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Title

Extended Field of Application for Falcon Timber Ltd

The Falcon Timber Ltd,

DC44-E30-STD-ULSASD-INT-G product family, 30-minute Fire Resisting Doorsets to BS EN 15269-3: 2022

Report No.:

WF550028

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Prepared for:

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1 Foreword

This Extended Field of Application (EXAP) report has been commissioned by Falcon Timber Ltd and relates to the fire resistance of the DC44-E30-STD-ULSASD-INT-G product family which comprises a 30-minute fire resisting timber based doorset design.

This EXAP report concerns test results obtained in accordance with test method BS EN 1634-1: 2014 + A1 2018; *Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 1: Fire resistance test for door and shutter assemblies and openable windows.*

The extended application process is carried out in conformity with the following standards:

- BS EN 15269-1: 2019; Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware – Part 1: General Requirements
- BS EN 15269-3: 2022; Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware – Part 3: Fire resistance of hinged and pivoted timber doorsets and openable timber framed windows.

The report is to be used for extending the field of application for the DC44-E30-STD-ULSASD-INT-G product family and has been written in accordance with the principles outlined in BS EN 15725: 2023; *Extended application on the fire performance of construction products and building elements: Principle of EXAP standards and EXAP reports.*

The report is to be used to support the formal fire resistance classification for the DC44-E30-STD-ULSASD-INT-G product family against BS EN 13501-2: 2023; *Fire classification of construction products and building elements Part 2: Classification using data from fire resistance tests, excluding ventilation services.*

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

To prepare this EXAP, in accordance with Annex A of BS EN 15269-3: 2022, the EXAP rules given in table A.1 and table A.2 of BS EN 15269-3: 2022 have been applied by experts competent in the field of fire resistance testing of hinged or pivoted doorsets with timber-based leaves.

2 Details of the Product

2.1 Product Technical Specification

The technical specification for the Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G product family being considered within this EXAP report is summarised as follows:

- The door leaf comprises a Falcon Timber Ltd, Duocore 44 door blank which includes an Albasia Falcata lamel / ply core constructed using 2no. layers of lamellas in a vertical orientation along with 3no. 2.6mm horizontally orientated ply veneer inner core and outer veneers with finishing hardwood vertical veneers 0.55mm thick.
- The door leaf is lipped on all edges with hardwood.
- The door leaf thickness is 44mm thick and is hung within a timber door frame.
- The doorset design incorporates glazing, hardware, intumescent seals and non-intumescent seals (i.e. smoke seals).
- The door design has been tested against the relevant EN standard for fire resisting door assemblies, BS EN 1634-1.
- The DC44-E30-STD-ULSASD-INT-G product family is intended for 30-minute fire resisting applications with integrity performance.

2.2 Product Family

The product family is referenced as the DC44-E30-STD-ULSASD-INT-G product family and the field of application defined in this report is based on the fire resistance test evidence for the doorset design, which is summarised in section 3. Analysis of specific construction details that require assessment using the rules given in BS EN 15269-3: 2022 are given within this report against the relevant element of construction, as appropriate.

The scope of application for the product family is summarised below:

- Latched and unlatched, single acting, single leaf doorsets opening towards and away from fire test conditions.
- Alternative doorset dimensions (smaller and greater than that tested)
- Doorsets fitted with and without glazed apertures.
- The doorset has various decorative and protective face options to suit end use application and aesthetic requirements.
- Hardware options: steel butt hinges, lock/latch locking system, handles, surface mounted overhead closers.

2.3 Intended Use

The intended use of the doorset is summarised below:

A pedestrian doorset 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) which form the assembly.

3 Test Evidence

The test evidence summarised below has been generated to support the fire resistance performance of the door design that is the subject of this extended field of application. The summary details are considered to be the key aspects of the design tested.

Note:

- Dimensions are in mm unless otherwise stated.
- Abbreviations: (h) = height; (w) = width; (t) = thickness; (d) = deep: (l) = long.
- Latches fitted but disengaged for the test, are reported as 'unlatched'.

3.1 Test Report WF547225

The referenced test report, the essential details of which are summarised below, is primary data for the DC44-E30-STD-ULSASD-INT-G product family and is used to support leaf dimensions, hardware options, and glazing apertures.

Date of Test:	30th October 2024
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762 Approved Body No. 1314
Sponsor:	Falcon Timber Ltd
Tested Product:	2No. Unlatched single acting single leaf doorsets with a glazed aperture
Tested Orientation:	The Doorset A was orientated to open away from the heating conditions of the test The Doorset B was orientated to open towards the heating conditions of the test
Sampling information:	Sampling was carried out by a representative of BM Trada under contract references SC24206T-1 & SC24207T on the 30th October 2024.
Summary of Test Specimen:	**Leaf:** Duocore 44 – Falcon Timber Ltd Overall size: 2360 (h) x 1034 (w) x 44 (t) Layer 1 (outer veneer) horizontally orientated (short / cross grain) Albasia Falcata veneer 2.6 thick, 220 (kg/m^3) layer 2 (Barecore blockboard) vertically orientated Albasia Falcata Lamel blockboard. 18.0 thick x 35 – 52 wide x various lengths, 300 (kg/m^3) Layer 3 (central veneer) horizontally orientated (cross grain) Albasia Falcata veneer 2.6 thick, 220 (kg/m^3) Layer 4 (Barecore blockboard) vertically orientated Albasia Falcata Lamel blockboard. 18.0 thick x 35 – 52 wide x various lengths 300, (kg/m^3) layer 5 (outer veneer) horizontally orientated (cross grain) Albasia Falcata veneer 2.6 thick, 220 (kg/m^3) Final finish facings (both leaf faces) long grain rotary peeled mixed light hardwood veneer 0.55 thick 460(kg/m^3) Lipping Sapele (702kg/m^3), 8 (t) to all four edges **Frame:** Head & Jambs: Redwood (402kg/m^3), 70 (d) x 30 (t), with 12 (w) x 20 (d) planted stop.

