High Wycombe Office:
Chiltern House, Stocking Lane,
High Wycombe,
HP14 4ND,
United Kingdom
T: +44 (0)1494 569750
W: www.warringtonfire.com

Title:

Field of Application for:

Falcon Stredor 44 Doorsets

For **30** Minutes Fire Resistance

Report No:

BMT/CNA/F15159 Revision F

Issue Date:

1st July 2022

Valid Until:

1st July 2027

Job Reference:

WF516032

Prepared for:

Falcon Panel Products Ltd.

Clock House,
Station Approach,
Shepperton,
Middlesex,
TW17 8AN

The version/revision stated on the front of this Field of Application supersedes all previous versions/revisions and must be used to manufacture doorsets from the stated validity date on this front cover. Previous revisions of the Field of Application cannot be used once an updated Field of Application has been issued under a new revision.

11.6.9 Escutcheons

Escutcheons are permitted at the lock location and can be bolt through, screw fixed or glued in position. The escutcheon must not remove any material from the door leaf and may be constructed of metal or plastic.

12 Installation

This section considers the installation of the different types of frames and doorset. This section considers:

- the door frame and architrave installation position relative to the wall
- the fire stopping between the frame and the wall
- the fixing requirement including packers
- the requirements for door edge gaps
- the trimming of door edges

The following table details which wall type the frame can be installed into

Frame type	Wall construction
Frames1, 2, 4, 5	Masonry wall Timber stud partition Steel stud partition

The following sections consider the fire stopping arrangement between door frame and wall.

12.1 Door Frame Installation: Frame 1, 2, 4, 5

12.1.1 Generic systems

The following tables detail permitted fire stopping details

The architrave can be softwood minimum density 450 kg/m^3 or MDF minimum density 600kg/m^3. Architrave to be mechanically fixed in place.

For the generic systems that specific the application of intumescent mastic, the sealant must have been fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1 and shown to provide at least the level of fire reistance required from the doorset.

Guidance for various methods of sealing the frame to structural opening gap is also given in BS 8214: 2016, “Code of practice for fire door assemblies”, which may be referred to where appropriate.

Mineral rock fibre with Architraves

Wall construction	Timber stud / masonry	
Architrave	15mm thick overlapping 15mm each side	
Linear gap joint seal	Mineral rock fibre packed to full depth	
Maximum gap size	20mm	

Mineral rock fibre and mastic with architraves

Wall construction	Steel and Timber stud / masonry	
Architrave	15mm thick overlapping 15mm each side	
Linear gap joint seal	Mineral rock fibre packed to full depth with 10mm intumescent capping both sides	
Maximum gap size	20mm	

Mineral rock fibre and mastic

Wall construction	Steel and Timber stud / masonry	
Architrave	None	
Linear gap joint seal	Mineral wool packed to full depth with 10mm intumescent capping both sides	
Maximum gap size	15mm	

Intumescent mastics with architraves

Wall construction	Timber stud / masonry	
Architrave	15mm thick overlapping 15mm each side	
Linear gap joint seal	Minimum 10 mm depth of intumescent mastic each side	
Maximum gap size	10mm	

12.1.2 Specific fire stopping solutions

12.1.2.1 Sealed Tight Solutions Ltd

Based on test test WF 386959 the following Sealed Tight Solutions Ltd products have been considered appropriate.

ST88 intumescent mastic

Wall construction	Steel and Timber stud / masonry	
Architrave	Optional	
Linear gap joint seal	10mm depth ST88 intumescent mastic either side.	
Maximum gap size	10mm	

Mineral Fibre or ST99 fire foam with ST88 intumescent mastic both sides

Wall construction	Steel and Timber stud / masonry	
Architrave	Optional	
Linear gap joint seal	ST99 full depth foam or mineral wool and 10mm deep ST88 intumescent mastic each side	
Maximum gap size	10 to 20mm	

ST99 Expanding foam with architraves

Wall construction	Steel and Timber stud / masonry	
Architrave	18mm thick overlapping 15mm each side minimum 45mm wide	
Linear gap joint seal	Full depth foam	
Maximum gap size	20mm	

Large gaps with timber/non-combustible subframe

Wall construction	Steel and Timber stud / masonry	
Architrave	18mm thick overlapping 15mm each side minimum 45mm wide l	
Linear gap joint seal	Timber or non-combustible sub frame bedded on wall with ST88 and gap between sub frame and frame filled with ST99	
Maximum gap size	Gap between frame and sub frame 25mm Overall gap 60mm max	

12.1.2.2 Fire and Acoustics Seals Ltd

Based on test test WF 414882 the following Fire and Acoustic Seals Ltd have been considered appropriate.

