

Field of Application Report

Kiwa Fire Safety Compliance Report PAR/10057/01 Revision E

Fire Resistance Standard: BS476: Part 22: 1987



Prepared for:

Eclisse UK

Assessed Product/System:

FD20 and FD30 Single and Double Leaf Sliding Doors Installed in Timber Frames within Fire Resisting Partition Walls

Assessed Performance:

20 or 30 minutes fire resistance

Issue Date

September 2023

Expiry Date

June 2028

Partner
for
Progress

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Issue and Amendment Record

REV	DATE	AUTHOR	REVIEW	SECTION	AMENDMENTS
-	March 2010	DC	DJI	-	-
A	March 2015	DC	MB	-	Review and revalidation of document. Minor typographical edits, but scope remains unaffected
B	May 2018	WL/DC	PNB	-	Inclusion of additional fire test evidence for double doors and associated changes.
C	May 2019	SP/WL	DC	-	Addition of new closing edge detail
D	June 2023	RS/WL	DC	3.5	Review and revalidation. Specific door types included.
E	September 2023	RS/WL	DC	3.5	Vicaima and XL Joinery door types included.

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1. Introduction

This report has been prepared by Kiwa Fire Safety Compliance (KFS), on the instruction of Eclisse UK, to define the Field of Application for timber-based door assemblies, comprising timber door leaves installed in timber frames within fire resisting partition walls, that are required to provide 20 or 30 minutes fire resistance performance, when adjudged against BS476: Part 22: 1987.

This assessment has been produced using the principles outlined in the [Passive Fire Protection Forum \(PFPF\): 'Guide to undertaking technical assessments of fire performance of construction products based on fire test evidence, 2021, Industry Standard Procedure'](#).

When establishing the variations in the construction that can achieve the required fire resistance performance, KFS complies with the principles found in the following documents:

- [BS ISO/TR 12470-2: 2017 'Fire resistance tests – Guidance on the application and extension of results from tests conducted on fire containment assemblies and products. Part 2: Non-load bearing elements'](#).
- [EN 15725: 2023: 'Extended application reports on the fire performance of construction products and building elements'](#).

It is proposed that variations to the tested specifications, as described in the following sections, may be accommodated into door assemblies, without reducing their potential to achieve a 20 or 30 minute integrity rating (as applicable), if tested in accordance with the method and criteria of BS476: Part 22: 1987. The omission of information on any components or manufacturing methods does not imply a lack of approval of those details, but these would need to be the subject of a separate analysis. Only variations specifically mentioned are supported by this assessment document, all other aspects must otherwise be as proven in tests summarised herein.

Unless stated otherwise, herein, this Field of Application considers the scope of approval for door assemblies that may be installed with either face exposed to fire conditions.

2. Test Evidence

The test evidence used to support this Field of Application Report is summarised in Appendix C of this report.

The appropriate performance of fire resisting doorsets is defined in Approved Document B of the Building Regulations England (2019 Edition with 2020 and 2022 Amendments), the Scottish Building Standards Technical Handbook (2022 edition), Approved Document B of the Building Regulations Wales (2006 Edition with 2010, 2013, 2016, 2017 and 2020 Amendments) or Technical Book E of the Building Regulations Northern Ireland (2012 Edition with 2014, 2016 and 2022 Amendments).

Table C1 in Appendix C of Approved Document B, which applies to England, identifies doorsets by their performance under test to BS EN 1634-1 or BS476: Part 22: 1987, in terms of integrity for a period of minutes, (e.g., E30/E60, if their performance is measured in terms of EN 1634-1, or FD30/FD60 for BS476: Part 22: 1987). It should be noted that a suffix (S) is added for doors where restricted smoke leakage at ambient temperatures is needed. The Scottish, Welsh and Northern Ireland documents also refer to the British and European Standards in Annex 2.A, Table B1 in Appendix B and Table 4.5 in Section 4, respectively of these documents.

These guidance documents thus give a parity of performance between the two test methods, and although the EN 1634-1 and the BS476: Part 22: 1987 test procedures are both generally based upon the ISO 834 fire resistance test method, there are differences. The major ones are thus;

- The method of measuring the furnace (exposure) temperature in the EN 1634-1 test is by means of plate thermocouples. The 'plates' have a greater thermal inertia than the bead thermocouples used in the BS476: Part 22: 1987 test, and therefore the heat input is higher than that given in BS476 at any given time during approximately the first 15 minutes of a fire resistance test.
- The furnace pressure in the EN 1634-1 test is neutral at a position 500mm above the threshold, compared to a nominal 1 metre in the BS476: Part 22: 1987 test. As a consequence, the pressure over the upper part of the doorset is higher and, therefore, is more onerous in the EN test.

There are other minor procedural matters that also increase the severity of the EN method. These, combined with the issues identified in a) and b) above, mean that the EN 1634-1 test is generally accepted as being a more onerous test than BS476: Part 22: 1987. This is borne out by KFS's experience of fire resistance testing already performed since the introduction of the European test standard.

As such, it is our opinion that any test results on doorsets tested to EN 1634-1 can be utilised in situations requiring a performance defined against the BS476: Part 22 test method, or when making assessments and judgements against the BS476 criteria, but not vice versa.

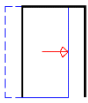
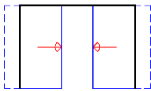
3. Scope of Approval

3.1 Specimen Overview

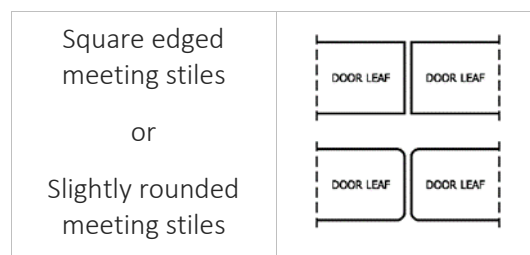
The Eclipse sliding door assemblies include a sliding leaf arrangement installed within an exposed timber frame construction, which fixes back to a steel subframe within a plasterboard-lined fire resisting partition wall. Details of the specimen construction and installation are held on file by KFS.

3.2 Door Assembly Configuration

The approved maximum leaf sizes and configurations of door assemblies comprising Eclipse FD20 and FD30 sliding door leaves are outlined below. Note that this is the maximum leaf size that the Eclipse pocket door system can accept, and should subsequent sections in this report include limitations on the size of the door leaf, then the smaller of the two shall take precedence.

	CONFIGURATION	ENVELOPE OF APPROVED LEAF SIZES
	<ul style="list-style-type: none"> • Unlatched • Horizontally Sliding • Single Door 	Figure PAR/10057/01E: B01 in Appendix B
	<ul style="list-style-type: none"> • Unlatched • Horizontally Sliding • Double Door ^{Note 1} 	Figure PAR/10057/01E: B02 in Appendix B

^{Note 1} Double leaf door assemblies must have square edged (or slightly rounded) meeting stiles.



3.3 Supporting Construction

The supporting construction may be timber or steel stud plasterboard clad partitioning of the following configurations.

