Exova Warringtonfire – the new name for BM TRADA

On December 1st 2015, Chiltern International Fire Limited (trading as BM TRADA) commenced trading under the name Exova Warringtonfire.

To coincide with this change, our Technical Reports, Test Reports, Product Assessments, company stationery and marketing collateral have been updated to reflect the Exova Warringtonfire branding.

The validity of all documents previously issued by Chiltern International Fire Limited including certificates, test reports and product assessments is unaffected by this change. A letter to this effect is available upon request by e-mailing globalfire@exova.com

About Exova Warringtonfire

Exova Warringtonfire is part of the Exova Group one of the world's leading laboratory-based testing groups, trusted by organisations to test and advise on the safety, quality and performance of their products and operations. Headquartered in Edinburgh, UK, Exova operates 143 laboratories and offices in 32 countries and employs around 4,500 people throughout Europe, the Americas, the Middle East and Asia/Asia Pacific. With over 90 years' experience, Exova specialises in testing across a number of key sectors from health sciences to aerospace, transportation, oil and gas, fire and construction.

Be assured that whilst the name will change, your service provision and primary contacts have not. What will be available to you is a wider team of testing experts and an extended range of testing capabilities including structural steelwork testing, ventilation duct and damper testing, ASTM testing, water mist system testing and smoke toxicity testing and covering additionally both the rail and marine sectors.

If you have any questions, please do not hesitate to contact a member of the team and we will do our best to answer them. We appreciate your business to date and we look forward to working with you in the future.

Kind regards

Exova Warringtonfire

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1 Introduction

This resistance to fire classification report defines the classification assigned to the steel access panel in accordance with the procedures given in BSEN 13501-2: 2007 +A1: 2009.

2 Details of classified element

2.1 Type of function

The steel access panel is defined in clause 7.5.5 of BSEN 13501-2 as a fire door / shutter assembly. Its function is to resist fire in respect of the fire performance characteristics given in clause 5 of BSEN 13501-2.

2.2 Description

The access panel is described in the test report in support of this classification detailed in clause 3.

3 Test reports and test results in support of classification

3.1 Summary of test report

This classification report is supported by the following test reports:

Test laboratory	Test sponsor	Test report reference	Test method	Test date
Exova Warringtonfire Notified body No: 1314	DFI	BMT/FEP/F15113D	BSEN 1363-1: 1999 and BSEN 1634: 1 2014	13th May 2015

The supporting construction comprised a British Gypsum 50mm thick steel stud partition with 50mm thick 30kg/m^3 density insulation fitted in between the studs, built in accordance with Clause 7.2.2.4 of BSEN 1363: Part 1 (table 1 group A), for a flexible supporting construction. The aperture created for the access panel was lined with a single layer of 12.5mm thick Gypsum type F plasterboard. The partition was clad with two layers of 12.5mm thick Gypsum type F plasterboard on each face. The supporting construction was only fixed on the horizontal edges, the vertical edges remained free.

Product description (refers to drawings below)

The access panel (product reference 'Premium Range Fire Rated EI_2 90 Access Panel') measured 1200mm high x 900mm wide x 90mm thick overall. The access panel leaf comprised 1.2mm thick profiled Zintec steel tray and lid section construction. The leaf core comprised 12.5mm thick BG Fireline plasterboard to the exposed face, 50mm thick Rockwool separated from the plasterboard by a 12mm thick airspace, with a 6mm thick layer of Glasroc board bonded to the facing on the unexposed face.

