

Title:

A fire resistance test
performed on a single leaf,
single acting steel access
panel test conducted in
accordance with BSEN 1634-
1: 2008 and BSEN 1363-1:
1999

Date Of Test:

23/05/2013

Report No:

Chilt/RF13137 Revision E



Prepared for:

Fire Proofing Services Ltd

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Nuneaton
CV11 5EL

This details of the test report Chilt/RF13137 Revision D are held on file by Warringtonfire. The original report and any previous revisions are replaced by this revised report. Chilt/RF13137 Revision E is a revision to that issued as Chilt/RF13137 Revision E and dated 15/06/2026.

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1 Summary of performance

The following performance was achieved from the specimen tested. Full details of the testing and specimen construction are described in the report.

Results:

Fire resistance test in accordance with BSEN 1634-1: 2008 and BSEN 1363-1: 1999

Integrity		
Cotton pad		132 (one hundred and thirty two) minutes*
Continuous flaming		132 (one hundred and thirty two) minutes*
Gap gauges		132 (one hundred and thirty two) minutes*
Insulation		
Leaf - discrete area (steel)	Average set	20 (twenty) minutes
	Standard set (Max)	8 (eight) minutes
	Supplementary set (Max)	9 (nine) minutes
Frame - discrete area (steel)	180°C rise	14 (fourteen) minutes
	360°C rise	52 (fifty two) minutes
Radiation – time to 15kw/m ²		132 (one hundred and thirty two) minutes*

* No failure had occurred at test termination at 132 minutes

Summary of specimen:

A steel single leaf single acting access panel

Leaf size –
2398mm high x
898mm wide x
44mm thick



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2 Introduction

The access panel was manufactured and supplied for test by the client. The access panel was installed into a flexible supporting construction. In accordance with BS EN 14600: 2005 the leaf was pre-cycled before the fire test. The access panel was instrumented with the standard and supplementary sets of thermocouples and was installed opening away from the furnace

3 Specimen verification

The access panel was delivered to BM TRADA during May 2013. The component parts of the access panel were identified and, where appropriate, moisture content readings and density checks were performed on either the original specimen, or, samples provided by the sponsor. These details are outlined in the construction section of this report.

3.1 Conditioning

BM TRADA stored the specimen in climatic conditions approximate to those in normal service.

3.2 Sampling

BM TRADA were not involved in factory sampling of the components used for the specimen subject to this report.

4 Description of supporting construction

The supporting construction comprised a British Gypsum steel stud partition built in accordance with Clause 7.2.2.4 of BSEN 1363: Part 1, for a flexible supporting construction. The vertical studs surrounding the apertures created for the access panel incorporated a 67mm x 29mm softwood timber infill to facilitate the fixings for the specimen. The specimen tested is a 120 minute product with an anticipated Category B performance, therefore intended fire resistance is 132 minutes, three layers of Gypsum plasterboard type F were fitted on the exposed face and one layer was fitted on the unexposed face. The supporting construction was only fixed on the horizontal edges, the vertical edges remained free.

5 Description of specimen

5.1 Access panel leaf

The leaf measured 2398mm high x 898mm wide x nominally 44mm thick overall.

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6 Description of construction (see clients drawings in appendix)

Leaf

	Material	Dimensions (mm)	Density (kg/m ³)	Moisture (% w/w)	Key to figures
Stiles	Profiled steel welded to the steel 'tray section facing (see figure 2)	1.2 thick x 70 wide x 44 thick	-	-	1
Rails	Profiled steel welded to the steel 'tray section facing, butted up to the stiles	1.2 thick x 70 wide x 44 thick	-	-	2
Facings	Profiled steel 'tray' on unexposed face	1.2 thick	-	-	3
	Siniat (formally Lafarge) Soundbloc plasterboard on the exposed	12.5mm thick*	-	-	4
Leaf finish	Polyester powder coating	Nominally 75 microns thick	-	-	-
Welds	Spot welds	12.5 long at nominal 450 centres	-	-	-
Plasterboard retainer	Profiled steel 'Z' section fixed to stiles with 16.5mm long self tapping screws 75mm from corners (see figure 2)	1.5 thick	-	-	5
Leaf stiffeners	None fitted	-	-	-	-
Acoustic matting	Isobase R50, closed-cell polyolefin foam resilient acoustic layer*	5 mm thick*	-	-	6

* Stated by client, not verified by laboratory

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Frame

	Material	Dimensions (mm)	Density (kg/m ³)	Moisture (% w/w)	Key to figures
Head, jambs and threshold	Profiled steel (see figure 2)	1.5 thick x 45 wide x 67 deep including a 47 wide x 20 high integral stop and a 25 wide integral architrave	-	-	7
Stops – integral	-	-	-	-	-
Frame jointing detail	Mitred - welded	-	-	-	-
Architrave - integral	-	-	-	-	-
Frame fixings	Steel screws	M4 x 70 long screws fitted at 50mm from corners and at 450mm centres	-	-	-
Frame infill	Rockwool rock mineral fibre	47 wide x 22 thick	33	-	8
Frame fire stopping	Intumescent acrylic mastic on both faces of frame	Nominally 5mm wide sealing frame to supporting construction	-	-	-

Intumescent and sealing materials

	Make/type	Size (mm)	Location	Key to figures
Panel leaf	None fitted	-	-	-
Frame	Lorient IS1020 white 'P' rubber buffer seal	8 x 4	Fitted to the upstand of the stop	9
	Envirograf Paper self adhesive intumescent Product ref: G10-10	10 x 2	Fitted to the upstand of the stop	10

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Hardware

	Make/type	Size (mm)	Location	Key to figures
Hinges	Fire Proofing Services Ltd 'in house' manufactured Fast Fit Spring Hinge*	19.1mm x 19.1mm x 40mm with 8mm pins	Fitted at the top and bottom of the door leaf	11
Closer	None fitted	-	-	-
Lock – engaged	3-point locking system, with lock operating 2No. Ø8 diameter rods, acting at top and bottom of leaf	112 high x 38 wide x 17 thick (lock body size)	Fitted 1200mm from the threshold of the leaf	12
Locking rod guide blocks	8No. steel rod blocks stitch welded on exposed face of stile	20 x 20 x 12 with a 8mm Ø whole to accept Rod	Fitted 60mm, 110mm, 535mm, 1025mm, 1415mm, 1885mm, 2315mm and 2355mm from the threshold of the leaf	13
Furniture	7No. steel hinge bolts	Ø11 x 6mm protruding from leaf edge	Fitted at 290mm centres, 340mm from the threshold of the leaf	14

* Stated by client, not verified by laboratory

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7 Pre-test measurements

7.1 Pre-cycling

Operability test of 25 manual cycles was completed on the leaves in accordance with BSEN 14600, section 5.1.1.1.

