

Falcon Panel Products

Strebord® | **STREDOR®**

Fire and Security Dual Scope System

FD30 / PAS24

STREBORD® 44 / 54

STREDOR® 44 / 54



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1. Introduction to Dual Scope Certification



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

1.1 **Strebord® and STREDOR® Doorset System**

Having been subject to an extensive, robust, ongoing testing and certification program, the market-leading brands for door core and door blank products, Strebord and Stredor, have been incorporated into a doorset system that is certified by BM Trada Q Mark 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 BM Trada Q Mark 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
- Choice of Strebord (Solid Particleboard) or Stredor (Solid Timber) for door leaf construction
- Evidence to support both 44mm and 54mm door leaf thicknesses
- Auto-firing, multi-point security lock
- Economically designed timber frame section (nominal 2" x 4" section)
- Includes evidence for both overhead and jamb mounted concealed automatic closing devices
- Options for key/key and key/thumbturn cylinders
- Up to 1047mm x 2402mm 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 Q Mark Fire Door Manufacturer 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 Q Mark Enhanced Security 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 dual scope system offers two of the market leading door cores from Falcon Panel Products, Strebord and Stredor, with the option of using the 44mm and 54mm variant of each. Both cores are available with FSC Certification, and Strebord is available with PEFC Certification.

Strebord®

Strebord is a robust graduated density particleboard core. Strebord particleboard is the market leader for fire-rated, as well as non fire-rated door cores, and is easy to process and work with using modern joinery practices. This core is suited to an internal setting, in corridors or otherwise internally in buildings.

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 Details

	Strebord 44	Strebord 54	Stredor 44 Ply	Stredor 54 Ply
Type	Three layer particleboard specially developed as a high performance door core	Three layer particleboard specially developed as a high performance door core	Engineered multi-layered solid timber	Engineered multi-layered solid timber
Raw Material (Wood Content)	Produced with softwood (Spruce / Pine / Fir) with hardwood (Birch , Chestnut) and using recycled wood based raw materials	Produced with softwood (Spruce / Pine / Fir) with hardwood (Birch , Chestnut) and using recycled wood based raw materials	Produced with Poplar, Beech, Spruce/Pine/Fir/ and Redwood	Produced with Poplar, Beech, Spruce/Pine/Fir/ and Redwood
Adhesive	Urea Formaldehyde	Urea Formaldehyde	Melamine and PVA	Melamine and PVA
Moisture Content	8% + or- 2% moisture	8% + or- 2% moisture	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	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 <small>Note - non standard sizes available to special order</small>	2060 x 840mm 2135 x 915mm 2440 x 915mm 2440 x 1220mm 2740 x 915mm 3300 x 1000mm Tolerance: Height & Width +/- 0.5mm Thickness +/- 0.2mm	2135 x 915mm 2440 x 915mm 2440 x 915mm 2740 x 915mm Tolerance: Height & Width +/- 0.5mm Thickness +/- 0.2mm	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	Has a precision finish meeting the highest requirements and is suitable as a base for use with a wide range of facing materials including delicate veneers, laminates and thin foils.	Has a precision finish meeting the highest requirements and is suitable as a base 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.	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 = 570 ~ 620kgs/m ³	Avg. bulk density = 570 ~ 610kgs/m ³	Avg. bulk density = 505 kg/m ³	Avg. bulk density = 505 kg/m ³
Weight	Nom. 27kgs/m ²	Nom. 34kgs/m ²	Nom. 22kgs/m ²	Nom. 27kgs/m ²
Machining	Suitable for use with standard woodworking tools and machinery	Suitable for use with standard woodworking tools and machinery	Suitable for use with standard woodworking tools and machinery	Suitable for use with standard woodworking tools and machinery

Table 1a - Core Performance Summary

	Core			Thickness (mm)				Fire				App.		Max dB (RW)	PAS24 Security	Thermal Range	Certification			COC			DD171/BS EN 1192	BS EN 13986	Perimeter Framing	Recessed Panels
	Particleboard	Solid Timber	Specialist	35	44	54	57	FD30	FD60	FD90	FD120	Internal	External				Certifire	Q Mark	IFCC	FSC	PEFC	EUTR				
Strebord 44	✓				✓			✓				✓		35	✓			✓		✓	*	✓	✓	E1		
Strebord 54	✓					✓		✓				✓		36	✓			✓		✓	*	✓	✓	E1		
Stredor 44		✓				✓		✓			✓	✓		33	✓			✓		✓		✓	✓	E1		
Stredor 54		✓				✓		✓			✓	✓		37	✓			✓		✓		✓	✓	E1		

*If specified at the point of order

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 leaves be lipped on all four edges. The lipping material must be an approved timber with a minimum density of 640kg/m³. Hardwood for lipping should be straight grained, joinery quality, and free from knots, splits and checks.

Lippings for Stredor 44mm and 54mm blanks should be 6 – 12mm thick all around.

Lippings for Strebord 44mm and 54mm blanks should be 6 – 12mm thick all around, with the head lipping increasing to 18-28mm thick if using a concealed closer.

Lippings should be bonded to the door leaf using a Polyurethane (PU) or Polyurethane-Reactive (PUR) adhesives.

Door may be lipped before or after the facing is applied.

Table 2 - Lipping Details

	Material	Dimensions	Density
Strebord 44	Sapele, Oak, Meranti, Ash, Mahogany, Maple, Utile, Beech, Walnut, Wenge, European Cherry, KSK, Strelip	6-12mm thick (all 4 sides). Head increased to 18-23mm thick if using a concealed overhead closer	640
Strebord 54		6-12mm thick (all 4 sides). Head increased to 18-23mm thick if using a concealed overhead closer	
Stredor 44 Ply		6-12mm thick (all 4 sides)	
Stredor 54 Ply		6-12mm thick (all 4 sides)	

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

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.

3.2 Facings

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

As solid core constructions, Strebord and Stredor provide 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 wood or chipboard 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.

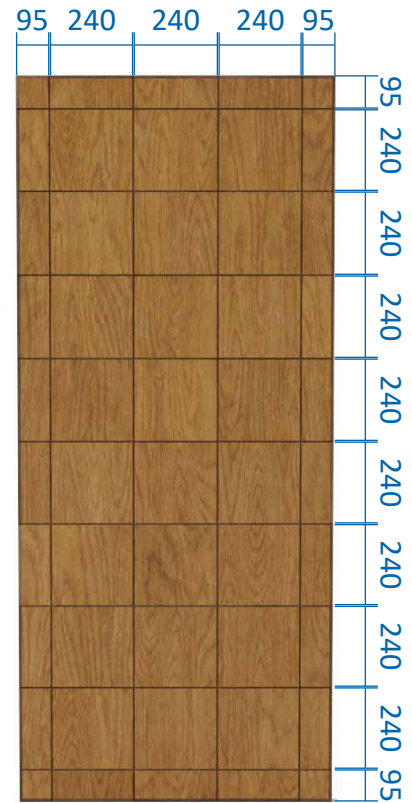
Plastic laminate or PVC facings should not extend over or wrap around the door edges. Metallic facings are not approved.



Table 3 - Facing Options

Approved Facings	Dimension
Paint / Paper Foils	Max 0.5mm
Timber veneers / PVC / Laminates	Max 2mm
Timber substrates / MDF	Max 6mm

3.3 Decorative Grooves



Doors may be face-machined to provide decorative grooves. Decorative grooves may be applied in vertical and/or horizontal orientation, in any configuration that complies with the minimum spacings.

Decorative grooves must be a minimum of 95mm from the edges, with 240mm spacing between the grooves. The measurements are made from the outside of the finished groove. The decorative grooves must not exceed 5mm wide and 4mm deep.

Face grooves require a timber infill prior to the decorative groove being machined. The timber infill must not exceed 10x10mm and must be a hardwood timber species.



Maximum 10x10mm machined from each face for timber infill



Timber infill fitted and calibrated. Infills can be fitted before or after the facing is applied



Maximum 5mm wide and 4mm deep decorative grooves machined into the timber infill

3.4 Decorative Mouldings

Decorative mouldings can be applied to both faces of the leaf. Mouldings can be used to create faux panels or to continue a design theme.

Mouldings must be surface applied to the door leaf without the use of mechanical fixings, using a suitable adhesive.

Mouldings must be a maximum size of 30mm high (proud of the door face) x 50mm wide, and can be of any profile.

No more than 20% of the door area can be covered by the mouldings.

Any timber species can be used, and mouldings may have any finish applied.

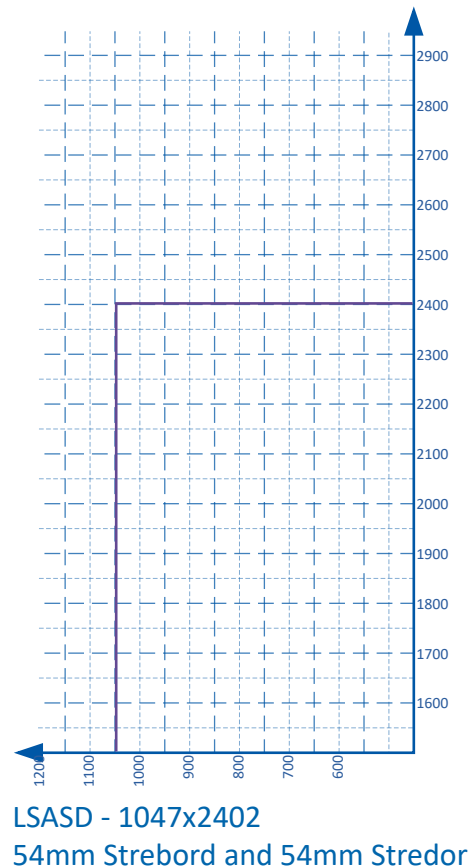
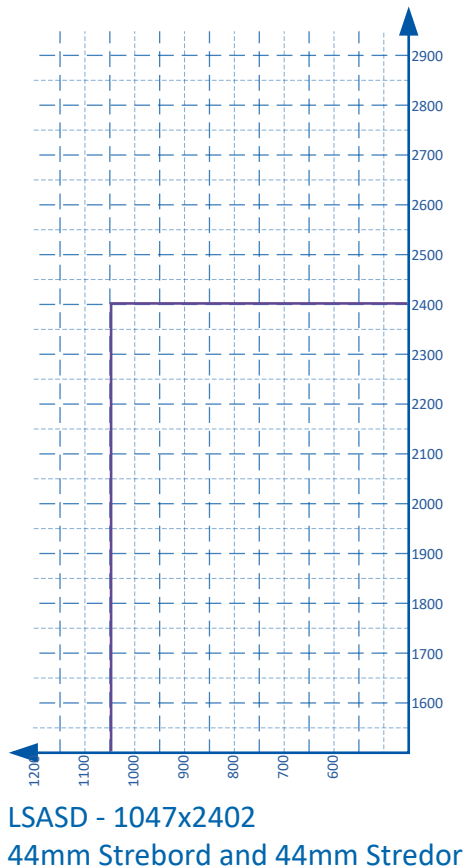


4. Approved Dimensions and Operating Gaps



4.1 Approved Leaf Dimensions

Under the dual scope system, the maximum door leaf size is consistent for Strebord 44 and 54, and Stredor 44 and 54, at 1047mm wide by 2402mm 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 finished floor level*
Alignment	Leaves must not project beyond the face of the frame by more than 1mm

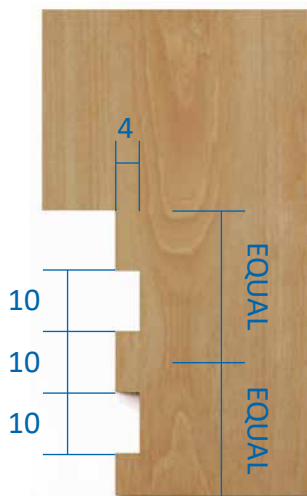
*Subject to dropseal or threshold manufacturer's installation instructions

5. Seals

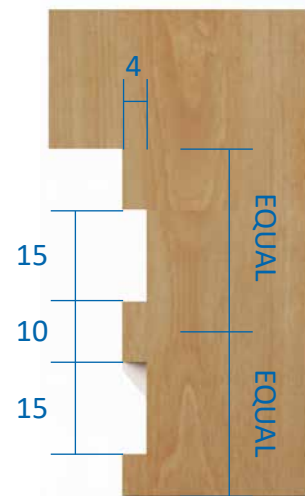


5.1 Intumescent Seals

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 dual scope system has been tested with PVC encapsulated graphite based intumescent seals.



Seal arrangement to suit Strebord 44 and Stredor 44



Seal arrangement to suit Strebord 54 and Stredor 54

Table 5 - Approved Intumescent Seals and Intumescent Seal Arrangements

	Strebord 44	Stredor 44	Strebord 54	Stredor 54
Seal Type	Sealed Tight Solutions Ltd ST104FO		Sealed Tight Solutions Ltd ST154FO	
Size	10x4mm		15x4mm	
Quantity	2			
Position	Fitted 5mm either side of the frame reveal centre line			

[See Appendix A for data sheets](#)

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.

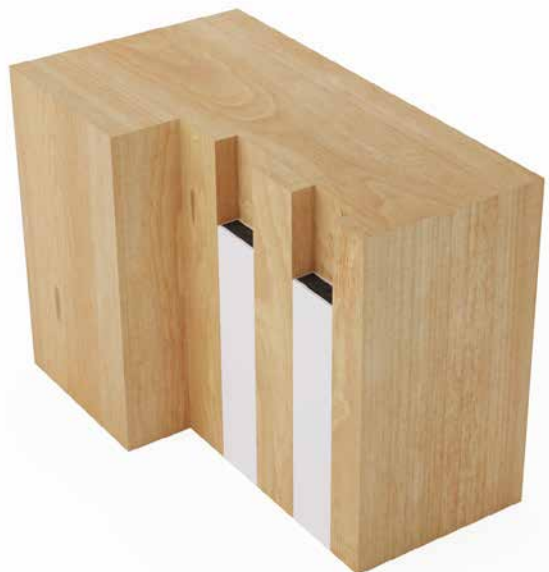
Cut the seal to size before removal of adhesive cover. Peel off the adhesive cover and ensure the adhesive does not contact fingers, or any other contaminants. Place the seal directly into the pre-prepared groove, applying firm, overall pressure to achieve a good bond to the contact area. Do not remove 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	Sealed Tight Solutions Ltd ST1009
Size	11x5mm
Quantity	1
Position	Fitted in swipe or compression mode, to the stop or to the frame reveal

See Appendix A for data sheets

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.



Smoke seal in compression mode



Smoke seal in swipe mode

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 seals and thresholds.

Table 7 - Approved Automatic Drop Seals and Thresholds

Product	Type	Dimension	Location
Sealed Tight Solutions Ltd ST422	Drop Seal	12x20mm	Central in door leaf
Sealed Tight Solutions Ltd STH004	Threshold	62x15mm	Installed to finished floor, as manufacturers instructions
Exitex MXS/FS15	Threshold	62x15mm	Installed to finished floor, as manufacturers instructions
Stormguard Slimline	Threshold	62x15mm	Installed to finished floor, as manufacturers instructions

See Appendix A for data sheets



Dropseal fitted centrally in the door leaf



Dropseal and threshold fitted with manufacturer's tolerances allowed

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.

Suitable tolerances at the bottom of the door should be allowed for a threshold, and the threshold should be 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 two types of 30 minute fire rated, minimum P1A security rated monolithic glass, as described in the table below.

