



Fire Resistance Assessment

Sentry Prolite Doorsets

30 Minutes Fire Resistance

Report No: Chilt/A09155 Revision A

Issue date: 24 May 2012

Valid until: 20 August 2014



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Prepared for

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1 Introduction

This document constitutes a global assessment relating to laminated timber fire resisting doorsets, for Sentry Panel Products Ltd. The assessment uses established extrapolation and interpretation techniques in order to extend the scope of application by determining the limits for the design based on the tested constructions and performances obtained. The assessment is an evaluation of the potential fire resistance performance, if the elements were to be tested in accordance with BS 476: Part 22: 1987.

2 General Description of Construction

The basic tested construction of the Sentry Prolite door design comprises the following.

Element		Material	Dimensions (mm)	Density (kg/m ³)
Stiles (Optional)		Finger jointed mixed hardwood	23-32 wide x nominally 36 thick	549 ⁽¹⁾
Top rail	Option 1	Finger jointed mixed hardwood	1No 32 wide x nominally 36 thick	565 ⁽¹⁾
	Option 2	Solid beech	2No 20-25 wide x nominally 36 thick	600 ⁽²⁾
Bottom rail (Optional)		Finger jointed mixed hardwood	32 wide x nominally 36 thick	565 ⁽¹⁾
Core		Albasia falcata	3No layers of 12 thick x 45 - 50 wide lamels, outer lamels orientated horizontally, inner lamels orientated vertically	160-350 Average 240 ⁽¹⁾
Facings		WBP hardwood plywood	3.5-4 thick	550 ⁽²⁾

1. Measured by CIFL
2. Stated nominal density not confirmed by CIFL

3 Leaf Sizes

The approval for increased leaf dimensions is based on the tests listed in appendix A and takes into account the margin of over performance above 30 minutes integrity for the design and the characteristics exhibited during test. Data sheets specifying the maximum approved leaf sizes and graphs showing the permitted gradient between maximum height and width, are contained in appendix D.

Doorsets containing leaves with smaller dimensions than those stated are deemed to be less onerous and are therefore automatically covered.

4 Configurations

Based on the test evidence listed in appendix A, this assessment covers the following Sentry Prolite doorset configurations:

Abbreviation	Description
LSASD & ULSASD	Latched & unlatched single acting single doorset
DASD	Double acting single doorset
LSASD+OP & ULSASD+OP	Latched & unlatched single acting single doorset with flush and transomed overpanels
DASD + OP	Double acting single doorset with flush and transomed overpanels
LSADD & ULSADD	Latched & unlatched single acting double doorset
DADD	Double acting double doorset
LSADD+OP & ULSADD+OP	Latched & unlatched single acting double doorset with flush and transomed overpanels
DADD+OP	Double acting double doorset with flush and transomed overpanel

Unequal leaf double doorsets are covered by this assessment with no restriction on the smaller leaf dimension.

5 Leaf Size Adjustment

Sentry Prolite door leaves may be altered as follows:

Element	Reduction	
Leaf	Height	The manufactured size of the leaf may be reduced in height without restriction. Reduction in height must be from the bottom edge only with the top rail remaining intact and providing the bottom edge is re-lipped in accordance with section 9
	Width	The manufactured size of the leaf may be reduced in width without restriction providing the vertical edges are re-lipped in accordance with section 9
Timber lippings	The lipping dimensions stated in section 9 may be reduced by 20% for fitting purposes	

6 Overpanels

6.1 Solid

Overpanels of the same construction as the door leaves may be used with this doorset design either with a transom or with a flush junction. Transoms must be softwood or hardwood and a minimum section of 70mm x 32mm. Joints must be mortise and tenon, mortise housed or butt jointed and glued (urea formaldehyde) and screwed. Overpanels must be fixed using the following method.

- screwing through the rear of the frame with steel screws passing at least 30mm into the centre line of the overpanel. Fixings must be no more than 100mm from each corner and a maximum of 250mm centres in between.

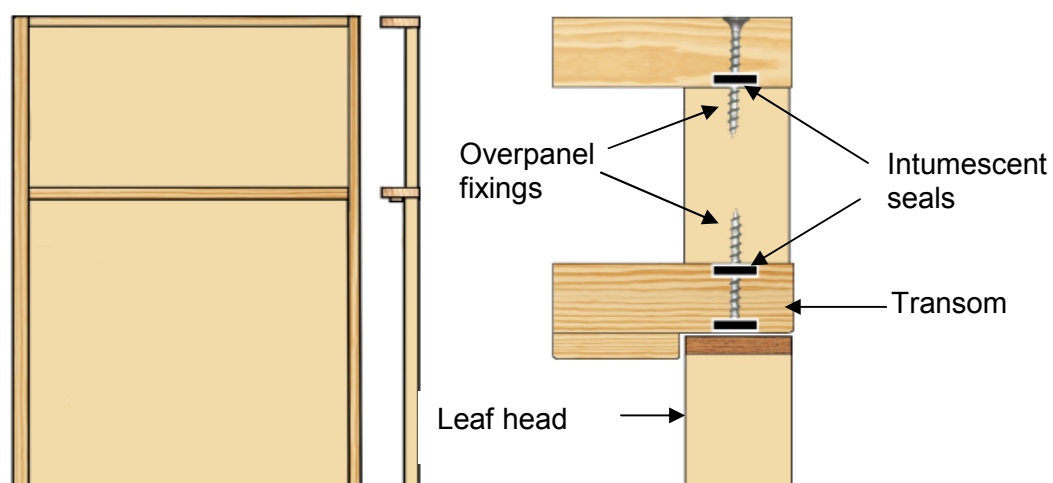
The intumescent seal specification for overpanel assemblies must comply with the following.

Overpanel Type	Specification
Transomed	Intumescent strips are not required for intimately fitting overpanels. Alternatively fit a 15 x 4mm positioned centrally in all 4 edges of the overpanel or door frame reveal
Flush	Intumescent strips are not required for intimately fitting overpanels. Alternatively fit a 15 x 4mm positioned centrally in all the vertical and top edges of the overpanel or door frame reveal

Permitted overpanel heights are as follows.

Configuration	Max Overpanel height (mm)
Single doorsets	2000
Double doorsets	1500

The following diagram illustrates a transomed overpanel arrangement.



6.2 Glazed Fanlights

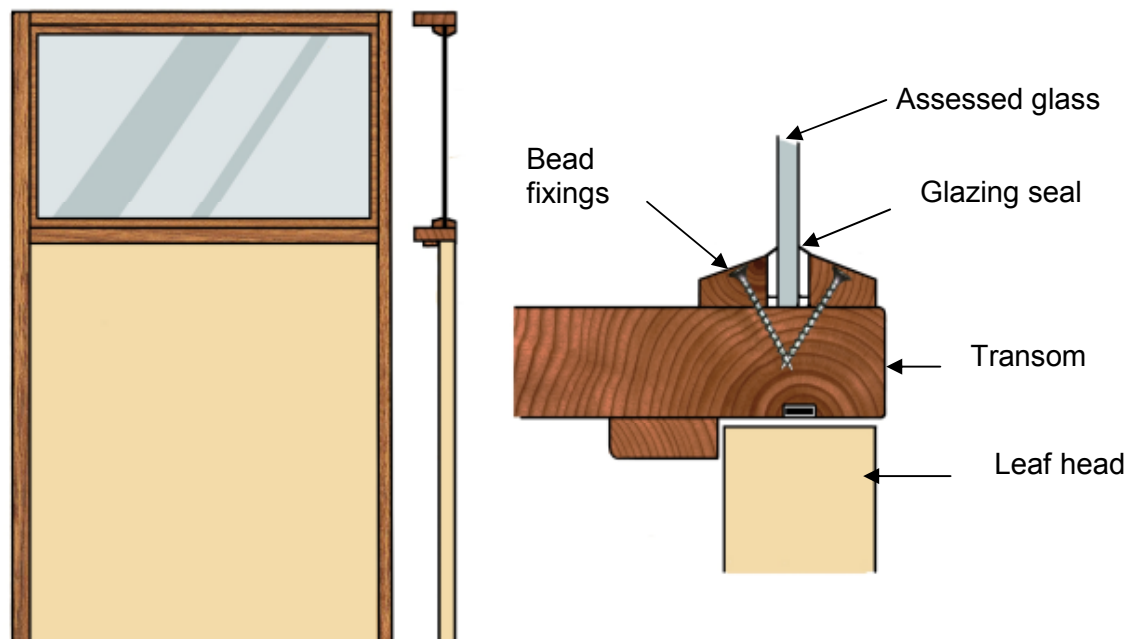
Doorsets including a transom may have the overpanel section glazed in lieu of a section of door. The timber frame and glazing beads must be hardwood with a minimum density of 640 kg/m³ and the transom section must be a minimum of 70mm x 44mm.

The maximum assessed fanlight dimensions are detailed in the table below, subject to the following restriction:

- The glazing system and glass must be able to demonstrate adequate performance when tested as a window or screen in accordance with BS 476: Part 22: 1987 or BS EN 1634-1: 2000 or 2008, at the pane dimensions to be installed.

Configuration	Height (mm)	Width (mm)
Single & double doorsets	≤600	Overall door width

The following diagram illustrates a glazed fanlight arrangement.



7 Glazing

7.1 General

Testing conducted on the Sentry Prolite doorset design has successfully demonstrated that it is capable of tolerating the inclusion of glazing.

The maximum assessed glazed area is 0.91m².

Glazing must meet the criteria contained in the following sections.