Intumescent and sealing materials:

Intumescent to frame reveal:

1No. Lorient Polyproducts Ltd, LP1504 Type 617, 15 (w) x 4 (t) applied 14.5mm from the opening face of the head and jambs.

Smoke seal to frame reveal

Lorient Polyproducts Ltd, LAS1010 Batwing, Co-extruded rigid back PVC with flexible fins.

10mm wide x 10mm high fixed with integral self-adhesive affixed to upstand of the door stop

Hardware:

Hinges: 3no. Zoo ZHSS243RS

Position of each hinge relative to the head of the leaf

Top — 150mm

Middle — 1114mm

Bottom — 2078mm

Closer: Vier, VDC0024A1SE surface mounted overhead closer.

Lock/Latch: Zoo ZDL7260RSS (stainless steel forend and latch bolt/lock bolt), fitted 1000mm from the bottom of the door leaf to the centre of the lock spindle

Operation of Lock Bolt: Cylinder, Vier V5EP70CTSCE

Handle: Zoo ZCS2040SS stainless steel lever 133mm wide x 62mm projection x Ø19mm on a rose, Ø52mm x 8mm thick mounted on each leaf face

Escutcheon: Veir VS001S, stainless steel Ø52mm,8mm thick, located to suite the cylinder

Latch Status: Disengaged

Drop down seal: Lorient LAS8001SI

Signage: Zoo FDKS stainless steel 76 Ø x 1.5(t)

Hardware Protection:

Under Hinges: 1 (t) Lorient MAP,

Around Lock Body: 1 (t) Interdens sheet (MAP),

Under Keep: 1 (t) Interdens sheet (MAP),

Under forend plate: 1 (t) Interdens sheet (MAP),

Glazing (Leaf A):

Glass: AGC Pyrobelite 7, 7 thick

Aperture Size: 800 (h) x 734 (w)

Glass Size: 794 (h) x 728 (w)

Sight Size: 770 (h) x 704 (w)

Expansion Allowance: 3mm all around

Beading: Sapele (702kg/m^3),20.5 high x 20mm wide pinned with 40mm steel brad pins 50mm from the corners, 150mm centres and at 35° to the face of the glass.

Glazing (Leaf B):

Glass: Pyroguard, Advanced 2-EW30/7-1, 7 thick.

	Aperture Size: 800 (h) x 734 (w) **Glass Size:** 794 (h) x 728 (w) **Sight Size:** 770 (h) x 704 (w) **Expansion Allowance:** 3mm all around **Beading:** Sapele (702kg/m^3),20.5 high x 20mm wide pinned with 40mm steel brad pins 50mm from the corners, 150mm centres and at 35° to the face of the glass. **Glazing System:** **Glazing Perimeter:** Lorient Polyproducts Ltd, FF1, PVC encased intumescent graphite 13.5 (h) x 3.5 (t) fitted with self-adhesive to the upstand of the beading	
Test Standard:	BS EN 1634-1:2014+ A1:2018	
Performance:	**Doorset A**	**Integrity:** 42 minutes **Insulation I_2:** 12 minutes **Radiation:** 42 minutes
	Doorset B	**Integrity:** 42 minutes **Insulation I_2:** 6 minutes **Radiation:** 42 minutes

3.1.1 Test WF547225 Summary of Results

The following table summarises the results of the test and provides information on the performance of the doorsets in fire test conditions that is required to extend the scope of application for the design using the rules in BS EN 15269-3: 2022.

Doorset Reference	Result (minutes)				Category of performance[1] (A or B)	Distortion[2] (Low, Med, High)
	Integrity	Insulation		Radiation		
		$(I_1)^3$	$(I_2)^4$			
Doorset A	42	N/A	N/A	42	B	Low
Doorset B	42	N/A	N/A	42	B	Medium

1. In accordance with clause 13.3.2 of BS EN 1634-1: 2014 + A1: 2018
2. In accordance with Annex A of BS EN 15269-3: 2022
3. Supplementary procedure for maximum temperature rise (I_1) in accordance with 11.2.5 in BS EN 1634-1: 2014 + A1: 2018
4. Normal procedure for maximum temperature rise (I_2) in accordance with 11.2.4 in BS EN 1634-1: 2014 + A1: 2018

4 Test Samples

The following table provides a summary of the test specimen:

Test Report Ref.	Sampling Procedure	Conditioning and Ageing	Pre-Fire Tests
WF547225	Sampling was carried out by a representative of BM Trada under contract references SC24206T-1 & SC24207T on the 30th October 2024.	The test specimen was subjected to normal laboratory temperatures and conditions between the completion of construction of the test specimen and the start of the test.	Prior to testing, the doorsets were subjected to appropriate mechanical pre-test conditioning in accordance with the requirement of BS EN 16034. Specifically, the pre-cycle requirement within Annex A.2.2 as detailed within the report and the Self-closing speed requirement within Annex A.4 as detailed within the test report.

5 General Description of Construction

5.1 Door Leaf Construction

The construction of door leaves to this design must be to the following specification.

Element	Material		Dimensions (mm)	Minimum Density (kg/m³)
Duocore 44	Layer 1	Albasia Falcata (horizontal construction veneer)	2.6 (t)	220
	Layer 2	Albasia Falcata (laminated to form a vertical panel)	18 (t) x 35 (w)	300
	Layer 3	Albasia Falcata (horizontal construction veneer)	2.6 (t)	220
	Layer 4	Albasia Falcata (laminated to form a vertical panel)	18 (t) x 35 (w)	300
	Layer 5	Albasia Falcata (horizontal construction veneer)	2.6 (t)	220
Factory-applied timber veneer	Hardwood		0.5 (t)	460
Lippings – all edges	Hardwood		44 (w) x 6 - 10 (t)	702

5.1.1 Door Leaf Design Options

The following design options are permitted. All other leaf construction details must remain as tested and summarised above:

1. The door leaf can be reduced in height or width without restriction prior to fitting the hardwood lipping, as required.
2. The door leaf must be lipped on all edges according to EXAP rule A.5.17 as the doorset tested included lipping to all edges and it is not possible to remove lippings.
3. The lipping thickness must be between a minimum of 6mm and a maximum of 10mm according to EXAP rule A.5.15, the tested lipping thickness at 8mm can be increased and reduced in thickness by 25%.
4. The lipping can be constructed using alternative hardwood timber meeting or exceeding 640kg/m^3 (excluding beech – fagus sylvatica) in accordance with EXAP rule A.5.13.

