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**Title**

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Field of Application for:  
Uninsulating Metal Faced FlipFix  
access panel designs.

For 120 minutes Fire Resistance

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**Report No.:**

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WF540274

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**Issue Date:**

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**Prepared for:**

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## 1 Foreword

This Field of Application report has been commissioned by Panel Technologies Ltd and relates to the fire resistance of 120 minute integrity fire resisting horizontal and vertical access panel designs.

The report is for national application and has been written in accordance with the general principles outlined in BS EN 15725.

This Field of Application (scope) uses established empirical methods of extrapolation and experience of fire testing similar doorsets, in order to extend the scope of application by determining the limits for the designs based on the tested constructions and performances obtained. The scope is an evaluation of the potential fire resistance performance if the variations specified herein were to be tested in accordance with BSEN 1634-1: 2014 +A1: 2018 (when fitted vertically) or BS EN 1364-2:2018 (when fitted horizontally as part of a proven suspended ceiling system).

This scope document cannot be used as supporting documentation for either a UKCA or CE marking application, nor can the conclusion be used to establish a formal classification against EN13501-2.

This Field of Application has been written using appropriate test evidence generated at UKAS accredited laboratories, to the relevant test standard. The supporting test evidence has been deemed appropriate to support the manufacturers stated access panel design and is summarised in section 3.

The scope presented in this report relates to the behaviour of the proposed door design variations under the particular conditions of the test; they are not intended to be the sole criterion for considering the potential fire hazard of the access panel in use.

This Field of Application has been prepared and checked by product assessors with the necessary competence, who subscribe to the principles outlined in the Passive Fire Protection Forum (PFPF) 'Guide to Undertaking Technical Assessments of the Fire Performance of Construction Products Based on Fire Test Evidence'. The aim of the PFPF guidelines is to give confidence to end-users that assessments that exist in the UK are of a satisfactory standard to be used for building control and other purposes.

The drawings provided in this report are for guidance and illustrative purposes only. Please note that the written scope of application takes precedence.

## 2 Proposal

It is proposed to consider the fire resistance performance of the metal faced FlipFix access panel designs, for 120 minutes fire resistance integrity performance, if the access panel designs were to be tested:

- In the vertical to the requirements of EN 1634-1:2014 +A1: 2018, *Fire resistance test for door and shutter assemblies and openable windows*.
- As part of a proven suspended ceiling system (see section 9.3.1) to the requirements of BS EN 1364-2:2018, *Fire resistance tests for non-loadbearing elements. Ceilings*.

The field of application defined in this report is based on the fire resistance test evidence for the access panel design, which is summarised in section 3. Analysis of specific construction details that require assessment are given within this report against the relevant element of construction, as appropriate.

Whilst specific items are included within this Field of Application report that may be used to provide additional performance characteristics (such as acoustic or smoke control for example), it is beyond the remit of this Field of Application report to provide scope for performance characteristics other than fire resistance integrity performance. Any other performance requirement for the door designs contained herein is to be subject to a separate analysis.

### 2.1 Assumptions

- It is assumed that unless otherwise documented in the field of application sections of this report, the steel access panel subject to this report will be constructed in accordance with the test evidence referred to herein.
- Where steel is referred to within this document it is assumed that the steel element is made from a continuous piece, unless specifically detailed otherwise.
- All dimensions detailed herein may be varied by  $\pm 2\%$  except where minimum, maximum or a range of dimensions are given.

### 3 Test Data

The test evidence summarised below has been generated to support the fire resistance performance of the access panel designs that are the subject of this field of application. The summary details are considered to be the key aspects of the design tested. These test summaries are not intended to be a definitive guide to constructing an access panel. The details for the construction of an access panel must be taken from other sections within this Field of Application.

#### Note:

- Dimensions are in mm unless otherwise stated.
- Abbreviations: (h) = height; (w) = width; (t) = thickness; (d) = deep; (l) = long.

The test evidence has been generated across in latched single leaf configurations in both horizontal and vertical orientations.

Some of the test evidence used in the evaluation is over 5 years old. In accordance with industry guidance, the evidence has been reviewed to consider its suitability. Warringtonfire are satisfied that there have been no significant revisions to the relevant test standards which would render the evidence irrelevant.

#### 3.1 Primary Test Evidence

The following summaries are provided to give the key details relevant to the tested specimen. Throughout this assessment report, relevant sections will reference the tests where they have been used to provide the scope of application.

##### 3.1.1 Test Report WF434360 Rev A – Specimens A and C

<b>Date of Test:</b>	12.NOV.2020		
<b>Identification of Test Body:</b>	Warringtonfire Testing and Certification Ltd. UKAS No. 1762		
<b>Sponsor:</b>	Panel Technologies Ltd		
<b>Tested Product:</b>	<p>Specimen A:  Latched, Single Acting, Single Leaf, Uninsulated Steel access panel.  Leaf size 597mm high x 595mm wide.  Fixed with FlipFix to partition element.</p> <p>Specimen C:  Latched, Single Acting, Single Leaf, Uninsulated Steel access panel.  Leaf size 295mm high x 295mm wide.  Fixed with FlipFix to partition element.</p>		
<b>Tested Orientation:</b>	A and C: Opening in towards heating condition		
<b>Sampling information:</b>	None stated in test report		
<b>Test Standard:</b>	BSEN 1634-1: 2014 +A1: 2018		
<b>Performance:</b>	<b>Integrity:</b>	Specimen A 122 minutes	Specimen C 126 minutes
	<b>Insulation:</b>	Not measured	Not measured
<b>Reason for Use</b>	Primary Test evidence for the vertical access panel design		

### 3.1.2 Test Report WF403834 – Specimens B and C

<b>Date of Test:</b>	11.OCT.2018		
<b>Identification of Test Body:</b>	Warringtonfire Testing and Certification Ltd.		
<b>Sponsor:</b>	Panel Technologies Ltd		
<b>Tested Product:</b>	<p>Specimen B:  Latched, Single Acting, Single Leaf, Uninsulated Steel access panel.  Overall Frame Dimensions 350mm x 350mm.  Fixed with FlipFix to ceiling element.</p> <p>Specimen C:  Latched, Single Acting, Single Leaf, Uninsulated Steel access panel.  Overall Frame Dimensions 640mm x 640mm.  Fixed with FlipFix to ceiling element.</p>		
<b>Tested Orientation:</b>	B and C: Opening in towards heating condition		
<b>Sampling information:</b>	None stated in test report		
<b>Test Standard:</b>	Using the principles of BS EN 1634-1:2014, horizontally.		
<b>Performance:</b>	<b>Integrity:</b> Sustained Flaming Cotton Pad Gap Gauge <b>Insulation:</b>	Specimen B 127 minutes 32 minutes 124 minutes Not measured	Specimen C 127 minutes 34 minutes 120 minutes Not measured
<b>Reason for Use</b>	Primary Test evidence for the horizontal access panel design		
<b>Failure Mode:</b>	Initial Failure: Cotton Pad Test at Specimen B at 32 minutes, Cotton Pad Test at Specimen C at 34 minutes. Further Failure: 6mm Gap Gauge at Specimen C at 120 minutes, 6mm Gap Gauge at Specimen B at 124 minutes.		

## 4 Technical Specification

### 4.1 General

The technical specification for the proposed access panel assembly is given in the following sections and is based on the test evidence for the door designs, summarised in section 3.

### 4.2 Intended Use

The intended use of the proposed door assembly is summarised below:

An access panel design including any frame, door leaf or leaves which is provided to give a fire resisting capability when used for the closing of permanent openings in fire resisting separating elements, which together with the building hardware and any seals (whether provided for the purpose of fire resistance or smoke control or for other purposes such as draught or acoustics) form the assembly.

### 4.3 Door Leaf

There is one type of leaf design, referred to as Leaf 1 in subsequent sections, which can include:

1. Empty Core
2. Specific hardware
3. Decorative finishes
4. Alternative galvanisation processes

Specific sections within this assessment must be referred to for design limitations and construction requirements.

Section 5 gives the description of leaf type in terms of composition and density etc.

### 4.4 Door Frames

There is one type of frame design, referred to as Frame 1 in subsequent sections. For further information on the specification and construction of the door frames see section 6.

Specific sections within this assessment must be referred to for design limitations and construction requirements, where applicable.

## 4.5 Access Panel Orientation, Configuration & Leaf Sizes

### 4.5.1 General


The evaluation of the leaf size and access panel configuration is based on the tests listed in Section 3 and takes into account:

1. The margin of over performance above 120 minutes integrity for the design
2. The characteristics exhibited during test and
3. The access panel configuration tested.