7.2 Assessed Glazing Systems

The glazing system must be one of the following tested or proprietary systems:

Glazing System	Manufacturer
1 Halspan Glazing – SLS-GLZ-200 Series	Halspan Ltd
2 Therm-A-Strip 30	Intumescent Seals Ltd
3 Fireglaze 30	Sealmaster Ltd
4 Firestrip 30	Hodgson Sealants Ltd
5 System 36/6	Lorient Polyproducts Ltd
6 R8913	Pyroplex Plc
7 Flexible Figure 1	Lorient Polyproducts Ltd
8 Pyroglaze 30	Mann McGowan Ltd

7.3 Assessed Glass Products

Assessed glass types are as follows.

Glass Type	Manufacturer	Glass Thickness
1. Pyroshield	Pilkington Group Ltd	6 & 7
2. Pyroshield 2	Pilkington Group Ltd	6 & 7
3. Pyran S	Schott Glass Ltd	6
4. Pyrostem	CGI Ltd	6
5. Pyroguard EW30	CGI Ltd	7
6. Pyrobelite	AGC Flat Glass Europe	7
7. Pyrodur 30-104	Pilkington Group Ltd	7
8. Pyrodur 60-10	Pilkington Group Ltd	10
9. Pyroguard EW MAXI	CGI Ltd	11
10. Pyranova 15-S2.0	Schott UK Ltd	11
11. Pyrobelite	AGC Flat Glass Europe	12
12. Pyrodur 60-20	Pilkington Group Ltd	13
13. Pyroguard EI 30	CGI Ltd	15
14. Pyrostop	Pilkington Group Ltd	15
15. Pyrobel	AGC Flat Glass Europe	16

7.4 Glazing Beads & Installation

Glazing beads must be from hardwood as specified in the following table:

Material	Profile	Density (kg/m ³)	Application
Hardwood	Splayed	≥ 640	All proprietary systems detailed in 7.2 and shown in appendix B and all glass types specified in 7.3
Hardwood	Square	≥ 640	Proprietary systems 2, 3 & 4 as specified in 7.2 and glass types 5-15 specified in 7.3

Notes

1. Timber for glazing beads must be joinery quality straight grained hardwood, free from knots, splits and checks.
2. A square bead profile may be used as an alternative to the splayed beads subject to the restricted glass types and glazing systems specified in the table above. See appendix B for diagrams of square bead options.
3. Glazing bead fixings must be retained in position with 50mm long x 2mm diameter steel pins or 40mm long No 6-8 screws, inserted at 35-40° to the vertical at no more than 50mm from each corner and at 150mm maximum centres.
4. The shape of glazed apertures is not restricted providing the glazing system can accommodate the profile.
5. Glazed apertures must not be nearer than 100mm to any leaf edge. Multiple apertures are acceptable up to the maximum approved area with a minimum dimension of 80mm core separating the apertures.
6. Gaps between glass and framing, to permit expansion, should be set at 2-3mm on all edges, and using non combustible or hardwood setting blocks at the bottom edge
7. Sectional drawings detailing the tested and assessed proprietary glazing systems are contained in appendix B
8. False timber beads may be applied to glass types 5-15 using one of the following intumescent glazing products. All seals must be a minimum of 10mm wide x 0.5 - 3mm thick and preformed strip systems 1-4 may be self adhesive and grooved in to the rear of the glazing bars.

Glazing System	Manufacturer
1. Therm-A-Strip 30	Intumescent Seals Ltd
2. Fireglaze 30	Sealmaster Ltd
3. Firestrip 30	Hodgson Sealants Ltd
4. Envirograf Product 77 - G10/10	Intumescent Systems Ltd
5. Intumescent mastic or silicone tested for glazing applications to BS 476: Part 22: 1987 or BS EN 1634-1: 2000 or 2008	Various

8 Door Frames

8.1 Door Frame Construction

Door frames for Sentry Prolite doorsets must be constructed as follows.

Application	Material	Section Size (mm)	Density (kg/m ³)
Door frames with or without transomed solid overpanels	Softwood or hardwood	70 x 32	≥ 510
	Hardwood ⁽¹⁾	70 x 32	≥ 640
Door frames without transomed solid overpanels or glazed fanlights	MDF ⁽²⁾	70 x 25	≥ 700
Door frames with glazed fanlights	Hardwood	70 x 44	≥ 640

Notes.

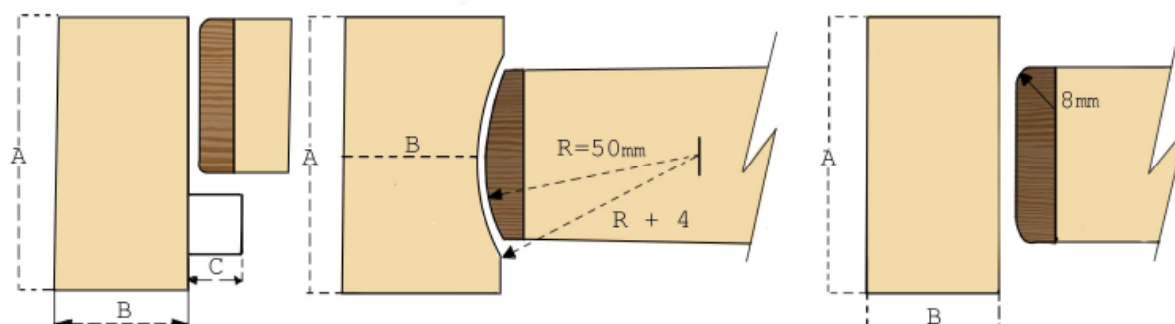
1. The single leaf doorset B tested in RF04016, evaluated the performance of the Sentry Prolite design utilising a hardwood door frame (see graph contained in appendix D for extended single leaf size range).
2. The doorset tested in RF01059B (AR2), evaluated the performance of the Sentry Superlite design, utilising an MDF door frame (see graph contained in appendix D for the permitted single leaf size range).
3. All timber used for constructing door frames must be to class J30 as specified in BS EN 942: 2007 (subject to adequate repair of any defects).
4. A 12mm deep planted stop is adequate for single acting frames whilst double acting frames may be scalloped or square (see diagram below).
5. Not permitted for doorsets with transomed overpanels.
6. The following diagram depicts the assessed frame profiles and dimensions.

A = min 70mm

B = min 25-32mm (see table above) C = min 12mm

R = radius from floor spring

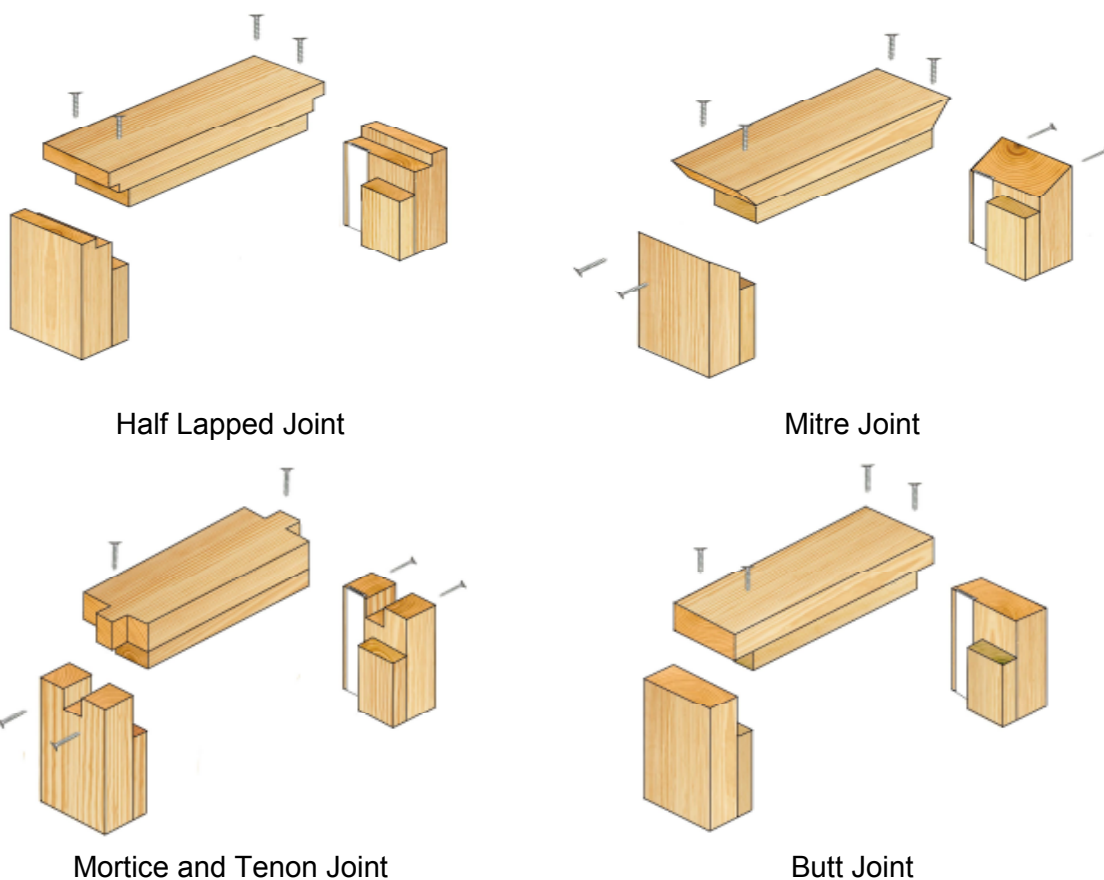
R8 = 8mm radius to create maximum 2mm edge profiling



The legal validity of this report can only be claimed on presentation of the complete report.

