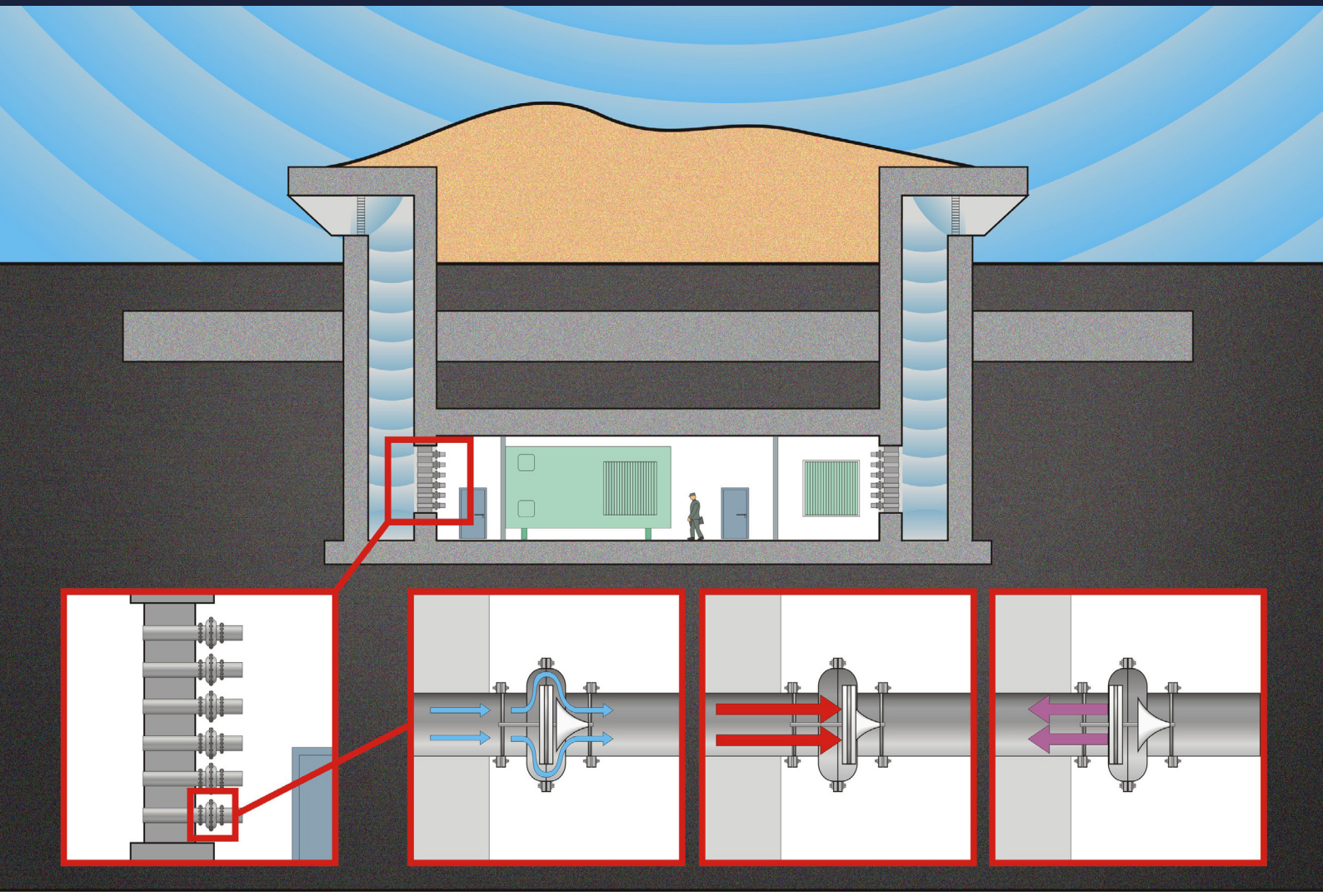
European EMC Products Ltd

CIRCULAR BLAST VALVES



Designers, Suppliers & Installers of Circular Blast Valves Designed to Protect in the Event of a Blast

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Certificate No. FS38901

INTRODUCTION

European EMC Products Ltd (EEP) offer modular circular blast resistant valves from 150mm to 350mm.

Each valve is designed to protect the air supply in the event of a blast. The blast valves are generally installed within the civil defence, government shelters, command and control centres and industries such as oil, gas and chemical production and storage. They are suitable for both inlet and exhaust air, where a large airflow is required. The valves are designed and tested to withstand loads of up to 2 MPa (20 bar) from both sides.

The BV Range of blast valves can withstand temperatures of up to 180°C.