Permitted glazing configurations are expressed in section 11.

5.2 Adhesives

The DC44-E30-STD-ULSASD-INT-G product family must utilise the adhesives defined in the below table in the construction of the doorset design.

The following rules from BS EN 15269-3 have been utilised to provide the scope of application given within this section:

BS EN 15269-3: A.4.17, A.4.18, A.4.19 & A.4.20

Location	Adhesive	Test Evidence (Fire resistance)
Application of lipping materials	AdCo UK Ltd, Polyurethane BX3002 PU	WF547225

Where reference to an adhesive is not provided the tested adhesive must be utilised.

It is possible to increase the amount of adhesive applied up to a maximum of 25% of that tested within the reports summarised within section 3.

It is possible to decrease the amount of adhesive applied up to a maximum of 10% from that tested within the reports summarised within section 3.

It is possible to change the manufacturer or supplier of the adhesive used providing the composition of the adhesive is identical.

It is possible to change the above tested thermosetting adhesive for an alternative thermosetting adhesive as defined in EN 923: 2015.

6 Configurations and Orientation

6.1 Door Leaf Configurations

The table below shows the permitted configurations for the doorset design, with the abbreviation and full description of each configuration. The summarised test evidence within Section 3 was generated with a latch which was disengaged for the duration of the test.

The doorset design may therefore be fitted in the following configurations (Rule A.1.27 of EN 15269-3: 2022):

Doorset Configurations		
Depiction	**Abbreviation**	**Description**
	LSASD	Latched Single Acting Single Doorset
	ULSASD	Unlatched Single Acting Single Doorset

6.2 Door leaf Orientation

The primary fire resistance test for this design included doorsets where the door leaves opened both towards and away from the fire. Based on this testing, the extended scope presented in this EXAP report is applicable to doorsets with leaves that are hung to open either away from or towards test conditions, making the Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G product family bi-directional with respect to test exposure.

The orientation of the door leaves also takes into consideration the testing of the restraining hardware in both directions with respect to exposure to fire test conditions as outlined in DIAP rule 13.4 in BS EN 1634-1: 2014 + A1:2018.

7 Leaf Sizes

7.1 Maximum Leaf Size

The maximum leaf size has been considered by the application of rules A.3.2, A.3.3 and A.3.4 of BS EN 15269-3: 2022 based on the medium distortion which was observed in WF547225 (Doorset B).

The following calculation has been applied to the tested height, width and area to define the maximum permitted parameters.

$$\frac{(42-30)}{30} x\ 0.33\ x\ 100\% = 13.2\%$$

The sizes in the table below detail the tested leaf size along with those permitted using the rules and formula set out above and the distortion value ascertained from the data recorded in WF547225 set out in Section 3.1

Parameter	Tested Parameter	Maximum Permitted Parameter
Height (mm)	2360	2672
Width (mm)	1034	1170
Area (m^2)	2.44	2.76

7.2 Minimum Leaf Size

Size reduction is permitted in accordance with rule A.3.1 which refers to the field of direct applications rules given within BS EN 1634-1: 2014 + A1: 2018. Table B.1 permits reduction in height and width without restriction for Category B doorset designs.

In all instances the door leaf must be lipped as defined within section 5.1.

8 Door Frames

8.1 Timber Door Frames

Timber based door frames for the Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G product family must be constructed to meet the following specification based on the test evidence contained within section 3.

Material	Minimum Section Size (mm)		Min. Density (kg/m^3)
Solid Softwood or Hardwood	Head & Jambs	70 (w) x 30 (t) with an additional 12 (h) x 20 (d) planted stop	403

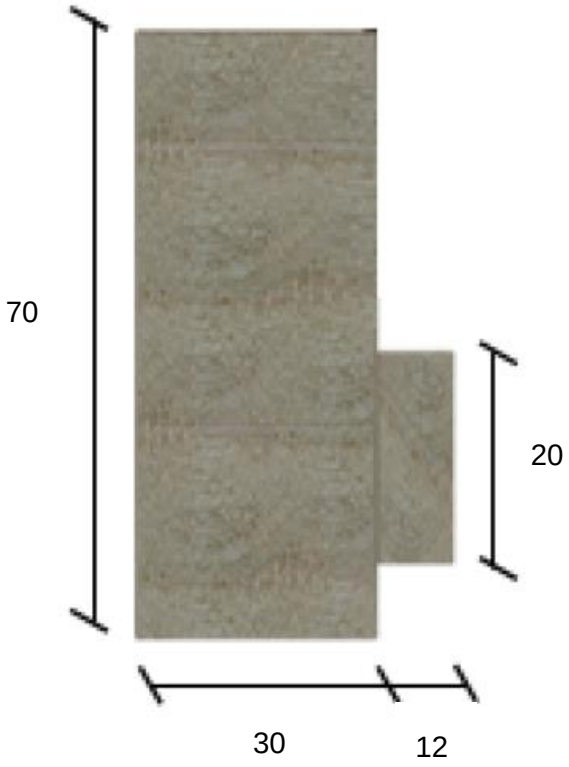
It is possible to increase the cross-sectional dimensions of the timber frame in line with rule B.2.2, which refers to rule 13.2.2.1 of BS EN 1634-1: 2014+A1: 2018. The image below details the minimum dimensions of the frame covered by this extended field of application.