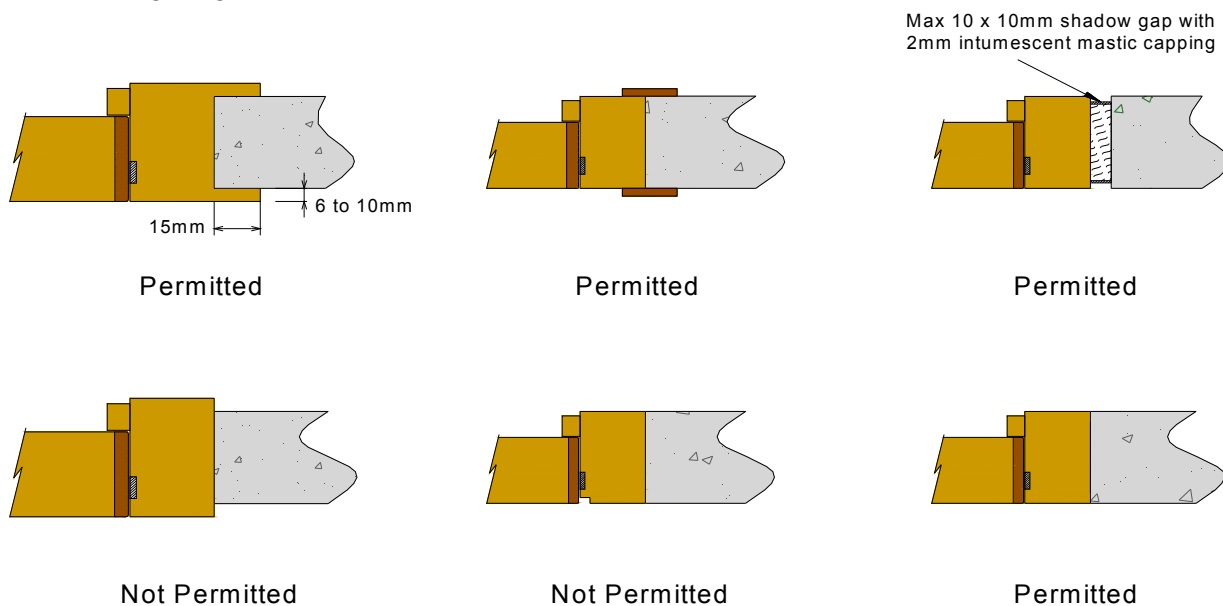
8.2 Door Frame Joints

The following door frame jointing methods are acceptable:



8.3 Door Frame Installation

The following diagrams indicate acceptable door frame installations.



9 Lippings

Sentry Prolite doors require lipping on all edges. Lippings must meet with the following specification.

Type	Dimensions (mm thick)	Density (kg/m ³)
Flat lipping	Flat = 6 - 11 thick with a maximum of 2 profiling permitted at corners of lipping (see section 8.1)	≥ 640
Rounded lipping	Rounded = 8 - 12 with a radius matching the distance between leaf edge and floor pivot (see section 8.1)	
Rebated lippings	Rebated = 18 - 23 thick with a 12 deep x 22 wide rebate	

Notes.

1. Timber for lippings must be joinery quality, straight grained hardwood, free from knots, splits and checks.
2. Rebated edges are not permitted for doors without flush overpanels.
3. Single & double doorsets without overpanels only require lipping on the vertical edges.
4. Doorsets with flush overpanels must be lipped on the vertical edges and additionally at the bottom edge of the overpanel and top edge of the doors.
5. Doorsets with flush overpanels may use a rebated head junction, whilst the meeting edges must use flat or rounded lippings.
6. Lippings must not concealed intumescent material.
7. A 2.5° chamfer is permitted to the lipping at the leading edge of leaves providing the door gaps meet the requirements of section 17.

10 Leaf Facing Materials

10.1 Structural Facings

The primary tested facing material for this doorset design is 3.5mm thick hardwood plywood. Test RF01059B (AR2) evaluated thicker plywood faces.

The following table defines the tested and assessed facing options for Sentry Prolite doors.

Material	Dimension (mm)	Density (kg/m ³)
Plywood	3.5 - 5.5	≥ 550
Chipboard (≥ BS EN 312-2)	3 - 4	≥ 650
MDF	3 - 4	≥ 700

Variation in facing thickness must be compensated for by a corresponding increase in the core thickness.

10.2 Decorative and Protective Materials

The following additional materials are permitted for this door design since they would degrade rapidly under test conditions without significant effect:

Facing Material	Maximum Permitted Thickness (mm)
Paint	0.5
Timber veneers	2
Plastic and resin laminates	2
Cellulosic foils	0.5

Notes

1. Metallic facings are not permitted (except for push plates and kick plates).
2. The door leaf thickness must not be reduced to accommodate the finish.
3. Materials must not conceal intumescent strips.
4. Plastic and resin laminates must not be applied to the edges of leaves.

11 Adhesives

The adhesives used in construction of Sentry Prolite doorsets must be as detailed in the following table:

Element	Adhesive Type
Timber Lippings	PVA, PVAC, PU or UF
Facing	Type B4 2-part or melamine type 1.5
Rails	Type B4 2-part or melamine type 1.5
Core lamels	PVAC or melamine type 1.5

12 Intumescent Materials

The intumescent materials tested and approved for the Sentry Prolite design are as follows:

Application	Location	Product/Manufacturer
Edge seals	Fitted in the frame jambs or leaf edges	1. Halspan SLS Seals – Halspan Ltd
		2. Therm-A-Seal – Intumescent Seals Ltd
Hinges	Not required	-
Lock/latch	Under forend and keep	<ol style="list-style-type: none"> 1. 1mm thick MAP paper - Lorient Polyproducts Ltd 2. 1mm thick Interdens - Dufaylite Developments Ltd 3. 1mm thick G30 – Sealmaster Ltd 4. 1mm thick Therm-A-Strip - Intumescent Seals Ltd 5. 1mm thick Therm-A-Flex - Intumescent Seals Ltd 6. Halspan 1mm thick SLS-PAD-107 - Halspan Ltd
Top pivots & flush bolts	Lining all sides of the mortices	<ol style="list-style-type: none"> 1. 1mm thick MAP paper - Lorient Polyproducts Ltd 2. 1mm thick Interdens - Dufaylite Developments Ltd 3. 1mm thick G30 – Sealmaster Ltd 4. 1mm thick Therm-A-Strip - Intumescent Seals Ltd 5. 1mm thick Therm-A-Flex - Intumescent Seals Ltd 6. Halspan 1mm thick SLS-PAD-107 - Halspan Ltd

The seal specification for each configuration is contained in appendix D.

13 Tested Hardware

The following hardware has been successfully incorporated in the tests on Sentry Prolite doorsets.

Element	Product	Dimensions (mm)
Hinges	Royde & Tucker H105 hinges	100 x 35 (blade size)
	3No Halspan R30 stainless steel bearing butt type hinge ref: HIN-BSS-103	102 x 31 (blade size)
Closer	Dorma Door Controls Ltd TS73V surface mounted overhead closer	233 x 60 (footprint size)
	Halspan R30 surface mounted overhead type eco closer ref: CLR-AGN-100	265 x 70 (footprint size)
	Halspan R30 surface mounted overhead type closer ref: CLR-BSS-100	253 x 68 x 53 (footprint size)
Latches/Locks	Stainless steel Europrofile lock/latch	235 x 24 (forend size) 165 x 85 x 15 (body size)
	Standard tubular mortise latch - disengaged	57 x 26 (forend size)
Furniture	Aluminium lever type handle	100 x 38 (footprint size)

14 Additional & Alternative Hardware

14.1 Latches & Locks

Latches and locks must either be as tested, or alternatively components with the following specification are acceptable:

Element	Dimensions (mm)
Maximum forend and strike plate dimensions	235 high by 25 wide by 4 thick
Maximum body dimensions	18 thick by 100 wide by 180 high.
Materials	All parts essential to the locking/latching action (including the latch bolt, forend and strike) to be steel or stainless steel
Lock Position	1000-1200mm from the bottom of doors

14.2 Hinges

Sentry Prolite door leaves must be hung on a minimum of 3 hinges. Leaves over 2300mm high require 4 hinges. Hinges products and locations must be as tested, or alternatively hinges meeting the following specification are acceptable.

Element	Dimensions (mm)	
Blade height:	90 – 120mm	
Blade width (excluding knuckle):	30 – 35 mm	
Blade thickness:	2.5 - 4 mm	
Fixings:	Minimum of 4 No. 30mm long No. 8 or No.10 steel wood screws per blade	
Materials:	Steel or stainless steel	
Hinge positions	Top	150 –200mm from the head to top of blade
	Bottom	200 – 300mm from foot to bottom of blade
	Remainder	2 nd and 3 rd equispaced between top and bottom or 2 nd 450mm from head for leaves up to 2300mm high

14.3 Automatic Closing

Automatic closing devices, must either be as tested or components of equal specification that have demonstrated contribution to the required integrity performance of this type of doorset design, when tested to BS 476: Part 22: 1987 or BS EN 1634-1: 2000 or 2008.

Floor spring top pivots and all mounting plates must be protected with one of the products specified for latch/lock protection in section 12. Alternatively the hardware manufacturers tested gaskets may be used.