7.2 Access panel leaf/frame perimeter gaps

The gaps between the edge of the leaf and frame were measured prior to test. A total of 12 readings were taken. The measurements (in mm) are given in Figure 5 of the appendix.

7.3 Closer forces

No closer was fitted.

7.4 Method of installation

The access panel was fixed into a pre-prepared opening. The details of the fixings and fire stopping between frame and supporting construction are outlined in the construction section and Figure 4 of the appendix.

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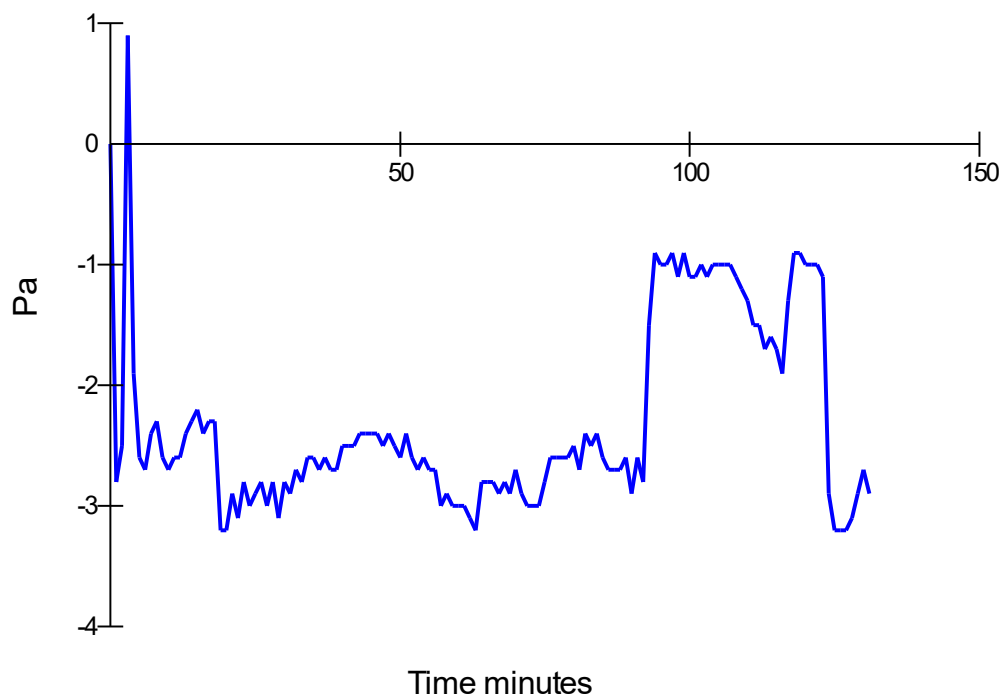
8 Test conditions

8.1 Ambient temperature

The ambient temperature of the test area at commencement of test was 11°C.

8.2 Pressure readings

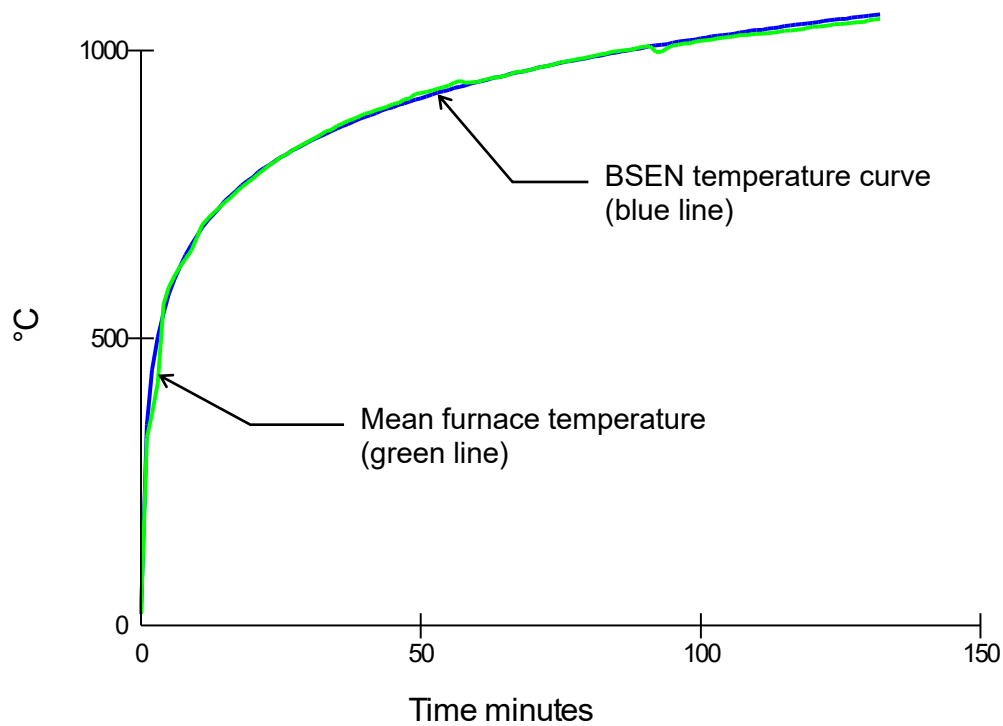
After the first 5 minutes of the test, the furnace pressure was maintained at -2 ± 5 Pa and after 10 minutes was maintained at -2 ± 3 Pa with respect to atmosphere at a point 0.5m from the notional floor level, in order to maintain 20Pa at the head of the leaf. The pressure readings recorded are shown graphically below:



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8.3 Furnace temperature

The furnace was controlled to follow the temperature/time relationship specified in BSEN 1363: Part 1: 1999 Section 5.1.1 as closely as possible, using the average of nine plate thermocouples suitably distributed within the furnace. The temperatures recorded are shown graphically below:



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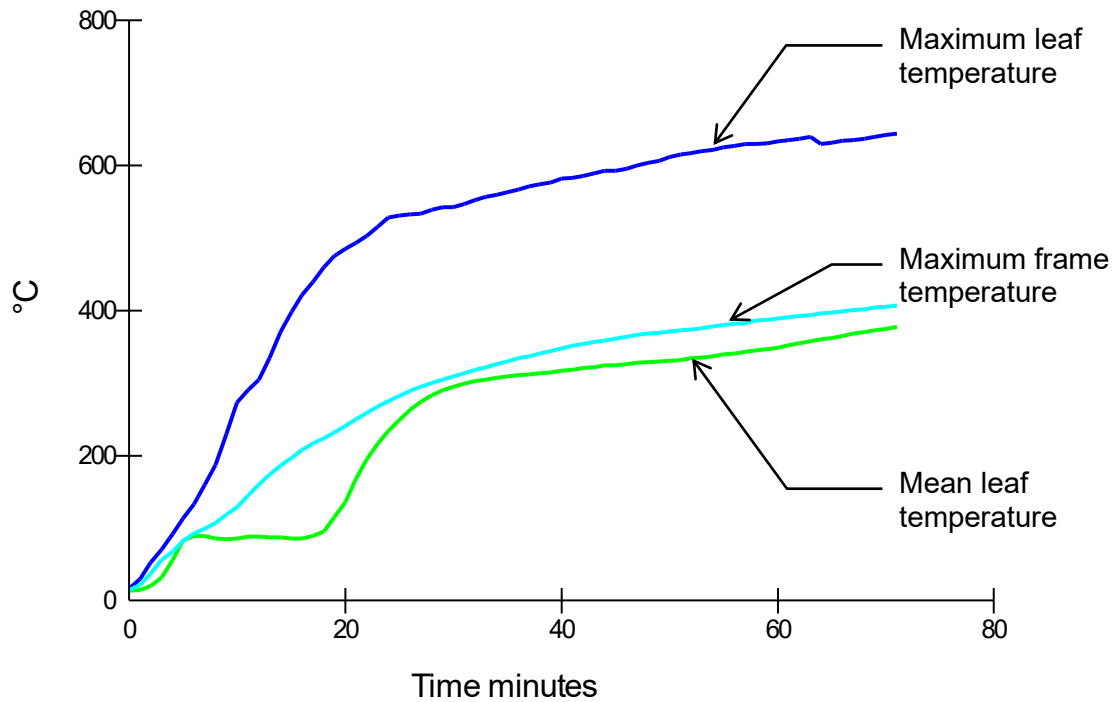
8.4 Unexposed face temperatures

The temperature of the unexposed face of the access panel was monitored by means of the following thermocouples:

Leaf	1 discrete area	
	Discrete area (steel)	5 measuring mean temperature rise.
		5 measuring maximum temperature rise, standard set 100mm in from the leaf edges.
		5 measuring maximum temperature rise, supplementary set 25mm in from leaf edges
Frame		5 measuring maximum temperature rise.

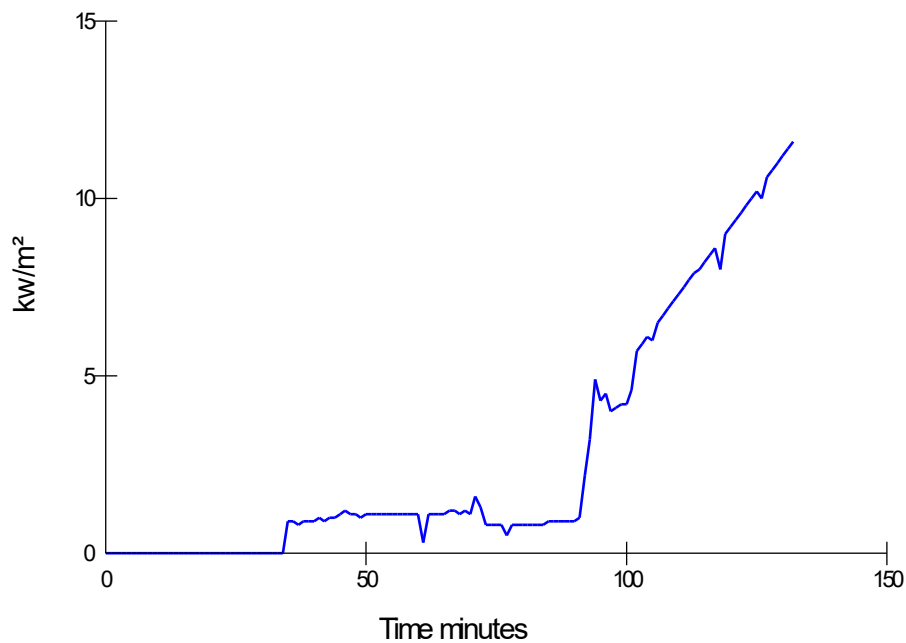
The location of the thermocouples are shown in Figure 6 of the appendix. The temperatures were recorded until 72 minutes, after all insulation criteria failures were achieved at all areas; the readings were recorded and are shown graphically below:

Access panel



8.5 Total heat flux

A medtherm heat flux radiometer was used to measure the radiant heat 1m away from the centre of the specimen. The readings recorded are shown graphically below:

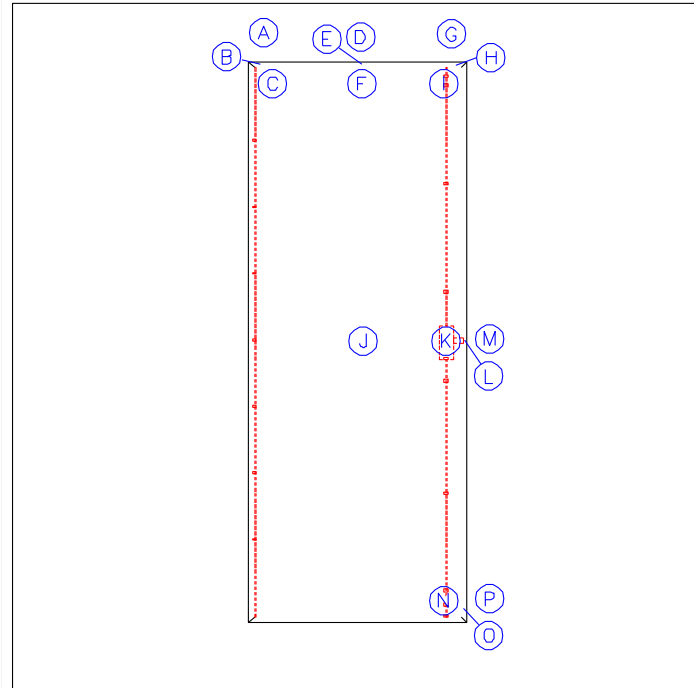


* Radiometer malfunction until 35 minutes had elapsed

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8.6 Distortion data

The following tables show the distortion of the leaves in mm with an accuracy of ± 1 mm. A positive measurement indicates distortion towards the furnace. A negative measurement indicates distortion away from the furnace.



Access panel - leaf (hung on the left and opening away from the furnace)

Time	A	B	C	D	E	F	G	H	I
15	8	-22	-17	4	-13	10	7	-25	-23
30	3	-32	-30	2	-20	-22	1	-32	-28
45	0	-37	-31	-2	-25	-26	-1	-37	-33
60	-4	-43	-36	-7	-29	-33	-9	-45	-42
75	-9	-48	-42	-14	-40	-40	-18	-56	-50
90	-14	-59	-49	-20	-48	-46	-23	-61	-74

Time	J	K	L	M	N	O	P
15	15	45	37	27	1	-15	5
30	8	36	26	15	-1	-18	3
45	7	31	26	16	-3	-20	3
60	10	30	23	13	-3	-21	3
75	12	30	22	13	-3	-21	2
90	26	18	22	13	-5	-22	0

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9 Observations

All comments relate to the unexposed face unless otherwise specified.