Table 1 – Supporting Construction Configuration

STUD DEPTH	DOOR CONFIGURATION	PLASTERBOARD (No. and thickness of layers to each face of studwork)
70mm	Single Door	1no 12.5mm thick
70mm	Single Door	1no 15mm thick
70mm	Single or Double Door	2no 12.5mm thick
75mm	Single Door	1no 12.5mm thick
75mm	Single or Double Door	2no 12.5mm thick
95mm	Single or Double Door	2no 12.5mm thick
100mm	Single or Double Door	2no 12.5mm thick

The construction must be of a type that has been tested or assessed to provide in excess of 30 minutes fire resistance to BS476: Part 22: 1987 at the required size, when incorporating door assembly openings. The method of forming the aperture must be as tested by the partition manufacturer.

Unless otherwise demonstrated by fire resistance testing the boards used in the configurations listed above shall be Type F (in accordance with EN 520).

Reference to partitioning is in the context of permanent elements, such as those designed and proven by the plasterboard manufacturers – this report does not approve use of the proposed door assemblies in proprietary ‘demountable’ partitions, which must be subject to a full and independent appraisal of the particular system and door assemblies therein.

3.4 Steel Subframe

The Eclisse steel subframe consists of horizontal and vertical steel channels and sections, as listed in Table 2, below.

Table 2 - Steel Subframe Components

ITEM	COMPONENT
1	Rear vertical
2	Pocket entrance verticals
3	Track holder 1
4	Pocket horizontal
5	Metal door post
6	Track holder 2
7	Floor bracket
8	Frame for self-closing mechanism
9	Self-closing mechanism
10	Fixing plate Note 2

Note 2 The fixing plate is present in double door assemblies only and is required in fixing of the self-closing system.

The subframe must be fixed back to the supporting construction with steel fixings, and clad with plasterboard, as per Section 3.3.

3.5 Door Leaf Specification

The following sections detail the specifications required to meet when selecting a door leaf for use with the Eclisse sliding door system.

- Sections 3.5.1 to 3.5.5 comprises specifications for particular door types when used with the Eclisse sliding door system.
- These door assemblies are approved for use as solid leaves and may not include glazed apertures.
- Section 3.5.6 provides parameters that are to be met for alternative door types than those listed in this report.

Use of this Field of Application Report with a certificated door design does not automatically maintain the chain of certification of the door. It is strongly recommended that the door manufacturer and/or the certification provider are contacted to understand the limitations of using this assessment in conjunction with a specific Third Party Certified door design. Any identifying certification labels or markings must be removed from the door design unless instructed otherwise by the certification provider.

3.5.1 Jeld Wen CF160

The leaf construction, below, is based upon the details contained within the test evidence WF 516236/R issue 1, and defines variations and tolerances, where it is considered that these will not adversely affect the intended fire resistance performance. The construction details are limited to the information available from the test reports.

For the sake of clarity, this report only approves doors that are rectilinear; i.e. adjacent door edges shall be straight, and at 90 degrees to each other, when viewed in elevation. In addition, doors shall be “flat”; i.e. not curved, when viewed in plan.

- These door leaves are limited to a maximum leaf size of 2040mm high x 926mm wide, in single and double leaf configurations.

COMPONENT		MATERIAL	MINIMUM DENSITY	DIMENSIONS
CORE ^{Note 3}		Flaxboard	340kg/m ³	Minimum 44mm thick
STILES		Softwood	450kg/m ³	Minimum 38mm thick x 33mm wide
RAILS – TOP/BOTTOM OUTER		Softwood	450kg/m ³	Minimum 38mm thick x 27mm wide
RAILS – TOP/BOTTOM INNER		Chipboard	530kg/m ³	Minimum 38mm thick x 38mm wide
FACINGS (MUST HAVE SAME OPTION ON EACH FACE OF LEAF; AND ON BOTH LEAVES OF DOUBLE DOORS)		HDF	945kg/m ³	Minimum 3mm thick
ADHESIVE	FACING	PVA		
MINIMUM LEAF THICKNESS				44mm – may be reduced in fielded sections. ^{Note 4}
OPTIONAL ADDITIONAL DECORATIVE FINISHES		Timber veneer or decorative plastic based laminate (to leaf faces only)		Maximum 2mm thick
		Paint or varnish		Maximum 0.5mm thick

^{Note 3} Unless otherwise tested, and approved by KFS, the core for each leaf shall be formed from one single piece.

Gaps between the core and stiles/rails shall be kept to a minimum, but shall not exceed 1.5mm at any edge.

Note 4 This leaf type may be supplied as a flush door in the following styles.

- Paint Grade Premium
- Ash Panel
- Beech Panel
- Koto Panel
- Sapele Panel
- Walnut Panel
- White Oak Panel

Alternatively, the total leaf thickness of the above referenced door construction may be reduced up to 17mm in fielded sections to create a panelled effect leaf. The doors may be supplied with the following Raised and Fielded designs only.

- Arlington 6 Panel
- Atherton 4 Panel
- Bostonian 6 Panel
- Linea Panel
- Oakfield 4 Panel
- Oregon 4 Panel

Decorative details, such as face applied mouldings that project from the face of the door leaf are not permitted.

3.5.2 Jeld Wen CF192

The leaf construction, below, is based upon the details contained within the test evidence referenced in WF 515495 Issue 2, and defines variations and tolerances, where it is considered that these will not adversely affect the intended fire resistance performance. The construction details are limited to the information available from the test reports.

For the sake of clarity, this report only approves doors that are rectilinear; i.e. adjacent door edges shall be straight, and at 90 degrees to each other, when viewed in elevation. In addition, doors shall be “flat”; i.e. not curved, when viewed in plan.

- These door leaves are limited to a maximum leaf size of 2040mm high x 926mm wide, in single and double leaf configurations.

COMPONENT		MATERIAL	MINIMUM DENSITY	DIMENSIONS
CORE ^{Note 5}		Tubular core	430kg/m ³	Minimum 38mm thick
STILES/RAILS		Softwood	440kg/m ³	Minimum 38mm thick x 33mm wide
RAILS – TOP/BOTTOM OUTER		Softwood	440kg/m ³	Minimum 38mm thick x 27mm wide
RAILS – TOP/BOTTOM INNER		Chipboard	530kg/m ³	Minimum 38mm thick x 38mm wide
FACINGS (MUST HAVE SAME OPTION ON EACH FACE OF LEAF; AND ON BOTH LEAVES OF DOUBLE DOORS)		HDF	800kg/m ³	Minimum 2.7mm thick
ADHESIVE	FACING	PVA		
MINIMUM LEAF THICKNESS				44mm ^{Note 6}
OPTIONAL ADDITIONAL DECORATIVE FINISHES		Timber veneer or decorative plastic based laminate (to leaf faces only)		Maximum 2mm thick
		Paint or varnish		Maximum 0.5mm thick

^{Note 5} Unless otherwise tested, and approved by KFS, the core for each leaf shall be formed from one single piece.

Gaps between the core and stiles/rails shall be kept to a minimum, but shall not exceed 1.5mm at any edge.

Note 6 This leaf type may be supplied as a flush door in the following styles.

- Paint Grade Premium
- Ash Panel
- Beech Panel
- Koto Panel
- Sapele Panel
- Walnut Panel
- White Oak Panel

Decorative details, such as face applied mouldings that project from the face of the door leaf are not permitted.

