

Bespoke to Any Size

ISO 16933 Live Tested

UFC 3-340-02 Design

Single &amp; Double Leaf

Manual or Automated

## PRODUCT SPECIFICATION

# Blast Doors

Engineered Blast-Resistant Doorsets — Designed, Tested &amp; Built to Order



## Key Features

- Designed to Your Blast Load**  
 Every door is analysed for the client's specified pressure, impulse and duration — not sold from a fixed catalogue
- Independently Verified**  
 Design calculations independently checked; full-scale arena trials conducted to ISO 16933 procedure
- SDOF Dynamic Analysis**  
 Single-degree-of-freedom modelling to UFC 3-340-02, ASCE and Biggs against client response criteria
- Welded Steel Matrix**  
 RHS/SHS internal matrix clad in solid steel plate skins — sized to the duty, from light to 7 bar
- Engineered Hardware**  
 Hinges, shoot bolts and connections individually designed for the dynamic reactions of the blast event
- Manual or Automated**  
 Hinged single & double leaf, or heavy automated sliding/hydraulic doorsets for large openings
- Integrated Blast Design**  
 Doors, windows and blast-proof buildings combined to protect from a single design initiation point
- Specialist Variants**  
 Ammunition storage doors and L151 magazine doors — capabilities few others offer

**CONSTRUCTION**

 S275 / S355  
 Steel Matrix

**CAPACITY**

 To 7 bar  
 Peak Pressure

**DESIGN CODE**

 UFC 3-340-02  
 Eurocode 3

**TESTING**

 ISO 16933  
 Live Trial

**CONFIG**

 Single / Double  
 Auto Option

**FINISH**

 C4 / C5  
 Any RAL

**MM Engineering**

Unit 4B Sirius Drive, Baglan Energy Park, Port Talbot SA12 7BR

# Our Design Process

MME blast doors are not selected from a catalogue — each doorset is engineered around the threat. The route we follow depends on the blast data the client can provide, and every component (hinges, shoot bolts, frame and their connections) is designed for the forces that analysis determines.

<p><b>01</b></p> <p><b>Dynamic Load</b></p> <p>Client specifies peak pressure, impulse, duration and response class (I–IV). We design the leaf using SDOF analysis to keep the response within the defined limits.</p>	<p><b>02</b></p> <p><b>Static Load</b></p> <p>Where only seated/unseated static pressures are given, the leaf is designed to take the seated pressure and remain within its elastic range.</p>	<p><b>03</b></p> <p><b>Verify &amp; Test</b></p> <p>Calculations are independently verified. Designs are proven by full-scale arena trials carried out to the ISO 16933 procedure.</p>	<p><b>04</b></p> <p><b>Build &amp; Install</b></p> <p>Single-source fabrication, finishing, witnessed testing and installation, with a full documentation pack.</p>
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## Technical Specification

ITEM	SPECIFICATION
Leaf Construction	Internal RHS/SHS steel matrix clad with solid steel plate skins, sized to duty
Blast Plate	Solid plate to 65mm (S355JR) on high-rating doors
Frame	Folded plate profile with chemical anchors; RHS/SHS to EN 10219 S355JRH
Plates & Flats	EN 10025 S275JR
Hinges	Heavy-duty blast hinge assemblies, EN8 hinge pins
Locking	Surelock latching (manual or motorised); lever / multi-point options
Insulation	Mineral wool cavity fill (Superglass / Rockwool)
Seals	Closed-cell expanded neoprene 'P' seal, stainless clamp
Design Codes	UFC 3-340-02 / TM5-1300, Biggs, ASCE, Eurocode 3
Welding	BS EN ISO 15614-1; macro BS EN 1321; hardness EN 1043-1
Paint System	C4 / C5 (Sigma / Jotun); blast cleaned to Sa 2.5
Colour	Any RAL to client specification
Fixings	Hilti HAS-U / HIT-V chemical anchors; A2 / A4 stainless

### Built Bespoke, In-House

From a single personnel door to an automated ammunition-store doorset, every MME blast door is designed, fabricated, finished, tested and installed by us — one accountable source, backed by independent verification and live-trial evidence.

[Contact us for a design consultation & quote](#)

## Configuration & Range



Automated sliding blast doorset — bespoke heavy doors for large openings where hinged leaves are impractical.

VARIANT	TYPICAL APPLICATION
Single Leaf	Personnel access, primary exit
Double Leaf	Active + passive, wide openings
Automated	Sliding / hydraulic, heavy leaves
Ammunition Store	IATG magazine doors
L151 Magazine	Specialist explosives storage

### PROVEN PROJECT PEDIGREE

#### Ammunition Storage Doorset

Automated double doorset rated to 7 bar peak pressure, designed to UFC 3-340-02 & IATG 09.10 by an RSES-accredited engineer, live tested to C15 standoff.

#### L151 Magazine Doors

Bespoke double blast doors for explosives storage — a specialist capability few suppliers offer.

#### ISO 16933 Arena Trial

100 kg TNT-equivalent at 15m: leaves remained intact, operable and fragment-free.