Table 8 - Approved Glass Types

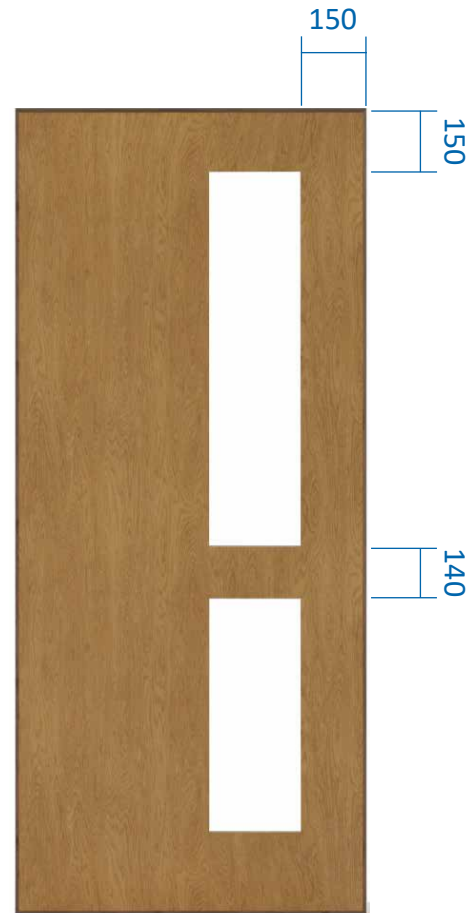
Product	Thickness	Glazing Type	Grade	Safety Rating	Burglar Resistance	Fire	Insulation	dBw
AGC Pyrobelite 9EG	12mm	Single	External	Class 1(B)1	P2A	E30	30	37
Pilkington Pyrostop 30-10	15mm	Single	External	Class 2(B)2	P1A	EI30	30	38

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 140mm between apertures.

The maximum glazed area allowed is 0.6m². This can be in one aperture or split over several apertures, in any configuration that complies with the restrictions on position.



6.3 Beading

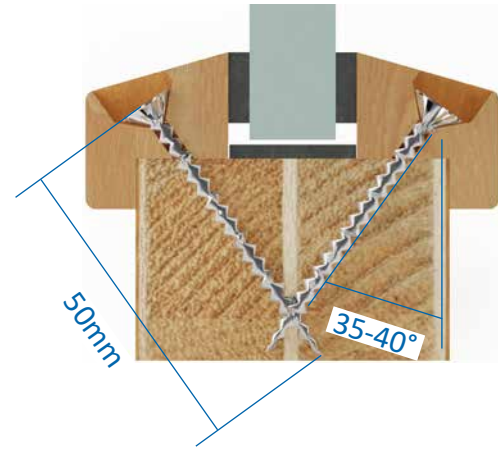
The dual scope system allows for a hardwood splayed bolection bead. The beading material must be a hardwood timber with a minimum density of 640kg/m³. Hardwood for beading should be straight grained, joinery quality, and free from knots split and checks.

Table 9- Glazing Systems

	Core	Glass	Overall Dimensions (WxH)	Bolection (WxH)
Config. 1	Strebord 44	Pyrobelite 9EG	22 x 22mm	8 x 7mm
Config. 2	Strebord 44	Pyrostop 30-10	20.5 x 22mm	8 x 7mm
Config. 3	Strebord 54	Pyrobelite 9EG	27 x 24mm	8 x 7mm
Config. 4	Strebord 54	Pyrostop 30-10	25.5 x 23.5mm	8 x 7mm
Config. 5	Stredor 44 Ply	Pyrobelite 9EG	22 x 22mm	8 x 7mm
Config. 6	Stredor 44 Ply	Pyrostop 30-10	20.5 x 22mm	8 x 7mm
Config. 7	Stredor 54 Ply	Pyrobelite 9EG	27 x 24mm	8 x 7mm
Config. 8	Stredor 54 Ply	Pyrostop 30-10	25.5 x 23.5mm	8 x 7mm

Beadings must be fixed securely to prevent any movement of the glass in the event of a fire.

Beadings should be fixed with 4x50mm screws, fitted a maximum of 50mm from each corner and a maximum of 150mm centres. Screws should be inserted at 35-40 degrees to the vertical.



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.

Where a hardwood glazing liner is required, it must be 6mm thick, made of hardwood of minimum density of 640 kg/m³ and be fixed with PUR/PU adhesive.

The dual scope system allows for the following glazing system options.

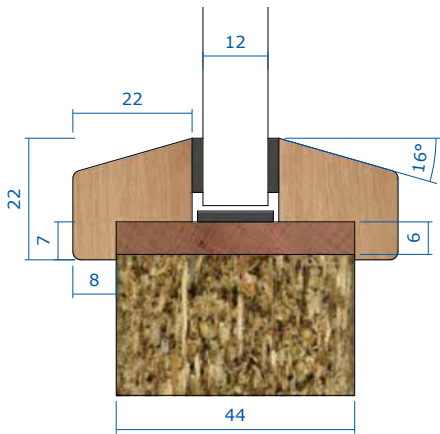
Table 10 - Glazing Systems

	Core	Glass	Hardwood Liner	Glazing Gaskets	Glazing Liner
Config. 1	Strebord 44	Pyrobelite 9EG	Required	Sealed Tight Solutions 105GT-3-DS	Sealed Tight Solutions 14x2GL Full Perimeter
Config. 2	Strebord 44	Pyrostop 30-10	Required	Sealed Tight Solutions 105GT-3-DS	Not required
Config. 3	Strebord 54	Pyrobelite 9EG	Required	Sealed Tight Solutions 105GT-3-DS	Sealed Tight Solutions 14x2GL Full Perimeter
Config. 4	Strebord 54	Pyrostop 30-10	Required	Sealed Tight Solutions 105GT-3-DS	Not required
Config. 5	Stredor 44 Ply	Pyrobelite 9EG	Not required	Sealed Tight Solutions 105GT-3-DS	Sealed Tight Solutions 14x2GL Full Perimeter
Config. 6	Stredor 44 Ply	Pyrostop 30-10	Not required	Sealed Tight Solutions 105GT-3-DS	Not required
Config. 7	Stredor 54 Ply	Pyrobelite 9EG	Not required	Sealed Tight Solutions 105GT-3-DS	Sealed Tight Solutions 14x2GL Full Perimeter
Config. 8	Stredor 54 Ply	Pyrostop 30-10	Not required	Sealed Tight Solutions 105GT-3-DS	Not required

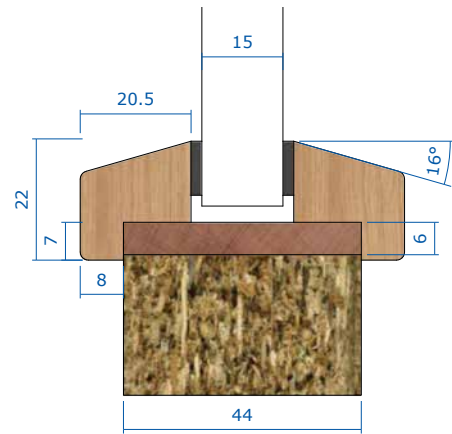
6.5 Vision Panel Machining, Assembly and Fitting

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 Q Mark certificate(s).

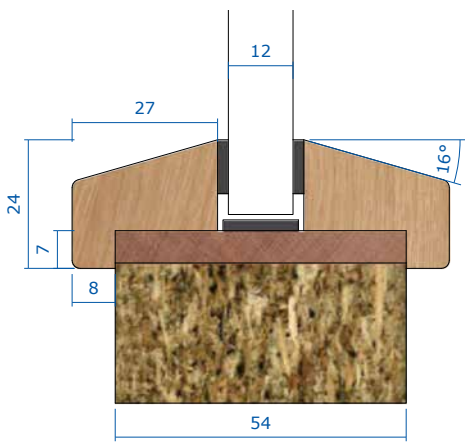
6.6 Approved Glazing Configurations



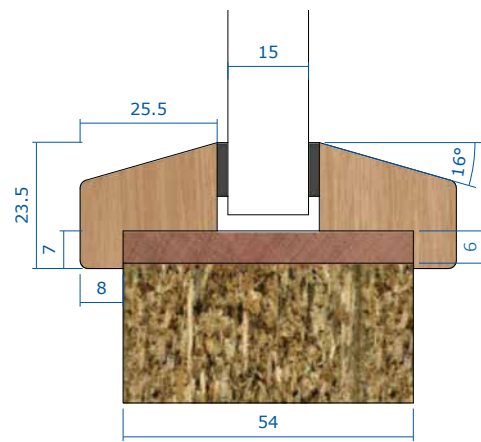
Config. 1



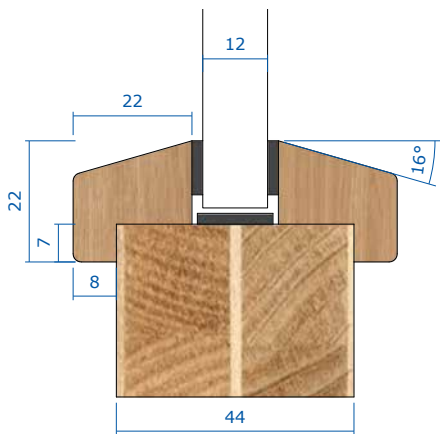
Config. 2



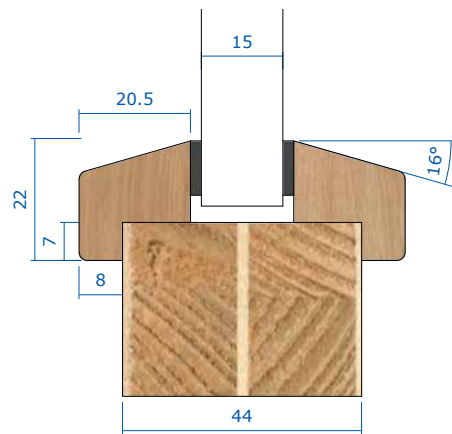
Config. 3



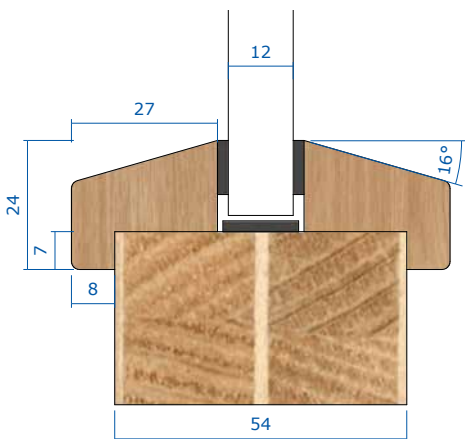
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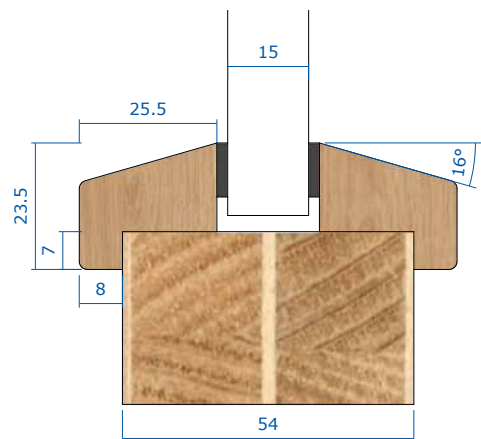
Config. 5



Config. 6



Config. 7



Config. 8

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 a variety of framing materials, with the required minimum density of 510kg/m³. Approved materials are; Redwood, Poplar, Sapele, Oak, Meranti, Ash, Mahogany, Maple, Utile, Beech, Walnut, Wenge, European Cherry, KSK and Streframe E.

Hardwood 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 90mm depth x 40mm thick, with a rebated stop that is 15mm thick.

A 47mm rebate should be allowed for a 44mm door leaf, a 57mm rebate should be allowed for a 54mm door leaf. Where any other thickness is used, allow 3mm on the door leaf thickness.



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 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.

Strebord and Stredor cores provide 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

Strebord and 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 11 - Approved Hinges

Hinge	Quantity	Blade Size	Fixing	Protection
Royde and Tucker H101	3	100x35mm	5no 4.2x30mm screws to leaf 5no 4.2x30mm screws to frame	Sealed Tight Solutions 1mm Raw Graphite (OPTIONAL)
Royde and Tucker H208	3	102x36mm	4no 5x32mm screws to leaf 4no 5x32mm screws to frame	Sealed Tight Solutions 1mm Raw Graphite (OPTIONAL)
Cooke Brothers CB7765 (RH) CB7766 (LH)	3	102x36.5mm	4no 4.2x30mm screws to leaf 4no 4.2x30mm screws to frame	Sealed Tight Solutions 1mm Raw Graphite (OPTIONAL)

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 12 - Hinge Positions	
Top	150- 180mm from top of the leaf to top of the hinge
Middle	Equally spaced between top and bottom hinge
Bottom	180- 250mm 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 13 - Approved Locks

Lock	Length	Backset	Fixing	Position	Protection
ERA Surefire Classic	1634mm	45mm	11no 4x30mm screws to leaf	Min. 900mm	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 the dual scope system, the lock must be fitted with the lock spindle at minimum 900mm 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 13 - 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) DKSFHKL23490 - Right Hand DKSFHKL24273- 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 14 - Approved Cylinders

Cylinder	Dimensions	Fixing	Protection	Configuration
ERA Fortress 3* Euro Profile Cylinder	70 (44mm) / 80mm (54mm)	1no M5 (size varied with cylinder dimension) supplied with cylinder	Not required	Key / Key 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 15 - Approved Handles

Handle	Dimensions	Fixing	Protection
ERA Fab & Fix Balmoral	243x32mm base plate and 120x17mm 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 16 - Approved Door Viewer

Handle	Dimensions	Fixing	Protection
Sealed Tight Solutions STS4008	14mm barrel diameter	Fixed through door leaf with integral bolt system	Sealed Tight Solutions 1mm Raw 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 hinges are permitted under the dual scope system.

Table 17 - Approved Closers

Closer	Core	Fixing	Position	Protection
Rutland ITS 11204 Concealed Overhead Closer	Strebord 44	As supplied with closer	Top of the leaf/head of frame as per manufacturers instructions	Rutland intumescent kit supplied with closer must be fitted
Rutland ITS 11205 Concealed Overhead Closer	Strebord 54	As supplied with closer	Top of the leaf/head of frame as per manufacturers instructions	Rutland intumescent kit supplied with closer must be fitted
Astra 4000 Concealed Jamb Closer	Strebord 44 Strebord 54 Stredor 44 Ply Stredor 54 Ply	As supplied with closer	At the door edge/frame jamb. Mounted between 800-1200mm from the bottom of the door leaf	Providing that rebates are tight to the hardware, no intumescent protection is required
Rutland TS3204 Overhead Face Fixed Closer	Strebord 44 Strebord 54 Stredor 44 Ply Stredor 54 Ply	As supplied with closer	Faced fixed at top of the leaf/head of frame as per manufacturers instructions	Not required
Dorma TS73V Overhead Face Fixed Closer	Strebord 44 Strebord 54 Stredor 44 Ply Stredor 54 Ply	As supplied with closer	Faced fixed at top of the leaf/head of frame as per manufacturers instructions	Not required
Dorma TS71 Overhead Face Fixed Closer	Strebord 44 Strebord 54 Stredor 44 Ply Stredor 54 Ply	As supplied with closer	Faced fixed at top of the leaf/head of frame as per manufacturers instructions	Not required
Briton 1110 Overhead Face Fixed Closer	Strebord 44 Strebord 54 Stredor 44 Ply Stredor 54 Ply	As supplied with closer	Faced fixed at top of the leaf/head of frame as per manufacturers instructions	Not required

[See Appendix A for Data Sheets](#)

Automatic closing devices must either be as tested or components of equal specification that have demonstrated contribution to the required performance of these types of 30 minute doorset designs, when tested to BS 476: Part 22: 1987, BS EN 1634-1 or BS EN 1634-2.