3.5.3 Vicaima Option 1

The leaf construction, below, is based upon the details contained within the test evidence referenced in Applus 23/32302197, and defines variations and tolerances, where it is considered that these will not adversely affect the intended fire resistance performance. The construction details are limited to the information available from the test report.

For the sake of clarity, this report only approves doors that are rectilinear; i.e. adjacent door edges shall be straight, and at 90 degrees to each other, when viewed in elevation. In addition, doors shall be “flat”; i.e. not curved, when viewed in plan.

- These door leaves are limited to a maximum leaf size of that shown in Figure B01, in single and double leaf configurations only.

COMPONENT		MATERIAL	MINIMUM DENSITY	DIMENSIONS
CORE ^{Note 7}		Vicaima Flaxboard	340kg/m ³	Minimum 38mm thick
STILES		Softwood	450kg/m ³	Minimum 38mm thick x 33mm wide
RAILS – TOP/BOTTOM OUTER		Softwood	450kg/m ³	Minimum 38mm thick x 30mm wide
RAILS – TOP/BOTTOM INNER		Softwood	450kg/m ³	Minimum 38mm thick x 38mm wide
FACINGS (MUST HAVE SAME OPTION ON EACH FACE OF LEAF; AND ON BOTH LEAVES OF DOUBLE DOORS)		MDF	845kg/m ³	Minimum 3mm thick
ADHESIVE	FACING	PVA		
MINIMUM LEAF THICKNESS				44mm ^{Note 8}
OPTIONAL ADDITIONAL DECORATIVE FINISHES		Timber veneer or decorative plastic based laminate (to leaf faces only)		Maximum 2mm thick
		Paint or varnish		Maximum 0.5mm thick

^{Note 7} Unless otherwise tested, and approved by KFS, the core for each leaf shall be formed from one single piece.

Gaps between the core and stiles/rails shall be kept to a minimum, but shall not exceed 1.5mm at any edge.

^{Note 8} This leaf type may be supplied in the following styles.

- MD55 embossed door design (Cottage style)

3.5.4 Vicaima Option 2

The leaf construction, below, is based upon the details contained within the test evidence referenced in WF 511259, and defines variations and tolerances, where it is considered that these will not adversely affect the intended fire resistance performance. The construction details are limited to the information available from the test report.

For the sake of clarity, this report only approves doors that are rectilinear; i.e. adjacent door edges shall be straight, and at 90 degrees to each other, when viewed in elevation. In addition, doors shall be “flat”; i.e. not curved, when viewed in plan.

- These door leaves are limited to a maximum leaf size of that shown in Figure B01, in single leaf configurations only.

COMPONENT		MATERIAL	MINIMUM DENSITY	DIMENSIONS
CORE ^{Note 9}		Vicaima Solid core board	500kg/m ³	Minimum 37mm thick
STILES		Softwood	420kg/m ³	Minimum 37mm thick x 38mm wide
RAILS – TOP/BOTTOM OUTER		Softwood	450kg/m ³	Minimum 37mm thick x 37mm wide
RAILS – TOP/BOTTOM INNER		Softwood	450kg/m ³	Minimum 37mm thick x 33mm wide
FACINGS (MUST HAVE SAME OPTION ON EACH FACE OF LEAF; AND ON BOTH LEAVES OF DOUBLE DOORS)		MDF	730kg/m ³	Minimum 3mm thick
ADHESIVE	FACING	PVA		
MINIMUM LEAF THICKNESS				44mm ^{Note 10}
OPTIONAL ADDITIONAL DECORATIVE FINISHES		Timber veneer or decorative plastic-based laminate (to leaf faces only)		Maximum 2mm thick
		Paint or varnish		Maximum 0.5mm thick

^{Note 9} Unless otherwise tested, and approved by KFS, the core for each leaf shall be formed from one single piece.

Gaps between the core and stiles/rails shall be kept to a minimum, but shall not exceed 1.5mm at any edge.

^{Note 10} This leaf type may be supplied as a flush door in the following styles.

- Essential Flush Vertical
- Essential Flush Horizontal
- Essential Plain Colours

3.5.5 XL Joinery FD30

The leaf construction, below, is based upon the details contained within the Field of Application report referenced in PAR/10899/01, and defines variations and tolerances, where it is considered that these will not adversely affect the intended fire resistance performance. The construction details are limited to the information available from the test reports referenced in PAR/10899/01.

For the sake of clarity, this report only approves doors that are rectilinear; i.e. adjacent door edges shall be straight, and at 90 degrees to each other, when viewed in elevation. In addition, doors shall be “flat”; i.e. not curved, when viewed in plan.

- These door leaves are limited to a maximum leaf size of 2040mm high x 926mm wide, in single or double leaf configurations only.

COMPONENT		MATERIAL	MINIMUM DENSITY	DIMENSIONS
CORE & FACINGS	OPTION 1	As detailed in the current revision of PAR/10899/01	550kg/m ³	Minimum 44mm thick
	OPTION 2A			
	OPTION 2B			
LIPPINGS – ALL FOUR EDGES		Solid or finger-jointed hardwood	640kg/m ³	As detailed in the current revision of PAR/10899/01
OPTIONAL ADDITIONAL DECORATIVE FINISHES <small>Note 11</small>		Timber veneer or decorative plastic-based laminate (to leaf faces only)		Maximum 2mm thick
		Paint or varnish		Maximum 0.5mm thick, or a maximum of 5 coats whichever is greater.

Note 11 The KFS Field of Application Report PAR/10899/01 permits the use of decorative to create various door designs. The following styles are approved for use with the Eclisse pocket door system as detailed herein and are covered under the XL Joinery Laminate collection.

- Ravenna
- Salerno
- Forli
- Palermo

3.5.6 Alternative Door Types

As well as the door types detailed in Sections 3.5.1 and 3.5.2 a door leaf that complies with the following limitations may also be selected for use with the Eclipse sliding door system;

- The door core being considered for use must have test evidence to BS476: Part 22: 1987 or BS EN 1634-1, which has been generated at a UKAS accredited test laboratory. The test evidence must demonstrate that the door design is capable of a minimum of 20 or 30 minutes fire resistance performance, as required, in the proposed configuration. Other than mounting the door into the Eclipse sliding door frame in accordance with the specification given in Section 3 of this report. No other changes to the tested specimen are covered by this assessment (e.g. door leaf sizes, glazing, leaf size adjustment).
- Alternative door cores meeting the above specification must follow the scope of approval given in Section 3 of this Engineering Assessment Report with respect to installation, pocket details, hardware, and intumescent seals etc.
- The alternative door cores may be glazed according to their supporting documentation, providing the door core is approved for flush glazing details i.e. glazing beads that do not project from the face of the door due to bolection returns or other decorative details. Such glazing details typically require glass that can provide radiation or insulation performance in terms of transferred heat.
- Decorative details, such as face applied mouldings that project from the face of the door leaf are also not permitted.

3.6 Timber Frames

There are two options for framing, both timber, with one being for single sliding doors only and the other for both single and double sliding doors. The different options are detailed in Sections 3.6.1 and 3.6.2.