Alternative solid softwood or hardwood timber is permitted in accordance with EXAP rule B.2.6 in BS EN 15269-3: 2022 providing the timber has a density equal to or greater than 403kg/m^3.

All door frame timber must meet or exceed class J30 as specified in BS EN 942: 2007 (subject to adequate repair of any defects).

Frame joints must be 12mm trench joint fixed with either AdCo UK Ltd Polyurethane BX 3002 PU with no gaps. It is possible to change the manufacturer or supplier of the adhesive used providing the composition of the adhesive is identical (B.2.20).

Joints require mechanical fixing with 3No. 80mm long steel screws at each joint.



9 Environmental Seals

The following smoke and weather seals are approved for use with the Falcon Timber Ltd, doorset design.

The doorset design was tested with the LAS1010 Batwing seal, on the basis of rule A.1.14 the LAS1212 Batwing seal has been included within this EXAP.

In accordance with rule A.1.15 of EN 15269-3: 2022 it is not possible to remove the tested seal.

Element	Product	Dimensions (mm)	Location
Lorient Polyproducts Ltd	LAS1010 Batwing	10 (h) x 10 (w)	Fitted with self-adhesive to the upstand of the rebate and frame reveal
Lorient Polyproducts Ltd	LAS1212 Batwing	12 (h) x 12 (w)	Fitted with self-adhesive to the upstand of the rebate and frame reveal

10 Perimeter Intumescent Seals

The following intumescent materials tested within the Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G doorsets design are as follows and must be fitted as tested.

Element	Product	Size (mm)	Location
Frame Reveal – Head & Jambs	Lorient Polyproducts Ltd, LP1504 Type 617	15 (w) x 4 (t)	14.5mm from the opening face of the head and jambs

11 Door Leaf Glazing

11.1 General

The testing on the Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G doorset design (WF547225) included a glazed aperture within the leaf of each doorsets tested. The following sections detail the required glazing specification in terms of glazing systems, glass types, area permitted within the leaf, number of glazed apertures and position within the leaf.

In accordance with rule E.1.2 of BS EN 15269-3: 2022 it is possible to remove glazed areas which have been tested at up to 25% of the door leaf. The Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G doorset design has been tested with a glazed aperture that was less than 25% of the leaf area:

- Dimension of the tested leaf (1034mm x 2360mm = 2.44 m^2),
- Total area of the glazed aperture incorporated within the leaf (800mm x 734mm = 0.5872m^2)
- (0.5872/2.44) x 100 = 24.06% of the leaf was glazed for the test.

It is therefore permitted to produce unglazed door leaves based upon the supplied test evidence subject to this evaluation.

As the doorsets tested included 1No. glazed aperture, it is only permitted to install a single glazed aperture within the leaf of any individual doorset design. The following sections detail the maximum dimensions permitted for the aperture as well as the positioning of the aperture within the leaf which is permitted.

The glass and glazing systems in both doorsets tested are symmetrical therefore, in accordance with rule E.1.1 of BS EN 15269-3: 2022, the glass and glazing systems specified herein are therefore approved in both directions in terms of fire resistance performance.

11.2 Aperture Dimensions

Based on the Category B performance obtained within the testing summarised within section 3 of this report, in accordance with rule E.1.6 it is possible to increase the tested dimension of the pane of glass by 15% in height and width up to a maximum area increase of 20%.

The increase to dimensions of glazed aperture shall not reduce the minimum permitted distance between the edge of the aperture and edge of the leaf.

It is possible to reduce the tested size of the glazing in accordance with Rule E.1.7 of BS EN 15269-3: 2022, without restriction providing the glazed area is less than 25% of the leaf area. As confirmed within section 11.1, the total area of the glazed aperture equates to less than 25% of the tested leaf area and therefore, glass sizes smaller than those tested are permitted.

Based on the maximum aperture sizes tested, the following aperture dimensions are permitted with the Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G doorset design based on the rule E.1.6 & E.1.7 given in BS EN 15269-3: 2022:

Maximum Dimensions Permitted for Each Aperture			Maximum Number of Apertures Permitted
Maximum Height	Maximum Width	Maximum Area	
800mm x 1.15 = **920mm**	734mm x 1.15 = **844mm**	(0.8mm x 0.734mm) * 1.20 = **0.5872m²**	1

11.3 Position of Apertures

Rules E.1.26 and E.1.28 of BS EN 15269-3: 2022 do not allow the tested minimum distance between the glazed aperture and the edge of the leaf to be decreased. The tested minimum distances are as detailed within the table below:

Minimum tested distance between the edge of the glazed aperture and the edge of the leaf (mm)
150 from the head of the leaf 150 from the vertical edge of the leaf

Using the above rules and the tested positions and dimensions of the glazing, the apertures can be moved within the following limitations, to meet the design requirements for the Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G product family.