Expanding foam and mastics – Wall depth 100mm min

Wall construction	Steel and Timber stud / masonry	
Architrave	Optional	
Linear gap joint seal	Successfully tested full depth Fire and Acoustic Seals Ltd foam and 10mm deep intumescent mastic each side	
Maximum gap size	25mm	

Expanding foam with architraves – Wall depth 70mm min

Wall construction	Steel and Timber stud / masonry	
Architrave	18mm thick overlapping 15mm each side minimum 45mm wide	
Linear gap joint seal	Successfully tested full depth Fire and Acoustic Seals foam and 10mm deep intumescent mastic each side	
Maximum gap size	25mm	

12.2 Packers

For frames 1 to 5, packers between the frame and the structural opening can be timber of equal density to the frame, or plywood, or plastic packers if fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1.

Plastic packers should be cut short and capped with intumescent mastic unless test evidence demonstrates that mastic capping is not required.

12.3 Wall Types

The frame needs to be fixed back to a supporting construction which will remain in place for the duration of the fire resistance period. The following aspect of the different supporting constructions need to be considered.

12.3.1 Masonry, Concrete & Solid Blockwork

These are considered as rigid constructions and are solid throughout the depth of the wall and have inherent fire resistance. These walls are denoted as rigid constructions in BSEN 1364 Part 1 as they deflect very little during a fire test. Due to the solid nature of the wall firestopping as detailed above will be adequate. Highly perforated blockwork is not covered by this category and specific test evidence must be referenced to ensure adequate support during the fire exposure period.

12.3.2 Steel Stud Partitions

These are considered as flexible constructions and incorporate large voids in their construction. These walls deflect during a fire test. Specific evidence is required to ensure the stud supporting the door frame is stabilised to reduce deflection during the fire test and the aperture is adequately lined to prevent gases getting into the void.

12.3.3 Timber Stud Partitions

These are not categorised but tend not to distort significantly during a fire test. A timber stud does not need to be stabilised during the fire test and the aperture will only need to be lined if the timber stud is not fully protecting the void in the partition.

12.3.4 Bespoke Walls & Partitions

These will require specific test evidence.

12.4 Onsite Leaf Size Adjustment

The door leaves should not be modified on site so only limited actions can be taken, see table below.

Leaf Size Adjustment Specification	
Element	Reduction
Lipping	The dimensions stated in section 5.2 may be reduced by 1mm for fitting purposes but cannot go below the minimum.

12.5 Door Gaps

For fire resistance performance, door edge gaps and alignment tolerances must fall within the range shown in the following table.

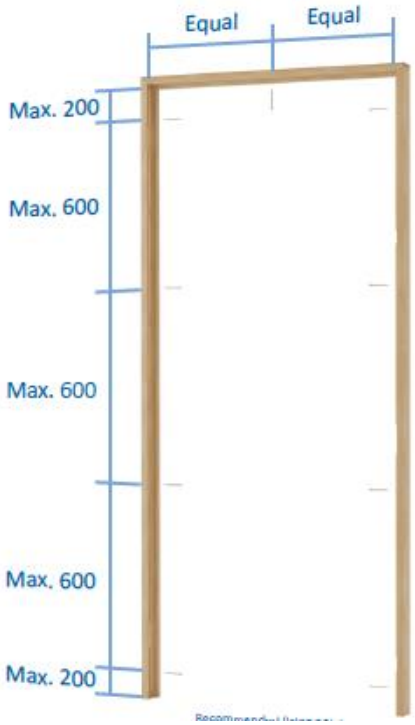
Door Edge Gaps & Alignment Tolerance Specification	
Location	Dimensions
Door edge gaps	A minimum of 2mm and a maximum of 4mm
Alignment tolerances	Leaves must not be proud of each other or from the door frame by more than 1mm
Threshold	10mm between bottom of leaf and top of floor covering

12.6 Structural Opening

The supporting construction must provide the required level of fire resistance designated for the doorset design and be a suitable medium to permit adequate fixity.

12.7 Fixings

The following drawings show the location of the fixings and the minimum depth of 40mm into the wall. A plastic packer is shown and proprietary plastic packers have been successfully tested.



Frame fixing locations

Frame fixing depth

The fixings must be of the appropriate type for the supporting construction.

13 Insulation

Insulation performance may be claimed for a doorset to this design meeting the following.

Insulation Performance Specification	
Type	Details
Partially insulating	Doorsets incorporating up to 20% of non-insulating glazing
Fully insulating	Unglazed doorsets and glazed doorsets with fully insulated glass (see section 6 for insulating glass types)