Timber frames must be either;

- Constructed from hardwood with a minimum measured density of 650kg/m³ (measured at 12% moisture content). Timber must be straight grained and of appropriate quality in accordance with EN 942: 2007. Moisture content to be 10 ± 2% or to suit the required internal joinery moisture content specification.
- Constructed from finger jointed oak with a minimum measured density of 800kg/m³ (measured at 12% moisture content). Timber must be straight grained and of appropriate quality in accordance with EN 942: 2007. Moisture content to be 10 ± 2% or to suit the required internal joinery moisture content specification.

The gap between the face of the door and the frame should be 1 – 4mm. Gaps under doors should not exceed 7mm.

3.6.1 Frame Option 1

This frame may be used for single door configurations only and comprises individual sections for use at the head, leading and trailing edges of the door assembly.

Figures 1 & 2 show options for the section at the closing edge of the frame. Figure 2 details an optional frame design that comprises three separate timber sections which, when glued with a non-thermally softening adhesive such as urea formaldehyde (i.e. Cascamite) or Resorcinol, create a complete frame. Both the single and multiple piece frame options overlap the supporting construction and include a rebate to accept the door in the fully closed position. The depth of the frame varies to accept the supporting construction. Other dimensions are shown in the figures below.

Non-thermally softening adhesives, such as urea formaldehyde (i.e. Cascamite) or Resorcinol, are often used when constructing fire resisting assemblies. KFS have determined that if frame design that comprises multiple pieces, Figure 2, was utilised incorporating non-thermally softening adhesive as the method to join the components of this profile, it would not have a detrimental effect of the fire resistance performance of the door assembly if it was tested in accordance with BS476: Part 22: 1987.

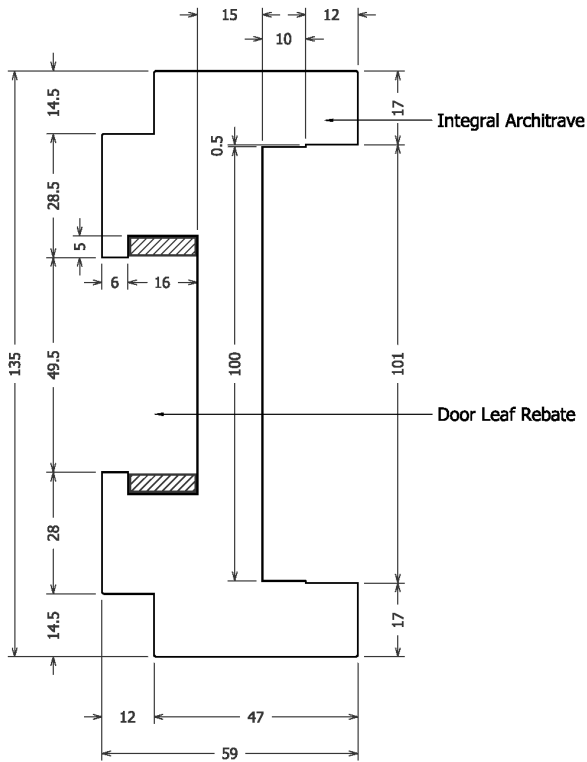


Figure 1: Closing Edge Jamb
Single piece

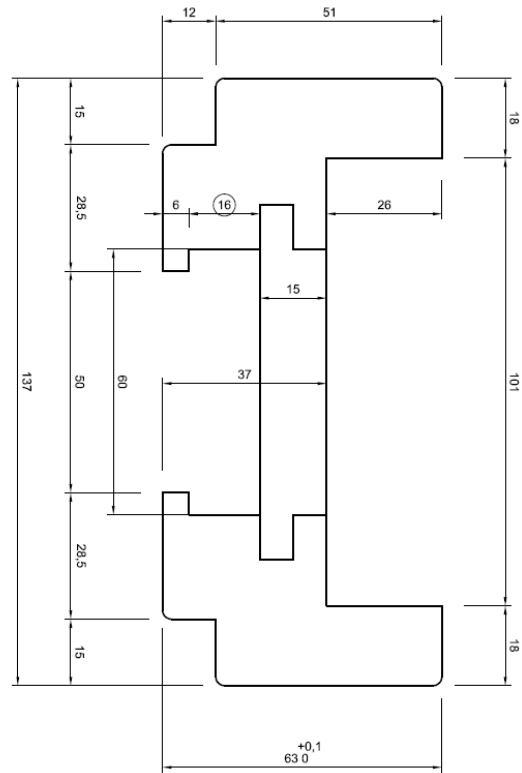


Figure 2: Closing Edge Jamb
Multiple pieces

The vertical edges of the pocket are framed, at both faces, using timber sections as shown in the figure below.

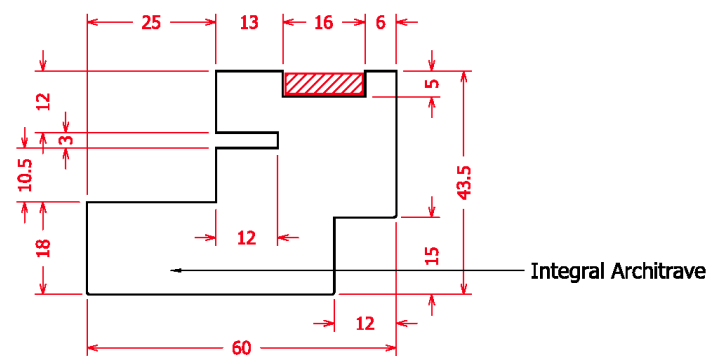


Figure 3: Vertical Pocket Edge

The head of the aperture are framed, at both faces, using timber sections as shown in the figure below.

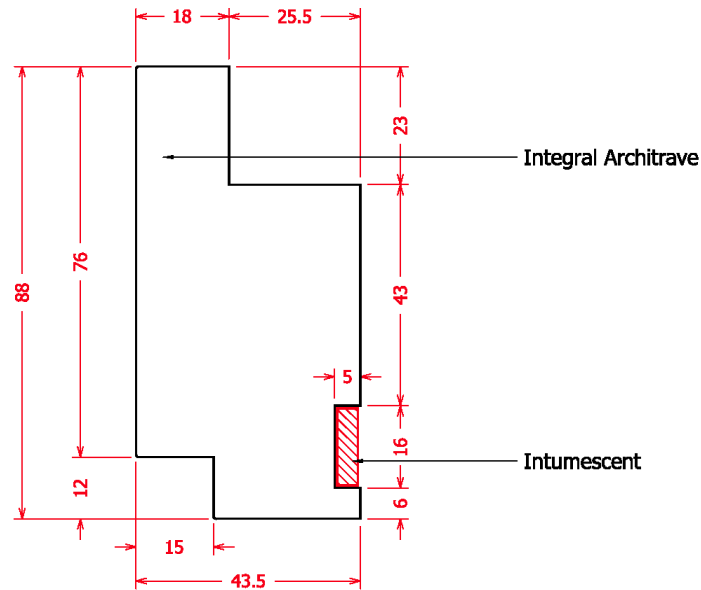


Figure 4: Head Aperture Framing Piece

These sections shall be fitted back to the supporting construction at minimum 3No. locations at the vertical edges, with maximum centres of 900mm. At the head, a minimum of 2No fixings shall be used. These must be located either side of the leaf and shall have maximum centres of 390mm. The jambs shall be installed using an intumescent mastic, that seals between the jamb and the steel frame. The intumescent mastic shall be a product proven in such timber applications, or tested, assessed or Third Party Certificated solutions may also be utilised using a product proven in such timber applications.