Time (minutes)	Comments
00.00	Test started.
03.00	There is smoke issuing from the perimeter of the frame.
04.00	The corners of the frame are starting to deflect away from the partition by approximately 10-15mm.
06.00	There is an increase in the level of smoke issuing from the head of the frame.
07.00	The top corners of the frame have deflected out by approximately 25mm.
07.30	The bottom corners of the frame have deflected out by approximately 20mm.
10.20	The plasterboard on the exposed face has started to crack
11.10	There is discolouration at the middle of the leaf approximately 100mm down from the head of the leaf.
13.30	The top corners of the frame have deflected out approximately 30mm.
14.10	There is discolouration at the hanging edge of the leaf.
14.30	There is further discolouration to the head of the leaf.
15.00	The powder coating at the top of the leaf is starting to bubble.
16.15	The bottom corners have deflected out approximately 25mm.
16.50	There is discolouration at the closing edge of the leaf.
18.00	The top corners of the frame have deflected out approximately 35mm.
20.00	The paint at the hanging and closing edges of the leaf is starting to bubble.
21.40	There is discolouration on the threshold of the leaf.
24.45	There is an increase in the level of smoke issuing from the perimeter of the frame.
27.00	There is further discolouration to the perimeter of the leaf.
35.00	There is discolouration on the unexposed face of the leaf.

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- 39.00 The plasterboard on the exposed face is starting to deflect away from the leaf face.
- 49.30 There is smoke issuing from across the face of the leaf.
- 53.00 A crack in the plasterboard on the exposed face has opened to approximately 10-15mm.
- 64.00 There is further discolouration across the face of the leaf.
- 68.00 There is a glow visible behind the frame at the top left corner of the leaf.
- 72.00 All unexposed thermocouples are removed.
- 73.00 The crack in the plasterboard on the exposed face has opened to approximately 15-20mm.
- 75.00 There is an increase in the level of smoke issuing from across the leaf face.
- 79.00 There is a glow visible behind the frame at the top right corner.
- 89.30 The crack in the plasterboard on the exposed face has now opened to approximately 20-25mm.
- 92.00 The exposed face plasterboard has fallen away.
- 92.40 The leaf face is now glowing.
- 93.00 The leaf face is starting to ripple and distort.
- 102.30 The entire unexposed face is now glowing.
- 132.00 Test terminated

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10 Expression of results

Integrity		
Cotton pad		132 (one hundred and thirty two) minutes*
Continuous flaming		132 (one hundred and thirty two) minutes*
Gap gauges		132 (one hundred and thirty two) minutes*
Insulation		
Leaf - discrete area (steel)	Average set	20 (twenty) minutes
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	Supplementary set (Max)	9 (nine) minutes
Frame - discrete area (steel)	180°C rise	14 (fourteen) minutes
	360°C rise	52 (fifty two) minutes
Radiation – time to 15kw/m²		132 (one hundred and thirty two) minutes*

* No failure had occurred at test termination at 132 minutes

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11 Limitations

This document is the original version of this test report and is written in English. In case of doubt, the original version prevails over a translation. This document is issued subject to Warringtonfire's standard terms and conditions, which are available at: [Terms and Conditions | Element](#).

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criteria for assessing the potential fire hazard of the product in use, nor can the results be extrapolated and applied to other products.

Reports are statements of fact(s) prepared in accordance with the referenced version of the standard(s) stated. Reports are based upon the information provided to Warringtonfire. Warringtonfire takes no responsibility for the accuracy or completeness of such information.

The results stated in this report apply to the test specimens as received.

Any significant deviation with respect to size, constructional details, loads, stresses, edge or end conditions other than those allowed under the field of direct application in the relevant test method is not covered by this report.

Any differences in relation to the aforementioned characteristics may significantly affect the performance and will therefore invalidate the application of the test results to the variant product. It is recommended that any proposed variation to the tested configuration or product should be referred to the test sponsor. The test sponsor should then obtain appropriate documentary evidence of compliance from Warringtonfire or another accredited testing authority. The supplier of the product is responsible for ensuring that the product which is supplied for use is identical to the test specimens that were tested.

The specification and the interpretation of fire test methods are both the subject of ongoing development and refinement. Changes in the applicability of the results of tests in relation to associated legislation may also occur. For these reasons the currency and the relevance of test reports should be considered by the user.

The test report also relates only to the sample(s) of the product submitted to the test. The laboratory accepts no responsibility for the representativeness of the test specimens unless so stated in the test report.

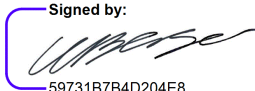
Confidence that the product that is supplied to the market will have the performance indicated in the test report can be supported by use of third-party certification schemes.

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The report is issued for the benefit of Warringtonfire's direct customer only, and may not be relied upon by any third parties without Warringtonfire's express written consent.

Because of the nature of fire resistance testing and the consequent difficulty in quantifying the uncertainty of measurement of fire resistance, it is not possible to provide a stated degree of accuracy of the result.

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Signature:	 Signed by: 59731B7B4D204E8...	 Signed by: 843CEA872FF94E3...
Name:	Christopher Berger	Adriano Montanino
Title:	Product Assessor	Product Assessor
Date of issue:	21 July 2026	21 July 2026

Revision A – September 2013	- Change of company name and change to name of hinge, page 8.
Revision B – July 2020	- Amended hinge description, Page 6 - Rebranded report to Warringtonfire, all pages - Added client supplied drawing to Appendix, Figure 7 - Amended incorrect key to figure, Figure 1, 2 and 3
Revision C – August 2020	- Amended hinge size and location
Revision D – June 2026	- Amended Siniat Soundbloc plasterboard thickness, page 5 - Updated limitations on page 17 - Corrected facing dimensions in Figure 2 to match test records
Revision E – July 2026	- Added details of acoustic layer to page 5 & updated Figure 2, 3 & 4 drawings - Updated key to figure labels in Figures 1, 2 & 3

12 Field of direct application of test results

The results of the test are directly applicable to similar constructions where one or more of the changes listed in BSEN 1634-1: 2008, Clause 13, are made and the construction continues to comply with that appropriate design code for its stiffness and stability. Other changes are not permitted by the document.

