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**Title**

Field of Application for:  
Falcon Strebord® 54 Doorsets

For 60 Minutes Fire Resistance

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**Report No.:**

Chilt/A02067 Revision N

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**Issue Date:**

31<sup>st</sup> January 2025

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**Valid Until:**

31<sup>st</sup> January 2030

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**Job Reference:**

WF547265

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**Prepared for:**

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## 11 Installation

### 11.1 General

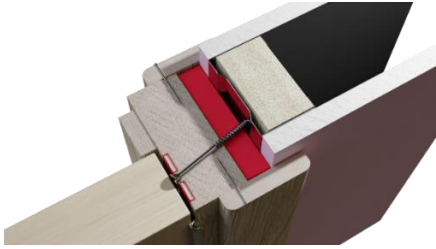


This section considers the installation of doorsets. This section considers:

- 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

### 11.2 Door Frame Installation

#### **Frame options:** 1 & 2

The following figures indicate the acceptable door frame installations. Please note that the firestopping element is provided in the below 3D models as a generic red coloured seal. For further clarification of the approved firestopping systems see section 11.3.

Permitted Installations	
	<p>Instances where the door frame and the wall of the same depth such that architraves are fitted flush to both faces. Note that the minimum door frame section size (width and depth) must be as per the requirements noted in this report – see door frame section.</p> <p>Architraves requirements are documented in the firestopping section of this report.</p>
	<p>Instances where the wall thickness is greater than the door frame depth.</p> <p>In this scenario timber architraves of minimum 18mm thick may be fitted to both faces, fitted with a minimum 15mm overlap to the door gap, other than when the architrave abuts the wall.</p>
	<p>Split frames are permitted providing that both frame sections are secured to the wall in accordance with section 11.5. Furthermore, the main frame section (from which the door is hung) must be constructed to at least the minimum door frame section size (width and depth) as per the requirements noted in this report – see door frame section. The extension piece must be constructed using the same timber species as the main frame section.</p>

#### **Note:**

The drawings of the door frame installation and fixing positions are provided as a generalised illustration only; actual installation must be as per the text within this document specifies.

### **Frame option: 3**

Refer to section 11.5.3 for Wall Types, Fixity and Firestopping of this frame type.


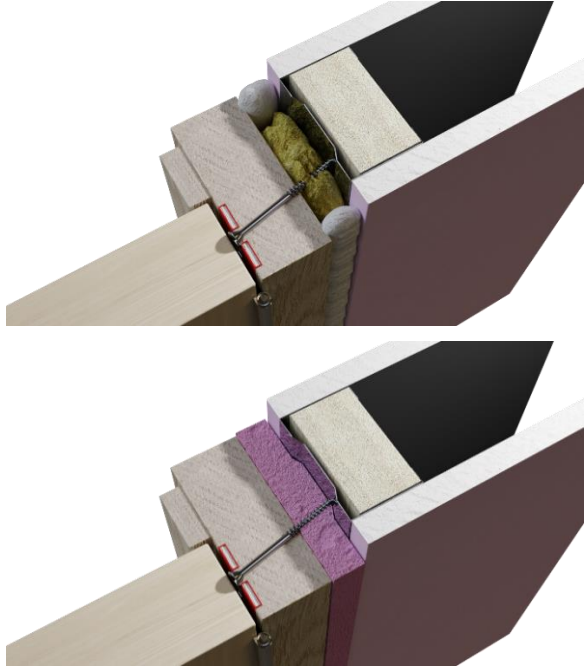
### **Frame option: 4**

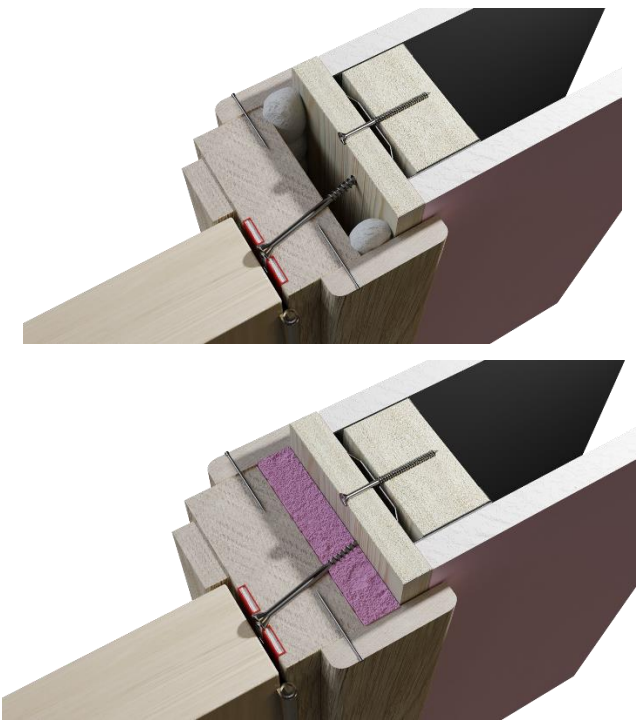
Refer to section 11.5.3 for Wall Types, Fixity and Firestopping of this frame type.