Access panels with reduced length and width dimensions from those tested are deemed to be less onerous, within limitations due to the steel construction of the design. Therefore, steel access panels of the assessed designs, with dimensions as shown in section 4.5.4, are covered and may be manufactured.

## 4.5.2 Configuration

The table below shows the permitted configuration for the access panel design, with the abbreviation and full description of the configuration.

Doorset Configurations		
Depiction	Abbreviation	Description
	LSASD	Latched Single Acting Single Door Leaf Access Panel

## 4.5.3 Orientation

The fire resistance tests for this design were conducted with the access panel fitted in both horizontal and vertical orientations, such that the leaf opened towards the fire conditions.

For access panels installed in a horizontal orientation, fire resistance may only be claimed for fire risk from below with the access panels pivoted such that they open towards the fire risk side.

For access panels installed in a vertical orientation, fire resistance may only be claimed for fire risk with the access panels pivoted such that they open towards the fire risk side.

## 4.5.4 Single Leaf Sizes

The following sections detail the permitted leaf sizes.

A table of essential hardware is given in section 8.3, as a minimum requirement for the access panel design described.

### 4.5.4.1 Leaf 1 – 120 Minutes Integrity Performance – Vertical orientation

The permitted leaf sizes are based on 122 minutes integrity fire resistance performance obtained in the successfully tested specimen in test report reference WF434360 Rev A Specimen A, where a leaf size of 597mm x 595mm was tested. Using the methodology adopted within BS EN 15269-2: 2012 (Annex A section A.2.1 to A.2.4), leaf size reduction and increase from that tested are permitted as follows:

Unlimited leaf size reduction is permitted (in accordance with Annex B, Table B.1 of BS EN 1634-1: 2014+A1: 2018) using the direct field.

Based on the tested specimen achieving Category A overrun leaf size increase is not permitted (in accordance with Annex B, Table B.1 of BS EN 1634-1: 2014+A1: 2018) using the direct field.

Leaf size may be varied within the following range as specified in the table below, for square or rectangular access panels.

Leaf Dimensions (mm)	Height (mm)	Width (mm)
Minimum	No Limit <sup>1</sup>	No Limit <sup>1</sup>
Maximum	597	595

### Note:

- 1) The fitting of hardware with required positioning and complying with leaf and frame designs will result in a practical minimum leaf dimension.

#### 4.5.4.2 Leaf 1 – 120 Minutes Integrity Performance – Horizontal orientation

The permitted leaf sizes are based on 120 minutes integrity fire resistance performance obtained in the successful tested specimen in test report reference WF403834 Specimen C, where a leaf size of nominally 605mm x 605mm was tested.

It is assessed, following the same methodology as discussed in section 4.5.4.1, that the leaf size may be varied within the following range as specified in the table below, for square or rectangular access panels.

Leaf Dimensions (mm)	Height (mm)	Width (mm)
Minimum	No Limit <sup>1</sup>	No Limit <sup>1</sup>
Maximum	605	605

**Note:**

- 1) The fitting of hardware with required positioning and complying with leaf and frame designs will result in a practical minimum leaf dimension.

## 5 General Description of Leaf Construction

### 5.1 Tested Leaf Construction

The door leaf design detailed below is approved by this assessment.

Fabrication of the access panel leaf must be as tested in WF434360 Rev A Specimens A and C and WF403834 Specimens B and C. The table in the following section summarises the main components of the tested access panel leaf design. For full construction details, reference should be made to the full test reports which are summarised in section 3.

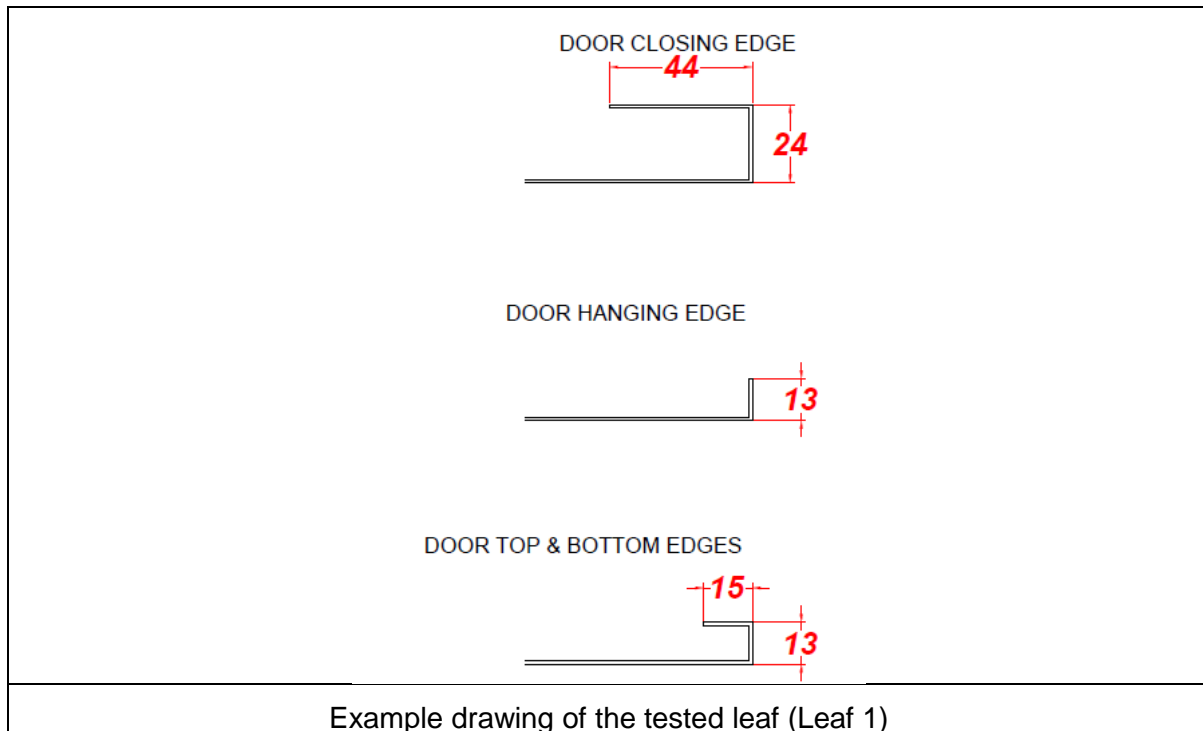
The tested construction is detailed in section 5.1.1. See section 5.2 for assessed variations to the tested leaf construction.

#### 5.1.1 Leaf Type 1 – For 120 minute integrity performance

The basic tested construction of this leaf design is as tested in test reference WF434360 Rev A Specimens A and C and WF403834 Specimens B and C and comprises the following:

Element	Product or Material	Dimensions (mm)
Facing/Skin	Zintec powder coated steel tray profile Leaf welded at the corners.	0.9 thick facing x 13 leaf thickness at all edges except for the lock edge. Lock edge leaf thickness is 24. Design includes an upstand to the hanging edge, 44 wide return on the closing edge and 15 wide return on the other edges. (see section 5.2 for assessed maximum & minimum thicknesses)
Core/ Facing	None	-
Leaf Stiffeners/ Lock Channel	None	-

The figure below shows an example detail of Leaf 1 with Frame 1. For full construction details, reference should be made to the full test reports which are summarised in section 3.



## 5.2 Variations to Tested Leaf Construction

### 5.2.1 Leaf Thickness

Increase in the tested leaf thickness is not permitted, for high leaf distortion (Using the methodology adopted within in section A.2.5 of BS EN 15269-2: 2012).

**Note:** A high leaf distortion (at 120 minutes) has been assumed (worst case) in this instance due to an incomplete distortion reading given in the referenced test report.

A reduction by up to 10% in the tested leaf thickness is permitted (Using the methodology adopted within section A.2.6 of BS EN 15269-2: 2012).

The permitted leaf thickness is therefore, as follows:

Maximum leaf thickness (without finishes) = **13mm**

Minimum leaf thickness (without finishes) = **11.7mm**

Variation to the leaf thickness at the lock edge is not permitted.

### 5.2.2 Leaf Facing / Skin

#### 5.2.2.1 Leaf Facing/Skin Thickness

Whilst the testing conducted on this design evaluated nominally **0.9mm** thick Zintec coated mild steel facing/skin, it is considered (using the methodology adopted within section A.3.21 of BS EN 15269-2: 2012) that a maximum 10% increase in the thickness of the steel sheet is permitted.