14.4 Pull Handles

Handles may be surface-fixed or bolted through the door leaf, providing they are steel or brass and the length is limited to 1200 mm between the fixing points. If through fixed, there must be no more than 1mm clearance between the hole and stud.

14.5 Push Plates & Kick Plates

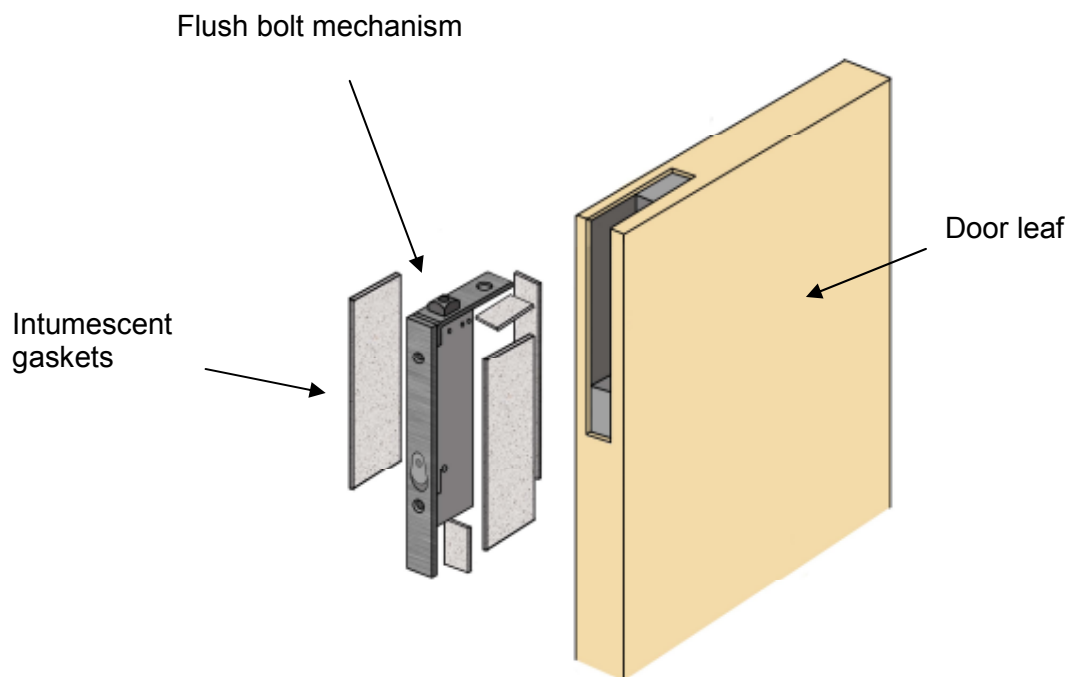
Face-fixed hardware such as push plates and kick plates may be fitted to the doorsets provided that their fitting requires the removal of no part of the door leaf. These items of hardware are permitted up to a maximum of 20% of the door leaf area if mechanically fixed and a maximum of 30% if bonded with a thermo-softening contact adhesive. Plates must not return around the door edges.

14.6 Flush Bolts

Flush bolts may be incorporated centrally into the top and bottom of one meeting edge, providing the following maximum dimensions are not exceeded and the meeting edge intumescent strips are fitted in the edge opposite the flush bolts.

- 200mm long x 20mm deep x 20mm wide.

Flush bolts must be steel or brass and the mortice must be as tight to the mechanism as is compatible with its operation. All edges of the mortice must be protected with intumescent gaskets as specified in section 12. Alternatively, the hardware manufacturers tested gaskets may be used.



14.7 Panic Hardware

Panic hardware may be fitted, providing the installation does not require the removal of any timber from the leaf, stop or frame reveal and it does not interfere with the self-closing action of the door leaf.

14.8 Door Security Viewers

Door security viewers with brass or steel bodies of a diameter less than or equal to 15mm may be used provided that the through-hole is bored tight to the case of the viewer (maximum tolerance +1 mm). Lenses must be glass, whilst the item must be bedded in to a tested intumescent mastic and fitted through a 44mm thick section of leaf.

14.9 Environmental Seals

Silicon based flame retardant acoustic, weather and dust seals may be fitted to this doorset design without compromising the performance, providing fitting does not interfere with the activation of the intumescent seals or hinder the self closing function of the leaves.

14.10 Threshold Seals

The following types of automatic threshold drop seals may be recessed in to the bottom rail of leaves to this design without compromising the performance:

Manufacturer	Product
Lorient Polyproducts	IS8010si
Raven	RP8
Athmer	Schall-Ex Duo L-15
Norseal	810
Halspan	SLS-DRP-100 Series

14.11 Letter Boxes/Plates

Letter boxes/plates may be fitted providing the product has demonstrated contribution to the required integrity performance of this type of doorset design, when tested to BS 476: Part 22: 1987 or BS EN 1634-1: 2000 or 2008, when installed in a timber based doorset of comparable thickness. Products may be fitted up to 1200mm from floor level, no closer than 100mm to any leaf edge.

14.12 Air Transfer Grilles

Air transfer grilles may be fitted providing the product has suitable test evidence to BS 476: Part 22: 1987 or BS EN 1634-1: 2000 or 2008, that demonstrates a minimum 30 minutes integrity performance when installed within a timber based doorset of comparable thickness.

Products must be fitted a minimum of 100mm from the vertical or bottom edges and from any other aperture. The height of unit is dictated by the test data (normally below mid height). The area occupied by the air transfer grille must not exceed the area tested and must be deducted from the percentage of glazing, if both elements are fitted.

Smoke control as defined by the performance criteria set out in BS 476: Part 31: Section 31.1 cannot be claimed for a doorset fitted with an air transfer grille(s)

15 Supporting Construction

The supporting construction must provide the required level of fire resistance designated for the doorset design and be a suitable medium to permit adequate fixity.

16 Fixings

The frame jambs are to be fixed to the supporting construction using steel fixings at 500mm maximum centres. The fixings must be of the appropriate type for the supporting construction and must penetrate to a minimum depth of 50mm. It is not necessary to fix the frame head, although packers must be inserted.

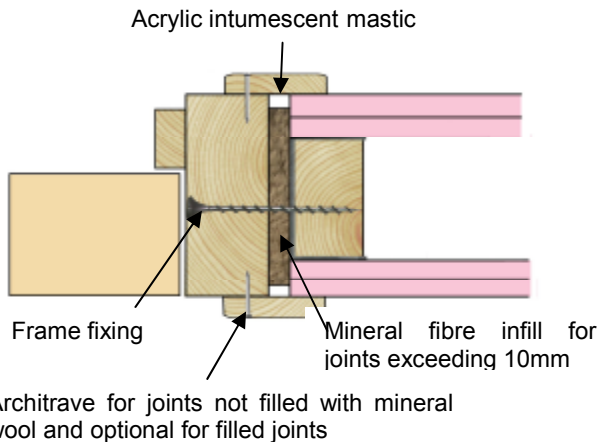
17 Door Gaps

Door edge gaps and alignment tolerances must be set within the range defined in the following table:

Location	Dimension
Door edge gaps	A minimum of 2mm and a maximum of 4mm.
Alignment tolerances	Leaves must not be proud of from the door frame or from each other by more than 1mm.
Threshold gap	A maximum of 10mm between bottom of leaf and top of floor covering.

18 Sealing to Structural Opening

The door frame to structural opening gap must be protected using one of the following methods.

<p>1. Gaps up to 10mm must be sealed on both sides with a 10mm depth of acrylic intumescent mastic, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1: 2000 or 2008. Joint must be fitted with 15mm thick architraves overlapping at least 15mm each side.</p>	
<p>2. Gaps between 10mm and 20mm must be tightly packed with mineral fibre capped on both sides with a 10mm depth of acrylic intumescent mastic, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1: 2000 or 2008. Architraves are optional.</p>	

<p>3. Gaps up to 20mm filled with proprietary fire stopping product (e.g. expanding PU foam or preformed compressible intumescent foam). Products must be tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1: 2000 or 2008. Joint must be fitted with 15mm thick architraves overlapping at least 15mm each side.</p>	
<p>4. Timber based or non-combustible subframe up to 50mm thick, with no gaps between the components. Joint must be fitted with 15mm thick architraves overlapping at least 15mm each side.</p>	
<p>5. Timber based or non-combustible subframe 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, fire tested for this application to BS 476: Part 22: 1987 or BS EN 1634-1: 2000 or 2008. Joint must be fitted with 15mm thick architraves overlapping at least 15mm each side.</p>	

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.

19 Insulation

Insulation performance may be claimed for a doorset to this design meeting the following.

Type	Details
Partially insulating	Doorsets incorporating up to 20% of non-insulating glazing
Fully insulating	Unglazed doorsets or doorsets fitted with 30 minute insulating glazing (e.g. 15mm Pyroguard EI 30, 15mm Pyrostop or 16mm Pyrobel)

20 Smoke Control

If the doorset design is required to provide a smoke control function to comply with Building Regulations, it must be fitted with a smoke seal or combined intumescent/smoke seal, that has been tested in accordance with BS 476: Part 31: Section 31.1 and demonstrated to maintain the leakage rate below 3m³/m/h when tested at 25Pa.

Providing the smoke seals, any interruptions, door gaps, type/configuration of door is consistent with the tested detail, the doorset will comply with current smoke control legislation and a suffix 'S' may be added to the designation. Any other installed components where smoke leakage may occur must also be taken into account.

