

Blast Valves for HVAC Ducting



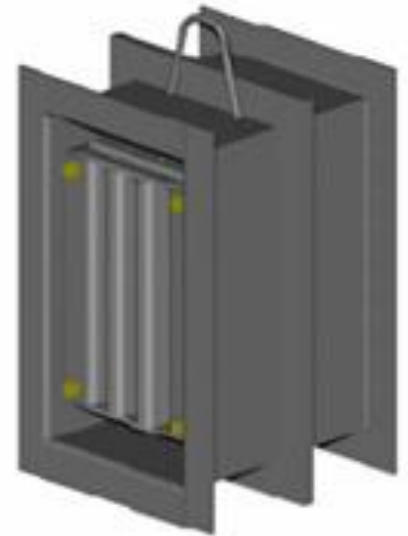
EEP's Modular Blast Valves are used when a large airflow is required through rectangular HVAC ducts and openings in blast resistant walls. They are suitable for both inlet and exhaust air and have been designed to with-stand loads of 1.0 MPa (10 Bar) from both sides.

The modular blast valves can with-stand temperatures of up to 150°C.

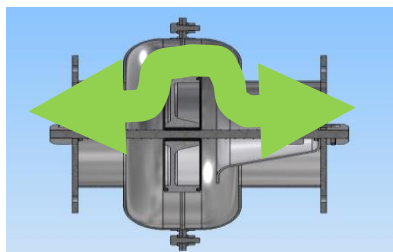
Design & Materials

The valve consists of modules fitted into wall frames. The valves can be installed both vertically and horizontally. The valve closes on impact of the blast and during the reverse pressure phase. When the blast has passed, the valve returns to its open position.

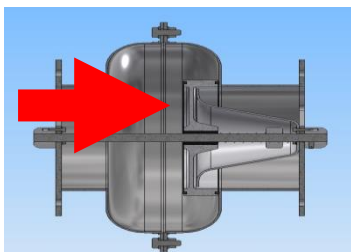
The frames are made from steel and are designed for casting into concrete. If required, they can also be supplied for bolting onto or welding into steel walls. The modules are made from aluminium alloy.



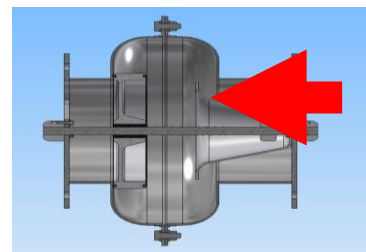
Modular blast valve block designed to allow any size blast valve wall to be constructed.



Blast valve NORMAL position



Blast valve CLOSED position during blast wave POSITIVE phase



Blast valve CLOSED position during blast wave NEGATIVE phase

Surface Treatment

The frames are primed for a high level of corrosion protection. Other finishes are available on request.

Air Flow Capacity

The air volume at the required pressure drop will determine the total number of valves. The chart on the following page shows flow rates relating to one valve. The airflow/pressure drop is the same for both inlets and outlets.

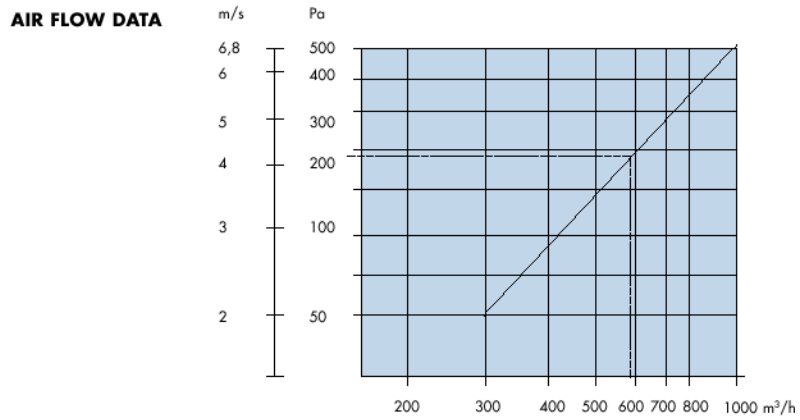
Blast Rating

The valves have been designed and tested to withstand loads of up to 2.0MPa, and short duration loads of up to 10MPa.