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 Letter Plates

The following Letter Plates are permitted under the dual scope system.

Table 18 - Approved Letter Plates

Letterplate	Dimensions	Position	Protection
Royde and Tucker LP08	250x40mm aperture	Below 1200mm from the bottom of the leaf, minimum 150mm from any edge	Protection integral to unit as supplied
ERA Nu Mail with Nu Mail Shield Security Cowl	264x40mm aperture	Below 1200mm from the bottom of the leaf, minimum 150mm from any edge	Sealed Tight Solutions 40x2mm Graphite OR Fire and Acoustic Seals 100x40x1.3mm Spartan FASGP1013

See Appendix A for Data Sheets

Letterplates should adhere to the same edge margins as glazing. Letterplates must be fitted at 400 - 1200mm above the threshold level. 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 must have a current TS008 Kitemark license. 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 19 - Approved Decorative Hardware

Hardware	Details	Direct Test Evidence
Push Plates / Kick Plates	Steel, stainless steel, or brass. Mechanically fixed at max. 20% of the door leaf area, bonded at max. 30% of the door leaf area. No return on door edges allowed	Generic
Pull Handles	Face fixed or through bolted with max. 1mm clearance on stud	Generic
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. Mechanically fixed with fixings provided	ERA Fab&Fix PVCu/Timber Door Chain 791-65
Numerals	Metal, mechanically fixed with fixings provided	ERA Fab&Fix Door Numerals FFNUM8BC
Knocker	Stainless Steel, mechanically 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.

It is vital that performance doorsets are installed by competent tradesmen and it is strongly recommended that the installer is a member of a recognised quality assurance scheme. Installers should be familiar with the content of BS 8214: 2008 - Code of practice for fire door assemblies.

The dual scope system is approved for installation into most structures, including:

- Cast dense concrete
- Dense concrete blocks or brickwork
- Lightweight concrete
- Lightweight aerated concrete
- Timber stud partition
- Steel stud partition

All structures should provide for secure fixings and in the case of Steel stud partitions, the jamb fixing studs should be generally be back filled with softwood to receive fixings.

Doorsets may be fixed to some propriety steel stud partitions where the partition system has been successfully tested to the required performance with timber doorsets. In this event fixings must comply with the partition suppliers or manufacturer specifications.

9.1 Adjusting Door Leafs

The extent to which door leafs need to be adjusted will be influenced by a number of factors including provisions made at the time of manufacture, environmental conditions affecting moisture content during transport and storage, and quality of installation.

When installed, the operating gaps between the door and the frame and at the meeting stiles of pairs should comply with BS 4787 Part 1: 1980 when measured from the opening face of the door leaf.

It is recommended that the moisture content of the door leaf is checked before attempting adjustment, and that possible shrinkage should be considered in the adjustment.

Additional care is required where doorsets are fitted with smoke seals to ensure smooth operation and to reduce wear on the seal.

9.2 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.

9.3 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 20 - Fire Stopping, Direct Evidence

Product Type	Product	Test Std	Frame Material	Supporting Construction	Architrave	Packers	Test Duration (min)	Method
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.

9.3 Fire Stopping Solutions with Primary Test Evidence Continued



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.

9.4 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.

9.5 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.

9.6 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 40mm.

Steel wood screws are approved for use with timber stud partitions and for use with steel stud partitions that incorporate a timber infill. When fixing to proprietary 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.



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.

The dual scope system is certificated by BM Trada under the Q Mark Fire Door manufacture and Q Mark Enhanced security doorset schemes. BM Trada will supply suitable labelling for the relevant schemes to doorset manufacturers.

10.1 Labelling for Fire Performance

The Q Mark Fire Door Manufacture scheme requires that a series of coloured plugs be fitted to the door set to indicate fire door type, componentry, scope of certification, member details and installation. The outer ring indicates the fire integrity, the inner tree colour indicates the status of manufacture and installation, and the number within the central tree is the manufacturers unique certification number. Typically, doorsets manufactured under the dual scope system will require a plug comprising a yellow surround and silver central tree (FD30 Complete certified factory hung doorset). If the doorset is glazed, it will also require a plug comprising a yellow surround with an orange central tree (FD30 Approved factory fitted glazing).

Plugs should be fitted to the edge of the door leaf in a place that is visible for onsite and ongoing inspections.

For further details, please refer to the BM Trada plug details document in Appendix A.

10.2 Labelling for Security

The Q Mark Enhanced Security scheme requires that a silver self-adhesive label be fitted to the door set to indicate scope of certification, manufacturer, date of manufacture and classification.

Manufacturers must mark each label with the year and quarter in which the doorset was manufactured. The label will be supplied by BM Trada already marked with the doorset classification. In the case of a doorset manufactured under the dual scope system, the classification is 'D'.

The label should be fitted to the edge of the door leaf in a place that is visible for onsite and ongoing inspections.

Appendix A



Appendix A compiles the pertinent pages from data sheets and declarations of performance for the seals, glass and hardware components that are approved under the Dual Scope system.

Please note that all data sheets within Appendix A of this manual are produced by 3rd parties. Whilst every effort has been made to ensure the accuracy of the information given, Falcon Panel Products cannot accept liability for loss or damage arising from the use of information provided in these documents.

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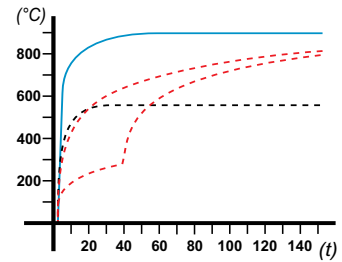
SEALED TIGHT SOLUTIONS

fire smoke acoustic

fire & smoke test data

All STS acoustic data is sourced, supplied and verified by independent, UKAS-accredited test facilities in accordance with all relevant British and European standards.

- Approved Document 'B' (Fire Safety)**
- Approved Document 'M' (Access To and Use of Buildings)**
- BS 9999**
- BS 476: 22 - 1987**
- BS 8214 - 2008**
- BS EN 1634 - 1: 2008**
- BS EN 1634 - 3: 2004**
- BS 476: 31 - 1**



STS INTUMESCENT SEALS

:13

Intumescent Only

Product code	Size*
STS 104FO	10mm x 4mm
STS 154FO	15mm x 4mm
STS 204FO	20mm x 4mm

Intumescent & Smoke (brush)

Product code	Size*
STS 104FS	10mm x 4mm
STS 154FS	15mm x 4mm

Intumescent, Smoke & Acoustic

STS "SBS"

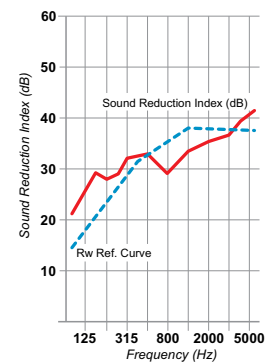
Product code	Size*
STS 104SBS	10mm x 4mm
STS 154SBS	15mm x 4mm

acoustic test data

All STS acoustic data is sourced, supplied and verified by independent, UKAS-accredited test facilities in accordance with all relevant British and European standards.

- Approved Document 'E' (Passage of Sound)**
- Approved Document 'B' (Fire Safety)**
- Approved Document 'M' (Access To and Use of Buildings)**
- Building Bulletin 93 (Acoustic design in schools)***

* See also: "Acoustic Performance Standards for the Priority Schools Building Programme" including: "Technical Guidance Document TGD-021-5 Acoustic Performance in Schools"



Characteristics / features - all products (unless otherwise stated)

Material	Standard lengths*	Colour(s)*	Performance**
Outer box section: PVC	2100mm, 2400mm, 3000mm	● BROWN	FD30 / FD60
Active product: Graphite		● BLACK	** SEE NOTE
Brush (FS only): Nylon		● GREY	
Blade (SBS only): Butyl		○ WHITE	

* Others available on request. MOQ may apply.

** Fire, smoke & acoustic test data available on request.



SEALED TIGHT SOLUTIONS

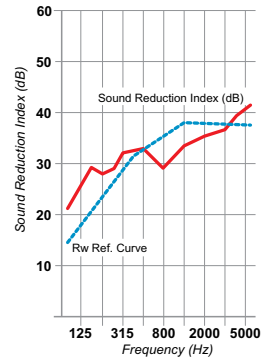
acoustic

acoustic test data

All STS acoustic data is sourced, supplied and verified by independent, UKAS-accredited test facilities in accordance with all relevant British and European standards.

- Approved Document - 'E' (Passage of Sound)
- Approved Document - 'B' (Fire Safety)
- Approved Document - 'M' (Access To and Use of Buildings)
- Building Bulletin - 93 (Acoustic design in schools)*

* See also: "Acoustic Performance Standards for the Priority Schools Building Programme" including: "Technical Guidance Document TGD-021-5 Acoustic Performance in Schools"



STS 1009

Acoustic/smoke perimeter seal

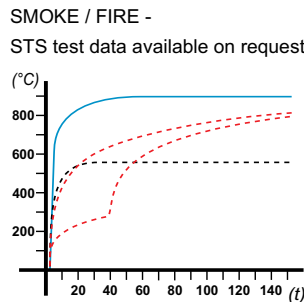
:20

Characteristics / features

Product code	Size / Length	Colour(s)	Material(s)
STS 1009 * "COLOUR/SIZE" See below	2100mm	● B BROWN	NEOPRENE/BUTYL
	2400mm	● BK BLACK	
	2700mm	● CL CLEAR	
	3000mm	● G GREY	
		○ W WHITE	

Characteristics / features

Protects against / Resists	Fitting / installation	Performance
SMOKE	STS 1009 - self-adhesive	ACOUSTIC -
SOUND	STS 1009K* - kerf/push-fit	See STS data sheets :01 - :16
DRAUGHT		
DUST		
INFESTATION		

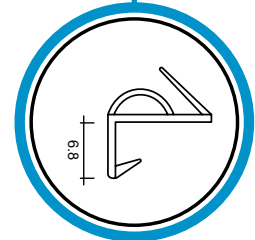
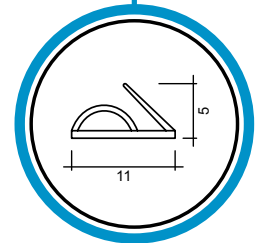


STS 1009

Perimeter acoustic/smoke seal

Available in both kerf-fit and self-adhesive versions, the ST1009 is the most versatile, cost-effective perimeter seal on the market. It offers simple solutions and is specifically designed to have no adverse effects on the operational integrity of the door.

Used in "compression", the ST1009 fits to the active face of the door-stop and thus has a minimal effect on the force required to close the door. The low co-efficient of the material ensures even less resistance to compression and excellent product recovery when the door is opened.





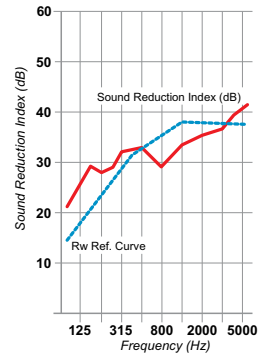
SEALED TIGHT SOLUTIONS

acoustic test data

All STS acoustic data is sourced, supplied and verified by independent, UKAS-accredited test facilities in accordance with all relevant British and European standards.

- Approved Document - 'E' (Passage of Sound)
- Approved Document - 'B' (Fire Safety)
- Approved Document - 'M' (Access To and Use of Buildings)
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* See also: "Acoustic Performance Standards for the Priority Schools Building Programme" including: "Technical Guidance Document TGD-021-5 Acoustic Performance in Schools"



STS 422 Door-bottom seal

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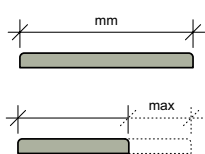
Characteristics / features

Product code	Size / Length	Colour(s)	Performance
STS 422 - "SIZE" See table below	VARIOUS See table below	N / A	ACOUSTIC - See STS data sheets :01 - :16

Characteristics / features

Protects against / Resists	Fitting / installation	Material(s)
FIRE SMOKE SOUND DRAUGHT DUST INFESTATION	See STS data sheet :17	Casing: ALUMINIUM (T60/60) Seal: NEOPRENE/BUTYL Mechanism: STEEL/NYLON

Sizes

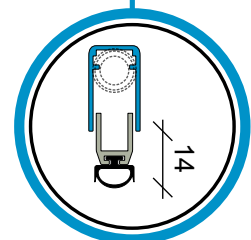
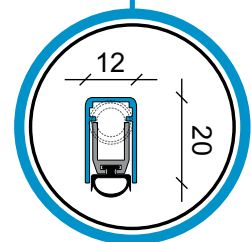


Product size (pre-cut) mm							
330	530	730	830	930	1030	1130	1330
70	200	200	200	200	200	200	200

Product cuts back by (maximum) mm

Please note

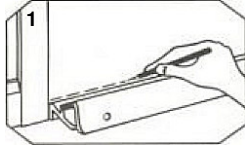
Pre-cut sizes are available at 925mm, 825mm & 725mm to suit standard width doorsets.



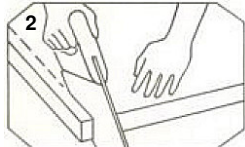
SLIMLINE DOOR SILL

FITTING INSTRUCTIONS

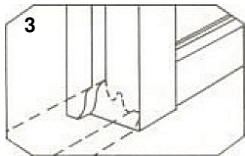
Please read all instructions before beginning fitting of this product



1 If necessary cut the door sill to the correct length i.e. the exact width of the door frame opening. This will normally be a fraction wider than the door itself. Place the back edge of the door sill against the inside face of the door when in its closed position, and mark along its length with as sharp pencil or marking tool.



2 Remove the door from its hinges and saw along a line parallel to the mark and 3mm above it to allow 3mm clearance between the door bottom and the rear upstand of the door sill. Smooth down the sawn surface with sandpaper. For ideal operation gloss paint or varnish the surface to ensure surface is smooth.
(PLEASE NOTE: Any paint/ varnish must dry completely before closing the door on the sill.)



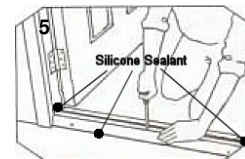
3 Chisel out sufficient from the bottom of the frame on both sides to receive the front of the door sill, shaping the cut to the profile of the front of the door sill (fig 3).



4 Rehang the door and place door sill in position. Ensure that the door opens and closes freely, the front face of the door butts up to the front seal of the door sill all along its length and the door bottom makes contact with the door sill centre seal. Mark through fixing holes for pre-drilling the threshold. If the threshold is not of wood these holes will have to be plugged to accept the screw.

The door sill is now ready for permanently fixing into place. Take a tube of sealant and fill the channel located along the underside of the door sill (see large image below). Ensure that the threshold surface is perfectly dry and apply the sealant.

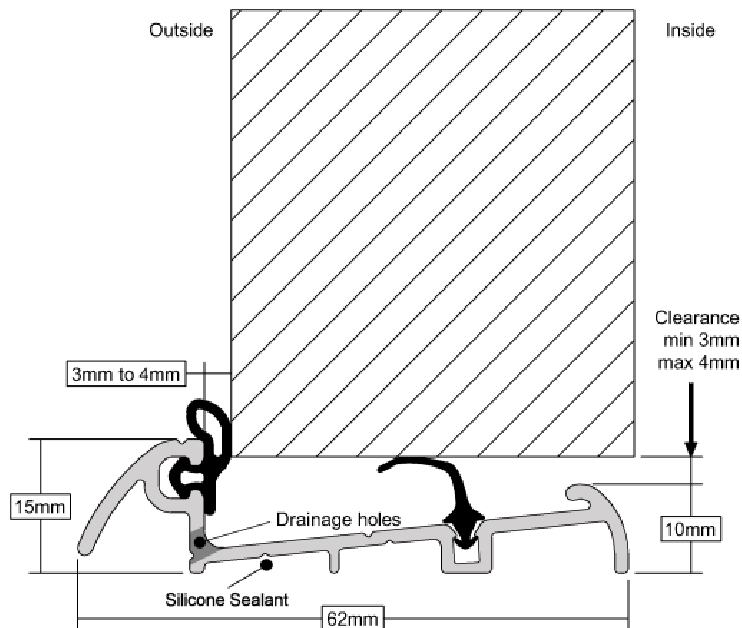
The sealant must be applied to both surfaces, i.e. to the door sill mastic channel and to the floor surface all along their lengths.