Additional guidance on smoke sealing is given in BS 8214: 2008, "Code of practice for fire door assemblies" and BS 9999: 2008 "Code of practice for fire safety in the design, management and use of buildings" both of which advise that for effective ambient smoke sealing the threshold gap should either be controlled to a maximum of 3mm or a tested threshold drop down seal must be fitted.

Note: The incorrect specification and fitting of smoke seals may impair the operation of a doorset and therefore compromise the fire resistance performance. Advice should be sought from the manufacturers as to the correct specification and installation of smoke seals or combined smoke and intumescent seals.

21 Conclusion

If the Sentry Prolite design constructed in accordance with the specification documented in this global assessment, were to be tested in accordance with BS 476 : Part 22 : 1987, it is our opinion that it would provide a minimum of 30 minutes integrity and insulation (subject to section 19).

22 Declaration by the Applicant

1. We the undersigned confirm that we have read and comply with obligations placed on us by FTSG Resolution No 82: 2001.
2. We confirm that the component or element of structure, which is the subject of this assessment, has not to our knowledge been subjected to a fire test to the Standard against which this assessment is being made.
3. We agree to withdraw this assessment from circulation should the component or element of structure be the subject of a fire test to the Standard against which this assessment is being made.
4. We are not aware of any information that could adversely affect the conclusions of this assessment.
5. If we subsequently become aware of any such information we agree to ask the assessing authority to withdraw the assessment.

Signed

Name:

For and on behalf of: Sentry Panel Products Ltd

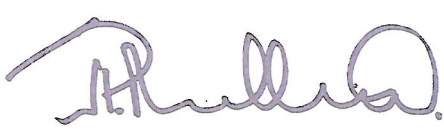
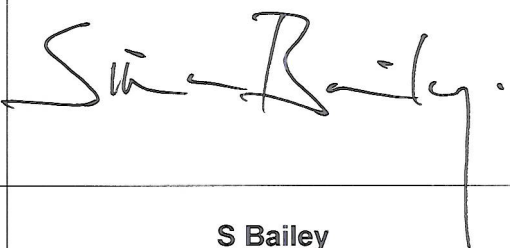
23 Limitations

The following limitations apply to this assessment:

1. This assessment addresses itself solely to the elements and subjects discussed and does not cover any other criteria. All other details not specifically referred to should remain as tested or assessed.
2. This assessment is issued on the basis of test data and information to hand at the time of issue. If contradictory evidence becomes available, CIF reserves the right to withdraw the assessment unconditionally but not retrospectively.
3. This assessment has been carried out in accordance with Fire Test Study Group Resolution No 82: 2001.
4. Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.
5. This assessment relates only to those aspects of design, materials and construction that influence the performance of the element(s) under fire resistance test conditions. It does not purport to be a complete specification ensuring fitness for purpose and long-term serviceability. It is the responsibility of the client to ensure that the element conforms to recognised good practice in all other respects and that, with the incorporation of the guidance given in this assessment, the element is suitable for its intended purpose.

24 Validity

1. The assessment is initially valid for five years after which time it must be submitted to CIFL for technical review.
2. This assessment report is not valid unless it incorporates the declaration given in Section 22 duly signed by the applicant.

Signature		
Name	J P Mullett	S Bailey
Title	Principal Consultant	Product Assessor

The legal validity of this report can only be claimed on presentation of the complete report.

Appendix A

Performance Data

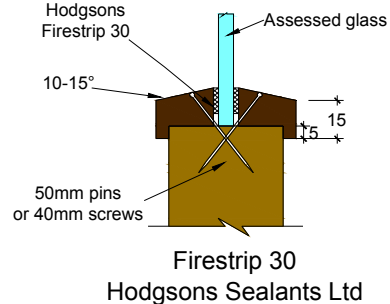
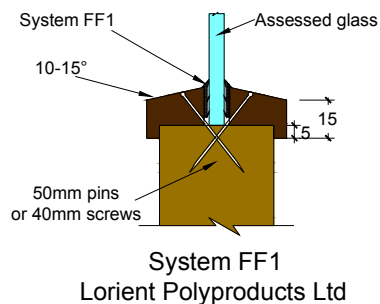
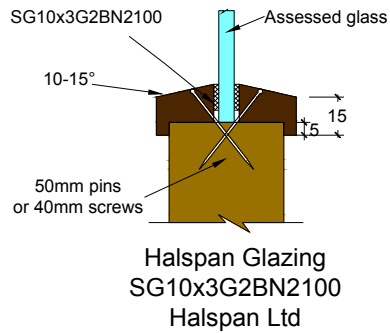
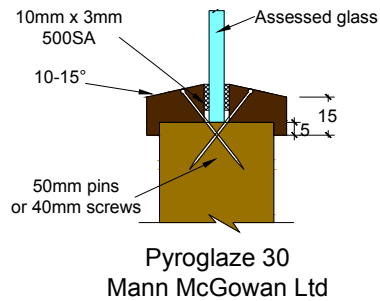
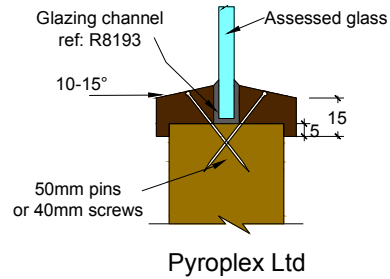
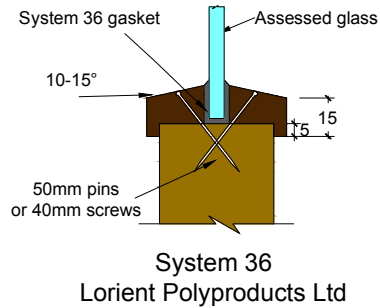
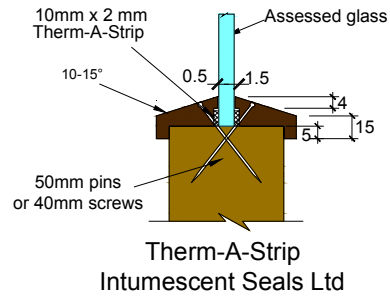
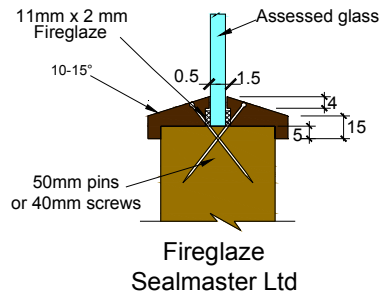
Primary Data

Report No	Configuration	Leaf Size (mm)	Standard	Performance (mins)	
				Integrity	Insulation
RF01059B (AR2) (5.5mm ply faces + 25mm MDF door frame)	ULSASD	2135	BS476 : Part 22 : 1987	Integrity	35
		915 45		Insulation	35
RF04016	A: ULSADD (glazed)	2110	BS476 Part 22	Integrity	37
		852+300 43		Insulation	37
	B: ULSASD (hardwood door frame)	2415		Integrity	44
		1210 43		Insulation	44
RF09023	ULSADD+OP	2100+288	BS476 : Part 22 : 1987	Integrity	30
		926 44		Insulation	30
CFR1112121	ULSADD (beech top rails)	2100	BS476 : Part 22 : 1987	Integrity	31
		900+450 44		Insulation	31

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Appendix B

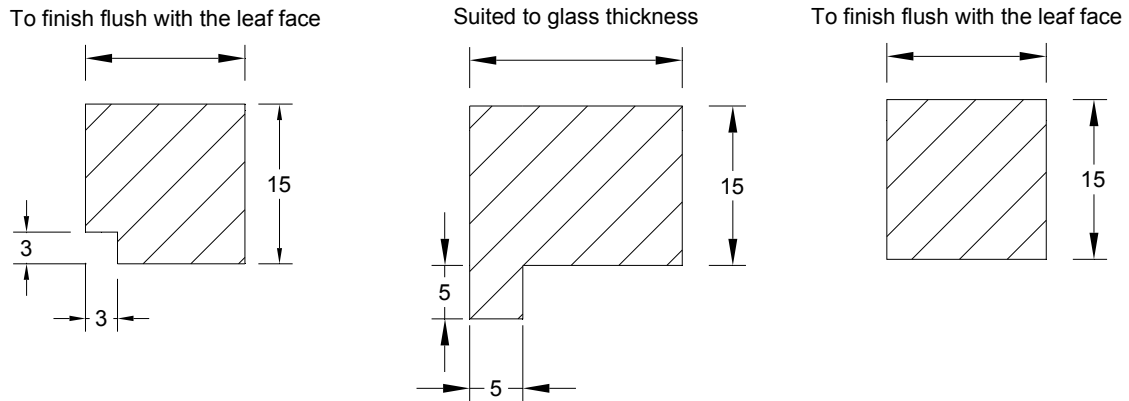
Proprietary 30 Minute Glazing Systems



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Square Glazing Bead Profiles

The following assessed square bead profiles may be used as an alternative to splayed beads. Refer to section 7 for glazing system and glass restrictions.



Appendix C
Revisions

Revision No	Date	Description
A – CIFL ref 12106	10.5.12	Updated format, addition of test data from reports RF01059B (AR2), RF04016 and CFR1112121 and product name change to Sentry Prolite.

The legal validity of this report can only be claimed on presentation of the complete report.