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13 Photographs

Shoot bolt guide blocks and plasterboard retaining section



Lock bolted to leaf stile



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At start of test

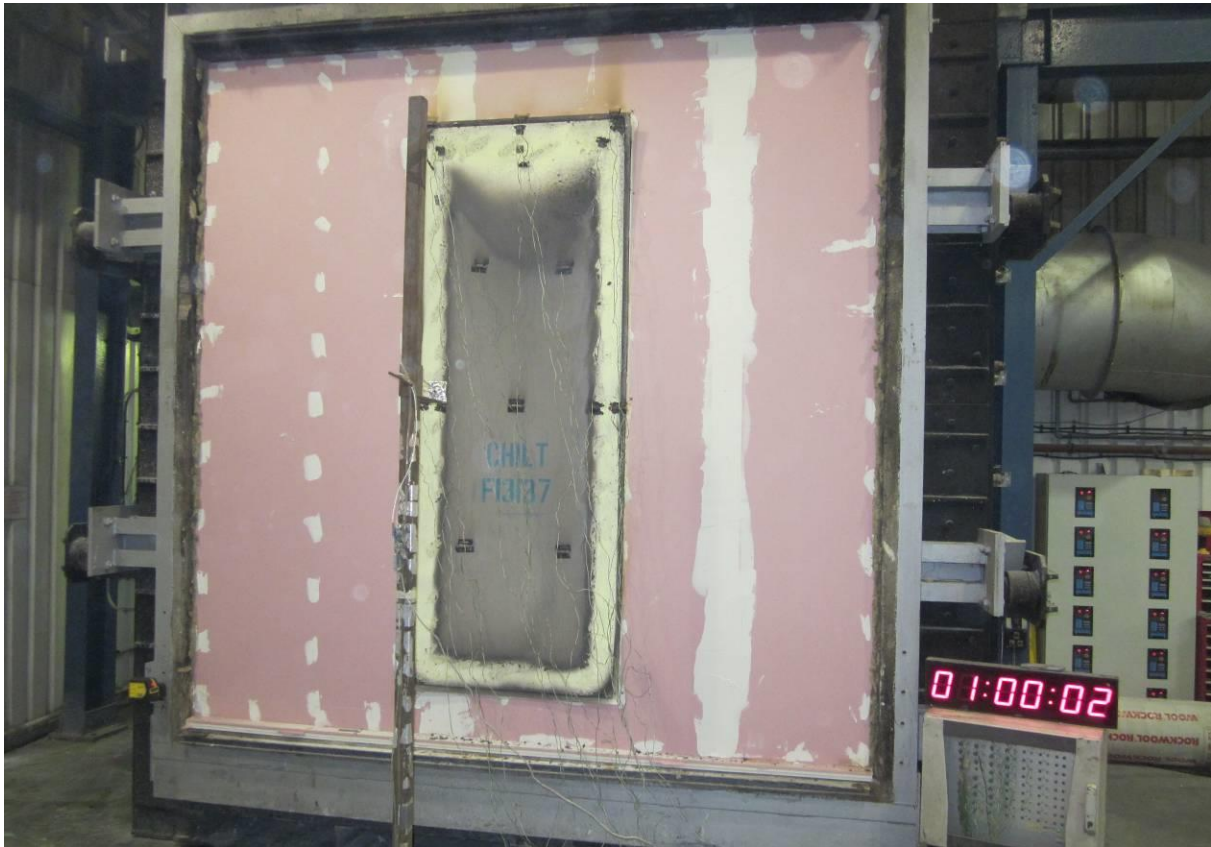


After 30 minutes

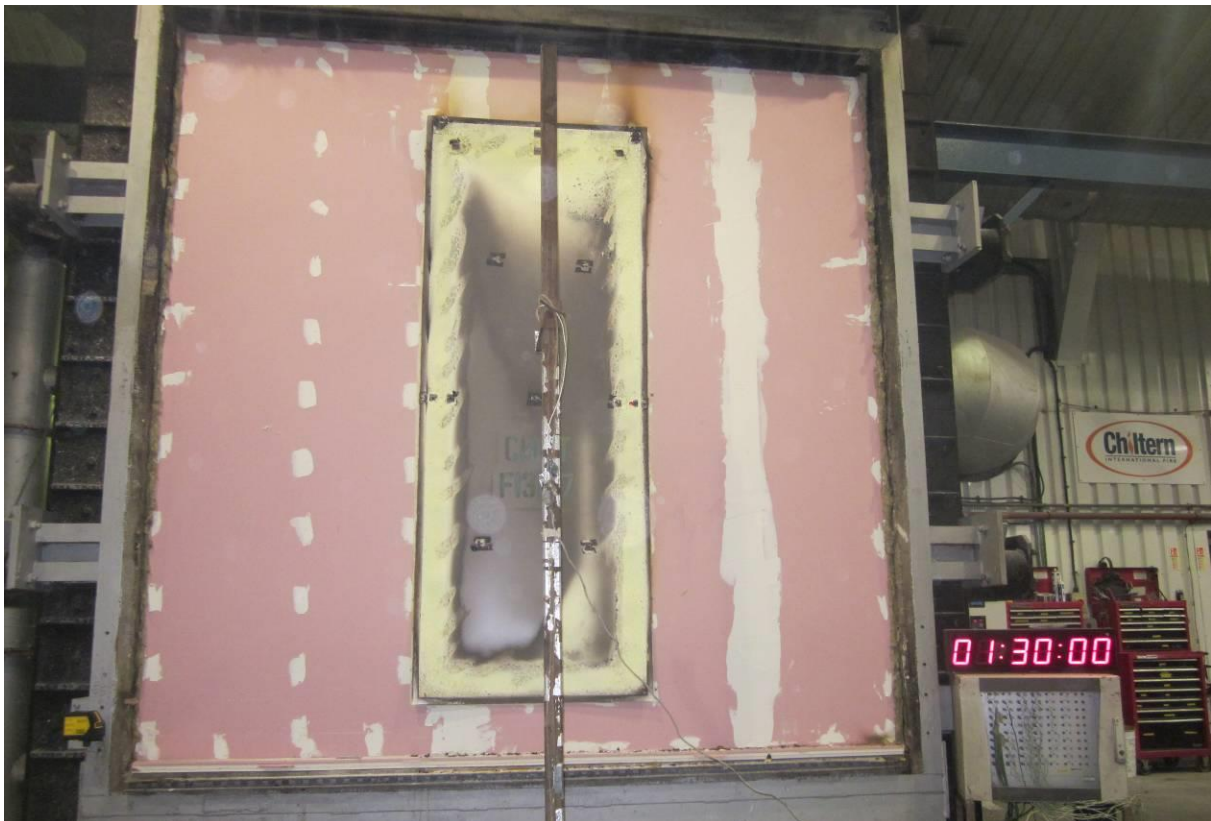