3.6.2 Frame Option 2

This frame may be used for single door or double door configurations. The timber frame is comprised of two individual sections. One section is located at the jambs and the other at the head, both fixed back to the supporting construction and installed on both faces.

Jambs of double and single doors may include the below sections, fitted back to the supporting construction at 100mm from finished floor level. Door assemblies, with leaves greater than 2040mm high, shall incorporate a further fixing at the midpoint between the lower fixing and the head of the frame. The timber frame sections at jambs, in double doors are installed individually, while for single doors the sections are linked by a 'stop'. This stop must be minimum thickness 15mm and be of the same material as the timber frame and may be integral or planted in position. Both frame styles are detailed below.

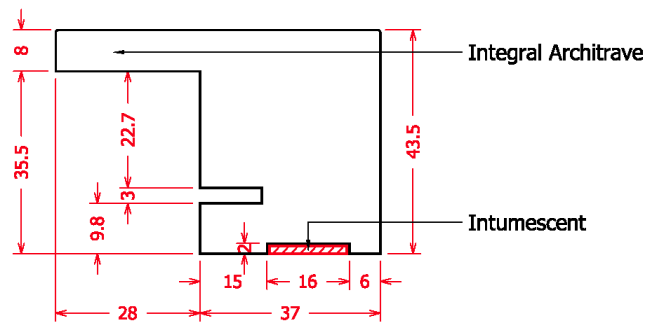


Figure 5: Vertical Pocket Trailing Edge

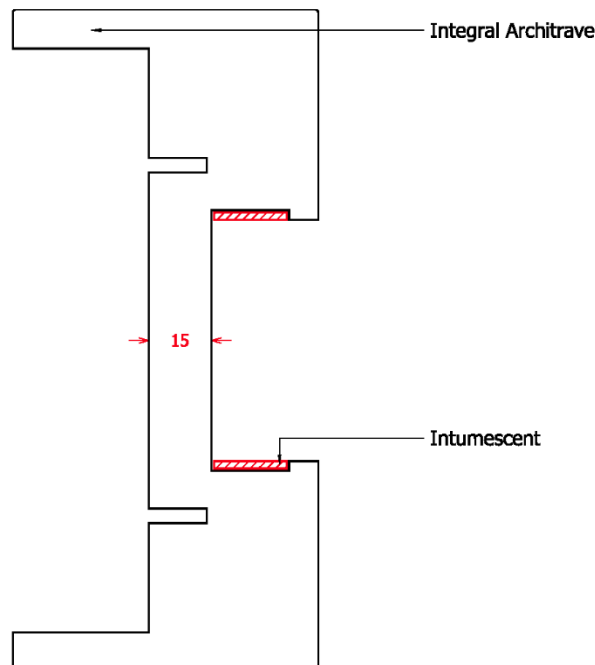


Figure 6: Vertical Pocket Leading Edge

The head of the aperture is framed, at both faces, using timber sections as shown in the figure below. These sections shall be fitted back to the supporting construction with a minimum of 4No fixings, and these must be located either side of the leaf and shall have maximum centres of 390mm.

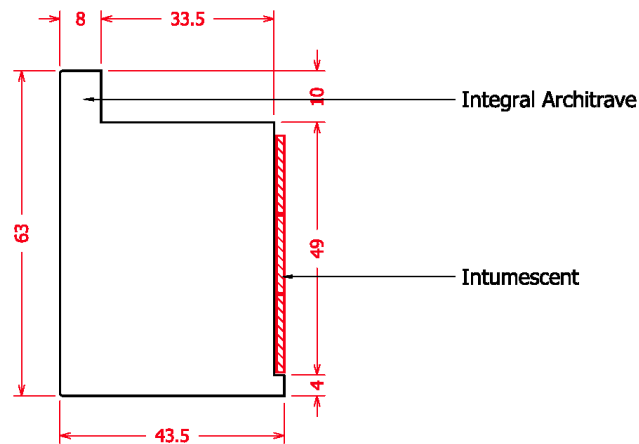


Figure 7: Head Aperture Framing Piece

3.7 Intumescent Seals

The intumescent seal specifications, widths, and positions are shown in Appendix A, based upon tested details.

3.8 Door Closers

FD30 door assemblies must be fitted with a self-closing device, whereas FD20 door assemblies may not require self-closing devices (guidance must be sought from the approving authorities to ensure that the self-closing device can be omitted from an FD20 doorset). This assessment is only applicable for door leaves that are fully closed. Approved Document B, Volumes 1 and 2, details particular circumstances where self-closing devices are not required to be installed on door assemblies. These approved documents, as well as the approving authorities, shall be consulted to determine where self-closing devices shall and shall not be installed.

The door leaves tested with the Eclisse pocket system have been tested incorporating the BIAS anti-slam closer mechanism. This may be fixed at the head of single and double leaf horizontally sliding door assemblies, as approved herein.

Where required, a bespoke self-closing device has been developed by Eclisse and tested within the sliding door construction. It is essential that the closers are of the correct power rating for the width and weight of the door assemblies (minimum power size 3). The self-closing device must be fitted according to the manufacturer's instructions, and be adjusted so that it is capable of fully closing the door leaf from any position of opening.

3.9 Non-Essential Hardware Items

ITEM	SPECIFICATION
Push plates, kick plates, etc:	Maximum 2mm thick plastic, pvc or metal plates may be recessed into the face of door leaves by maximum 1mm thick by 200mm wide. Plates must be installed such that there in a minimum of 100mm from the leaf edges.
Surface mounted pull handles:	These may be fixed to the door assemblies, provided that the fixing points are no greater than 500mm apart. Pull handles that are fixed through the leaf should use clearance holes as close fitting as possible to the bolt.
Rebated pull handles	<p>The Eclipse Recessed Pull Handle (produced from a zamak alloy), with a 48mm diameter, routed into each face of the leaf. Pull handle fitted in to 9mm recess on each face, back-to-back (such that minimum 26mm of door core remains between two handles). Pull handles to be bedded on <i>No Nonsense Intumescent Sealant</i>. No additional fixings are required. Handles to be fitted no higher than 1000mm from the threshold of the door leaf. The following limitations must also apply;</p> <ul style="list-style-type: none"> • May be used on the flush designs of the CF160 leaf only as detailed by this report, or in door leaves that have been tested with a recessed flush pull handle. • Spacing of flush pull handle from other features of the door leaves such as glazed apertures, recessed panels and hardware (all only if permitted) shall be as required by the supporting documentation of the door type.

3.10 Insulation Performance

This report considers the door assemblies with regards of their ability to achieve up to 30 minutes integrity performance if they were to be tested in accordance with BS 476: Part 22: 1987. Integrity performance is the measure of performance for a fire door as laid out in Approved Document B.

There are elements of the timber door constructions that would achieve 30 minutes insulation performance when evaluated to Section 7 in BS 476: Part 22.

In the fire resistance test data sponsored by Eclipse, the insulation performance of the assemblies was recorded and achieved a performance equal to that of the integrity performance of the door assembly.