It is the opinion of Warringtonfire that the thickness may not be reduced any further than the tested thickness.

The permitted thickness of leaf facing/skin is therefore, as follows:

Maximum facing thickness (without finishes) = **0.99mm**.

Minimum facing/skin thickness (without finishes) = **0.9mm**. (as tested)

### 5.2.2.2 Alternative Leaf Facing/Skin Material

Alternative leaf facing/skin material is not permitted, for high leaf distortion (Using the methodology adopted within section A.3.23 of BS EN 15269-2: 2012). Leaf facing/skin material must remain as tested.

**Note:** A high leaf distortion (120 minutes) has been assumed (worst case) in this instance due to an incomplete distortion reading given in the referenced test report.

### 5.2.3 Decorative and Protective Finishes

The following additional finishes are permitted for the leaf of this access panel design since they would either degrade rapidly or remain inert under test conditions without significant effect to the fire resistance performance of the access panel.

Facing Material	Maximum Permitted Thickness (mm)
Paint	0.2
Vitreous Enamel	1.0
Stove Enamelling	0.1
Epoxy Powder Coating	0.4

### 5.2.4 Galvanisation Process

It is the opinion of Warringtonfire, that the effect the use of a particular galvanisation process will have on the access panel design tested, will be insignificant. Therefore, any of the galvanisation processes listed below are acceptable for the leaf:

- Hot dip
- Electro-galvanisation
- Aluzinc.

## 6 Access Panel Frame Construction

The frames for the different Specimens tested in the test evidence cited in Section 3 were of the same design and materials except for some variations in the dimensions of the integral architrave and integral stop.

The fabrication of the access panel frame must be as tested in WF434360 Rev A Specimens A and C, fabricated from Zintec coated mild steel sheet. For assessed variations from the tested design given in section 6.1.1, see section 6.2.

The following section details the tested frame profile, for full construction detail reference should be made to the full test reports summarised in section 3.

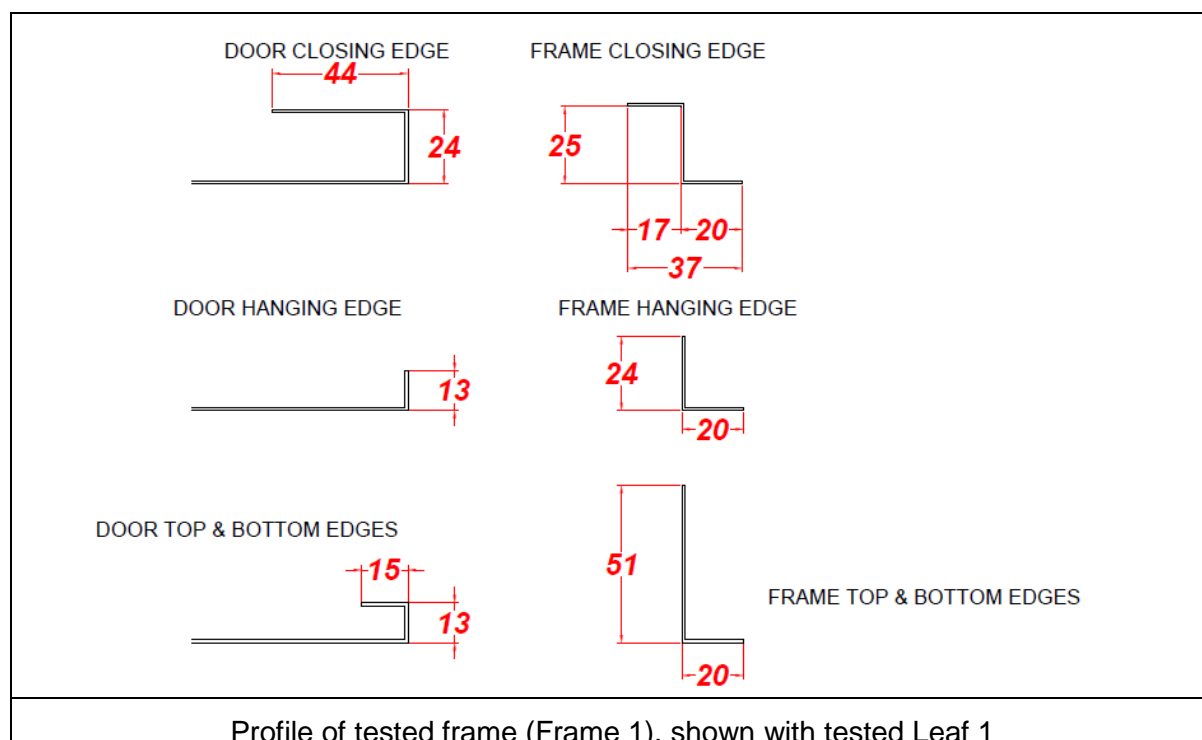
### 6.1.1 Frame 1 – Minimum 120 Minute Fire Resistance Performance

This is a four-sided single rebate frame construction based on the referenced test evidence, WF434360 Rev A Specimens A and C.

Element	Material or Product	Dimensions (mm)
Frame Hanging side (or hanging Jamb)	Zintec coated profiled steel section	24 deep x 20 wide integral architrave x 0.9 thick sheet material
Frame Locking side (or closing side Jamb)	Zintec coated profiled steel section, featuring an integral stop	25 deep x 20 wide integral architrave plus integral stop x 0.9 thick sheet material
Other frame sides (or frame top and bottom)	Zintec coated profiled steel section	51 deep x 20 wide integral architrave x 0.9 thick sheet material
Stop	Integral	25 deep x 17 wide x 0.9 thick

**Note:** See section 6.2 for assessed variations to maximum & minimum frame material thicknesses and assessed integral architrave range

The figure below shows example detail of the tested frame profile.



## 6.2 Variations to Tested Frame

Frame cross section dimensions must remain as tested in WF434360 Rev A Specimens A and C, except for the variations which follow.

### 6.2.1 Frame material thickness

The testing conducted on this design evaluated a nominally **0.9mm** thick Zintec coated mild steel frame, it is considered (clause 13.2.2.2 of BS EN 1634-1: 2014+A1: 2018) that a maximum 25% increase in the thickness of the steel sheet is permitted.

It is the opinion of Warringtonfire that the thickness may not be reduced any further than the tested thickness.

The permitted thickness of frame material is therefore, as follows:

Maximum frame material thickness (without finishes) = **1.1mm**.

Minimum frame material thickness (without finishes) = **0.9mm** (as tested)

### 6.2.2 Integral architrave

The architrave dimension of 20mm has been tested in the test evidence cited in Section 3 for both tested vertically oriented access panels and the larger of the tested horizontally oriented access panels.

Test reference WF403834 Specimen B, the smaller of the tested horizontally oriented access panels included an architrave of 25mm.

Based on the test evidence, it is assessed that the integral architrave width may be varied as follows:

Minimum architrave width = **20mm**

Maximum architrave width = **25mm**

This must be achieved by increasing the integral architrave, as the stop width must remain at 17mm as tested in WF434360 Rev A Specimens A and C.

### 6.2.3 Depth of Frame

The frame edges other than the closing and hanging (i.e. frame top and bottom) have been tested with 51mm depth in the test evidence cited in Section 3 for both tested vertically oriented access panels and the larger of the tested horizontally oriented access panels.

Test reference WF403834 Specimen B, the smaller of the tested horizontally oriented access panels included the depth of "other" frame sides with 54mm depth.

This part of the frame provides for the FlipFix fixings.

Based on the test evidence and taking into consideration the methodology in BS EN 15269-2: 2012 (sections B.2.1 and B.2.2), it is assessed that the frame edges other than the closing and hanging edge (i.e. frame top and bottom) may have a depth varied as follows:

Minimum depth of frame edges other than the closing and hanging edge = **51mm**

Maximum depth of frame edges other than the closing and hanging edge = **54mm**

For any individual access panel, the two frame edges other than the closing and hanging edge (i.e. frame top and bottom) must both have the same depth.

#### **6.2.4 Galvanisation Process**

It is the opinion of Warringtonfire, that the effect the use of a particular galvanisation process will have on the access panel design tested, will be insignificant. Therefore, any of the galvanisation processes listed below are acceptable for the frame:

- Hot dip
- Electro-galvanisation
- Aluzinc.