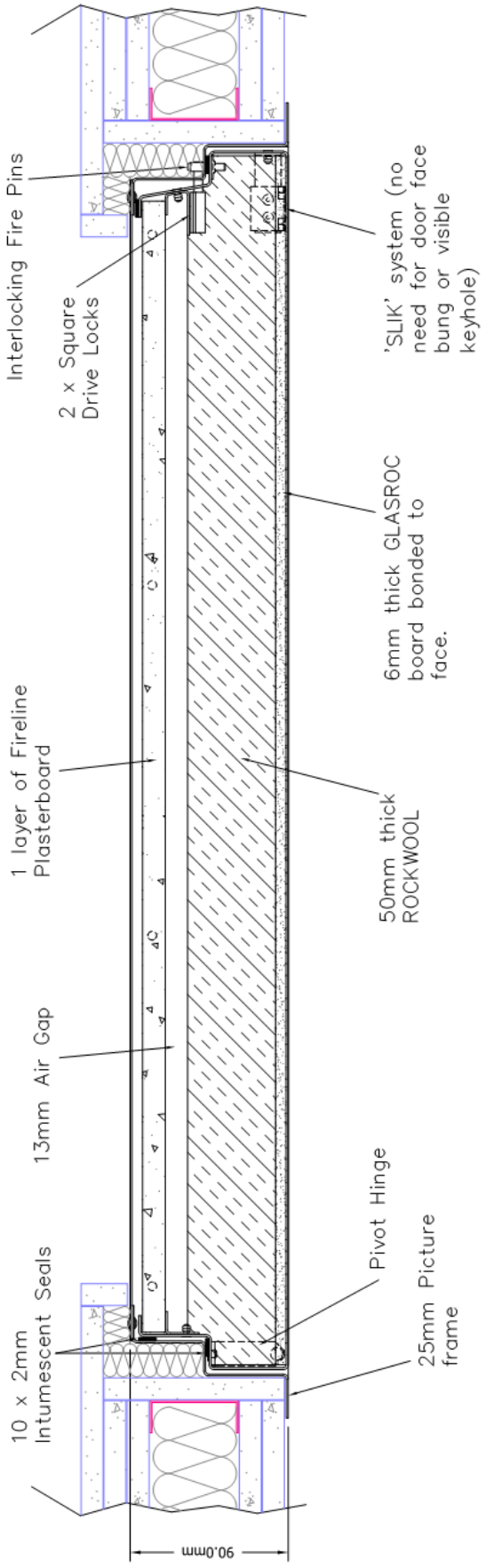
The frame comprised 1.2mm thick profiled Zintec steel 'picture frame' 90mm deep x 50mm wide overall, including a 25 wide integral stop and 25mm wide integral architrave. The frame was fixed into the aperture with Ø5 x 65mm long fixing screws fitted 32mm from corners at 200mm centres. The aperture was lined with 100kg/m^3 density Rockwool, extending for 20mm beyond the frame edge, with a 200mm x 12.5mm thick plasterboard fillet fitted around the aperture on the exposed face, extending to the edge of the Rockwool, and a 22.5mm wide fillet of plasterboard covering the remaining exposed edge of the Rockwool.

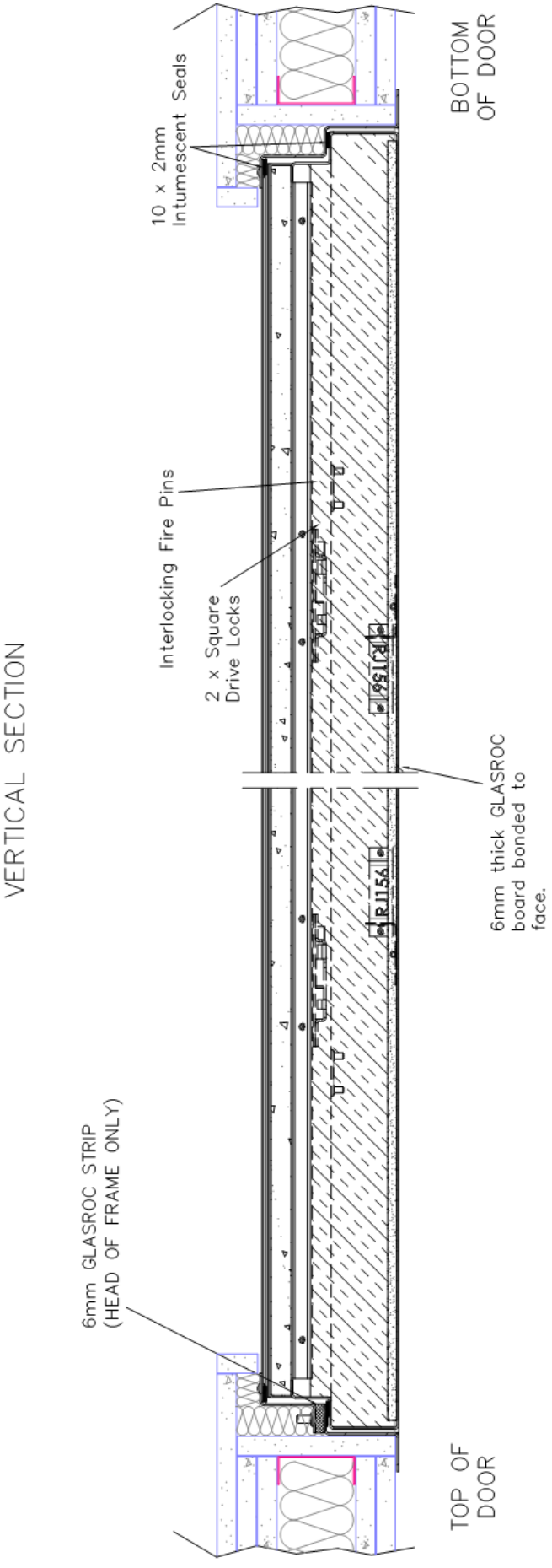
The access panel leaf was hinged on Ø5mm steel pins, and had 2No. Ø5 x 7mm long steel locking pins, fitted on the closing edge 230mm and 960mm from the threshold of the leaf.