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After 60 minutes



At 90 minutes



After 120 minutes

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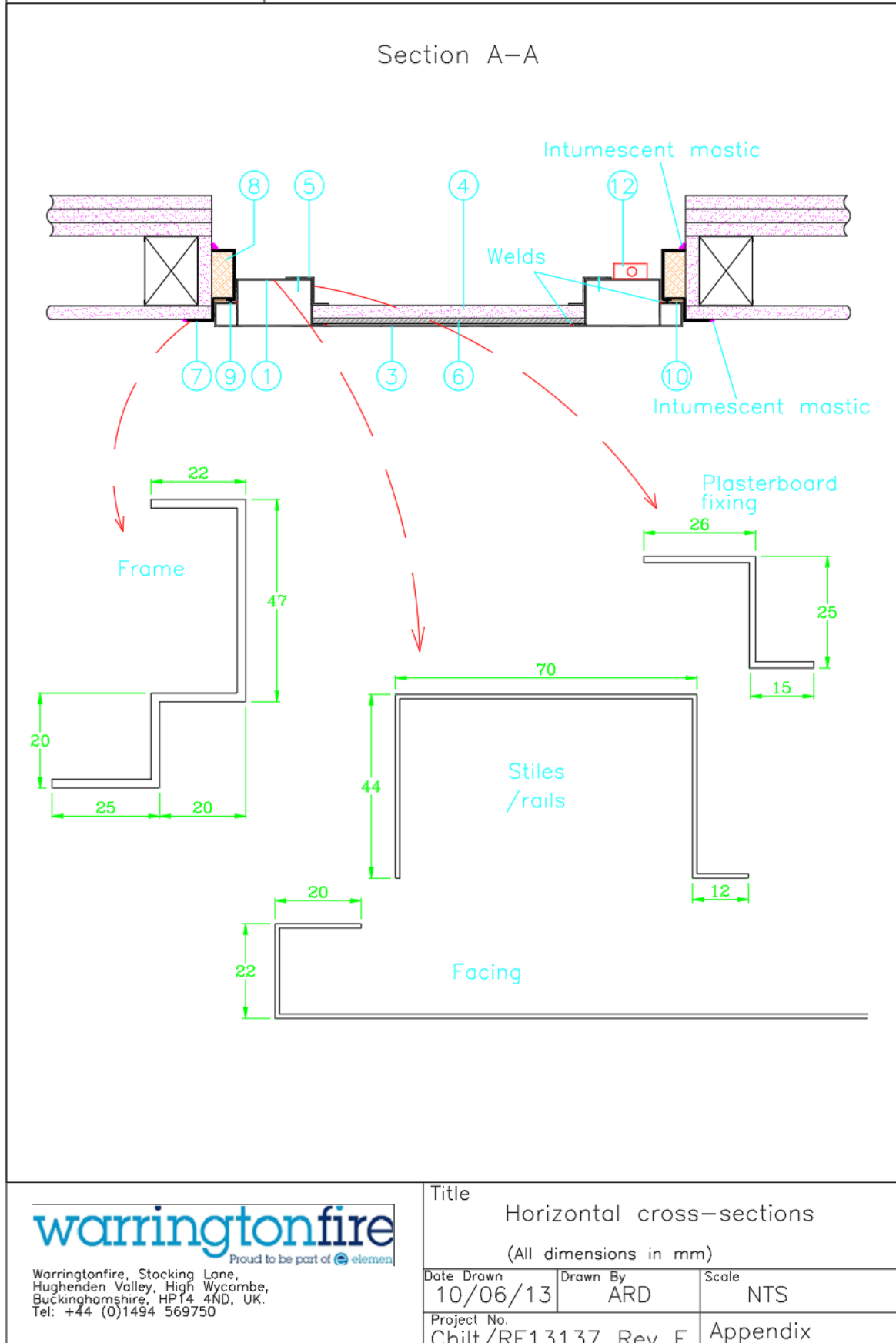


After 132 minutes



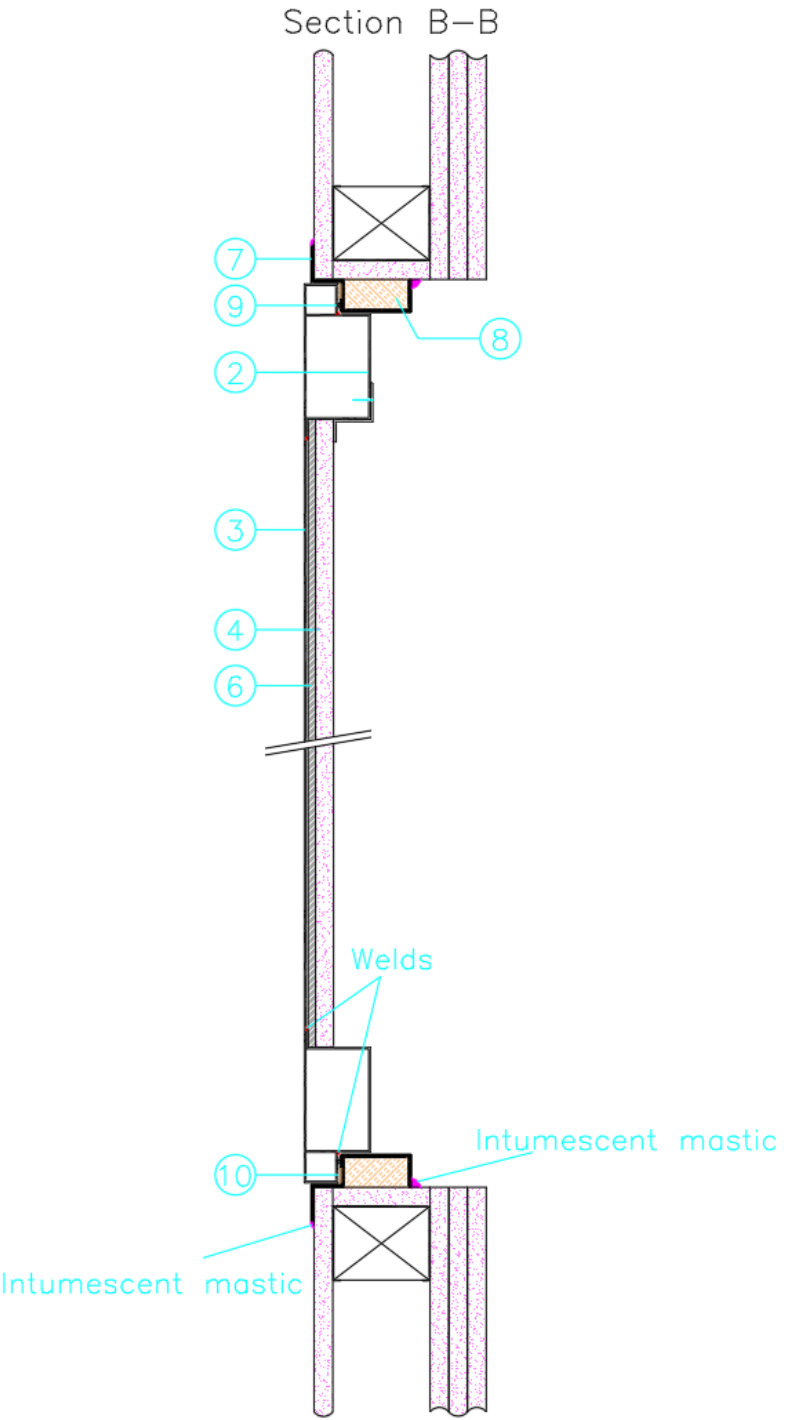
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Figure 3 of 7 | Fire Proofing Services Ltd