It is therefore demonstrated that the inclusion of the Eclipse pocket door hardware to a door assembly does not restrict the door assembly from achieving insulation performance.

An independent review of the proposed door assemblies should be carried out if insulation performance is required, and the commentary herein is provided to indicate that insulation performance of an assembly may be possible.

4. Conclusion

Based upon the available test evidence, and subsequent analysis performed by Kiwa Fire Safety Compliance if the proposed Eclisse single and double leaf sliding doors installed in timber frames within fire resisting partition walls were manufactured and installed in accordance with the requirements of this Field of Application Report; the leaf sizes are within the envelope of approved dimensions/sizes given for the configuration outlined in Appendix B; and the hardware and intumescent seal specification are in accordance with the recommendations of this report, then the assemblies, as described, would satisfy the integrity criteria for 20 or 30 minutes, as applicable, when tested for fire resistance to the conditions of BS476: Part 22: 1987.

5. Declaration by the Applicant

KFS Field of Application Report	PAR/10057/01 Revision E
Client	Eclisse UK
<p>We the undersigned confirm that we have read and complied with the obligations placed on us by the</p>	
<p>Passive Fire Protection Forum (PFPF) - Industry Standard Procedure 2021 ‘Guide to Undertaking Technical Assessments of Fire Performance of Construction Products Based on Fire Test Evidence’</p>	
<ul style="list-style-type: none"> • We confirm that any changes which are subject of this assessment have not to our knowledge been tested to the standard against which this assessment has been made. • 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. • 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. • 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. 	
Signature	
Name	
Position	
Company Name	
Date	

6. Limitations

This report addresses itself solely to the ability of the proposed assemblies described to satisfy the criteria of the fire resistance test and does not imply any suitability for use with respect to other unspecified criteria.

It is the responsibility of others to establish whether the proposed product meets any other relevant requirements, including any other requirements for fire performance and life safety, as defined in documents such as the Building Regulations, and the Fire Strategy/Risk Assessment for the project.

This document only considers the door assemblies described, herein, and assumes that the surrounding construction will provide no less restraint than the tested assembly and that it will remain in place and be substantially intact for the full fire resistance period.

This assessment is issued on the basis of test data and information to hand at the time of issue. If contradictory evidence becomes available to KFS, 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.

As per the guidance outlined in the [Passive Fire Protection Forum \(PFPF\): 'Guide to undertaking technical assessments of fire performance of construction products based on fire test evidence, 2021, Industry Standard Procedure'](#), appropriate action has been taken to mitigate the risk of a conflict of interest arising during the preparation of this report. All individuals involved in the production, or subsequent review, of this assessment have declared any perceived conflicts of interest, with regards to the sponsor or subject(s) of this report, prior to working on this project.

The assessor and reviewer have been deemed suitable for involvement in the production of this assessment in accordance with the guidance outlined in the [Passive Fire Protection Forum \(PFPF\): 'Guide to undertaking technical assessments of fire performance of construction products based on fire test evidence, 2021, Industry Standard Procedure'](#).

Constructional information in this report is taken from details provided to KFS, and/or from fire resistance test reports referenced herein. It is therefore limited to the information given in those documents. It is necessarily dependent upon the accuracy and completeness of that information. Where constructional or manufacturing details are not specified, or discussed, herein, it should not, therefore, be taken to infer approval of variation in such details from those tested or otherwise approved.

The analysis and conclusions within this report are based upon the likely fire resisting performance of a complete door assembly that is manufactured and installed in accordance with this document, and offered for fire resistance testing in 'perfect' condition. In practice, management procedures must be in place in any building where the door assemblies are installed, to ensure that no parts of the assembly are damaged or faulty. Further, the doors must open and close without the use of undue force. The edge gaps/alignment of door leaves must be in accordance with the tolerances defined, herein, when the doors are closed. Any such shortfalls in respect to the condition of the assemblies will invalidate the approval by KFS, and may seriously affect the ability of the assemblies to provide the required level of fire resistance performance. Determination of what constitutes wear or damage, and any corrective actions in order to return assemblies to the required condition, should only be carried out following consultation with the manufacturer and KFS.

This report is not intended to be a complete specification for the proposed assemblies and it is the responsibility of others to ensure that the assemblies are suitable for the intended purpose; whilst incorporating the requirements of this report. Further, the assemblies must be manufactured/installed by experienced/trained personnel using appropriate and established working practices/techniques.

This report applies to fire door assemblies that are evaluated to BS476: Part 22: 1987; which is an applicable test method currently referenced within guidance to Building Regulations in the United

Kingdom, and in building codes in some other countries. However, KFS have a duty of care to advise that introduction of CE Marking may become compulsory for fire resisting doorsets marketed in the EU, during the validity period of this report; in which case, users should contact KFS for further details/advice.

Where the assessed constructions have not been subject to an on-site audit by KFS, it is the responsibility of anyone using this report to confirm that all aspects of the assemblies fully comply with the descriptions and limitations, herein.

Any materials specified in this report have been selected and judged primarily on their fire performance. KFS do not claim expertise in areas other than fire safety. Whilst observing all possible care in the specification of solutions, we would draw the reader's attention to the fact that during the construction and procurement process, the materials used should be subjected to more general examination regarding the wider Health and Safety, and CoSHH Regulations. Designers, manufacturers and installers are reminded of their responsibilities under the CDM Regulations; but particularly with regard to installation and maintenance of heavy or inaccessible items.

This assessment considers the fire resistance performance of the door assemblies when tested with the leaves in the closed position, within the frame reveal; either retained by the latch, or self-closing device, or locked shut, as applicable. The door assemblies will only provide the assessed fire performance when in a similar configuration; and it is the responsibility of the building occupants/owner to ensure that this is the case.

This Report is provided to the sponsor on the basis that it is a professional independent engineering evaluation as to what the fire performance of the construction/system would be should it to be tested to the named standard. It is KFS's experience that such an evaluation is normally acceptable in support of an application for building approvals, certainly throughout the UK and in many parts of Europe and the rest of the world.

However, unless KFS have been commissioned to liaise with the Authorities that have jurisdiction for the building in question for the purpose of obtaining the necessary approvals, KFS cannot assure that the document will satisfy the requirements of the particular building regulations for any building being constructed.

It is, therefore, the responsibility of the sponsor to establish whether this evidence is appropriate for the application for which it is being supplied and KFS cannot take responsibility for any costs incurred as a result of any rejection of the document for reasons outside of our control. Early submittal of the Report to the Authorities will minimise any risks in this respect.

7. Validity

This Field of Application Report has been prepared based on Kiwa Fire Safety Compliance's present knowledge of the products described, the stated testing regime and the submitted test evidence.

The assessment is valid initially for a period of five years after which time it is recommended that it be submitted to Kiwa Fire Safety Compliance for re-evaluation. For this reason, anyone using this document after June 2028 should confirm its ongoing validity.

This assessment report is not valid unless it incorporates the declaration, in Section 5, duly signed by the applicant.

Prepared by:



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Appendix A Assessed Intumescent Seal Specifications

Assessed Intumescent Seal Specifications

The assessed Intumescent Seal Specifications for Eclisse FD20 and FD30 sliding door Leaves installed in timber frames within fire resisting partition walls.