#### **6.3 Frame Joint**

The head to jambs and threshold to jambs jointing must be a welded type construction as tested in WF434360 Rev A Specimens A and C and WF403834 Specimens B and C . Joints must be tight and secure with no gaps. For further details reference should be made to the full test report summarised in section 3.

### **7 Intumescent & Sealing Materials**

No intumescent materials were tested for this design at the leaf edge or frame reveal, and they are therefore not required or permitted.

## 8 Hardware

### 8.1 General

The following sections detail the permitted scope and constraints for fitting hardware to the access panel design and consider what tested items of essential hardware can be used on the access panel range.

Each section will consider the named item of hardware and detail if there are any limitations (for example associated with leaf size or installation orientation).

Hardware items should generally be fitted in accordance with the manufacturer's instructions. However, the parameters and requirements of this assessment always take precedence.

### 8.2 Intumescent to Hardware

Intumescent materials were not used to protect hardware during the tests and are not required or permitted.

### 8.3 Essential Hardware

The following table details the essential hardware that are referenced in this assessment.

Essential Hardware
<ul style="list-style-type: none"><li>• Lock</li><li>• Pivots</li><li>• Door Retaining bolts</li><li>• Fire Door Keep Locked Shut sign</li></ul>

**Note:**

1. Closer – the access panels do not require self-closing devices since they must be kept locked shut when not in use. A metal 'Fire Door Keep Locked Shut' sign must therefore be fixed to the access panel face.
2. Lock – all leaves must be fitted with the lock system as tested or assessed, which must be engaged when the access panel is in the closed position.
3. No other hardware is approved for use with this steel access panel design.

## 8.4 Latch/Lock - Single Point Engagement

The permitted options for a latch/lock are as detailed below in the following sections. No other options for a latch/lock are permitted.

The latch/lock must be engaged when the access panel is in the closed position.


### 8.4.1 Budget latch

This item, as tested in all test references in section 3, is suitable in the following applications only:

**Leaf:** 1

**Frame:** 1

The table below details the tested latch/lock that is approved.

Element	Product Information
Latch/Lock	<p>Budget type latch (85mm x 22mm) central to the closing edge, screwed in position, engaging over the frame profile.</p>  <p>The plastic grommet cover to the fire risk side is optional as this would be expected to melt or burn away in the early stages of the test (no integrity failures have been seen in the tested arrangements related to this component).</p>

The latch/lock must be engaged when the access panel is in the closed position.

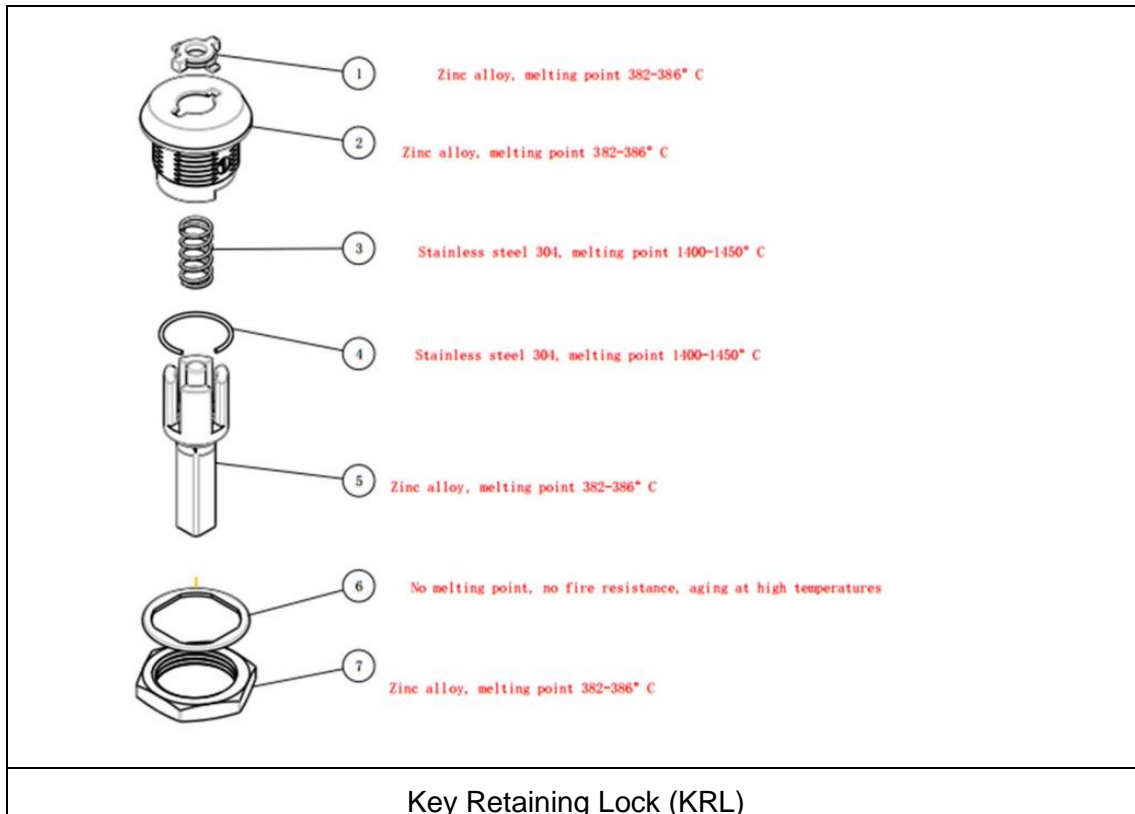
## 8.4.2 Budget latch lock inserts

The budget latch was tested in all test references in section 3 with a standard lock mechanism as detailed in section 8.4.1.

The following alternate lock inserts for use with the budget latch have been assessed.

### 8.4.2.1 Key Retaining Lock (KRL) insert for budget latch

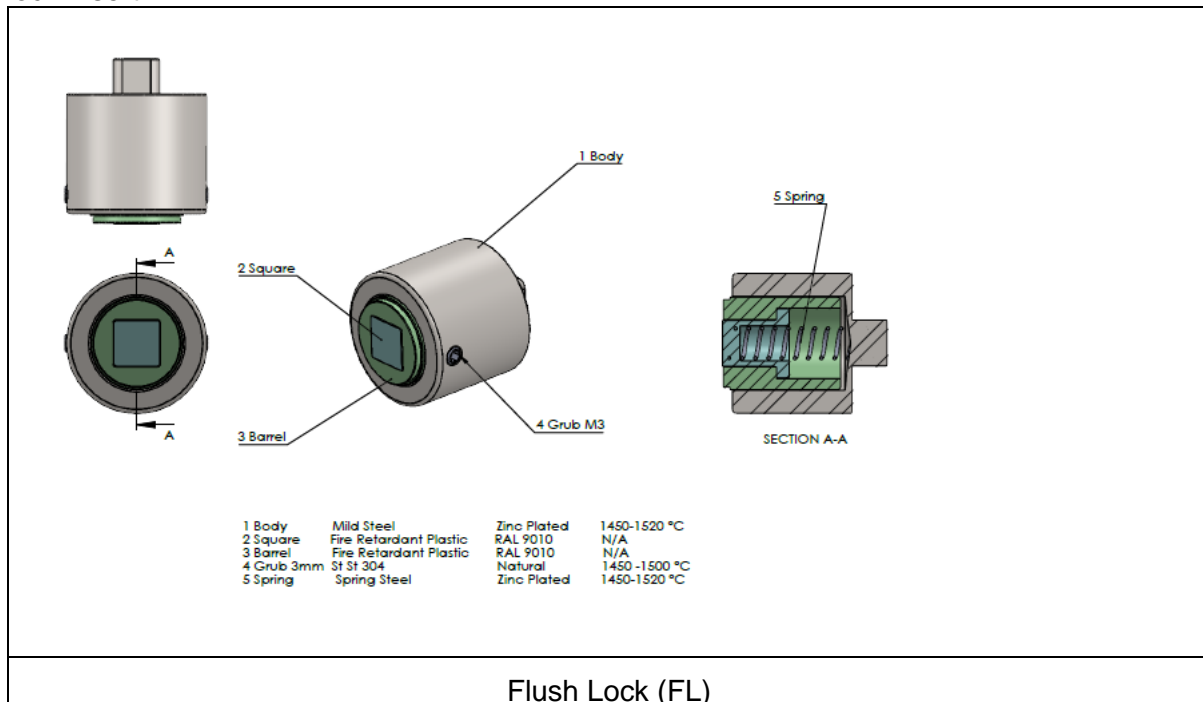
The below illustration, supplied by Panel Technologies Ltd, details the components of the KRL lock insert.



