



Security Doors

Technical information and specifications

ASSA ABLOY

The global leader in
door opening solutions

About ASSA ABLOY Security Doors

High Performance Steel and Timber Security Doors

UK's leading ranges
of proven security
doors

ASSA ABLOY Security Doors designs, manufactures and installs high performance steel and timber doors tailor-made to individual project requirements, with the support and resources of the global leader in door opening solutions.

We offer the UK's leading ranges of proven security doors – Powershield Steel Doors and Safeguard Timber Doors.

Powershield Steel Doors

Synonymous with
exceptional product
quality and attention
to detail

The UK's number one range of steel doors, Powershield is synonymous with exceptional product quality and attention to detail.

Powershield Steel Doors have been specified for a diverse range of major construction projects for over 20 years, from commercial office and telecommunication facilities to pharmaceutical and chemical plants, as well as military bases, transport hubs and leisure stadia.



Safeguard Timber Doors

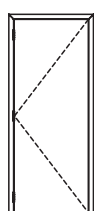
Maximum security
for high profile
buildings at risk
from attack

Safeguard Timber Doors are approved by many governmental and military organisations to provide maximum security for high profile buildings at risk of attack. Each Safeguard doorset offers advanced protection in discreet designs that will not attract unwanted attention.

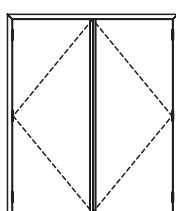


Typical Door Configurations for Timber and Steel Doorsets

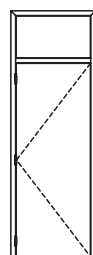
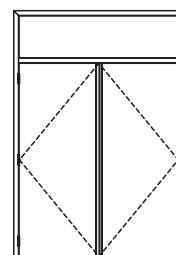
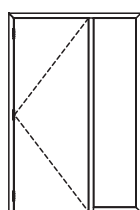
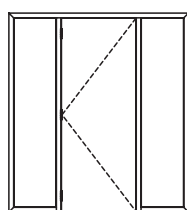
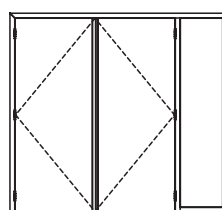
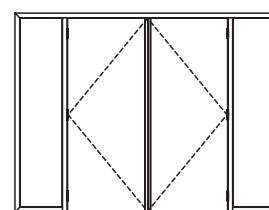
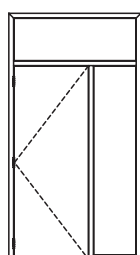
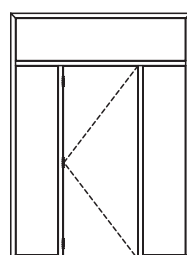
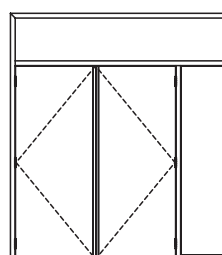
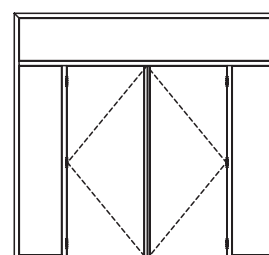
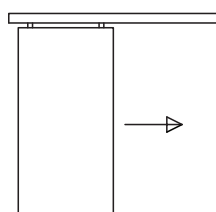
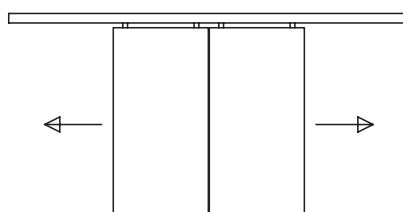
Door Configurations



