TEMET BLAST VALVE PSV-150

Applications
The PSV-150 blast valve is used as air intake and exhaust valve in Civil Defense and military shelters. The PSV-series blast valves are specially designed for applications requiring high blast resistance and large ventilation capacity with minimum wall space.

Specification
Manufacturer of PSV-150 blast valve is Temet, Helsinki Finland. The PSV-150 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 valve is completely corrosion resistant. The pressure disk is made of hardened aluminum alloy and coated with epoxy powder paint, and all other components of spindle mechanism are made of stainless steel. The valve body is of steel cast and the wall sleeve is made of structural steel. These components are available as hot dip galvanized or coated with epoxy powder paint.

Design Criteria
The PSV-150 blast valve is made in accordance with specific provisions issued by the Finnish Ministry of Interior. The PSV-150 blast valve is type tested and approved for use by the Technical Research Centre of Finland / VTT Building and Transport, an Independent Testing Authority mandated to perform type inspection for shelter equipment and systems by the Finnish Ministry of Interior.

Test and performance data
The valve is designed and tested to withstand multiple long duration blast loads having peak reflected overpressure of 19 bar while retaining its full functional ability.

The valve is shock tested in horizontal and vertical directions with a mechanical shock of installation base having a rapid change in velocity of 2.0 m/s and an acceleration in excess of 30 g in both directions.

The valve is designed to function within operating temperature range of \(-20 \ldots +80 \degree C\).

PSV-150 Blast Valve Operation Principle
Normal ventilation position
Blast pressure from the outside
Valve closes
Negative pressure from the outside
Valve closes

Documents related to PSV-150 Blast Valve:
- Installation, Operation & Maintenance Instructions
TEMET BLAST VALVE PSV-150

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

Blast Valve PSV-150 and wall sleeve dimensions

<table>
<thead>
<tr>
<th>Valve</th>
<th>Total weight with wall thickness of 1000 mm (kg)</th>
<th>Air Flow at 100 Pa inward / outward (m³/h)</th>
<th>Air Flow at 200 Pa inward / outward (m³/h)</th>
<th>Air Flow at 300 Pa inward / outward (m³/h)</th>
<th>Air Flow at 500 Pa inward / outward (m³/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSV-150</td>
<td>60</td>
<td>430/490</td>
<td>600/750</td>
<td>700/950</td>
<td>-</td>
</tr>
<tr>
<td>PSV-250</td>
<td>160</td>
<td>2000/2100</td>
<td>2800/3000</td>
<td>3500/3700</td>
<td>4400/5100</td>
</tr>
<tr>
<td>PSV-350</td>
<td>260</td>
<td>3800/2800</td>
<td>5400/4000</td>
<td>6600/4900</td>
<td>8500/6400</td>
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