5 Bed the door sill firmly into place and close the door to re-check for exact positioning. Screw down all fixing screws. **IMPORTANT: The screws must be bedded in sealant to ensure fixing holes are waterproof.**

Apply extra sealant where the door sill meets the door frame, there must be a watertight seal where the ends of the door sill meet the door frame (figs 4 & 5).



IMPORTANT: Correct fitting may result in the back edge of the Stormguard protruding slightly beyond the inside face of the door.



TOOLS REQUIRED: Pencil. small hacksaw. wood saw. wood chisel. drill. tube of silicone sealant. pliers.

For door sills to work to their maximum performance they must be hermetically sealed and rigidly fastened to the floor to prevent any possibility of water penetration under the door sill.

Table 8 - Pyrobelite 9EG Glass

	CE Marking of Pyrobelite – EN 14449:2005 + AC:2005 Declaration of performances Pyrobelite	
---	--	---

We

AGC Glass Europe
Building Division

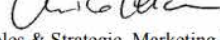
Avenue Jean Monnet 4 - 1348 Louvain-la-Neuve - Belgium
Tel.: +32 - (0) 2 409.30.00 - Fax: +32 - (0) 2 672.44.62

Declare, under his sole responsibility, the following characteristics for the CE Marking of the glass products named **Pyrobelite**, intended to be used in buildings and construction works, following **EN 14449:2005 + AC:2005**

NB 0074 0336 0402 0432 0474 0497 0589 0620 0672 0679 0749 0757 0761 0833 1080 1121 1136 1154 1173 1174 1234 1314 1322 1343 1390 1391 1394 1396 1488 1643 1694 1717 1750 1812 2531

	Pyrobelite characteristics in :	AVCP Systems	Pyrobelite 7	Pyrobelite 9 EG	Pyrobelite 10
1.	Resistance to fire (EN 13501-2)	1	EW30	EI20 / EW30	EW30
2.	Reaction to fire (EN 13501-1)	3, 4	A2 – s1, d0	NPD	A2 – s1, d0
3.	External fire performances	3, 4	NPD	NPD	NPD
4.	Bullet resistance (EN 1063)	1	NPD	NPD	NPD
5.	Explosion resistance (EN 13541)	1	NPD	NPD	NPD
6.	Burglar resistance (EN 356)	3	NPD	P2A	NPD
7.	Pendulum body impact resistance (EN 12600)	3	3B3	1B1	2B2
8.	Resistance against sudden temperature change and temperature differentials	4	NPD	NPD	NPD
9.	Wind, snow, permanent and imposed load resistance	4	NPD	NPD	NPD
10.	Direct airborne sound reduction (EN 12758): R_w (C;Ctr)	3	34 (0;-3)	37 (-1;-2)	37 (-1;-3)
11.	- U-value (EN 673)		5,6	5,5	5,5
	- Normal emissivity ϵ_n coated side (EN 12898)	3	NPD	NPD	NPD
12.	Light transmission/reflection (EN 410): $\tau_v / \rho_v / \rho'_v$	3	88 / 8 / 8	86 / 8 / 8	87 / 8 / 8
13.	- Solar transmission/reflection (EN 410): $\tau_e / \rho_e / \rho'_e$		74 / 7 / 7	63 / 6 / 6	70 / 7 / 7
	- Solar factor: g	3	79	70	76
14.	Durability	3	PASS	PASS	PASS

Louvain-la-Neuve
24th of October 2017

E. Ceriani 
Primary Sales & Strategic, Marketing Director, Building

156

Declaration of Performance
CE DOP 10/215228/1


The undersigned, representing the following:

Company placing on the market:
NSG Group European Technical Centre Hall Lane Lathom Nr Ormskirk Lancashire L40 5UF

Manufacturing Plant:
Pilkington Deutschland AG, Gelsenkirchen, Germany (Addresses of other sites kept on record)

Herewith declare that the following product:
Pilkington **Pyrostop**@ 30-10, 15 mm

is in conformity with the provisions of the following EU Regulation when installed in accordance with the installation instructions contained in the product documentation:
Regulation (EU) No 305/2011 Construction Products Regulation.

The following product standard referenced below has been applied:
EN 14449: 2005 + AC:2005 Laminated safety glass, intended to be used in buildings and construction works

Declared Performance

Essential Characteristics	AVCP Systems	Performance
Resistance to Fire	1	EI30
Reaction to Fire	3,4	NPD
External Fire Performance	3,4	NPD
Bullet Resistance	1	NPD
Explosion Resistance	1	NPD
Burglar Resistance	3	P1A
Pendulum Body Impact Resistance	3	2(B)2
Resistance Against Sudden Temperature Changes and Temperature Differentials	4	40 K
Wind, Snow, Permanent and Imposed Load Resistance	4	NPD
Direct Airborne Sound Insulation	3	38 (0; -2) dB
Thermal Properties	3	5.1 W/m ² K
Radiation Properties		
Light Transmittance / Reflectance	3	0.87/0.08/0.08
Solar Transmittance / Reflectance	3	0.69/0.07/0.07
g Value	3	0.75
Durability	3,4	Pass

Notified production control certification body number
1121, 0432, 0757, 1750, 1234, 1004, 1680, 2509, 1314, 1488, 1812, 0833

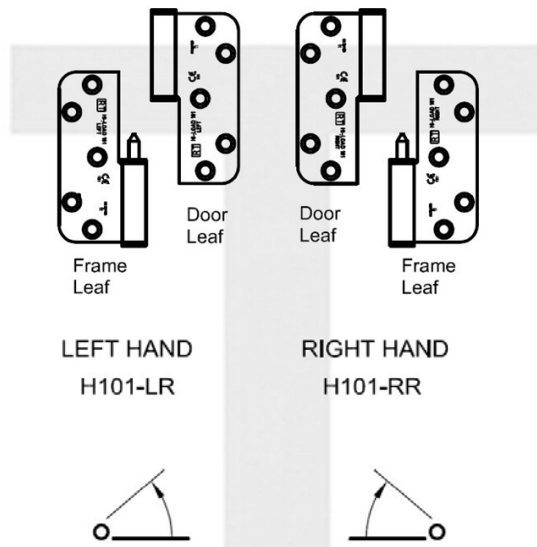
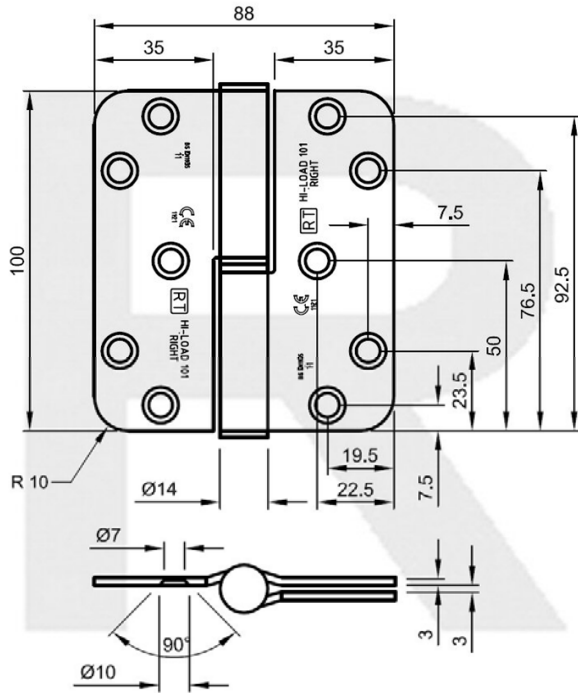


Martin Neifer
Operations Director Fire Protection Glass
01/07/2013



Nils Brinkmann
Commercial Director Fire Protection Glass
01/07/2013

Royde & Tucker H101 HI-LOAD lift-off hinge



BS EN 1935



- 100x88x3mm Lift-off hinge
- Maximum adjusted door weight 80kg
- To BS EN 1935 Grade 11
- Minimum door thickness 44mm
- Maintenance free, guaranteed for 25 years
- CE Certificate No. 1121-CPR-AC0029 (SS)
- CE Certificate No. 1121-CPR-AC0020 (MS)
- Suitable for use on fire doors: Certifire approved – CF209
- To be fitted with HP102 intumescent hinge pads, if being installed on fire doors
- c/w metric 5 x 32mm wood screws
- Unless stated Mild steel substrate, Grade 304 or 316 stainless steel available

Royde & Tucker Ltd
 Bilton Road
 Cadwell lane
 Hitchin
 SG4 0SB
 Tel: 01462 444444
 Fax: 01462 444433
 www.ratman.co.uk
 e-mail: sales@ratman.co.uk



Multi-Point Locks For Timber/ Composite

EXTERNAL DOORS

SureFire Classic 2 Hook Multi-Point Door Lock

Ordering Details

KEY

To select the required 2 hook MPL part number, use the below to determine:	B Backset	OL Overall Length
	FB Face Bar	TH Top Hook
	DL Datum Line	BH Bottom Hook

1. The face bar and backset
2. The overall length of the unit
3. The position of the hooks

SQUARE END

B	FB	DL	OL	TH	BH	Part No.
35	20	977	2137	715	680	DLSF-35-604-85
45	"	"	"	"	"	DLSF-45-604-85

ROUND END

B	FB	DL	OL	TH	BH	Part No.
35	20	788	1634	715	680	DLSF-35-609-85
45	"	"	"	"	"	DLSF-45-609-85

Technical Information

Corrosion resistance

Meets the requirements of BS EN 1670:2007 Grade 4 (240 hours)

Operation

Endurance tested in excess of 150,000 cycles

Performance

Tested to meet the requirements of PAS 24 as part of a compliant door set. Fire test to BS 476 FD30 and FD60, and EN 1634 FD30.

*Suitable for fire door applications in appropriate door assemblies, subject to approval by an accredited and authorised third party organisation.

Material Specification

Lock case:	BZP CR3 Passivate + Seal
Face bar:	Stainless Steel 430
Hooks:	Aluminium anodised 2A50-T6
Deadbolt:	Zinc CR3 Passivate + Seal, PTFE insert
Latch Bolts:	Stainless Steel 304
Trigger:	Stainless Steel
Keeps:	Zinc with Brass roller

Maintenance

All moving parts should be lightly lubricated using a light non-acidic mineral oil (e.g. "3 in 1") twice per year and the surface cleaned with a soft damp cloth. The product may need to be adjusted and fixings tightened to ensure a satisfactory operation.

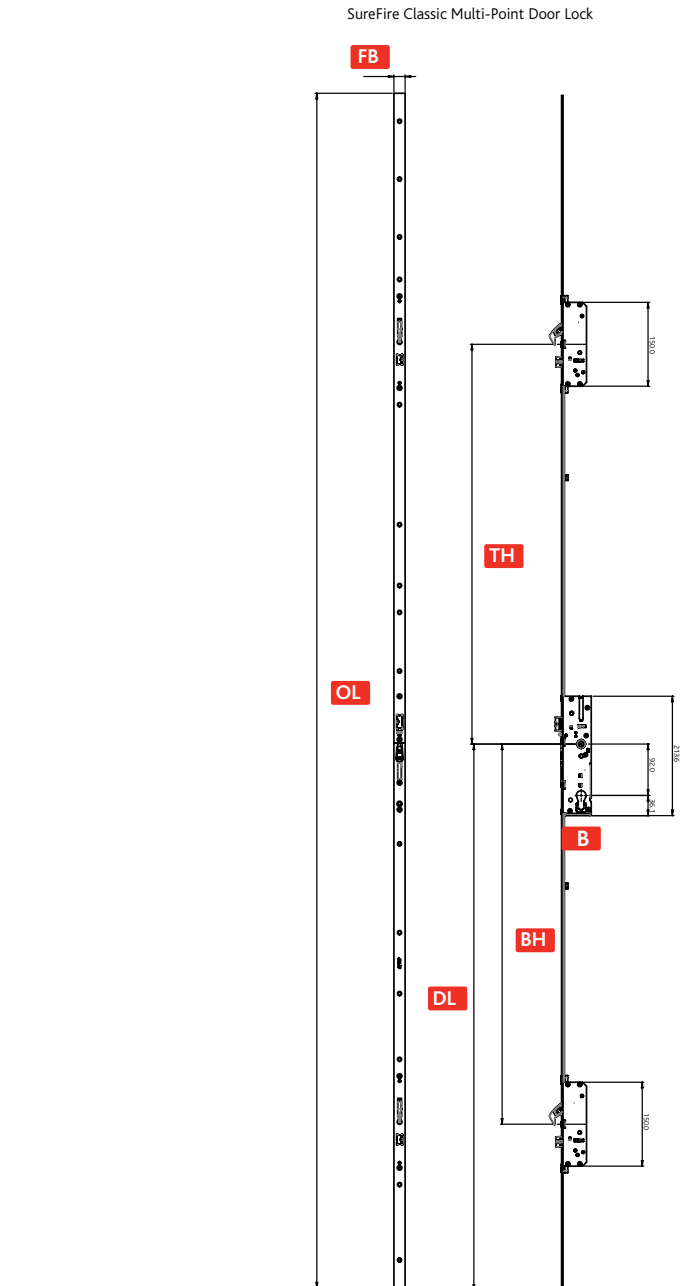


Diagram illustrates product in locked position. Not to scale. All dimensions are in mm and are nominal. ERA reserves the right to change specification without notice. It is the responsibility of the door manufacturer to ensure that the finished product meets any required safety and performance specification.