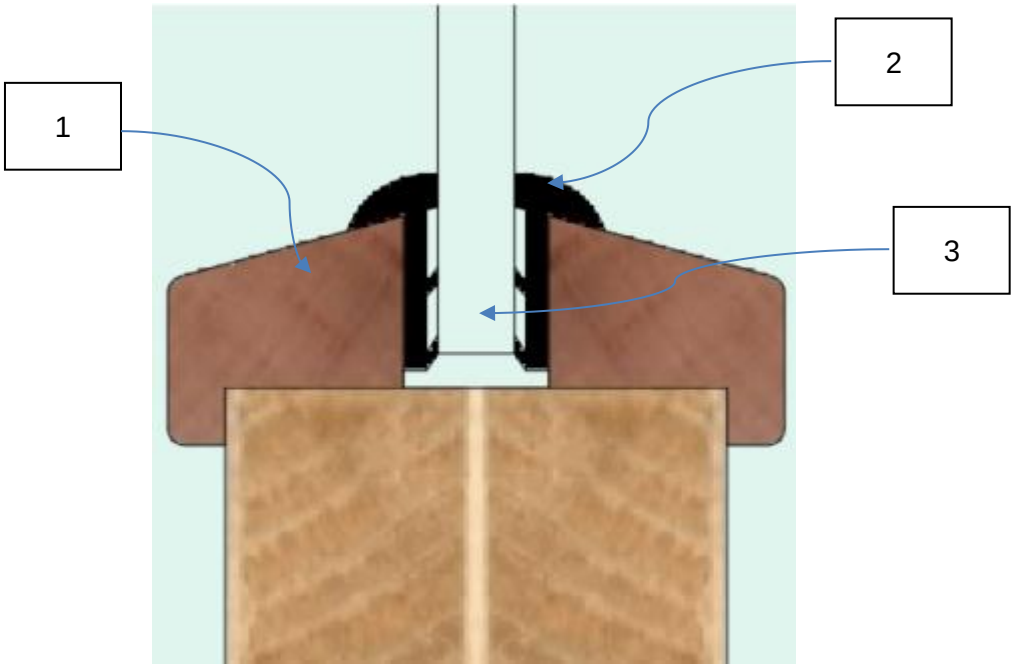
- Glazed apertures must meet the following position and spacing requirements:
- The aperture must be no closer than 150mm from the top of the door leaf to the top of the glazed aperture.
- The aperture must be no closer than 150mm from the bottom of the door leaf to the bottom of the glazed aperture.
- The aperture must be no closer than 150mm from the closing and hanging edge of the door leaf to the vertical edge of the glazed aperture.
- In accordance with rule E.1.29 repositioning of glass shall not result in the glazing aperture being closer than 50mm to any cut-outs within the leaf for items of building hardware.

11.4 Glazing System

According to rules E.1.17, E.1.19, E.1.20 and E.1.21 in BS EN 15269-3: 2022 the following glazing system, beading and materials are permitted with the Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G door design and must therefore be used when glazing the door leaf.

The number of each table provides the key to the components depicted in below.

1. Beading	
Material	Hardwood
Minimum Density	703kg/m^3
Minimum Cross-sectional Dimension	20.5mm x 20mm with a 5mm x 5mm bolection and a 15 degree chamfer
Fixing Method	40mm steel brads or screws, fitted 50mm from corners, 150mm centres at 35° to the face of the door
2. Sealing System	
Manufacturer	Lorient Polyproducts Ltd
Reference	FF1
Material	PVC encased graphite
Overall Size	13.5mm (w) x 3.5mm (t)
Fixing Method	Self-adhesive to the upstand of the bead
Location	Fitted between the glass and the bead on both faces.



11.5 Glass Type

The Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G doorset design was tested with the following glass types in a symmetrical system with respect to exposure to fire test conditions. Based on the test evidence referenced in this EXAP report it is not possible to substitute the glass types with alternative glass types other than those tested.

3. Glass	
Option 1 – (WF547225 Doorset A)	
Manufacturer	AGC
Reference	7mm Pyrobelite
Expansion Allowance	3mm all around
Option 2 – (WF547225 Doorset B)	
Manufacturer	Pyroguard
Reference	Advanced 2-EW30/7-1
Expansion Allowance	3mm all around

Note: It is permitted to use alternative suppliers of the glass type described above, providing it can be demonstrated the glass comprises the same glass type from the same manufacturer as tested.

12 Decorative and / or Protective Finishes

The following decorative and protective finishes may therefore be applied to the DC44-E30-STD-ULSASD-INT-G doorset design in accordance with the appropriate rules within BS EN 15269-3: 2022 as detailed in the following sections.

12.1 Combustible Decorative Finish

Applied to the face of the leaf and / or frame, not applied to the leaf edges or rebates:

It is possible to apply decorative facings meeting the below specification to unglazed doorsets, see Section 11.1, as the doorset did not exceed the insulation criteria at the unglazed locations during the test. Therefore rule A.5.1 of EN 15269-3: 2022 can be applied to unglazed doorsets as follows:

- Timber veneers up to 3mm thickness.
- Other materials up to 2mm thickness.
- All materials applied to the face of the door leaf must have:
  - A reaction to fire class B - F.
  - Melting point of <660^{o}C.

It is not possible to apply decorative finished meeting the criteria above to glazed doorsets.

Applied to the leaf edges and / or frame rebate:

It is not possible to apply decorative facings to the leaf edges and / or frame rebate in accordance with rule E.5.3 of EN 15269-3: 2022 as the doorset tested (WF547225 Doorset B) exhibited medium deflection under test conditions.

12.2 Paint Finish

According to the direct application (DIAP) rule 13.2.3.1 given in BS EN 1634-1: 2014 + A1: 2018 it is possible to add paint to the door, including the edges, providing the paint finish is not expected to contribute to the fire resistance of the door and providing the test specimens were tested unfinished.

The Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G door design was tested unfinished and can therefore be painted according to the above DIAP rule.

The intumescent, smoke and weather seals must not be painted.

12.3 Non-Combustible Decorative Facing

Decorative facings meeting the following performance requirements are permitted on the face of the leaf and /or frame in accordance with A.5.5 of EN 15269-3: 2022:

- Reaction to fire class A1 or A2
- Melting point ≥660^{o}C.

The application of the above referenced decorative facings shall not increase the leaf weight by more than 25% and shall be applied with adhesive only.

Items of hardware such as door handles must not act as a mechanical fixing for the facing material.

Decorative facing materials shall not be applied behind door frame rebates.

NB: This could include materials such as glass sheet, stone, marble, ceramic tile but not metals.

It is not possible to apply decorative facing materials to the above specification to the leaf edges and / or frame rebates.