The KRL is proposed to be fitted to the fire risk side of the budget latch and has been declared to be constructed from metallic components. The positioning is instead of the plastic grommet cover with the shaft engaging into the budget latch. The zinc alloy of the KRL, with a stated melting point of 382 to 386°C, would be expected to remain in position for longer than the plastic grommet cover, therefore plugging the hole for a longer period of time. Should the KRL melt and fall away during the test, the engagement of the budget latch with the frame would not be expected to change. It is the opinion of Warringtonfire that this modification is acceptable, when fitted to the fire risk side of the budget latch.

### 8.4.2.2 Flush Lock (FL) insert for budget latch

The below illustration, supplied by Panel Technologies Ltd, details the components of the FL lock insert.



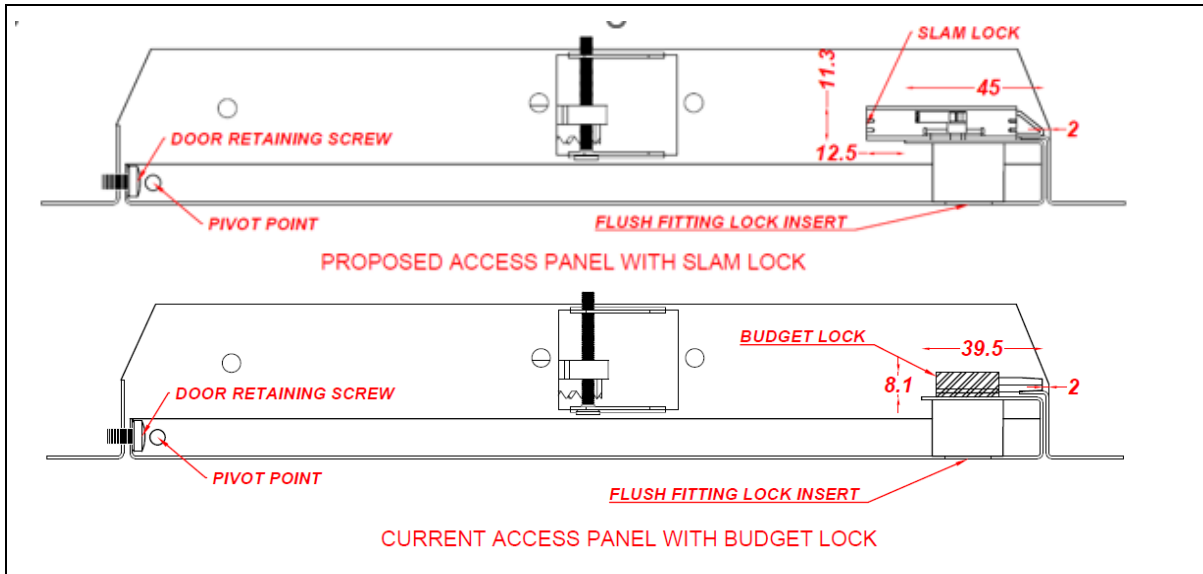
The FL is proposed to be fitted to the fire risk side of the budget latch and has been declared to be constructed from metallic and plastic components. The positioning is instead of the plastic grommet cover with the shaft engaging into the budget latch.

The steel parts of the FL have stated melting points in excess of 1450°C. The specified heating regime of EN 1634-1 test method reaches 1049°C at 120 minutes. The steel parts of the FL would be expected to remain in position for the duration of the test and the engagement of the budget latch with the frame would not be expected to change.

The performance of the plastic square and barrel components have not been declared. On the basis that the plastic components are to the fire risk side, any melting or burning would be expected to be isolated from the non-fire risk side by the mild steel body. It is the opinion of Warringtonfire that this modification is acceptable, when fitted to the fire risk side of the budget latch.

### 8.4.3 Slam Lock (SL)

The SL is proposed to be fitted to the non-fire risk side of the leaf instead of the tested budget latch. The below snip from a drawing supplied by Panel Technologies Ltd, shows an example with the differences in fitting between the proposed slam lock and the tested budget lock.



The below illustration, supplied by Panel Technologies Ltd, details the components of the SL lock insert. The SL is stated to be constructed of steel plate or steel cast with stated melting points in excess of 1425°C. The slammer of the Slam Lock is engaged by the action of the spring and unlatched by use of the key. An engaged slammer would not be expected to disengage without the use of a key if the lock included in an access panel design was subject to a fire resistance test. The above illustration shows that the engagement distance of the SL with the frame is similar to the budget lock.

It is the opinion of Warringtonfire that this alternative to the tested budget latch, when fitted to the non-fire risk side of the leaf, is permitted and is suitable in the following applications only:

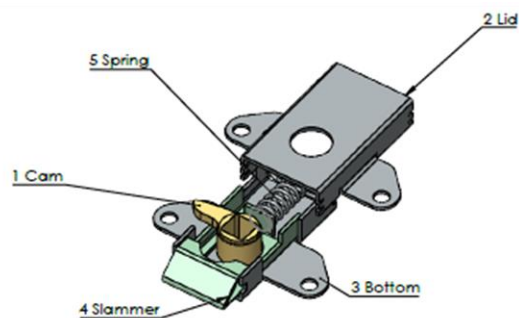
**Leaf:** 1

**Frame:** 1

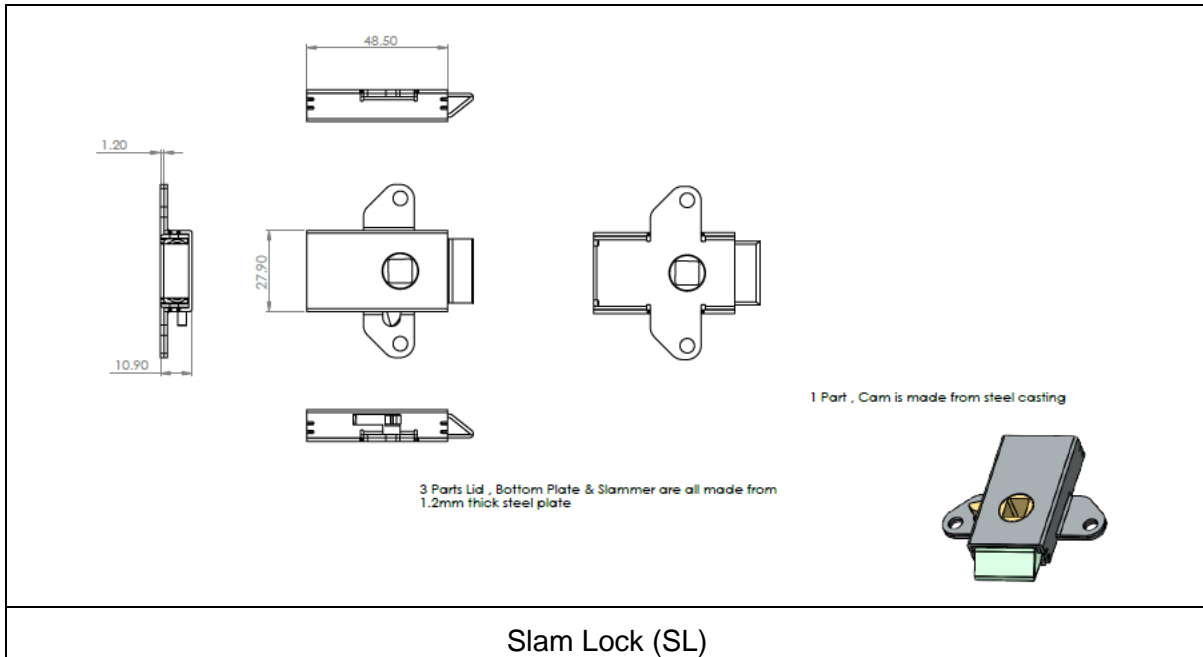
The table below details the assessed alternative latch/lock that is approved.

Slam Lock (48.5mm x 28mm) central to the edge opposite to the hinge or pivoted edge, engaging over the frame profile. Must be fitted so the engagement over the frame profile is at least as much as was tested with the budget lock.

The return on the leaf to accommodate the fixings for the lock must be increased from the tested dimension to 45mm as proposed when using the Slam Lock.