Packaging

Locks: 5 locks per box

Keeps: 50 keeps per box

ERA Door Cylinders

FORTRESS

EXTERNAL DOORS

British Standard 3 Star Anti Snap Euro Profile Cylinder

Ordering Details

Single

Dimensions			Finish	Part No.
A	B	C		
37.5	10	47.5	Dual	BS-FOR-3510-DC-1K
41.5	10	51.5	Dual	BS-FOR-4010-DC-1K
45	10	55	Dual	BS-FOR-4510-DC-1K
50	10	60	Dual	BS-FOR-5010-DC-1K
55	10	65	Dual	BS-FOR-5510-DC-1K
60	10	70	Dual	BS-FOR-6010-DC-1K

Double

Dimensions			Finish	Part No.
A	B	C		
37.5	37.5	75	Dual	BS-FOR-3535-DC-1K
37.5	37.5	75	Dual	BS-FOR-3535-DC-TP2K
37.5	41.5	79	Dual	BS-FOR-3540-DC-1K
37.5	45	82.5	Dual	BS-FOR-3545-DC-1K
41.5	41.5	83	Dual	BS-FOR-4040-DC-1K
41.5	41.5	83	Dual	BS-FOR-4040-DC-TP2K
41.5	45	86.5	Dual	BS-FOR-4045-DC-1K
41.5	45	86.5	Dual	BS-FOR-4045-DC-TP2K
41.5	50	91.5	Dual	BS-FOR-4050-DC-1K
41.5	55	96.5	Dual	BS-FOR-4055-DC-1K
41.5	55	96.5	Dual	BS-FOR-4055-DC-TP2K
41.5	60	101.5	Dual	BS-FOR-4060-DC-1K
45	45	90	Dual	BS-FOR-4545-DC-1K
45	45	90	Dual	BS-FOR-4545-DC-TP2K
45	50	95	Dual	BS-FOR-4550-DC-1K
45	50	95	Dual	BS-FOR-4550-DC-TP2K
45	55	100	Dual	BS-FOR-4555-DC-1K
45	55	100	Dual	BS-FOR-4555-DC-TP2K
50	50	100	Dual	BS-FOR-5050-DC-1K
50	50	100	Dual	BS-FOR-5050-DC-TP2K

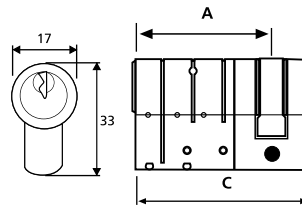
Double Thumbturn

Dimensions			Finish	Part No.
A	B	C		
37.5	37.5	75	Dual	BS-FOR-T3535-DC-1K
37.5	37.5	75	Dual	BS-FOR-T3535-DC-TP2K
37.5	41.5	79	Dual	BS-FOR-T3540-DC-1K
37.5	45	82.5	Dual	BS-FOR-T3545-DC-1K
41.5	41.5	83	Dual	BS-FOR-T4040-DC-1K
41.5	45	86.5	Dual	BS-FOR-T4045-DC-1K
41.5	50	91.5	Dual	BS-FOR-T4050-DC-1K
41.5	55	96.5	Dual	BS-FOR-T4055-DC-1K
45	45	90	Dual	BS-FOR-T4545-DC-1K
45	45	90	Dual	BS-FOR-T4545-DC-TP2K
45	50	95	Dual	BS-FOR-T4550-DC-1K
45	50	95	Dual	BS-FOR-T4550-DC-TP2K
50	45	95	Dual	BS-FOR-T5045-DC-1K
50	45	95	Dual	BS-FOR-T5045-DC-TP2K
50	50	100	Dual	BS-FOR-T5050-DC-1K
50	50	100	Dual	BS-FOR-T5050-DC-TP2K
55	45	100	Dual	BS-FOR-T5545-DC-1K

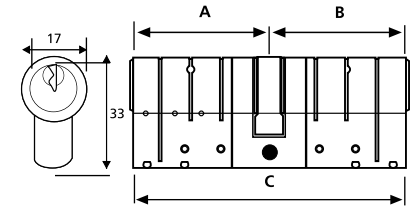
Key Blank

BS 3* Fortress Cylinder Key Blank	BS-FOR-KEYBLANK-K
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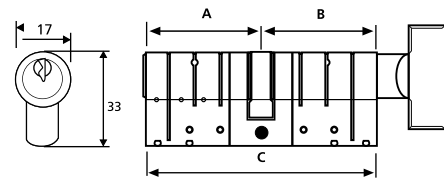
Fortress 3 Star BS Single Euro Profile Cylinder



Fortress 3 Star BS Double Euro Profile Cylinder



Fortress 3 Star BS Double Euro Profile Thumbturn Cylinder



All dimensions are in mm and are nominal.
ERA reserves the right to change specification without notice.
It is the responsibility of the door manufacturer to ensure that the finished product meets any required safety and performance specification.

Maintenance

Wipe the surface periodically with a soft cloth to remove excess grease or moisture.

Packaging

Fortress 3 Star Cylinder
1 cylinder per box, 10 per outer box

Technical Information

Corrosion resistance

Meets the requirements of BS EN 1670:2007 Grade 3

Operation

Endurance tested in excess of 100,000 cycles

Performance

Independently tested to meet the requirements of BS EN 1303:2005 and accredited to TS007 3*. BSI Kitemark License No. 553031. Designed to meet the requirements of PAS 24 in a compliant door set.
Fire test to BS 476 FD30 and FD60, and EN 1634 FD30.

Material Specification

Cylinder:	Brass
Cam:	Sintered Steel
Pins:	2 hardened pins, anti bump anti pick and anti-drill
Key:	Nickel plated brass
Screw:	M5 x 45mm and M5 x 70mm nickel plated screws
Finish:	Satin nickel plated brass with brass keyhole



Balmoral Inline Lever Lever

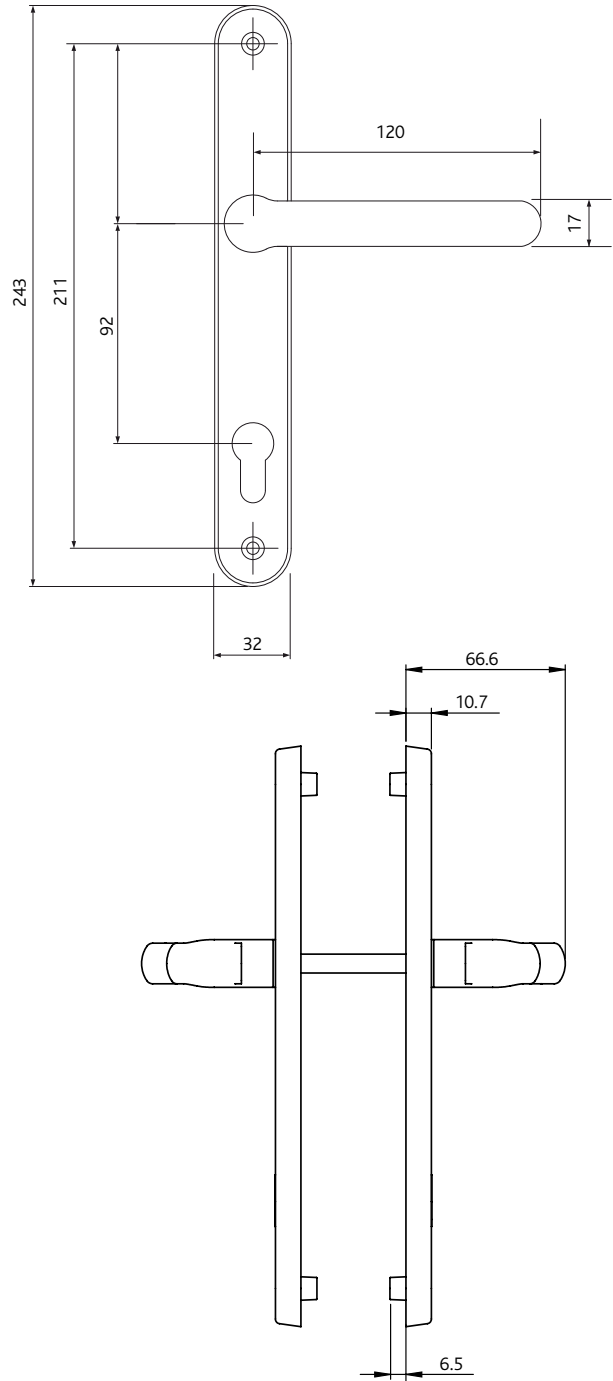
Ordering Details	
Product	
Balmoral Inline Lever Lever	
Finish	Part No.
Hardex Chrome	1D001
Hardex Satin	1D002
Hardex Bronze	1D003
Hardex Gold	1D005
Hardex Graphite	1D008
Hardex Pewter	1D009
Antique Black	1D006
White	1A000
Black	1A001
Silver	1A002

For additional part numbers please contact our sales office.

Technical Information	
Corrosion resistance	Meets the requirements of BS EN 1670:2007 Grade 5 (480 hours)
Operation	Endurance tested in excess of 200,000 cycles
Performance	Tested to meet the requirements of PAS 24 as part of a compliant door set. 30 minute fire test to BS 476: Part 20/22: 1987
Material Specification	
Handle Grip and Backplate:	High quality Zinc for all Hardex finishes and Antique Black. High quality Aluminium for White, Black and Silver finishes
Coatings:	Hardex Chrome, Hardex Satin, Hardex Bronze, Hardex Gold, Hardex Graphite, Hardex Pewter, Antique Black, White, Black and Silver
Spindle / Screws:	Machine screws with colour coordinated heads for handle. 60mm - 70mm profiles (1 x 8mm x 120mm spindle; 2 x M5 x 70mm and 2x M5 x 80mm screws)
Cylinder:	Euro Cylinder, 92mm PZ

Maintenance	
For continued protection of the quality finish and appearance, Fab&Fix advise routine cleaning of all our external hardware. Moving parts should also be lightly lubricated at least twice a year. This procedure is particularly essential if products are used within a 25-mile radius of coastal areas or close proximity to building sites or large industrial areas, where more frequent cleaning may be required to prevent the accumulation of corrosive contaminants.	

Packaging	
Handles	Individually bagged with screws, spindle and care instructions. 15 handles in an outer box.



All dimensions are in mm and are nominal.
Fab&Fix reserves the right to change specification without notice
It is the responsibility of the door manufacturer to ensure that the finished product meets any required safety and performance specification.



Specification Overview



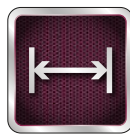
Fire Tested to EN1634



Max Door Weight up to 80kg



Opening Angle 110°



Max Door Width 1100mm



Min Door Thickness 44mm



Adjustable Closing Speed



11204250CP R071118



Universal Application



Power Size EN2-4



Adjustable Latch Speed



Guarantee



Min Door 835mm

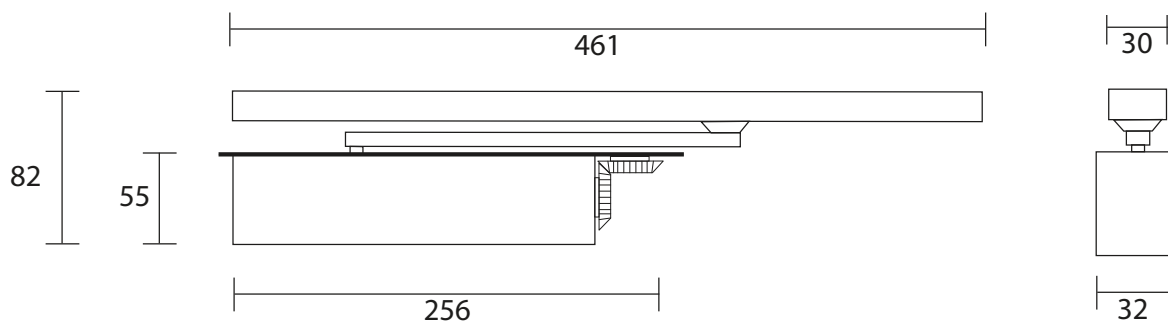


Rut Lock



IFCC 1417

All dimensions shown are in mm.



For fitting instructions see website - www.rutlanduk.co.uk

Technical Information

BS EN 1154 Classification

ITS.11204 door closers have been independently tested to conform with the EN 1154 performance standard. They are CE marked and classified as follows:

3	8	$\frac{2}{4}$	1	1	3
---	---	---------------	---	---	---

BS EN 1634 Fire Test

ITS.11204 closers have been tested to EN 1634 requirements up to 60 minutes– please specify intumescent gasket IP.114. Test certificates are available on request.

FIRE DOORS

Intumescent **MUST** be used on fire doors – please enquire for latest testing details.

ITT Timber Leaf & Timber Frame:

May be fitted in previously tested single-acting, latched or unlatched, intumescent sealed timber door and timber frame assemblies.

IMM & MM Timber Leaf & Timber Frame:

May be fitted in previously tested single-acting steel door assemblies, if required in latched or unlatched un-insulating or insulating steel door leaf and steel frame assemblies.

Options

- Mechanical hold open slide rail (*Not to be used on fire doors. Not covered by CE*)
- Anti-Ligature
- For uninsulated doors see code in components list for intumescent kit



Specification Overview



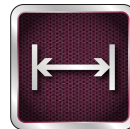
Fire Tested to EN1634



Max Door Weight up to 110kg



Opening Angle 120°



Max Door Width 1250mm



Min Door Thickness 54mm



Adjustable Closing Speed



Universal Application



Power Size EN2-5



Adjustable Latch Speed



Guarantee



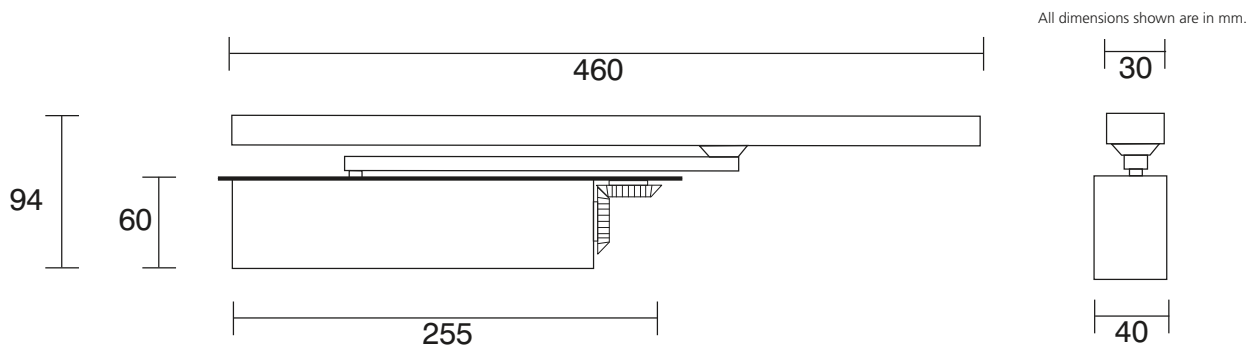
Rut Lock



Min Door 835mm



IFCC 1442



For fitting instructions see website - www.rutlanduk.co.uk

Technical Information

BS EN 1154 Classification

ITS.11205 door closers have been independently tested to conform with the EN 1154 performance standard. They are CE marked and classified as follows:

3 8 $\frac{5}{2}$ 1 1 3

BS EN 1634 Fire Test

ITS.11205 closers have been tested to EN 1634 requirements up to 60 minutes – please specify intumescent gasket IP.115. Test certificates are available on request.

UL Listed

The ITS.11205 has been certified and labelled to the Underwriters' Laboratories (UL) testing, inspection, certification, auditing and validation.

Fire Doors

Intumescent **MUST** be used on fire doors – please enquire for latest testing details.

ITT Timber Leaf & Timber Frame

May be fitted in previously tested single-acting, latched or unlatched, intumescent sealed timber door and timber frame doorsets or assemblies.

Options

- Mechanical hold open slide rail (*Not to be used on fire doors*) (not covered by CE)
- EN2 (not covered by CE)
- Cushion stop
- Anti-Ligature
- For uninsulated doors see code in components list for intumescent kit

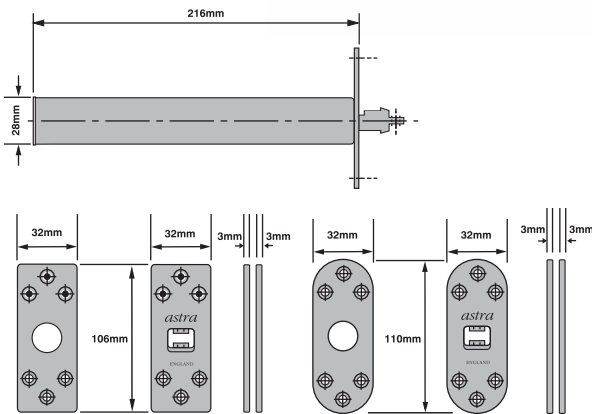
4000 Series

Following market research and feedback gathered from a combination of architects, interior designers, architectural ironmongers, doorset manufacturers and joiners it became apparent that there was a demand in the market for a jamb mounted concealed closer that was efficient, fully concealed but also easier to install compared to the current products available. Our Research and Development Department were tasked to produce a concealed jamb mounted door control that was fully concealed when the door is closed, seamless to fit in to the doorset at the factory stage through CNC machines, easy to install on site, and fully adjustable once the closer is installed.