Appendix D

Data Sheets

Sentry Prolite Doorsets

30 Minutes Fire Resistance

Sentry Prolite Doorsets – 30 Minutes Fire Resistance
Latched & Unlatched Single Acting & Double Acting Single Doorsets
(MDF Door Frames)

Leaf Sizes	Configuration		Height (mm)		Width (mm)
	LSASD	From	2135	x	1019
To		2367	x	915	
ULSASD & DASD	From	2135	x	994	
	To	2318	x	915	
Maximum Overpanel height (mm)		Transomed	2000		
Glazing		Maximum Glazed Area	0.91m ² - See section 7 for details		
		Approved systems	See section 7 and appendix B		
Frame specification		Min. Section (mm):	70 x 25		
		Material	MDF		
		Density (kg/m ³):	≥ 700		

Intumescent Materials:- SLS – Halspan Ltd or Therm-A-Seal – Intumescent Seals Ltd

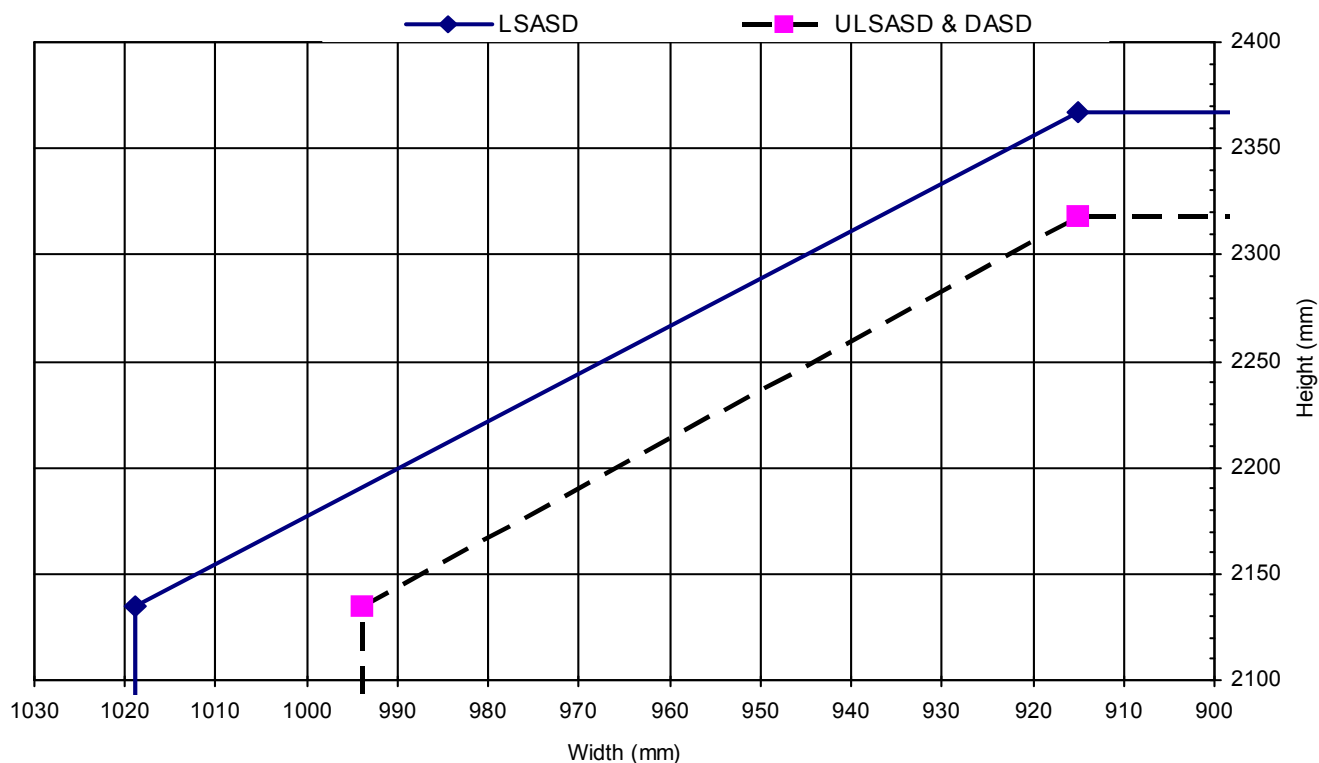
Head: 1 No 20 x 4mm fitted centrally in the leaf edge or frame reveal.

Jamb: 1 No 20 x 4mm fitted centrally in the leaf edge or frame reveal.

Overpanel: 1 No. 20 x 4mm strip centrally fitted in either the panel edge or frame reveal.

Hardware Protection: see section 12.

Maximum Door Leaf Size



The legal validity of this report can only be claimed on presentation of the complete report.

Sentry Prolite Doorsets – 30 Minutes Fire Resistance
Latched & Unlatched Single Acting & Double Acting Single Doorsets
(Extended Sizes Using Hardwood Door Frames)

Leaf Sizes	Configuration		Height (mm)		Width (mm)
	LSASD		From	2415	x
To			3020	x	1210
ULSASD & DASD		From	2415	x	1488
		To	2970	x	1210
Maximum Overpanel height (mm)		Transomed	2000		
Glazing		Maximum Glazed Area	0.91m ² - See section 7 for details		
		Approved systems	See section 7 and appendix B		
Frame specification		Min. Section (mm)	70 x 32		
		Material	Hardwood		
		Density (kg/m ³)	≥ 640		

Intumescent Materials:- SLS – Halspan Ltd or Therm-A-Seal – Intumescent Seals Ltd

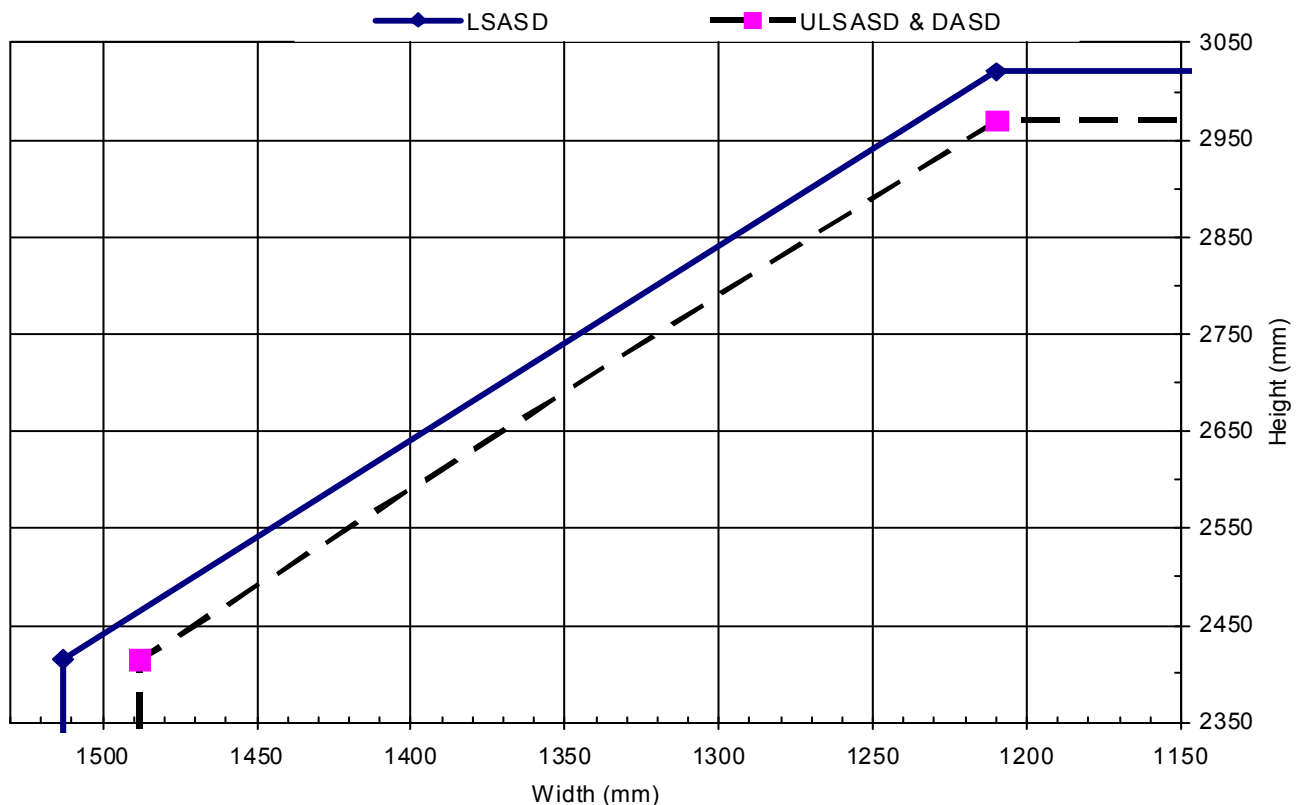
Head: 1 No 20 x 4mm fitted centrally in the leaf edge or frame reveal. For leaves over 2700mm increase to 25mm.

Jamb: 1 No 20 x 4mm fitted centrally in the leaf edge or frame reveal. For leaves over 1400mm increase to 25mm.

Overpanel: 1 No. 15 x 4mm strip centrally fitted in either the panel edge or frame reveal.

Hardware Protection: see section 12.

Maximum Door Leaf Size



The legal validity of this report can only be claimed on presentation of the complete report.