1 Cam	Cast Steel	Zinc Plated	1426-1540 °C
2 Lid	1.2mm Cold rolled	Zinc Plated	1500 °C
3 Bottom	1.2mm Cold rolled	Zinc Plated	1500 °C
4 Slammer	1.2mm Cold rolled	Zinc Plated	1500 °C
5 Spring	Spring Steel	Zinc Plated	1425-1500 °C

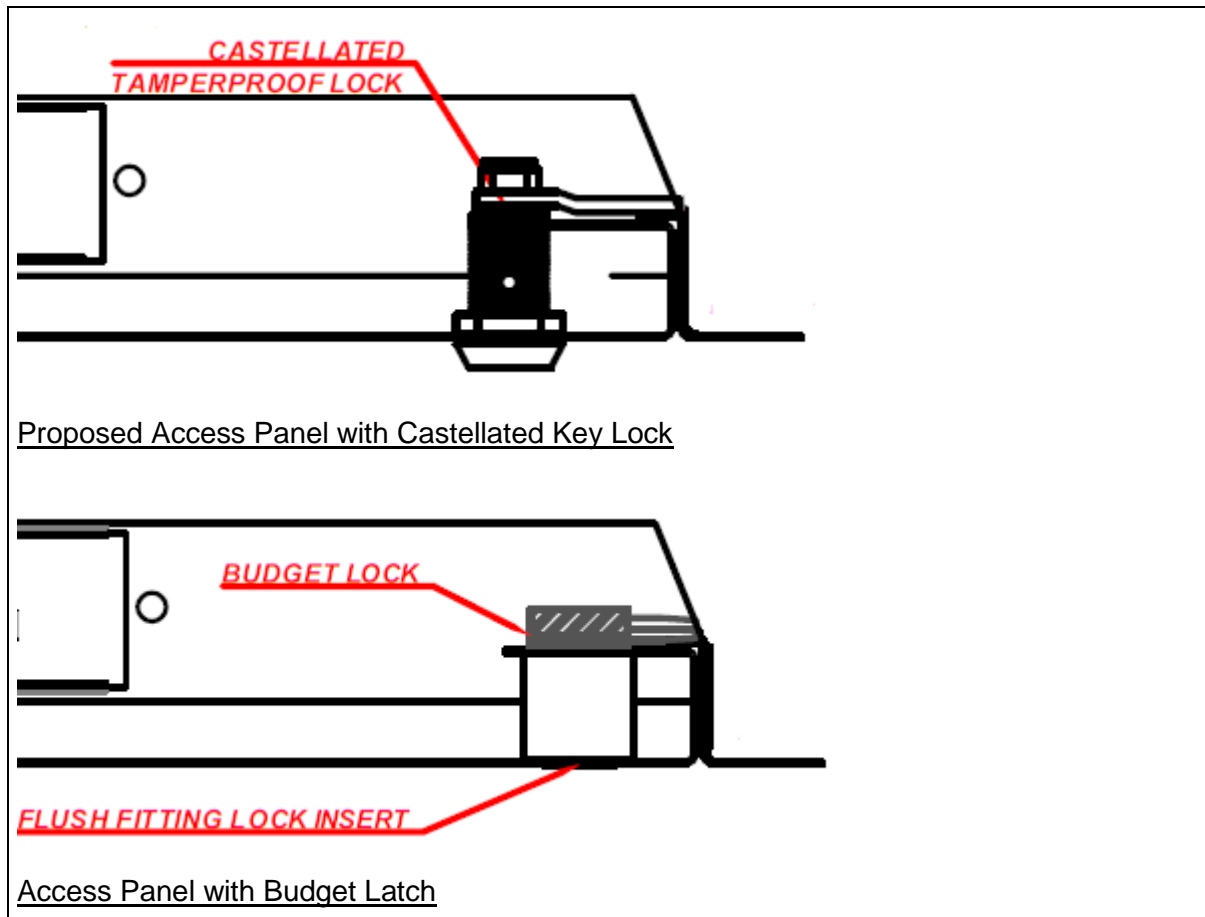


The latch/lock must be engaged when the access panel is in the closed position.

#### 8.4.4 Castellated Key Lock (CKL)

The CKL is proposed to be fitted, through the leaf with the key side to the fire risk side instead of fitting the tested budget latch and plastic grommet cover. It has been declared to be constructed from metallic components.

The below snip from a drawing supplied by Panel Technologies Ltd, shows an example with the differences in fitting between the proposed Castellated Key Lock and the tested budget lock.



The below illustration, supplied by Panel Technologies Ltd, details the components of the CKL lock insert. The CKL is stated to be constructed of brass and steel with stated melting points of 1193°C and 1500°C respectively. The specified heating regime of EN 1634-1 test method reaches 1049°C at 120 minutes. The steel and brass components of the CKL, have melting points in excess of those reached during test at 120 minutes.

The CKL is positioned with the lock body through a hole in the risk side face of the leaf and held in position with a nut. The proposed hole dimensions are shown in the below illustration. It is the opinion of Warringtonfire that this hole is a sufficiently tight fit and that with a tightly fitted nut, that this lock would be expected to remain in position if the lock included in an access panel design was subject to a fire resistance test for 120 minutes. It is also the opinion of Warringtonfire that as the hole is a sufficiently tight fit that this would not permit the passage of flames.

The above illustration shows that the engagement distance of the CKL with the frame is similar to the budget lock. The engagement of the CKL would not be expected to change if the lock included in an access panel design was subject to a fire resistance test for 120 minutes.



## 8.5 Pivot Points

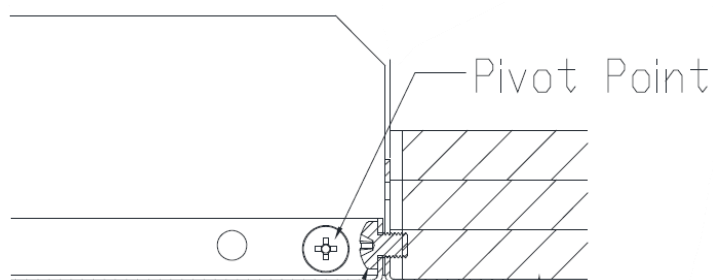
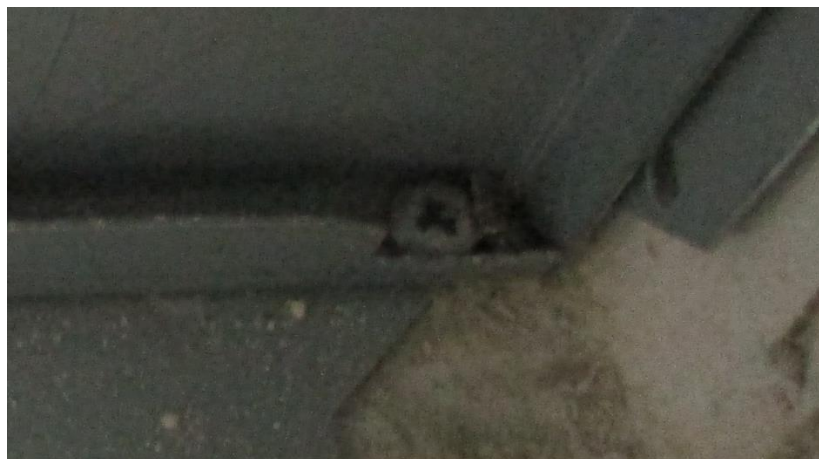
This item, when fitted as tested in all test references cited in section 3, is suitable in the following applications only:

**Leaf:** 1

**Frame:** 1

### Product Information for Pivot Points

M5 x 8mm steel Bright Zinc Plated (BZP) Pan Pozi Head Cross recess Tritap screws.



## 8.6 Door Retaining Bolts


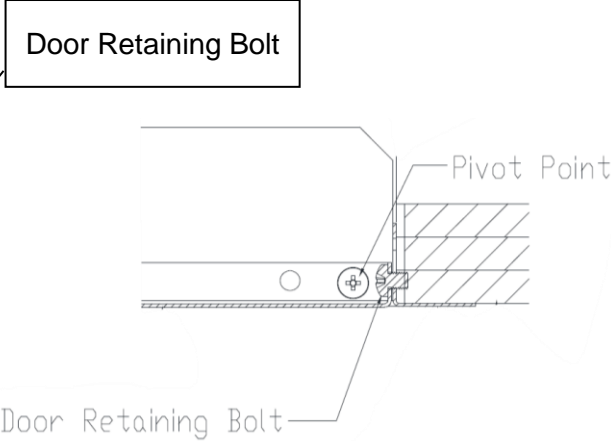
Door retaining bolts were included in all test specimens cited in Section 3, with either 1 or 2No. fitted to the hanging edge of the leaf depending on the overall size of the access panel.