The UK-manufactured 4000 Series includes three different power size door closers each with easily adjustable speed: the 4001, 4002 and 4003. It is manufactured with a single spring and hydraulic unit, that offers a higher efficiency rate than a typical overhead closer so it does not require any adjustable latching. The 4000 Series does not need to be removed to adjust the closing speed, this can be done with a flat headed screwdriver with the door closer installed.



4000 Series Dimensions



An ultra-compact high efficiency design makes the Astra 4000 Series the perfect choice for both new-build and refurbishment projects.

They are ideally suited to a wide variety of applications including hotel bedrooms, office doors, residential dwellings, student accommodation and any setting with a reduced ligature requirement.

The Astra 4000 Series door closers are tested and certified to all British and international performance standards and programmes, including FD30 & FD60 fire tests conducted in accordance with BS EN1634-1:2000 (test report CHILT/RF06118). It will allow specifiers to meet PAS 24 standards for residential entrance doors since it is Secured by Design (SBD) accredited. Astra 4000 Series door closers have also been successfully included in tests in both Halspan and Streboard core 44mm and 54mm doors and has successfully completed in house-testing to over 500,000 cycles.



Specification Overview



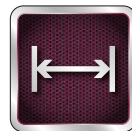
Fire Tested to EN1634 & UL 10C



Max Door Weight 80kg



Opening Angle 180°



Max Door Width 930mm



Adjustable Closing Speed



Rut Lock



Universal Application



Power Size EN3



Adjustable Latch Speed



Guarantee

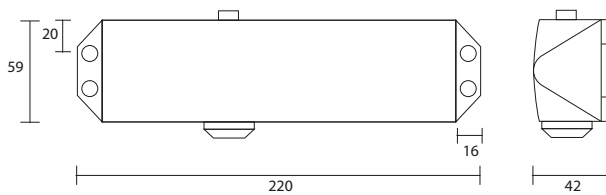


32040000 CPR101218



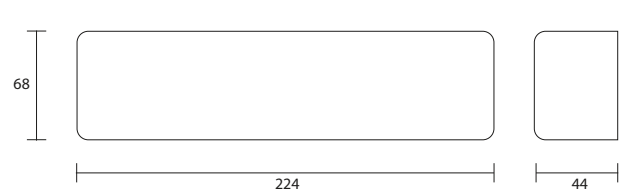
1432

Mechanism



Cover

All dimensions shown are in mm.



For fitting instructions see website - www.rutlanduk.co.uk

Technical Information

BS EN 1154 Classification

TS.3204 door closers have been independently tested to conform with the EN 1154 performance standard. They are CE marked and classified as follows:

Standard Arm Fig 1.

4	8	3	3	1	3
---	---	---	---	---	---

Parallel Arm Fig 66.

3	8	3	1	1	3
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BS EN 1634 Fire Test

TS.3204 closers have been tested to EN 1634 for 30, 60 and 120 minute door sets. Test certificates are available on request.

UL Listed

The TS.3204 has been certified and labelled to the Underwriters' Laboratories (UL) testing, inspection, certification, auditing and validation.

Options

- Hold-Open arm (Not to be used on fire doors)
 - Hollow door fixing pack
 - Drop plate
- Options not covered by CE.*

Other Benefits

- Silver and Plated finishes

Easy to fix, and even easier to adjust

Outstanding versatility. Quality assured.

Tested to EN 1154.

The classic dormakaba TS 73 range has matured into the world's most specified hydraulic door closer for all types of interior doors. Its pedigree has been proven by the countless imitations that have appeared over the years.

With the introduction of the TS 73 V, now more than ever, this technically superior closer has more features and has become simpler to specify and install.

The spring strength of the closer can now be easily and steplessly adjusted by means of an allen key, ensuring optimum performance in every situation.

Certified to ISO 9001.

Plus points...

...for the trade

- The TS73 V covers the application and spring strength requirements of most standard interior doors (parallel arm bracket included with closer).
- Non-standard door and frame details are no problem with our wide range of fixing brackets and accessories.
- Stockholding requirements are reduced to a minimum without affecting service levels.

...for the installer

- Quick and easy to fix – completely straightforward.
- Closing speed, latching speed and spring strength all simply adjusted with common handtools.
- Each boxed unit comes complete with fixings for timber and a parallel arm conversion bracket.

...for the specifier/architect

- Compact dimensions in a classic shape.
- Versatile in application, with a wide range of finishes.
- Designed to cope with most door and frame details, and backed by a wide range of accessories.

...for the user

- Peace of mind – a closer that works well and goes on working year after year.
- High mechanical efficiency, low sensitivity to temperature change, wide opening angle, pressure relief valve to protect hydraulics from abuse.
- Optimum wall and door protection thanks to "thinking" backcheck.

Data and features		TS73 V	TS73 V BC DC
Closing force adjustable	Size	EN 2-4	EN 1-4
Standard doors ¹⁾	≤ 1100 mm	●	●
External doors, opening outwards ¹⁾		-	-
Fire and smoke check doors ¹⁾	≤ 1100 mm	●	●
Non-handed		●	●
Arm	Standard	●	●
Closing force adjustable by means of setting screw		●	●
Closing speed adjustable at 2 separate valves	180° – 15° 15° – 0°	● ●	● ●
Backcheck	self-regulating adjustable at valve	● ●	● ●
Adjustable latching action	by arm	●	●
Delayed action		-	●
Hold-open		○	○
Weight in kg		1.3	1.3
Dimensions in mm	Length Depth Height	225 40 60	245 46 60
Door closer tested to EN 1154		●	●
CE mark for construction products		●	●

2 Yes – No " Option

¹⁾ For high and heavy doors, external doors, and for doors required to close against high wind pressure, we recommend dormakaba TS 83.



The TS 73 V complies with the requirements and/or recommendations of the following: CERTIFIRE approved for fire doors ITT 120; MM/IMM 240; Ref. CF 117

The inexpensive solution for standard doors – With quality assured

With the TS 71, dormakaba has developed a door closer that rounds off its Classic Line series perfectly. The ease and speed with which it can be fixed, the fact that its spring strength can be so easily adapted to the door size – by simply turning round the hinge plate – and its competitive price should make it the ideal choice for your application. Certified to ISO 9001

Benefits

For the trade

- Increased stocking flexibility thanks to use of the standard ClassicLine series arm.
- Complements the ClassicLine series as a competitive model for standard doors.

For the installer

- Non-handed design.
- Easy and quick to fix.

For the architect/specifier

- Competitive and reliable.
- Compact construction combined with classic design.

For the user

- Constant closing action virtually unaffected by temperature fluctuations.
- Optimum closing speed adjustment with two regulating valves.
- Reliable closing with adjustable latching action.



The dormakaba TS 71 is CERTIFIRE approved (Certificate No. CF 268) for door types ITT 120 and MM/IMM 240

Standard and optional functions

- 1 Closing speed adjustable in the range 180° – 15°.
- 2 Closing speed adjustable in the range 15° – 0°.
- 3 Latching action.
- 4 Hold-open range for model with hold-open arm (optional extra).

Closing force settings

Door width	Setting
≤ 950	EN 3
≤ 1100	EN 4

With the TS 71, the spring strength (size setting) of the closer is adjusted to the door width concerned by merely turning round the hinge plate.

Data and features		TS 71
Spring strength (adjustable by turning round the hinge plate)	Size	EN 3/4
Standard doors ≤ 1100 mm ¹⁾		●
External doors, outward opening		-
Fire doors		●
Non-handed		●
Arm type	Standard	●
	Slide channel	-
Closing speed adjustable at 2 separate valves	180° – 15°	●
	115° – 10°	●
Latching action adjustable (by arm)		●
Backcheck		-
Delayed action		-
Hold-open		○
Weight in kg		1.2
Dimensions in mm	Length	232
	Overall depth	245
	Height	68
Door closer tested and approved to EN 1154		●
CE Marked		●

● = Yes - = No ○ = Option

¹⁾ With parallel-arm fixing, the closing force is approx. 20 Nm (for doors up to 950 mm)

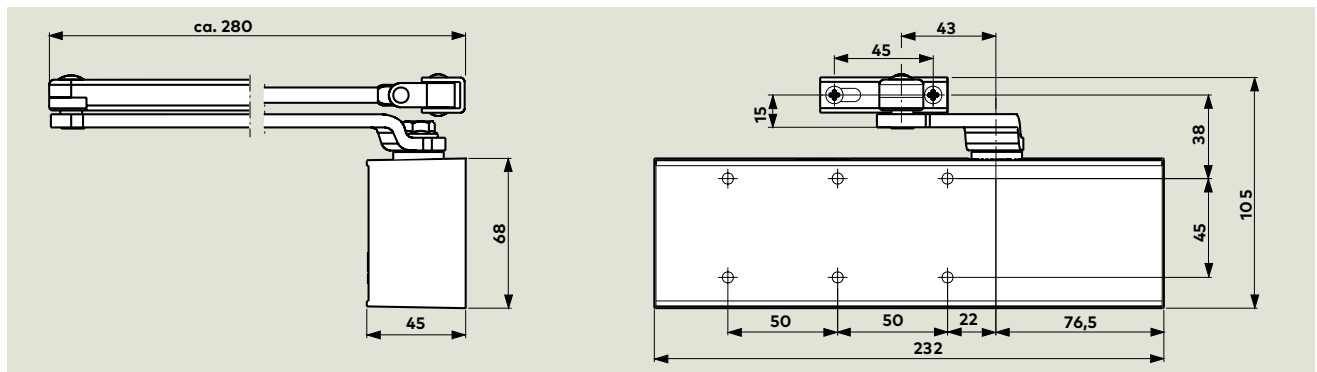
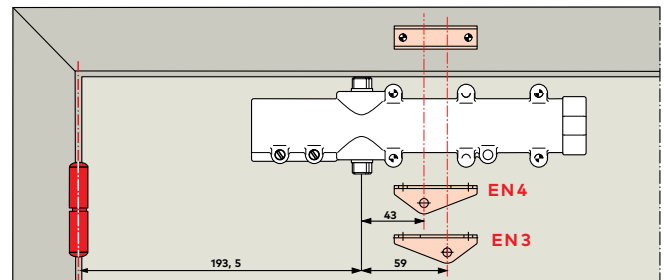
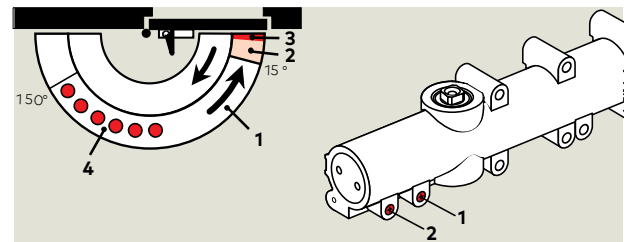


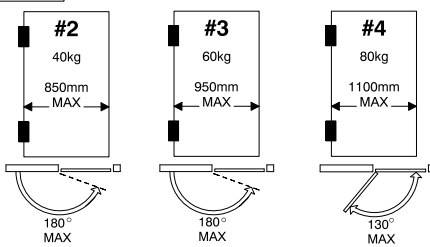
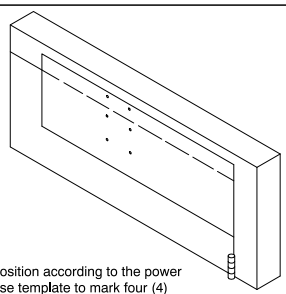
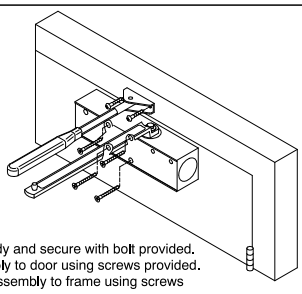
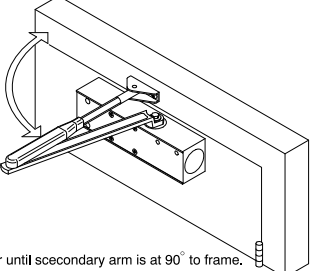
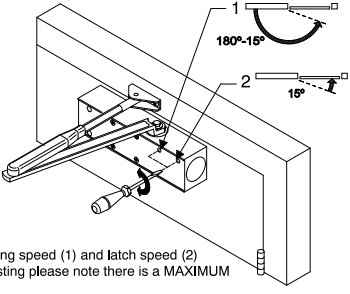
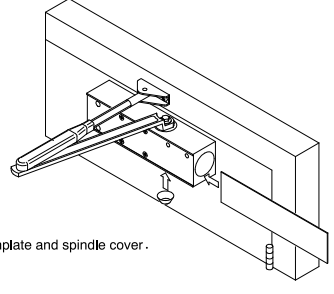

Table 17 - Briton 1110 Face Fixed Closer

TU212 ZINS B337




Power Selectable #2/3/4


Choix de pose du Ferme porte : Force 2 / 3 ou 4

1	Regular fixing (1) See below and template provided.	Transom fixing (61) See below/overleaf and template provided.	Parallel fixing (66) See below and detail overleaf.
2	Select power size to suit door width or weight. Regular fixing (1) 	3  Determine installation position according to the power strength of closer and use template to mark four (4) holes for closer and two (2) holes for arm bracket.	4  Assemble arm to body and secure with bolt provided. Install closer assembly to door using screws provided. Install arm bracket assembly to frame using screws provided.
5  Pull main arm over until secondary arm is at 90° to frame.	6  Adjust closing speed (1) and latch speed (2). When adjusting please note there is a MAXIMUM of 2 turns.	7  Fit trimplate and spindle cover.	
8	Maintenance (Quarterly) Check door closer closes the door correctly and fixing screws are tight. Apply light oil to arm knuckle joint and door hinges.	9	Warning  Door closer power #1&2 and those fitted with mechanical hold open devices must not be installed on fire/smoke doors.


Français

1	Fixation normale (1) Voir ci-dessous et se référer au gabarit fourni.	Fixation sur imposte (61) Voir ci-dessous et se référer au gabarit fourni.	Fixation parallèle (66) Voir ci-dessous et se référer au détail au verso.
2	Sélectionnez la force voulue pour convenir à la largeur ou au poids de la porte. Réglez en usine : Force 3	3 Établir la position de l'installation selon la force du ferme-porte et utiliser le gabarit pour marquer les 4 trous de fixation du ferme porte et les 2 trous pour le support de bras.	4 Assembler le bras sur le corps et le fixer à l'aide du boulon fourni. Installer l'ensemble ferme-porte sur la porte à l'aide des vis fournies. Installer l'ensemble support de bras sur le cadre à l'aide des vis fournies.
5	Tirer le bras principal jusqu'à ce que le bras secondaire soit à 90° par rapport au cadre.	6 Régler la vitesse de fermeture (1) et la vitesse de l'à-coup final (2). Attention, 2 tours MAXIMUM pour le réglage.	7 Monter la plaque de garniture et le couvercle de la broche.
8	Entretien (tous les trois mois) Vérifier que le ferme-porte ferme correctement la porte et que les vis de fixation sont serrées. Appliquer de l'huile légère sur la genouillère du bras et les charnières de porte.	9	Avertissement  Des fermes-porte de force n° 1 et n° 2 et ceux munis d'un maintien d'ouverture mécanique ne doivent pas être installés sur des portes coupe-feu/coupe-fumée.