Sentry Prolite Doorsets – 30 Minutes Fire Resistance

Latched & Unlatched Single Acting & Double Acting Single Doorsets

Leaf Sizes	Configuration		Height (mm)		Width (mm)
	LSASD		From	2100	x
		To	2450	x	926
ULSASD & DASD		From	2100	x	1076
		To	2400	x	926
Maximum Overpanel height (mm)		Transomed	2000		
Glazing	Maximum Glazed Area		0.91m ² - See section 7 for details		
	Approved systems		See section 7 and appendix B		
Frame specification	Min. Section (mm)		70 x 32		
	Material		Softwood or hardwood		
	Density (kg/m ³)		≥ 510		

Intumescent Materials:- SLS – Halspan Ltd or Therm-A-Seal – Intumescent Seals Ltd

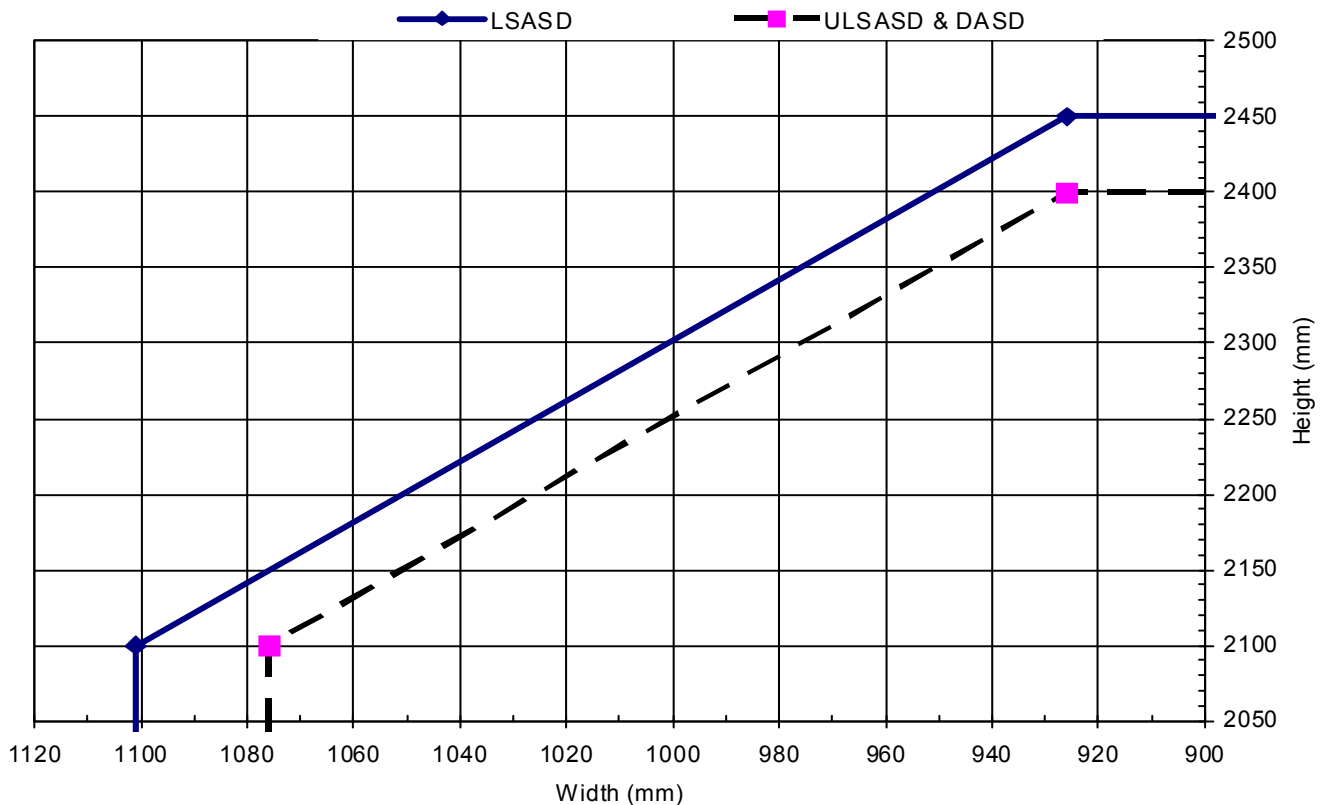
Head: 1 No 15 x 4mm fitted centrally in the leaf edge or frame reveal.

Jamb: 1 No 15 x 4mm fitted centrally in the leaf edge or frame reveal.

Overpanel: 1 No. 15 x 4mm strip centrally fitted in either the panel edge or frame reveal

Hardware Protection: see section 12.

Maximum Door Leaf Size



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Sentry Prolite Doorsets – 30 Minutes Fire Resistance

Latched & Unlatched Single Acting & Double Acting Single Doorsets + Overpanel

Leaf Sizes	Configuration		Height (mm)		Width (mm)
	LSASD + OP	From		2100	x
To			2350	x	926
ULSASD + OP & DASD + OP	From		2100	x	1026
	To		2300	x	926
Maximum Overpanel height (mm)			2000		
Glazing	Maximum Glazed Area		0.91m ² - See section 7 for details		
	Approved systems		See section 7 and appendix B		
Frame specification	Min. Section (mm)		70 x 32		
	Material		Softwood or hardwood		
	Density (kg/m ³)		≥ 510		

Intumescent Materials: - SLS – Halspan Ltd or Therm-A-Seal – Intumescent Seals Ltd

Square Head: 2 No 10 x 4mm fitted 5mm each side of the centreline in the bottom edge of the overpanel.

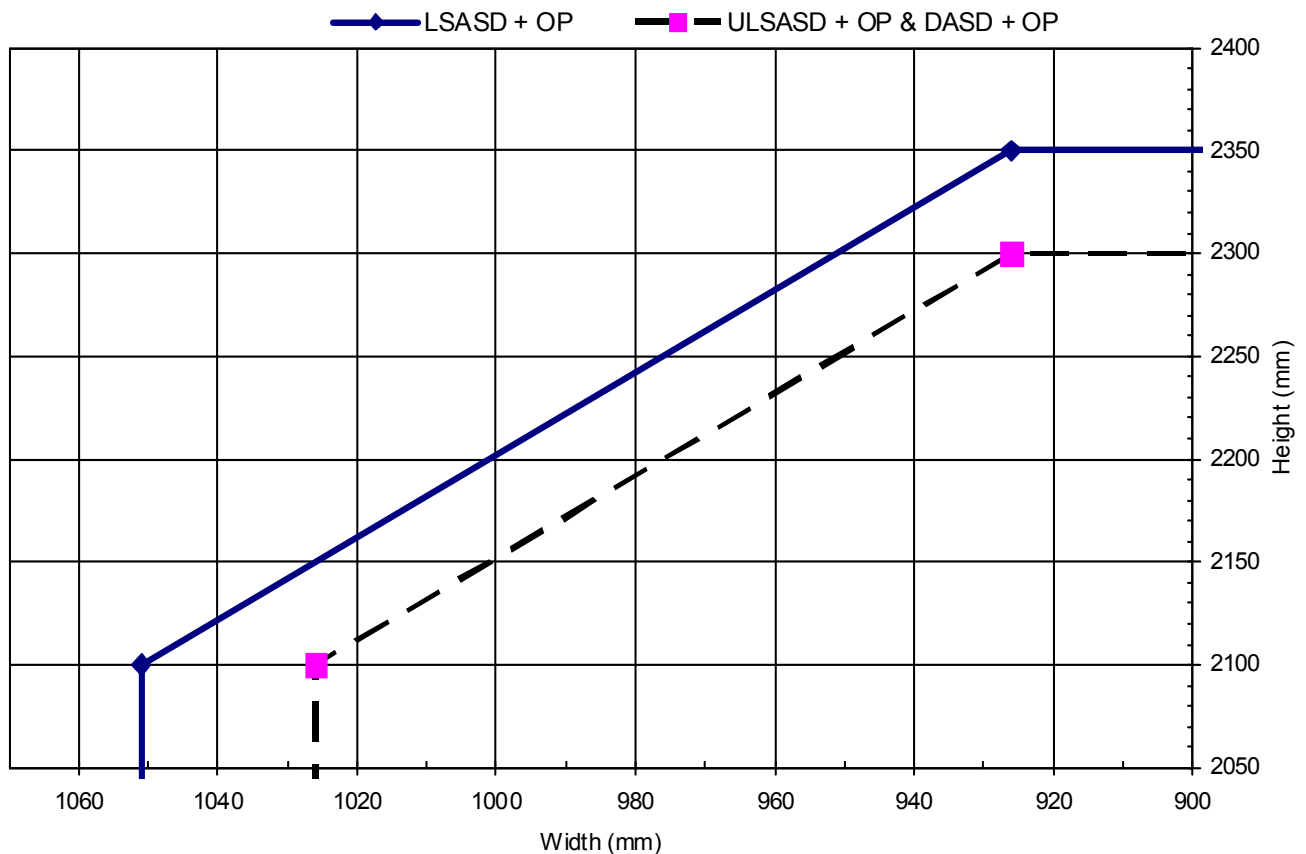
Rebated Head: 2 No 10 x 4mm centrally fitted centrally in the rebates of the leaf heads and rebate of the overpanel.

Jamb: 2 No 10 x 4mm fitted 5mm each side of the centreline in the leaf edges or frame reveal.

Overpanels: 1 No 15 x 4mm fitted centrally in the edges of panel or frame reveal.

Hardware Protection: see section 12.

Maximum Door Leaf Size



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Sentry Prolite Doorsets – 30 Minutes Fire Resistance
Latched & Unlatched Single Acting & Double Acting Double Doorsets

Leaf Sizes	Configuration		Height (mm)		Width (mm)
	LSADD		From	2100	x
To			2250	x	926
ULSADD & DADD		From	2100	x	976
		To	2200	x	926
Maximum Overpanel height (mm)		Transomed	1500		
Glazing	Maximum Glazed Area		0.91m ² - See section 7 for details		
	Approved systems		See section 7 and appendix B		
Frame specification	Min. Section (mm)		70 x 32		
	Material		Softwood or hardwood		
	Density (kg/m ³)		≥ 510		

Intumescent Materials: - SLS – Halspan Ltd or Therm-A-Seal – Intumescent Seals Ltd

Square Head: 2 No 10 x 4mm fitted 5mm each side of the centreline in the bottom edge of the overpanel.

