

Frangible Blow Out/Rupture Panels & Safety Cages

Technical Data Sheet



Intended to release overpressure from within buildings by allowing the panel to release from the frame.

Features

- All units are made to customer's required dimensions and various wall constructions
- The product uses FM Approved Blast Release Bolts to provide accurate release values and reduce the likelihood of an incorrect release.
- Blast cages are available to order to contain the frangible panel after an event and allows blast pressure to be released sideways and upwards.

Product Description

The centre panel is manufactured from Super Lightweight GRP material which in the event of a blast, will release at the customer's chosen blast pressure, in order to release overpressure from the building.

Advantages

The unit provides instant pressure relief over larger areas than what can be achieved with typical vent products. This is suitable for both small and large threats that may arise in factories and processing plants.



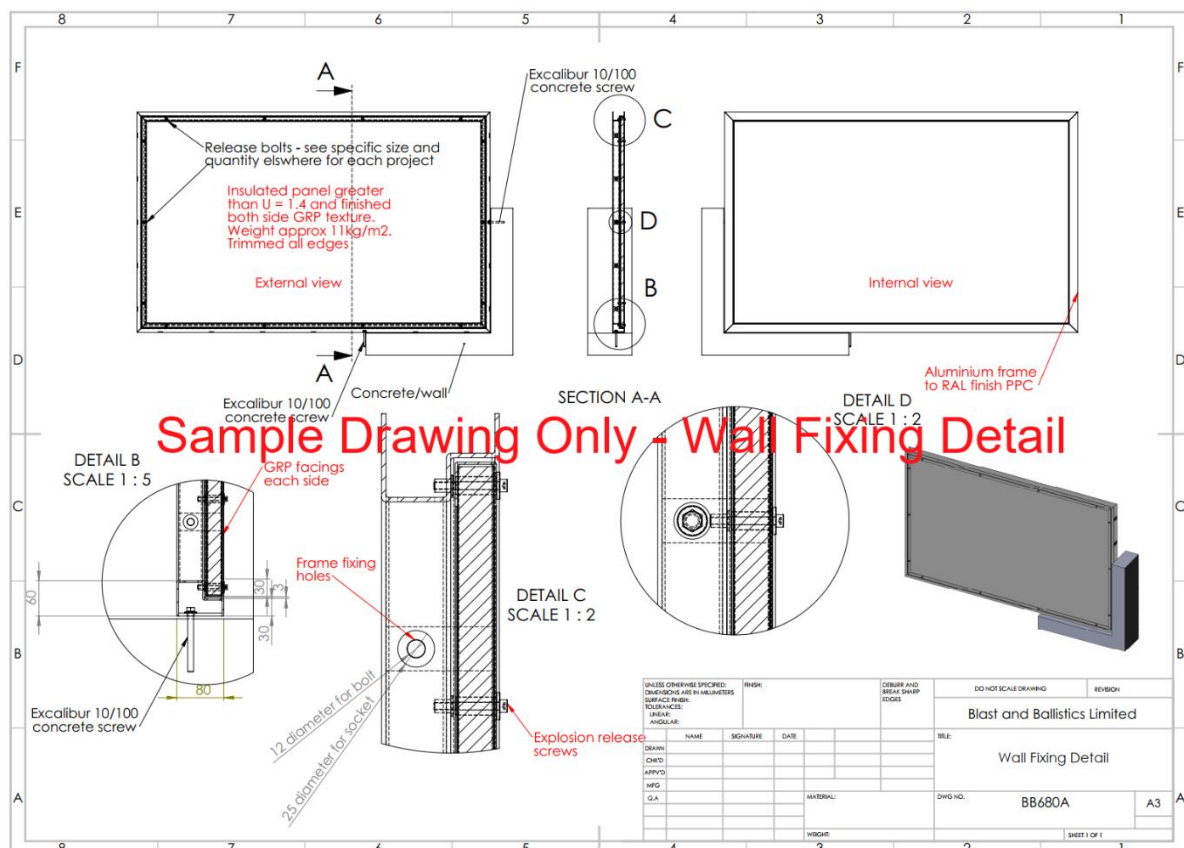
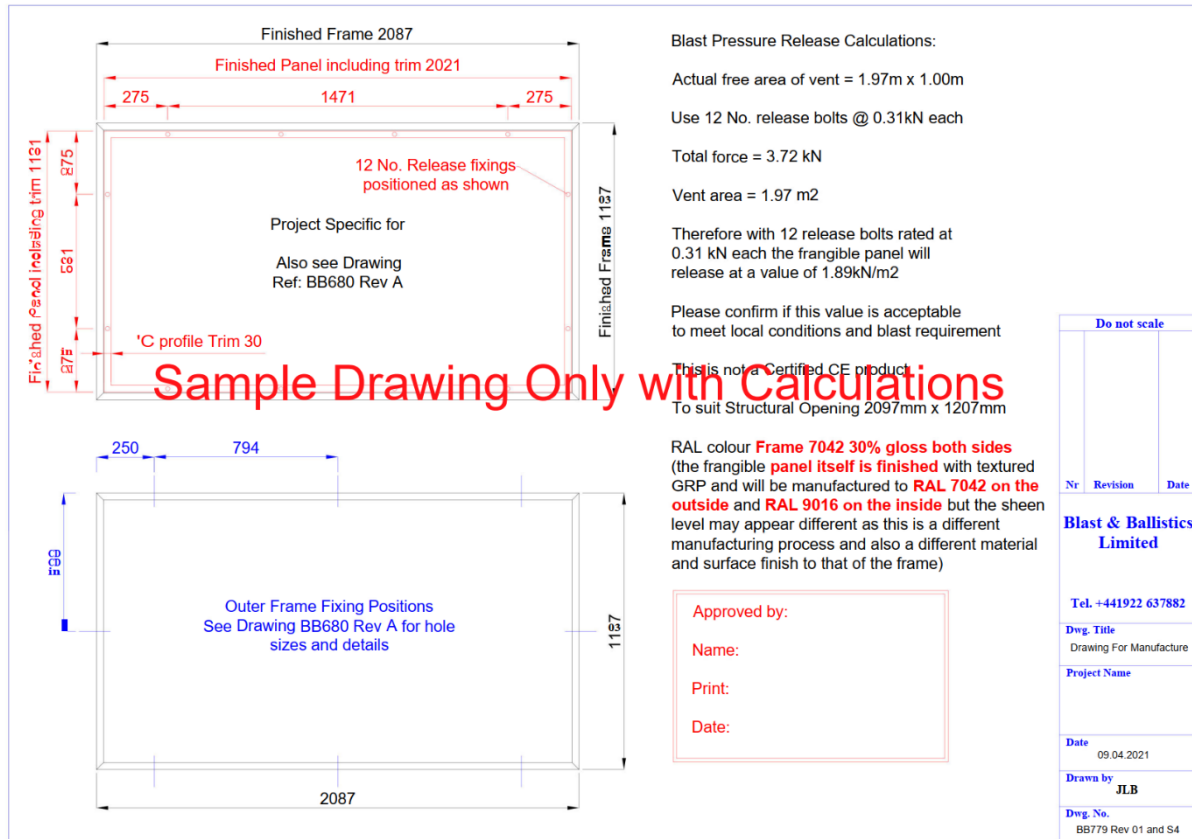
Areas of Application