This item is suitable in the following applications only:

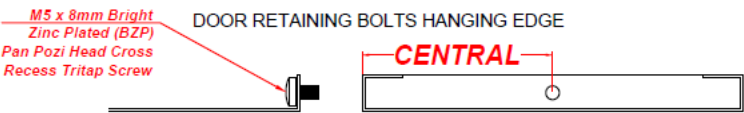
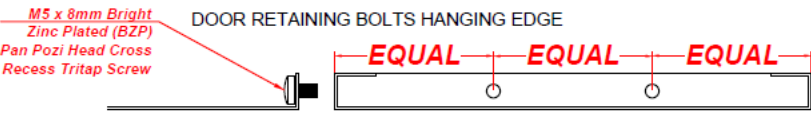
**Leaf:** 1

**Frame:** 1

The table below details the door retaining bolt arrangement tested in test reference WF434360 Rev A Specimen C, that is approved.

Product Information for Door Retaining Bolt(s)	
<p>Door retaining bolt, M5 x 8mm steel Pan Pozi Head Cross recess Tritap screw. Fitted through hanging edge of leaf tray to engage in frame as tested.</p>	
	

In all instances, it is assessed that the required number of door retaining bolts and their positioning must be as follows:

Element		Specification
Door Retaining Bolt Positions:	Horizontal or Vertical Leaf, hinged side having a dimension of 300mm or less	<p>1 door retaining bolt is required, central to hanging edge of leaf</p> 
	Horizontal or Vertical Leaf, hinged side having a dimension greater than 300mm	<p>2 door retaining bolts are required, spaced equally to hanging edge of leaf</p> 

## 8.7 Signage

A metal 'Fire Door Keep Locked Shut' sign is required to be fixed to the access panel face.

Surface mounted components with the following specification are deemed acceptable as in the opinion of Warringtonfire they will not significantly affect the fire resistance performance of the access panel design being considered. This is on the basis of the items being surface mounted away from the edge of the leaf, therefore unlikely to influence the junction between leaf and frame. Furthermore, they are generally of lightweight construction, meaning that they are unlikely to destabilise the steel access panel assembly and therefore cause adverse deflection under test conditions.

Approved specification:

- Steel, stainless steel, aluminium or bronze signage may be fitted providing they are fitted no closer than 75mm from the leaf edge and are no greater than 80mm diameter. A maximum of 2No. signs may be fitted and must be positioned at least 100mm apart.
- Permitted fixing methods are as follows:
  - Surface-fixed with adhesive.
  - Bolted through the leaf with maximum of M5 steel or stainless steel bolts. If bolted, there must be no more than 1mm clearance between the hole and stud.
  - Steel signage of the above specification may be welded to the face of the leaf.

When applied to a door leaf the plate shall be surface mounted to the face without removing material from the leaf.

## 9 Installation

### 9.1 General

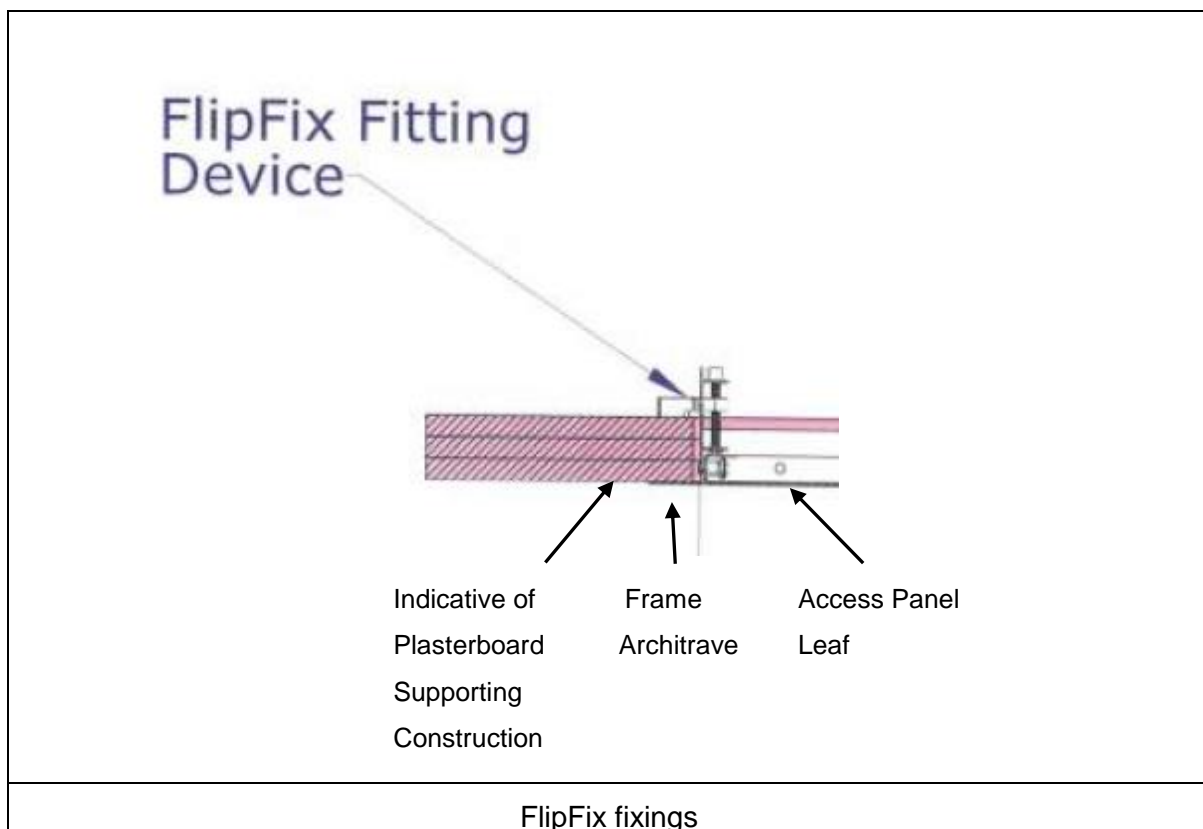
The steel access panel must be installed on the exposed face of the supporting construction with the leaf opening towards the fire risk side as tested and the integral frame architrave exposed as shown below.

The following sections detail the installation for the access panel designs and consider:

- the frame installation
- the requirements for the supporting construction
- fire stopping between the frame and the supporting construction.
- the fixing requirements
- the requirements for leaf edge gaps

### 9.2 Tested Frame installation detail – FlipFix Fixings

The figure below shows an example detail of the tested installation using FlipFix fixings. For further detail, reference should be made to the test evidence cited in section 3.



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

In all instances, it is assessed that the required number of FlipFix fixings and their positioning must be as follows:

Element		Specification
FlipFix Positions:	Horizontal or Vertical Leaf, hinged side having a dimension of 300mm or less	2No. per access panel. 1No. FlipFix fixing fitted centrally to each of the opposite frame edges other than the closing and hanging (i.e. frame top and bottom).
	Horizontal or Vertical Leaf, hinged side having a dimension greater than 300mm	4No. per access panel. 2No. FlipFix fixings fitted to each of the opposite frame edges other than the closing and hanging (i.e. frame top and bottom).  The FlipFix fixings must be 100mm to 150mm from any corner.

### 9.3 Wall Types, Structural Opening & Fixity

#### 9.3.1 Ceiling Type

Test WF403834 Specimens B and C summarised in section 3, demonstrate fixing by FlipFix to a tested number of layers and board thickness and type. In order to maintain similar stress levels within the boards due to the fixing method as experienced by the tested arrangement, it is assessed that steel access panel designs using Frame 1 are approved for use with the following ceiling type:

- a) Board clad non-loadbearing suspended ceilings, utilising 3No layers of 10mm thick British Gypsum Glasroc F Multiboard.

The above ceiling type must have supporting fire resistance test evidence which demonstrates that it is capable of staying in place and intact for a minimum of 120 minutes fire resistance (120 minutes integrity and insulation) classified to EI 120 to BS EN 13501-2. This supporting test evidence must show that the ceiling can tolerate access panels or penetration designs fitted to the boards/plasterboards in a similar manner. The steel access panel design to be fitted must require no larger an aperture and be no heavier than the tested fitting supported by the supporting test evidence for the ceiling.

The ceiling type must provide the boarding option required to permit adequate fixity using FlipFix fixings, which is to the board and not any underlying studwork.