12.4 Decorative Mouldings

According to A.5.18 of EN 15269-3: 2022 It is possible to apply timber based, surface mounted mouldings to the face of the leaf within the following restrictions:

- The weight of the leaf when the mouldings are applied is not increased by more than 25%.
- When mouldings are fitted to only one face of the leaf, the surface shall not be covered by more than 25%.
- When mouldings are fitted to both faces of the leaf and they cover more than 25% for each face they shall be equally distributed on both sides.

12.5 Protective plates (Kick & Push)

According to C.14.1 of EN 15269-3: 2022 it is possible to apply kick and or push plates to the face of the leaf providing the following specifications are followed:

- The kick plate shall be surface mounted, not recessed within the thickness of the leaf.
- The maximum area permitted to be covered by kick plates is 40% of the clear opening or 1m^2 whichever is smaller. (this will depend on leaf dimensions)
- The plate thickness is no greater than 2mm.
- The maximum height of horizontally fitted plates is no greater than 500mm.
- The maximum width of vertically fitted plates is no greater than 200mm.
- Screw fixings are permitted providing they are no greater than 25mm long and shall be applied at no more than 200mm centres.
- Kick plates may alternatively be adhered.

13 Tested Hardware

The following hardware has been successfully incorporated in the tests on the DC44-E30-STD-ULSASD-INT-G door design and is approved for use. Specific restrictions related to hardware are given below the table for each item of hardware as appropriate. The hardware must remain as tested unless otherwise stated, where more than one item is listed for an item (for example, hinges only one of the listed items may be fitted to any one doorset).

13.1 Hinges

The following tabulated hinges are permitted for use with the DC44-E30-STD-ULSASD-INT-G product family based on the testing identified within section 3.

The hinges have been determined to meet the criteria of Clause 13.4.2 of BS EN 1634-1: 2014+A1: 2018 requiring items of restraining hardware to have demonstrated performance in both directions of the test conditions as identified below.

In accordance with C.3.3.1 of BS EN 15269-3: 2022:

- The hinges must be fixed with steel screws as tested and identified.
- All fixing points must be utilised.
- The position of the fixings relative to width of the hinge leaves shall remain the same as tested as it has not been possible to determine a less critical position based on the information provided.

In accordance with C.3.3.2 of BS EN 15269-3: 2022:

- Alternative hinges are not considered or permitted without additional test evidence and citing within this document to determine if the hinge is suitable on the doorset design.

In accordance with C.3.3.3 of BS EN 15269-3: 2022:

- It is permitted to change the material of the tested hinges proving the alternative material has a demonstrated higher melting point than the material of the permitted hinge.

Supplier	Zoo	
Reference	ZHSS243RS	
Minimum Quantity	3No.	
Material	Grade 201 Stainless Steel	
Overall Size	Knuckle	14.5mm Ø,107mm high
	Blades	102mm high x 31mm wide x 3mm thick
Fixings	4No. Ø4.5mm x 31mm long steel wood screws per blade	
Positioning (Relative to the head of the door leaf to the top of the hinge blade)	Top Hinge – 150mm Middle Hinge – 1114mm Bottom Hinge – 2078mm	
Intumescent Protection	1mm Lorient MAP	
Interruptions to Intumescent within the frame reveal	Seal fully interrupted	

13.1.1 Number of Hinges

Typically, the door leaf will be fitted with a minimum of 3 hinges as tested, which must meet the positioning requirements outlined in section 13.1.2.

However, it is possible to reduce the number of hinges from that tested providing the reduction is in relation to a reduction in door leaf size and distance between the hinges and the top and bottom of the leaf shall be equal to the distance tested or is smaller in accordance with BS EN 15269-3: 2022 Rule C.3.2.

It is possible to increase the number of hinges in accordance with direct application rule 13.2.5 in BS EN 1634-1: 2014 + A1: 2018.

13.1.2 Hinge Positioning

It is possible to vary the hinge positioning for the DC44-E30-STD-ULSASD-INT-G doorset design within the following parameters:

1. The position of the top hinge must be located 100mm – 150mm from the top of the door leaf (measured from the top of the hinge)
2. The bottom hinge must be no further than 200mm and no closer than 100mm from the bottom of the leaf (measured to the bottom of the hinge)
3. The intermediate hinges were tested at 913mm from the bottom of the top hinge and the top of the bottom hinge to the centre of the intermediate hinge. The intermediate hinge may be moved providing the tested distance between hinges is not varied by more than 300mm.
4. Additional hinges may be applied providing the distance between the mandatory hinges remain within the above defined tolerances.

The following rules from BS EN 15269-3: 2022 have been used to consider the possible extended scope of application for hinge positioning: C.3.4.1, C.3.4.2, C.3.4.3, C.3.4.4, C.3.4.5.

13.2 Door Closer

The Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G design has been tested with an overhead surface mounted door closer, only one closer shall be fitted to any one doorset design, it is not possible to produce a doorset without a self-closing device present. The following sections provide information on the door closer permitted based on the testing summarised within section 3.

13.2.1 Surface Mounted Overhead Closers

The Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G design must be fitted with the following tested closer:

- Vier VDC0024A1SE

No alternative door closing devices other than that listed above is permitted with this doorset design based on the evidence contained within section 3. (C.8.3.1)

13.2.1.1 Door Closer Positioning

The above detailed door closer shall be fitted as tested; it is not possible to modify the location of the tested closer, as the doorset design includes glass which achieved EW performance only. (C.8.4.1 & C.8.4.2)

The closer permitted shall therefore be applied to the pull face of the doorset.

13.3 Door Signage

Door signs may be applied to the face of the door leaf in accordance with the following specification:

- Possible for horizontally fitted signs no more than 500mm high, across the full opening width on the closing face and the full leaf width on the opening face. (i.e. does not go under the stop)
- Possible for vertically fitted signs no more than 200mm wide, across the full opening height of the closing face and the full height of the leaf on the opening face. (i.e. does not go under the stop)
- Signage smaller than these dimensions are permitted but shall never be applied such that they interfere with the door stop.

In all cases the signage shall be within the following design specification:

- Signs shall be no thicker than 2mm.
- Signs shall be fixed with screws no greater than 25mm long at a minimum of 200mm centres or applied with adhesive.
- The area of the leaf face shall not be covered by more than 40% its area by signs or $1m^2$ whichever is smaller.

The following rule from EN 15269-3: 2022 has been followed in order to establish the above parameters C.28.1.

13.4 Lockset / Latch

The Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G doorset design has been tested with a single point latch/lockset. The doorset design has been tested with the latching function disengaged and therefore can be installed with or without the latch/lock detailed below as per Section 6.1, should a latch/lock be required the doorset shall always be installed with the following lockset.

13.4.1 Zoo ZDL7260RSS

Zoo ZDL7260RSS		
Manufacturer	Zoo	
Reference	ZDL7260RSS	
Intumescent Protection	Lockcase	1mm Interdens sheet (MAP)
	Forend plate	1mm Interdens sheet (MAP)
	Keep	1mm Interdens sheet (MAP)
Tested location	The centre of the spindle measured 1000mm from the bottom of the leaf.	

It is possible to increase the number of tested locks as detailed above which are applied to the doorset design providing the additional locks are applied such that the spindle measures less than 1000mm from the bottom of the leaf. The lock must include the same strike plate arrangement (type, material and dimensions to the tested design). (C.1.1.2)

It is possible to remove the tested lockset from the doorset design as the tested doorset was unlatched (i.e. the latch was withdrawn) for the purposes of the test. (C.1.2.1)

It is possible to vary the tested height of the lock (1000mm form the centre of the spindle to the bottom of the leaf) by ±300mm in height as outlined within Rule C.1.4.1 of EN 15269-3: 2022.

In all cases the above detailed intumescent protection shall be applied to the lock as tested.

Furthermore, the lock shall be installed with the tested keeps when a lockset is applied, when a lockset is not applied nor must the associated keeps. (C.2).

13.5 Lock Cylinders

The Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G doorset design has been tested with the following cylinder, therefore, when required the below detailed cylinder may be applied to the doorset design.

Cylinder	
Manufacturer	Vier
Reference	V5EP70CTSCE
Material	Steel
Dimensions	33mm high x 17mm wide x 70mm long

It is possible to produce a doorset without a cylinder providing the doorset is not prepared to accept a cylinder, i.e. there are no through holes associated with the fitted on the cylinder. (C.23.2)

13.5.1 Alternative Manufacturer and configuration

Alternative cylinders of the same or smaller dimensions of the above detailed cylinder are permitted providing the alternative cylinder has the same or smaller cross-sectional area than the originally tested cylinder and is made from metal with a melting point of ≥800 degrees Celsius.

As the cylinder tested was a thumb-turn arrangement it is possible in accordance with rule C.23.3.3 to change the configuration to key/key or a single cylinder. Providing the cylinder prep of the leaf is for a single side of the leaf such that there are no through holes.

13.6 Handles & Escutcheons

The Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G design has been tested with the following handle and escutcheon which are therefore, approved within the doorset design:

- Handle – Zoo ZCS2040SS – Stainless Steel
- Escutcheon – Veir VS001S – Stainless Steel

It is possible to utilise alternative surface mounted handles and escutcheons providing:

- They are mechanical in design (not mechatronic) (C.5.1.3)
- They are appropriate for the lock / latching function of the lock and fitted as such. (C.5.1.1)
- The material is of a higher melting point to the tested items or non-combustible. (C.5.3.1)
- They are face fixed and not recessed. (C.5.3.1)
- Any spindle or fixing holes required shall be no larger than originally tested. (C.5.3.1)
- If handles or escutcheons are associated with the presence of a lockset within the doorset design, they must be fitted in conjunction with the lockset to ensure functionality.
- If handles are not associated with the presence of a lockset within the doorset design the handle may be repositioned without limitation providing the fixings are not through-going. (C.5.4)
- It is possible to change the dimensions of door handles and accessories which are not recessed into the leaf. (C.5.5)

The rules detailed within C.5 of EN 15269-3: 2022 have been utilised to establish the above permitted parameters.

13.7 Eye Viewers

According to rule C.15.1.1 in BS EN 15269-3: 2022 it is permitted to add eye viewers to a door providing the diameter of the body is 15mm or less and the body is metal with a melting point of greater than 800 degrees Celsius. Additionally, door viewers must not be positioned closer to 100mm to the edges of the leaf or other leaf apertures. C.15.1.2 allows up to 3No. viewers to be applied to any single doorset.

Therefore, the viewers are permitted within the following specification:

- Viewers where the diameter of the body is 15mm or less and the body is metal with a melting point of greater than 800 degrees Celsius are permitted for use.
- The viewers are positioned when fitted no closer than 100mm to leaf edges or other apertures within the leaf
- No more than 3No. viewers are fitted within any single leaf.

13.8 Drop Seal

The Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G design has been tested with the following drop seal which therefore, must be applied (C.27.2).

Lorient LAS8001SI	
Manufacturer	Lorient Polyproducts Ltd
Reference	LAS8001SI
Construction	Aluminium body with Silicone seals and Aluminium face plates Body size 35mm high x 14mm wide, face plate 57mm high x 22mm wide
Tested location	Fixed to the channel in the centre of the bottom leaf edge.