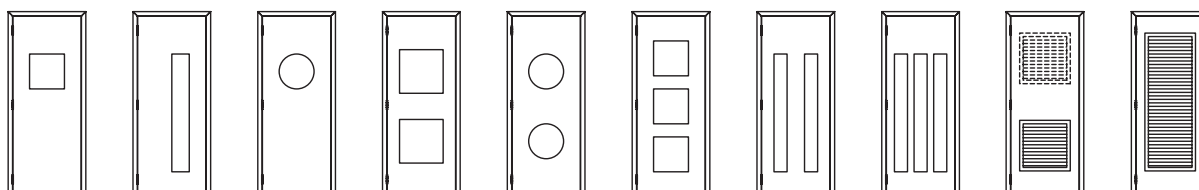
SINGLE LEAF



DOUBLE LEAF

SINGLE LEAF
WITH OVERHEAD PANELDOUBLE LEAF
WITH OVERHEAD PANELSINGLE LEAF WITH
SIDE PANELSINGLE LEAF WITH
SIDE PANEL BOTH SIDESDOUBLE LEAF
WITH SIDE PANELDOUBLE LEAF WITH
SIDE PANEL BOTH SIDESSINGLE LEAF WITH SIDE
& OVERHEAD PANELSINGLE LEAF WITH SIDE
PANEL BOTH SIDES
& OVERHEAD PANELDOUBLE LEAF WITH
SIDE PANEL
& OVERHEAD PANELDOUBLE LEAF WITH SIDE
PANEL BOTH SIDES
& OVERHEAD PANELSINGLE LEAF
SLIDINGDOUBLE LEAF
SLIDING

Glazing and Louvre Options for Steel and Timber Doors

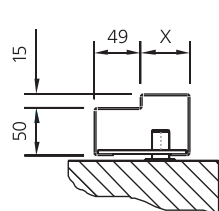


May not be applicable to all door products

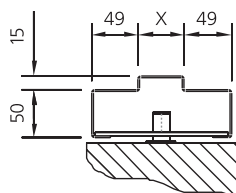
For increased accessibility we can offer vision panels designed to meet approved Document M and BS8300.

Typical Steel Door Details

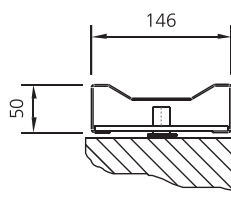
Typical Steel Frame Profiles



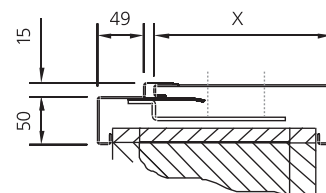
SINGLE REBATE



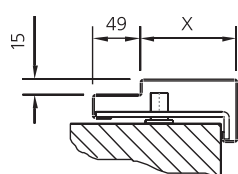
DOUBLE REBATE



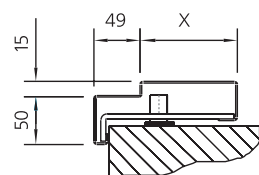
DOUBLE SWING



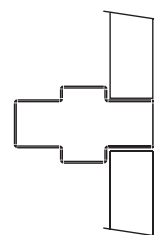
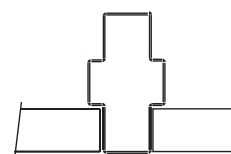
WRAPAROUND



HALF WRAPAROUND



HALF WRAPAROUND

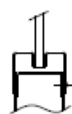
OVERHEAD PANEL
TRANSOMSIDE PANEL
MULLION

Project specific frame options available on request

Typical Steel Door Vision Profiles and Louvre Options



TYPE 1



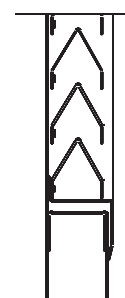
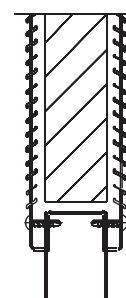
TYPE 2



TYPE 3



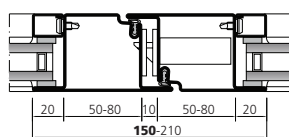
TYPE 3A

TYPE 4
(Non fire rated
doors only)STANDARD LOUVRE
(FREE AIR FLOW 50%)