The leaf was fitted with 2No. 'SLIK' system square drive locks, engaged, fitted at 300mm and 900mm from the threshold of the leaf.

2No. 10mm wide x 2mm thick Firestop Flexible Graphite intumescent seals were fitted on each edge, one on each of the upstands of the frame stop profile.

HORIZONTAL SECTION




VERTICAL SECTION
10 x 2mm
Intumescent Seals
BOTTOM
OF DOOR
Interlocking Fire Pins
2 x Square
Drive Locks
6mm thick GLASROC
board bonded to
face.
6mm GLASROC STRIP
(HEAD OF FRAME ONLY)
TOP OF
DOOR

3.2 Test 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	
Average set	113 (one hundred and thirteen) minutes
Maximum ≥ 100mm in from leaf edge	99 (ninety nine) minutes
Door frame ≥ 180ºc temp rise	61 (sixty one) minutes
Door frame ≥ 360ºc temp rise	102 (one hundred and two) minutes

* No failure of the test criteria had occurred at termination of the test at 132 minutes

4 Classification and direct field of application

4.1 Reference of classification

This classification has been carried out in accordance with clause 7 of BSEN 13501-2: 2007 + A1: 2009.

Performance Criteria

Integrity (E)

The assessment of integrity shall be made on the basis of the following three aspects:

a) cracks or opening in excess of given dimensions

b) ignition of a cotton pad

c) sustained flaming on the unexposed face

Classification for integrity shall be according to whether or not the element is also classified both for integrity and insulation, the value of integrity is that determined by whichever of the three aspects fails first. Where an element is classified without an insulation classification, the value of integrity is that determined by the time to failure of only the cracks/openings or sustained flaming aspects, whichever fails first.

Insulation (I_2)

The mean temperature rise on the unexposed face of the door leaf shall be limited to 140ºC above the initial mean temperature, with the maximum temperature rise at any point of the door leaf limited to 180°C. No temperature measurements shall be taken into account on the door leaf within 100mm from the border line of the visible part of the door leaf. The temperature rise at any point on the frame shall be limited to 360°C, measured at 100mm from the visible edge (on the unexposed face) of the door leaf, if the frame is wider than 100mm, otherwise it shall be measured at the frame supporting construction boundary.

Radiation (W)

Classification for radiation shall be given by the time for which the maximum value of radiation, measured in the test standard, does not exceed 15kW/m^2. An element which satisfies the thermal insulation criterion I, I1 or I2 is also deemed to satisfy the W requirement for the same period.

4.2 Classifications

The 'Premium Range Fire Rated EI$_2$ 90 Access Panel' may be classified to the following combinations of performance parameters and classes as appropriate:

R	E	I_1	I_2	W	*t*	*t*	-	M	C	S	IncSlow	sn	ef	r
	✓		✓	✓										

Considering the test evidence submitted for classification, the 'Premium Range Fire Rated EI$_2$ 90 Access Panel' provides the following classification:

Fire resistance classification =
EI$_2$90, EI$_2$60, EI$_2$45, EI$_2$30, EI$_2$20, EI$_2$15
E120, E90, E60, E45, E30, E20, E15

4.3 Field of direct application

As stated in clause 13 of BSEN 1634-1: 2014, the results of the test are directly applicable to similar constructions where one or more of the changes listed under the Field of Direct Application are made. Other changes are not permitted by this document.

5 Limitations

This classification document does not represent type approval or certification of the product.

	Written and checked by:	**Authorised by:**
Signature:		
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Title:	Senior Technical Officer	Lead Technical Officer
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