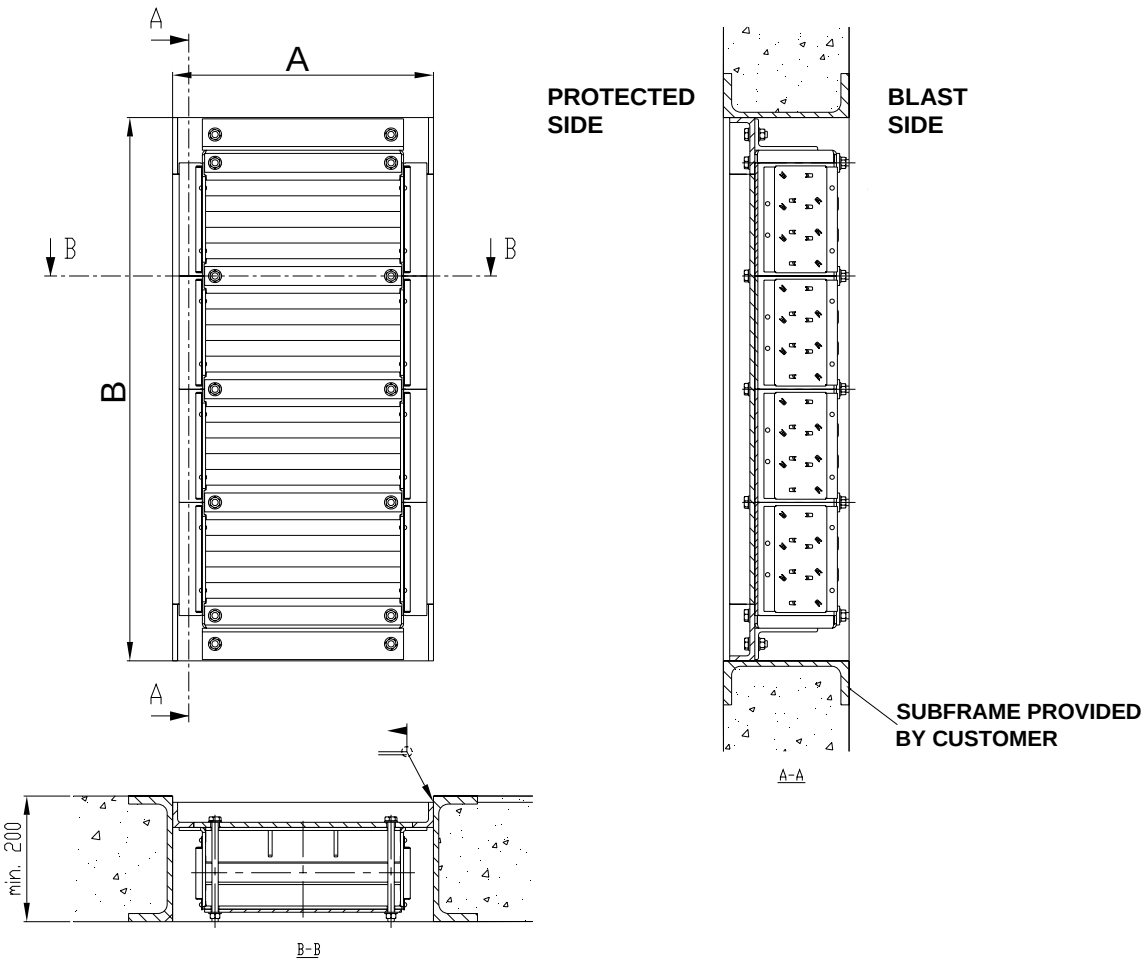
## Quality Assurance

Temet Oy has been certified to conform to ISO 9001:2000 Quality Management System Standard. Additionally, production of the PV-KK blast valves is subject to Quality Assurance procedures detailed in product specific Quality Control Agreement made between Temet and VTT/Technical Research Centre of Finland.




**Air flow characteristics of PV-KK-W blast valves measured at 20 ºC corresponding to air density of 1.2 kg/m³. The valves have the same airflow characteristics for intake and exhaust air flow direction.**

**Dimensions of PV-KK-W**




| VALVE | A (mm) | B (mm) | Air flow at 100 Pa ($m^3$/h) | Air flow at 200 Pa ($m^3$/h) | Air flow at 300 Pa ($m^3$/h) | Total weight (kg) |
|---|---|---|---|---|---|---|
| **PV-KK-W-1** | 415 | 325 | 500 | 720 | 900 | 40 |
| **PV-KK-W-2** | 415 | 505 | 1000 | 1440 | 1800 | 52 |
| **PV-KK-W-3** | 415 | 685 | 1500 | 2160 | 2700 | 65 |
| **PV-KK-W-4** | 415 | 865 | 2000 | 2880 | 3600 | 80 |
| **PV-KK-W-5** | 415 | 1045 | 2500 | 3600 | 4500 | 96 |
| **PV-KK-W-6** | 415 | 1225 | 3000 | 4320 | 5400 | 111 |



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