High Wycombe Office:
Chiltern House, Stocking Lane,
High Wycombe,
HP14 4ND,
United Kingdom
T: +44 (0)1494 569750
W: www.warringtonfire.com

Title

Extended Field of Application for Falcon Timber Limited

The Falcon Timber Limited, SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family for 30 minute Fire resisting and ambient temperature smoke control doorsets to BS EN 15269-3: 2022 and BS EN 15269-20: 2020

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Prepared for:

Falcon Timber Limited
The Enterprise building,
Port of Tilbury,
Tilbury,
RM 18 7HL
United Kingdom

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1 Foreword

This Extended Field of Application (EXAP) report has been commissioned by Falcon Timber Limited and relates to the fire resistance and ambient temperature smoke control of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family, which comprises a 30-minute fire resisting and smoke controlling 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*, and test method BS EN 1634-3: 2004; *Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware – Part 3: Smoke control test for door and shutter assemblies.*

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*

- BS EN 15269-20: 2020; *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 20: Smoke control for doors, shutters, operable fabric curtains and openable windows.*

The report is to be used for extending the field of application for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family and has been written in accordance with the principles outlined in BS EN 15725; Extended application reports on the fire performance of construction products and building elements.

The report is to be used to support the formal fire resistance and ambient temperature smoke control classification for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC 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 variations 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 and BS EN 15269-20: 2020, the EXAP rules given in Table A.1 and Table A.2 of BS EN 15269-3: 2022 and Table A.1 of BS EN 15269-20: 2020 have been applied by experts competent in the field of fire resistance and ambient temperature smoke control testing of hinged or pivoted doorsets with timber based leaves.

In all cases the lowest common performance achieved, along with the rule supporting the lowest additional performance from either BS EN 15269-3: 2022 and BS EN 15269-20: 2020 have been applied.

2 Details of the Product

2.1 Product Technical Specification

The technical specification for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC construction being considered within this EXAP report is summarised as follows:

- The door leaf comprises a Falcon Timber Limited, Stredor 44 door blank which includes a ply core, layers of lamellas in a vertical orientation along with a Poplar ply facing and a 0.4mm thick finishing hardwood veneer.
- The door leaf is lipped on all edges with hardwood.
- The doorset design incorporates 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 and smoke control door assemblies, BS EN 1634-1 and BS EN 1634-3 respectively.
- The SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC design is intended for 30-minute fire resisting applications with integrity performance, as well as ambient temperature smoke control performance.

2.2 Product Family

The product family is referenced as SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC and the field of application defined in this report is based on the fire resistance and ambient temperature smoke control 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 and BS EN 15269-20: 2020 are given within this report against the relevant element of construction, as appropriate.

The scope of application for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family is summarised below:

- Latched single acting single leaf doorsets opening towards and away from test conditions.
- Alternative doorset dimensions (smaller than that tested).
- Glazed and Unglazed door leaves.
- The doorset has various decorative and protective face options to suit end use application and aesthetic requirements.
- Hardware options: steel butt hinges, multi-point locking system, handles, door viewers and letter plates.
- Fanlight and sidelight arrangements

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 and/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 Primary Evidence – Fire Resistance

3.1.1 Test Report WF432578

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 doorset design supporting leaf dimensions, hardware options, the inclusion of Lorient Perimeter Intumescents, Yale Lockmaster Autoengage locks, fanlights using Sealed Tight Solutions glazing incorporating a DGU and is used to support leaf dimensions.

Date of Test:	2nd September 2020
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Panel Products Ltd
Tested Product:	2No Latched, Single Acting, Single Doorsets with Fanlights
Tested Orientation:	Doorset A: Opened in towards the heating conditions of the test Doorset B: Opened out away from the heating conditions of the test
Sampling information:	Sampling was carried out by a representative of BM TRADA on the 28th August 2020, contract reference SC20148.
Summary of Test Specimen:	**Door Leaf:** Falcon Panel products Ltd. Stredor 44 Leaf Size: 2040 (h) x 926 (w) x 44 (t) **Lipping:** Sapele 660-706kg/m^3 8(t) to all leaf edges, glued with Henkel Technomelt 270/7 PUR applied by edge bander **Decorative mouldings:** Sapele, 70mm wide x 19mm thick beads forming 620(h) x 200(w) panels. Fixed with PVA adhesive and pneumatically fired pins 21 s.w.g x 25 (l). **Frame:** **Head and Jambs:** Redwood, 529kg/m^3 80(w) x 44(t) with a 33(w) x 15(t) Integral stop, Trench jointed 12(d) and screwed 4No. Ø5 x 100(l) steel screws **Intumescent and sealing materials:** Frame Reveal: 2No. Lorient Polyproducts Ltd, (LP1004) PVC encased Sodium silicate 10(w) x 4(t) fitted 5mm either side of the centre of the leaf. Environmental Seals: Schlegel Aquamac 21 Foam seal 9.1(w)x10.7(t) **Fire stopping to frame / supporting construction:**

	Rockwool, Flexi, Rock mineral wool 6-13(w) to the full depth of the frame, capped with 10(d) with Mann McGowan Pyromas A. **Hardware Both doorsets:** Hinges: 3No. Eurospec, HIN 1433/13, Closer: Rutland TS 9205 overhead face fitted door closer Lock/Latch: Yale Lockmaster Autoengage 2LB Classic 45mm Latch Status: Latched Cylinder & Thumbturn: Yale, Platinum 3* Lever Handles: Yale, Steel, 0757-2003-CH-CH Inline Lever Threshold: Stormguard, Low Height Macclex – Thermally Broken, aluminium and EPDM rubber construction with Slimline Front Seal and Slimline Press In Rio Seal. Fixed with 2No. Ø4 x 70(l) woodscrews and bedded on Firewizard intumescent acrylic sealant. Drip rail: Stormguard, 32mm rain deflector, aluminium Drop down seal: Sealed Tight Solutions Limited, ST422GT 14(w) x 35(h) aluminium body and neoprene seal Letter Plate: Yale, Postmaster Professional Security viewer: Yale, DH000768, Brass Security Chain: Yale, B-WS6-20-SC, Brass Numerals: Yale, Swis721BT, Zinc Door Knocker: Yale, 0716-2001 -Contemporary-Knocker-No-Spyhole **Hardware Protection:** Under Hinges: 1mm Interdens Multi point lock: 1mm Interdens wrapped around the lock bodies, keep boxes under strike plates. Letter plate: Full wrap around tunnel and graphite tubes around fixing posts as supplied integral to the letter plate Security viewer: 0.5mm graphite wrapped around body **Fanlight:** **Fanlight Frame:** Redwood, 545kg/m^3,80(w) x 44(t) with a 47(w) x 15(t) Integral rebate. Trench jointed 15(d) and screwed with No Ø5 x 100(l) steel screws/per joint. Jointed to the head of the doorset with 70(l) woodscrews through the integral stop and 50(l) woodscrews through the rebate in the fanlight. Lorient intumescent sealant was applied between the fanlight and door frame on both sides **Intumescent:** 2No. Sealed Tight Solutions, STS154FO intumescent strips fitted to the top of the fanlight frame (opposing the supporting construction) fitted 15mm from each side. Double glazed unit: Fireglass UK, 12mm Pyrobelite / 8mm Bar / 6.8mm Low E, Laminated Aperture Size: 650 (h) x 932 (w) Glass Size: 644 (h) x 926 (w) x 26.8(t) Sight Size: 620(h) x 902(w) Expansion Allowance: 3mm all around Beading: Sapele, 15 (h) x 15 (w) with a 2mm quirk fitted with 2(t) pins 50mm from the corners, 140mm centres 45° to the glass

	Glazing System: Glazing Liner: Sealed Tight Solutions Ltd, STS 302, 30(w) x 2(t) graphite liner fixed with self-adhesive around the full perimeter of the glazing Glazing intumescent: Sealed Tight Solutions Ltd, STS 104, 10(w) x 4(t) graphite intumescent fixed with self-adhesive to the upstand of the integral rebate	
Test Standard:	BS EN 1634-1:2014+ A1:2018	
Performance:	**Doorset A**	**Integrity:** 46 minutes **Insulation I_2:** 46 minutes **Radiation:** 46minutes
	Doorset B	**Integrity:** 45 minutes **Insulation I_2:** 42 minutes **Radiation:** 46 minutes

3.1.1.1 Test WF432578 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	46	N/A	46	46	B	Low
Doorset B	45	N/A	42	46	B	Low

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

3.1.2 Test Report WF534710

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 doorset design supporting leaf dimensions, hardware options, Ring doorbell 4, the inclusion of Pyroplex Perimeter Intumescents, Winkhaus AV2 E locks, fanlights using the Pyroplex 30049 glazing seal incorporating a DGU and is used to support leaf dimensions.

Date of Test:	28th July 2023
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Timber Ltd
Tested Product:	2No Latched, Single Acting, Single Doorsets with Fanlights
Tested Orientation:	Doorset A: Opened out away from the heating conditions of the test Doorset B: Opened in towards the heating conditions of the test
Sampling information:	Sampling was carried out by a representative of BM TRADA on the 27thJuly 2023, contract reference SC23185.
Summary of Test Specimen:	**Door Leaf:** Stredor 44 **Lipping:** Sapele 739kg/m3 8(t) to all leaf edges, glued with AdCo UK Ltd PU BX 3002 hand applied **Frame:** **Head and Jambs** Sapele, 739kg/m3 80(w) x 44(h), with a 50(w) x 12(t) integral rebate Morticed and tenon jointed, glued and fixed with screws to each joint - 4No Ø5 x 100(l) steel screws. Adhesive – AdCo PU BX 3002 PU Cill: Butt joint with frame, Sapele 140(w) x 44(h) with 9° chamfer at 80mm fixed to the frame jambs with 3No. Ø5.0 x 80(l) screws (2 up through Cill into jamb, 1 through jamb into Cill) with AdCo BX 3002 PU air cured hand applied **Intumescent and sealing materials:** To frame reveal: 2No. Pyroplex 10(w)x4(t) adhered with self-adhesive to grooves in the frame reveal, 7mm from the opening face 10mm apart. Environmental Seals: Schlegel Aquamac 21 Foam seal 9.1(w)x10.7(t) **Fire stopping to frame / supporting construction:** Pyroplex, fire rated expanding foam, applied to the full depth 6.5-26.2mm (w) and capped with 10(d) with Pyroplex, Intumescent acrylic sealant to both faces. **Hardware Both doorsets:** Hinges: 4No. Arrone AR8180-SSS, Grade 13 Ball bearing butt hinges Closer: Rutland, TS.11204 overhead concealed closer. Lock/Latch: Winkhaus AV2 E Lever Handles: Salto XS4 One Steel access control handle Latch Status: Latched Threshold: Exitex MDS 80/2 RITB Aluminium and rubber 87(w) x 24(h) Security viewer: Rutland, HR.DV.PNP Ø16 Brass body

	Numerals: Rutland, RH.DNSA, aluminium Door Knocker: Rutland, RH.DK.PHP, Door Knocker Urn style Door Bell: Ring, Doorbell 4 Cableway: Winkhaus, STV-E, Cable & Cable tray (cable and steel) Ø8 **Hardware Protection:** Under Hinges: 1mm graphite Multi point lock: Lock bodies - 1 mm Pyroplex Graphite applied to all edges of the top, mid and bottom lockcase cut outs Strikes/Keeps - 1 mm Pyroplex Graphite, 4 layers to the central keep and 1 layer to the top and bottom strikes/ keep Security viewer: 1 mm Pyroplex Graphite Cable way and cable loop: 1 mm Pyroplex Graphite lining the cable tray/loop and the cable route through leaf/arounds VPs* **Glazing (Door Leaf):** Double glazed unit: Fireglass: 7(t) Pyrobelite / 6.4x7.5mm Hollow Box Steel Spacer / 6.4(t) laminate Aperture Size: 900 (h) x 240 (w) Glass Size: 890 (h) x 230 (w) x 21.4 (t) Sight Size: 850 (h) x 190(w) Expansion Allowance: 5mm all around Beading: Sapele 739kg/m^3, 28 (h) x 16 (w) with 8mm x 8mm bolection return - fixed with 16g 38mm pins 50mm from the corners, 150mm centres 30° to the glass **Glazing System:** Pyroplex 30049 graphite 14.2(h)x6.4(t) fixed with self-adhesive on either side of the double-glazed unit. **Fanlight:** **Fanlight Frame:** Sapele, 739kg/m^3, 80(w)x44(t) with a 49(w)x15(t) Integral rebate, 12mm mortice and tenon jointed with 2no. Ø 5 x 80(l) screws on each joint, the frame is screw fixed to the door frame beneath the 1st seal and through the stop & and 1 screw fitted through the fanlight beneath the glass using Ø5x80(l) woodscrews 10mm in from the edges and at 260mm centres. **Glazing (Fanlight):** Double glazed unit: Fireglass UK: 7(t) Pyrobelite/6.4x7.5mm Hollow Box Steel Spacer / 6.4(t) laminate Aperture Size: 436(h) x 936(w) Glass Size: 426(h) x 926(w) x 21.4(t) Sight Size: 400(h) x 900(w) Expansion Allowance: mm all around Beading: Sapele 739kg/m^3 15(h)x15(w) fixed using 16g x 40(l) steel pins 50mm from the corners and at 30° to the face of the glass **Glazing System:**

	Intumescent Glazing seal: Pyroplex 30049 graphite, 14.2(h)x6.45(t) fixed to the upstand of the rebate and the glazing bead on and up to each face of the glass	
Test Standard:	BS EN 1634-1:2014+ A1:2018	
Performance:	**Doorset A**	**Integrity:** 23 minutes **Insulation I_2:** 19 minutes
	Doorset B	**Integrity:** 15 minutes **Insulation I_2:** 20 minutes **Radiation:** Radiation data was removed due to a malfunction in the radiometer

3.1.2.1 Test WF534710 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	23	N/A	19	46	N/A	Low
Doorset B	15	N/A	19	N/A	N/A	Low

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

In accordance with clause 4.4.2 of BS EN 15269-3: 2022, the full test report has been analysed and the failures observed on both doorsets within the test have been attributed to the threshold seal present in the doorset design.

This is supported by the results obtained within the other tests referenced herein where modified threshold designs, had not shown any visible signs of failure at this location until the tests termination in excess of 30 minutes.

On this basis the tested threshold detail defined within WF534710 has not been included within this extended field of application for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family.

With this in mind the below detailed table summarises the results when the failures recorded at the threshold are isolated:

3.1.2.2 Test WF534710 Summary of Results (Failure isolated)

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 when the failure associated with the threshold component has been isolated.

In accordance with clause 4.4.3 the performance category has been amended to reflect the performance of the doorset design once the isolated failure is removed.

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	46	N/A	19	46	B	Low
Doorset B	46	N/A	19	N/A	B	Low

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

3.1.3 Test Report WF538328

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 doorset design supporting leaf dimensions, hardware options, the inclusion of Exitex Perimeter Intumescents, Exitex Aquatex A13 environmental seals, Fullex Crimebeater CRB-45-BT-1720-20 lock, Exitex MXS 15-70 threshold, glazed apertures and is used to support leaf dimensions.

Date of Test:	29th November 2023
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Timber Ltd
Tested Product:	2No Latched, Single Acting, Single Doorsets
Tested Orientation:	Doorset A: Opened out away from the heating conditions of the test Doorset B: Opened in towards the heating conditions of the test
Sampling information:	Sampling was carried out by a representative of BM TRADA on 04th March 2024 under sampling contract number SC23281T
Summary of Test Specimen:	**Door Leaf:** Stredor 44 Leaf Size: 2153 (h) x 930 (w) x 44 (t) **Lipping:** Sapele 687kg/m^3 8 (t) all leaf edges, glued with Henkel 4 PUR **Frame:** **Head and Jambs** Sapele 687kg/m^3, 80(w) x 44(t) with rebate 50(w) x 12(d) trench jointed 12mm to the depth of the rebate and screwed with Ø5 x 90 (l) steel wood screws with D3 PVA adhesive. Cill 140(w) x 44(t) with tapering from 80 mm wide down to 34(h) Butt jointed with frame with 2 No. 5.0 mm Ø x 90 mm long screws through Cill into jambs in butt joint and using PVA D3 PVA Wood Adhesive. **Intumescent and sealing materials:** To frame reveal: 2No. Exitex 15(w)x4(t) fire only PVC encapsulated graphite fixed with self-adhesive, frame head and jambs, 5mm from the opening face of the frame 5mm apart. To bottom edge of door leaf: 1No. Exitex 15(w)x4(t) PVC encapsulated graphite fitted centrally to the bottom leaf edge Environmental Seals: Exitex, Intumescent Aquatex A13 1.29.0700 Foam encapsulated in nylon fibre 13 (w) x 10(h) **Fire stopping to frame / supporting construction:** Blue60 Fire Rated Frame Foam 1.31.0600.0750.01 foam to the full depth of the frame 9.7-18 (w). **Hardware Both doorsets:** Hinges: 4No. UAP, Stainless steel, IH-HINGE-SS201-FIRE-RADIUS-PSS Steel Bearing Closer: Rutland, TS.11204 Lock/Latch: Fullex Crimebeater (Label: CRB-45-BT-1720-20-SLAM) FULLEX-CRB-AUTOLOCK =Crimebeater lock-dual spindle /

<table>
<tr><td></td><td colspan="2">45mm backset / 234mm backplate / 0 hooks / 3 bolts — AUTO LOCK with anti-slam striker plate
Latch Status: Latched
Handle: UAP, DH243-DUO-MPSS-NANOCOAST
Cylinder: UAP, Kinetica 3 Star
Threshold: Exitex, MXS 15-70 Aluminium & Rubber 70(w) x 15(h) fixed with Ø3.5 x 30(l) screws into the timber cill integral to threshold.
Security viewer: UAP, SWALFCH-FR, Brass
Security Chain: UAP, DCCHN-TS003 Steel, Doorset A only
Numerals: UAP,3" Nanocoast Number 6 Satin Stainless Self Adhesive Door Number
Door Knocker: UAP, 6 Inch Victorian Urn Hidden Fix Stainless Steel Door Knocker.
Hardware Protection:
Under Hinges: 1 (t) Exitex radius corner S/A hinge pads 100mm x 31 mm x 1mm
Multi point lock: Intumescent kit Exitex Fullex CRB 220 Pro Lock Kit
Security viewer: UAP, Pre-supplied sheet rolled into tube
Threshold: Bedded on Norseal Firewizard intumescent mastic
Glazing (Door Leaf):
Double glazed unit: Fireglass UK: 7(t) Pyroguard Advanced / 8mm Hollow Box Steel Spacer / 6.4(t) laminate
Aperture Size: 900 (h) x 240 (w)
Glass Size: 890 (h) x 230 (w) x 21.4 (t)
Sight Size: 855 (h) x 200(w)
Expansion Allowance: 5mm all around
Beading: Sapele 687kg/m^3, 28 (h) x 15 (w) with 8mm x 8mm bolection return - fixed with 4 x50(l) screws 50mm from the corners, 150mm centres 30° to the glass
Glazing System:
Glazing intumescent: Exitex, Exi-Glaze 30 close cell foam 5(t)x10(w) applied with self-adhesive between the bead and glass on both faces.</td></tr>
<tr><td>Test Standard:</td><td colspan="2">BS EN 1634-1:2014+ A1:2018</td></tr>
<tr><td rowspan="2">Performance:</td><td>Doorset A</td><td>Integrity: 35 minutes
Insulation I_1: 14 minutes
Radiation: 47 minutes</td></tr>
<tr><td>Doorset B</td><td>Integrity: 26 minutes
Insulation I_1: 16 minutes
Radiation: 47 minutes</td></tr>
</table>

3.1.3.1 Test WF538328 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	35	N/A	14	47	A	Low
Doorset B	26	N/A	16	47	N/A	Low

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

In accordance with clause 4.4.2 of BS EN 15269-3: 2022, the full test report has been analysed and the failures observed on doorset B within the test has been attributed to the fire stopping arrangement present in the doorset design.

This is supported by the results obtained within the other tests referenced herein where other methods of fire stopping materials have been used and not shown any visible signs of failure at this location until the tests termination in excess of 30 minutes.

On this basis the tested fire stopping medium defined within WF538328 has not been included within this extended field of application for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family.

With this in mind the below detailed table summarises the results when the failures recorded at the threshold are isolated:

3.1.3.2 Test WF538328 Summary of Results (Failure isolated)

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 when the failure associated with the fire stopping medium has been isolated.

In accordance with clause 4.4.3 the performance category has been amended to reflect the performance of the doorset design once the isolated failure is removed.

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	35	N/A	14	47	A	Low
Doorset B	42	N/A	16	47	B	Low

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

3.1.4 Test Report WF529859

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 doorset design supporting leaf dimensions, hardware options, the inclusion of Intumescent Seals Ltd Therm-A-Seal perimeter Intumescents, Rutland RMP3.1720.45 lock, glazed apertures and is used to support leaf dimensions.

Date of Test:	8th June 2023
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Rutland UK
Tested Product:	2No Latched, Single Acting, Single Doorsets
Tested Orientation:	Doorset A: Opened out away from the heating conditions of the test Doorset B: Opened in towards the heating conditions of the test
Sampling information:	Sampling was carried out by BM TRADA on 5th June 2023 under sampling contract number SC23163 Dog Bolt Hinge: RH.DBSH.34.SSS and Cam Action Closer were sampled on the 12th of July 2022 under contract FM519852
Summary of Test Specimen:	**Door Leaf:** Stredor 44 Leaf Size: 2153 (h) x 930 (w) x 44 (t) **Lipping:** Sapele 642kg/m3 8 (t) all leaf edges, glued with Everbuild PU 5 min cure **Frame:** **Head and Jambs** Sapele 640kg/m3, 80(d) x 47(t) with integral stop 33(w) x 15(d) Trench jointed to the depth of the rebate and screwed with Ø5 x 80(l) steel wood screws along with PU 5 minute set glue. Cill: 140 (w) x 44(h) screwed to the jambs with Ø5 x 80(l) steel wood screws along with PU 5-minute glue **Intumescent and sealing materials:** Intumescent to frame reveal: 2No. Intumescent Seals Ltd, Therm-A-Seal SL 1040NW PVC encased graphite intumescent 10mm wide x 4mm thick fixed with Self-adhesive, frame head and jambs, 7mm and 27mm in from the opening face. Environmental Seals: 1No. Sealmaster Ltd, Delta corner seal – DELTA12BK, 12 (h) x 12(w) fixed with self-adhesive, frame head and jambs, to upstand of stop. **Fire stopping to frame / supporting construction:** Rockwool, RW45, Mineral wool rockfibre, hand applied to a depth of 60mm, capped with Mann McGowan Pyromas A Intumescent mastic 10-16 (w) x 10 (d) cartridge gun applied to frame perimeter on both sides. **Hardware Both doorsets:** Hinges: 3No. Rutland, Dog Bolt Hinge RH.DBSH.34.SSS Closer: Rutland TS.11205.BC.SR.2. SESE Lock/Latch: RMP3.1720.45.S Rutland Multi Point Lock: Cylinder: ARC, Pro-Tec

<table>
<tr><td></td><td colspan="2">Handles: Rutland, RH.RLB.PNP box marked HA12318 Door handle
Latch Status: Latched
Threshold: Exitex, Low Macclex Threshold – Thermally Broken – Inward Opening, MXS 15/2 RITB bedded on intumescent mastic
Security viewer: Rutland RH.DVP.NP
Security Chain: Rutland, RH.SC.PNP
Numerals: Rutland, RH.DNSA Door Numeral
Letter plate: Rutland, RLP.EXT & RLP.INT, Aluminium screw fixed
Hardware Protection:
Under Hinges: 0.8 (t) Graphite Intumescent Pad Ref: IP.HP43.SQ
Multipoint lock: IP.RMP3 Graphite intumescent kit
Security viewer: 1 mm graphite intumescent lining
Letter Plate: IP.RLP — Intumescent kit 30/60 mins for RLP letterplate (supplied with letterplate)
Glazing (Door Leaf):
Double glazed unit: Fireglass UK: 7(t) ACG Pyrobelite 7 / 8mm Hollow Box Steel Spacer / 6.4(t) Clear laminate
Aperture Size: 850 (h) x 200 (w)
Glass Size: 844 (h) x 194 (w) x 22.6 (t)
Sight Size: 810 (h) x 170(w)
Expansion Allowance: 3mm all around
Beading: Sapele 642kg/m^3, 20 (h) x 16.5 (w) with 8mm x 5mm bolection return - fixed with 4 x40(l) screws 50mm from the corners, 150mm centres 20° to the glass
Glazing System:
Glazing intumescent: Intumescent Seals Ltd, Foam Glazing Tape – GTR15x5FM, Closed cell foam tape, 15mm x 5mm fixed with self-adhesive to bead
Silicon Capping: No Nonsense, Silicone Sealant, (general purpose acetoxy cure clear), 5mm bead, nozzle applied to cap glazing tape of the glazing system
Setting Blocks: Sapele, 642kg/rn^3 10mm in from corners on bottom of glass unit</td></tr>
<tr><td>Test Standard:</td><td colspan="2">BS EN 1634-1:2014+ A1:2018</td></tr>
<tr><td rowspan="2">Performance:</td><td>Doorset A</td><td>Integrity: 39 minutes
Insulation I_2: 18 minutes
Radiation: 48 minutes</td></tr>
<tr><td>Doorset B</td><td>Integrity: 35 minutes
Insulation I_2: 22 minutes
Radiation: 48 minutes</td></tr>
</table>

3.1.4.1 Test WF529859 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	39	N/A	18	48	B	Low
Doorset B	35	N/A	22	48	A	Low

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

3.1.5 Test Report WF428987 AR1

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 doorset design supporting leaf dimensions, hardware options, the inclusion of Sealed Tight Solutions perimeter Intumescents, Sealed Tight Solutions ST422 drop seal installed to co-ordinate with the Exitex RITB MXS 15/2 threshold and is used to support leaf dimensions.

Date of Test:	2nd November 2022
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Panel Products
Tested Product:	2No Latched, Single Acting, Single Doorsets
Tested Orientation:	Doorset A: Opened out away from the heating conditions of the test Doorset B: Opened in towards the heating conditions of the test
Sampling information:	Sampling was carried out by a representative of BM TRADA on 02nd June 2020 under sampling contract number SC20096
Summary of Test Specimen:	**Doorset A** **Door Leaf:** Stredor 44 (F7) Leaf Size: 2440 (h) x 1041 (w) x 44 (t) **Lipping:** Sapele 18(t) to top edge 8 (t) vertical leaf edges and bottom leaf edge glued with Norbond Kaberfix D4 PU **Doorset B** **Door Leaf:** Stredor 44 (F14) Leaf Size: 2440 (h) x 1041 (w) x 44 (t) **Lipping:** Sapele 18(t) to top edge 8 (t) vertical leaf edges and bottom leaf edge glued with Norbond Kaberfix D4 PU **Both Doorsets Frame:** **Head and Jambs** Sapele (640kg/m3), 70 (w) x 44 (t) with integral rebate 47 (w) x 15 (d) Trench jointed to the depth of the rebate and screwed with Ø5 x 80 (l) steel wood screws **Intumescent and sealing materials:** Intumescent to frame reveal: 2No. Sealed Tight Solutions, STS104FO PVC encased graphite intumescent 10(w) x 4(t) fixed with Self-adhesive, frame head and jambs, 10mm apart, 7mm from the opening face. Environmental Seals: 1No. Sealed Tight Solutions ST1009 PVC base with nitrile surface and fin 10(w) x 9(t) thick fixed with self-adhesive, frame head and jambs, to upstand of stop on outer edge. **Fire stopping to frame / supporting construction:** Rockwool, Mineral wool, full depth of the frame, hand filled capped with Mann McGowan Pyromas A Intumescent mastic 6.4-19 (w) x 10 (d) cartridge gun applied to frame perimeter on both sides. **Hardware Both doorsets:** Hinges: 3No. Rutland RH.BB.43R.SS Closer: Rutland, ITS 11204 overhead concealed closer. Lock/Latch: Doorset A:

<table>
<tr><td></td><td colspan="2">ERA Surefire Heritage 2 Hook Multi Point Lock:
Doorset B:
ERA Surefire Classic
Cylinder: Access 2, Tigris Premier 3
Cylinder Guard: A Spec, Cylinder Pull
Latch Status: Latched
Drop down seal: Sealed tight Solutions ST422 12(w) x 20(h)
Threshold: Exitex RITB MXS 15/2 Aluminium extrusion sealed to floor level with Mann McGowan Pyromas A 6mm bead.
Letterplate (Doorset A): 2No. Lorient Polyproducts Ltd, RJ008
Security viewer: Rutland HA12338 Brass
Hardware Protection:
Under Hinges: 1 (t) Rutland hinge packers
Lock: Flexifire Universal SureFire Multipoint Lock Kit
Closer: Rutland IP.114 intumescent kit for ITS11204
Letter Plate: Lorient Polyproducts Ltd intumescent lining
Security viewer: 1 (t) graphite intumescent lining
Glazing (Door Leaf) Both Doorsets:
Glass: Pilkington Pyrostop 30-10
Aperture Size: 1540 (h) x 400 (w)
Glass Size: 1530 (h) x 390 (w)
Sight Size: 1504 (h) x 360 (w)
Expansion Allowance: 5mm all around
Beading: Sapele, 23(h) x 17.5 (w) with 6(w) x 8(t) bolection return fixed with Ø4x50(l) screws 50mm from the corners, 150mm centres.
Glazing System:
Glazing Perimeter: Sealed Tight solutions STS 302 liner, 30(w) x 2(t) graphite liner fixed with self-adhesive
Glazing intumescent: Sealed Tight Solutions STS ST 105-3 closed cell foam 10(h) x 3(t) fitted between the glass and the glazing bead</td></tr>
<tr><td>Test Standard:</td><td colspan="2">BS EN 1634-1:2014+ A1:2018</td></tr>
<tr><td rowspan="2">Performance:</td><td>Doorset A</td><td>Integrity: 31 minutes
Insulation I_1: 31 minutes
Insulation I_2: 31 minutes
Radiation: 41 minutes</td></tr>
<tr><td>Doorset B</td><td>Integrity: 41 minutes
Insulation I_1: 41 minutes
Insulation I_2: 41 minutes
Radiation: 41 minutes</td></tr>
</table>

3.1.5.1 Test Report Summary WF428987 AR1

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	31	31	31	41	A	Low
Doorset B	41	41	41	41	B	Low

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

3.1.6 Test Report WF426419

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 doorset design supporting leaf construction, hardware options, glazed apertures, the inclusion of Sealed Tight Solutions perimeter Intumescents and Sealed Tight Solutions ST422 drop seal installed to co-ordinate with the Sealed Tight Solutions STH004 aluminium threshold.

Date of Test:	27th February 2020
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Panel Products Ltd
Tested Product:	2No Latched, Single Acting, Single Doorsets
Tested Orientation:	Doorset A: Opened in towards the heating conditions of the test Doorset B: Opened in towards the heating conditions of the test
Sampling information:	Sampling was carried out by a representative of Warringtonfire on 11th & 12th February 2020 under sampling contract number FM424838
Summary of Test Specimen:	**Doorset A** **Door Leaf:** Stredor 44 (F14) Leaf Size: 2399 (h) x 1047 (w) x 44 (t) **Lipping:** Sapele 8 (t) all leaf edges glued with Norbond Kaberfix D4 PU **Decorative Beading:** European Redwood 510 kg/m^3 70 (w) x 19 (t) fixed with 30mm x 18g pins & D4 adhesive and Caberfix D4 glue **Doorset B** **Door Leaf:** Stredor 44 (F7) Leaf Size: 2399 (h) x 1047 (w) x 44 (t) **Lipping:** Sapele 8 (t) all leaf edges glued with Norbond Kaberfix D4 PU **Decorative Beading:** European Redwood 510 kg/m^3 70 (w) x 19 (t) fixed with 30mm x 18g pins & D4 adhesive and Caberfix D4 glue **Both Doorsets Frame:** **Head and Jambs** European Redwood (510kg/m^3), 69.5(w) x 44 (t) with integral stop 47(w) x 22.5(d) Trench jointed to the depth of the rebate and screwed with Ø5 x 80(l) steel wood screws **Intumescent and sealing materials:** Intumescent to frame reveal: 2No. Sealed Tight Solutions, STS 104FO PVC encased graphite intumescent 10mm wide x 4mm thick fixed with Self-adhesive, frame head and jambs, 10mm apart,7mm from the opening face. Environmental Seals: 1No. Sealed Tight Solutions ST1009 PVC base with nitrile surface and fin 10mm wide x 9mm thick (prior to compression), fixed with self-adhesive, frame head and jambs, to upstand of stop on outer edge. **Fire stopping to frame / supporting construction:**

	Rockwool, Flexi, Mineral wool, full depth of the frame, capped with Mann McGowan Pyromas A Intumescent mastic 4-12(w) x 10(d) cartridge gun applied to frame perimeter on both sides. **Hardware Both doorsets:** Hinges: 3No. Eurospec, HIN1433/13 Closer: Astra 4003, Steel jamb closer Lock/Latch: ERA SureFire Heritage 2 Hook Multi-Point Lock: Cylinder: Era Fortress 3 Cylinder Pull: ERA Fab & Fix Heritage Euro Cylinder Pull Latch Status: Latched Drop down seal: Sealed Tight Solutions ST422 12(w) x 20(h) fitted centrally along the bottom edge of the leaf mechanically fixed Threshold: Sealed Tight Solutions STH004 Aluminium 15(h) x 47(w) screwed to the floor using 2No. Ø 50mm woodscrew Security viewer: Sealed Tight Solutions 4008 Ø14 Brass body with glass lens **Hardware Protection:** Under Hinges: 1 (t) Sealed Tight Solutions Ltd, Raw graphite Lock: 1 (t) Sealed Tight Solutions Ltd ERA Surefire Intumescent Kit. Astro 4003 jamb closer: 1 (t) Sealed Tight Solutions Ltd, Raw graphite lining cut out Security viewer: 1 (t) Sealed Tight Solutions Ltd, Raw graphite intumescent lining **Glazing (Both leaves):** Glass: Pilkington Pyrostop 15 (t) Aperture Size: 1540 (h) x 400 (w) Glass Size: 1530 (h) x 390 (w) x 15 (t) Expansion Allowance: 5mm all around Beading: Sapele 640kg/m^3, 22(h) x 19 (w)wide with 6mm x 6mm bolection return and 15° splay, fixed with 16g 50mm pins 50mm from the corners, 150mm centres 35° to the glass **Glazing System:** Glazing Perimeter: Sealed Tight solutions STS 302 15(w) x 2(t) graphite liner fixed with self-adhesive centrally lining the glazing aperture Glazing intumescent: Sealed Tight Solutions STS 105-3 closed cell foam 9(h) x 3(t) fitted between the glass and the glazing bead	
Test Standard:	BS EN 1634-1:2014+ A1:2018	
Performance:	**Doorset A**	**Integrity:** 35 minutes **Insulation I_1:** 32 minutes **Insulation I_2:** 35 minutes **Radiation:** 42 minutes

	Doorset B	**Integrity:** 41 minutes **Insulation I_1:** 31 minutes **Insulation I_2:** 41 minutes **Radiation:** 42 minutes

3.1.6.1 Test Report Summary WF426419

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	35	32	35	42	A	Low
Doorset B	41	31	41	42	B	Low

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

3.1.7 Test Report WF544878 (Doorset B)

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 and is used to support hardware options, glazing options and the inclusion of Pyroplex perimeter Intumescents and Harmony HID1135 drop seal.

The referenced test report contains 2No. doorsets, however, only doorset B as detailed below pertains to the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family. Doorset A has therefore been omitted from this report.

Date of Test:	26th June 2024
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Timber Ltd
Tested Product:	Unlatched Single Acting Single Leaf Doorset
Tested Orientation:	Opened in towards the heating conditions of the test
Sampling information:	Sampling was carried out by a representative of BM TRADA on 28th June 2024 under contract SC241110T
Summary of Test Specimen:	**Door Leaf:** Stredor 44 Leaf Size: 2360 (h) x 1034 (w) x 44 (t) **Lipping:** Sapele 716kg/m^3 8(t) all leaf edges glued with Polyurethane BX 3002 PU **Decorative Grooves**: 5mm wide x 10mm deep V grooves to both faces **Frame:** **Head and Jambs** Redwood, 510kg/m^3, 70 (w) x 32(t) with planted stop 20(w) x 12(t), 12mm trench jointed and fixed with PU adhesive and 3No. 80mm screws to each joint (2no top and 1no side). Stops pinned and glued with BX 3002 PU. **Intumescent and sealing materials:** To frame reveal: 1No. Pyroplex Twin Flipper 30175 PVC encased graphite, 15mm wide x 4mm thick, 14.5mm from opening face of the frame **Fire stopping to frame / supporting construction:** Rockwool, Flexi, Mineral wool, Nominal 50(d) x filling a gap between 11.42mm – 18.08mm wide, hand applied and capped with Pyroplex Intumescent Acrylic Sealant Intumescent mastic Nominal 10(d) x between 11.42mm – 18.08mm wide nozzle applied to both faces **Hardware:** Hinges: 3No Arrone AR8180-SSS,102x76x3mm Grade 13 Ball bearing butt hinges Closer: Arrone AR6800-SE OH Face Fixed

	Lock/Latch: Arrone AR910-S-80-SSS Cylinder: Hoppe Arrone AR-KD-5130-BB-NP 35/35 Brass Lever Handles: Hoppe, Paris 138S/42K Set on rose without escutcheon Escutcheon: Hoppe Arrone AR200/27-SAA* Latch Status: Unlatched Drop down seal: Harmony HID1135 **Hardware Protection:** Under Hinges: 1 (t) Pyroplex Mineral Fibre Sheet. Lock: 1 (t) Pyroplex Mineral Fibre Sheet applied to lock case, forend and keeps. **Glazing (Door Leaf):** Glass: AGC Pyrobelite 7 Aperture Size:1690 (h) x 294(w) Glass Size: 1684(h) x 288(w) x 7(t) Sight Size: 1660(h) x 264(w) Expansion Allowance: 3mm all around Beading: Sapele 638kg/m^3, 20(h) x 21.5(w) wide with 5mm x 5mm bolection return fixed with 16g x 38(l) pins 50mm from the corners, 150mm centres 35° to the glass **Glazing System:** Glazing intumescent: Pyroplex 8492 Graphite glazing strip 10 (w) x 2.5(t) fixed with self-adhesive either side of the glass adhered to the glazing bead	
Test Standard:	BS EN 1634-1:2014+ A1:2018	
Performance:	**Doorset B**	**Integrity:** 40minutes **Insulation I_2:** 12 minutes **Radiation:** 41 minutes

3.1.7.1 Test Report Summary WF544878 (Doorset B)

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 B	40	N/A	12	41	B	Low

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

3.1.8 Test Report WF534693 (Doorset A)

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 and is used to support Streframe E frame material.

The referenced test report contains 2No. doorsets, however, only doorset A as detailed below pertains to the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family. Doorset B has therefore been omitted from this report.

Date of Test:	27th July 2023
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Timber Ltd
Tested Product:	Unlatched Single Acting Single Leaf Doorset
Tested Orientation:	Opened in towards the heating conditions of the test
Sampling information:	Sampling was carried out by a representative of BM Trada on 27th July 2023 under contract SC23186
Summary of Test Specimen:	**Door Leaf:** Stredor 44 (F14) Leaf Size: 2362 (h) x 934 (w) x 44 (t) **Lipping:** Sapele 616kg/m3 8(t) all leaf edges glued with Polyurethane BX 3002 PU **Frame:** **Head and Jambs** Streframe, 427kg/m3 30 (t) x 70 (w) main section with 30(t) x 70(w) back section, jointed with a 14 (w) x 10 (t) hardwood loose tongue positioned 10 mm back from the inner face to allow the jointed extension piece. A 30(w)x12(t) loose stop is pinned and glued over the joint. The frame is trench jointed and fixed with 3no Ø5.0 x 80(l) steel screws to each joint (2No. top and 1No.side). AdCo UK Ltd BX 3002 PU adhesive is applied to each frame joint and the stop. **Intumescent and sealing materials:** To frame reveal: 1No. Mann McGowan Pyrostrip 500P, PVC encased graphite, 15(w)x 4(t) Self-adhesive into groove, 14.5mm in from opening face of the frame. Environmental Seals: Mann McGowan, ACS-1, Co-extruded rigid back PVC with flexible fins, 12 mm wide x 12 mm high, fixed with self-adhesive affixed to upstand of stop **Fire stopping to frame / supporting construction:** Rockwool, Rockwool Flexi 50mm, Mineral fibre stuffing to fill a gap 10-19mm wide x full depth of frame allowing for 10 mm mastic cap on each face.

	Capping: Mann McGowan, Pyromas A Intumescent Mastic 10-19 mm wide x 10mm deep mastic gun applied to both faces between frame and supporting construction **Hardware:** Hinges: 3No Arrone AR8180-SSS, Grade 13 bushed bearing butt hinges Closer: Hoppe, Arrone AR6800 OH Face Fixed Lock/Latch: Arrone AR910-S-80-SSS Cylinder: Hoppe Arrone AR-KD-5130-BB-NP 35/35 Brass Latch Status: Unlatched Lever Handles: Hoppe, Arrone AR200S/10-SP-SAA Drop down seal: Mann McGowan, DD-1703ACU Air Transfer Grille: Mann McGowan, Pyrogrille 25 with Pressed Steel Cover Grilles, Pyrogrille = PVC encased graphite, Cover: Steel 346(h) x 346(w) fitted centrally in width and 178 mm from the bottom of the leaf **Hardware Protection:** Under Hinges: 2 (t) Mann McGowan, Pyrostrip Interdens Lock. 1 (t) Mann McGowan, Pyrostrip Interdens applied to the lockcase, forend and keeps Drop down seal: Mann McGowan "Pyrostrip" 69 x 1 x 930 white Interdens SA to sides and top edge **Glazing (Door Leaf):** Glass: Pyroguard Advance 2-EW30/7-1 Aperture Size: 850(h) x 634(w) Glass Size: 844(h) x 628(w) x 7(t) Sight Size: 810(h) x 600 (w) Expansion Allowance: 3mm all around Beading: Sapele,616kg/m^3 20(h) x 20(w) wide with 5mm x 5mm bolection return fixed with 38(l) 16g pins 50mm from the corners, 150mm centres 30° to the glass **Glazing System:** Glazing intumescent: Mann McGowan, Pyroglaze 30, PVC encased graphite 10(h) x 3(t) fitted with self-adhesive to the upstand of the bead on each and up against each face of the glass	
Test Standard:	BS EN 1634-1:2014+ A1:2018	
Performance:	**Doorset A**	**Integrity:** 40 minutes **Insulation I_2:** 9 minutes **Radiation:** 41 minutes

3.1.8.1 Test Report Summary WF534693 (Doorset A)

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	40	N/A	9	41	B	Low

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

3.1.9 Test Report WF532750 (Doorset A)

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 and is used to support timber frame density, Strelip lipping material and hardware options.

The referenced test report contains 2No. doorsets, however, only doorset A as detailed below pertains to the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family. Doorset B has therefore been omitted from this report.

Date of Test:	30th May 2023
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Timber limited
Tested Product:	Unlatched Single Acting Single Leaf Doorset
Tested Orientation:	Opened in towards the heating conditions of the test
Sampling information:	Sampling was carried out by a representative of BM TRADA on 31st May 2023 under contract SC23132
Summary of Test Specimen:	**Door Leaf:** Stredor 44 Leaf Size: 2160 (h) x 930 (w) x 44 (t) **Lipping:** Strelip 697kg/m^3 8(t) all leaf edges glued with Polyurethane BX 3002 PU **Frame:** **Head and Jambs** Redwood 453kg/m^3 70(w) x 32(t) with 20(w) x 12(t) planted stop The frame was trench jointed 12(d) and fixed with PU adhesive, BX 3002 PU and 3No. 80(l) screws. The doorstop was pinned with 16g x 38(l) steel pins 50mm in from the corners and at 150mm centres. **Intumescent and sealing materials:** To frame reveal: 1No. Lorient Polyproducts Ltd, LP1504 PVC encased sodium silicate 15(w) x 4(t) fitting into a groove in the frame 14.5mm in from the opening face. Environmental Seals: Lorient Polyproducts Ltd, LAS1010 Batwing co-extruded rigid black PVC with flexible fins fitted to the upstand of the door stop with self-adhesive **Fire stopping to frame / supporting construction:** Rockwool, Rockwool Flexi 50mm, Mineral fibre stuffing full depth of frame allowing for 10 mm mastic cap on each face. Capping: Mann McGowan, Pyromas A Intumescent Mastic 10mm deep mastic gun applied to both faces between frame and supporting construction **Hardware both doorsets:** Hinges 3No. Union JH603BUFR-M-BZP Grade 13 bushed bearing stainless steel butt hinges

	Closer: Union J-CE3F-SIL Lock/Latch: Union X0347260EU-SL-R-SS Sashlock/400 series DIN sashlock Cylinder: Union 6 Pin Euro Double Cyl 35/35 SN J-U6PED3535SN Lever Handles: Union, 01 style lever on s rose SSS J-1000RRS01 Escutcheon: Union, J-1 000EESS Signage: Excel DH003790 Fire Door Keep Shut **Hardware Protection:** Under Hinges: UNION Power Load Intumescent Pads J-603-lK*. Lock. UNION 400 Series DIN Intumescent Kit J-400-lK to the Lock body forend and keep **Glazing (Door Leaf):** Glass: Pyroguard, 2-EW30/7-1 Aperture Size: 900(h) x 550(w) Glass Size: 894(h) x 544(w) x 7(t) Sight Size: 870(h) x 520(w) Expansion Allowance: 3mm all around Beading: Sapele 623kg/m^3, 20(h) x 20.5 (w) wide with 5mm x 5mm bolection return fixed with 16g x 38(l) pins 50mm from the corners, 150mm centres 35° to the glass **Glazing System:** Glazing intumescent: Lorient FF1, 13.5(w) x 3.5(t) graphite encapsulated PVC self-adhered to the upstand of the beading on each face of the glass	
Test Standard:	BS EN 1634-1:2014+ A1:2018	
Performance:	**Doorset A**	**Integrity:** 47 minutes **Insulation I_2:** 6 minutes **Radiation:** 47 minutes

3.1.9.1 Test Report Summary WF532750 (Doorset A)

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	47	N/A	6	47	B	Low

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

3.1.10 Test Report WF544880

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 used to support the inclusion of the Sealmaster DRP2712E drop seal, glazing and hardware options.

Date of Test:	27th June 2024
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Timber Ltd
Tested Product:	Unlatched Single Acting Double Leaf Doorset
Tested Orientation:	Opened in towards the heating conditions of the test
Sampling information:	Sampling was carried out by a representative of BM TRADA on the 28th June 2024, contract reference SC24111T.
Summary of Test Specimen:	**Door Leaf:** Stredor 44 Leaf Size: 2358 (h) x 1000 (w) x 44 (t) **Lipping:** Sapele 602kg/m^3 8(t) to all leaf edges, glued with Polyurethane BX 3002 PU adhesive hand applied **Frame:** **Head and Jambs** Redwood, 569kg/m^3, 70(w)x32(t) with a 20(w)x12(t) planted stop The door frame was trenched jointed 12 (d) and screwed with 3No. 80(l) steel screws using a PU adhesive, stops were pinned using a Caberfix PU adhesive. **Intumescent and sealing materials:** To frame reveal: 1No. Intumescent Seals Ltd. Therm-A-Seal PVC encased graphite 15(w) x 4(t) fitted with self-adhesive into a groove. Set 14.5mm in from the opening face To the meeting edges: Primary leaf – 1No. Intumescent Seals Ltd. Therm-A-Blade PVC encased graphite with rubber fin 10(w)x4(t) fitted with self-adhesive into a groove set 6mm in from the pull face; and 1No. Intumescent Seals Ltd. Therm-A-Seal PVC encased graphite 10(w)x4(t) fitted with self-adhesive into a groove. set 6mm in from the push face Environmental Seals: 12(w)x12(t) Sealmaster Delta door seal fitted with self-adhesive to the upstand of the stop **Fire stopping to frame / supporting construction:** Rockwool, Rockwool Flexi 50mm, Mineral fibre stuffing full depth of frame allowing for 10 mm mastic cap on each face. Capping: Mann McGowan, Pyromas A Intumescent Mastic 10mm deep mastic gun applied to both faces between frame and supporting construction **Hardware:** Hinges: 3No. Zoo ZHSS243RS Closer: Vier, VDC0024A1SE,

	Drop down seal: Sealmaster DRP2712E Lock/Latch: Zoo, ZDL7260RSS, Din Euro lockcase, Cylinder: Vier, V5EP70CTSCE Lever Handles: Zoo ZSC2040SS Escutcheon: Zoo ZCS2001SS Flush Bolt: Zoo ZAS03RSS Signage: Zoo, ZSA09SA **Hardware Protection:** Under Hinges: 1mm ISL Therm-A-Strip Lock: 1(t) Therm-A-Seal Flush Bolt: 1(t) Therm-A-Seal **Fanlight & Sidelight:** **Fanlight & Sidelight Frame:** Redwood, 569kg/m^3, 70(w)x32(t) **Glass:** Pilkington Pyrodur 30-105, 7 (t) Fanlight: Aperture Size: 326 (h) x 2009 (w) Glass Size: 320 (h) x 2003 (w) x 7 (t) Sight Size: 296(h) x 1979(w) Sidelight: Aperture Size: 2726 (h) x 443 (w) Glass Size: 2720 (h) x 437 (w) x 7(t) Sight Size: 2696(h) x 413(w) Expansion Allowance: 3mm all around Beading: Sapele, 15 (h) x 15 (w) fitted with 16gx 38(l) pins 50mm from the corners, 150mm centres 35° to the glass **Glazing System:** Glazing intumescent: Sealmaster, Intumescent Foam Glazing Tape, Closed Cell Foam Tape, 15(w) x 5(t) (compressed to 3 (t)) between the bead and the glass. **Glazing (Door Leaf):** Glass: Pilkington Pyrodur 30-105, 7 (t) Aperture Size: 1000(h) x 600(w) Glass Size: 994(h) x 594 (w) x 7(t) Sight Size: 970(h) x 570(w) Expansion Allowance: 3mm all around **Glazing System:** Glazing intumescent: Sealmaster, Intumescent Foam Glazing Tape, Closed Cell Foam Tape, 15(w) x 5(t) (compressed to 3 (t)) between the bead and the glass. Beading: Sapele 602kg/m^3 20.5 x 20 overall including a 5 x 5 bolection return fixed with 16g x 38(l) steel pins fixed 50mm in from the corners and 150mm centres at 35° to the glass.

Test Standard:	BS EN 1634-1:2014+ A1:2018	
Performance:	**Doorset**	**Integrity:** 31 minutes **Insulation I_2:** 12 minutes **Radiation:** 34 minutes

3.1.10.1 Test Report Summary WF544880

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	31	N/A	12	34	A	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

3.1.11 Test Report CFR2110131

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 for fanlights, side screens, the Schlegal Aquamac 21 environmental seal, Exitex MXS/15/2 RITB aluminium threshold and hardware options.

Date of Test:	13th of October 2021
Identification of Test Body:	Cambridge Fire Research Limited UKAS No. 4319
Sponsor:	Falcon Panel Products Ltd.
Tested Product:	Latched Single Acting Single Leaf Doorset
Tested Orientation:	Opened in towards the heating conditions of the test
Sampling information:	Sampling was carried out by a representative of TRADA on 30th September 2021, contract reference SC21161
Summary of Test Specimen:	**Door Leaf:** Stredor 44 Leaf Size: 2132 (h) x 1047 (w) x 44 (t) **Lipping:** Sapele 640kg/m^3 8(t) to all leaf edges, glued with Henkel Technomelt PUR 270/7 adhesive **Frame:** **Head and Jambs** Redwood, nominally 520kg/m^3, 79(d)x41(t) with a 30(w)x12(t) Integral stop The jambs were screwed into the head with 2No Ø4.8 x 80(l) steel screws **Cill:** Utile, 139(d) x 45(t) morticed and tenon jointed and affixed using 2No. vertically drive Ø4.8 x 100 steel woodscrews. **Intumescent and sealing materials:** To frame reveal: Intumescent Seals Ltd. 2No. Therm-A-Seal PVC encased graphite 10(w)x4(t) fitted with self-adhesive into a groove. Set 8mm and 29mm in from the opening face. Environmental Seals: Schlegel, Q-Lon, Aquamac 21 PU foam seal in a plastic casing set in a groove in the stop.11(w) x 13.3(d) (uncompressed) **Fire stopping to frame / supporting construction:** Blue 60 Fire Rated Frame Foam capped with Norseal Firewizard Fire Rated Intumescent Acrylic Sealant. **Hardware:** Hinges: 3No. Eurospec, HIN 14333/13SSS/R, Closer: Rutland, TS9205.SRFB.SESE Lock/Latch: Fullex Locks Ltd SL16 Crimebeater 3 point steel latch lock, forend, body, upper and lower lock boxes and actuator. Cylinder: UAP, Kinetica, KM561977 brass euro cylinder 35/35 with thumbturn Latch Status: Latched Lever Handles: UAP, NANOCOAST 243

	Threshold: Exitex Ltd, MXS 15/2 aluminium threshold with 2No. elastomeric seals, fitted set between the door frame jambs using 4No. Ø4.4 x 38(l) steel countersunk screws set 80mm in from the edges and at 300* centres.15(h) x 1050(l) x 62(w) x 2(t) Letterplate: 2No. Soterian TS008-SLIM Security viewer: UAP Firecheck viewer, SWALF Satin Chrome brass Security Chain: UAP, Narrow Door Chain – Satin Silver Door Knocker: UAP, 6 inch Victorian Urn Satin Stainless Steel. Numerals: UAP, 3” Nanocoast Number 1 **Hardware Protection:** Under Hinges: 1mm ISL Therm-A-Strip Latch/Lock: 1mm Therm-a-Strip ammonium phosphate based intumescent pad under the lock cases/strikes/keeps/boxes, encapsulating the full profile of all boxes strike plates and keeps. Handles: Intumescent Seals Ltd, Therm-A-Flex 1(t) Graphite based intumescent pad lines the aperture. Threshold: Intumescent Seals Ltd, Therm-A-Flex, Graphite based intumescent strip, set centrally in rebate/body of the top of the aluminium threshold. 21(w) x 3(t) Also Norseal Firewizard fire rated intumescent acrylic sealant applied between the frames at the rebates in outer frame edges, fully filling extrusion grooves, (2No.beads), applied beneath the aluminium threshold prior to fixing. Door Viewer: Intumescent Seals Ltd, Therm-A-Flex, 1(t) graphite based intumescent pad lines the aperture and 1mm graphite sealant applied to the periphery of the door viewer Letter Plate: Lorient graphite based intumescent kit supplied pre- applied to letterplate. **Fanlight & Sidelight:** **Fanlight & Sidelight Frame:** Redwood, nominally 520kg/m^3, 79(d)x45(t) with a 30(w)x15(t) Integral stop **Glass:** DGU: FireGlass UK Ltd, Pyrobelite 12 EW60 2(B)2 – 36 dB / 8mm Steel Spacer / 6.8 Acoustic Laminated (with Pyrobelite fitted to the exposed face) Fanlight: Aperture Size: 387(h) x 1717(w) Glass Size: 372(h) x 1702(w) x 27.1(t) Sight Size: 355(h) x 1688(w) Sidelight: Aperture Size: 2118(h) x 609(w) Glass Size: 2106(h) x 592(w) x 27.1(t) Sight Size: 2089(h) x 576(w) Beading: 22(h)x24(w) Sapele 640kg/m^3 with a 16° Bevel and 7mmx7mm bolection return fixed with 16g x 50(l) steel pins fixed 50mm in from the corners and 200mm centres at 30° to the glass **Glazing System:**

	Glazing perimeter: Sealmaster, Fireglaze tape 26(w) x 2.5(t) fixed with a self-adhesive tape, lining the aperture of the fanlight and sidelight frame. Glazing intumescent seal: Sealmaster, Intumescent foam glazing tape closed cell foam 5(w)x15h (compressed to 3(t)) capped with Dowsil 799EU The sidelight frame is fixed vertically together with the door frame with Ø5x60(l) countersunk woodscrews set central to the frame depth at 350mm from the corners and 500mm centres and to the fanlight frame 120mm in from the corners. The fanlight frame is fixed through the frame reveal to the doorframe head and sidelight head using Ø5 x 50(l) steel woodscrews set 50mm in from the edges and at 400mm centres and through the integral bead using Ø5 x 60(l) woodscrews set 100mm in from the edges and 500mm centres	
Test Standard:	BS EN 1634-1:2014+ A1:2018	
Performance:	**Doorset:**	**Integrity:** 49 minutes **Insulation I_2:** 40 minutes **Radiation:** 55 minutes

3.1.11.1 Test Report Summary CFR2110131

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	49	N/A	40	55	B	Low

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

3.1.12 Test Report CFR2205181

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 and is used to fanlights, side screens, the Exitex MXS/15/2 RITB aluminium threshold and hardware options.

Date of Test:	18th May 2022
Identification of Test Body:	Cambridge Fire Research Limited UKAS No. 4319
Sponsor:	Falcon Panel Products Ltd.
Tested Product:	Latched Single Acting Single Leaf Doorset
Tested Orientation:	Opened out away from the heating conditions of the test
Sampling information:	Sampling was carried out by a representative of BM TRADA on the 16th of May 2022, contract reference SC22092
Summary of Test Specimen:	**Door Leaf:** Stredor 44 Leaf Size: 2132 (h) x 1047 (w) x 44 (t) **Lipping:** Sapele 694kg/m^3 8(t)x44(w) lippings to all edges of the leaf, adhered to the core using Henkel Technomelt PUR 270/7 adhesive **Frame:** **Head and Jambs** Redwood, nominally 531kg/m^3, 80(d)x41(t) with a 30(w)x12(t) Integral stop. Jointing: frame head is trenched for the frame jambs 12(h) and fixed using 2No.Ø5x100 countersunk screws **Cill:** Utile, 694kg/m^3 , 140(d) x 45(t) fixed using 2No. vertically drive Ø5 x 100 steel woodscrews **Intumescent and sealing materials:** To frame reveal: Intumescent Seals Ltd. 2No. Therm-A-Seal PVC encased graphite 10(w)x4(t) fitted with self-adhesive into a groove. Set 7mm and 26mm in from the opening face. Environmental Seals: Schlegel, Q-Lon, Aquamac 21 PU foam seal in a plastic casing set in a groove in the stop.11(w) x 13.3(d) (uncompressed) **Fire stopping to frame / supporting construction:** Blue 60 Fire Rated Frame Foam capped with Norseal Firewizard Fire Rated Intumescent Acrylic Sealant. **Hardware:** Hinges: 3No. Eurospec, HIN 14333/13SSS/R, Closer: Rutland, TS11204, Cam action door closer Lock/Latch: Fullex Locks Ltd SL16 Crimebeater 3 point steel latch lock, forend, body, upper and lower lock boxes and actuator. Cylinder: UAP, Kinetica, KM561977 brass euro cylinder 35/35 with thumbturn Latch Status: Latched Lever Handles: UAP,NANOCOAST 243

	Threshold: Exitex Ltd, MXS 15/2 aluminium threshold with 2No. elastomeric seals, fitted set between the door frame jambs using 4No. Ø4.4 x 38(l) steel countersunk screws set 80mm in from the edges and at 300* centres.15(h) x 1050(l) x 62(w) x 2(t) Letterplate: 2No. Soterian TS008-SLIM Security viewer: UAP Firecheck viewer, SWALF Satin Chrome brass Security Chain: UAP, Narrow Door Chain – Satin Silver Door Knocker: UAP, 6 inch Victorian Urn Satin Stainless Steel. Numerals: UAP, 3” Nanocoast Number 1 **Hardware Protection:** Under Hinges: 1mm ISL Therm-A-Strip Latch/Lock: 1mm Therm-A-Strip ammonium phosphate based intumescent pad under the lock cases/strikes/keeps/boxes, encapsulating the full profile of all boxes strike plates and keeps. Threshold: Intumescent Seals Ltd, Therm-A-Flex, Graphite based intumescent strip, set centrally in rebate/body of the top of the aluminium threshold. 20(w) x 3(t) Also Norseal Firewizard fire rated intumescent acrylic sealant applied between the frames at the rebates in outer frame edges, fully filling extrusion grooves, (2No.beads), applied beneath the aluminium threshold prior to fixing. Door Viewer: 2(t) Firecheck Viewer, Intumescent Kit, ammonium phosphate based. Letter Plate: UAP FD30 Fire Kit, a graphite based intumescent encapsulating the letterplate sleeve **Fanlight & Sidelight:** **Fanlight & Sidelight Frame:** Redwood, nominally 520g/m^3, 80(d) x 44(t) including 15(t) x 30(w) integral rebate **Glass:** DGU: FireGlass UK Ltd, Pyrobelite 12 EW60 2(B)2 – 36 dB / 8mm Steel Spacer / 6.8 Acoustic Laminated (with Pyrobelite fitted to the unexposed face) Fanlight: Aperture Size: 386(h) x 1718(w) Glass Size: 370(h) x 1703(w) x 27.1(t) Sight Size: 354(h) x 1684(w) Sidelight: Aperture Size: 2120(h) x 607(w) Glass Size: 2105(h) x 593(w) x 27(t) Sight Size: 2088(h) x 574(w) Beading: 15(h)x15(w) Redwood with a 30° bevel, fixed with 16swg x 50(l) steel pins fixed 30mm in from the corners and 90-205mm centres at 30° to the glass **Glazing System:** Glazing perimeter: Sealmaster, Fireglaze tape 27(w) x 2.7(t) fixed with a self-adhesive tape, lining the aperture of the fanlight and sidelight frame.

	Glazing intumescent seal: Sealmaster, Intumescent foam glazing tape closed cell foam 5(w)x15h The sidelight frame is fixed to the door frame and fanlight reveal with Ø4.5x50(l) countersunk woodscrews set central to the frame depth at 20-52 from the corners and at 185-264mm centres. It is also fixed through the integral stop in the fanlight and sidelight to the frame head and sidelight head and sidelight to frame jamb using Ø4.5 x 80(l) steel woodscrews at 35-48 from the corners and at 185 to 269 centres.	
Test Standard:	BS EN 1634-1:2014+ A1:2018	
Performance:	**Doorset**	**Integrity:** 60 minutes **Insulation I_2:** 35 minutes **Radiation:** 60 minutes

3.1.12.1 Test Report Summary CFR22055181

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	60	N/A	40	60	B	Low

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 (I2) in accordance with 11.2.4 in BS EN 1634-1: 2014 + A1: 2018

3.2 Primary Evidence – Ambient Temperature Smoke Control

3.2.1 Test Report WYC432787/test2

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 doorset design supporting leaf dimensions, hardware options, the inclusion of Lorient Perimeter Intumescents, Yale Lockmaster Autoengage locks, fanlights using Sealed Tight Solutions glazing incorporating a DGU and is used to support leaf dimensions.

Date of Test:	01st September 2020
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Panel Products Limited
Tested Product:	Latched, Single Acting, Single Doorset with Fanlight
Tested Orientation:	The doorset was orientated to open out away from the chamber.
Sampling information:	Sampling was carried out by a representative of BM TRADA on the 28th August 2020, contract reference SC20148.
Summary of Test Specimen:	**Door Leaf:** Falcon Panel products Ltd. Stredor 44 Leaf Size: 2040 (h) x 926 (w) x 44 (t) **Lipping:** Sapele 660-706kg/m3 8(t) to all leaf edges, glued with Henkel Technomelt 270/7 PUR applied by edge bander **Decorative mouldings:** Sapele, 70mm wide x 19mm thick beads forming 620(h) x 200(w) panels. Fixed with PVA adhesive and pneumatically fired pins 21 s.w.g x 25 (l). **Frame:** **Head and Jambs:** Redwood, 529kg/m3 80(w) x 44(t) with a 33(w) x 15(t) Integral stop, Trench jointed 12(d) and screwed 4No. Ø5 x 100(l) steel screws **Intumescent and sealing materials:** Frame Reveal: 2No. Lorient Polyproducts Ltd, (LP1004) PVC encased Sodium silicate 10(w) x 4(t) fitted 5mm either side of the centre of the leaf. Environmental Seals: Schlegel Aquamac 21 Foam seal 9.1(w)x10.7(t) **Fire stopping to frame / supporting construction:** Rockwool, Flexi, Rock mineral wool 6-13(w) to the full depth of the frame, capped with 10(d) with Mann McGowan Pyromas A. **Hardware Both doorsets:** Hinges: 3No. Eurospec, HIN 1433/13, Closer: Rutland TS 9205 overhead face fitted door closer Lock/Latch: Yale Lockmaster Autoengage 2LB Classic 45mm Latch Status: Latched Cylinder & Thumbturn: Yale, Platinum 3* Lever Handles: Yale, Steel, 0757-2003-CH-CH Inline Lever Threshold: Stormguard, Low Height Macclex – Thermally Broken, aluminium and EPDM rubber construction with Slimline Front Seal and

	Slimline Press In Rio Seal. Fixed with 2No. Ø4 x 70(l) woodscrews and bedded on Firewizard intumescent acrylic sealant. Drip rail: Stormguard, 32mm rain deflector, aluminium Drop down seal: Sealed Tight Solutions Limited, ST422GT 14(w) x 35(h) aluminium body and neoprene seal Letter Plate: Yale, Postmaster Professional Security viewer: Yale, DH000768, Brass Security Chain: Yale, B-WS6-20-SC, Brass Numerals: Yale, Swis721BT, Zinc Door Knocker: Yale, 0716-2001 -Contemporary-Knocker-No-Spyhole **Hardware Protection:** Under Hinges: 1mm Interdens Multi point lock: 1mm Interdens wrapped around the lock bodies, keep boxes under strike plates. Letter plate: Full wrap around tunnel and graphite tubes around fixing posts as supplied integral to the letter plate Security viewer: 0.5mm graphite wrapped around body **Fanlight:** **Fanlight Frame:** Redwood, 545kg/m^3,80(w) x 44(t) with a 47(w) x 15(t) Integral rebate. Trench jointed 15(d) and screwed with No Ø5 x 100(l) steel screws/per joint. Jointed to the head of the doorset with 70(l) woodscrews through the integral stop and 50(l) woodscrews through the rebate in the fanlight. Lorient intumescent sealant was applied between the fanlight and door frame on both sides **Intumescent:** 2No. Sealed Tight Solutions, STS154FO intumescent strips fitted to the top of the fanlight frame (opposing the supporting construction) fitted 15mm from each side. Double glazed unit: Fireglass UK, 12mm Pyrobelite / 8mm Bar / 6.8mm Low E, Laminated Aperture Size: 650 (h) x 932 (w) Glass Size: 644 (h) x 926 (w) x 26.8(t) Sight Size: 620(h) x 902(w) Expansion Allowance: 3mm all around Beading: Sapele, 15 (h) x 15 (w) with a 2mm quirk fitted with 2(t) pins 50mm from the corners, 140mm centres 45° to the glass **Glazing System:** Glazing Liner: Sealed Tight Solutions Ltd, STS 302, 30(w) x 2(t) graphite liner fixed with self-adhesive around the full perimeter of the glazing Glazing intumescent: Sealed Tight Solutions Ltd, STS 104, 10(w) x 4(t) graphite intumescent fixed with self-adhesive to the upstand of the integral rebate
Test Standard:	BS EN 1634-3: 2004

3.2.1.1 Test WYC432787/test2 Summary of Results

The following table summarises the leakage rates observed throughout the test and provides information to perform the required calculation to generate the requested classification of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design once the doorset design is extended using the rules in BS EN 15269-20: 2020.

The table states the single leaf doorset was outward opening, however, the testing is conducted under negative and positive pressure to provide results that can be applied to the doorset in both directions. This is clarified in the table that states the side that was exposed to pressure.

Product Tested	**Single Leaf Doorset**	
Test Detail	**Latched, Threshold not taped**	
Summary of testing procedure		
BS EN 1634-3: 2004	**Pressure (Pa)**	**Leakage (m^3/h)**
Results under positive chamber (door leaf opening away from chamber)	**50**	**5.15**
	25	**3.18**
	10	**1.61**
Results under negative chamber (door leaf opening away from chamber)	**50**	**5.28**
	25	**3.13**
	10	**1.68**

3.2.1.2 Test WYC432787/test2 Summary of Results

The doorset design has been stated by the manufacturer to be required to achieve an Sa_4 classification.

The above leakage rates have been extracted from the test report and include the leakage observed from the threshold.

In accordance with Clause 10.2.2.1 of BS EN 1634-3, the length between the fixed and moving components of the doorset (e.g. between the door leaf and frame as well as, where appropriate, between the moveable elements) but excluding the length of the threshold gap shall be measured and recorded. On this basis the leakage rates observed are required to be divided by the perimeter length of the door leaf, excluding the length across the bottom edge of the leaf. This leads to the following calculation:

$$\frac{\text{Leakage recorded at 25 Pascals of pressure}}{\text{(Height + Height + Width)}}$$

This calculation is required to be applied to both the leakage rates which are observed under positive and negative conditions which lead to the following worked calculations and results:

Orientation	Calculation	Result ($m^3/h/m$)
Positive	**3.18 (m^3/h)**	0.64
	5.006 (m)	
Negative	**3.13 (m^3/h)**	0.63
	5.006 (m)	

3.2.2 Test Report WYC534820-03/Test 2

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 doorset design supporting leaf dimensions, hardware options, Ring doorbell 4, the inclusion of Pyroplex Perimeter Intumescents, Winkhaus AV2 E locks, fanlights using the Pyroplex 30049 glazing seal incorporating a DGU and is used to support leaf dimensions.

Date of Test:	18th July 2023
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Panel Products
Tested Product:	Latched, Single Acting, Single Doorsets with Fanlights
Tested Orientation:	The doorset was orientated to open out away from the chamber.
Sampling information:	Sampling was carried out by a representative of BM TRADA on the 27thJuly 2023, contract reference SC23185.
Summary of Test Specimen:	**Door Leaf:** Stredor 44 **Lipping:** Sapele 739kg/m3 8(t) to all leaf edges, glued with AdCo UK Ltd PU BX 3002 hand applied **Frame:** **Head and Jambs** Sapele, 739kg/m3 80(w) x 44(h), with a 50(w) x 12(t) integral rebate Morticed and tenon jointed, glued and fixed with screws to each joint - 4No Ø5 x 100(l) steel screws. Adhesive – AdCo PU BX 3002 PU Cill: Butt joint with frame, Sapele 140(w) x 44(h) with 9° chamfer at 80mm fixed to the frame jambs with 3No. Ø5.0 x 80(l) screws (2 up through Cill into jamb, 1 through jamb into Cill) with AdCo BX 3002 PU air cured hand applied **Intumescent and sealing materials:** To frame reveal: 2No. Pyroplex 10(w)x4(t) adhered with self-adhesive to grooves in the frame reveal, 7mm from the opening face 10mm apart. Environmental Seals: Schlegel Aquamac 21 Foam seal 9.1(w)x10.7(t) **Fire stopping to frame / supporting construction:** Pyroplex, fire rated expanding foam, applied to the full depth 5-15.2mm (w) and capped with 10(d) with Pyroplex, Intumescent acrylic sealant to both faces. **Hardware Both doorsets:** Hinges: 4No. Arrone AR8180-SSS, Grade 13 Ball bearing butt hinges Closer: Rutland, TS.11204 overhead concealed closer. Lock/Latch: Winkhaus AV2 E Lever Handles: Salto XS4 One Steel access control handle Latch Status: Latched Threshold: Exitex MDS 80/2 RITB Aluminium and rubber 87(w) x 24(h) Security viewer: Rutland, HR.DV.PNP Ø16 Brass body

	Numerals: Rutland, RH.DNSA, aluminium Door Knocker: Rutland, RH.DK.PHP, Door Knocker Urn style Door Bell: Ring, Doorbell 4 Cableway: Winkhaus, STV-E, Cable & Cable tray (cable and steel) Ø8 **Hardware Protection:** Under Hinges: 1mm graphite Multi point lock: Lock bodies - 1 mm Pyroplex Graphite applied to all edges of the top, mid and bottom lockcase cut outs Strikes/Keeps - 1 mm Pyroplex Graphite, 4 layers to the central keep and 1 layer to the top and bottom strikes/ keep Security viewer: 1 mm Pyroplex Graphite Cable way and cable loop: 1 mm Pyroplex Graphite lining the cable tray/loop and the cable route through leaf/arounds VPs* **Glazing (Door Leaf):** Double glazed unit: Fireglass: 7(t) Pyrobelite / 6.4x7.5mm Hollow Box Steel Spacer / 6.4(t) laminate Aperture Size: 900 (h) x 240 (w) Glass Size: 890 (h) x 230 (w) x 21.4 (t) Sight Size: 850 (h) x 190(w) Expansion Allowance: 5mm all around Beading: Sapele 739kg/m^3, 28 (h) x 16 (w) with 8mm x 8mm bolection return - fixed with 16g 38mm pins 50mm from the corners, 150mm centres 30° to the glass **Glazing System:** Pyroplex 30049 graphite 14.2(h)x6.4(t) fixed with self-adhesive on either side of the double-glazed unit. **Fanlight:** **Fanlight Frame:** Sapele, 739kg/m^3, 80(w)x44(t) with a 49(w)x15(t) Integral rebate, 12mm mortice and tenon jointed with 2no. Ø 5 x 80(l) screws on each joint, the frame is screw fixed to the door frame beneath the 1st seal and through the stop & and 1 screw fitted through the fanlight beneath the glass using Ø5x80(l) woodscrews 10mm in from the edges and at 260mm centres. **Glazing (Fanlight):** Double glazed unit: Fireglass UK: 7(t) Pyrobelite/6.4x7.5mm Hollow Box Steel Spacer / 6.4(t) laminate Aperture Size: 436(h) x 936(w) Glass Size: 426(h) x 926(w) x 21.4(t) Sight Size: 400(h) x 900(w) Expansion Allowance: mm all around Beading: Sapele 739kg/m^3 15(h)x15(w) fixed using 16g x 40(l) steel pins 50mm from the corners and at 30° to the face of the glass **Glazing System:**

	Intumescent Glazing seal: Pyroplex 30049 graphite, 14.2(h)x6.45(t) fixed to the upstand of the rebate and the glazing bead on and up to each face of the glass
Test Standard:	BS EN 1634-3: 2004

3.2.2.1 Test WYC534820-03/Test 2 Summary of Results

The following table summarises the leakage rates observed throughout the test and provides information to perform the required calculation to generate the requested classification of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design once the doorset design is extended using the rules in BS EN 15269-20: 2020.

The table states the single leaf doorset was outward opening, however, the testing is conducted under negative and positive pressure to provide results that can be applied to the doorset in both directions. This is clarified in the table that states the side that was exposed to pressure.

Product Tested	**Single Leaf Doorset**	
Test Detail	**Latched, Threshold not taped**	
Summary of testing procedure		
BS EN 1634-3: 2004	**Pressure (Pa)**	**Leakage (m^3/h)**
Results under positive chamber (door leaf opening away from chamber)	**50**	**7.71**
	25	**4.84**
	10	**2.56**
Results under negative chamber (door leaf opening away from chamber)	**50**	**6.67**
	25	**4.51**
	10	**2.48**

3.2.2.2 Test WYC534820-03/Test 2 Summary of Results

The doorset design has been stated by the manufacturer to be required to achieve an Sa_4 classification.

The above leakage rates have been extracted from the test report and include the leakage observed from the threshold.

In accordance with Clause 10.2.2.1 of BS EN 1634-3, the length between the fixed and moving components of the doorset (e.g. between the door leaf and frame as well as, where appropriate, between the moveable elements) but excluding the length of the threshold gap shall be measured and recorded. On this basis the leakage rates observed are required to be divided by the perimeter length of the door leaf, excluding the length across the bottom edge of the leaf. This leads to the following calculation:

$$\frac{\text{Leakage recorded at 25 Pascals of pressure}}{\text{(Height + Height + Width)}}$$

This calculation is required to be applied to both the leakage rates which are observed under positive and negative conditions which lead to the following worked calculations and results:

Orientation	Calculation	Result ($m^3/h/m$)
Positive	**4.84 (m^3/h)**	0.93
	5.220 (m)	
Negative	**4.51 (m^3/h)**	0.87
	5.220 (m)	

3.2.3 Test Report WYC538563/01/Test 2

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 doorset design supporting leaf dimensions, hardware options, the inclusion of Exitex Perimeter Intumescents, Exitex Aquatex A13 environmental seals, Fullex Crimebeater CRB-45-BT-1720-20 lock, Exitex MXS 15-70 threshold, glazed apertures and is used to support leaf dimensions.

Date of Test:	17th November 2023
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Timber Limited
Tested Product:	Latched, Single Acting, Single Doorsets
Tested Orientation:	The doorset was orientated to open out away from the chamber.
Sampling information:	Sampling was carried out by a representative of BM TRADA on 04th March 2024 under sampling contract number SC23281T
Summary of Test Specimen:	**Door Leaf:** Stredor 44 Leaf Size: 2153 (h) x 930 (w) x 44 (t) **Lipping:** Sapele 687kg/m^3 8 (t) all leaf edges, glued with Henkel 4 PUR **Frame:** **Head and Jambs** Sapele 687kg/m^3, 80(w) x 44(t) with rebate 50(w) x 12(d) trench jointed 12mm to the depth of the rebate and screwed with Ø5 x 90 (l) steel wood screws with D3 PVA adhesive. Cill 140(w) x 44(t) with tapering from 80 mm wide down to 34(h) Butt jointed with frame with 2 No. 5.0 mm Ø x 90 mm long screws through Cill into jambs in butt joint and using PVA D3 PVA Wood Adhesive. **Intumescent and sealing materials:** To frame reveal: 2No. Exitex 15(w)x4(t) fire only PVC encapsulated graphite fixed with self-adhesive, frame head and jambs, 5mm from the opening face of the frame 5mm apart. To bottom edge of door leaf: 1No. Exitex 15(w)x4(t) PVC encapsulated graphite fitted centrally to the bottom leaf edge Environmental Seals: Exitex, Intumescent Aquatex A13 1.29.0700 Foam encapsulated in nylon fibre 13 (w) x 10(h) **Fire stopping to frame / supporting construction:** Blue60 Fire Rated Frame Foam 1.31.0600.0750.01 foam to the full depth of the frame 9.7-18 (w). **Hardware Both doorsets:** Hinges: 4No. UAP, Stainless steel, IH-HINGE-SS201-FIRE-RADIUS-PSS Steel Bearing Closer: Rutland, TS.11204 Lock/Latch: Fullex Crimebeater (Label: CRB-45-BT-1720-20-SLAM) FULLEX-CRB-AUTOLOCK =Crimebeater lock-dual spindle /

	45mm backset / 234mm backplate / 0 hooks / 3 bolts — AUTO LOCK with anti-slam striker plate Latch Status: Latched Handle: UAP, DH243-DUO-MPSS-NANOCOAST Cylinder: UAP, Kinetica 3 Star Threshold: Exitex, MXS 15-70 Aluminium & Rubber 70(w) x 15(h) fixed with Ø3.5 x 30(l) screws into the timber cill integral to threshold. Security viewer: UAP, SWALFCH-FR, Brass Security Chain: UAP, DCCHN-TS003 Steel, Doorset A only Numerals: UAP,3" Nanocoast Number 6 Satin Stainless Self Adhesive Door Number Door Knocker: UAP, 6 Inch Victorian Urn Hidden Fix Stainless Steel Door Knocker. **Hardware Protection:** Under Hinges: 1 (t) Exitex radius corner S/A hinge pads 100mm x 31 mm x 1mm Multi point lock: Intumescent kit Exitex Fullex CRB 220 Pro Lock Kit Security viewer: UAP, Pre-supplied sheet rolled into tube Threshold: Bedded on Norseal Firewizard intumescent mastic **Glazing (Door Leaf):** Double glazed unit: Fireglass UK: 7(t) Pyroguard Advanced / 8mm Hollow Box Steel Spacer / 6.4(t) laminate Aperture Size: 900 (h) x 240 (w) Glass Size: 890 (h) x 230 (w) x 21.4 (t) Sight Size: 855 (h) x 200(w) Expansion Allowance: 5mm all around Beading: Sapele 687kg/m^3, 28 (h) x 15 (w) with 8mm x 8mm bolection return - fixed with 4 x50(l) screws 50mm from the corners, 150mm centres 30° to the glass **Glazing System:** Glazing intumescent: Exitex, Exi-Glaze 30 close cell foam 5(t)x10(w) applied with self-adhesive between the bead and glass on both faces.
Test Standard:	BS EN 1634-3: 2004

3.2.3.1 Test WYC538563/01/Test 2 Summary of Results

The following table summarises the leakage rates observed throughout the test and provides information to perform the required calculation to generate the requested classification of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design once the doorset design is extended using the rules in BS EN 15269-20: 2020.

The table states the single leaf doorset was outward opening, however, the testing is conducted under negative and positive pressure to provide results that can be applied to the doorset in both directions. This is clarified in the table that states the side that was exposed to pressure.

Product Tested	**Single Leaf Doorset**	
Test Detail	**Latched, Threshold not taped**	
Summary of testing procedure		
BS EN 1634-3: 2004	**Pressure (Pa)**	**Leakage (m^3/h)**
Results under positive chamber (door leaf opening away from chamber)	**50**	**4.79**
	25	**2.91**
	10	**2.01**
Results under negative chamber (door leaf opening away from chamber)	**50**	**4.54**
	25	**2.90**
	10	**1.81**

3.2.3.2 Test WYC534820-03/Test 2 Summary of Results

The doorset design has been stated by the manufacturer to be required to achieve an Sa_4 classification.

The above leakage rates have been extracted from the test report and include the leakage observed from the threshold.

In accordance with Clause 10.2.2.1 of BS EN 1634-3, the length between the fixed and moving components of the doorset (e.g. between the door leaf and frame as well as, where appropriate, between the moveable elements) but excluding the length of the threshold gap shall be measured and recorded. On this basis the leakage rates observed are required to be divided by the perimeter length of the door leaf, excluding the length across the bottom edge of the leaf. This leads to the following calculation:

$$\frac{\text{Leakage recorded at 25 Pascals of pressure}}{\text{(Height + Height + Width)}}$$

This calculation is required to be applied to both the leakage rates which are observed under positive and negative conditions which lead to the following worked calculations and results:

Orientation	Calculation	Result ($m^3/h/m$)
Positive	**2.91 (m^3/h)**	0.56
	5.236 (m)	
Negative	**2.90 (m^3/h)**	0.56
	5.236 (m)	

3.2.4 Test Report WYC524839/AR1/test2

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 doorset design supporting leaf dimensions, hardware options, the inclusion of Intumescent Seals Ltd Therm-A-Seal perimeter Intumescents, Rutland RMP3.1720.45 lock, glazed apertures and is used to support leaf dimensions.

Date of Test:	8th June 2023
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Rutland UK
Tested Product:	Latched, Single Acting, Single Doorset
Tested Orientation:	The doorset was orientated to open out away from the chamber.
Sampling information:	Sampling was carried out by BM TRADA under sampling contract number SC23163.
Summary of Test Specimen:	**Door Leaf:** Stredor 44 Leaf Size: 2153 (h) x 930 (w) x 44 (t) **Lipping:** Sapele 642kg/m^3 8 (t) all leaf edges, glued with Everbuild PU 5 min cure **Frame:** **Head and Jambs** Sapele 640kg/m^3, 80(d) x 47(t) with integral stop 33(w) x 15(d) Trench jointed to the depth of the rebate and screwed with Ø5 x 80(l) steel wood screws along with PU 5 minute set glue. Cill: 140 (w) x 44(h) screwed to the jambs with Ø5 x 80(l) steel wood screws along with PU 5-minute glue **Intumescent and sealing materials:** Intumescent to frame reveal: 2No. Intumescent Seals Ltd, Therm-A-Seal SL 1040NW PVC encased graphite intumescent 10mm wide x 4mm thick fixed with Self-adhesive, frame head and jambs, 7mm and 27mm in from the opening face. Environmental Seals: 1No. Sealmaster Ltd, Delta corner seal – DELTA12BK, 12 (h) x 12(w) fixed with self-adhesive, frame head and jambs, to upstand of stop. **Fire stopping to frame / supporting construction:** Rockwool, RW45, Mineral wool rockfibre, hand applied to a depth of 60mm, capped with Mann McGowan Pyromas A Intumescent mastic 10-16 (w) x 10 (d) cartridge gun applied to frame perimeter on both sides. **Hardware Both doorsets:** Hinges: 3No. Rutland, Dog Bolt Hinge RH.DBSH.34.SSS Closer: Rutland TS.11205.BC.SR.2. SESE Lock/Latch: RMP3.1720.45.S Rutland Multi Point Lock: Cylinder: ARC, Pro-Tec Handles: Rutland, RH.RLB.PNP box marked HA12318 Door handle Latch Status: Latched

	Threshold: Exitex, Low Macclex Threshold – Thermally Broken – Inward Opening, MXS 15/2 RITB bedded on intumescent mastic Security viewer: Rutland RH.DVP.NP Security Chain: Rutland, RH.SC.PNP Numerals: Rutland, RH.DNSA Door Numeral Letter plate: Rutland, RLP.EXT & RLP.INT, Aluminium screw fixed **Hardware Protection:** Under Hinges: 0.8 (t) Graphite Intumescent Pad Ref: IP.HP43.SQ Multipoint lock: IP.RMP3 Graphite intumescent kit Security viewer: 1 mm graphite intumescent lining Letter Plate: IP.RLP — Intumescent kit 30/60 mins for RLP letterplate (supplied with letterplate) **Glazing (Door Leaf):** Double glazed unit: Fireglass UK: 7(t) ACG Pyrobelite 7 / 8mm Hollow Box Steel Spacer / 6.4(t) Clear laminate Aperture Size: 850 (h) x 200 (w) Glass Size: 844 (h) x 194 (w) x 22.6 (t) Sight Size: 810 (h) x 170(w) Expansion Allowance: 3mm all around Beading: Sapele 642kg/m^3, 20 (h) x 16.5 (w) with 8mm x 5mm bolection return - fixed with 4 x40(l) screws 50mm from the corners, 150mm centres 20° to the glass **Glazing System:** Glazing intumescent: Intumescent Seals Ltd, Foam Glazing Tape – GTR15x5FM, Closed cell foam tape, 15mm x 5mm fixed with self-adhesive to bead Silicon Capping: No Nonsense, Silicone Sealant, (general purpose acetoxy cure clear), 5mm bead, nozzle applied to cap glazing tape of the glazing system Setting Blocks: Sapele, 642kg/rn^3 10mm in from corners on bottom of glass unit
Test Standard:	BS EN 1634-3: 2004

3.2.4.1 Test WYC524839/AR1/test2 Summary of Results

The following table summarises the leakage rates observed throughout the test and provides information to perform the required calculation to generate the requested classification of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design once the doorset design is extended using the rules in BS EN 15269-20: 2020.

The table states the single leaf doorset was outward opening, however, the testing is conducted under negative and positive pressure to provide results that can be applied to the doorset in both directions. This is clarified in the table that states the side that was exposed to pressure.

Product Tested	**Single Leaf Doorset**	
Test Detail	**Latched, Threshold not taped**	
Summary of testing procedure		
BS EN 1634-3: 2004	**Pressure (Pa)**	**Leakage (m^3/h)**
Results under positive chamber (door leaf opening away from chamber)	**50**	**8.26**
	25	**5.89**
	10	**3.22**
Results under negative chamber (door leaf opening away from chamber)	**50**	**8.47**
	25	**5.04**
	10	**2.82**

3.2.4.2 Test WYC524839/AR1/test2 Summary of Results

The doorset design has been stated by the manufacturer to be required to achieve an Sa_4 classification.

The above leakage rates have been extracted from the test report and include the leakage observed from the threshold.

In accordance with Clause 10.2.2.1 of BS EN 1634-3, the length between the fixed and moving components of the doorset (e.g. between the door leaf and frame as well as, where appropriate, between the moveable elements) but excluding the length of the threshold gap shall be measured and recorded. On this basis the leakage rates observed are required to be divided by the perimeter length of the door leaf, excluding the length across the bottom edge of the leaf. This leads to the following calculation:

$$\frac{\text{Leakage recorded at 25 Pascals of pressure}}{\text{(Height + Height + Width)}}$$

This calculation is required to be applied to both the leakage rates which are observed under positive and negative conditions which lead to the following worked calculations and results:

Orientation	Calculation	Result ($m^3/h/m$)
Positive	**5.89 (m^3/h)**	1.13
	5.234 (m)	
Negative	**5.04 (m^3/h)**	0.97
	5.234 (m)	

3.2.5 Test Report WYC429040/AR1/Test2

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 doorset design supporting leaf dimensions, hardware options, the inclusion of Sealed Tight Solutions perimeter Intumescents, Sealed Tight Solutions ST422 drop seal installed to co-ordinate with the Exitex RITB MXS 15/2 threshold and is used to support leaf dimensions.

Date of Test:	04th June 2020
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Panel Products Ltd
Tested Product:	Latched, Single Acting, Single Doorset
Tested Orientation:	The doorset was orientated to open out away from the chamber.
Sampling information:	Sampling was carried out by a representative of BM TRADA under sampling contract number SC20096
Summary of Test Specimen:	**Door Leaf:** Stredor 44 (F14) Leaf Size: 2440 (h) x 1041 (w) x 44 (t) **Lipping:** Sapele 18(t) to top edge 8 (t) vertical leaf edges and bottom leaf edge glued with Norbond Kaberfix D4 PU **Frame:** **Head and Jambs** Sapele (640kg/m^3), 70 (w) x 44 (t) with integral rebate 47 (w) x 15 (d) Trench jointed to the depth of the rebate and screwed with Ø5 x 80 (l) steel wood screws **Intumescent and sealing materials:** Intumescent to frame reveal: 2No. Sealed Tight Solutions, STS104FO PVC encased graphite intumescent 10(w) x 4(t) fixed with Self-adhesive, frame head and jambs, 10mm apart, 7mm from the opening face. Environmental Seals: 1No. Sealed Tight Solutions ST1009 PVC base with nitrile surface and fin 10(w) x 9(t) thick fixed with self-adhesive, frame head and jambs, to upstand of stop on outer edge. **Fire stopping to frame / supporting construction:** Rockwool, Mineral wool, full depth of the frame, hand filled capped with Mann McGowan Pyromas A Intumescent mastic 6.4-19 (w) x 10 (d) cartridge gun applied to frame perimeter on both sides. **Hardware:** Hinges: 3No. Rutland RH.BB.43R.SS Closer: Rutland, ITS 11204 overhead concealed closer. Lock/Latch: Doorset A: ERA Surefire Heritage 2 Hook Multi Point Lock: Doorset B: ERA Surefire Classic Cylinder: Access 2, Tegris Premier 3

	Cylinder Guard: A Spec, Cylinder Pull Latch Status: Latched Drop down seal: Sealed tight Solutions ST422 12(w) x 20(h) Threshold: Exitex RITB MXS 15/2 Aluminium extrusion sealed to floor level with Mann McGowan Pyromas A 6mm bead. Letterplate (Doorset A): 2No. Lorient Polyproducts Ltd, RJ008 Security viewer: Rutland HA12338 Brass **Hardware Protection:** Under Hinges: 1 (t) Rutland hinge packers Lock: Flexifire Universal SureFire Multipoint Lock Kit Closer: Rutland IP.114 intumescent kit for ITS11204 Letter Plate: Lorient Polyproducts Ltd intumescent lining Security viewer: 1 (t) graphite intumescent lining **Glazing (Door Leaf) Both Doorsets:** Glass: Pilkington Pyrostop 30-10 Aperture Size: 1540 (h) x 400 (w) Glass Size: 1530 (h) x 390 (w) Sight Size: 1504 (h) x 360 (w) Expansion Allowance: 5mm all around Beading: Sapele, 23(h) x 17.5 (w) with 6(w) x 8(t) bolection return fixed with Ø4x50(l) screws 50mm from the corners, 150mm centres. **Glazing System:** Glazing Perimeter: Sealed Tight solutions STS 302 liner, 30(w) x 2(t) graphite liner fixed with self-adhesive Glazing intumescent: Sealed Tight Solutions STS ST 105-3 closed cell foam 10(h) x 3(t) fitted between the glass and the glazing bead
Test Standard:	BS EN 1634-3: 2004

3.2.5.1 Test WYC429040/AR1/Test2 Summary of Results

The following table summarises the leakage rates observed throughout the test and provides information to perform the required calculation to generate the requested classification of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design once the doorset design is extended using the rules in BS EN 15269-20: 2020.

The table states the single leaf doorset was outward opening, however, the testing is conducted under negative and positive pressure to provide results that can be applied to the doorset in both directions. This is clarified in the table that states the side that was exposed to pressure.

Product Tested	**Single Leaf Doorset**	
Test Detail	**Latched, Threshold not taped**	
Summary of testing procedure		
BS EN 1634-3: 2004	**Pressure (Pa)**	**Leakage (m^3/h)**
Results under positive chamber (door leaf opening away from chamber)	**50**	**9.10**
	25	**6.27**
	10	**3.97**
Results under negative chamber (door leaf opening away from chamber)	**50**	**9.10**
	25	**6.32**
	10	**3.76**

3.2.5.2 Test WYC429040/AR1/Test2 Summary of Results

The doorset design has been stated by the manufacturer to be required to achieve an Sa_4 classification.

The above leakage rates have been extracted from the test report and include the leakage observed from the threshold.

In accordance with Clause 10.2.2.1 of BS EN 1634-3, the length between the fixed and moving components of the doorset (e.g. between the door leaf and frame as well as, where appropriate, between the moveable elements) but excluding the length of the threshold gap shall be measured and recorded. On this basis the leakage rates observed are required to be divided by the perimeter length of the door leaf, excluding the length across the bottom edge of the leaf. This leads to the following calculation:

$$\frac{\text{Leakage recorded at 25 Pascals of pressure}}{\text{(Height + Height + Width)}}$$

This calculation is required to be applied to both the leakage rates which are observed under positive and negative conditions which lead to the following worked calculations and results:

Orientation	Calculation	Result ($m^3/h/m$)
Positive	**6.27 (m^3/h)**	1.06
	5.921 (m)	
Negative	**6.32 (m^3/h)**	1.07
	5.921 (m)	

3.2.6 Test Report WYC426329/b

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 doorset design supporting leaf construction, hardware options, glazed apertures, the inclusion of Sealed Tight Solutions perimeter Intumescents and Sealed Tight Solutions ST422 drop seal installed to co-ordinate with the Sealed Tight Solutions STH004 aluminium threshold.

Date of Test:	25th February 2020
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Panel Products Ltd
Tested Product:	Latched, Single Acting, Single Doorset
Tested Orientation:	The doorset was orientated to open out away from the chamber.
Sampling information:	Sampling was carried out by a representative of Warringtonfire on 11th & 12th February 2020 under sampling contract number FM424838
Summary of Test Specimen:	**Door Leaf:** Stredor 44 (F7) Leaf Size: 2399 (h) x 1047 (w) x 44 (t) **Lipping:** Sapele 8 (t) all leaf edges glued with Norbond Kaberfix D4 PU **Decorative Beading:** European Redwood 510 kg/m^3 70 (w) x 19 (t) fixed with 30mm x 18g pins & D4 adhesive and Caberfix D4 glue **Frame:** **Head and Jambs** European Redwood (510kg/m^3), 69.5(w) x 44 (t) with integral stop 47(w) x 22.5(d) Trench jointed to the depth of the rebate and screwed with Ø5 x 80(l) steel wood screws **Intumescent and sealing materials:** Intumescent to frame reveal: 2No. Sealed Tight Solutions, STS 104FO PVC encased graphite intumescent 10mm wide x 4mm thick fixed with Self-adhesive, frame head and jambs, 10mm apart,7mm from the opening face. Environmental Seals: 1No. Sealed Tight Solutions ST1009 PVC base with nitrile surface and fin 10mm wide x 9mm thick (prior to compression), fixed with self-adhesive, frame head and jambs, to upstand of stop on outer edge. **Fire stopping to frame / supporting construction:** Rockwool, Flexi, Mineral wool, full depth of the frame, capped with Mann McGowan Pyromas A Intumescent mastic 4-12(w) x 10(d) cartridge gun applied to frame perimeter on both sides. **Hardware:** Hinges: 3No. Eurospec, HIN1433/13 Closer: Astra 4003, Steel jamb closer Lock/Latch: ERA SureFire Heritage 2 Hook Multi-Point Lock: Cylinder: Era Fortress 3 Cylinder Pull: ERA Fab & Fix Heritage Euro Cylinder Pull

	Latch Status: Latched Drop down seal: Sealed Tight Solutions ST422 12(w) x 20(h) fitted centrally along the bottom edge of the leaf mechanically fixed Threshold: Sealed Tight Solutions STH004 Aluminium 15(h) x 47(w) screwed to the floor using 2No. Ø 50mm woodscrew Security viewer: Sealed Tight Solutions 4008 Ø14 Brass body with glass lens **Hardware Protection:** Under Hinges: 1 (t) Sealed Tight Solutions Ltd, Raw graphite Lock: 1 (t) Sealed Tight Solutions Ltd ERA Surefire Intumescent Kit. Astro 4003 jamb closer: 1 (t) Sealed Tight Solutions Ltd, Raw graphite lining cut out Security viewer: 1 (t) Sealed Tight Solutions Ltd, Raw graphite intumescent lining **Glazing:** Glass: Pilkington Pyrostop 15 (t) Aperture Size: 1540 (h) x 400 (w) Glass Size: 1530 (h) x 390 (w) x 15 (t) Expansion Allowance: 5mm all around Beading: Sapele 640kg/m^3, 22(h) x 19 (w)wide with 6mm x 6mm bolection return and 15° splay, fixed with 16g 50mm pins 50mm from the corners, 150mm centres 35° to the glass **Glazing System:** Glazing Perimeter: Sealed Tight solutions STS 302 15(w) x 2(t) graphite liner fixed with self-adhesive centrally lining the glazing aperture Glazing intumescent: Sealed Tight Solutions STS 105-3 closed cell foam 9(h) x 3(t) fitted between the glass and the glazing bead
Test Standard:	BS EN 1634-3: 2004

3.2.6.1 Test WYC426329/b Summary of Results

The following table summarises the leakage rates observed throughout the test and provides information to perform the required calculation to generate the requested classification of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design once the doorset design is extended using the rules in BS EN 15269-20: 2020.

The table states the single leaf doorset was outward opening, however, the testing is conducted under negative and positive pressure to provide results that can be applied to the doorset in both directions. This is clarified in the table that states the side that was exposed to pressure.

Product Tested	**Single Leaf Doorset**	
Test Detail	**Latched, Threshold not taped**	
Summary of testing procedure		
BS EN 1634-3: 2004	**Pressure (Pa)**	**Leakage (m^3/h)**
Results under positive chamber (door leaf opening away from chamber)	**50**	**11.35**
	25	**8.06**
	10	**5.29**
Results under negative chamber (door leaf opening away from chamber)	**50**	**20.79**
	25	**13.76**
	10	**7.98**

3.2.6.2 Test WYC426329/b Summary of Results

The doorset design has been stated by the manufacturer to be required to achieve an Sa_4 classification.

The above leakage rates have been extracted from the test report and include the leakage observed from the threshold.

In accordance with Clause 10.2.2.1 of BS EN 1634-3, the length between the fixed and moving components of the doorset (e.g. between the door leaf and frame as well as, where appropriate, between the moveable elements) but excluding the length of the threshold gap shall be measured and recorded. On this basis the leakage rates observed are required to be divided by the perimeter length of the door leaf, excluding the length across the bottom edge of the leaf. This leads to the following calculation:

$$\frac{\text{Leakage recorded at 25 Pascals of pressure}}{\text{(Height + Height + Width)}}$$

This calculation is required to be applied to both the leakage rates which are observed under positive and negative conditions which lead to the following worked calculations and results:

Orientation	Calculation	Result ($m^3/h/m$)
Positive	**8.06 (m^3/h)**	1.38
	5.845 (m)	
Negative	**13.76 (m^3/h)**	2.36
	5.845 (m)	

3.2.7 Test Report WYC545080/Test 2

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 and is used to support hardware options, glazing options and the inclusion of Pyroplex perimeter Intumescents and Harmony HID1135 drop seal.

Date of Test:	21st June 2024
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Timber Limited
Tested Product:	Latched, Single Acting, Single Doorset
Tested Orientation:	The doorset was orientated to open out away from the chamber.
Sampling information:	Sampling was carried out by a representative of BM TRADA on 28th June 2024 under contract SC241110T
Summary of Test Specimen:	**Door Leaf:** Stredor 44 Leaf Size: 2360 (h) x 1034 (w) x 44 (t) **Lipping:** Sapele 716kg/m^3 8(t) all leaf edges glued with Polyurethane BX 3002 PU **Decorative Grooves**: 5mm wide x 10mm deep V grooves to both faces **Frame:** **Head and Jambs** Redwood, 510kg/m^3, 70 (w) x 32(t) with planted stop 20(w) x 12(t) 12mm trench jointed and fixed with PU adhesive and 3No. 80mm screws to each joint (2no top and 1no side). Stops pinned and glued with BX 3002 PU. **Intumescent and sealing materials:** To frame reveal: 1No. Pyroplex Twin Flipper 30175 PVC encased graphite, 15mm wide x 4mm thick, 14.5mm from opening face of the frame **Fire stopping to frame / supporting construction:** Rockwool, Flexi, Mineral wool, Nominal 50(d) x filling a gap between 11.42mm – 18.08mm wide, hand applied and capped with Pyroplex Intumescent Acrylic Sealant Intumescent mastic Nominal 10(d) x between 11.42mm – 18.08mm wide nozzle applied to both faces **Hardware:** Hinges: 3No Arrone AR8180-SSS,102x76x3mm Grade 13 Ball bearing butt hinges Closer: Arrone AR6800-SE OH Face Fixed Lock/Latch: Arrone AR910-S-80-SSS Cylinder: Hoppe Arrone AR-KD-5130-BB-NP 35/35 Brass

	Lever Handles: Hoppe, Paris 138S/42K Set on rose without escutcheon Escutcheon: Hoppe Arrone AR200/27-SAA* Latch Status: Unlatched Drop down seal: Harmony HID1135 **Hardware Protection:** Under Hinges: 1 (t) Pyroplex Mineral Fibre Sheet. Lock: 1 (t) Pyroplex Mineral Fibre Sheet applied to lock case, forend and keeps. **Glazing (Door Leaf):** Glass: AGC Pyrobelite 7 Aperture Size:1690 (h) x 294(w) Glass Size: 1684(h) x 288(w) x 7(t) Sight Size: 1660(h) x 264(w) Expansion Allowance: 3mm all around Beading: Sapele 638kg/m^3, 20(h) x 21.5(w) wide with 5mm x 5mm bolection return fixed with 16g x 38(l) pins 50mm from the corners, 150mm centres 35° to the glass **Glazing System:** Glazing intumescent: Pyroplex 8492 Graphite glazing strip 10 (w) x 2.5(t) fixed with self-adhesive either side of the glass adhered to the glazing bead
Test Standard:	BS EN 1634-3: 2004

3.2.7.1 Test WYC545080/Test 2 Summary of Results

The following table summarises the leakage rates observed throughout the test and provides information to perform the required calculation to generate the requested classification of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design once the doorset design is extended using the rules in BS EN 15269-20: 2020.

The table states the single leaf doorset was outward opening, however, the testing is conducted under negative and positive pressure to provide results that can be applied to the doorset in both directions. This is clarified in the table that states the side that was exposed to pressure.

Product Tested	**Single Leaf Doorset**	
Test Detail	**Latched, Threshold not taped**	
Summary of testing procedure		
BS EN 1634-3: 2004	**Pressure (Pa)**	**Leakage (m^3/h)**
Results under positive chamber (door leaf opening away from chamber)	**50**	**22.14**
	25	**15.00**
	10	**7.23**
Results under negative chamber (door leaf opening away from chamber)	**50**	**16.82**
	25	**13.65**
	10	**7.22**

3.2.7.2 Test WYC545080/Test 2 Summary of Results

The doorset design has been stated by the manufacturer to be required to achieve an Sa_4 classification.

The above leakage rates have been extracted from the test report and include the leakage observed from the threshold.

In accordance with Clause 10.2.2.1 of BS EN 1634-3, the length between the fixed and moving components of the doorset (e.g. between the door leaf and frame as well as, where appropriate, between the moveable elements) but excluding the length of the threshold gap shall be measured and recorded. On this basis the leakage rates observed are required to be divided by the perimeter length of the door leaf, excluding the length across the bottom edge of the leaf. This leads to the following calculation:

$$\frac{\text{Leakage recorded at 25 Pascals of pressure}}{\text{(Height + Height + Width)}}$$

This calculation is required to be applied to both the leakage rates which are observed under positive and negative conditions which lead to the following worked calculations and results:

Orientation	Calculation	Result ($m^3/h/m$)
Positive	**15.00 (m^3/h)**	2.61
	5.754 (m)	
Negative	**13.65 (m^3/h)**	2.38
	5.754 (m)	

3.2.8 Test Report WYC534820/01/test2

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 and is used to support Streframe E frame material.

Date of Test:	17th July 2023
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Panel Products
Tested Product:	Latched Single Acting Single Leaf Doorset
Tested Orientation:	The doorset was orientated to open out away from the chamber.
Sampling information:	Sampling was carried out by a representative of BM Trada on 27th July 2023 under contract SC23186
Summary of Test Specimen:	**Door Leaf:** Stredor 44 Leaf Size: 2362 (h) x 934 (w) x 44 (t) **Lipping:** Sapele 616kg/m^3 8(t) all leaf edges glued with Polyurethane BX 3002 PU **Frame:** **Head and Jambs** Streframe, 427kg/m^3 30 (t) x 70 (w) main section with 30(t) x 70(w) back section, jointed with a 14 (w) x 10 (t) hardwood loose tongue positioned 10 mm back from the inner face to allow the jointed extension piece. A 30(w)x12(t) loose stop is pinned and glued over the joint. The frame is trench jointed and fixed with 3no Ø5.0 x 80(l) steel screws to each joint (2No. top and 1No.side). AdCo UK Ltd BX 3002 PU adhesive is applied to each frame joint and the stop. **Intumescent and sealing materials:** To frame reveal: 1No. Mann McGowan Pyrostrip 500P, PVC encased graphite, 15(w)x 4(t) Self-adhesive into groove, 14.5mm in from opening face of the frame. Environmental Seals: Mann McGowan, ACS-1, Co-extruded rigid back PVC with flexible fins, 12 mm wide x 12 mm high, fixed with self-adhesive affixed to upstand of stop **Fire stopping to frame / supporting construction:** Rockwool, Rockwool Flexi 50mm, Mineral fibre stuffing to fill a gap 10-19mm wide x full depth of frame allowing for 10 mm mastic cap on each face. Capping: Mann McGowan, Pyromas A Intumescent Mastic 10-19 mm wide x 10mm deep mastic gun applied to both faces between frame and supporting construction

	Hardware: Hinges: 3No Arrone AR8180-SSS, Grade 13 bushed bearing butt hinges Closer: Hoppe, Arrone AR6800 OH Face Fixed Lock/Latch: Arrone AR910-S-80-SSS Cylinder: Hoppe Arrone AR-KD-5130-BB-NP 35/35 Brass Latch Status: Unlatched Lever Handles: Hoppe, Arrone AR200S/10-SP-SAA Drop down seal: Mann McGowan, DD-1703ACU Air Transfer Grille: Mann McGowan, Pyrogrille 25 with Pressed Steel Cover Grilles, Pyrogrille = PVC encased graphite, Cover: Steel 346(h) x 346(w) fitted centrally in width and 178 mm from the bottom of the leaf **Hardware Protection:** Under Hinges: 2 (t) Mann McGowan, Pyrostrip Interdens Lock. 1 (t) Mann McGowan, Pyrostrip Interdens applied to the lockcase, forend and keeps Drop down seal: Mann McGowan "Pyrostrip" 69 x 1 x 930 white Interdens SA to sides and top edge **Glazing (Door Leaf):** Glass: Pyroguard Advance 2-EW30/7-1 Aperture Size: 850(h) x 634(w) Glass Size: 844(h) x 628(w) x 7(t) Sight Size: 810(h) x 600 (w) Expansion Allowance: 3mm all around Beading: Sapele,616kg/m^3 20(h) x 20(w) wide with 5mm x 5mm bolection return fixed with 38(l) 16g pins 50mm from the corners, 150mm centres 30° to the glass **Glazing System:** Glazing intumescent: Mann McGowan, Pyroglaze 30, PVC encased graphite 10(h) x 3(t) fitted with self-adhesive to the upstand of the bead on each and up against each face of the glass
Test Standard:	BS EN 1634-3: 2004

3.2.8.1 Test WYC534820/01/test2 Summary of Results

The following table summarises the leakage rates observed throughout the test and provides information to perform the required calculation to generate the requested classification of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design once the doorset design is extended using the rules in BS EN 15269-20: 2020.

The table states the single leaf doorset was outward opening, however, the testing is conducted under negative and positive pressure to provide results that can be applied to the doorset in both directions. This is clarified in the table that states the side that was exposed to pressure.

Product Tested	**Single Leaf Doorset**	
Test Detail	**Latched, Threshold not taped**	
Summary of testing procedure		
BS EN 1634-3: 2004	**Pressure (Pa)**	**Leakage (m^3/h)**
Results under positive chamber (door leaf opening away from chamber)	**50**	**23.71**
	25	**3.02**
	10	**1.42**
Results under negative chamber (door leaf opening away from chamber)	**50**	**4.18**
	25	**3.02**
	10	**1.31**

3.2.8.2 Test WYC534820/01/test2 Summary of Results

The doorset design has been stated by the manufacturer to be required to achieve an Sa_4 classification.

The above leakage rates have been extracted from the test report and include the leakage observed from the threshold.

In accordance with Clause 10.2.2.1 of BS EN 1634-3, the length between the fixed and moving components of the doorset (e.g. between the door leaf and frame as well as, where appropriate, between the moveable elements) but excluding the length of the threshold gap shall be measured and recorded. On this basis the leakage rates observed are required to be divided by the perimeter length of the door leaf, excluding the length across the bottom edge of the leaf. This leads to the following calculation:

$$\frac{\text{Leakage recorded at 25 Pascals of pressure}}{\text{(Height + Height + Width)}}$$

This calculation is required to be applied to both the leakage rates which are observed under positive and negative conditions which lead to the following worked calculations and results:

Orientation	Calculation	Result ($m^3/h/m$)
Positive	**17.25 (m^3/h)**	3.04
	5.658 (m)	
Negative	**17.29 (m^3/h)**	3.04
	5.658 (m)	

It can be observed that the leakage rate exceeded the required $3m^3/h/m$. The failure observed has been determined to have likely been due to the associated air transfer grille. This report has not been utilised to support the performance of the smoke control aspect of the doorset design.

3.2.9 Test Report WYC532752/03

WYC532752/03 was conducted using a Falcon-Timber Duocore 44mm thick blank which is of a similar timber lamel type construction to that of the Falcon-Timber Stredor 44. The use of this alternative, similar door design is supported by the definitions given within BS EN 15269-1:2019+AC:2020 Annex A Section A.2.

Tests WYC532752/02 and WYC532752/03 were of the same overall dimensions and incorporated the same perimeter intumescents and jamb mounted environmental seals with the door leaves fitted within softwood frames.

The primary differences between tests WYC532752/02 and WYC532752/03 are:

- The door blank type – Falcon-Timber Duocore in lieu of Falcon-Timber Strebord 54.
- The glazing aperture configuration – note that the smallest individual tested aperture size has been considered within this report.
- WYC532752/03 included a threshold drop seal and has been tested untaped allowing consideration for Sa_4 applications.

Therefore test WYC532752/03, the essential details of which are summarised below, is provided to support timber frame density, Strelip lipping material and hardware options.

Date of Test:	25th May 2023
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Timber Limited
Tested Product:	Latched Single Acting Single Leaf Doorset
Tested Orientation:	The doorset was orientated to open out away from the chamber.
Sampling information:	Sampling was carried out by a representative of BM TRADA on 31st May 2023 under contract SC23134
Summary of Test Specimen:	**Door Leaf:** Duocore 44 (F12) Leaf Size: 2160 (h) x 930 (w) x 44 (t) **Lipping:** Strelip 665kg/m^3 8(t) all leaf edges glued with Polyurethane BX 3002 PU **Frame:** **Head and Jambs** Redwood 453kg/m^3 70(w) x 32(t) with 20(w) x 12(t) planted stop The frame was trench jointed 12(d) and fixed with PU adhesive, BX 3002 PU and 2No. 80(l) screws. The doorstop was pinned. **Intumescent and sealing materials:** To frame reveal: 1No. Lorient Polyproducts Ltd, LP1504 PVC encased sodium silicate 15(w) x 4(t) fitting into a groove in the frame 14.5mm in from the opening face. Environmental Seals: Lorient Polyproducts Ltd, LAS1010 Batwing co-extruded rigid black PVC with flexible fins fitted to the upstand of the door stop with self-adhesive **Fire stopping to frame / supporting construction:**

	Rockwool, Rockwool Flexi 50mm, Mineral fibre stuffing full depth of frame allowing for 10 mm mastic cap on each face. Capping: Mann McGowan, Pyromas A Intumescent Mastic 10mm deep mastic gun applied to both faces between frame and supporting construction **Hardware:** Hinges 3No. Union JH603BUFR-M-BZP Grade 13 bushed bearing stainless steel butt hinges Closer: Union DC140A Lock/Latch: Yale (Assa Abloy) YAS1-4502-27 Lockmaster Autoengage 2LB Classic 45mm 20RE. Cylinder: Yale Platinum 3* YS3-3535N 70mm long europrofile. Lever Handles: ASSA Abloy Sparta on backplate. Signage: Yale – ASSA Abloy – 77(h) x55(w) x 2(t) Door Knocker – ASSA Abloy 0716-2001-SL steel knocker. **Hardware Protection:** Under Hinges: UNION Power Load Intumescent Pads J-603-lK*. Lock. 1.3(t) precut gasket to the lock body forend and keeps **Glazing (Door Leaf):** Glass: Pyroguard, 2-EW30/7-1 Aperture Size: 850(h) x 235(w) Glass Size: 844(h) x 229(w) x 7(t) Sight Size: 820(h) x 205(w) Expansion Allowance: 3mm all around Beading: Sapele 646.9kg/m^3, 20(h) x 20.5 (w) wide with bolection return fixed with Ø5x 50(l) pins screws, 50mm from the corners, 150mm centres 35° to the glass **Glazing System:** Glazing intumescent: Lorient FF1, 13.5(w) x 3.5(t) graphite encapsulated PVC self-adhered to the upstand of the beading on each face of the glass
Test Standard:	BS EN 1634-3: 2004

3.2.9.1.1 Test WYC532752/03 Summary of Results

The following table summarises the leakage rates observed throughout the test and provides information to perform the required calculation to generate the requested classification of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design once the doorset design is extended using the rules in BS EN 15269-20: 2020.

The table states the single leaf doorset was outward opening, however, the testing is conducted under negative and positive pressure to provide results that can be applied to the doorset in both directions. This is clarified in the table that states the side that was exposed to pressure.

Product Tested	**Single Leaf Doorset**	
Test Detail	**Latched, Threshold not taped**	
Summary of testing procedure		
BS EN 1634-3: 2004	**Pressure (Pa)**	**Leakage (m^3/h)**
Results under positive chamber (door leaf opening away from chamber)	**50**	**7.67**
	25	**2.58**
	10	**1.42**
Results under negative chamber (door leaf opening away from chamber)	**50**	**5.43**
	25	**1.71**
	10	**1.42**

3.2.9.1.2 Test WYC532752/03 Summary of Results

The doorset design has been stated by the manufacturer to be required to achieve an Sa_4 classification.

The above leakage rates have been extracted from the test report and include the leakage observed from the threshold.

In accordance with Clause 10.2.2.1 of BS EN 1634-3, the length between the fixed and moving components of the doorset (e.g. between the door leaf and frame as well as, where appropriate, between the moveable elements) but excluding the length of the threshold gap shall be measured and recorded. On this basis the leakage rates observed are required to be divided by the perimeter length of the door leaf, excluding the length across the bottom edge of the leaf. This leads to the following calculation:

$$\frac{\text{Leakage recorded at 25 Pascals of pressure}}{\text{(Height + Height + Width)}}$$

This calculation is required to be applied to both the leakage rates which are observed under positive and negative conditions which lead to the following worked calculations and results:

Orientation	Calculation	Result ($m^3/h/m$)
Positive	**2.58 (m^3/h)**	0.49
	5.250 (m)	
Negative	**1.71 (m^3/h)**	0.32
	5.250 (m)	

3.2.10 Test Report WYC545081/Test 2

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 used to support the inclusion of the Sealmaster DRP2712E drop seal, glazing and hardware options.

Date of Test:	21st June 2024
Identification of Test Body:	Warringtonfire Testing and Certification Limited UKAS No. 1762
Sponsor:	Falcon Timber Limited
Tested Product:	Latched Single Acting Double Leaf Doorset
Tested Orientation:	The doorset was orientated to open out away from the chamber.
Sampling information:	Sampling was carried out by a representative of BM TRADA on the 28th June 2024, contract reference SC24111T.
Summary of Test Specimen:	**Door Leaf:** Stredor 44 Leaf Size: 2358 (h) x 1000 (w) x 44 (t) **Lipping:** Sapele 602kg/m^3 8(t) to all leaf edges, glued with Polyurethane BX 3002 PU adhesive hand applied **Frame:** **Head and Jambs** Redwood, 569kg/m^3, 70(w)x32(t) with a 20(w)x12(t) planted stop The door frame was trenched jointed 12 (d) and screwed with 3No. 80(l) steel screws using a PU adhesive, stops were pinned using a Caberfix PU adhesive. **Intumescent and sealing materials:** To frame reveal: 1No. Intumescent Seals Ltd. Therm-A-Seal PVC encased graphite 15(w) x 4(t) fitted with self-adhesive into a groove. Set 14.5mm in from the opening face To the meeting edges: Primary leaf – 1No. Intumescent Seals Ltd. Therm-A-Blade PVC encased graphite with rubber fin 10(w)x4(t) fitted with self-adhesive into a groove set 6mm in from the pull face; and 1No. Intumescent Seals Ltd. Therm-A-Seal PVC encased graphite 10(w)x4(t) fitted with self-adhesive into a groove. set 6mm in from the push face Environmental Seals: 12(w)x12(t) Sealmaster Delta door seal fitted with self-adhesive to the upstand of the stop **Fire stopping to frame / supporting construction:** Rockwool, Rockwool Flexi 50mm, Mineral fibre stuffing full depth of frame allowing for 10 mm mastic cap on each face. Capping: Mann McGowan, Pyromas A Intumescent Mastic 10mm deep mastic gun applied to both faces between frame and supporting construction **Hardware:** Hinges: 3No. Zoo ZHSS243RS Closer: Vier, VDC0024A1SE,

	Drop down seal: Sealmaster DRP2712E Lock/Latch: Zoo, ZDL7260RSS, Din Euro lockcase, Cylinder: Vier, V5EP70CTSCE Lever Handles: Zoo ZSC2040SS Escutcheon: Zoo ZCS2001SS Flush Bolt: Zoo ZAS03RSS Signage: Zoo, ZSA09SA **Hardware Protection:** Under Hinges: 1mm ISL Therm-A-Strip Lock: 1(t) Therm-A-Seal Flush Bolt: 1(t) Therm-A-Seal **Fanlight & Sidelight:** **Fanlight & Sidelight Frame:** Redwood, 569kg/m^3, 70(w)x32(t) **Glass:** Pilkington Pyrodur 30-105, 7 (t) Fanlight: Aperture Size: 326 (h) x 2009 (w) Glass Size: 320 (h) x 2003 (w) x 7 (t) Sight Size: 296(h) x 1979(w) Sidelight: Aperture Size: 2726 (h) x 443 (w) Glass Size: 2720 (h) x 437 (w) x 7(t) Sight Size: 2696(h) x 413(w) Expansion Allowance: 3mm all around Beading: Sapele, 15 (h) x 15 (w) fitted with 16gx 38(l) pins 50mm from the corners, 150mm centres 35° to the glass **Glazing System:** Glazing intumescent: Sealmaster, Intumescent Foam Glazing Tape, Closed Cell Foam Tape, 15(w) x 5(t) (compressed to 3 (t)) between the bead and the glass. **Glazing (Door Leaf):** Glass: Pilkington Pyrodur 30-105, 7 (t) Aperture Size: 1000(h) x 600(w) Glass Size: 994(h) x 594 (w) x 7(t) Sight Size: 970(h) x 570(w) Expansion Allowance: 3mm all around **Glazing System:** Glazing intumescent: Sealmaster, Intumescent Foam Glazing Tape, Closed Cell Foam Tape, 15(w) x 5(t) (compressed to 3 (t)) between the bead and the glass. Beading: Sapele 602kg/m^3 20.5 x 20 overall including a 5 x 5 bolection return fixed with 16g x 38(l) steel pins fixed 50mm in from the corners and 150mm centres at 35° to the glass.

Test Standard:	BS EN 1634-3: 2004

3.2.10.1 Test WYC545081/Test 2 Summary of Results

The following table summarises the leakage rates observed throughout the test and provides information to perform the required calculation to generate the requested classification of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design once the doorset design is extended using the rules in BS EN 15269-20: 2020.

The table states the double leaf doorset was outward opening, however, the testing is conducted under negative and positive pressure to provide results that can be applied to the doorset in both directions. This is clarified in the table that states the side that was exposed to pressure.

Product Tested	**Double Leaf Doorset**	
Test Detail	**Latched, Threshold not taped**	
Summary of testing procedure		
BS EN 1634-3: 2004	**Pressure (Pa)**	**Leakage (m^3/h)**
Results under positive chamber (door leaf opening away from chamber)	**50**	**33.82**
	25	**19.72**
	10	**8.95**
Results under negative chamber (door leaf opening away from chamber)	**50**	**34.14**
	25	**21.01**
	10	**8.75**

3.2.10.2 Test WYC545081/Test 2 Summary of Results

The doorset design has been stated by the manufacturer to be required to achieve an Sa_4 classification.

The above leakage rates have been extracted from the test report and include the leakage observed from the threshold.

In accordance with Clause 10.2.2.1 of BS EN 1634-3, the length between the fixed and moving components of the doorset (e.g. between the door leaf and frame as well as, where appropriate, between the moveable elements) but excluding the length of the threshold gap shall be measured and recorded. On this basis the leakage rates observed are required to be divided by the perimeter length of the door leaf, excluding the length across the bottom edge of the leaf. This leads to the following calculation:

$$\frac{\text{Leakage recorded at 25 Pascals of pressure}}{\text{(Height + Height + Height + Width)}}$$

This calculation is required to be applied to both the leakage rates which are observed under positive and negative conditions which lead to the following worked calculations and results:

Orientation	Calculation	Result ($m^3/h/m$)
Positive	**19.72 (m^3/h)**	2.18
	9.074 (m)	
Negative	**21.01 (m^3/h)**	2.32
	9.074 (m)	

3.2.11 Test Report WYC509193 Test 1

The referenced test report, the essential details of which are summarised below, is primary data for the Stredor 44 for fanlights, side screens, the Schlegal Aquamac 21 environmental seal, Exitex MXS/15/2 RITB aluminium threshold and hardware options.

Date of Test:	04th October 2021
Identification of Test Body:	Cambridge Fire Research Limited UKAS No. 4319
Sponsor:	Falcon Timber Limited
Tested Product:	Latched Single Acting Single Leaf Doorset
Tested Orientation:	The doorset was orientated to open out away from the chamber.
Sampling information:	Sampling was carried out by a representative of TRADA on 30th September 2021, contract reference SC21161
Summary of Test Specimen:	**Door Leaf:** Stredor 44 Leaf Size: 2132 (h) x 1047 (w) x 44 (t) **Lipping:** Sapele 640kg/m^3 8(t) to all leaf edges, glued with Henkel Technomelt PUR 270/7 adhesive **Frame:** **Head and Jambs** Redwood, nominally 520kg/m^3, 79(d)x41(t) with a 30(w)x12(t) Integral stop The jambs were screwed into the head with 2No Ø4.8 x 80(l) steel screws **Cill:** Utile, 139(d) x 45(t) morticed and tenon jointed and affixed using 2No. vertically drive Ø4.8 x 100 steel woodscrews. **Intumescent and sealing materials:** To frame reveal: Intumescent Seals Ltd. 2No. Therm-A-Seal PVC encased graphite 10(w)x4(t) fitted with self-adhesive into a groove. Set 7mm and 27mm in from the opening face. Environmental Seals: Schlegel, Q-Lon, Aquamac 21 PU foam seal in a plastic casing set in a groove in the stop.11(w) x 13.3(d) (uncompressed) **Fire stopping to frame / supporting construction:** Not verified by the laboratory. **Hardware:** Hinges: 3No. Eurospec, HIN 14333/13SSS/R, Closer: Rutland, TS9205.SRFB.SESE Lock/Latch: Fullex Locks Ltd SL16 Crimebeater 3 point steel latch lock, forend, body, upper and lower lock boxes and actuator. Cylinder: UAP, Kinetica, KM561977 brass euro cylinder 35/35 with thumbturn Latch Status: Latched Lever Handles: UAP,NANOCOAST 243 Threshold: Exitex Ltd, MXS 15/2 aluminium threshold with 2No. elastomeric seals, fitted set between the door frame jambs using 4No.

	Ø4.4 x 38(l) steel countersunk screws set 80mm in from the edges and at 300* centres.15(h) x 1050(l) x 62(w) x 2(t) Letterplate: 2No. Soterian TS008-SLIM Security viewer: UAP Firecheck viewer, SWALF Satin Chrome brass Security Chain: UAP, Narrow Door Chain – Satin Silver Door Knocker: UAP, 6 inch Victorian Urn Satin Stainless Steel. Numerals: UAP, 3" Nanocoast Number 1 **Hardware Protection:** Under Hinges: 1mm ISL Therm-A-Strip Latch/Lock: 1mm Therm-a-Strip ammonium phosphate based intumescent pad under the lock cases/strikes/keeps/boxes, encapsulating the full profile of all boxes strike plates and keeps. Handles: Intumescent Seals Ltd, Therm-A-Flex 1(t) Graphite based intumescent pad lines the aperture. Threshold: Intumescent Seals Ltd, Therm-A-Flex, Graphite based intumescent strip, set centrally in rebate/body of the top of the aluminium threshold. 21(w) x 3(t) Also Norseal Firewizard fire rated intumescent acrylic sealant applied between the frames at the rebates in outer frame edges, fully filling extrusion grooves, (2No.beads), applied beneath the aluminium threshold prior to fixing. Door Viewer: Intumescent Seals Ltd, Therm-A-Flex, 1(t) graphite based intumescent pad lines the aperture and 1mm graphite sealant applied to the periphery of the door viewer Letter Plate: Lorient graphite based intumescent kit supplied pre- applied to letterplate. **Fanlight & Sidelight:** **Fanlight & Sidelight Frame:** Redwood, nominally 520kg/m^3, 79(d)x45(t) with a 30(w)x15(t) Integral stop **Glass:** DGU: FireGlass UK Ltd, Pyrobelite 12 EW60 2(B)2 – 36 dB / 8mm Steel Spacer / 6.8 Acoustic Laminated (with Pyrobelite fitted to the exposed face) Fanlight: Aperture Size: 387(h) x 1717(w) Glass Size: 372(h) x 1702(w) x 27.1(t) Sight Size: 355(h) x 1688(w) Sidelight: Aperture Size: 2118(h) x 609(w) Glass Size: 2106(h) x 592(w) x 27.1(t) Sight Size: 2089(h) x 576(w) Beading: 22(h)x24(w) Sapele 640kg/m^3 with a 16° Bevel and 7mmx7mm bolection return fixed with 16g x 50(l) steel pins fixed 50mm in from the corners and 200mm centres at 30° to the glass **Glazing System:** Glazing perimeter: Sealmaster, Fireglaze tape 26(w) x 2.5(t) fixed with a self-adhesive tape, lining the aperture of the fanlight and sidelight frame.

	Glazing intumescent seal: Sealmaster, Intumescent foam glazing tape closed cell foam 5(w)x15h (compressed to 3(t)) capped with Dowsil 799EU The sidelight frame is fixed vertically together with the door frame with Ø5x60(l) countersunk woodscrews set central to the frame depth at 350mm from the corners and 500mm centres and to the fanlight frame 120mm in from the corners. The fanlight frame is fixed through the frame reveal to the doorframe head and sidelight head using Ø5 x 50(l) steel woodscrews set 50mm in from the edges and at 400mm centres and through the integral bead using Ø5 x 60(l) woodscrews set 100mm in from the edges and 500mm centres
Test Standard:	BS EN 1634-3: 2004

3.2.11.1 Test WYC509193 Test 1 Summary of Results

The following table summarises the leakage rates observed throughout the test and provides information to perform the required calculation to generate the requested classification of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design once the doorset design is extended using the rules in BS EN 15269-20: 2020.

The table states the Single leaf doorset was outward opening, however, the testing is conducted under negative and positive pressure to provide results that can be applied to the doorset in both directions. This is clarified in the table that states the side that was exposed to pressure.

Product Tested	**Single Leaf Doorset**	
Test Detail	**Latched, Threshold not taped**	
Summary of testing procedure		
BS EN 1634-3: 2004	**Pressure (Pa)**	**Leakage (m^3/h)**
Results under positive chamber (door leaf opening away from chamber)	**50**	**10.50**
	25	**2.95**
	10	**1.98**
Results under negative chamber (door leaf opening away from chamber)	**50**	**8.35**
	25	**3.34**
	10	**1.60**

3.2.11.2 Test WYC509193 Test 1 Summary of Results

The doorset design has been stated by the manufacturer to be required to achieve an Sa_4 classification.

The above leakage rates have been extracted from the test report and include the leakage observed from the threshold.

In accordance with Clause 10.2.2.1 of BS EN 1634-3, the length between the fixed and moving components of the doorset (e.g. between the door leaf and frame as well as, where appropriate, between the moveable elements) but excluding the length of the threshold gap shall be measured and recorded. On this basis the leakage rates observed are required to be divided by the perimeter length of the door leaf, excluding the length across the bottom edge of the leaf. This leads to the following calculation:

$$\frac{\text{Leakage recorded at 25 Pascals of pressure}}{\text{(Height + Height + Width)}}$$

This calculation is required to be applied to both the leakage rates which are observed under positive and negative conditions which lead to the following worked calculations and results:

Orientation	Calculation	Result ($m^3/h/m$)
Positive	**2.95 (m^3/h)**	0.56
	5.306 (m)	
Negative	**3.34 (m^3/h)**	0.63
	5.306 (m)	

4 Test Samples

The following table provides a summary of the test specimen:

Test Report Ref.	Sampling Procedure	Conditioning and Ageing	Pre-Fire Tests
WF432578	Sampling was carried out by a representative of BM TRADA on the 28th August 2020, contract reference SC20148.	The specimens' storage, construction, and test preparation took place in the test laboratory. Warringtonfire stored the specimen in climactic conditions approximate to those in normal service.	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 and the Self-closing speed requirement within Annex A.4.1 as detailed in the report.
WF534710	Sampling was carried out by a representative of BM TRADA on the 27th July 2023, contract reference SC23185.	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 and the Self-closing speed requirement within Annex A.4 as detailed in the report
WF538328	Sampling was carried out by a representative of BM TRADA on 04th March 2024 under sampling contract number SC23281T	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 and the Self-closing speed requirement within Annex A.4 as detailed in the report
WF529859	Sampling was carried out by a representative of BM TRADA on 05th June 2023 under sampling contract number SC23163	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 and the Self-closing speed requirement within Annex A.4 as detailed in the report

WF428987	Sampling was carried out by a representative of BM TRADA on 02nd June 2020 under sampling contract number SC20096	The specimens' storage, construction, and test preparation took place in the test laboratory. Warringtonfire stored the specimen in climactic conditions approximate to those in normal service.	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 and the Self-closing speed requirement within Annex A.4 as detailed within the report.
WF426419	Sampling was carried out by a representative of Warringtonfire on 11th & 12th February 2020 under sampling contract number FM424838	The specimens' storage, construction, and test preparation took place in the test laboratory. Warringtonfire stored the specimen in climactic conditions approximate to those in normal service	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 and the Self-closing speed requirement within Annex A.4 as detailed in the report
WF544878 (Doorset B)	Sampling was carried out by a representative of BM TRADA on 28th June 2024 under contract SC241110T	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 and the Self-closing speed requirement within Annex A.4 as detailed in the report
WF534693 Doorset A	Sampling was carried out by a representative of BM TRADA on 27th July 2023 under contract SC23186	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 and the Self-closing speed requirement within Annex A.4 as detailed in the report

WF532750	Sampling was carried out by a representative of BM TRADA on 31st May 2023 under contract SC23132	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 and the Self-closing speed requirement within Annex A.4 as detailed in the report
WF544880	Sampling was carried out by a representative of BM TRADA on the 28th June 2024, contract reference SC24111T.	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 and the Self-closing speed requirement within Annex A.4 as detailed in the report
CFR2110131	Sampling was carried out by a representative of TRADA on 30th September 2021, contract reference SC21161	The specimen was received by Cambridge Fire Research on 05/10/2021. For the final 7 days that the specimen was on the site the temperature and relative humidity were measured and recorded within the range of 13°C to 20°C and 56% to 81% respectively.	Prior to testing, the doorsets were subjected to mechanical pre-test conditioning in accordance with the requirement of BS EN 16034. This included fully opening and closing for 25 cycles to check for operability. Where closers were fitted one additional operation was carried out comprising opening the leaf to 10° ± 2°, holding for 20 s ± 2 s and releasing without shock. This was at a maximum mean average speed of 300mm/s and a closed position was achieved.

CFR22055181	Sampling was carried out by a representative of BM TRADA on the 16th of May 2022, contract reference SC22092	The specimen was received by Cambridge Fire Research on 11/05/2022. For the final 7 days that the specimen was on the site the temperature and relative humidity were measured and recorded within the range of 16°C to 24°C and 42% to 75% respectively.	Prior to testing, the doorsets were subjected to mechanical pre-test conditioning in accordance with the requirement of BS EN 16034. This included fully opening and closing for 25 cycles to check for operability. Where closers were fitted one additional operation was carried out comprising opening the leaf to 10° ± 2°, holding for 20 s ± 2 s and releasing without shock. This was at a maximum mean average speed of 300mm/s and a closed position was achieved.
WYC432787/test2	Sampling was carried out by a representative of BM TRADA on the 28th August 2020, contract reference SC20148.	The specimen was made from hygroscopic materials and was conditioned for at least 72 hours at an average temperature between 18°C and 25°C. Relative humidity was between 51% and 65%.	In accordance with BS EN 1634: 2004, the leaf was pre-cycled before the smoke leakage test. The closing force was also observed.
WYC534820-03/Test 2	Sampling was carried out by a representative of BM TRADA on the 27th July 2023, contract reference SC23185.	The test specimen was subjected to the following laboratory temperatures and humidity conditions at the start of the test. Average temperature of 18.5°C. Relative humidity was 62.1%.	In accordance with BS EN 16034: 2014 Annex A section A.2.2, the leaf was pre-cycled before the smoke leakage test. The closing speed was also observed.
WYC538563/01/Test 2	Sampling was carried out by a representative of BM TRADA on 04th March 2024 under sampling contract number SC23281T	The test specimen was subjected to the following laboratory temperatures and humidity conditions at the start of the test. Average temperature of 18.5°C. Relative humidity was 62.1%.	In accordance with BS EN 16034: 2014 Annex A section A.2.2, the leaf was pre-cycled before the smoke leakage test. The closing speed was also observed.
WYC524839/AR1/test2	Sampling was carried out by BM TRADA on 5th June 2023 under sampling contract number SC23163	The specimen was made from hygroscopic materials and was conditioned for at least 72 hours at an average temperature between 18°C and 25°C. Relative humidity was between 51% and 65%.	In accordance with BS EN 16034: 2014 Annex A section A.2.2, the leaf was pre-cycled before the smoke leakage test. The closing speed was also observed.

WYC429040/AR1/Test 2	Sampling was carried out by a representative of BM TRADA under sampling contract number SC20096	The specimen was made from hygroscopic materials and was conditioned for at least 7 days at an average temperature between 18°C and 25°C. Relative humidity was between 51% and 65%.	In accordance with BS EN 1634: 2004, the leaf was pre-cycled before the smoke leakage test. The closing force was also observed.
WYC426329/b	Sampling was carried out by a representative of Warringtonfire on 11th & 12th February 2020 under sampling contract number FM424838	The specimen was made from hygroscopic materials and was conditioned for at least 72 hours at an average temperature between 13°C and 16°C. Relative humidity was between 61% and 65%.	In accordance with BS EN 1634: 2004, the leaf was pre-cycled before the smoke leakage test. The closing force was also observed.
WYC545080/Test 2	Sampling was carried out by a representative of BM TRADA on 28th June 2024 under contract SC24110T	The test specimen was subjected to the following laboratory temperatures and humidity conditions at the start of the test. Average temperature of 18.9°C. Relative humidity was 57%.	In accordance with BS EN 16034: 2014 Annex A section A.2.2, the leaf was pre-cycled before the smoke leakage test. The closing speed was also observed.
WYC534820/01/test2	Sampling was carried out by a representative of BM Trada on 27th July 2023 under contract SC23186	The test specimen was subjected to the following laboratory temperatures and humidity conditions at the start of the test. Average temperature of 18.6°C. Relative humidity was 65.9%.	In accordance with BS EN 16034: 2014 Annex A section A.2.2, the leaf was pre-cycled before the smoke leakage test. The closing speed was also observed.
WYC532752/03	Sampling was carried out by a representative of BM TRADA on 31st May 2023 under contract SC23134	The test specimen was subjected to the following laboratory temperatures and humidity conditions at the start of the test. Average temperature of 14.9°C. Relative humidity was 47.9%.	In accordance with BS EN 16034: 2014 Annex A section A.2.2, the leaf was pre-cycled before the smoke leakage test. The closing speed was also observed.
WYC545081/Test 2	Sampling was carried out by a representative of BM TRADA on the 28th June 2024, contract reference SC24111T.	The test specimen was subjected to the following laboratory temperatures and humidity conditions at the start of the test. Average temperature of 23.1°C. Relative humidity was 41%.	In accordance with BS EN 16034: 2014 Annex A section A.2.2, the leaf was pre-cycled before the smoke leakage test. The closing speed was also observed.

WYC509193 Test 1	Sampling was carried out by a representative of TRADA on 30th September 2021, contract reference SC21161	The test specimen was subjected to the following laboratory temperatures and conditions between the completion of installation of the test specimen and the start of the test. Maximum temperature: 18.2°C Minimum temperature: 18.1°C	In accordance with BS EN 16034: 2014 Annex A section A.3.2, the leaf was pre-cycled before the smoke leakage test.

5 General Description of Construction

5.1 Door Leaf Construction

The construction of door leaves to this design must be made to one of the following specifications.

Specification 1

Element		Material	Dimensions (mm)	Density (kg/m³)
Core	Central Layer	Poplar Ply	1.8	510[1]
	Outer Core Layer	Vertically orientated butt jointed pine lamels	16	480[1]
Facings	Inner Facing	Poplar Ply	4.6	510[1]
	Outer Veneer	Beech Veneer	0.4	600[1]
Lippings – all edges		See Section 5.2 Below		

Notes:

The above referenced specification was tested within WF432578 and WYC432787.

1. Stated nominal density
2. Minimum density

Specification 2

Element		Material	Dimensions (mm)	Density (kg/m³)
Core	Central Layer	Poplar Ply	2.1	510[1]
	Outer Core Layer	Vertically orientated finger jointed spruce/pine lamels	19.5	480[1]
Facings	Inner Facing	Poplar Ply	1.4	510[1]
	Outer Veneer	Beech Veneer	0.4	600[1]
Lippings – all edges		See Section 5.2 Below		

Notes:

The above referenced specification was tested within WF534710 and WYC534820-03/Test 2.

1. Stated nominal density
2. Minimum density

Specification 3

Element		Material	Dimensions (mm)	Density (kg/m³)
Core	Central Layer	Poplar Ply	4	510[1]
	Outer Core Layer	Vertically orientated butt jointed pine lamels	15	480[1]
Facings	Inner Facing	Poplar Ply	4.6	510[1]
	Outer Veneer	Stredor 44 Engineered Veneer	0.4	510[1]
Lippings – all edges		See Section 5.2 Below		

Notes:

The above referenced specification was tested within WF426419 and WYC426329.

1. Stated nominal density
2. Minimum density

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 and width from all edges without restriction prior to fitting the hardwood lipping, as required.
2. The door leaf must be lipped on all edges as the doorsets tested included lipping to all edges and it is not possible to remove lippings for fire resistance performances according to rule A.5.17 of EN 15269-3.
3. The applied lipping must be within the parameters determined in section 5.2 below.

Permitted glazing configurations are expressed in section 11.

5.2 Approved Lipping Arrangements

Based on the testing undertaken on the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family as summarised within section 3 for fire resistance and ambient temperature smoke control performance the following specification of lippings are permitted:

In all instances all edges of the leaf must have lippings applied.

5.2.1 Specification 1:

Material	Density (kg/m^3)	Dimensions (mm)
Hardwood	602 (WF544880)	6 – 10 (WF544880)
Strelip	697 (WF532750)	6 – 10 (WF532750)
Cross sectional representation of the permitted lipping detail		
		

Note: The dimensions detailed above are to be taken from the thickest part of the lipping in all instances.

The permitted specifications given above have been determined possible based on the following rules from EN 15269-3: A.5.13 & A.5.15 and EN 15269-20: A.5.7 & A.5.8 when applied to the tests referenced in section 3.

5.3 Adhesives

The SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family must utilise the following adhesives in the construction of the doorset design:

Location:	Adhesive:
Assembly of leaf materials, consisting of core & facings.	As the manufacturers' specification for each of the permitted blank specifications. No Change is permitted.
Application of flat lippings	Henkel Technomelt 270/7 PUR (WF432578) AdCo UK Ltd PU BX 3002 (WF534710) Everbuild PU 5 min cure (WF529859) Kaberfix D4 (WF428987 AR1)
Assembly of door frame	D3 PVA adhesive (WF538328) AdCo PU BX 3002 PU (WF534710) Caberfix PU adhesive (WF544880)

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. (EN 15269-3 rule A.4.17 & EN 15269-20 rule A.4.16).

It is **not** possible to decrease the amount of adhesive applied from that tested within the reports summarised within section 3. (EN 15269-3 rule A.4.18 & EN 15269-20 rule A.4.17).

It is possible to change the manufacturer or supplier of the adhesive used providing the composition of the adhesive is identical. (EN 15269-3 rule A.4.19 & EN 15269-20 rule A.4.14).

6 Configurations and Orientation

6.1 Door Leaf Configurations

The table below shows the permitted configurations for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC design, with the abbreviation and full description of each configuration. The summarised test evidence within Section 3 was generated with a multi-point latch which was engaged at all latching locations for the duration of the test.

Doorset Configurations		
Depiction	**Abbreviation**	**Description**
	LSASD	Latched 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 the test conditions, making the Falcon Timber Limited. SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family bi-directional with respect to the fire risk.

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.

The primary ambient temperature smoke control tests for this design included doorsets that were tested under positive and negative pressure. According to the table in section 6.2 of BS EN 1634-3 this allows the results from the smoke leakage test to be considered from both sides of the doorset. 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 the test conditions, making the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family bi-directional with respect to smoke leakage performance.

7 Leaf Sizes

7.1 Maximum Leaf Size

The maximum leaf sizes permitted within this extended field of application for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family have been established based on meeting the lowest common performance as requested by the sponsor.

In this instance the maximum dimensions permitted are as follows:

Maximum Height: 2132mm

Maximum Width: 930mm

7.2 Minimum Leaf Size

The leaf size for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family is permitted to be reduced from the dimensions demonstrated under test conditions in accordance with rule A.3.1 of BS EN 15269-3 and BS EN 15269-20.

However, due to the requirement of the doorset design to maintain the required latching function, the height of the leaf is required to be restricted based on the height of the multi-point locks, as these cannot be removed for the purpose of maintaining the required fire resistance and smoke classification (the latch was engaged at the centre position for the purpose of the fire and smoke testing and cannot therefore be removed).

According to the limitations in EXAP rule C.1.4.2 of BS EN 15269-3, the height reduction stated below is permitted with the tested 3-point locking systems with the latch spindle positioned 1000±200mm from the bottom edge of the leaf.

It has been deemed necessary to maintain at least 50mm distance from the top and the bottom of the forend of the locking system to the leaf edges, to maintain intumescent/smoke sealing at the top and bottom corners of the closing edge of the doorset.

Minimum height permitted:

1820mm (h)

Note:

1. There must be a minimum of 50mm distance above and below the forend of the full height lock to the leaf edges.
2. Margins to glazed apertures must apply Section 11 for door leaf glazing limitations.

8 Door Frames

8.1 Timber Door Frames

Timber based door frames for the Falcon Timber Limited, SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family must be constructed to meet the following specification based on the test evidence contained in section 3.

Material	Minimum Section Size (mm)		Min. Density (kg/m^3)
Solid Softwood or Hardwood	Head & Jambs	80 (w) x 44 (t) with an integrated 12 (h) stop	453 (WF532750)
Streframe E	Head & Jambs	70 (w) x 30 (t) with a ≥30 (w) x 12 (h) stop	427 (WF534693)

In accordance with rule B.2.6 of EN 15269-3 and B.2.6 of EN 15269-20 it is possible to change from the tested softwood to alternative solid timber providing the timber has a density equal to or greater than $453kg/m^3$.

It is possible to increase the cross-sectional dimensions of the timber frame in line with rule 13.2.2.1 of BS EN 1634-1: 2014+A1: 2018, providing the rebate depth is maintained as required for smoke control performance under rule B.2.1 of BS EN 15269-20:2020.

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

The testing conducted and summarised within section 3 of this report utilised a range of frame joints and adhesives, therefore in accordance with rule B.2.16 of EN 15269-3 the following tested frame joints may be utilised:

- Trench jointed with 2No Ø5 x 100(l) steel screws
- Mortice and tenon with 2No Ø5 x 100(l) steel screws

The above jointing methods must be additionally bonded using one of the adhesives referenced in section 5.3.

8.2 Sills

Hardwood sills were tested with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC design and are therefore may to be fitted.

Material	Minimum Section Size (mm)	Min. Density (kg/m^3)
Solid Hardwood	140 (w) x 44 (t) Profiled (if required) to 34mm minimum from the front edge of the frame	640

Notes:

1. In accordance with rule B.2.6 of EN 15269-3 and EN 15269-20 it is possible to change from the tested solid Sapele timber to alternative solid timber providing the timber has a density equal to or greater than $640kg/m^3$.
2. All timber must be meet or exceed class J30 as specified in BS EN 942: 2007 (subject to adequate repair of any defects).
3. The sill is to be fixed to the frame jambs using 2No. steel wood screws measuring 80mm long x 5.0mm diameter per jamb. The length of the screw must be increased in direct proportion to the increase in height of the timber sill where applicable.
4. It is possible to increase the cross-sectional dimensions of the timber sill in line with rule B.2.2 of EN 15269-3, the depth of the sill may be increased in line with increases to the frame depth. Providing the rebate depth is maintained and subject to not projecting greater than 300mm as required for smoke control performance under rule B.2.1 of BS EN 15269-20:2020.
5. It is not possible to reduce the thickness of the sill in accordance with rules B.2.3 of EN 15269-3 and B.2.2 of EN 15269-20.

Based on the testing undertaken, when the above sill is utilised an aluminium threshold must be present.

See subsequent sections for the permitted arrangements.

9 Perimeter Intumescent Materials

One of the following intumescent sealing arrangements must be utilised within the frame to leaf junction of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design. The selected specification must be as tested and expressed within the text below:

Manufacturer & Product	Quantity & Size (mm)	Location	Fire Resistance Test Evidence
Exitex 15x4 Fire Only	2 No. 15 (w) x 4 (t)	Positioned central to the leaf thickness, spaced 5mm apart within the frame reveal.	WF538328
Intumescent Seals Ltd Therm-A-Seal	2 No. 10 (w) x 4 (t)	Positioned central to the leaf thickness, spaced 10mm apart within the frame reveal.	WF529859
Pyroplex Rigid Box Seal	2 No. 10 (w) x 4 (t)		WF534710
Sealed Tight Solutions STS1004FO	2 No. 10 (w) x 4 (t)		WF428987 AR1
Lorient Polyproducts Ltd LP1004	2 No. 10 (w) x 4 (t)		WF432578

The ability to consider the above referenced specifications of intumescent sealing materials has been considered utilising rule A.1.13 of BS EN 15269-3 which permits the substitution of intumescent seals for alternatives providing a test with the required material in a representative specimen is successfully undertaken, the tests which support each of the sealing arrangements are also identified above. This modification is also permitted for ambient temperature smoke control performance based on rule A.1.7 of BS EN 15269-20 which allows for modification of intumescent seals which are separate from the smoke seal and do not interfere with the smoke sealing system.

Each of the referenced tests have been confirmed to support the leaf dimensions permitted for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family defined within section 7. By having tested equal to or greater leaf dimensions, however, WF432578 was tested at smaller dimensions.

Based on rule A.3.2 of BS EN 15269-3 and the 45 minutes integrity performance and low deflection rating observed throughout the test, the following increase may be applied to the leaf height:

$$\frac{(45-30)}{30} \times 0.5 \times 100 = \mathbf{25\%}$$

Once applied this would allow for leaves up to 2.55m high for fire resistance performance only, supporting the use of the sealing arrangement for the leaf dimensions considered herein.

Intumescent protection to hardware is detailed with the specific hardware in Section 14.

10 Environmental Seals

One of the following environmental sealing arrangements must be utilised within the frame to leaf junction of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design. The selected specification must be as tested and expressed within the text below:

Product	Dimensions (mm)	Location	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Test Evidence
Exitex Aquatex A13	13 x 10	Kerf fitted within the jambs and head	WF538328	WYC538563/01/Test 2
Schlegel Aquamac 21	10.7 x 9.1	Kerf fitted within the jambs and head	CFR2110131	WYC509193 Test 1

In the absence of material or product change based rules within BS EN 15269-3 and BS EN 15269-20 for fire resistance and ambient temperature smoke control performance respectively, the permitted environmental seals must have direct test evidence. The testing undertaken and referenced above support the performance of the environmental seals when used within the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family for fire resistance and ambient temperature smoke control at the permitted dimensions given in section 7.

11 Door Leaf Glazing

11.1 General

The testing on the Falcon Timber Limited, SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC door design, demonstrated the performance of glazed apertures within the leaf.

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.

Tests referenced CFR2110131, CFR2205181 and WYC509193 Test 1 supports the performance of the doorset design without glazed apertures present. It is therefore permitted to produce unglazed door leaves.

As the doorsets tested included a range of glazed apertures, the following sections provide information on the maximum permitted aperture sizes relative to the quantity of apertures contained within the leaf. The following sections also detail the required positioning of the apertures within the leaf.

The glass and glazing systems tested, are both symmetrical and asymmetric, therefore, only the asymmetric systems which have bi-directional test evidence for fire resistance performance in accordance with rule E.1.1 of BS EN 15269-3 have been included within this extended field of application.

11.2 Aperture Dimensions

Based on the performance obtained within the testing summarised within section 3 of this report, in accordance with rules within section E.1 of BS EN 15269-3, the following scope of application has been determined.

Doorsets including a single glazed aperture

Maximum Dimensions Permitted for Each Aperture			Maximum Number of Apertures Permitted
Maximum Height (WF544878)	Maximum Width (WF544880)	Maximum Area (WF426419)	
1690mm x 1.15 = **1943mm**	**600mm**	1.54m x 0.4m = **0.616m^2**	**1**

Doorsets including up to 2No. glazed apertures

Maximum Dimensions Permitted for Each Aperture			Maximum Number of Apertures Permitted
Maximum Height (WF534710)	Maximum Width (WF534710)	Maximum Area (WF534710)	
900mm x 1.15 = **1035mm**	240mm x 1.15 = **276mm**	(0.9m x 0.24m) * 1.2 = **0.25m^2**	**2**

Based on rule E.1.6 of BS EN 15269-3 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% based on category B performance. This is also supported by F.1.7 of BS EN 15269-20. When applied, the calculation is explained above as well as the referenced test to which it has been applied.

The increase to dimensions of glazed aperture shall not reduce the minimum permitted distance between the edge of the aperture, adjacent apertures and the edges of the leaf as required within E.1.26 – E.1.28 of BS EN 15269-3. This is also supported by F.1.7 of BS EN 15269-20.

It is possible to reduce the tested size of the glazing in accordance with Rule E.1.7 of BS EN 15269-3 as the leaves have been tested without glazing present in tests referenced CFR2110131 and CFR2205181. Rule F.1.8 of BS EN 15269-20 permits the reduction in glazing dimensions.

The subsequent sections within this report detail the permitted glass and glazing systems with their associated size ranges permitted within the doorset design based on the testing undertaken, the performance observed and the rules found within section E of BS EN 15269-3 and section F of BS EN 15269-20.

The maximum glazed areas given in each subsection supersede those given above and must be adhered to. However, the dimensional restrictions relative to the number of apertures given above shall not be exceeded under any circumstance.

Aperture shapes considered herein are rectilinear and cannot be rotated (e.g. a square to be rotated to create a diamond effect) and alternative shapes are not permitted in accordance with rule E.1.24 of BS EN 15269-3.

11.3 Position of Apertures

Rules E.1.26 and E.1.28 of BS EN 15269-3 and F.1.21 – F.1.24 of BS EN 15269-20 do not allow the tested minimum distance between the glazed aperture, adjacent apertures and the edge of the leaf to be decreased. The tested minimum distances are as detailed within the table below:

Minimum permitted distance between: The edge of the glazed aperture, adjacent apertures and the edge of the leaf (mm)
145 from the head of the leaf (WF534710) 145 from the vertical edge of the leaf (WF534710) 145 between apertures (WF534710)

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 Limited, SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family.

- Glazed apertures must meet the following position and spacing requirements:
- The aperture must be no closer than 145mm from the top of the door leaf to the top of the glazed aperture.
- The aperture must be no closer than 145mm from the bottom of the door leaf to the bottom of the glazed aperture.
- The aperture must be no closer than 145mm 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 of BS EN 15269-3 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 Single Pane Glass and Glazing Systems (Timber Beading)

The glass and glazing system(s) combinations, detailed within the table below may be used, subject to the limitations and scope detailed in section 11.1 – 11.3 above.

The table below specifies the maximum height, width and area of each glass and glazing system combination.

The numerical figures in the main body of the table are the maximum height, width (m) & area of glass (in m^2) that is considered acceptable for an individual glazed aperture, based upon the specific system. Where a '-' is applied the glass type and glazing system has not been considered compatible.

Each glazing system must be utilised with the corresponding glazing retention technique detailed within section 11.5.

Glass & Glazing System Specification			Maximum Assessed Area (m^2), Height & Width (m)					
Glass Type Manufacturer		Thickness	System & Manufacturer→	1	2	3	4	5
				Sealmaster, Intumescent Foam Glazing Tape, Closed Cell Foam Tape, 15(w) x 5(t) (compressed to 3 (t)) between the bead and the glass.	Pyroplex 8492 Graphite glazing strip 10 (w) x 2.5(t) fixed with self-adhesive either side of the glass adhered to the glazing bead	Lorient FF1, 13.5(w) x 3.5(t) graphite encapsulated PVC self-adhered to the upstand of the beading on each face of the glass	STS 302 liner, 30(w) x 2(t) graphite liner fixed with self-adhesive STS ST 105-3 closed cell foam 10(h) x 3(t) fitted between the glass and the glazing bead	STS 302 15(w) x 2(t) graphite liner fixed with self-adhesive centrally lining the glazing aperture STS 105-3 closed cell foam 9(h) x 3(t) fitted between the glass and the glazing bead
				Sealmaster	Pyroplex	Lorient Polyproducts Ltd	Sealed Tight Solutions	Sealed Tight Solutions
			Fire Test Reference	WF544880 & WYC545081/Test 2	WF544878 & WYC545080/Test 2	WF532750 & WYC532752/03	WF428987 AR1 & WYC429040/AR1/Test2	WF426419 & WYC426329/b
1	Pyrodur 30-105	7	WF544880 & WYC545081/Test 2	Area: 0.6 Height: 1.0 Width: 0.6	Area: 0.59 Height: 1.0 Width: 0.33	Area: 0.23 Height: 0.977 Width: 0.27	Area: 0.6 Height: 1.0 Width: 0.4	Area: 0.6 Height: 1.0 Width: 0.4
2	Pyrobelite 7	7	WF544878 & WYC545080/Test 2	Area: 0.59 Height: 1.0 Width: 0.33	Area: 0.59 Height: 1.94 Width: 0.33	Area: 0.23 Height: 0.977 Width: 0.27	Area: 0.59 Height: 1.54 Width: 0.33	Area: 0.59 Height: 1.54 Width: 0.33
3	Pyroguard 2 EW30/7-1	7	WF532750 & WYC532752/03	Area: 0.23 Height: 0.977 Width: 0.27	Area: 0.23 Height: 0.977 Width: 0.27	Area: 0.23 Height: 0.977 Width: 0.27	Area: 0.23 Height: 0.977 Width: 0.27	Area: 0.23 Height: 0.977 Width: 0.27

Glass & Glazing System Specification			Maximum Assessed Area (m^2), Height & Width (m)				
Glass Type Manufacturer		Thickness	System & Manufacturer→	1	2	3	4	5
				Sealmaster, Intumescent Foam Glazing Tape, Closed Cell Foam Tape, 15(w) x 5(t) (compressed to 3 (t)) between the bead and the glass.	Pyroplex 8492 Graphite glazing strip 10 (w) x 2.5(t) fixed with self-adhesive either side of the glass adhered to the glazing bead	Lorient FF1, 13.5(w) x 3.5(t) graphite encapsulated PVC self-adhered to the upstand of the beading on each face of the glass	STS 302 liner, 30(w) x 2(t) graphite liner fixed with self-adhesive STS ST 105-3 closed cell foam 10(h) x 3(t) fitted between the glass and the glazing bead	STS 302 15(w) x 2(t) graphite liner fixed with self-adhesive centrally lining the glazing aperture STS 105-3 closed cell foam 9(h) x 3(t) fitted between the glass and the glazing bead
				Sealmaster	Pyroplex	Lorient Polyproducts Ltd	Sealed Tight Solutions	Sealed Tight Solutions
			Fire Test Reference	WF544880 & WYC545081/Test 2	WF544878 & WYC545080/Test 2	WF532750 & WYC532752/03	WF428987 AR1 & WYC429040/AR1/Test2	WF426419 & WYC426329/b
4	Pyrostop 30-10	15	WF428987 AR1 & WYC429040/AR1/Test2	Area: 0.6 Height: 1.0 Width: 0.40	Area: 0.59 Height: 1.54 Width: 0.33	Area: 0.23 Height: 0.977 Width: 0.27	Area: 0.616 Height: 1.54 Width: 0.40	Area: 0.616 Height: 1.54 Width: 0.40
5	Pyrostop 15	15	WF426419 & WYC426329/b	Area: 0.6 Height: 1.0 Width: 0.4	Area: 0.59 Height: 1.54 Width: 0.33	Area: 0.23 Height: 0.977 Width: 0.27	Area: 0.616 Height: 1.54 Width: 0.40	Area: 0.616 Height: 1.54 Width: 0.40

1. All glass types must be fitted fully in accordance with the manufacturers' tested details/installation requirements, particularly with respect to edge cover and expansion tolerances.

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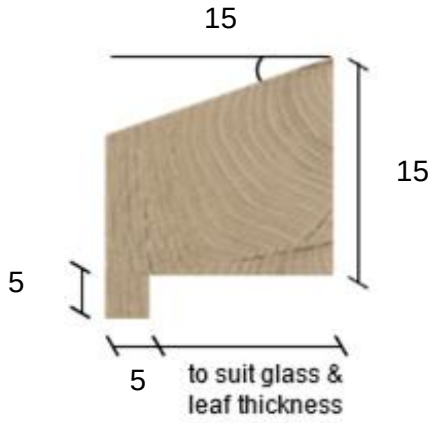
11.5 Single Pane Glass and Glazing – Glazing Beads

According to rules E.1.17, E.1.19, E.1.20 and E.1.21 in BS EN 15269-3 and F.1.11, F.1.12, F.1.16 and F.1.17 of BS EN 15269-20 the following glazing bead arrangements are permitted for use with the specifically identified glazing system from section 11.4 with the Falcon Timber Limited, SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC door design and must therefore be used when glazing the door leaf.

11.5.1 Glazing Bead – Glazing System 1

Permitted Glazing Systems (Defined in Section 11.4)	1

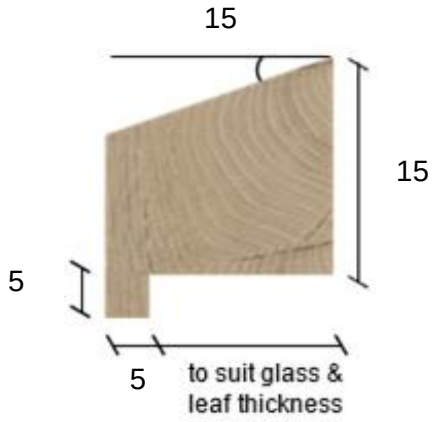


Dimensions given above are in millimetres.

- The timber used to create the glazing bead may be substituted for an alternative Hardwood with equal or greater density than 602kg/m^3
- The geometry of the glazing bead may be modified providing the cross-sectional area remains ≥ than tested **(276.2mm^2).** The depth of the glazing bead must be adjusted to suit the thickness of the glass included within the aperture such that the bolection finishes abutting the face of the leaf.
- The glazing bead must be pinned in position using 16swg x 38mm steel pins, however, it is permitted to apply screw fixings in place of the pins if desired.
- Fixings must be applied at 150mm centres, 50mm from corners at 35° to the glass face.
- It is possible to increase the number of fixings applied to the glazing bead, i.e. reduce the centres between fixings, however, in all instances the distance between fixings must not be increased.
- The fitting of the glazing seal between the bead and the glass should be in accordance with the tested specimens.

11.5.2 Glazing Bead – Glazing System 2

Permitted Glazing Systems (Defined in Section 11.4)	2

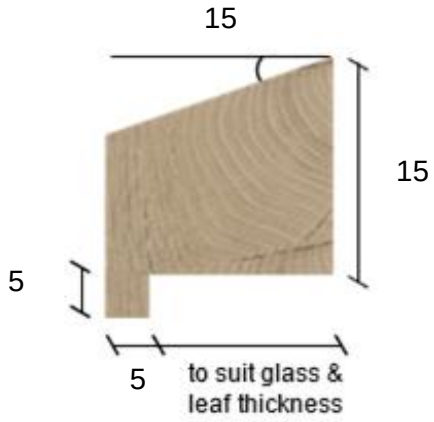


Dimensions given above are in millimetres.

- The timber used to create the glazing bead may be substituted for an alternative Hardwood with equal or greater density than 638kg/m^3
- The geometry of the glazing bead may be modified providing the cross-sectional area remains ≥ than tested **(276.2mm^2).** The depth of the glazing bead must be adjusted to suit the thickness of the glass included within the aperture such that the bolection finishes abutting the face of the leaf.
- The glazing bead must be pinned in position using 16swg x 38mm steel pins, however, it is permitted to apply screw fixings in place of the pins if desired.
- Fixings must be applied at 150mm centres, 50mm from corners at 35° to the glass face.
- It is possible to increase the number of fixings applied to the glazing bead, i.e. reduce the centres between fixings, however, in all instances the distance between fixings must not be increased.
- The fitting of the glazing seal between the bead and the glass should be in accordance with the tested specimens.

11.5.3 Glazing Bead – Glazing System 3

Permitted Glazing Systems (Defined in Section 11.4)	3

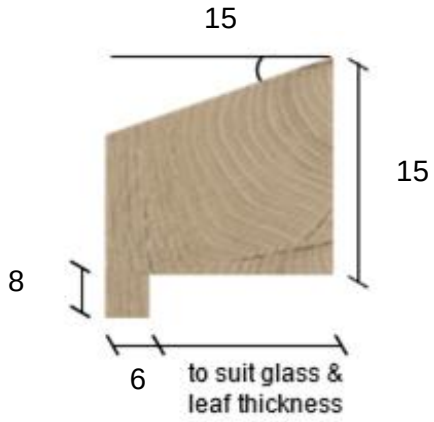


Dimensions given above are in millimetres.

- The timber used to create the glazing bead may be substituted for an alternative Hardwood with equal or greater density than 646kg/m^3
- The geometry of the glazing bead may be modified providing the cross-sectional area remains ≥ than tested **(276.2mm^2).** The depth of the glazing bead must be adjusted to suit the thickness of the glass included within the aperture such that the bolection finishes abutting the face of the leaf.
- The glazing bead must be fixed in position using Ø5mm x 50mm steel screws, alternative fixings are not permitted.
- Fixings must be applied at 145mm centres, 45mm from corners at 35° to the glass face.
- It is possible to increase the number of fixings applied to the glazing bead, i.e. reduce the centres between fixings, however, in all instances the distance between fixings must not be increased.
- The fitting of the glazing seal between the bead and the glass should be in accordance with the tested specimens.

11.5.4 Glazing Bead – Glazing System 4

Permitted Glazing Systems (Defined in Section 11.4)	4

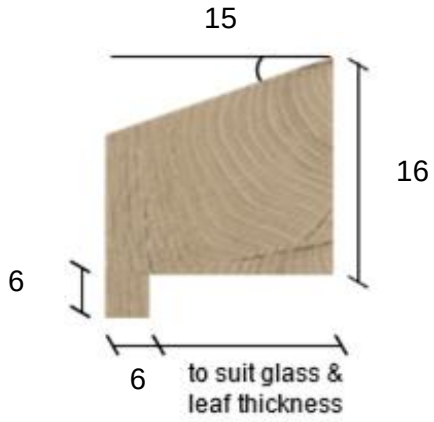


Dimensions given above are in millimetres.

- The timber used to create the glazing bead may be substituted for an alternative Hardwood with equal or greater density than 640kg/m^3
- The geometry of the glazing bead may be modified providing the cross-sectional area remains ≥ than tested **(269.48mm^2).** The depth of the glazing bead must be adjusted to suit the thickness of the glass included within the aperture such that the bolection finishes abutting the face of the leaf.
- The glazing bead must be pinned in position using Ø4mm x 50mm steel screws, alternative fixings are not permitted.
- Fixings must be applied at 150mm centres, 50mm from corners at 15° to the glass face.
- It is possible to increase the number of fixings applied to the glazing bead, i.e. reduce the centres between fixings, however, in all instances the distance between fixings must not be increased.
- The fitting of the glazing seal between the bead and the glass should be in accordance with the tested specimens.

11.5.5 Glazing Bead – Glazing System 5

Permitted Glazing Systems (Defined in Section 11.4)	5



Dimensions given above are in millimetres.

- The timber used to create the glazing bead may be substituted for an alternative Hardwood with equal or greater density than 640kg/m^3
- The geometry of the glazing bead may be modified providing the cross-sectional area remains ≥ than tested **(291.64mm^2).** The depth of the glazing bead must be adjusted to suit the thickness of the glass included within the aperture such that the bolection finishes abutting the face of the leaf.
- The glazing bead must be pinned in position using 16swg x 50mm steel pins, however, it is permitted to apply screw fixings in place of the pins if desired.
- Fixings must be applied at 150mm centres, 50mm from corners at 35° to the glass face.
- It is possible to increase the number of fixings applied to the glazing bead, i.e. reduce the centres between fixings, however, in all instances the distance between fixings must not be increased.
- The fitting of the glazing seal between the bead and the glass should be in accordance with the tested specimens.

11.6 Double Glazed Units & Glazing Systems

The glass and glazing system(s) combinations, detailed within the table below may be used, subject to the limitations and scope detailed in section 11.1 – 11.3 above.

The table below specifies the maximum height, width and area of each glass and glazing system combination.

The numerical figures in the main body of the table are the maximum height, width (m) & area of glass (in m^2) that is considered acceptable for an individual glazed aperture, based upon the specific system. Where a '-' is applied the glass type and glazing system has not been considered compatible.

Each glazing system must be utilised with the corresponding glazing retention technique detailed within section 11.7.

Glass & Glazing System Specification		Maximum Assessed Area (m^2), Height & Width (m)			
Glass Type Manufacturer		System & Manufacturer →	1	2	3
			Pyroplex 30049 graphite 14.2(h)x6.4(t) fixed with self-adhesive on either side of the double-glazed unit	Foam Glazing Tape – GTR15x5FM, Closed cell foam tape, 15mm x 5mm fixed with self-adhesive to bead No Nonsense, Silicone Sealant, (general purpose acetoxy cure clear), 5mm bead, nozzle applied to cap glazing tape of the glazing system	Exi-Glaze 30 close cell foam 5(t)x10(w) applied with self-adhesive between the bead and glass on both faces.
			Pyroplex	Intumescent Seals Ltd & No Nonsense	Exitex
		Fire Test Reference	WF534710 & WYC534820-03/Test 2	WF529859 & WYC524839/AR1/Test 2	WF538328 & WYC538563/01/Test2
1	Fireglass UK 7(t) Pyrobelite, 7.5 (t) Hollow Box Steel Spacer 6.4(t) laminate 21.4 (t) Overall	WF534710 & WYC534820-03/Test 2	Area 0.25 Height: 1.035 Width:0.276	-	-

Glass & Glazing System Specification		Maximum Assessed Area (m^2), Height & Width (m)			
Glass Type Manufacturer		System & Manufacturer →	1	2	3
			Pyroplex 30049 graphite 14.2(h)x6.4(t) fixed with self-adhesive on either side of the double-glazed unit	Foam Glazing Tape – GTR15x5FM, Closed cell foam tape, 15mm x 5mm fixed with self-adhesive to bead No Nonsense, Silicone Sealant, (general purpose acetoxy cure clear), 5mm bead, nozzle applied to cap glazing tape of the glazing system	Exi-Glaze 30 close cell foam 5(t)x10(w) applied with self-adhesive between the bead and glass on both faces.
			Pyroplex	Intumescent Seals Ltd & No Nonsense	Exitex
		Fire Test Reference	WF534710 & WYC534820-03/Test 2	WF529859 & WYC524839/AR1/Test 2	WF538328 & WYC538563/01/Test2
2	Fireglass UK 7(t) ACG Pyrobelite 7 8mm Hollow Box Steel Spacer 6.4(t) Clear laminate 22.6 (t) Overall	WF529859 & WYC524839/AR1/Test 2	-	Area 0.17 Height: 0.80 Width:0.17	-

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Glass & Glazing System Specification		Maximum Assessed Area (m^2), Height & Width (m)			
Glass Type Manufacturer		System & Manufacturer →	1	2	3
			Pyroplex 30049 graphite 14.2(h)x6.4(t) fixed with self-adhesive on either side of the double-glazed unit	Foam Glazing Tape – GTR15x5FM, Closed cell foam tape, 15mm x 5mm fixed with self-adhesive to bead No Nonsense, Silicone Sealant, (general purpose acetoxy cure clear), 5mm bead, nozzle applied to cap glazing tape of the glazing system	Exi-Glaze 30 close cell foam 5(t)x10(w) applied with self-adhesive between the bead and glass on both faces.
			Pyroplex	Intumescent Seals Ltd & No Nonsense	Exitex
		Fire Test Reference	WF534710 & WYC534820-03/Test 2	WF529859 & WYC524839/AR1/Test 2	WF538328 & WYC538563/01/Test2
3	Fireglass UK 7(t) Pyroguard Advanced 8mm Hollow Box Steel Spacer 6.4(t) laminate 21.4 (t) Overall	WF538328 & WYC538563/01/Test2	-	-	Area 0.216 Height: 0.90 Width:0.24

Note:

1. All glass types must be fitted fully in accordance with the manufacturers' tested details/installation requirements, particularly with respect to edge cover and expansion tolerances.

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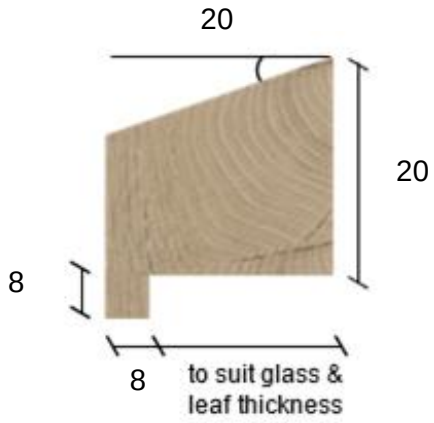
11.7 Single Pane Glass and Glazing – Glazing Beads

According to rules E.1.17, E.1.19, E.1.20 and E.1.21 in BS EN 15269-3 and F.1.11, F.1.12, F.1.16 and F.1.17 of BS EN 15269-20 the following glazing bead arrangements are permitted for use with the specifically identified glazing system from section 11.4 with the Falcon Timber Limited, SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC door design and must therefore be used when glazing the door leaf.

11.7.1 Glazing Bead – Glazing System 1

Permitted Glazing Systems (Defined in Section 11.6)	1

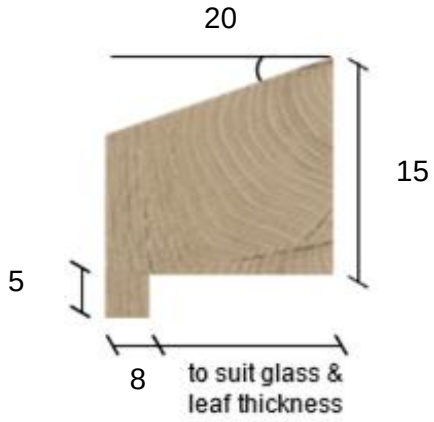


Dimensions given above are in millimetres.

- The timber used to create the glazing bead may be substituted for an alternative Hardwood with equal or greater density than 739kg/m^3
- The geometry of the glazing bead may be modified providing the cross-sectional area remains ≥ than tested **(337.42mm^2).** The depth of the glazing bead must be adjusted to suit the thickness of the glass included within the aperture such that the bolection finishes abutting the face of the leaf.
- The glazing bead must be pinned in position using 16swg x 38mm steel pins, however, it is permitted to apply screw fixings in place of the pins if desired.
- Fixings must be applied at 150mm centres, 50mm from corners at 30° to the glass face.
- It is possible to increase the number of fixings applied to the glazing bead, i.e. reduce the centres between fixings, however, in all instances the distance between fixings must not be increased.
- The fitting of the glazing seal between the bead and the glass should be in accordance with the tested specimens.

11.7.2 Glazing Bead – Glazing System 2

Permitted Glazing Systems (Defined in Section 11.6)	2

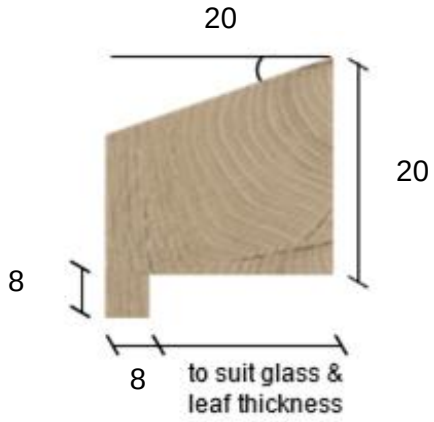


Dimensions given above are in millimetres.

- The timber used to create the glazing bead may be substituted for an alternative Hardwood with equal or greater density than 642kg/m^3
- The geometry of the glazing bead may be modified providing the cross-sectional area remains ≥ than tested **(237.96mm^2).** The depth of the glazing bead must be adjusted to suit the thickness of the glass included within the aperture such that the bolection finishes abutting the face of the leaf.
- The glazing bead must be pinned in position using Ø4mm x 40mm steel screws, alternative fixings are not permitted.
- Fixings must be applied at 120mm centres, 50mm from corners at 20° to the glass face.
- It is possible to increase the number of fixings applied to the glazing bead, i.e. reduce the centres between fixings, however, in all instances the distance between fixings must not be increased.
- The fitting of the glazing seal between the bead and the glass should be in accordance with the tested specimens.

11.7.3 Glazing Bead – Glazing System 3

Permitted Glazing Systems (Defined in Section 11.6)	3



Dimensions given above are in millimetres.

- The timber used to create the glazing bead may be substituted for an alternative Hardwood with equal or greater density than 687kg/m^3
- The geometry of the glazing bead may be modified providing the cross-sectional area remains ≥ than tested **(323.06mm^2).** The depth of the glazing bead must be adjusted to suit the thickness of the glass included within the aperture such that the bolection finishes abutting the face of the leaf.
- The glazing bead must be pinned in position using Ø4mm x 50mm steel screws, alternative fixings are not permitted.
- Fixings must be applied at 150mm centres, 50mm from corners at 30° to the glass face.
- It is possible to increase the number of fixings applied to the glazing bead, i.e. reduce the centres between fixings, however, in all instances the distance between fixings must not be increased.
- The fitting of the glazing seal between the bead and the glass should be in accordance with the tested specimens.

12 Decorative and / or Protective Finishes

The following decorative and protective finishes may be used with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design. The following scope has been checked against the rules within Section A.5 of BS EN 15269-20: 2020 to verify that the following design changes are also acceptable for ambient smoke control performance.

12.1 Combustible Decorative Finishes (on face of the leaf)

It is possible to apply the following decorative facings to the doorset design as the doorset under test conditions achieved insulation criteria in accordance with rule A.5.1 of EN 15269-3: 2022:

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

12.2 Paint Finish (face and edge of the leaf)

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 or vary the application of 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 SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC door design has been tested with a paint finish which was not expected to contribute to the fire resistance performance of the doorset design 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 Facings (on face of the leaf)

Decorative facings meeting the following performance requirements are permitted on the face of the leaf:

1. Reaction to fire class A1 or A2
2. Melting point ≥660°C.

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

Notes:

1. Maximum thickness of 3mm. (limited by rule A.5.1 of EN 15269-20: 2020)
2. The total increase in leaf weight must not exceed 25%
3. The facings must be attached by adhesive only
4. Items of hardware such as door handles must not act as a mechanical fixing for the facing material.
5. The facing must not be added to the area of the leaf behind the door frame rebates (door stop).

The following rules from BS EN 15269-3: 2022 have been used to consider the possible extended scope of application for non-combustible decorative facings on the face of leaves: A.5.5.

12.4 Decorative Mouldings

It is possible to apply timber based, surface mounted mouldings to the face of the leaf within the following restrictions:

1. Each surface of the leaf is not to be covered by more than 25% of the surface area.
2. The mass of the leaf when the mouldings are applied is not increased by more than 25%.
3. The mouldings are to be fixed to the surface of the leaf with adhesive or fixings as tested.
4. The mouldings are not permitted to return around the edge of the leaf or interfere with the sealing system in any way.

It is possible to remove the tested moulding from the surface of the leaf and supply a doorset without surface mounted mouldings.

The following rules from BS EN 15269-3: 2022 have been considered to apply timber based mouldings to the face of the leaf: A.5.18 & A.5.19 in conjunction with Rules A.5.18 & A.5.19 from EN 15269-20: 2020 to consider the effect on ambient smoke control.

13 Configurations of Doorsets Incorporating Side and/or Overpanels

13.1 General

The SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design has been tested with and without the presence of side lights and fanlights. Based on this testing it has been possible to consider the following scope of extended application when sidelights and/or fanlights are applied.

The following sections have been split into permitted specifications based upon specific testing and glazing arrangements. Where utilised, all of the following sections relevant to the glazing arrangement must be complied with including permitted configurations, framing details, glazing systems and glass types.

13.2 Sealmaster

Based on the testing conducted as summarised within section 3, specifically CFR2110131, CFR2205181 and WYC509193 Test 1, the following sections detail the permitted scope of application for the Sealmaster based glazing arrangement.

13.2.1 Permitted Configurations of Doorsets Incorporating Fanlights and / or Sidelights

Based on the testing conducted as summarised within section 3, specifically CFR2110131, CFR2205181 and WYC509193 Test 1, the following configurations are permitted providing:

- The maximum overall assembly size as tested is not exceeded in accordance with Annex C, C.2.3 of BS EN 15269-3.
- The overall combined width of all the sidelight elements must not exceed the maximum dimension tested.
- The overall combined height of the fanlight element must not exceed the maximum dimension tested.
- The maximum permitted dimensions for glass and glazing system combinations in the following sections must not be exceeded.

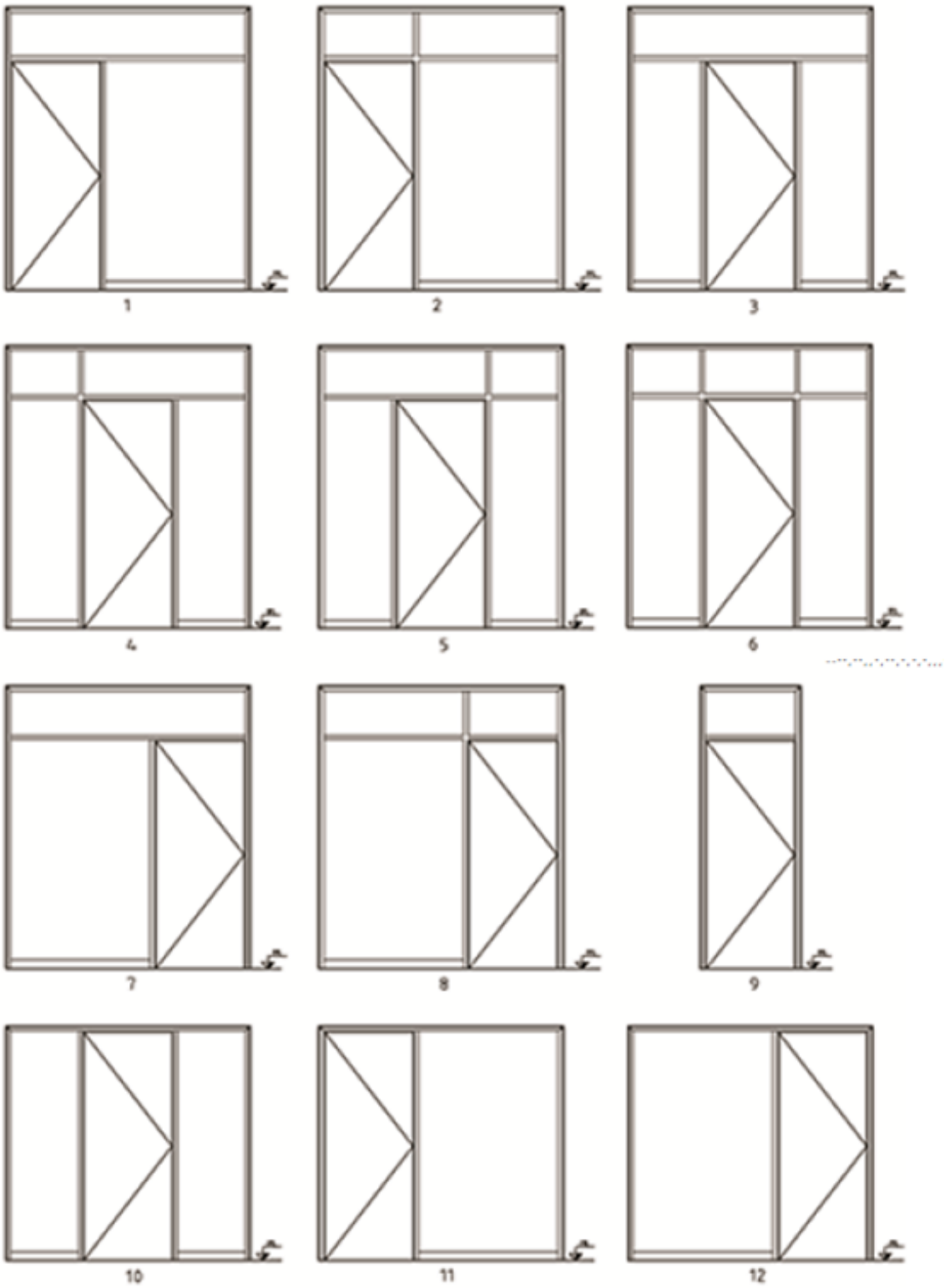
Rules D.1.1 and Annex B, Table B.1 of BS EN 15269-3 and rule E.1.1 and Annex B, Table B.2 of BS EN 15269-20 have been used to establish the permitted configurations provided. Due to the requirement to maintain both fire resistance and ambient temperature smoke control functions the scope provided has been limited to the lowest common performance.

The maximum overall doorset size including outer framing of the associated fanlight and sidelight assembly must be no greater than: **2666mm high x 1775mm wide.**

The maximum overall combined width of all sidelight elements must not exceed **664mm wide.**

The maximum overall height of the fanlight elements must not exceed **443mm high.**

Permitted configurations



Note: The configurations above are drawn such that the apex (the vertex angle) of the triangle points to the closing edge of the leaf.

13.2.2 Sidelight / Fanlight Frame

Based on the testing for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design the permitted sidelight and fanlight arrangements must be contained within a modular frame as tested. The following sections detail the requirements based on the testing undertaken.

13.2.2.1 Frame Requirements

Timber based frames for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family must be constructed to meet the following specification based on the test evidence.

Material	Minimum Section Size (mm)	Min. Density (kg/m^3)
Solid Softwood or Hardwood	80 (w) x 44 (t) with a 15 (h) x 50 (w) rebate to form an integral bead	531

In accordance with rule B.2.6 of EN 15269-3 and EN 15269-20 it is possible to change from the tested Softwood to alternative solid timber providing the timber has a density equal to or greater than $531kg/m^3$.

It is possible to increase the cross-sectional dimensions of the timber frame in line with rule 13.2.2.1 of BS EN 1634-1: 2014+A1: 2018, providing the rebate depth is maintained as required for smoke control performance under rule B.2.1 of BS EN 15269-20:2020.

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 butt jointed as tested with no gaps. Joints require mechanical fixing with 2No. 100mm long x 5.0mm diameter screws.

13.2.2.2 Fixing Arrangements

The framing for the permitted sidelights and/or fanlights defined herein must be fixed to adjacent frames in the following manner on the basis of CFR2110131, CFR2205181 and WYC509193 Test 1.

Element	Fixing Arrangement
Fanlight	Affixed through the reveal of the leaf, overpanel and sidepanel frames using Ø4.5 x 50mm steel countersunk screws at 20mm to 50mm from the internal corners and at 185mm to 264mm centres. Additionally affixed through the integral stop and bead using Ø4.5 x 80mm steel countersunk screws at 35mm to 48mm from the internal corners and at 185mm to 269mm centres.
Sidelight	

13.2.3 Glazing System

13.2.3.1 Sealmaster – Fireglaze Tape & Intumescent Foam Glazing Tape with Dow Inc. Dowsil 799EU Neutral Silicone

The below detailed glazing system has been tested within all of the referenced tests contained within section 13.2.

13.2.3.1.1 Glazing System

The glazing system as tested is permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design. Permitted modifications to the tested arrangement are provided where applicable.

Glazing Seal	
Manufacturer	Sealmaster
Reference	Intumescent Foam Glazing Tape
Material	Closed Cell Foam
Overall Size	15mm (w) x 5mm (t)
Fixing Method	Self-adhesive
Location	Between the face of the glass and the bead on both sides of the glass.
Glazing Liner	
Manufacturer	Sealmaster
Reference	Fireglaze Tape
Material	Intumescent glazing material
Overall Size	26mm (w) x 2.5 (t)
Fixing Method	Self-adhesive
Location	Lining the permitter of the glazing aperture.
Glazing Sealant	
Manufacturer	Dow Inc.
Reference	Dowsil 799EU
Material	Neutral Silicone
Location	Applied capping the closed cell foam tape.

When utilising this glazing system, the above detailed glazing seal and glazing liner must be utilised, and no modifications are permitted.

13.2.3.1.2 Glazing Bead and Fixity

The glazing bead and fixing method as defined herein is to be utilised when using the glazing system as defined within section 13.2.3.1.1.

Permitted modifications to the tested arrangement are provided, where applicable.

Glazing Bead	
Material	Hardwood with Minimum Density of 640kg/m^3
Overall Size	22mm (h) x 24mm (d) with a 7mm x 7mm bolection and a 16-degree splay.
Fixing Method	Pinned.
Fixing Frequency	50mm from corners, not greater than 200mm centres at 30 degrees to the face of the glass.
Bead Fixings – Pins	
Material	Steel
Overall Size	16swg x 50mm (l) pneumatically fired pins

Based on rules E.1.17, E.1.19, E.1.20 and E.1.21 of BS EN 15269-3 and F.1.11, F.1.12, F.1.16, F.1.17 of BS EN 15269-20 the following modifications may be made to the above tested glazing bead and its associated fixing arrangement:

- The timber used to create the glazing bead may be substituted for an alternative Hardwood with equal or greater density than 640kg/m^3
- The geometry of the glazing bead may be modified providing the cross-sectional area remains ≥ than tested **(326.42mm^2).** The depth of the glazing bead must be adjusted to suit the thickness of the glass included within the aperture such that the bolection finishes abutting the face of the leaf.
- The glazing bead must be pinned in position as defined above, however, it is permitted to apply screw fixings in place of the pins if desired.
- It is possible to increase the number of fixings applied to the glazing bead, i.e. reduce the centres between fixings, however, in all instances the distance between fixings must not be increased.

13.2.3.1.3 Glass Type

The SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design has been tested with the following glass.

Manufacturer	Description	Thickness	Test Evidence
Fire Glass UK Ltd	DGU consisting of: 6.8 (t) laminated glass, 8 (t) Steel spacer, 12 (t) Pyrobelite 12 EW60 2(B)2 – 36dB	27.1mm Overall	CFR2110131, CFR2205181 and WYC509193 Test 1

The spacer tested within the DGU must be constructed from the same material as tested.

As defined within BS EN 15269-3, it is not possible to include finishes on the face of the glass in accordance with rule E.1.33 unless they have been tested with them present.

13.2.3.1.4 Aperture Dimensions

The below detailed dimensions are the maximum permitted for the glazing system, these have been defined based on the test evidence contained within section 3 as well as the following rules from BS EN 15269-3 and BS EN 15269-20:

BS EN 15269-3: E.1.7, E.1.8.

BS EN 15269-20: F.1.7, F.1.8 & F.1.9.

Glass & Glazing System Specification	Maximum Assessed Area (m^2), Height & Width (m) of any individual aperture.	
Glass Type Manufacturer	**System & Manufacturer →**	Sealmaster Intumescent Foam Glazing Tape Fireglaze Tape Liner Dowsil 799EU Capping
	Fire & Smoke Test Reference	CFR2110131, CFR2205181 and WYC509193 Test 1
DGU consisting of: 6.8 (t) laminated glass, 8 (t) Steel spacer, 12 (t) Pyrobelite 12 EW60 2(B)2 – 36dB	CFR2110131, CFR2205181 and WYC509193 Test 1	**Landscape:** Area 0.66 Height: 0.387 Width:1.717 **Portrait:** Area 1.28 Height: 2.118 Width:0.609

The following rationale has been used to provide the scope given in the table above.

Clause 13.3.3.2.3 of BS EN 1634-1: 2014+A1: 2018 stipulates that the rules for variation to side and transom panel arrangements are the same as those applied generally to hinged doorsets. Therefore, in accordance with clause 13.3.3.2.1 "*Unlimited reductions from the tested specimen are permitted with the exception of insulated metal doors where the size reduction is limited.*" The reduction of the tested and detailed maximum dimensions are permitted.

The reduction in size is covered by rule E.1.3 of BS EN 15269-20 for ambient temperature smoke control and as the maximum permitted dimensions defined above are equal to or less than those included within WYC509193 Test 1 the above dimensions are permitted and reduction is allowed.

13.3 Sealed Tight Solutions

Based on the testing conducted as summarised within section 3, specifically WF432578 and WYC432787, the following sections detail the permitted scope of application for the Sealed Tight Solutions based glazing arrangement.

13.3.1 Permitted Configurations of Doorsets Incorporating Fanlights and / or Sidelights

Based on the testing conducted as summarised within section 3, specifically WF432578 and WYC432787, the following configurations are permitted providing:

- The maximum overall assembly size as tested is not exceeded in accordance with Annex C, C.2.3 of BS EN 15269-3.
- The overall combined height of the fanlight element must not exceed the maximum dimension tested.
- The maximum permitted dimensions for glass and glazing system combinations in the following sections must not be exceeded.

Rules D.1.1 and Annex B, Table B.1 of BS EN 15269-3 and rule E.1.1 and Annex B, Table B.2 of BS EN 15269-20 have been used to establish the permitted configurations provided. Due to the requirement to maintain both fire resistance and ambient temperature smoke control functions the scope provided has been limited to the lowest common performance.

The maximum overall doorset size including outer framing of the associated fanlight and sidelight assembly must be no greater than: **2790mm high x 990mm wide.**

The maximum overall height of the fanlight elements must not exceed **708mm high.**

Permitted configurations

Note: The configurations above are drawn such that the apex (the vertex angle) of the triangle points to the closing edge of the leaf.

13.3.2 Fanlight Frame

Based on the testing for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design the permitted fanlight arrangement must be contained within a modular frame as tested. The following sections detail the requirements based on the testing undertaken.

13.3.2.1 Frame Requirements

Timber based frames for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family must be constructed to meet the following specification based on the test evidence.

Material	Minimum Section Size (mm)	Min. Density (kg/m^3)
Solid Softwood or Hardwood	80 (w) x 44 (t) with a 15 (h) x 47 (w) rebate to form an integral bead	545

In accordance with rule B.2.6 of EN 15269-3 and EN 15269-20 it is possible to change from the tested Engineered Softwood to alternative solid timber providing the timber has a density equal to or greater than $545kg/m^3$.

It is possible to increase the cross-sectional dimensions of the timber frame in line with rule 13.2.2.1 of BS EN 1634-1: 2014+A1: 2018, providing the rebate depth is maintained as required for smoke control performance under rule B.2.1 of BS EN 15269-20:2020.

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 trench jointed as tested with no gaps. Joints require mechanical fixing with 2No. 100mm long x 5.0mm diameter screws.

2No. Sealed Tight Solutions, STS154FO, 15mm wide x 4mm thick fitted to the top frame member of the fanlight fitted 15mm in from each face.

13.3.2.2 Fixing Arrangements

The framing for the permitted sidelights and/or fanlights defined herein must be fixed to adjacent frames in the following manner on the basis of WF432578 and WYC432787.

Element	Fixing Arrangement
Fanlight	Affixed through the reveal of the leaf, overpanel and sidepanel frames using 50mm steel countersunk screws Additionally affixed through the integral stop using 70mm steel countersunk screws.

13.3.3 Glazing System

13.3.3.1 Sealed Tight Solutions Ltd, STS 302 Liner & STS 104

The below detailed glazing system has been tested within all of the referenced tests contained within section 13.3.

13.3.3.1.1 Glazing System

The glazing system as tested is permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design. Permitted modifications to the tested arrangement are provided where applicable.

Glazing Seal	
Manufacturer	Sealed Tight Solutions Ltd
Reference	STS 104
Material	Graphite intumescent
Overall Size	10mm (w) x 4mm (t)
Fixing Method	Self-adhesive
Location	Between the face of the glass and the bead on both sides of the glass.
Glazing Liner	
Manufacturer	Sealed Tight Solutions Ltd
Reference	STS 302 Liner
Material	Graphite
Overall Size	30mm (w) x 2 (t)
Fixing Method	Self-adhesive
Location	Lining the permitter of the glazing aperture.

When utilising this glazing system, the above detailed glazing seal and glazing liner must be utilised, and no modifications are permitted.

13.3.3.1.2 Glazing Bead and Fixity

The glazing bead and fixing method as defined herein is to be utilised when using the glazing system as defined within section 13.3.3.1.1.

Permitted modifications to the tested arrangement are provided, where applicable.

Glazing Bead	
Material	Hardwood with Minimum Density of 640kg/m^3
Overall Size	15mm (h) x 15mm (d) with a 2mm x 2mm quirk
Fixing Method	Pinned.
Fixing Frequency	50mm from corners, not greater than 140mm centres at 45 degrees to the face of the glass.
Bead Fixings – Pins	
Material	Steel
Overall Size	2mm x 50mm (l) panel pins

Based on rules E.1.17, E.1.19, E.1.20 and E.1.21 of BS EN 15269-3 and F.1.11, F.1.12, F.1.16, F.1.17 of BS EN 15269-20 the following modifications may be made to the above tested glazing bead and its associated fixing arrangement:

- The timber used to create the glazing bead may be substituted for an alternative Hardwood with equal or greater density than 640kg/m^3
- The geometry of the glazing bead may be modified providing the cross-sectional area remains ≥ than tested **(221mm^2).** The depth of the glazing bead must be adjusted to suit the thickness of the glass included within the aperture such that the bolection finishes abutting the face of the leaf.
- The glazing bead must be pinned in position as defined above, however, it is permitted to apply screw fixings in place of the pins if desired.
- It is possible to increase the number of fixings applied to the glazing bead, i.e. reduce the centres between fixings, however, in all instances the distance between fixings must not be increased.

13.3.3.1.3 Glass Type

The SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design has been tested with the following glass.

Manufacturer	Description	Thickness	Test Evidence
Fireglass UK	DGU consisting of: 6.8 (t) Low E laminated glass, 8 (t) spacer, 12 (t) Pyrobelite 12	26.8mm Overall	WF432578 and WYC432787

The spacer tested within the DGU must be constructed from the same material as tested.

As defined within BS EN 15269-3, it is not possible to include finishes on the face of the glass in accordance with rule E.1.33 unless they have been tested with them present.

13.3.3.1.4 Aperture Dimensions

The below detailed dimensions are the maximum permitted for the glazing system, these have been defined based on the test evidence contained within section 3 as well as the following rules from BS EN 15269-3 and BS EN 15269-20:

BS EN 15269-3: E.1.7, E.1.8.

BS EN 15269-20: F.1.7, F.1.8 & F.1.9.

Glass & Glazing System Specification	Maximum Assessed Area (m^2), Height & Width (m) of any individual aperture.	
Glass Type Manufacturer	**System & Manufacturer →**	Sealed Tight Solutions Ltd
		STS 104 STS 302 Liner
	Fire & Smoke Test Reference	WF432578 and WYC432787
DGU consisting of: 6.8 (t) Low E laminated glass, 8 (t) spacer, 12 (t) Pyrobelite 12	WF432578 and WYC432787	**Landscape:** Area 0.60 Height: 0.650 Width:0.932

The following rationale has been used to provide the scope given in the table above.

Clause 13.3.3.2.3 of BS EN 1634-1: 2014+A1: 2018 stipulates that the rules for variation to side and transom panel arrangements are the same as those applied generally to hinged doorsets. Therefore, in accordance with clause 13.3.3.2.1 "*Unlimited reductions from the tested specimen are permitted with the exception of insulated metal doors where the size reduction is limited.*" The reduction of the tested and detailed maximum dimensions are permitted.

The reduction in size is covered by rule E.1.3 of BS EN 15269-20 for ambient temperature smoke control and as the maximum permitted dimensions defined above are equal to or less than those included within WYC432787 the above dimensions are permitted and reduction is allowed.

13.4 Pyroplex

Based on the testing conducted as summarised within section 3, specifically WF534710 and WYC534820-03/Test 2, the following sections detail the permitted scope of application for the Pyroplex based glazing arrangement.

13.4.1 Permitted Configurations of Doorsets Incorporating Fanlights and / or Sidelights

Based on the testing conducted as summarised within section 3, specifically WF534710 and WYC534820-03/Test 2, the following configurations are permitted providing:

- The maximum overall assembly size as tested is not exceeded in accordance with Annex C, C.2.3 of BS EN 15269-3.
- The overall combined height of the fanlight element must not exceed the maximum dimension tested.
- The maximum permitted dimensions for glass and glazing system combinations in the following sections must not be exceeded.

Rules D.1.1 and Annex B, Table B.1 of BS EN 15269-3 and rule E.1.1 and Annex B, Table B.2 of BS EN 15269-20 have been used to establish the permitted configurations provided. Due to the requirement to maintain both fire resistance and ambient temperature smoke control functions the scope provided has been limited to the lowest common performance.

The maximum overall doorset size including outer framing of the associated fanlight and sidelight assembly must be no greater than: **2744mm high x 1000mm wide.**

The maximum overall height of the fanlight elements must not exceed **500mm high.**

Permitted configurations

Note: The configurations above are drawn such that the apex (the vertex angle) of the triangle points to the closing edge of the leaf.

13.4.2 Fanlight Frame

Based on the testing for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design the permitted fanlight arrangement must be contained within a modular frame as tested. The following sections detail the requirements based on the testing undertaken.

13.4.2.1 Frame Requirements

Timber based frames for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family must be constructed to meet the following specification based on the test evidence.

Material	Minimum Section Size (mm)	Min. Density (kg/m^3)
Solid Hardwood	80 (w) x 47 (t) with a 15 (h) x 49 (w) rebate to form an integral bead	739

In accordance with rule B.2.6 of EN 15269-3 and EN 15269-20 it is possible to change from the tested Hardwood to alternative solid timber providing the timber has a density equal to or greater than $739kg/m^3$.

It is possible to increase the cross-sectional dimensions of the timber frame in line with rule 13.2.2.1 of BS EN 1634-1: 2014+A1: 2018, providing the rebate depth is maintained as required for smoke control performance under rule B.2.1 of BS EN 15269-20:2020.

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 mortice and tenon jointed as tested with no gaps. Joints require mechanical fixing with 2No. 80mm long x 5.0mm diameter screws.

13.4.2.2 Fixing Arrangements

The framing for the permitted sidelights and/or fanlights defined herein must be fixed to adjacent frames in the following manner on the basis of WF534710 and WYC534820-03/Test 2.

Element	Fixing Arrangement
Fanlight	1No. screw fitted behind the first seal, 1No. fitted through stop 1No. fitted through fanlight bottom underneath glass. 50mm long x 5.0mm diameter fitted 100mm from edges and at 260mm centres.

13.4.3 Glazing System

13.4.3.1 Pyroplex 30049

The below detailed glazing system has been tested within all of the referenced tests contained within section 13.4.

13.4.3.1.1 Glazing System

The glazing system as tested is permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design. Permitted modifications to the tested arrangement are provided where applicable.

Glazing Seal	
Manufacturer	Pyroplex
Reference	30049
Material	Graphite intumescent
Overall Size	14.2mm (w) x 6.4mm (t)
Fixing Method	Self-adhesive
Location	Between the face of the glass and the bead on both sides of the glass.

When utilising this glazing system, the above detailed glazing seal and glazing liner must be utilised, and no modifications are permitted.

13.4.3.1.2 Glazing Bead and Fixity

The glazing bead and fixing method as defined herein is to be utilised when using the glazing system as defined within section 13.4.3.1.1.

Permitted modifications to the tested arrangement are provided, where applicable.

Glazing Bead	
Material	Hardwood with Minimum Density of 739kg/m^3
Overall Size	15mm (h) x 15mm (d) with a 9 degree splay
Fixing Method	Pinned.
Fixing Frequency	50mm from corners, not greater than 150mm centres at 30 degrees to the face of the glass.
Bead Fixings – Pins	
Material	Steel
Overall Size	16swg x 40mm (l) panel pins

Based on rules E.1.17, E.1.19, E.1.20 and E.1.21 of BS EN 15269-3 and F.1.11, F.1.12, F.1.16, F.1.17 of BS EN 15269-20 the following modifications may be made to the above tested glazing bead and its associated fixing arrangement:

- The timber used to create the glazing bead may be substituted for an alternative Hardwood with equal or greater density than 739kg/m^3
- The geometry of the glazing bead may be modified providing the cross-sectional area remains ≥ than tested **(207.18mm^2).** The depth of the glazing bead must be adjusted to suit the thickness of the glass included within the aperture such that the bolection finishes abutting the face of the leaf.
- The glazing bead must be pinned in position as defined above, however, it is permitted to apply screw fixings in place of the pins if desired.
- It is possible to increase the number of fixings applied to the glazing bead, i.e. reduce the centres between fixings, however, in all instances the distance between fixings must not be increased.

13.4.3.1.3 Glass Type

The SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design has been tested with the following glass.

Manufacturer	Description	Thickness	Test Evidence
Fire Glass UK	DGU consisting of: 6.8 (t) laminated glass, 7.5 (t) steel spacer, 7 (t) Pyrobelite 7	21.4mm Overall	WF534710 and WYC534820-03/Test 2

The spacer tested within the DGU must be constructed from the same material as tested.

As defined within BS EN 15269-3, it is not possible to include finishes on the face of the glass in accordance with rule E.1.33 unless they have been tested with them present.

13.4.3.1.4 Aperture Dimensions

The below detailed dimensions are the maximum permitted for the glazing system, these have been defined based on the test evidence contained within section 3 as well as the following rules from BS EN 15269-3 and BS EN 15269-20:

BS EN 15269-3: E.1.7, E.1.8.

BS EN 15269-20: F.1.7, F.1.8 & F.1.9.

Glass & Glazing System Specification	Maximum Assessed Area (m^2), Height & Width (m) of any individual aperture.	
Glass Type Manufacturer	**System & Manufacturer →**	Pyroplex
		30049
	Fire & Smoke Test Reference	WF534710 and WYC534820-03/Test 2
DGU consisting of: 6.8 (t) laminated glass, 7.5 (t) steel spacer, 7 (t) Pyrobelite 7	WF534710 and WYC534820-03/Test 2	**Landscape:** Area 0.40 Height: 0.436 Width:0.936

The following rationale has been used to provide the scope given in the table above.

Clause 13.3.3.2.3 of BS EN 1634-1: 2014+A1: 2018 stipulates that the rules for variation to side and transom panel arrangements are the same as those applied generally to hinged doorsets. Therefore, in accordance with clause 13.3.3.2.1 "*Unlimited reductions from the tested specimen are permitted with the exception of insulated metal doors where the size reduction is limited.*" The reduction of the tested and detailed maximum dimensions are permitted.

The reduction in size is covered by rule E.1.3 of BS EN 15269-20 for ambient temperature smoke control and as the maximum permitted dimensions defined above are equal to or less than those included within WYC534820-03/Test 2 the above dimensions are permitted and reduction is allowed.

14 Tested Hardware

The following hardware has been successfully incorporated in the tests on the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family design and is approved for use with the application extended utilising the rules within BS EN 15269-3 and BS EN 15269-20.

The following sections identify the permitted items of hardware and specific considerations related to the item of hardware are given 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).

14.1 Hinges

The following tabulated hinges are permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC 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 and C.1.16 of BS EN 15269-20: 2020:

- 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 and C.1.17 of BS EN 15269-20: 2020:

- 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.

Manufacturer & Product Reference	Materials & Dimensions	Fixings	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Eurospec HIN1433P/R Grade 13 Concealed Bearing Butt Hinge	Steel Blade Dimensions: 102mm (h) x 31mm (w) x 3mm (t) Knuckle Dimensions: Ø14mm x 106mm (h)	4No. Ø4.2mm x 32mm (l) steel wood screws per blade into frame and leaf respectively.	1mm (t), Interdens applied under each blade	WF432578 A (Opening in) WF432578 B (Opening out)	WYC432787
Hoppe Arrone AR8180	Steel Blade Dimensions: 102mm (h) x 30mm (w) x 3mm (t) Knuckle Dimensions: Ø14mm x 106mm (h)	4No. Ø4.6mm x 31mm (l) steel wood screws per blade into frame and leaf respectively.	1mm (t), Graphite (as tested) applied under each blade	WF534710 B (Opening in) WF534710 A (Opening out)	WYC534820-03/Test 2
UAP IH-HINGE-SS201-FIRE-RADIUS-PSS	Stainless Steel Blade Dimensions: 101mm (h) x 30mm (w) x 3mm (t) Knuckle Dimensions: Ø14mm x 107mm (h)	4No. Ø4.5mm x 30mm (l) steel wood screws per blade into frame and leaf respectively.	1mm (t), Exitex self-adhesive hinge pads applied under each blade	WF538328 B (Opening in) WF538328 A (Opening out)	WYC538563/01/Test 2

Manufacturer & Product Reference	Materials & Dimensions	Fixings	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Rutland RH.DBSH.34 Dog bolt	Stainless Steel Blade Dimensions: 102mm (h) x 30mm (w) x 2.7mm (t) Knuckle Dimensions: Ø14mm x 107mm (h)	4No. Ø5mm x 30mm (l) steel wood screws per blade into frame and leaf respectively.	0.8mm (t), Graphite Intumescent PAD, Ref. IP.HP43.SQ applied under each blade	WF529859 B (Opening in) WF529859 A (Opening out)	WYC52483
Rutland RH.BB.43R.SS	Stainless Steel Blade Dimensions: 102mm (h) x 30mm (w) x 3mm (t) Knuckle Dimensions: Ø14.5mm	4No. Ø4mm x 30mm (l) steel wood screws per blade into frame and leaf respectively.	1mm (t) Rutland hinge packer applied under each blade	987AR1	WYC429040

14.1.1 Number of Hinges

The door leaf must be fitted with the minimum number of hinges as tested and detailed in Section 14.1.2, which must meet the positioning requirements outlined in section 14.1.2 as required by BS EN 15269-3: 2022.

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 and because the smoke sealing system is not interrupted by the hinges (rule C.1.20 in BS EN 15269-20: 2020).

14.1.2 Hinge Positioning

It is possible to vary the hinge positioning for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family within the following parameters:

Option 1 – Minimum 3 Hinges

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 230mm and no closer than 100mm from the bottom of the leaf (measured to the bottom of the hinge).
3. The intermediate hinges must be positioned as follows:
    a. The intermediate hinge was tested at 809mm from the bottom of the top hinge and the top of the bottom hinge to the centre of the intermediate hinge. The distance of 809mm between the intermediate hinge and the top and bottom hinge may be reduced. Increases in this distance are not permitted.
4. Additional hinges may be applied providing the distance between the mandatory hinges remain within the above defined tolerances.

Option 2 – Minimum 4 Hinges

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 175 and no closer than 100mm from the bottom of the leaf (measured to the bottom of the hinge).
3. The intermediate hinges must be positioned as follows:
    a. Top intermediate hinge, positioned 200mm from the bottom of the top hinge and top of the intermediate hinge.
    b. Bottom intermediate hinge, positioned 200mm from the top of the bottom hinge and bottom of the intermediate hinge.
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.

The above detailed specification has also been limited in accordance with the rules given within EN 15269-20: 2020 for ambient temperature smoke control performance: C.1.29 & C.1.30. which inhibits the movement of the hinge to ±300mm from the tested dimension specifically for the intermediate hinges.

14.2 Door Closer

The SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC design has been tested with various types of self-closing devices. Due to the differing method of installation and associated rules within the Extended Field of Application standard the door closers have been divided into two separate sections. In all instances, one of the following door closers must be fitted to ensure the performance characteristics of the doorset design.

14.2.1 Face Fixed Door Closers

The following tabulated face fixed door closers are permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC design based on the testing identified within section 3.

Manufacturer & Product Reference	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Rutland TS9205	None Required	WF432578 Doorset A (Opening In) & WF432578 Doorset B (Opening Out)	WYC432787
Rutland TS11204	None Required	WF534710 Doorset A (Opening In) & WF4534710 Doorset B (Opening Out)	WYC534820-03/Test 2
Rutland TS11205	None Required	WF529859 Doorset A (Opening Out) & WF529859 Doorset B (Opening In)	WYC524839/AR1/test2

When applied the above detailed face fixed door closers' body must be fixed to the face of the leaf with the closer arm fixed to the frame as tested, alternative arrangements are not permitted in accordance with C.8.4.2 of BS EN 15269-3: 2022 and C.1.35 of BS EN 15269-20: 2020.

The above identified face fixed closers may be fitted to either the push face or pull face of doorsets which do not include glazed apertures, however, may only be applied to the pull face of doorsets which include glazing within the leaf in accordance with C.8.4.1 of BS EN 15269-3: 2022 and C.1.31 of BS EN 15269-20: 2020.

14.3 Door Signage & Protective Elements

Door signage & protective elements have been considered based on the evidence provided and summarised within section 3 in conjunction with the associated rules from BS EN 15269-3: 2022 and BS EN 15269-20: 2020.

14.3.1 Tested Signage & Protective Elements:

The following tabulated signage is permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design based on the testing identified within section 3.

Manufacturer & Product Reference	Materials	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Yale Swis721BT	Zinc	WF432578	WYC432787/test2
Rutland RH.DNSA Self-adhesive Door Numerals and Letters	Aluminium	WF534710	WYC534820-03/Test 2
UAP 3" Nanocoast Number 6 Self-Adhesive Door Number	Satin Stainless Steel	WF538328	WYC538563/01/Test 2

In accordance with rule C.28.4 of BS EN 15269-3: 2022 and C.1.44 of BS EN 15269-20: 2020 it is possible to reposition the above tested signage, providing it is applied to the leaf face and not the leaf edges.

In accordance with rule C.28.2 of BS EN 15269-3: 2022 and C.1.45 of BS EN 15269-20: 2020 it is possible to remove the above detailed tested signage from the doorset design.

14.3.2 Alternative Signage and Protective Elements:

Screw Fixed:

It is possible to add un-recessed and screw fixed horizontally and / or vertically orientated protective plates and / or signs to one or both faces of the leaf within the doorset design providing:

- The horizontally orientated protective plate is no greater than 500mm high.
- The vertically orientated protective plate is no greater than 200mm wide.
- Signs applied to the door leaf face are permitted providing their dimensions are within those permitted for protective plates given above.
- The maximum area covered by the plates and / or signage applied to the leaf face is less than 40% of the clear opening or no greater than $1m^2$.
- Plate and sign thickness must not be greater than 2mm.
- The fixings applied to the plates or signs may be no longer than 25mm and must be applied at a minimum of 200mm centres at the perimeter of the plate or sign.
- Plates or signage must be affixed to the leaf face and must not interfere with the sealing arrangement at the leaf perimeter (under the stop).

Adhesive Fixed:

It is possible to add un-recessed and adhesive fixed horizontally and / or vertically orientated protective plates and / or signs to one or both faces of the leaf within the doorset design providing:

- Protective plates may be applied to the full height and width of the leaf. The maximum area covered by the plates and / or signage applied to the leaf face is less than 40% of the clear opening.
- Signs applied to the door leaf face are permitted providing their dimensions are within those permitted for protective plates given above.
- Plate and sign thickness must not be greater than 2mm.
- Plates or signage must be affixed to the leaf face and must not interfere with the sealing arrangement at the leaf perimeter (under the stop).

In all instances signs must not be positioned on the leaf edges. (C.28.4 of BS EN 15269-3: 2022)

The following series of rules from BS EN 15269-3: 2022 have been used to consider the possible extended scope of application for door signs: C.28 & C.14.

The following series of rules from BS EN 15269-20: 2020 have been used to consider the possible extended scope of application for door signs: A.5.14 & C.1.44.

14.4 Lockset / Latch

The following tabulated locksets are permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC design based on the testing identified within section 3.

The locksets 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.

Alternative lock / latches are not permitted, and the permitted locksets must also include the tested intumescent gaskets as described.

The following series of rules from BS EN 15269-3: 2022 have been used to consider the possible extended scope of application for alternative lock / latches: C.1. This is supported for ambient smoke control by Rule C.1.1 of BS EN 15269-20: 2020.

The position of the lockset must be such that the centre of the spindle to the bottom of the leaf measures 1031mm ± 200mm, in accordance with Rule C.1.4.2 of EN 15269-3: 2022 and rule C.1.6 of BS EN 15269-20:2020.

In any case a distance of 50mm from the edge of the forend and the edge of the leaf shall be maintained.

Manufacturer & Product Reference	Materials & Dimensions (mm)	Fixings	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Winkhaus AV2-E	Forend: Steel 1770 (h) x 20 (w) x 3 (t) Lock Case: Steel 185 (h) x 15 (t) x 63 (w) Latch Bolt: Steel 28 (h) x 10 (w) x 10 (Projection) Lock Bolt: Steel 30 (h) x 6 (w) x 20 (Projection) Top and Bottom Lock Cases: Steel 113 (h) x 15 (t) x 44 (w) Top and Bottom Lock Bolts: Steel 25 (h) x 10 (w) x 30 (Projection)	Lock Forend 9No. Ø3.8 x 29mm Keeps Top and bottom: 4No. Ø3.8 x 29mm Centre Strike plate and keep: 3No. Ø3.8 x 29mm	Lockcases: 1mm (t) Pyroplex Graphite applied to all edges of the top, mid and bottom lockcase cut outs. Top and bottom strike plate and keep: 1mm (t) Pyroplex Graphite Centre Strike plate and keep: 4 layers of 1mm (t) Pyroplex Graphite	WF534710 B (Opening in) WF534710 A (Opening out)	WYC534820-03/TEST 2-03

Manufacturer & Product Reference	Materials & Dimensions (mm)	Fixings	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Winkhaus AV-2	Forend: Steel 1770 (h) x 20 (w) x 3 (t) Lock Case: Steel 185 (h) x 15 (t) x 63 (w) Latch Bolt: Steel 28 (h) x 10 (w) x 10 (Projection) Lock Bolt: Steel 30 (h) x 6 (w) x 20 (Projection) Top and Bottom Lock Cases: Steel 113 (h) x 15 (t) x 44 (w) Top and Bottom Lock Bolts: Steel 25 (h) x 10 (w) x 30 (Projection)	Lock Forend 9No. Ø3.8 x 29mm Keeps Top and bottom: 4No. Ø3.8 x 29mm Centre Strike plate and keep: 3No. Ø3.8 x 29mm	Lockcases: 1mm (t) Pyroplex Graphite applied to all edges of the top, mid and bottom lockcase cut outs. Top and bottom strike plate and keep: 1mm (t) Pyroplex Graphite Centre Strike plate and keep: 4 layers of 1mm (t) Pyroplex Graphite	Permitted based on rule C.1.3.1 of BS EN 15269-3: 2022	Permitted based on rule C.1.1 of BS EN 15269-20: 2020

Manufacturer & Product Reference	Materials & Dimensions (mm)	Fixings	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Fullex Crimebeater CRB-45-BT-1720-20	Forend: Zinc and clear passivated mild steel 1720 (h) x 20 (w) x 2.5 (t) Lock Case: Zinc and clear passivated mild steel 227 (h) x 17 (t) x 57.5 (w) Latch Bolt: Chrome plated Mazac 23 (h) x 10 (w) x 9.5 (Projection) Lock Bolt: CZ122 brass stamping 30 (h) x 6 (w) x 12 (Single Projection) Top and Bottom Lock Cases: Zinc and clear passivated mild steel 135 (h) x 14 (t) x 42.5 (w) Top and Bottom Lock Bolts: Chrome plated A3 hardened Steel 30 (h) x 6 (w) x 21 (Projection)	Lock Forend 11No. Ø4.0 x 50mm Keeps Top and bottom: 4No. Ø3.5 x 30mm Centre Strike plate and keep: 3No. Ø3.5 x 30mm	Intumescent Kit Exitex Fullex CRB220 Pro Lock Kit, to all lockcases and forend plate.	WF538328 B (Opening In) WF538328 A (Opening out)	WYC538563/01/Test 2

Manufacturer & Product Reference	Materials & Dimensions (mm)	Fixings	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Yale Lockmaster Autoengage	Forend: Stainless Steel Dimension: 1770(h) x 20(w)x 2.5(t) Lock Case: Galvanised mild steel 210(h) x 15.5(w) x 62.5(d) Latch Bolt: Stainless Steel 30(h)x10(w)x12.7(projection) Lock Bolt: Zinc Alloy Casting / Austenitic 304 Stainless Steel 31.5(h)x6(w)x20(projection) Top and Bottom Lock Cases: Stainless Steel Top and Bottom Lock Bolts: Stainless Steel 30(h) x 20 (Projection) + hooks	Lock Forend Wood Screws (No details) Keeps Top and bottom: Wood Screws (No details) Centre Strike plate and keep: Wood Screws (No details)	1mm Interdens wrapped around the lock bodies/keep boxes and under the keep forend and strike plates	WF432578 A (Opening In) WF432578 B (Opening out)	WYC432787

Manufacturer & Product Reference	Materials & Dimensions (mm)	Fixings	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Rutland RMP3.1720.45	Forend: Steel Dimension: 1720(h) x 20(w) x 3(t) Lock Case: Steel 183.5(h) x 20(w) x 65(d) Latch Bolt: Brushed Stainless Steel 30(h) x9(w) x 10(projection) Lock Bolt: Steel 30(h) x 6(w) x 15 (single projection) Top and Bottom Lock Cases: Steel 113 (h) x 20 (t) x 40 (w) Top and Bottom Lock Bolts: Steel 34(h) x 8(w) x 23.5 (Projection)	Lock Forend 4No. Ø4.0 x 40mm Wood screws Keeps Top and bottom: 3No. Ø3.5 x 30mm Centre Strike plate and keep: 4No. Ø3.5 x 30mm	IP.RMP3 graphite intumescent kit – encasing all lock cases, all rear surfaces of the keep forend, strikes and backbox	WF529859 A (Opening In) WF529859 B (Opening out)	WYC524839/AR1/test2

14.5 Lock Cylinders

The following tested lock cylinders are permitted with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC Product Range design:

Manufacturer & Product Reference	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Access 2 Tigris Premier 3	WF428987 AR1	WYC429040
ARC Pro-Tec	WF529859	WYC524839/AR1/test2
Hoppe Arrone AR-KD-5130-BB-NP 35/35	WF544878 Doorset B Opening In	WYC545080/Test 2
UAP Kinetica 3*	WF538328	WYC538563/01/Test 2
UAP Kinetica KM561977	CFR2110131 & CFR2205181	WYC509193 TEST 1
Vier V5EP70CTSCE	WF544880 Opening In	WYC545081/Test 2
Yale Platinum 3*	WF432578	WYC432787

14.5.1 Alternative Manufacturer

Alternative cylinders of the same or smaller dimensions of the above detailed cylinders are permitted providing the alternative cylinder is metal with a melting point of greater than or equal to 800 degrees Celsius the shape of the alternative cylinder shall not prevent the correct operation of the doorset in accordance with C.23.3 of EN 15269-3: 2022 & the alternative cylinder must have been tested to EN 1303 in accordance with rule C.1.57 of EN 15269-20: 2020.

14.5.2 Cylinder Configuration

It is permitted to exchange a double cylinder for a single cylinder or cylinder and thumb-turn/knob or omit the cylinder completely without additional test evidence providing the melting point is higher than the cylinder originally tested and no further cut outs in the door leaf are required in accordance with rule C.23.3.3 of EN 15269-3: 2022 the alternative cylinder must have been tested to EN 1303 in accordance with rule C.1.57 of EN 15269-20: 2020.

14.6 Letter Plates

The following tabulated letterplates are permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC design based on the testing identified within section 3.

Manufacturer & Product Reference	Materials & Dimensions (mm)	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
UAP Soterian FD30 Timber Slim	Body: Aluminium Faceplate (Internal): Aluminium Faceplate (External): Steel Cut out: 259mm (w) x 49.5mm (h)	Integral and supplied with the letterplate. Consisting of 2mm (t) graphite.	CFR2110131 (Opening in) CFR2205181 (Opening out)	WYC509193 test 1
Rutland RLP.EXT & RLP.INT	Aluminium Body and Faceplate.	IP.RLP – Intumescent kit 30/60 mins for RLP letterplate	WF529859	WYC524839/AR1/ TEST2
Lorient RJ008	Body: Aluminium Cut out: 259mm (w) x 53mm (h)	Lorient Polyproducts Ltd. Intumescent lining	WF428987 AR1	WYC429040

According to rule C.18.4 of BS EN 15269-3: 2022 it is only possible to move the letter plate to an alternative position which have been demonstrated by test evidence, therefore based on the evidence contained within section 3 the letterplate aperture must be positioned:

- Between 400 and 950mm from the bottom edge of the leaf to the centre of the aperture
- 115.5mm from the vertical edges of the leaf to the edge of the aperture

It is possible to omit the letterplate in accordance with rule C.18.2 of EN 15269-3: 2022 and rule C.1.55 of BS EN 15269-20: 2020.

14.7 Eye Viewers

The following tabulated viewers are permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC Product Range design based on the testing identified within section 3.

Manufacturer & Product Reference	Materials & Dimensions	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Rutland HA12338	Body: Brass Ø14	1mm (t) graphite type intumescent.	WF428987	WYC429040
Rutland RH. DV	Body: Brass Ø14	Tubular 1mm (t) graphite type intumescent.	WF529859	WYC524839/AR1/test2
Sealed Tight Solutions 4008	Body: Brass Ø14	1mm (t) graphite type intumescent.	WF4426419	WYC426329
UAP SWALFCH-FR	Body: Brass Ø14	UAP – Supplied sheet rolled into tube	WF538328	WYC538563-01/Test 2
Yale DH000768	Body: Zinc Ø13.7	0.5mm graphite wrapped around body	WF432578	WYC432787

In addition to the tabulated viewers to rule C.15.1 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 equal or greater than 800 degrees Celsius. It is also permitted to fit an eye viewer to a door according to rule C.1.40 in BS EN 15269-20: 2020 providing the body is 15mm or less and properly sealed.

Up to a maximum of 3No. viewers may be applied within any individual leaf in accordance with rule C.15.1.2.

The tested constructions included viewers positioned 1300 and 1800mm from the bottom of the door leaf, **67.5mm** from the adjacent glazed apertures. The viewers as tabulated above may be positioned at these locations as tested.

Otherwise, the above tabulated viewers or alternatives may be repositioned within the leaf providing a minimum distance of **100mm** is maintained between the cut out and any door leaf edges or apertures within the leaf as defined within C.15.4.1 of BS EN 15269-3.

It is possible to remove the tested viewer from the doorset design in accordance with rule C.15.2.1. In accordance with rule C.1.41 of EN 15269-20: 2020 it is also possible remove the tested viewer from the doorset design. It is therefore permitted to remove the tested viewer from the door leaf.

14.8 Handles & Escutcheons

The following tabulated handles are permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC Product Range design based on the testing identified within section 3.

Manufacturer & Product Reference	Materials & Dimensions (mm)	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
ERA Fab & Fix Heritage Euro Cylinder Pull	Zinc 83 (h) x 51.5 (w) x 25 (d)	WF4426419 (Opening in)	WYC426329
Hoppe Arrone AR200/27-SAA (Cylinder Escutcheon)	Aluminium cover with plastic body Plastic body: Ø50 x 6 (h) Aluminium Cover: Ø52 x 9 (h)	WF544878 (Opening in)	WYC545080
Hoppe Paris 138S/42K	Aluminium 74 (h) including rose) x 143 (w) x 19 (t) x 65 (projection)	WF544878 (Opening in)	WYC545080
Rutland RH.RLB	Stainless Steel 240 (h) x 29 (w) x 13 (d)	WF529859	WYC524839/AR1/test2
UAP Nanocoast 243	243 (h) x30 (w) x 12(d)	WF538328	WYC538563-01/Test 2
Salto XS4 One	Steel 285 (h) x 50 (w) x 90 (d)	WF534710	WYC534820-03/Test 2
Yale 0757-2003-CH-CH	Steel 240 (h) x 35 (w)	WF432578	WYC432787
Zoo ZCS2040	Stainless Steel Rose: Ø52 x 8(t) Handle: Ø19 x 122.5(l) x 67.5	WF544880	WYC545081/Test 2
Zoo ZCS2001	Stainless Steel Ø52 x 8(t)	WF544880	WYC545081/Test 2

In accordance with rule C.5.3 of BS EN 15269-3: 2022 and C.1.12 of BS EN 15269-20: 2020, alternative handles meeting the following specification are permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design:

- Faced fixed handles, screw fixed to the leaf or bolts passing through to the other face (as tested).
- Constructed from one of the following options:
  - Stainless Steel
  - a non-combustible material
  - a material with a higher melting point than the tested lever handles as detailed above.
- Any spindle holes or fixing holes shall be no larger than those tested originally.

14.9 Knockers

The following tabulated knockers are permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC Product Range design based on the testing identified within section 3.

Manufacturer & Product Reference	Materials & Dimensions (mm)	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
UAP Victorian	Aluminium 168(h) x 71(w) x 14 (projection)	WF543970 (Opening in) WF543972 (Opening out)	WYC544190/03
Rutland RH.DK Door Knocker Urn style	Aluminium 80(h) x 65(w) x 20(t)	WF534710	WYC534820-03/TEST 2
UAP 6 Inch Victorian Urn Hidden Fix Door Knocker	Stainless Steel 11 (h) x 72(w) x 14 (projection)	CFR2110131 (Opening in) CFR2205181 (Opening out)	WYC509193 Test 1
Yale 0716-2001-Contemporary-Knocker -No-Spyhole	Stainless Steel 117 (h) x 55 (w) x 14 (t)	WF432578	WYC432787

In accordance with rule C.26.1, C.26.3 & C.26.5 of BS EN 15269-3: 2022, alternative knockers are not permitted to be applied to the doorset design.

In accordance with rule C.26.2 of BS EN 15269-3: 2022 and rule C.1.46 of BS EN 15269-20: 2020 it is possible to remove the tested knocker from the doorset design.

In accordance with rule C.26.4 of BS EN 15269-3: 2022 it is possible to reposition the knocker to a position lower than that tested and no closer than 100mm to the edge of the door leaf, i.e. if the knocker is positioned below 1484mm. This is supported for smoke control by use of rule C.1.44 within BS EN 15269-20.

14.10 Security Chains

The following tabulated security chains are permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC Product Range design based on the testing identified within section 3.

Manufacturer & Product Reference	Materials & Dimensions (mm)	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Rutland RH.SC	Steel Frame Plate: 61(h) x 14(w) x 3(t) Leaf Plate: 39(h) x 41(w) x 3(t)	WF529859	WYC524839/AR1/test2
UAP Narrow Door Chain	Steel Frame Component: 61(h) x 13(w) x 12(d) x 3.2(t) Leaf Component: 39(h) x 41(w) x 35(d) x 3(t)	CFR2110131 (Opening in) CFR2205181 (Opening out)	WYC509193 Test 1
UAP DCCHN-TS003	Steel Frame Plate: 38(h) x 47(w) x 2.8(t) Leaf Plate: 65(h) x 13(w) x 12(projection)	WF538328 Doorset A (Opening out)	WYC538563-01/Test 2
Yale B-WS6-20-SC	Brass Frame Plate: 57(h) x 13(w) Leaf Plate: 48(h) x 38(w)	WF432578	WYC432787

In accordance with rule C.19.1.1, C.19.3.1 and C.19.5.1 of BS EN 15269-3: 2022 and C.1.44 of BS EN 15269-20: 2020, it is possible to add face fixed security chains and therefore alternative to those above are permitted providing they are face fixed items.

In accordance with rule C.19.1.2 of BS EN 15269-3: 2022 and C.1.45 of BS EN 15269-20: 2020, it is possible remove the tested face fixed security chain above.

Repositioning of the face fixed security chains is permitted without limitation in accordance with rule C.19.4 of BS EN 15269-3: 2022 and C.1.44 of BS EN 15269-20: 2020.

14.11 Threshold Sealing Arrangements

14.11.1 Drop Seal

The SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC Product Range design has been tested with the following drop seals which may therefore be applied (C.27.2).

Manufacturer	Product	Construction	Test Reports	Intumescent Protection	Maximum Permitted Threshold Gap (mm)
Harmony	HID1135	Aluminium body with Silicone seals and Stainless Steel face plates Body size 35mm high x 14mm wide, face plate 60mm high x 22mm wide	WF544878 & WYC545080	None	6.5
Sealmaster	DRP2712E	Aluminium body with Silicone seals and Stainless Steel face plates Body size 27mm high x 12mm wide, face plate 28mm high x 22mm wide	WF544880 & WYC545081/Test 2	No Intumescent Protection	6.0

Manufacturer	Product	Construction	Test Reports	Intumescent Protection	Maximum Permitted Threshold Gap (mm)
Sealed Tight Solutions	STS 422 when used with Exitex RITB MXS 15/2 Aluminium extrusion sealed to floor level with Mann McGowan Pyromas A 6mm bead.	Aluminium body and neoprene seal. Body size 20mm high x 12mm wide	WF428987 & WYC429040/AR1/Test2	No Intumescent Protection	3.96
	STS 422 when used with Sealed Tight Solutions STH004 Aluminium Threshold	Aluminium body and neoprene seal. Body size 20mm high x 12mm wide	WF426419 & WYC426329/b	Sealed Tight Solutions 1mm thick graphite lining all sides of the rebate	7.4
	STS 422GT when used with Stormguard Macclex Aluminium Threshold	Aluminium body and neoprene seal fixed to the face plates Body size 35mm high x 14mm wide	WF432578 & WYC432787	No Intumescent Protection	4.5

Note:

The above detailed drop seals when fitted must be applied in the bottom edge of the door leaf, centrally within the leaf thickness as tested.

Alternative drop down seals are not permitted in accordance with rule C.27.3 of BS EN 15269-3: 2022

14.11.2 Aluminium Threshold Bar

The following tabulated aluminium threshold bars are permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC Product Range design based on the testing identified within section 3.

Manufacturer & Product Reference	Materials & Dimensions (mm)	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence	Maximum Permitted Threshold Gap (mm)
Exitex MXS/15/2 RITB	Aluminium 47(d) x 15(w)	1mm Norseal Firewizard under threshold.	CFR2110131 (Opening In) CFR2205181 (Opening out)	WYC509193 Test 1	3.5
Exitex MXS 15-70	Aluminium 70(d) x 15(h)	1mm Norseal Firewizard under threshold. 1No. 15mm x 4mm Exitex 15x4 Fire Only Intumescent seal must be fitted centrally in the bottom edge of the leaf.	WF538328 Doorset B (Opening in) WF538328 Doorset A (Opening out)	WYC538563-01/Test 2	5.5

Manufacturer & Product Reference	Materials & Dimensions (mm)	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence	Maximum Permitted Threshold Gap (mm)
Stormguard Macclex Used in conjunction with STS 422GT Drop Seal	Aluminium with thermal break 62(d) x 15(h)	N/a	Refer to table in section 14.11.1		
Exitex RITB MXS 15/2 Aluminium extrusion when used with STS 422 Drop Seal	Aluminium 47 (d) x 9.5 (h)	6mm bead of Mann McGowan Pyromas A applied around the perimeter of the threshold.	Refer to table in section 14.11.1		
Sealed Tight Solutions STH004 Used in conjunction with STS 422 Drop Seal	Aluminium 47(d) x 15(h)	N/a	Refer to table in section 14.11.1		

14.12 Cableloop and Cableways

14.12.1 Cable Loop

The following tabulated cable loops are permitted for use with the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC Product Range design based on the testing identified within section 3.

Manufacturer & Product Reference	Materials & Dimensions (mm)	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Winkhaus STV-E	Cable Tray: Steel Ø8mm Cable Frame Cable Tray Cut Out Size: 58(h) x 15(w) x 3(t) Leaf Cable Tray Cut Out Size: 380(h) x 15(w) x 3(t)	1mm Pyroplex Graphite lining the cable tray in the leaf and frame.	WF534710	WYC534820-03/Test 2

In accordance with rule C.24.3, alternative cable loops are not permitted to be applied to the doorset design.

In accordance with rule C.24.2 of BS EN 15269-3: 2022 and rule C.1.39 of BS EN 15269-20: 2020 it is possible to remove the tested cable loop from the doorset design.

In accordance with rule C.24.4 of BS EN 15269-3: 2022 it is possible to reposition the Cableloop to a position lower than that tested. This is supported for smoke control by use of rule C.1.38 within BS EN 15269-20.

14.12.2 Cableway

Cableways within the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC Product Range product family must be constructed to meet the following specification based on the test evidence contained in section 3.

Method	Dimension (mm)	Intumescent Protection	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
Cableway Width of the leaf or linking leaf vertical edges and apertures to the channels around apertures	Ø10 bore	Holes lined 50% with 1mm Pyroplex Graphite	WF534710	WYC534820-03/Test 2
Channel cut around glazing aperture	11 (w) x 12.3(d) channel	1mm Pyroplex Graphite lining the three sides of the channel A bead of Hodgson Sealants SILFIX U9 LMNC Silicone sealant applied to the perimeter of intumescent channel to fix the cable in place.	WF534710	WYC534820-03/Test 2

14.12.2.1 Glazed apertures with cable channels and connecting Ø10mm cableways

The testing undertaken within WF534710 incorporated two glazed apertures with a channel around the upper sections, these channels were connected from one side of the leaf to the other by a Ø10mm cableway .

The maximum height of the Ø10mm cableway from the bottom of the door leaf to the centreline of the bore is 1230mm as tested.

In accordance with rule C.24.4 of BS EN 15269-3: 2022 it is possible to reposition the cableway to a position lower than that tested. This is supported for smoke control by use of rule C.1.38 within BS EN 15269-20.

The following tested dimensions must not be exceeded:

- Minimum Leaf Head to Aperture cut out = 150mm
- Maximum Leaf height 2145mm
- Maximum aperture channel length = 765mm

All elements of the glass, glazing system, glazing beads and fixings must be as tested within WF534710.

14.12.2.2 Single Ø10 Cableway Method

The testing on the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC Product Ranges design, (WF534710) included two glazed apertures within the leaf of each doorset tested.

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 SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC Product Ranges design has been tested with a glazed aperture that was less than 25% of the leaf area:

- Dimension of the tested leaf (930mm x 2145mm = 1.99m^2),
- Total area of the glazed apertures incorporated within the leaf 2 x (240mm x 900mm = 0.432m^2)
- (0.432/1.66) x 100 = 21.70% of the leaf was glazed for the test.

It is therefore permitted to produce unglazed door leaves with a single horizontal Ø10mm cableway, with intumescent lining as stipulated above, based upon the supplied test evidence subject to this evaluation.

The maximum height of the Ø10mm cableway from the bottom of the door leaf to the centreline of the bore is 1230mm as tested.

In accordance with rule C.24.4 of BS EN 15269-3: 2022 it is possible to reposition the cableway to a position lower than that tested. This is supported for smoke control by use of rule C.1.38 within BS EN 15269-20.

14.13 Drip Rail

The SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design has been tested with and without the presence of a drip rail. The following drip rails are therefore optionally permitted:

Product Reference (Test references)	Dimensions	Material
Stormguard Rain Deflector (WF432578 & WYC432797/test2)	32 (h) x 20 (d)	Aluminium

14.14 Doorbell

The SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design has been tested with and without the presence of the below detailed doorbell. The following doorbells are therefore optionally permitted:

Product Reference (Test references)	Dimensions	Material
Ring, Doorbell 4 (2023) (WF534710 & WYC534820-03/Test 2)	125mm high x 62mm wide x 25mm thick	Various plastics and metals

Rule C.26 of BS EN 15269-3 does not allow for the application of doorbells on doorsets which do not achieve EI performance. Therefore, alternatives are not permitted.

When applied the doorbell must be applied to the face of the leaf as tested.

Rule C.1.44 and C.1.45 of BS EN 15269-20, permits the application and removal of face mounted elements being applied to the leaf frame, supporting the doorbells use for ambient temperature smoke control.

15 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 2.5mm
Leaf/frame edge gaps hinge side	Maximum of 3.0mm
Leaf/frame edge gaps head	Maximum of 3.5mm
Threshold	Refer to section 14.11 for specific gap dimensions relative to the sealing arrangement.

The following rules from BS EN 1634-1 and BS EN 15269-3: 2022 have been used to consider the possible extended scope of application for leaf/frame gaps: Section 7.3 in BS EN 1634-1 direct field of application and B.1.1, B.1.2. from BS EN 15269-3: 2022

In conjunction with rule A.4.31 from EN 15269-20: 2020, due to the request of achieving a S_{a4} performance for the doorset design the maximum permitted gap sizes have been limited to the more restrictive scope.

On this basis the gap dimensions permitted have been established based on WYC509193 Test 1.

16 Supporting Construction and Attachment (Technique) of Door Frame

The Falcon Timber Limited, SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design must be mounted in the following supporting constructions and using approved attachment techniques:

16.1 Supporting Construction

The supporting construction in which the doorset was mounted for the summarised fire resistance tests within section 3 of this report consisted of a combination of standard steel stud flexible construction as detailed within Group A of Table 1 EN 1363-1: 2020 with timber inserts facilitating fixings and standard rigid supporting constructions.

Therefore, the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset design may be installed within alternative plasterboard lined flexible constructions of timber or steel studs with a minimum cross section of 50mm (excluding board lining dimensions), which have been tested and classified, and confirmed to achieve an equal or greater fire resistance than the doorset design.

Timber inserts must be present to facilitate fixings within the profile of steel studs.

According to EXAP rules F.1.1 and F.1.2 of BS EN 15269-3: 2022 and G.1.1 of BS EN 15269-20: 2020 the doorset may be hung in a rigid standard supporting construction or a flexible standard supporting construction, with the above limitation relating specifically to flexible constructions.

In all instances the minimum thickness of any supporting construction which the doorset is intended to be installed within must be a minimum of 69mm.

16.2 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 160mm from corners and 600mm centres, centres smaller than 600mm 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.1.11, F.1.13.

16.3 Sealing to Structural Opening

The sealing between the rear of the door frame and the structural opening must be one of the following tested solutions:

Sealing Method	Backing Material	Capping Material	Permitted Gap Range (mm)	Fire Resistance Test Evidence	Ambient Temperature Smoke Control Evidence
1	Rockwool Flexi Mineral Wool Tightly packed filling the void	Mann McGowan Pyromas A Intumescent Acrylic 10mm Depth	6.4-17	WF428987 AR1	WYC545081/Test 2
2	Pyroplex, Fire Rated Expanding Foam	Pyroplex, Intumescent Acrylic Sealant to both faces 10mm Depth	5 – 15.2	WF534710	WYC534820-03/Test 2
3	Rockwool Flexi Mineral Wool Tightly packed filling the void	Pyroplex, Intumescent Acrylic Sealant to both faces 10mm Depth	8 – 15	WF544878	WYC545080/Test 2

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.4.3, F.4.4 & F.4.5.

The following rules from BS EN 15269-20: 2020 have been used to consider the possible extended scope of application for the supporting construction: G.1.15 & G.1.16.

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.

17 Application Range – Product Family

The precise scope and design options for the Falcon Timber Limited, SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC Doorset Range, which provide the boundaries for the product family, are defined within this EXAP document.

18 Fire Performance Parameters

The fire performance parameters for the range of designs covered in this extended field of application report for the Falcon Timber Limited, SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family is tabulated below:

Integrity	
Cotton pad	0 (Zero) 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 Limited, SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC 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.

19 Smoke Control Performance Parameters

The smoke leakage performance for the range of designs covered in this extended field of application report for the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family is based on the ability of the doors to reduce the passage of smoke from one side of the door to the other.

The SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family and the extended scope of application given herein can be considered as capable of limiting the leakage rate (when measured at ambient temperature and at a pressure of up to 25Pa and tested to the requirements of BS EN 1634-3: 2004) to less than $3m^3/h$ per metre length of gap between the fixed and movable components of the doorset (e.g. between the door leaf and door frame), including leakage at the threshold.

The SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC doorset designs detailed in this EXAP report are defined in clause 7.5.5 of BS EN 13501-2 as smoke control doors. Their function is to reduce or eliminate the passage of smoke from one side of the door to the other in respect of the smoke control characteristics given in clause 5 of BS EN 13501-2: 2023.

20 Declaration by the Applicant

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.

We confirm that any changes to a component or element of structure which are the subject of this assessment have not to our knowledge been tested to the standard against which this assessment has been made.

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.

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

Signed: Signed by: 6C3251A35814487...

Name: Josh Clare

Position: Technical Manager

Date: 21-Nov-2025

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

21 Limitations

This extended field of application:

- Does not represent type approval or certification of the product.
- Does not provide an endorsement by Warringtonfire of actual products supplied.
- Has been prepared based on information provided by the Applicant. Warringtonfire has not verified the accuracy or completeness of that information and will not be responsible for any errors or omissions that might be incorporated into this report as a result.
- Any figures included in this report are provided for illustrative purposes only and may not fully reflect the actual scope being assessed. Warringtonfire cannot guarantee the accuracy of the drawings against the scope being assessed. The scope of this report is limited to assessments of the modifications to the tested systems as described in Section 3.
- This report addresses itself solely to the elements and subjects discussed and do not cover any other criteria or modifications. All other details not specifically referred to should remain as tested or assessed.
- This report is issued on the basis of test data and information to hand at the time of issue. If contradictory evidence becomes available to Warringtonfire, the assessment will be unconditionally withdrawn, and the applicant will be notified in writing. Similarly, the assessment should be re-evaluated if the assessed construction is subsequently tested since actual test data is deemed to take precedence.
- This assessment has been carried out in accordance with Fire Test Study Group Resolution No. 82: 2001.
- Opinions and interpretation expressed herein are outside the scope of UKAS accreditation.
- This assessment report relates only to those aspects of design, materials and construction that influence the performance of the element(s) under fire resistance test conditions that are stipulated in the standard this assessment concludes to. It does not purport to be a complete specification ensuring fitness for purpose and long-term serviceability. It is the responsibility of the client to ensure that the element conforms to recognised good practice in all other respects and that, with the incorporation of the guidance given in this assessment, the element is suitable for its intended purpose.
- This report represents our opinion as to the performance likely to be demonstrated on a test in accordance with BS EN 1634-1: 2014 + A1: 2018 and BS EN 1634-3: 2004, on the basis of the test evidence referred to in this report and the relevant EXAP rules taken from BS EN 15269-3: 2022 and BS EN 15269-20: 2020. This report has been written for the purpose of classifying the fire resistance and ambient temperature smoke control performance of the SD44P-E30Sa-FED-LSASD-EXT-G-DR-AC product family to BS EN 13501-2: 2023. We express no opinion as to whether that evidence, and/or this report would be regarded by any Building Control authorities or any other third parties as sufficient for that or any other purpose.
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22 Validity

1. This extended application report is not valid unless it incorporates the declaration given in Section 20 duly signed by the applicant.

Signature:	Signed by: 3A9C822F3E7F487...	Signed by: 43935C1A192A419...
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
1	550026	19/11/2025	First Issue