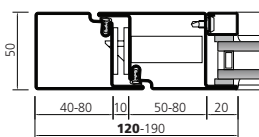
FIREBLOCK LOUVRE

Glazing Frame Profile

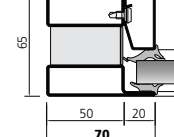
Uninsulated Profiles



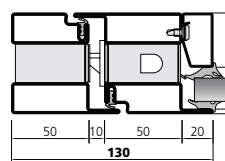
DOUBLE DOOR MEETING STILE



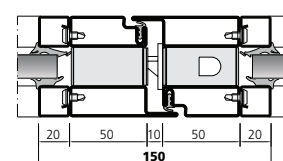
DOOR JAMB DETAIL



OUTER FRAME PROFILE



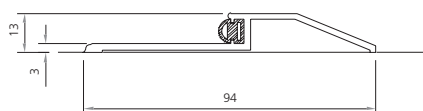
DOOR JAMB DETAIL



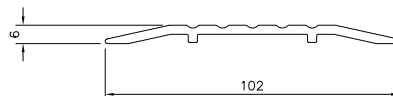
DOUBLE DOOR MEETING STILE

Insulated Profiles

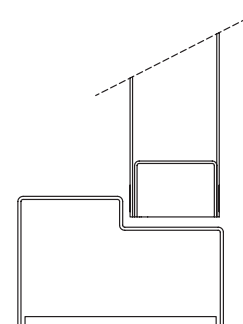
Typical Threshold Options



LOW PROFILE ALUMINIUM



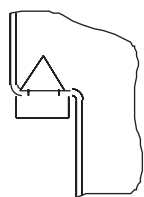
RAMPED



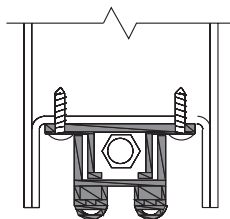
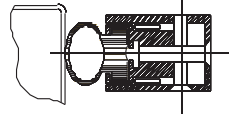
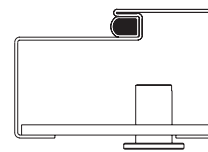
SINGLE REBATE 4-SIDED FRAME

Options

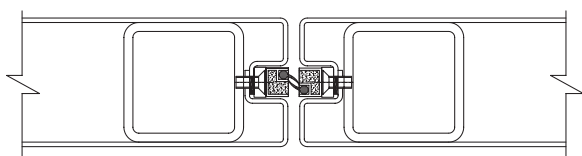
Standard Steel Door Seals



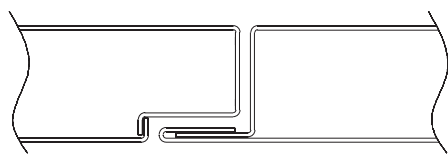
DOOR SILENCER

EPDM
DRAUGHT88S SMOKE
SEALINTEGRAL
DROP SEALACOUSTIC
FRAME SEALINTEGRAL
FRAME SEAL
(THERMO Door)

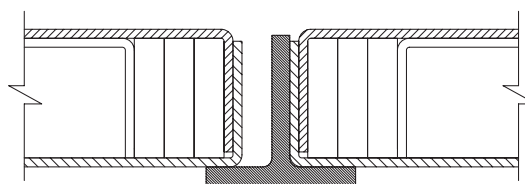
Steel Double Door Meeting Stile Options



Plain

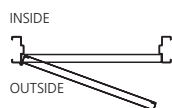


Flush

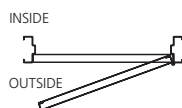


High Security

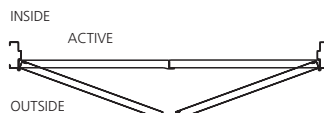
Handings



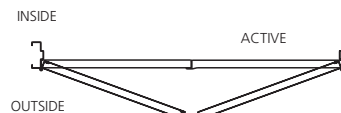
LEFT HAND



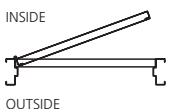
RIGHT HAND



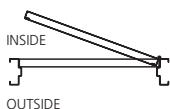
LEFT HAND ACTIVE



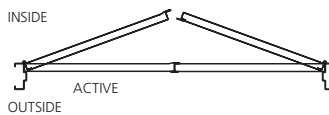
RIGHT HAND ACTIVE



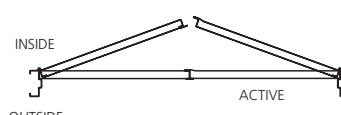
RIGHT HAND



LEFT HAND



RIGHT HAND ACTIVE



LEFT HAND ACTIVE

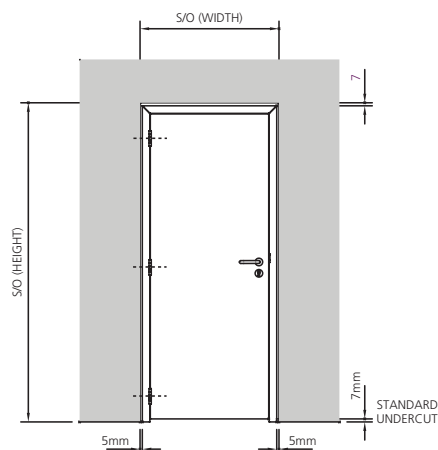
When viewing the door on the side where the hinge is visible, the door is either left or right hand hinged - for double doors, left or right hand active.

The door is then described as either inward or outward opening.