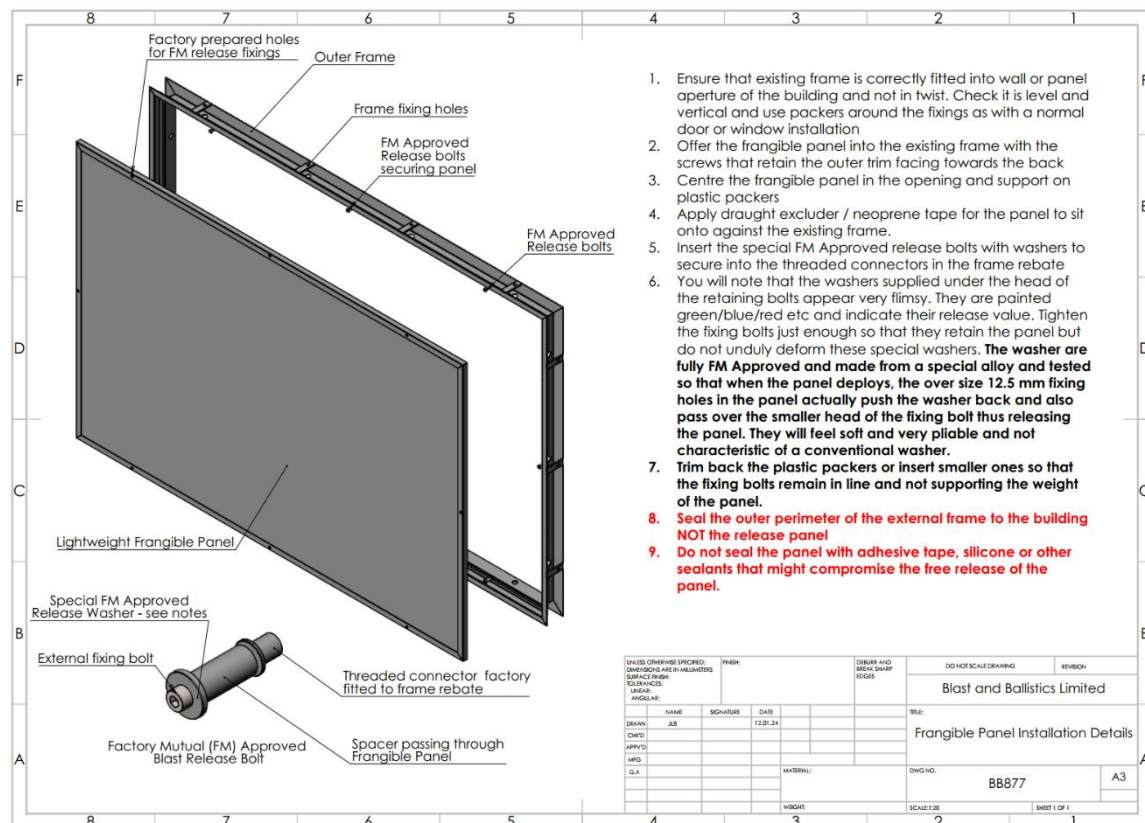
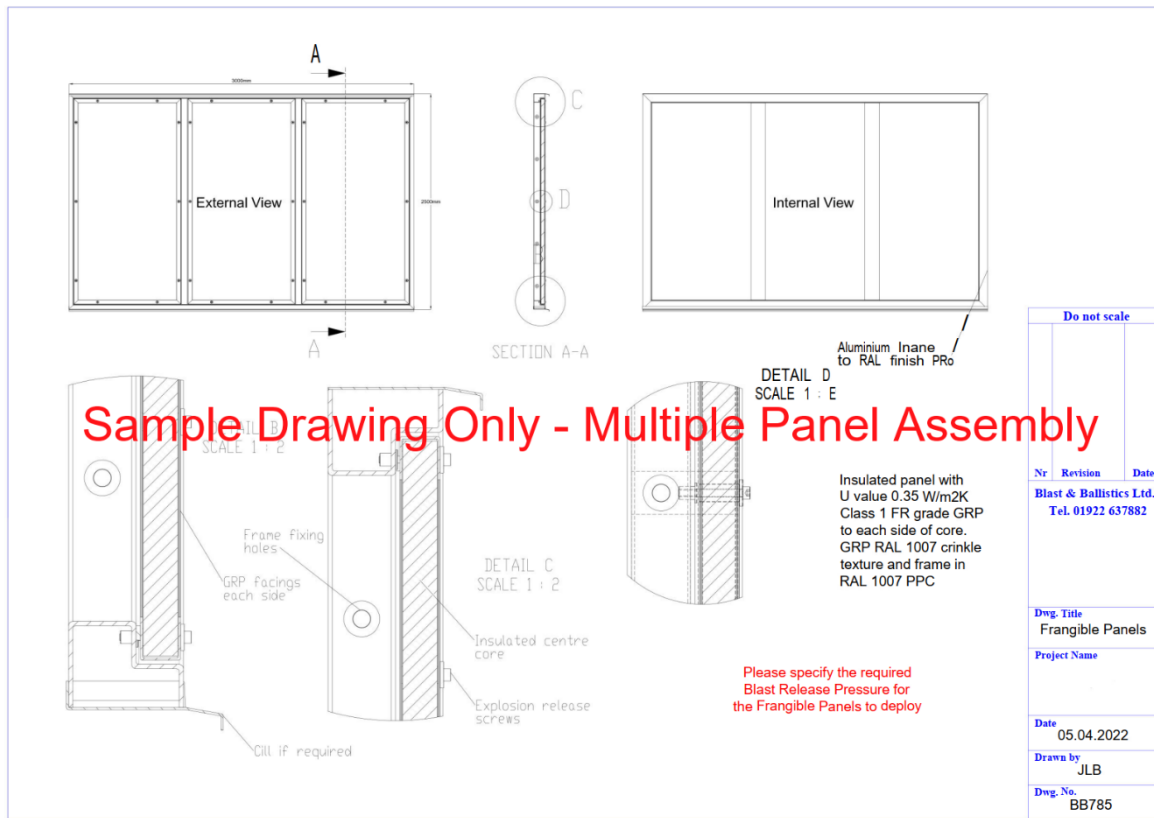
- Chemical Production
- Petroleum Industry
- Paint, Varnish Manufacturers
- Energy/ Mining Industry
- Co-Generation Plants
- Recycling Centres
- Sewage Treatment (by-product recycling)
- Automotive (air bag, mfg. Plant lines)
- Grinding/Pulverizing processes
- Airborne dusts
- Ink Manufacturers
- Printing Companies (solvent use/storage)
- Paper Process (solvent use/storage)
- Laboratory Test Facilities
- Hospitals (gas and/or flammable storage areas)
- Brewery Facilities (grain storage/processing)
- Fossil Fuel Plants (coal dusts)
- Food Processing (airborne dust)
- University Labs (chemical lab store rooms)
- Grain Milling Facilities (airborne dusts)
- Nuclear Power Stations