EEP manufacture 3 versions with different diameters:

BV-350 – 350 mm diameter

BV-250 – 250 mm diameter

BV-150 – 150 mm diameter

DESIGN & MATERIALS

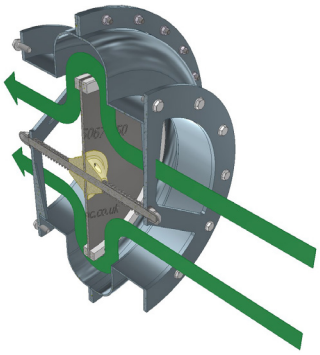
Blast valves generally form part of a blast wall, where the valves are either mounted vertically or horizontally into a steel wall frame.

The quantity of blast valves is determined by the requirement of free air movement specified.

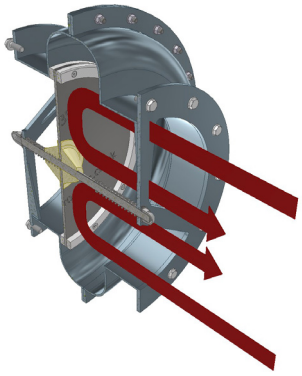
The Blast Valve closes upon impact of a blast and during the reverse pressure phase. When the blast has passed, the valve returns to its open (resting) position.

Wall frames are generally constructed from steel and are designed for casting into concrete. A wall frame can also be designed and supplied for bolting onto, or welding into, steel walls.

Blast Valve Open (Air Flow)



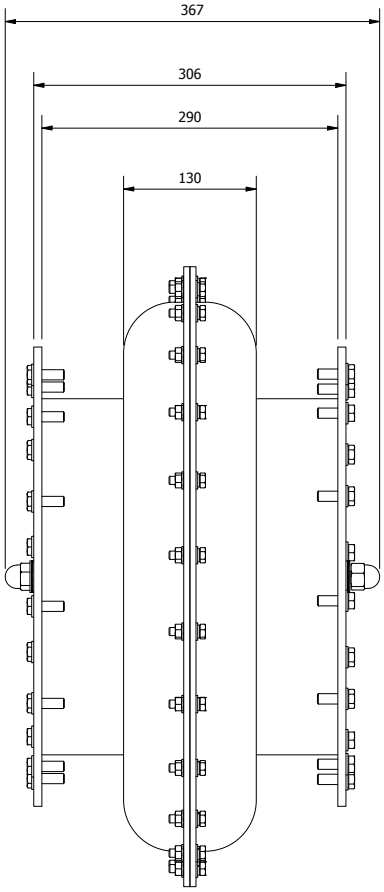
Blast Valve Closed (Air Flow)