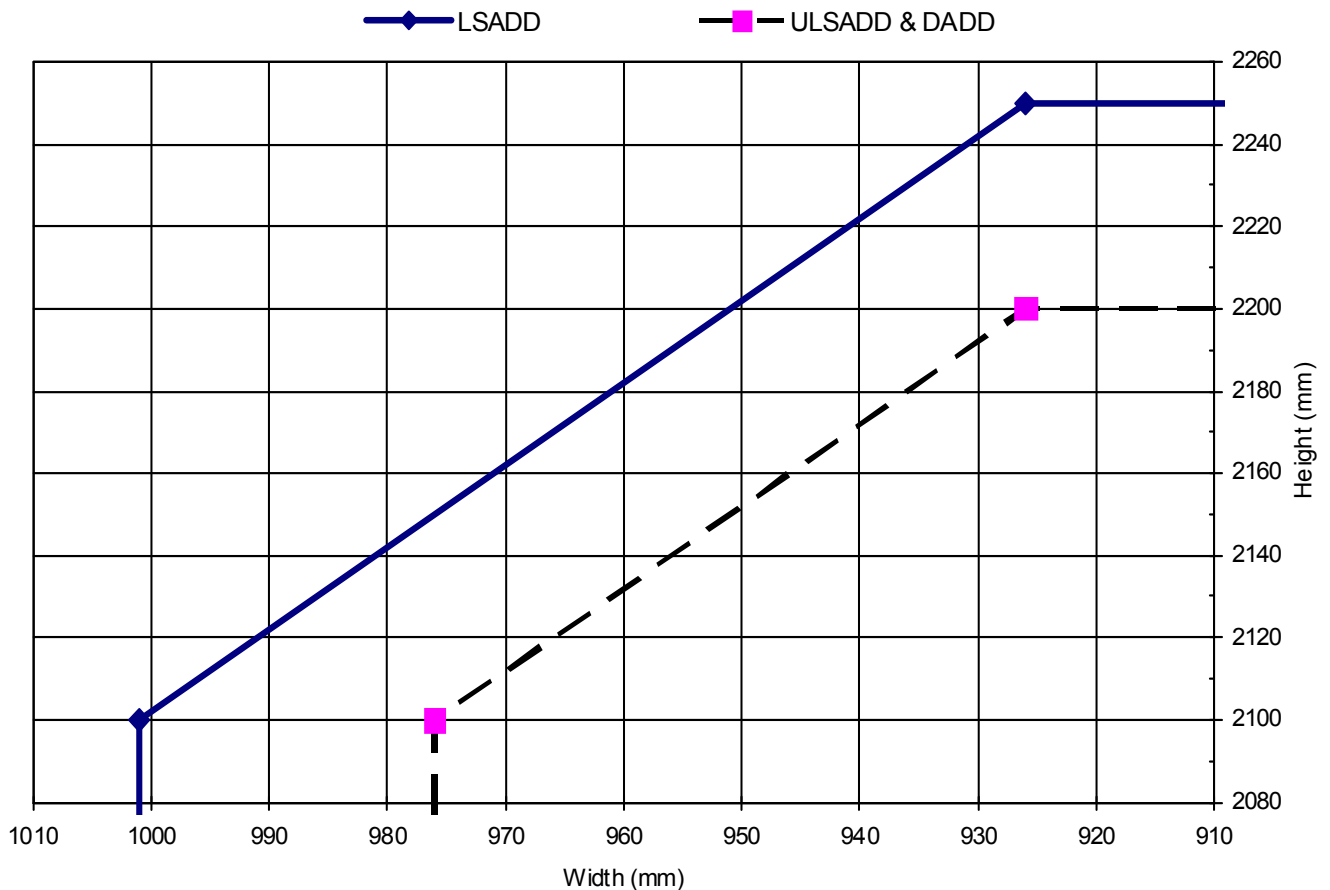
Square Meeting edges: 2 No 10 x 4mm fitted 5mm each side of the centreline in one edge only.

Jamb: 2 No 10 x 4mm fitted 5mm each side of the centreline in the leaf edges or frame reveal.

Overpanels: 1 No 15 x 4mm fitted centrally in the edges of panel or frame reveal.

Hardware Protection: see section 12.

Maximum Door Leaf Size



The legal validity of this report can only be claimed on presentation of the complete report.

Sentry Prolite Doorsets – 30 Minutes Fire Resistance

Latched & Unlatched Single Acting & Double Acting Double Doorsets + Overpanel

Leaf Sizes	Configuration		Height (mm)		Width (mm)
	LSADD + OP	From		2100	x
To			2150	x	926
ULSADD + OP & DADD + OP	From		2100	x	926
	To				
Maximum Overpanel height (mm)			1500		
Glazing	Maximum Glazed Area		0.91m ² - See section 7 for details		
	Approved systems		See section 7 and appendix B		
Frame specification	Min. Section (mm)		70 x 32		
	Material		Softwood or hardwood		
	Density (kg/m ³)		≥ 510		

Intumescent Materials: - SLS – Halspan Ltd or Therm-A-Seal – Intumescent Seals Ltd

Square Head: 2 No 10 x 4mm fitted 5mm each side of the centreline in the bottom edge of the overpanel.

Rebated Head: 2 No 10 x 4mm centrally fitted centrally in the rebates of the leaf heads and rebate of the overpanel.

Square Meeting edges: 2 No 10 x 4mm fitted 5mm each side of the centreline in one edge only.

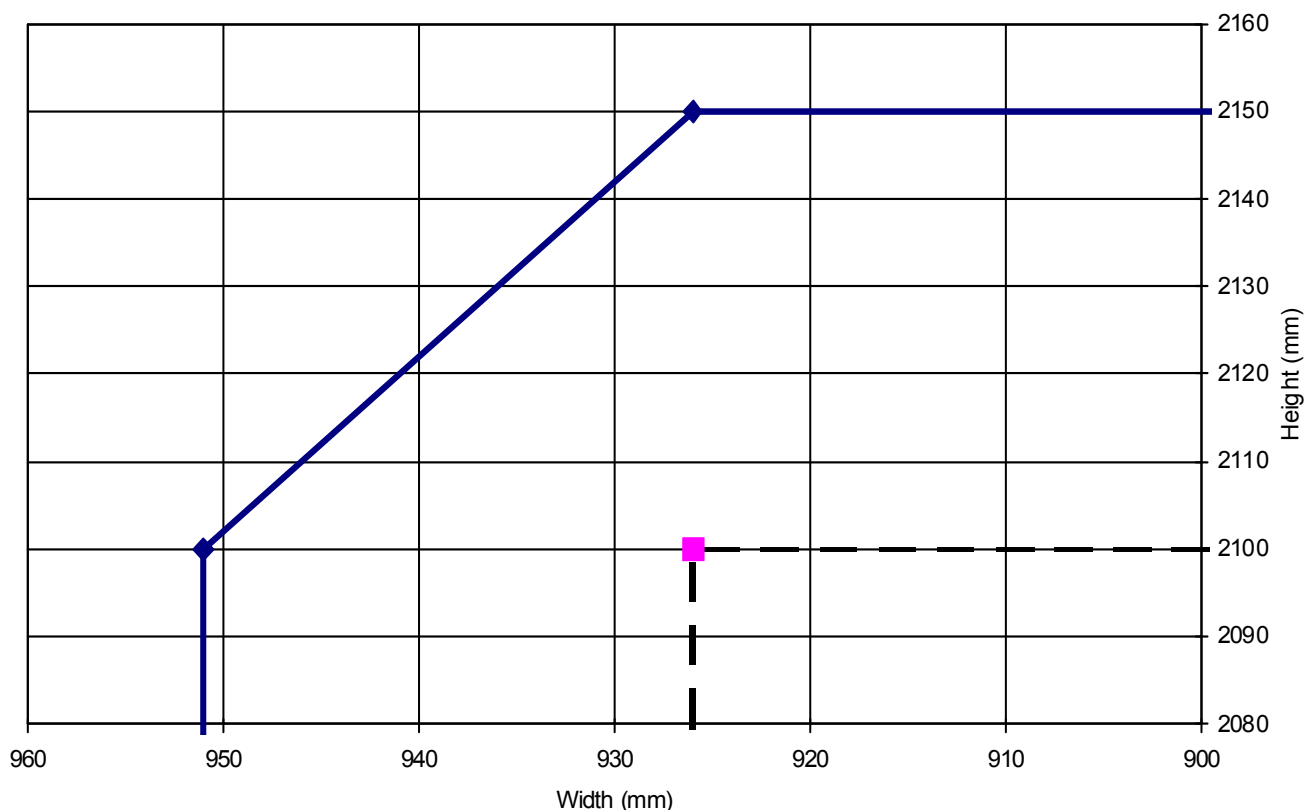
Jamb: 2 No 10 x 4mm fitted 5mm each side of the centreline in the leaf edges or frame reveal.

Overpanels: 1 No 15 x 4mm fitted centrally in the edges of panel or frame reveal.

Hardware Protection: see section 12.

Maximum Door Leaf Size

◆ LSADD + OP ■ ULSADD + OP & DADD + OP



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