Nederlands

1	Standaardbevestiging (1) Zie hieronder en meegeleverd sjabloon.	Bevestiging op de bovendorpel (61) Zie hieronder en meegeleverd sjabloon.	Bevestiging met parallelarm(66) Zie hieronder en detailtekening ommezijde.
2	Kies drangerzwaarte al naar gelang breedte of gewicht van de deur	3 Bepaal de montageplaats al naar gelang de drangerzwaarte en gebruik het sjabloon voor het markeren van vier (4) gaten voor de dranger en twee (2) gaten voor de armsteun.	4 Bevestig de arm aan de dranger en zet deze met de meegeleverde schroeven. Bevestig de armsteun op de bovendorpel met de meegeleverde schroeven.
5	Trek de hoofdarmp uit totdat de tweede arm een hoek van 90° met de bovendorpel maakt.	6 Regel de sluitsnelheid (1) en de eindslag (2). NB: Bij het verstellen kunt u maximaal 2 slagen draaien.	7 Bevestig de afdekplaat en asafdekking.
8	Onderhoud (per kwartaal) Controleer of de deurdranger de deur goed sluit en dat de bevestigingsschroeven goed vastzitten. Olie het armscharnier en de deurscharnieren met lichte olie.	9	Waarschuwing  Deurdrangers zwaarte #1 & 2 en drangers met een vastzetarm mogen niet op brandwerende deuren aangebracht worden.

Deutsch

1	Normale Montage (1) Siehe unten sowie beiliegende Schablone.	Obentür-Montage (61) Siehe unten sowie beiliegende Schablone.	Parallele Montage (66) Siehe unten sowie Details auf der Rückseite.
2	Türschließer entsprechend der Breite bzw. des Gewichts der Tür auswählen.	3 Montageort abhängig von der Schließkraft des Türschließers wählen und mit Hilfe der Schablone vier (4) Löcher für den Türschließer und zwei (2) Löcher für den Arm anzeichnen.	4 Arm montieren und mit mitgelieferter Schraube befestigen. Türschließer mit den mitgelieferten Schrauben an der Tür montieren. Arm mit den mitgelieferten Schrauben am Türrahmen befestigen.
5	Hauptarm ziehen, bis der zweite Arm rechtwinklig zum Rahmen steht.	6 Schließgeschwindigkeit (1) und Endschlag (2) einstellen. Beim Einstellen beachten, dass MAXIMAL 2 Umdrehungen möglich sind.	7 Blende und Spindelabdeckung montieren.
8	Wartung (vierteljährlich) Prüfen, ob der Türschließer die Tür richtig schließt und ob die Befestigungsschrauben fest sitzen, Gelenk und Türscharniere leicht ölen.	9	Achtung  Türschließer mit Schließkraft #1 & 2 sowie Türschließer, die mechanisch offen gehalten werden, dürfen nicht an Brand-/Rauchschutztüren montiert werden.

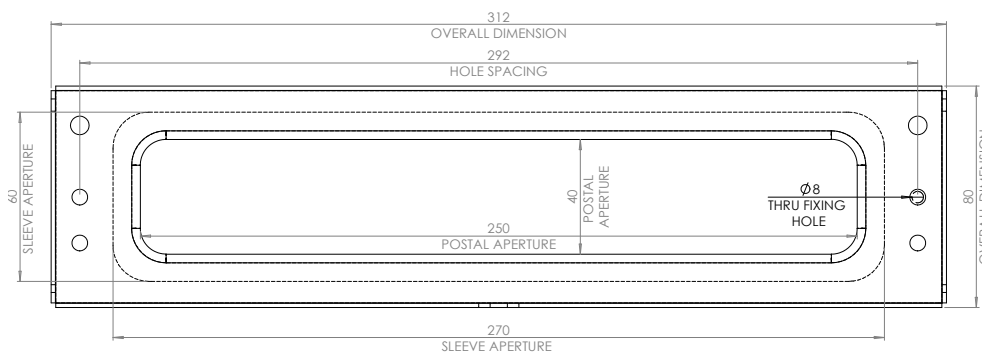
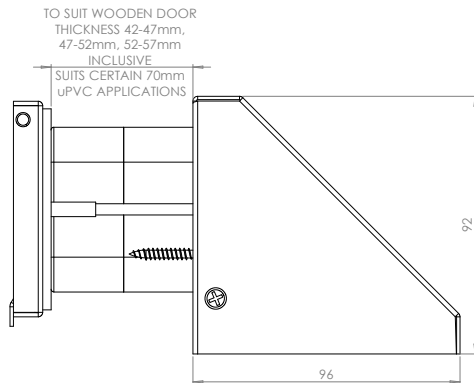
LP08 – Approved Document Q

TS008:2015 approved letterplate & security cowl (complete kit)

Classification

A	1	2	N	3	Y	1	0
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- Supplied complete with external and internal flaps, aperture liner and security cowl
- System includes for fire/smoke resistant models FD30S and FD60S doors
- System included integral weather seals
- Appropriate for installation where fire risk may be from either side of the door
- Suitable for use on acoustic doorsets. Achieves 31Db/R_w sound reduction on an appropriate door
- Security Tested to TS008:2015
- To suit door thicknesses:
42–47mm, 47–52mm, 52–57mm and 70mm
- Flaps held in the closed position on magnets
- Easy to install, either at works or on site
- Suitable for use on timber and some UPVC doors, please contact the sales office for guidance



PARTS

Mild Steel/Stainless Steel frames and flaps and cowl

- LP08-44: E30/E60 Fire rated inc Smoke seals 42–47mm Doors
- LP08-49: E30/E60 Fire rated inc Smoke seals 47–52mm Doors
- LP08-54: E30/E60 Fire rated inc Smoke seals 52–57mm Doors
- LP08-70: E30/E60 Fire rated inc Smoke seals 70mm Doors (suitable for some UPVC doors)

Finishes*: Silver Anodised Finish – SAA,, Brushed Stainless Steel – BSS, Polished Stainless Steel – PSS, Polished Brass Lacquered – PBL, Imitation Bronze – RBZ, Antique Brass – ABR, Dark Bronze – DBZ, Colour Powder Coated – NST

* (For some finishes the frame is a different finish to the flaps. Please contact the same office if in doubt).

RT Technical Sales – Tel: 01462 444444 Fax: 01462 444433 www.ratman.co.uk

CLASSIFICATION

Classification of enhanced security and general requirements are detailed below –

1st Digit: Product type

- A = Without any remotely fitted security hardware
- B = With remotely fitted security hardware p.7 of 22

2nd Digit: Aperture type

- Type: 1 = Letterplate assemblies
- 2 = Slide through box

3rd Digit: Enhanced security level

- 1 = Resistance to thumb-turn manipulation
- 2 = Resistance to thumb-turn manipulation and fishing

4th Digit: Option to lock the letter plate to prevent delivery of mail

- N = No not lockable
- Y = Yes lockable

5th Digit: Corrosion

- 3 = 96 hours
- 4 = 240 hours
- 5 = 480 hours

6th Digit: Resistance to water penetration

- N = No performance determined
- Y = Pass

7th Digit: Fire Resistance (to either BS476– 22 or EN 1634-1)

- 0 = No Fire resistance
- 1 = Yes

8th Digit: Arson attack

- Grade 0 = No performance determined
- Grade 1 = Yes

Nu Mail Letterplate

Ordering Details

Product

Nu Mail Letterplate

Finish	Part No.			
	Panel 68 (20-40)	Midrail 68 (40-80)	Panel 76 (20-40)	Midrail 76 (40-80)
Hardex Chrome	3C301	3C101	3C201	3C001
Hardex Satin	3C302	3C102	3C202	3C002
Hardex Bronze	3C303	3C103	3C203	3C003
Hardex Gold	3C305	3C105	3C205	3C005
Hardex Graphite	3C311	3C111	3C211	3C018
Antique Black	3C306	3C106	3C206	3C006
White	3C300	3C100	3C200	3C000
Black	3C308	3C108	8D001	3C008
Silver	3C309	3C109	3C209	3C009

*Easy Fit Rubber Drip Gasket 9B000

Technical Information

Corrosion resistance

Meets the requirements of BS EN 1670:2007 Grade 5 (480 hours)

Operation

Flap cycle tested to 30,000 cycles

Conforms to the requirements of BS EN 13724: 2002

Performance

Tested as part of a complete door set that successfully achieved PAS23 (rubber gasket fitted)

Tested as part of a complete door set that successfully achieved PAS24

Screws

Midrail version includes 2 x M5 x 50mm machine screws, 2 x M5 x 70mm machine screws and 2 screw guides

Panel version includes 2 x M5 x 28mm machine screws and 2 screw guides

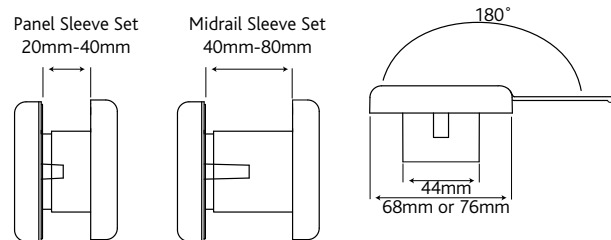
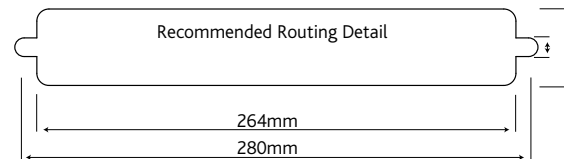
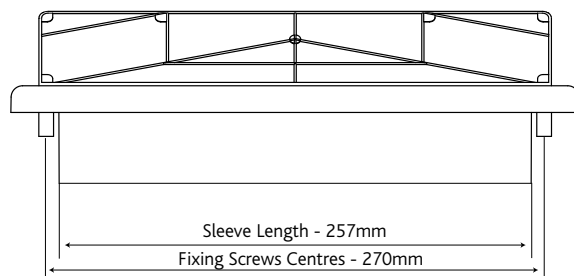
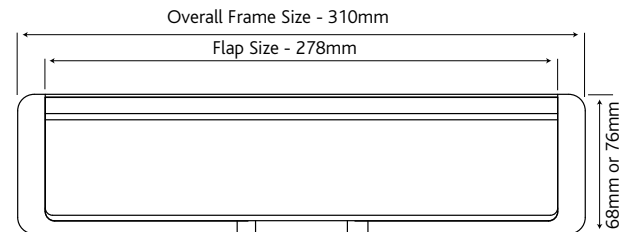
Material Specification

Frame and Flap: High quality Zinc

Coatings: Hardex Chrome, Hardex Satin, Hardex Bronze, Hardex Gold, Hardex Graphite, Antique Black, White, Black and Silver.

Maintenance

For continued protection of the quality finish and appearance, Fab&Fix advise routine cleaning of all our external hardware. Moving parts should also be lightly lubricated at least twice a year. This procedure is particularly essential if products are used within a 25-mile radius of coastal areas or close proximity to building sites or large industrial areas, where more frequent cleaning may be required to prevent the accumulation of corrosive contaminants.



Fixing Screws Provided

All dimensions are in mm and are nominal. Fab&Fix reserves the right to change specification without notice. It is the responsibility of the door manufacturer to ensure that the finished product meets any required safety and performance specification.

Packaging

Nu Mail Letterplate

Individually boxed with fixings and care instructions. 15 letterplates in an outer box.

Nu Mail Letterplate Security Shield

Ordering Details

Nu Mail Letterplate Security Shield

Finish	Part No.
Hardex Chrome	3F002
Hardex Bronze	3F003
Hardex Gold	3F004
Hardex Graphite	3F005
Antique Black	3F006
White	3F000
Black	3F001

Technical Information

Corrosion resistance

Meets the requirements of BS EN 1670:2007 Grade 5 (480 hours)

Performance

Independently tested to meet the requirements of TS008: 2015 (Inc. Corr, No 1) when used in conjunction with the Fab&Fix 3C 76mm Nu Mail Letterplate. Designed to meet the requirements of PAS 24 in a compliant door set.

Fixings

Includes 4 x M5 x 65mm screws, 4 x Jack Nuts and 2 x cover caps.

Material Specification

Frame:	High quality Zinc
Coatings:	Hardex Chrome, Hardex Bronze, Hardex Gold, Hardex Graphite, Antique Black, White and Black.

Classification

The Nu Mail Security Shield (Cowl) has been certified to TS008:2015 and carries the following classification:

Category	1	2	3	4	5	6	7	8
Classification	B	1	2	N	3	N	0	0

Packaging

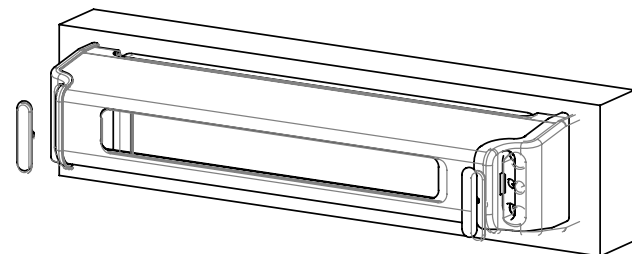
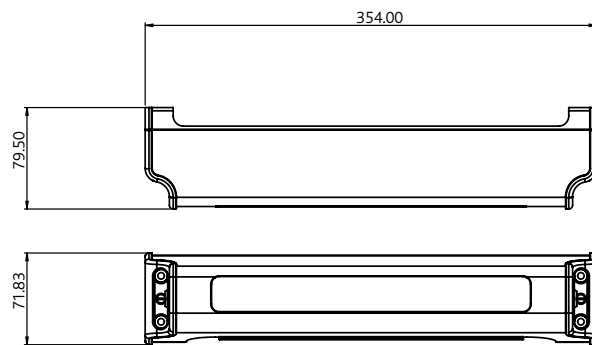
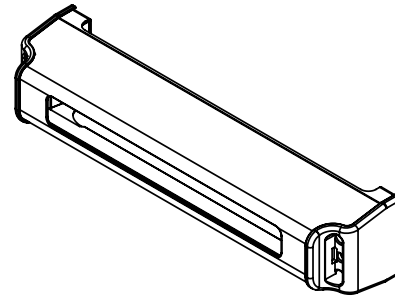
Nu Mail Letterplate Security Shield

Individually boxed with fixings and care instructions.
10 letterplate shields in an outer box.

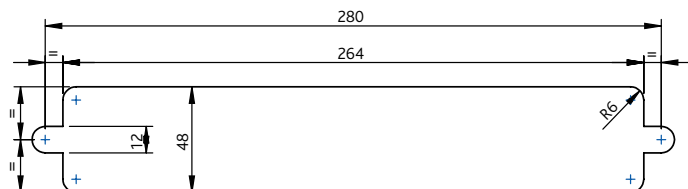
Maintenance

For continued protection of the quality finish and appearance, Fab&Fix advise routine cleaning of all our external hardware. Moving parts should also be lightly lubricated at least twice a year. This procedure is particularly essential if products are used within a 25-mile radius of coastal areas or close proximity to building sites or large industrial areas, where more frequent cleaning may be required to prevent the accumulation of corrosive contaminants.

Letterplate Shield



Routing Detail



All dimensions are in mm.
ERA reserves the right to change specification without notice.
It is the responsibility of the door manufacturer to ensure that the finished product meets any required safety and performance specification.