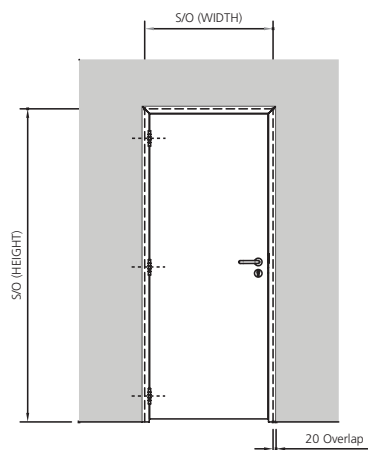
For security, blast and ballistic doors, attack side should be identified.

Clear Opening and Fitting Tolerances

Tolerances



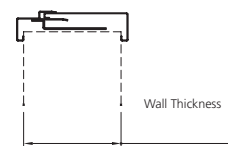
SINGLE REBATE, DOUBLE REBATE OR DOUBLE SWING FRAME



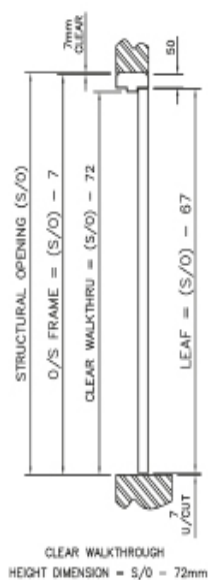
WRAPAROUND FRAME

STRUCTURAL OPENING SHOULD BE QUOTED AS Xmm (WIDTH) x Ymm (HEIGHT) & WALL THICKNESS Zmm

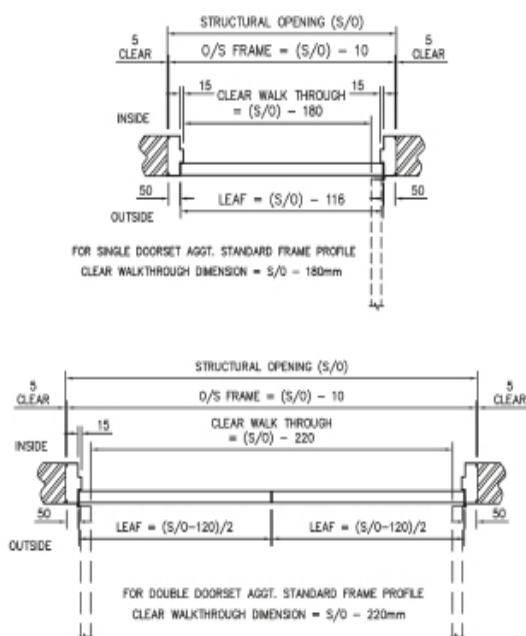
WALL CONSTRUCTION SHOULD BE STATED



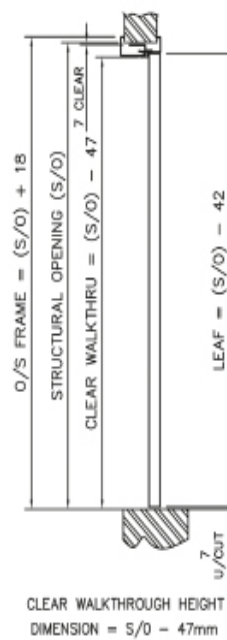
Wall Thickness



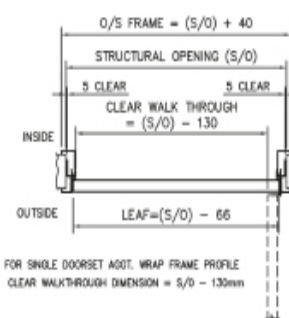
CLEAR WALKTHROUGH HEIGHT DIMENSION = S/O - 72mm



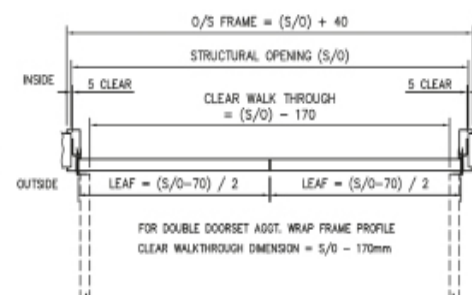
FOR SINGLE DOORSET AGGT. STANDARD FRAME PROFILE
CLEAR WALKTHROUGH DIMENSION = S/O - 180mm