#### 9.3.2 Wall Types

Test WF434360 Rev A Specimens A and C summarised in section 3, demonstrate fixing by FlipFix to a tested number of layers and board thickness and type. In order to maintain similar stress levels within the boards due to the fixing method as experienced by the tested arrangement, it is assessed that steel access panel designs using Frame 1 are approved for use with the following wall type:

- a) Board clad shaft walls, utilising 2No layers of 15mm thick Gypsum plasterboard Type F, to the fire side of the studwork.

Additionally, based on Test WF403834 Specimens B and C, assessment is made that the boarding of the ceiling type tested may be used when fixing in a vertical orientation. The rationale behind this being that when tested in the horizontal orientation the access panel would drop, sag and bow under its own weight, and thus be more likely to separate between the frame and ceiling than the following. When fixed in a vertical orientation the access panel would not have the weight effect causing the assembly to sag as much compared to when in the horizontal orientation, so would be expected to be less likely to separate between the frame and the wall.

On the basis of test WF403834 Specimens B and C summarised in section 3, for fixing by FlipFix it is therefore assessed that steel access panel designs using Frame 1 are approved for use with the following wall type:

- a) Board clad shaft walls, utilising 3No layers of 10mm thick British Gypsum Glasroc F Multiboard, to the fire side of the studwork.

The above wall types must have supporting fire resistance test evidence which demonstrates that it is capable of staying in place and intact for a minimum of 120 minutes fire resistance (either 120 minutes integrity or 120 minutes integrity and insulation) classified to E120 or EI 120 to BS EN 13501-2. This supporting test evidence must show that the wall can tolerate access panels or doorset designs fitted to the boards/plasterboards in a similar manner. The steel access panel design to be fitted must require no larger an aperture than the tested fitting supported by the supporting test evidence for the wall.

The wall type must provide the boarding option required to permit adequate fixity using FlipFix fixings, which is to the board and not any underlying studwork.

### 9.3.3 Structural Opening

For all ceiling and wall types the structural opening shall be square, plumb and provide the essential tested specification, as detailed in sections 9.3.1 and 9.3.2 (as applicable) to facilitate installation of the access panel.

The aperture must provide a tight sliding fit to the edges of the access panel frame.

For board clad wall and ceiling types the structural opening must be prepared in line with the test evidence provided by the wall or ceiling manufacturer.

### 9.3.4 Fixity

In all instances the fixing position must be such that it provides adequate restraint to the element of construction throughout the exposure to fire.

The required number of FlipFix fixings is detailed in section 9.2.

## 9.4 Sealing to Structural Opening

Fitting of the frame to the structural opening should be a tight fit leaving no gaps between the back of the frame and the face of the supporting construction.

The access panel frame for the Panel Technologies Ltd, FlipFix access panel incorporates a 20mm to 25mm wide architrave. Installation of the access panel must ensure the architrave is a tight fit against the underside of the ceiling or against the face of the supporting partition, leaving no gaps.

Sealant was not applied between the frame and the face of the supporting construction and is therefore not required or permitted.

## 9.5 Post Production (Onsite) Size Adjustment

Post production adjustment of the steel access panel assemblies is not permitted.

## 9.6 Leaf to Frame Gaps

Based on the test evidence Test WF434360 Rev A Specimens A and C, the leaf edge to frame gaps on all edges must be controlled to 1.2 to 1.8mm.

**Note:** Leaf must not be proud of the access panel frame by more than 1mm.

If substantially different gaps are employed, the fire resistance performance of these access panel designs may change.

## 10 Insulation Performance

Insulation performance may not be claimed for access panels to these designs.

## 11 Conclusion

If the Panel Technologies steel access panel constructions, constructed in accordance with the specification documented in this field of application were to be tested horizontally as part of a proven suspended ceiling system (as given in section 9.3.1) in accordance with BS EN 1364-2:2018, it is our opinion that they would provide a minimum of 120 minutes integrity performance (based on integrity criteria of gap gauge and continuous flaming) subject to the access panel being fitted opening into the fire risk side.

If the Panel Technologies steel access panel constructions, constructed in accordance with the specification documented in this field of application were to be fitted vertically as part of a proven flexible partition system (as given in section 9.3.2) and tested in accordance with BSEN 1634-1: 2014 +A1: 2018, it is our opinion that they would provide a minimum of 120 minutes integrity performance (based on integrity criteria of gap gauge and continuous flaming), subject to the access panel being fitted opening into the fire risk side.

In both cases the latch/lock must be engaged with the access panel in the closed position.

## 12 Declaration by the Applicant

- 1) We the undersigned confirm that we have read and comply with obligations placed on us by the Passive Fire Protection Forum (PFPF) Guide to undertaking technical assessments and engineering evaluations based on fire test evidence 2021 Industry Standard Procedure
- 2) We confirm that any changes to a component or element of structure which are the subject of this assessment have not to our knowledge been tested to the standard against which this assessment has been made.
- 3) We agree to withdraw this assessment from circulation should the component or element of structure, or any of its component parts be the subject of a failed fire resistance test to the standard against which this assessment is being made.
- 4) We understand that this assessment is based on test evidence and will be withdrawn should evidence become available that causes the conclusion to be questioned. In that case, we accept that new test evidence may be required.
- 5) We are not aware of any information that could affect the conclusions of this assessment. If we subsequently become aware of any such information, we agree to ask the assessing authority to withdraw the assessment.

(In accordance with the principles of FTSG Resolution No. 82: 2001)

Signed:  701A0E6005614F7...

Name: Ross Stokes

Position: Technical Manager

Date: 13-Mar-2024

For and on behalf of: Panel Technologies Ltd

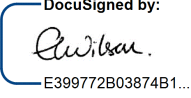
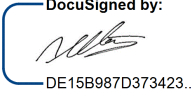
## 13 Limitations

The following limitations apply to this assessment:

- 1) This field of application addresses itself solely to the elements and subjects discussed and do not cover any other criteria or modifications. All other details not specifically referred to should remain as tested or assessed.
- 2) This field of application report is issued on the basis of test data and information to hand at the time of issue. If contradictory evidence becomes available to Warringtonfire, the assessment will be unconditionally withdrawn, and the applicant will be notified in writing. Similarly, the assessment evaluation is invalidated if the assessed construction is subsequently tested since actual test data is deemed to take precedence.
- 3) This field of application has been carried out in accordance with Fire Test Study Group Resolution No. 82: 2001.
- 4) Opinions and interpretation expressed herein are outside the scope of UKAS accreditation.
- 5) This field of application relates only to those aspects of design, materials and construction that influence the performance of the element(s) under fire resistance test conditions, against the ISO 834 time/temperature curve that is stipulated in the standard this assessment concludes to. It does not purport to be a complete specification ensuring fitness for purpose and long-term serviceability. It is the responsibility of the client to ensure that the element conforms to recognised good practice in all other respects and that, with the incorporation of the guidance given in this field of application, the element is suitable for its intended purpose.
- 6) This field of application report represents our opinion as to the performance likely to be demonstrated on a test in accordance with BSEN 1634-1: 2014 +A1: 2018 (when fitted vertically) or BS EN 1364-2:2018 (when fitted horizontally as part of a proven suspended ceiling system), on the basis of the test evidence referred to in this report. We express no opinion as to whether that evidence, and/or this field of application would be regarded by any Building Control authorities or any other third parties as sufficient for that or any other purpose.
- 7) This report may only be reproduced in full. Extracts or abridgements of reports shall not be published without permission of Warringtonfire. All work and services carried out by Warringtonfire Testing and Certification Limited are subject to, and conducted in accordance with, the Standard Terms and Conditions of Warringtonfire Testing and Certification Limited, which are available at <https://www.element.com/terms/terms-and-conditions> or upon request.
- 8) 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.

## 14 Validity

- 1) The assessment is initially valid for five years after which time it is recommended to be submitted to Warringtonfire for re-appraisal.
- 2) This assessment report is not valid unless it incorporates the declaration given in Section 12 duly signed by the applicant.

<b>Position:</b>	<b>Assessor</b>	<b>Reviewer</b>
<b>Signature:</b>		
<b>Name:</b>	<b>* Emma Wilson</b>	<b>* Andrew Winning</b>
<b>Title:</b>	Senior Product Assessor	Senior Product Assessor

\* For and on behalf of Warringtonfire

## Appendix A: Revisions

Rev.	WF Ref.	Date	Description
-	WF5040274	11.03.2024	First Issue