 Proud to be part of element Warringtonfire, Stocking Lane, Hughenden Valley, High Wycombe, Buckinghamshire, HP14 4ND, UK. Tel: +44 (0)1494 569750	Title Vertical cross-sections (All dimensions in mm)		
	Date Drawn 10/06/13	Drawn By ARD	Scale NTS
	Project No. Chilt/RF13137 Rev E		Appendix

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Figure 4 of 7 Fire Proofing Services Ltd

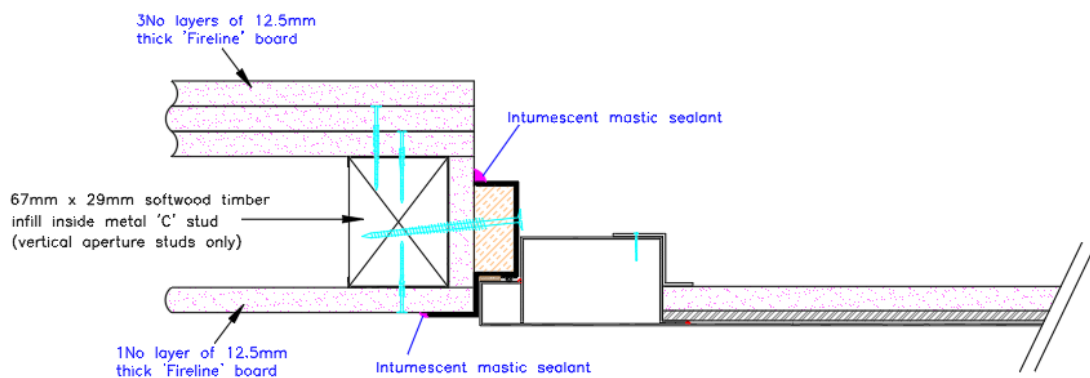
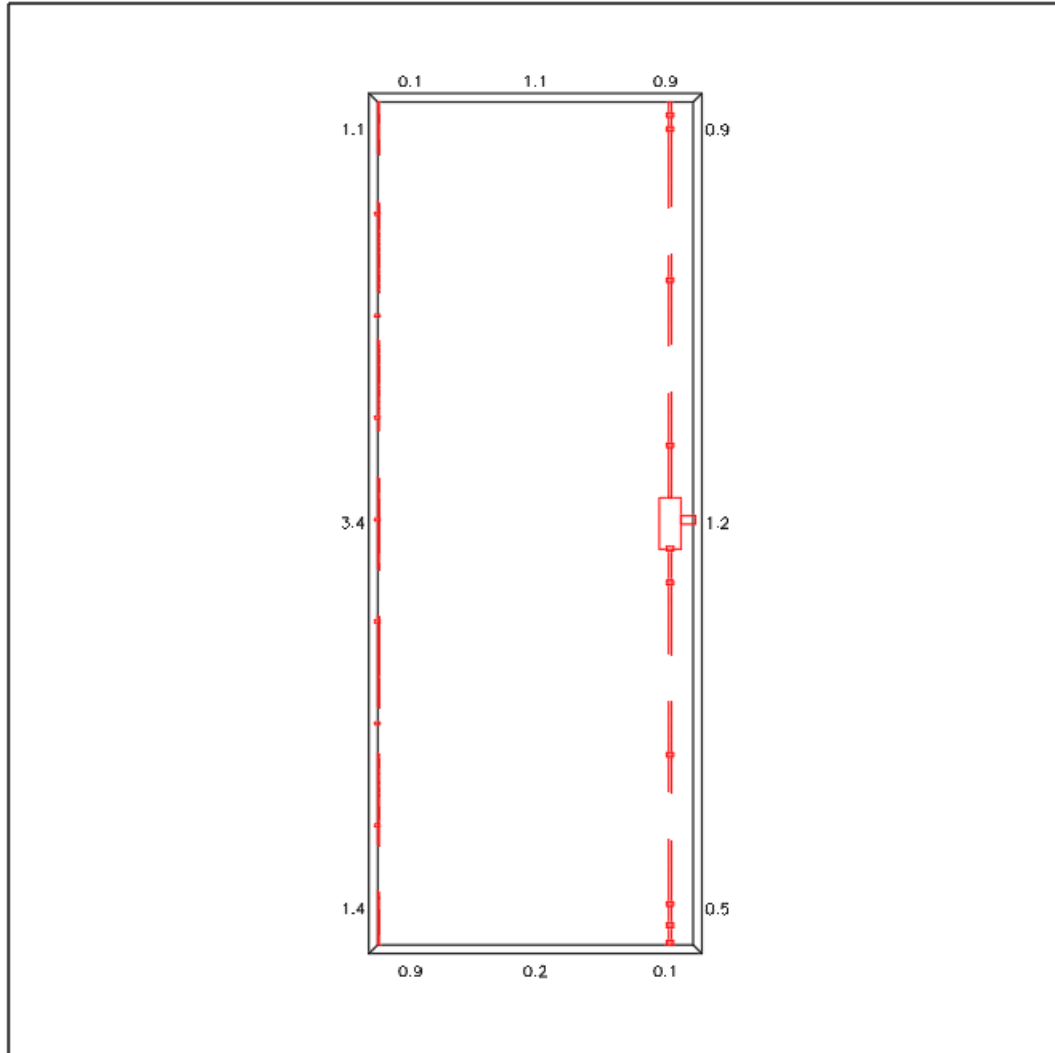