CLEAR WALKTHROUGH HEIGHT DIMENSION = S/O - 47mm



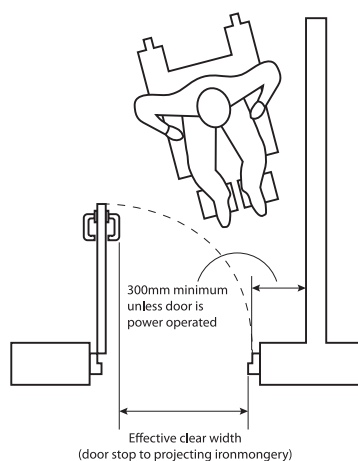
FOR SINGLE DOORSET AGGT. WRAP FRAME PROFILE
CLEAR WALKTHROUGH DIMENSION = S/O - 130mm



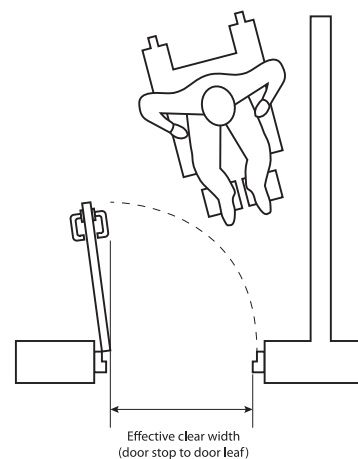
FOR DOUBLE DOORSET AGGT. WRAP FRAME PROFILE
CLEAR WALKTHROUGH DIMENSION = S/O - 170mm

Direction and Width of Approach	New Buildings (mm)	Existing Buildings (mm)
Straight-on (without a turn or approach)	800	750
At right-angles to an access route at least 1500mm wide	800	750
At right-angles to an access route at least 1200mm wide	825	775
External doors to buildings used by the general public	1000	775

Opening to 90°



Opening beyond 90°



Materials and Finishes

Steel and timber doors are supplied in the following materials and finishes

Steel Material Types

- Magizinc, DX51D-ZM-A EN 10346:2015 140g/m2
- Stainless Steel Grade 304 (1.4301) to EN 58E
- Stainless Steel Grade 316 (1.4401) to EN 58H

Timber Material Types

- Solid hardwood frame sections, with steel reinforcement in some door types
- Solid hardwood/lamelled door cores
- Hardwood veneered, steel laminate and composite exterior facings
- Hardened steel, inserts as required
- Anti-drill plates available to protect doors fitted with panic or emergency exit hardware

Finish Performance

- Increased corrosion resistance
- Marine-grade
- Anti-graffiti
- High impact laminate
- Flame retardant

Colours

- A wide selection of standard BS and RAL colours available

Steel Finishes

- Epoxy Powder Primed Finish
- Polyester Powder Coated Finish
- Satin Polish 180-240 grit (Stainless Steel Only)
- Patterned Finish (Stainless Steel Only)
- Security Doors: Prison products are supplied in Epoxy Powder Primed Finish Only
- Laminates

Timber Finishes

- Timber veneers including ash, mahogany, oak and specialist timbers
- Two-pack Polyurethane
- Two-pack lacquer
- Solid panels
- Water based two coat paint



Standard Hardware Options

A choice of hardware solutions are available as standard for our steel and timber doors from across the ASSA ABLOY Group. A wider range of hardware is available on request.

Standard Locks / Latches



Mortise Sashlock

Latchbolt withdrawn by lever handles from either side. Deadbolt operated by cylinder key or thumbturn



Mortise Deadlock

Deadbolt operated by cylinder key or thumbturn



Mortise Latch

Latchbolt withdrawn by lever handles from either side



Mortise Nightlatch

Latchbolt withdrawn by lever handle inside and by key from outside (Complies with BS EN 179)



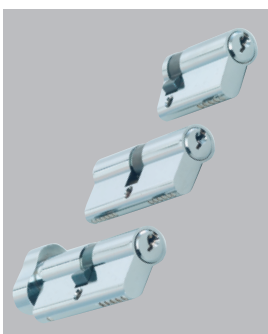
Mortise Bathroom Lock

Latchbolt withdrawn by lever handles from either side. Deadbolt operated by turn or emergency release



Flush Bolts

Fire rated and non-fire rated for double leaf doors



Euro Profile Cylinders

5-pin single, double or cylinder and turn (Available keyed-alike or masterkeyed to special order)



Pull Handles

19mm or 22mm D-Shape or off-set D-Shape stainless steel finish



Push Plates

Push/kick plate/ Finger pull/ Escutcheon/ Signage

Electric Locking



Electric Strikes

Range of robust solid construction one piece and surface mounted strikes



Drop Bolts

Designed for use on swing-through double action doors.