Accessories

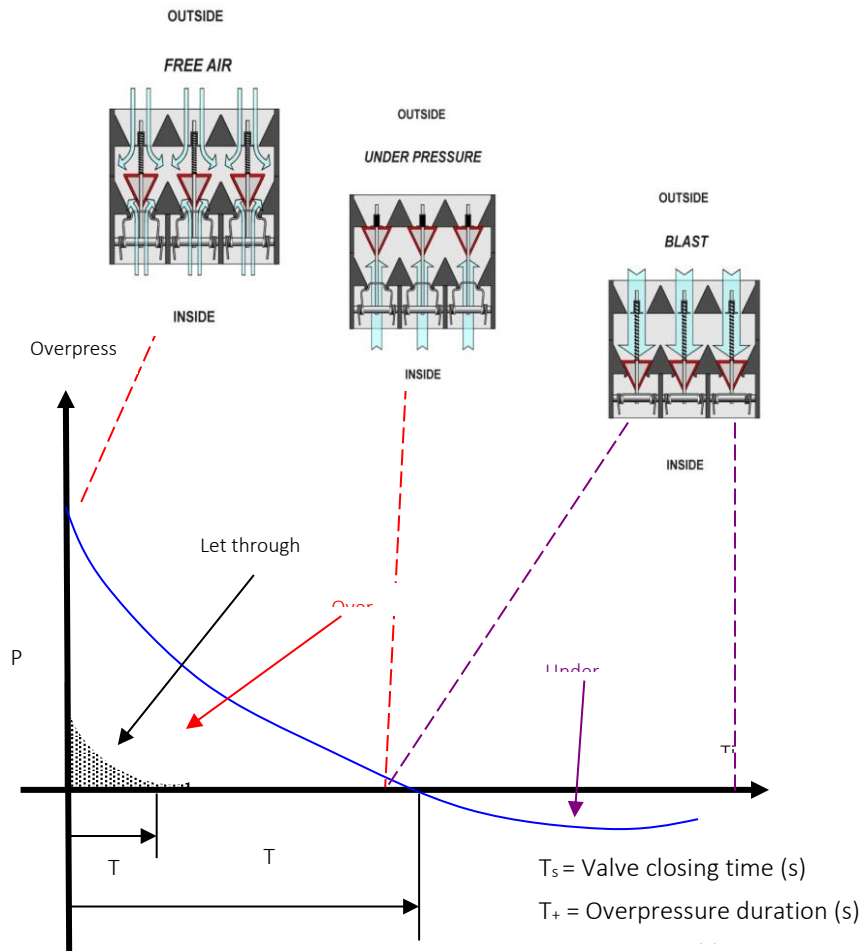
The wall frames can be fitted with particle filters and shields for protection against weather and shrapnel.

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Air flow m³/h
 Pressure drop (Pa)
 Air velocity (m/s)
 The example shows an air flow of 600 m³/h at a pressure drop of 190 Pa, and an air velocity of 4 m/s

Sequence of Operation



Blast Valves for HVAC Ducting

Installation

The blast valve is normally supplied in 2 parts:

1. Item A. Blast valve frame.
2. Item B. Blast valve.

The frame (Item A) can be cast into concrete or bolted to a steel frame. Item B is used after the frame is fixed.

Actions before fitting the frame (item A)

- Remove the packing from the frame.
- Check for transport damages.
- Check the label on the frame for drawing reference and serial number.
- Turn the frame to make the arrow point in the right direction.
- Check that the frame is turned with the side exterior in the right direction.
- Lift the whole unit into its position in the formwork, or into the steel mounting frame.
- Ensure that the frame is correctly aligned and fixed.
- Fix the frame properly by welding the anchor bars to the reinforcement. Or bolt into the mounting frame. **Do not weld anything to the valve frame, as this will damage the surface treatment.**



Blast valve module in frame for casting into concrete.

Item A and B



Blast valve module (Item B) with fixings

- The formwork is to be firmly fixed to the valve unit preventing concrete between the valve and the formwork ensuring that the valve flanges will be at the face of the barrier.
- Seal any gaps between the valve frame and the formwork with suitable sealant.

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- Pour the concrete, if applicable.
- Check the frame for concrete stains and clean it from concrete after the formwork has been removed. Make paint repairs.
- Take item B unit to the place of installation
- Remove the packing and check for any transport damages.
- Place the first valve at the bottom of the frame and fix it to the frame with 4 bolts and nuts.
- Mount the following valves modules on top of each other in the frame fixing them to the frame in the correct installation order.
- The bolts are tightened with 13 mm socket to a torque of 25 Nm.
- It is important that the frames are properly treated for corrosion protection before the blast valves modules are installed.



Blast Module Component parts



Mounting blast valve module (Item B) into frame (Item A)



Tightening blast valve unit (Item B) into the frame (Item A)

About Us

Established in 1996, European EMC Products (EEP) are an established British company whose experience and understanding of the science of shielding makes it an ideal partner in whom you can place your trust with confidence. The purpose of installing EEP shielding systems is to protect people and equipment against the threats posed by electromagnetic and radio frequency (RF) interference, radiation, magnetic fields and electromagnetic pulses. Our diverse range of turnkey products and services, including design, project management, testing and consultancy are delivered across multiple sectors to an international client base.

Quality

European EMC Products Limited are registered to BS EN ISO 9001:2015, Certificate Number FS38901.

Registered Scope: The design, assembly, installation, servicing and testing of RF Shielded Structures and equipment including EMI Shielding, Blast Doors, Gas Tight Doors and specialised mobile Electromagnetic Pulse Protection (EMPP) containers.

Radio Frequency, Magnetic Shielding and Quench systems for MRI (Magnetic Resonance Imaging) scanners.

The design, assembly and installation of Ionising Radiation Protection facilities.

The design, manufacture and installation of LED lighting systems for medical applications.

EEP Filters Limited are registered to BS EN ISO 9001:2015, Certificate Number FS38901.

Registered Scope: The design, manufacture, management of installation and testing of high performance EMC and EMP Power and Data Line Filters.

Disclaimer

NB: All the information provided within this datasheet is for reference only. Product specifications are subject to change without notice.