Single Door Assemblies

LOCATION	INTUMESCENT SEAL SPECIFICATION
Head - Frame Reveal (both faces)	1no 15 x 4mm or 15 x 1.4mm seal; fitted within the frame reveal, on each side of the door leaf, opposing the faces of the door, 6mm from the opening aperture
Jams – Frame Reveal (both faces)	1no 15 x 4mm or 15 x 2mm seal; fitted within the frame reveal, on each side of the door leaf, opposing the faces of the door, 6mm from the opening aperture

Double Door Assemblies

LOCATION	INTUMESCENT SEAL SPECIFICATION
Head - Frame Reveal (both faces)	1no 15 x 4mm or 15 x 1.4mm seal; fitted within the frame reveal, on each side of the door leaf, opposing the faces of the door, 6mm from the opening aperture
Meeting stiles	1no 10 x 2mm, fitted centrally in one leaf and 2no 10 x 2mm, fitted 14mm apart, centrally in the other leaf

Notes:

- i) The intumescent seals must be fitted in all Eclisse assemblies, for both 20 and 30 minute ratings, even if the selected door type has independent evidence/approval for use without intumescent seals.
- ii) The 2mm thick frame reveal seals are graphite base and must be supplied by Odice, Sealed Tight Solutions or Intumescent Seals.
- iii) The 2mm thick meeting stiles seals are Interdens and must be supplied by Odice, Sealed Tight Solutions or Intumescent Seals.
- iv) The 1.4mm thick seals are graphite based and must be supplied by Odice or Sealed Tight Solutions.

Appendix B Assessed Leaf Size Envelopes for Sliding Door Leaves Installed in Timber Frames

Figures PAR/10057/01D:B01 to B02

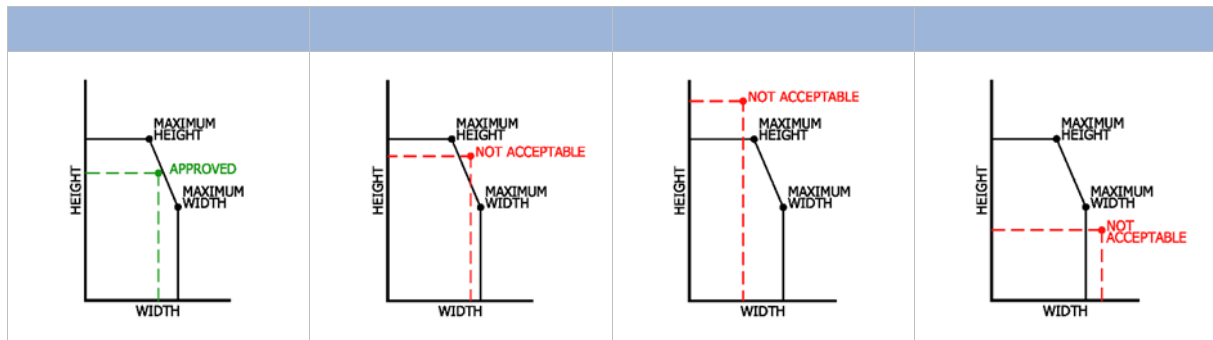
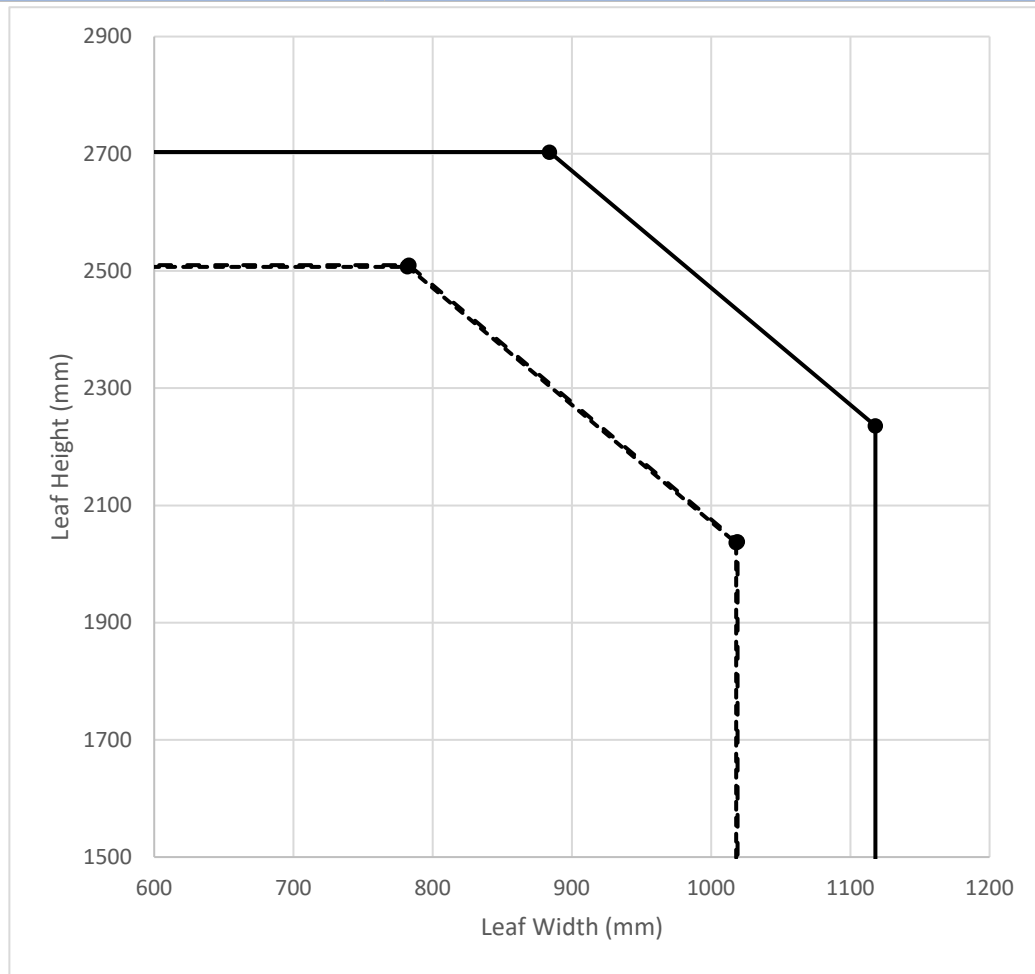