Solenoid Lock

Designed for use on swing-through double action doors.



Friction Door Holder

Door Limiting Stay, Wind Restrictor



Door Closer

Light, medium and heavy duty door closer. Silver or stainless steel cover, variable backcheck and hold open options available

Emergency Escape


High Security Multi-Point Panic Escape System

Two or three point system available with panic bar (Complies with BS EN 1125) or paddle / lever handle (Complies to EN 179)


Outside Access Device (Vertical Handle)

Universal independent outer handle for CORNI rim panic exit devices. Suitable for installation on doors with metal profiles (standard euro cylinders)


Single Push Pad Panic Latch

Single point latch with pushpad. (Complies with BS EN 179)

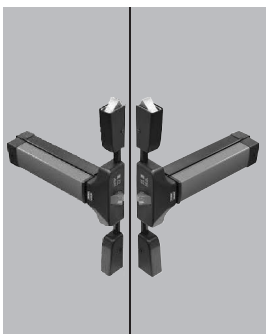

Outside Access Device

To suit touchbar latch or bolt and panic latch or bolt (standard euro cylinders)

Panic Devices


Touchbar Single Panic Latch

One point locking with panic bar. (Complies with BS EN 1125)


Touchbar Double Panic Bolt

Panic bolt for a double door with no astragal. (Complies with BS EN 1125)


Touchbar Single Panic Bolt

Two point locking with optional three point locking. (Complies with BS EN 1125)

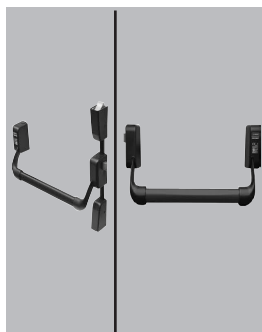

Pushbar Single Panic Bolt

With optional three point locking. (Complies with BS EN 1125)

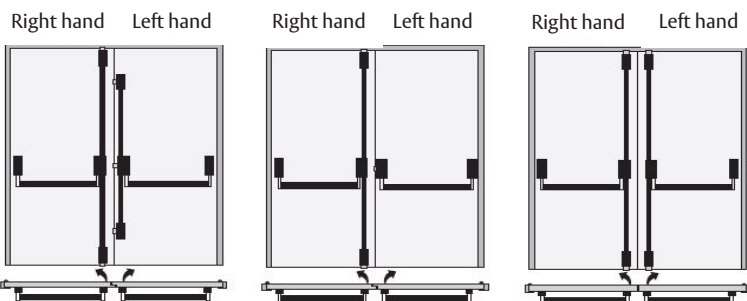
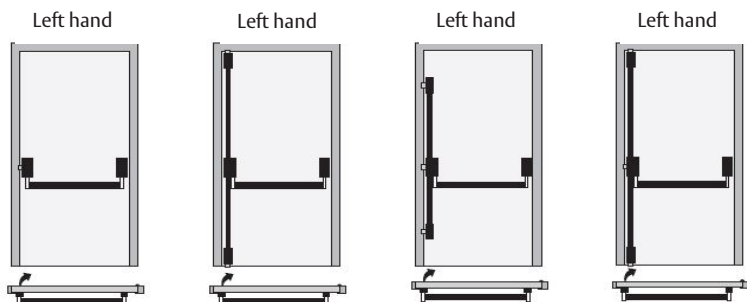

Pushbar Single Panic Latch

Single point locking for the Pushbar single point latch

Applications Patterns


Pushbar Double Panic Bolt

Panic system for a double door with up Five point locking available. (Three point standard)





Simple Solutions.
Powershield Personnel.

Personnel Doors

Standard Steel Leaf Construction

- Two skins of 1.2mm (18ga.) thick steel
- 44mm thick door leaf with no face seams
- Doors are stiffened, insulated and sound deadened with pre-expanded, small cell honeycomb core (or high density mineral wool if thermal insulation is required) and laminated under heat and pressure to the face skins
- Face skins are connected by a continuous 4 sided 'deep pocket' interlocking edge lock seam for added strength and durability (SMARTform)
- Door edges are bevelled for ease of operation and close fit
- Doors are morticed, reinforced, drilled and tapped for three templated hinges
- On double doors, a flush astragal is folded into the leading edge of one leaf to improve sealing

Standard Steel Frame Construction

- Manufactured from 1.5mm (16ga.) steel with single, double rebate or wraparound profile
- Supplied in either knock down or fully welded smooth finish
- Frames are morticed, reinforced, drilled and tapped for hinges and strikes
- Standard height frames are provided with four fixings per jamb, built-in adjustment and complete with plastic push fit cover caps

Performance

- Typical insulation value: Pre-expanded, small cell honeycomb core 3.7W/m²k
- Typical insulation value: High density mineral wool core 3.2W/m²k



Feel Protected.
Powershield Fire.