## **11.3 Firestopping**

### **Frame options: 1 & 2**

The firestopping requirements between the back of frame and wall are dependent on the gap size between the substrates. The table below provides the requirements based upon the gaps size. Please note that in the 3D depictions noted below show the application where a door frame is of the same depth as the overall wall thickness.

Gap (mm)	Requirement	3D model depiction
0 – 2	In practice, unlikely to occur, but if present, must be sealed with architraves, as below, fitted over a bead of acrylic intumescent sealant, tested as below.	
3 – 10	Gap must be sealed on both sides with a 10mm depth of acrylic intumescent mastic, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1.  Timber architraves of a minimum 18mm thick may be fitted to both faces, fitted with a minimum 15mm overlap to the door gap.	
10 – 20	Gap must be tightly packed with mineral fibre capped on both sides with a 10mm depth of acrylic intumescent mastic, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1 or full depth expanding PU foam, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1.  Timber architraves of a minimum 18mm thick may be fitted to both faces, fitted with a minimum 15mm overlap to the door gap.	

Gap (mm)	Requirement	3D model depiction
Over 20	<p>This would be considered a poor preparation of the structural opening. A timber based or non-combustible subframe up to 50mm thick can be inserted and fixed to the wall bedded on intumescent mastic, the gap between door frame and subframe filled as follows:</p> <p>Gaps 5 to 10mm filled on both sides with 10mm depth of acrylic intumescent mastic or full depth expanding PU foam, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1.</p> <p>Timber architraves of a minimum 18mm thick may be fitted to both faces, fitted with a minimum 15mm overlap to the door gap.</p>	

### **Frame option: 3**

Refer to section 11.5.3 for Wall Types, Fixity and Firestopping of this frame type.

### **Frame option: 4**

Refer to section 11.5.3 for Wall Types, Fixity and Firestopping of this frame type.

## **11.4 Packers**

Packers 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.

## 11.5 Wall Types, Structural Opening & Fixity

### 11.5.1 Wall Types

The following wall types are approved for this doorset design:

For Frame Types 1 & 2: (refer also to section 11.5.3.1)

- a) Plasterboard clad timber stud partitions
- b) Plasterboard clad steel stud partitions including timber lining
- c) Masonry constructions

For Frame Types 3 (refer also to section 11.5.3.2)

- a) Plasterboard clad timber stud partitions
- b) Plasterboard clad steel stud partitions including timber lining
- c) Masonry constructions

For Frame Types 4 (refer also to section 11.5.3.3)

- a) Plasterboard clad timber stud partitions

Wall types a & b above must have supporting fire resistance test evidence which demonstrates that it is capable of staying in place and intact for a minimum of 60 minutes supporting a doorset design.

Wall type c above must be determined to be able to provide at least the same level of fire resistance of the doorset design.

All wall types detailed above shall provide a suitable medium to permit adequate fixity, it is anticipated that for:

- Plasterboard clad timber stud partitions, the timber stud will be of sufficient dimensions such that the fixing for the door frame penetrates into solid timber.
- Plasterboard clad steel stud partitions will include a timber lining of sufficient dimensions such that the fixing for the door frame penetrates into solid timber.
- Masonry constructions are anticipated to be constructed of a solid block or brickwork to receive the fixings.

Note: Other tested solutions to achieve adequate fixity may be detailed within the above noted supporting fire resistance test evidence.

### 11.5.2 Structural Opening

For all wall types the structural opening shall be square, plumb and provide a flat surface for installation of the doorset.

For flexible wall types such as steel and timber stud partitions the structural opening must be prepared in line with the test evidence provided by the wall manufacturer.

### 11.5.3 Fixity

#### 11.5.3.1 Frames 1 & 2

In all instances the fixing position must be such that it provides adequate restraint to the element of construction throughout the exposure to fire. This may therefore sometimes necessitate a twin line of fixings.

For single leaf doorset without sidepanels, the frame jambs only are to be fixed to the supporting construction using steel fixings at 600mm maximum centres and maximum of 150mm from corner. The fixings must be of the appropriate type for the supporting construction and must penetrate to a minimum depth of 50mm, in the case of timber studs or steel studs with timber inserts, the fixing is permitted to extend beyond the rear face of the timber stud or timber insert. It is not necessary to fix the frame head, although packers must be inserted.

For all other configurations of doorset, the upper horizontal framing section abutting the structural opening must also be secured to the wall using steel fixings at 600mm maximum centres and maximum of 150mm from corner. The fixings must be of the appropriate type for the supporting construction and must penetrate to a minimum depth of 50mm, in the case of timber studs or steel studs with timber inserts, the fixing is permitted to extend beyond the rear face of the timber stud or timber insert.

#### 11.5.3.2 Frame Type 3 - Simplis Soleco Visible frame

Fixing positions for the Simplis Soleco Visible frame are provided via pre-positioned welded tabs. A minimum of three are required per jamb.

The fixings must be of the appropriate type for the supporting construction and must penetrate to a minimum depth of 40mm.

Details of the firestopping requirements are shown in the diagram below:

