Falcon Panel Products

STREDOR®

Certifire & Certisecure Fire and Security Dual Scope System

FD30 / PAS24

STREDOR® 44

www.falconpp.co.uk

FALCON PANEL PRODUCTS LTD

Contents

1. Introduction to Dual Scope Certification

This document outlines the details and requirements of the Falcon Panel Products Certisecure Stredor Fire and Security Dual Scope System.

1.1 44mm STREDOR® Glazed Front Entrance Doorset System

Having been subject to an extensive, robust, ongoing testing and certification program, Stredor has been incorporated into a doorset system that is certified by Certifire and Certisecure for both Fire and Enhanced Security door schemes.

This system provides our customers with additional support - particularly when working in the flat entrance door market - to ensure there is no conflict between the Building Regulations for fire safety (Part B) and security (Part Q) where specifiers require both to be met. Manufacturing doorsets from this fully tested system complies with both fire and security requirements. Furthermore, manufacturers can certify the doorsets produced under the Certifire and Certisecure third-party product certification scheme, providing clients and end users with additional confidence that their properties and loved ones are safe and secure.

A joint publication: 'A Guide for Selecting Flat Entrance Doorsets; A publication for housing associations, landlords, building owners and local authorities in England', relates to new doorsets and is the product of DHF (Door & Hardware Federation), Secured by Design (SBD) and the Fire Industry Association (FIA).

The publication brings together the best collaborative advice available from the industry in one straightforward document to highlight the fundamental issues of fire safety and security for those selecting fire doorsets.

1.2 System Features

- FD30s and Enhanced Security
- Stredor (Solid Timber) for door leaf construction
- Evidence to support both 44mm door leaf thicknesses
- Auto-firing, multi-point security lock
- Economically designed timber frame section (nominal 2" x 4" section)
- Includes evidence for overhead closing devices
- Options for key/key and key/thumbturn cylinders
- Up to 933mm x 2153mm leaf sizes for fire and security
- Provision for glazed apertures using fire rated P1A glazing
- Tested to BS 476: Part 22, BS EN 1634-1, BS EN 1634-3, PAS 24:2016, BS 6375-1, BS 6375-2 & BS 6375-3

1.3 Fire and Smoke Performance

The dual scope system is certified by the Certifire scheme, and will perform to 30 minutes for fire and smoke. The components of the system have been extensively tested to the British Standard BS 476: Part 22, and to European Standards BS EN 1634-1, BS EN 1634-3.

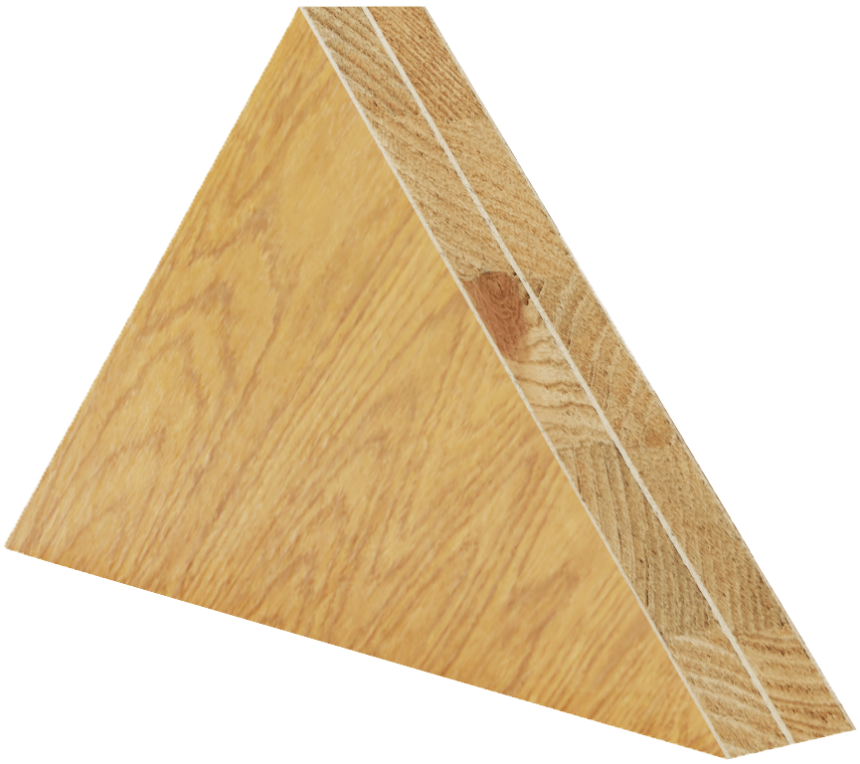
1.4 Security Performance

The dual scope system is certified by the Certisecure scheme. The system has been tested to PAS24: 2016. All of the permitted ironmongery components have also been rigorously tested individually and hold robust certification.

The dual scope system is licensed by Secured by Design, the Official Police Security Initiative. As noted in the Secure By Design 'Homes 2019' Brochure, Section 21.5;

"Where there is a requirement for a doorset to be both fire and security rated, … the manufacturer or fabricator supplying the finished product to site is required to present independent third party dual certification from a single UKAS accredited certification body for both elements."

2. Door Cores



The Certisecure dual scope system is designed with one of the market leading door cores from Falcon Panel Products. 44mm Stredor is available with FSC Certification and in a range of board size.

STREDOR®

Stredor is a lighter weight, solid laminated timber core. Stredor does not have core perimeter framing like other laminated timber cores, meaning that it can be processed easily and without restriction to size reduction. Ply faced Stredor cores are suitable for an internal or external setting.

Table 1 - Core Performance Summary

	Core			Thickness (mm)				Fire				App.					Certification			COC						
	Particleboard	Solid Timber	Specialist	35	44	54	57	FD30	FD60	FD90	FD120	Internal	External	Max dB (RW)	PAS24 Security	Thermal Range	Certifire	Q Mark	IFCC	FSC	PEFC	EUTR	DD171/BS EN 1192	BS EN 13986	Perimeter Framing	Recessed Panels
Stredor 44		✓			✓			✓				✓	✓	33	✓			✓		✓		✓	✓	E1		
Stredor 54		✓				✓		✓				✓	✓	37	✓			✓		✓		✓	✓	E1		

Table 2 - Core Details

	Stredor 44 Ply	Stredor 54 Ply
Type	Engineered multi-layered solid timber	Engineered multi-layered solid timber
Raw Material (Wood Content)	Produced with Poplar, Beech, Spruce/Pine/Fir/ and Redwood	Produced with Poplar, Beech, Spruce/Pine/Fir/ and Redwood
Adhesive	Melamine and PVA	Melamine and PVA
Moisture Content	8% + or- 2% moisture	8% + or- 2% moisture
Fire	Tested to BS476: Part 22: 1987 and BS EN 1634-1:2014+A1:2018, opening in both directions	Tested to BS476: Part 22: 1987 and BS EN 1634-1:2014+A1:2018, opening in both directions
Sheet Size Note - non standard sizes available to special order	2135 x 915mm 2440 x 1220 mm 2745 x 1220 mm 3050 x 1220 mm Tolerance: Height & Width +/- 0.5mm Thickness +/- 0.2mm	2135 x 915mm 2440 x 1220mm 2740 x 915mm Tolerance: Height & Width +/- 0.5mm Thickness +/- 0.2mm
Surface	Beech or EV veneered suitable for painting and staining, or for use with a wide range of facing materials including delicate veneers, laminates and thin foils.	Beech or EV veneered suitable for painting and staining, or for use with a wide range of facing materials including delicate veneers, laminates and thin foils.
Density	Avg. bulk density = 505 kg/m³	Avg. bulk density = 505 kg/m³
Weight	Nom. 22kgs/m²	Nom. 27kgs/m²
Machining	Suitable for use with standard woodworking tools and machinery	Suitable for use with standard woodworking tools and machinery

3. Lippings and Facings

3.1 Lippings

Lippings provide stability and durability to the edges of a door leaf, and are more aesthetically desirable than the exposed door core.

The dual scope system requires that door leafs be lipped on all four edges. The lipping material must be Sapele with a minimum density of 640kg/m³. Lipping timber should be straight grained, joinery quality, and free from knots, splits and checks.

Lippings must be 10mm thick x 44mm wide.

Lippings should be bonded to the door leaf using Technomelt PUR 270/7G Hot Melt adhesive.

Door may be lipped before or after the facing is applied.
It is important to ensure that the lipping material and the cores are properly dried and have similar moisture contents (10-12% for internal use). Timber can shrink or grow by up to 1% across the grain for every 4% variation in moisture content. Differential movement between the core and lipping resulting from adverse environmental conditions or use of components with different moisture contents can give rise to ‘telegraphing’ of the core and, in extreme circumstances, splitting of veneer facings.

Lippings at the closing and meeting stiles may need to be profiled either at the time of manufacture, or on site at the time of installation, to ensure correct operation while maintaining operating gaps to the satisfaction of BS 4787-1:1980. Profiling is only to be carried out where necessary and should not be done as standard practise.

Pencil round to the leading edge

Maximum 2.5° chamfer to the leading edge

3.2 Facings

Facings are the decorative layers applied to the outside of a door core.

As a solid core construction, Stredor provides a stable base for the application of door facings. Under the Dual Scope system, doors can be faced with a variety of facings.

The adhesives used for the application of door facings should be suitable for use with the particular material for bonding onto a timber base.

Core calibration is limited to 0.5mm to each face (1mm over the total thickness of the door). Veneer facings may be laid with a vertical or horizontal grain direction.

Plastic or metallic facings are not approved.

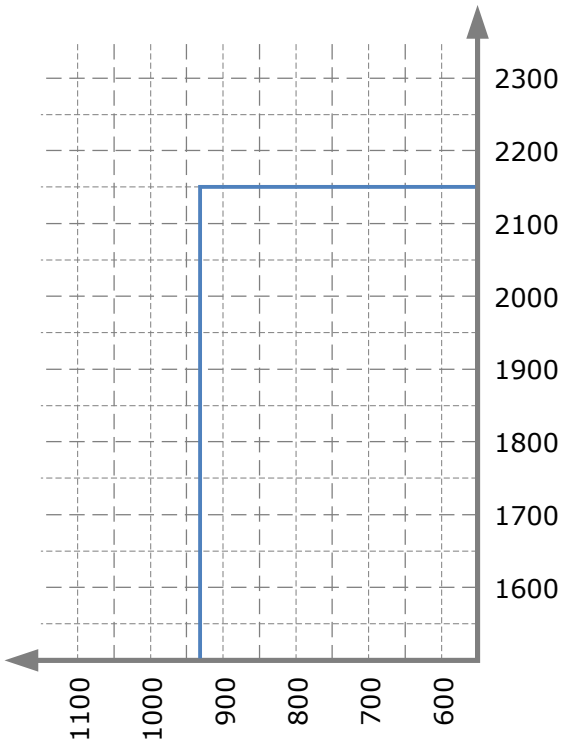
Table 3 - Facing Options

Approved Facings	Dimension
Paint / Paper Foils	Max 0.5mm
Timber veneers	Max 1mm

4. Approved Dimensions and Operating Gaps

4.1 Approved Leaf Dimensions

Under the Certisecure dual scope system, the maximum door leaf size is 933mm wide by 2153mm high. This is the maximum measurement for the door leaf, including the lipping, and not including the door frame.



4.2 Operating Gaps and Alignment

The following describes the minimum and maximum approved operating gaps and door leaf positioning for the dual scope system. The **recommended** margins are 3mm at the head and stiles. The operating gap at the threshold is a maximum of 10mm, but should be manufactured in accordance with the manufacturers recommendations of any dropseal or threshold that is fitted.

Table 4 - Operating Gaps and Alignment

Location	Dimension
Head and stiles edge gaps	Minimum = 2mm Maximum = 4mm
Threshold	Maximum = 10mm above finsished floor level*
Alignment	Leafs must not project beyond the face of the frame by more than 1mm

*Subject to dropseal or threshold manufacturer's installation instructions

5. Seals

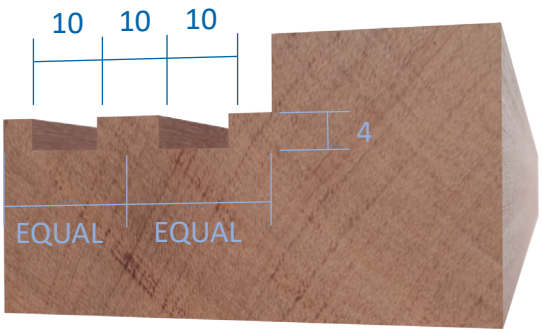
5.1 Intumescent Seals

An intumescent seal contains a material that is chemically designed to expand and swell when exposed to heat. Intumescent seals are used to fill operating gaps in the event of a fire.
The use of intumescent seals within the dual scope system is essential to achieve the potential fire performance. The Certisecure dual scope system has been tested with PVC encapsulated graphite based intumescent seals.

Table 5 - Approved Intumescent Seals and Arrangements

	All Cores
Seal Type	Pyroplex 8500
Size	10x4mm
Quantity	2no
Position	Fitted 5mm either side of the centre line of the frame reveal

See Appendix A for data sheets



Seal arrangement to suit Stredor 44

It is important to ensure that the seals extend the full height and width of the perimeter, to enable suitable sealing at the top joints of the frame.

Ensure that the seal grooves are machined cleanly and are free of any deviation, defect or contaminant.

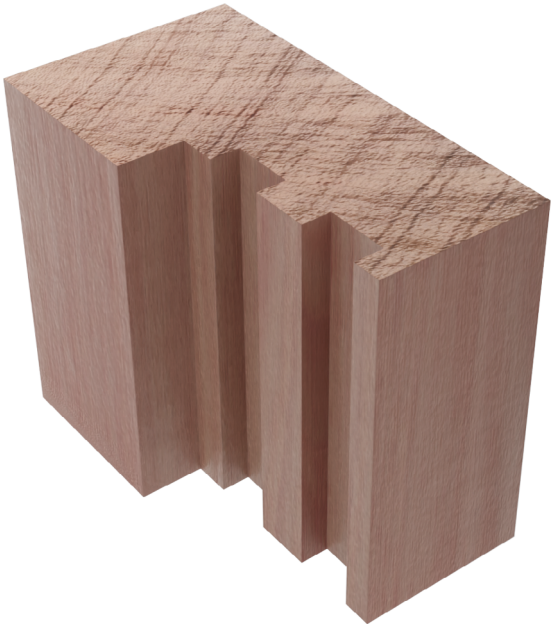
Cut the seal to size before removal of adhesive cover. Peel off the adhesive cover and ensure the adhesive does not contact fingers, or any other contaminants. Place the seal directly into the pre-prepared groove, applying firm, overall pressure to achieve a good bond to the contact area. Do not remove the seal once fitted.

If the surface has been primed, lacquered or painted, it must be completely dry before the seal is fitted.

If surface materials and/or the self-adhesive tape are too cold the adhesive will harden, severely affecting the bonding process. Apply the seals in temperatures above 10°C, and ideally between 20°C - 30°C. The seal will withstand extremes of cold and heat when properly applied.

Intumescent seals should be carefully fitted in accordance with the manufacturer's recommendations, these should be referred to if in any doubt.

Once installed, the exposed surface of the seal may be painted over if required.



5.2 Smoke Seals

Smoke seals are fitted between the door leaf and frame to reduce the passage of smoke. If the doorset is required to provide for a smoke control function, there is allowance in the dual scope system for smoke seals, as shown below.

Table 6 - Approved Smoke Seals and Smoke Seal Arrangements

	All Cores
Seal Type	Norseal Ltd NOR710
Size	11x10mm
Quantity	1
Position	Fitted in compression, at the joint between the stop and frame reveal

See Appendix A for data sheets

Smoke seal in compression mode

For optimum performance, seals should compress to approx. 50% of maximum. Over compression can lead to distortion of the seal with subsequent leakage and possible interference with the door operation.

Smoke seals should be fitted the full length and width of the frame reveal. The smoke seals that are approved for the dual scope system can be fitted in swipe or compression configuration, although compression mode is recommended for the best operation of the door and longevity of the seal.

Regardless of fitting configuration, smoke seals must not compromise the operation of the door.

Seals should be checked for any damage or defect. Cut the seal to size before removal of any protective tape. Ensure that the area of application is sound, clean, dry and dust-free.

Peel off the protective tape and ensure the adhesive does not contact fingers, or any other contaminants. Place the seal directly onto the stop or frame reveal, applying firm, overall pressure to achieve a good bond to the contact area. Do not remove the seal once fitted.

It is not acceptable to apply paint or similar finishes to the smoke seal. Smoke seals should be applied after the final finish.

Note that dropseals as described in the following section are also integral to the smoke sealing system of the doorset.

5.3 Automatic Drop Seals and Thresholds

The gap underneath the door cannot be controlled by the doorset manufacturer, who can only assemble doorsets to provide for a nominal dimension from the bottom of the door to the bottom of the frame jamb. Similarly, it may be difficult for the installation contractor to control under door gaps, as these are influenced to a major degree by the quality of the surrounding structure, and the quality and nature of the floor preparation and finish. In the dual scope system, automatic drop seals and thresholds may be used to control the gap underneath the door, and control smoke passage or weather ingress.

The dual scope system allows for the following automatic drop seal.

Table 7 - Approved Automatic Drop Seals

Product	Type	Dimension	Location
Norseal Ltd NOR810s	Drop Seal	12x20mm	Central in door leaf

See Appendix A for data sheets

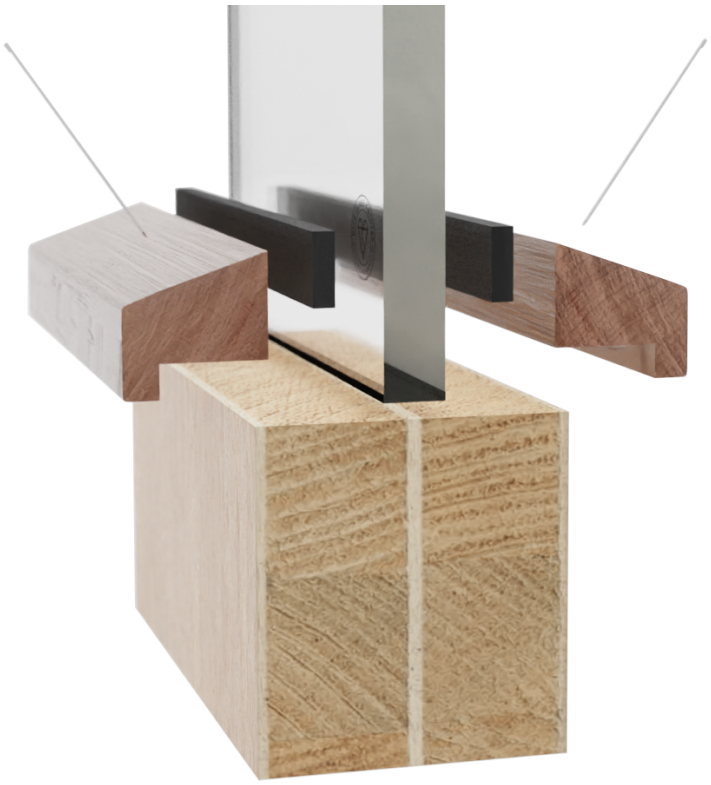
Dropseal fitted centrally in the door leaf

The drop seal should be machined in the centre of the width of the door leaf, and installed in accordance with the manufacturer's recommendations.

Where it is impractical to provide for seals at the threshold, the maximum threshold gap between the bottom of the door and the top of the finished floor should not exceed 3mm.

If a smoke rating is required then a drop seal must be fitted.

6. Glazing



Doors are glazed primarily for the safety of users of a building. Glazing is often also incorporated as an aesthetic consideration, or to allow for the passage of light. The dual scope system allows for apertures to be machined, glazed with approved glass, lined with an approved system of glazing tape and glazing liner, and secured with a hardwood beading.

6.1 Glass

The dual scope system allows for the use of 30 minute fire rated, minimum P1A security rated monolithic glass, as described in the table below.

Table 8 - Approved Glass Types

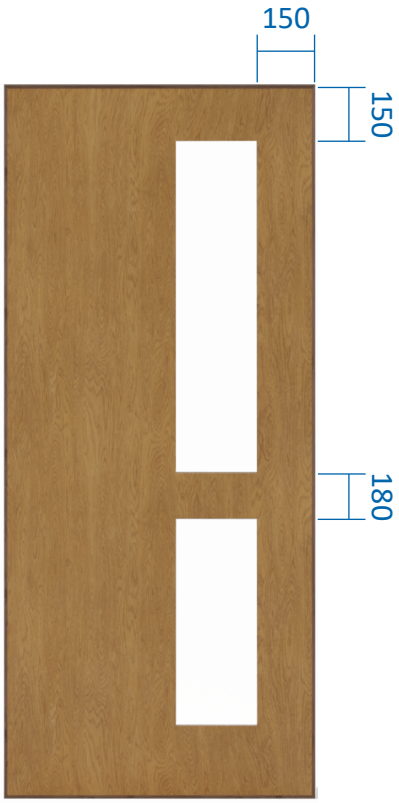
Product	Thickness	Glazing Type	Grade	Safety Rating	Burglar Resistance	Fire	Insulation	dBrw
AGC Pyrobelite 9EG	12mm	Single	External	Class 1(B)1	P2A	E30	30	37

See Appendix A for Declarations of Performance

6.2 Area and Position

The glazing apertures must be located to ensure an adequate margin between the nearest edge of the door, and between apertures. Apertures cut into the door leaf must be a minimum of 150mm from the edges of the leaf, and a minimum of 1800mm between apertures.

The maximum glazed area allowed is 0.36m² per leaf, with the maximum area per pane being 0.22m² . Multiple apertures can be in any configuration that complies with the restrictions on position and area per leaf and pane.

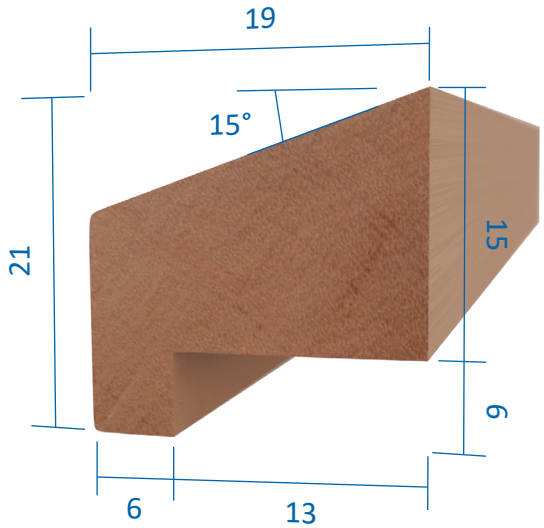


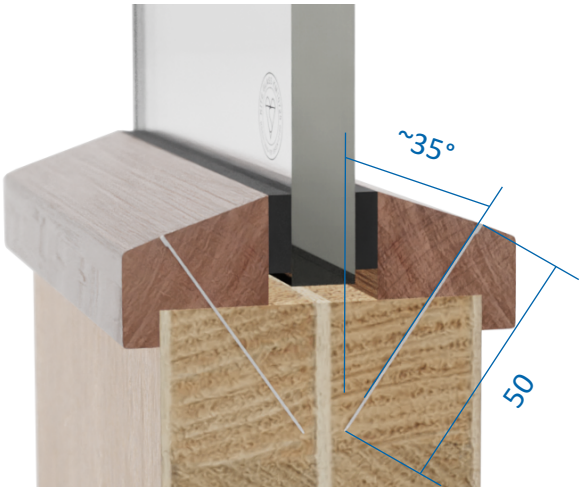
6.3 Beading

The dual scope system allows for a hardwood splayed bolection bead. The beading material must be Sapele with a minimum density of 640kg/m³. Hardwood for beading should be straight grained, joinery quality, and free from knots split and checks.

The beading profile must be 19mm wide x 21mm high with a 15° splay and a 13mm wide x 6mm rebate forming a 6mm wide x 6mm high bolection.

Beading must be fixed securely to prevent any movement of the glass in the event of a fire. Beadings must be fixed with 16 gauge 50mm length steel pins. Pins should be fixed 50mm from the corners and at maximum 145mm centres.





6.4 Glazing Seal Systems

Glazing seal systems are intended to the glass in place for regular use of the door, and not to be detrimental in the event of a fire.

The dual scope system allows for the use of Sealmaster Black Glazing Tape, 10mm wide x 4mm thick. This tape is fixed to the bead with the self adhesive strip.

Hardwood liners are not permitted.

6.5 Vision Panel Machining, Assembly and Fitting

All processes and specifications described in sections 6.1 - 6.4 must only be carried out by a certificated company/operative, demonstrating competency to do so as required by the scheme. In most cases, this will be the system fabricator having the fire and security dual scope documents listed on their Certifire certificate(s).

7. Framing

7.1 Door Frames

The dual scope system requires that doors be framed on three sides, the two vertical sides and the top.

The dual scope allows for frames to be made of Sapele with the required minimum density of 640kg/m³.

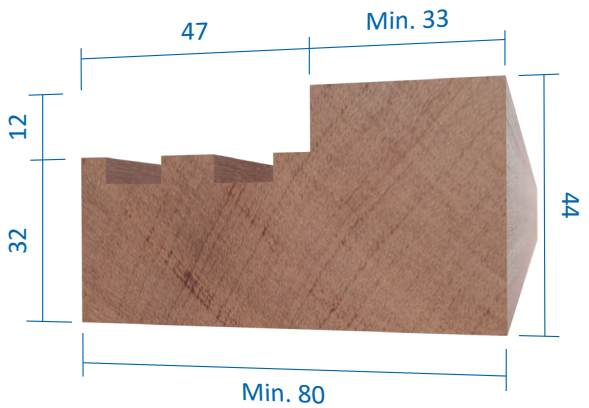
Timber for door frames should be straight grained, joinery quality, and free from knots split and checks. Any minor defects should be orientated away from intumescent seal activation.

The moisture content should be 9-13% on average.
Under the dual scope system, transoms, over panels and side screens are not permitted.

7.2 Minimum Frame Dimensions

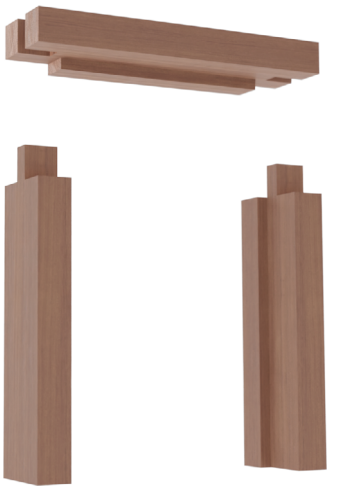
Door frames must be a minimum of 80mm depth x 44mm thick, with a rebated stop that is 12mm thick.

A 47mm rebate should be allowed for a 44mm door leaf.

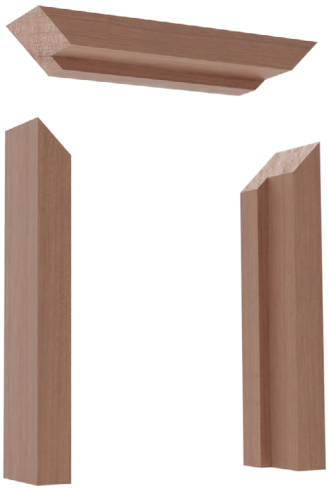


7.3 Frame Joints

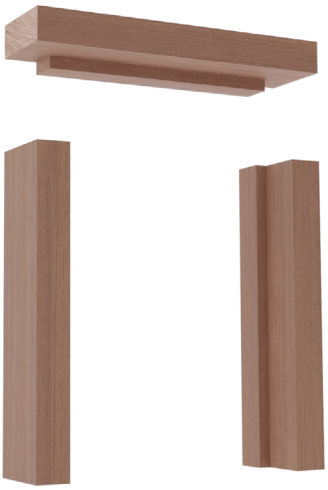
Frames should be manufactured and installed plumb and square. Frames should be assembled with mortice and tenon, mitred, butt or half lap joints with PVA D4 adhesive and mechanical fixings. All joints should be of a tight fit. Pilot holes should be drilled to receive mechanical fixings.



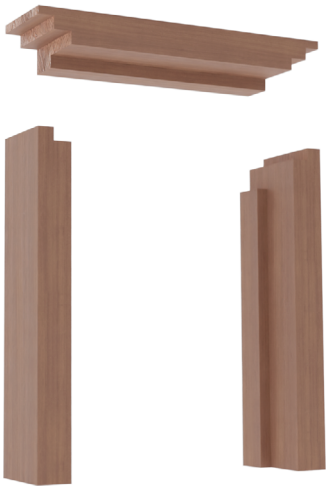
Mortice and Tenon



Mitre



Butt



Half Lap

7.4 Architrave

The use of architrave is recommended for fire doors, and aesthetically, it conceals the joint between door frame and wall.

Architraves should be minimum of 12mm thickness and conform with the material specifications applicable to frames.

8. Hardware

8.1 Preparation and Fixing of Hardware

Preparation of hardware should be carried out in accordance with the hardware manufacturer's instructions. It should be ensured that any hardware is tightly fitting in the cut openings and that any intumescent protection is allowed for.

As a solid laminated timber core Stredor provides for universal screw fixing without the need for timber blocking.

It is recommended that hardware is fixed using fully threaded, suitable wood or chipboard screws. The recommended screw size for load bearing items is detailed in each of the following sections. Pilot holes should always be drilled to receive fixings.

Fixings supplied with the hardware or recommended by the manufacturer will generally be sufficient for use, and will have been tested to the relevant standards for use in this door set system.

8.2 Intumescent Protection

Stredor cores rely on the core material to erode at a predictable rate, and for intumescent materials to fill gaps to ensure their fire performance. As such, the removal of core and intumescent material to accommodate hardware potentially creates weaknesses that could be detrimental to performance in the event of a fire. As such, it can be important to line the hardware recesses with intumescent material. Where intumescent protection is noted as 'Optional', it is recommended to always include the protection.

The specific protection required for each type of hardware is detailed in the following sections.

8.3 Hinges

The following hinges are permitted under the dual scope system.

Table 9 - Approved Hinges

Hinge	Quantity	Blade Size	Fixing	Protection
Zoo ZHSS243RS	3	102x31mm	4no 4.2x30mm screws to leaf 4no 4.2x30mm screws to frame	1mm Mono Ammonium Phosphate sheet material to both hinge leaves

See Appendix A for Data Sheets

It should be ensured that the hinge fits tightly in the recess and that if hinge protection is used, it is allowed for in the recess depth. The face of the hinge should sit flush with the face of the door leaf or frame.

Pilot holes should be drilled to receive hinge fixing screws. Hinges should be fitted to allow for maximum opening angle, taking into consideration all fitted hardware and the surrounding supporting construction.

Double action pivots or floor spring devices are not permitted under the dual scope system.

	Table 10 - Hinge Positions
Top	150mm from top of the leaf to top of the hinge
Middle	Equally spaced between top and bottom hinge
Bottom	181mm from bottom of the leaf to bottom of the hinge

8.4 Locking Systems

The following Locking System is permitted under the dual scope system.

Table 11 - Approved Locks

Lock	Length	Backset	Fixing	Position	Protection
ERA Surefire Classic	1634mm	45mm	11no 4x30mm screws to leaf	950mm from the bottom of the leaf to the spindle	Sealed Tight Solutions 1mm Raw Graphite fitted both sides of the centre latch body, fully encasing the top and bottom lock body, and under latch forends

See Appendix A for Data Sheets

Under this dual scope system, the lock must be fitted with the lock spindle at 950mm from the bottom of the door leaf.

It should be ensured that the lock is fitted tightly into the recess and in accordance with the manufacturer's fitting instructions.

Ensure that where intumescent protection is used, it fully covers the required areas as per the manufacturer's fitting instructions. Ensure that any intumescent protection does not hinder the operation of the lock.

The frame keeps used should be those recommended by the manufacturer and be suitable for the handing of the door leaf.

The following keeps are permitted under the dual scope system.

Table 12 - Approved Keeps

Lock	ERA Surefire Classic
Centre	DKSFCKL23487- Left Hand DKSFCKL24272- Left Hand (Extended Strike) DKSFCKR23488- Right Hand DKSFCKR24271- Right Hand (Extended Strike)
Upper and Lower	DKSFHKL23489- Left Hand DKSFHKL24274- Left Hand (Extended Strike) DKSFHKR23490 - Right Hand DKSFHKR24273- Right Hand (Extended Strike)
Fixing	Centre- 3no 4.2x30mm screws Upper and Lower- 2no 4.2x30mm screws
Protection	Sealed Tight Solutions 1mm Raw Graphite fitted under all keeps

The keeps used must be securely fixed and in line with the latch/bolt/hooks, and must provide for smooth operation of the lock.

8.5 Cylinders

The following cylinder is permitted under the dual scope system.

Table 13 - Approved Cylinders

Cylinder	Dimensions	Fixing	Protection	Configuration
ERA Fortress 3* Euro Profile Cylinder	70mm	1no M5 (size varied with cylinder dimension) supplied with cylinder	Not required	Key / Thumbturn

See Appendix A for Data Sheets

It is important to ensure that the cylinder is fitted in the correct orientation. Cylinders will be marked to indicate the external face. It should be ensured that the cylinder is fitted into the machined opening tightly. The fixings supplied with the cylinder should be used, and the cylinder should be fitted in accordance with the manufacturer's instructions.

8.6 Handles

The following handle is permitted under the dual scope system.

Table 14 - Approved Handles

Handle	Dimensions	Fixing	Protection
ERA Fab & Fix Heritage 1X000	243x32mm base plate and 140x61mm handle	2no machine screws supplied with handle	Not required

See Appendix A for Data Sheets

Handles should be fitted in accordance with the manufacturer's instructions.

8.7 Door Viewers

The following door viewer is permitted under the dual scope system.

Table 15 - Approved Door Viewer

Handle	Dimensions	Fixing	Protection
ERA Fab & Fix Spyhole	12mm barrel	Fixed through door leaf with integral bolt system	Min. 0.5mm graphite lining the cutout through the leaf

See Appendix A for Data Sheets

It should be ensured that the door viewer is fitted into the machined opening tightly, and that the intumescent protection lines the machined opening completely. Door viewers should be fitted below 1600mm, and in accordance with the manufacturer's instructions.

8.8 Automatic Closing Devices

The following closers are permitted under the dual scope system.

Table 16 - Approved Closers

Closer	Fixing	Position	Protection
Hoppe AR1500	As supplied with closer	aced fixed at top of the leaf/head of frame as per manufacturers instructions	Not required

See Appendix A for Data Sheets

Alternative Certifire approved surface mounted overhead closer approved for use on 'ITT' doorsets may be fitted, subject to the conditions contained within the relevant Certifire certificate of approval. All fire doorsets are required to be fitted with a Certifire certificated self-closing device. The exceptions are doorsets kept locked shut such as service access doors.

Closers with mechanical hold-open mechanisms are not permitted to be used.

Building Regulations may identify locations within domestic locations where self-closing devices are not mandatory.

Closers should be fitted in accordance with the manufacturer's instructions. All adjustments to closing forces or fitting should be made in line with the manufacturer's instructions. Closers should not impede the operation of the door, and should close the door from any position to fully closed in under 25 seconds.

8.9 Letterplates

The following Letterplates are permitted under the dual scope system.

Table 17 - Approved Letter Plates

Letterplate	Dimensions	Position	Protection
ERA Nu Mail with Nu Mail Shield Security Cowl	264x40mm aperture	850mm from the bottom of the leaf, minimum 150mm from any edge	Sealed Tight Solutions 40x2mm Graphite wrapped twice around the letter plate panel

See Appendix A for Data Sheets

Letterplates should adhere to the same edge margins as glazing. Letterplates must be fitted at 850mm from the bottom of the leaf. Where doors are glazed, a minimum margin of 200mm must be maintained between the aperture cut out and the letterplate cut out.

It should be ensured that the letterplate is fitted into the machined opening tightly, and that the intumescent protection lines the machined opening completely. Letterplates should be fitted in accordance with the manufacturer's instructions.

8.10 Decorative and Ancillary Hardware

The following items of decorative hardware are permitted under the dual scope system.

Table 18 - Approved Decorative Hardware

Hardware	Details	Direct Test Evidence
Signage	Plastic or metal surface mounted with glue or screws	Generic
Recessed Signage	2mm aluminium or 3mm PVC, max. 45mm dia. flush fitted at min. 50mm from any edge	Generic
Security Chain	Steel, stainless steel, or brass. Mechincally fixed with fixings provided	ERA Fab&Fix PVCu/Timber Door Chain 791-65
Numerals	Metal, mechincally fixed with fixings provided	ERA Fab&Fix Door Numerals FFNUM8BC
Knocker	Stainless Steel, mechincally fixed using fixings provided.	ERA Ingot Door Knocker 4A550

See Appendix A for Data Sheets

9. Installation

Doorsets are not freestanding products and they will not provide for any design performance until they have been competently installed into a suitable structure. If the installed doorset is difficult to operate the users of the building may disable elements of the doorset on the basis of user convenience with consequential safety risks, for example by wedging the doors in an open position.

The doorsets are approved to be installed in brick, block, masonry, timber or steel stud of minimum thickness 85 mm, providing at least 30 minutes fire resistance. Where stud partition are used these should be suitably constructed to provide a secure fixing for the doorsets as recommended by the partition manufacturer.

The opening may be lined with hardwood which shall be continuous and of minimum width, 85mm. Each door frame jamb to be fixed through to the wall at not less than four points with steel or nylon fixings at maximum 600 mm centres penetrating the wall to at least 50 mm.

Doorsets shall be installed as stated in BS 8214. Suitable CERTIFIRE approved lineal gap sealing systems may also be utilised to protect the frame/supporting construction gap, subject to the conditions contained within the relevant certificate. The use of third party accredited installers provides a means of ensuring that installations have been conducted by knowledgeable contractors, to appropriate standards, thereby increasing the reliability of the anticipated performance in fire.

Adjusting door leaves on site is not permitted.

9.1 Sealing to Structural Opening (Fire Stopping)

For second fixing of doorsets into prepared openings it is essential that there is an installation gap between the frame and the surrounding structure.

It should be ensured that structural openings are plumb and square, and are prepared to accurate dimensions.

9.2 Fire Stopping Solutions with Primary Test Evidence

The following details a selection of methods of fire stopping with Primary Test Evidence. Please find illustrations of these methods on Page 26.

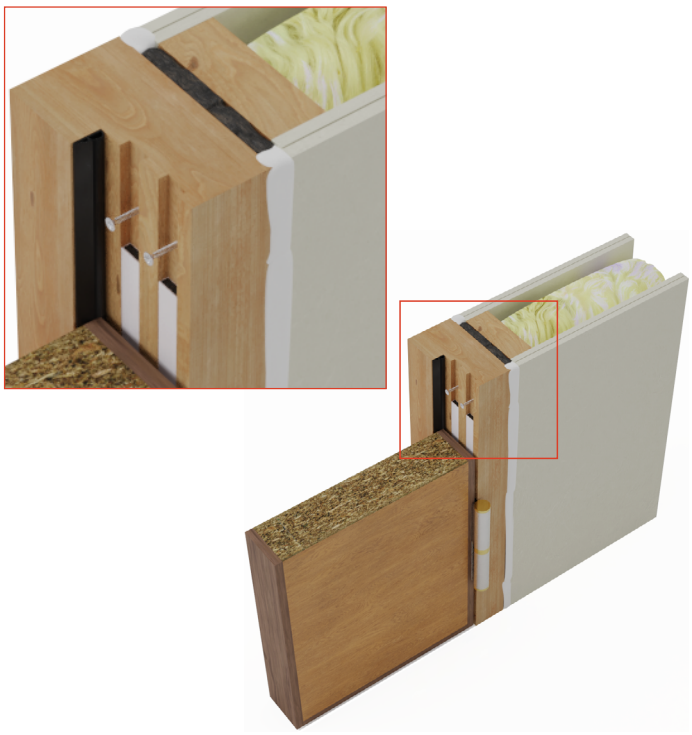
Table 19 - Fire Stopping, Direct Evidence

Product Type	Product	Test Std	Frame Material	Supporting Construction	Architrave	Packers	Test Duration (min)	
Acrylic Mastic	STS ST88	BS 476: Part 22: 1987	Softwood	Plasterboard clad timber stud	45x18mm Softwood	Softwood	51	1
Acrylic Mastic	Norseal Firewizard	BS 476: Part 22: 1987	Softwood	Plasterboard clad timber stud	45x18mm Softwood	Softwood	31	1
Acrylic Mastic	Mann MacGowan Pyromas	BS 476: Part 22: 1987	Engineered Softwood	Plasterboard clad timber stud	45x18mm MDF	Softwood	36	1
Acrylic Mastic	Firewise	BS 476: Part 22: 1987	Softwood	Plasterboard clad timber stud	None	Softwood	39	2
Acrylic Mastic	Everbuild Sealant 300	BS 476: Part 22: 1987	Hardwood	Plasterboard clad steel stud	45x18mm Softwood	Plastic	50	3
Intumescent Foam	STS ST99	BS 476: Part 22: 1987	Softwood	Plasterboard clad steel stud	55x18mm Softwood	Plastic	40	4

Selected primary supporting evidence. Further evidence is available on request.

Method 1

Softwood frame fitted to a plasterboard clad timber stud partition, with 45x18mm softwood architrave. Structural opening gap packed with Rockwool and sealed with acrylic intumescent mastic.



Method 2

Softwood frame fitted to a plasterboard clad timber stud partition, with no architrave. Structural opening gap packed with Rockwool and sealed with acrylic intumescent mastic.

Method 3

Hardwood frame fitted to a plasterboard clad steel stud partition, with 45x18mm softwood architrave. Structural opening gap packed with Rockwool and sealed with acrylic intumescent mastic.

Method 4

Softwood frame fitted to a plasterboard clad steel stud partition, with 45x18mm softwood architrave. Structural opening gap filled with intumescent expanding foam.

9.3 Assessed Fire Stopping Solutions

The following details a selection of methods of **Assessed** fire stopping for the Dual Scope System.

Gaps up to 10mm must be sealed on both sides with a 10mm depth of acrylic intumescent mastic. Joint must be fitted with 15mm thick architraves overlapping by at least 15mm each side.

Gaps up to 10mm and 20mm may be tightly packed with mineral fibre, capped on both sides with a 10mm depth of acrylic intumescent mastic. Architraves are optional.

Gaps up to 20mm are filled with proprietary fire stopping product (e.g. expanding PU foam or compressible intumescent foam). Products must be fitted with 15mm thick architraves overlapping by at least 15mm each side.

Timber based or non-combustible sub-frame up to 50mm thick, with no gaps between the components. Joint must be fitted with architraves overlapping by at least 15mm each side.

Timber based or non-combustible sub-frame up to 50mm thick, with gaps up to 10mm between the components filled on both sides with 10mm depth of acrylic intumescent mastic or full depth expanding PU foam. Joint must be fitted with 15mm architraves overlapping by at least 15mm each side.

Note - illustrations on pages 28 and 29 are indicitive of installation methods only.

9.4 Associated Standards

Guidance for various methods of sealing the frame to structural opening gap is also given in BS 8214: 2008, 'Code of Practice for Fire Door Assemblies', which may be referred to where appropriate.

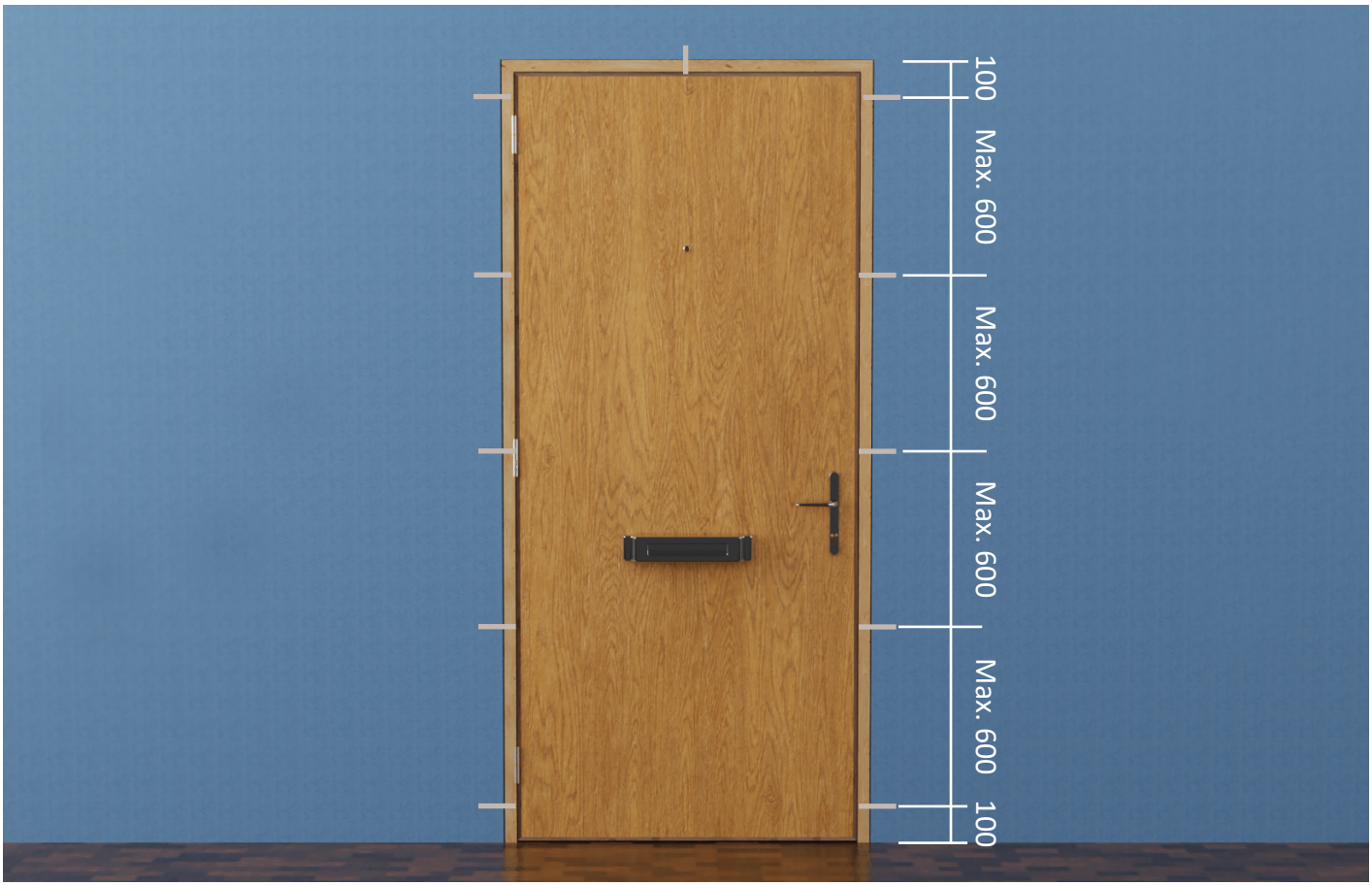
9.5 Installation Fixings

Fasteners used for the installation of doorsets must be of a size and type suitable for securing into the medium to which the doorset is to be installed. Fixings must penetrate the structure to a minimum depth of 50mm.

Steel or nylon fixings are approved for use with the dual scope system. When fixing to propriety metal stud partitions without timber infill the fixings must be of the size and type approved by the partition manufacturers fire test/assessment data. The positioning of installation fixings in height should be planned to avoid conflicts with hardware, sealing systems and other building elements.

The fixings can be covered by using timber pellets or by fixing behind the intumescent seals.

The maximum fixing centres are 100mm from the top and bottom, with maximum 600mm between each fixing. A fixing can be fitted to the head of the frame if required.



Maximum fixing centres

10. Labelling and Marking

Doorsets manufactured under the dual scope system should be labelled or marked appropriately to enable quick and easy identification of the fire and security rating. Doors can also be labelled separately to assist with distribution on site or to assist with manufacturing and chain of custody requirements.

This dual scope system is certificated under the Certifire and Certisecure schemes. Certifire will supply suitable labelling for the relevant schemes to doorset manufacturers.

For technical support, training and guidance

Falcon Panel Products Ltd
Door Technical Office
Unit 1 Block 2
Birch House Business Centre
Hen Lon Parcwr
Ruthin
Denbighshire
LL15 1NA

t: 01824 730266
e: doortechnical@falconpp.co.uk

Gateshead Depot	T 0191 338 8208	E gateshead@falconpp.co.uk
Haydock Depot	T 01744 416 600	E haydock@falconpp.co.uk
High Wycombe Depot	T 01494 291 777	E highwycombe@falconpp.co.uk
Leeds Depot	T 0113 887 2222	E leeds@falconpp.co.uk
Nottingham Depot	T 0115 919 2000	E nottingham@falconpp.co.uk
Tilbury Depot	T 01375 487 300	E tilbury@falconpp.co.uk
West Bromwich Depot	T 0121 525 8844	E westbrom@falconpp.co.uk

Falcon Panel Products Ltd
Clock House
Station Approach
Shepperton, Middlesex
TW17 8AN
E sales@falconpp.co.uk

www.falconpp.co.uk