Fire Doors

To BS 476 Part 22 and EN 1634-1: 2008

Steel Fire Door Construction

- Similar construction to Powershield Personnel with minimum material thicknesses as specified
- Non-combustible core (reinforced where required)
- Includes singles, doubles/leaf & half, all as per configurations detailed on Page 3
- Fire doors can be certified latched or unlatched depending on size and configuration and can include vision panels up 600mm wide x 800mm high or 200mm wide x 1500mm high. Fire rated louvres are also available up to 500mm wide x 1500mm high

Performance

- FD30(S) – FD240(S) in accordance with BS476 Part 22: 1987
- E30 – E240 in accordance with EN1634-1: 2008
- Most standard configurations are Certifire compliant and therefore regularly audited and approved by third party to ensure continued conformity

Options

- Double action with door opening size up to 2.6m x 2.6m to FD60(S)/E60
- Sliding with door opening size up to 2.2mW x 2.4mH to FD90

Other performance options available with fire performance

- Security, Cleanroom, Blast, Ballistic and Acoustic
- Supply Stainless Steel finish





Primary Protection.
Powershield Ballistic.



Ultimate Safety.
Safeguard Blast.



Ultimate Safety.
Powershield Blast.



Primary Protection.
Safeguard Ballistic.

Powershield and Safeguard Blast and Ballistic Doors

Doorsets are tested in both inward and outward opening configurations

ASSA ABLOY Security Doors is a leading supplier for public properties providing a full range of commercial products in timber and steel that can provide protection against hand-delivered charges and fragmentation, as well as handguns, rifles and larger weapons.



Testing and Certification

Doorsets are blast tested on both inward and outward opening configurations. Single and double doorsets, vision panels, single-point locks and multiple locking systems are all configured within testing.

Supporting physical testing, we also have independent assessments from other recognised blast authorities.

Doorsets are also ballistic tested in ISO-accredited test houses and equipment is calibrated and ammunition loaded by hand to ensure consistent testing and reliability.



Product Performance

Blast products are tested with charges from <1kg to over 500kg and for ranges from <1m to 30m. Our products are also tested with the inclusion of both soft and hardened fragmentation.

Ballistic protection is offered from 9mm handguns through to armour-piercing rounds. All testing is to European Standards EN1522 and EN1523. This not only involves 'straight on' shots but also 'angular' shots, which were not a requirement in previous British Standard testing.

Design and Evaluation

Understanding blast is crucial when designing products or advising clients. Interpreting clients' or consultants' requirements has led us to study the propagation of blast waves and apply these

elements to the structural loading of products. Software is very important as a complimentary tool to our testing to help understand the science of blast. We are able to model blast situations and then determine the most suitable product ranges to meet clients' requirements. This is often more cost-effective, as a building may often need more than one doorset but rarely do they have to be built to the same specification.

Providing ballistic protection is also an ongoing challenge. New and more powerful weapons, ammunition and increasing threat levels mean that products need to be re-evaluated or re-invented to deliver consistent protection.

Ballistic rounds travel at velocities between 450m/sec and 1000m/sec. When this is combined with armour piercing tips, it becomes a formidable challenge for our designers. Our blast knowledge provides an advantage at this point, as blast fragmentation travels at 3000m/sec, which informs and improves our ballistic protection design, giving confidence to customers and clients.

Further Protection

ASSA ABLOY Security Doors can build further protection into door solutions, allowing one doorset to provide protection against blast, ballistic and physical attack.

Fire Certification

All blast and ballistic doorsets can be fire certified from 60 minutes to 4 hours.



Acoustic Doors

Rating of Sound Insulation

The sound insulation performance can be described over a range of frequencies as the Sound Reduction Index in dB. The Powershield range of Acoustic Doors provides a variety of sound reduction capabilities.