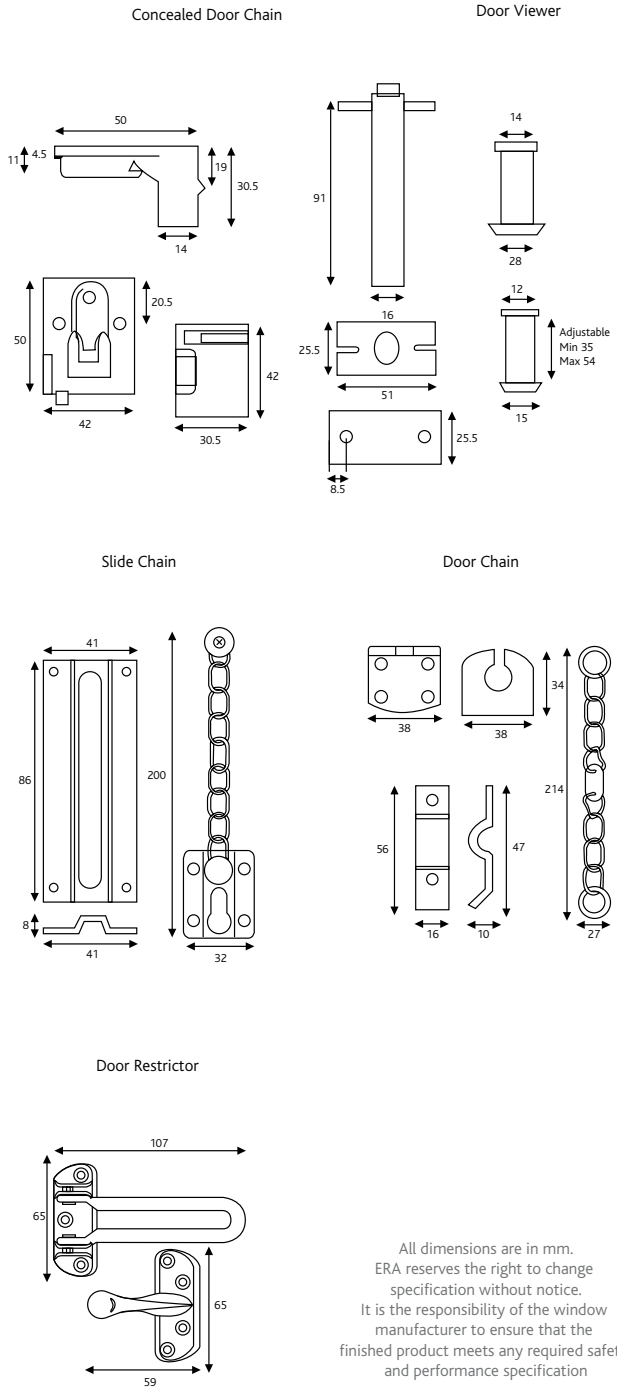
ERA Door Accessories

Door Chains and Viewers

Ordering Details	
Product	Part No.
Door Viewer	
120° Brass - Glass Lens	786 - 32
120° Chrome - Glass Lens	786 - 62
160° Brass - Glass Lens	784 - 32
160° Chrome - Glass Lens	784 - 62
120° Brass - Plastic Lens	190 - 32
120° Chrome - Plastic Lens	190 - 62
160° Brass - Plastic Lens Wide Angle	191 - 32
160° Chrome - Plastic Lens Wide Angle	191 - 62
180° Brass - Plastic Lens Wide Angle	192 - 32
180° Chrome - Plastic Lens Wide Angle	192 - 62
Concealed Door Chain	
Brassed	700 - 32
Satin	700 - 52
Slide Door Chain	
Brass	787-32
Satin	787-52
Timber/ PVCu Door Chain	
Brassed	791-32
Satin	791-52
Chrome	791-62
Door Restrictor	
Brassed	789-32
Chrome	789-62

Maintenance
 The surface should be cleaned with a soft cloth to remove any dust or grime. The product should be periodically adjusted and the fixings tightened to ensure a satisfactory operation

Packaging
Door Viewer
 1 per clam, 10 per box.
Concealed Door Chain:
 1 per clam, 10 per box.
Door Chains:
 1 per clam, 10 per box.
Door Restrictor:
 1 per clam, 10 per box.



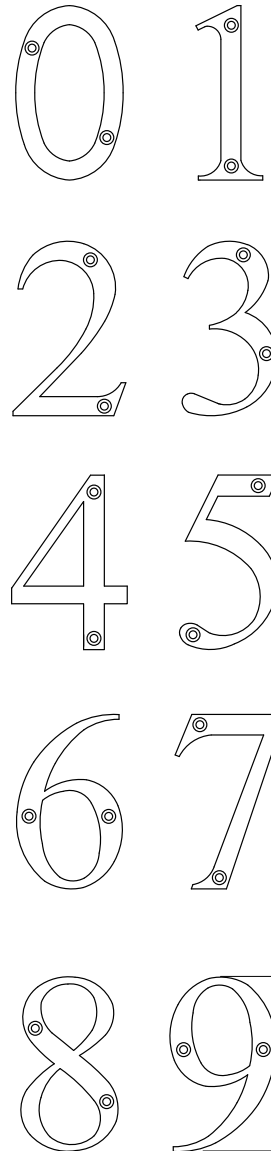
All dimensions are in mm.
 ERA reserves the right to change specification without notice.
 It is the responsibility of the window manufacturer to ensure that the finished product meets any required safety and performance specification

Numbers 0-9

Ordering Details

Numbers 0 - 9

Finish	Part No.								
	0	1	2	3	4	5	6 or 9	7	8
Hardex Chrome	4B304	4B354	4B404	4B454	4B504	4B554	4B604	4B654	4B704
Hardex Satin	4B305	4B355	4B405	4B455	4B505	4B555	4B605	4B655	4B705
Hardex Bronze	4B306	4B356	4B406	4B456	4B506	4B556	4B606	4B656	4B706
Hardex Gold	4B308	4B358	4B408	4B458	4B508	4B558	4B608	4B658	4B708
Hardex Graphite	4B312	4B362	4B412	4B462	4B512	4B562	4B612	4B662	4B712
Antique Black	4B309	4B359	4B409	4B459	4B509	4B559	4B609	4B659	4B709
White	4B300	4B350	4B400	4B450	4B500	4B550	4B600	4B650	4B700
Black	4B301	4B351	4B401	4B451	4B501	4B551	4B601	4B651	4B701
Silver	4B302	4B352	4B402	4B452	4B502	4B552	4B602	4B652	4B702



Technical Information

Corrosion resistance
Meets the requirements of BS EN 1670:2007 Grade 5 (480 hours)

Material Specification

Numerals: High quality Zinc

Coatings: Hardex Chrome, Hardex Satin, Hardex Bronze, Hardex Gold, Hardex Graphite, Antique Black, White and Silver

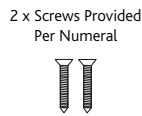
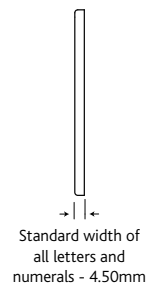
Screws: Includes 2 X M3.5 x 25mm colour coordinated countersunk flat head screw

Maintenance

For continued protection of the quality finish and appearance, Fab&Fix advise routine cleaning of all our external hardware. Moving parts should also be lightly lubricated at least twice a year. This procedure is particularly essential if products are used within a 25-mile radius of coastal areas or close proximity to building sites or large industrial areas, where more frequent cleaning may be required to prevent the accumulation of corrosive contaminants.

Packaging

Numerals
Individually bagged with screws and care instructions.
10 in an outer box.



Approximate height of all numerals - 80mm

All dimensions are in mm and are nominal.
Fab&Fix reserves the right to change specification without notice.
It is the responsibility of the door manufacturer to ensure that the finished product meets any required safety and performance specification.

Ingot Door Knocker

Ordering Details

Product

Ingot Knocker

Finish

Brushed Steel

Part No.

4A550

Technical Information

Corrosion resistance

Salt spray tested to 1000 hours (BS EN 1670: Class 5)

Operation

Tested to 200,000 cycles

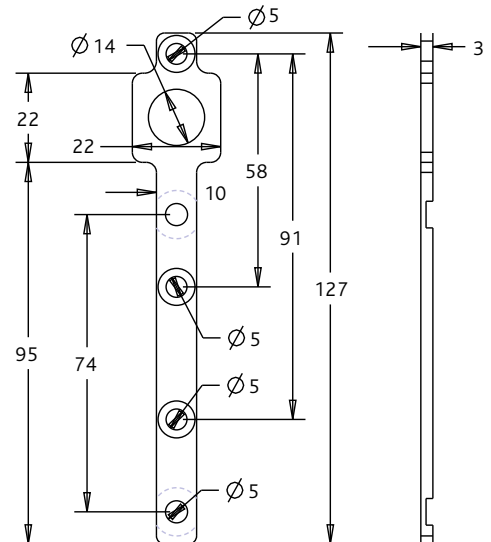
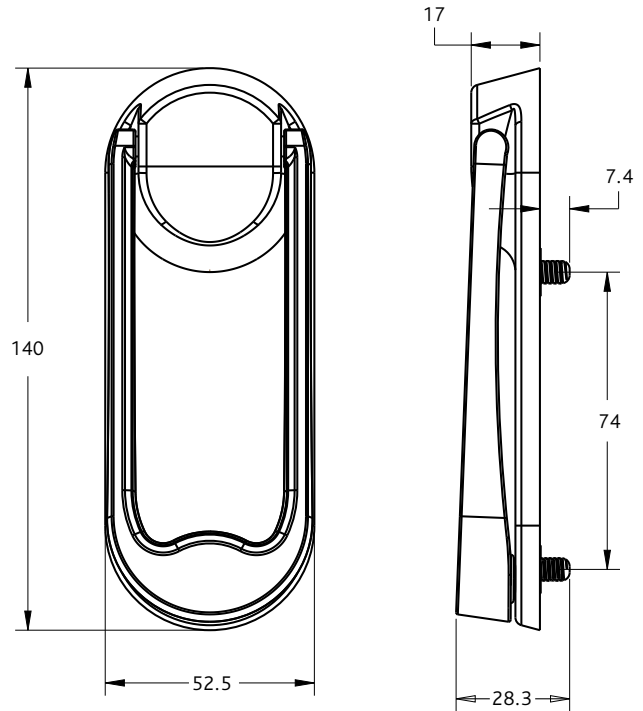
Material Specification

Handle Grip and Backplate: Stainless Steel

Coatings: Brushed Steel

Maintenance

To maintain your stainless steel product in best condition, we recommend routine cleaning once a month. All exposed stainless steel surfaces should be wiped over with a clean cloth and warm water with a mild detergent on a frequent and routine basis. Cleaning should always be immediately followed by rinsing in clean hot water and the surface then wiped completely with a dry towel. For more stubborn dirt or stains use mild, non-scratching abrasive powders such as typical household cleaners. These can be used with bristle brushes, sponges or non-abrasive scourers. For more aggressive cleaning a small amount of vinegar can be added to the powder. Carbon steel brushes and steel wool should be avoided as they may leave particles embedded in the surface, which can lead to rusting.



All dimensions are in mm and are nominal.
 Fab&Fix reserves the right to change specification without notice.
 It is the responsibility of the door manufacturer to ensure that the finished product meets any required safety and performance specification.

Appendix B



Appendix B compiles the relevant certification held by Falcon Panel Products, details on Q Mark Labelling and links to other useful documents and websites.

	Page
Q Mark Fire Certificate	61
Q Mark Enhanced Security Certificate	62
Q Mark Fire Door Plug Details	63
Links	64



012

Certificate Number

020

Date of Initial Certification

27 January 2009

Date of Last Issue

20 July 2018

Date of Expiry

28 September 2021

CERTIFICATE OF REGISTRATION

This is to certify that

Falcon Panel Products Ltd

Clock House
Station Approach
Shepperton
Middlesex
TW17 8AN

Meets the requirements of the BM TRADA **Q-Mark Fire Door Manufacture** scheme to **STD 006**

Robert Veitch
Executive Vice President Fire & Building Products
Element Materials Technology

Warringtonfire Testing and Certification Limited t/a BM TRADA, Chiltern House, Stocking Lane, High Wycombe, Buckinghamshire, HP14 4ND, UK
Registered Office: Warringtonfire Testing and Certification Limited, 10 Lower Grosvenor Place, London, SW1W 0EN, UK.
Reg No. 11371436.

This certificate remains the property of Warringtonfire Testing and Certification Limited. This certificate and all copies or reproductions of the certificate shall be returned to Warringtonfire Testing and Certification Limited or destroyed if requested. Further clarification regarding the scope of this certificate and verification of the certificate is available through BM TRADA or at the above address or at www.bmtrada.com



012

Certificate Number

297

Date of Initial Certification

29 November 2019

Date of Last Issue

2 December 2019

Date of Expiry

28 September 2021

CERTIFICATE OF REGISTRATION

This is to certify that

Falcon Panel Products Ltd

Clock House
Station Approach
Shepperton
Middlesex
TW17 8AN

Meets the requirements of the BM TRADA Q-Mark Enhanced Security Door scheme to **PAS 24:2016** and **BS 644:2012 Timber**

All companies manufacturing doorsets to the certified specification must hold permission from Falcon Panel Products Ltd and hold QMark certification in their own name in order to claim to be certified by BM TRADA for these products

Robert Veitch
Executive Vice President Fire & Building Products
Element Materials Technology

Warringtonfire Testing and Certification Limited t/a BM TRADA, Chiltern House, Stocking Lane, High Wycombe, Buckinghamshire, HP14 4ND, UK
Registered Office: Warringtonfire Testing and Certification Limited, 10 Lower Grosvenor Place, London, SW1W 0EN, UK.
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bmtrada

Proud to be part of  element

Fire Door Certification Scheme



Outer colour - period of fire integrity.
Inner/tree colour - status of manufacture.
Unique certified company's number.

Outer colour -
Period of fire
integrity (mins)

30



(Yellow)

60



(Blue)

90



(Brown)

120



(Black)

Inner/Tree colour



(Red)

Approved door leaf
and/or frame* (FD30
& FD60 only).
Intumescent strips
not supplied.



(Orange)

Approved factory
fitted glazing.



(Silver)

Complete certified
factory hung doorset.



(Green)

Approved door leaf
and/or frame* (FD30
& FD60 only).
Intumescent strips
prepared for &
supplied.



(Gold)

Certified installation
of a complete factory
hung doorset.

*Where the frame and leaf are produced by separate Q-Mark companies, both the frame and leaf must have their own red/green plug.

For details of the scheme and list of
certified companies visit
www.bmtrada.com or call
+44 (0) 1494 569960



Links

Strebord & Stredor 44 & 54 FD30 Front Entrance Door Global Assessment - WF407090

<https://www.falconpp.co.uk/media/16049/strebord-stredor-front-entrance-door-30-minute-assessment-wf407090.pdf>

Strebord Door Cores

<https://www.falconpp.co.uk/products/door-cores/strebord-door-cores/>

Stredor Door Cores

<https://www.falconpp.co.uk/products/door-blanks/stredor/>

BM Trada/Q Mark

<https://www.bmtrada.com/>

Hardware and Seals

Sealed Tight Solutions

<http://sealedtightsolutions.com/>

Stormguard Threshold

<https://www.stormguard.co.uk/stormguard-products/slimline-inward-opening/>

Royde and Tucker Hardware

<https://www.ratman.co.uk/>

ERA Hardware

<https://www.eraeverywhere.com/>

Rutland Closers

<https://www.rutlanduk.co.uk/>

Astra Closers

<http://www.astradoorcontrols.com/products/4000-series/>

Dorma Closers

<https://www.dormakaba.com/gb-en/solutions/products/door-hardware/door-closers>

Briton Closers

<https://www.allegion.co.uk/en/productcatalogue/doorcontrols.html>

For technical support, training and guidance

Falcon Panel Products Ltd

Door Technical Office

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Ruthin
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Tilbury Depot	T 01375 487 300	E tilbury@falconpp.co.uk	E sales@falconpp.co.uk
West Bromwich Depot	T 0121 525 8844	E westbrom@falconpp.co.uk	

www.falconpp.co.uk