Figure 5 of 7 Fire Proofing Services Ltd

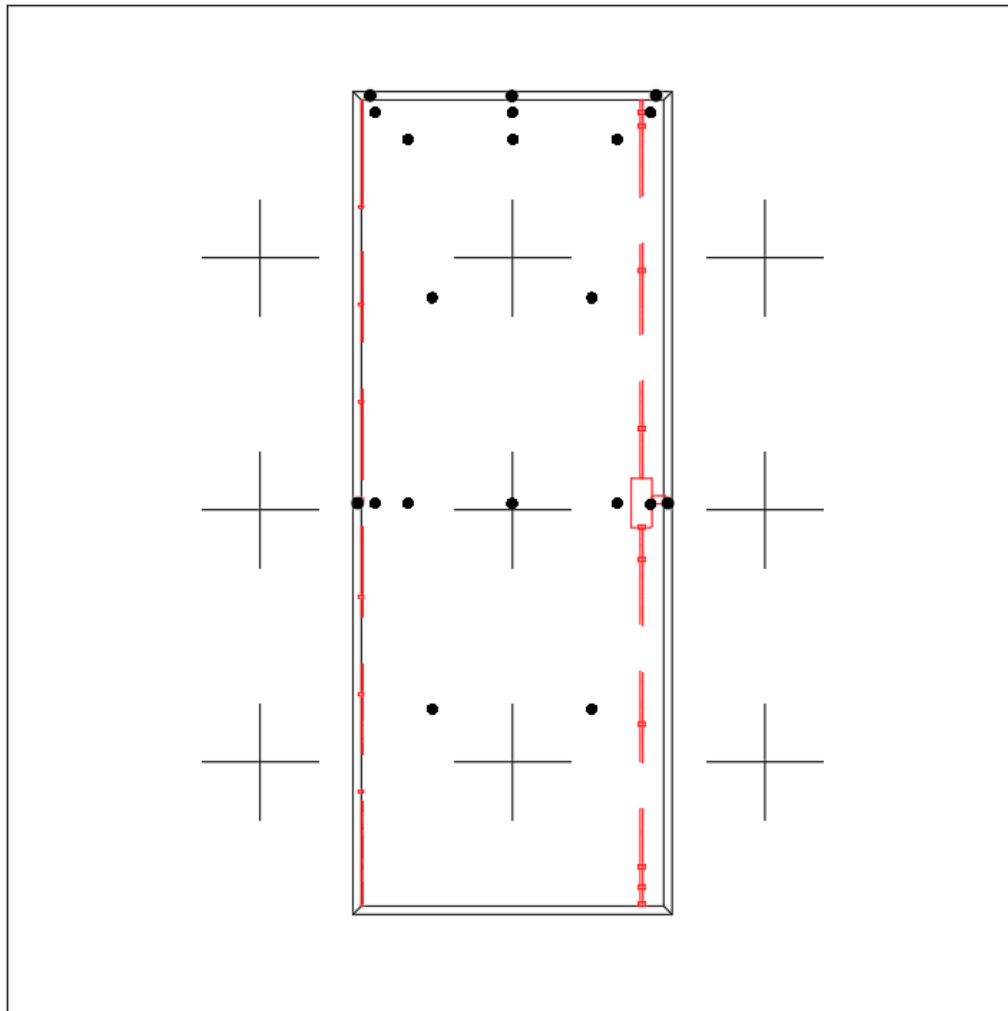


Gaps shown



Viewed From Unexposed Face

Figure 6 of 7 Fire Proofing Services Ltd



+ : Furnace Thermocouples
 • : Unexposed Face Thermocouples

Viewed From Unexposed Face

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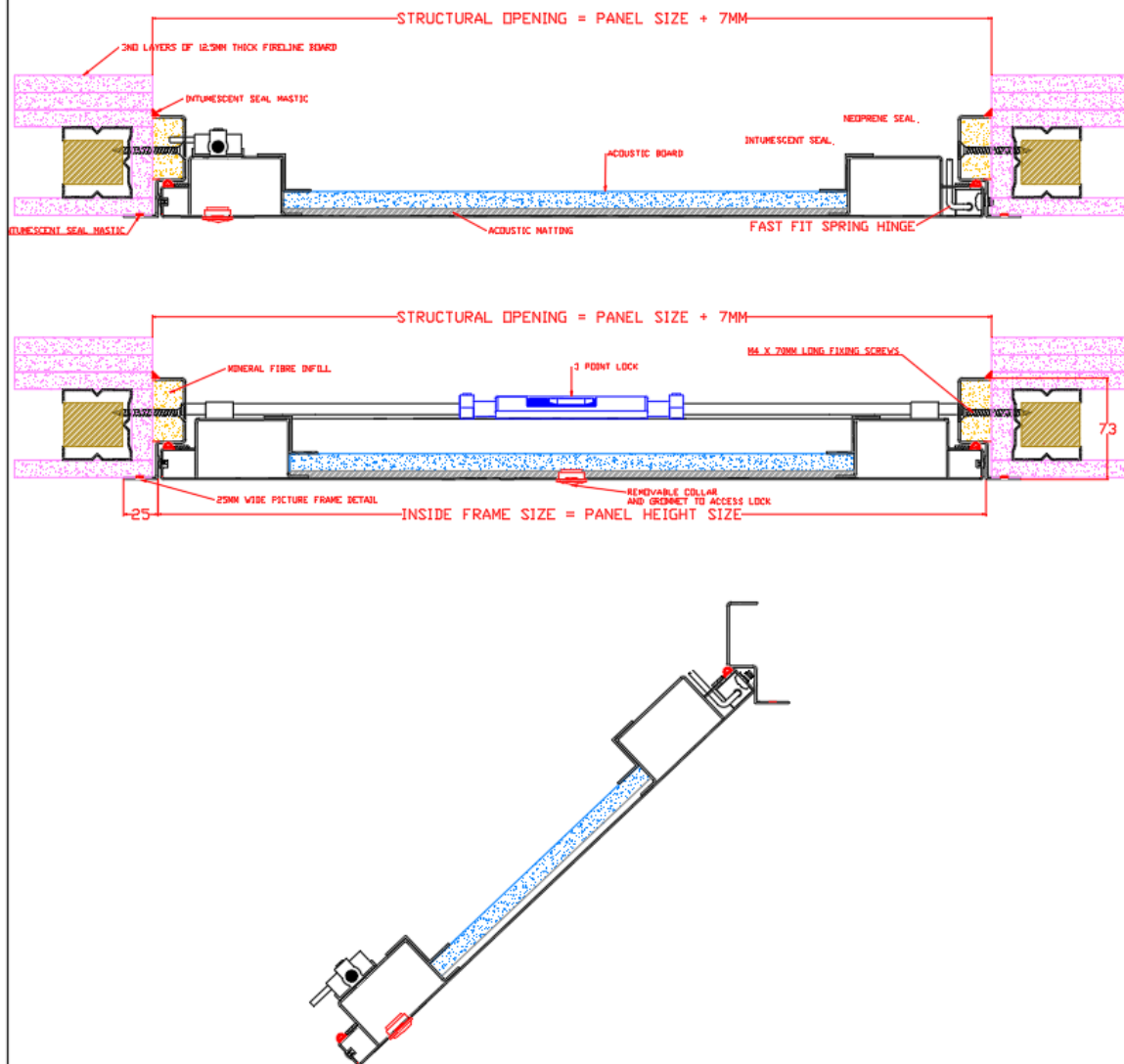
Title Thermocouple positions

(All dimensions in mm)

Date Drawn 10/06/13	Drawn By ARD	Scale NTS
Project No. Chilt/RF13137 Rev E		Appendix

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Figure 7 of 7 Fire Proofing Services Ltd



warringtonfire
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Warringtonfire, Stocking Lane,
Hughenden Valley, High Wycombe,
Buckinghamshire, HP14 4ND, UK.
Tel: +44 (0)1494 569750

Title Client supplied drawing

(All dimensions in mm)

Date Drawn
10/06/13

Drawn By
ARD

Scale
NTS

Project No.
Chilt/RF13137 Rev E

Appendix

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