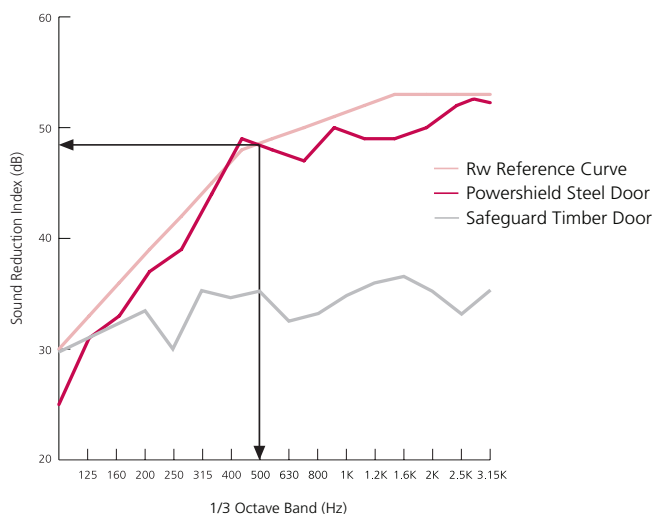
Examples of sound insulation

To maximise sound insulation, it is necessary to minimise vibrations in and through a structure and hence minimise transmission. The degree of sound transmission will depend on a number of factors: mass, stiffness and insulation.

Powershield Acoustic Doors are manufactured from steel providing greater mass than other raw materials. Through extensive research our core materials and combinations have been developed to improve both insulation and stiffness.



Diagram 1: Example of Weighted Sound Reduction (Rw)
Graph for Powershield and Safeguard Doors



Sound Reduction Induction Descriptors

Sound Level dB(A)	Type of noise	Noise Level
0	Threshold of hearing	Inaudible
20	Very rural environment	Extremely quiet
	Empty studio	
30	Quiet home	Distant sounds audible
40	Quiet office	
50	Background conversation	Moderate
60	Radio/television in home	
70	Motorway noise	Moderately loud
80	Background factory noise	Loud
90	Noisy factory	Very loud
105	Discotheque	Deafening
120	Bass drum at 1m	
130	Jet aircraft at 30m	Physical pain

Acoustic Doors Product Selector

Powershield Door	Rw	Frame Type	Performance	Sealing System	Description
Sonata	20 - 25	Single or double rebate	Minimal	Self adhesive frame seals	Speech audible
Encore	up to 37	Double rebate	Good	Self adhesive sealing and threshold	Loud speech audible but not intelligible
Quartet	up to 42	Double rebate	Very Good	Surface mounted frame, seals, drop seal and threshold	Loud speech just detectable
Symphony	up to 45	Double rebate	Excellent	Adjustable surface mounted frame seals	Loud speech barely audible



Setting Standards.
Powershield Cleanroom.

Cleanroom Doors

A Seamless Finish

Powershield Cleanroom Doors are manufactured from high quality steel. Seamless finishes are applied to all leaf edges to ensure that surfaces can be easily cleaned and that there are no areas where dirt may collect or bacteria can grow.

Integral Astragal

Overlapping astragals are required on Cleanroom double leaf doors when fire resistance is necessary or when air pressure differentials between rooms need to be regulated. Powershield Cleanroom Doors feature a unique, fully-integrated astragal, ensuring no seams or fixings on the face of the door leaf.

Vision Panels

Cleanroom Doors feature a wide range of cGMP compliant vision panels. Options include 45° vision kits for single glazing or flush glazing to one or both sides. Vision panels can be supplied with no visible fixings to ensure an easy wipe-clean surface.

Flush Cover Cap

Powershield Cleanroom Doors can be finished with a flush cover cap at fixing positions for a smooth easy wipe-clean surface on frames.

Fully Welded Frame

Powershield Cleanroom Door frames are supplied with a mitred, fully welded and ground-smooth connection between jambs and head.



Superior Strength.
Powershield **Security Doors.**

Security Doors

Maximum Protection

Security Doors will protect people, property and assets within any commercial building. Powershield Security Doors offer maximum protection from theft, vandalism and attack, and are available in a variety of specifications to suit all levels of security risk.

Variety of Finishes

Powershield Security Doors available in a wide range of finishes including primed, powder coated and stainless steel.

Pre-Engineered Security Doorsets

Powershield Security Doors offer a comprehensive range of pre-engineered security doorsets specifically designed for either internal or external use on a variety of building applications. The Security Doors range of doors has been designed to meet the needs of a broad spectrum of security requirements.

Security Classes

Powershield Security Doors offer doors to withstand varying levels of attack including independently certified PAS 24 and LPS 1175 attack test resistance.

ASSA ABLOY is the global leader in door opening solutions, dedicated to satisfying end-user needs for security, safety and convenience

ASSA ABLOY

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