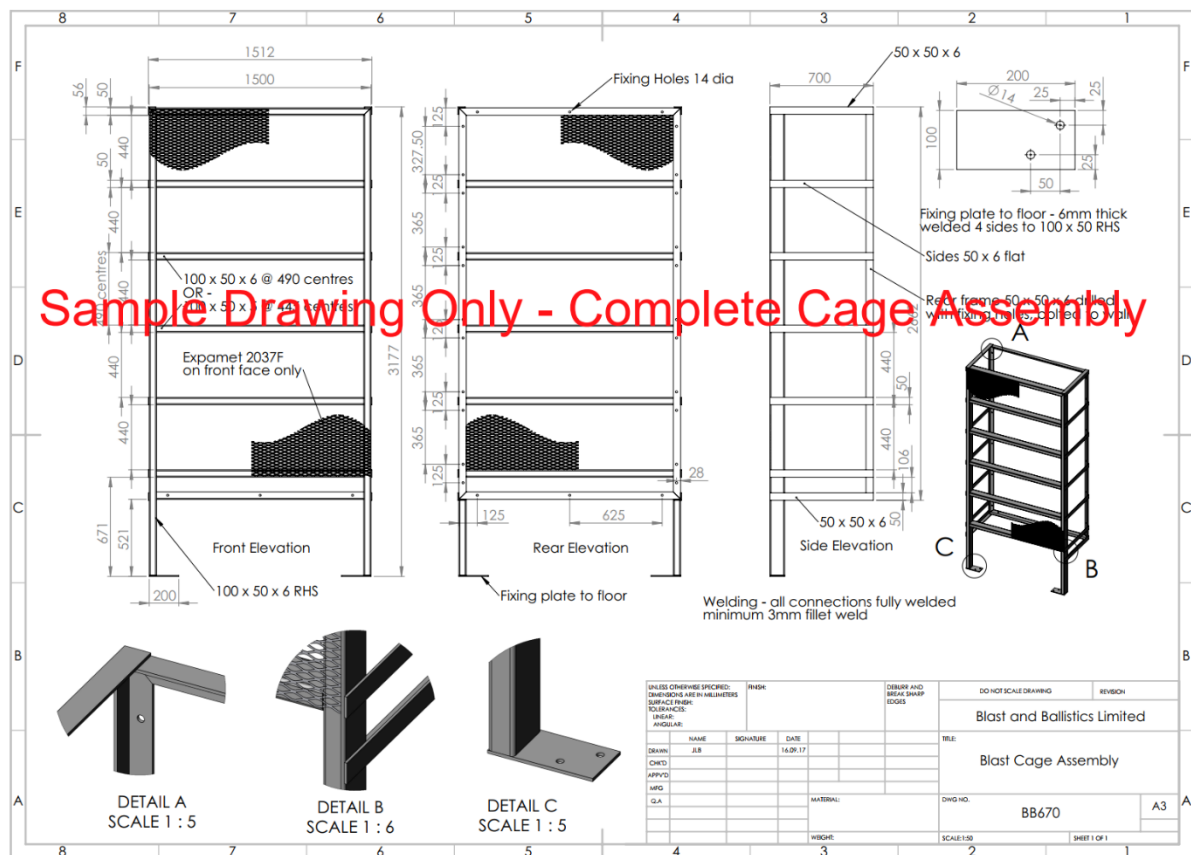


Specification

PROFILE	
✓	Available in Aluminium and Stainless Steel
✓	Minimum frame depth/wall thickness 80mm
FINISHES	
✓	Factory applied Polyester Powder Coat in standard RAL colours
✓	Special finishes available on request
AVAILABLE SIZES	
✓	Minimum 500mm x 500mm
✓	Maximum up to 1250mm x 2400mm
CENTRE PANEL	
✓	28mm overall centre panel thickness
✓	Weighs less than 11kg/m ²
✓	Insulation greater than U=1.4
RELEASE VALUES	
✓	To suit customer specification
OPTIONS	
✓	Thermally broken Fire Rated panel
✓	Extended fixing lugs if required
✓	Can be installed into steel or masonry apertures
SHIPPING	
✓	Supplied in International Shipping Crates for dispatch







Additional Information

Damage-Limiting Construction

**FM Global Property Loss Prevention Data Sheets 1-44, Extract with reference to
FM Approved Release Fasteners**

2.1.3 Location

2.1.3.1 Locate rooms or buildings requiring damage-limiting construction in accordance with Section 3.1.1.

2.1.3.2 Avoid venting a single end of an elongated enclosure. Where this situation is unavoidable, follow the guidelines in Section 3.1.7.

2.1.4 Pressure Relieving Vent Panels

Install at least a total area of pressure relieving vent panels that equals the minimum recommended vent area.

Do not credit roof vent panel areas subject to accumulation of snow, ponded water, dust, or debris.

Where this situation is unavoidable, refer to Section 3.1.2. A maximum weight of 3lb/ft² (14.6kg/m²) is generally recommended for venting roof panels.

2.1.4.1 FM Approved Products

Follow the manufacturer's instructions for the installation of FM Approved (see Appendix A for definition) explosion venting systems, including fasteners and washers.

The following recommendations apply to the installation of FM Approved explosion venting systems including fasteners and washers:

1. When FM Approved, collapsing washers are used, a 1/2in. (13mm) diameter oversized hole should be drilled in the wall panel and a slightly smaller diameter centering washer or sleeve should be installed. It is imperative that the pilot hole for the screw/bolt be centred with respect to the centering washer. Only a specifically FM Approved No.14 (1/4in., 6mm in diameter) screw/bolt should be used with this washer (see Figure 2.1.4.1-1).

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Notes:

Vent-All FM Certified Approved Release Washers identification colours –

EXA-74	Colour Code GREEN	Release Value Per Fastener 70# / 0.31 kN
EXA-76	Colour Code BLUE	Release Value Per Fastener 110# / 0.49 kN
EXA-79	Colour Code TAN	Release Value Per Fastener 175# / 0.78 kN
EXA-84	Colour Code LIGHT GREEN	Release Value Per Fastener 435# / 1.93 kN

Release calculations of venting panel in this product include the weight of the roof panel e.g. –
Weight of roof panel in kN + 2 x Vent Washer in kN / vent area

The illustrated Release Washer in this Data Sheet is GREEN, release value 70lbs/0.31kN

The Release Assemblies are fitted centrally and opposing to balance the resistance of the Roof Panel

Applications that require 4 No. Release Assemblies are also paired about centre

Imbalanced blast waves can cause distortion and compromise operation. Keep Roof Panels clear of debris and snow accumulation at all times. An excessive internal explosion could compromise the restraint cables and also distort the roof panel requiring replacement before future use.

See Terms and Conditions, available upon request.