FIGURE B01	FD20 OR FD30	CONFIGURATION: UNLATCHED, HORIZONTALLY SLIDING, SINGLE LEAF, WITHOUT OVERPANEL
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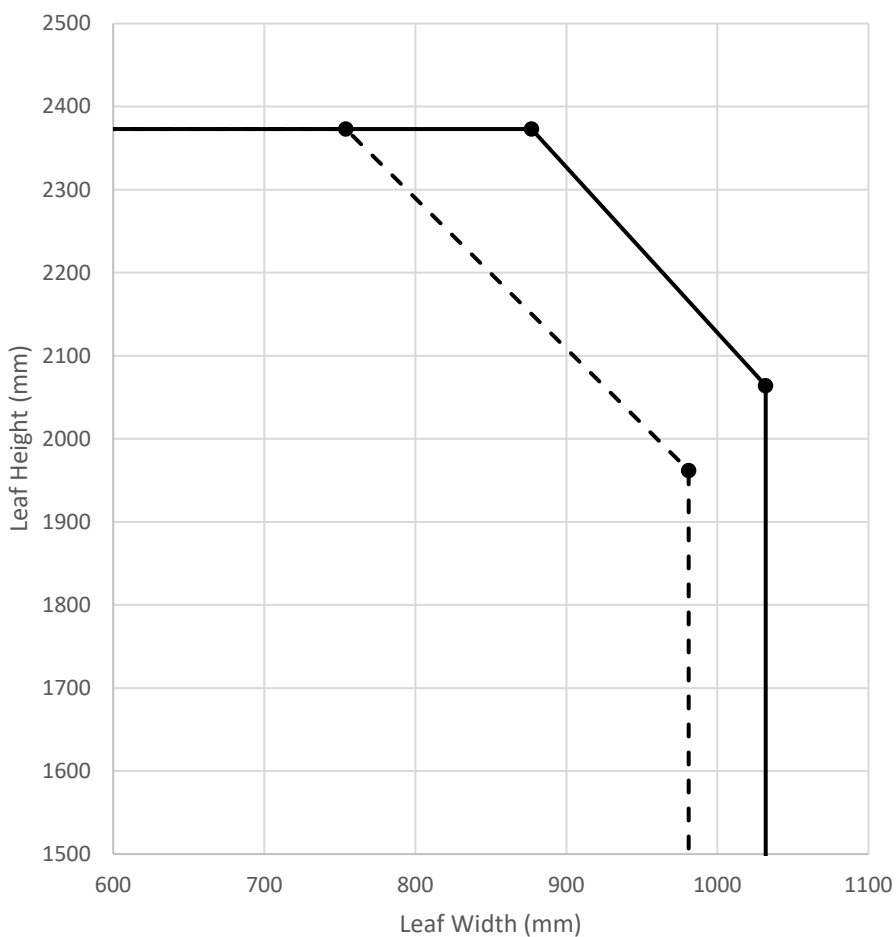


Door Type	Leaf Height	Leaf Width
FD20 and FD30 (Maximum envelope size using Eclisse Pocket Door system)	2236mm	1118mm
	2703mm	884mm
Vicaima Option 1	2038mm	1019mm
	2510mm	783mm
Vicaima Option 2	2036mm	1018mm
	2507mm	782mm

Note: Limitations on the leaf sizes may differ than those detailed by this figure, by the supporting documentation, leaf type or other sections in this report. In such cases the smaller size shall take precedence.

FIGURE B02

FD20 OR FD30



CONFIGURATION:

UNLATCHED, HORIZONTALLY SLIDING, DOUBLE LEAF, WITHOUT OVERPANEL

Door Type	Leaf Height	Leaf Width
FD20 and FD30 (Maximum envelope size using Eclisse Pocket Door system)	2064mm	1032mm
	2373mm	877mm
Vicaima Option 1	1962mm	981mm
	2415mm	754mm

Note: Limitations on the leaf sizes may differ than those detailed by this figure, by the supporting documentation, leaf type or other sections in this report. In such cases the smaller size shall take precedence.

Appendix C Summary of Fire Test Evidence

Summary of Primary Fire Test Evidence

TEST LABORATORY AND REPORT NO.	TEST DATE	CONFIGURATION TESTED	LEAF SIZE TEST	TEST STANDARD	INTEGRITY
Cambridge Fire Research CFR0912101	10.12.2009	Single leaf sliding door installed in a timber frame within a partition wall	2110mm high x 1026mm wide x 44mm thick leaf	BS EN1634-1: 2000	38 minutes
Warringtonfire WF 385794	07.07.2017	Double leaf sliding door installed in a timber frame within a partition wall	2040mm high x 926mm + 926mm wide x 44mm thick leaf	BS 476: Part 22: 1987	44 minutes

Summary of Secondary Fire Test Evidence

TEST LABORATORY AND REPORT NO.	TEST DATE	CONFIGURATION TESTED	LEAF SIZE TEST	TEST STANDARD	INTEGRITY
Warringtonfire WF 148395	14.12.2005	Single leaf sliding door installed in a timber frame within a partition wall	2100mm high x 990mm wide x 43mm thick leaf	BS476: Part 22: 1987	32 minutes
Warringtonfire WF 516236/R	15.03.2022	Single hinged leaf utilising the CF160 construction	2037mm high x 926mm wide x 44mm thick	BS476: Part 22: 1987	32 minutes
Warringtonfire WF 515495	23.02.2022	Single hinged leaf utilising the CF192 construction	2040mm high x 926mm wide x 44mm thick	BS476: Part 22: 1987	36 minutes
		Single hinged leaf utilising the CF192 construction	2040mm high x 826mm wide x 44mm thick	BS476: Part 22: 1987	38 minutes
Warringtonfire WF 520543 Version 1	09.11.2022	Recessed pull handle on sliding door (specification as witnessed by KFS engineer)		BS 476: Part 22: 1987	48 minutes

TEST LABORATORY AND REPORT NO.	TEST DATE	CONFIGURATION TESTED	LEAF SIZE TEST	TEST STANDARD	INTEGRITY
Applus 23/32302197	19.04.2023	Single hinged leaf utilising the Vicaima MD55 construction	2040mm high x 926mm wide x 43.5mm thick	BS 476: Part 22: 1987	34 minutes
		Single hinged leaf utilising the Vicaima MD55 construction	2040mm high x 926mm wide x 43.5mm thick		37 minutes
Warringtonfire WF511259	14.02.2022	Single hinged leaf utilising the Vicaima essential flush construction	2040mm high x 926mm wide x 44mm thick	BS 476: Part 22: 1987	37 minutes
Applus 23/32302200	29.03.2023	Double hinged leaf utilising the Vicaima MD55 construction	2040mm high x 926/926mm wide x 44mm thick	BS 476: Part 22: 1987	31 minutes
Warringtonfire WF505197	01/07/2021	Double hinged leaf utilising the CF192 construction	2035mm high x 918/518mm wide x 44mm thick	BS 476: Part 22: 1987	32 minutes
Cambridge Fire Research CFR2206271	27/06/2022	Double hinged leaf utilising the CF192 construction	2041mm high x 927/426mm wide x 45mm thick	BS 476: Part 22: 1987	36 minutes
Cambridge Fire Research CFR2101221	22/01/2021	Double hinged leaf utilising the CF160 construction	2040mm high x 926/426mm wide x 44mm thick	BS 476: Part 22: 1987	37 minutes
KFS Field of Application Report PAR/10899/01 Revision I – ‘Field of Application for FD30 three-layer particleboard leaves, with or without feature grooves, installed in timber frames - BS476: Part 22: 1987’					

Some of the test evidence referenced in this Engineering Assessment Report is more than 5 years old. In accordance with industry practice, KFS have reviewed this test evidence, and have concluded that the evidence is still valid, and suitable to form the basis of this approval.

Some of the test evidence is not owned by Eclisse UK; but KFS have written permission from the test sponsor, to use the evidence in support of this assessment.

Note: Where appropriate, fire test evidence from glass, hardware, and intumescent seal manufacturers has also been considered when preparing this Field of Application Report.