14 Leaf/Frame Gaps

Leaf/frame gaps must not be greater than the following permitted maximums:

Location	Dimension
Leaf/frame edge gaps lock side	Maximum of 4mm
Leaf/frame edge gaps hinge side	Maximum of 4mm
Leaf/frame edge gaps head	Maximum of 4mm
Threshold	Maximum gap of 9mm

The following rule from BS EN 1634-1: 2014+A1: 2018 has been used to consider the possible extended scope of application for leaf/frame gaps: Section 7.3. The gaps have been defined by test report WF547225

15 Supporting Construction and Attachment (Technique) of Door Frame

The Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G doorset design must be mounted in the following supporting constructions and using approved attachment techniques:

15.1 Supporting Construction

The supporting construction in which the doorset was mounted for the summarised fire resistance test WF547225 consisted of a plasterboard clad EI30 steel stud supporting construction with steel 'C' studs meeting the specification of Group A within Table 1 of BS EN 1363-1: 2020.

Timber inserts were additionally applied within the studs forming the aperture of the doorset.

Therefore, the Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G doorset design may be installed within other standard flexible supporting constructions meeting the following specification:

- The minimum wall thickness must be no smaller than 75mm
- The supporting construction must include a minimum of 1No. layer Type F Gypsum board to each face.
- The supporting construction must have suitable test evidence to demonstrate that it is capable of achieving at least the same level of fire resistance as the doorset design.
- The studs may be made from steel or timber, where the studs are made from steel they must include timber inserts to facilitate fixings.

Rigid supporting constructions with a minimum wall thickness of 75mm, which have been tested and confirmed to achieve an equal or greater fire resistance than the doorset design may also be suitable for the installation of the doorset design.

According to EXAP rules F.1.1 and F.1.2 the doorset may be hung in a rigid standard supporting construction or a flexible standard supporting construction, with the above limitations.

15.2 Fixings

The door frame is to be fixed to the supporting construction using Ø5mm x 100mm long steel screw fixings per jamb. The screws are to be appropriate for the substrate of the supporting construction.

Fixings shall be positioned at no greater than 145mm from corners and 520mm centres, centres smaller than 520mm are permitted.

It is permitted to increase the size and number of fixings but not decrease.

The following rules from BS EN 15269-3: 2022 have been used to consider the possible extended scope of application for the supporting construction: F.1.9 – F.1.15.

15.3 Sealing to Structural Opening

The gap between the rear of the door frame and the structural opening must be no greater than 26.5mm to accommodate the sealing material, as tested.

It is not permitted to install the door frame without the tested sealing material between the door frame and the supporting construction.

The approved sealing materials as tested for the Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G design is as follows:

Firestopping solution	Permitted gap range
Rockwool mineral wool, tightly packed by hand to the full depth of the frame allowing for 10mm depth of Mann McGowan Pyromas A Acrylic Intumescent Sealant to be applied to both faces.	Up to 26.5mm

Rule F.4.3 & F.4.4 of EN 15269-3: 2022 have been utilised based on the testing undertaken to establish the above permitted range of gaps.

In all cases the fire stopping solution must be able to be applied as tested, otherwise if the solution cannot be applied as tested the gap is too small and is not covered by this EXAP.

In accordance with rule B.3.3 of EN 15269-3: 2022 it is permitted to add architraves to the tested doorset design as the tests were undertaken without architraves present.

16 Application Range – Product Family

The precise scope and design options for the Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G doorsets range, which provide the boundaries for the product family, are defined within this EXAP document.

17 Fire Performance Parameters

The fire performance parameters for the range of designs covered in this extended field of application report for the Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G product family is tabulated below:

Integrity	
Cotton pad	30 (Thirty) minutes
Continuous flaming	30 (Thirty) minutes
Gap gauges	30 (Thirty) minutes
Insulation	
Average	0 (Zero) minutes
Maximum temperature rise (normal procedure for insulation 2)	0 (Zero) minutes
Maximum temperature rise (supplementary procedure for insulation 1)	Not Evaluated
Radiation	30 (Thirty) minutes

The Falcon Timber Ltd, DC44-E30-STD-ULSASD-INT-G doorset designs detailed in this EXAP report are defined in clause 7.5.5 of BS EN 13501-2 as fire doorset assemblies. Their function is to resist fire in respect of the fire performance characteristics given in clause 5 of BS EN 13501-2: 2023.

18 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 the undersigned confirm that any changes to a component or element of structure which are the subject of this extended application report have not to our knowledge been tested to the standard against which this assessment has been made.
3. We agree to withdraw this extended application report 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 extended application report 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 extended application report. If we subsequently become aware of any such information, we agree to ask the assessing authority to withdraw the assessment.

Signed: **Signed by:** 6C3251A35814487...

Name: Josh Clare

Position: Technical Manager

Date: 09-Oct-2025

For and on behalf of: **Falcon Timber Ltd**

19 Limitations

The following limitations apply to this assessment:

1. This extended field of application document does not represent type approval or certification of the product.
2. This extended field of application addresses itself solely to the elements and subjects discussed and do not cover any other criteria. All other details not specifically referred to should remain as tested or assessed.
3. This extended 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 extended field of application will be unconditionally withdrawn, and the applicant will be notified in writing.
4. Opinions and interpretation expressed herein are outside the scope of UKAS accreditation.
5. This extended 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. 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 extended field of application represents our opinion as to the performance likely to be demonstrated on a test in accordance with BS EN 1634-1: 2014 + A1: 2018, on the basis of the test evidence referred to in this report and the relevant EXAP rules taken from BS EN 15269-3: 2022. We express no opinion as to whether that evidence, and/or this extended field of application, would be regarded by any Building Control authority as sufficient for that or any other purpose. This field of application has been written for the purpose of classifying the fire resistance of the DC44-E30-STD-ULSASD-INT-G product family to BS EN 13501-2: 2023 and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any 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.

20 Validity

1. This extended application report is not valid unless it incorporates the declaration given in Section 18 duly signed by the applicant.

Signature:		
Name:	**C Newton***	**N Whitelock***
Title:	Senior Product Assessor	Technical Manager, Doors & Smoke Leakage

* For and on behalf of Warringtonfire

Appendix A: Revisions

Issue	WF Ref.	Date	Description
-	WF550028	09/10/2025	First Issue

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