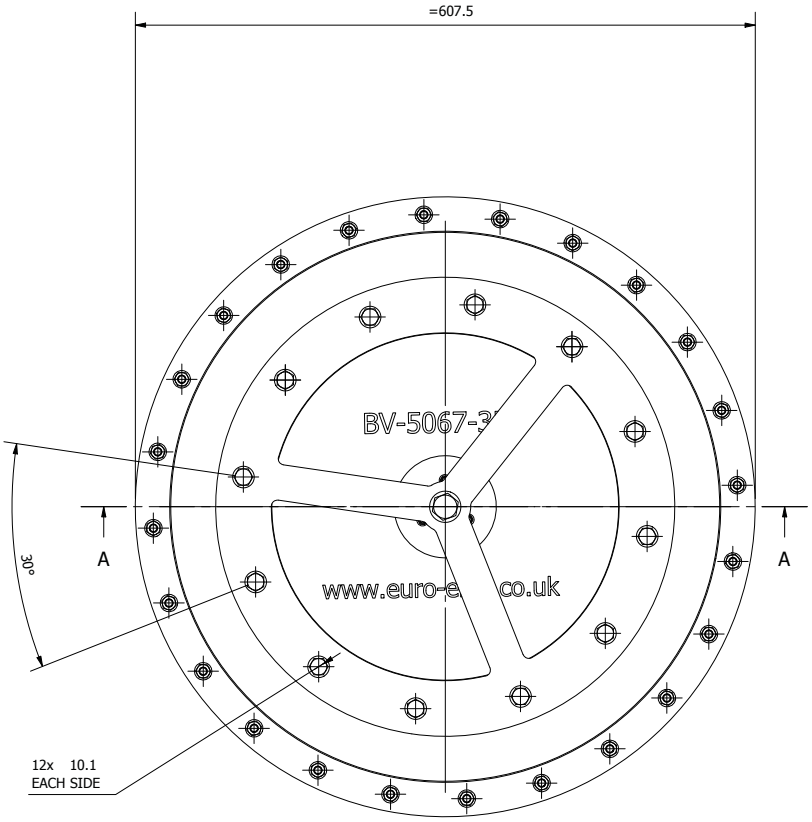


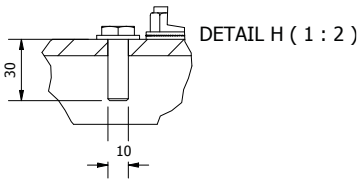
BLAST VALVE SURFACE TREATMENT

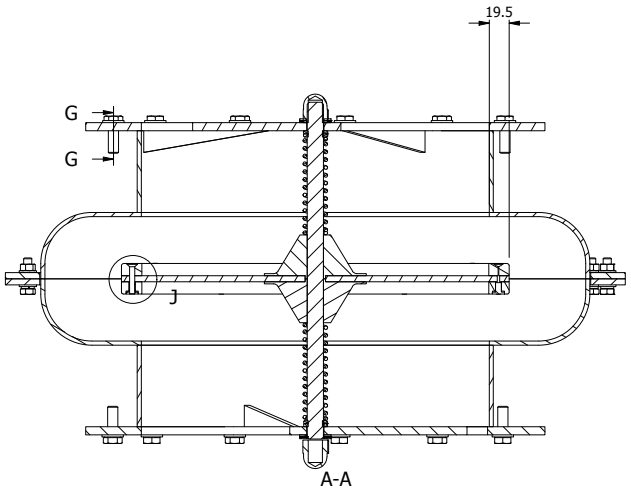
Each blast valve is manufactured using high grade stainless steel to ensure strength and a high level of corrosion protection. Each valve is then powder coated for additional protection. Each blast valve uses stainless steel springs together with a stainless steel baffle plate with a nylon sealing ring.

EXAMPLE OF CIRCULAR BLAST VALVE







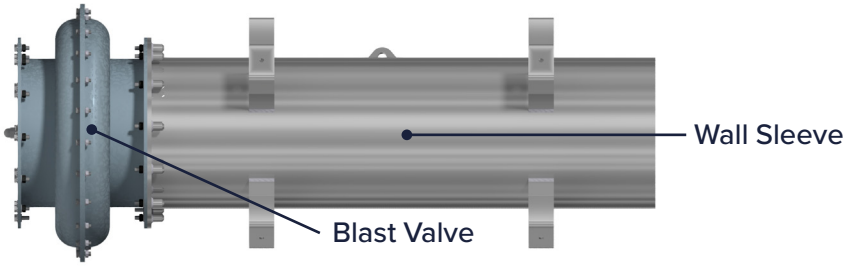


Contact European EMC Products for dimensional information for all Blast Valves

BLAST VALVE WALL SLEEVES

Where blast valves are installed within a concrete wall, blast valve wall sleeves are used.

Blast valve wall sleeves can be designed and manufactured to meet the site requirements and match the full range of blast valve diameters.



WALL SLEEVE SURFACE TREATMENT

Each blast valve wall sleeve is manufactured from mild steel, then hot dip galvanized to ensure a high level of corrosion protection.

AIR FLOW CAPACITY

The air volume at the required pressure drop will determine the total number of valves required.

The airflow/pressure drop is the same for both inlets and outlets.

AIRFLOW PERFORMANCE

The blast valves are designed to maintain airflow while withstanding high-pressure shock events.

The performance table below represents typical airflow performance across the range of circular blast valves, showing the relationship between volume flow rate (m^3/hr) and pressure drop (Pa) across the valve.

Configuration	Diameter	Airflow at 200Pa (M^3/hr)	Airflow at 300Pa (M^3/hr)
BV-350	350mm	3240	3960
BV-250	250mm	2314	2827
BV-150	150mm	1370	1675

All airflow figures are estimated.

BLAST VALVE TESTING

Each blast valve design is tested by an independent test house. Explosions are generated using small amounts of explosive material, increasing the amount of explosive material to simulate real life blast pressures.

PRESSURE RESISTANCE

Incident Pressure Durability: 2 MPa (20 bar)

Reflected Pressure Durability: 2 MPa (20 bar)

Capable of withstanding both incident and reflected blast pressures up to 20 bar.

ACCESSORIES

The wall frames can be fitted with particle filters and shields for protection against weather and shrapnel. Adapter boxes can be installed for use with rectangular and square ducts.

SHIPPING

All blast valves and wall sleeves are manufactured to order and shipped worldwide. For security and protection each order for blast valves and wall sleeves are shipped within strong wooden shipping crates suitable for both air and sea freight.

About Us

Established in 1996, European EMC Products Ltd (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, installation, project management, testing and consultancy are delivered across multiple sectors to an international client base.

Security Doors

Anechoic Chambers

EMP Power Filters

European EMC Products Ltd (EEP) are registered to BS EN ISO 9001:2015, Certificate Number FS38901, specialising in the design, manufacture and installation of RF Shielded Structures, Blast Doors, Gas Tight Doors, Electromatic Pulse Protection (EMPP) containers, Magnetic Shields, Quench Systems for MRI Scanners, LED Lighting Systems for Medical Applications, Sound Masking and Eavesdropping Protection Systems, Power and Signal Filters.

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